

# Tool- catalog

Edition 2018



TRUMPF LASERdur Bending Tools

TRUMPF Angle Measuring System ACB



# TRUMPF LASERdur Bending Tools TRUMPF Angle Measuring System ACB

Edition: **03/2018**

Mat.No. **1467847 TAT**

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## Before you continue...

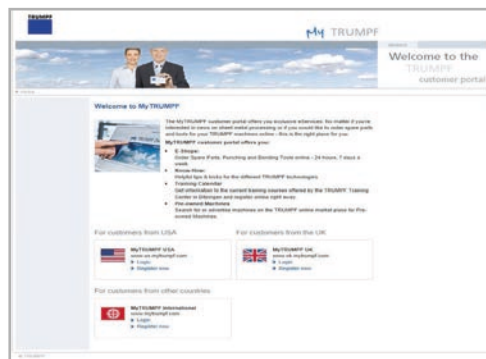
**On the contents** Here you will find the prices of the bending tools and the sensor tools of the ACB angle measuring system.

Please read the section regarding systematic tool divisions on page 15 and in the Technical Section chapter.

### Reference Material CD-Rom Bending tools



TRUMPF E-shop for Bending tools at [www.TRUMPF.com/myTRUMPF](http://www.TRUMPF.com/myTRUMPF)



|                                                                            |              |
|----------------------------------------------------------------------------|--------------|
| Bending technology catalog (available from your sales partner)             | <b>.NEW</b>  |
| Operators manual TrumaBend V-Series (V 50 – V 320)                         | Mat.No. B317 |
| Operators manual TruBend Series 3000                                       | Mat.No. B561 |
| Operators manual TruBend Series 5000 / TrumaBend V-Series (V 500 – V 3200) | Mat.No. B504 |
| Operators manual TruBend Series 7000                                       | Mat.No. B631 |
| Operators manual TruBend Series 8000                                       | Mat.No. B538 |

**For further questions, contact your TRUMPF sales partner**

see Addresses / Fax templates



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## Expertise for any application.

We know that any bending machine delivers maximum performance every day. And that when it comes to achieving the best results, it is important for all components to interact optimally with one another. Because only the original can guarantee this, we have been producing our own bending tools for more than 20 years – in top quality and with the broadest range of tools on the market.



### Concentrated expertise.

Our employees at TRUMPF Maschinen Austria in Pasching produce bending tools under one roof using TRUMPF bending machines. These tools are used in TruBend machines of all series world-wide. Our bending tool experts are working on your behalf in all fields ranging from technical consultation, development and production through to dispatch. We use the latest CAD systems and manufacturing methods in order to produce tools with the best quality.

At the same time, we always keep in mind what is most important: that you get the optimum tool at the right time.

Our delivery reliability speaks for itself: in 98% of cases, our customers receive their delivery on the agreed date.

As a rule, standard tools are dispatched from Pasching on the same day they are ordered. As a result, your production can quickly get back on track even in an emergency.



## Process experts.

To be able to guarantee high levels of availability and rapid delivery times, we are working continuously to optimize the procedures in our bending tool production. In doing so, we use our SYNCHRO production system for producing our bending tools. In this way, we achieve top quality for products and service.

## Talk to us.

If you are interested in where and how TRUMPF bending tools are made, or if you would like to discuss an idea with us – simply get in touch. We are looking forward to your visit.



The TRUMPF bending system

An intelligent  
approach.



TruBend:  
The advantages for you at a glance.

- 1** Unrivalled productivity.
- 2** Full application freedom.
- 3** All-round user-friendliness.
- 4** Exact results.
- 5** Cutting-edge control.

Modern bending technology offers a wide variety of processing possibilities: air bending and coining, folding and radius bending, and of course the widest possible range of sheet thicknesses and materials.

Whatever you or your customers want to produce, you need a system that supports you flexibly and economically in all your requirements.

The TRUMPF system comprises the machine, tool and software – optimally adapted to one another. You can produce a wide range of parts on one machine, and what is more you can do this as economically and efficiently as possible. The focus is directed on particularly frugal use of energy and material resources.



TruBend machines embody the wealth of experience and forward-looking innovations in press-brake bending technology. Using them, you can produce simple to complex parts in any format precisely and economically.

### Equipped for all eventualities.

Our Laserdur tool system comprises not only many typical standard geometries but also many special geometries. These tools can be used on all generations of TRUMPF bending machine. This is also guaranteed in the future. The Safety-Click integrated as standard in tools up to a weight of 13.5 kg permits simple and direct tool setup operations from below.

### As individual as your tasks: Special developments.

You need special tools for quite individual applications – our specialists develop these precisely according to your specifications. We guarantee you receive high quality thanks to having our own production and conducting intensive tests on tools using TRUMPF machines. Deliveries are made within a few days.



### Economical bending – The right machine for each component geometry.

A wide selection of machine variants with numerous tonnages, bending lengths and versatile equipment features guarantees a machine that is tailor-made for your applications. ACB (Automatically Controlled Bending) guarantees the angle will be correct, right from the first bend.

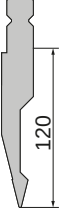
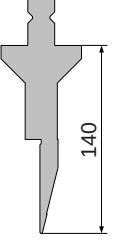
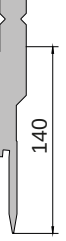
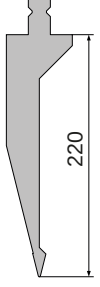
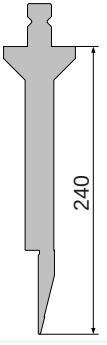
Fast joint speeds of the backgauge and the press beam as well as minimum setup times through automatic and selfcentering tool clamps ensure high productivity and minimize your part costs.

- Full tool flexibility through a broad range of tools
- Ingenious safety systems
- Optimum press force transmission with patented 4-cylinder concept
- Highest precision due to ACB Laser and ACB Wireless
- Precise angles throughout thanks to integrated CNC-crowning
- Durchgängig exakter Winkel dank integrierter CNC-Bombierung
- User-friendly and intuitive user interface on TRUMPF's own Touchpoint machine control system
- Ergonomic bending aids and support brackets
- Short paths for machine operators due to MobileControl Pro

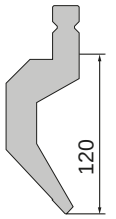
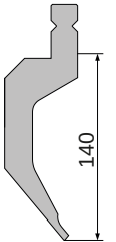
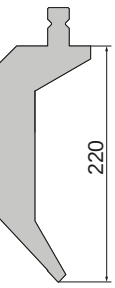
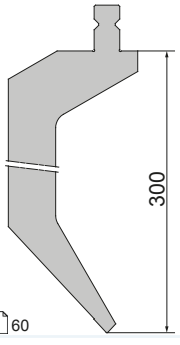


## Punches

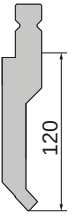
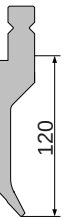
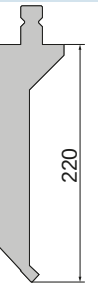
### pointed

| OW 202/K<br>R1/28°                                                                | OW 210<br>R1/28°                                                                  | OW 215/K<br>R0,5/20°<br>.NEW                                                      | OW 202/S<br>R1/28°                                                                 | OW 210/S<br>R1/28°                                                                  |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
| 120                                                                               | 140                                                                               | 140                                                                               | 220                                                                                | 240                                                                                 |
| 42                                                                                | 52                                                                                | 116                                                                               | 68                                                                                 | 76                                                                                  |

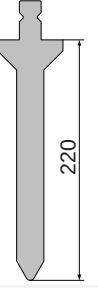
### highly offset

| OW 200/K<br>R1/86°                                                                 | OW 280/K<br>R0,5/80°                                                               | OW 200/S<br>R1/86°                                                                 | OW 300/S<br>R1/86°                                                                  |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |
| 120                                                                                | 140                                                                                | 220                                                                                | 300                                                                                 |
| 30                                                                                 | 34                                                                                 | 56                                                                                 | 60                                                                                  |

### slightly offset

| OW 201/K<br>R1/86°                                                                  | OW 204/K<br>R1/86°<br>.NEW                                                          | OW 201/S<br>R1/86°                                                                  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
| 120                                                                                 | 120                                                                                 | 220                                                                                 |
| 38                                                                                  | 50                                                                                  | 64                                                                                  |

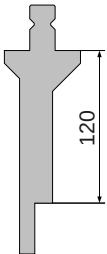
### even

| OW 203/K<br>R4/60°                                                                  | OW 211/K<br>R1/89,66°                                                               | OW 203/S<br>R4/60°                                                                  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |
| 120                                                                                 | 120                                                                                 | 220                                                                                 |
| 46                                                                                  | 98                                                                                  | 72                                                                                  |

Various applications

Tool holders / Inserts

**OW 209/S**  
(OW 320)



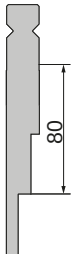
82/98

**OW 320**



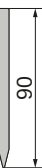
82/98

**OW/K 80**  
(OW 390, OW 391)



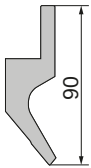
88

**OW 390**



90

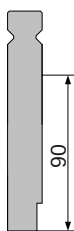
**OW 391**



90

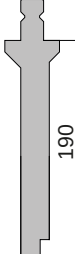
Z bending / Inserts

**OW/K 90**



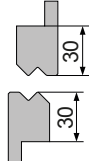
193

**OW/S 190**



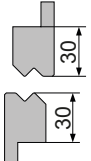
193

**ZE 90°**  
Z4-10



194/195

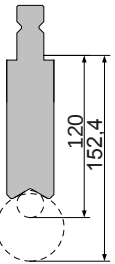
**ZE 90°**  
Z4-10



194/195

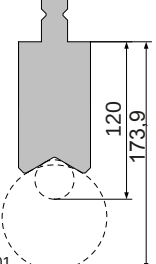
Radius bending

**OW 308/K**  
R10-R25



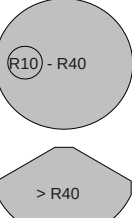
100

**OW 308/S**  
R15-R50



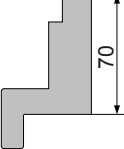
101

**Round bars**  
R10 - R50



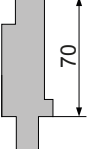
101 - 106

**EV/70**



194

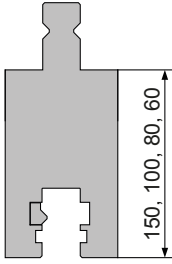
**EV/70-M**



194

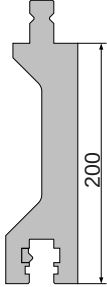
Adapter

**Adapter**  
TRUMPF



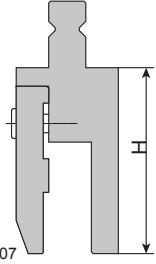
108 - 110

**Adapter**  
TRUMPF



110

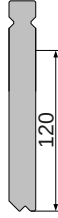
**Adapter**  
EHT, LVD, Amada



107

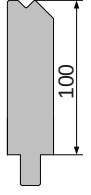
Z Bending

**OWZ/K 90°**  
Z4-10



188

**EVZ 90°**  
Z4-10



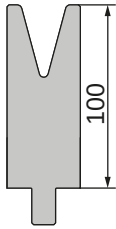
188



## Dies

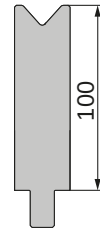
### Air bending 30°

| Type       | W  | R   |
|------------|----|-----|
| <b>30°</b> |    |     |
| EV001      | 6  | 0,6 |
| EV002      | 8  | 1   |
| EV003      | 10 | 1   |
| EV004      | 12 | 1   |
| EV005      | 16 | 1,6 |
| EV006      | 20 | 2   |
| EV007      | 24 | 2,5 |
| EV W30/30° | 30 | 3   |
| EV W40/30° | 40 | 5   |
| EV W50/30° | 50 | 5   |



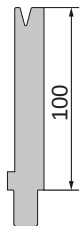
### Air bending 84°

| Type       | W  | R   |
|------------|----|-----|
| <b>84°</b> |    |     |
| EV W6/84°  | 6  | 0,6 |
| EV W8/84°  | 8  | 0,8 |
| EV W10/84° | 10 | 1   |
| EV W12/84° | 12 | 1   |
| EV W16/84° | 16 | 1,6 |
| EV W20/84° | 20 | 2   |



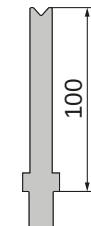
### 30° „narrow“

|             |    |     |
|-------------|----|-----|
| EV/S W4/30° | 4  | 0,6 |
| EV/S W5/30° | 5  | 0,6 |
| EV001/S     | 6  | 0,6 |
| EV002/S     | 8  | 1   |
| EV003/S     | 10 | 1   |
| EV004/S     | 12 | 1   |



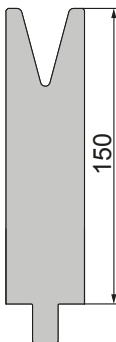
### 84° „narrow“

|              |    |     |
|--------------|----|-----|
| EV/S W4/84°  | 4  | 0,6 |
| EV/S W5/84°  | 5  | 0,6 |
| EV/S W6/84°  | 6  | 0,6 |
| EV/S W8/84°  | 8  | 0,8 |
| EV/S W10/84° | 10 | 1   |
| EV/S W12/84° | 12 | 1   |
| EV/S W14/84° | 14 | 1,6 |



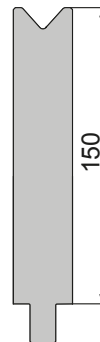
### 30° „high“

|         |    |     |
|---------|----|-----|
| EV001/H | 6  | 0,6 |
| EV002/H | 8  | 1   |
| EV003/H | 10 | 1   |
| EV004/H | 12 | 1   |
| EV005/H | 16 | 1,6 |
| EV006/H | 20 | 2   |
| EV007/H | 24 | 2,5 |



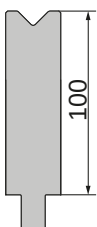
### 84° „high“

|              |    |     |
|--------------|----|-----|
| EV/H W6/84°  | 6  | 0,6 |
| EV/H W8/84°  | 8  | 0,8 |
| EV/H W10/84° | 10 | 1   |
| EV/H W12/84° | 12 | 1   |
| EV/H W16/84° | 16 | 1,6 |
| EV/H W20/84° | 20 | 2   |



### Coining

| Type       | W  | R   |
|------------|----|-----|
| <b>90°</b> |    |     |
| EV 040     | 6  | 0,6 |
| EV 041     | 8  | 0,8 |
| EV 042     | 10 | 1   |
| EV 043     | 12 | 1   |
| EV 044     | 16 | 1,6 |



### Coining

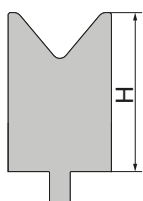
| Type                | W  | R   |
|---------------------|----|-----|
| <b>90° „narrow“</b> |    |     |
| EV/S W4/90°         | 4  | 0,6 |
| EV/S W5/90°         | 5  | 0,6 |
| EV 040/S            | 6  | 0,6 |
| EV 041/S            | 8  | 0,8 |
| EV 042/S            | 10 | 1   |
| EV 043/S            | 12 | 1   |





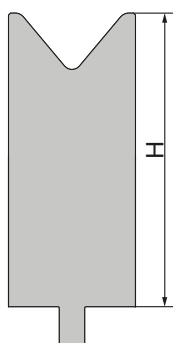
## Air bending 80°

| Type             | H   | R   |
|------------------|-----|-----|
| <b>80° (60°)</b> |     |     |
| EV W24/80°       | 100 | 2,5 |
| EV W30/80°       | 100 | 5   |
| EV W40/80°       | 100 | 5   |
| EV W50/80°       | 100 | 5   |
| EV W60/80°       | 100 | 5   |
| EV W70/80°       | 100 | 5   |
| EV W80/80°       | 100 | 5   |
| EV W90/80°       | 120 | 8   |
| EV W100/80°      | 120 | 8   |
| EV W120/60°      | 120 | 8   |



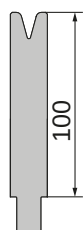
## 80° „high“

|              |     |     |
|--------------|-----|-----|
| EV/H W24/80° | 150 | 2,5 |
| EV/H W30/80° | 150 | 5   |
| EV/H W40/80° | 150 | 5   |
| EV/H W50/80° | 150 | 5   |



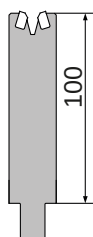
## Low impression

| Type            | W  | R |
|-----------------|----|---|
| <b>30° „R3“</b> |    |   |
| EV/S W5/30° R2  | 5  | 2 |
| EV001 R3        | 6  | 3 |
| EV002 R3        | 8  | 3 |
| EV003 R3        | 10 | 3 |
| EV004 R3        | 12 | 3 |
| EV005 R3        | 16 | 3 |



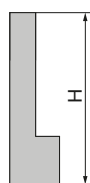
## 30° KEV

|             |    |
|-------------|----|
| KEV W8/30°  | 8  |
| KEV W10/30° | 10 |
| KEV W12/30° | 12 |
| KEV W16/30° | 16 |
| KEV W20/30° | 20 |
| KEV W24/30° | 24 |



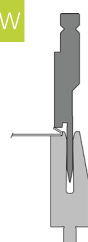
## Folding

| Type          | H   | W |
|---------------|-----|---|
| <b>Falzen</b> |     |   |
| FWZ           | 100 |   |
| ZDL           | 100 |   |
| MST           | 100 |   |
| FWZ/H         | 150 |   |
| ZDL/H         | 150 |   |
| MST/H         | 150 |   |



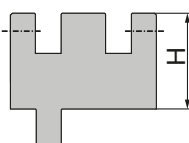
## „without lower tool displacement“

|             |             |     |     |
|-------------|-------------|-----|-----|
| <b>.NEW</b> | EV-F W6,4   | 100 | 6,4 |
|             | EV-F W8     | 100 | 8   |
|             | EV-F W10    | 100 | 10  |
|             | FEV W6/30°  | 108 | 6   |
|             | FEV W8/30°  | 110 | 8   |
|             | FEV W10/30° | 110 | 10  |
|             | FEV W12/30° | 110 | 12  |



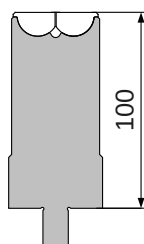
## Adapter

| Typ       | H  |
|-----------|----|
| TRUMPF EV | 50 |
| TRUMPF DV | 50 |
| EHT       | 40 |
| AMADA     | 40 |



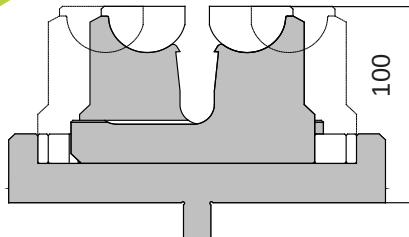
## Low impression / Distortion-free

| Type                | H   | W  |
|---------------------|-----|----|
| <b>90° RollBend</b> |     |    |
| RB 200              | 100 | 8  |
| RB 300              | 100 | 12 |
| RB 400              | 100 | 16 |
| RB 500              | 100 | 24 |
| RB 600              | 100 | 30 |



## 90° RollBend 1250

|             |     |     |
|-------------|-----|-----|
| <b>.NEW</b> | 100 | W40 |
|             | 100 | W50 |
|             | 100 | W60 |
|             | 100 | W70 |
|             | 100 | W80 |

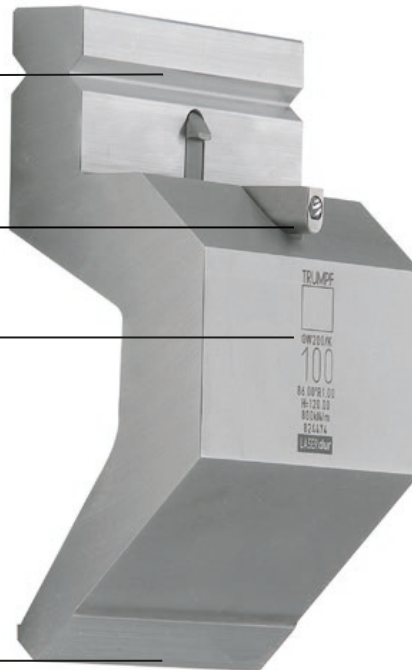




## Quality is Standard

### Characteristics

- Tool elements are self-centering, interchangeable with one another and can be used rotated by 180°.
- Securing the punch against falling out.
- Permanent inscription with great amount of information.
- Laser-hardened working zone



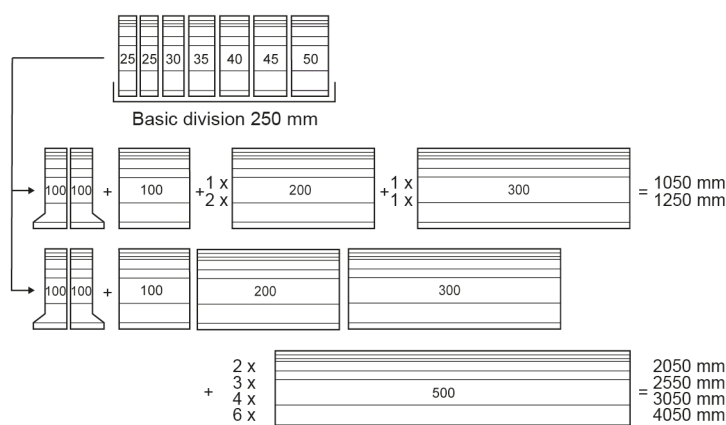
### Quality safety packaging



## System divisions with tools

### System division version B

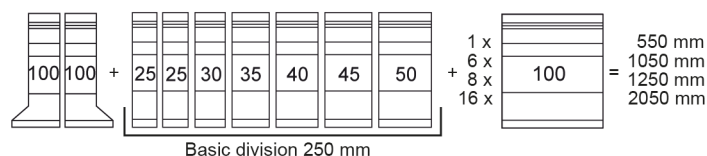
### Advantages



- Short setup time with long tool stations
- Lower procurement price
- Fewer tool switches (even greater workpiece quality)
- Version most often selected and recommended
- Tool lengths of up to 100 mm are equipped with 1 Safety-Click
- Tool lengths of 100 mm or more with a tool weight of max. 13.5 kg are equipped with 2 Safety-Clicks
- Weight-dependent division changes can be found in the technical part under system divisions

### System division version A

### Advantages



- Maximum flexibility
- Minimum tool set-up time
- Weight of the individual part pieces very low.
- All tools can be loaded vertically and horizontally.

### Dies

For dies, the division applies in the same way als for punches.  
Gooseneck tools are replaced with 100 mm part pieces.



## Punches



- Punch parts with a weight up to 13.5 kg are equipped with **Safety-Click** security elements and can also be replaced vertically.
- The punches are aligned automatically.
- Tools can be rotated by 180°.
- Punches smaller than 25 mm are delivered without Safety-Click.

### Safety-Click

Punches from TRUMPF are equipped with Safety-Click, a spring-loaded safety mechanism integrated into the tool. The Safety-Click enables vertical tool change. The tool is simply clicked in and out of the machine clamp vertically.

### Application range

Safety-Click can be used in:

- Parts from 10 mm onwards (depending on the tool type).
- Tool lengths of up to 100 mm are equipped with one Safety-Click.
- Tool lengths of 100 mm or more with a tool weight of max. 13.5 kg are equipped with 2 Safety-Clicks.

### Advantages

- Extremely short changeover times.
- The tools can be naturally installed and removed horizontally.

### Note

- If the maximum permitted weight per tool is exceeded, the tools are equipped with fixed locking pins, which means they can only be exchanged horizontally.
- For shoulder-bearing tools from 10 mm – 25 mm, an adapted safety system is available from TRUMPF on customer request.

## Punch with Safety-Click

| Length      | 1 Safety-Click |             | 2 Safety-Click |        |        |
|-------------|----------------|-------------|----------------|--------|--------|
|             | 10 - 20 mm     | 25 - 100 mm | 200 mm         | 300 mm | 500 mm |
| OW200/K     | ✓              | ✓           | ✓              | ✓      | ○      |
| OW201/K     | ✓              | ✓           | ✓              | ✓      | ✓      |
| OW202/K     | ✓              | ✓           | ✓              | ✓      | ✓      |
| OW203/K     | ✓              | ✓           | ✓              | ✓      | ✓      |
| OW204/K     | ✓              | ✓           | ✓              | ✓      | ✓      |
| OW211/K     | ✓              | ✓           | ✓              | ✓      | ✓      |
| OW215/K     | ✓              | ✓           | ✓              | ✓      | ✓      |
| OW280/K     | ✓              | ✓           | ✓              | ✓      | ○      |
| OW200/S     | ○              | ✓           | ✓              | ○      | —      |
| OW201/S     | ○              | ✓           | ✓              | ○      | —      |
| OW202/S     | ○              | ✓           | ✓              | ○      | ○      |
| OW203/S     | ○              | ✓           | ✓              | ○      | —      |
| OW210/S 140 | ○              | ✓           | ✓              | ✓      | ○      |
| OW210/S 240 | ○              | ✓           | ✓              | ○      | ○      |
| OW300/S     | ○              | ✓           | ○              | —      | —      |

- ✓ with Safety-Click
- with locking pins
- Parts > 25 kg available on request





## Lightweight bending tools for air bending

Lightweight bending tools with a weight savings of over 30% significantly reduce the physical effort required by the operator and the setup time.

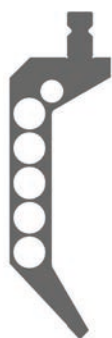
**The following upper tool types are available as standard in lightweight construction**

>L< OW200/S

>L< OW 201/S

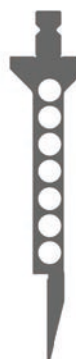
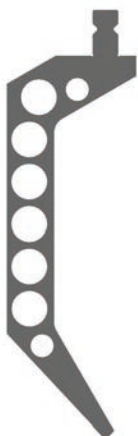
>L< OW202/S

>L< OW203/S



>L< OW300/S

>L< OW210/S



### Information

- Price surcharge for lightweight bending tools: 20% on the respective standard upper tool type  
Delivery time: 2 weeks
- >L< OW special equipment designs on request

### Application area

Up to 10 mm sheet thickness (depending on the tool type)

### Advantage

- Reduce physical handling effort for the operator
- Minimize the setup time by applying Safety-Click to the tool length of up to 300 mm
- Same load with lower tool weight

### Note

- The combination of lightweight bending tools and standard tools is only permitted to a limited extent
- The specified load on the tools must not be exceeded.



Normally, lightweight bending tools are equipped with the Safety-Click up to a length of 300 mm:

- Tool lengths up to 100 mm – with 1 Safety-Click
- Tool lengths greater than 100 mm – with 2 Safety-Clicks



|                    | Tool type       | Load kN/m | 1 Safety-Click | 2 Safety-Clicks |        | 500 mm |
|--------------------|-----------------|-----------|----------------|-----------------|--------|--------|
|                    |                 |           | 25-100 mm      | 200 mm          | 300 mm |        |
| Standard           | OW200/S         | 800       |                |                 |        |        |
|                    | OW201/S         | 800       |                |                 |        |        |
|                    | OW202/S         | 600/800   |                |                 |        |        |
|                    | OW203/S         | 2500      |                |                 |        |        |
|                    | OW210/S 240     | 400/1300  |                |                 |        |        |
|                    | OW300/S         | 800       |                |                 |        |        |
| Lightweight design | >L< OW200/S     | 800       |                |                 |        |        |
|                    | >L< OW201/S     | 800       |                |                 |        |        |
|                    | >L< OW202/S     | 600/800   |                |                 |        |        |
|                    | >L< OW203/S     | 1300 *    |                |                 |        |        |
|                    | >L< OW210/S 240 | 400/1300  |                |                 |        |        |
|                    | >L< OW300/S     | 800       |                |                 |        |        |

\* Maximum load of lightweight bending tool OW203/S is reduced to 1300 kN/m.

■ with Safety-Click

■ with locking pin

□ Parts available upon request

## Machine types and tool adaptor

Please take note of the tool adapter version when ordering TRUMPF bending tools!

(Observe installation height of the press brakes)

| TruBend /<br>TrumaBend                                                                                                        | Head-bearing Tools<br>(OW/K)                                                        | Shoulder-bearing<br>Tools (OW/S)                                                                                                    |                                                                                                                                     | Dies                                                                                  | Lower tool<br>displacement                                                            |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <br>Series 3000/C-Series                     |    | up to year<br>of manu-<br>facture<br>June 2004<br> | up to year<br>of manu-<br>facture<br>July 2004<br> |    |    |
| <br>Series 5000/V-Series                     |    |                                                    |                                                                                                                                     |    |    |
| <br>Series 7000                            |  |                                                  |                                                                                                                                     |  |  |
| <br>Series 8000 with<br>TRUMPF tool system |  |                                                  |                                                                                                                                     |  |  |

The following amounts of compressive force should not be exceeded in order not to exceed the maximum permissible surface pressure of the Modufix clamp (starting from year of construction 2002 ):

- 250 tons/meter at head-bearing tools
- 300 tons/meter at shoulder-bearing tools
- 300 - 600 tons/meters for shoulder-bearing tools (only applicable for Series 8000)

## Additional charges for the modification of standard tools

The prices for the most recent modified upper tool radii are already indicated in the catalog. The prices indicated in the extra charge table are valid from a total order length of 200 mm.

Prices for radius changes of 0.3 mm to 10 mm can be determined using the extra charge:

- For radius changes with height modification, **Extra charge 1 (modification)** is to be used.
- For radius changes without height modification, **Extra charge 2 (new manufacture)** is to be used.

### Examples of modifications

## Upper tools

## Lower tools

Radius  
Modification

Angle  
Modification

Height  
Modification

Radius modification  
**Extra charge 1**  
(Modification)

Radius modification  
**Extra charge 2**  
(New manufacture)

| Type of modification | Extra | Die width  |
|----------------------|-------|------------|
| Radius modification  | 1     | W4-W120    |
| Hight mod. 30 mm     | 1     | W4-W30/80° |
| Hight mod. 50 mm     | 1     | W4-W50/80° |
| Angle mod. 50° - 90° | 1     | W4-W20     |
| Angle mod. 50° - 80° | 2     | W24-W30    |
| Angle mod. 60° - 80° | 2     | W40-W100   |

Extra charge table

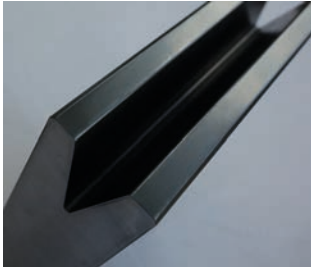
| Lengths in [mm] |      | Extra charge 1 | Extra charge 2 |     |
|-----------------|------|----------------|----------------|-----|
| up to           | 100  | 0              | 0              | EUR |
|                 | 150  | 0              | 0              | EUR |
|                 | 200  | 0              | 0              | EUR |
|                 | 250  | 0              | 0              | EUR |
|                 | 300  | 0              | 0              | EUR |
|                 | 500  | 0              | 0              | EUR |
|                 | 550  | 0              | 0              | EUR |
|                 | 1050 | 0              | 0              | EUR |
|                 | 1250 | 0              | 0              | EUR |
|                 | 2050 | 0              | 0              | EUR |
|                 | 2550 | 0              | 0              | EUR |
|                 | 3050 | 0              | 0              | EUR |
|                 | 4050 | 0              | 0              | EUR |

Calculating and request for special shapes is best supported in the TRUMPF E-Shop!



## Additional charges for LASERdur ZN-coating

Coated LASERdur ZN dies are especially suited to processing galvanized sheets.



- Standard dies for air bending with the die width up to 24 mm are available with LASERdur ZN coating.
- Embossing dies with the die width up to 12 mm are available with LASERdur ZN coating.
- Special tools available on request.

|          | Length | Extra charge 1 | Extra charge 2     |
|----------|--------|----------------|--------------------|
| Var. B   |        | Die 45° - 86°  | Die 30°, 90°, EV-F |
| 4050     |        | 0              | 0                  |
| 3050     |        | 0              | 0                  |
| 2550     |        | 0              | 0                  |
| 2050     |        | 0              | 0                  |
| 1250     |        | 0              | 0                  |
| 1050     |        | 0              | 0                  |
| Var. A   |        |                |                    |
| 2050     |        | 0              | 0                  |
| 1250     |        | 0              | 0                  |
| 1050     |        | 0              | 0                  |
| 550      |        | 0              | 0                  |
| Block    |        |                |                    |
| 250      |        | 0              | 0                  |
| 150      |        | 0              | 0                  |
| Single   |        |                |                    |
| 500      |        | 0              | 0                  |
| 300      |        | 0              | 0                  |
| 200      |        | 0              | 0                  |
| 100      |        | 0              | 0                  |
| up to 50 |        | 0              | 0                  |

Minimum order quantity 800mm or € 950

### Material selection

| Material                       | Galvanized sheet | Mild steel | Hot-rolled steel | Aluminium | Stainless steel |
|--------------------------------|------------------|------------|------------------|-----------|-----------------|
| Application of the coated dies |                  |            |                  |           |                 |

The values of the maximum sheet thicknesses for the specific die widths are not allowed to be exceeded.

## Dies for air bending

| Die width | Radii    | Type                                    | Sheet thickness [mm] |      |   |      |     |      |   |     |   |     |
|-----------|----------|-----------------------------------------|----------------------|------|---|------|-----|------|---|-----|---|-----|
|           |          |                                         | 0,5                  | 0,75 | 1 | 1,25 | 1,5 | 1,75 | 2 | 2,5 | 3 | 3,5 |
| W4        | Standard | R0,6 EV/S W4/84°                        |                      |      |   |      |     |      |   |     |   |     |
|           |          | R0,6 EV/S W4/30°                        |                      |      |   |      |     |      |   |     |   |     |
| W5        | Standard | R0,6 EV/S W5/84°                        |                      |      |   |      |     |      |   |     |   |     |
|           |          | R0,6 EV/S W5/30°                        |                      |      |   |      |     |      |   |     |   |     |
| W6        | Standard | R2 EV/S W5/30° R2                       |                      |      |   |      |     |      |   |     |   |     |
|           |          | R0,6 EV001 (/S)/(H), EV W6/84° (/S)/(H) |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R3 EV001 R3                             |                      |      |   |      |     |      |   |     |   |     |
| W8        | Standard | R2                                      |                      |      |   |      |     |      |   |     |   |     |
|           |          | R0,8 EV W8/84° (/S)/(H)                 |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R1 EV002 (/S)/(H)                       |                      |      |   |      |     |      |   |     |   |     |
| W10       | Standard | R3 EV002 R3                             |                      |      |   |      |     |      |   |     |   |     |
|           |          | R2                                      |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R1 EV003 (/S)/(H), EV W10/84° (/S)/(H)  |                      |      |   |      |     |      |   |     |   |     |
| W12       | Standard | R3 EV003 R3                             |                      |      |   |      |     |      |   |     |   |     |
|           |          | R2                                      |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R1 EV004 (/S)/(H), EV W12/84° (/S)/(H)  |                      |      |   |      |     |      |   |     |   |     |
| W16       | Standard | R3 EV004 R3                             |                      |      |   |      |     |      |   |     |   |     |
|           |          | R2                                      |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R1,6 EV005 (/H), EV W16/84° (/H)        |                      |      |   |      |     |      |   |     |   |     |
| W20       | Standard | R3 EV005 R3                             |                      |      |   |      |     |      |   |     |   |     |
|           |          | R2                                      |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R2 EV006 (/H), EV W20/84° (/H)          |                      |      |   |      |     |      |   |     |   |     |
| W24       | Standard | R4                                      |                      |      |   |      |     |      |   |     |   |     |
|           | Special  | R2,5 EV007 (/H) EV W24/80° (/H)         |                      |      |   |      |     |      |   |     |   |     |
|           |          | R4                                      |                      |      |   |      |     |      |   |     |   |     |



preferred dies



Area of application

## Dies for embossing

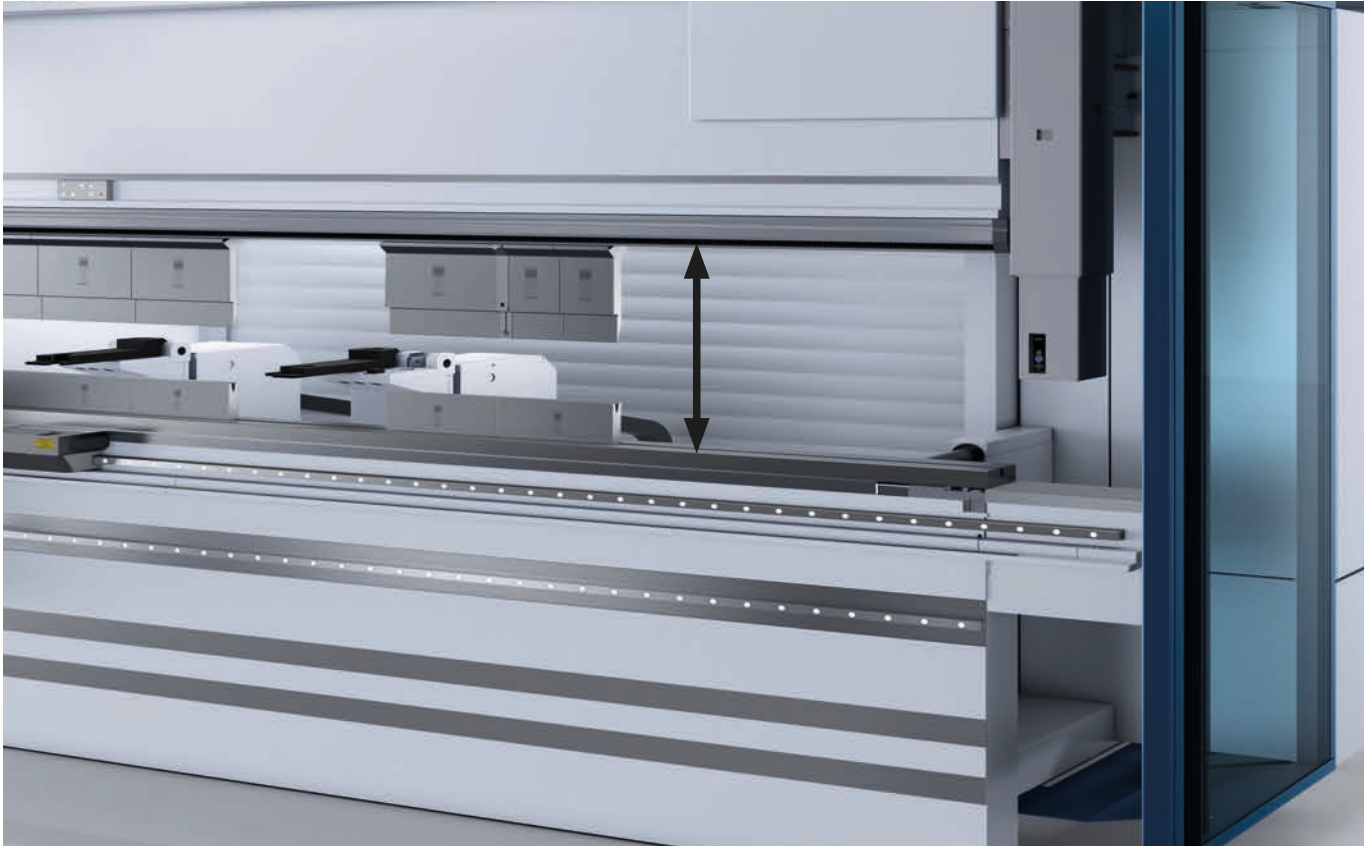
| Die width | Radii    | Type                | Sheet thickness [mm] |      |   |      |     |      |   |
|-----------|----------|---------------------|----------------------|------|---|------|-----|------|---|
|           |          |                     | 0,5                  | 0,75 | 1 | 1,25 | 1,5 | 1,75 | 2 |
| W6        | Standard | R0,6 EV040 90° (/S) |                      |      |   |      |     |      |   |
| W8        | Standard | R0,8 EV041 90° (/S) |                      |      |   |      |     |      |   |
| W10       | Standard | R1 EV042 90° (/S)   |                      |      |   |      |     |      |   |
| W12       | Standard | R1 EV043 90° (/S)   |                      |      |   |      |     |      |   |



Area of application

## Installation height check

You can determine the suitable tool types for the TruBend/TrumaBend by means of the following tables:



„The installation height is the maximum distance between the upper tool clamp and lower tool clamp.“

### TruBend Series 3000 up to YOM 2015

#### Installation height 347 mm

| TruBend<br>3066<br>3120<br>3180 | Height [mm] OW<br>↓ | EV70-M | RollBend 200 - 1250 | EV/S-W4-W5 | EV W6-W80 | KEV W8-W24 | EV001-EV007 „R3./S) | EV Z4-10/90° | FEV W6-12 | EV W90-120 | EV/H W6-W50 | EV001/H-EV007/H | VLMBN | VLMDN |
|---------------------------------|---------------------|--------|---------------------|------------|-----------|------------|---------------------|--------------|-----------|------------|-------------|-----------------|-------|-------|
| Height [mm] EV ►                |                     | 100    | 100                 | 100        | 100       | 100        | 100                 | 100          | 108       | 120        | 150         | 150             | 185   | 195   |
| OW.../K                         | 120                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |
| OW210/S 280/K                   | 140                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |
|                                 | 160                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |
|                                 | 180                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |
|                                 | 200                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |
| OW.../S                         | 220                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |
| OW210/S                         | 240                 |        |                     |            |           |            |                     |              |           |            |             |                 |       |       |

A > 40 mm    A 25-40 mm    impossible

A = Removal height

## TruBend Series 3000 since YOM 2015

### Installation height 342mm

| TruBend<br>3066<br>3100 | Height [mm] OW<br>▼ | EV70-M | WB120 - WB 350 | RollBend 200 - 600 | EV/S-W4-W5 | EV W6-W80 | KEV W8-W24 | EV001-EV007 („R3../S) | EV Z4-10/90° | FEV W6-12 | EV W90-120 | EV/H W6-W50 | EV001/H-EV007/H | VLMBN * | VLMDN |
|-------------------------|---------------------|--------|----------------|--------------------|------------|-----------|------------|-----------------------|--------------|-----------|------------|-------------|-----------------|---------|-------|
| Height [mm] EV ►        |                     | 100    | 100            | 100                | 100        | 100       | 100        | 100                   | 100          | 108       | 120        | 150         | 150             | 185     | 195   |
| OW.../K                 | 120                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |
| OW210/S 280/K           | 140                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |
|                         | 160                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |
|                         | 180                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |
|                         | 200                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |
| OW.../S                 | 220                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |
| OW210/S                 | 240                 |        |                |                    |            |           |            |                       |              |           |            |             |                 |         |       |

A > 40 mm    A 25-40 mm    impossible

A = Removal height    \*Attention: only when using 5-axis backgauge

## TruBend Series 3000 since YOM 2015

### Installation height 500 mm

| TruBend<br>3100<br>with extended Installation height<br>3170 | Height [mm] OW<br>▼ | EV70-M | RollBend 200 - 1250 | EV/S-W4-W5 | EV W6-W80 | KEV W8-W24 | EV001-EV007 („R3../S) | EV Z4-10/90° | FEV W6-12 | EV W90 - 120 | EV/H W6-W50 | EV001/H - EV007/H | VLMBN * | VLMDN |
|--------------------------------------------------------------|---------------------|--------|---------------------|------------|-----------|------------|-----------------------|--------------|-----------|--------------|-------------|-------------------|---------|-------|
| Height [mm] EV ►                                             |                     | 100    | 100                 | 100        | 100       | 100        | 100                   | 100          | 108       | 120          | 150         | 150               | 185     | 195   |
| OW.../K                                                      | 120                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
| OW210/S 280/K                                                | 140                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 160                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 180                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 200                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
| OW.../S                                                      | 220                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
| OW210/S                                                      | 240                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 260                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 280                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
| OW300/S                                                      | 300                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 320                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 340                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |
|                                                              | 360                 |        |                     |            |           |            |                       |              |           |              |             |                   |         |       |

A > 60 mm    A 45-60 mm    impossible

A = Removal height    \* Attention: only when using 5-axis backgauge



TruBend Series 5000

Installation height 385 mm

| TruBend<br>5050<br>5085<br>5130 | Height [mm] OW | EV70-M | EV70 | RollBend 200 - 1250 | EV/S-W4-W5 | EV W6-W80 | KEV W8-W24 | EV001-EV007 (...R3..S) | FWZ | ZDL | MST | EV Z4-10/90° | FEV W6-12 | SBW | EV W90-120 | EV/H W6-W50 | EV001/H-EV007/H | FWZ/H | ZDL/H | MST/H | VLMBN | VLMDN |
|---------------------------------|----------------|--------|------|---------------------|------------|-----------|------------|------------------------|-----|-----|-----|--------------|-----------|-----|------------|-------------|-----------------|-------|-------|-------|-------|-------|
| Height [mm] EV ▶                |                | 100    | 100  | 100                 | 100        | 100       | 100        | 100                    | 100 | 100 | 100 | 100          | 108       | 110 | 120        | 150         | 150             | 150   | 150   | 150   | 185   | 195   |
| OW.../K                         | 120            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW210/S 280/K                   | 140            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                 | 160            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                 | 180            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                 | 200            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW.../S                         | 220            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW210/S                         | 240            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                 | 260            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                 | 280            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW300/S                         | 300            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |

A > 40 mm

A 25-40 mm

impossible

A = Removal height

TruBend Series 5000

Installation height 615 mm

| TruBend<br>5085<br>5130<br>5170<br>5230<br>5320 | Height [mm] OW | EV70-M | EV70 | RollBend 200 - 1250 | EV/S-W4-W5 | EV W6-W80 | KEV W8-W24 | EV001-EV007 (...R3..S) | FWZ | ZDL | MST | EV Z4-10/90° | FEV W6-12 | SBW | EV W90-120 | EV/H W6-W50 | EV001/H-EV007/H | FWZ/H | ZDL/H | MST/H | VLMBN | VLMDN |
|-------------------------------------------------|----------------|--------|------|---------------------|------------|-----------|------------|------------------------|-----|-----|-----|--------------|-----------|-----|------------|-------------|-----------------|-------|-------|-------|-------|-------|
| Height [mm] EV ▶                                |                | 100    | 100  | 100                 | 100        | 100       | 100        | 100                    | 100 | 100 | 100 | 100          | 108       | 110 | 120        | 150         | 150             | 150   | 150   | 150   | 185   | 195   |
| OW.../K                                         | 120            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW210/S 280/K                                   | 140            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 160            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 180            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 200            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW.../S                                         | 220            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW210/S                                         | 240            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 260            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 280            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
| OW300/S                                         | 300            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 320            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 340            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 360            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 380            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 400            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |
|                                                 | 420            |        |      |                     |            |           |            |                        |     |     |     |              |           |     |            |             |                 |       |       |       |       |       |

A > 60 mm

A 45-60 mm

impossible

A = Removal height

## TruBend Series 7000

### Installation height 295 mm

| TruBend<br>7018<br>7036 | Height [mm] OW<br>↓ | EV70-M | RollBend 200 - 1250 | EV/S-W4-W5 | EV W6-W80 | KEV W8-W24 | EV001-EV007,R3.../S | EV Z4-10/90° | FEV W6-12 | EV W90-120 |
|-------------------------|---------------------|--------|---------------------|------------|-----------|------------|---------------------|--------------|-----------|------------|
| Height [mm] EV ▶        |                     | 100    | 100                 | 100        | 100       | 100        | 100                 | 100          | 108       | 120        |
| OW.../K                 | 120                 |        |                     |            |           |            |                     |              |           |            |
| OW210/S 280/K           | 140                 |        |                     |            |           |            |                     |              |           |            |
|                         | 160                 |        |                     |            |           |            |                     |              |           |            |
|                         | 180                 |        |                     |            |           |            |                     |              |           |            |
|                         | 200                 |        |                     |            |           |            |                     |              |           |            |
| OW.../S                 | 220                 |        |                     |            |           |            |                     |              |           |            |
| OW210/S                 | 240                 |        |                     |            |           |            |                     |              |           |            |

A > 30 mm A 15-30 mm impossible

A = Removal height

## TruBend Series 8000

### Installation height

TruBend 8230 up to 8600

|                                                  | Standard | Option 1 | Option 2 |
|--------------------------------------------------|----------|----------|----------|
|                                                  |          |          |          |
| Throat depth                                     | 420 mm   | 420 mm   | 620 mm   |
| Stroke                                           | 300 mm   | 500 mm   | 700 mm   |
| Usable Installation height<br>TRUMPF tool system | 475 mm   | 675 mm   | 875 mm   |
| Lower tool displacement                          |          |          |          |

Attention: folding only possible with OW210/S H=240 and OW215/K or folding tool H=150 (minimum opening = 175 mm)

TruBend 8800 and 8010

|                                                  | Standard | Option 1 |
|--------------------------------------------------|----------|----------|
|                                                  |          |          |
| Throat depth                                     | 420 mm   | 620 mm   |
| Stroke                                           | 500 mm   | 700 mm   |
| Usable Installation height<br>TRUMPF tool system | 675 mm   | 875 mm   |
| Lower tool displacement                          |          |          |



You can find many variants of our high-quality TRUMPF tools on the following pages.

## Explanation of symbols



Max. load



Folding



Material, tensile strength



Weight



Final processing working surface  
hardened and ground



Max. box height



Vertically exchangeable (Safety-Click)



Minimum side length  
at the maximum sheet thickness



Minimum Z-dimension  
at max. sheet thickness



Technical information

### Dies with bore holes for folding tools



Bore holes available (from 25 mm)

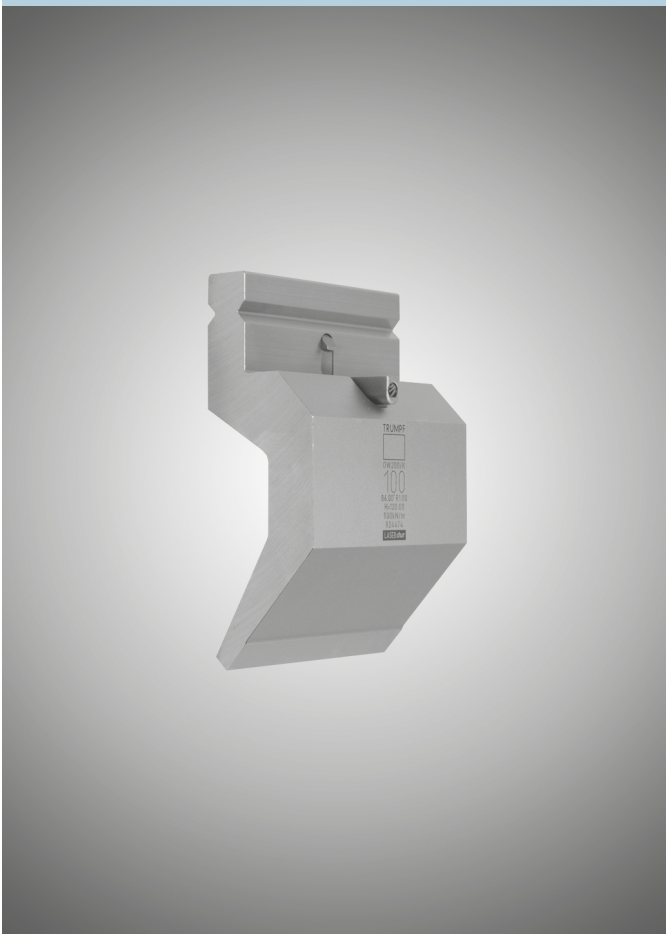


Bore hole possible  
(ordering price + 10% surcharge)



# Punches up to H = 140 mm

## Punch



Delivery time: ex warehouse

|                  |          |         |
|------------------|----------|---------|
| OW200/K          | Radius:  | R1,0 mm |
|                  | Angle:   | 86°     |
|                  | Height:  | 120 mm  |
|                  | Mat. No. | Price   |
| <b>Var. B</b>    |          |         |
| 4050             | 0823788  | - EUR   |
| 3050             | 0823787  | - EUR   |
| 2550             | 0835174  | - EUR   |
| 2050             | 0823786  | - EUR   |
| 1250             | 0825696  | - EUR   |
| 1050             | 0867268  | - EUR   |
| <b>Var. A</b>    |          |         |
| 2050             | 0823783  | - EUR   |
| 1250             | 0825695  | - EUR   |
| 1050             | 1576196  | - EUR   |
| 550              | 1601819  | - EUR   |
| <b>Block 250</b> |          |         |
| 250              | 0825692  | - EUR   |
| <b>Single</b>    |          |         |
| 500              | 0823781  | - EUR   |
| 300              | 0823780  | - EUR   |
| 200              | 0823779  | - EUR   |
| 100              | 0824474  | - EUR   |
| Horn left 100    | 0824472  | - EUR   |
| Horn right 100   | 0824473  | - EUR   |
| 50               | 0824471  | - EUR   |
| 45               | 0824470  | - EUR   |
| 40               | 0824469  | - EUR   |
| 35               | 0824468  | - EUR   |
| 30               | 0824467  | - EUR   |
| 25               | 0824466  | - EUR   |
| 20               | 0838231  | - EUR   |
| 15               | 0838230  | - EUR   |
| 10               | 0838229  | - EUR   |

Lengths in [mm]

## Technical data



800 kN/m


42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>


29,3 kg/m



~60 HRC

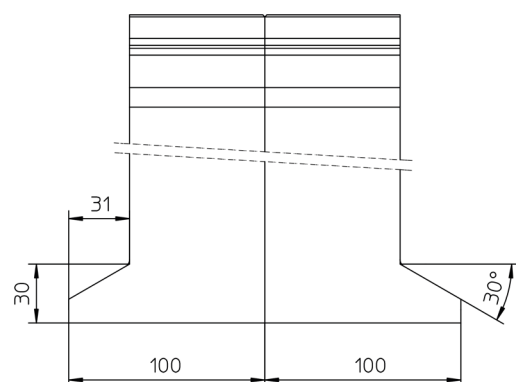


64 mm



10 mm - 300 mm

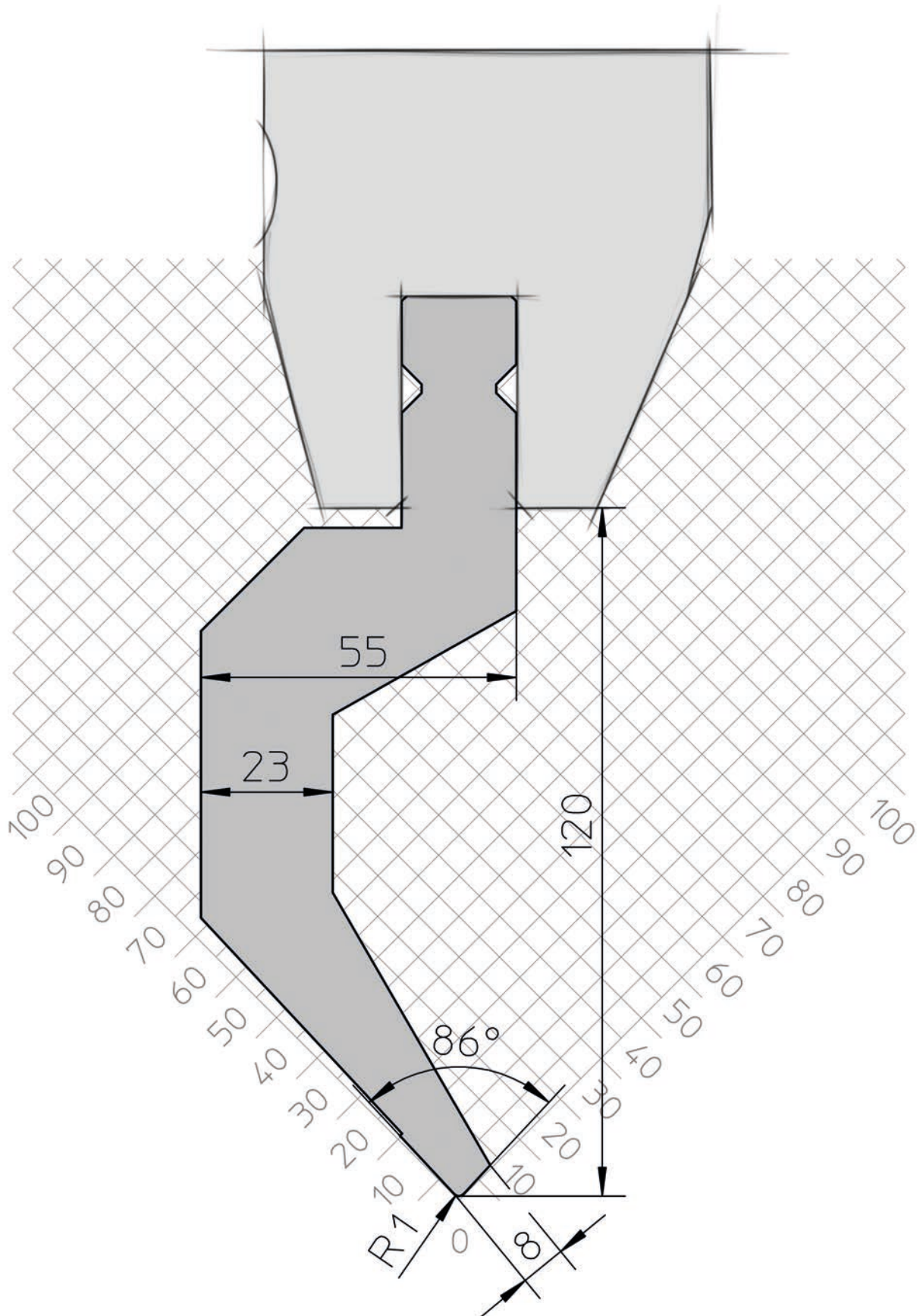
## Horn left / right





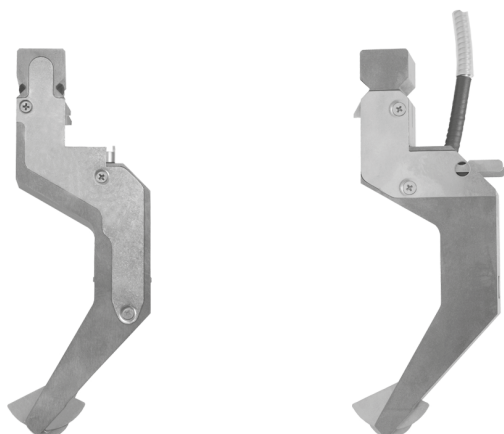
| More working radii |                      |                      |                    |                    |                    |                    |                      |                    |                    | Delivery time: 2 weeks             |
|--------------------|----------------------|----------------------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|--------------------|------------------------------------|
| OW200/K            | R0,5<br>86°<br>119,8 | R1,6<br>86°<br>119,2 | R2<br>86°<br>119,2 | R2,3<br>86°<br>119 | R2,5<br>86°<br>119 | R3<br>86°<br>118,7 | R3,2<br>86°<br>118,6 | R4<br>86°<br>118,3 | R6<br>86°<br>117,3 | Radius<br>Angle<br>Height<br>Price |
|                    | Mat. No.             | Mat. No.             | Mat. No.           | Mat. No.           | Mat. No.           | Mat. No.           | Mat. No.             | Mat. No.           | Mat. No.           |                                    |
| <b>Var. B</b>      |                      |                      |                    |                    |                    |                    |                      |                    |                    |                                    |
| 4050               | 0868289              | 0868295              | 0868300            | 0868312            | 0868319            | 0868324            | 0855080              | 0868407            | 0874746            | - EUR                              |
| 3050               | 0846063              | 0832791              | 0831478            | 0839065            | 0834501            | 0834516            | 0839066              | 0834532            | 0861678            | - EUR                              |
| 2550               | 0868288              | 0839388              | 0847141            | 0839383            | 0850076            | 0853797            | 0839380              | 0854438            | 0854878            | - EUR                              |
| 2050               | 0833552              | 0839386              | 0852195            | 0839384            | 0854453            | 0848442            | 0839381              | 0848454            | 0857213            | - EUR                              |
| 1250               | 0848070              | 0839387              | 0860478            | 0839385            | 0829977            | 0868325            | 0839382              | 0842424            | 0832068            | - EUR                              |
| 1050               | 1667589              | 1593107              | 1645116            | 1871095            | 1593190            | 1674887            | 1837176              | 1593195            | 1593198            | - EUR                              |
| <b>Var. A</b>      |                      |                      |                    |                    |                    |                    |                      |                    |                    |                                    |
| 2050               | 0868284              | 0868291              | 0868296            | 0868308            | 0868315            | 0868321            | 0868395              | 0868403            | 1205298            | - EUR                              |
| 1250               | 0868283              | 0868290              | 0866329            | 0868307            | 0868314            | 0868320            | 0868394              | 0868402            | 1568387            | - EUR                              |
| 1050               | 1667588              | 1871061              | 1871070            | 1576241            | 1871132            | 1666717            | 1837175              | 1753378            | 1990209            | - EUR                              |
| 550                | 1667587              | 1871050              | 1651650            | 1871094            | 1871131            | 1697998            | 1651651              | 1651652            | 1674935            | - EUR                              |
| <b>Block 250</b>   |                      |                      |                    |                    |                    |                    |                      |                    |                    |                                    |
| 250                | 0833575              | 0832790              | 0831477            | 0839331            | 0829963            | 0834515            | 0839282              | 0834531            | 0832066            | - EUR                              |
| <b>Single</b>      |                      |                      |                    |                    |                    |                    |                      |                    |                    |                                    |
| 500                | 0833562              | 0832777              | 0827213            | 0839316            | 0829961            | 0827226            | 0839268              | 0827240            | 0832050            | - EUR                              |
| 300                | 0833561              | 0832776              | 0831471            | 0839315            | 0829960            | 0834506            | 0839267              | 0834521            | 0832049            | - EUR                              |
| 200                | 0833560              | 0832775              | 0827212            | 0839314            | 0829959            | 0827225            | 0839266              | 0827239            | 0832048            | - EUR                              |
| 100                | 0833569              | 0832784              | 0827218            | 0839323            | 0829973            | 0827234            | 0839275              | 0827243            | 0832057            | - EUR                              |
| Horn left 100      | 0833572              | 0832787              | 0831474            | 0839327            | 0829971            | 0834512            | 0839278              | 0834528            | 0832064            | - EUR                              |
| Horn right 100     | 0833573              | 0832788              | 0831475            | 0839329            | 0829972            | 0834513            | 0839279              | 0834529            | 0832065            | - EUR                              |
| 50                 | 0833568              | 0832783              | 0827217            | 0839322            | 0829970            | 0827233            | 0839274              | 0834525            | 0832056            | - EUR                              |
| 45                 | 0833567              | 0832782              | 0827216            | 0839321            | 0829969            | 0827232            | 0839273              | 0834524            | 0832055            | - EUR                              |
| 40                 | 0833566              | 0832781              | 0827215            | 0839320            | 0829968            | 0827231            | 0839272              | 0834523            | 0832054            | - EUR                              |
| 35                 | 0833565              | 0832780              | 0831473            | 0839319            | 0829967            | 0834508            | 0839271              | 0827242            | 0832053            | - EUR                              |
| 30                 | 0833564              | 0832779              | 0827214            | 0839318            | 0829966            | 0827230            | 0839270              | 0834522            | 0832052            | - EUR                              |
| 25                 | 0833563              | 0832778              | 0831472            | 0839317            | 0829964            | 0834507            | 0839269              | 0827241            | 0832051            | - EUR                              |
| 20                 | 1307796              | 1472577              | 1472595            | 1871098            | 1871135            | 0853796            | 1871152              | 1871211            | 1292586            | - EUR                              |
| 15                 | 1307795              | 1472576              | 1472593            | 1871097            | 1871134            | 0853794            | 1871151              | 1871160            | 1292585            | - EUR                              |
| 10                 | 1307794              | 1489520              | 1871092            | 1871096            | 1871133            | 0853793            | 1871140              | 1871159            | 1292584            | - EUR                              |

Lengths, radius and height in [mm]





## Sensor tool

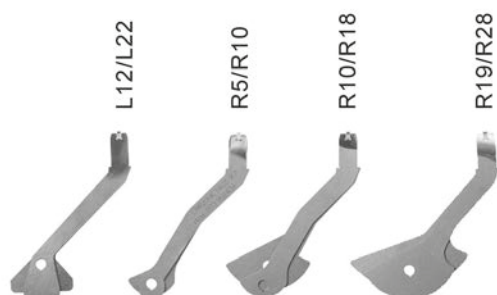


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW200/K</b>    | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 86°          |
|                       | <b>Height:</b>  | 120 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1858866         | - EUR        |
| Initial equipment     | 2040948         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0902753         | - EUR        |
| Initial equipment 2.G | 1273588         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L22                   | 0912267         | - EUR        |
| L12                   | 0912266         | - EUR        |
| R28                   | 0902666         | - EUR        |
| R19                   | 0904046         | - EUR        |
| R18                   | 0901125         | - EUR        |
| R10                   | 0901126         | - EUR        |
| R05                   | 0902436         | - EUR        |

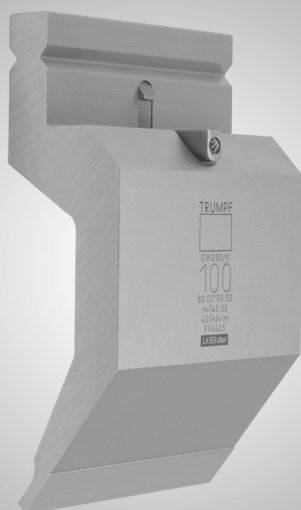
The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 200/K



| <b>R5/R10 *</b>  |             |           |           |          |
|------------------|-------------|-----------|-----------|----------|
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 90 - 95   | $\leq 2$ |
| St               | $\leq 2.5$  | $\leq 16$ | 90 - 105  | $\leq 2$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 90 - 105  | $\leq 2$ |
| <b>R10/R18 *</b> |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 20$ | 90 - 100  | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 24$ | 90 - 105  | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 90 - 105  | $\leq 4$ |
| <b>R19/R28</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 90 - 95   | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 90 - 100  | $\leq 6$ |
| Al               | $\leq 8.0$  | $\leq 70$ | 90 - 100  | $\leq 6$ |
| <b>L12/L22</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| St               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |

For bigger tool radii restricted angle measurements ranges are valid!



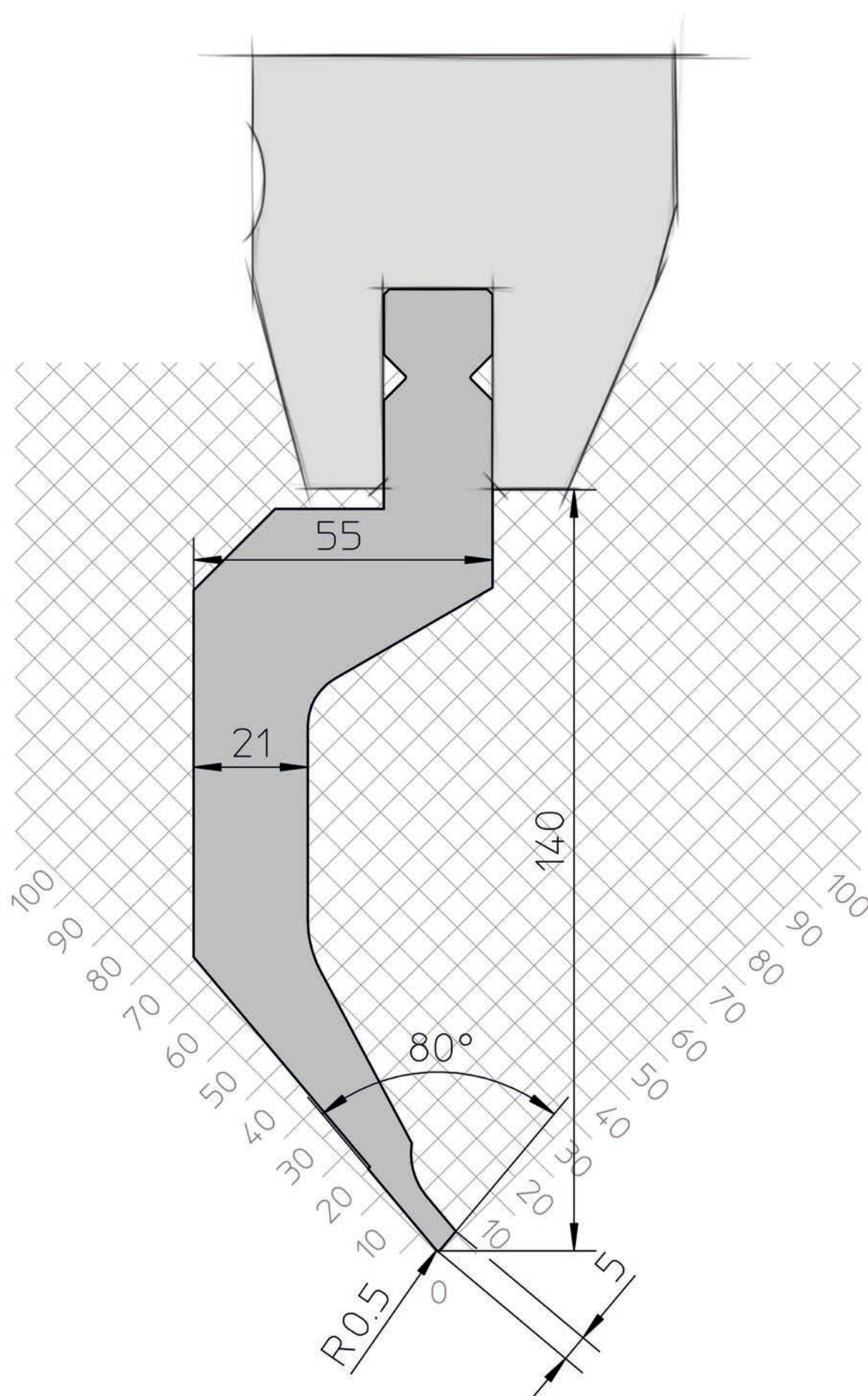
Delivery time: ex warehouse

| OW280/K        | Radius:  | R0,5 mm |
|----------------|----------|---------|
|                | Angle:   | 80°     |
|                | Height:  | 140 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 1203552  | - EUR   |
| 3050           | 1203551  | - EUR   |
| 2550           | 1203550  | - EUR   |
| 2050           | 1202371  | - EUR   |
| 1250           | 0994475  | - EUR   |
| 1050           | 1483114  | - EUR   |
| Var. A         |          |         |
| 2050           | 1203506  | - EUR   |
| 1250           | 1203505  | - EUR   |
| 1050           | 1607695  | - EUR   |
| 550            | 1587197  | - EUR   |
| Block 250      |          |         |
| 250            | 0994474  | - EUR   |
| Block 150      |          |         |
| 150            | 1207217  | - EUR   |
| Single         |          |         |
| 500            | 0994464  | - EUR   |
| 300            | 0994463  | - EUR   |
| 200            | 0994462  | - EUR   |
| 100            | 0994465  | - EUR   |
| Horn left 100  | 0994472  | - EUR   |
| Horn right 100 | 0994473  | - EUR   |
| 50             | 0994471  | - EUR   |
| 45             | 0994470  | - EUR   |
| 40             | 0994469  | - EUR   |
| 35             | 0994468  | - EUR   |
| 30             | 0994467  | - EUR   |
| 25             | 0994466  | - EUR   |
| 20             | 1465755  | - EUR   |
| 15             | 1465754  | - EUR   |
| 10             | 1293086  | - EUR   |

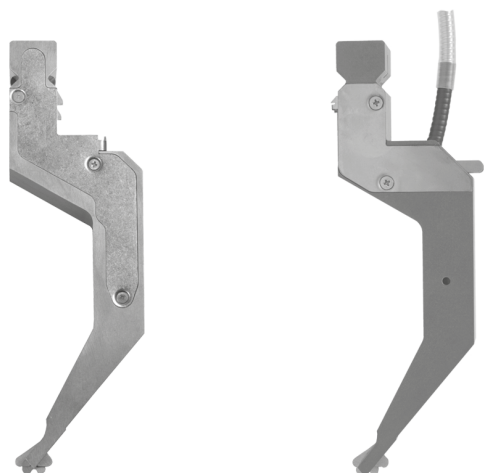
Lengths in [mm]

Technical drawing of a mechanical part. The drawing shows a cross-section of a part with a base width of 200 (two 100 segments). The left side has a vertical edge with a 30-degree chamfer. The right side has a vertical edge with a 30-degree chamfer. The top surface is flat. A dimension of 31 is indicated for the width of the top section. A dashed line indicates a 30-degree angle on the right side.





## Sensor tool

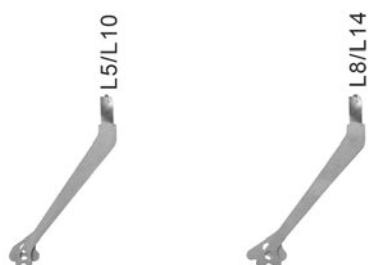


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW280/K</b>    | <b>Radius:</b>  | R0,5 mm      |
|                       | <b>Angle:</b>   | 80°          |
|                       | <b>Height:</b>  | 140 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1942753         | - EUR        |
| Initial equipment     | 2040912         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 1206823         | - EUR        |
| Initial equipment 2.G | 1273600         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L14                   | 1206832         | - EUR        |
| L10                   | 1206830         | - EUR        |
| L08                   | 1206831         | - EUR        |
| L05                   | 1206829         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 280/K



| <b>L5/L10 *</b> |            |           |          |            |
|-----------------|------------|-----------|----------|------------|
| Mat.            | s          | W         | $\alpha$ | R (OW)     |
| StSt            | $\leq 1.0$ | $\leq 8$  | 85 - 110 | $\leq 1.0$ |
| St              | $\leq 1.5$ | $\leq 10$ | 85 - 110 | $\leq 1.5$ |
| Al              | $\leq 1.5$ | $\leq 10$ | 85 - 110 | $\leq 1.5$ |
| <b>L8/L14 *</b> |            |           |          |            |
| Mat.            | s          | W         | $\alpha$ | R (OW)     |
| StSt            | $\leq 2.0$ | $\leq 12$ | 85 - 110 | $\leq 2.0$ |
| St              | $\leq 2.5$ | $\leq 16$ | 85 - 110 | $\leq 2.5$ |
| Al              | $\leq 2.5$ | $\leq 16$ | 85 - 110 | $\leq 2.5$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW201/K        | Radius:  | R1,0 mm |
|                | Angle:   | 86°     |
|                | Height:  | 120 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 0823918  | - EUR   |
| 3050           | 0823917  | - EUR   |
| 2550           | 0835179  | - EUR   |
| 2050           | 0823916  | - EUR   |
| 1250           | 0825685  | - EUR   |
| 1050           | 0867269  | - EUR   |
| Var. A         |          |         |
| 2050           | 0823912  | - EUR   |
| 1250           | 0825684  | - EUR   |
| 1050           | 1576193  | - EUR   |
| 550            | 1606659  | - EUR   |
| Block 250      |          |         |
| 250            | 0825683  | - EUR   |
| Single         |          |         |
| 500            | 0823908  | - EUR   |
| 300            | 0823907  | - EUR   |
| 200            | 0823905  | - EUR   |
| 100            | 0824548  | - EUR   |
| Horn left 100  | 0824542  | - EUR   |
| Horn right 100 | 0824545  | - EUR   |
| 50             | 0824539  | - EUR   |
| 45             | 0824537  | - EUR   |
| 40             | 0824534  | - EUR   |
| 35             | 0824531  | - EUR   |
| 30             | 0824525  | - EUR   |
| 25             | 0824523  | - EUR   |
| 20             | 0855800  | - EUR   |
| 15             | 0855799  | - EUR   |
| 10             | 0855798  | - EUR   |

Lengths in [mm]

Technical data



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



24,3 kg/m



~60 HRC

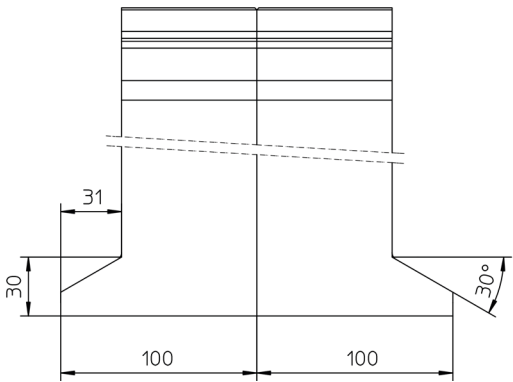


64 mm



10 mm - 500 mm

Horn left / right

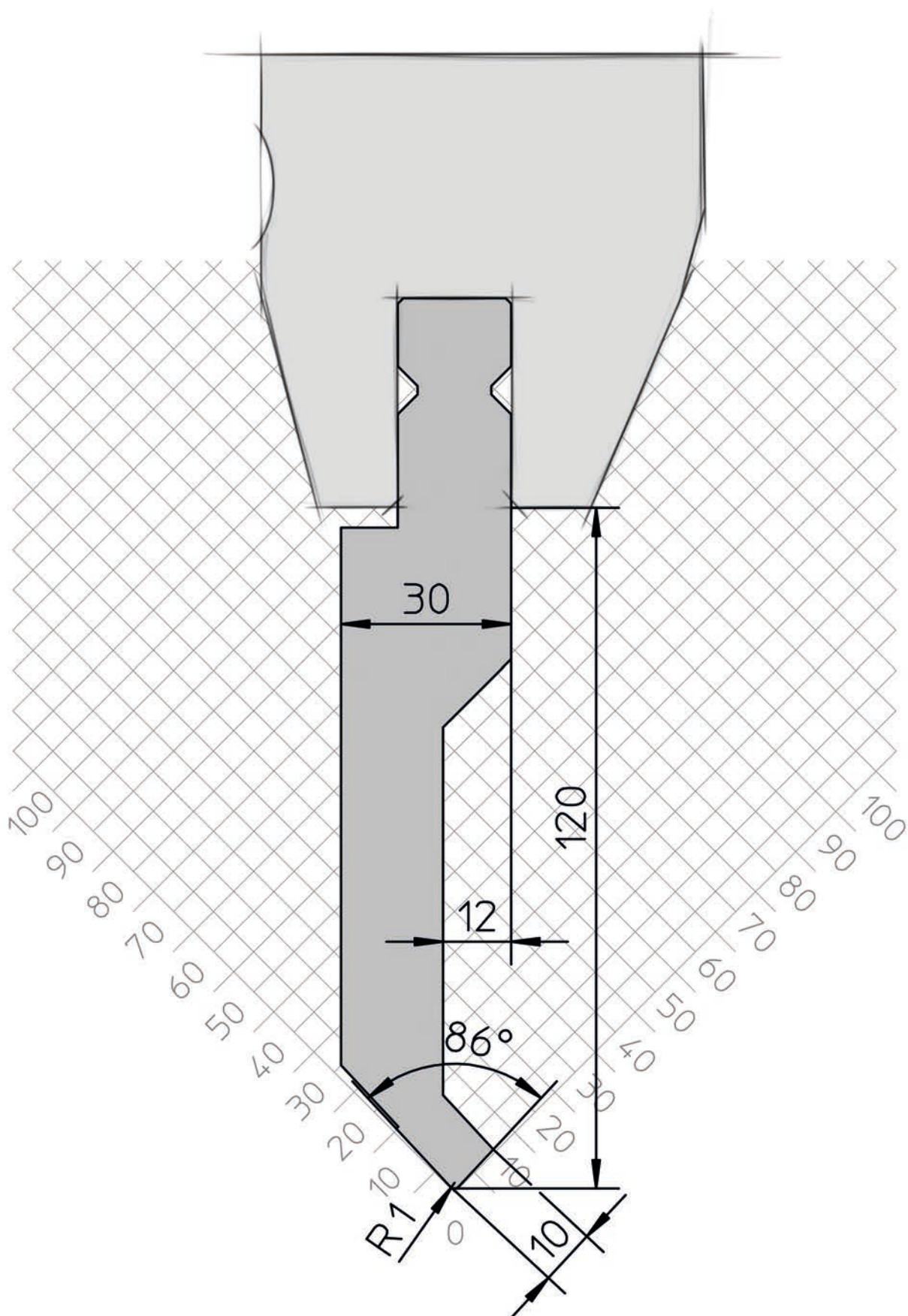




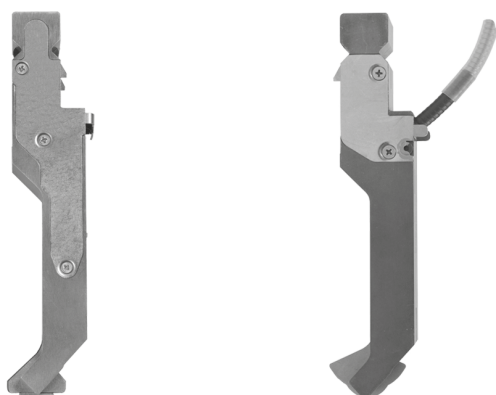
| More working radii |          |          |          |          |          |          |          |          | Delivery time: 2 weeks    |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|---------------------------|
| OW201/K            | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | Radius<br>Angle<br>Height |
|                    | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      |                           |
|                    | 119,8    | 119,4    | 119,2    | 119      | 119      | 118,8    | 118,6    | 118,2    |                           |
|                    | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                     |
| <b>Var. B</b>      |          |          |          |          |          |          |          |          |                           |
| 4050               | 0868497  | 0868656  | 0826169  | 0868679  | 0868688  | 0868697  | 0868711  | 0868719  | - EUR                     |
| 3050               | 0846122  | 0839398  | 0826168  | 0839402  | 0859508  | 0831479  | 0839406  | 0859510  | - EUR                     |
| 2550               | 0868496  | 0839397  | 0868660  | 0839401  | 0868687  | 0859662  | 0839405  | 0868718  | - EUR                     |
| 2050               | 0868495  | 0839396  | 0826167  | 0839400  | 0868686  | 0850134  | 0839404  | 0868717  | - EUR                     |
| 1250               | 0868494  | 0839395  | 0826166  | 0839399  | 0868685  | 0831153  | 0839403  | 0848067  | - EUR                     |
| 1050               | 1871251  | 1827392  | 1679400  | 1871265  | 1871284  | 1871313  | 1871319  | 1871347  | - EUR                     |
| <b>Var. A</b>      |          |          |          |          |          |          |          |          |                           |
| 2050               | 0868490  | 0868652  | 0826163  | 0868675  | 0868681  | 0868693  | 0868707  | 0868713  | - EUR                     |
| 1250               | 0868489  | 0868651  | 0826162  | 0868674  | 0868680  | 0868692  | 0868706  | 0868712  | - EUR                     |
| 1050               | 1576195  | 1827391  | 1871260  | 1871267  | 1871283  | 1871312  | 1871318  | 1871346  | - EUR                     |
| 550                | 1859495  | 1827360  | 1871259  | 1871266  | 1871282  | 1751926  | 1871317  | 1871345  | - EUR                     |
| <b>Block 250</b>   |          |          |          |          |          |          |          |          |                           |
| 250                | 0846121  | 0840090  | 0826161  | 0840114  | 0859507  | 0831151  | 0840137  | 0848066  | - EUR                     |
| <b>Single</b>      |          |          |          |          |          |          |          |          |                           |
| 500                | 0846113  | 0840077  | 0826150  | 0840100  | 0845638  | 0831139  | 0840124  | 0848055  | - EUR                     |
| 300                | 0846112  | 0840076  | 0826149  | 0840099  | 0859493  | 0831138  | 0840123  | 0848054  | - EUR                     |
| 200                | 0846111  | 0840075  | 0826148  | 0840098  | 0859492  | 0831137  | 0840122  | 0834059  | - EUR                     |
| 100                | 0831586  | 0840086  | 0826159  | 0840112  | 0845639  | 0831148  | 0840135  | 0834061  | - EUR                     |
| Horn left 100      | 0846118  | 0840087  | 0826157  | 0840103  | 0859504  | 0831149  | 0840127  | 0848063  | - EUR                     |
| Horn right 100     | 0846119  | 0840088  | 0826158  | 0840104  | 0859505  | 0831150  | 0840128  | 0848064  | - EUR                     |
| 50                 | 0846110  | 0840085  | 0826156  | 0840111  | 0859499  | 0831147  | 0840134  | 0834060  | - EUR                     |
| 45                 | 0846109  | 0840084  | 0826155  | 0840109  | 0859498  | 0831146  | 0840133  | 0848060  | - EUR                     |
| 40                 | 0846108  | 0840083  | 0826154  | 0840108  | 0859497  | 0831145  | 0840132  | 0848059  | - EUR                     |
| 35                 | 0846107  | 0840082  | 0826153  | 0840107  | 0859496  | 0831144  | 0840131  | 0848058  | - EUR                     |
| 30                 | 0846106  | 0840081  | 0826152  | 0840106  | 0859495  | 0831143  | 0840130  | 0848057  | - EUR                     |
| 25                 | 0846105  | 0840080  | 0826151  | 0840105  | 0859494  | 0831142  | 0840129  | 0848056  | - EUR                     |
| 20                 | 1739016  | 1827395  | 1865852  | 1871270  | 1871287  | 1871316  | 1871342  | 1871350  | - EUR                     |
| 15                 | 1739015  | 1827394  | 1865851  | 1871269  | 1871286  | 1871315  | 1871341  | 1871349  | - EUR                     |
| 10                 | 1739014  | 1827393  | 1865830  | 1871268  | 1871285  | 1871314  | 1871320  | 1871348  | - EUR                     |

Lengths, radius and height in [mm]





## Sensor tool

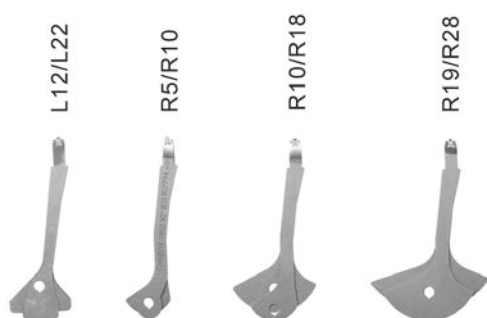


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW201/K</b>    | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 86°          |
|                       | <b>Height:</b>  | 120 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 2040404         | - EUR        |
| Initial equipment     | 2040989         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0902755         | - EUR        |
| Initial equipment 2.G | 1273590         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L22                   | 0912271         | - EUR        |
| L12                   | 0912270         | - EUR        |
| R28                   | 0907795         | - EUR        |
| R19                   | 0907796         | - EUR        |
| R18                   | 0907792         | - EUR        |
| R10                   | 0907793         | - EUR        |
| R05                   | 0907794         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 201/K



| <b>R5/R10 *</b>  |             |           |           |          |
|------------------|-------------|-----------|-----------|----------|
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 90 - 95   | $\leq 2$ |
| St               | $\leq 2.5$  | $\leq 16$ | 90 - 105  | $\leq 2$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 90 - 105  | $\leq 2$ |
| <b>R10/R18 *</b> |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 20$ | 90 - 100  | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 24$ | 90 - 105  | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 90 - 105  | $\leq 4$ |
| <b>R19/R28</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 90 - 95   | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 90 - 100  | $\leq 6$ |
| Al               | $\leq 8.0$  | $\leq 70$ | 90 - 100  | $\leq 6$ |
| <b>L12/L22</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| St               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW202/K        | Radius:  | R1,0 mm |
|                | Angle:   | 28°     |
|                | Height:  | 120 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 0823827  | - EUR   |
| 3050           | 0823826  | - EUR   |
| 2550           | 0835183  | - EUR   |
| 2050           | 0823825  | - EUR   |
| 1250           | 0825705  | - EUR   |
| 1050           | 0867272  | - EUR   |
| Var. A         |          |         |
| 2050           | 0823822  | - EUR   |
| 1250           | 0825704  | - EUR   |
| 1050           | 1579145  | - EUR   |
| 550            | 1606730  | - EUR   |
| Block 250      |          |         |
| 250            | 0825658  | - EUR   |
| Single         |          |         |
| 500            | 0823820  | - EUR   |
| 300            | 0823819  | - EUR   |
| 200            | 0823818  | - EUR   |
| 100            | 0824603  | - EUR   |
| Horn left 100  | 0824599  | - EUR   |
| Horn right 100 | 0824601  | - EUR   |
| 50             | 0824598  | - EUR   |
| 45             | 0824597  | - EUR   |
| 40             | 0824596  | - EUR   |
| 35             | 0824595  | - EUR   |
| 30             | 0824594  | - EUR   |
| 25             | 0824593  | - EUR   |
| 20             | 0827316  | - EUR   |
| 15             | 0838227  | - EUR   |
| 10             | 0838228  | - EUR   |

Lengths in [mm]

Technical data



600 kN/m



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



19,5 kg/m



~60 HRC

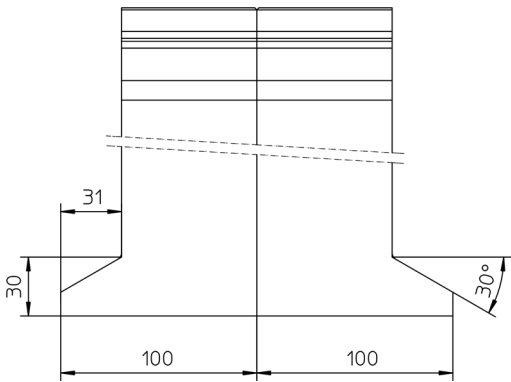


64 mm



10 mm - 500 mm

Horn left / right

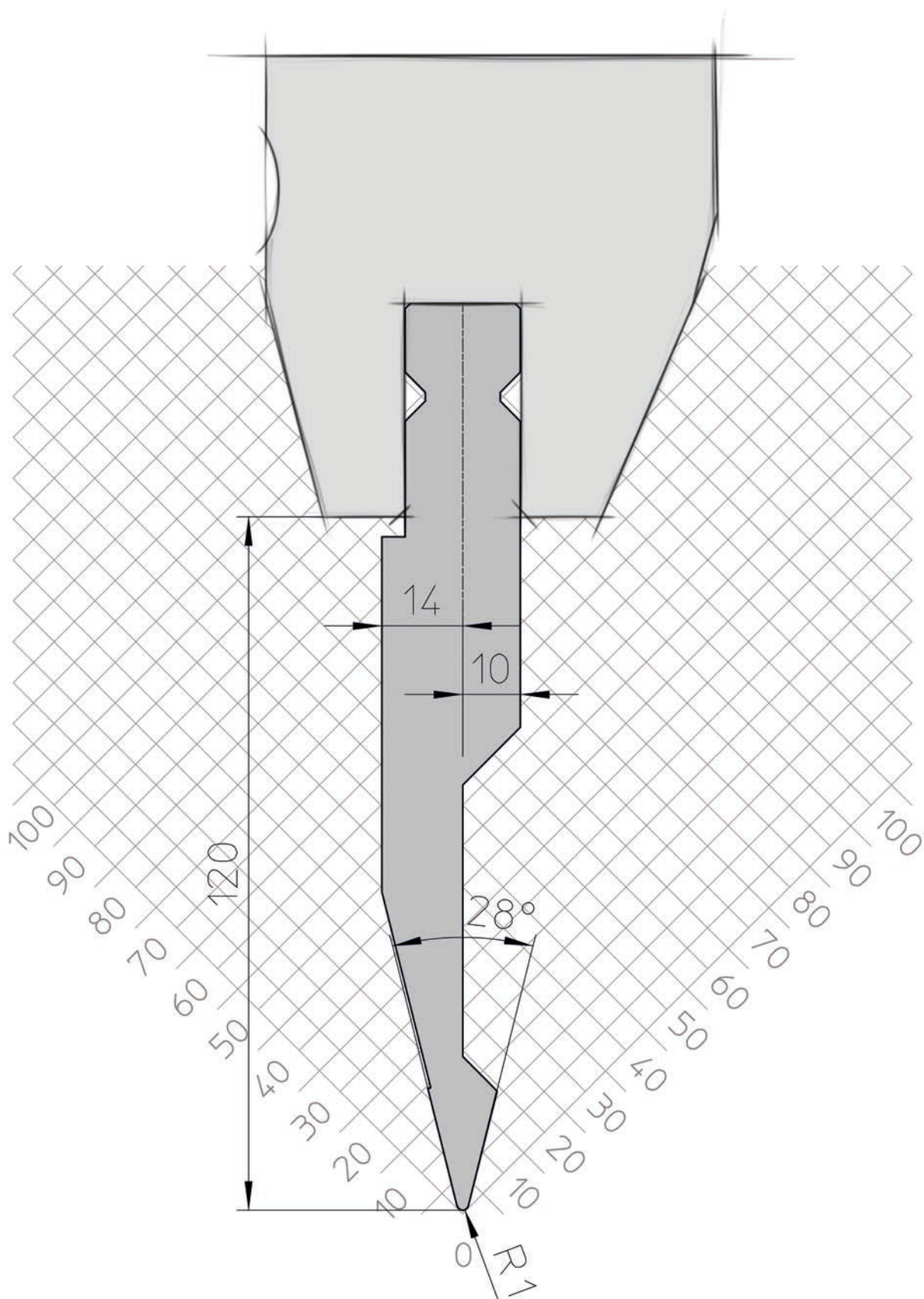




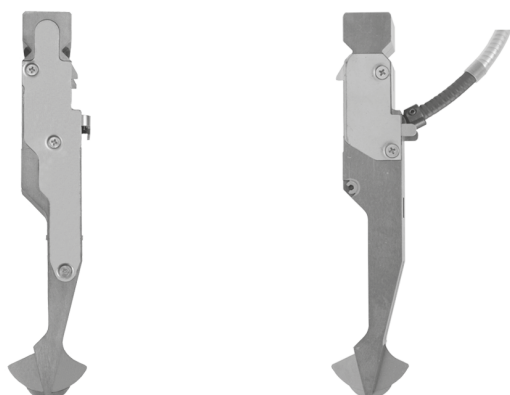
| More working radii |                      |                      |                  |                      |                      |                    |                      |                    | Delivery time: 2 weeks    |
|--------------------|----------------------|----------------------|------------------|----------------------|----------------------|--------------------|----------------------|--------------------|---------------------------|
| OW202/K            | R0,5<br>28°<br>119,8 | R1,6<br>28°<br>117,2 | R2<br>28°<br>116 | R2,3<br>28°<br>115,1 | R2,5<br>28°<br>114,4 | R3<br>28°<br>112,8 | R3,2<br>28°<br>112,7 | R4<br>28°<br>109,8 | Radius<br>Angle<br>Height |
|                    | Mat. No.             | Mat. No.             | Mat. No.         | Mat. No.             | Mat. No.             | Mat. No.           | Mat. No.             | Mat. No.           | Price                     |
| <b>Var. B</b>      |                      |                      |                  |                      |                      |                    |                      |                    |                           |
| 4050               | 0868521              | 0868551              | 0868558          | 0868564              | 0868631              | 0868639            | 0868644              | 0868650            | - EUR                     |
| 3050               | 0829264              | 0839414              | 0848038          | 0839392              | 0859511              | 0868638            | 0839389              | 0840414            | - EUR                     |
| 2550               | 0868520              | 0839413              | 0868557          | 0837579              | 0856001              | 0868637            | 0837580              | 0856002            | - EUR                     |
| 2050               | 0866975              | 0839412              | 0848443          | 0839393              | 0827267              | 0832092            | 0839390              | 0842426            | - EUR                     |
| 1250               | 0839904              | 0839411              | 0841286          | 0839394              | 0831538              | 0850922            | 0839391              | 0848582            | - EUR                     |
| 1050               | 1648152              | 1593248              | 1673024          | 1777766              | 1593265              | 1624505            | 1871627              | 1593283            | - EUR                     |
| <b>Var. A</b>      |                      |                      |                  |                      |                      |                    |                      |                    |                           |
| 2050               | 0868516              | 0868547              | 0868553          | 0868560              | 0868627              | 0868633            | 0868640              | 0868646            | - EUR                     |
| 1250               | 0868515              | 0868546              | 0868552          | 0868559              | 0868626              | 0868632            | 0840008              | 0868645            | - EUR                     |
| 1050               | 1648151              | 1871508              | 1871592          | 1871597              | 1726409              | 1854721            | 1871626              | 1871630            | - EUR                     |
| 550                | 1648150              | 1871506              | 1651654          | 1871596              | 1863825              | 1672865            | 1651656              | 1651657            | - EUR                     |
| <b>Block 250</b>   |                      |                      |                  |                      |                      |                    |                      |                    |                           |
| 250                | 0829262              | 0840067              | 0841285          | 0837836              | 0827266              | 0832091            | 0837892              | 0840413            | - EUR                     |
| <b>Single</b>      |                      |                      |                  |                      |                      |                    |                      |                    |                           |
| 500                | 0829249              | 0840054              | 0841274          | 0837823              | 0827253              | 0832078            | 0837879              | 0840400            | - EUR                     |
| 300                | 0829248              | 0840053              | 0841273          | 0837822              | 0827252              | 0832077            | 0837878              | 0840399            | - EUR                     |
| 200                | 0829247              | 0840052              | 0841272          | 0837821              | 0827251              | 0832076            | 0837877              | 0840398            | - EUR                     |
| 100                | 0829259              | 0840061              | 0841283          | 0837830              | 0827262              | 0832085            | 0837886              | 0840401            | - EUR                     |
| Horn left 100      | 0829257              | 0840064              | 0841281          | 0837833              | 0827263              | 0832088            | 0837889              | 0840410            | - EUR                     |
| Horn right 100     | 0829258              | 0840065              | 0841282          | 0837834              | 0827264              | 0832089            | 0837890              | 0840411            | - EUR                     |
| 50                 | 0829256              | 0840060              | 0841280          | 0837829              | 0827261              | 0832084            | 0837885              | 0840407            | - EUR                     |
| 45                 | 0829255              | 0840059              | 0841279          | 0837828              | 0827260              | 0832083            | 0837884              | 0840406            | - EUR                     |
| 40                 | 0829254              | 0840058              | 0841278          | 0837827              | 0827259              | 0832082            | 0837883              | 0840405            | - EUR                     |
| 35                 | 0829253              | 0840057              | 0841277          | 0837826              | 0827258              | 0832081            | 0837882              | 0840404            | - EUR                     |
| 30                 | 0829252              | 0840056              | 0841276          | 0837825              | 0827257              | 0832080            | 0837881              | 0840403            | - EUR                     |
| 25                 | 0829251              | 0840055              | 0841275          | 0837824              | 0827256              | 0832079            | 0837880              | 0840402            | - EUR                     |
| 20                 | 1307813              | 1389671              | 0863282          | 1871595              | 1871621              | 0853722            | 1871625              | 1809416            | - EUR                     |
| 15                 | 1307811              | 1389655              | 1809375          | 1871594              | 1871600              | 0853721            | 1871624              | 1809415            | - EUR                     |
| 10                 | 0865760              | 1389652              | 1809374          | 1871593              | 1871599              | 0853720            | 1871623              | 1809414            | - EUR                     |

Lengths, radius and height in [mm]





## Sensor tool

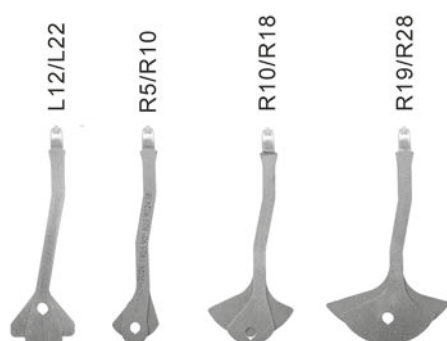


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW202/K</b>    | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 28°          |
|                       | <b>Height:</b>  | 120 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1837174         | - EUR        |
| Initial equipment     | 2040986         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0902757         | - EUR        |
| Initial equipment 2.G | 1273592         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L22                   | 0912273         | - EUR        |
| L12                   | 0912272         | - EUR        |
| R28                   | 0902668         | - EUR        |
| R19                   | 0904178         | - EUR        |
| R18                   | 0901129         | - EUR        |
| R10                   | 0901130         | - EUR        |
| R05                   | 0902438         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 202/K



| <b>R5/R10 *</b>  |             |           |           |          |
|------------------|-------------|-----------|-----------|----------|
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 75 - 95   | $\leq 2$ |
| St               | $\leq 2.5$  | $\leq 16$ | 75 - 105  | $\leq 2$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 75 - 105  | $\leq 2$ |
| <b>R10/R18 *</b> |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 20$ | 80 - 100  | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 24$ | 80 - 105  | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 80 - 105  | $\leq 4$ |
| <b>R19/R28</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 85 - 95   | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 85 - 100  | $\leq 6$ |
| Al               | $\leq 8.0$  | $\leq 70$ | 85 - 100  | $\leq 6$ |
| <b>L12/L22</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| St               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



| Delivery time: ex warehouse |          |         |
|-----------------------------|----------|---------|
| OW203/K                     | Radius:  | R4,0 mm |
|                             | Angle:   | 60°     |
|                             | Height:  | 120 mm  |
|                             | Mat. No. | Price   |
| Var. B                      |          |         |
| 4050                        | 0825385  | - EUR   |
| 3050                        | 0825384  | - EUR   |
| 2550                        | 0835187  | - EUR   |
| 2050                        | 0825383  | - EUR   |
| 1250                        | 0825711  | - EUR   |
| 1050                        | 0867273  | - EUR   |
| Var. A                      |          |         |
| 2050                        | 0825380  | - EUR   |
| 1250                        | 0825710  | - EUR   |
| 1050                        | 1606787  | - EUR   |
| 550                         | 1606786  | - EUR   |
| Block 250                   |          |         |
| 250                         | 0825709  | - EUR   |
| Single                      |          |         |
| 500                         | 0825378  | - EUR   |
| 300                         | 0825377  | - EUR   |
| 200                         | 0825376  | - EUR   |
| 100                         | 0825394  | - EUR   |
| Horn left 100               | 0825392  | - EUR   |
| Horn right 100              | 0825393  | - EUR   |
| 50                          | 0825391  | - EUR   |
| 45                          | 0825390  | - EUR   |
| 40                          | 0825389  | - EUR   |
| 35                          | 0825388  | - EUR   |
| 30                          | 0825387  | - EUR   |
| 25                          | 0825386  | - EUR   |
| 20                          | 1247241  | - EUR   |
| 15                          | 1465780  | - EUR   |
| 10                          | 1465757  | - EUR   |

Lengths in [mm]

Technical data



1800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



23,7 kg/m



~60 HRC

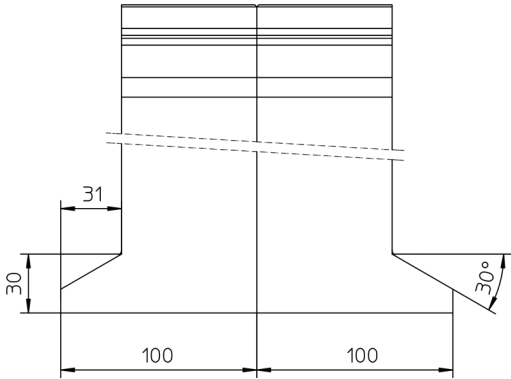


64 mm



10 mm - 500 mm

Horn left / right

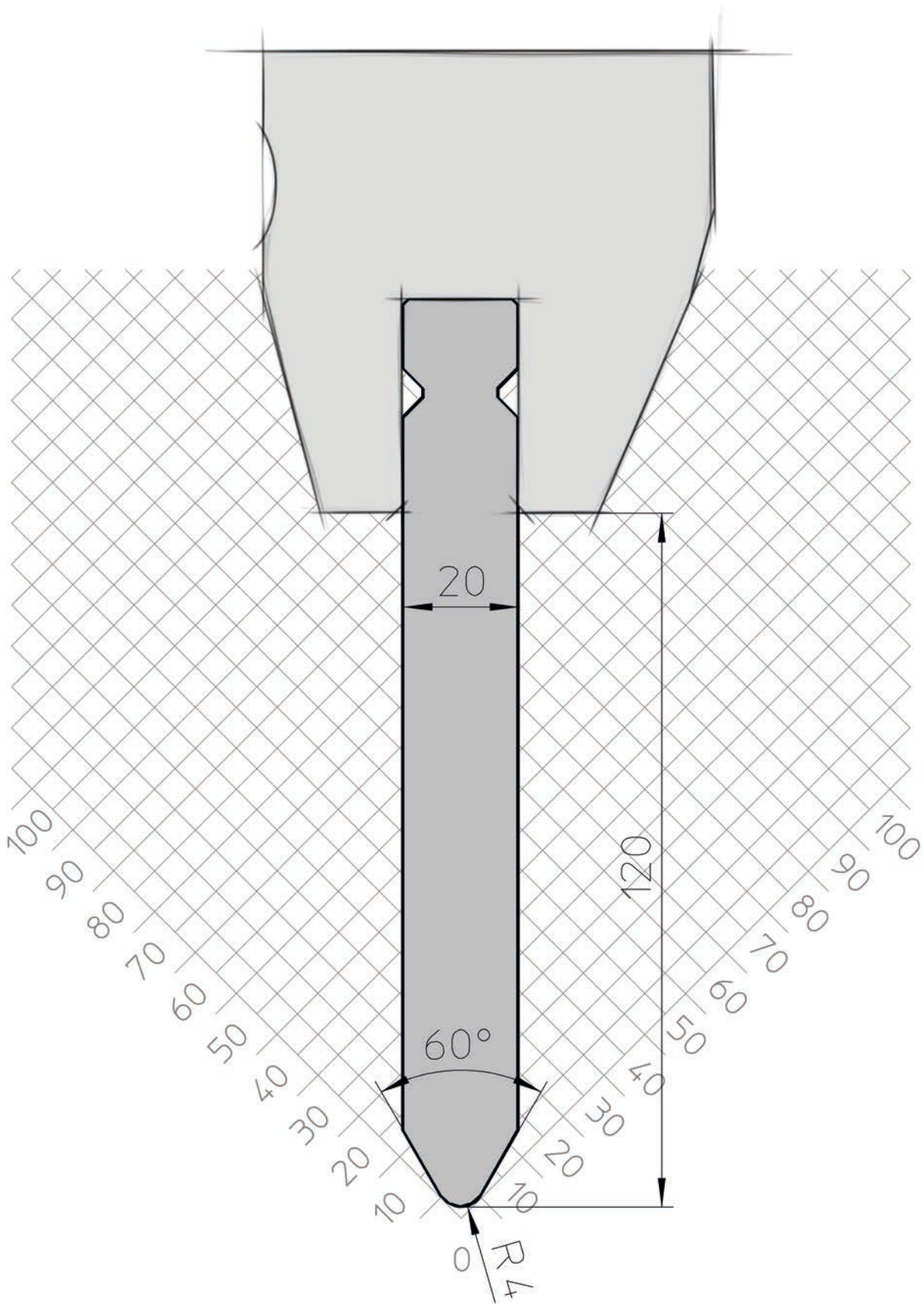




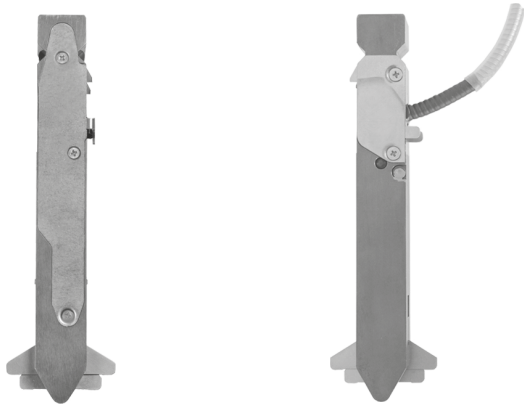


| More working radii |                    |                      |                    |                      |                    |                    |                       |                  |                   | Delivery time: 2 weeks             |
|--------------------|--------------------|----------------------|--------------------|----------------------|--------------------|--------------------|-----------------------|------------------|-------------------|------------------------------------|
| OW203/K            | R2<br>60°<br>119,8 | R2,5<br>60°<br>119,8 | R3<br>60°<br>119,8 | R4,7<br>60°<br>119,1 | R5<br>60°<br>118,8 | R6<br>60°<br>117,6 | R6,35<br>60°<br>117,2 | R8<br>60°<br>120 | R10<br>10°<br>120 | Radius<br>Angle<br>Height<br>Price |
|                    | Mat. No.           | Mat. No.             | Mat. No.           | Mat. No.             | Mat. No.           | Mat. No.           | Mat. No.              | Mat. No.         | Mat. No.          |                                    |
| <b>Var. B</b>      |                    |                      |                    |                      |                    |                    |                       |                  |                   |                                    |
| 4050               | 0868931            | 0868937              | 0869041            | 0853703              | 0869057            | 0826203            | 0845500               | 1325283          | 1867943           | - EUR                              |
| 3050               | 0868930            | 0854737              | 0847913            | 0869048              | 0862440            | 0826202            | 0865305               | 0837201          | 1358925           | - EUR                              |
| 2550               | 0868929            | 0855748              | 0869040            | 0837582              | 0869056            | 0847142            | 0852372               | 0849425          | 1445059           | - EUR                              |
| 2050               | 0867449            | 0865844              | 0840544            | 0869047              | 0855020            | 0826201            | 0842342               | 0841596          | 1207083           | - EUR                              |
| 1250               | 0842337            | 0846233              | 0839343            | 0858961              | 0864668            | 0826200            | 0869064               | 0831201          | 1246653           | - EUR                              |
| 1050               | 1657208            | 1871654              | 1699901            | 1871661              | 1701319            | 1727938            | 1835008               | 1737265          | 1667217           | - EUR                              |
| <b>Var. A</b>      |                    |                      |                    |                      |                    |                    |                       |                  |                   |                                    |
| 2050               | 0868925            | 0868933              | 0869036            | 0869043              | 0869052            | 0826197            | 0869060               | 2048330          | 2047825           | - EUR                              |
| 1250               | 0868924            | 0868932              | 0859049            | 0869042              | 0869051            | 0826196            | 0869059               | 0863783          | 2047824           | - EUR                              |
| 1050               | 1871653            | 1871656              | 1699900            | 1871663              | 1871665            | 1871668            | 1871669               | 2048329          | 2047823           | - EUR                              |
| 550                | 1871652            | 1871655              | 1699899            | 1871662              | 1871664            | 1772708            | 1651709               | 1773012          | 2047822           | - EUR                              |
| <b>Block 250</b>   |                    |                      |                    |                      |                    |                    |                       |                  |                   |                                    |
| 250                | 0842336            | 0846234              | 0839357            | 0837915              | 0855019            | 0826195            | 0842515               | 0831193          | 0993996           | - EUR                              |
| <b>Single</b>      |                    |                      |                    |                      |                    |                    |                       |                  |                   |                                    |
| 500                | 0842322            | 0846225              | 0839349            | 0837902              | 0850704            | 0826182            | 0842504               | 0831180          | 0866627           | - EUR                              |
| 300                | 0842321            | 0846224              | 0839348            | 0837901              | 0855007            | 0826181            | 0842503               | 0831179          | 0994030           | - EUR                              |
| 200                | 0842320            | 0846223              | 0839347            | 0837900              | 0855006            | 0826180            | 0842502               | 0831178          | 0872099           | - EUR                              |
| 100                | 0842323            | 0839863              | 0830319            | 0837909              | 0850705            | 0826193            | 0842512               | 0831187          | 0852371           | - EUR                              |
| Horn left 100      | 0842333            | 0846238              | 0839354            | 0837912              | 0855016            | 0826191            | 0842513               | 0831190          | 1206989           | - EUR                              |
| Horn right 100     | 0842334            | 0846239              | 0839355            | 0837913              | 0855017            | 0826192            | 0842514               | 0831191          | 1207080           | - EUR                              |
| 50                 | 0842329            | 0846231              | 0830990            | 0837908              | 0855013            | 0826190            | 0842511               | 0831186          | 0866628           | - EUR                              |
| 45                 | 0842328            | 0846230              | 0839351            | 0837907              | 0855012            | 0826188            | 0842510               | 0831185          | 0993994           | - EUR                              |
| 40                 | 0842327            | 0846229              | 0830989            | 0837906              | 0855011            | 0826187            | 0842509               | 0831184          | 0993993           | - EUR                              |
| 35                 | 0842326            | 0846228              | 0830988            | 0837905              | 0855010            | 0826186            | 0842508               | 0831183          | 0993992           | - EUR                              |
| 30                 | 0842325            | 0846227              | 0830987            | 0837904              | 0855009            | 0826184            | 0842507               | 0831182          | 0993991           | - EUR                              |
| 25                 | 0842324            | 0846226              | 0839350            | 0837903              | 0855008            | 0826183            | 0842506               | 0831181          | 0993990           | - EUR                              |
| 20                 | 1980615            | 1969911              | 0872719            | 1980715              | 1980718            | 1980733            | 1980740               | 2048328          | 2047821           | - EUR                              |
| 15                 | 1455102            | 1969840              | 0872718            | 1980714              | 1980717            | 1980732            | 1980739               | 2048327          | 2047760           | - EUR                              |
| 10                 | 1980614            | 1969839              | 0872717            | 1980713              | 1980716            | 1980731            | 1980737               | 2048326          | 2047759           | - EUR                              |

Lengths, radius and height in [mm]



Sensor tool

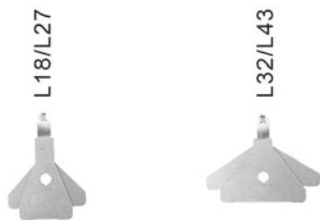


Delivery time: ex warehouse

|                        |                 |              |
|------------------------|-----------------|--------------|
| <b>ACB<br/>OW203/K</b> | <b>Radius:</b>  | R4,0 mm      |
|                        | <b>Angle:</b>   | 60°          |
|                        | <b>Height:</b>  | 120 mm       |
|                        | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>    |                 |              |
| Sensor tool 25         | 1858869         | - EUR        |
| Initial equipment      | 2040985         | - EUR        |
| <b>ACB</b>             |                 |              |
| Sensor tool 25         | 0902759         | - EUR        |
| Initial equipment 2.G  | 1273594         | - EUR        |
| <b>Sensor disk</b>     |                 |              |
| L43                    | 0908872         | - EUR        |
| L32                    | 0908873         | - EUR        |
| L27                    | 0919840         | - EUR        |
| L18                    | 0919842         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

Sensor disks OW 203/K



| <b>L18/L27 *</b> |        |      |          |        |
|------------------|--------|------|----------|--------|
| Mat.             | s      | W    | α        | R (OW) |
| StSt             | ≤ 4.0  | ≤ 24 | 85 - 105 | ≤ 4    |
| St               | ≤ 4.0  | ≤ 24 | 85 - 105 | ≤ 4    |
| Al               | ≤ 4.0  | ≤ 24 | 85 - 105 | ≤ 4    |
| <b>L32/L43 *</b> |        |      |          |        |
| Mat.             | s      | W    | α        | R (OW) |
| StSt             | ≤ 6.0  | ≤ 40 | 85 - 95  | ≤ 6    |
| St               | ≤ 10.0 | ≤ 70 | 85 - 95  | ≤ 6    |
| Al               | ≤ 10.0 | ≤ 70 | 85 - 95  | ≤ 6    |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW204/K        | Radius:  | R1,0 mm |
|                | Angle:   | 86°     |
|                | Height:  | 120 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 1751096  | - EUR   |
| 3050           | 1751094  | - EUR   |
| 2550           | 1751092  | - EUR   |
| 2050           | 1751090  | - EUR   |
| 1250           | 1751088  | - EUR   |
| 1050           | 1751086  | - EUR   |
| Var. A         |          |         |
| 2050           | 1751089  | - EUR   |
| 1250           | 1751087  | - EUR   |
| 1050           | 1751085  | - EUR   |
| 550            | 1751084  | - EUR   |
| Block 250      |          |         |
| 250            | 1751081  | - EUR   |
| Single         |          |         |
| 500            | 1751083  | - EUR   |
| 300            | 1751082  | - EUR   |
| 200            | 1751080  | - EUR   |
| 100            | 1751077  | - EUR   |
| Horn left 100  | 1751078  | - EUR   |
| Horn right 100 | 1751079  | - EUR   |
| 50             | 1751076  | - EUR   |
| 45             | 1751075  | - EUR   |
| 40             | 1751074  | - EUR   |
| 35             | 1751073  | - EUR   |
| 30             | 1751072  | - EUR   |
| 25             | 1751071  | - EUR   |
| 20             | 1751030  | - EUR   |
| 15             | 1751029  | - EUR   |
| 10             | 1751028  | - EUR   |

Lengths in [mm]

Technical data



400 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



19,8 kg/m



~60 HRC

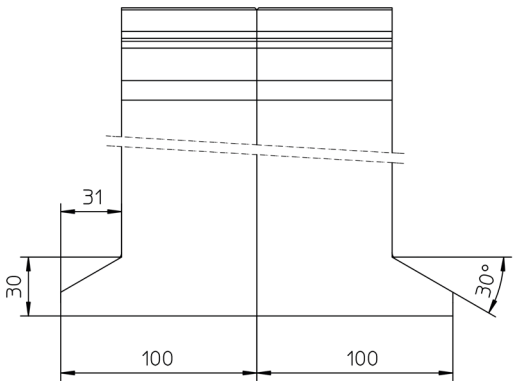


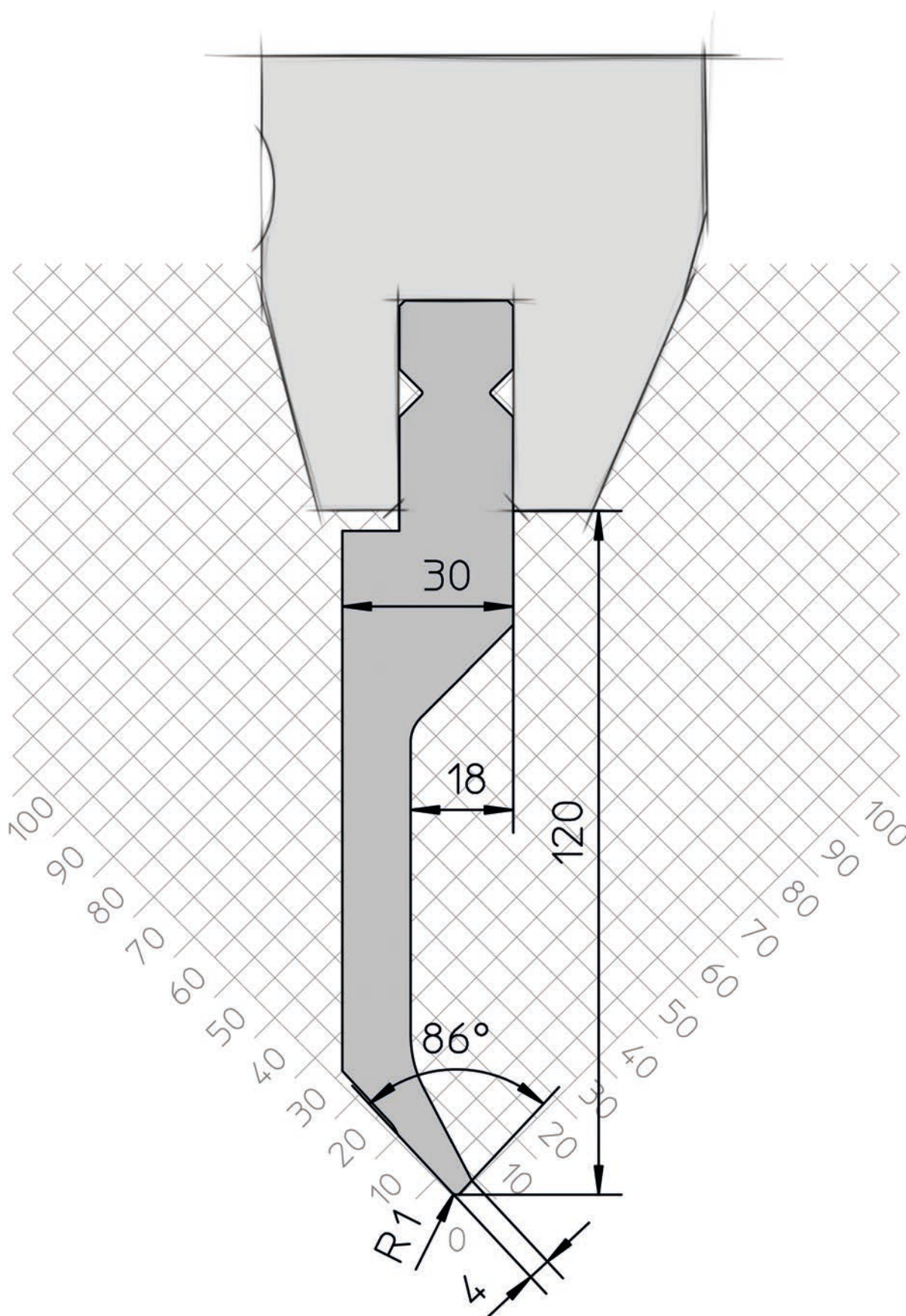
64 mm



10 mm - 500 mm

Horn left / right









## Punch OW210/S H=140mm



Delivery time: ex warehouse

| OW210            | Radius:  | R1,0 mm |
|------------------|----------|---------|
|                  | Angle:   | 28°     |
|                  | Height:  | 140 mm  |
|                  | Mat. No. | Price   |
| <b>Var. B</b>    |          |         |
| 4050             | 0824010  | - EUR   |
| 3050             | 0824008  | - EUR   |
| 2550             | 0835193  | - EUR   |
| 2050             | 0824006  | - EUR   |
| 1250             | 0825720  | - EUR   |
| 1050             | 0867279  | - EUR   |
| <b>Var. A</b>    |          |         |
| 2050             | 0824000  | - EUR   |
| 1250             | 0825719  | - EUR   |
| 1050             | 1576244  | - EUR   |
| 550              | 1607489  | - EUR   |
| <b>Block 250</b> |          |         |
| 250              | 0825717  | - EUR   |
| <b>Single</b>    |          |         |
| 500              | 0823995  | - EUR   |
| 300              | 0823993  | - EUR   |
| 200              | 0823991  | - EUR   |
| 100              | 0824653  | - EUR   |
| Horn left 100    | 0824651  | - EUR   |
| Horn right 100   | 0824652  | - EUR   |
| 50               | 0824650  | - EUR   |
| 45               | 0824649  | - EUR   |
| 40               | 0824648  | - EUR   |
| 35               | 0824647  | - EUR   |
| 30               | 0824646  | - EUR   |
| 25               | 0824641  | - EUR   |
| 20               | 0836712  | - EUR   |
| 15               | 0836711  | - EUR   |
| 10               | 0836710  | - EUR   |

Lengths in [mm]

## Technical data



400 kN/m



1300 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

28,2 kg/m



~60 HRC

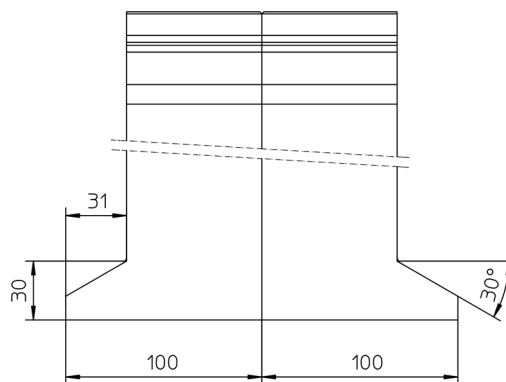


78 mm



25 mm - 300 mm

## Horn left / right

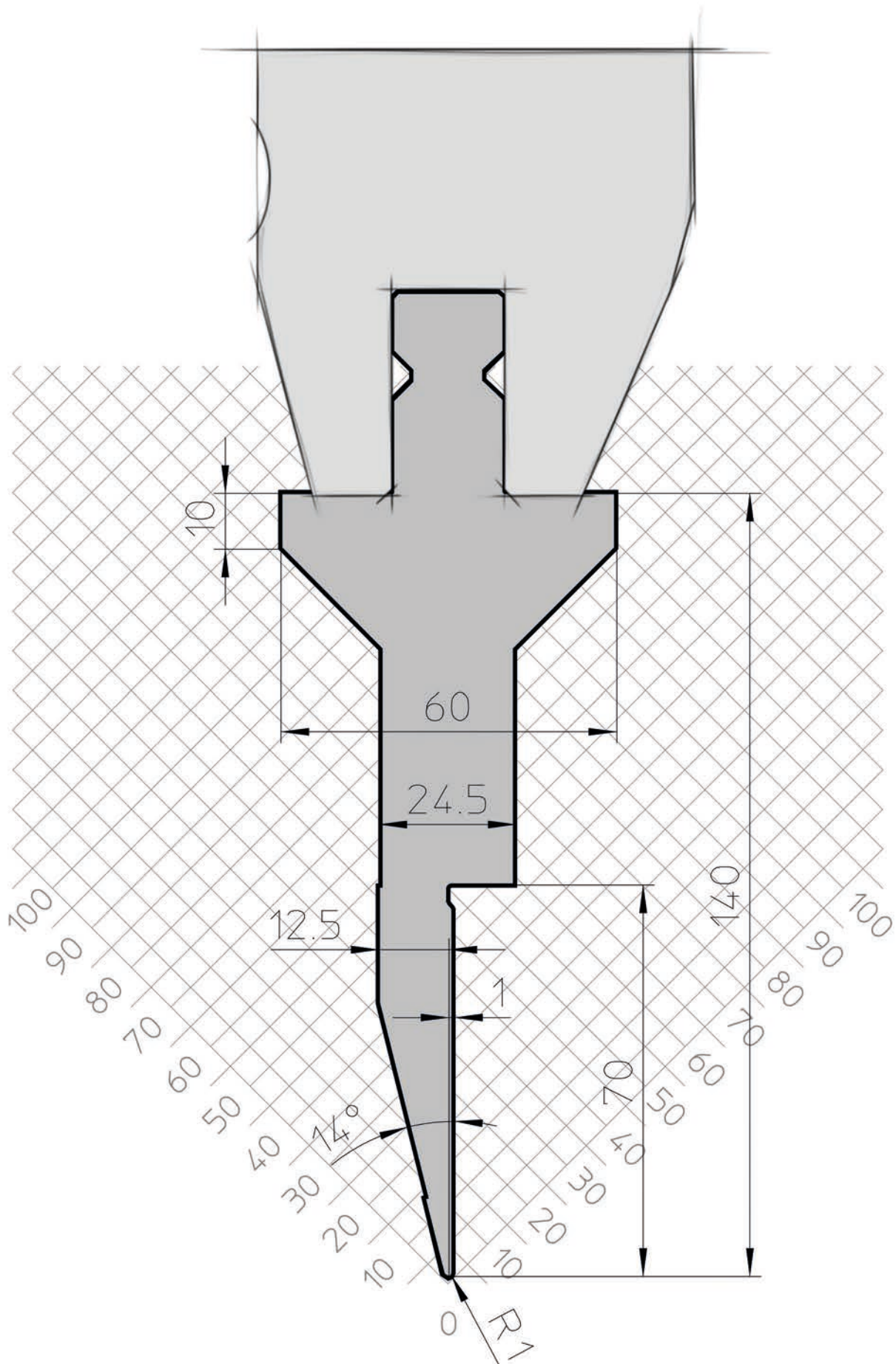


| More working radii |       |  | Delivery time: 2 weeks |
|--------------------|-------|--|------------------------|
| OW210              | R0,5  |  | Radius                 |
|                    | 28°   |  | Angle                  |
|                    | 139,8 |  | Height                 |

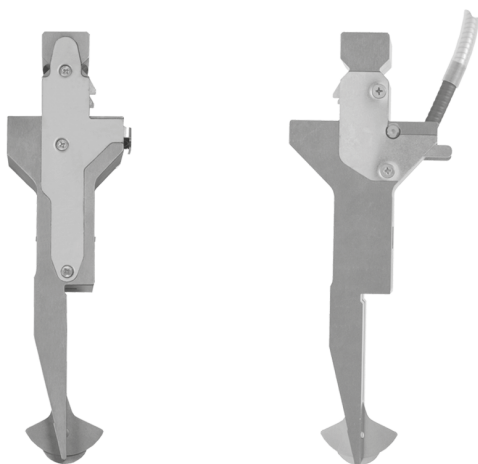
|                  | Mat. No. | Price |
|------------------|----------|-------|
| <b>Var. B</b>    |          |       |
| 4050             | 0869246  | - EUR |
| 3050             | 0869245  | - EUR |
| 2550             | 0869244  | - EUR |
| 2050             | 0833957  | - EUR |
| 1250             | 0853694  | - EUR |
| 1050             | 1674937  | - EUR |
| <b>Var. A</b>    |          |       |
| 2050             | 0863333  | - EUR |
| 1250             | 0869240  | - EUR |
| 1050             | 1576245  | - EUR |
| 550              | 1727645  | - EUR |
| <b>Block 250</b> |          |       |
| 250              | 0833991  | - EUR |
| <b>Single</b>    |          |       |
| 500              | 0833978  | - EUR |
| 300              | 0833977  | - EUR |
| 200              | 0833976  | - EUR |
| 100              | 0833985  | - EUR |
| Horn left 100    | 0833988  | - EUR |
| Horn right 100   | 0833989  | - EUR |
| 50               | 0833984  | - EUR |
| 45               | 0833983  | - EUR |
| 40               | 0833982  | - EUR |
| 35               | 0833981  | - EUR |
| 30               | 0833980  | - EUR |
| 25               | 0833979  | - EUR |
| 20               | 1498688  | - EUR |
| 15               | 1498687  | - EUR |
| 10               | 1451033  | - EUR |

Lengths, radius and height in [mm]





## Sensor tool

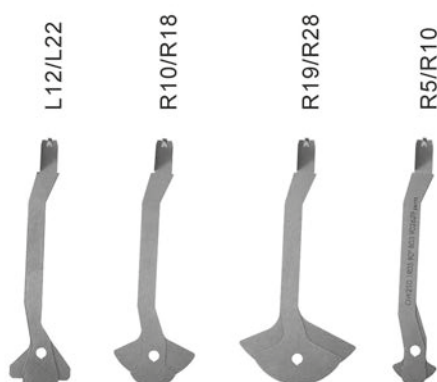


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW210</b>      | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 28°          |
|                       | <b>Height:</b>  | 140 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1858870         | - EUR        |
| Initial equipment     | 2040984         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0902761         | - EUR        |
| Initial equipment 2.G | 1273597         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L22                   | 0912277         | - EUR        |
| L12                   | 0912276         | - EUR        |
| R28                   | 0902700         | - EUR        |
| R19                   | 0904180         | - EUR        |
| R18                   | 0902627         | - EUR        |
| R10                   | 0902628         | - EUR        |
| R05                   | 0902629         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 210 - H140



| <b>R10/R18 *</b> |             |           |           |          |
|------------------|-------------|-----------|-----------|----------|
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 20$ | 80 - 100  | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 24$ | 80 - 105  | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 80 - 105  | $\leq 4$ |
| <b>R19/R28</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 85 - 95   | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 85 - 100  | $\leq 6$ |
| Al               | $\leq 8.0$  | $\leq 70$ | 85 - 100  | $\leq 6$ |
| <b>R5/R10 *</b>  |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 75 - 95   | $\leq 2$ |
| St               | $\leq 2.5$  | $\leq 16$ | 75 - 105  | $\leq 2$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 75 - 105  | $\leq 2$ |
| <b>L12/L22</b>   |             |           |           |          |
| Mat.             | s           | W         | $\alpha$  | R (OW)   |
| StSt             | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| St               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |
| Al               | $\leq 2.5$  | $\leq 16$ | 105 - 135 | $\leq 3$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punches up to H = 300 mm

Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW200/S        | Radius:  | R1,0 mm |
|                | Angle:   | 86°     |
|                | Height:  | 220 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 0823806  | - EUR   |
| 3050           | 0823805  | - EUR   |
| 2550           | 0835176  | - EUR   |
| 2050           | 0823804  | - EUR   |
| 1250           | 0825699  | - EUR   |
| 1050           | 0867275  | - EUR   |
| Var. A         |          |         |
| 2050           | 0823801  | - EUR   |
| 1250           | 0825698  | - EUR   |
| 1050           | 1606802  | - EUR   |
| 550            | 1606801  | - EUR   |
| Block 250      |          |         |
| 250            | 0825697  | - EUR   |
| Single         |          |         |
| 300            | 0823799  | - EUR   |
| 200            | 0823798  | - EUR   |
| 100            | 0824549  | - EUR   |
| Horn left 100  | 0824481  | - EUR   |
| Horn right 100 | 0824482  | - EUR   |
| 50             | 0824480  | - EUR   |
| 45             | 0824479  | - EUR   |
| 40             | 0824478  | - EUR   |
| 35             | 0824477  | - EUR   |
| 30             | 0824476  | - EUR   |
| 25             | 0824475  | - EUR   |
| 20             | 0848757  | - EUR   |
| 15             | 0837118  | - EUR   |
| 10             | 0837117  | - EUR   |

Lengths in [mm]

Technical data



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



66,6 kg/m



~60 HRC

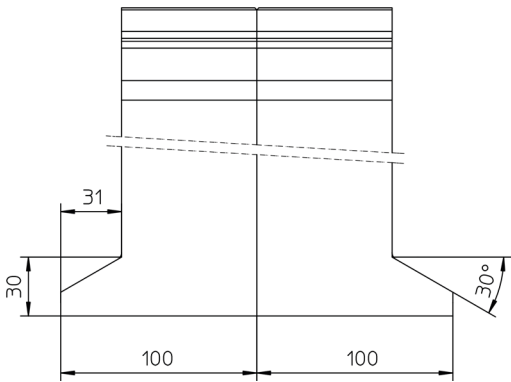


132 mm



25 mm - 200 mm

Horn left / right





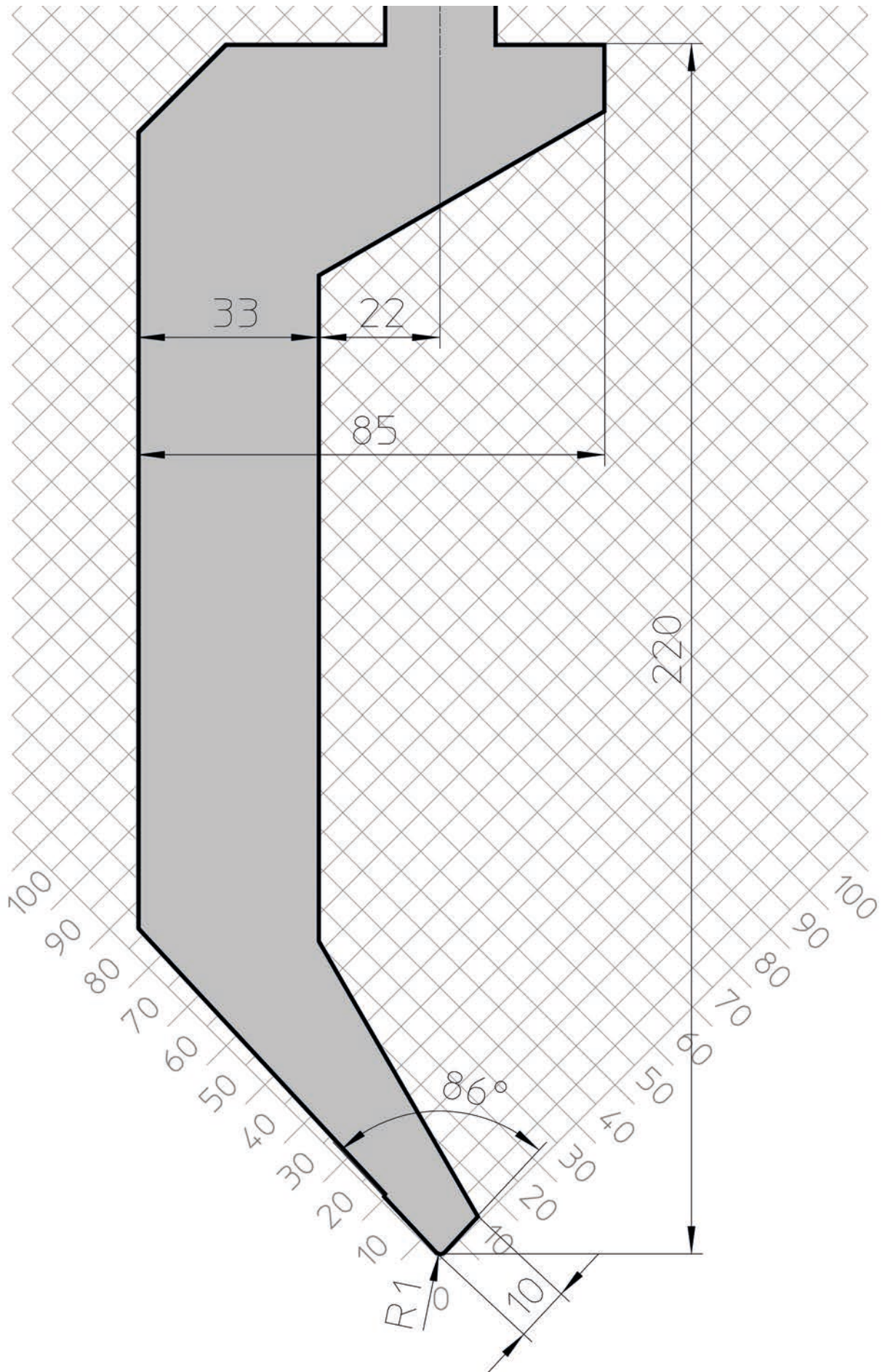
| More working radii |          |          |          |          |          |          |          |          |          | Delivery time: 2 weeks |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------|
| OW200/S            | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | R6       | Radius                 |
|                    | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | Angle                  |
|                    | 219,8    | 219,2    | 219,2    | 219      | 218,7    | 218,5    | 218,5    | 218,3    | 217,5    | Height                 |
|                    | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                  |
| <b>Var. B</b>      |          |          |          |          |          |          |          |          |          |                        |
| 4050               | 0868415  | 0828060  | 0868437  | 0868470  | 0828090  | 0836797  | 0868485  | 0825969  | 1297183  | - EUR                  |
| 3050               | 0868414  | 0828059  | 0857218  | 0868469  | 0828089  | 0847467  | 0865362  | 0825968  | 0851946  | - EUR                  |
| 2550               | 0865720  | 0868418  | 0851010  | 0868468  | 0868473  | 0849135  | 0868484  | 0862529  | 0862530  | - EUR                  |
| 2050               | 0868413  | 0828058  | 0840936  | 0868467  | 0828088  | 0830780  | 0857669  | 0825967  | 0854879  | - EUR                  |
| 1250               | 0835648  | 0828054  | 0841064  | 0868466  | 0828087  | 0850119  | 0868483  | 0825966  | 0843708  | - EUR                  |
| 1050               | 1871735  | 1871752  | 1871756  | 1871782  | 1871832  | 1581018  | 1871835  | 1718990  | 1871840  | - EUR                  |
| <b>Var. A</b>      |          |          |          |          |          |          |          |          |          |                        |
| 2050               | 0868409  | 0828051  | 0868435  | 0868462  | 0828084  | 0835901  | 0868479  | 0825963  | 1766321  | - EUR                  |
| 1250               | 0868408  | 0828050  | 0868434  | 0868461  | 0828083  | 0868474  | 0868478  | 0825962  | 0859122  | - EUR                  |
| 1050               | 1871737  | 1871753  | 1871757  | 1871783  | 1871833  | 1581017  | 1871836  | 1871838  | 1871851  | - EUR                  |
| 550                | 1871736  | 1871754  | 1871758  | 1871784  | 1871834  | 1581016  | 1871837  | 1871839  | 1700246  | - EUR                  |
| <b>Block 250</b>   |          |          |          |          |          |          |          |          |          |                        |
| 250                | 0835646  | 0828048  | 0840958  | 0868460  | 0828081  | 0830778  | 0857854  | 0825960  | 0843707  | - EUR                  |
| <b>Single</b>      |          |          |          |          |          |          |          |          |          |                        |
| 300                | 0835634  | 0828036  | 0840947  | 0868447  | 0828069  | 0830766  | 0857822  | 0825958  | 0837052  | - EUR                  |
| 200                | 0835633  | 0828035  | 0840946  | 0868446  | 0828068  | 0830765  | 0857821  | 0825957  | 0843695  | - EUR                  |
| 100                | 0835644  | 0828045  | 0840956  | 0868448  | 0828078  | 0830773  | 0857823  | 0825979  | 0837053  | - EUR                  |
| Horn left 100      | 0835642  | 0828046  | 0840954  | 0868457  | 0828079  | 0830776  | 0857849  | 0825977  | 0843704  | - EUR                  |
| Horn right 100     | 0835643  | 0828047  | 0840955  | 0868458  | 0828080  | 0830777  | 0857851  | 0825978  | 0843705  | - EUR                  |
| 50                 | 0835641  | 0828044  | 0840953  | 0868454  | 0828077  | 0830772  | 0857829  | 0825976  | 0843703  | - EUR                  |
| 45                 | 0835640  | 0828043  | 0840952  | 0868453  | 0828076  | 0830771  | 0857828  | 0825975  | 0843702  | - EUR                  |
| 40                 | 0835639  | 0828042  | 0840951  | 0868452  | 0828075  | 0830770  | 0857827  | 0825974  | 0843701  | - EUR                  |
| 35                 | 0835638  | 0828041  | 0840950  | 0868451  | 0828074  | 0830769  | 0857826  | 0825973  | 0843700  | - EUR                  |
| 30                 | 0835637  | 0828040  | 0840949  | 0868450  | 0828073  | 0830768  | 0857825  | 0825971  | 0843699  | - EUR                  |
| 25                 | 0835636  | 0828039  | 0840948  | 0868449  | 0828072  | 0830767  | 0857824  | 0825970  | 0843698  | - EUR                  |
| 20                 | 1474043  | 1984753  | 1616395  | 1984760  | 1984778  | 1604677  | 1984816  | 1799107  | 1563090  | - EUR                  |
| 15                 | 1347156  | 1984752  | 1616394  | 1984759  | 1984777  | 1604676  | 1984815  | 1799106  | 1563059  | - EUR                  |
| 10                 | 1347155  | 1984751  | 1984756  | 1984758  | 1984776  | 1604675  | 1984814  | 1799105  | 1563058  | - EUR                  |

Lengths, radius and height in [mm]

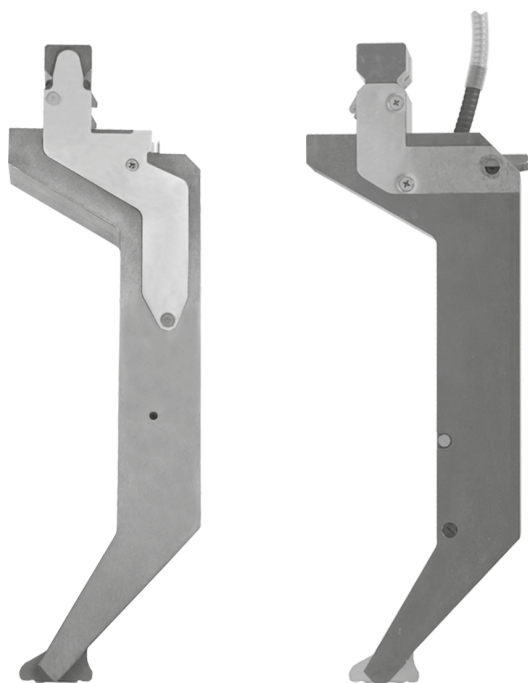
| More working radii         |          |          |          |          |          |          |          |          |          | Delivery time: 3 weeks |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------|
| OW200/S                    | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | R6       | Radius                 |
|                            | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | Angle                  |
|                            | 219,8    | 219,2    | 219,2    | 219      | 218,7    | 218,5    | 218,5    | 218,3    | 217,5    | Height                 |
|                            | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                  |
| <b>ACB Wireless</b>        |          |          |          |          |          |          |          |          |          |                        |
| Sensor tool 25             | 2289882  | 2298105  | 2285738  | 2298110  | 2298238  | 2298263  | 2298268  | 2298274  | 2284790  | - EUR                  |
| Initial equip-<br>ment     | 2289883  | 2298106  | 2285739  | 2298151  | 2298239  | 2298264  | 2298269  | 2298275  | 2284881  | - EUR                  |
| <b>ACB</b>                 |          |          |          |          |          |          |          |          |          |                        |
| Sensor tool 25             | 1285225  | 0987320  | 0933594  | 1602978  | 0957801  | 0951078  | 1271775  | 0951079  | 0951081  | - EUR                  |
| Initial equip-<br>ment 2.G | 1408977  | 1397876  | 1282571  | 1602990  | 1354761  | 1282572  | 1598742  | 1282573  | 1464788  | - EUR                  |
| <b>Sensor disk</b>         |          |          |          |          |          |          |          |          |          |                        |
| L43                        | 0949405  | 0949405  | 0949405  | 0949405  | 0949405  | 0949405  | 0949405  | 1410933  | 1410933  | - EUR                  |
| L33                        | 0949404  | 0949404  | 0949404  | 0949404  | 0949404  | 0949404  | 0949404  | 1410931  | 1410931  | - EUR                  |
| L27                        | 0949406  | 0949406  | 0949406  | 0949406  | 0949406  | 0949406  | 0949406  | 0949406  | 0949406  | - EUR                  |
| L17                        | 0949402  | 0949402  | 0949402  | 0949402  | 0949402  | 0949402  | 0949402  | 0949402  | 0949402  | - EUR                  |
| L15                        | 0949407  | 0949407  | 0949407  | 0949407  |          |          |          |          |          | - EUR                  |
| L09                        | 0949403  | 0949403  | 0949403  | 0949403  |          |          |          |          |          | - EUR                  |

Radius and height in [mm]





## Sensor tool

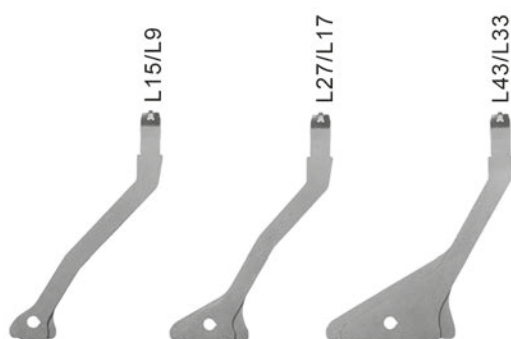


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW200/S</b>    | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 86°          |
|                       | <b>Height:</b>  | 220 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1873173         | - EUR        |
| Initial equipment     | 2040281         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0938411         | - EUR        |
| Initial equipment 2.G | 1273589         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L43                   | 0949405         | - EUR        |
| L33                   | 0949404         | - EUR        |
| L27                   | 0949406         | - EUR        |
| L17                   | 0949402         | - EUR        |
| L15                   | 0949407         | - EUR        |
| L09                   | 0949403         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 200/S



| <b>L15/L9 *</b>  |             |           |          |          |
|------------------|-------------|-----------|----------|----------|
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 2.0$  | $\leq 16$ | 90 - 105 | $\leq 2$ |
| St               | $\leq 2.0$  | $\leq 12$ | 90 - 135 | $\leq 2$ |
| Al               | $\leq 2.0$  | $\leq 12$ | 90 - 135 | $\leq 2$ |
| <b>L27/L17 *</b> |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 24$ | 90 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 30$ | 90 - 135 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 90 - 135 | $\leq 4$ |
| <b>L43/L33</b>   |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 90 - 135 | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 90 - 135 | $\leq 6$ |
| Al               | $\leq 10.0$ | $\leq 70$ | 90 - 135 | $\leq 6$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW300/S        | Radius:  | R1,0 mm |
|                | Angle:   | 86°     |
|                | Height:  | 300 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 1420642  | - EUR   |
| 3050           | 1420640  | - EUR   |
| 2550           | 1420638  | - EUR   |
| 2050           | 1420636  | - EUR   |
| 1250           | 1420634  | - EUR   |
| 1050           | 1607677  | - EUR   |
| Var. A         |          |         |
| 2050           | 1420635  | - EUR   |
| 1250           | 1420633  | - EUR   |
| 1050           | 1607676  | - EUR   |
| 550            | 1607675  | - EUR   |
| Block 250      |          |         |
| 250            | 1420632  | - EUR   |
| Single         |          |         |
| 200            | 1420630  | - EUR   |
| 100            | 1420613  | - EUR   |
| Horn left 100  | 1420627  | - EUR   |
| Horn right 100 | 1420629  | - EUR   |
| 50             | 1420625  | - EUR   |
| 45             | 1420623  | - EUR   |
| 40             | 1420621  | - EUR   |
| 35             | 1420619  | - EUR   |
| 30             | 1420617  | - EUR   |
| 25             | 1420615  | - EUR   |

Lengths in [mm]

Technical data



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



98,9 kg/m



~60 HRC

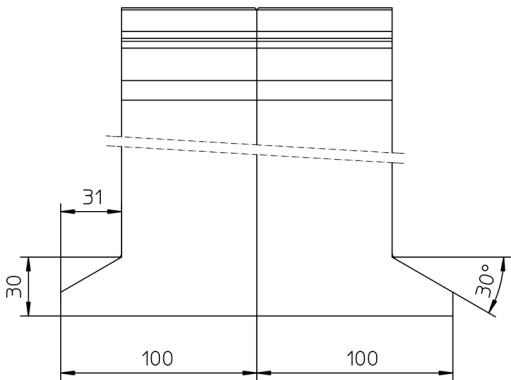


185 mm



25 mm - 100 mm

Horn left / right





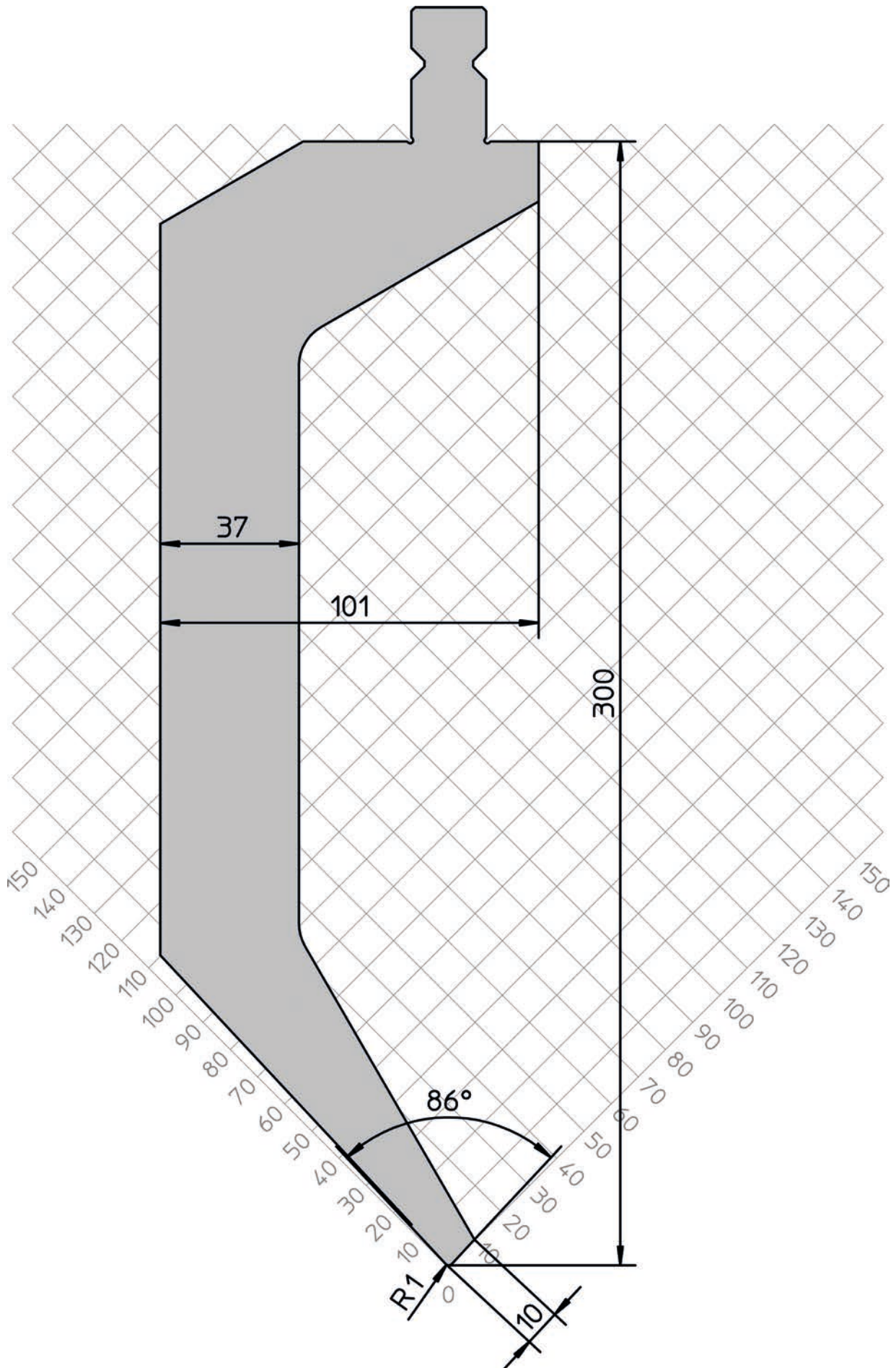


| More working radii |                    |                    |                    |                    |                    | Delivery time: 3 weeks    |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------------|
| OW300/S            | R2<br>86°<br>299,2 | R3<br>86°<br>298,5 | R4<br>86°<br>298,3 | R5<br>86°<br>297,8 | R6<br>86°<br>297,5 | Radius<br>Angle<br>Height |
|                    | Mat. No.           | Mat. No.           | Mat. No.           | Mat. No.           | Mat. No.           | Price                     |
| <b>Var. B</b>      |                    |                    |                    |                    |                    |                           |
| 4050               | 2051381            | 2042778            | 1469391            | 1871570            | 1626716            | - EUR                     |
| 3050               | 1950571            | 1717419            | 1469389            | 1871569            | 1626714            | - EUR                     |
| 2550               | 2051380            | 2051433            | 1469387            | 1871568            | 1626712            | - EUR                     |
| 2050               | 2051379            | 1819815            | 1469385            | 1871567            | 1626710            | - EUR                     |
| 1250               | 2002308            | 2019399            | 1469383            | 1871566            | 1626708            | - EUR                     |
| 1050               | 2051378            | 2051431            | 2031673            | 1871565            | 1626706            | - EUR                     |
| <b>Var. A</b>      |                    |                    |                    |                    |                    |                           |
| 2050               | 2051372            | 1839037            | 1469384            | 1871561            | 1626709            | - EUR                     |
| 1250               | 1871337            | 1871339            | 1469382            | 1871540            | 1626707            | - EUR                     |
| 1050               | 2051371            | 2051417            | 2031672            | 1871539            | 1626705            | - EUR                     |
| 550                | 2051330            | 2051416            | 2052149            | 1871538            | 1626704            | - EUR                     |
| <b>Block 250</b>   |                    |                    |                    |                    |                    |                           |
| 250                | 1871336            | 1717418            | 1469381            | 1871582            | 1626701            | - EUR                     |
| <b>Single</b>      |                    |                    |                    |                    |                    |                           |
| 200                | 1780744            | 1717417            | 1469377            | 1871581            | 1626700            | - EUR                     |
| 100                | 1780743            | 1717414            | 1469360            | 1871577            | 1626687            | - EUR                     |
| Horn left 100      | 1871334            | 1717415            | 1469374            | 1871583            | 1626688            | - EUR                     |
| Horn right 100     | 1871335            | 1717416            | 1469376            | 1871584            | 1626689            | - EUR                     |
| 50                 | 1871333            | 1717413            | 1469372            | 1871576            | 1626686            | - EUR                     |
| 45                 | 1871332            | 1717412            | 1469370            | 1871575            | 1626685            | - EUR                     |
| 40                 | 1871331            | 1717411            | 1469368            | 1871574            | 1626684            | - EUR                     |
| 35                 | 1871310            | 1717410            | 1469366            | 1871573            | 1626683            | - EUR                     |
| 30                 | 1871309            | 1717389            | 1469364            | 1871572            | 1626682            | - EUR                     |
| 25                 | 1871308            | 1717388            | 1469362            | 1871571            | 1626681            | - EUR                     |

Lengths, radius and height in [mm]

| More working radii         |                    |                    |                    |                    |                    | Delivery time: 3 weeks    |
|----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------------|
| OW300/S                    | R2<br>86°<br>299,2 | R3<br>86°<br>298,5 | R4<br>86°<br>298,3 | R5<br>86°<br>297,8 | R6<br>86°<br>297,5 | Radius<br>Angle<br>Height |
|                            | Mat. No.           | Mat. No.           | Mat. No.           | Mat. No.           | Mat. No.           | Price                     |
| <b>ACB Wireless</b>        |                    |                    |                    |                    |                    |                           |
| Sensor tool 25             | 2300008            | 2300073            | 2300078            | 2300083            | 2300089            | - EUR                     |
| Initial equip-<br>ment     | 2300009            | 2300074            | 2300079            | 2300084            | 2300090            | - EUR                     |
| <b>ACB</b>                 |                    |                    |                    |                    |                    |                           |
| Sensor tool 25             | 2044648            | 1754493            | 2044973            | 2045066            | 2045150            | - EUR                     |
| Initial equip-<br>ment 2.G | 2044708            | 1754495            | 2045090            | 2045155            | 2045279            | - EUR                     |
| <b>Sensor disk</b>         |                    |                    |                    |                    |                    |                           |
| L43                        | 1434055            | 1434055            | 1434055            | 1434055            | 1434055            | - EUR                     |
| L33                        | 1434130            | 1434130            | 1434130            | 1434130            | 1434130            | - EUR                     |
| L27                        | 1430773            | 1430773            | 1430773            | 1430773            | 1430773            | - EUR                     |
| L17                        | 1430828            | 1430828            | 1430828            | 1430828            | 1430828            | - EUR                     |
| L15                        | 1434132            |                    |                    |                    |                    | - EUR                     |
| L09                        | 1434181            |                    |                    |                    |                    | - EUR                     |

Radius and height in [mm]



## Sensor tool



Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW300/S</b>    | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 86°          |
|                       | <b>Height:</b>  | 300 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 2041796         | - EUR        |
| Initial equipment     | 2042076         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 1428673         | - EUR        |
| Initial equipment 2.G | 1428666         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L43                   | 1434055         | - EUR        |
| L33                   | 1434130         | - EUR        |
| L27                   | 1430773         | - EUR        |
| L17                   | 1430828         | - EUR        |
| L15                   | 1434132         | - EUR        |
| L09                   | 1434181         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 300/S



| <b>L15/L9 *</b>  |             |           |          |          |
|------------------|-------------|-----------|----------|----------|
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 2.0$  | $\leq 16$ | 90 - 105 | $\leq 2$ |
| St               | $\leq 2.0$  | $\leq 12$ | 90 - 135 | $\leq 2$ |
| Al               | $\leq 2.0$  | $\leq 12$ | 90 - 135 | $\leq 2$ |
| <b>L27/L17 *</b> |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 24$ | 90 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 30$ | 90 - 135 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 90 - 135 | $\leq 4$ |
| <b>L43/L33</b>   |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 90 - 135 | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 90 - 135 | $\leq 6$ |
| Al               | $\leq 10.0$ | $\leq 70$ | 90 - 135 | $\leq 6$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW201/S        | Radius:  | R1,0 mm |
|                | Angle:   | 86°     |
|                | Height:  | 220 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 0823966  | - EUR   |
| 3050           | 0823965  | - EUR   |
| 2550           | 0835181  | - EUR   |
| 2050           | 0823964  | - EUR   |
| 1250           | 0825702  | - EUR   |
| 1050           | 0867276  | - EUR   |
| Var. A         |          |         |
| 2050           | 0823961  | - EUR   |
| 1250           | 0825701  | - EUR   |
| 1050           | 1606923  | - EUR   |
| 550            | 1606922  | - EUR   |
| Block 250      |          |         |
| 250            | 0825700  | - EUR   |
| Single         |          |         |
| 300            | 0823959  | - EUR   |
| 200            | 0823958  | - EUR   |
| 100            | 0824580  | - EUR   |
| Horn left 100  | 0824578  | - EUR   |
| Horn right 100 | 0824579  | - EUR   |
| 50             | 0824577  | - EUR   |
| 45             | 0824574  | - EUR   |
| 40             | 0824572  | - EUR   |
| 35             | 0824569  | - EUR   |
| 30             | 0824568  | - EUR   |
| 25             | 0824566  | - EUR   |
| 20             | 0842991  | - EUR   |
| 15             | 0842990  | - EUR   |
| 10             | 0842989  | - EUR   |

Lengths in [mm]

Technical data



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



57,1 kg/m



~60 HRC

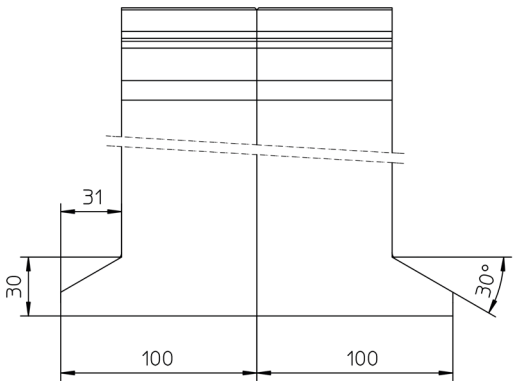


132 mm



25 mm - 200 mm

Horn left / right





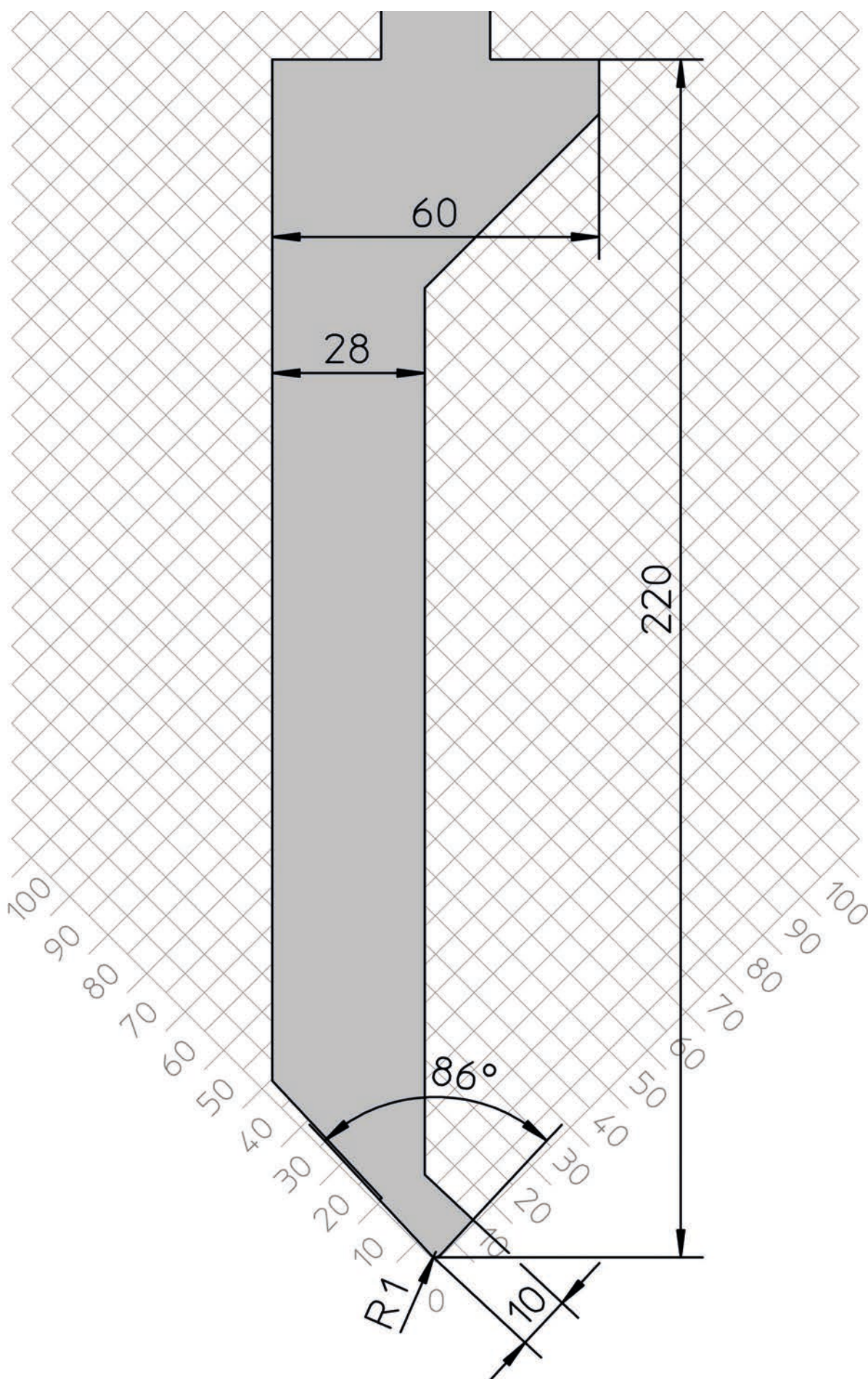
| More working radii |          |          |          |          |          |          |          |          | Delivery time: 2 weeks    |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|---------------------------|
| OW201/S            | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | Radius<br>Angle<br>Height |
|                    | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      |                           |
|                    | 219,8    | 219,4    | 219,2    | 219      | 218,7    | 218,8    | 218,6    | 218,3    |                           |
|                    | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                     |
| <b>Var. B</b>      |          |          |          |          |          |          |          |          |                           |
| 4050               | 0868730  | 0868738  | 0868747  | 0868779  | 0868811  | 0868823  | 0857670  | 0868838  | - EUR                     |
| 3050               | 0868729  | 0852135  | 0863335  | 0868778  | 0868810  | 0868822  | 0852158  | 0856505  | - EUR                     |
| 2550               | 0868728  | 0868737  | 0862538  | 0868777  | 0868809  | 0867529  | 0868831  | 0862531  | - EUR                     |
| 2050               | 0868727  | 0868736  | 0868746  | 0868776  | 0868808  | 0867528  | 0868830  | 0868837  | - EUR                     |
| 1250               | 0862937  | 0863254  | 0868744  | 0868775  | 0868807  | 0859471  | 0868829  | 0868836  | - EUR                     |
| 1050               | 1871854  | 1871857  | 1871874  | 1871878  | 1871911  | 1871914  | 1871918  | 1871934  | - EUR                     |
| <b>Var. A</b>      |          |          |          |          |          |          |          |          |                           |
| 2050               | 0868723  | 0868732  | 0868740  | 0868771  | 0868803  | 0868818  | 0868825  | 0868833  | - EUR                     |
| 1250               | 0868722  | 0868731  | 0868739  | 0868770  | 0868802  | 0868817  | 0868824  | 0868832  | - EUR                     |
| 1050               | 1871856  | 1871859  | 1871875  | 1871879  | 1871912  | 1871915  | 1871919  | 1762657  | - EUR                     |
| 550                | 1871855  | 1871858  | 1871876  | 1871880  | 1871913  | 1871916  | 1871920  | 1871936  | - EUR                     |
| <b>Block 250</b>   |          |          |          |          |          |          |          |          |                           |
| 250                | 0862936  | 0852134  | 0862682  | 0868769  | 0868801  | 0859470  | 0852157  | 0846213  | - EUR                     |
| <b>Single</b>      |          |          |          |          |          |          |          |          |                           |
| 300                | 0862923  | 0852121  | 0862542  | 0868756  | 0868788  | 0859457  | 0852144  | 0846196  | - EUR                     |
| 200                | 0862922  | 0852120  | 0862669  | 0868755  | 0868787  | 0859456  | 0852143  | 0846195  | - EUR                     |
| 100                | 0862924  | 0852122  | 0862670  | 0868757  | 0868789  | 0859458  | 0852145  | 0846200  | - EUR                     |
| Horn left 100      | 0862933  | 0852131  | 0862679  | 0868766  | 0868798  | 0859467  | 0852154  | 0846210  | - EUR                     |
| Horn right 100     | 0862934  | 0852132  | 0862680  | 0868767  | 0868799  | 0859468  | 0852155  | 0846211  | - EUR                     |
| 50                 | 0862930  | 0852128  | 0862676  | 0868763  | 0868795  | 0859464  | 0852151  | 0846207  | - EUR                     |
| 45                 | 0862929  | 0852127  | 0862675  | 0868762  | 0868794  | 0859463  | 0852150  | 0846206  | - EUR                     |
| 40                 | 0862928  | 0852126  | 0862674  | 0868761  | 0868793  | 0859462  | 0852149  | 0846205  | - EUR                     |
| 35                 | 0862927  | 0852125  | 0862673  | 0868760  | 0868792  | 0859461  | 0852148  | 0846204  | - EUR                     |
| 30                 | 0862926  | 0852124  | 0862672  | 0868759  | 0868791  | 0859460  | 0852147  | 0846203  | - EUR                     |
| 25                 | 0862925  | 0852123  | 0862671  | 0868758  | 0868790  | 0859459  | 0852146  | 0846202  | - EUR                     |
| 20                 | 1739264  | 1985307  | 1985310  | 1985313  | 1985316  | 1985319  | 1985343  | 1985346  | - EUR                     |
| 15                 | 1739263  | 1985306  | 1985309  | 1985312  | 1985315  | 1985318  | 1985342  | 1985345  | - EUR                     |
| 10                 | 1739262  | 1985305  | 1985308  | 1985311  | 1985314  | 1985317  | 1985341  | 1985344  | - EUR                     |

Lengths, radius and height in [mm]

| More working radii         |          |          |          |          |          |          |          |          | Delivery time: 3 weeks    |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|---------------------------|
| OW201/S                    | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | Radius<br>Angle<br>Height |
|                            | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      | 86°      |                           |
|                            | 219,8    | 219,4    | 219,2    | 219      | 218,7    | 218,8    | 218,6    | 218,3    |                           |
|                            | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                     |
| <b>ACB Wireless</b>        |          |          |          |          |          |          |          |          |                           |
| Sensor tool 25             | 2298280  | 2298295  | 2298317  | 2298348  | 2298357  | 2298364  | 2298369  | 2298375  | - EUR                     |
| Initial equip-<br>ment     | 2298291  | 2298299  | 2298318  | 2298349  | 2298358  | 2298365  | 2298370  | 2298376  | - EUR                     |
| <b>ACB</b>                 |          |          |          |          |          |          |          |          |                           |
| Sensor tool 25             | 1602991  | 1322238  | 0951101  | 1602998  | 1415541  | 0951102  | 1603011  | 0950043  | - EUR                     |
| Initial equip-<br>ment 2.G | 1602994  | 1322269  | 1282574  | 1603010  | 1415606  | 1282575  | 1603013  | 1282576  | - EUR                     |
| <b>Sensor disk</b>         |          |          |          |          |          |          |          |          |                           |
| L43                        | 0950856  | 0950856  | 0950856  | 0950856  | 0950856  | 0950856  | 0950856  | 0950856  | - EUR                     |
| L33                        | 0950857  | 0950857  | 0950857  | 0950857  | 0950857  | 0950857  | 0950857  | 0950857  | - EUR                     |
| L27                        | 0950855  | 0950855  | 0950855  | 0950855  | 0950855  | 0950855  | 0950855  | 0950855  | - EUR                     |
| L17                        | 0950858  | 0950858  | 0950858  | 0950858  | 0950858  | 0950858  | 0950858  | 0950858  | - EUR                     |
| L15                        | 0950854  | 0950854  | 0950854  | 0950854  | 0950854  | 0950854  | 0950854  | 0950854  | - EUR                     |
| L09                        | 0950859  | 0950859  | 0950859  | 0950859  | 0950859  | 0950859  | 0950859  | 0950859  | - EUR                     |

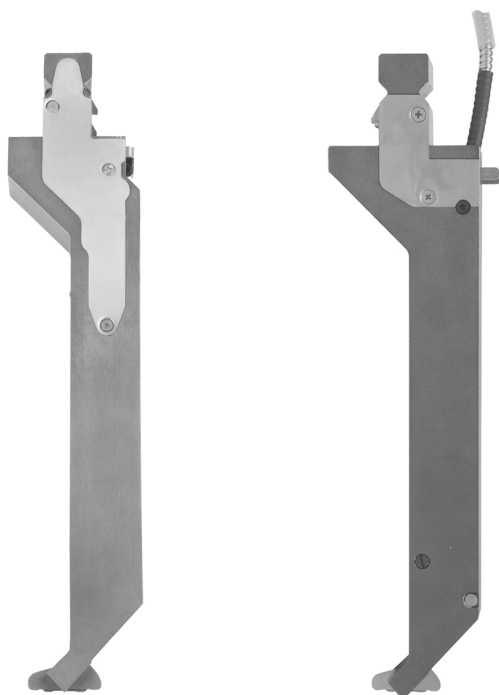
Radius and height in [mm]







## Sensor tool

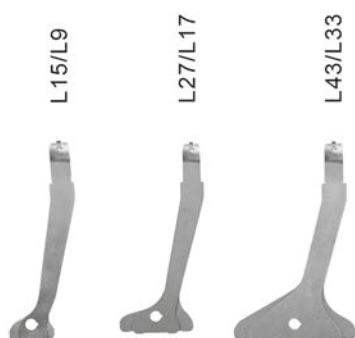


Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW201/S</b>    | <b>Radius:</b>  | R1,0 mm      |
|                       | <b>Angle:</b>   | 86°          |
|                       | <b>Height:</b>  | 220 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1950645         | - EUR        |
| Initial equipment     | 2040736         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0950821         | - EUR        |
| Initial equipment 2.G | 1273591         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L43                   | 0950856         | - EUR        |
| L33                   | 0950857         | - EUR        |
| L27                   | 0950855         | - EUR        |
| L17                   | 0950858         | - EUR        |
| L15                   | 0950854         | - EUR        |
| L09                   | 0950859         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW201/S



| <b>L15/L9 *</b>  |             |           |          |          |
|------------------|-------------|-----------|----------|----------|
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 2.0$  | $\leq 16$ | 90 - 105 | $\leq 2$ |
| St               | $\leq 2.0$  | $\leq 12$ | 90 - 135 | $\leq 2$ |
| Al               | $\leq 2.0$  | $\leq 12$ | 90 - 135 | $\leq 2$ |
| <b>L27/L17 *</b> |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 24$ | 90 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 30$ | 90 - 135 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 90 - 135 | $\leq 4$ |
| <b>L43/L33</b>   |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 90 - 135 | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 90 - 135 | $\leq 6$ |
| Al               | $\leq 10.0$ | $\leq 70$ | 90 - 135 | $\leq 6$ |

For bigger tool radii restricted angle measurements ranges are valid!



Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW202/S        | Radius:  | R1,0 mm |
|                | Angle:   | 28°     |
|                | Height:  | 220 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 0823869  | - EUR   |
| 3050           | 0823868  | - EUR   |
| 2550           | 0835185  | - EUR   |
| 2050           | 0823867  | - EUR   |
| 1250           | 0825708  | - EUR   |
| 1050           | 0867277  | - EUR   |
| Var. A         |          |         |
| 2050           | 0823863  | - EUR   |
| 1250           | 0825707  | - EUR   |
| 1050           | 1606976  | - EUR   |
| 550            | 1606974  | - EUR   |
| Block 250      |          |         |
| 250            | 0825706  | - EUR   |
| Single         |          |         |
| 500            | 0823859  | - EUR   |
| 300            | 0823858  | - EUR   |
| 200            | 0823857  | - EUR   |
| 100            | 0824628  | - EUR   |
| Horn left 100  | 0824625  | - EUR   |
| Horn right 100 | 0824626  | - EUR   |
| 50             | 0824624  | - EUR   |
| 45             | 0824623  | - EUR   |
| 40             | 0824622  | - EUR   |
| 35             | 0824618  | - EUR   |
| 30             | 0824617  | - EUR   |
| 25             | 0824614  | - EUR   |
| 20             | 0846380  | - EUR   |
| 15             | 0837116  | - EUR   |
| 10             | 0837115  | - EUR   |

Lengths in [mm]

Technical data



600 kN/m



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



49,9 kg/m



~60 HRC

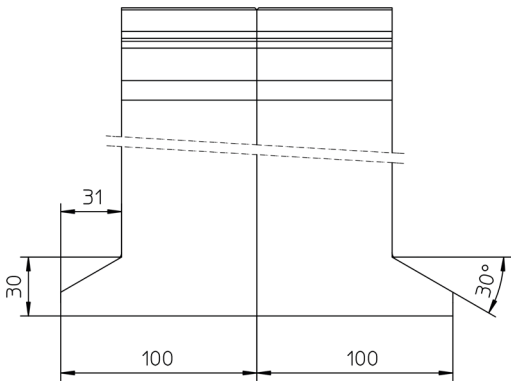


132 mm



25 mm - 200 mm

Horn left / right



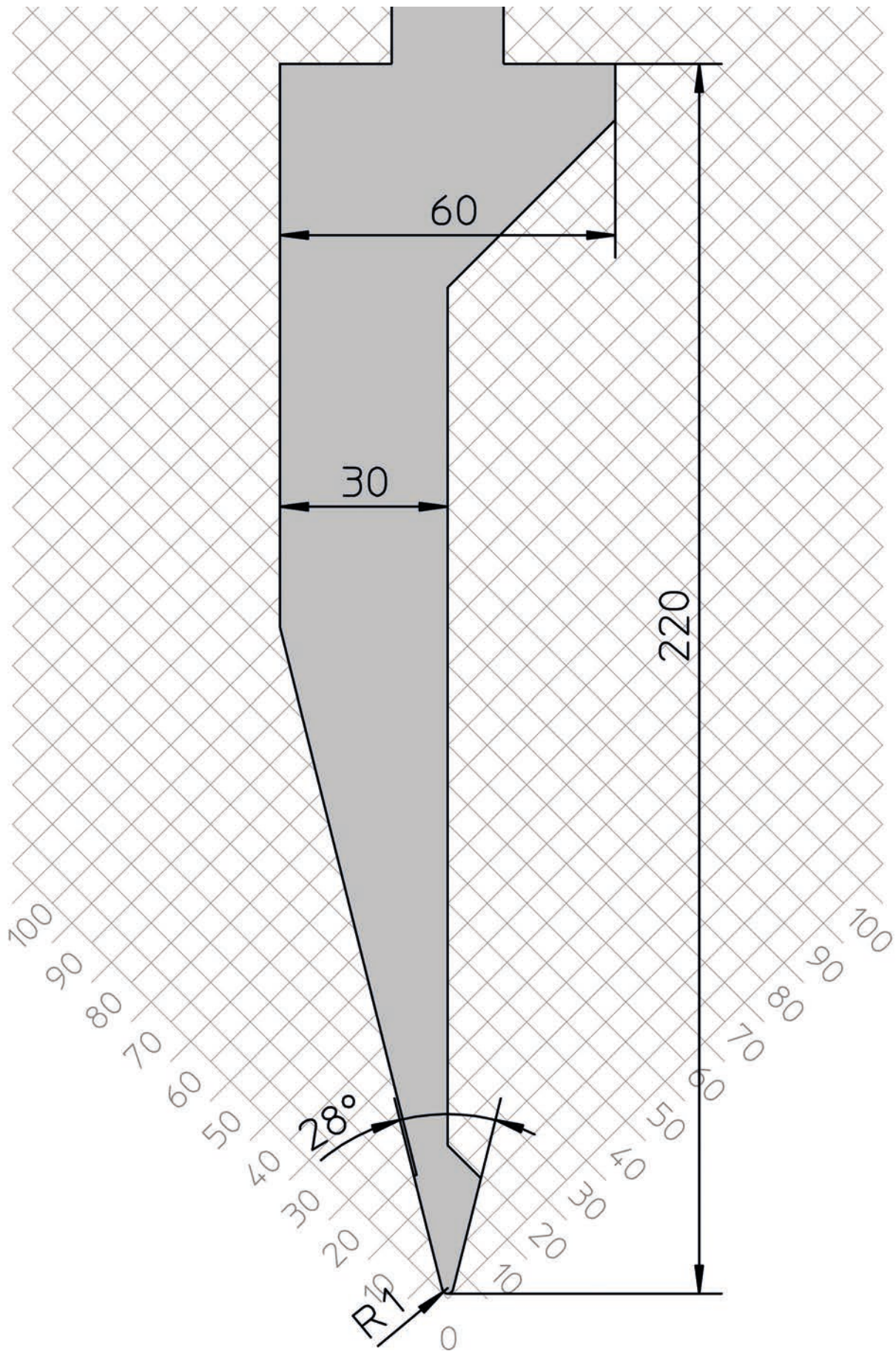


| More working radii |          |          |          |          |          |          |          |          | Delivery time: 2 weeks |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------|
|                    | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | Radius                 |
| OW202/S            | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      | Angle                  |
|                    | 219,8    | 217,8    | 216      | 215,6    | 214      | 212,8    | 212,7    | 209,8    | Height                 |
|                    | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                  |
| <b>Var. B</b>      |          |          |          |          |          |          |          |          |                        |
| 4050               | 0868847  | 0851552  | 0868860  | 0868872  | 0852105  | 0868881  | 0868916  | 0868923  | - EUR                  |
| 3050               | 0868846  | 0867084  | 0868859  | 0868871  | 0828020  | 0868880  | 0868915  | 0868922  | - EUR                  |
| 2550               | 0868845  | 0868854  | 0856362  | 0863624  | 0846150  | 0854127  | 0868914  | 0860007  | - EUR                  |
| 2050               | 0868844  | 0868853  | 0841516  | 0868870  | 0840022  | 0846169  | 0868913  | 0865409  | - EUR                  |
| 1250               | 0836896  | 0864327  | 0848015  | 0868869  | 0845258  | 0860121  | 0868912  | 0868921  | - EUR                  |
| 1050               | 1871940  | 1696800  | 1758572  | 1696806  | 1872034  | 1696841  | 1871996  | 1696844  | - EUR                  |
| <b>Var. A</b>      |          |          |          |          |          |          |          |          |                        |
| 2050               | 0868840  | 0868849  | 0868856  | 0868864  | 0868874  | 0835867  | 0868908  | 0868918  | - EUR                  |
| 1250               | 0868839  | 0868848  | 0868855  | 0868863  | 0868873  | 0854916  | 0868907  | 0868917  | - EUR                  |
| 1050               | 1871952  | 1696739  | 1871960  | 1696805  | 1872035  | 1696840  | 1871997  | 1696843  | - EUR                  |
| 550                | 1871953  | 1696738  | 1871959  | 1696804  | 1872036  | 1696809  | 1871998  | 1696842  | - EUR                  |
| <b>Block 250</b>   |          |          |          |          |          |          |          |          |                        |
| 250                | 0837415  | 0851545  | 0841515  | 0855933  | 0828017  | 0835866  | 0868906  | 0844749  | - EUR                  |
| <b>Single</b>      |          |          |          |          |          |          |          |          |                        |
| 500                | 0837406  | 0851536  | 0841495  | 0851388  | 0828005  | 0835851  | 0868891  | 0844733  | - EUR                  |
| 300                | 0837405  | 0851535  | 0841494  | 0851387  | 0828004  | 0835850  | 0868890  | 0844732  | - EUR                  |
| 200                | 0837403  | 0851534  | 0841493  | 0851386  | 0828003  | 0835849  | 0868889  | 0844731  | - EUR                  |
| 100                | 0837414  | 0851537  | 0841502  | 0851389  | 0828014  | 0835858  | 0868892  | 0844736  | - EUR                  |
| Horn left 100      | 0837418  | 0851548  | 0841512  | 0859516  | 0828015  | 0835861  | 0868902  | 0844746  | - EUR                  |
| Horn right 100     | 0837419  | 0851549  | 0841513  | 0859517  | 0828016  | 0835862  | 0868903  | 0844747  | - EUR                  |
| 50                 | 0837413  | 0851543  | 0841503  | 0851395  | 0828013  | 0835857  | 0868898  | 0844742  | - EUR                  |
| 45                 | 0837412  | 0851542  | 0841504  | 0851394  | 0828012  | 0835856  | 0868897  | 0844741  | - EUR                  |
| 40                 | 0837411  | 0851541  | 0841505  | 0851393  | 0828011  | 0835855  | 0868896  | 0844740  | - EUR                  |
| 35                 | 0837410  | 0851540  | 0841506  | 0851392  | 0828010  | 0835854  | 0868895  | 0844739  | - EUR                  |
| 30                 | 0837409  | 0851539  | 0841507  | 0851391  | 0828009  | 0835853  | 0868894  | 0844738  | - EUR                  |
| 25                 | 0837408  | 0851538  | 0841508  | 0851390  | 0828008  | 0835852  | 0868893  | 0844737  | - EUR                  |
| 20                 | 1423562  | 1985364  | 1309878  | 1985422  | 0845248  | 1604674  | 1993583  | 1993587  | - EUR                  |
| 15                 | 1423561  | 1985363  | 1985386  | 1985421  | 0845247  | 1604673  | 1993582  | 1993586  | - EUR                  |
| 10                 | 1423560  | 1985362  | 1309873  | 1985390  | 0845246  | 1604672  | 1993581  | 1993585  | - EUR                  |

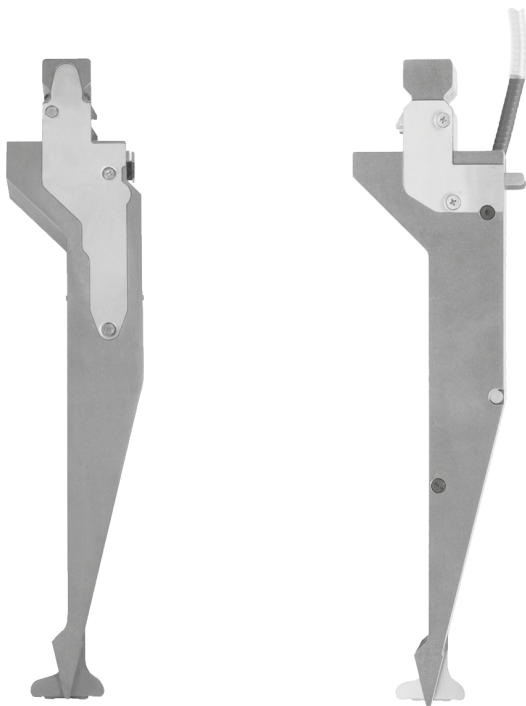
Lengths, radius and height in [mm]

| More working radii         |          |          |          |          |          |          |          |          | Delivery time: 3 weeks |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------|
|                            | R0,5     | R1,6     | R2       | R2,3     | R2,5     | R3       | R3,2     | R4       | Radius                 |
| OW202/S                    | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      | Angle                  |
|                            | 219,8    | 217,8    | 216      | 215,6    | 214      | 212,8    | 212,7    | 209,8    | Height                 |
|                            | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                  |
| <b>ACB Wireless</b>        |          |          |          |          |          |          |          |          |                        |
| Sensor tool 25             | 2289866  | 2260696  | 2298761  | 2302162  | 2298771  | 2298777  | 2298793  | 2298799  | - EUR                  |
| Initial equip-<br>ment     | 2289867  | 2260697  | 2298762  | 2302163  | 2298772  | 2298778  | 2298794  | 2298800  | - EUR                  |
| <b>ACB</b>                 |          |          |          |          |          |          |          |          |                        |
| Sensor tool 25             | 1285233  | 0951117  | 0951118  | 0933578  | 0951119  | 0951120  | 1603014  | 0970511  | - EUR                  |
| Initial equip-<br>ment 2.G | 1329274  | 1282884  | 1282577  | 1282885  | 1282886  | 1282578  | 1603016  | 1282579  | - EUR                  |
| <b>Sensor disk</b>         |          |          |          |          |          |          |          |          |                        |
| L43                        | 0949420  | 0949420  | 0962191  | 0962191  | 0962191  | 0962191  | 0962191  | 0962191  | - EUR                  |
| L33                        | 0949421  | 0949421  | 0962190  | 0962190  | 0962190  | 0962190  | 0962190  | 0962190  | - EUR                  |
| L27                        | 0949409  | 0949409  | 0962189  | 0962189  | 0962189  | 0962189  | 0962189  | 0962189  | - EUR                  |
| L17                        | 0949422  | 0949422  | 0962128  | 0962128  | 0962128  | 0962128  | 0962128  | 0962128  | - EUR                  |
| L15                        | 0949408  | 0949408  | 1375241  |          |          |          |          |          | - EUR                  |
| L09                        | 0949423  | 0949423  | 1375244  |          |          |          |          |          | - EUR                  |

Radius and height in [mm]



Sensor tool



Delivery time: ex warehouse

|                        |                 |              |
|------------------------|-----------------|--------------|
| <b>ACB<br/>OW202/S</b> | <b>Radius:</b>  | R1,0 mm      |
|                        | <b>Angle:</b>   | 28°          |
|                        | <b>Height:</b>  | 220 mm       |
|                        | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>    |                 |              |
| Sensor tool 25         | 1874196         | - EUR        |
| Initial equipment      | 2040947         | - EUR        |
| <b>ACB</b>             |                 |              |
| Sensor tool 25         | 0943008         | - EUR        |
| Initial equipment 2.G  | 1273593         | - EUR        |
| <b>Sensor disk</b>     |                 |              |
| L43                    | 0949420         | - EUR        |
| L33                    | 0949421         | - EUR        |
| L27                    | 0949409         | - EUR        |
| L17                    | 0949422         | - EUR        |
| L15                    | 0949408         | - EUR        |
| L09                    | 0949423         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

Sensor disks OW 202/S



|                  |             |           |          |          |
|------------------|-------------|-----------|----------|----------|
| <b>L15/L9 *</b>  |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 2.0$  | $\leq 16$ | 45 - 105 | $\leq 2$ |
| St               | $\leq 2.0$  | $\leq 12$ | 45 - 135 | $\leq 2$ |
| Al               | $\leq 2.0$  | $\leq 12$ | 55 - 135 | $\leq 2$ |
| <b>L27/L17 *</b> |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 24$ | 55 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 30$ | 55 - 105 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 55 - 105 | $\leq 4$ |
| <b>L43/L33</b>   |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| Al               | $\leq 10.0$ | $\leq 70$ | 65 - 135 | $\leq 6$ |

For bigger tool radii restricted angle measurements ranges are valid!





Punch



Delivery time: ex warehouse

|                |          |         |
|----------------|----------|---------|
| OW203/S        | Radius:  | R4,0 mm |
|                | Angle:   | 60°     |
|                | Height:  | 220 mm  |
|                | Mat. No. | Price   |
| Var. B         |          |         |
| 4050           | 0825649  | - EUR   |
| 3050           | 0825648  | - EUR   |
| 2550           | 0835189  | - EUR   |
| 2050           | 0825647  | - EUR   |
| 1250           | 0825646  | - EUR   |
| 1050           | 0867278  | - EUR   |
| Var. A         |          |         |
| 2050           | 0825643  | - EUR   |
| 1250           | 0825642  | - EUR   |
| 1050           | 1607008  | - EUR   |
| 550            | 1607007  | - EUR   |
| Block 250      |          |         |
| 250            | 0825714  | - EUR   |
| Single         |          |         |
| 300            | 0825630  | - EUR   |
| 200            | 0825629  | - EUR   |
| 100            | 0825639  | - EUR   |
| Horn left 100  | 0825637  | - EUR   |
| Horn right 100 | 0825638  | - EUR   |
| 50             | 0825636  | - EUR   |
| 45             | 0825635  | - EUR   |
| 40             | 0825634  | - EUR   |
| 35             | 0825633  | - EUR   |
| 30             | 0825632  | - EUR   |
| 25             | 0825631  | - EUR   |
| 20             | 1431078  | - EUR   |
| 15             | 1431066  | - EUR   |
| 10             | 1394894  | - EUR   |

Lengths in [mm]

Technical data



2500 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



52,3 kg/m



~60 HRC

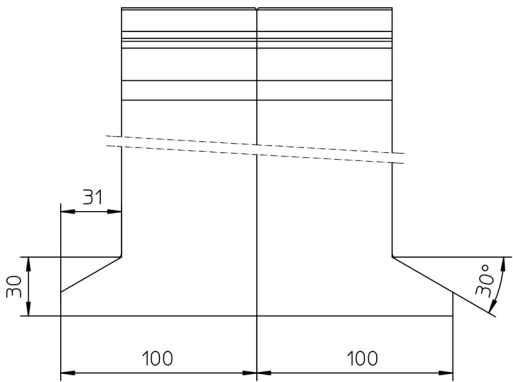


132 mm



25 mm - 200 mm

Horn left / right





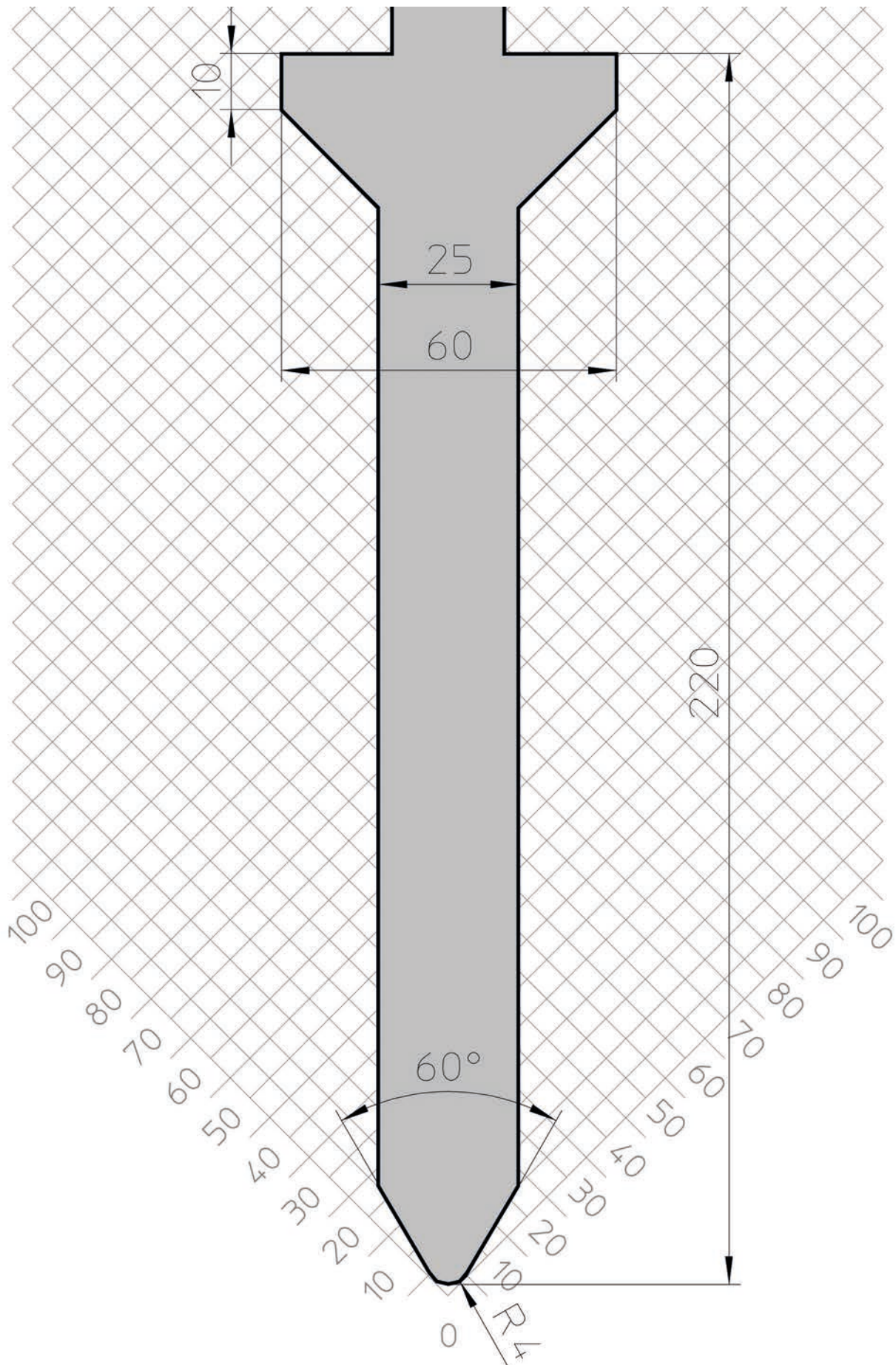


| More working radii |           |             |           |             |           |           |              |           |            | Delivery time: 2 weeks             |
|--------------------|-----------|-------------|-----------|-------------|-----------|-----------|--------------|-----------|------------|------------------------------------|
| OW203/S            | R2<br>60° | R2,5<br>60° | R3<br>60° | R4,7<br>60° | R5<br>60° | R6<br>60° | R6,35<br>60° | R8<br>60° | R10<br>28° | Radius<br>Angle<br>Height<br>Price |
|                    | 219,8     | 219,8       | 219,8     | 219         | 218,6     | 217,6     | 217,2        | 220       | 220        |                                    |
|                    | Mat. No.  | Mat. No.    | Mat. No.  | Mat. No.    | Mat. No.  | Mat. No.  | Mat. No.     | Mat. No.  | Mat. No.   |                                    |
| <b>Var. B</b>      |           |             |           |             |           |           |              |           |            |                                    |
| 4050               | 0869083   | 0869091     | 0869118   | 0869151     | 0869160   | 0869192   | 0869237      | 0859117   | 1322438    | - EUR                              |
| 3050               | 0869082   | 0862842     | 0860541   | 0869150     | 0860542   | 0869191   | 0869236      | 0853168   | 0875054    | - EUR                              |
| 2550               | 0862914   | 0852164     | 0869117   | 0869149     | 0869159   | 0869190   | 0869235      | 0862534   | 1630942    | - EUR                              |
| 2050               | 0869081   | 0849062     | 0869116   | 0869148     | 0841566   | 0869189   | 0869234      | 0874848   | 0866179    | - EUR                              |
| 1250               | 0840295   | 0869090     | 0841541   | 0869147     | 0860122   | 0869188   | 0869233      | 0874743   | 1258280    | - EUR                              |
| 1050               | 1871999   | 1872042     | 1872045   | 1872047     | 1678264   | 1684749   | 1716739      | 1716772   | 1672368    | - EUR                              |
| <b>Var. A</b>      |           |             |           |             |           |           |              |           |            |                                    |
| 2050               | 0869078   | 0869086     | 0869111   | 0869143     | 0869155   | 0869184   | 0869229      | 1321484   | 1766327    | - EUR                              |
| 1250               | 0869077   | 0869085     | 0869110   | 0869142     | 0860120   | 0869183   | 0869228      | 1249949   | 1766326    | - EUR                              |
| 1050               | 1872000   | 1872043     | 1872046   | 1872048     | 1872081   | 1872082   | 1872083      | 1872085   | 1872086    | - EUR                              |
| 550                | 1872041   | 1872044     | 1839038   | 1872049     | 1872050   | 1758574   | 1872084      | 1678263   | 1700197    | - EUR                              |
| <b>Block 250</b>   |           |             |           |             |           |           |              |           |            |                                    |
| 250                | 0840294   | 0849050     | 0841540   | 0869141     | 0841565   | 0869182   | 0869227      | 0841577   | 0857807    | - EUR                              |
| <b>Single</b>      |           |             |           |             |           |           |              |           |            |                                    |
| 300                | 0840281   | 0849048     | 0841519   | 0869128     | 0841546   | 0869169   | 0869214      | 0830784   | 0866178    | - EUR                              |
| 200                | 0840280   | 0849047     | 0841518   | 0869127     | 0841545   | 0869168   | 0869213      | 0846166   | 0866177    | - EUR                              |
| 100                | 0840288   | 0849051     | 0841526   | 0869129     | 0841557   | 0869170   | 0869215      | 0830786   | 0857795    | - EUR                              |
| Horn left 100      | 0840291   | 0849060     | 0841543   | 0869138     | 0841556   | 0869179   | 0869223      | 0852987   | 0857804    | - EUR                              |
| Horn right 100     | 0840292   | 0849061     | 0841537   | 0869139     | 0841555   | 0869180   | 0869225      | 0852988   | 0857805    | - EUR                              |
| 50                 | 0840287   | 0849057     | 0841527   | 0869135     | 0841558   | 0869176   | 0869221      | 0830785   | 0857801    | - EUR                              |
| 45                 | 0840286   | 0849056     | 0841528   | 0869134     | 0841559   | 0869175   | 0869220      | 0841572   | 0857800    | - EUR                              |
| 40                 | 0840285   | 0849055     | 0841529   | 0869133     | 0841560   | 0869174   | 0869219      | 0841573   | 0857799    | - EUR                              |
| 35                 | 0840284   | 0849054     | 0841530   | 0869132     | 0841561   | 0869173   | 0869218      | 0841574   | 0857798    | - EUR                              |
| 30                 | 0840283   | 0849053     | 0841531   | 0869131     | 0841562   | 0869172   | 0869217      | 0841575   | 0857797    | - EUR                              |
| 25                 | 0840282   | 0849052     | 0841532   | 0869130     | 0841563   | 0869171   | 0869216      | 0841578   | 0857796    | - EUR                              |
| 20                 | 1940607   | 1989115     | 1625625   | 1989134     | 1989137   | 1677928   | 1989144      | 1989149   | 1565050    | - EUR                              |
| 15                 | 1940606   | 1989114     | 1625624   | 1989133     | 1989136   | 1989139   | 1989143      | 1989148   | 1565039    | - EUR                              |
| 10                 | 1940605   | 1989113     | 1625623   | 1989132     | 1989135   | 1989140   | 1989142      | 1989147   | 1565038    | - EUR                              |

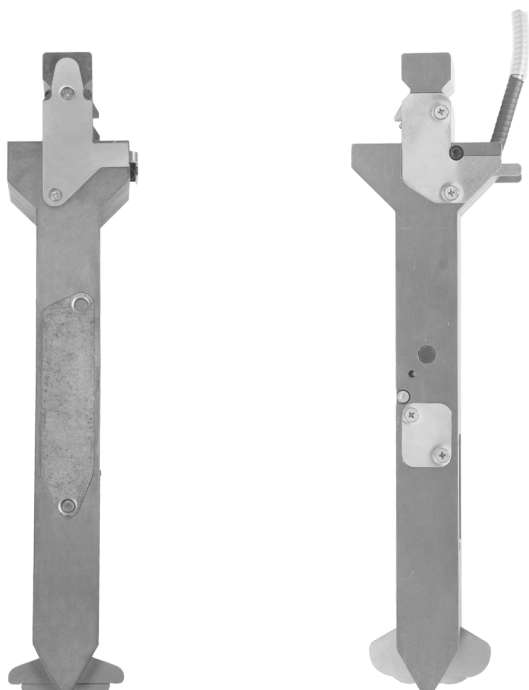
Lengths, radius and height in [mm]

| More working radii         |           |             |           |             |           |           |              |           |            | Delivery time: 3 weeks             |
|----------------------------|-----------|-------------|-----------|-------------|-----------|-----------|--------------|-----------|------------|------------------------------------|
| OW203/S                    | R2<br>60° | R2,5<br>60° | R3<br>60° | R4,7<br>60° | R5<br>60° | R6<br>60° | R6,35<br>60° | R8<br>60° | R10<br>28° | Radius<br>Angle<br>Height<br>Price |
|                            | 219,8     | 219,8       | 219,8     | 219         | 218,6     | 217,6     | 217,2        | 220       | 220        |                                    |
|                            | Mat. No.  | Mat. No.    | Mat. No.  | Mat. No.    | Mat. No.  | Mat. No.  | Mat. No.     | Mat. No.  | Mat. No.   |                                    |
| <b>ACB Wireless</b>        |           |             |           |             |           |           |              |           |            |                                    |
| Sensor tool 25             | 2298854   | 2298942     | 2258891   | 2298947     | 2292054   | 2298952   | 2298957      | 2298963   |            | - EUR                              |
| Initial equip-<br>ment     | 2298855   | 2298943     | 2258892   | 2298948     | 2292055   | 2298953   | 2298958      | 2298964   |            | - EUR                              |
| <b>ACB Wireless DB</b>     |           |             |           |             |           |           |              |           |            |                                    |
| Sensor tool 35             |           |             | 2298986   | 2299021     | 2299026   | 2299033   | 2299039      | 2299056   | 2299072    | - EUR                              |
| Initial equip-<br>ment     |           |             | 2298987   | 2299022     | 2299027   | 2299034   | 2299040      | 2299057   | 2299073    | - EUR                              |
| <b>ACB</b>                 |           |             |           |             |           |           |              |           |            |                                    |
| Sensor tool 25             | 0947302   | 1603017     | 0966925   | 1311911     | 1331083   | 0973357   | 1320686      | 0952910   |            | - EUR                              |
| Initial equip-<br>ment 2.G | 1282580   | 1603019     | 1598744   | 1383964     | 1471986   | 1282591   | 1402719      | 1320673   |            | - EUR                              |
| <b>ACB DB</b>              |           |             |           |             |           |           |              |           |            |                                    |
| Sensor tool 35             |           |             | 1342500   | 1397027     | 2041075   | 1454286   | 1397065      | 1360088   | 1654554    | - EUR                              |
| Initial equip-<br>ment 2.G |           |             | 1493167   | 1397049     | 2041224   | 1454288   | 1397067      | 1615349   | 1654556    | - EUR                              |
| <b>Sensor disk</b>         |           |             |           |             |           |           |              |           |            |                                    |
| L43                        | 0940335   | 0940335     | 0940335   | 0940335     | 0940335   | 0940335   | 0940335      | 0940335   |            | - EUR                              |
| L33                        | 0940338   | 0940338     | 0940338   | 0940338     | 0940338   | 0940338   | 0940338      | 0940338   |            | - EUR                              |
| L27                        | 0932791   | 0932791     | 0932791   | 0932791     | 0932791   | 0932791   | 0932791      | 0932791   |            | - EUR                              |
| L17                        | 0940333   | 0940333     | 0940333   | 0940333     | 0940333   | 0940333   | 0940333      | 0940333   |            | - EUR                              |
| <b>Sensor disk DB</b>      |           |             |           |             |           |           |              |           |            |                                    |
| L58                        |           |             | 1306820   | 1306820     | 1306820   | 1306820   | 1306820      | 1306820   | 1306820    | - EUR                              |
| L47                        |           |             | 1306737   | 1306737     | 1306737   | 1306737   | 1306737      | 1306737   | 1306737    | - EUR                              |
| L44                        |           |             | 1221932   | 1221932     | 1221932   | 1221932   | 1221932      | 1221932   | 1221932    | - EUR                              |
| L31                        |           |             | 1221931   | 1221931     | 1221931   | 1221931   | 1221931      | 1221931   | 1221931    | - EUR                              |
| L28                        |           |             | 1221930   | 1221930     | 1221930   | 1221930   | 1221930      | 1221930   | 1221930    | - EUR                              |
| L16                        |           |             | 1221929   | 1221929     | 1221929   | 1221929   | 1221929      | 1221929   | 1221929    | - EUR                              |

Radius and height in [mm]



## Sensor tool

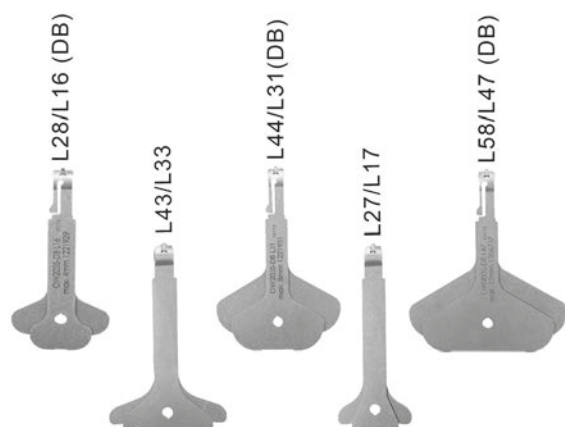


Delivery time: ex warehouse

|                        |                 |              |
|------------------------|-----------------|--------------|
| <b>ACB OW203/S</b>     | <b>Radius:</b>  | R4,0 mm      |
|                        | <b>Angle:</b>   | 60°          |
|                        | <b>Height:</b>  | 220 mm       |
|                        | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>    |                 |              |
| Sensor tool 25         | 1874137         | - EUR        |
| Initial equipment      | 2040945         | - EUR        |
| <b>ACB Wireless DB</b> |                 |              |
| Sensor tool 35         | 2028094         | - EUR        |
| Initial equipment      | 2040944         | - EUR        |
| <b>ACB</b>             |                 |              |
| Sensor tool 25         | 0940059         | - EUR        |
| Initial equipment 2.G  | 1273595         | - EUR        |
| <b>ACB DB</b>          |                 |              |
| Sensor tool 35         | 1211228         | - EUR        |
| Initial equipment 2.G  | 1273596         | - EUR        |
| <b>Sensor disk</b>     |                 |              |
| L43                    | 0940335         | - EUR        |
| L33                    | 0940338         | - EUR        |
| L27                    | 0932791         | - EUR        |
| L17                    | 0940333         | - EUR        |
| <b>Sensor disk DB</b>  |                 |              |
| L58                    | 1306820         | - EUR        |
| L47                    | 1306737         | - EUR        |
| L44                    | 1221932         | - EUR        |
| L31                    | 1221931         | - EUR        |
| L28                    | 1221930         | - EUR        |
| L16                    | 1221929         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 203/S und OW203/S DB



For bigger tool radii restricted angle measurements ranges are valid!

| <b>L27/L17 *</b> |             |            |          |          |
|------------------|-------------|------------|----------|----------|
| Mat.             | s           | W          | $\alpha$ | R (OW)   |
| StSt             | $\leq 4.0$  | $\leq 30$  | 65 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 24$  | 65 - 135 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$  | 65 - 135 | $\leq 4$ |
| <b>L43/L33 *</b> |             |            |          |          |
| Mat.             | s           | W          | $\alpha$ | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 40$  | 65 - 135 | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$  | 65 - 135 | $\leq 6$ |
| Al               | $\leq 10.0$ | $\leq 70$  | 65 - 135 | $\leq 6$ |
| <b>L28/L16 *</b> |             |            |          |          |
| Mat.             | s           | W          | $\alpha$ | R (OW)   |
| StSt             | $\leq 4.0$  | $\leq 24$  | 70 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 24$  | 70 - 135 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$  | 70 - 135 | $\leq 4$ |
| <b>L44/L31 *</b> |             |            |          |          |
| Mat.             | s           | W          | $\alpha$ | R (OW)   |
| StSt             | $\leq 8.0$  | $\leq 50$  | 70 - 135 | $\leq 4$ |
| St               | $\leq 8.0$  | $\leq 50$  | 70 - 135 | $\leq 4$ |
| Al               | $\leq 8.0$  | $\leq 50$  | 70 - 135 | $\leq 4$ |
| <b>L58/L47 *</b> |             |            |          |          |
| Mat.             | s           | W          | $\alpha$ | R (OW)   |
| StSt             | $\leq 12.0$ | $\leq 80$  | 70 - 135 | $\leq 4$ |
| St               | $\leq 15.0$ | $\leq 100$ | 70 - 135 | $\leq 4$ |
| Al               | $\leq 12.0$ | $\leq 80$  | 70 - 135 | $\leq 4$ |



Punch OW210/S H=240mm



Delivery time: ex warehouse

| OW210/S          | Radius:  | R1,0 mm |
|------------------|----------|---------|
|                  | Angle:   | 28°     |
|                  | Height:  | 240 mm  |
|                  | Mat. No. | Price   |
| <b>Var. B</b>    |          |         |
| 4050             | 0824045  | - EUR   |
| 3050             | 0824043  | - EUR   |
| 2550             | 0835195  | - EUR   |
| 2050             | 0824041  | - EUR   |
| 1250             | 0825725  | - EUR   |
| 1050             | 0867280  | - EUR   |
| <b>Var. A</b>    |          |         |
| 2050             | 0824036  | - EUR   |
| 1250             | 0825724  | - EUR   |
| 1050             | 1607536  | - EUR   |
| 550              | 1607535  | - EUR   |
| <b>Block 250</b> |          |         |
| 250              | 0825722  | - EUR   |
| <b>Single</b>    |          |         |
| 500              | 0824033  | - EUR   |
| 300              | 0824032  | - EUR   |
| 200              | 0824031  | - EUR   |
| 100              | 0824679  | - EUR   |
| Horn left 100    | 0824677  | - EUR   |
| Horn right 100   | 0824678  | - EUR   |
| 50               | 0824675  | - EUR   |
| 45               | 0824672  | - EUR   |
| 40               | 0824669  | - EUR   |
| 35               | 0824667  | - EUR   |
| 30               | 0824663  | - EUR   |
| 25               | 0824659  | - EUR   |
| 20               | 0842994  | - EUR   |
| 15               | 0842993  | - EUR   |
| 10               | 0842992  | - EUR   |

Lengths in [mm]

Technical data



400 kN/m



1300 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



47,5 kg/m



~60 HRC

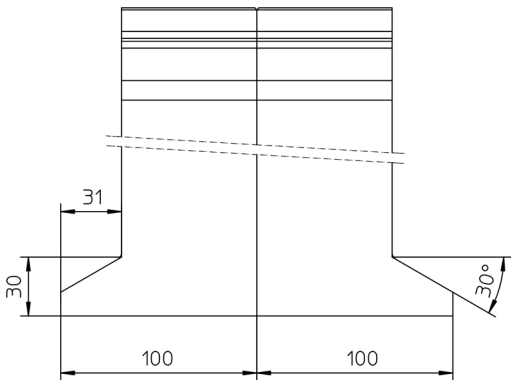


145 mm



25 mm - 200 mm

Horn left / right



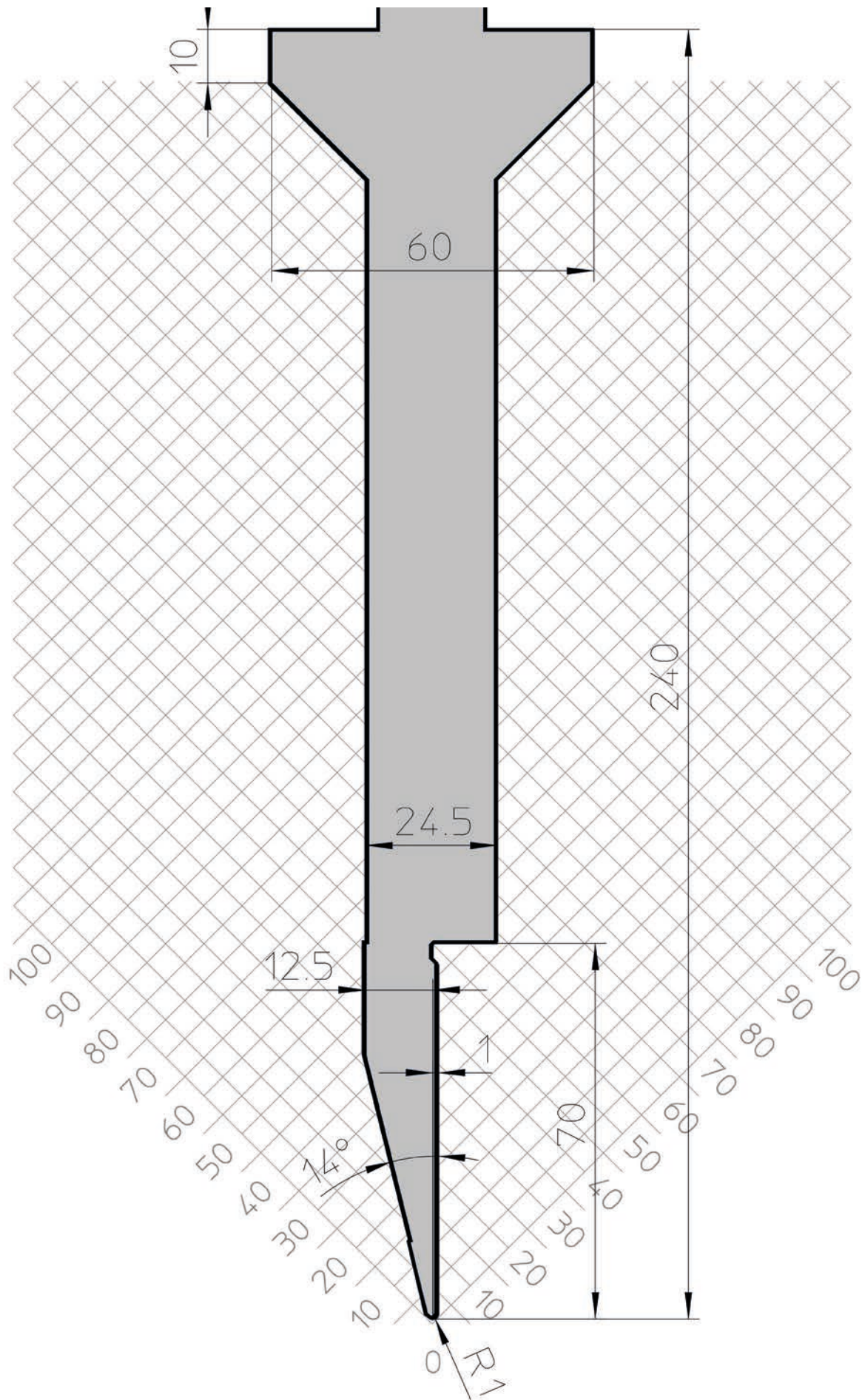


| More working radii |          |       | Delivery time: 2 weeks |
|--------------------|----------|-------|------------------------|
| OW210/S            | R0,5     |       | Radius                 |
|                    | 28°      |       | Angle                  |
|                    | 239,8    |       | Height                 |
|                    | Mat. No. | Price |                        |
| <b>Var. B</b>      |          |       |                        |
| 4050               | 0869285  | - EUR |                        |
| 3050               | 0869284  | - EUR |                        |
| 2550               | 0865725  | - EUR |                        |
| 2050               | 0869283  | - EUR |                        |
| 1250               | 0869282  | - EUR |                        |
| 1050               | 1871692  | - EUR |                        |
| <b>Var. A</b>      |          |       |                        |
| 2050               | 0869278  | - EUR |                        |
| 1250               | 0869277  | - EUR |                        |
| 1050               | 1871693  | - EUR |                        |
| 550                | 1871694  | - EUR |                        |
| <b>Block 250</b>   |          |       |                        |
| 250                | 0865724  | - EUR |                        |
| <b>Single</b>      |          |       |                        |
| 500                | 0865722  | - EUR |                        |
| 300                | 0856233  | - EUR |                        |
| 200                | 0865721  | - EUR |                        |
| 100                | 0839679  | - EUR |                        |
| Horn left 100      | 0839687  | - EUR |                        |
| Horn right 100     | 0839688  | - EUR |                        |
| 50                 | 0839685  | - EUR |                        |
| 45                 | 0839744  | - EUR |                        |
| 40                 | 0839743  | - EUR |                        |
| 35                 | 0839682  | - EUR |                        |
| 30                 | 0839681  | - EUR |                        |
| 25                 | 0839680  | - EUR |                        |
| 20                 | 1795766  | - EUR |                        |
| 15                 | 1795765  | - EUR |                        |
| 10                 | 1795764  | - EUR |                        |

Lengths, radius and height in [mm]

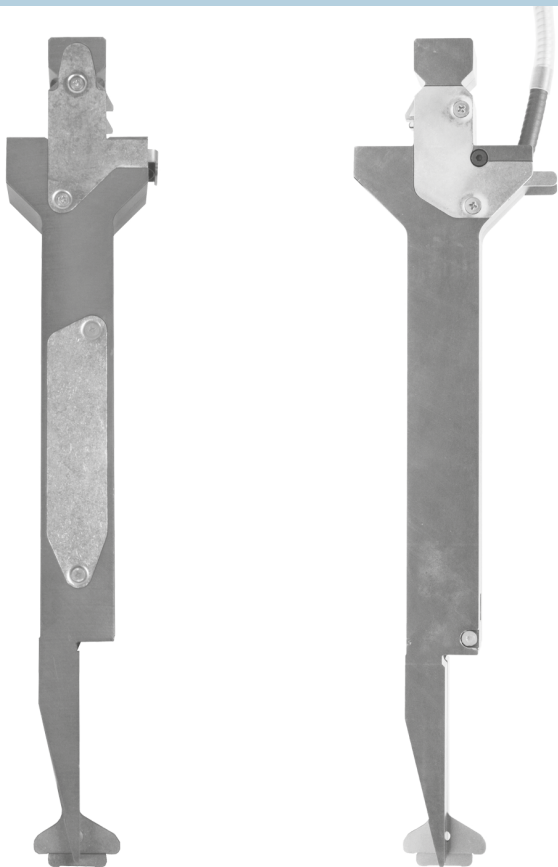
| More working radii  |          |       | Delivery time: 3 weeks |
|---------------------|----------|-------|------------------------|
| OW210/S             | R0,5     |       | Radius                 |
|                     | 28°      |       | Angle                  |
|                     | 239,8    |       | Height                 |
|                     | Mat. No. | Price |                        |
| <b>ACB Wireless</b> |          |       |                        |
| Sensor tool 25      | 2299116  | - EUR |                        |
| Initial equipment   | 2299117  | - EUR |                        |
| <b>ACB</b>          |          |       |                        |
| Sensor tool 25      | 1200080  | - EUR |                        |
| Initial equipment   | 1393466  | - EUR |                        |
| <b>Sensor disk</b>  |          |       |                        |
| L27                 | 1238673  | - EUR |                        |
| L18                 | 1238672  | - EUR |                        |
| L16                 | 1226063  | - EUR |                        |
| R07                 | 1226061  | - EUR |                        |

Radius and height in [mm]





Sensor tool

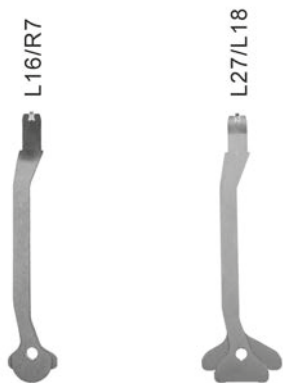


Delivery time: ex warehouse

|                       |          |         |
|-----------------------|----------|---------|
| ACB<br>OW210/S        | Radius:  | R1,0 mm |
|                       | Angle:   | 28°     |
|                       | Height:  | 240 mm  |
|                       | Mat. No. | Price   |
| ACB Wireless          |          |         |
| Sensor tool 25        | 1871672  | - EUR   |
| Initial equipment     | 2040949  | - EUR   |
| ACB                   |          |         |
| Sensor tool 25        | 0932643  | - EUR   |
| Initial equipment 2.G | 1273598  | - EUR   |
| Sensor disk           |          |         |
| L27                   | 1238673  | - EUR   |
| L18                   | 1238672  | - EUR   |
| L16                   | 1226063  | - EUR   |
| R07                   | 1226061  | - EUR   |

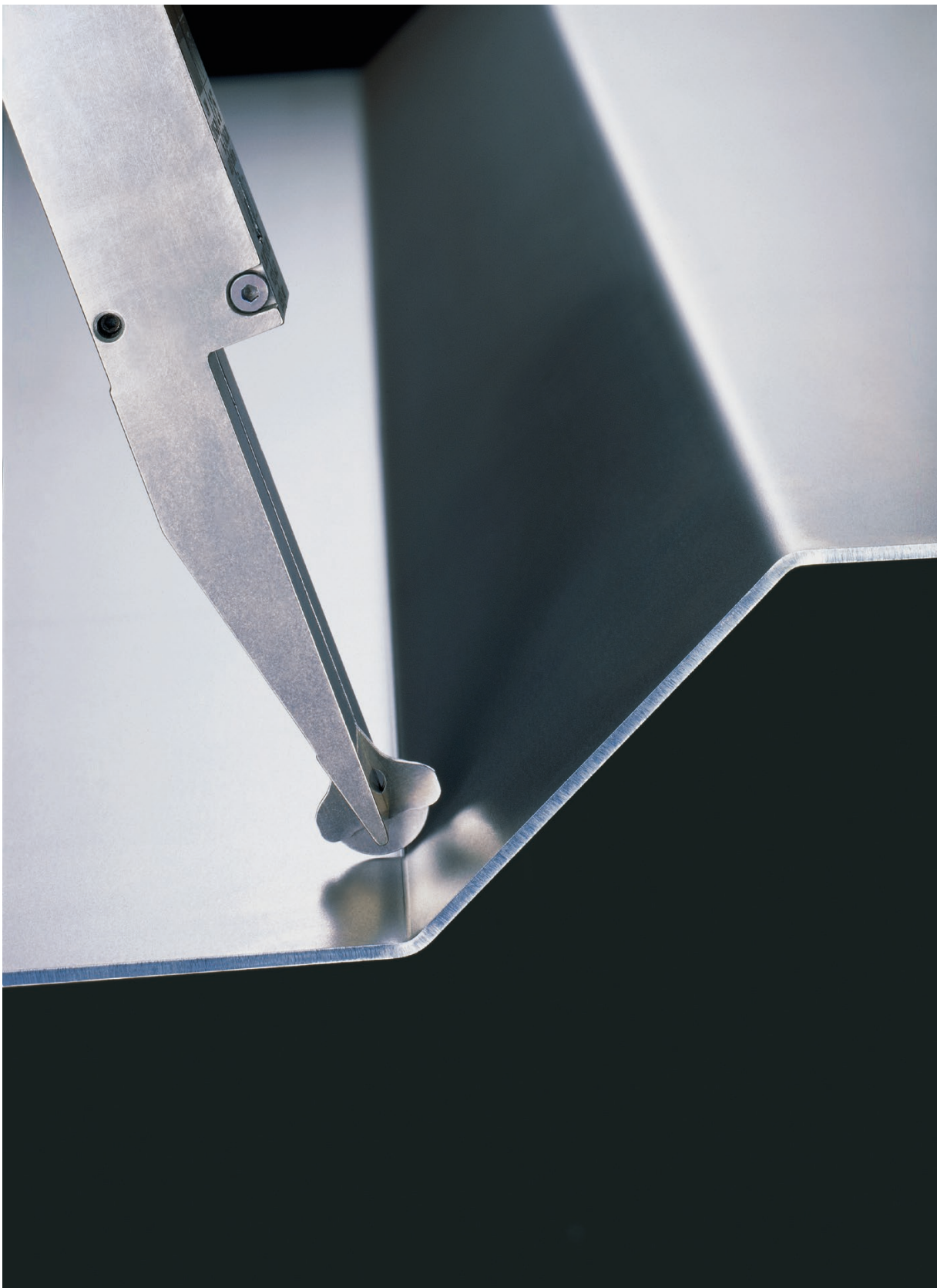
The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

Sensor disks OW 210/S H240



|           |       |      |          |        |
|-----------|-------|------|----------|--------|
| L16/R7 *  |       |      |          |        |
| Mat.      | s     | W    | α        | R (OW) |
| StSt      | ≤ 2.0 | ≤ 12 | 45 - 135 | ≤ 2    |
| St        | ≤ 3.0 | ≤ 16 | 45 - 120 | ≤ 2    |
| Al        | ≤ 2.0 | ≤ 12 | 45 - 135 | ≤ 2    |
| L27/L18 * |       |      |          |        |
| Mat.      | s     | W    | α        | R (OW) |
| StSt      | ≤ 3.0 | ≤ 24 | 52 - 135 | ≤ 4    |
| St        | ≤ 4.0 | ≤ 30 | 52 - 135 | ≤ 4    |
| Al        | ≤ 4.0 | ≤ 24 | 52 - 135 | ≤ 4    |

For bigger tool radii restricted angle measurements ranges are valid!



Sensor tool OW210/S in use

# Tool holders and punch inserts

## Technical information concerning tool adapters with interchangeable inserts

- Favorable opportunity for different radiuses
- Radius 0.3 to radius 6 mm (standard)
- Blades which can be replaced rapidly
- Tool holders can also be used for folding (see Chapter Folding)
- Tool blades in thin construction
- The heels are NOT included in the block with OW320, OW390 and OW391

| OW209/S | OWK130<br>OWK80 | OWK130<br>OWK80 |
|---------|-----------------|-----------------|
|         |                 |                 |
| OW320   | OW390           | OW391           |



Tool holders



Delivery time: ex warehouse

|           |          |        |
|-----------|----------|--------|
| OW209/S   | Radius:  | -      |
|           | Angle:   | -      |
|           | Height:  | 120 mm |
|           | Mat. No. | Price  |
| Var. B    |          |        |
| 4050      | 0832205  | - EUR  |
| 3050      | 0832204  | - EUR  |
| 2550      | 0835191  | - EUR  |
| 2050      | 0832203  | - EUR  |
| 1250      | 0830316  | - EUR  |
| 1050      | 0867281  | - EUR  |
| Var. A    |          |        |
| 2050      | 0823613  | - EUR  |
| 1250      | 0831970  | - EUR  |
| 1050      | 1607019  | - EUR  |
| 550       | 1607018  | - EUR  |
| Block 250 |          |        |
| 250       | 0829335  | - EUR  |
| Single    |          |        |
| 500       | 0831318  | - EUR  |
| 300       | 0831317  | - EUR  |
| 200       | 0831316  | - EUR  |
| 100       | 0829332  | - EUR  |
| 50        | 0829331  | - EUR  |
| 45        | 0829330  | - EUR  |
| 40        | 0829329  | - EUR  |
| 35        | 0829328  | - EUR  |
| 30        | 0829327  | - EUR  |
| 25        | 0829319  | - EUR  |

Lengths in [mm]

Technical data



2500 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



38,7 kg/m



~60 HRC

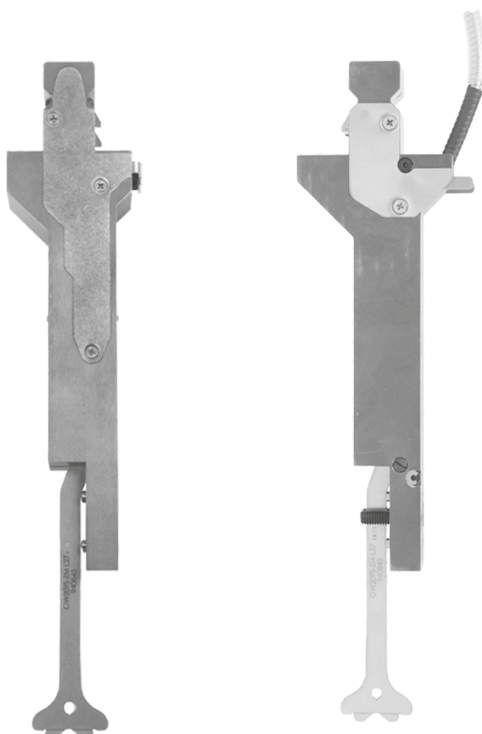


132 mm



25 mm - 100 mm

## Sensor tool



Delivery time: ex warehouse

|                       |                 |              |
|-----------------------|-----------------|--------------|
| <b>ACB OW209/S</b>    | <b>Radius:</b>  | -            |
|                       | <b>Angle:</b>   | -            |
|                       | <b>Height:</b>  | 120 mm       |
|                       | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB Wireless</b>   |                 |              |
| Sensor tool 25        | 1957586         | - EUR        |
| Initial equipment     | 2040733         | - EUR        |
| <b>ACB</b>            |                 |              |
| Sensor tool 25        | 0914983         | - EUR        |
| Initial equipment 2.G | 1278416         | - EUR        |
| <b>Sensor disk</b>    |                 |              |
| L43                   | 0949478         | - EUR        |
| L33                   | 0949477         | - EUR        |
| L27                   | 0940845         | - EUR        |
| L17                   | 0940846         | - EUR        |
| L15                   | 0940847         | - EUR        |
| L09                   | 0940849         | - EUR        |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

## Sensor disks OW 209/S



| <b>L15/L9 *</b>  |             |           |          |          |
|------------------|-------------|-----------|----------|----------|
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 2.0$  | $\leq 16$ | 45 - 105 | $\leq 2$ |
| St               | $\leq 2.0$  | $\leq 12$ | 45 - 135 | $\leq 2$ |
| Al               | $\leq 2.0$  | $\leq 12$ | 52 - 135 | $\leq 2$ |
| <b>L27/L17 *</b> |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 3.0$  | $\leq 24$ | 65 - 135 | $\leq 4$ |
| St               | $\leq 4.0$  | $\leq 30$ | 65 - 135 | $\leq 4$ |
| Al               | $\leq 4.0$  | $\leq 24$ | 65 - 135 | $\leq 4$ |
| <b>L43/L33 *</b> |             |           |          |          |
| Mat.             | s           | W         | $\alpha$ | R (OW)   |
| StSt             | $\leq 6.0$  | $\leq 50$ | 65 - 135 | $\leq 6$ |
| St               | $\leq 10.0$ | $\leq 70$ | 65 - 135 | $\leq 6$ |
| Al               | $\leq 10.0$ | $\leq 70$ | 65 - 135 | $\leq 6$ |

For bigger tool radii restricted angle measurements ranges are valid!



## Insert for OW209/S



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

8,6 kg/m



~60 HRC



\*For OW209/S  
L=100mm. Heels  
NOT included in the  
block! See Acces-  
sories for I axis  
spacer. R < 0,5mm =  
400kN/m



Delivery time: ex warehouse

| OW320 28°        | Radius:  | R1,0 mm |
|------------------|----------|---------|
|                  | Angle:   | 28°     |
|                  | Height:  | 100 mm  |
|                  | Mat. No. | Price   |
| <b>Var. B</b>    |          |         |
| 4050             | 0836147  | - EUR   |
| 3050             | 0834649  | - EUR   |
| 2550             | 0836146  | - EUR   |
| 2050             | 0834451  | - EUR   |
| 1250             | 0836145  | - EUR   |
| 1050             | 0867283  | - EUR   |
| <b>Var. A</b>    |          |         |
| 2050             | 0836142  | - EUR   |
| 1250             | 0831982  | - EUR   |
| 1050             | 1607066  | - EUR   |
| 550              | 1607065  | - EUR   |
| <b>Block 250</b> |          |         |
| 250              | 0831981  | - EUR   |
| <b>Single</b>    |          |         |
| 500              | 0831980  | - EUR   |
| 300              | 0831979  | - EUR   |
| 200              | 0831978  | - EUR   |
| Horn left 130*   | 0868239  | - EUR   |
| Horn right 130*  | 0868240  | - EUR   |
| 100              | 0831977  | - EUR   |
| 50               | 0831976  | - EUR   |
| 45               | 0831975  | - EUR   |
| 40               | 0831974  | - EUR   |
| 35               | 0831973  | - EUR   |
| 30               | 0831972  | - EUR   |
| 25               | 0831971  | - EUR   |

Lengths in [mm]

## Insert for OW209/S lock-seam prepared



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

9,4 kg/m



~60 HRC



\*For OW209/S  
L=100mm. Heels  
NOT included in the  
block! See Acces-  
sories for I axis  
spacer. R < 0,5mm =  
400kN/m



Delivery time: ex warehouse

| OW320-F          | Radius:  | R1,0 mm |
|------------------|----------|---------|
|                  | Angle:   | 28°     |
|                  | Height:  | 100 mm  |
|                  | Mat. No. | Price   |
| <b>Var. B</b>    |          |         |
| 4050             | 1245034  | - EUR   |
| 3050             | 0992142  | - EUR   |
| 2550             | 1235032  | - EUR   |
| 2050             | 1304504  | - EUR   |
| 1250             | 1357597  | - EUR   |
| 1050             | 1607217  | - EUR   |
| <b>Var. A</b>    |          |         |
| 2050             | 1461846  | - EUR   |
| 1250             | 1385813  | - EUR   |
| 1050             | 1607216  | - EUR   |
| 550              | 1607215  | - EUR   |
| <b>Block 250</b> |          |         |
| 250              | 0992141  | - EUR   |
| <b>Single</b>    |          |         |
| 500              | 0992140  | - EUR   |
| 300              | 0992139  | - EUR   |
| 200              | 0992138  | - EUR   |
| Horn left 130*   | 0994760  | - EUR   |
| Horn right 130*  | 0994761  | - EUR   |
| 100              | 0992061  | - EUR   |
| 50               | 0992137  | - EUR   |
| 45               | 0992136  | - EUR   |
| 40               | 0992135  | - EUR   |
| 35               | 0992134  | - EUR   |
| 30               | 0992133  | - EUR   |
| 25               | 0992132  | - EUR   |

Lengths in [mm]





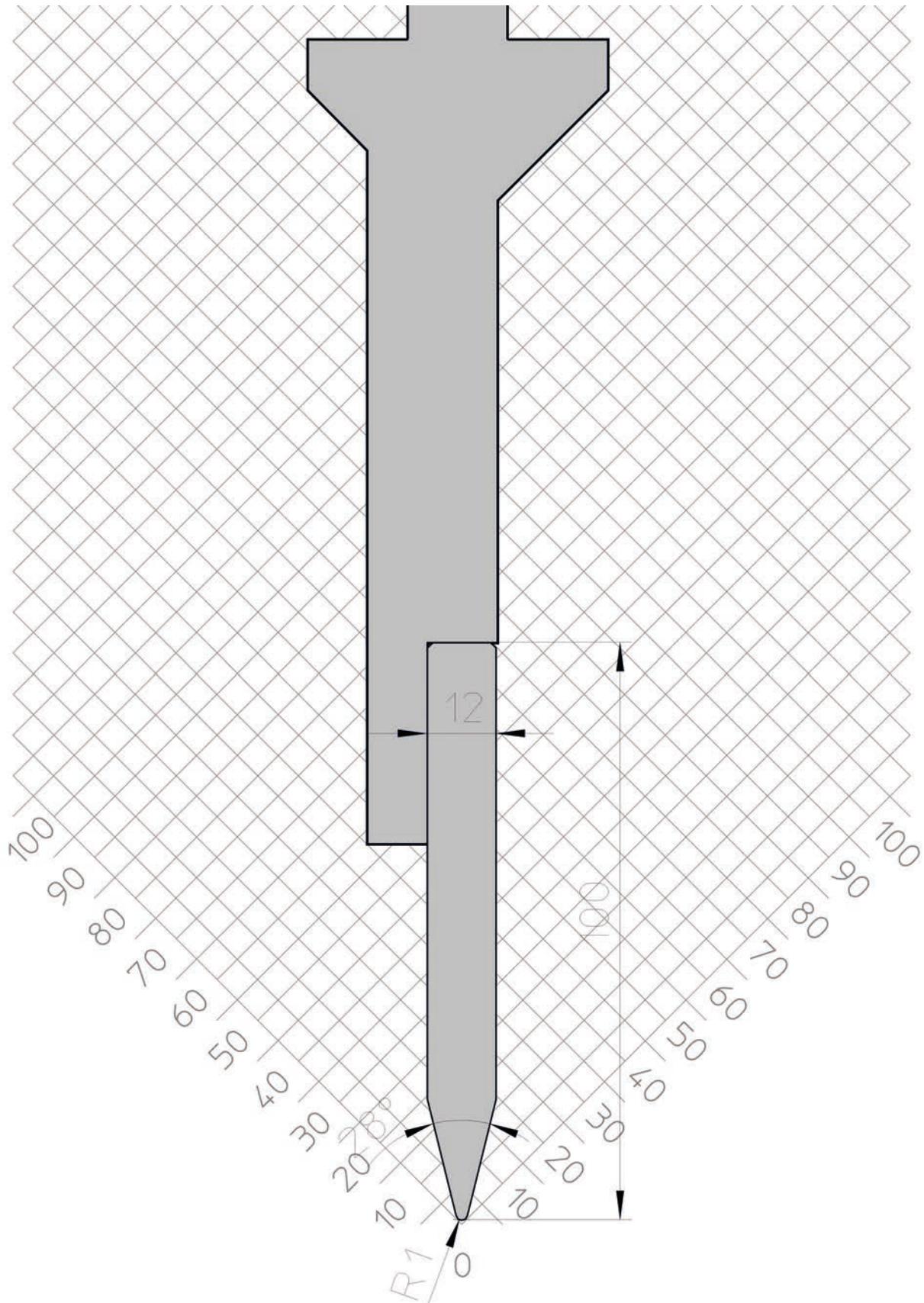
| More working radii |          |          |          |          |          |          |          | Delivery time: ex warehouse |
|--------------------|----------|----------|----------|----------|----------|----------|----------|-----------------------------|
|                    | R0,3     | R1,6     | R2       | R3       | R4       | R5       | R6       | Radius                      |
| OW320 28°          | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      |          | Angle                       |
|                    | 100      | 100      | 100      | 100      | 100      | 100      | 100      | Height                      |
|                    | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                       |
| <b>Var. B</b>      |          |          |          |          |          |          |          |                             |
| 4050               | 0869326  | 0869334  | 0869340  | 0869348  | 0869354  | 0869361  | 0839426  | - EUR                       |
| 3050               | 0869325  | 0869333  | 0866096  | 0843348  | 0850269  | 0862750  | 0850270  | - EUR                       |
| 2550               | 0869324  | 0869050  | 0869339  | 0869347  | 0857681  | 0864278  | 1271425  | - EUR                       |
| 2050               | 0869323  | 0869332  | 0866604  | 0869346  | 0869353  | 0869360  | 0843336  | - EUR                       |
| 1250               | 0866149  | 0855221  | 0846921  | 0846909  | 0838041  | 0869359  | 0862938  | - EUR                       |
| 1050               | 1607057  | 1607098  | 1607113  | 1607117  | 1607167  | 1607194  | 1607210  | - EUR                       |
| <b>Var. A</b>      |          |          |          |          |          |          |          |                             |
| 2050               | 0869319  | 0869328  | 0869335  | 0869342  | 0869349  | 0869355  | 1271410  | - EUR                       |
| 1250               | 0869318  | 0869327  | 0852572  | 0852573  | 0852574  | 0852575  | 0845139  | - EUR                       |
| 1050               | 1607056  | 1607097  | 1607112  | 1607116  | 1607166  | 1607193  | 1607199  | - EUR                       |
| 550                | 1607055  | 1607096  | 1607111  | 1607115  | 1607165  | 1607192  | 1607198  | - EUR                       |
| <b>Block 250</b>   |          |          |          |          |          |          |          |                             |
| 250                | 0866148  | 0855220  | 0846920  | 0843347  | 0833089  | 0832296  | 0839427  | - EUR                       |
| <b>Single</b>      |          |          |          |          |          |          |          |                             |
| 500                | 0866141  | 0855219  | 0846919  | 0843346  | 0833088  | 0832295  | 0835794  | - EUR                       |
| 300                | 0866140  | 0855218  | 0846918  | 0843345  | 0833087  | 0832294  | 0835793  | - EUR                       |
| 200                | 0866139  | 0855217  | 0846917  | 0843344  | 0833085  | 0832293  | 0835792  | - EUR                       |
| Horn left 130*     | 1366349  | 1322099  | 0869914  | 1346996  | 1375396  | 1245324  | 1250817  | - EUR                       |
| Horn right 130*    | 1366351  | 1322100  | 0869915  | 1346998  | 1375397  | 1245325  | 1250818  | - EUR                       |
| 100                | 0866137  | 0855210  | 0846910  | 0843337  | 0833081  | 0832292  | 0835791  | - EUR                       |
| 50                 | 0866147  | 0855216  | 0846916  | 0843343  | 0833080  | 0832291  | 0835790  | - EUR                       |
| 45                 | 0866146  | 0855215  | 0846915  | 0843342  | 0833079  | 0832290  | 0835789  | - EUR                       |
| 40                 | 0866145  | 0855214  | 0846914  | 0843341  | 0833078  | 0832289  | 0835788  | - EUR                       |
| 35                 | 0866144  | 0855213  | 0846913  | 0843340  | 0833077  | 0832288  | 0835787  | - EUR                       |
| 30                 | 0866143  | 0855212  | 0846912  | 0843339  | 0833075  | 0832287  | 0835786  | - EUR                       |
| 25                 | 0866142  | 0855211  | 0846911  | 0843338  | 0833070  | 0832286  | 0835785  | - EUR                       |

Lengths, radius and height in [mm]

| More working radii |          |          |          |          |          |          |          | Delivery time: 3 weeks |
|--------------------|----------|----------|----------|----------|----------|----------|----------|------------------------|
|                    | R0,3     | R1,6     | R2       | R3       | R4       | R5       | R6       | Radius                 |
| OW320 28°          | 28°      | 28°      | 28°      | 28°      | 28°      | 28°      |          | Angle                  |
|                    | 100      | 100      | 100      | 100      | 100      | 100      | 100      | Height                 |
|                    | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Mat. No. | Price                  |
| <b>ACB</b>         |          |          |          |          |          |          |          |                        |
| insert             | 0960827  | 0959784  | 0948203  | 0944436  | 0952945  | 0949642  | 0949643  | - EUR                  |

Radius and height in [mm]

Note: 2 pcs of ACB OW320 are needed for each OW209/S sensor.



Insert for sensor tool



2 pcs of ACB OW320 are needed for each OW209/S sensor.

| Delivery time: ex warehouse |          |         |
|-----------------------------|----------|---------|
| ACB<br>OW320 28°            | Radius:  | R1,0 mm |
|                             | Angle:   | 28°     |
|                             | Height:  | 100 mm  |
|                             | Mat. No. | Price   |
| ACB<br>insert               | 0914136  | - EUR   |

Insert for sensor tool



1 pc each of ACB OW320 F (1369850) and 1 pc ACB OW320 F with web (1369849) are needed for each OW209/S sensor.

| Delivery time: ex warehouse |          |         |
|-----------------------------|----------|---------|
| ACB<br>OW320-F              | Radius:  | R1,0 mm |
|                             | Angle:   | 28°     |
|                             | Height:  | 100 mm  |
|                             | Mat. No. | Price   |
| ACB<br>insert               | 1369849  | - EUR   |
| insert                      | 1369850  | - EUR   |



Tool holders



Delivery time: ex warehouse

|           |          |       |
|-----------|----------|-------|
| OW/K 80   | Radius:  | -     |
|           | Angle:   | -     |
|           | Height:  | 80 mm |
|           | Mat. No. | Price |
| Var. B    |          |       |
| 4050      | 1203581  | - EUR |
| 3050      | 1203580  | - EUR |
| 2550      | 1203569  | - EUR |
| 2050      | 1203568  | - EUR |
| 1250      | 0994305  | - EUR |
| 1050      | 1606513  | - EUR |
| Var. A    |          |       |
| 2050      | 1203564  | - EUR |
| 1250      | 1203563  | - EUR |
| 1050      | 1606512  | - EUR |
| 550       | 1606511  | - EUR |
| Block 250 |          |       |
| 250       | 0994304  | - EUR |
| Block 150 |          |       |
| 150       | 1207319  | - EUR |
| Single    |          |       |
| 500       | 0994303  | - EUR |
| 300       | 0994302  | - EUR |
| 200       | 0994291  | - EUR |
| 100       | 0994283  | - EUR |
| 50        | 0994290  | - EUR |
| 45        | 0994289  | - EUR |
| 40        | 0994288  | - EUR |
| 35        | 0994287  | - EUR |
| 30        | 0994286  | - EUR |
| 25        | 0994284  | - EUR |

Lengths in [mm]

Technical data



1000 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



18,8 kg/m



~60 HRC



98 mm



10 mm - 100 mm

Sensor tool

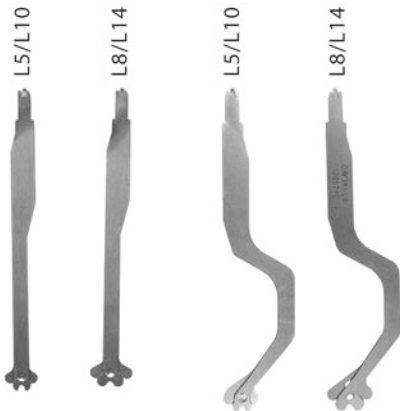


Delivery time: ex warehouse

|                       |          |       |
|-----------------------|----------|-------|
| ACB<br>OW/K 80        | Radius:  | -     |
|                       | Angle:   | -     |
|                       | Height:  | 80 mm |
|                       | Mat. No. | Price |
| ACB                   |          |       |
| Sensor tool 25        | 1204549  | - EUR |
| Initial equipment 2.G | 1273587  | - EUR |
| Sensor disk           |          |       |
| L14 (OW390)           | 1205780  | - EUR |
| L14 (OW391)           | 1205791  | - EUR |
| L10 (OW390)           | 1205777  | - EUR |
| L10 (OW391)           | 1205789  | - EUR |
| L08 (OW390)           | 1205778  | - EUR |
| L08 (OW391)           | 1205790  | - EUR |
| L05 (OW390)           | 1205754  | - EUR |
| L05 (OW391)           | 1205788  | - EUR |

The sensor disks marked with a star (\*) are included in the sensor tool scope of delivery.

Sensor disks OW/K-H80, OW/K-H130



| L5/L10 * |            |           |          |            |
|----------|------------|-----------|----------|------------|
| Mat.     | s          | W         | $\alpha$ | R (OW)     |
| StSt     | $\leq 1.0$ | $\leq 8$  | 45 - 110 | $\leq 1.0$ |
| St       | $\leq 1.5$ | $\leq 10$ | 45 - 110 | $\leq 1.5$ |
| Al       | $\leq 1.5$ | $\leq 10$ | 45 - 110 | $\leq 1.5$ |
| L8/L14 * |            |           |          |            |
| Mat.     | s          | W         | $\alpha$ | R (OW)     |
| StSt     | $\leq 2.0$ | $\leq 12$ | 45 - 110 | $\leq 2.0$ |
| St       | $\leq 2.5$ | $\leq 16$ | 45 - 110 | $\leq 2.5$ |
| Al       | $\leq 2.5$ | $\leq 16$ | 45 - 110 | $\leq 2.5$ |

For bigger tool radii restricted angle measurements ranges are valid!





## Insert for OW/K 80, OW/K 130



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

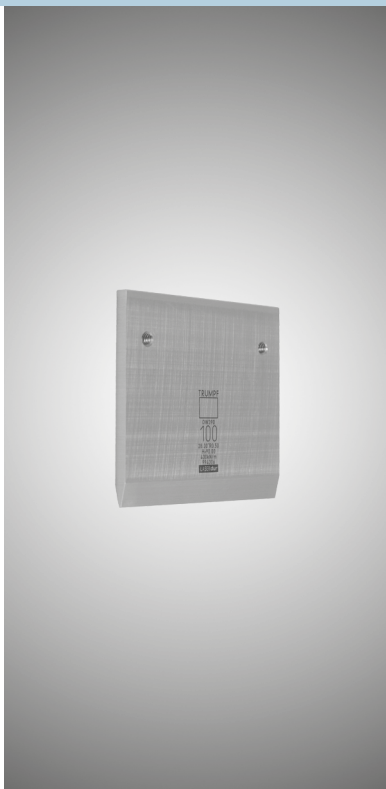
4,0 kg/m



~60 HRC



Heels upon request



Delivery time: ex warehouse

## OW390

Radius: R0,5 mm

Angle: 28°

Height: 90 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1203729 | - EUR |
| 3050 | 1203728 | - EUR |
| 2550 | 1203727 | - EUR |
| 2050 | 1203726 | - EUR |
| 1250 | 0994352 | - EUR |
| 1050 | 1607325 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1203722 | - EUR |
| 1250 | 1203721 | - EUR |
| 1050 | 1607324 | - EUR |
| 550  | 1607323 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0994351 | - EUR |
|-----|---------|-------|

## Block 150

|     |         |       |
|-----|---------|-------|
| 150 | 1207359 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0994350 | - EUR |
| 300 | 0994349 | - EUR |
| 200 | 0994348 | - EUR |
| 100 | 0994306 | - EUR |
| 50  | 0994347 | - EUR |
| 45  | 0994345 | - EUR |
| 40  | 0994341 | - EUR |
| 35  | 0994338 | - EUR |
| 30  | 0994311 | - EUR |
| 25  | 0994307 | - EUR |

Lengths in [mm]

## Insert for OW/K 80, OW/K 130



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

8,9 kg/m



~60 HRC



Heels upon request



Delivery time: ex warehouse

## OW391

Radius: R0,5 mm

Angle: 80°

Height: 90 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1204647 | - EUR |
| 3050 | 1204646 | - EUR |
| 2550 | 1204645 | - EUR |
| 2050 | 1204642 | - EUR |
| 1250 | 0994418 | - EUR |
| 1050 | 1607414 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1204627 | - EUR |
| 1250 | 1204626 | - EUR |
| 1050 | 1607413 | - EUR |
| 550  | 1607412 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0994417 | - EUR |
|-----|---------|-------|

## Block 150

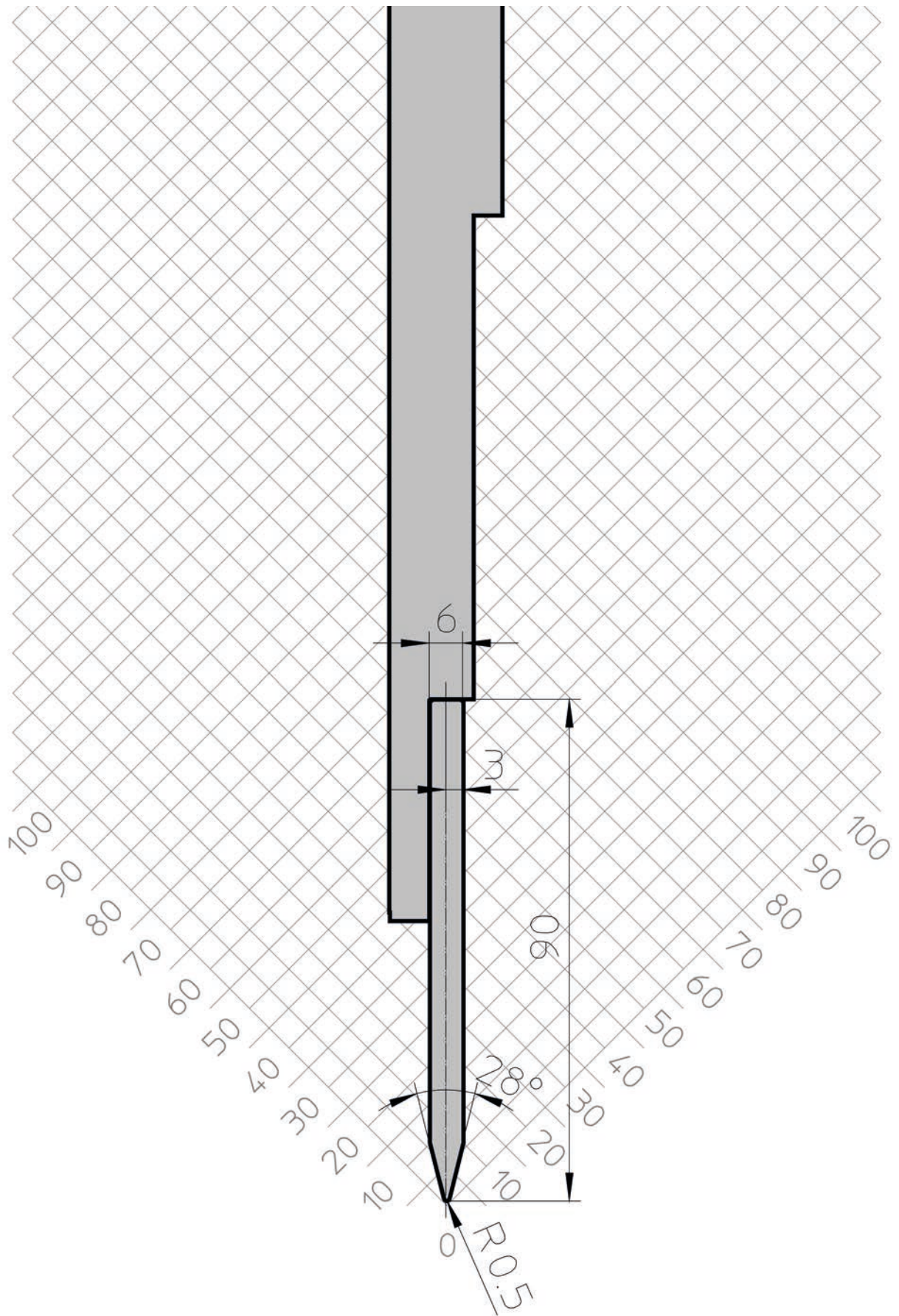
|     |         |       |
|-----|---------|-------|
| 150 | 1207416 | - EUR |
|-----|---------|-------|

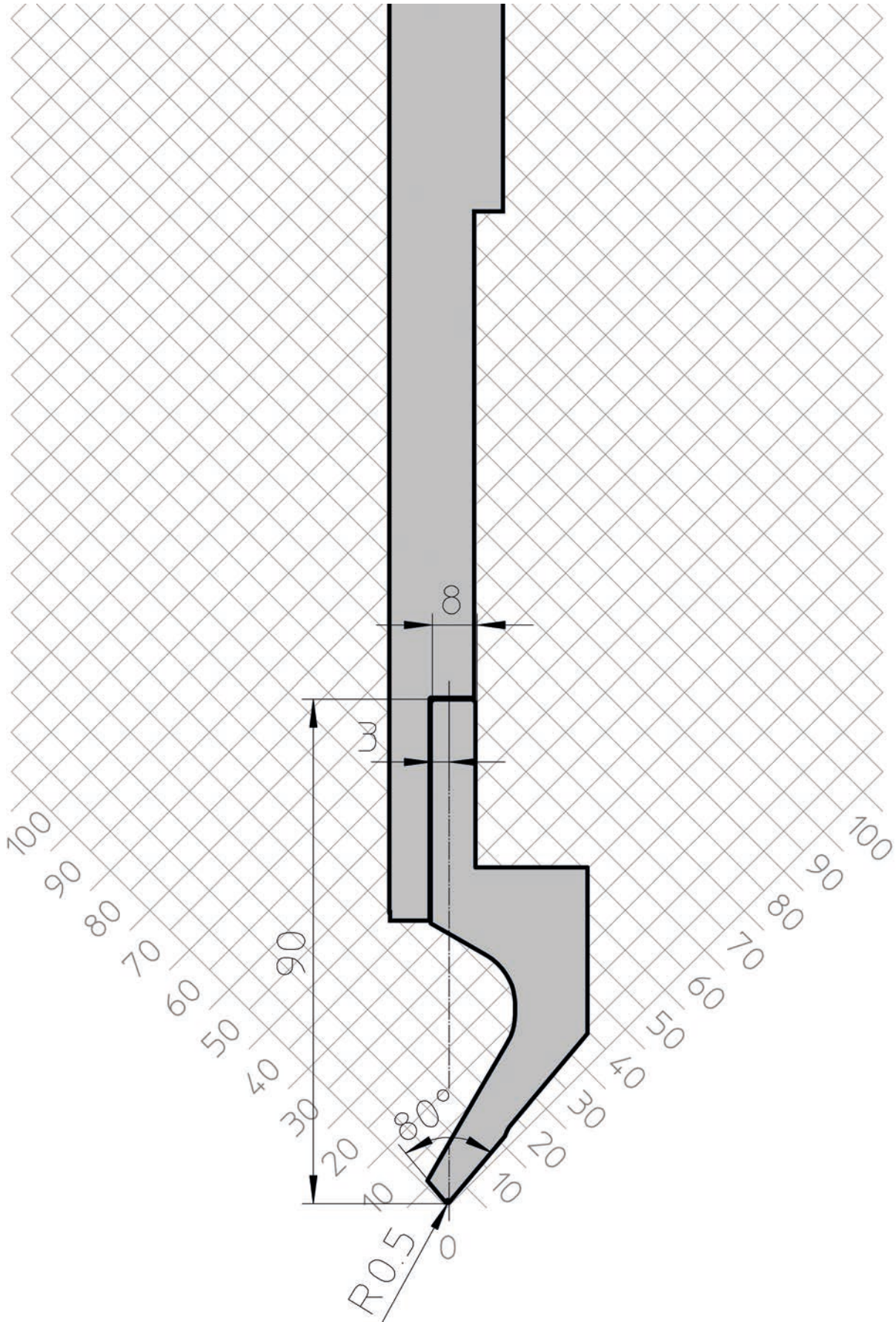
## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0994416 | - EUR |
| 300 | 0994415 | - EUR |
| 200 | 0994414 | - EUR |
| 100 | 0994377 | - EUR |
| 50  | 0994413 | - EUR |
| 45  | 0994412 | - EUR |
| 40  | 0994381 | - EUR |
| 35  | 0994380 | - EUR |
| 30  | 0994379 | - EUR |
| 25  | 0994378 | - EUR |

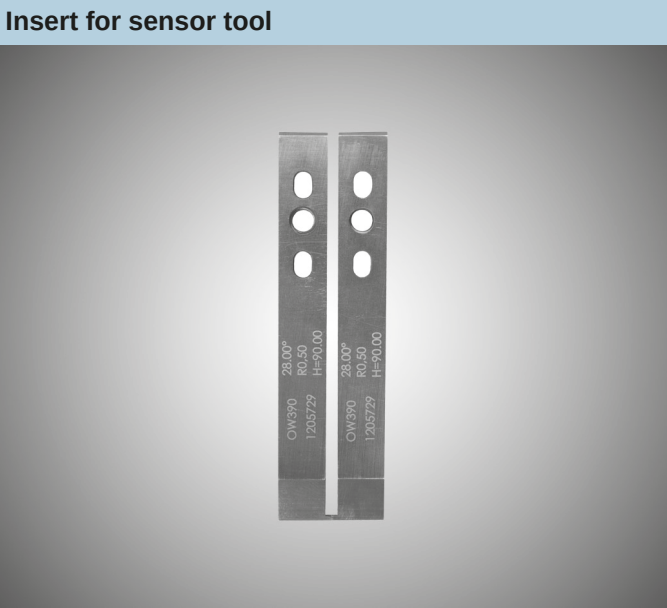
Lengths in [mm]





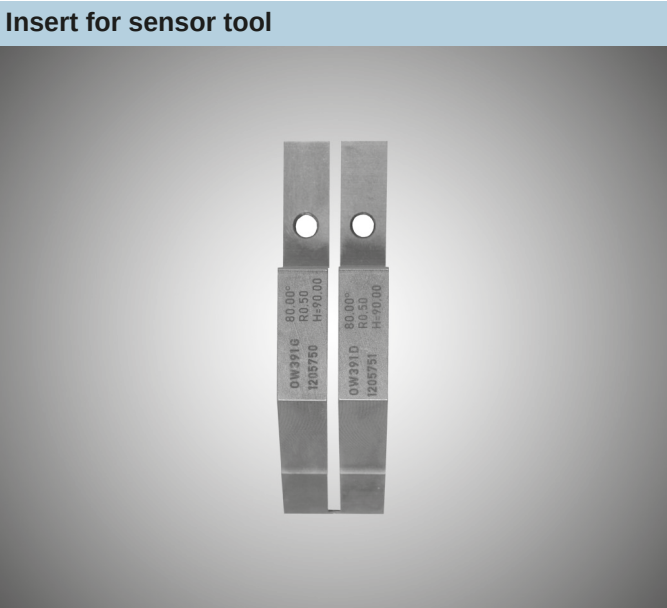






| Delivery time: ex warehouse |                 |              |
|-----------------------------|-----------------|--------------|
| <b>ACB<br/>OW390</b>        | <b>Radius:</b>  | R0,5 mm      |
|                             | <b>Angle:</b>   | 28°          |
|                             | <b>Height:</b>  | 90 mm        |
|                             | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB</b>                  |                 |              |
| insert                      | 1205729         | - EUR        |

2 pcs ACB OW390 (1205729) are needed for each OW/K 80 and OW/K 130 sensor.



| Delivery time: ex warehouse |                 |              |
|-----------------------------|-----------------|--------------|
| <b>ACB<br/>OW391</b>        | <b>Radius:</b>  | R0,5 mm      |
|                             | <b>Angle:</b>   | 80°          |
|                             | <b>Height:</b>  | 90 mm        |
|                             | <b>Mat. No.</b> | <b>Price</b> |
| <b>ACB</b>                  |                 |              |
| insert                      | 1205750         | - EUR        |
| insert                      | 1205751         | - EUR        |

1 pc of ACB OW391 (1205751 D) and 1 pc of ACB OW391 (1205750 G) are needed for each OW/K 80 and OW/K 130 sensor.



## Coining

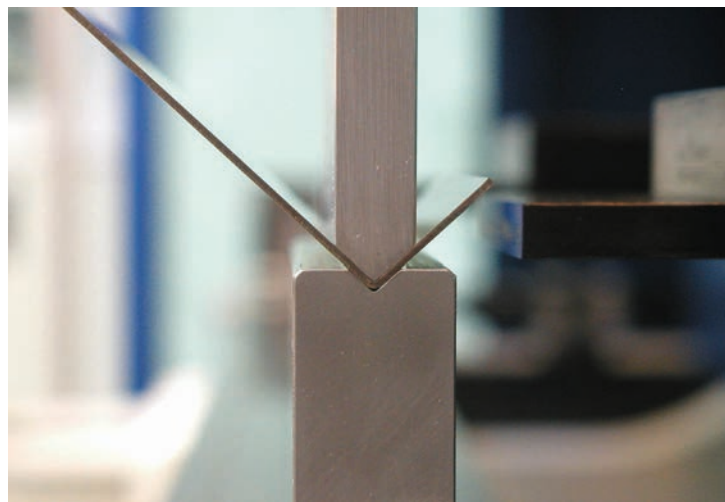
### Applications

- Small inner radiuses
- Recesses/holes next to the bending line
- Material thickness differences (but ACB not usable)

Selection of coining tools for precise coined parts requires great experience. Experimentation is required in a very large number of application cases. Naturally, we also supply coining tools according to customer specifications.

### Influencing variables for coining

- Bending part material
- Sheet thickness
- Inner radius R
- Smallest side length b
- Bending angle
- Angle accuracies
- Sheet thickness tolerances
- Maximum tensile strength of the material used



## Insert for coining for OW/K80, OW/K130



800 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

6,2 kg/m



~60 HRC

Chapter Coining.  
Heels available  
upon request

Delivery time: 1 week

## OW390

Radius: R0,5 mm

Angle: 90°

Height: 90 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1203801 | - EUR |
| 3050 | 1203800 | - EUR |
| 2550 | 1203749 | - EUR |
| 2050 | 1203748 | - EUR |
| 1250 | 0994375 | - EUR |
| 1050 | 1607329 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1203744 | - EUR |
| 1250 | 1203743 | - EUR |
| 1050 | 1607328 | - EUR |
| 550  | 1607327 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0994374 | - EUR |
|-----|---------|-------|

## Block 150

|     |         |       |
|-----|---------|-------|
| 150 | 1207401 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0994373 | - EUR |
| 300 | 0994372 | - EUR |
| 200 | 0994361 | - EUR |
| 100 | 0994353 | - EUR |
| 50  | 0994360 | - EUR |
| 45  | 0994359 | - EUR |
| 40  | 0994358 | - EUR |
| 35  | 0994357 | - EUR |
| 30  | 0994356 | - EUR |
| 25  | 0994355 | - EUR |

Lengths in [mm]

## Insert for coining for OW/K80, OW/K130



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

9,0 kg/m



~60 HRC

Chapter  
Coining. Heels  
available upon  
request

Delivery time: 1 week

## OW391

Radius: R0,5 mm

Angle: 90°

Height: 90 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1205113 | - EUR |
| 3050 | 1205112 | - EUR |
| 2550 | 1205111 | - EUR |
| 2050 | 1205110 | - EUR |
| 1250 | 0994440 | - EUR |
| 1050 | 1607452 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1205095 | - EUR |
| 1250 | 1205093 | - EUR |
| 1050 | 1607451 | - EUR |
| 550  | 1607450 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0994439 | - EUR |
|-----|---------|-------|

## Block 150

|     |         |       |
|-----|---------|-------|
| 150 | 1207445 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0994438 | - EUR |
| 300 | 0994437 | - EUR |
| 200 | 0994436 | - EUR |
| 100 | 0994419 | - EUR |
| 50  | 0994435 | - EUR |
| 45  | 0994434 | - EUR |
| 40  | 0994433 | - EUR |
| 35  | 0994432 | - EUR |
| 30  | 0994421 | - EUR |
| 25  | 0994420 | - EUR |

Lengths in [mm]



## Tool holders



2500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

38,7 kg/m



~60 HRC



132 mm



25 mm - 100 mm



Delivery time: ex warehouse

|                  |                 |              |
|------------------|-----------------|--------------|
| <b>OW209/S</b>   | <b>Radius:</b>  | -            |
|                  | <b>Angle:</b>   | -            |
|                  | <b>Height:</b>  | 120 mm       |
|                  | <b>Mat. No.</b> | <b>Price</b> |
| <b>Var. B</b>    |                 |              |
| 4050             | 0832205         | - EUR        |
| 3050             | 0832204         | - EUR        |
| 2550             | 0835191         | - EUR        |
| 2050             | 0832203         | - EUR        |
| 1250             | 0830316         | - EUR        |
| 1050             | 0867281         | - EUR        |
| <b>Var. A</b>    |                 |              |
| 2050             | 0823613         | - EUR        |
| 1250             | 0831970         | - EUR        |
| 1050             | 1607019         | - EUR        |
| 550              | 1607018         | - EUR        |
| <b>Block 250</b> |                 |              |
| 250              | 0829335         | - EUR        |
| <b>Single</b>    |                 |              |
| 500              | 0831318         | - EUR        |
| 300              | 0831317         | - EUR        |
| 200              | 0831316         | - EUR        |
| 100              | 0829332         | - EUR        |
| 50               | 0829331         | - EUR        |
| 45               | 0829330         | - EUR        |
| 40               | 0829329         | - EUR        |
| 35               | 0829328         | - EUR        |
| 30               | 0829327         | - EUR        |
| 25               | 0829319         | - EUR        |

Lengths in [mm]

## Insert for OW209/S



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

9,1 kg/m



~60 HRC

Chapter Coining.  
Heels available  
upon request

Delivery time: ex warehouse

|                  |                 |              |
|------------------|-----------------|--------------|
| <b>OW320 90°</b> | <b>Radius:</b>  | R1,0 mm      |
|                  | <b>Angle:</b>   | 90°          |
|                  | <b>Height:</b>  | 100 mm       |
|                  | <b>Mat. No.</b> | <b>Price</b> |
| <b>Var. B</b>    |                 |              |
| 4050             | 0832200         | - EUR        |
| 3050             | 0832199         | - EUR        |
| 2550             | 0835206         | - EUR        |
| 2050             | 0832198         | - EUR        |
| 1250             | 0832169         | - EUR        |
| 1050             | 0867284         | - EUR        |
| <b>Var. A</b>    |                 |              |
| 2050             | 0832195         | - EUR        |
| 1250             | 0832194         | - EUR        |
| 1050             | 1607299         | - EUR        |
| 550              | 1607298         | - EUR        |
| <b>Block 250</b> |                 |              |
| 250              | 0832168         | - EUR        |
| <b>Single</b>    |                 |              |
| 500              | 0832167         | - EUR        |
| 300              | 0832166         | - EUR        |
| 200              | 0832165         | - EUR        |
| 100              | 0832164         | - EUR        |
| 50               | 0832163         | - EUR        |
| 45               | 0832162         | - EUR        |
| 40               | 0832161         | - EUR        |
| 35               | 0832160         | - EUR        |
| 30               | 0832159         | - EUR        |
| 25               | 0832158         | - EUR        |

Lengths in [mm]



| More working radii |          |          |          | Delivery time: ex warehouse |  |
|--------------------|----------|----------|----------|-----------------------------|--|
| OW320 90°          | R0,2     | R0,5     | R1,5     | Radius                      |  |
|                    | 90°      | 90°      | 90°      | Angle                       |  |
|                    | 100      | 100      | 100      | Height                      |  |
|                    | Mat. No. | Mat. No. | Mat. No. | Price                       |  |
| Var. B             |          |          |          |                             |  |
| 4050               | 0869317  | 0832226  | 0833007  | - EUR                       |  |
| 3050               | 0869316  | 0832225  | 0833006  | - EUR                       |  |
| 2550               | 0869315  | 0835204  | 0835208  | - EUR                       |  |
| 2050               | 0855123  | 0832224  | 0833005  | - EUR                       |  |
| 1250               | 0849957  | 0832223  | 0833004  | - EUR                       |  |
| 1050               | 1607274  | 0867282  | 0867285  | - EUR                       |  |
| Var. A             |          |          |          |                             |  |
| 2050               | 0869311  | 0829336  | 0833001  | - EUR                       |  |
| 1250               | 0844986  | 0832023  | 0831070  | - EUR                       |  |
| 1050               | 1607273  | 1607295  | 1607321  | - EUR                       |  |
| 550                | 1607272  | 1607294  | 1607320  | - EUR                       |  |
| Block 250          |          |          |          |                             |  |
| 250                | 0832285  | 0829315  | 0831068  | - EUR                       |  |
| Single             |          |          |          |                             |  |
| 500                | 0832284  | 0829314  | 0831057  | - EUR                       |  |
| 300                | 0832283  | 0829313  | 0831056  | - EUR                       |  |
| 200                | 0832282  | 0829312  | 0831055  | - EUR                       |  |
| 100                | 0832281  | 0829311  | 0831054  | - EUR                       |  |
| 50                 | 0832280  | 0829310  | 0831053  | - EUR                       |  |
| 45                 | 0832279  | 0829309  | 0831052  | - EUR                       |  |
| 40                 | 0832278  | 0829308  | 0831051  | - EUR                       |  |
| 35                 | 0832277  | 0829307  | 0831050  | - EUR                       |  |
| 30                 | 0832276  | 0829306  | 0831049  | - EUR                       |  |
| 25                 | 0832275  | 0829305  | 0831048  | - EUR                       |  |

Lengths, radius and height in [mm]



## Punch for coining



Delivery time: ex warehouse

|                  |                 |              |
|------------------|-----------------|--------------|
| <b>OW211/K</b>   | <b>Radius:</b>  | R1,0 mm      |
|                  | <b>Angle:</b>   | 89.66°       |
|                  | <b>Height:</b>  | 120 mm       |
|                  | <b>Mat. No.</b> | <b>Price</b> |
| <b>Var. B</b>    |                 |              |
| 4050             | 0824077         | - EUR        |
| 3050             | 0824076         | - EUR        |
| 2550             | 0835197         | - EUR        |
| 2050             | 0824074         | - EUR        |
| 1250             | 0825730         | - EUR        |
| 1050             | 0867274         | - EUR        |
| <b>Var. A</b>    |                 |              |
| 2050             | 0824070         | - EUR        |
| 1250             | 0825729         | - EUR        |
| 1050             | 1576242         | - EUR        |
| 550              | 1607722         | - EUR        |
| <b>Block 250</b> |                 |              |
| 250              | 0825728         | - EUR        |
| <b>Single</b>    |                 |              |
| 500              | 0824063         | - EUR        |
| 300              | 0824062         | - EUR        |
| 200              | 0824060         | - EUR        |
| 100              | 0824732         | - EUR        |
| Horn left 100    | 0824729         | - EUR        |
| Horn right 100   | 0824731         | - EUR        |
| 50               | 0824726         | - EUR        |
| 45               | 0824724         | - EUR        |
| 40               | 0824722         | - EUR        |
| 35               | 0824720         | - EUR        |
| 30               | 0824718         | - EUR        |
| 25               | 0824712         | - EUR        |

Lengths in [mm]

## Technical data



1800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



23,7 kg/m



~60 HRC



64 mm

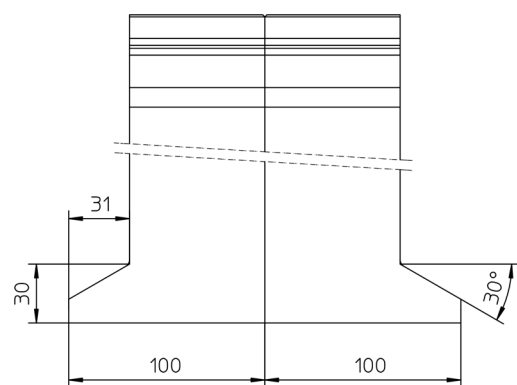


10 mm - 500 mm



Chapter Coining

## Horn left / right



| More working radii |          |          |       | Delivery time: 2 weeks    |
|--------------------|----------|----------|-------|---------------------------|
| OW211/K            | R0,2     | R0,5     |       |                           |
|                    | 89.66°   | 90°      |       |                           |
|                    | 119,8    | 119,8    |       |                           |
|                    | Mat. No. | Mat. No. | Price | Radius<br>Angle<br>Height |
| <b>Var. B</b>      |          |          |       |                           |
| 4050               | 0869302  | 0869310  | - EUR |                           |
| 3050               | 0869301  | 0869309  | - EUR |                           |
| 2550               | 0869300  | 0869308  | - EUR |                           |
| 2050               | 0869299  | 0833955  | - EUR |                           |
| 1250               | 0842901  | 0869307  | - EUR |                           |
| 1050               | 1871695  | 1871700  | - EUR |                           |
| <b>Var. A</b>      |          |          |       |                           |
| 2050               | 0869295  | 0829419  | - EUR |                           |
| 1250               | 0869294  | 0869303  | - EUR |                           |
| 1050               | 1871697  | 1576243  | - EUR |                           |
| 550                | 1871696  | 1871699  | - EUR |                           |
| <b>Block 250</b>   |          |          |       |                           |
| 250                | 0842931  | 0829421  | - EUR |                           |
| <b>Single</b>      |          |          |       |                           |
| 500                | 0842918  | 0829409  | - EUR |                           |
| 300                | 0842917  | 0829408  | - EUR |                           |
| 200                | 0842916  | 0829407  | - EUR |                           |
| 100                | 0842925  | 0829418  | - EUR |                           |
| Horn left 100      | 0842928  | 0829416  | - EUR |                           |
| Horn right 100     | 0842929  | 0829417  | - EUR |                           |
| 50                 | 0842924  | 0829415  | - EUR |                           |
| 45                 | 0842923  | 0829414  | - EUR |                           |
| 40                 | 0842922  | 0829413  | - EUR |                           |
| 35                 | 0842921  | 0829412  | - EUR |                           |
| 30                 | 0842920  | 0829411  | - EUR |                           |
| 25                 | 0842919  | 0829410  | - EUR |                           |

Lengths, radius and height in [mm]



## Radius bending



- Optimum tool angle  $\sim 30^\circ$
- Overbending by  $\sim 10^\circ$  is necessary (depends on material)
- Minimum die width:  $\sim (\text{radius} + \text{sheet thickness}) \times 2$
- Round off the result upwards.
- Hardened radius shaft  $\sim 60$  HRC.
- The radiuses at the product will as a rule be somewhat larger than those at the tool (depends on material)

### Examples from daily practice (Mild steel 450N/mm<sup>2</sup>):

| Radius insert [mm] | Die width [mm] | Inner radius at the product |
|--------------------|----------------|-----------------------------|
| R10                | W24            | 10                          |
| R15                | W40            | 15,5                        |
| R20                | W50            | 20,5                        |
| R25                | W60            | 25,5                        |
| R30                | W70            | 31                          |
| R35                | W80            | 36                          |
| R40                | W90            | 41                          |

#### Tool adapter (R10-R25)



1300 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

33,3 kg/m



100 mm



Delivery time: ex warehouse

|                  |                 |              |
|------------------|-----------------|--------------|
| <b>OW308/K</b>   | <b>Radius:</b>  | -            |
|                  | <b>Angle:</b>   | -            |
|                  | <b>Height:</b>  | 106 mm       |
|                  | <b>Mat. No.</b> | <b>Price</b> |
| <b>Var. B</b>    |                 |              |
| 4050             | 0832213         | - EUR        |
| 3050             | 0832212         | - EUR        |
| 2550             | 0835202         | - EUR        |
| 2050             | 0832211         | - EUR        |
| 1250             | 0832210         | - EUR        |
| 1050             | 0867643         | - EUR        |
| <b>Var. A</b>    |                 |              |
| 2050             | 0832207         | - EUR        |
| 1250             | 0832206         | - EUR        |
| 1050             | 1607839         | - EUR        |
| 550              | 1607838         | - EUR        |
| <b>Block 250</b> |                 |              |
| 250              | 0831722         | - EUR        |
| <b>Single</b>    |                 |              |
| 500              | 0826531         | - EUR        |
| 300              | 0827150         | - EUR        |
| 200              | 0827151         | - EUR        |
| 100              | 0827152         | - EUR        |
| 50               | 0831721         | - EUR        |
| 45               | 0831720         | - EUR        |
| 40               | 0831719         | - EUR        |
| 35               | 0831718         | - EUR        |
| 30               | 0831717         | - EUR        |
| 25               | 0831716         | - EUR        |

Lengths in [mm]

## Tool adapter (R15-R50)



1500 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



46,5 kg/m



100 mm



Delivery time: ex warehouse

|                |                 |              |
|----------------|-----------------|--------------|
| <b>OW308/S</b> | <b>Radius:</b>  | -            |
|                | <b>Angle:</b>   | -            |
|                | <b>Height:</b>  | 100 mm       |
|                | <b>Mat. No.</b> | <b>Price</b> |

|               |         |       |
|---------------|---------|-------|
| <b>Var. B</b> |         |       |
| 4050          | 0842446 | - EUR |
| 3050          | 0839573 | - EUR |
| 2550          | 0842445 | - EUR |
| 2050          | 0842444 | - EUR |
| 1250          | 0842427 | - EUR |
| 1050          | 0867644 | - EUR |

|               |         |       |
|---------------|---------|-------|
| <b>Var. A</b> |         |       |
| 2050          | 0842448 | - EUR |
| 1250          | 0842447 | - EUR |
| 1050          | 1607830 | - EUR |
| 550           | 1607809 | - EUR |

|                  |         |       |
|------------------|---------|-------|
| <b>Block 250</b> |         |       |
| 250              | 0839572 | - EUR |

|               |         |       |
|---------------|---------|-------|
| <b>Single</b> |         |       |
| 500           | 0839569 | - EUR |
| 300           | 0839568 | - EUR |
| 200           | 0839567 | - EUR |
| 100           | 0839566 | - EUR |
| 50            | 0839565 | - EUR |
| 45            | 0839564 | - EUR |
| 40            | 0839563 | - EUR |
| 35            | 0839562 | - EUR |
| 30            | 0839561 | - EUR |
| 25            | 0839560 | - EUR |

Lengths in [mm]

## Insert for OW 308/K



1300 kN/m



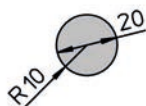
C 45  
650 - 800 N/mm<sup>2</sup>



2,6 kg/m



~60 HRC



Delivery time: ex warehouse

|                   |                 |              |
|-------------------|-----------------|--------------|
| <b>round bars</b> | <b>Radius:</b>  | R10,0 mm     |
|                   | <b>Height:</b>  | 20 mm        |
|                   | <b>Mat. No.</b> | <b>Price</b> |

|               |         |       |
|---------------|---------|-------|
| <b>Var. B</b> |         |       |
| 4050          | 0841925 | - EUR |
| 3050          | 0842538 | - EUR |
| 2550          | 0842067 | - EUR |
| 2050          | 0835550 | - EUR |
| 1250          | 0835020 | - EUR |
| 1050          | 1607908 | - EUR |

|               |         |       |
|---------------|---------|-------|
| <b>Var. A</b> |         |       |
| 2050          | 0842534 | - EUR |
| 1250          | 0837974 | - EUR |
| 1050          | 1607907 | - EUR |
| 550           | 1607906 | - EUR |

|                  |         |       |
|------------------|---------|-------|
| <b>Block 250</b> |         |       |
| 250              | 0830948 | - EUR |

|               |         |       |
|---------------|---------|-------|
| <b>Single</b> |         |       |
| 500           | 0826535 | - EUR |
| 300           | 0830943 | - EUR |
| 200           | 0830942 | - EUR |
| 100           | 0830941 | - EUR |
| 50            | 0830940 | - EUR |
| 45            | 0830939 | - EUR |
| 40            | 0830938 | - EUR |
| 35            | 0830937 | - EUR |
| 30            | 0830936 | - EUR |
| 25            | 0830935 | - EUR |

Lengths in [mm]





## Insert for OW 308/K



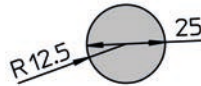
1300 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

3,8 kg/m



~60 HRC



Delivery time: ex warehouse

| round bars       | Radius:  | R12,5 mm |
|------------------|----------|----------|
|                  | Height:  | 25 mm    |
|                  | Mat. No. | Price    |
| <b>Var. B</b>    |          |          |
| 4050             | 1782831  | - EUR    |
| 3050             | 1782829  | - EUR    |
| 2550             | 1782827  | - EUR    |
| 2050             | 1541448  | - EUR    |
| 1250             | 1782824  | - EUR    |
| 1050             | 1782822  | - EUR    |
| <b>Var. A</b>    |          |          |
| 2050             | 1782825  | - EUR    |
| 1250             | 1782823  | - EUR    |
| 1050             | 1782821  | - EUR    |
| 550              | 1782790  | - EUR    |
| <b>Block 250</b> |          |          |
| 250              | 1541447  | - EUR    |
| <b>Single</b>    |          |          |
| 500              | 1203818  | - EUR    |
| 300              | 1203840  | - EUR    |
| 200              | 1203819  | - EUR    |
| 100              | 0994059  | - EUR    |
| 50               | 1541445  | - EUR    |
| 45               | 1541444  | - EUR    |
| 40               | 1541443  | - EUR    |
| 35               | 1541442  | - EUR    |
| 30               | 1541441  | - EUR    |
| 25               | 1541440  | - EUR    |

Lengths in [mm]

## Insert for OW308/K, OW308/S



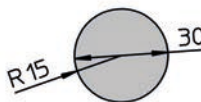
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

5,5 kg/m



~60 HRC



Delivery time: ex warehouse

| round bars       | Radius:  | R15,0 mm |
|------------------|----------|----------|
|                  | Height:  | 30 mm    |
|                  | Mat. No. | Price    |
| <b>Var. B</b>    |          |          |
| 4050             | 0853731  | - EUR    |
| 3050             | 0861406  | - EUR    |
| 2550             | 0861877  | - EUR    |
| 2050             | 0841924  | - EUR    |
| 1250             | 0835021  | - EUR    |
| 1050             | 1607936  | - EUR    |
| <b>Var. A</b>    |          |          |
| 2050             | 0864237  | - EUR    |
| 1250             | 0869384  | - EUR    |
| 1050             | 1607935  | - EUR    |
| 550              | 1607934  | - EUR    |
| <b>Block 250</b> |          |          |
| 250              | 0832340  | - EUR    |
| <b>Single</b>    |          |          |
| 500              | 0832339  | - EUR    |
| 300              | 0830071  | - EUR    |
| 200              | 0832338  | - EUR    |
| 100              | 0832337  | - EUR    |
| 50               | 0832336  | - EUR    |
| 45               | 0832335  | - EUR    |
| 40               | 0832334  | - EUR    |
| 35               | 0832333  | - EUR    |
| 30               | 0832332  | - EUR    |
| 25               | 0832331  | - EUR    |

Lengths in [mm]

## Insert for OW308/K, OW308/S



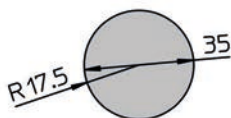
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

7,6 kg/m



~60 HRC



Delivery time: ex warehouse

| round bars | Radius:  | R17,5 mm |
|------------|----------|----------|
|            | Height:  | 35 mm    |
|            | Mat. No. | Price    |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1782889 | - EUR |
| 3050 | 1782887 | - EUR |
| 2550 | 1782885 | - EUR |
| 2050 | 1782883 | - EUR |
| 1250 | 0852881 | - EUR |
| 1050 | 1782860 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1782882 | - EUR |
| 1250 | 1782881 | - EUR |
| 1050 | 1782859 | - EUR |
| 550  | 1782858 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0852880 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1598058 | - EUR |
| 300 | 0852879 | - EUR |
| 200 | 0852878 | - EUR |
| 100 | 0852871 | - EUR |
| 50  | 0852877 | - EUR |
| 45  | 0852876 | - EUR |
| 40  | 0852875 | - EUR |
| 35  | 0852874 | - EUR |
| 30  | 0852873 | - EUR |
| 25  | 0852872 | - EUR |

Lengths in [mm]

## Insert for OW308/K, OW308/S



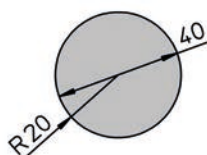
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

9,8 kg/m



~60 HRC



Delivery time: ex warehouse

| round bars | Radius:  | R20,0 mm |
|------------|----------|----------|
|            | Height:  | 40 mm    |
|            | Mat. No. | Price    |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0859434 | - EUR |
| 3050 | 0861407 | - EUR |
| 2550 | 0851579 | - EUR |
| 2050 | 0855423 | - EUR |
| 1250 | 0835004 | - EUR |
| 1050 | 1607946 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0869389 | - EUR |
| 1250 | 0869388 | - EUR |
| 1050 | 1607945 | - EUR |
| 550  | 1607944 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0835019 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0826534 | - EUR |
| 300 | 0827153 | - EUR |
| 200 | 0827154 | - EUR |
| 100 | 0827155 | - EUR |
| 50  | 0835018 | - EUR |
| 45  | 0835017 | - EUR |
| 40  | 0835016 | - EUR |
| 35  | 0835015 | - EUR |
| 30  | 0835014 | - EUR |
| 25  | 0835013 | - EUR |

Lengths in [mm]



## Insert for OW308/K, OW308/S



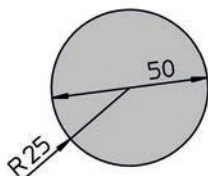
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

15,3 kg/m



~60 HRC



Delivery time: ex warehouse

| round bars       | Radius:  | R25,0 mm |
|------------------|----------|----------|
|                  | Height:  | 50 mm    |
|                  | Mat. No. | Price    |
| <b>Var. B</b>    |          |          |
| 4050             | 0842299  | - EUR    |
| 3050             | 0848761  | - EUR    |
| 2550             | 0842070  | - EUR    |
| 2050             | 0835809  | - EUR    |
| 1250             | 0841800  | - EUR    |
| 1050             | 1607981  | - EUR    |
| <b>Var. A</b>    |          |          |
| 2050             | 0869394  | - EUR    |
| 1250             | 0869393  | - EUR    |
| 1050             | 1607980  | - EUR    |
| 550              | 1607949  | - EUR    |
| <b>Block 250</b> |          |          |
| 250              | 0835032  | - EUR    |
| <b>Single</b>    |          |          |
| 500              | 0835031  | - EUR    |
| 300              | 0835030  | - EUR    |
| 200              | 0835029  | - EUR    |
| 100              | 0835028  | - EUR    |
| 50               | 0835027  | - EUR    |
| 45               | 0835026  | - EUR    |
| 40               | 0835025  | - EUR    |
| 35               | 0835024  | - EUR    |
| 30               | 0835023  | - EUR    |
| 25               | 0835022  | - EUR    |

Lengths in [mm]

## Insert for OW308/S



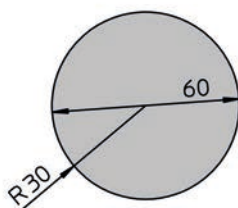
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

22,2 kg/m



~60 HRC



Delivery time: ex warehouse

| round bars       | Radius:  | R30,0 mm |
|------------------|----------|----------|
|                  | Height:  | 60 mm    |
|                  | Mat. No. | Price    |
| <b>Var. B</b>    |          |          |
| 4050             | 0869405  | - EUR    |
| 3050             | 0869404  | - EUR    |
| 2550             | 0864142  | - EUR    |
| 2050             | 0869403  | - EUR    |
| 1250             | 0864112  | - EUR    |
| 1050             | 1607984  | - EUR    |
| <b>Var. A</b>    |          |          |
| 2050             | 0869399  | - EUR    |
| 1250             | 0869398  | - EUR    |
| 1050             | 1607983  | - EUR    |
| 550              | 1607982  | - EUR    |
| <b>Block 250</b> |          |          |
| 250              | 0864111  | - EUR    |
| <b>Single</b>    |          |          |
| 500              | 0853551  | - EUR    |
| 300              | 0855876  | - EUR    |
| 200              | 0864110  | - EUR    |
| 100              | 0853550  | - EUR    |
| 50               | 0864109  | - EUR    |
| 45               | 0864108  | - EUR    |
| 40               | 0864107  | - EUR    |
| 35               | 0855875  | - EUR    |
| 30               | 0864106  | - EUR    |
| 25               | 0864105  | - EUR    |

Lengths in [mm]

## Insert for OW308/S



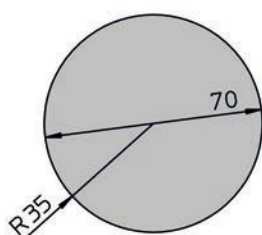
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

30,2 kg/m



~60 HRC

The 500-mm part length  
has a weight of 37 kg with  
holder

Delivery time: ex warehouse

| round bars | Radius:  | R35,0 mm |
|------------|----------|----------|
|            | Height:  | 70 mm    |
|            | Mat. No. | Price    |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0869413 | - EUR |
| 3050 | 0869412 | - EUR |
| 2550 | 0864151 | - EUR |
| 2050 | 0869411 | - EUR |
| 1250 | 0863579 | - EUR |
| 1050 | 1607987 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0869407 | - EUR |
| 1250 | 0869406 | - EUR |
| 1050 | 1607986 | - EUR |
| 550  | 1607985 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0864150 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0864149 | - EUR |
| 300 | 0861138 | - EUR |
| 200 | 0859828 | - EUR |
| 100 | 0859827 | - EUR |
| 50  | 0864148 | - EUR |
| 45  | 0864147 | - EUR |
| 40  | 0864146 | - EUR |
| 35  | 0864145 | - EUR |
| 30  | 0864144 | - EUR |
| 25  | 0864143 | - EUR |

Lengths in [mm]

## Insert for OW308/S



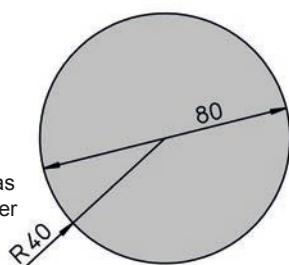
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

39,5 kg/m



~60 HRC

The 500-mm part length  
has a weight of 43 kg with  
holder

Delivery time: ex warehouse

| round bars | Radius:  | R40,0 mm |
|------------|----------|----------|
|            | Height:  | 80 mm    |
|            | Mat. No. | Price    |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0869421 | - EUR |
| 3050 | 0869420 | - EUR |
| 2550 | 0856344 | - EUR |
| 2050 | 0847638 | - EUR |
| 1250 | 0869419 | - EUR |
| 1050 | 1607992 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0869415 | - EUR |
| 1250 | 0869414 | - EUR |
| 1050 | 1607991 | - EUR |
| 550  | 1607990 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0847637 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0847636 | - EUR |
| 300 | 0847635 | - EUR |
| 200 | 0847634 | - EUR |
| 100 | 0847627 | - EUR |
| 50  | 0847633 | - EUR |
| 45  | 0847632 | - EUR |
| 40  | 0847631 | - EUR |
| 35  | 0847630 | - EUR |
| 30  | 0847629 | - EUR |
| 25  | 0847628 | - EUR |

Lengths in [mm]



## Insert for OW308/S



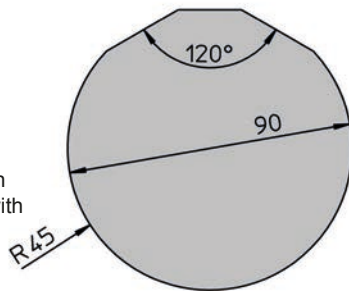
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

49,3 kg/m



~60 HRC

The 500-mm part length  
has a weight of 47 kg with  
holder

Delivery time: ex warehouse

| round bars | Radius:  | R45,0 mm |
|------------|----------|----------|
|            | Height:  | 89 mm    |
|            | Mat. No. | Price    |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1461664 | - EUR |
| 3050 | 1461663 | - EUR |
| 2550 | 1461661 | - EUR |
| 2050 | 0871222 | - EUR |
| 1250 | 1461660 | - EUR |
| 1050 | 1608027 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1461589 | - EUR |
| 1250 | 1461582 | - EUR |
| 1050 | 1608026 | - EUR |
| 550  | 1608025 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0871221 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0871220 | - EUR |
| 300 | 0871219 | - EUR |
| 200 | 0852887 | - EUR |
| 100 | 0871212 | - EUR |
| 50  | 0871218 | - EUR |
| 45  | 0871217 | - EUR |
| 40  | 0871216 | - EUR |
| 35  | 0871215 | - EUR |
| 30  | 0871214 | - EUR |
| 25  | 0871213 | - EUR |

Lengths in [mm]

## Insert for OW308/S



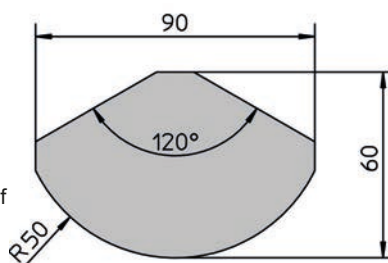
1500 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

29,9 kg/m



~60 HRC

The 500-mm part  
length has a weight of  
37 kg with holder

Delivery time: ex warehouse

| round bars | Radius:  | R50,0 mm |
|------------|----------|----------|
|            | Height:  | 60 mm    |
|            | Mat. No. | Price    |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1461702 | - EUR |
| 3050 | 1461700 | - EUR |
| 2550 | 1245215 | - EUR |
| 2050 | 1461699 | - EUR |
| 1250 | 0860395 | - EUR |
| 1050 | 1608054 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1461693 | - EUR |
| 1250 | 1444371 | - EUR |
| 1050 | 1608053 | - EUR |
| 550  | 1608052 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0860474 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0860473 | - EUR |
| 300 | 0860472 | - EUR |
| 200 | 0852886 | - EUR |
| 100 | 0860464 | - EUR |
| 50  | 0860471 | - EUR |
| 45  | 0860470 | - EUR |
| 40  | 0860469 | - EUR |
| 35  | 0860468 | - EUR |
| 30  | 0860467 | - EUR |
| 25  | 0860466 | - EUR |

Lengths in [mm]

## Adapter

## Adapter



1300 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

35,8 kg/m

Adapter for other tool adapters  
available upon request.

Delivery time: 4 weeks / on request

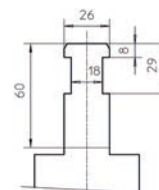
Adapter  
TRUMPF-EHT

Angle: -  
Height: 40 mm  
Mat. No. Price

## Single

200 1281055 - EUR

Lengths in [mm]



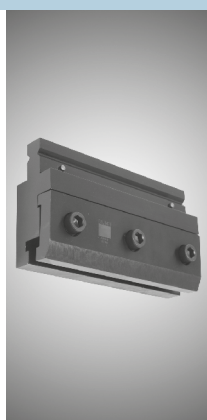
## Adapter



1300 kN/m

C 50  
700 - 850 N/mm<sup>2</sup>

33,2 kg/m

Adapter for other tool adapters  
available upon request.

Delivery time: ex warehouse

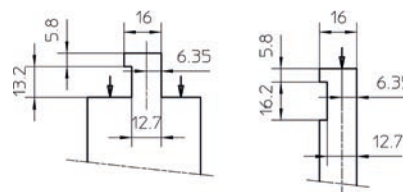
## LVD 80 adapter

Angle: -  
Height: 80 mm  
Mat. No. Price

## Single

200 0831700 - EUR

Lengths in [mm]



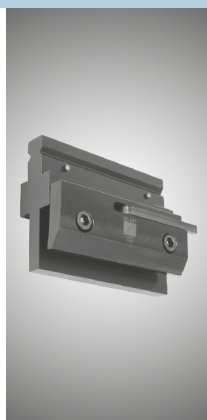
## Adapter



1000 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

26,0 kg/m

Adapter for other tool adapters  
available upon request.

Delivery time: ex warehouse

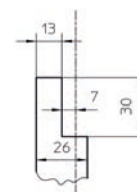
Adapter Amada:  
type A

Angle: -  
Height: 80 mm  
Mat. No. Price

## Single

150 0831214 - EUR

Lengths in [mm]



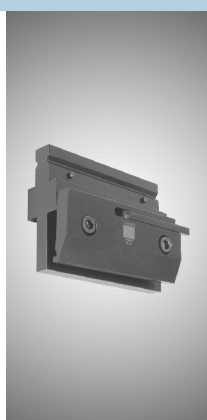
## Adapter



1000 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

27,1 kg/m

Adapter for other tool adapters  
available upon request.

Delivery time: ex warehouse

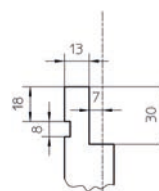
Adapter Amada:  
type B

Angle: -  
Height: 80 mm  
Mat. No. Price

## Single

150 0831331 - EUR

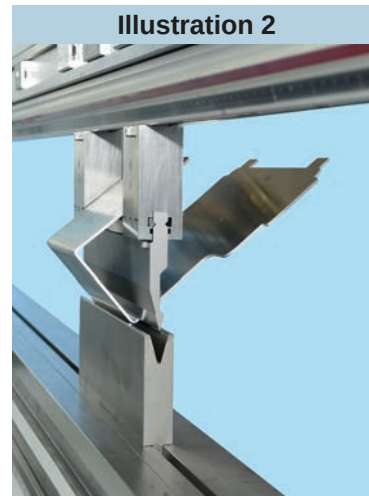
Lengths in [mm]





## Technical information concerning TRUMPF adapter as extension

- For tool extensions (Illustration 1) e.g. with boxes
- Individual window solutions can be generated (Illustration 2).
- Observe installation height of the press brakes.



### Adapter



1500 kN/m



Ck 45  
650 - 800 N/mm<sup>2</sup>



26,3 kg/m



25 mm - 100 mm



Delivery time: ex warehouse

| Modufix H=60     | Angle:   | -     |
|------------------|----------|-------|
|                  | Height:  | 60 mm |
|                  | Mat. No. | Price |
| <b>Var. A</b>    |          |       |
| 4050             | 0832616  | - EUR |
| 3050             | 0832615  | - EUR |
| 2550             | 0836965  | - EUR |
| 2050             | 0832614  | - EUR |
| 1250             | 0832613  | - EUR |
| 1050             | 1605787  | - EUR |
| 550              | 1605786  | - EUR |
| <b>Block 250</b> |          |       |
| 250              | 0831695  | - EUR |
| <b>Single</b>    |          |       |
| 100              | 0831691  | - EUR |
| 50               | 0831690  | - EUR |
| 45               | 0831689  | - EUR |
| 40               | 0831688  | - EUR |
| 35               | 0831687  | - EUR |
| 30               | 0831686  | - EUR |
| 25               | 0831685  | - EUR |

Lengths in [mm]

## Adapter



1500 kN/m



Ck 45  
650 - 800 N/mm<sup>2</sup>



35,7 kg/m



25 mm - 100 mm



Delivery time: ex warehouse

### Modufix H=80

Angle: -  
Height: 80 mm  
Mat. No. Price

#### Var. A

|      |         |       |
|------|---------|-------|
| 4050 | 0832714 | - EUR |
| 3050 | 0832713 | - EUR |
| 2550 | 0836962 | - EUR |
| 2050 | 0832712 | - EUR |
| 1250 | 0832711 | - EUR |
| 1050 | 1605810 | - EUR |
| 550  | 1605789 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0832710 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 100 | 0832708 | - EUR |
| 50  | 0832707 | - EUR |
| 45  | 0832706 | - EUR |
| 40  | 0832705 | - EUR |
| 35  | 0832704 | - EUR |
| 30  | 0832703 | - EUR |
| 25  | 0832702 | - EUR |

Lengths in [mm]

## Adapter



1500 kN/m



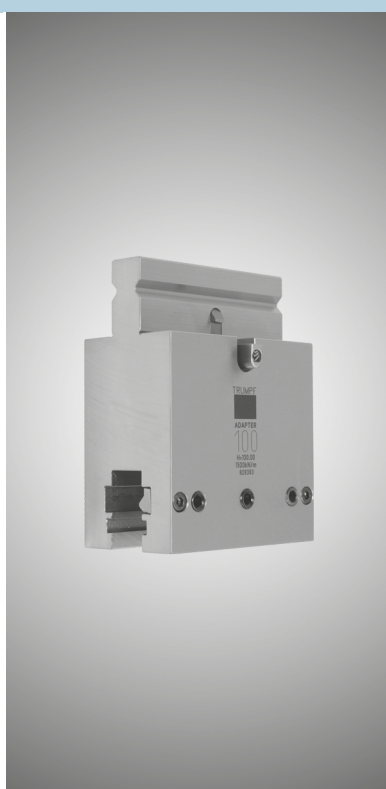
Ck 45  
650 - 800 N/mm<sup>2</sup>



45,3 kg/m



25 mm - 100 mm



Delivery time: ex warehouse

### Modufix H=100

Angle: -  
Height: 100 mm  
Mat. No. Price

#### Var. A

|      |         |       |
|------|---------|-------|
| 4050 | 0830711 | - EUR |
| 3050 | 0830710 | - EUR |
| 2550 | 0836961 | - EUR |
| 2050 | 0830709 | - EUR |
| 1250 | 0829283 | - EUR |
| 1050 | 1605817 | - EUR |
| 550  | 1605816 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0828387 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 100 | 0828383 | - EUR |
| 50  | 0828382 | - EUR |
| 45  | 0828381 | - EUR |
| 40  | 0828380 | - EUR |
| 35  | 0828379 | - EUR |
| 30  | 0828378 | - EUR |
| 25  | 0828377 | - EUR |

Lengths in [mm]



## Adapter



1500 kN/m

Ck 45  
650 - 800 N/mm<sup>2</sup>

68,6 kg/m



25 mm - 100 mm



Delivery time: ex warehouse

## Modufix H=150

Angle:

-

Height:

150 mm

Mat. No.

Price

## Var. A

|      |         |       |
|------|---------|-------|
| 4050 | 0832734 | - EUR |
| 3050 | 0832733 | - EUR |
| 2550 | 0836959 | - EUR |
| 2050 | 0832732 | - EUR |
| 1250 | 0832731 | - EUR |
| 1050 | 1605862 | - EUR |
| 550  | 1605861 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0832730 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 100 | 0832728 | - EUR |
| 50  | 0832727 | - EUR |
| 45  | 0832726 | - EUR |
| 40  | 0832725 | - EUR |
| 35  | 0832724 | - EUR |
| 30  | 0832723 | - EUR |
| 25  | 0832722 | - EUR |

Lengths in [mm]

## Adapter



1000 kN/m



1.1191 Ck45



62,5 kg/m



25 mm - 100 mm



Delivery time: ex warehouse

## Modufix H=200

Angle:

-

Height:

200 mm

Mat. No.

Price

## Var. A

|      |         |       |
|------|---------|-------|
| 4050 | 1766444 | - EUR |
| 3050 | 1766443 | - EUR |
| 2550 | 1766442 | - EUR |
| 2050 | 1766441 | - EUR |
| 1250 | 1766440 | - EUR |
| 1050 | 1766439 | - EUR |
| 550  | 1766438 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1766437 | - EUR |
|-----|---------|-------|

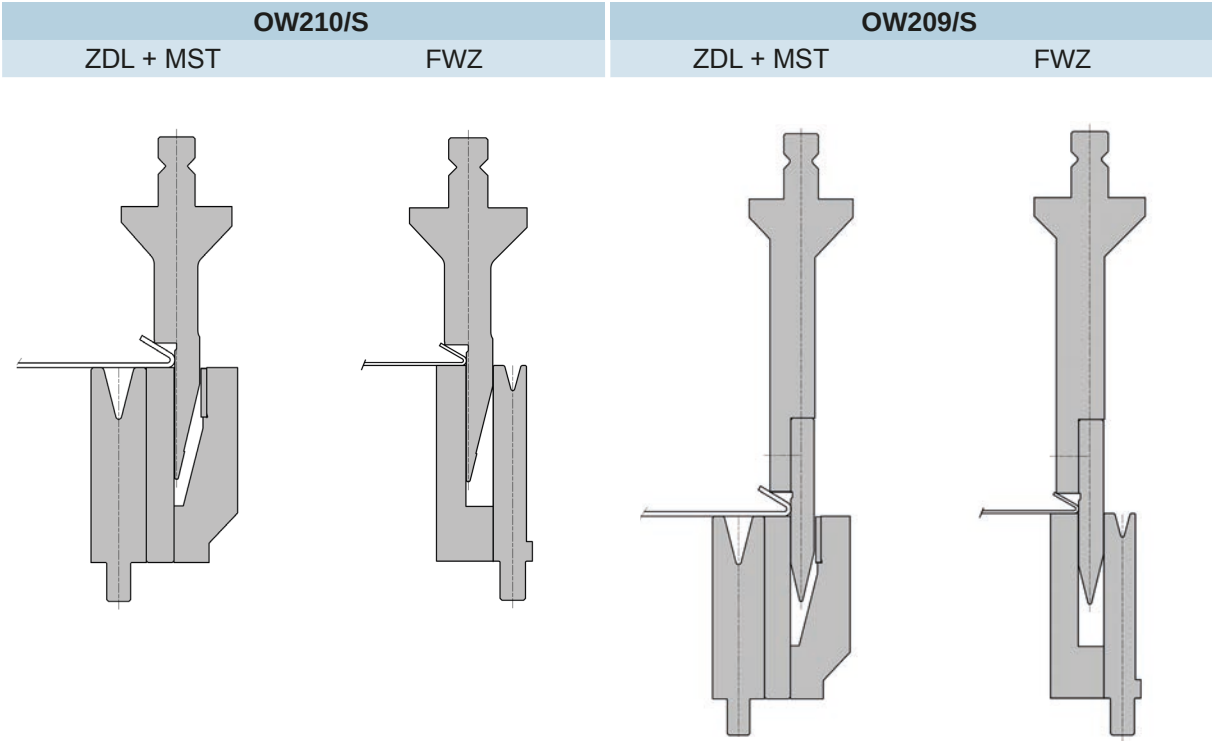
## Single

|     |         |       |
|-----|---------|-------|
| 100 | 1766435 | - EUR |
| 50  | 1766434 | - EUR |
| 45  | 1766433 | - EUR |
| 40  | 1766432 | - EUR |
| 35  | 1766431 | - EUR |
| 30  | 1766330 | - EUR |
| 25  | 1766329 | - EUR |

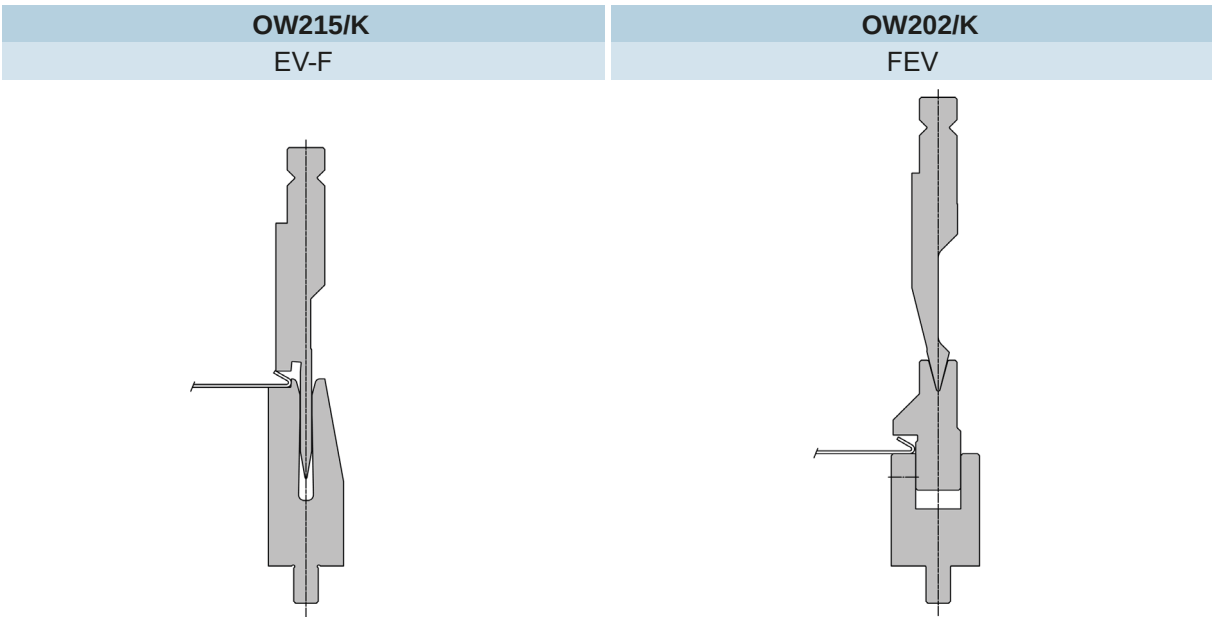
Lengths in [mm]

Sheets can be folded with/without lower tool displacement. All useful information on these two variants is summarized in the following chapter.

Folding with lower tool displacement



Folding without lower tool displacement



## Press force during folding

ST37: ~ 400 N/mm<sup>2</sup>

| Sheet thickness | Press force | Press force |
|-----------------|-------------|-------------|
| 0,8 mm          | 320 kN/m    | 120 kN/m    |
| 1 mm            | 500 kN/m    | 150 kN/m    |
| 1,25 mm         | 550 kN/m    | 170 kN/m    |
| 1,5 mm          | 650 kN/m    | 220 kN/m    |
| 2 mm            | 800 kN/m    | 300 kN/m    |
| 2,5 mm          | 1000 kN/m   | 550 kN/m    |
| 3 mm            | 1300 kN/m   | 800 kN/m    |

Stainless steel  
(1.4301):  
~700 N/mm<sup>2</sup>



| Sheet thickness | Press force | Press force |
|-----------------|-------------|-------------|
| 0,8 mm          | 500 kN/m    | 200 kN/m    |
| 1 mm            | 600 kN/m    | 250 kN/m    |
| 1,25 mm         | 800 kN/m    | 300 kN/m    |
| 1,5 mm          | 950 kN/m    | 500 kN/m    |
| 2 mm            | 1300 kN/m   | 800 kN/m    |

# Folding without lower tool displacement

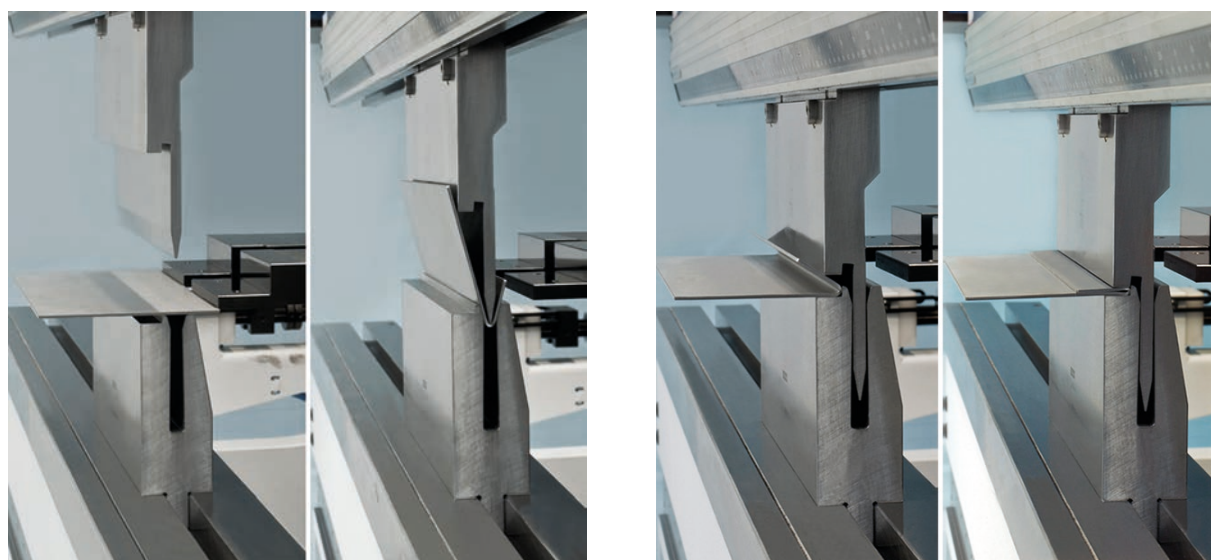
## Folding tool OW215 / EV-F

With folding tool OW215, materials up to a sheet thickness of 2 mm can be folded. The upper tool is compatible with all 3 folding dies (EV-F) and can be used without lower tool displacement or a folding table . This makes it particularly interesting for machines from the TruBend Series 3000 and 7000 .

### Your advantages at a glance

- Only one punch is necessary for all EV-F dies
- Reliability because of the stop edge on the die
- A larger radius on the lower tool is possible (for film-coated workpieces)
- Short setup time - all punches up to 500 mm with a Safety-Click
- No I-axis necessary
- Quick folding on the TruBend Series 5000 and 7000 possible

### Bending process



preparation bend

folding

### Areas of application

| Tool combination      |                       | Steel<br>(max. sheet thickness) | Stainless steel<br>(max. sheet thickness) |
|-----------------------|-----------------------|---------------------------------|-------------------------------------------|
| Punch<br>OW215/K R0,5 | Die EV-F W6,4 R2      | 1,50 mm                         | 1,25 mm                                   |
|                       | Die EV-F W8/30° R2,5  | 1,75 mm                         | 1,50 mm                                   |
|                       | Die EV-F W10/30° R2,5 | 2,00 mm                         | 1,50 mm                                   |

### Conditions

|              |                                                                         |
|--------------|-------------------------------------------------------------------------|
| Machine      | TruBend Series 3000, 8000                                               |
| Control unit | Delem, all versions                                                     |
| Machine      | TruBend Series 5000                                                     |
| Control unit | TASC 6000 starting at version 6.0<br>Touchpoint starting at version 2.0 |
| Machine      | TruBend Series 7000                                                     |
| Control unit | TASC 6000 starting at version 4.0                                       |



## Punch



Delivery time: ex warehouse

|                  |                 |              |
|------------------|-----------------|--------------|
| <b>OW215/K</b>   | <b>Radius:</b>  | R0,5 mm      |
|                  | <b>Angle:</b>   | 20°          |
|                  | <b>Height:</b>  | 140 mm       |
|                  | <b>Mat. No.</b> | <b>Price</b> |
| <b>Var. B</b>    |                 |              |
| 4050             | 1908035         | - EUR        |
| 3050             | 1908034         | - EUR        |
| 2550             | 1908033         | - EUR        |
| 2050             | 1908032         | - EUR        |
| 1250             | 1908031         | - EUR        |
| 1050             | 1908010         | - EUR        |
| <b>Var. A</b>    |                 |              |
| 2050             | 1908006         | - EUR        |
| 1250             | 1908005         | - EUR        |
| 1050             | 1908004         | - EUR        |
| 550              | 1908003         | - EUR        |
| <b>Block 250</b> |                 |              |
| 250              | 1908049         | - EUR        |
| <b>Single</b>    |                 |              |
| 500              | 1908048         | - EUR        |
| 300              | 1908047         | - EUR        |
| 200              | 1908046         | - EUR        |
| 100              | 1908042         | - EUR        |
| Horn left 100    | 1908050         | - EUR        |
| Horn right 100   | 1908051         | - EUR        |
| 50               | 1908041         | - EUR        |
| 45               | 1908040         | - EUR        |
| 40               | 1908039         | - EUR        |
| 35               | 1908038         | - EUR        |
| 30               | 1908037         | - EUR        |
| 25               | 1908036         | - EUR        |
| 20               | 1908045         | - EUR        |
| 15               | 1908044         | - EUR        |
| 10               | 1908043         | - EUR        |

Lengths in [mm]

## Technical data



400 kN/m



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

21,7 kg/m



~60 HRC

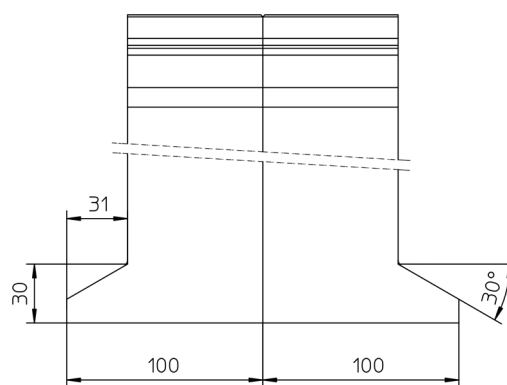


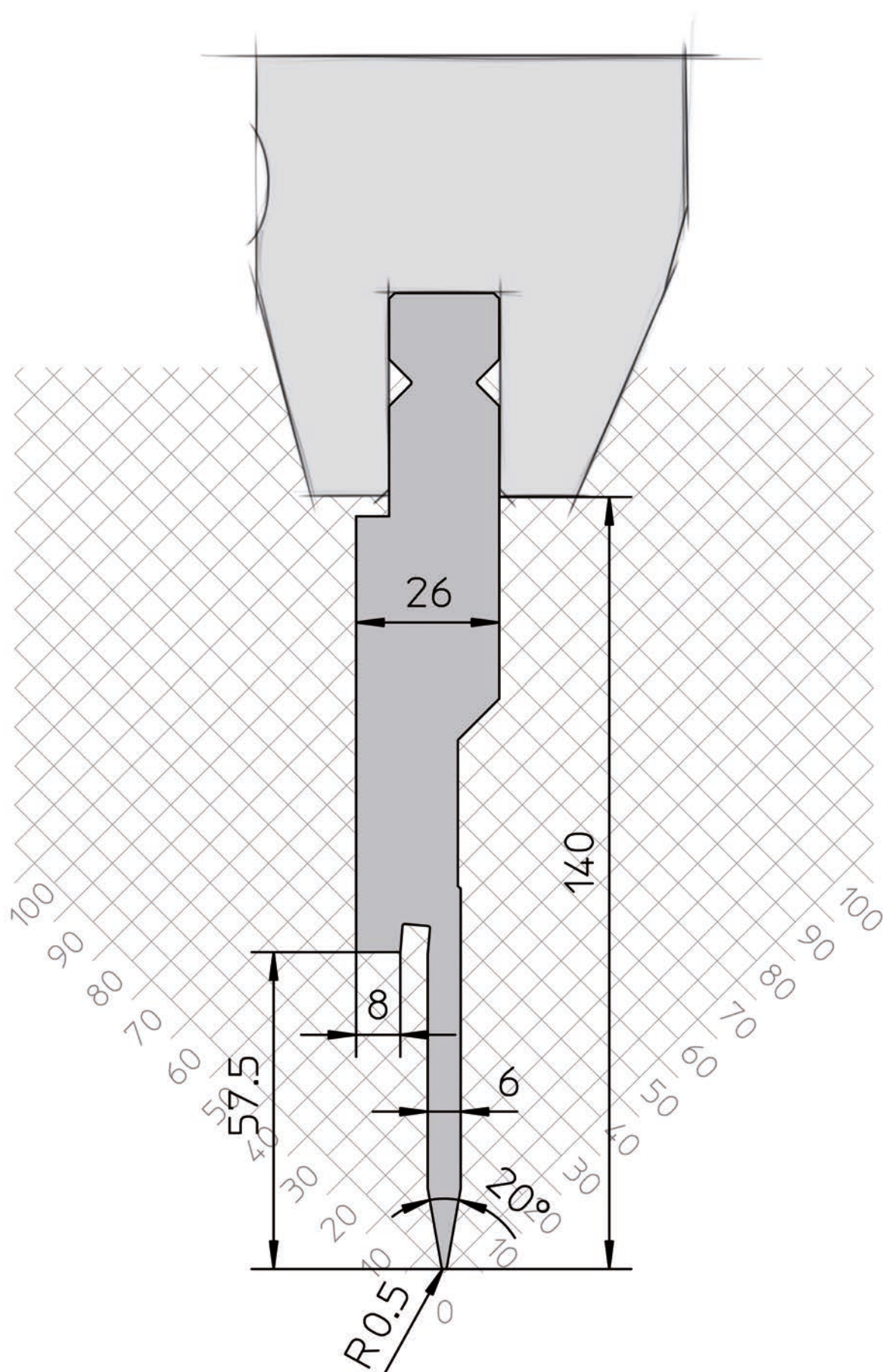
78 mm



10 mm - 500 mm

## Horn left / right







## Die



400 kN/m



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

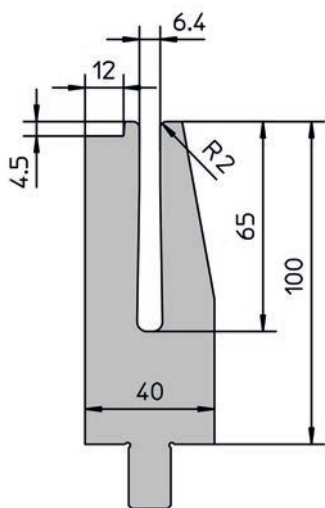
27,3 kg/m



~60 HRC



4,7 mm



Delivery time: ex warehouse

## EV-F W6,4

Die width: 6,4 mm

Angle: 0°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1963983 | - EUR |
| 3050 | 1963982 | - EUR |
| 2550 | 1963981 | - EUR |
| 2050 | 1963980 | - EUR |
| 1250 | 1963979 | - EUR |
| 1050 | 1963978 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1963974 | - EUR |
| 1250 | 1963973 | - EUR |
| 1050 | 1963972 | - EUR |
| 550  | 1963971 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1963997 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1963996 | - EUR |
| 300 | 1963995 | - EUR |
| 200 | 1963994 | - EUR |
| 100 | 1963993 | - EUR |
| 50  | 1963992 | - EUR |
| 45  | 1963991 | - EUR |
| 40  | 1963990 | - EUR |
| 35  | 1963989 | - EUR |
| 30  | 1963988 | - EUR |
| 25  | 1963987 | - EUR |
| 20  | 1963986 | - EUR |
| 15  | 1963985 | - EUR |
| 10  | 1963984 | - EUR |

Lengths in [mm]

## Die



400 kN/m



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

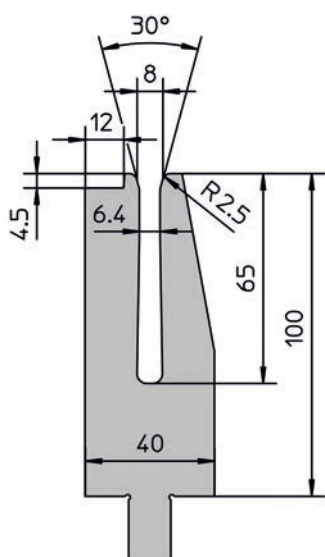
27,3 kg/m



~60 HRC



7,6 mm



Delivery time: ex warehouse

## EV-F W8

Die width: 8 mm

Angle: 30°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1941578 | - EUR |
| 3050 | 1941577 | - EUR |
| 2550 | 1941576 | - EUR |
| 2050 | 1941575 | - EUR |
| 1250 | 1941574 | - EUR |
| 1050 | 1941573 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1941549 | - EUR |
| 1250 | 1941548 | - EUR |
| 1050 | 1941547 | - EUR |
| 550  | 1941546 | - EUR |

## Block 250

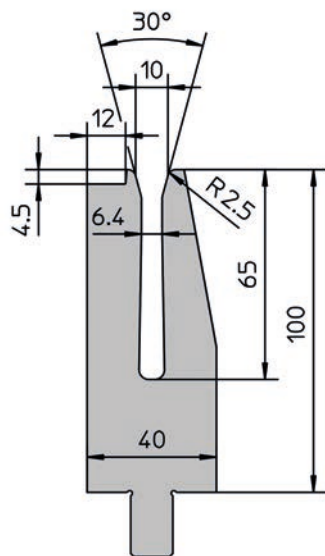
|     |         |       |
|-----|---------|-------|
| 250 | 1941592 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1941591 | - EUR |
| 300 | 1941590 | - EUR |
| 200 | 1941589 | - EUR |
| 100 | 1941588 | - EUR |
| 50  | 1941587 | - EUR |
| 45  | 1941586 | - EUR |
| 40  | 1941585 | - EUR |
| 35  | 1941584 | - EUR |
| 30  | 1941583 | - EUR |
| 25  | 1941582 | - EUR |
| 20  | 1941581 | - EUR |
| 15  | 1941580 | - EUR |
| 10  | 1941579 | - EUR |

Lengths in [mm]

## Die

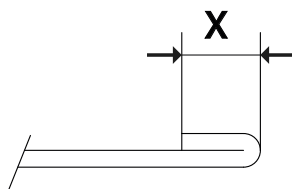


Delivery time: ex warehouse

|                  |                   |              |
|------------------|-------------------|--------------|
| <b>EV-F W10</b>  | <b>Die width:</b> | 10 mm        |
|                  | <b>Angle:</b>     | 30°          |
|                  | <b>Height:</b>    | 100 mm       |
|                  | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>    |                   |              |
| 4050             | 1908064           | - EUR        |
| 3050             | 1908063           | - EUR        |
| 2550             | 1908062           | - EUR        |
| 2050             | 1908061           | - EUR        |
| 1250             | 1908060           | - EUR        |
| 1050             | 1908059           | - EUR        |
| <b>Var. A</b>    |                   |              |
| 2050             | 1908055           | - EUR        |
| 1250             | 1908054           | - EUR        |
| 1050             | 1908053           | - EUR        |
| 550              | 1908052           | - EUR        |
| <b>Block 250</b> |                   |              |
| 250              | 1908078           | - EUR        |
| <b>Single</b>    |                   |              |
| 500              | 1908077           | - EUR        |
| 300              | 1908076           | - EUR        |
| 200              | 1908075           | - EUR        |
| 100              | 1908074           | - EUR        |
| 50               | 1908073           | - EUR        |
| 45               | 1908072           | - EUR        |
| 40               | 1908071           | - EUR        |
| 35               | 1908070           | - EUR        |
| 30               | 1908069           | - EUR        |
| 25               | 1908068           | - EUR        |
| 20               | 1908067           | - EUR        |
| 15               | 1908066           | - EUR        |
| 10               | 1908065           | - EUR        |

Lengths in [mm]

**Minimum seam length**  
valid for steel, stainless steel and Aluminium

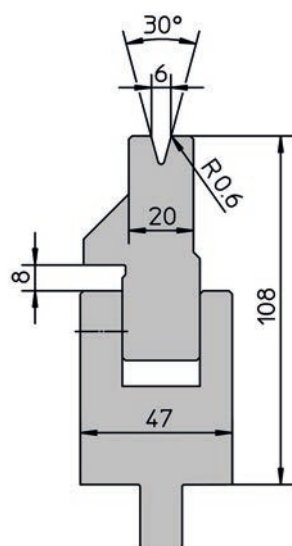


| Type of die       | sheet thickness | min. seam length „x“ |
|-------------------|-----------------|----------------------|
| EVF W6,4 Standard | 1 mm            | 4,90 mm              |
|                   | 1,5 mm          | 5,80 mm              |
| EVF W8 Standard   | 1 mm            | 6,10 mm              |
|                   | 1,5 mm          | 6,40 mm              |
| EVF W10 Standard  | 1 mm            | 7,50 mm              |
|                   | 1,5 mm          | 7,60 mm              |
|                   | 2 mm            | 7,80 mm              |

## FEV Dies

- Folding without I axis (e.g.: TruBend Series 3000 and 7000)
- Insert can be fixed at H=100
- Folding stroke of the FEV: 8 to 10 mm
- Ideal in combination with OW202/K, OW202/S
- Folding: – stainless steel max. 1.5 mm  
– steel, alu max. 2.0 mm
- Partial section lengths up to L=100 mm on request

### Die



Delivery time: ex warehouse

### FEV W6/30°

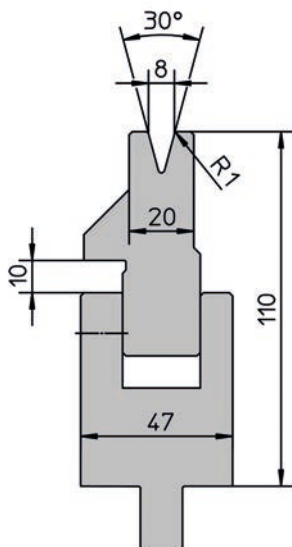
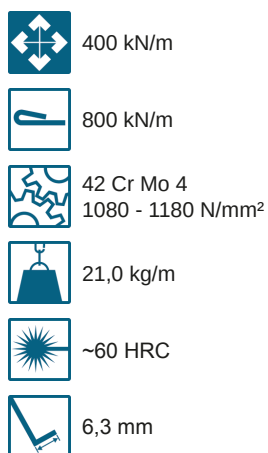
|                   |              |
|-------------------|--------------|
| <b>Die width:</b> | 6 mm         |
| <b>Angle:</b>     | 30°          |
| <b>Height:</b>    | 100 mm       |
| <b>Mat. No.</b>   | <b>Price</b> |

### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1239747 | - EUR |
| 300 | 1239746 | - EUR |
| 200 | 1239743 | - EUR |
| 100 | 1239742 | - EUR |

Lengths in [mm]

### Die



Delivery time: ex warehouse

### FEV W8/30°

|                   |              |
|-------------------|--------------|
| <b>Die width:</b> | 8 mm         |
| <b>Angle:</b>     | 30°          |
| <b>Height:</b>    | 100 mm       |
| <b>Mat. No.</b>   | <b>Price</b> |

### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1231050 | - EUR |
| 300 | 1231049 | - EUR |
| 200 | 1231048 | - EUR |
| 100 | 1229818 | - EUR |

Lengths in [mm]

Die



400 kN/m



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



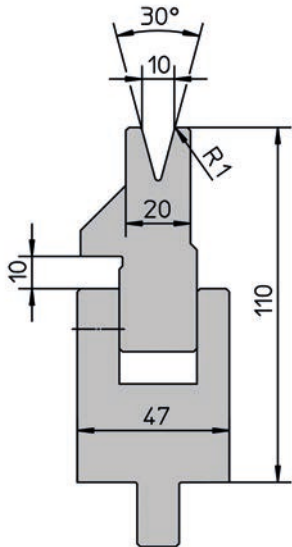
20,0 kg/m



~60 HRC



7,8 mm



Delivery time: ex warehouse

|                    |                   |              |
|--------------------|-------------------|--------------|
| <b>FEV W10/30°</b> | <b>Die width:</b> | 10 mm        |
|                    | <b>Angle:</b>     | 30°          |
|                    | <b>Height:</b>    | 110 mm       |
|                    | <b>Mat. No.</b>   | <b>Price</b> |

|                 |         |       |
|-----------------|---------|-------|
| <b>Single</b>   |         |       |
| 500             | 1240001 | - EUR |
| 300             | 1239920 | - EUR |
| 200             | 1239919 | - EUR |
| 100             | 1239918 | - EUR |
| Lengths in [mm] |         |       |

Die



400 kN/m



800 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



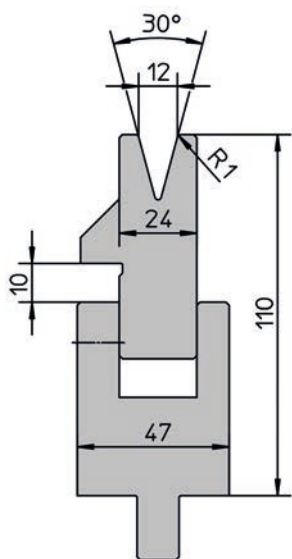
21,0 kg/m



~60 HRC



9,3 mm



Delivery time: ex warehouse

|                    |                   |              |
|--------------------|-------------------|--------------|
| <b>FEV W12/30°</b> | <b>Die width:</b> | 12 mm        |
|                    | <b>Angle:</b>     | 30°          |
|                    | <b>Height:</b>    | 100 mm       |
|                    | <b>Mat. No.</b>   | <b>Price</b> |

|                 |         |       |
|-----------------|---------|-------|
| <b>Single</b>   |         |       |
| 500             | 1240043 | - EUR |
| 300             | 1240042 | - EUR |
| 200             | 1240041 | - EUR |
| 100             | 1240010 | - EUR |
| Lengths in [mm] |         |       |





## Folding with lower tool displacement

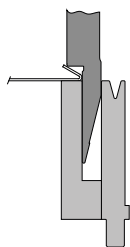
### Application

Folding tools (FWZ, ZDL, MST) can only be used in combination with a TruBend series 5000/TrumaBend V series, because the utilization of these tools requires lower tool displacement..

### Application range

- Stainless steel up to 2 mm sheet thicknesses
- Steel, aluminum up to 2.5 mm sheet thickness

### Flattening front

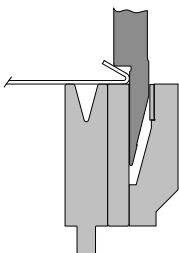


Prerequisites:

- The pivoting piece lies against the rear fixed stop
- Spacer associated with the die has been loaded at the front

1. Bend to an angle of 30°. I axis is located thereby in the front position
2. Flattening. I axis is located thereby in the rear position

### Flattening rear



Prerequisites:

- The pivoting piece lies against the front fixed stop
- Spacer associated with the die has been loaded at the rear

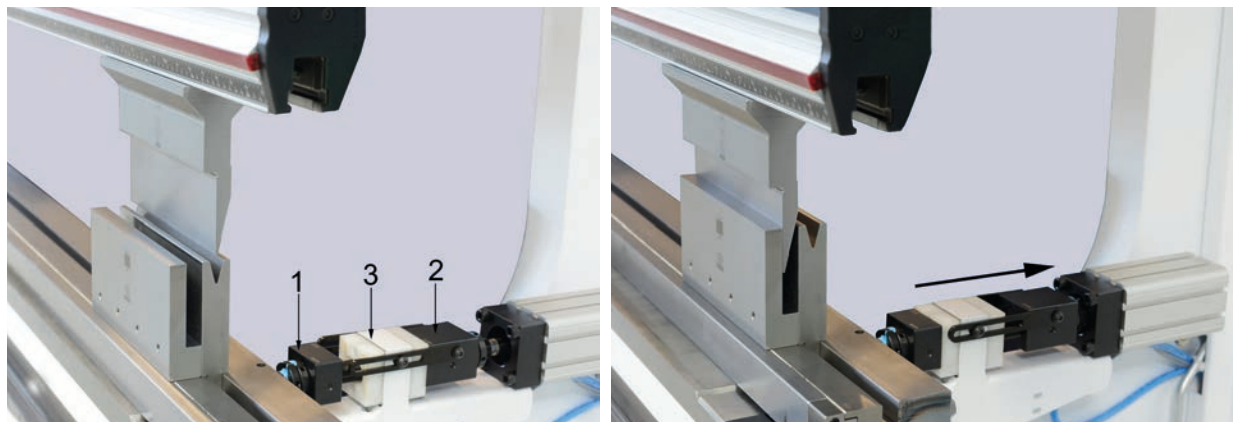
1. Bend to an angle of 30°. I axis is located thereby in the rear position
2. Flattening. I axis is located thereby in the front position

## Assembly options for folding tools

| Folding tool front | Folding tool rear (thin sheets) | Torque stay rods and press-shut strips rear | Press-shut strips rear (thin sheets) | Folding tools and press-shut strips rear |
|--------------------|---------------------------------|---------------------------------------------|--------------------------------------|------------------------------------------|
|--------------------|---------------------------------|---------------------------------------------|--------------------------------------|------------------------------------------|



## Displacement of the lower tools with OW210/S



- 1 ... spacer for sliding distance  
2 ... spacer for sliding direction  
3 ... rear fixed stop

The fixed stop is dependent upon the tool width of a 30° die. The following spacers are available for this:

| Folding tool rear |                 |        |                           | Folding tool front |                 |        |                          |
|-------------------|-----------------|--------|---------------------------|--------------------|-----------------|--------|--------------------------|
|                   | Distance spacer |        | Displacement to the front |                    | Distance spacer |        | Displacement to the rear |
| EV001             | 30,0 mm         | 825780 | 26,2 mm                   | EV001              | 30,0 mm         | 825780 | 22,7 mm                  |
| EV002             | 30,0 mm         | 825780 | 26,2 mm                   | EV002              | 30,0 mm         | 825780 | 22,7 mm                  |
| EV003             | 30,0 mm         | 825780 | 26,2 mm                   | EV003              | 30,0 mm         | 825780 | 22,7 mm                  |
| EV004             | 27,5 mm         | 825779 | 28,7 mm                   | EV004              | 27,5 mm         | 825779 | 25,2 mm                  |
| EV005             | 25,0 mm         | 825778 | 31,2 mm                   | EV005              | 25,0 mm         | 825778 | 27,7 mm                  |
| EV006             | 22,5 mm         | 825777 | 33,7 mm                   | EV006              | 22,5 mm         | 825777 | 30,2 mm                  |
| EV007             | 20,0 mm         | 825776 | 36,2 mm                   | EV007              | 20,0 mm         | 825776 | 32,7 mm                  |

In addition, specially configured spacers also exist for special dies.



## Die



1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

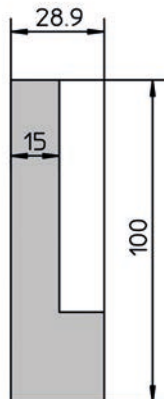
14,8 kg/m



~60 HRC



See screw selection



Delivery time: ex warehouse

## FWZ

Angle:

-

Height:

100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843943 | - EUR |
| 3050 | 0843115 | - EUR |
| 2550 | 0843942 | - EUR |
| 2050 | 0842348 | - EUR |
| 1250 | 0843244 | - EUR |
| 1050 | 0867525 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0843939 | - EUR |
| 1250 | 0843938 | - EUR |
| 1050 | 1606377 | - EUR |
| 550  | 1606376 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0842230 | - EUR |
|-----|---------|-------|

## Single

|                    |         |       |
|--------------------|---------|-------|
| 500                | 0842229 | - EUR |
| 300                | 0842228 | - EUR |
| 200                | 0842227 | - EUR |
| 100                | 0842220 | - EUR |
| 50                 | 0842226 | - EUR |
| 45                 | 0842225 | - EUR |
| 40                 | 0842224 | - EUR |
| 35                 | 0842223 | - EUR |
| 30                 | 0842222 | - EUR |
| 25                 | 0842221 | - EUR |
| 25 reduced imprint | 1411454 | - EUR |
| 25 with groove     | 1226331 | - EUR |

Lengths in [mm]

## Die



1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

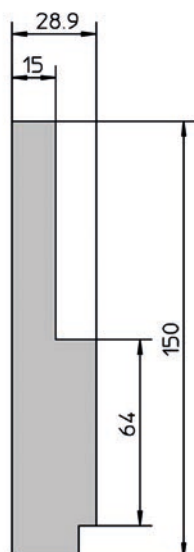
25,3 kg/m



~60 HRC



See screw selection



Delivery time: ex warehouse

## FWZ/H

Angle:

-

Height:

150 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843937 | - EUR |
| 3050 | 0843936 | - EUR |
| 2550 | 0843935 | - EUR |
| 2050 | 0842953 | - EUR |
| 1250 | 0843934 | - EUR |
| 1050 | 0867526 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0843930 | - EUR |
| 1250 | 0843929 | - EUR |
| 1050 | 1606412 | - EUR |
| 550  | 1606411 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0842952 | - EUR |
|-----|---------|-------|

## Single

|                    |         |       |
|--------------------|---------|-------|
| 500                | 0842949 | - EUR |
| 300                | 0842948 | - EUR |
| 200                | 0842947 | - EUR |
| 100                | 0842940 | - EUR |
| 50                 | 0842946 | - EUR |
| 45                 | 0842945 | - EUR |
| 40                 | 0842944 | - EUR |
| 35                 | 0842943 | - EUR |
| 30                 | 0842942 | - EUR |
| 25                 | 0842941 | - EUR |
| 25 reduced imprint | 1457105 | - EUR |
| 25 with groove     | 1256340 | - EUR |

Lengths in [mm]

## Die



1300 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



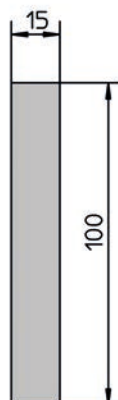
11,8 kg/m



~60 HRC



See screw selection



Delivery time: ex warehouse

| ZDL       | Angle:   | -      |
|-----------|----------|--------|
|           | Height:  | 100 mm |
|           | Mat. No. | Price  |
| Var. B    |          |        |
| 4050      | 0824895  | - EUR  |
| 3050      | 0824894  | - EUR  |
| 2550      | 0835283  | - EUR  |
| 2050      | 0824887  | - EUR  |
| 1250      | 0825838  | - EUR  |
| 1050      | 0867520  | - EUR  |
| Var. A    |          |        |
| 2050      | 0824884  | - EUR  |
| 1250      | 0825837  | - EUR  |
| 1050      | 1606465  | - EUR  |
| 550       | 1606464  | - EUR  |
| Block 250 |          |        |
| 250       | 0824883  | - EUR  |
| Single    |          |        |
| 500       | 0824882  | - EUR  |
| 300       | 0824881  | - EUR  |
| 200       | 0824880  | - EUR  |
| 100       | 0824879  | - EUR  |
| 50        | 0824878  | - EUR  |
| 45        | 0824877  | - EUR  |
| 40        | 0824876  | - EUR  |
| 35        | 0824875  | - EUR  |
| 30        | 0824874  | - EUR  |
| 25        | 0824873  | - EUR  |

Lengths in [mm]

## Die



1300 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



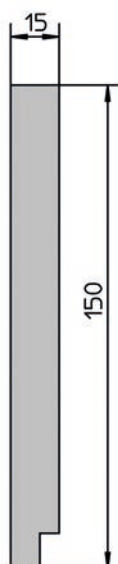
16,2 kg/m



~60 HRC



See screw selection



Delivery time: ex warehouse

| ZDL/H     | Angle:   | -      |
|-----------|----------|--------|
|           | Height:  | 150 mm |
|           | Mat. No. | Price  |
| Var. B    |          |        |
| 4050      | 0824915  | - EUR  |
| 3050      | 0824914  | - EUR  |
| 2550      | 0835287  | - EUR  |
| 2050      | 0824913  | - EUR  |
| 1250      | 0825840  | - EUR  |
| 1050      | 0867521  | - EUR  |
| Var. A    |          |        |
| 2050      | 0824909  | - EUR  |
| 1250      | 0825839  | - EUR  |
| 1050      | 1606505  | - EUR  |
| 550       | 1606504  | - EUR  |
| Block 250 |          |        |
| 250       | 0824908  | - EUR  |
| Single    |          |        |
| 500       | 0824907  | - EUR  |
| 300       | 0824905  | - EUR  |
| 200       | 0824904  | - EUR  |
| 100       | 0824903  | - EUR  |
| 50        | 0824901  | - EUR  |
| 45        | 0824900  | - EUR  |
| 40        | 0824899  | - EUR  |
| 35        | 0824898  | - EUR  |
| 30        | 0824897  | - EUR  |
| 25        | 0824896  | - EUR  |

Lengths in [mm]



## Die



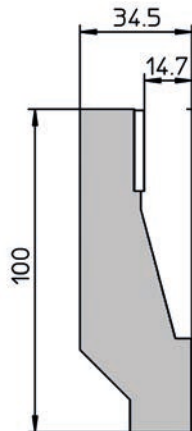
1300 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

18,0 kg/m



See screw selection



Delivery time: ex warehouse

## MST

Angle:

-

Height:

100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824932 | - EUR |
| 3050 | 0824931 | - EUR |
| 2550 | 0835281 | - EUR |
| 2050 | 0824930 | - EUR |
| 1250 | 0825799 | - EUR |
| 1050 | 0867522 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824927 | - EUR |
| 1250 | 0825798 | - EUR |
| 1050 | 1606439 | - EUR |
| 550  | 1606438 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0825797 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0825796 | - EUR |
| 300 | 0825795 | - EUR |
| 200 | 0825794 | - EUR |
| 100 | 0825792 | - EUR |
| 50  | 0825791 | - EUR |
| 45  | 0825790 | - EUR |
| 40  | 0825789 | - EUR |
| 35  | 0825788 | - EUR |
| 30  | 0825787 | - EUR |
| 25  | 0825786 | - EUR |

Lengths in [mm]

## Die



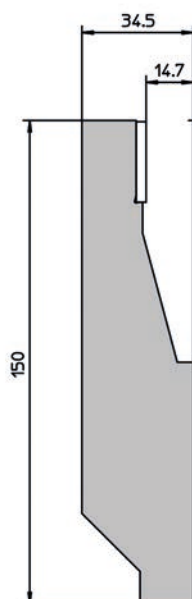
1300 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

30,6 kg/m



See screw selection



Delivery time: ex warehouse

## MST/H

Angle:

-

Height:

150 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0825819 | - EUR |
| 3050 | 0825818 | - EUR |
| 2550 | 0835285 | - EUR |
| 2050 | 0825817 | - EUR |
| 1250 | 0825816 | - EUR |
| 1050 | 0867523 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0825813 | - EUR |
| 1250 | 0825812 | - EUR |
| 1050 | 1606462 | - EUR |
| 550  | 1606461 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0825811 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0825809 | - EUR |
| 300 | 0825808 | - EUR |
| 200 | 0825807 | - EUR |
| 100 | 0825806 | - EUR |
| 50  | 0825805 | - EUR |
| 45  | 0825804 | - EUR |
| 40  | 0825803 | - EUR |
| 35  | 0825802 | - EUR |
| 30  | 0825801 | - EUR |
| 25  | 0825800 | - EUR |

Lengths in [mm]

## Displacement of the lower tools with OW210/S

### Application

This tool system with OW209/S holder + insert OW320-F can only be used in combination with a TruBend series 5000/TrumaBend V series, because the utilization of these tools requires I axis displacement.

### Application range

- Stainless steel up to 2 mm sheet thicknesses
- Steel, aluminum up to 2.5 mm sheet thickness

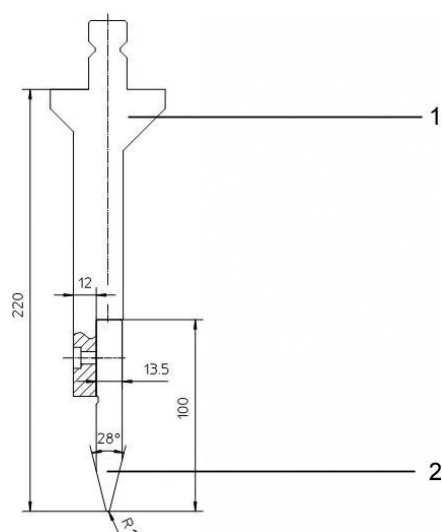
### Advantages

- More flexible with a variety of pre bending radiuses (replaceable OW320-F insert)
- More stable tool tip compared to OW210/S (up to 1000 kN/m)
- Standard solution
- Station operation possible with OW200/S, OW201/S, OW202/S (H=220 mm) because of tool heights of 220 mm

| Folding tool rear |               |        |                           |
|-------------------|---------------|--------|---------------------------|
|                   | Distance stop |        | Displacement to the front |
| EV001             | 25 mm         | 825778 | 31,2 mm                   |
| EV002             | 25 mm         | 825778 | 31,2 mm                   |
| EV003             | 25 mm         | 825778 | 31,2 mm                   |
| EV004             | 22,5 mm       | 825777 | 33,7 mm                   |
| EV005             | 20 mm         | 825776 | 36,2 mm                   |

| Folding tool front |               |          |                          |
|--------------------|---------------|----------|--------------------------|
|                    | Distance stop |          | Displacement to the rear |
| EV001              | 35 mm         | 845425 * | 17,7 mm                  |
| EV002              | 35 mm         | 845425 * | 17,7 mm                  |
| EV003              | 35 mm         | 845425 * | 17,7 mm                  |
| EV004              | 32,5 mm       | 861938 * | 20,2 mm                  |
| EV005              | 30 mm         | 825780   | 22,7 mm                  |
| EV006              | 27,5 mm       | 825779   | 25,2 mm                  |
| EV007              | 25 mm         | 825778   | 27,7 mm                  |

\* NOT included in the machine scope of delivery.



- 1 ... Holder OW209/S standard  
2 ... Insert OW320-F R1/28°, b=13.5 mm  
(ready for folding)



## DIN6912 bolts for seaming tools

| Dies<br>(hight 100 und 150)                                                             | MST + ZDL<br>ZDL + FWZ                       | ZDL                                                                                               | FWZ                                          |
|-----------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------|
| EV/S-W4/30°<br>EV/S-W5/30°<br>EV001(/S)-W6/30°<br>EV002(/S)-W8/30°<br>EV003(/S)-W10/30° | 016381 M8x40 1 item<br>872435 M8x40 10 items | 016373 M8x30 1 item<br>872434 M8x30 10 items<br>+<br>022365 M8-10 1 item<br>872436 M8-10 10 items | 016357 M8x25 1 item<br>872433 M8x25 10 items |
| EV004(/S)-W12/30°                                                                       | 809531 M8x45 1 item<br>872439 M8x45 10 items | 105889 M8x35 1 item<br>872437 M8x35 10 items<br>+<br>022365 M8-10 1 item<br>872436 M8-10 10 items | 016373 M8x30 1 item<br>872434 M8x30 10 items |
| EV005-W16/30°                                                                           | 800276 M8x50 1 item<br>872438 M8x50 10 items | 016381 M8x40 1 item<br>872435 M8x40 10 items<br>+<br>022365 M8-10 1 item<br>872436 M8-10 10 items | 105889 M8x35 1 item<br>872437 M8x35 10 items |
| EV006-W20/30°                                                                           | 831445 M8x55 1 item<br>872440 M8x55 10 items | 809531 M8x45 1 item<br>872439 M8x45 10 items<br>+<br>022365 M8-10 1 item<br>872436 M8-10 10 items | 016381 M8x40 1 item<br>872435 M8x40 10 items |
| EV007-W24/30°                                                                           | 833069 M8x60 1 item<br>872441 M8x60 10 items | 800276 M8x50 1 item<br>872438 M8x50 10 items<br>+<br>022365 M8-10 1 item<br>872436 M8-10 10 items | 809531 M8x45 1 item<br>872439 M8x45 10 items |



## Required quantity

| Single pieces<br>Length | H = 100<br>Quantity | Single pieces<br>Length | H = 150<br>Quantity |
|-------------------------|---------------------|-------------------------|---------------------|
| 25 - 40 mm              | 1                   | 25 - 50 mm              | 2                   |
| 45 - 100 mm             | 2                   | 100 mm                  | 4                   |
| 200 mm                  | 4                   | 200 mm                  | 8                   |
| 300 mm                  | 6                   | 300 mm                  | 12                  |
| 500 mm                  | 7                   | 500 mm                  | 14                  |

| Blocks  | H = 100   |           | H = 150   |           |
|---------|-----------|-----------|-----------|-----------|
|         | Version A | Version B | Version A | Version B |
| 250 mm  | 9         |           | 14        |           |
| 550 mm  | 15        | -         | 26        | -         |
| 1050 mm | 25        | 25        | 46        | 46        |
| 1250 mm | 29        | 29        | 54        | 54        |
| 2050 mm | 45        | 39        | 86        | 74        |
| 2550 mm | 52        | 46        | 93        | 81        |
| 3050 mm | 65        | 53        | 126       | 102       |
| 4050 mm | 85        | 67        | 166       | 130       |

| Designation                            |                                                                                      | Mat. No. | Price |
|----------------------------------------|--------------------------------------------------------------------------------------|----------|-------|
| 10 items cylinder screws M8x25 DIN6912 |    | 0872433  | - EUR |
| 10 items cylinder screws M8x30 DIN6912 |                                                                                      | 0872434  | - EUR |
| 10 items cylinder screws M8x35 DIN6912 |                                                                                      | 0872437  | - EUR |
| 10 items cylinder screws M8x40 DIN6912 |                                                                                      | 0872435  | - EUR |
| 10 items cylinder screws M8x45 DIN6912 |                                                                                      | 0872439  | - EUR |
| 10 items cylinder screws M8x50 DIN6912 |                                                                                      | 0872438  | - EUR |
| 10 items cylinder screws M8x55 DIN6912 |                                                                                      | 0872440  | - EUR |
| 10 items cylinder screws M8x60 DIN6912 |                                                                                      | 0872441  | - EUR |
| 10 items nuts M8x10 DIN934             |  | 0872436  | - EUR |



## Selection of dies 30° / 80 / 84°(86°) / 90°



### Die 30°

- For angles of 30° to 180°, and for pre bending prior to folding (with OW210 < 30° also possible)
- Min. side length is less than with same die width with 30° R3
- Standard: H100, H150, narrow version



### Die 30° with R3

- For angles of 30° to 180°, and for pre bending prior to folding.
- Application for low-impression bending of coated sheets
- Standard: H100



### Die 84° (86°)

- If no bendings <90° are being created, then 84° dies are recommended.
- Higher die stress in comparison with 30° dies.
- Less distortion of holes (notch formation) near the bending line in comparison with 30° dies. In many cases, coining (90° die) will be required.
- Higher part quality
- Standard: H100, H150, narrow version



### Die 80°

- Starting with W24, now only 80° (instead of 84°) is available, since bending is often done with larger punch-radiuses that produce greater spring-back.
- Standard: H100, H150



### Die 90°

Lower tools with an opening angle of 90° are used for coining.

Application:

- If the inside workpiece radius is to be smaller than the sheet thickness.
- If bore holes, openings or inclined edges are near or in the bending line.
- Contour accuracy for material variations

Every specific angle and inside radius requires its own set of tools (upper and lower tool).

Depending on the material and sheet thickness, the press force during coining is at least three times higher than the press force during air bending.

The springback can only be modified by changing the press force.

## Maximum flexibility at TRUMPF

You can change all parameters of dies on request:

- Height (H)
- Radius (R)
- Angle (W)
- Length (L)
- ....



## Selection of the die width

- The die width is defined by the sheet thickness and the side length.
- The minimum die width is defined by its stability under load.
- Minimum side length =  $\sim 0.75 \times \text{die width}$

| s (sheet thickness) | minimum die width | optimal die width | maximum die width |
|---------------------|-------------------|-------------------|-------------------|
| 0.5                 | 4                 | 4                 | 8                 |
| 0.75                | 4                 | 6                 | 12                |
| 1                   | 5                 | 8                 | 16                |
| 1.25                | 6                 | 10                | 20                |
| 1.5                 | 6                 | 12                | 20                |
| 1.75                | 8                 | 12                | 24                |
| 2                   | 10                | 16                | 24                |
| 2.5                 | 12                | 20                | 30                |
| 3                   | 16                | 24                | 40                |
| 3.5                 | 16                | 30                | 50                |
| 4                   | 20                | 30                | 60                |
| 4.5                 | 20                | 40                | 70                |
| 5                   | 30                | 40                | 80                |
| 6                   | 30                | 50                | 90                |
| 7                   | 40                | 60                | 100               |
| 8                   | 50                | 70                | 120               |
| 10                  | 70                | 80                | 150               |
| 12                  | 80                | 100               | 150               |
| 15                  | 90                | 120               | 150               |

All values in [mm]



## 4 to 5 mm die width

### Die



150 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

14,1 kg/m



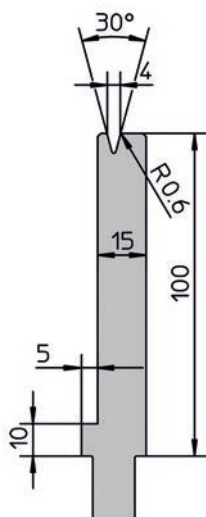
~60 HRC



3,3 mm



4,9mm (s=0,9mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

EV/S-W4/30°

Die width: 4 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1205134 | - EUR |
| 3050 | 1205133 | - EUR |
| 2550 | 1205132 | - EUR |
| 2050 | 1205131 | - EUR |
| 1250 | 0994487 | - EUR |
| 1050 | 1575074 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1205117 | - EUR |
| 1250 | 1205116 | - EUR |
| 1050 | 1575073 | - EUR |
| 550  | 1603524 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0994486 | - EUR |
|-----|---------|-------|

#### Block 150

|     |         |       |
|-----|---------|-------|
| 150 | 1210141 | - EUR |
|-----|---------|-------|

#### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0994485 | - EUR |
| 300            | 0994484 | - EUR |
| 200            | 0994483 | - EUR |
| 100            | 0994476 | - EUR |
| 50             | 0994482 | - EUR |
| 45             | 0994481 | - EUR |
| 40             | 0994480 | - EUR |
| 35             | 0994479 | - EUR |
| 30             | 0994478 | - EUR |
| 25             | 0994477 | - EUR |
| 20             | 1440483 | - EUR |
| 15             | 1440482 | - EUR |
| 10             | 1236598 | - EUR |
| 25 with groove | 1211855 | - EUR |

Lengths in [mm]

### Die



250 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

10,2 kg/m



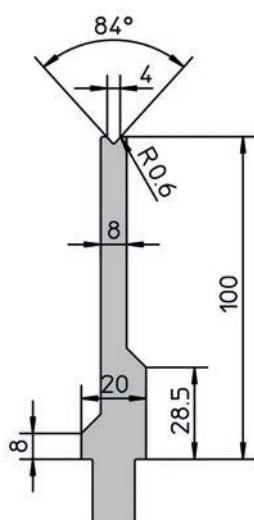
~60 HRC



3,1 mm



3,8mm (s=1mm)



Delivery time: ex warehouse

EV/S-W4/84°

Die width: 4 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1206630 | - EUR |
| 3050 | 1206619 | - EUR |
| 2550 | 1206618 | - EUR |
| 2050 | 1206617 | - EUR |
| 1250 | 1206616 | - EUR |
| 1050 | 1574984 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206612 | - EUR |
| 1250 | 1206611 | - EUR |
| 1050 | 1574983 | - EUR |
| 550  | 1603586 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1206610 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1206609 | - EUR |
| 300 | 1206608 | - EUR |
| 200 | 1206607 | - EUR |
| 100 | 1206600 | - EUR |
| 50  | 1206606 | - EUR |
| 45  | 1206605 | - EUR |
| 40  | 1206604 | - EUR |
| 35  | 1206603 | - EUR |
| 30  | 1206602 | - EUR |
| 25  | 1206601 | - EUR |
| 20  | 1391267 | - EUR |
| 15  | 1295659 | - EUR |
| 10  | 1315231 | - EUR |

Lengths in [mm]

Die



250 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



11,1 kg/m



~60 HRC



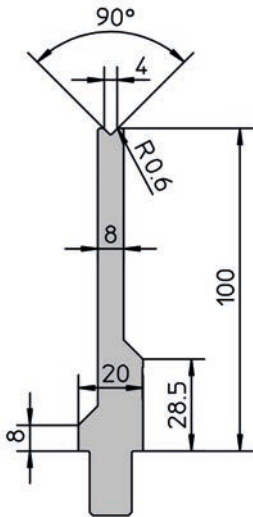
3,1 mm



3,8mm (s=1mm)



Chapter Coining



Delivery time: 1 week

|             |            |        |
|-------------|------------|--------|
| EV/S-W4/90° | Die width: | 4 mm   |
|             | Angle:     | 90°    |
|             | Height:    | 100 mm |
|             | Mat. No.   | Price  |
| Var. B      |            |        |
| 4050        | 1207818    | - EUR  |
| 3050        | 1207817    | - EUR  |
| 2550        | 1207816    | - EUR  |
| 2050        | 1207815    | - EUR  |
| 1250        | 1207814    | - EUR  |
| 1050        | 1603639    | - EUR  |
| Var. A      |            |        |
| 2050        | 1207810    | - EUR  |
| 1250        | 1207789    | - EUR  |
| 1050        | 1603638    | - EUR  |
| 550         | 1603637    | - EUR  |
| Block 250   |            |        |
| 250         | 1207788    | - EUR  |
| Single      |            |        |
| 500         | 1207787    | - EUR  |
| 300         | 1207786    | - EUR  |
| 200         | 1207783    | - EUR  |
| 100         | 1207766    | - EUR  |
| 50          | 1207782    | - EUR  |
| 45          | 1207781    | - EUR  |
| 40          | 1207780    | - EUR  |
| 35          | 1207769    | - EUR  |
| 30          | 1207768    | - EUR  |
| 25          | 1207767    | - EUR  |

Lengths in [mm]





## Die



150 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



14,0 kg/m



~60 HRC



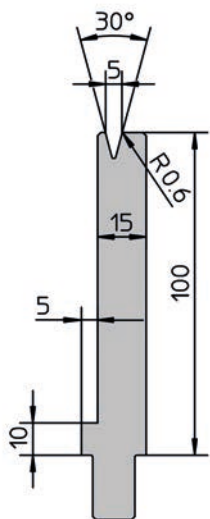
4,1 mm



5mm (s=1mm)



Bore hole existing  
(from 25 mm)



Delivery time: ex warehouse

**EV/S-W5/30°**

**Die width:** 5 mm

**Angle:** 30°

**Height:** 100 mm

**Mat. No.** **Price**

### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1205451 | - EUR |
| 3050 | 1205450 | - EUR |
| 2550 | 1205449 | - EUR |
| 2050 | 1205448 | - EUR |
| 1250 | 0994528 | - EUR |
| 1050 | 1603529 | - EUR |

### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1205444 | - EUR |
| 1250 | 1205443 | - EUR |
| 1050 | 1603528 | - EUR |
| 550  | 1603527 | - EUR |

### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0994527 | - EUR |
|-----|---------|-------|

### Block 150

|     |         |       |
|-----|---------|-------|
| 150 | 1210148 | - EUR |
|-----|---------|-------|

### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0994526 | - EUR |
| 300            | 0994525 | - EUR |
| 200            | 0994524 | - EUR |
| 100            | 0994497 | - EUR |
| 50             | 0994523 | - EUR |
| 45             | 0994522 | - EUR |
| 40             | 0994501 | - EUR |
| 35             | 0994500 | - EUR |
| 30             | 0994499 | - EUR |
| 25             | 0994498 | - EUR |
| 20             | 1463126 | - EUR |
| 15             | 1463125 | - EUR |
| 10             | 1345667 | - EUR |
| 25 with groove | 1211884 | - EUR |

Lengths in [mm]

## Die



200 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



14,4 kg/m



~60 HRC



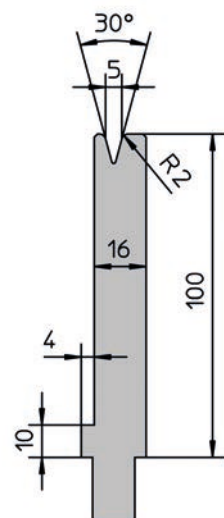
4,9 mm



6mm (1,25mm)



Bore hole existing  
(from 25 mm)



Delivery time: ex warehouse

**EV/S-W5/30° R2**

**Die width:** 5 mm

**Angle:** 30°

**Height:** 100 mm

**Mat. No.** **Price**

### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1749793 | - EUR |
| 3050 | 1749791 | - EUR |
| 2550 | 1749789 | - EUR |
| 2050 | 1749787 | - EUR |
| 1250 | 1749785 | - EUR |
| 1050 | 1749783 | - EUR |

### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1749786 | - EUR |
| 1250 | 1749784 | - EUR |
| 1050 | 1749782 | - EUR |
| 550  | 1749781 | - EUR |

### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1749778 | - EUR |
|-----|---------|-------|

### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1749780 | - EUR |
| 300 | 1749779 | - EUR |
| 200 | 1749777 | - EUR |
| 100 | 1749776 | - EUR |
| 50  | 1749775 | - EUR |
| 45  | 1749774 | - EUR |
| 40  | 1749773 | - EUR |
| 35  | 1749772 | - EUR |
| 30  | 1749771 | - EUR |
| 25  | 1749690 | - EUR |
| 20  | 1749689 | - EUR |
| 15  | 1749688 | - EUR |
| 10  | 1749687 | - EUR |

Lengths in [mm]



## Die



250 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

10,1 kg/m



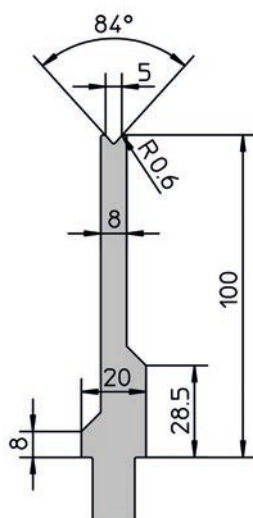
~60 HRC



3,8 mm



3,7mm (s=1,25mm)



Delivery time: ex warehouse

EV/S-W5/84°

Die width: 5 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1206698 | - EUR |
| 3050 | 1206697 | - EUR |
| 2550 | 1206696 | - EUR |
| 2050 | 1206695 | - EUR |
| 1250 | 1206694 | - EUR |
| 1050 | 1603632 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206690 | - EUR |
| 1250 | 1206669 | - EUR |
| 1050 | 1603631 | - EUR |
| 550  | 1603630 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1206668 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1206667 | - EUR |
| 300 | 1206666 | - EUR |
| 200 | 1206665 | - EUR |
| 100 | 1206632 | - EUR |
| 50  | 1206663 | - EUR |
| 45  | 1206661 | - EUR |
| 40  | 1206660 | - EUR |
| 35  | 1206639 | - EUR |
| 30  | 1206636 | - EUR |
| 25  | 1206633 | - EUR |
| 20  | 1463108 | - EUR |
| 15  | 1442565 | - EUR |
| 10  | 1345699 | - EUR |

Lengths in [mm]

## Die



390 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

11,9 kg/m



~60 HRC



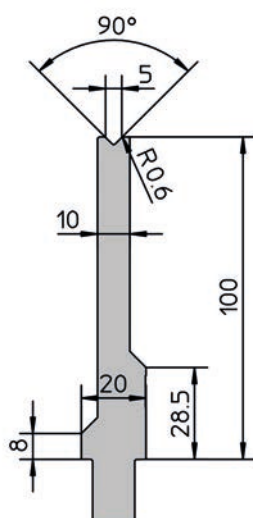
3,8 mm



4,7mm (s=1,25mm)



Chapter Coining



Delivery time: 1 week

EV/S-W5/90°

Die width: 5 mm

Angle: 90°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1207853 | - EUR |
| 3050 | 1207851 | - EUR |
| 2550 | 1207850 | - EUR |
| 2050 | 1207849 | - EUR |
| 1250 | 1207848 | - EUR |
| 1050 | 1603663 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1207842 | - EUR |
| 1250 | 1207841 | - EUR |
| 1050 | 1603662 | - EUR |
| 550  | 1603661 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1207840 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1207839 | - EUR |
| 300 | 1207838 | - EUR |
| 200 | 1207837 | - EUR |
| 100 | 1207830 | - EUR |
| 50  | 1207836 | - EUR |
| 45  | 1207835 | - EUR |
| 40  | 1207834 | - EUR |
| 35  | 1207833 | - EUR |
| 30  | 1207832 | - EUR |
| 25  | 1207831 | - EUR |

Lengths in [mm]



## 6 mm die width

### Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,5 kg/m



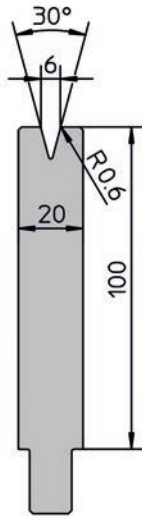
~60 HRC



4,8 mm



9,8mm (s=1,5mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

#### EV001 30°

Die width: 6 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0823872 | - EUR |
| 3050 | 0823871 | - EUR |
| 2550 | 0835213 | - EUR |
| 2050 | 0823870 | - EUR |
| 1250 | 0825738 | - EUR |
| 1050 | 0867465 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0823860 | - EUR |
| 1250 | 0825737 | - EUR |
| 1050 | 1603666 | - EUR |
| 550  | 1603665 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0823844 | - EUR |
|-----|---------|-------|

#### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0823843 | - EUR |
| 300            | 0823842 | - EUR |
| 200            | 0823841 | - EUR |
| 100            | 0823840 | - EUR |
| 50             | 0823839 | - EUR |
| 45             | 0823838 | - EUR |
| 40             | 0823837 | - EUR |
| 35             | 0823836 | - EUR |
| 30             | 0823835 | - EUR |
| 25             | 0823830 | - EUR |
| 20             | 0836703 | - EUR |
| 15             | 0836702 | - EUR |
| 10             | 0836701 | - EUR |
| 25 with groove | 0932559 | - EUR |

Lengths in [mm]

### Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

26,1 kg/m



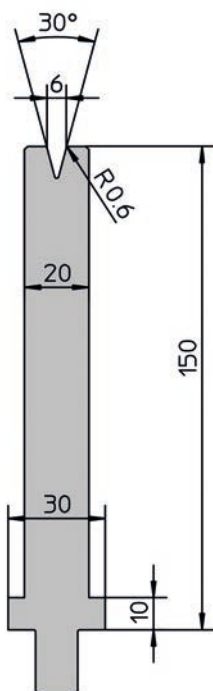
~60 HRC



4,8 mm



9,8mm (s=1,5mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

#### EV001/H 30°

Die width: 6 mm

Angle: 30°

Height: 150 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0823913 | - EUR |
| 3050 | 0823911 | - EUR |
| 2550 | 0835215 | - EUR |
| 2050 | 0823909 | - EUR |
| 1250 | 0825740 | - EUR |
| 1050 | 0867472 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0823901 | - EUR |
| 1250 | 0825739 | - EUR |
| 1050 | 1603778 | - EUR |
| 550  | 1603777 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0823895 | - EUR |
|-----|---------|-------|

#### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0823893 | - EUR |
| 300            | 0823889 | - EUR |
| 200            | 0823886 | - EUR |
| 100            | 0823885 | - EUR |
| 50             | 0823883 | - EUR |
| 45             | 0823882 | - EUR |
| 40             | 0823880 | - EUR |
| 35             | 0823879 | - EUR |
| 30             | 0823878 | - EUR |
| 25             | 0823877 | - EUR |
| 25 with groove | 0932573 | - EUR |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,3 kg/m



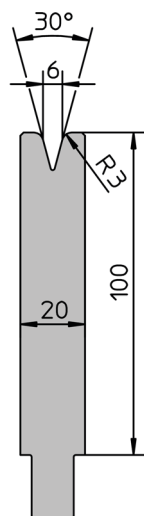
~60 HRC



6,4 mm



9,8mm (s=1,5mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

## EV001 R3 30°

Die width: 6 mm

Angle: 30°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0860494 | - EUR |
| 3050 | 0858917 | - EUR |
| 2550 | 0860493 | - EUR |
| 2050 | 0860492 | - EUR |
| 1250 | 0860491 | - EUR |
| 1050 | 0867287 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0860487 | - EUR |
| 1250 | 0860486 | - EUR |
| 1050 | 1576246 | - EUR |
| 550  | 1603743 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0858916 | - EUR |
|-----|---------|-------|

## Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0855433 | - EUR |
| 300            | 0858915 | - EUR |
| 200            | 0858914 | - EUR |
| 100            | 0855432 | - EUR |
| 50             | 0858913 | - EUR |
| 45             | 0858912 | - EUR |
| 40             | 0858911 | - EUR |
| 35             | 0858910 | - EUR |
| 30             | 0858909 | - EUR |
| 25             | 0858908 | - EUR |
| 20             | 1242166 | - EUR |
| 15             | 1242165 | - EUR |
| 10             | 1455402 | - EUR |
| 25 with groove | 0869966 | - EUR |

Lengths in [mm]

## Die



170 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

14,6 kg/m



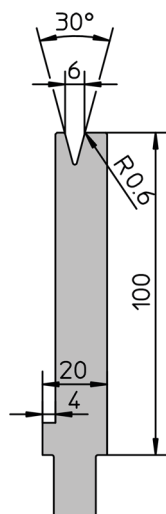
~60 HRC



4,8 mm



6,2mm (s=1mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

## EV001/S 30°

Die width: 6 mm

Angle: 30°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0859051 | - EUR |
| 3050 | 0867266 | - EUR |
| 2550 | 0870607 | - EUR |
| 2050 | 0849843 | - EUR |
| 1250 | 0849815 | - EUR |
| 1050 | 0989588 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870604 | - EUR |
| 1250 | 0870603 | - EUR |
| 1050 | 1603740 | - EUR |
| 550  | 1603699 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0849814 | - EUR |
|-----|---------|-------|

## Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0849813 | - EUR |
| 300            | 0849812 | - EUR |
| 200            | 0849811 | - EUR |
| 100            | 0849804 | - EUR |
| 50             | 0849810 | - EUR |
| 45             | 0849809 | - EUR |
| 40             | 0849808 | - EUR |
| 35             | 0849807 | - EUR |
| 30             | 0849806 | - EUR |
| 25             | 0849805 | - EUR |
| 20             | 1200444 | - EUR |
| 15             | 1200443 | - EUR |
| 10             | 1200442 | - EUR |
| 25 with groove | 0869970 | - EUR |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,6 kg/m



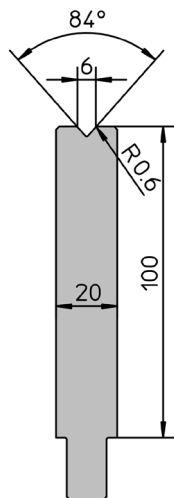
~60 HRC



4,5 mm



9,8mm (s=1,5mm)



Delivery time: ex warehouse

## EV W6/84°

Die width: 6 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0857516 | - EUR |
| 3050 | 0861833 | - EUR |
| 2550 | 0861832 | - EUR |
| 2050 | 0861831 | - EUR |
| 1250 | 0858874 | - EUR |
| 1050 | 0867292 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0861827 | - EUR |
| 1250 | 0861826 | - EUR |
| 1050 | 1603177 | - EUR |
| 550  | 1603176 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0857515 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0857514 | - EUR |
| 300 | 0857513 | - EUR |
| 200 | 0857512 | - EUR |
| 100 | 0857505 | - EUR |
| 50  | 0857511 | - EUR |
| 45  | 0857510 | - EUR |
| 40  | 0857509 | - EUR |
| 35  | 0857508 | - EUR |
| 30  | 0857507 | - EUR |
| 25  | 0857506 | - EUR |
| 20  | 1304940 | - EUR |
| 15  | 1465620 | - EUR |
| 10  | 1304936 | - EUR |

Lengths in [mm]

## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

26,3 kg/m



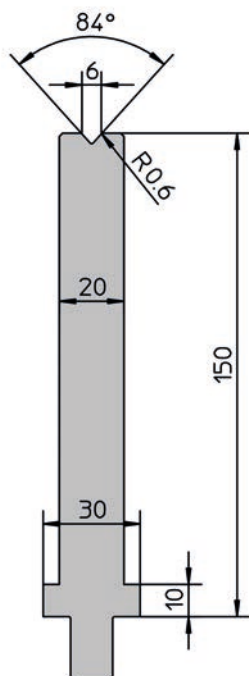
~60 HRC



4,5 mm



9,8mm (s=1,5mm)



Delivery time: ex warehouse

## EV/H W6/84°

Die width: 6 mm

Angle: 84°

Height: 150 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1274520 | - EUR |
| 3050 | 1274519 | - EUR |
| 2550 | 1274517 | - EUR |
| 2050 | 1274516 | - EUR |
| 1250 | 1274515 | - EUR |
| 1050 | 1603205 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1274485 | - EUR |
| 1250 | 1274480 | - EUR |
| 1050 | 1603204 | - EUR |
| 550  | 1603203 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1274479 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1274478 | - EUR |
| 300 | 1274477 | - EUR |
| 200 | 1274476 | - EUR |
| 100 | 1274406 | - EUR |
| 50  | 1274475 | - EUR |
| 45  | 1274474 | - EUR |
| 40  | 1274473 | - EUR |
| 35  | 1274471 | - EUR |
| 30  | 1274470 | - EUR |
| 25  | 1274408 | - EUR |

Lengths in [mm]



## Die



250 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

10,6 kg/m



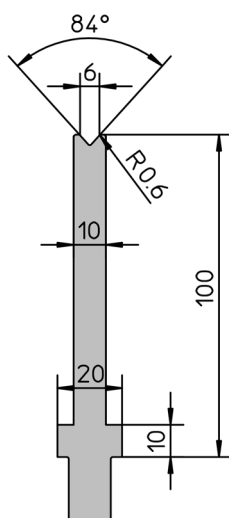
~60 HRC



4,5 mm



5,2mm (s=1,25mm)



Delivery time: ex warehouse

|                    |                   |              |
|--------------------|-------------------|--------------|
| <b>EV/S W6/84°</b> | <b>Die width:</b> | 6 mm         |
|                    | <b>Angle:</b>     | 84°          |
|                    | <b>Height:</b>    | 100 mm       |
|                    | <b>Mat. No.</b>   | <b>Price</b> |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1206507 | - EUR |
| 3050 | 0867527 | - EUR |
| 2550 | 1206506 | - EUR |
| 2050 | 1206505 | - EUR |
| 1250 | 0864724 | - EUR |
| 1050 | 1575077 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206502 | - EUR |
| 1250 | 1206501 | - EUR |
| 1050 | 1575076 | - EUR |
| 550  | 1603521 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0858802 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0858801 | - EUR |
| 300 | 0858800 | - EUR |
| 200 | 0858799 | - EUR |
| 100 | 0858792 | - EUR |
| 50  | 0858798 | - EUR |
| 45  | 0858797 | - EUR |
| 40  | 0858796 | - EUR |
| 35  | 0858795 | - EUR |
| 30  | 0858794 | - EUR |
| 25  | 0858793 | - EUR |
| 20  | 0858806 | - EUR |
| 15  | 0858805 | - EUR |
| 10  | 0858804 | - EUR |

Lengths in [mm]

Delivery time: 1 week

|                  |                   |              |
|------------------|-------------------|--------------|
| <b>EV020 86°</b> | <b>Die width:</b> | 6 mm         |
|                  | <b>Angle:</b>     | 86°          |
|                  | <b>Height:</b>    | 100 mm       |
|                  | <b>Mat. No.</b>   | <b>Price</b> |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824221 | - EUR |
| 3050 | 0824220 | - EUR |
| 2550 | 0835244 | - EUR |
| 2050 | 0824219 | - EUR |
| 1250 | 0825763 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824216 | - EUR |
| 1250 | 0825762 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824215 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824214 | - EUR |
| 300 | 0824213 | - EUR |
| 200 | 0824212 | - EUR |
| 100 | 0824211 | - EUR |
| 50  | 0824210 | - EUR |
| 45  | 0824209 | - EUR |
| 40  | 0824208 | - EUR |
| 35  | 0824207 | - EUR |
| 30  | 0824206 | - EUR |
| 25  | 0824205 | - EUR |

Lengths in [mm]

Delivery time: 1 week

|                    |                   |              |
|--------------------|-------------------|--------------|
| <b>EV020/S 86°</b> | <b>Die width:</b> | 6 mm         |
|                    | <b>Angle:</b>     | 86°          |
|                    | <b>Height:</b>    | 100 mm       |
|                    | <b>Mat. No.</b>   | <b>Price</b> |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843836 | - EUR |
| 3050 | 0840838 | - EUR |
| 2550 | 0843835 | - EUR |
| 2050 | 0832799 | - EUR |
| 1250 | 0840837 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0841463 | - EUR |
| 1250 | 0843831 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0832033 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0832798 | - EUR |
| 300 | 0832797 | - EUR |
| 200 | 0832796 | - EUR |
| 100 | 0832032 | - EUR |
| 50  | 0832031 | - EUR |
| 45  | 0832030 | - EUR |
| 40  | 0832029 | - EUR |
| 35  | 0832028 | - EUR |
| 30  | 0832027 | - EUR |
| 25  | 0832026 | - EUR |

Lengths in [mm]

Previous model to 84°

Previous model to 84°





## Die



1100 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



18,4 kg/m



~60 HRC



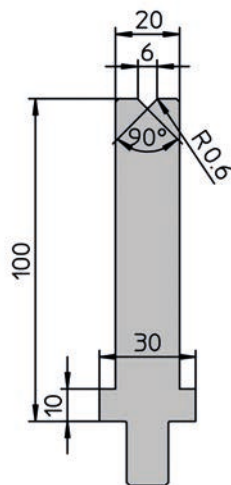
4,5 mm



9,8mm (s=1,5mm)



Chapter Coining



Delivery time: ex warehouse

### EV040 90°

Die width: 6 mm

Angle: 90°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824522 | - EUR |
| 3050 | 0824521 | - EUR |
| 2550 | 0835289 | - EUR |
| 2050 | 0824520 | - EUR |
| 1250 | 0825870 | - EUR |
| 1050 | 0867598 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824517 | - EUR |
| 1250 | 0825869 | - EUR |
| 1050 | 1604335 | - EUR |
| 550  | 1604334 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824516 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824515 | - EUR |
| 300 | 0824514 | - EUR |
| 200 | 0824513 | - EUR |
| 100 | 0824512 | - EUR |
| 50  | 0824511 | - EUR |
| 45  | 0824510 | - EUR |
| 40  | 0824509 | - EUR |
| 35  | 0824508 | - EUR |
| 30  | 0824507 | - EUR |
| 25  | 0824506 | - EUR |

Lengths in [mm]

## Die



390 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



11,0 kg/m



~60 HRC



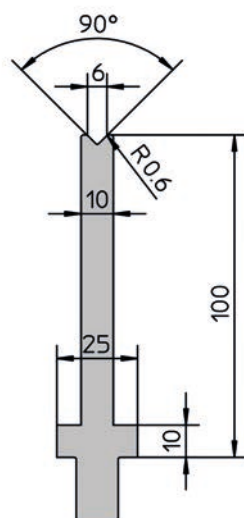
4,5 mm



5,2mm (s=1,5mm)



Chapter Coining



Delivery time: ex warehouse

### EV040/S 90°

Die width: 6 mm

Angle: 90°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0844139 | - EUR |
| 3050 | 0844138 | - EUR |
| 2550 | 0844137 | - EUR |
| 2050 | 0844136 | - EUR |
| 1250 | 0840673 | - EUR |
| 1050 | 0867608 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0844141 | - EUR |
| 1250 | 0844140 | - EUR |
| 1050 | 1604372 | - EUR |
| 550  | 1604371 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0840672 | - EUR |
|-----|---------|-------|

#### Single

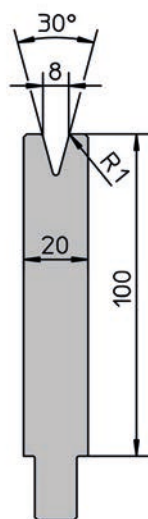
|     |         |       |
|-----|---------|-------|
| 500 | 0840671 | - EUR |
| 300 | 0840670 | - EUR |
| 200 | 0840669 | - EUR |
| 100 | 0840660 | - EUR |
| 50  | 0840666 | - EUR |
| 45  | 0840665 | - EUR |
| 40  | 0840664 | - EUR |
| 35  | 0840663 | - EUR |
| 30  | 0840662 | - EUR |
| 25  | 0840661 | - EUR |

Lengths in [mm]

## 8 mm die width

## Die

-  400 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  17,2 kg/m
-  ~60 HRC
-  6,3 mm
-  10mm (s=2mm)
-  Bore hole existing  
(from 25 mm)



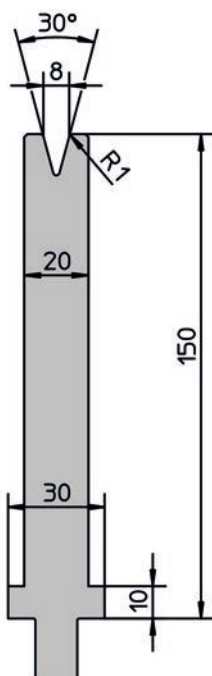
Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV002 30°</b>            | <b>Die width:</b> | 8 mm         |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 100 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0823936           | - EUR        |
| 3050                        | 0823934           | - EUR        |
| 2550                        | 0835217           | - EUR        |
| 2050                        | 0823933           | - EUR        |
| 1250                        | 0825742           | - EUR        |
| 1050                        | 0867466           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0823930           | - EUR        |
| 1250                        | 0825741           | - EUR        |
| 1050                        | 1594286           | - EUR        |
| 550                         | 1594285           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0823929           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0823928           | - EUR        |
| 300                         | 0823927           | - EUR        |
| 200                         | 0823926           | - EUR        |
| 100                         | 0823925           | - EUR        |
| 50                          | 0823924           | - EUR        |
| 45                          | 0823923           | - EUR        |
| 40                          | 0823922           | - EUR        |
| 35                          | 0823921           | - EUR        |
| 30                          | 0823920           | - EUR        |
| 25                          | 0823919           | - EUR        |
| 20                          | 0836064           | - EUR        |
| 15                          | 0836063           | - EUR        |
| 10                          | 0839096           | - EUR        |
| 25 with groove              | 0932570           | - EUR        |

Lengths in [mm]

## Die

-  400 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  25,9 kg/m
-  ~60 HRC
-  6,3 mm
-  10mm (s=2mm)
-  Bore hole possible  
+10%



Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV002/H 30°</b>          | <b>Die width:</b> | 8 mm         |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 150 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0823974           | - EUR        |
| 3050                        | 0823973           | - EUR        |
| 2550                        | 0835220           | - EUR        |
| 2050                        | 0823972           | - EUR        |
| 1250                        | 0825744           | - EUR        |
| 1050                        | 0867474           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0823969           | - EUR        |
| 1250                        | 0825743           | - EUR        |
| 1050                        | 1603916           | - EUR        |
| 550                         | 1603915           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0823968           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0823946           | - EUR        |
| 300                         | 0823945           | - EUR        |
| 200                         | 0823944           | - EUR        |
| 100                         | 0823943           | - EUR        |
| 50                          | 0823942           | - EUR        |
| 45                          | 0823941           | - EUR        |
| 40                          | 0823940           | - EUR        |
| 35                          | 0823939           | - EUR        |
| 30                          | 0823938           | - EUR        |
| 25                          | 0823937           | - EUR        |
| 25 with groove              | 0932574           | - EUR        |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,1 kg/m



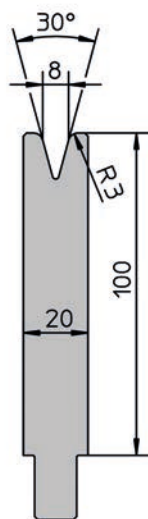
~60 HRC



8,0 mm



10mm (s=2mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

## EV002 R3 30°

Die width: 8 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0857864 | - EUR |
| 3050 | 0848421 | - EUR |
| 2550 | 0860500 | - EUR |
| 2050 | 0859479 | - EUR |
| 1250 | 0853761 | - EUR |
| 1050 | 0867288 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0860496 | - EUR |
| 1250 | 0860495 | - EUR |
| 1050 | 1576399 | - EUR |
| 550  | 1603911 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0848420 | - EUR |
|-----|---------|-------|

## Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0848419 | - EUR |
| 300            | 0848418 | - EUR |
| 200            | 0848417 | - EUR |
| 100            | 0848410 | - EUR |
| 50             | 0848416 | - EUR |
| 45             | 0848415 | - EUR |
| 40             | 0848414 | - EUR |
| 35             | 0848413 | - EUR |
| 30             | 0848412 | - EUR |
| 25             | 0848411 | - EUR |
| 20             | 1465568 | - EUR |
| 15             | 1465567 | - EUR |
| 10             | 1465566 | - EUR |
| 25 with groove | 0869967 | - EUR |

Lengths in [mm]

## Die



200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

14,8 kg/m



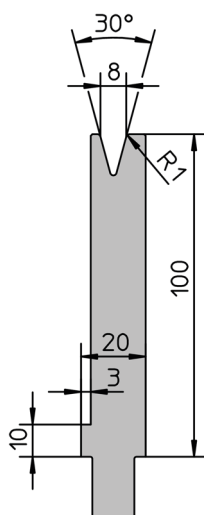
~60 HRC



6,3 mm



7,6mm (s=1,5mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

## EV002/S 30°

Die width: 8 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0870611 | - EUR |
| 3050 | 0857458 | - EUR |
| 2550 | 0855649 | - EUR |
| 2050 | 0855208 | - EUR |
| 1250 | 0849803 | - EUR |
| 1050 | 0989589 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870608 | - EUR |
| 1250 | 0867079 | - EUR |
| 1050 | 1603800 | - EUR |
| 550  | 1603779 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0849802 | - EUR |
|-----|---------|-------|

## Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0849800 | - EUR |
| 300            | 0849799 | - EUR |
| 200            | 0849798 | - EUR |
| 100            | 0849791 | - EUR |
| 50             | 0849797 | - EUR |
| 45             | 0849796 | - EUR |
| 40             | 0849795 | - EUR |
| 35             | 0849794 | - EUR |
| 30             | 0849793 | - EUR |
| 25             | 0849792 | - EUR |
| 20             | 1220177 | - EUR |
| 15             | 1220175 | - EUR |
| 10             | 1269504 | - EUR |
| 25 with groove | 0869971 | - EUR |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,6 kg/m



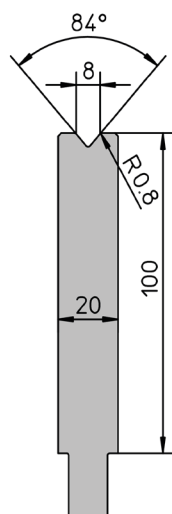
~60 HRC



5,7 mm



10mm (s=2mm)



Delivery time: ex warehouse

## EV W8/84°

Die width: 8 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0861842 | - EUR |
| 3050 | 0861841 | - EUR |
| 2550 | 0861840 | - EUR |
| 2050 | 0861839 | - EUR |
| 1250 | 0858875 | - EUR |
| 1050 | 0867293 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0861835 | - EUR |
| 1250 | 0861834 | - EUR |
| 1050 | 1603381 | - EUR |
| 550  | 1603380 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0858736 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0858735 | - EUR |
| 300 | 0858734 | - EUR |
| 200 | 0858733 | - EUR |
| 100 | 0858726 | - EUR |
| 50  | 0858732 | - EUR |
| 45  | 0858731 | - EUR |
| 40  | 0858730 | - EUR |
| 35  | 0858729 | - EUR |
| 30  | 0858728 | - EUR |
| 25  | 0858727 | - EUR |
| 20  | 1332190 | - EUR |
| 15  | 1332168 | - EUR |
| 10  | 1375377 | - EUR |

Lengths in [mm]

## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

26,2 kg/m



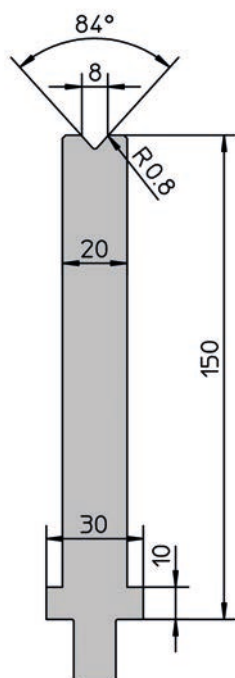
~60 HRC



5,7 mm



10mm (s=2mm)



Delivery time: ex warehouse

## EV/H W8/84°

Die width: 8 mm

Angle: 84°

Height: 150 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1272807 | - EUR |
| 3050 | 1272806 | - EUR |
| 2550 | 1272805 | - EUR |
| 2050 | 1272803 | - EUR |
| 1250 | 1272802 | - EUR |
| 1050 | 1603384 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1272656 | - EUR |
| 1250 | 1272655 | - EUR |
| 1050 | 1603383 | - EUR |
| 550  | 1603382 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1272654 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1272653 | - EUR |
| 300 | 1272652 | - EUR |
| 200 | 1272651 | - EUR |
| 100 | 1272640 | - EUR |
| 50  | 1272634 | - EUR |
| 45  | 1272633 | - EUR |
| 40  | 1272632 | - EUR |
| 35  | 1272631 | - EUR |
| 30  | 1272618 | - EUR |
| 25  | 1272613 | - EUR |

Lengths in [mm]



## Die



350 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

10,9 kg/m



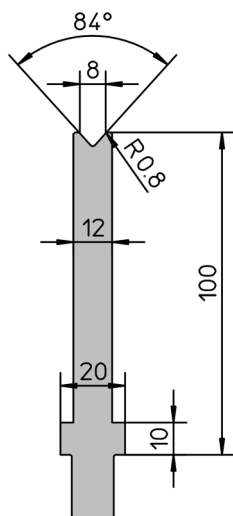
~60 HRC



5,7 mm



6,6mm (s=1,5mm)



Delivery time: ex warehouse

## EV/S W8/84°

Die width: 8 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1206548 | - EUR |
| 3050 | 0860807 | - EUR |
| 2550 | 0861294 | - EUR |
| 2050 | 0865349 | - EUR |
| 1250 | 0864725 | - EUR |
| 1050 | 1601276 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206545 | - EUR |
| 1250 | 0862969 | - EUR |
| 1050 | 1601275 | - EUR |
| 550  | 1601274 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0858817 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0858816 | - EUR |
| 300 | 0858815 | - EUR |
| 200 | 0858814 | - EUR |
| 100 | 0858807 | - EUR |
| 50  | 0858813 | - EUR |
| 45  | 0858812 | - EUR |
| 40  | 0858811 | - EUR |
| 35  | 0858810 | - EUR |
| 30  | 0858809 | - EUR |
| 25  | 0858808 | - EUR |
| 20  | 0858821 | - EUR |
| 15  | 0858820 | - EUR |
| 10  | 0858819 | - EUR |

Lengths in [mm]

Delivery time: 1 week

## EV021 86°

Die width: 8 mm

Angle: 86°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824258 | - EUR |
| 3050 | 0824257 | - EUR |
| 2550 | 0835248 | - EUR |
| 2050 | 0824256 | - EUR |
| 1250 | 0825767 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824253 | - EUR |
| 1250 | 0825766 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824252 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824251 | - EUR |
| 300 | 0824250 | - EUR |
| 200 | 0824249 | - EUR |
| 100 | 0824248 | - EUR |
| 50  | 0824247 | - EUR |
| 45  | 0824246 | - EUR |
| 40  | 0824245 | - EUR |
| 35  | 0824244 | - EUR |
| 30  | 0824243 | - EUR |
| 25  | 0824241 | - EUR |

Lengths in [mm]

Delivery time: 1 week

## EV021/S 86°

Die width: 8 mm

Angle: 86°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843734 | - EUR |
| 3050 | 0843733 | - EUR |
| 2550 | 0843732 | - EUR |
| 2050 | 0843731 | - EUR |
| 1250 | 0840970 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0843736 | - EUR |
| 1250 | 0843735 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0840969 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0840968 | - EUR |
| 300 | 0840967 | - EUR |
| 200 | 0840966 | - EUR |
| 100 | 0840959 | - EUR |
| 50  | 0840965 | - EUR |
| 45  | 0840964 | - EUR |
| 40  | 0840963 | - EUR |
| 35  | 0840962 | - EUR |
| 30  | 0840961 | - EUR |
| 25  | 0840960 | - EUR |

Lengths in [mm]

Predecessor to 84°

Predecessor to 84°



## Die



1100 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

18,4 kg/m



~60 HRC



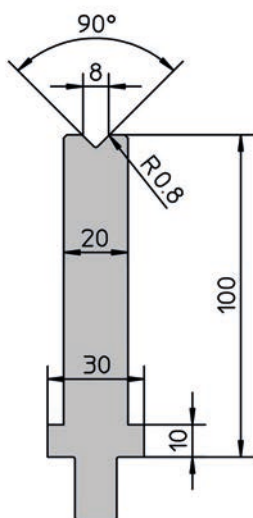
5,7 mm



10mm (s=2mm)



Chapter Coining



Delivery time: ex warehouse

## EV041 90°

Die width: 8 mm

Angle: 90°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824567 | - EUR |
| 3050 | 0824565 | - EUR |
| 2550 | 0835293 | - EUR |
| 2050 | 0824564 | - EUR |
| 1250 | 0825874 | - EUR |
| 1050 | 0867599 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824561 | - EUR |
| 1250 | 0825873 | - EUR |
| 1050 | 1604376 | - EUR |
| 550  | 1604375 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824560 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824559 | - EUR |
| 300 | 0824558 | - EUR |
| 200 | 0824557 | - EUR |
| 100 | 0824556 | - EUR |
| 50  | 0824555 | - EUR |
| 45  | 0824554 | - EUR |
| 40  | 0824553 | - EUR |
| 35  | 0824552 | - EUR |
| 30  | 0824551 | - EUR |
| 25  | 0824550 | - EUR |

Lengths in [mm]

## Die



460 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

12,3 kg/m



~60 HRC



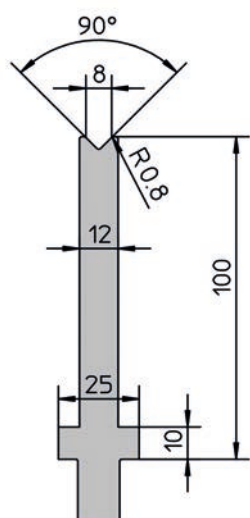
5,7 mm



6,6mm (s=2mm)



Chapter Coining



Delivery time: ex warehouse

## EV041/S 90°

Die width: 8 mm

Angle: 90°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0844148 | - EUR |
| 3050 | 0844147 | - EUR |
| 2550 | 0844146 | - EUR |
| 2050 | 0844145 | - EUR |
| 1250 | 0840689 | - EUR |
| 1050 | 0867609 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0844150 | - EUR |
| 1250 | 0844149 | - EUR |
| 1050 | 1604421 | - EUR |
| 550  | 1604420 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0840688 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0840687 | - EUR |
| 300 | 0840686 | - EUR |
| 200 | 0840685 | - EUR |
| 100 | 0840676 | - EUR |
| 50  | 0840682 | - EUR |
| 45  | 0840681 | - EUR |
| 40  | 0840680 | - EUR |
| 35  | 0840679 | - EUR |
| 30  | 0840678 | - EUR |
| 25  | 0840677 | - EUR |

Lengths in [mm]





Die



200 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm²



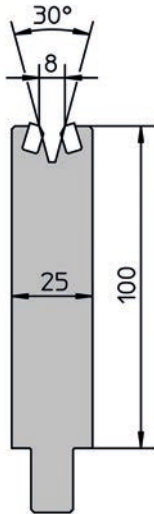
21,2 kg/m



7,6 mm



12,5mm (s=1,5mm)



| Delivery time: ex warehouse |            |        |
|-----------------------------|------------|--------|
| KEV W8/30°                  | Die width: | 8 mm   |
|                             | Angle:     | 30°    |
|                             | Height:    | 100 mm |
|                             | Mat. No.   | Price  |
| Var. B                      |            |        |
| 4050                        | 0846302    | - EUR  |
| 3050                        | 0846301    | - EUR  |
| 2550                        | 0846300    | - EUR  |
| 2050                        | 0846299    | - EUR  |
| 1250                        | 0844967    | - EUR  |
| 1050                        | 0867618    | - EUR  |
| Var. A                      |            |        |
| 2050                        | 0846311    | - EUR  |
| 1250                        | 0846303    | - EUR  |
| 1050                        | 1605336    | - EUR  |
| 550                         | 1605335    | - EUR  |
| Block 250                   |            |        |
| 250                         | 0844966    | - EUR  |
| Single                      |            |        |
| 500                         | 0844965    | - EUR  |
| 300                         | 0844964    | - EUR  |
| 200                         | 0844963    | - EUR  |
| 100                         | 0844956    | - EUR  |
| 50                          | 0844962    | - EUR  |
| 45                          | 0844961    | - EUR  |
| 40                          | 0844960    | - EUR  |
| 35                          | 0844959    | - EUR  |
| 30                          | 0844958    | - EUR  |
| 25                          | 0844957    | - EUR  |

Lengths in [mm]

## 10 mm die width

## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

16,6 kg/m



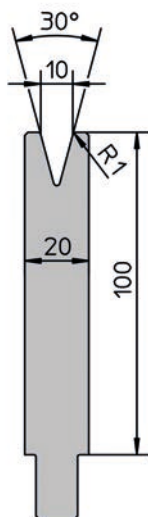
~60 HRC



7,8 mm



10mm (s=2mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

|                 |            |        |
|-----------------|------------|--------|
| EV003 30°       | Die width: | 10 mm  |
|                 | Angle:     | 30°    |
|                 | Height:    | 100 mm |
|                 | Mat. No.   | Price  |
| Var. B          |            |        |
| 4050            | 0824011    | - EUR  |
| 3050            | 0824009    | - EUR  |
| 2550            | 0835223    | - EUR  |
| 2050            | 0824007    | - EUR  |
| 1250            | 0825746    | - EUR  |
| 1050            | 0867467    | - EUR  |
| Var. A          |            |        |
| 2050            | 0824001    | - EUR  |
| 1250            | 0825745    | - EUR  |
| 1050            | 1603974    | - EUR  |
| 550             | 1603973    | - EUR  |
| Block 250       |            |        |
| 250             | 0823999    | - EUR  |
| Single          |            |        |
| 500             | 0823998    | - EUR  |
| 300             | 0823996    | - EUR  |
| 200             | 0823994    | - EUR  |
| 100             | 0823992    | - EUR  |
| 50              | 0823989    | - EUR  |
| 45              | 0823987    | - EUR  |
| 40              | 0823984    | - EUR  |
| 35              | 0823981    | - EUR  |
| 30              | 0823979    | - EUR  |
| 25              | 0823977    | - EUR  |
| 20              | 0845257    | - EUR  |
| 15              | 0845256    | - EUR  |
| 10              | 0845255    | - EUR  |
| 25 with groove  | 0932571    | - EUR  |
| Lengths in [mm] |            |        |

Lengths in [mm]

## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

25,6 kg/m



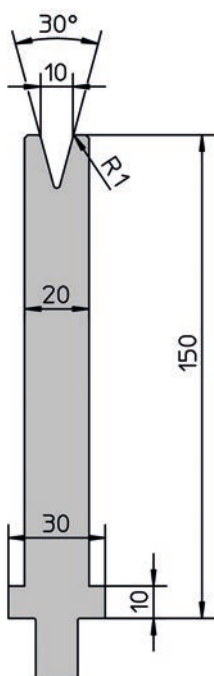
~60 HRC



7,8 mm



10mm (s=2mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

|                 |            |        |
|-----------------|------------|--------|
| EV003/H 30°     | Die width: | 10 mm  |
|                 | Angle:     | 30°    |
|                 | Height:    | 150 mm |
|                 | Mat. No.   | Price  |
| Var. B          |            |        |
| 4050            | 0824047    | - EUR  |
| 3050            | 0824046    | - EUR  |
| 2550            | 0835225    | - EUR  |
| 2050            | 0824044    | - EUR  |
| 1250            | 0825749    | - EUR  |
| 1050            | 0867475    | - EUR  |
| Var. A          |            |        |
| 2050            | 0824037    | - EUR  |
| 1250            | 0825748    | - EUR  |
| 1050            | 1604077    | - EUR  |
| 550             | 1604076    | - EUR  |
| Block 250       |            |        |
| 250             | 0824034    | - EUR  |
| Single          |            |        |
| 500             | 0824030    | - EUR  |
| 300             | 0824027    | - EUR  |
| 200             | 0824025    | - EUR  |
| 100             | 0824022    | - EUR  |
| 50              | 0824020    | - EUR  |
| 45              | 0824017    | - EUR  |
| 40              | 0824015    | - EUR  |
| 35              | 0824014    | - EUR  |
| 30              | 0824013    | - EUR  |
| 25              | 0824012    | - EUR  |
| 25 with groove  | 0932575    | - EUR  |
| Lengths in [mm] |            |        |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

16,5 kg/m



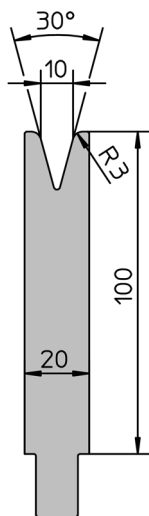
~60 HRC



9,5 mm



10mm (s=2mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

## EV003 R3 30°

Die width: 10 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0857866 | - EUR |
| 3050 | 0849665 | - EUR |
| 2550 | 0860512 | - EUR |
| 2050 | 0859474 | - EUR |
| 1250 | 0860511 | - EUR |
| 1050 | 0867289 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0860507 | - EUR |
| 1250 | 0860506 | - EUR |
| 1050 | 1576412 | - EUR |
| 550  | 1604057 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0849664 | - EUR |
|-----|---------|-------|

## Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0849663 | - EUR |
| 300            | 0849662 | - EUR |
| 200            | 0849661 | - EUR |
| 100            | 0849654 | - EUR |
| 50             | 0849660 | - EUR |
| 45             | 0849659 | - EUR |
| 40             | 0849658 | - EUR |
| 35             | 0849657 | - EUR |
| 30             | 0849656 | - EUR |
| 25             | 0849655 | - EUR |
| 20             | 1465591 | - EUR |
| 15             | 1444679 | - EUR |
| 10             | 1465590 | - EUR |
| 25 with groove | 0869968 | - EUR |

Lengths in [mm]

## Die



200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

15,2 kg/m



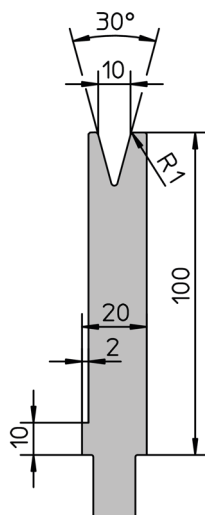
~60 HRC



7,8 mm



8,1mm (s=1,5mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

## EV003/S 30°

Die width: 10 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0870618 | - EUR |
| 3050 | 0849845 | - EUR |
| 2550 | 0870617 | - EUR |
| 2050 | 0857460 | - EUR |
| 1250 | 0849790 | - EUR |
| 1050 | 0989590 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870613 | - EUR |
| 1250 | 0870612 | - EUR |
| 1050 | 1604055 | - EUR |
| 550  | 1604054 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0849789 | - EUR |
|-----|---------|-------|

## Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0849788 | - EUR |
| 300            | 0849787 | - EUR |
| 200            | 0849786 | - EUR |
| 100            | 0849779 | - EUR |
| 50             | 0849785 | - EUR |
| 45             | 0849784 | - EUR |
| 40             | 0849783 | - EUR |
| 35             | 0849782 | - EUR |
| 30             | 0849781 | - EUR |
| 25             | 0849780 | - EUR |
| 20             | 0858858 | - EUR |
| 15             | 0858857 | - EUR |
| 10             | 0858856 | - EUR |
| 25 with groove | 0869972 | - EUR |

Lengths in [mm]



## Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,5 kg/m



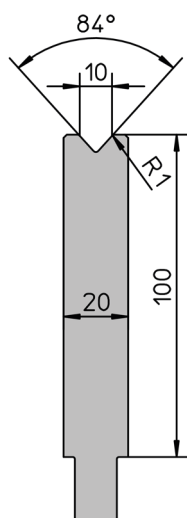
~60 HRC



7,1 mm



10mm (s=2,5mm)



Delivery time: ex warehouse

|                   |                   |              |
|-------------------|-------------------|--------------|
| <b>EV W10/84°</b> | <b>Die width:</b> | 10 mm        |
|                   | <b>Angle:</b>     | 84°          |
|                   | <b>Height:</b>    | 100 mm       |
|                   | <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0857528 | - EUR |
| 3050 | 0860118 | - EUR |
| 2550 | 0861849 | - EUR |
| 2050 | 0861848 | - EUR |
| 1250 | 0858876 | - EUR |
| 1050 | 0867294 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0861844 | - EUR |
| 1250 | 0861843 | - EUR |
| 1050 | 1594072 | - EUR |
| 550  | 1594071 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0857527 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 500 | 0857526 | - EUR |
| 300 | 0857525 | - EUR |
| 200 | 0857524 | - EUR |
| 100 | 0857517 | - EUR |
| 50  | 0857523 | - EUR |
| 45  | 0857522 | - EUR |
| 40  | 0857521 | - EUR |
| 35  | 0857520 | - EUR |
| 30  | 0857519 | - EUR |
| 25  | 0857518 | - EUR |
| 20  | 1429638 | - EUR |
| 15  | 1429295 | - EUR |
| 10  | 1429296 | - EUR |

Lengths in [mm]

## Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

26,1 kg/m



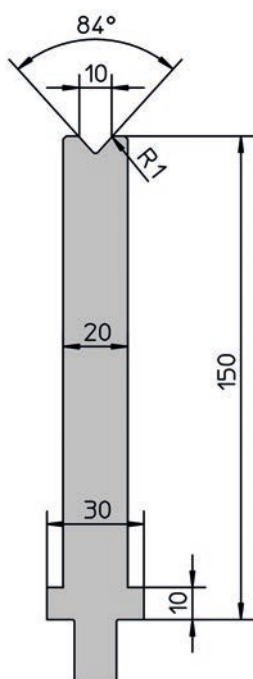
~60 HRC



7,1 mm



10mm (s=2,5mm)



Delivery time: ex warehouse

|                     |                   |              |
|---------------------|-------------------|--------------|
| <b>EV/H W10/84°</b> | <b>Die width:</b> | 10 mm        |
|                     | <b>Angle:</b>     | 84°          |
|                     | <b>Height:</b>    | 150 mm       |
|                     | <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0992251 | - EUR |
| 3050 | 1272109 | - EUR |
| 2550 | 1272107 | - EUR |
| 2050 | 1272106 | - EUR |
| 1250 | 1272104 | - EUR |
| 1050 | 1594102 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 1272078 | - EUR |
| 1250 | 1272076 | - EUR |
| 1050 | 1594101 | - EUR |
| 550  | 1594100 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0992250 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 500 | 0992249 | - EUR |
| 300 | 0992248 | - EUR |
| 200 | 0992247 | - EUR |
| 100 | 0992230 | - EUR |
| 50  | 0992246 | - EUR |
| 45  | 0992245 | - EUR |
| 40  | 0992244 | - EUR |
| 35  | 0992243 | - EUR |
| 30  | 0992242 | - EUR |
| 25  | 0992231 | - EUR |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

13,3 kg/m



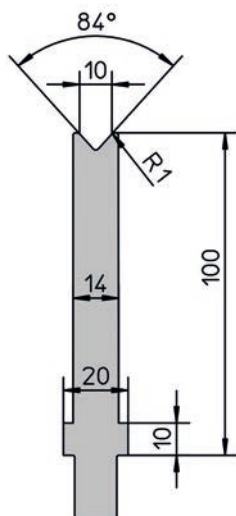
~60 HRC



7,1 mm



7,3mm (s=2mm)



Delivery time: ex warehouse

|                     |                   |              |
|---------------------|-------------------|--------------|
| <b>EV/S W10/84°</b> | <b>Die width:</b> | 10 mm        |
|                     | <b>Angle:</b>     | 84°          |
|                     | <b>Height:</b>    | 100 mm       |
|                     | <b>Mat. No.</b>   | <b>Price</b> |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0872304 | - EUR |
| 3050 | 0861962 | - EUR |
| 2550 | 1206568 | - EUR |
| 2050 | 1206567 | - EUR |
| 1250 | 0868088 | - EUR |
| 1050 | 1601200 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206562 | - EUR |
| 1250 | 1206561 | - EUR |
| 1050 | 1601169 | - EUR |
| 550  | 1601168 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0861961 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0861960 | - EUR |
| 300 | 0861959 | - EUR |
| 200 | 0861958 | - EUR |
| 100 | 0861951 | - EUR |
| 50  | 0861957 | - EUR |
| 45  | 0861956 | - EUR |
| 40  | 0861955 | - EUR |
| 35  | 0861954 | - EUR |
| 30  | 0861953 | - EUR |
| 25  | 0861952 | - EUR |
| 20  | 1202871 | - EUR |
| 15  | 1202870 | - EUR |
| 10  | 1202789 | - EUR |

Lengths in [mm]

Delivery time: 1 week

|                  |                   |              |
|------------------|-------------------|--------------|
| <b>EV022 86°</b> | <b>Die width:</b> | 10 mm        |
|                  | <b>Angle:</b>     | 86°          |
|                  | <b>Height:</b>    | 100 mm       |
|                  | <b>Mat. No.</b>   | <b>Price</b> |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824293 | - EUR |
| 3050 | 0824292 | - EUR |
| 2550 | 0835252 | - EUR |
| 2050 | 0824291 | - EUR |
| 1250 | 0825771 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824288 | - EUR |
| 1250 | 0825770 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824287 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824286 | - EUR |
| 300 | 0824285 | - EUR |
| 200 | 0824284 | - EUR |
| 100 | 0824283 | - EUR |
| 50  | 0824282 | - EUR |
| 45  | 0824281 | - EUR |
| 40  | 0824280 | - EUR |
| 35  | 0824279 | - EUR |
| 30  | 0824278 | - EUR |
| 25  | 0824277 | - EUR |

Lengths in [mm]

Delivery time: 1 week

|                    |                   |              |
|--------------------|-------------------|--------------|
| <b>EV022/S 86°</b> | <b>Die width:</b> | 10 mm        |
|                    | <b>Angle:</b>     | 86°          |
|                    | <b>Height:</b>    | 100 mm       |
|                    | <b>Mat. No.</b>   | <b>Price</b> |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843876 | - EUR |
| 3050 | 0834571 | - EUR |
| 2550 | 0843875 | - EUR |
| 2050 | 0843874 | - EUR |
| 1250 | 0841897 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0843870 | - EUR |
| 1250 | 0843869 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0834570 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0834569 | - EUR |
| 300 | 0834568 | - EUR |
| 200 | 0834567 | - EUR |
| 100 | 0834566 | - EUR |
| 50  | 0834565 | - EUR |
| 45  | 0834564 | - EUR |
| 40  | 0834563 | - EUR |
| 35  | 0834562 | - EUR |
| 30  | 0834561 | - EUR |
| 25  | 0834560 | - EUR |

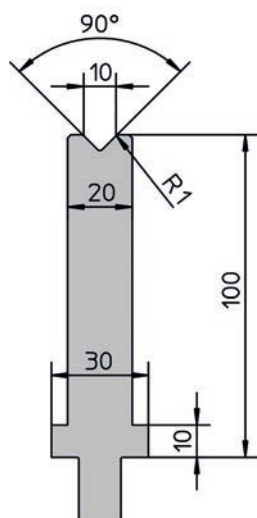
Lengths in [mm]

Predecessor to 84°

Predecessor to 84°

## Die

-  1100 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  18,3 kg/m
-  ~60 HRC
-  7,0 mm
-  10mm (s=2,5mm)
-  Chapter Coining



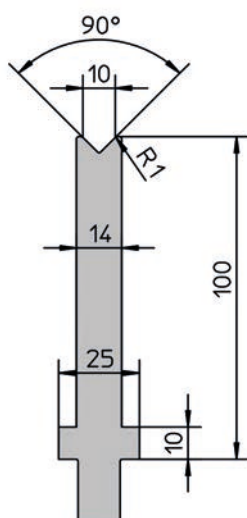
Delivery time: ex warehouse

|           |            |        |
|-----------|------------|--------|
| EV042 90° | Die width: | 10 mm  |
|           | Angle:     | 90°    |
|           | Height:    | 100 mm |
|           | Mat. No.   | Price  |
| Var. B    |            |        |
| 4050      | 0824621    | - EUR  |
| 3050      | 0824620    | - EUR  |
| 2550      | 0835297    | - EUR  |
| 2050      | 0824619    | - EUR  |
| 1250      | 0825878    | - EUR  |
| 1050      | 0867600    | - EUR  |
| Var. A    |            |        |
| 2050      | 0824613    | - EUR  |
| 1250      | 0825877    | - EUR  |
| 1050      | 1605155    | - EUR  |
| 550       | 1605154    | - EUR  |
| Block 250 |            |        |
| 250       | 0824612    | - EUR  |
| Single    |            |        |
| 500       | 0824611    | - EUR  |
| 300       | 0824610    | - EUR  |
| 200       | 0824609    | - EUR  |
| 100       | 0824608    | - EUR  |
| 50        | 0824607    | - EUR  |
| 45        | 0824606    | - EUR  |
| 40        | 0824605    | - EUR  |
| 35        | 0824604    | - EUR  |
| 30        | 0824602    | - EUR  |
| 25        | 0824600    | - EUR  |

Lengths in [mm]

## Die

-  530 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  13,7 kg/m
-  ~60 HRC
-  7,0 mm
-  7,3mm (s=2,5mm)
-  Chapter Coining



Delivery time: ex warehouse

|             |            |        |
|-------------|------------|--------|
| EV042/S 90° | Die width: | 10 mm  |
|             | Angle:     | 90°    |
|             | Height:    | 100 mm |
|             | Mat. No.   | Price  |
| Var. B      |            |        |
| 4050        | 0844156    | - EUR  |
| 3050        | 0844155    | - EUR  |
| 2550        | 0844154    | - EUR  |
| 2050        | 0842072    | - EUR  |
| 1250        | 0840690    | - EUR  |
| 1050        | 0867610    | - EUR  |
| Var. A      |            |        |
| 2050        | 0844158    | - EUR  |
| 1250        | 0844157    | - EUR  |
| 1050        | 1605158    | - EUR  |
| 550         | 1605157    | - EUR  |
| Block 250   |            |        |
| 250         | 0840703    | - EUR  |
| Single      |            |        |
| 500         | 0840702    | - EUR  |
| 300         | 0840701    | - EUR  |
| 200         | 0840700    | - EUR  |
| 100         | 0840691    | - EUR  |
| 50          | 0840697    | - EUR  |
| 45          | 0840696    | - EUR  |
| 40          | 0840695    | - EUR  |
| 35          | 0840694    | - EUR  |
| 30          | 0840693    | - EUR  |
| 25          | 0840692    | - EUR  |

Lengths in [mm]





## Die



200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

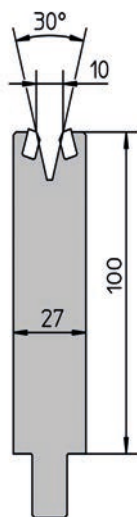
22,5 kg/m



8,7 mm



13,5mm (s=1,5mm)



Delivery time: ex warehouse

## KEV W10/30°

Die width: 10 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0846317 | - EUR |
| 3050 | 0846316 | - EUR |
| 2550 | 0839929 | - EUR |
| 2050 | 0846315 | - EUR |
| 1250 | 0844954 | - EUR |
| 1050 | 0867619 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0846319 | - EUR |
| 1250 | 0846318 | - EUR |
| 1050 | 1605339 | - EUR |
| 550  | 1605338 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0839928 | - EUR |
|-----|---------|-------|

## Single

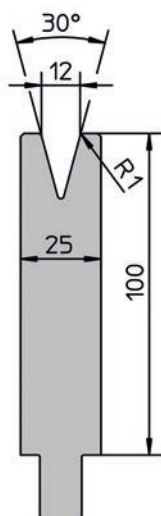
|     |         |       |
|-----|---------|-------|
| 500 | 0839927 | - EUR |
| 300 | 0839926 | - EUR |
| 200 | 0839925 | - EUR |
| 100 | 0839918 | - EUR |
| 50  | 0839924 | - EUR |
| 45  | 0839923 | - EUR |
| 40  | 0839922 | - EUR |
| 35  | 0839921 | - EUR |
| 30  | 0839920 | - EUR |
| 25  | 0839919 | - EUR |

Lengths in [mm]

## 12 mm die width

## Die

-  400 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  20,5 kg/m
-  ~60 HRC
-  9,3 mm
-  12,4mm (s=2,5m)
-  Bore hole existing  
(from 25 mm)



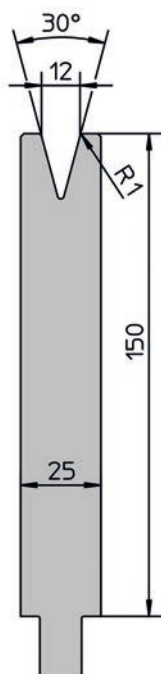
Delivery time: ex warehouse

|                 |            |        |
|-----------------|------------|--------|
| EV004 30°       | Die width: | 12 mm  |
|                 | Angle:     | 30°    |
|                 | Height:    | 100 mm |
|                 | Mat. No.   | Price  |
| Var. B          |            |        |
| 4050            | 0824084    | - EUR  |
| 3050            | 0824083    | - EUR  |
| 2550            | 0835227    | - EUR  |
| 2050            | 0824082    | - EUR  |
| 1250            | 0825751    | - EUR  |
| 1050            | 0867468    | - EUR  |
| Var. A          |            |        |
| 2050            | 0824079    | - EUR  |
| 1250            | 0825750    | - EUR  |
| 1050            | 1594313    | - EUR  |
| 550             | 1594312    | - EUR  |
| Block 250       |            |        |
| 250             | 0824078    | - EUR  |
| Single          |            |        |
| 500             | 0824075    | - EUR  |
| 300             | 0824073    | - EUR  |
| 200             | 0824069    | - EUR  |
| 100             | 0824068    | - EUR  |
| 50              | 0824067    | - EUR  |
| 45              | 0824066    | - EUR  |
| 40              | 0824064    | - EUR  |
| 35              | 0824061    | - EUR  |
| 30              | 0824058    | - EUR  |
| 25              | 0824050    | - EUR  |
| 20              | 0840390    | - EUR  |
| 15              | 0840389    | - EUR  |
| 10              | 0840388    | - EUR  |
| 25 with groove  | 0932572    | - EUR  |
| Lengths in [mm] |            |        |

Lengths in [mm]

## Die

-  400 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  30,3 kg/m
-  ~60 HRC
-  9,3 mm
-  12,4mm (s=2,5mm)
-  Bore hole possible  
+10%



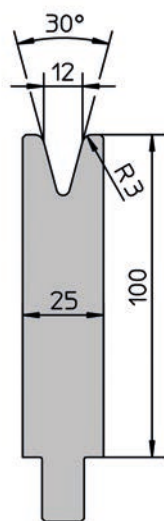
Delivery time: ex warehouse

|                 |            |        |
|-----------------|------------|--------|
| EV004/H 30°     | Die width: | 12 mm  |
|                 | Angle:     | 30°    |
|                 | Height:    | 150 mm |
|                 | Mat. No.   | Price  |
| Var. B          |            |        |
| 4050            | 0824122    | - EUR  |
| 3050            | 0824121    | - EUR  |
| 2550            | 0835229    | - EUR  |
| 2050            | 0824120    | - EUR  |
| 1250            | 0825753    | - EUR  |
| 1050            | 0867476    | - EUR  |
| Var. A          |            |        |
| 2050            | 0824116    | - EUR  |
| 1250            | 0825752    | - EUR  |
| 1050            | 1604134    | - EUR  |
| 550             | 1604133    | - EUR  |
| Block 250       |            |        |
| 250             | 0824114    | - EUR  |
| Single          |            |        |
| 500             | 0824113    | - EUR  |
| 300             | 0824112    | - EUR  |
| 200             | 0824110    | - EUR  |
| 100             | 0824106    | - EUR  |
| 50              | 0824103    | - EUR  |
| 45              | 0824101    | - EUR  |
| 40              | 0824099    | - EUR  |
| 35              | 0824096    | - EUR  |
| 30              | 0824093    | - EUR  |
| 25              | 0824087    | - EUR  |
| 25 with groove  | 0932576    | - EUR  |
| Lengths in [mm] |            |        |

Lengths in [mm]

## Die

-  400 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  20,5 kg/m
-  ~60 HRC
-  10,3 mm
-  12,4mm (s=2,5mm)
-  Bore hole existing  
(from 25 mm)



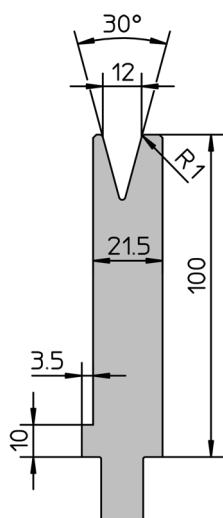
Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV004 R3 30°</b>         | <b>Die width:</b> | 12 mm        |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 100 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0858954           | - EUR        |
| 3050                        | 0851555           | - EUR        |
| 2550                        | 0851203           | - EUR        |
| 2050                        | 0836666           | - EUR        |
| 1250                        | 0859473           | - EUR        |
| 1050                        | 0867290           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0860514           | - EUR        |
| 1250                        | 0860513           | - EUR        |
| 1050                        | 1576414           | - EUR        |
| 550                         | 1604130           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0836665           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0836664           | - EUR        |
| 300                         | 0836663           | - EUR        |
| 200                         | 0836662           | - EUR        |
| 100                         | 0836661           | - EUR        |
| 50                          | 0836660           | - EUR        |
| 45                          | 0836659           | - EUR        |
| 40                          | 0836658           | - EUR        |
| 35                          | 0836657           | - EUR        |
| 30                          | 0836656           | - EUR        |
| 25                          | 0836655           | - EUR        |
| 20                          | 1309986           | - EUR        |
| 15                          | 1238776           | - EUR        |
| 10                          | 1309985           | - EUR        |
| 25 with groove              | 0869677           | - EUR        |

Lengths in [mm]

## Die

-  250 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  18,1 kg/m
-  ~60 HRC
-  9,3 mm
-  9,2mm (s=2mm)
-  Bore hole existing  
(from 25 mm)



Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV004/S 30°</b>          | <b>Die width:</b> | 12 mm        |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 100 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0870625           | - EUR        |
| 3050                        | 0857169           | - EUR        |
| 2550                        | 0855662           | - EUR        |
| 2050                        | 0859417           | - EUR        |
| 1250                        | 0870624           | - EUR        |
| 1050                        | 0989634           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0870620           | - EUR        |
| 1250                        | 0867080           | - EUR        |
| 1050                        | 1604101           | - EUR        |
| 550                         | 1604100           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0855661           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0855660           | - EUR        |
| 300                         | 0855659           | - EUR        |
| 200                         | 0855658           | - EUR        |
| 100                         | 0855651           | - EUR        |
| 50                          | 0855657           | - EUR        |
| 45                          | 0855656           | - EUR        |
| 40                          | 0855655           | - EUR        |
| 35                          | 0855654           | - EUR        |
| 30                          | 0855653           | - EUR        |
| 25                          | 0855652           | - EUR        |
| 20                          | 1440526           | - EUR        |
| 15                          | 1354980           | - EUR        |
| 10                          | 1354978           | - EUR        |
| 25 with groove              | 0869973           | - EUR        |

Lengths in [mm]



## Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

21,3 kg/m



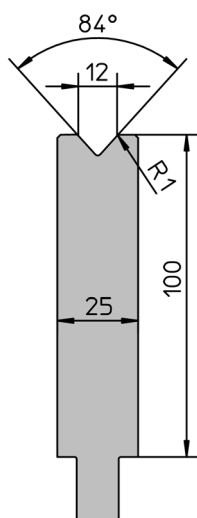
~60 HRC



8,2 mm



12,4mm (s=2,5mm)



Delivery time: ex warehouse

## EV W12/84°

Die width: 12 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0861856 | - EUR |
| 3050 | 0859201 | - EUR |
| 2550 | 0861295 | - EUR |
| 2050 | 0861855 | - EUR |
| 1250 | 0860324 | - EUR |
| 1050 | 0867298 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0861851 | - EUR |
| 1250 | 0861850 | - EUR |
| 1050 | 1594130 | - EUR |
| 550  | 1594129 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0858725 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0858724 | - EUR |
| 300 | 0858723 | - EUR |
| 200 | 0858722 | - EUR |
| 100 | 0858715 | - EUR |
| 50  | 0858721 | - EUR |
| 45  | 0858720 | - EUR |
| 40  | 0858719 | - EUR |
| 35  | 0858718 | - EUR |
| 30  | 0858717 | - EUR |
| 25  | 0858716 | - EUR |
| 20  | 0986870 | - EUR |
| 15  | 0986869 | - EUR |
| 10  | 0986868 | - EUR |

Lengths in [mm]

## Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

31,1 kg/m



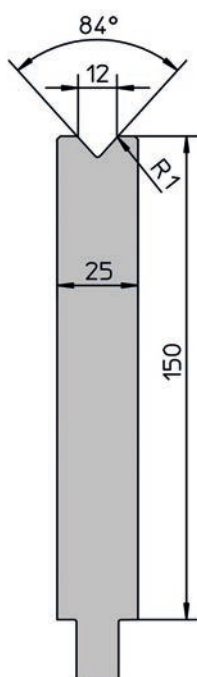
~60 HRC



8,2 mm



12,4mm (s=2,5mm)



Delivery time: ex warehouse

## EV/H W12/84°

Die width: 12 mm

Angle: 84°

Height: 150 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1273207 | - EUR |
| 3050 | 1273206 | - EUR |
| 2550 | 1273201 | - EUR |
| 2050 | 1273198 | - EUR |
| 1250 | 1273142 | - EUR |
| 1050 | 1594152 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1273118 | - EUR |
| 1250 | 1273116 | - EUR |
| 1050 | 1594151 | - EUR |
| 550  | 1594150 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1273115 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 1273114 | - EUR |
| 300 | 1273113 | - EUR |
| 200 | 1273112 | - EUR |
| 100 | 1273081 | - EUR |
| 50  | 1273111 | - EUR |
| 45  | 1273089 | - EUR |
| 40  | 1273088 | - EUR |
| 35  | 1273087 | - EUR |
| 30  | 1273086 | - EUR |
| 25  | 1273083 | - EUR |

Lengths in [mm]



## Die



400 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

14,6 kg/m



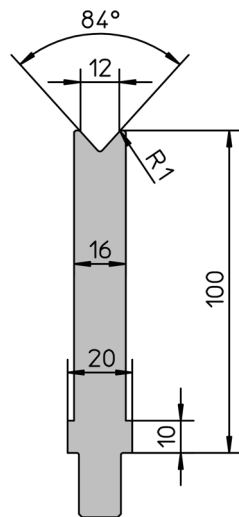
~60 HRC



8,2 mm



8,1mm (s=2,5mm)



Delivery time: ex warehouse

## EV/S W12/84°

Die width: 12 mm

Angle: 84°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0864777 | - EUR |
| 3050 | 0860808 | - EUR |
| 2550 | 1206572 | - EUR |
| 2050 | 0990813 | - EUR |
| 1250 | 0875026 | - EUR |
| 1050 | 1601270 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206569 | - EUR |
| 1250 | 0864328 | - EUR |
| 1050 | 1601259 | - EUR |
| 550  | 1601258 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0858832 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0858831 | - EUR |
| 300 | 0858830 | - EUR |
| 200 | 0858829 | - EUR |
| 100 | 0858822 | - EUR |
| 50  | 0858828 | - EUR |
| 45  | 0858827 | - EUR |
| 40  | 0858826 | - EUR |
| 35  | 0858825 | - EUR |
| 30  | 0858824 | - EUR |
| 25  | 0858823 | - EUR |
| 20  | 0858836 | - EUR |
| 15  | 0858835 | - EUR |
| 10  | 0858834 | - EUR |

Lengths in [mm]

Delivery time: 1 week

## EV023 86°

Die width: 12 mm

Angle: 86°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824334 | - EUR |
| 3050 | 0824333 | - EUR |
| 2550 | 0835256 | - EUR |
| 2050 | 0824332 | - EUR |
| 1250 | 0825682 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824329 | - EUR |
| 1250 | 0825681 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824328 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824327 | - EUR |
| 300 | 0824325 | - EUR |
| 200 | 0824324 | - EUR |
| 100 | 0824323 | - EUR |
| 50  | 0824322 | - EUR |
| 45  | 0824321 | - EUR |
| 40  | 0824319 | - EUR |
| 35  | 0824318 | - EUR |
| 30  | 0824317 | - EUR |
| 25  | 0824315 | - EUR |

Lengths in [mm]

Delivery time: 1 week

## EV023/S 86°

Die width: 12 mm

Angle: 86°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843887 | - EUR |
| 3050 | 0842416 | - EUR |
| 2550 | 0843886 | - EUR |
| 2050 | 0843885 | - EUR |
| 1250 | 0832448 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0843881 | - EUR |
| 1250 | 0843880 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0832447 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0832446 | - EUR |
| 300 | 0832445 | - EUR |
| 200 | 0832444 | - EUR |
| 100 | 0832443 | - EUR |
| 50  | 0832442 | - EUR |
| 45  | 0832441 | - EUR |
| 40  | 0832440 | - EUR |
| 35  | 0832439 | - EUR |
| 30  | 0832438 | - EUR |
| 25  | 0832437 | - EUR |

Lengths in [mm]

Predecessor to 84°

Predecessor to zu 84°



## Die



1100 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

18,2 kg/m



~60 HRC



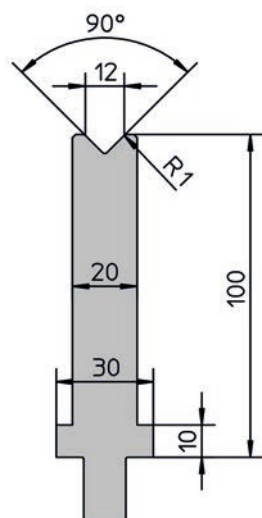
8,2 mm



10mm (s=3mm)



Chapter Coining



Delivery time: ex warehouse

## EV043 90°

Die width: 12 mm

Angle: 90°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824676 | - EUR |
| 3050 | 0824674 | - EUR |
| 2550 | 0835301 | - EUR |
| 2050 | 0824673 | - EUR |
| 1250 | 0825882 | - EUR |
| 1050 | 0867601 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824668 | - EUR |
| 1250 | 0825881 | - EUR |
| 1050 | 1576550 | - EUR |
| 550  | 1605214 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824666 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824665 | - EUR |
| 300 | 0824664 | - EUR |
| 200 | 0824662 | - EUR |
| 100 | 0824661 | - EUR |
| 50  | 0824660 | - EUR |
| 45  | 0824658 | - EUR |
| 40  | 0824657 | - EUR |
| 35  | 0824656 | - EUR |
| 30  | 0824655 | - EUR |
| 25  | 0824654 | - EUR |

Lengths in [mm]

## Die



550 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

15,0 kg/m



~60 HRC



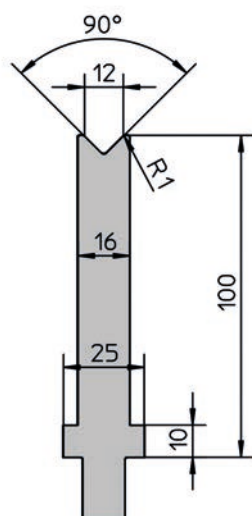
8,2 mm



8,1mm (s=2,5mm)



Chapter Coining



Delivery time: ex warehouse

## EV043/S 90°

Die width: 12 mm

Angle: 90°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0844165 | - EUR |
| 3050 | 0844164 | - EUR |
| 2550 | 0844163 | - EUR |
| 2050 | 0844162 | - EUR |
| 1250 | 0840716 | - EUR |
| 1050 | 0867612 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0844167 | - EUR |
| 1250 | 0844166 | - EUR |
| 1050 | 1605281 | - EUR |
| 550  | 1605280 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0840717 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0840715 | - EUR |
| 300 | 0840714 | - EUR |
| 200 | 0840713 | - EUR |
| 100 | 0840704 | - EUR |
| 50  | 0840710 | - EUR |
| 45  | 0840709 | - EUR |
| 40  | 0840708 | - EUR |
| 35  | 0840707 | - EUR |
| 30  | 0840706 | - EUR |
| 25  | 0840705 | - EUR |

Lengths in [mm]





## 14 mm die width

### Die



200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

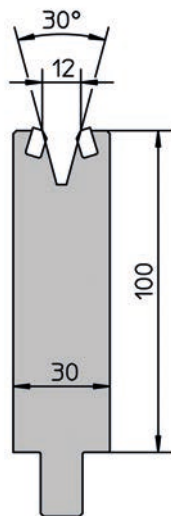
24,6 kg/m



10,5 mm



15mm (s=1,5mm)



Delivery time: ex warehouse

|                    |                   |              |
|--------------------|-------------------|--------------|
| <b>KEV W12/30°</b> | <b>Die width:</b> | 12 mm        |
|                    | <b>Angle:</b>     | 30°          |
|                    | <b>Height:</b>    | 100 mm       |
|                    | <b>Mat. No.</b>   | <b>Price</b> |

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0846171 | - EUR |
| 3050 | 0846184 | - EUR |
| 2550 | 0846324 | - EUR |
| 2050 | 0846323 | - EUR |
| 1250 | 0841609 | - EUR |
| 1050 | 0867620 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0846325 | - EUR |
| 1250 | 0845873 | - EUR |
| 1050 | 1605414 | - EUR |
| 550  | 1605413 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0841607 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0841606 | - EUR |
| 300 | 0841605 | - EUR |
| 200 | 0841604 | - EUR |
| 100 | 0841597 | - EUR |
| 50  | 0841598 | - EUR |
| 45  | 0841599 | - EUR |
| 40  | 0841600 | - EUR |
| 35  | 0841601 | - EUR |
| 30  | 0841602 | - EUR |
| 25  | 0841603 | - EUR |

Lengths in [mm]

### Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

17,6 kg/m



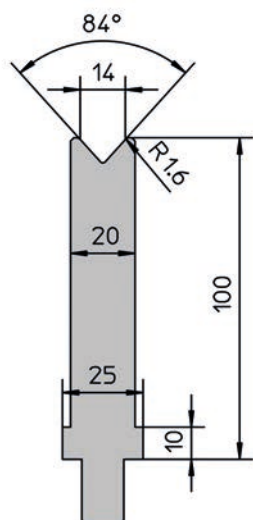
~60 HRC



10,3 mm



10mm (s=3mm)



Delivery time: ex warehouse

|                     |                   |              |
|---------------------|-------------------|--------------|
| <b>EV/S W14/84°</b> | <b>Die width:</b> | 14 mm        |
|                     | <b>Angle:</b>     | 84°          |
|                     | <b>Height:</b>    | 100 mm       |
|                     | <b>Mat. No.</b>   | <b>Price</b> |

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1749339 | - EUR |
| 3050 | 1749337 | - EUR |
| 2550 | 1749335 | - EUR |
| 2050 | 1749333 | - EUR |
| 1250 | 1749331 | - EUR |
| 1050 | 1749329 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1749332 | - EUR |
| 1250 | 1749330 | - EUR |
| 1050 | 1749328 | - EUR |
| 550  | 1749327 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1749324 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1749326 | - EUR |
| 300 | 1749325 | - EUR |
| 200 | 1749323 | - EUR |
| 100 | 1749322 | - EUR |
| 50  | 1749321 | - EUR |
| 45  | 1749320 | - EUR |
| 40  | 1749319 | - EUR |
| 35  | 1749318 | - EUR |
| 30  | 1749317 | - EUR |
| 25  | 1749316 | - EUR |
| 20  | 1749315 | - EUR |
| 15  | 1749314 | - EUR |
| 10  | 1749313 | - EUR |

Lengths in [mm]

## 16 mm die width

## Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

23,6 kg/m



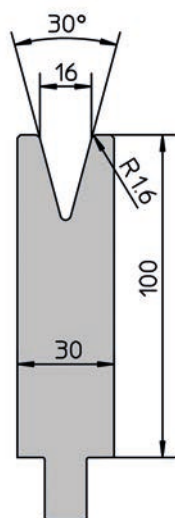
~60 HRC



12,1 mm



15,1mm (s=3mm)

Bore hole existing  
(from 25 mm)

Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV005 30°</b>            | <b>Die width:</b> | 16 mm        |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 100 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0824145           | - EUR        |
| 3050                        | 0824144           | - EUR        |
| 2550                        | 0835231           | - EUR        |
| 2050                        | 0824143           | - EUR        |
| 1250                        | 0825755           | - EUR        |
| 1050                        | 0867469           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0824140           | - EUR        |
| 1250                        | 0825754           | - EUR        |
| 1050                        | 1604170           | - EUR        |
| 550                         | 1604139           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0824139           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0824138           | - EUR        |
| 300                         | 0824137           | - EUR        |
| 200                         | 0824136           | - EUR        |
| 100                         | 0824135           | - EUR        |
| 50                          | 0824134           | - EUR        |
| 45                          | 0824133           | - EUR        |
| 40                          | 0824132           | - EUR        |
| 35                          | 0824131           | - EUR        |
| 30                          | 0824130           | - EUR        |
| 25                          | 0824129           | - EUR        |
| 20                          | 0840387           | - EUR        |
| 15                          | 0840386           | - EUR        |
| 10                          | 0840385           | - EUR        |
| 25 with groove              | 0939526           | - EUR        |

Lengths in [mm]

## Die



500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

35,4 kg/m



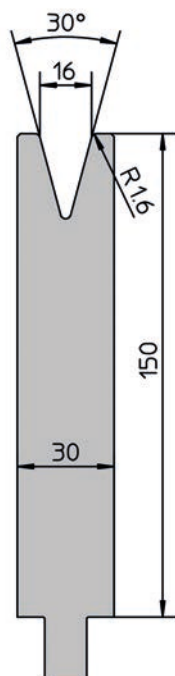
~60 HRC



12,1 mm



15,1mm (s=3mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV005/H 30°</b>          | <b>Die width:</b> | 16 mm        |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 150 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0824165           | - EUR        |
| 3050                        | 0824164           | - EUR        |
| 2550                        | 0835233           | - EUR        |
| 2050                        | 0824163           | - EUR        |
| 1250                        | 0825757           | - EUR        |
| 1050                        | 0867483           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0824159           | - EUR        |
| 1250                        | 0825756           | - EUR        |
| 1050                        | 1604211           | - EUR        |
| 550                         | 1604210           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0824160           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0824158           | - EUR        |
| 300                         | 0824157           | - EUR        |
| 200                         | 0824156           | - EUR        |
| 100                         | 0824155           | - EUR        |
| 50                          | 0824154           | - EUR        |
| 45                          | 0824153           | - EUR        |
| 40                          | 0824152           | - EUR        |
| 35                          | 0824151           | - EUR        |
| 30                          | 0824150           | - EUR        |
| 25                          | 0824149           | - EUR        |
| 25 with groove              | 0939527           | - EUR        |

Lengths in [mm]



## Die



500 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



23,4 kg/m



~60 HRC



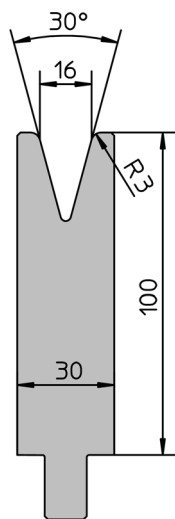
13,5 mm



15,1mm (s=3mm)



Bore hole existing  
(from 25 mm)



Delivery time: ex warehouse

### EV005 R3 30°

**Die width:** 16 mm

**Angle:** 30°

**Height:** 100 mm

**Mat. No.**

**Price**

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0857867 | - EUR |
| 3050 | 0850447 | - EUR |
| 2550 | 0860524 | - EUR |
| 2050 | 0860523 | - EUR |
| 1250 | 0860522 | - EUR |
| 1050 | 0867291 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0860519 | - EUR |
| 1250 | 0860518 | - EUR |
| 1050 | 1604176 | - EUR |
| 550  | 1604175 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0850446 | - EUR |
|-----|---------|-------|

#### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0850445 | - EUR |
| 300            | 0850444 | - EUR |
| 200            | 0850443 | - EUR |
| 100            | 0850436 | - EUR |
| 50             | 0850442 | - EUR |
| 45             | 0850441 | - EUR |
| 40             | 0850440 | - EUR |
| 35             | 0850439 | - EUR |
| 30             | 0850438 | - EUR |
| 25             | 0850437 | - EUR |
| 20             | 1465619 | - EUR |
| 15             | 1465618 | - EUR |
| 10             | 1465617 | - EUR |
| 25 with groove | 0869969 | - EUR |

Lengths in [mm]

## Die



200 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



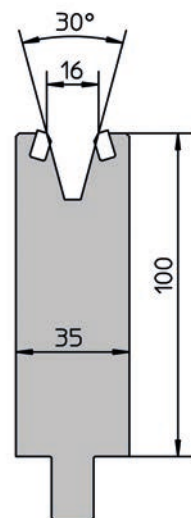
27,8 kg/m



12,8 mm



17,9mm (s=2mm)



Delivery time: ex warehouse

### KEV W16/30°

**Die width:** 16 mm

**Angle:** 30°

**Height:** 100 mm

**Mat. No.**

**Price**

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0846331 | - EUR |
| 3050 | 0846330 | - EUR |
| 2550 | 0839941 | - EUR |
| 2050 | 0846329 | - EUR |
| 1250 | 0844955 | - EUR |
| 1050 | 0867633 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0846333 | - EUR |
| 1250 | 0846332 | - EUR |
| 1050 | 1605700 | - EUR |
| 550  | 1605679 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0839940 | - EUR |
|-----|---------|-------|

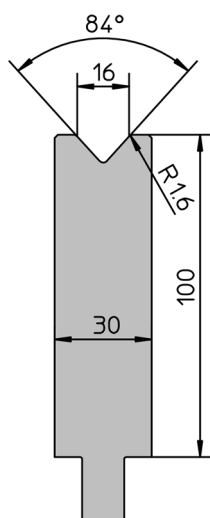
#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0839939 | - EUR |
| 300 | 0839938 | - EUR |
| 200 | 0839937 | - EUR |
| 100 | 0839930 | - EUR |
| 50  | 0839936 | - EUR |
| 45  | 0839935 | - EUR |
| 40  | 0839934 | - EUR |
| 35  | 0839933 | - EUR |
| 30  | 0839932 | - EUR |
| 25  | 0839931 | - EUR |

Lengths in [mm]

## Die

-  700 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  25,0 kg/m
-  ~60 HRC
-  11,1 mm
-  15,1mm (s=4mm)



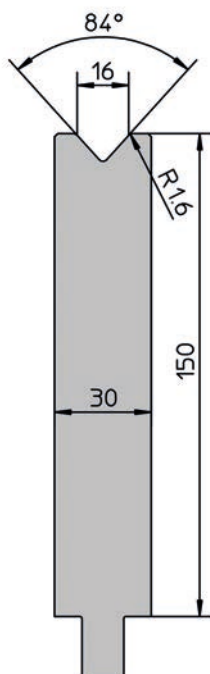
Delivery time: ex warehouse

|            |            |        |
|------------|------------|--------|
| EV W16/84° | Die width: | 16 mm  |
|            | Angle:     | 84°    |
|            | Height:    | 100 mm |
|            | Mat. No.   | Price  |
| Var. B     |            |        |
| 4050       | 0861863    | - EUR  |
| 3050       | 0859203    | - EUR  |
| 2550       | 0861297    | - EUR  |
| 2050       | 0857541    | - EUR  |
| 1250       | 0861862    | - EUR  |
| 1050       | 0867299    | - EUR  |
| Var. A     |            |        |
| 2050       | 0861858    | - EUR  |
| 1250       | 0861857    | - EUR  |
| 1050       | 1594191    | - EUR  |
| 550        | 1594190    | - EUR  |
| Block 250  |            |        |
| 250        | 0857539    | - EUR  |
| Single     |            |        |
| 500        | 0857538    | - EUR  |
| 300        | 0857537    | - EUR  |
| 200        | 0857536    | - EUR  |
| 100        | 0857529    | - EUR  |
| 50         | 0857535    | - EUR  |
| 45         | 0857534    | - EUR  |
| 40         | 0857533    | - EUR  |
| 35         | 0857532    | - EUR  |
| 30         | 0857531    | - EUR  |
| 25         | 0857530    | - EUR  |
| 20         | 1272087    | - EUR  |
| 15         | 1272084    | - EUR  |
| 10         | 1272089    | - EUR  |

Lengths in [mm]

## Die

-  700 kN/m
-  42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>
-  36,7 kg/m
-  ~60 HRC
-  11,1 mm
-  15,1mm (s=4mm)



Delivery time: ex warehouse

|              |            |        |
|--------------|------------|--------|
| EV/H W16/84° | Die width: | 16 mm  |
|              | Angle:     | 84°    |
|              | Height:    | 150 mm |
|              | Mat. No.   | Price  |
| Var. B       |            |        |
| 4050         | 0872583    | - EUR  |
| 3050         | 0864723    | - EUR  |
| 2550         | 1271923    | - EUR  |
| 2050         | 1271922    | - EUR  |
| 1250         | 1271909    | - EUR  |
| 1050         | 1594229    | - EUR  |
| Var. A       |            |        |
| 2050         | 1264621    | - EUR  |
| 1250         | 1271904    | - EUR  |
| 1050         | 1594228    | - EUR  |
| 550          | 1594227    | - EUR  |
| Block 250    |            |        |
| 250          | 0858787    | - EUR  |
| Single       |            |        |
| 500          | 0858786    | - EUR  |
| 300          | 0858785    | - EUR  |
| 200          | 0858784    | - EUR  |
| 100          | 0858777    | - EUR  |
| 50           | 0858783    | - EUR  |
| 45           | 0858782    | - EUR  |
| 40           | 0858781    | - EUR  |
| 35           | 0858780    | - EUR  |
| 30           | 0858779    | - EUR  |
| 25           | 0858778    | - EUR  |

Lengths in [mm]



## Die



1400 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



25,0 kg/m



~60 HRC



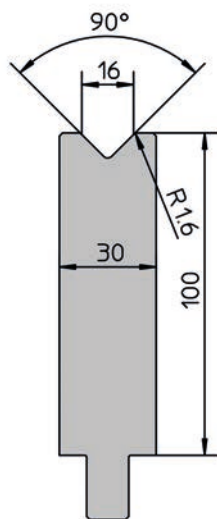
11,0 mm



15,1mm (s=4mm)



Chapter Coining



Delivery time: ex warehouse

### EV044 90°

Die width: 16 mm

Angle: 90°

Height: 100 mm

Mat. No. Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824730 | - EUR |
| 3050 | 0824728 | - EUR |
| 2550 | 0835305 | - EUR |
| 2050 | 0824727 | - EUR |
| 1250 | 0825886 | - EUR |
| 1050 | 0867602 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824721 | - EUR |
| 1250 | 0825885 | - EUR |
| 1050 | 1605286 | - EUR |
| 550  | 1605285 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824719 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824717 | - EUR |
| 300 | 0824716 | - EUR |
| 200 | 0824715 | - EUR |
| 100 | 0824714 | - EUR |
| 50  | 0824713 | - EUR |
| 45  | 0824711 | - EUR |
| 40  | 0824710 | - EUR |
| 35  | 0824709 | - EUR |
| 30  | 0824708 | - EUR |
| 25  | 0824707 | - EUR |

Lengths in [mm]

Delivery time: 1 week

### EV024 86°

Die width: 16 mm

Angle: 86°

Height: 100 mm

Mat. No. Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824370 | - EUR |
| 3050 | 0824369 | - EUR |
| 2550 | 0835260 | - EUR |
| 2050 | 0824368 | - EUR |
| 1250 | 0825847 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824363 | - EUR |
| 1250 | 0825846 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824362 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824364 | - EUR |
| 300 | 0824361 | - EUR |
| 200 | 0824360 | - EUR |
| 100 | 0824359 | - EUR |
| 50  | 0824358 | - EUR |
| 45  | 0824357 | - EUR |
| 40  | 0824356 | - EUR |
| 35  | 0824355 | - EUR |
| 30  | 0824354 | - EUR |
| 25  | 0824353 | - EUR |

Lengths in [mm]

Predecessor to 84°

## 20 mm die width

## Die



600 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

26,4 kg/m



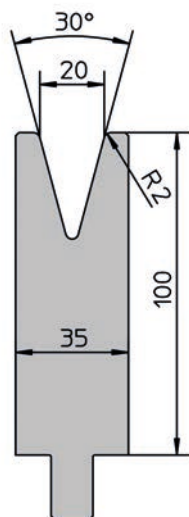
~60 HRC



15,7 mm



17,3mm (s=4mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV006 30°</b>            | <b>Die width:</b> | 20 mm        |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 100 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0827762           | - EUR        |
| 3050                        | 0827285           | - EUR        |
| 2550                        | 0835235           | - EUR        |
| 2050                        | 0827764           | - EUR        |
| 1250                        | 0827763           | - EUR        |
| 1050                        | 0867470           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0827766           | - EUR        |
| 1250                        | 0827765           | - EUR        |
| 1050                        | 1604213           | - EUR        |
| 550                         | 1604212           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0827284           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0827283           | - EUR        |
| 300                         | 0827282           | - EUR        |
| 200                         | 0827281           | - EUR        |
| 100                         | 0827280           | - EUR        |
| 50                          | 0827279           | - EUR        |
| 45                          | 0827278           | - EUR        |
| 40                          | 0827277           | - EUR        |
| 35                          | 0827276           | - EUR        |
| 30                          | 0827275           | - EUR        |
| 25                          | 0827274           | - EUR        |
| 20                          | 0840383           | - EUR        |
| 15                          | 0840382           | - EUR        |
| 10                          | 0840381           | - EUR        |
| 25 with groove              | 0869960           | - EUR        |

Lengths in [mm]

## Die



600 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

40,1 kg/m



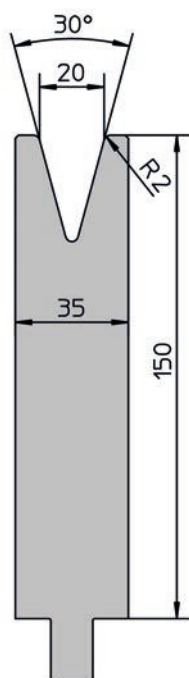
~60 HRC



15,7 mm



17,3mm (s=4mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

| Delivery time: ex warehouse |                   |              |
|-----------------------------|-------------------|--------------|
| <b>EV006/H 30°</b>          | <b>Die width:</b> | 20 mm        |
|                             | <b>Angle:</b>     | 30°          |
|                             | <b>Height:</b>    | 150 mm       |
|                             | <b>Mat. No.</b>   | <b>Price</b> |
| <b>Var. B</b>               |                   |              |
| 4050                        | 0831196           | - EUR        |
| 3050                        | 0831195           | - EUR        |
| 2550                        | 0835237           | - EUR        |
| 2050                        | 0830757           | - EUR        |
| 1250                        | 0831194           | - EUR        |
| 1050                        | 0867486           | - EUR        |
| <b>Var. A</b>               |                   |              |
| 2050                        | 0831198           | - EUR        |
| 1250                        | 0831197           | - EUR        |
| 1050                        | 1604217           | - EUR        |
| 550                         | 1604216           | - EUR        |
| <b>Block 250</b>            |                   |              |
| 250                         | 0830756           | - EUR        |
| <b>Single</b>               |                   |              |
| 500                         | 0830755           | - EUR        |
| 300                         | 0830754           | - EUR        |
| 200                         | 0830753           | - EUR        |
| 100                         | 0830752           | - EUR        |
| 50                          | 0830751           | - EUR        |
| 45                          | 0830750           | - EUR        |
| 40                          | 0830749           | - EUR        |
| 35                          | 0830748           | - EUR        |
| 30                          | 0830747           | - EUR        |
| 25                          | 0830746           | - EUR        |
| 25 with groove              | 0864915           | - EUR        |

Lengths in [mm]





## Die



200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

29,1 kg/m



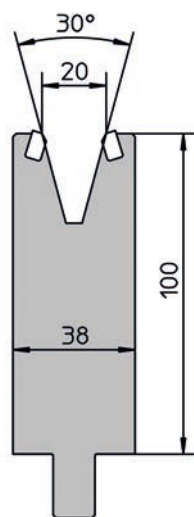
~60 HRC



15,2 mm



20,2mm (s=2,5mm)



Delivery time: ex warehouse

## KEV W20/30°

Die width: 20 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0870633 | - EUR |
| 3050 | 0864524 | - EUR |
| 2550 | 0862175 | - EUR |
| 2050 | 0870632 | - EUR |
| 1250 | 0870631 | - EUR |
| 1050 | 1605707 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870627 | - EUR |
| 1250 | 0870626 | - EUR |
| 1050 | 1605706 | - EUR |
| 550  | 1605705 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0862174 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0855114 | - EUR |
| 300 | 0862173 | - EUR |
| 200 | 0862172 | - EUR |
| 100 | 0855113 | - EUR |
| 50  | 0862171 | - EUR |
| 45  | 0862170 | - EUR |
| 40  | 0862169 | - EUR |
| 35  | 0862168 | - EUR |
| 30  | 0862167 | - EUR |
| 25  | 0862166 | - EUR |

Lengths in [mm]

Delivery time: 1 week

## EV025 86°

Die width: 20 mm

Angle: 86°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0825907 | - EUR |
| 3050 | 0825905 | - EUR |
| 2550 | 0835264 | - EUR |
| 2050 | 0825903 | - EUR |
| 1250 | 0825901 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0825902 | - EUR |
| 1250 | 0825900 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0825899 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0825898 | - EUR |
| 300 | 0825897 | - EUR |
| 200 | 0825896 | - EUR |
| 100 | 0825895 | - EUR |
| 50  | 0825894 | - EUR |
| 45  | 0825893 | - EUR |
| 40  | 0825892 | - EUR |
| 35  | 0825891 | - EUR |
| 30  | 0825890 | - EUR |
| 25  | 0825889 | - EUR |

Lengths in [mm]

Predecessor to 84°



## Die



700 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

24,6 kg/m



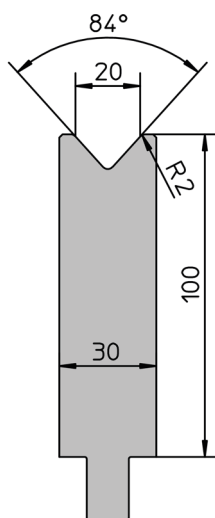
~60 HRC



14,5 mm



14,9mm (s=4mm)



Delivery time: ex warehouse

## EV W20/84°

Die width: 20 mm

Angle: 84°

Height: 100 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0857561 | - EUR |
| 3050 | 0861420 | - EUR |
| 2550 | 0861870 | - EUR |
| 2050 | 0861869 | - EUR |
| 1250 | 0860323 | - EUR |
| 1050 | 0867300 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0861865 | - EUR |
| 1250 | 0861864 | - EUR |
| 1050 | 1594471 | - EUR |
| 550  | 1594470 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0857560 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0857559 | - EUR |
| 300 | 0857558 | - EUR |
| 200 | 0857557 | - EUR |
| 100 | 0857550 | - EUR |
| 50  | 0857556 | - EUR |
| 45  | 0857555 | - EUR |
| 40  | 0857554 | - EUR |
| 35  | 0857553 | - EUR |
| 30  | 0857552 | - EUR |
| 25  | 0857551 | - EUR |
| 20  | 1286391 | - EUR |
| 15  | 1286369 | - EUR |
| 10  | 1431080 | - EUR |

Lengths in [mm]

## Die



700 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

36,4 kg/m



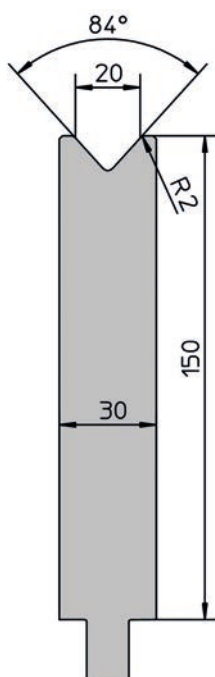
~60 HRC



14,5 mm



14,9mm (s=4mm)



Delivery time: ex warehouse

## EV/H W20/84°

Die width: 20 mm

Angle: 84°

Height: 150 mm

Mat. No. Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0992283 | - EUR |
| 3050 | 1230842 | - EUR |
| 2550 | 1271617 | - EUR |
| 2050 | 1271615 | - EUR |
| 1250 | 1214666 | - EUR |
| 1050 | 1594583 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1271604 | - EUR |
| 1250 | 1271602 | - EUR |
| 1050 | 1594582 | - EUR |
| 550  | 1594581 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0992282 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0992281 | - EUR |
| 300 | 0992280 | - EUR |
| 200 | 0992279 | - EUR |
| 100 | 0992272 | - EUR |
| 50  | 0992278 | - EUR |
| 45  | 0992277 | - EUR |
| 40  | 0992276 | - EUR |
| 35  | 0992275 | - EUR |
| 30  | 0992274 | - EUR |
| 25  | 0992273 | - EUR |

Lengths in [mm]



## 24 mm die width

### Die



650 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

29,5 kg/m



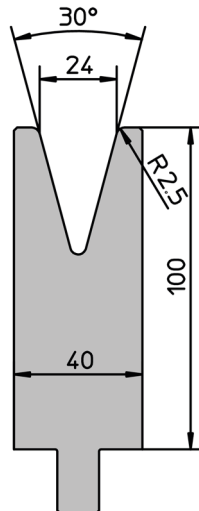
~60 HRC



19,1 mm



20mm (s=5mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

#### EV007 30°

Die width: 24 mm

Angle: 30°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824185 | - EUR |
| 3050 | 0824184 | - EUR |
| 2550 | 0835239 | - EUR |
| 2050 | 0824183 | - EUR |
| 1250 | 0825759 | - EUR |
| 1050 | 0867471 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824180 | - EUR |
| 1250 | 0825758 | - EUR |
| 1050 | 1594318 | - EUR |
| 550  | 1594317 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824179 | - EUR |
|-----|---------|-------|

#### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0824178 | - EUR |
| 300            | 0824177 | - EUR |
| 200            | 0824176 | - EUR |
| 100            | 0824175 | - EUR |
| 50             | 0824174 | - EUR |
| 45             | 0824173 | - EUR |
| 40             | 0824172 | - EUR |
| 35             | 0824171 | - EUR |
| 30             | 0824170 | - EUR |
| 25             | 0824169 | - EUR |
| 25 with groove | 0869961 | - EUR |

Lengths in [mm]

### Die



650 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

49,2 kg/m



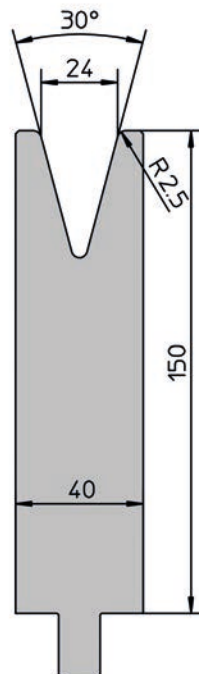
~60 HRC



19,1 mm



20mm (s=5mm)

Bore hole possible  
+10%

Delivery time: ex warehouse

#### EV007/H 30°

Die width: 24 mm

Angle: 30°

Height: 150 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824203 | - EUR |
| 3050 | 0824202 | - EUR |
| 2550 | 0835242 | - EUR |
| 2050 | 0824201 | - EUR |
| 1250 | 0825761 | - EUR |
| 1050 | 0867488 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824198 | - EUR |
| 1250 | 0825760 | - EUR |
| 1050 | 1604333 | - EUR |
| 550  | 1604332 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824197 | - EUR |
|-----|---------|-------|

#### Single

|                |         |       |
|----------------|---------|-------|
| 500            | 0824196 | - EUR |
| 300            | 0824194 | - EUR |
| 200            | 0824193 | - EUR |
| 100            | 0824192 | - EUR |
| 50             | 0824191 | - EUR |
| 45             | 0824190 | - EUR |
| 40             | 0824189 | - EUR |
| 35             | 0824188 | - EUR |
| 30             | 0824187 | - EUR |
| 25             | 0824186 | - EUR |
| 25 with groove | 0869965 | - EUR |

Lengths in [mm]

## Die



200 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



33,4 kg/m



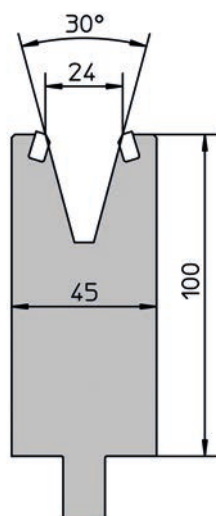
~60 HRC



17,3 mm



24mm (s=2,5mm)



Delivery time: ex warehouse

### KEV W24/30°

Die width: 24 mm  
Angle: 30°  
Height: 100 mm

Mat. No. Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0870684 | - EUR |
| 3050 | 0870683 | - EUR |
| 2550 | 0870682 | - EUR |
| 2050 | 0870681 | - EUR |
| 1250 | 0860208 | - EUR |
| 1050 | 1605734 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870677 | - EUR |
| 1250 | 0870676 | - EUR |
| 1050 | 1605733 | - EUR |
| 550  | 1605732 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0860207 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0860206 | - EUR |
| 300 | 0860205 | - EUR |
| 200 | 0860204 | - EUR |
| 100 | 0860197 | - EUR |
| 50  | 0860203 | - EUR |
| 45  | 0860202 | - EUR |
| 40  | 0860201 | - EUR |
| 35  | 0860200 | - EUR |
| 30  | 0860199 | - EUR |
| 25  | 0860198 | - EUR |

Lengths in [mm]

Delivery time: 1 week

### EV026 86°

Die width: 24 mm  
Angle: 86°  
Height: 100 mm  
Mat. No. Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824404 | - EUR |
| 3050 | 0824403 | - EUR |
| 2550 | 0835268 | - EUR |
| 2050 | 0824402 | - EUR |
| 1250 | 0825851 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824399 | - EUR |
| 1250 | 0825850 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824398 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0824397 | - EUR |
| 300 | 0824396 | - EUR |
| 200 | 0824395 | - EUR |
| 100 | 0824394 | - EUR |
| 50  | 0824393 | - EUR |
| 45  | 0824392 | - EUR |
| 40  | 0824391 | - EUR |
| 35  | 0824390 | - EUR |
| 30  | 0824389 | - EUR |
| 25  | 0824388 | - EUR |

Lengths in [mm]

Predecessor to 80°



## Die



700 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



28,0 kg/m



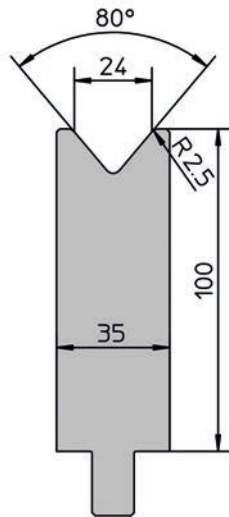
~60 HRC



19,0 mm



18mm (s=5mm)



Delivery time: ex warehouse

|                   |                   |              |
|-------------------|-------------------|--------------|
| <b>EV W24/80°</b> | <b>Die width:</b> | 24 mm        |
|                   | <b>Angle:</b>     | 80°          |
|                   | <b>Height:</b>    | 100 mm       |
|                   | <b>Mat. No.</b>   | <b>Price</b> |

### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0853235 | - EUR |
| 3050 | 0867146 | - EUR |
| 2550 | 0870696 | - EUR |
| 2050 | 0870695 | - EUR |
| 1250 | 0869678 | - EUR |
| 1050 | 1545487 | - EUR |

### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870691 | - EUR |
| 1250 | 0870690 | - EUR |
| 1050 | 1596558 | - EUR |
| 550  | 1596557 | - EUR |

### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0853234 | - EUR |
|-----|---------|-------|

### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0832839 | - EUR |
| 300 | 0835118 | - EUR |
| 200 | 0853233 | - EUR |
| 100 | 0835119 | - EUR |
| 50  | 0853232 | - EUR |
| 45  | 0853231 | - EUR |
| 40  | 0853230 | - EUR |
| 35  | 0853229 | - EUR |
| 30  | 0853228 | - EUR |
| 25  | 0853227 | - EUR |

Lengths in [mm]

## Die



700 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



41,7 kg/m



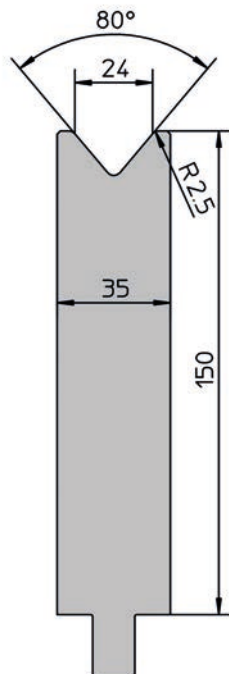
~60 HRC



19,0 mm



18mm (s=5mm)



Delivery time: ex warehouse

|                     |                   |              |
|---------------------|-------------------|--------------|
| <b>EV/H W24/80°</b> | <b>Die width:</b> | 24 mm        |
|                     | <b>Angle:</b>     | 80°          |
|                     | <b>Height:</b>    | 150 mm       |
|                     | <b>Mat. No.</b>   | <b>Price</b> |

### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1271639 | - EUR |
| 3050 | 1271638 | - EUR |
| 2550 | 1271637 | - EUR |
| 2050 | 1271635 | - EUR |
| 1250 | 1271633 | - EUR |
| 1050 | 1600913 | - EUR |

### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1271599 | - EUR |
| 1250 | 1271598 | - EUR |
| 1050 | 1600912 | - EUR |
| 550  | 1600911 | - EUR |

### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1271597 | - EUR |
|-----|---------|-------|

### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1271595 | - EUR |
| 300 | 1271594 | - EUR |
| 200 | 1271593 | - EUR |
| 100 | 1215140 | - EUR |
| 50  | 1271592 | - EUR |
| 45  | 1271591 | - EUR |
| 40  | 1271500 | - EUR |
| 35  | 1271499 | - EUR |
| 30  | 1271498 | - EUR |
| 25  | 1271497 | - EUR |

Lengths in [mm]

## 30 mm die width

## Die



900 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

38,2 kg/m



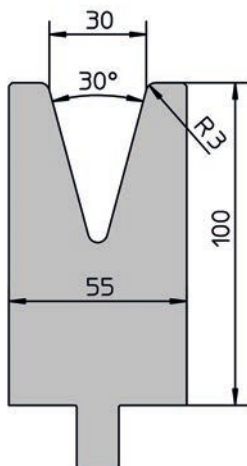
~60 HRC



23,0 mm



27,8mm (s=6mm)



Delivery time: ex warehouse

|                      |                   |              |
|----------------------|-------------------|--------------|
| <b>EV W30/30° R3</b> | <b>Die width:</b> | 30 mm        |
|                      | <b>Angle:</b>     | 30°          |
|                      | <b>Height:</b>    | 100 mm       |
|                      | <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0827787 | - EUR |
| 3050 | 0827786 | - EUR |
| 2550 | 0870698 | - EUR |
| 2050 | 0827785 | - EUR |
| 1250 | 0827784 | - EUR |
| 1050 | 1593984 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0827781 | - EUR |
| 1250 | 0827780 | - EUR |
| 1050 | 1593983 | - EUR |
| 550  | 1601486 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0827779 | - EUR |
|-----|---------|-------|

**Single**

|                |         |       |
|----------------|---------|-------|
| 500            | 0827778 | - EUR |
| 300            | 0827777 | - EUR |
| 200            | 0827776 | - EUR |
| 100            | 0827775 | - EUR |
| 50             | 0827774 | - EUR |
| 45             | 0827773 | - EUR |
| 40             | 0827772 | - EUR |
| 35             | 0827771 | - EUR |
| 30             | 0827770 | - EUR |
| 25             | 0827769 | - EUR |
| 25 with groove | 0869974 | - EUR |

Lengths in [mm]

Delivery time: 1 week

**EV027 86°**

|                   |              |
|-------------------|--------------|
| <b>Die width:</b> | 30 mm        |
| <b>Angle:</b>     | 86°          |
| <b>Height:</b>    | 100 mm       |
| <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0824438 | - EUR |
| 3050 | 0824437 | - EUR |
| 2550 | 0835273 | - EUR |
| 2050 | 0824436 | - EUR |
| 1250 | 0825855 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0824433 | - EUR |
| 1250 | 0825854 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0824432 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 500 | 0824431 | - EUR |
| 300 | 0824430 | - EUR |
| 200 | 0824429 | - EUR |
| 100 | 0824428 | - EUR |
| 50  | 0824427 | - EUR |
| 45  | 0824426 | - EUR |
| 40  | 0824425 | - EUR |
| 35  | 0824424 | - EUR |
| 30  | 0824423 | - EUR |
| 25  | 0824422 | - EUR |

Lengths in [mm]

Predecessor to 80°





## Die



900 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



34,8 kg/m



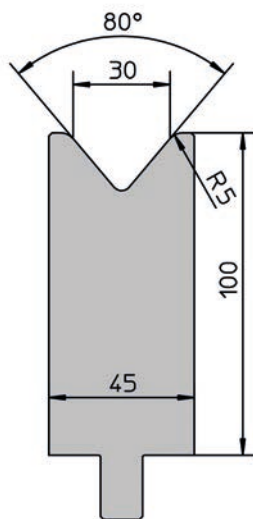
~60 HRC



23,7 mm



23,6mm (s=6mm)



Delivery time: ex warehouse

### EV W30/80°

Die width: 30 mm

Angle: 80°

Height: 100 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0866948 | - EUR |
| 3050 | 0862762 | - EUR |
| 2550 | 0870706 | - EUR |
| 2050 | 0870705 | - EUR |
| 1250 | 0870704 | - EUR |
| 1050 | 1601515 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870700 | - EUR |
| 1250 | 0870699 | - EUR |
| 1050 | 1601514 | - EUR |
| 550  | 1601513 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0862761 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 0862760 | - EUR |
| 300 | 0862759 | - EUR |
| 200 | 0862758 | - EUR |
| 100 | 0862751 | - EUR |
| 50  | 0862757 | - EUR |
| 45  | 0862756 | - EUR |
| 40  | 0862755 | - EUR |
| 35  | 0862754 | - EUR |
| 30  | 0862753 | - EUR |
| 25  | 0862752 | - EUR |

Lengths in [mm]

## Die



900 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



52,5 kg/m



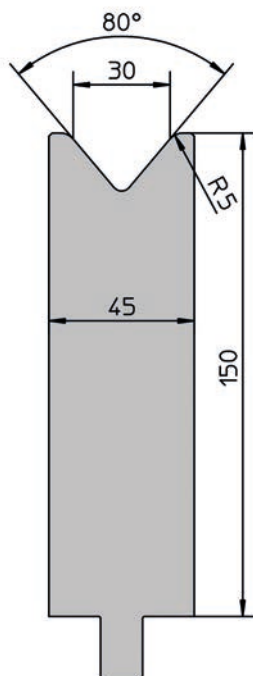
~60 HRC



23,7 mm



23,6mm (s=6mm)



Delivery time: ex warehouse

### EV/H W30/80°

Die width: 30 mm

Angle: 80°

Height: 150 mm

Mat. No.

Price

#### Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1212782 | - EUR |
| 3050 | 1230843 | - EUR |
| 2550 | 1271580 | - EUR |
| 2050 | 1271577 | - EUR |
| 1250 | 1271576 | - EUR |
| 1050 | 1601498 | - EUR |

#### Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1271560 | - EUR |
| 1250 | 1271557 | - EUR |
| 1050 | 1601497 | - EUR |
| 550  | 1601496 | - EUR |

#### Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1212781 | - EUR |
|-----|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 300 | 1212780 | - EUR |
| 200 | 1212769 | - EUR |
| 100 | 1212762 | - EUR |
| 50  | 1212768 | - EUR |
| 45  | 1212767 | - EUR |
| 40  | 1212766 | - EUR |
| 35  | 1212765 | - EUR |
| 30  | 1212764 | - EUR |
| 25  | 1212763 | - EUR |

Lengths in [mm]

## 40 mm die width

## Die



900 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

36,7 kg/m



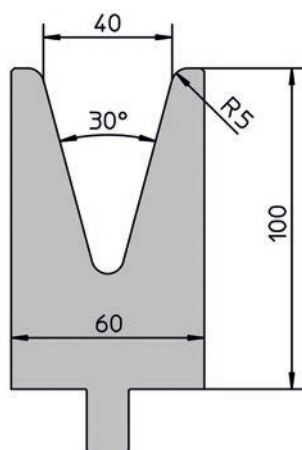
~60 HRC



31,5 mm



32mm (s=6mm)



Delivery time: ex warehouse

|                   |                   |              |
|-------------------|-------------------|--------------|
| <b>EV W40/30°</b> | <b>Die width:</b> | 40 mm        |
|                   | <b>Angle:</b>     | 30°          |
|                   | <b>Height:</b>    | 100 mm       |
|                   | <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 1372754 | - EUR |
| 3050 | 1244636 | - EUR |
| 2550 | 0864277 | - EUR |
| 2050 | 1408935 | - EUR |
| 1250 | 0994425 | - EUR |
| 1050 | 1601594 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 1461705 | - EUR |
| 1250 | 1461704 | - EUR |
| 1050 | 1601593 | - EUR |
| 550  | 1601592 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0864276 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 500 | 0864275 | - EUR |
| 300 | 0864274 | - EUR |
| 200 | 0864273 | - EUR |
| 100 | 0864266 | - EUR |
| 50  | 0864272 | - EUR |
| 45  | 0864271 | - EUR |
| 40  | 0864270 | - EUR |
| 35  | 0864269 | - EUR |
| 30  | 0864268 | - EUR |
| 25  | 0864267 | - EUR |

Lengths in [mm]

Delivery time: 1 week

**EV028 86°**

|                   |              |
|-------------------|--------------|
| <b>Die width:</b> | 40 mm        |
| <b>Angle:</b>     | 86°          |
| <b>Height:</b>    | 100 mm       |
| <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0827714 | - EUR |
| 3050 | 0827713 | - EUR |
| 2550 | 0835519 | - EUR |
| 2050 | 0827649 | - EUR |
| 1250 | 0827715 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0835515 | - EUR |
| 1250 | 0835514 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0827648 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 500 | 0827647 | - EUR |
| 300 | 0827646 | - EUR |
| 200 | 0827645 | - EUR |
| 100 | 0827644 | - EUR |
| 50  | 0827643 | - EUR |
| 45  | 0827642 | - EUR |
| 40  | 0827641 | - EUR |
| 35  | 0827640 | - EUR |
| 30  | 0827639 | - EUR |
| 25  | 0827638 | - EUR |

Lengths in [mm]

Predecessor to 80°



## Die



1200 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



40,9 kg/m



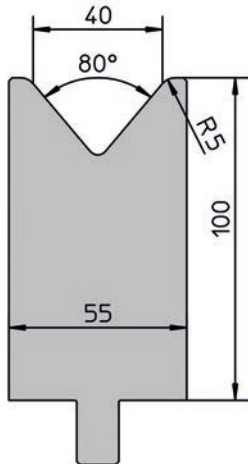
~60 HRC



29,8 mm



29mm (s=6mm)



Delivery time: ex warehouse

**EV W40/80°**

**Die width:** 40 mm

**Angle:** 80°

**Height:** 100 mm

**Mat. No.** **Price**

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0867596 | - EUR |
| 3050 | 0862703 | - EUR |
| 2550 | 0868663 | - EUR |
| 2050 | 0861605 | - EUR |
| 1250 | 0868581 | - EUR |
| 1050 | 1534873 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0870708 | - EUR |
| 1250 | 0870707 | - EUR |
| 1050 | 1601662 | - EUR |
| 550  | 1601661 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0861604 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 500 | 0861603 | - EUR |
| 300 | 0861602 | - EUR |
| 200 | 0861601 | - EUR |
| 100 | 0861594 | - EUR |
| 50  | 0861600 | - EUR |
| 45  | 0861599 | - EUR |
| 40  | 0861598 | - EUR |
| 35  | 0861597 | - EUR |
| 30  | 0861596 | - EUR |
| 25  | 0861595 | - EUR |

Lengths in [mm]

## Die



1200 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



62,5 kg/m



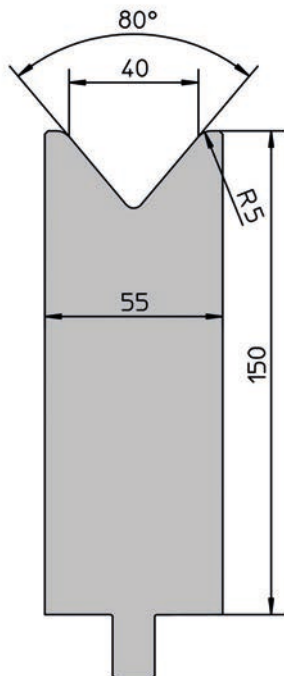
~60 HRC



29,8 mm



29mm (s=6mm)



Delivery time: ex warehouse

**EV/H W40/80°**

**Die width:** 40 mm

**Angle:** 80°

**Height:** 150 mm

**Mat. No.** **Price**

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 1271508 | - EUR |
| 3050 | 1230934 | - EUR |
| 2550 | 1271504 | - EUR |
| 2050 | 1271502 | - EUR |
| 1250 | 1271477 | - EUR |
| 1050 | 1603085 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 1271428 | - EUR |
| 1250 | 1271427 | - EUR |
| 1050 | 1603084 | - EUR |
| 550  | 1603083 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 1230931 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 300 | 1230909 | - EUR |
| 200 | 1230907 | - EUR |
| 100 | 1230898 | - EUR |
| 50  | 1230905 | - EUR |
| 45  | 1230904 | - EUR |
| 40  | 1230902 | - EUR |
| 35  | 1230901 | - EUR |
| 30  | 1230900 | - EUR |
| 25  | 1230899 | - EUR |

Lengths in [mm]

## 50 mm die width

## Die



1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

43,3 kg/m



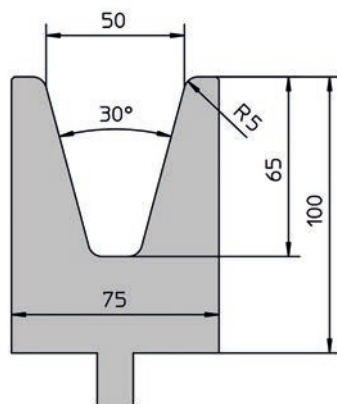
~60 HRC



38,0 mm



41,4mm (s=8mm)



Delivery time: ex warehouse

| EV W50/30° | Die width: | 50 mm  |
|------------|------------|--------|
|            | Angle:     | 30°    |
|            | Height:    | 100 mm |
| Mat. No.   | Price      |        |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1567856 | - EUR |
| 3050 | 0871432 | - EUR |
| 2550 | 1766454 | - EUR |
| 2050 | 1766452 | - EUR |
| 1250 | 1279646 | - EUR |
| 1050 | 1766449 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1766451 | - EUR |
| 1250 | 1766450 | - EUR |
| 1050 | 1766448 | - EUR |
| 550  | 1766447 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0871431 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0866298 | - EUR |
| 300 | 0871430 | - EUR |
| 200 | 0871429 | - EUR |
| 100 | 0866297 | - EUR |
| 50  | 0871428 | - EUR |
| 45  | 0871427 | - EUR |
| 40  | 0871426 | - EUR |
| 35  | 0871425 | - EUR |
| 30  | 0871424 | - EUR |
| 25  | 0871423 | - EUR |

Lengths in [mm]

## Die



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

46,5 kg/m



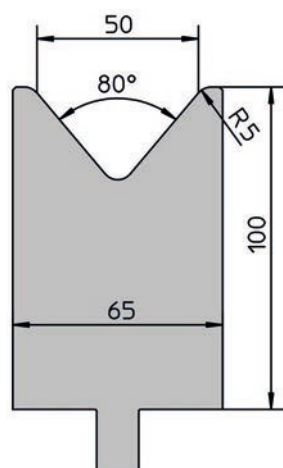
~60 HRC



34,5 mm



37mm (s=10mm)



Delivery time: ex warehouse

| EV W50/80° | Die width: | 50 mm  |
|------------|------------|--------|
|            | Angle:     | 80°    |
|            | Height:    | 100 mm |
| Mat. No.   | Price      |        |

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0866949 | - EUR |
| 3050 | 0862774 | - EUR |
| 2550 | 0870717 | - EUR |
| 2050 | 0863205 | - EUR |
| 1250 | 0870716 | - EUR |
| 1050 | 1603100 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0870713 | - EUR |
| 1250 | 0870712 | - EUR |
| 1050 | 1603089 | - EUR |
| 550  | 1603088 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0862773 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0862772 | - EUR |
| 300 | 0862771 | - EUR |
| 200 | 0862770 | - EUR |
| 100 | 0862763 | - EUR |
| 50  | 0862769 | - EUR |
| 45  | 0862768 | - EUR |
| 40  | 0862767 | - EUR |
| 35  | 0862766 | - EUR |
| 30  | 0862765 | - EUR |
| 25  | 0862764 | - EUR |

Lengths in [mm]



## Die



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

72,1 kg/m



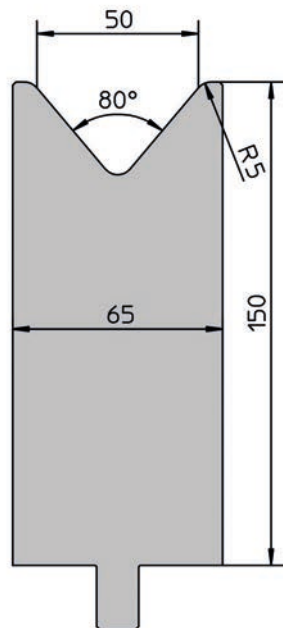
~60 HRC



34,5 mm



37mm (s=10mm)



Delivery time: ex warehouse

EV/H W50/80°

Die width: 50 mm

Angle: 80°

Height: 150 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1275889 | - EUR |
| 3050 | 1275887 | - EUR |
| 2550 | 1275884 | - EUR |
| 2050 | 1275879 | - EUR |
| 1250 | 1275877 | - EUR |
| 1050 | 1603105 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1275816 | - EUR |
| 1250 | 1275815 | - EUR |
| 1050 | 1603104 | - EUR |
| 550  | 1603103 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 1275812 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 300 | 1275787 | - EUR |
| 200 | 1275786 | - EUR |
| 100 | 1275765 | - EUR |
| 50  | 1275784 | - EUR |
| 45  | 1275783 | - EUR |
| 40  | 1275782 | - EUR |
| 35  | 1275781 | - EUR |
| 30  | 1275768 | - EUR |
| 25  | 1275766 | - EUR |

Lengths in [mm]

Delivery time: 1 week

EV029 86°

Die width: 50 mm

Angle: 86°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0824490 | - EUR |
| 3050 | 0824489 | - EUR |
| 2550 | 0835277 | - EUR |
| 2050 | 0824488 | - EUR |
| 1250 | 0825863 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0824485 | - EUR |
| 1250 | 0825862 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0824483 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 300 | 0824465 | - EUR |
| 200 | 0824464 | - EUR |
| 100 | 0824463 | - EUR |
| 50  | 0824462 | - EUR |
| 45  | 0824461 | - EUR |
| 40  | 0824460 | - EUR |
| 35  | 0824459 | - EUR |
| 30  | 0824458 | - EUR |
| 25  | 0824457 | - EUR |

Lengths in [mm]

Predecessor to 80°

## 60 - 120 mm die width

## Die



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

51,7 kg/m



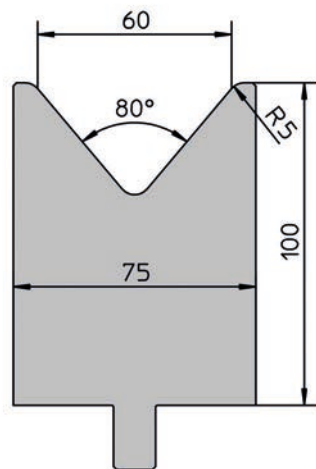
~60 HRC



42,0 mm



44mm (s=10mm)



Delivery time: ex warehouse

|                   |                   |              |
|-------------------|-------------------|--------------|
| <b>EV W60/80°</b> | <b>Die width:</b> | 60 mm        |
|                   | <b>Angle:</b>     | 80°          |
|                   | <b>Height:</b>    | 100 mm       |
|                   | <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0848821 | - EUR |
| 3050 | 0848820 | - EUR |
| 2550 | 0848819 | - EUR |
| 2050 | 0848818 | - EUR |
| 1250 | 0848817 | - EUR |
| 1050 | 0867614 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0848813 | - EUR |
| 1250 | 0848812 | - EUR |
| 1050 | 1603242 | - EUR |
| 550  | 1603241 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0848811 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 300 | 0848810 | - EUR |
| 200 | 0848809 | - EUR |
| 100 | 0848802 | - EUR |
| 50  | 0848808 | - EUR |
| 45  | 0848807 | - EUR |
| 40  | 0848806 | - EUR |
| 35  | 0848805 | - EUR |
| 30  | 0848804 | - EUR |
| 25  | 0848803 | - EUR |

Lengths in [mm]

## Die



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

56,3 kg/m



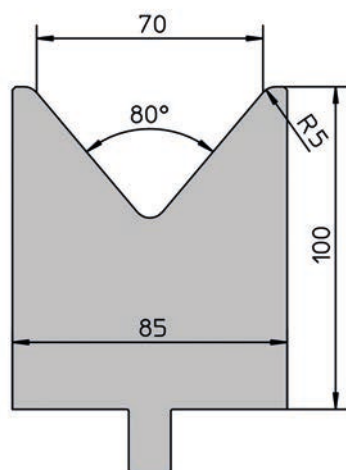
~60 HRC



48,0 mm



45,5mm (s=12mm)



Delivery time: ex warehouse

|                   |                   |              |
|-------------------|-------------------|--------------|
| <b>EV W70/80°</b> | <b>Die width:</b> | 70 mm        |
|                   | <b>Angle:</b>     | 80°          |
|                   | <b>Height:</b>    | 100 mm       |
|                   | <b>Mat. No.</b>   | <b>Price</b> |

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0848841 | - EUR |
| 3050 | 0848840 | - EUR |
| 2550 | 0848839 | - EUR |
| 2050 | 0848838 | - EUR |
| 1250 | 0848837 | - EUR |
| 1050 | 0867616 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0848833 | - EUR |
| 1250 | 0848832 | - EUR |
| 1050 | 1603303 | - EUR |
| 550  | 1603302 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0848831 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 300 | 0848830 | - EUR |
| 200 | 0848829 | - EUR |
| 100 | 0848822 | - EUR |
| 50  | 0848828 | - EUR |
| 45  | 0848827 | - EUR |
| 40  | 0848826 | - EUR |
| 35  | 0848825 | - EUR |
| 30  | 0848824 | - EUR |
| 25  | 0848823 | - EUR |

Lengths in [mm]

Dies W60

Dies W70





## Die



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

64,5 kg/m



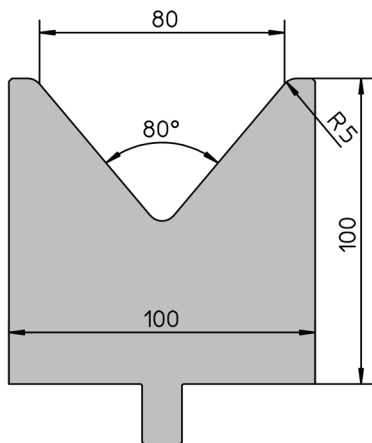
~60 HRC



54,0 mm



53,5mm (s=12mm)



Delivery time: ex warehouse

## EV W80/80°

Die width: 80 mm

Angle: 80°

Height: 100 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0848862 | - EUR |
| 3050 | 0848861 | - EUR |
| 2550 | 0848859 | - EUR |
| 2050 | 0848858 | - EUR |
| 1250 | 0848857 | - EUR |
| 1050 | 0867617 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0848853 | - EUR |
| 1250 | 0848852 | - EUR |
| 1050 | 1603307 | - EUR |
| 550  | 1603306 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0848851 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 300 | 0848850 | - EUR |
| 200 | 0848849 | - EUR |
| 100 | 0848842 | - EUR |
| 50  | 0848848 | - EUR |
| 45  | 0848847 | - EUR |
| 40  | 0848846 | - EUR |
| 35  | 0848845 | - EUR |
| 30  | 0848844 | - EUR |
| 25  | 0848843 | - EUR |

Lengths in [mm]

## Die



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

84,7 kg/m



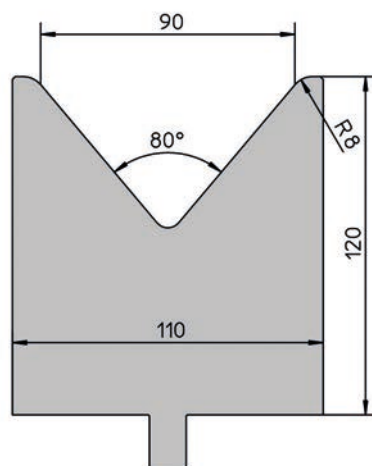
~60 HRC



65,0 mm



60,5mm (s=15mm)



Delivery time: ex warehouse

## EV W90/80°

Die width: 90 mm

Angle: 80°

Height: 120 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0848881 | - EUR |
| 3050 | 0848880 | - EUR |
| 2550 | 0848879 | - EUR |
| 2050 | 0848878 | - EUR |
| 1250 | 0848877 | - EUR |
| 1050 | 1603310 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0848873 | - EUR |
| 1250 | 0848872 | - EUR |
| 1050 | 1603309 | - EUR |
| 550  | 1603308 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0848871 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 200 | 0848870 | - EUR |
| 100 | 0848863 | - EUR |
| 50  | 0848869 | - EUR |
| 45  | 0848868 | - EUR |
| 40  | 0848867 | - EUR |
| 35  | 0848866 | - EUR |
| 30  | 0848865 | - EUR |
| 25  | 0848864 | - EUR |

Lengths in [mm]

## Die



1500 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



89,4 kg/m



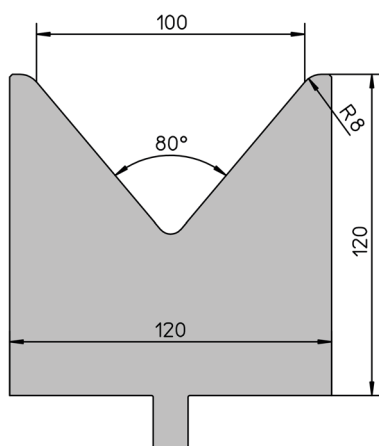
~60 HRC



68,0 mm



68,5mm (s=15mm)



Delivery time: ex warehouse

**EV W100/80°**

**Die width:** 100 mm

**Angle:** 80°

**Height:** 120 mm

**Mat. No.** **Price**

**Var. B**

|      |         |       |
|------|---------|-------|
| 4050 | 0848900 | - EUR |
| 3050 | 0848899 | - EUR |
| 2550 | 0848898 | - EUR |
| 2050 | 0848897 | - EUR |
| 1250 | 0848896 | - EUR |
| 1050 | 1601449 | - EUR |

**Var. A**

|      |         |       |
|------|---------|-------|
| 2050 | 0848892 | - EUR |
| 1250 | 0848891 | - EUR |
| 1050 | 1601448 | - EUR |
| 550  | 1601447 | - EUR |

**Block 250**

|     |         |       |
|-----|---------|-------|
| 250 | 0848890 | - EUR |
|-----|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 200 | 0848889 | - EUR |
| 100 | 0848882 | - EUR |
| 50  | 0848888 | - EUR |
| 45  | 0848887 | - EUR |
| 40  | 0848886 | - EUR |
| 35  | 0848885 | - EUR |
| 30  | 0848884 | - EUR |
| 25  | 0848883 | - EUR |

Lengths in [mm]

## Die



1600 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



92,4 kg/m



~60 HRC



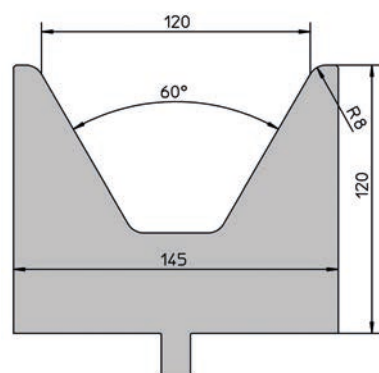
82,0 mm



79,5mm (s=15mm)



The block length is formed using the longest part pieces of this tool type.



Delivery time: ex warehouse

**EV W120/60°**

**Die width:** 120 mm

**Angle:** 60°

**Height:** 120 mm

**Mat. No.** **Price**

**Block 2000**

|      |         |       |
|------|---------|-------|
| 2000 | 1465314 | - EUR |
|------|---------|-------|

**Block 1000**

|      |         |       |
|------|---------|-------|
| 1000 | 1465313 | - EUR |
|------|---------|-------|

**Single**

|     |         |       |
|-----|---------|-------|
| 200 | 0867228 | - EUR |
| 100 | 0867227 | - EUR |

Lengths in [mm]



## Adapter

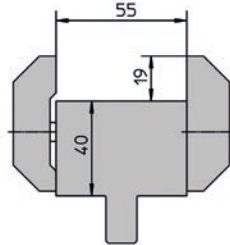
### Adapter



1300 kN/m

C 50  
700 - 850 N/mm<sup>2</sup>

32,9 kg/m



Delivery time: 4 weeks / on request

#### TRUMPF-EHT

Angle: -

Height: 40 mm

Mat. No. Price

#### Single

500 1282380

- EUR

Lengths in [mm]

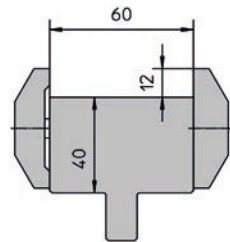
### Adapter



1300 kN/m

C 50  
700 - 850 N/mm<sup>2</sup>

30,0 kg/m



Delivery time: ex warehouse

#### Amada with clamp

Angle: -

Height: 40 mm

Mat. No. Price

#### Single

500 1464474

- EUR

Lengths in [mm]

### Adapter



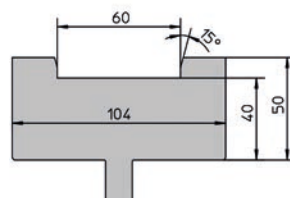
1300 kN/m

C 45  
650 - 800 N/mm<sup>2</sup>

38,0 kg/m



1x1250mm 826515  
 1x2050mm 831441  
 1x2550mm 836719  
 1x3050mm 831442  
 1x4050mm 836966



Delivery time: ex warehouse

#### Amada without clamp

Angle: -

Height: 40 mm

Mat. No. Price

#### Single

500 0831443

- EUR

Lengths in [mm]

Adapter



1500 kN/m



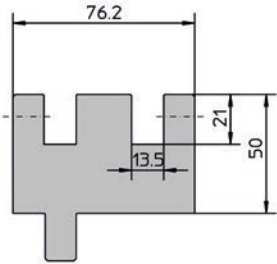
C 45  
650 - 800 N/mm²



27,1 kg/m



See Technical section



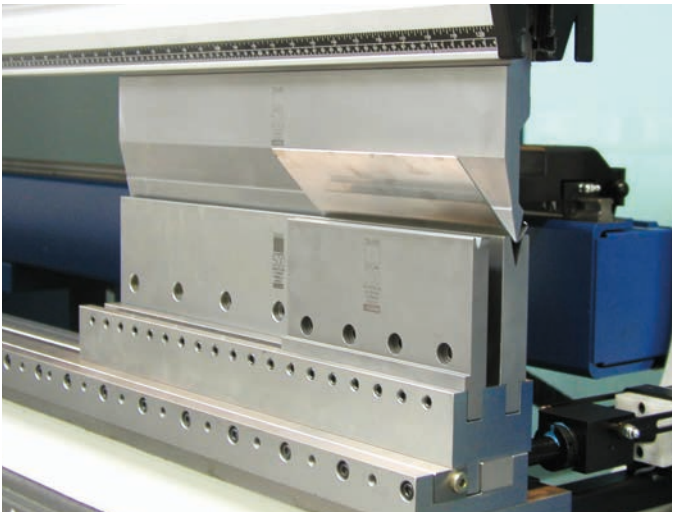
Delivery time: ex warehouse

Adapter TRUMPF DV

Angle: -  
Height: 50 mm  
Mat. No. Price

| Single |         |       |
|--------|---------|-------|
| 500    | 0853308 | - EUR |
| 100    | 1410970 | - EUR |
| 50     | 1410988 | - EUR |

Lengths in [mm]



Adapter



1000 kN/m



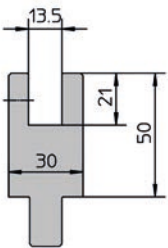
C 45  
650 - 800 N/mm²



11,6 kg/m



See Technical section



Delivery time: ex warehouse

TRUMPF EV

Angle: -  
Height: 50 mm  
Mat. No. Price

| Single |         |       |
|--------|---------|-------|
| 500    | 1210798 | - EUR |
| 100    | 1210779 | - EUR |
| 50     | 1210795 | - EUR |

Lengths in [mm]



## VLM – Adjustable die

### Application

The VLM die from TRUMPF helps with convenient bending of various sheet thicknesses in a single set-up. The die widths can be adjusted as per the request of a customer quickly and easily using setting bars.

### Area of application

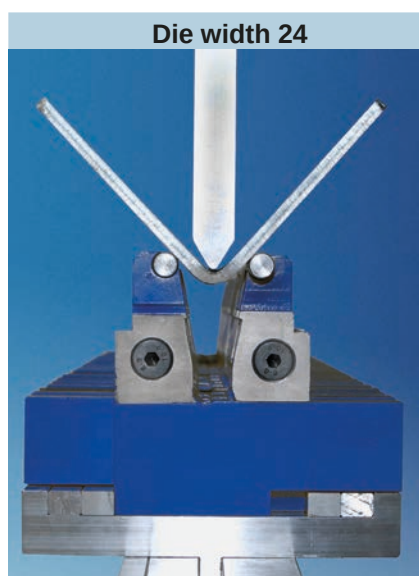
- VLMBN: 3 – 15 mm sheet thickness (max. 1250 kN/m)
- VLMDN: 5 – 20 mm sheet thickness (max. 2000 kN/m)

### Advantages

- Wide die width range from W24 – W182 possible. Continuous die replacement is thus not required.
- Reduced-imprint bending of rotating and hardened track rollers (minimum wear)
- Lower press forces required
- Production of various bending radii
- Decrease in the down times by up to 30% through the fast and easy replacement of the setting bars.
- Minimum maintenance costs:
  - Replaceable track rollers
  - Replaceable protective foil protecting the die parts against contamination.
- Low collision contour compared to the conventional adjustable dies.

### Restrictions

- Bending aid up to max. 150 mm height possible







Die VLMBN (adjustable W24 – W124)



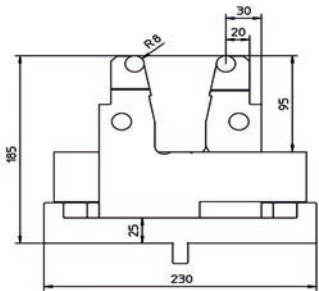
800 - 1250 kN/m



~60 HRC



s=3 to 15 mm, length 1000 mm available upon request. The tool is comprised of holder, trips, track rollers and die jaws.



Delivery time: 2 weeks

VLMBN

Angle: -  
Height: 185 mm  
Mat. No. Price

Single

|     |         |       |
|-----|---------|-------|
| 500 | 1392023 | - EUR |
| 250 | 1392021 | - EUR |

Lengths in [mm]

Die VLMDN (adjustable W62 – W182)



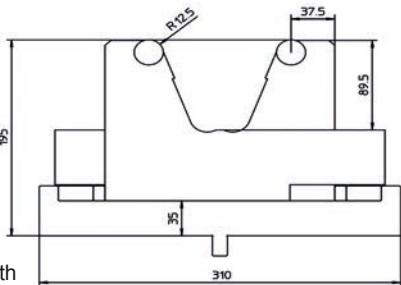
1500 - 2000 kN/m



~60 HRC



s=5 to 20 mm, length 1000 mm available upon request. The tool is comprised of holder, strips, track rollers and die jaws.



Delivery time: 2 weeks

VLMDN

Angle: -  
Height: 195 mm  
Mat. No. Price

Single

|     |         |       |
|-----|---------|-------|
| 500 | 1392026 | - EUR |
| 250 | 1392025 | - EUR |

Lengths in [mm]

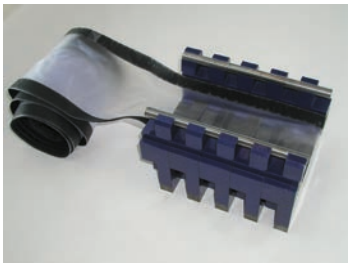
Designation

Illustration

Mat. No.

Price

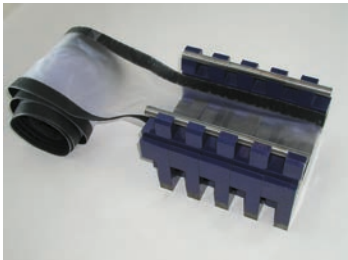
Protective foil set 1 VLMBN 150mm



1544581

- EUR

Protective foil set 2 VLMDN 190mm



1544582

- EUR



Comprising 25 meters Velcro strap and 5 meters protective foil

# RollBend

## Application

During the bending method, the support areas of the side plates evenly press up onto the sheet. Thus, there is almost no relative movement between the tool and the workpiece. This has different advantages over traditional bending methods.

## Advantages

- Recesses and holes can be edged, even near the bending foil, without deformation
- Extremely short sides can be edged
- Ideal for diagonal or tapered parts
- Variable material thickness
- No foil damage on foil-coated sheets

| RollBend        |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| RB 200          | RB 300          | RB 400          | RB 500          | RB 600          |
| s= 0,5 - 2,0 mm | s= 1,0 - 3,0 mm | s= 1,0 - 4,0 mm | s= 2,0 - 5,0 mm | s= 3,0 - 6,0 mm |
|                 |                 |                 |                 |                 |

| RollBend         |
|------------------|
| RB 1250          |
| s= 3,0 - 12,5 mm |
|                  |

**i** For a detailed description of RollBend see the chapter RollBend in the technical section.

## RollBend



1000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

20,1 kg/m



~60 HRC



6,1 mm



12,1mm (s=2mm)

RB 200 + EV W8/84°;  
Lengths 25, 30, 35, 40  
und 45 available upon  
request.

Delivery time: ex warehouse

### RB 200

**Die width:** 8 mm  
**Angle:** -  
**Height:** 100 mm  
**Mat. No.** **Price**

#### Block 2000

|      |         |       |
|------|---------|-------|
| 2000 | 1785940 | - EUR |
|------|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1785939 | - EUR |
| 300 | 1785938 | - EUR |
| 200 | 1785937 | - EUR |
| 100 | 1781483 | - EUR |
| 50  | 1785936 | - EUR |

Lengths in [mm]

## RollBend



1300 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

28,8 kg/m



~60 HRC



8,5 mm



17,7mm (s=3mm)

RB 300 + EV W12/84°;  
Lengths 25, 30, 35, 40  
und 45 available upon  
request.

Delivery time: ex warehouse

### RB 300

**Die width:** 12 mm  
**Angle:** -  
**Height:** 100 mm  
**Mat. No.** **Price**

#### Block 2000

|      |         |       |
|------|---------|-------|
| 2000 | 1786044 | - EUR |
|------|---------|-------|

#### Single

|     |         |       |
|-----|---------|-------|
| 500 | 1786043 | - EUR |
| 300 | 1786042 | - EUR |
| 200 | 1786041 | - EUR |
| 100 | 1780175 | - EUR |
| 50  | 1786030 | - EUR |

Lengths in [mm]

## RollBend



1500 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



31,0 kg/m



~60 HRC



13,2 mm



22,7mm (s=4mm)



RB 400 + EV W16/84°;  
Lengths 25, 30, 35, 40  
und 45 available upon  
request.



Delivery time: ex warehouse

### RB 400

**Die width:** 16 mm  
**Angle:** -  
**Height:** 100 mm  
**Mat. No.** **Price**

#### Block 2000

2000 1840571 - EUR

#### Single

500 1840570 - EUR

300 1840569 - EUR

200 1840568 - EUR

100 1840567 - EUR

50 1840566 - EUR

Lengths in [mm]

## RollBend



1700 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



42,4 kg/m



~60 HRC



18,3 mm



30,4mm (s=5mm)



RB 500 + EV W24/80°;  
Lengths 25, 30, 35, 40  
und 45 available upon  
request.



Delivery time: ex warehouse

### RB 500

**Die width:** 24 mm  
**Angle:** -  
**Height:** 100 mm  
**Mat. No.** **Price**

#### Block 2000

2000 1786115 - EUR

#### Single

500 1786114 - EUR

300 1786113 - EUR

200 1786112 - EUR

100 1769612 - EUR

50 1786111 - EUR

Lengths in [mm]



## RollBend



2000 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

59,0 kg/m



~60 HRC



23,5 mm



42,5mm (s=6mm)

RB 600 + EV W30/80°; Lengths  
25, 30, 35, 40 und 45 available  
upon request.

Delivery time: ex warehouse

### RB 600

Die width: 30 mm

Angle: -

Height: 100 mm

Mat. No. Price

#### Block 2000

2000 1786171 - EUR

#### Single

500 1786160 - EUR

300 1786159 - EUR

200 1786158 - EUR

100 1781557 - EUR

50 1786157 - EUR

Lengths in [mm]

## RollBend



2500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

77,0 kg/m



~60 HRC

RB 1250 + EV  
W40-80; Lengths  
300, 500 available  
upon request.

Delivery time: ex warehouse

### RB 1250

Angle: -

Height: 100 mm

Mat. No. Price

#### Single

200 1968591 - EUR

100 1968540 - EUR

Lengths in [mm]

## Designation

## Illustration

## Mat. No.

## Price

Lubricating grease GLEITMO 805 100 g tube



1851466

- EUR

Protective foil set RB1250, w=100  
Comprising 25 meters Velcro strap and 5 meters  
protective foil.

1969373

- EUR

## SBW - Swivel bending tool

### Application

The workpiece is placed on the swivel unit and positioned through the backgauge as usual. The swivel bending punch clamps the workpiece between the support surfaces. As soon as the press beam moves downwards, the swivel level bends the flange around the tip of the swivel bending punch.

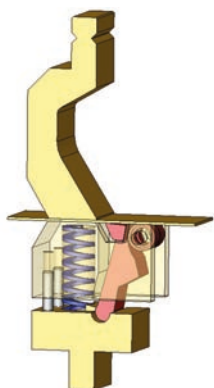
### Area of application

- From 0.5 – 1.5 mm sheet thickness
- Can be used from 75° to 140°
- Min. side length 7 – 10 mm
- Bending length: 10 – 50 mm

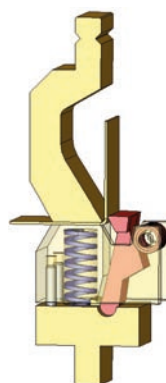
### Advantages

- Quick edging of small flanges
- No time-consuming tracking of the high swiveling side
- No reverse bend, as manual tracking unnecessary
- Possibility of rotating 180° for installation
- Can be combined with the conventional die bending tools
- **Various edge lengths due to exchangeable tool tips with ariable widths**

A blank is clamped between the punch and the die



The swivel lever bends the flange upwards



### Ordering examples (for a complete SBW tool)

1x swivel unit 1381470

1x swivel lever (select according to requirements)

1x punch OW/K – SBW H120 L=50 1386073

2x spacer 23.5 mm 1402081 (not necessary with CNC I axis)





## Punch



500 kN/m



34,1 kg/m



~60 HRC



10 mm - 50 mm



Tool can be lengthened with MF/S adapter (for station operation). Other lengths for OW/K – SBT available upon request.



Delivery time: 1 week

### Punch OW/K-SBW

Radius: R1,0 mm

Angle: 59.9°

Height: 120 mm

Mat. No. Price

#### Single

|    |         |       |
|----|---------|-------|
| 50 | 1386073 | - EUR |
|----|---------|-------|

Lengths in [mm]

## SBW



500 kN/m



98,0 kg/m



~60 HRC



Delivery time: 1 week

### Swivel unit

Height: 110 mm

Mat. No. Price

#### Single

|    |         |       |
|----|---------|-------|
| 50 | 1381470 | - EUR |
|----|---------|-------|

Lengths in [mm]

## Upper part swivel lever



500 kN/m



0,0 kg/m



~60 HRC



for 0.5 – 1.0 mm sheet



Delivery time: 1 week

Radius:Die width:

### Swivel lever W4

Mat. No. Price

#### Single

|    |         |       |
|----|---------|-------|
| 50 | 1386704 | - EUR |
|----|---------|-------|

|    |         |       |
|----|---------|-------|
| 20 | 1386706 | - EUR |
|----|---------|-------|

|    |         |       |
|----|---------|-------|
| 10 | 1386707 | - EUR |
|----|---------|-------|

Lengths in [mm]

Upper part swivel lever



500 kN/m



0,0 kg/m



~60 HRC



for 1.5 mm sheet



Delivery time: 1 week

Radius:Die width:

Swivel lever W5

|        | Mat. No. | Price |
|--------|----------|-------|
| Single |          |       |
| 50     | 1386684  | - EUR |
| 40     | 1422499  | - EUR |
| 25     | 1422498  | - EUR |
| 20     | 1386685  | - EUR |
| 10     | 1386687  | - EUR |

Lengths in [mm]

| Designation   | Illustration | Mat. No. | Price |
|---------------|--------------|----------|-------|
| Spacer 23,5mm |              | 1402081  | - EUR |

## Z bending / Inserts

### Technical information Z bending

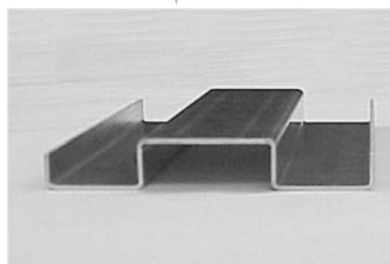
- With a set, you can achieve either 4, 6, 8 or 10 mm joggings with 90° to 90° (coining process) or achieve different joggings and angles > 90° in the air bending process.
- Modified inserts, e.g. ZE5/90° available upon request
- Tools are suitable for station operation (with EV/70)
- Inexpensive solution with the usage of several inserts (Z inserts, form inserts,...)

### Maximum sheet thicknesses with Z bending

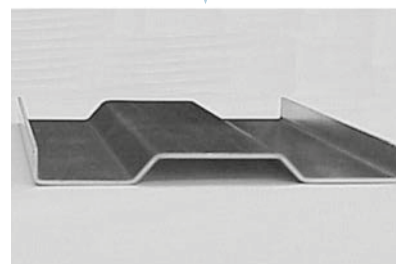
| Z-dimension (mm) | Coining (mm) | Air bending (mm) |
|------------------|--------------|------------------|
| 4                | 1            | 1,5              |
| 6                | 1,5          | 2                |
| 8                | 2            | (2,5)*           |
| 10               | (2,5)*       | (3)*             |

\* Observe maximum bending force on inserts

Coining  
(90° zu 90°)



Air bending





## Punch



1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

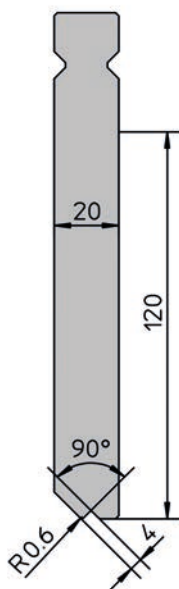
23,8 kg/m



~60 HRC



10 mm - 100 mm



Delivery time: ex warehouse

|           |           |        |
|-----------|-----------|--------|
| OWZ/K 90° | Joggling: | Z4     |
|           | Angle:    | 90°    |
|           | Height:   | 120 mm |
|           | Mat. No.  | Price  |
| Var. B    |           |        |
| 4050      | 0841685   | - EUR  |
| 3050      | 0841684   | - EUR  |
| 2550      | 0841683   | - EUR  |
| 2050      | 0832862   | - EUR  |
| 1250      | 0841682   | - EUR  |
| 1050      | 1606294   | - EUR  |
| Var. A    |           |        |
| 2050      | 0841689   | - EUR  |
| 1250      | 0841690   | - EUR  |
| 1050      | 1606293   | - EUR  |
| 550       | 1606291   | - EUR  |
| Block 250 |           |        |
| 250       | 0832861   | - EUR  |
| Single    |           |        |
| 500       | 0830264   | - EUR  |
| 300       | 0832851   | - EUR  |
| 200       | 0832850   | - EUR  |
| 100       | 0832859   | - EUR  |
| 50        | 0832858   | - EUR  |
| 45        | 0832857   | - EUR  |
| 40        | 0832856   | - EUR  |
| 35        | 0832855   | - EUR  |
| 30        | 0832854   | - EUR  |
| 25        | 0832853   | - EUR  |

Lengths in [mm]

## Die



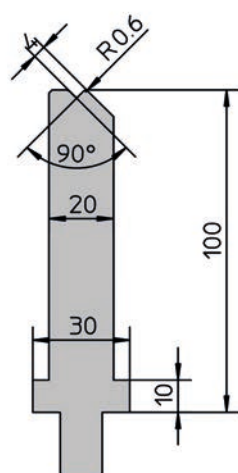
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

18,2 kg/m



~60 HRC



Delivery time: ex warehouse

|           |           |        |
|-----------|-----------|--------|
| EVZ 90°   | Joggling: | Z4     |
|           | Angle:    | 90°    |
|           | Height:   | 100 mm |
|           | Mat. No.  | Price  |
| Var. B    |           |        |
| 4050      | 0841673   | - EUR  |
| 3050      | 0841672   | - EUR  |
| 2550      | 0841674   | - EUR  |
| 2050      | 0832935   | - EUR  |
| 1250      | 0841245   | - EUR  |
| 1050      | 1606173   | - EUR  |
| Var. A    |           |        |
| 2050      | 0841668   | - EUR  |
| 1250      | 0841667   | - EUR  |
| 1050      | 1606172   | - EUR  |
| 550       | 1606171   | - EUR  |
| Block 250 |           |        |
| 250       | 0832934   | - EUR  |
| Single    |           |        |
| 500       | 0830265   | - EUR  |
| 300       | 0832932   | - EUR  |
| 200       | 0832931   | - EUR  |
| 100       | 0832930   | - EUR  |
| 50        | 0832929   | - EUR  |
| 45        | 0832928   | - EUR  |
| 40        | 0832927   | - EUR  |
| 35        | 0832926   | - EUR  |
| 30        | 0832925   | - EUR  |
| 25        | 0832924   | - EUR  |

Lengths in [mm]



## Punch



1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

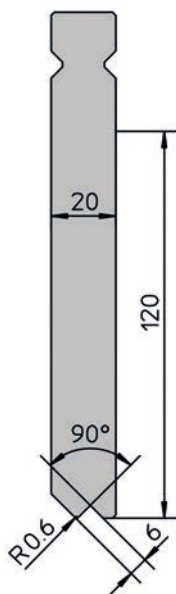
24,0 kg/m



~60 HRC



10 mm - 100 mm



Delivery time: ex warehouse

|                  |                  |              |
|------------------|------------------|--------------|
| <b>OWZ/K 90°</b> | <b>Joggling:</b> | Z6           |
|                  | <b>Angle:</b>    | 90°          |
|                  | <b>Height:</b>   | 120 mm       |
|                  | <b>Mat. No.</b>  | <b>Price</b> |
| <b>Var. B</b>    |                  |              |
| 4050             | 0841692          | - EUR        |
| 3050             | 0841691          | - EUR        |
| 2550             | 0841693          | - EUR        |
| 2050             | 0832882          | - EUR        |
| 1250             | 0839545          | - EUR        |
| 1050             | 1606279          | - EUR        |
| <b>Var. A</b>    |                  |              |
| 2050             | 0841695          | - EUR        |
| 1250             | 0841694          | - EUR        |
| 1050             | 1606278          | - EUR        |
| 550              | 1606277          | - EUR        |
| <b>Block 250</b> |                  |              |
| 250              | 0832881          | - EUR        |
| <b>Single</b>    |                  |              |
| 500              | 0832872          | - EUR        |
| 300              | 0832871          | - EUR        |
| 200              | 0832870          | - EUR        |
| 100              | 0832879          | - EUR        |
| 50               | 0832878          | - EUR        |
| 45               | 0832877          | - EUR        |
| 40               | 0832876          | - EUR        |
| 35               | 0832875          | - EUR        |
| 30               | 0832874          | - EUR        |
| 25               | 0832873          | - EUR        |

Lengths in [mm]

## Die



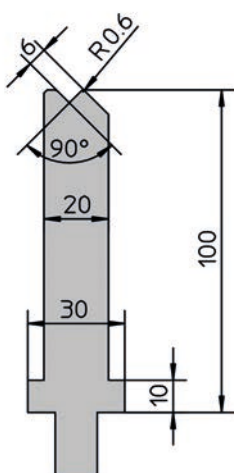
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

18,2 kg/m



~60 HRC



Delivery time: ex warehouse

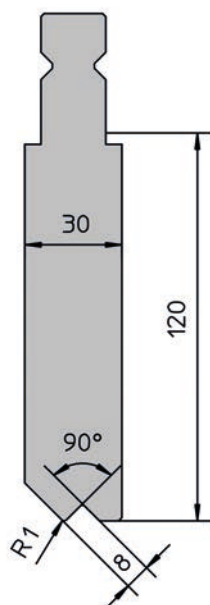
|                  |                  |              |
|------------------|------------------|--------------|
| <b>EVZ 90°</b>   | <b>Joggling:</b> | Z6           |
|                  | <b>Angle:</b>    | 90°          |
|                  | <b>Height:</b>   | 100 mm       |
|                  | <b>Mat. No.</b>  | <b>Price</b> |
| <b>Var. B</b>    |                  |              |
| 4050             | 0841710          | - EUR        |
| 3050             | 0841709          | - EUR        |
| 2550             | 0841708          | - EUR        |
| 2050             | 0832936          | - EUR        |
| 1250             | 0839546          | - EUR        |
| 1050             | 1606210          | - EUR        |
| <b>Var. A</b>    |                  |              |
| 2050             | 0841714          | - EUR        |
| 1250             | 0841715          | - EUR        |
| 1050             | 1606179          | - EUR        |
| 550              | 1606178          | - EUR        |
| <b>Block 250</b> |                  |              |
| 250              | 0832937          | - EUR        |
| <b>Single</b>    |                  |              |
| 500              | 0832947          | - EUR        |
| 300              | 0832946          | - EUR        |
| 200              | 0832945          | - EUR        |
| 100              | 0832944          | - EUR        |
| 50               | 0832943          | - EUR        |
| 45               | 0832942          | - EUR        |
| 40               | 0832941          | - EUR        |
| 35               | 0832940          | - EUR        |
| 30               | 0832939          | - EUR        |
| 25               | 0832938          | - EUR        |

Lengths in [mm]



## Punch

|  |                                             |
|--|---------------------------------------------|
|  | 1200 kN/m                                   |
|  | 42 Cr Mo 4<br>1080 - 1180 N/mm <sup>2</sup> |
|  | 32,7 kg/m                                   |
|  | ~60 HRC                                     |
|  | 10 mm - 100 mm                              |



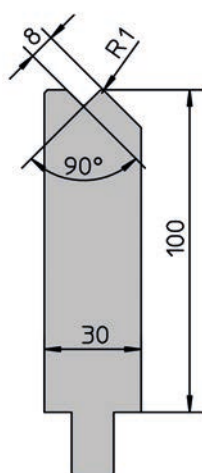
Delivery time: ex warehouse

|                  |                  |              |
|------------------|------------------|--------------|
| <b>OWZ/K 90°</b> | <b>Joggling:</b> | Z8           |
|                  | <b>Angle:</b>    | 90°          |
|                  | <b>Height:</b>   | 120 mm       |
|                  | <b>Mat. No.</b>  | <b>Price</b> |
| <b>Var. B</b>    |                  |              |
| 4050             | 0841744          | - EUR        |
| 3050             | 0841743          | - EUR        |
| 2550             | 0841742          | - EUR        |
| 2050             | 0841741          | - EUR        |
| 1250             | 0841740          | - EUR        |
| 1050             | 1606335          | - EUR        |
| <b>Var. A</b>    |                  |              |
| 2050             | 0841736          | - EUR        |
| 1250             | 0841735          | - EUR        |
| 1050             | 1606334          | - EUR        |
| 550              | 1606333          | - EUR        |
| <b>Block 250</b> |                  |              |
| 250              | 0841727          | - EUR        |
| <b>Single</b>    |                  |              |
| 500              | 0841719          | - EUR        |
| 300              | 0841718          | - EUR        |
| 200              | 0841717          | - EUR        |
| 100              | 0841728          | - EUR        |
| 50               | 0841729          | - EUR        |
| 45               | 0841730          | - EUR        |
| 40               | 0841731          | - EUR        |
| 35               | 0841732          | - EUR        |
| 30               | 0841733          | - EUR        |
| 25               | 0841734          | - EUR        |

Lengths in [mm]

## Die

|  |                                             |
|--|---------------------------------------------|
|  | 1200 kN/m                                   |
|  | 42 Cr Mo 4<br>1080 - 1180 N/mm <sup>2</sup> |
|  | 24,8 kg/m                                   |
|  | ~60 HRC                                     |



Delivery time: ex warehouse

|                  |                  |              |
|------------------|------------------|--------------|
| <b>EVZ 90°</b>   | <b>Joggling:</b> | Z8           |
|                  | <b>Angle:</b>    | 90°          |
|                  | <b>Height:</b>   | 100 mm       |
|                  | <b>Mat. No.</b>  | <b>Price</b> |
| <b>Var. B</b>    |                  |              |
| 4050             | 0841765          | - EUR        |
| 3050             | 0841764          | - EUR        |
| 2550             | 0841763          | - EUR        |
| 2050             | 0841762          | - EUR        |
| 1250             | 0841761          | - EUR        |
| 1050             | 1606236          | - EUR        |
| <b>Var. A</b>    |                  |              |
| 2050             | 0841757          | - EUR        |
| 1250             | 0841756          | - EUR        |
| 1050             | 1606235          | - EUR        |
| 550              | 1606234          | - EUR        |
| <b>Block 250</b> |                  |              |
| 250              | 0841755          | - EUR        |
| <b>Single</b>    |                  |              |
| 500              | 0841748          | - EUR        |
| 300              | 0841747          | - EUR        |
| 200              | 0841746          | - EUR        |
| 100              | 0841745          | - EUR        |
| 50               | 0841749          | - EUR        |
| 45               | 0841750          | - EUR        |
| 40               | 0841751          | - EUR        |
| 35               | 0841752          | - EUR        |
| 30               | 0841753          | - EUR        |
| 25               | 0841754          | - EUR        |

Lengths in [mm]



## Punch



1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

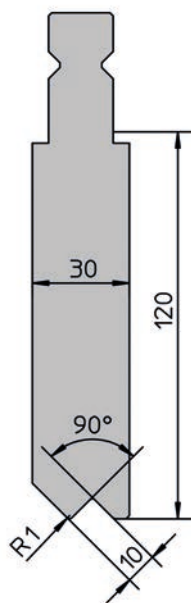
32,7 kg/m



~60 HRC



10 mm - 100 mm



Delivery time: ex warehouse

|           |           |        |
|-----------|-----------|--------|
| OWZ/K 90° | Joggling: | Z10    |
|           | Angle:    | 90°    |
|           | Height:   | 120 mm |
|           | Mat. No.  | Price  |
| Var. B    |           |        |
| 4050      | 0841769   | - EUR  |
| 3050      | 0841768   | - EUR  |
| 2550      | 0841767   | - EUR  |
| 2050      | 0832902   | - EUR  |
| 1250      | 0841766   | - EUR  |
| 1050      | 1606374   | - EUR  |
| Var. A    |           |        |
| 2050      | 0841773   | - EUR  |
| 1250      | 0841774   | - EUR  |
| 1050      | 1606373   | - EUR  |
| 550       | 1606372   | - EUR  |
| Block 250 |           |        |
| 250       | 0832901   | - EUR  |
| Single    |           |        |
| 500       | 0832892   | - EUR  |
| 300       | 0832891   | - EUR  |
| 200       | 0832890   | - EUR  |
| 100       | 0832899   | - EUR  |
| 50        | 0832898   | - EUR  |
| 45        | 0832897   | - EUR  |
| 40        | 0832896   | - EUR  |
| 35        | 0832895   | - EUR  |
| 30        | 0832894   | - EUR  |
| 25        | 0832893   | - EUR  |

Lengths in [mm]

## Die



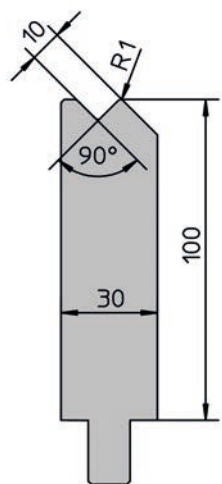
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

24,8 kg/m



~60 HRC



Delivery time: ex warehouse

|           |           |        |
|-----------|-----------|--------|
| EVZ 90°   | Joggling: | Z10    |
|           | Angle:    | 90°    |
|           | Height:   | 100 mm |
|           | Mat. No.  | Price  |
| Var. B    |           |        |
| 4050      | 0841778   | - EUR  |
| 3050      | 0841777   | - EUR  |
| 2550      | 0841776   | - EUR  |
| 2050      | 0832959   | - EUR  |
| 1250      | 0841775   | - EUR  |
| 1050      | 1606282   | - EUR  |
| Var. A    |           |        |
| 2050      | 0841781   | - EUR  |
| 1250      | 0841783   | - EUR  |
| 1050      | 1606281   | - EUR  |
| 550       | 1606280   | - EUR  |
| Block 250 |           |        |
| 250       | 0832958   | - EUR  |
| Single    |           |        |
| 500       | 0832957   | - EUR  |
| 300       | 0832956   | - EUR  |
| 200       | 0832955   | - EUR  |
| 100       | 0832954   | - EUR  |
| 50        | 0832953   | - EUR  |
| 45        | 0832952   | - EUR  |
| 40        | 0832951   | - EUR  |
| 35        | 0832950   | - EUR  |
| 30        | 0832949   | - EUR  |
| 25        | 0832948   | - EUR  |

Lengths in [mm]





## Tool adapter for Z insert



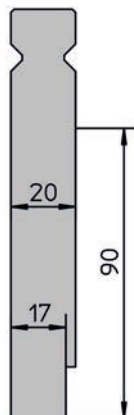
1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

19,3 kg/m



10 mm - 100 mm



Delivery time: ex warehouse

| OW/K 90          | Radius:  | -     |
|------------------|----------|-------|
|                  | Angle:   | -     |
|                  | Height:  | 90 mm |
|                  | Mat. No. | Price |
| <b>Var. B</b>    |          |       |
| 4050             | 0843417  | - EUR |
| 3050             | 0843416  | - EUR |
| 2550             | 0843415  | - EUR |
| 2050             | 0843414  | - EUR |
| 1250             | 0843413  | - EUR |
| 1050             | 0867642  | - EUR |
| <b>Var. A</b>    |          |       |
| 2050             | 0844005  | - EUR |
| 1250             | 0844004  | - EUR |
| 1050             | 1606653  | - EUR |
| 550              | 1606652  | - EUR |
| <b>Block 250</b> |          |       |
| 250              | 0843412  | - EUR |
| <b>Single</b>    |          |       |
| 500              | 0843402  | - EUR |
| 300              | 0843401  | - EUR |
| 200              | 0843400  | - EUR |
| 100              | 0843410  | - EUR |
| 50               | 0843409  | - EUR |
| 45               | 0843408  | - EUR |
| 40               | 0843407  | - EUR |
| 35               | 0843406  | - EUR |
| 30               | 0843405  | - EUR |
| 25               | 0843403  | - EUR |

Lengths in [mm]

## Tool adapter for Z insert



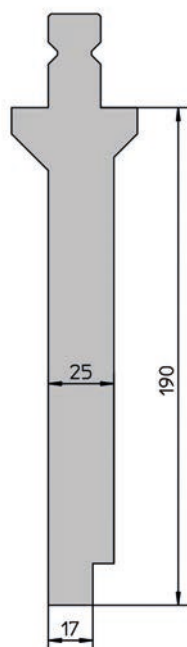
1500 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

44,5 kg/m



25 mm - 100 mm



Delivery time: ex warehouse

| OW/S 190         | Radius:  | -      |
|------------------|----------|--------|
|                  | Angle:   | -      |
|                  | Height:  | 190 mm |
|                  | Mat. No. | Price  |
| <b>Var. B</b>    |          |        |
| 4050             | 1461571  | - EUR  |
| 3050             | 1461559  | - EUR  |
| 2550             | 1461555  | - EUR  |
| 2050             | 1461554  | - EUR  |
| 1250             | 0856439  | - EUR  |
| 1050             | 1606657  | - EUR  |
| <b>Var. A</b>    |          |        |
| 2050             | 1461508  | - EUR  |
| 1250             | 1461507  | - EUR  |
| 1050             | 1606656  | - EUR  |
| 550              | 1606655  | - EUR  |
| <b>Block 250</b> |          |        |
| 250              | 0856438  | - EUR  |
| <b>Single</b>    |          |        |
| 500              | 0852365  | - EUR  |
| 300              | 0853187  | - EUR  |
| 200              | 0853186  | - EUR  |
| 100              | 0851017  | - EUR  |
| 50               | 0856436  | - EUR  |
| 45               | 0856435  | - EUR  |
| 40               | 0856434  | - EUR  |
| 35               | 0851018  | - EUR  |
| 30               | 0856433  | - EUR  |
| 25               | 0856432  | - EUR  |

Lengths in [mm]



## Tool adapter for Z insert



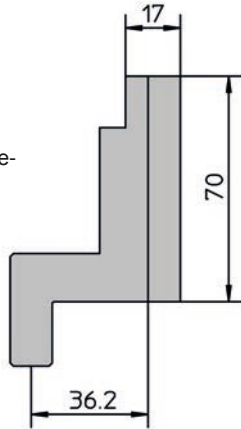
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

18,0 kg/m



See Technical Section Displacement of the I axis



Delivery time: ex warehouse

## EV 70

Angle:

-

Height:

70 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 0843433 | - EUR |
| 3050 | 0843432 | - EUR |
| 2550 | 0843431 | - EUR |
| 2050 | 0843430 | - EUR |
| 1250 | 0843429 | - EUR |
| 1050 | 0867641 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 0844010 | - EUR |
| 1250 | 0844009 | - EUR |
| 1050 | 1605950 | - EUR |
| 550  | 1605929 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0843428 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0843427 | - EUR |
| 300 | 0843426 | - EUR |
| 200 | 0843425 | - EUR |
| 100 | 0843418 | - EUR |
| 50  | 0843424 | - EUR |
| 45  | 0843423 | - EUR |
| 40  | 0843422 | - EUR |
| 35  | 0843421 | - EUR |
| 30  | 0843420 | - EUR |
| 25  | 0843419 | - EUR |

Lengths in [mm]

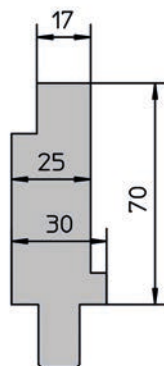
## Tool adapter for Z insert



1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

15,0 kg/m



Delivery time: ex warehouse

## EV70-M

Angle:

-

Height:

70 mm

Mat. No.

Price

## Var. B

|      |         |       |
|------|---------|-------|
| 4050 | 1206770 | - EUR |
| 3050 | 1206759 | - EUR |
| 2550 | 1206758 | - EUR |
| 2050 | 1206757 | - EUR |
| 1250 | 1206756 | - EUR |
| 1050 | 1605991 | - EUR |

## Var. A

|      |         |       |
|------|---------|-------|
| 2050 | 1206752 | - EUR |
| 1250 | 1206750 | - EUR |
| 1050 | 1605990 | - EUR |
| 550  | 1605989 | - EUR |

## Block 250

|     |         |       |
|-----|---------|-------|
| 250 | 0871240 | - EUR |
|-----|---------|-------|

## Single

|     |         |       |
|-----|---------|-------|
| 500 | 0860905 | - EUR |
| 300 | 0871239 | - EUR |
| 200 | 0860904 | - EUR |
| 100 | 0860903 | - EUR |
| 50  | 0871238 | - EUR |
| 45  | 0871237 | - EUR |
| 40  | 0871236 | - EUR |
| 35  | 0871235 | - EUR |
| 30  | 0871234 | - EUR |
| 25  | 0871233 | - EUR |

Lengths in [mm]



# Insert for OWK 90, OW/S 190, EV70, EV70-M



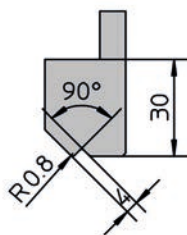
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

6,5 kg/m



~60 HRC



Delivery time: ex warehouse

| Z insert 90°     | Joggling: | Z4    |
|------------------|-----------|-------|
|                  | Angle:    | 90°   |
|                  | Height:   | 30 mm |
|                  | Mat. No.  | Price |
| <b>Var. B</b>    |           |       |
| 4050             | 0844183   | - EUR |
| 3050             | 0844182   | - EUR |
| 2550             | 0844181   | - EUR |
| 2050             | 0844180   | - EUR |
| 1250             | 0843601   | - EUR |
| 1050             | 1607728   | - EUR |
| <b>Var. A</b>    |           |       |
| 2050             | 0844185   | - EUR |
| 1250             | 0844184   | - EUR |
| 1050             | 1607727   | - EUR |
| 550              | 1607726   | - EUR |
| <b>Block 250</b> |           |       |
| 250              | 0843600   | - EUR |
| <b>Single</b>    |           |       |
| 500              | 0843599   | - EUR |
| 300              | 0843598   | - EUR |
| 200              | 0843597   | - EUR |
| 100              | 0843590   | - EUR |
| 50               | 0843596   | - EUR |
| 45               | 0843595   | - EUR |
| 40               | 0843594   | - EUR |
| 35               | 0843593   | - EUR |
| 30               | 0843592   | - EUR |
| 25               | 0843591   | - EUR |

Lengths in [mm]

# Insert for OWK 90, OW/S 190, EV70, EV70-M



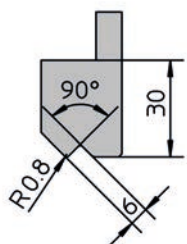
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

6,4 kg/m



~60 HRC



Delivery time: ex warehouse

| Z insert 90°     | Joggling: | Z6    |
|------------------|-----------|-------|
|                  | Angle:    | 90°   |
|                  | Height:   | 30 mm |
|                  | Mat. No.  | Price |
| <b>Var. B</b>    |           |       |
| 4050             | 0869070   | - EUR |
| 3050             | 0857168   | - EUR |
| 2550             | 0865204   | - EUR |
| 2050             | 0849444   | - EUR |
| 1250             | 0846933   | - EUR |
| 1050             | 1607731   | - EUR |
| <b>Var. A</b>    |           |       |
| 2050             | 0869363   | - EUR |
| 1250             | 0869362   | - EUR |
| 1050             | 1607730   | - EUR |
| 550              | 1607729   | - EUR |
| <b>Block 250</b> |           |       |
| 250              | 0846932   | - EUR |
| <b>Single</b>    |           |       |
| 500              | 0846931   | - EUR |
| 300              | 0846930   | - EUR |
| 200              | 0846929   | - EUR |
| 100              | 0845668   | - EUR |
| 50               | 0846928   | - EUR |
| 45               | 0846927   | - EUR |
| 40               | 0845669   | - EUR |
| 35               | 0846926   | - EUR |
| 30               | 0846925   | - EUR |
| 25               | 0846924   | - EUR |

Lengths in [mm]



## Insert for OWK 90, OW/S 190, EV70, EV70-M



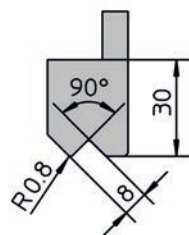
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

6,4 kg/m



~60 HRC



Delivery time: ex warehouse

| Z insert 90°     | Joggling: | Z8    |
|------------------|-----------|-------|
|                  | Angle:    | 90°   |
|                  | Height:   | 30 mm |
|                  | Mat. No.  | Price |
| <b>Var. B</b>    |           |       |
| 4050             | 0869073   | - EUR |
| 3050             | 0869372   | - EUR |
| 2550             | 0869371   | - EUR |
| 2050             | 0847586   | - EUR |
| 1250             | 0846945   | - EUR |
| 1050             | 1607800   | - EUR |
| <b>Var. A</b>    |           |       |
| 2050             | 0869367   | - EUR |
| 1250             | 0852614   | - EUR |
| 1050             | 1607799   | - EUR |
| 550              | 1607798   | - EUR |
| <b>Block 250</b> |           |       |
| 250              | 0846944   | - EUR |
| <b>Single</b>    |           |       |
| 500              | 0846943   | - EUR |
| 300              | 0846942   | - EUR |
| 200              | 0846941   | - EUR |
| 100              | 0846934   | - EUR |
| 50               | 0846940   | - EUR |
| 45               | 0846939   | - EUR |
| 40               | 0846938   | - EUR |
| 35               | 0846937   | - EUR |
| 30               | 0846936   | - EUR |
| 25               | 0846935   | - EUR |

Lengths in [mm]

## Insert for OWK 90, OW/S 190, EV70, EV70-M



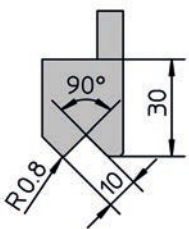
1200 kN/m

42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>

6,4 kg/m



~60 HRC



Delivery time: ex warehouse

| Z insert 90°     | Joggling: | Z10   |
|------------------|-----------|-------|
|                  | Angle:    | 90°   |
|                  | Height:   | 30 mm |
|                  | Mat. No.  | Price |
| <b>Var. B</b>    |           |       |
| 4050             | 0869075   | - EUR |
| 3050             | 0860119   | - EUR |
| 2550             | 0857248   | - EUR |
| 2050             | 0857465   | - EUR |
| 1250             | 0846957   | - EUR |
| 1050             | 1607803   | - EUR |
| <b>Var. A</b>    |           |       |
| 2050             | 0869380   | - EUR |
| 1250             | 0852615   | - EUR |
| 1050             | 1607802   | - EUR |
| 550              | 1607801   | - EUR |
| <b>Block 250</b> |           |       |
| 250              | 0846956   | - EUR |
| <b>Single</b>    |           |       |
| 500              | 0846955   | - EUR |
| 300              | 0846954   | - EUR |
| 200              | 0846953   | - EUR |
| 100              | 0846946   | - EUR |
| 50               | 0846952   | - EUR |
| 45               | 0846951   | - EUR |
| 40               | 0846950   | - EUR |
| 35               | 0846949   | - EUR |
| 30               | 0846948   | - EUR |
| 25               | 0846947   | - EUR |

Lengths in [mm]

# Flat insert

Flat insert for OWK 90, OW/S 190, EV70, EV70-M



1300 kN/m



42 Cr Mo 4  
1080 - 1180 N/mm<sup>2</sup>



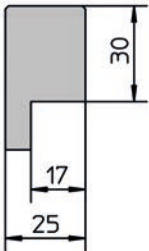
6,8 kg/m



~60 HRC



For holder see chapter Punches:  
Punch holder



Delivery time: ex warehouse

insert flatt 180°

|                  | Height:  | 30 mm |
|------------------|----------|-------|
|                  | Mat. No. | Price |
| <b>Var. B</b>    |          |       |
| 4050             | 1461879  | - EUR |
| 3050             | 1461878  | - EUR |
| 2550             | 1461876  | - EUR |
| 2050             | 0863682  | - EUR |
| 1250             | 1461872  | - EUR |
| 1050             | 1605924  | - EUR |
| <b>Var. A</b>    |          |       |
| 2050             | 1461860  | - EUR |
| 1250             | 1461849  | - EUR |
| 1050             | 1605923  | - EUR |
| 550              | 1605922  | - EUR |
| <b>Block 250</b> |          |       |
| 250              | 0863681  | - EUR |
| <b>Single</b>    |          |       |
| 500              | 0852366  | - EUR |
| 300              | 0863680  | - EUR |
| 200              | 0863679  | - EUR |
| 100              | 0848033  | - EUR |
| 50               | 0848034  | - EUR |
| 45               | 0863678  | - EUR |
| 40               | 0863677  | - EUR |
| 35               | 0863676  | - EUR |
| 30               | 0863675  | - EUR |
| 25               | 0852376  | - EUR |

Lengths in [mm]



## Accessories / spareparts punches

| Designation                                                                                          | Illustration                                                                         | Mat. No. | Price |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------|-------|
| Safety-Click for OW200/S, OW300/S                                                                    |     | 0826076  | - EUR |
| Safety-Click for OW200/K OW280/K                                                                     |     | 0826075  | - EUR |
| Safety-Click for OW201/S, OW202/S, OW203/S, OW210, OW210/S, OW209/S, OW308/S, Modufix MF/S, OW/S 190 |    | 0826078  | - EUR |
| Safety-Click for OW201/K, OW204/K, OW215/K, OW308/K                                                  |   | 0826077  | - EUR |
| Safety-Click for OW202/K, OW/K Z8/90°, OW/K Z10/90°                                                  |  | 0826079  | - EUR |
| Safety-Click for OW203/K, OW211/K, OW/K 90, OW/K 80, OW/K 130, OW/K Z4/90°, OW/K Z6/90°              |  | 0826080  | - EUR |

| Designation                                            | Illustration                                                                       | Mat. No. | Price |
|--------------------------------------------------------|------------------------------------------------------------------------------------|----------|-------|
| 10 locking pins for OW without safety click (DIN 1475) |  | 0872631  | - EUR |

Tool holders

|                                                             |                                                                                      |         |       |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|-------|
| 10 items cylinder screws DIN 6912-M6x10 (OW/K 80, OW/K 130) |    | 1413689 | - EUR |
| 10 items cylinder screws DIN 6912-M6x20 (OW209/S)           |                                                                                      | 1413674 | - EUR |
| 10 items cylinder screws M6x16 ISO4762 (OW/K 90, OW/S 190)  |                                                                                      | 1413690 | - EUR |
| 10 items cylinder screws ISO4762-M8x90 (OW308/K, OW308/S)   |  | 1413691 | - EUR |

Spacers

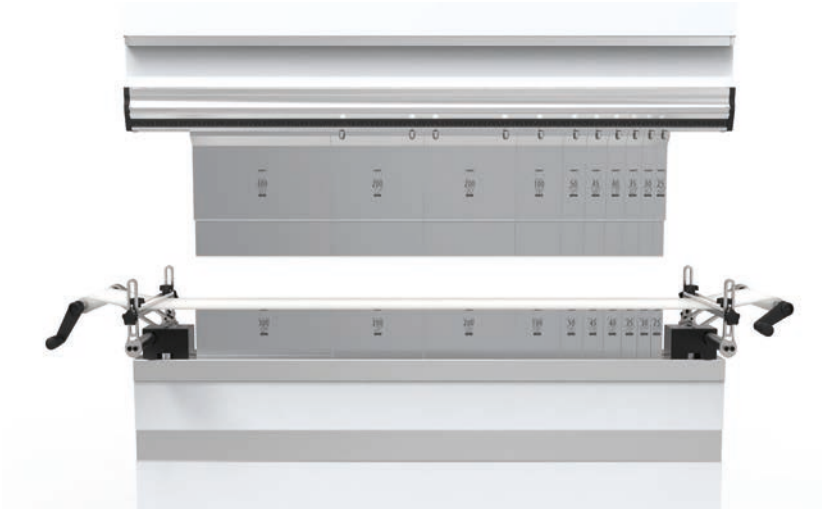
|               |                                                                                     |         |       |
|---------------|-------------------------------------------------------------------------------------|---------|-------|
| Spacer 35mm   |  | 0845425 | - EUR |
| Spacer 32,5mm |                                                                                     | 0861938 | - EUR |



Bending foil holder (BFH)

Advantages

- Higher productivity and user-friendliness thanks to the intelligent unrolling device
- Short setup times due to infinitely variable adjustment of the foil holder
- Guaranteed functionality and safety when using the tool at any position on the die clamp
- Suitable for different foil dimensions
- Clean foil cutting due to integrated foil foil separation groove
- Useable on all TruBend series
- Collision Check with TruTops Bend V5.0 or higher



TRUMPF Bending foil holder

| Designation                               | Illustration | Mat. No. | Price |
|-------------------------------------------|--------------|----------|-------|
| BFH TRUMPF bending foil holder left/right |              | 1905450  | - EUR |
| BFH basic module left/right               |              | 1905481  | - EUR |
| BFH extension module left/right           |              | 1905484  | - EUR |

| Designation                                        | Illustration                                                                         | Mat. No. | Price |
|----------------------------------------------------|--------------------------------------------------------------------------------------|----------|-------|
| Workpiece protection foil b=100 mm, l=30m, s=0,4mm |    | 0845855  | - EUR |
| Bending foil Heavy b=150mm, l=18m, s=0,8mm         |    | 1868051  | - EUR |
| Fabric bending foil w=120mm, l=1m                  |   | 1710197  | - EUR |
| Fabric bending foil w=120mm, l=3m                  |                                                                                      | 1835856  | - EUR |
| Fabric bending foil w=120mm, l=6m                  |                                                                                      | 1755314  | - EUR |
| Fabric bending foil w=120mm, l=10m                 |                                                                                      | 1720866  | - EUR |
| Fabric bending foil w=240mm, l=1m                  |                                                                                      | 1761109  | - EUR |
| Fabric bending foil w=240mm, l=6m                  |                                                                                      | 2045034  | - EUR |
| Plastic insert l=500mm (for KEV die)               |  | 0839792  | - EUR |

## Ejection aid 30° die

| Designation                              | Illustration                                                                        | Mat. No. | Price |
|------------------------------------------|-------------------------------------------------------------------------------------|----------|-------|
| Ejection aid H=5.4 mm; l=500 mm (grey)   |    | 2238821  | - EUR |
| Ejection aid H=8 mm; l=500 mm (blue)     |    | 2079876  | - EUR |
| Ejection aid H=9.5 mm; l=500 mm (yellow) |   | 2238822  | - EUR |
| Ejection aid H=10.5 mm; l=500 mm (green) |  | 2238824  | - EUR |



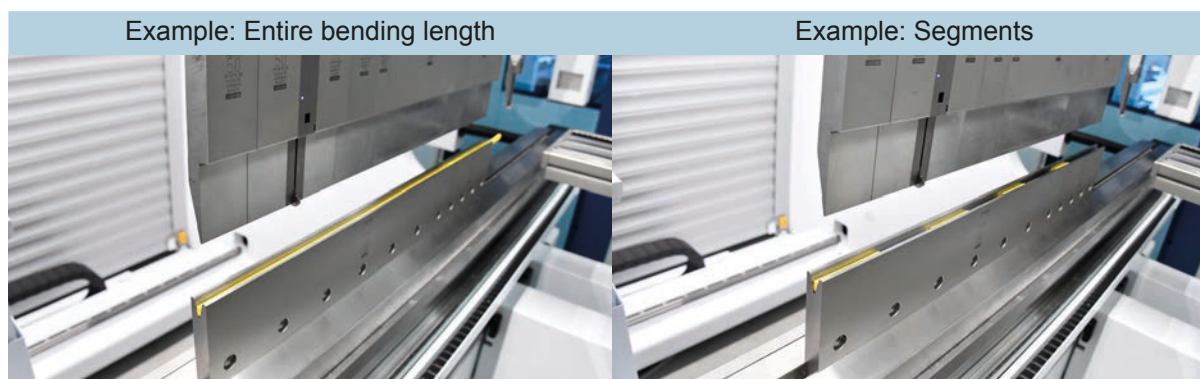
When creating sharp bends with 30° dies, the bent sheet metal may become jammed in the die. TRUMPF ejection aids solve this problem. By inserting a plastic strip into the die, the workpiece can be easily removed after bending.

- The ejection aid is supplied in L = 500 mm and can be cut to any desired length with a knife.

## Application

Ejection aids are inserted into the V-groove of the 30° standard die. They provide help during the removal of the component after sharp bends.

The ejection aid is most effective when its length is equal to the bending length.



## Advantages

- Can be combined with standard dies
- Can be used for manual and automatic bending
- Simple handling due to color coding: gray, blue, yellow and green
- Greater productivity and user-friendliness thanks to reliable bending

## Areas of application

The ejection aid for 30° bends with punch R1 can be used with different dies and sheet thicknesses (S).

Depending on the combination, the ejection pressure is LOW (1), OPTIMAL (2) or HIGH (3):

| Color code | EV001<br>R0.6 | EV001<br>R3 | EV002<br>R1 | EV002<br>R3 | EV003<br>R1 | EV003<br>R3 | EV004<br>R1 | EV004<br>R3 | EV005<br>R1.6 | EV005<br>R3 | EV006<br>R2 |
|------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|
|            | W6/30°        |             | W8/30°      |             | W10/30°     |             | W12/30°     |             | W16/30°       |             | W20/30°     |
| S=1mm      |               |             |             |             |             |             |             |             |               |             |             |
| Gray       | 2             | 2           | 2           | 2           | 2           | 2           |             |             |               |             |             |
| Blue       |               |             | 3           | 3           | 3           | 3           |             |             |               |             |             |
| S=1,5mm    |               |             |             |             |             |             |             |             |               |             |             |
| Gray       | 1             | 1           | 1           | 1           |             |             |             |             |               |             |             |
| Blue       |               |             | 3           | 3           | 2           | 2           | 2           | 2           |               |             |             |
| Yellow     |               |             |             |             |             |             | 3           | 3           | 2             | 2           |             |
| Green      |               |             |             |             |             |             |             |             | 3             | 3           |             |
| S=2mm      |               |             |             |             |             |             |             |             |               |             |             |
| Blue       |               |             | 1           | 1           | 1           | 1           | 1           | 1           |               |             |             |
| Yellow     |               |             |             |             | 3           | 3           | 2           | 2           | 1             | 1           |             |
| Green      |               |             |             |             |             |             | 3           | 3           | 2             | 2           | 2           |
| S=2,5mm    |               |             |             |             |             |             |             |             |               |             |             |
| Yellow     |               |             |             |             |             |             | 2           | 2           | 1             | 1           |             |
| Green      |               |             |             |             |             |             | 3           | 3           | 2             | 2           | 1           |
| S=3mm      |               |             |             |             |             |             |             |             |               |             |             |
| Yellow     |               |             |             |             |             |             | 1           | 1           |               |             |             |
| Green      |               |             |             |             |             |             | 2           | 2           | 1             | 1           | 1           |



ACB

| Designation                                                | Illustration | Mat. No. | Price |
|------------------------------------------------------------|--------------|----------|-------|
| additional license for software                            |              | 0853185  | - EUR |
| additional extension cable for sensor tools, L=1500 mm     |              | 0919112  | - EUR |
| additional short extension cable for sensor tools, L=500mm |              | 1273132  | - EUR |
| ACB module, 2nd gen.                                       |              | 1253913  | - EUR |
| electronic screwdriver 2,5x50                              |              | 0140800  | - EUR |
| Torque Screwdriver complete                                |              | 2234347  | - EUR |

| Designation                                          | Illustration                                                                         | Mat. No. | Price |
|------------------------------------------------------|--------------------------------------------------------------------------------------|----------|-------|
| Reversing blade slotted 0,5x3 for Torque Screwdriver |    | 1940273  | - EUR |
| stop pin                                             |     | 0902665  | - EUR |
| Retaining clip                                       |   | 0358056  | - EUR |
| Magnet with tie-clip                                 |   | 0342979  | - EUR |
| calibrating die 90° complete                         |   | 0935355  | - EUR |
| Guide rod - calibrating die                          |  | 0928523  | - EUR |

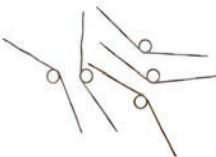


| Designation                         | Illustration | Mat. No. | Price |
|-------------------------------------|--------------|----------|-------|
| Guide body cpl.                     |              | 0932900  | - EUR |
| Replaceable element 90°             |              | 0932898  | - EUR |
| Replaceable element 120°            |              | 0932899  | - EUR |
| Spring (l=57.3mm) - calibrating die |              | 1560926  | - EUR |
| assembly device for sensor disk     |              | 0932914  | - EUR |
| Spacer 0.1x12.7                     |              | 0903268  | - EUR |



| Designation    | Illustration                                                                      | Mat. No. | Price |
|----------------|-----------------------------------------------------------------------------------|----------|-------|
| assembly sheet |  | 0906262  | - EUR |

## Spare parts for ACB sensor tools

| Designation                                           | Illustration                                                                        | Mat. No. | Price |
|-------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------|
| 4 screws M3x5-4.8                                     |    | 0872632  | - EUR |
| 5 springs                                             |    | 0872633  | - EUR |
| ACB Click - Locking bolt Set                          |  | 1373219  | - EUR |
| Spring (l=10.9mm) - ACB Click                         |  | 0358529  | - EUR |
| screw for sensor disk M1.6x8 (OW200/K, OW..../S)      |  | 0902819  | - EUR |
| screw for sensor disk M2x8 (OW/K80, OW/K130, OW280/K) |  | 0755413  | - EUR |

| Designation                                                  | Illustration                                                                        | Mat. No. | Price |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------|
| screw for sensor disk M1,6x6 (OW201/K, OW202/K, OW203/K)     |    | 0138704  | - EUR |
| lever for OW200/K                                            |    | 0901184  | - EUR |
| lever for OW200/S                                            |  | 0901188  | - EUR |
| lever for OW200/S-ZM                                         |  | 1305652  | - EUR |
| lever for OW201/K                                            |  | 0902640  | - EUR |
| lever for OW201/S, OW202/S, OW203/S, OW209/S, OW210/S, OW210 |  | 0901191  | - EUR |



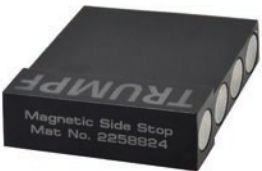
| Designation                                                | Illustration                                                                        | Mat. No. | Price |
|------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------|
| lever for OW201/S, 202/S, 203/S (+DB), 209/S, 210S<br>- ZM |    | 1258405  | - EUR |
| lever for OW202/K                                          |    | 0901190  | - EUR |
| lever for OW203/K                                          |  | 0908885  | - EUR |
| lever for OW280/K - D                                      |  | 1209383  | - EUR |
| lever for OW280/K - G                                      |  | 1209382  | - EUR |
| lever for OW/K 80 - G, OW/K 130 - G                        |  | 1209380  | - EUR |

| Designation                                                         | Illustration                                                                        | Mat. No. | Price |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|-------|
| lever for OW/K 80 - D, OW/K 130 - D                                 |    | 1209381  | - EUR |
| lever for OW300/S-ZM                                                |    | 1434211  | - EUR |
| Stop pin OW/K 80                                                    |  | 1204322  | - EUR |
| Compression spring d0.4 De3.6 Lo12.8 for stop pin OW/K 80, OW/K 130 |  | 0353942  | - EUR |

## Sensor disks for 1st version (not ZM sensors)

Prices as with standard sensor disks

| OW200/S - R1 |         | OW201/S - R1 |         | OW202/S - R1 |         | OW203/S - R4 |         | OW210/S - R1 |         |
|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|
|              | Mat.No. |              | Mat.No. |              | Mat.No. |              | Mat.No. |              | Mat.No. |
| R5           | 902437  | R5           | 914362  | R5           | 902439  | L18          | 919842  | R5           | 902629  |
| R10          | 901128  | R10          | 911053  | R10          | 901132  | L27          | 919840  | R10          | 902628  |
| R18          | 901127  | R18          | 911052  | R18          | 901131  | L32          | 908873  | R18          | 902627  |
| R19          | 903961  | R19          | 914364  | R19          | 904009  | L43          | 908872  | R19          | 904180  |
| R28          | 902667  | R28          | 914363  | R28          | 902669  |              |         | R28          | 902700  |
| L12          | 912268  | L12          | 915074  | L12          | 912274  |              |         | L12          | 912276  |
| L22          | 912269  | L22          | 915075  | L22          | 912275  |              |         | L22          | 912277  |

| Designation                            | Illustration                                                                         | Mat. No. | Price |
|----------------------------------------|--------------------------------------------------------------------------------------|----------|-------|
| Quickstop                              |     | 0843809  | - EUR |
| Side stop complete                     |     | 0843740  | - EUR |
| Magnetic Side Stop                     |   | 2258824  | - EUR |
| Scotch-Brite fine                      |  | 0814638  | - EUR |
| Scotch-Brite rough                     |  | 0814639  | - EUR |
| Hand-held magnet with detachment lever |   | 0982944  | - EUR |

| Designation                  | Illustration                                                                      | Mat. No. | Price |
|------------------------------|-----------------------------------------------------------------------------------|----------|-------|
| Eyebolt M12X20.5 DIN580 C15E |  | 019860   | - EUR |





Beading tools

Beading bars can be set at any point between individual segments of the standard dies. Punches are not engaged.

See Technical section



| Designation                 | Illustration | Mat. No. | Price |
|-----------------------------|--------------|----------|-------|
| Beading bar R1/60° H=97.5mm |              | 1257288  | - EUR |
| Beading bar R2 H=149mm      |              | 1213530  | - EUR |
| Beading bar R2 H=99mm       |              | 0855836  | - EUR |
| Beading bar R2,5 H=95,5mm   |              | 0855544  | - EUR |

## Application of beading bars

### Application

Tools for diagonal beading are used to stabilize angles.

By using beading bars, angles can be produced with bracing in only one step. Beading bars can be set at any point between individual segments of the standard dies. The punches are not engaged in this area. The beading bars are standard TRUMPF tools.

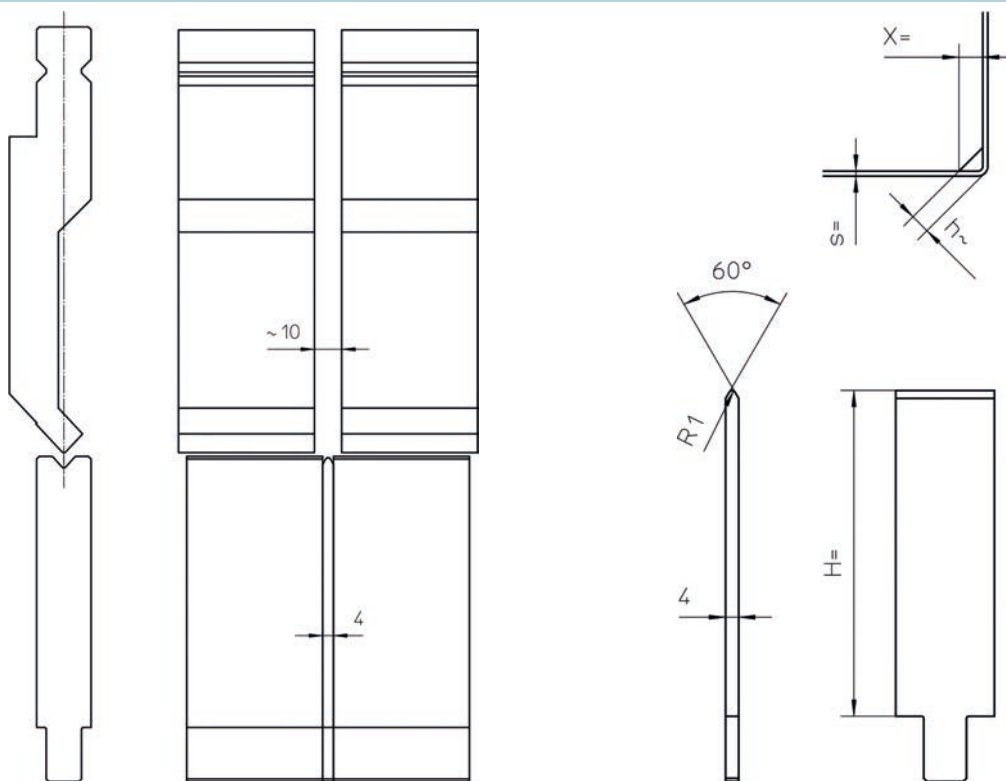
### Area of application

Up to 4 mm sheet thickness.

### Advantages

- Producing angles and bracing in one step.
- For bracing of sides in case of thin sheet metals.
- Available as a standard tool.
- Beading bars provide maximum flexibility – beading distances freely selectable.

#### Sketches of tools



- Measure the drawing (incl. length)
- Specify the tolerances
- Specify the material type
- Specify the sheet thickness

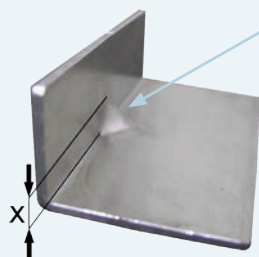
## Application of standard beading bars (standard values)

Combination of dies with 80°, 84° and 30° and punches with 1 mm radius.

| Beading bar R2 |           | Sheet thickness [mm] |            |           |   |     |                                             |
|----------------|-----------|----------------------|------------|-----------|---|-----|---------------------------------------------|
| H = 99 mm      |           |                      |            |           |   |     |                                             |
| H = 149 mm     |           | 0,8                  | 1          | 1,5       | 2 | 2,5 | 3                                           |
| EV W6          | 3,5<br>10 |                      |            |           |   |     | Beading height x<br>Distance of the punches |
| EV W8          | 5<br>12   | 4,5<br>12            |            |           |   |     | Beading height x<br>Distance of the punches |
| EV W10         | 6<br>14   | 6<br>14              | 6,5<br>15  | 6<br>16   |   |     | Beading height x<br>Distance of the punches |
| EV W12         |           | 7,5<br>16            | 7,5<br>17  | 7,5<br>18 |   |     | Beading height x<br>Distance of the punches |
| EV W16         |           |                      | 10,5<br>21 | 10<br>22  |   |     | Beading height x<br>Distance of the punches |

| Beading bar R1/60° |  | Sheet thickness [mm] |           |           |          |            |                                             |
|--------------------|--|----------------------|-----------|-----------|----------|------------|---------------------------------------------|
| H = 97,5 mm        |  |                      |           |           |          |            |                                             |
|                    |  | 0,8                  | 1         | 1,5       | 2        | 2,5        | 3                                           |
| EV W10             |  |                      | 4<br>10   | 3,5<br>12 | 3<br>14  |            | Beading height x<br>Distance of the punches |
| EV W12             |  |                      | 5,5<br>10 | 5<br>12   | 5<br>16  |            | Beading height x<br>Distance of the punches |
| EV W16             |  |                      |           | 8<br>12   | 8<br>16  | 7,5<br>18  | Beading height x<br>Distance of the punches |
| EV W20             |  |                      |           |           | 11<br>18 | 10,5<br>20 | 10,5<br>22                                  |
| EV W24             |  |                      |           |           |          | 13<br>18   | 13<br>22                                    |

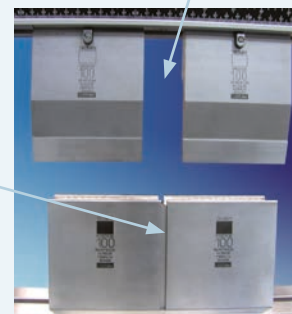
| Beading bar R2,5 |  | Sheet thickness [mm] |   |     |         |            |                                             |
|------------------|--|----------------------|---|-----|---------|------------|---------------------------------------------|
| H = 95,5 mm      |  |                      |   |     |         |            |                                             |
|                  |  | 0,8                  | 1 | 1,5 | 2       | 2,5        | 3                                           |
| EV W16           |  |                      |   |     | 6<br>14 | 5<br>18    | Beading height x<br>Distance of the punches |
| EV W20           |  |                      |   |     | 9<br>20 | 8,5<br>20  | 8<br>20                                     |
| EV W24           |  |                      |   |     |         | 11,5<br>20 | 11<br>20                                    |



X = Beading height [mm]



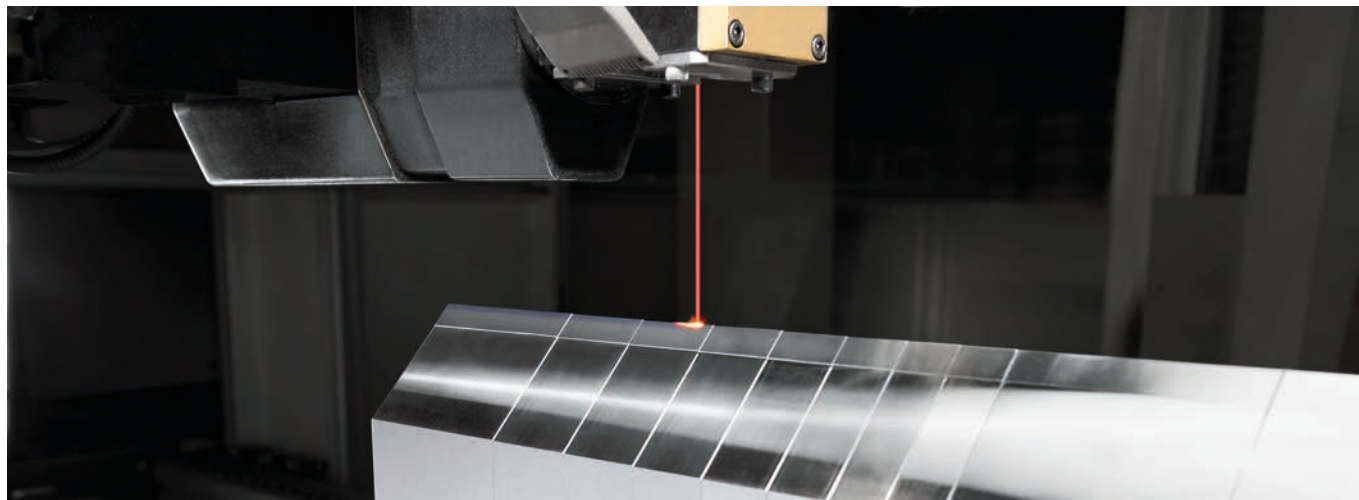
Beading bar



Distance of the punches [mm]

## LASERdur TRUMPF hardening process

### Hardness through laser exposure



TRUMPF tools are laser-hardened. Thanks to utilization of a TRUMPF TLF high-performance laser with innovative special hardening optics, improvements over earlier laser hardening in terms of hardening depth and the width of the hardened zone have been achieved:

- Degree of hardness ~60 HRC
- Hardened depth to 3 mm
- Tough tool core
- No hardness distortion
- Extremely wear-resistant working zones

Only the surface of the tool is hardened with laser hardening; the interior of the tool remains „soft“. The tool does not crack or splinter under excessive loads; instead, either the tool splits or the hard layer is pressed into the soft core.



Hardened zones (depending on tool type)



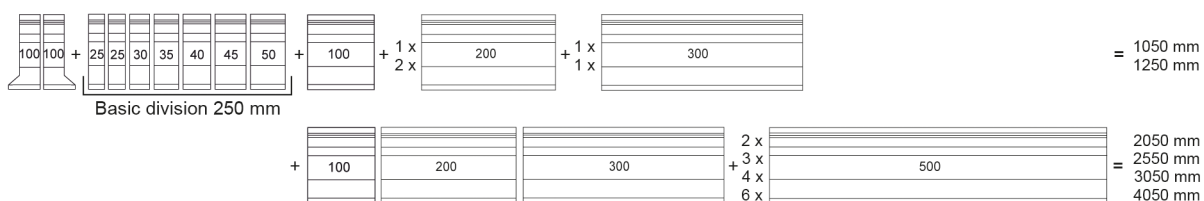
## System divisions (according to weight)

Each segment listed is of course also available on an individual basis

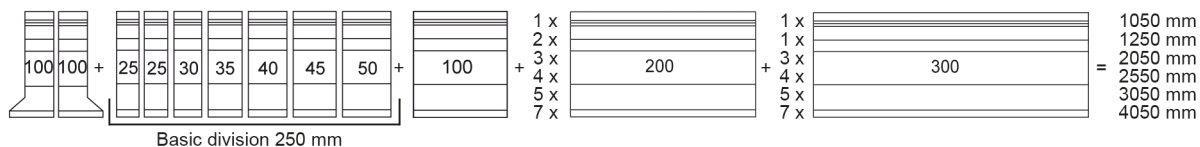
### Punches

#### Version B

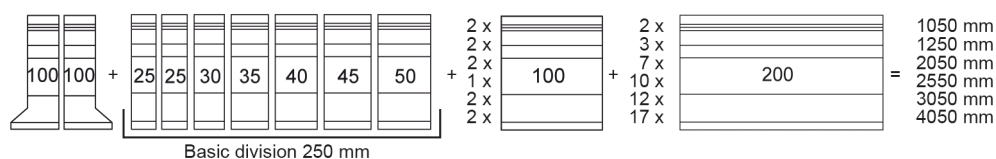
Division version for tool sets with a **weight of up to 50 kg/m**



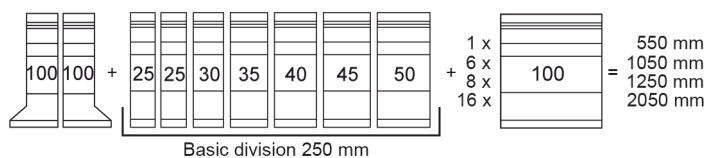
Division version for tool sets with a **weight of more than 50 kg/m**  
(type OW200/S, OW201/S, OW203/S)



Division variants for tool sets with **weights 83 kg/m or more**  
(type OW300/S)



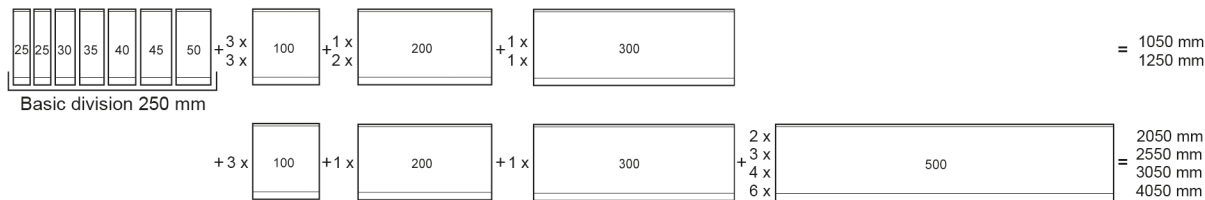
#### Version A



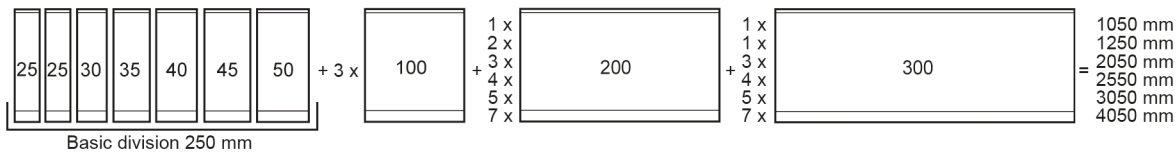
# Dies

## Version B

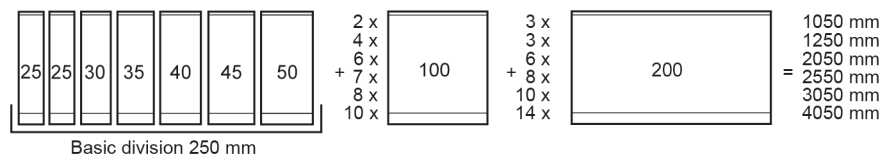
Division version for tool sets with a **weight of up to 50 kg/m**



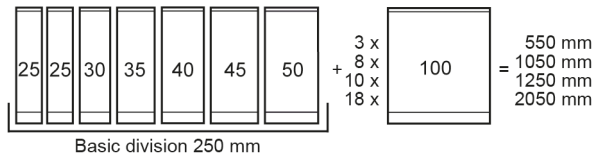
Division version for tool sets with **weights starting from 50 kg/m**  
(type EV W60/80°, EV W70/80°, EV W80/80°)



Division version for tool sets with a **weight of more than 83 kg/m**  
(type EV W90/80°, EV W100/80°, EV W120/60°)



## Version A

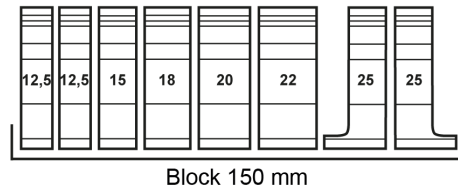


## Block 150

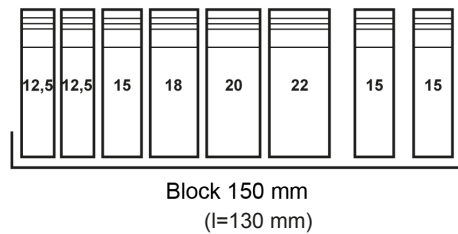
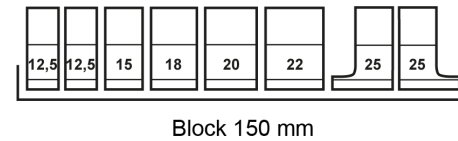
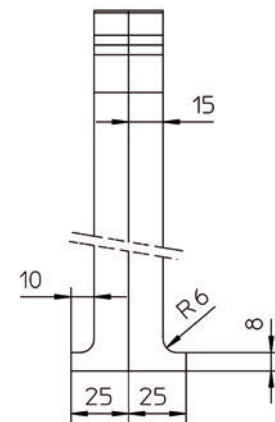
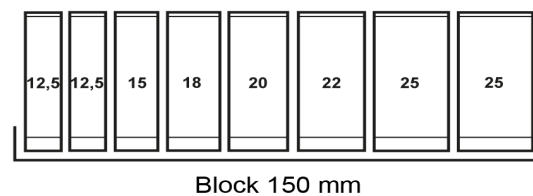
## Additional divisions

## Info

## OW280/K



- This tool division is not included in the B/A standard division.
- Also available with other tools upon request.
- Sketch of heels

OW/K 80  
OW/K 130OW390  
OW391EVW 4/30°  
EVW 5/30°

## Tool elements &lt; 25 mm, Block 150

## Important

- Punches smaller than 25 mm are delivered without Safety-Click (OW.../S).
- 30° dies cannot be supplied with bore holes.



## Calculation

(Box height, Press force, Die width)

### Calculation of the maximum nest height

- The maximum box height is defined mainly by the installation height of the machine.
- The installation height is the maximum clearance between lower edge-punch adaptor and upper edge-die adaptor.
- Calculation by means of BendGuide-App or E-Shop possible

| Punch height  | Box internal height |
|---------------|---------------------|
| OWH           | SHI                 |
| 120           | 64                  |
| 130           | 71                  |
| 140           | 78                  |
| 150           | 85                  |
| 160           | 91                  |
| 170           | 98                  |
| 180           | 105                 |
| 190           | 112                 |
| 200           | 118                 |
| 210           | 125                 |
| 220           | 132                 |
| 230           | 138                 |
| 240           | 145                 |
| 250           | 152                 |
| 260           | 159                 |
| 270           | 165                 |
| 280           | 172                 |
| 290           | 179                 |
| 300           | 185                 |
| 310           | 192                 |
| 320           | 199                 |
| 330           | 206                 |
| 340           | 212                 |
| 350           | 219                 |
| 360           | 226                 |
| 370           | 232                 |
| 380           | 239                 |
| 390           | 246                 |
| 400           | 253                 |
| 410           | 259                 |
| 420           | 266                 |
| 430           | 273                 |
| 440           | 279                 |
| 450           | 286                 |
| 460           | 293                 |
| 470           | 300                 |
| 480           | 306                 |
| 490           | 313                 |
| 500           | 320                 |
| Standardhöhen |                     |

$$OWH = \frac{SHI}{0,95} \times 1,414 + B$$

$$SHI = \frac{OWH - B}{1,414} \times 0,95$$

B ... Center of press beam to Modufix outer edge

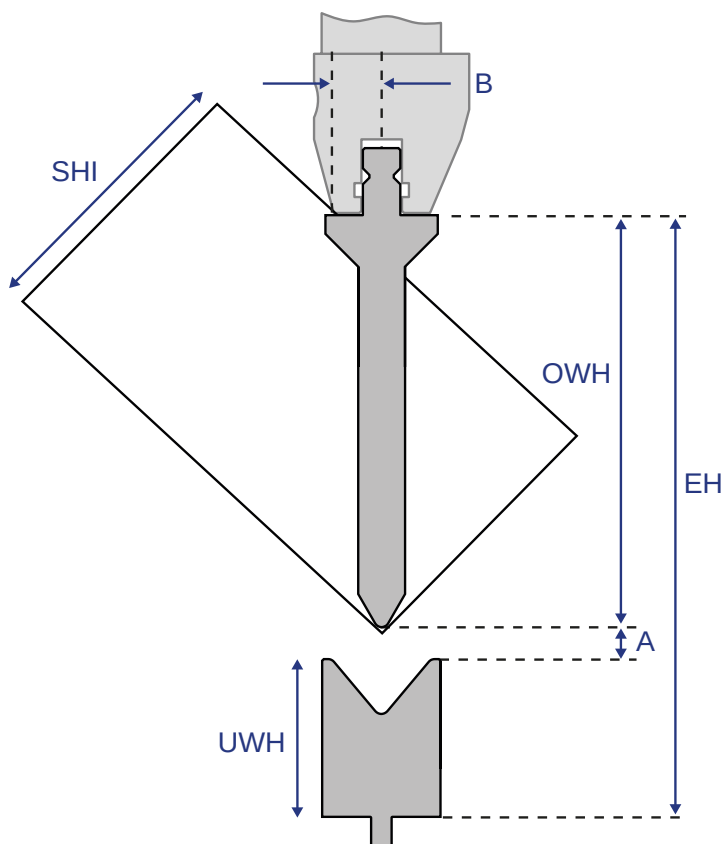
A ... Removal height

SHI..... Box internat height

OWH.. Punch heigth

UWH.. Die height

EH..... Installation heigth



## Calculation of the die width

### Selection of the die width

- The inner radius is a function of the die width and the punch radius.
- The die width is defined by the sheet thickness and the side length.
- The minimum die width is defined by its stability under load.

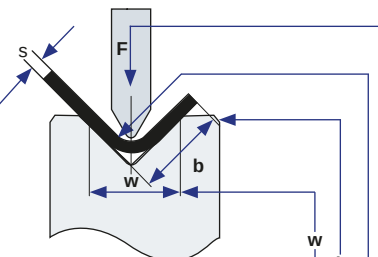
|                     |              |              |               |
|---------------------|--------------|--------------|---------------|
| Sheet thickness $s$ | 0,5 - 2,6 mm | 3,0 - 8,0 mm | 9,0 - 12,0 mm |
| Die width $w$       | $6 \times s$ | $8 \times s$ | $10 \times s$ |

### Maximum load of dies

| 30°                                      |                                                                                     |                                          |                                                                                     | 84°                        |                                                                                     |                                                                     |                                                                                       | 80°         |                                                                                       |                             |                                                                                       | 90°         |                                                                                       |             |                                                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------|
| EV                                       |  | EV                                       |  | EV                         |  | EV                                                                  |  | EV          |  | EV                          |  | EV          |  | EV          |  |
| EV/S-W4/30°<br>EV/S-W5/30°               | 150 kN/m                                                                            | EV004/S 30°                              | 250 kN/m                                                                            | EV/S-W4/84°<br>EV/S-W5/84° | 250 kN/m                                                                            | EV W24/80°<br>EV/H W24/80°                                          | 700 kN/m                                                                              | EV/S-W4/90° | 250 kN/m                                                                              | EV/S-W4/80°<br>EV/H W24/80° | 700 kN/m                                                                              | EV/S-W4/90° | 250 kN/m                                                                              | EV/S-W4/90° | 250 kN/m                                                                              |
| EV/S-W5/30°-R2                           | 200 kN/m                                                                            | KEV W12/30°                              | 200 kN/m                                                                            | EV W6/84°<br>EV/H W6/84°   | 400 kN/m                                                                            | EV W30/80°<br>EV/H W30/80°                                          | 900 kN/m                                                                              | EV/S-W5/90° | 390 kN/m                                                                              | EV W6/80°<br>EV/H W6/80°    | 900 kN/m                                                                              | EV040 90°   | 1100 kN/m                                                                             | EV/S-W5/90° | 390 kN/m                                                                              |
| EV001 30°<br>EV001/H 30°<br>EV001 R3 30° | 400 kN/m                                                                            | EV005 30°<br>EV005/H 30°<br>EV005 R3 30° | 500 kN/m                                                                            | EV/S W6/84°                | 250 kN/m                                                                            | EV W40/80°<br>EV/H W40/80°                                          | 1200 kN/m                                                                             | EV040/S 90° | 390 kN/m                                                                              | EV W8/84°<br>EV/H W8/84°    | 400 kN/m                                                                              | EV041 90°   | 1100 kN/m                                                                             | EV040/S 90° | 390 kN/m                                                                              |
| EV001/S 30°                              | 170 kN/m                                                                            | KEV W16/30°                              | 200 kN/m                                                                            | EV W8/84°<br>EV/H W8/84°   | 400 kN/m                                                                            | EV W50/80°<br>EV/H W50/80°                                          | 1500 kN/m                                                                             | EV041/S 90° | 460 kN/m                                                                              | EV/S W8/84°                 | 350 kN/m                                                                              | EV042 90°   | 1100 kN/m                                                                             | EV041/S 90° | 460 kN/m                                                                              |
| EV002 30°<br>EV002/H 30°<br>EV002 R3 30° | 400 kN/m                                                                            | EV006 30°<br>EV006/H 30°                 | 600 kN/m                                                                            | EV W10/84°<br>EV/H W10/84° | 500 kN/m                                                                            | EV W60/80°<br>EV W70/80°<br>EV W80/80°<br>EV W90/80°<br>EV W100/80° | 1500 kN/m                                                                             | EV042/S 90° | 530 kN/m                                                                              | EV W10/84°                  | 400 kN/m                                                                              | EV043 90°   | 1100 kN/m                                                                             | EV042/S 90° | 530 kN/m                                                                              |
| EV002/S 30°<br>KEV W8/30°                | 200 kN/m                                                                            | KEV W20/30°                              | 200 kN/m                                                                            | EV/S W10/84°               | 400 kN/m                                                                            | EV W120/60°                                                         | 1600 kN/m                                                                             | EV043/S 90° | 550 kN/m                                                                              | EV W12/84°<br>EV/H W12/84°  | 500 kN/m                                                                              | EV044 90°   | 1400 kN/m                                                                             | EV043/S 90° | 550 kN/m                                                                              |
| EV003 30°<br>EV003/H 30°<br>EV003 R3 30° | 400 kN/m                                                                            | EV007 30°<br>EV007/H 30°                 | 650 kN/m                                                                            | EV W12/84°<br>EV/H W12/84° | 500 kN/m                                                                            |                                                                     |                                                                                       |             |                                                                                       | EV/S W12/84°                | 400 kN/m                                                                              |             |                                                                                       | EV044 90°   | 1400 kN/m                                                                             |
| EV003/S 30°<br>KEV W10/30°               | 200 kN/m                                                                            | KEV W24/30°                              | 200 kN/m                                                                            | EV/S W14/84°               | 500 kN/m                                                                            |                                                                     |                                                                                       |             |                                                                                       | EV W16/84°<br>EV/H W16/84°  | 700 kN/m                                                                              |             |                                                                                       |             |                                                                                       |
| EV004 30°<br>EV004/H 30°<br>EV004 R3 30° | 400 kN/m                                                                            | EV W30/30° R3<br>EV W40/30°              | 900 kN/m                                                                            | EV W20/84°<br>EV/H W20/84° | 700 kN/m                                                                            |                                                                     |                                                                                       |             |                                                                                       |                             |                                                                                       |             |                                                                                       |             |                                                                                       |
|                                          |                                                                                     | EV W50/30°                               | 1200 kN/m                                                                           |                            |                                                                                     |                                                                     |                                                                                       |             |                                                                                       |                             |                                                                                       |             |                                                                                       |             |                                                                                       |

## Press force table (recommended values)

### Press force required for 90° air bending



Material: 450 N/mm², STEEL

| s    | 4   | 5    | 6   | 8   | 10  | 12  | 14  | 16  | 20  | 24  | 30   | 40  | 50   | 60   | 70   | 80   | 90   | 100  | 120  | 150   |
|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|------|------|------|------|------|------|------|-------|
|      | 3   | 3,75 | 4,5 | 6   | 7,5 | 9   | 11  | 12  | 15  | 18  | 22,5 | 30  | 37,5 | 45   | 52,5 | 60   | 67,5 | 75   | 90   | 112,5 |
|      | 0,7 | 0,8  | 0,9 | 1,4 | 1,7 | 1,9 | 2,2 | 2,6 | 3,2 | 3,9 | 4    | 5,1 | 6,3  | 7,7  | 9,1  | 10,1 | 12   | 12,9 | 15,7 | 15,5  |
| 0,5  | 45  | 35   | 28  | 21  |     |     |     |     |     |     |      |     |      |      |      |      |      |      |      |       |
| 0,75 | 102 | 78   | 64  | 46  | 36  | 30  |     |     |     |     |      |     |      |      |      |      |      |      |      |       |
| 1    |     | 167  | 131 | 91  | 70  | 57  | 48  | 41  |     |     |      |     |      |      |      |      |      |      |      |       |
| 1,25 |     |      | 204 | 142 | 109 | 88  | 74  | 64  | 50  |     |      |     |      |      |      |      |      |      |      |       |
| 1,5  |     |      | 294 | 204 | 157 | 127 | 107 | 92  | 72  |     |      |     |      |      |      |      |      |      |      |       |
| 1,75 |     |      |     | 278 | 213 | 173 | 146 | 126 | 99  | 81  |      |     |      |      |      |      |      |      |      |       |
| 2    |     |      |     |     | 279 | 226 | 190 | 164 | 129 | 106 |      |     |      |      |      |      |      |      |      |       |
| 2,5  |     |      |     |     | 353 | 297 | 256 | 201 | 166 | 131 |      |     |      |      |      |      |      |      |      |       |
| 3    |     |      |     |     |     | 428 | 369 | 290 | 238 | 188 | 140  |     |      |      |      |      |      |      |      |       |
| 3,5  |     |      |     |     |     |     | 503 | 394 | 325 | 256 | 190  | 151 |      |      |      |      |      |      |      |       |
| 4    |     |      |     |     |     |     |     | 515 | 424 | 335 | 248  | 197 | 163  |      |      |      |      |      |      |       |
| 4,5  |     |      |     |     |     |     |     | 652 | 537 | 424 | 314  | 249 | 207  | 177  |      |      |      |      |      |       |
| 5    |     |      |     |     |     |     |     |     |     | 523 | 388  | 308 | 255  | 218  | 190  |      |      |      |      |       |
| 6    |     |      |     |     |     |     |     |     |     | 754 | 558  | 443 | 368  | 314  | 274  | 243  |      |      |      |       |
| 7    |     |      |     |     |     |     |     |     |     |     | 760  | 604 | 501  | 428  | 373  | 331  | 297  |      |      |       |
| 8    |     |      |     |     |     |     |     |     |     |     |      | 864 | 705  | 595  | 515  | 454  | 406  | 335  |      |       |
| 10   |     |      |     |     |     |     |     |     |     |     |      |     | 1101 | 930  | 805  | 710  | 634  | 523  | 415  |       |
| 12   |     |      |     |     |     |     |     |     |     |     |      |     |      | 1339 | 1159 | 1022 | 914  | 754  | 597  |       |
| 15   |     |      |     |     |     |     |     |     |     |     |      |     |      |      |      | 1597 | 1427 | 1178 | 933  |       |

Material: 700 N/mm², STAINLESS STEEL

| s    | 4   | 5    | 6   | 8   | 10  | 12  | 14  | 16   | 20  | 24   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 120  | 150   |
|------|-----|------|-----|-----|-----|-----|-----|------|-----|------|------|------|------|------|------|------|------|------|------|-------|
|      | 3   | 3,75 | 4,5 | 6   | 7,5 | 9   | 11  | 12   | 15  | 18   | 22,5 | 30   | 37,5 | 45   | 52,5 | 60   | 67,5 | 75   | 90   | 112,5 |
|      | 0,8 | 1    | 0,8 | 2   | 1,9 | 2,3 | 2,2 | 3,5  | 3,9 | 5,3  | 5,4  | 7,9  | 8,5  | 10,4 | 12,1 | 13,8 | 15,5 | 17,9 | 20,7 | 24    |
| 0,5  | 71  | 54   | 44  | 32  |     |     |     |      |     |      |      |      |      |      |      |      |      |      |      |       |
| 0,75 | 159 | 122  | 99  | 72  | 56  | 46  |     |      |     |      |      |      |      |      |      |      |      |      |      |       |
| 1    |     | 260  | 203 | 141 | 108 | 88  | 74  | 64   |     |      |      |      |      |      |      |      |      |      |      |       |
| 1,25 |     |      | 317 | 221 | 169 | 137 | 116 | 100  | 78  |      |      |      |      |      |      |      |      |      |      |       |
| 1,5  |     |      | 457 | 318 | 244 | 198 | 166 | 144  | 113 |      |      |      |      |      |      |      |      |      |      |       |
| 1,75 |     |      |     | 433 | 332 | 269 | 227 | 195  | 153 | 126  |      |      |      |      |      |      |      |      |      |       |
| 2    |     |      |     |     | 434 | 352 | 296 | 255  | 200 | 165  |      |      |      |      |      |      |      |      |      |       |
| 2,5  |     |      |     |     |     | 550 | 462 | 399  | 313 | 258  | 204  |      |      |      |      |      |      |      |      |       |
| 3    |     |      |     |     |     |     | 574 | 451  | 371 | 293  | 217  |      |      |      |      |      |      |      |      |       |
| 3,5  |     |      |     |     |     |     | 782 | 614  | 505 | 399  | 296  | 235  |      |      |      |      |      |      |      |       |
| 4    |     |      |     |     |     |     |     | 801  | 660 | 521  | 386  | 307  | 254  |      |      |      |      |      |      |       |
| 4,5  |     |      |     |     |     |     |     | 1014 | 835 | 660  | 489  | 388  | 322  | 275  |      |      |      |      |      |       |
| 5    |     |      |     |     |     |     |     |      |     | 814  | 603  | 479  | 397  | 339  | 296  |      |      |      |      |       |
| 6    |     |      |     |     |     |     |     |      |     | 1172 | 869  | 690  | 572  | 489  | 426  | 378  |      |      |      |       |
| 7    |     |      |     |     |     |     |     |      |     |      | 1182 | 939  | 779  | 665  | 580  | 515  | 463  |      |      |       |
| 8    |     |      |     |     |     |     |     |      |     |      |      | 1344 | 1096 | 926  | 801  | 706  | 632  | 521  |      |       |
| 10   |     |      |     |     |     |     |     |      |     |      |      |      |      | 1447 | 1252 | 1104 | 987  | 814  |      |       |
| 12   |     |      |     |     |     |     |     |      |     |      |      |      |      |      | 1803 | 1590 | 1421 | 1172 |      |       |
| 15   |     |      |     |     |     |     |     |      |     |      |      |      |      |      |      | 2484 | 2220 | 1832 | 1451 |       |

F in kN

S, w, b, Ri in mm

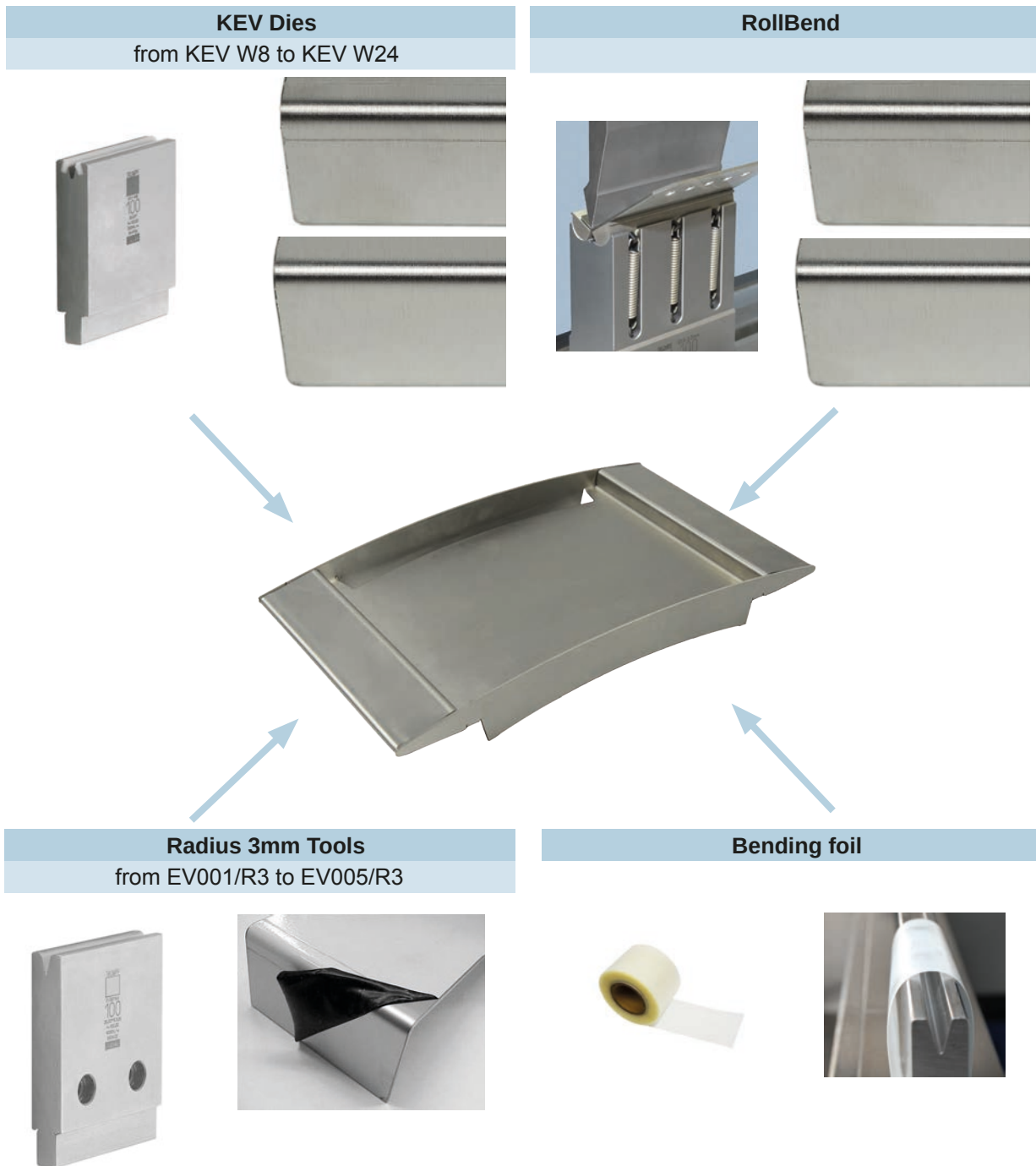
= optimal die width

b=0.75 x w (calculated value at optimal die width)

## Reduced-imprint bending

### Note

More detailed information can be found in the new bending technology catalog.



**Material: 700 N/mm<sup>2</sup>, Stainless steel with foil**

| Max. sheet thickness | 0,9 mm | 1 mm | 1,25 mm | 1,5 mm |
|----------------------|--------|------|---------|--------|
| EV001 R3 30°         | ok     | ok   |         |        |
| EV002 R3 30°         | ok     | ok   | ok      |        |
| EV003 R3 30°         | ok     | ok   | ok      | ok     |
| EV004 R3 30°         | ok     | ok   | ok      | ok     |
| EV005 R3 30°         |        | ok   | ok      | ok     |

## Application

During the bending method, the support areas of the side plates evenly press up onto the sheet. Thus, there is almost no relative movement between the tool and the workpiece.

## Area of application

- RollBend can be used on all TRUMPF bending presses
- From 0.5 mm to 12.5 mm sheet thickness
- For foil-coated sheets, but also for painted and coated surfaces
- Painted or powdered surfaces are not damaged
- Bends of 180° to 65° (RB200 to 40°) possible

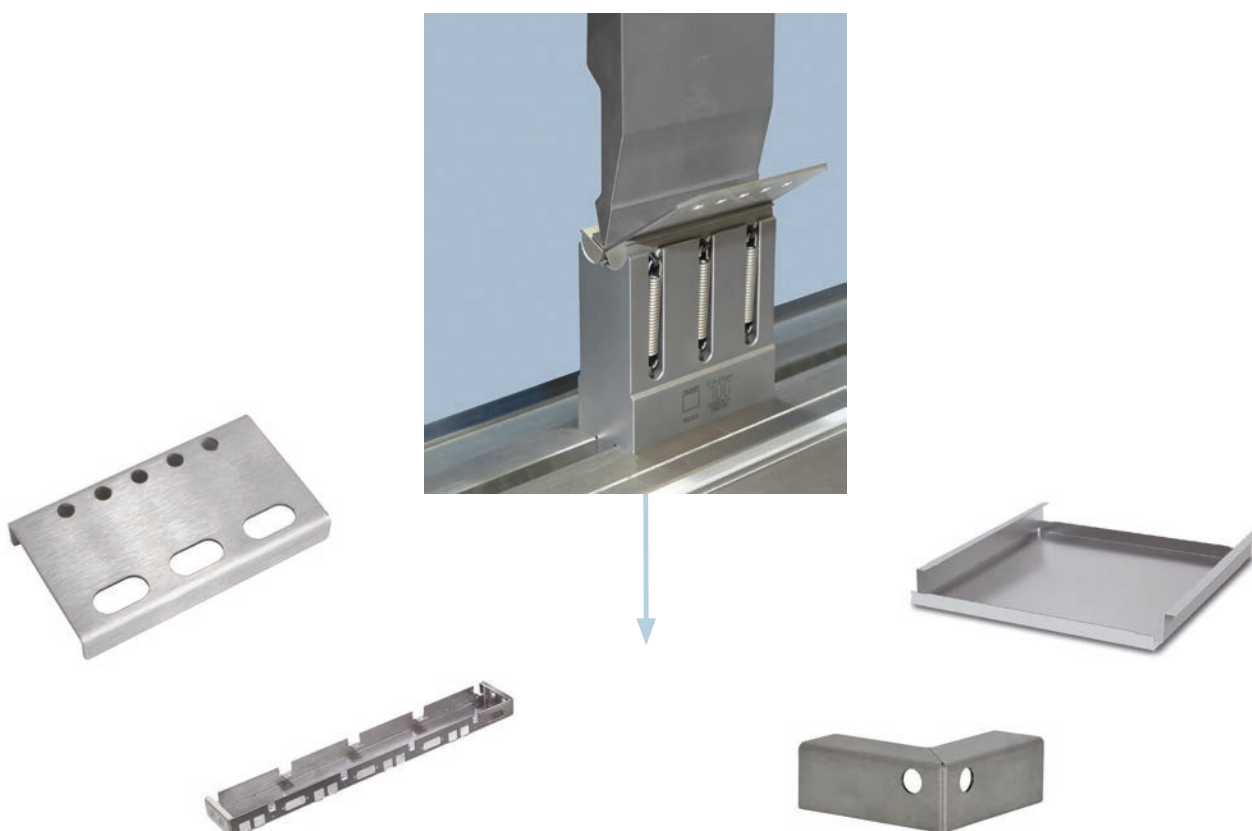
## Advantages

- Producing recesses and holes even near the bending line without deformation
- Extremely short sides can be produced
- Variable sheet thickness
- Hardened jaws. Guaranteed exchangeability through highest precision

## Note

- ACB (automatic angle measurement system) can be used in combination with RollBend
- RollBend can be combined with TRUMPF V dies

### Bending with RollBend



Products



Press force table (kN/m)

| Material | Sheet thickness [mm] | OW | RB 200       | RB 300 | RB 400 | RB 500 | RB 600 |
|----------|----------------------|----|--------------|--------|--------|--------|--------|
|          |                      |    | Punch radius |        |        |        |        |
|          |                      |    | 90°          | 90°    | 90°    | 90°    | 90°    |
| Steel    | 0,5                  | R1 | 30           | 30     | 20     |        |        |
|          | 1,0                  | R1 | 100          | 60     | 40     | 30     |        |
|          | 1,5                  | R1 | 240          | 130    | 90     | 50     |        |
|          | 2,0                  | R1 | 530          | 260    | 150    | 100    | 80     |
|          | 2,5                  | R1 |              | 460    | 270    | 160    | 130    |
|          | 3,0                  | R1 |              | 770    | 510    | 270    | 180    |
|          | 4,0                  | R1 |              |        | 970    | 530    | 400    |
|          | 5,0                  | R4 |              |        |        | 880    | 660    |
|          | 6,0                  | R4 |              |        |        |        | 1050   |

| Material        | Sheet thickness [mm] | OW | RB 200       | RB 300 | RB 400 | RB 500 | RB 600 |
|-----------------|----------------------|----|--------------|--------|--------|--------|--------|
|                 |                      |    | Punch radius |        |        |        |        |
|                 |                      |    | 90°          | 90°    | 90°    | 90°    | 90°    |
| Stainless Steel | 0,5                  | R1 | 30           | 30     | 30     |        |        |
|                 | 1,0                  | R1 | 120          | 70     | 50     | 40     |        |
|                 | 1,5                  | R1 | 330          | 180    | 100    | 80     |        |
|                 | 2,0                  | R1 | 800          | 400    | 230    | 150    | 110    |
|                 | 2,5                  | R1 |              | 680    | 400    | 230    | 170    |
|                 | 3,0                  | R1 |              | 1030   | 750    | 380    | 210    |
|                 | 4,0                  | R1 |              |        | 1350   | 710    | 520    |
|                 | 5,0                  | R4 |              |        |        | 1020   | 780    |
|                 | 6,0                  | R4 |              |        |        |        | 1260   |

| Material  | Sheet thickness [mm] | OW | RB 200       | RB 300 | RB 400 | RB 500 | RB 600 |
|-----------|----------------------|----|--------------|--------|--------|--------|--------|
|           |                      |    | Punch radius |        |        |        |        |
|           |                      |    | 90°          | 90°    | 90°    | 90°    | 90°    |
| Aluminium | 0,5                  | R1 | 20           | 20     | 10     |        |        |
|           | 1,0                  | R1 | 40           | 40     | 20     | 20     |        |
|           | 1,5                  | R1 | 130          | 80     | 50     | 40     |        |
|           | 2,0                  | R1 | 290          | 140    | 70     | 60     | 50     |
|           | 2,5                  | R1 |              | 240    | 150    | 100    | 70     |
|           | 3,0                  | R1 |              | 360    | 260    | 170    | 100    |
|           | 4,0                  | R1 |              |        | 480    | 320    | 240    |
|           | 5,0                  | R4 |              |        |        |        | 350    |
|           |                      |    |              |        |        |        |        |

**Note:** Note load on punch.

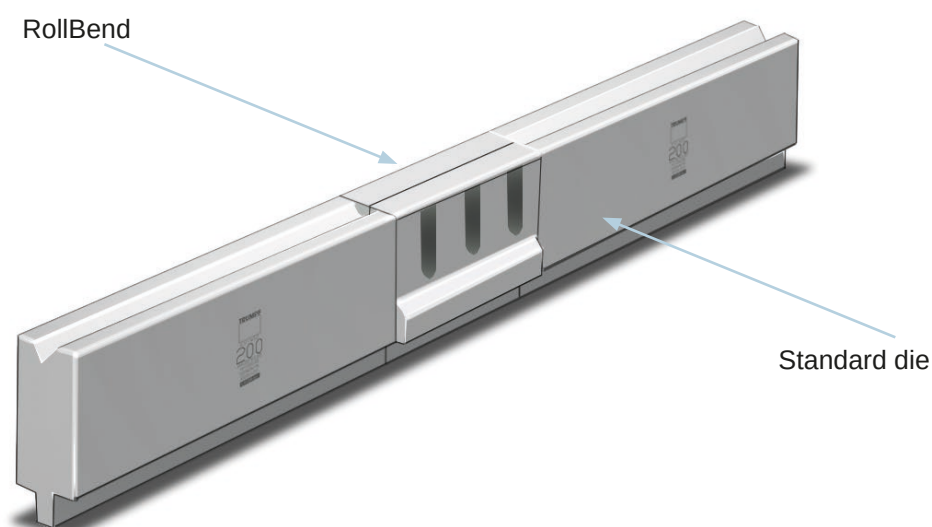
## Combination with V dies

When combined, the load limits of the V dies which are below the load limits of the RollBend dies must be observed. This means that the max. permitted sheet thickness is determined by the single V die used when combining tools.

To keep the different press forces for tool combinations within limits, the following recommended values apply.

| Tool combination     | Steel (max. sheet thickness) | Stainless steel (max. sheet thickness) |
|----------------------|------------------------------|----------------------------------------|
| RB 200 + EV W8/84°   | 1,75 mm                      | 1,50 mm                                |
| RB 300 + EV W12/84°  | 2,50 mm                      | 2,00 mm                                |
| RB 400 + EV W16/84°  | 3,50 mm                      | 3,00 mm                                |
| RB 500 + EV W24/80°  | 4,50 mm                      | 4,00 mm                                |
| RB 600 + EV W30/80 ° | 5,00 mm                      | 5,00 mm                                |

For a bending angle smaller than 90°, RollBend dies cannot be combined with the standard dies listed above.







**Table with minimum side lengths  
(outside dimensions)**

| Material | Punch Radius<br>Sheet thick-<br>ness | RB 200 |     | RB 300 | RB 400 |      | RB 500 |      | RB 600 |      |
|----------|--------------------------------------|--------|-----|--------|--------|------|--------|------|--------|------|
|          |                                      | R0,5   | R1  | R1     | R1     | R3   | R1     | R4   | R1     | R4   |
| Steel    | 0,5                                  | 4,6    | 4,7 | 5,6    | 10,0   | 10,0 |        |      |        |      |
|          | 1,0                                  | 5,3    | 5,3 | 6,8    | 10,1   | 10,0 | 15,6   | 15,7 |        |      |
|          | 1,5                                  | 5,6    | 5,5 | 7,6    | 10,6   | 10,7 | 16,0   | 16,2 |        |      |
|          | 2,0                                  | 5,9    | 6,1 | 8,0    | 10,8   | 11,0 | 16,3   | 17,8 | 19,4   | 19,5 |
|          | 2,5                                  |        |     | 8,2    | 11,1   | 11,2 | 16,4   | 17,9 | 19,8   | 20,0 |
|          | 3,0                                  |        |     | 8,3    | 11,4   | 11,5 | 16,5   | 18,5 | 20,6   | 20,6 |
|          | 4,0                                  |        |     |        | 13,1   | 13,2 | 16,8   | 18,7 | 21,1   | 21,2 |
|          | 5,0                                  |        |     |        |        |      | 17,0   | 19,3 | 22,0   | 22,0 |
|          | 6,0                                  |        |     |        |        |      |        |      | 23,4   | 23,2 |

| Material           | Punch Radius<br>Sheet thick-<br>ness | RB 200 |     | RB 300 | RB 400 |      | RB 500 |      | RB 600 |      |
|--------------------|--------------------------------------|--------|-----|--------|--------|------|--------|------|--------|------|
|                    |                                      | R0,5   | R1  | R1     | R1     | R3   | R1     | R4   | R1     | R4   |
| Stainless<br>Steel | 0,5                                  | 4,7    | 4,8 | 6,1    | 10,1   | 10,1 |        |      |        |      |
|                    | 1,0                                  | 5,5    | 5,4 | 7,4    | 10,3   | 10,1 | 16,4   | 16,3 |        |      |
|                    | 1,5                                  | 5,8    | 5,8 | 8,0    | 11,0   | 11,1 | 17,3   | 16,6 |        |      |
|                    | 2,0                                  | 6,1    | 6,0 | 8,3    | 10,9   | 11,3 | 17,4   | 17,1 | 20,0   | 20,2 |
|                    | 2,5                                  |        |     | 8,4    | 11,1   | 11,2 | 17,6   | 17,5 | 20,2   | 20,7 |
|                    | 3,0                                  |        |     | 8,5    | 11,5   | 11,7 | 17,8   | 17,7 | 20,8   | 20,9 |
|                    | 4,0                                  |        |     |        | 13,2   | 13,3 | 18,1   | 18,0 | 21,4   | 21,2 |
|                    | 5,0                                  |        |     |        |        |      | 18,3   | 18,7 | 22,2   | 22,4 |
|                    | 6,0                                  |        |     |        |        |      |        |      | 23,5   | 23,2 |

| Material  | Punch Radius<br>Sheet thick-<br>ness | RB 200 |     | RB 300 | RB 400 |      | RB 500 |      | RB 600 |      |
|-----------|--------------------------------------|--------|-----|--------|--------|------|--------|------|--------|------|
|           |                                      | R0,5   | R1  | R1     | R1     | R3   | R1     | R4   | R1     | R4   |
| Aluminium | 0,5                                  | 3,5    | 3,6 | 5,7    | 9,8    | 9,8  |        |      |        |      |
|           | 1,0                                  | 4,9    | 5,1 | 7,0    | 9,9    | 9,8  | 15,0   | 14,6 |        |      |
|           | 1,5                                  | 5,1    | 5,5 | 7,7    | 9,9    | 10,0 | 15,5   | 15,3 |        |      |
|           | 2,0                                  | 5,8    | 6,0 | 8,1    | 10,5   | 10,6 | 15,8   | 16,3 | 18,7   | 18,8 |
|           | 2,5                                  |        |     | 8,7    | 10,8   | 11,1 | 16,1   | 16,6 | 19,9   | 19,6 |
|           | 3,0                                  |        |     | 9,0    | 11,4   | 11,8 | 16,4   | 16,7 | 20,0   | 20,4 |
|           | 4,0                                  |        |     |        | 12,4   | 12,7 | 16,9   | 17,2 | 20,8   | 21,3 |
|           | 5,0                                  |        |     |        |        |      |        |      | 21,9   | 21,5 |

**Note:** All values in [mm].

Optimum area of application

# RollBend 1250

## Application

TRUMPF's adjustable RollBend is used to conveniently bend various sheet thicknesses in clamping operations within the thick sheet range. The die widths can be adjusted quickly and easily as desired by the user using setting bars.

## Press force table (kN/m)

| Material | Sheet thickness [mm] | RB 1250 |     |                  |      |      |
|----------|----------------------|---------|-----|------------------|------|------|
|          |                      | W40     | W50 | W60              | W70  | W80  |
|          |                      | 90°     | 90° | Punch radius 90° | 90°  | 90°  |
| Steel    | 3,0                  | 105     | 85  |                  |      |      |
|          | 4,0                  | 240     | 190 | 160              | 130  |      |
|          | 5,0                  | 390     | 310 | 240              | 205  | 175  |
|          | 6,0                  | 630     | 495 | 400              | 330  | 280  |
|          | 8,0                  | 1060    | 830 | 660              | 550  | 460  |
|          | 10,0                 |         |     | 1150             | 970  | 790  |
|          | 12,0                 |         |     |                  | 1390 | 1160 |

| Material        | Sheet thickness [mm] | RB 1250 |      |                  |      |      |
|-----------------|----------------------|---------|------|------------------|------|------|
|                 |                      | W40     | W50  | W60              | W70  | W80  |
|                 |                      | 90°     | 90°  | Punch radius 90° | 90°  | 90°  |
| Stainless Steel | 3,0                  | 130     | 100  |                  |      |      |
|                 | 4,0                  | 280     | 210  | 170              | 140  |      |
|                 | 5,0                  | 500     | 380  | 300              | 250  | 210  |
|                 | 6,0                  | 770     | 590  | 470              | 390  | 320  |
|                 | 8,0                  | 1370    | 1080 | 830              | 680  | 560  |
|                 | 10,0                 |         |      | 1320             | 1160 | 970  |
|                 | 12,0                 |         |      |                  |      | 1570 |

| Material  | Sheet thickness [mm] | RB 1250 |     |                  |     |     |
|-----------|----------------------|---------|-----|------------------|-----|-----|
|           |                      | W40     | W50 | W60              | W70 | W80 |
|           |                      | 90°     | 90° | Punch radius 90° | 90° | 90° |
| Aluminium | 3,0                  | 65      | 55  |                  |     |     |
|           | 4,0                  | 130     | 105 | 85               | 70  |     |
|           | 5,0                  | 210     | 175 | 140              | 120 | 100 |
|           | 6,0                  | 330     | 290 | 210              | 150 | 115 |
|           | 8,0                  | 500     | 410 | 330              | 280 | 230 |
|           | 10,0                 |         |     | 570              | 480 | 400 |
|           | 12,0                 |         |     |                  | 740 | 580 |

**Note:** All specifications for using a punch-radius of R4 - R10.  
Note load on punch.



## Combination with V dies

When combined, the load limits of the V dies which are below the load limits of the RollBend dies must be observed. This means that the max. permitted sheet thickness is determined by the single V die used when combining tools.

To keep the different press forces for tool combinations within limits, the following recommended values apply:

| Tool combination          | Steel<br>(max. sheet<br>thickness) | Stainless steel<br>(max. sheet<br>thickness) |
|---------------------------|------------------------------------|----------------------------------------------|
| RB 1250 W40 + EV W40/80°  | 6,0 mm                             | 6,0 mm                                       |
| RB 1250 W50 + EV W50/80°  | 6,0 mm                             | 6,0 mm                                       |
| RB 1250 W60 + EV W60/80°  | 8,0 mm                             | 8,0 mm                                       |
| RB 1250 W70 + EV W70/80°  | 10,0 mm                            | 10,0 mm                                      |
| RB 1250 W80 + EV W 80/80° | 12,0 mm                            | 12,0 mm                                      |

For a bending angle smaller than 90°, RollBend dies cannot be combined with the standard dies listed above.

## Standard values for minimum flange length (outside dimensions)

|          |                                    | RB 1250        |                |                 |                 |                 |
|----------|------------------------------------|----------------|----------------|-----------------|-----------------|-----------------|
| Material | Punch Radius<br>Sheet<br>thickness | W40<br>R1 - R4 | W50<br>R1 - R4 | W60<br>R4 - R10 | W70<br>R4 - R10 | W80<br>R4 - R10 |
|          |                                    |                |                |                 |                 |                 |
| Steel    | 3,0                                | 27,0           | 34,7           | 42,4            |                 |                 |
|          | 4,0                                | 27,5           | 34,9           | 42,6            | 50,6            |                 |
|          | 5,0                                | 28,0           | 35,1           | 42,8            | 50,8            | 57,0            |
|          | 6,0                                | 28,5           | 35,3           | 43,0            | 51,0            | 57,2            |
|          | 8,0                                | 29,5           | 35,7           | 43,3            | 51,4            | 57,6            |
|          | 10,0                               |                |                | 43,6            | 51,8            | 58,0            |
|          | 12,0                               |                |                |                 | 52,2            | 58,4            |

|                    |                                    | RB 1250        |                |                 |                 |                 |
|--------------------|------------------------------------|----------------|----------------|-----------------|-----------------|-----------------|
| Material           | Punch Radius<br>Sheet<br>thickness | W40<br>R1 - R4 | W50<br>R1 - R4 | W60<br>R4 - R10 | W70<br>R4 - R10 | W80<br>R4 - R10 |
|                    |                                    |                |                |                 |                 |                 |
| Stainless<br>Steel | 3,0                                | 28,0           | 36,0           | 42,5            |                 |                 |
|                    | 4,0                                | 28,4           | 36,1           | 42,7            | 51,0            |                 |
|                    | 5,0                                | 28,8           | 36,3           | 42,8            | 51,2            | 57,2            |
|                    | 6,0                                | 29,2           | 36,4           | 43,0            | 51,4            | 57,4            |
|                    | 8,0                                | 30,0           | 36,6           | 43,4            | 51,8            | 57,8            |
|                    | 10,0                               |                |                | 43,8            | 52,2            | 58,2            |
|                    | 12,0                               |                |                |                 | 52,6            | 58,6            |

|                |                                    | RB 1250        |                |                 |                 |                 |
|----------------|------------------------------------|----------------|----------------|-----------------|-----------------|-----------------|
| Material       | Punch Radius<br>Sheet<br>thickness | W40<br>R1 - R4 | W50<br>R1 - R4 | W60<br>R4 - R10 | W70<br>R4 - R10 | W80<br>R4 - R10 |
|                |                                    |                |                |                 |                 |                 |
| Alu-<br>minium | 3,0                                | 26,5           | 34,4           | 41,0            |                 |                 |
|                | 4,0                                | 27,0           | 34,7           | 41,5            | 48,7            |                 |
|                | 5,0                                | 27,5           | 35,0           | 42,0            | 49,1            | 56,0            |
|                | 6,0                                | 28,0           | 35,3           | 42,5            | 49,5            | 56,2            |
|                | 8,0                                | 29,0           | 35,7           | 43,0            | 50,3            | 56,6            |
|                | 10,0                               |                |                | 43,8            | 51,1            | 57,0            |
|                | 12,0                               |                |                |                 | 51,9            | 57,4            |

Note: All values in [mm]

Optimum area of application

## Application

The stop aids for the TruBend/TrumaBend – called short „QuickStop“ – can be used in 2 and 4 axis machines. Here, QuickStop can be used together on individual (mounted only on one gauge finger) as well as on both gauge fingers.

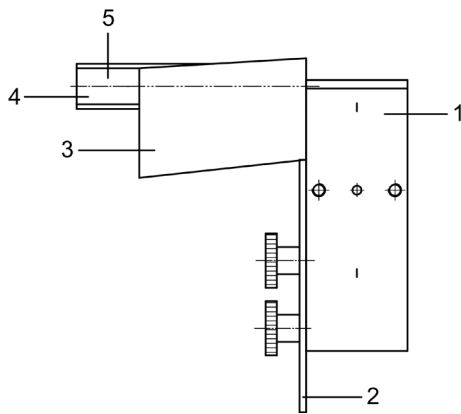
## Application range

- Up to 5 mm sheet thickness
- Bending of smaller and medium parts
- For 2 and 4 axis backgauge

## Note

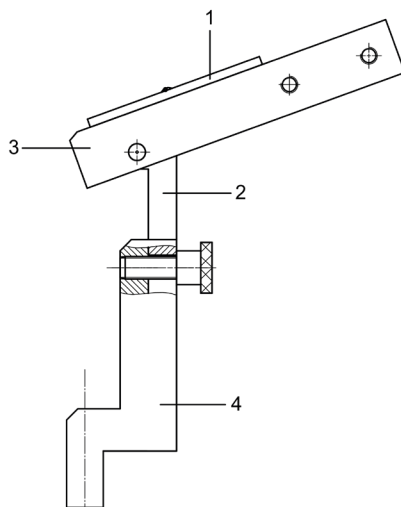
- There might be unevenness in large or thick parts.
- In case of the TruBend/TrumaBend with 6 axis backgauge, QuickStop cannot be used due to the different shape and separate programming option of the gauge fingers.

### Stop situation from above



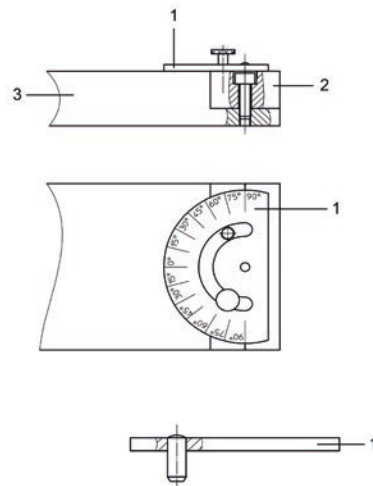
- 1 ... Lateral stop
- 2 ... Front gauge
- 3 ... Product
- 4 ... Die
- 5 ... Bending line

### Lateral stop complete



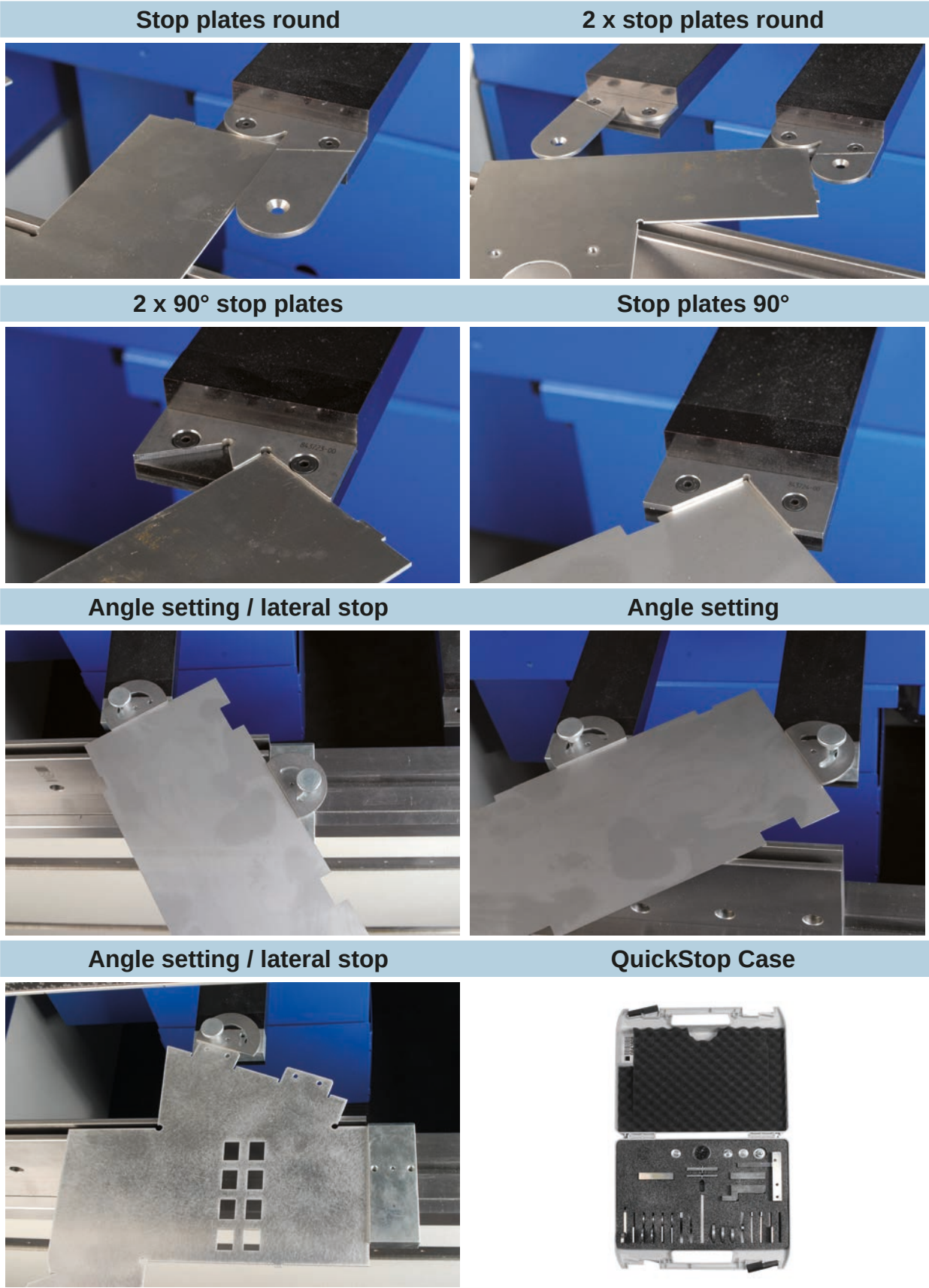
- 1 ... Goniometer
- 2 ... Height adjustment
- 3 ... Rocker
- 4 ... Lateral stop

### Angle setting



- 1 ... Goniometer
- 2 ... Mounting device for goniometer
- 3 ... Gauge finger

# Application examples





## Use of DV adapters

### Application

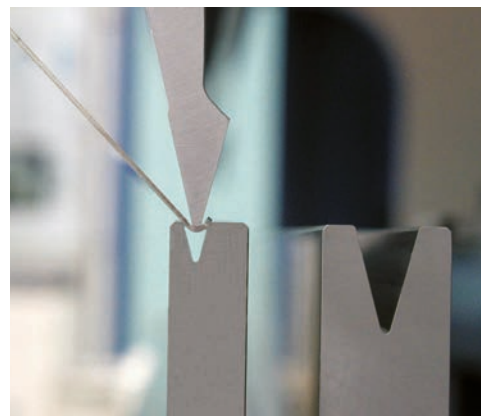
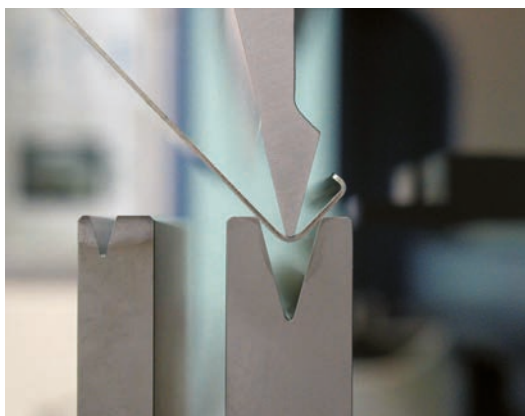
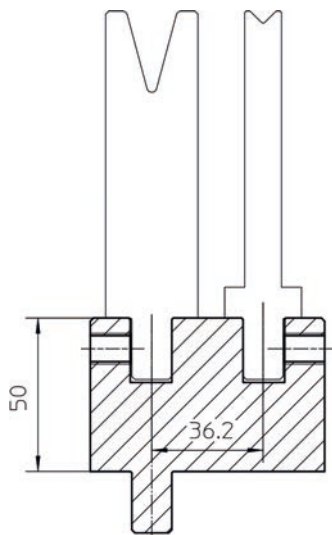
Two different dies can be used with DV adapters. These can be tools that have the same opening angle but different die widths, or vice versa. Another possibility is dies with different working radii or narrow dies combined with dies of normal width.

### Advantages

- Station operation, where the individual stations produce a longer bending length as the bending length of the machine (drawing 2). Various bending lengths can be produced at one station.
- Increase of die height by 50 mm
- Double sheet bends, i.e. various sheet thicknesses in one product (depending on the die width), refer to drawing 1 below.
- Shorter and longer sides in one product (dependent on the die width).
- Technological advantages, e.g. through the use of 84° and 30° dies.
- Two different bending radii can be produced with one punch.

### Note

The displacement is done through the I axis  
(thus not suitable for TruBend series 3000/TrumaBend C series and TruBend Series 7000).

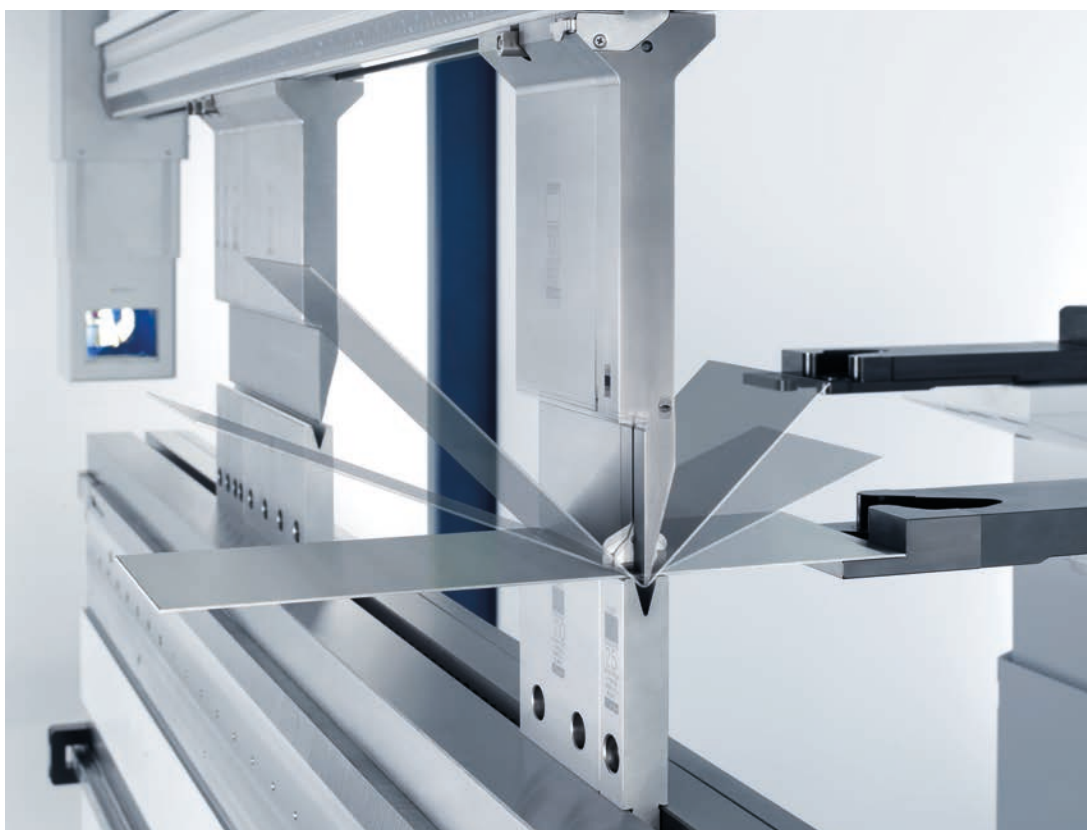




## ACB angle measuring system

### Use the ACB angle measuring system

- **Increase your angle qualities**  
Automatic measurement and regulation always provide a high-precision bending angle.  
**Angle accuracy** → Typically  $\pm 0,3^\circ$
- **Get work started more quickly**  
Time-consuming insertion procedures are dispensed with.
- **React flexibly**  
The ACB angle measuring system measures and regulates the angle, regardless of material variations.
- **Reduce your materials consumption**  
The parts can be made of „nested“ sheets or from remainder sheets, it makes no difference any more to the subsequent bending work cycle.
- **Avoid rejects**  
Bending workpieces that have been processed with the ACB angle measuring system have exact angles.
- **Shorten your machining times**  
Precise-angle workpieces emerge from the TruBend/ TrumaBend which require neither reworking nor renewed measurement for quality assurance purposes.



ACB Wireless angle measuring system, TruBend Series 5000



## Structure of the ACB angle measuring system

### ACB Wireless

The ACB Wireless angle measuring system consists of a ACB sensor tool with sensor discs. The system automatically detects the position of the sensor tools. Communication between sensor tool and control is wireless.

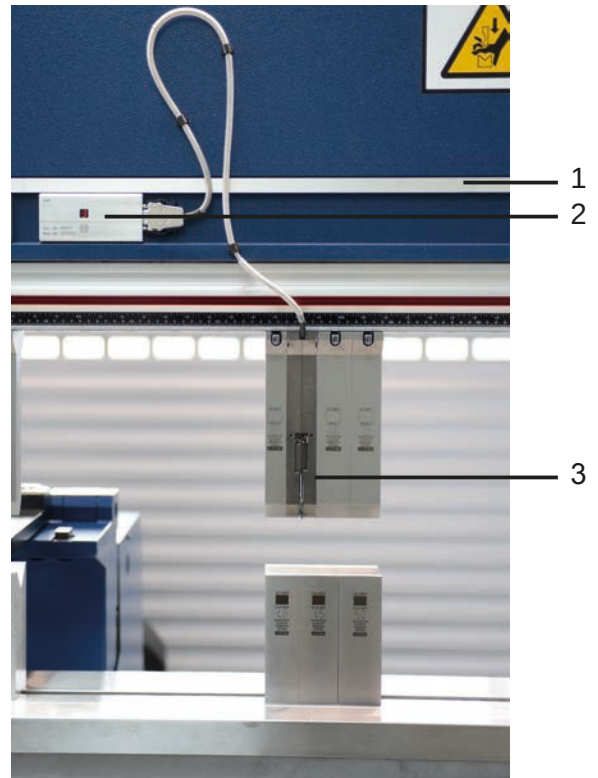
### ACB 2. G.

The ACB angle measuring system consists of a sensor tool with sensor discs and an ACB module for connecting to the control. Magnets are attached to the ACB module and to the connection cables so that the ACB module can be placed anywhere on the press beam.



ACB Wireless angle measuring system  
TruBend Series 5000 (B23), 3<sup>rd</sup> generation

1 ... Sensor tool with sensor discs



ACB angle measuring system 2. G.  
TruBend Series 5000  
TrumaBend V Series (V 500 – V 3200)

1 ... Contact strip for ACB module  
2 ... ACB module  
3 ... Sensor tool with sensor discs

## Thick sheet sensor tool

The DB (thick sheet) sensor tool has been especially adapted to meet the requirements of bending thick sheet metal. It is now possible to bend sheets of up to 15 mm thickness immediately with angle precision.

### Advantages

- Robust casing of the sensor tool (35 mm wide)
- Thick, wear-resistant sensor disks
- Simple, toolless sensor disk replacement
- Overload protection in the form of a joint on the sensor disk holder
- Simple, safe loading into the machine thanks to sturdy Safety-Click

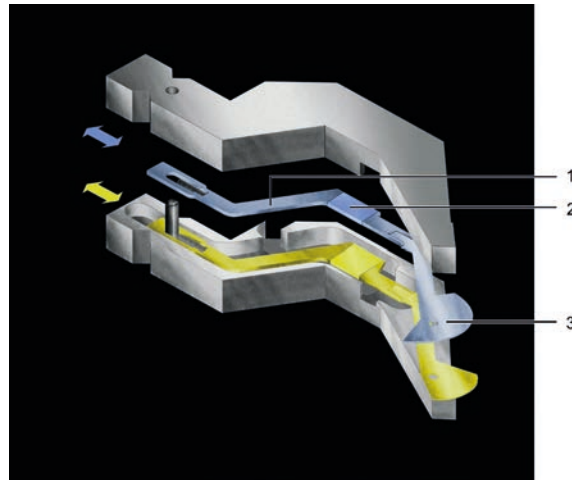




## Measuring principle

### Angle measurement in the punch

The angle measurement system is integrated into the punch and is loaded in the work stations with the conventional punches.



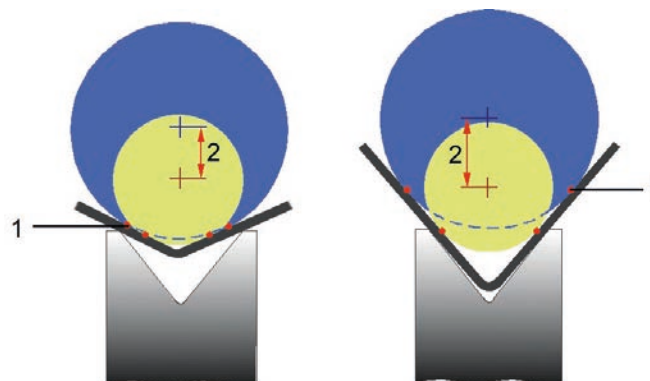
- 1 ... Bracket
- 2 ... Sensor disk holder
- 3 ... Sensor disk

### Four-point measurement with sensor disks

Two sensor disks with different diameters are located in the sensor tool which center themselves in the sides.

During the bending process in the work cycle, the sensor disks acquire 4 contact points on the inner sides of the bend (1). The distance between the disk centers (2) changes with the depth of penetration of the disks.

The system calculates the actual angle from the distance between the disk centers. Different angles create different distances between the disk centers:



1 ... Contact points on the inner sides of the bend

2 ... Distance between the disk centers

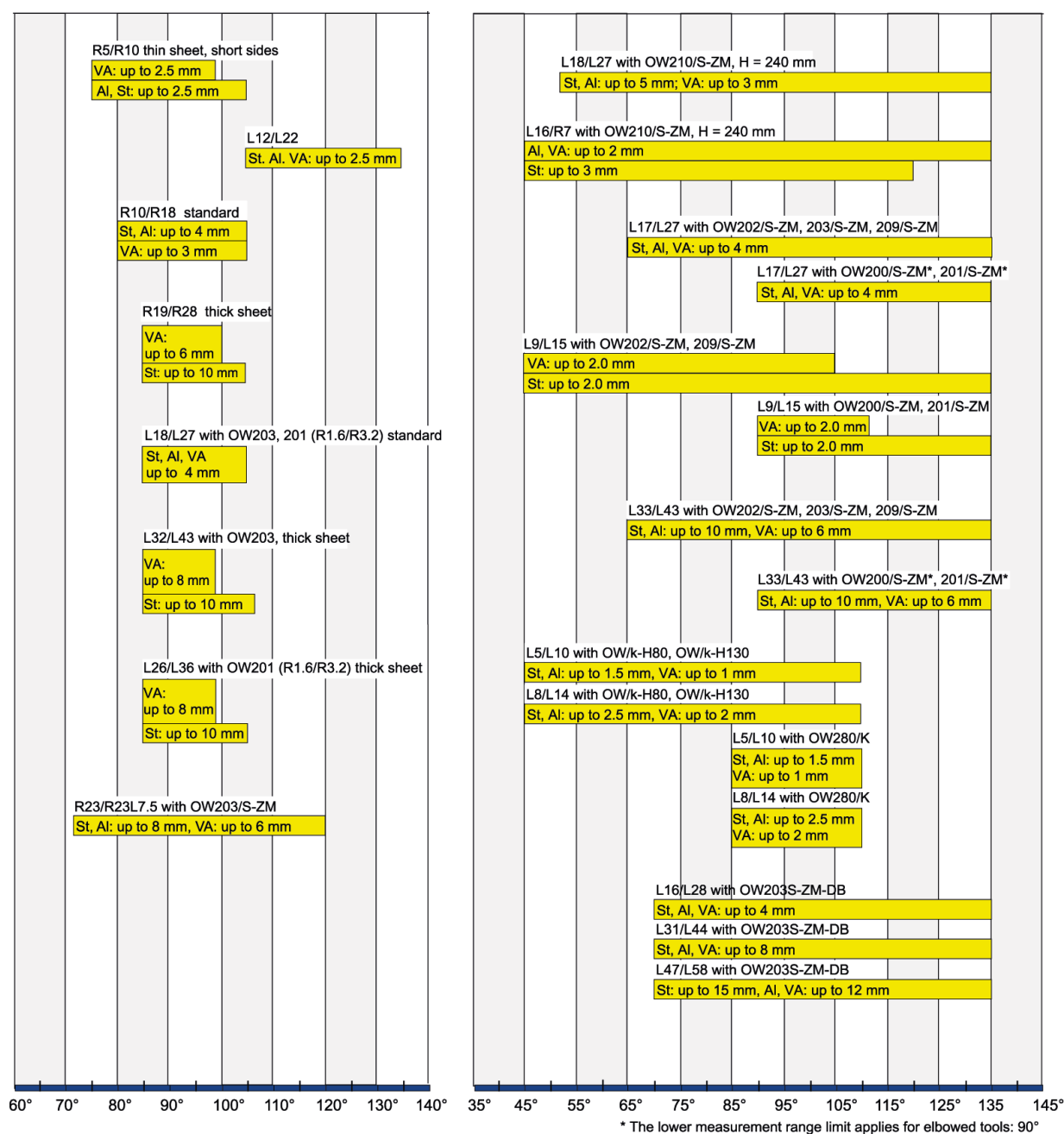
## Areas of utilization of the sensor discs

### Note

Only applies in compliance with the correct tools in relation to the sheet thickness.

### Measurement range

42°-135° (dependent upon material and sensor disks)



The angle range for the sensor disk combination R5/R10 (75° - 105°) does not apply for the tools OW200/K and OW201/K nor for OW200/S and OW201/S (86° tools).

Folding is not possible with the sensor disk combination L18/L27!

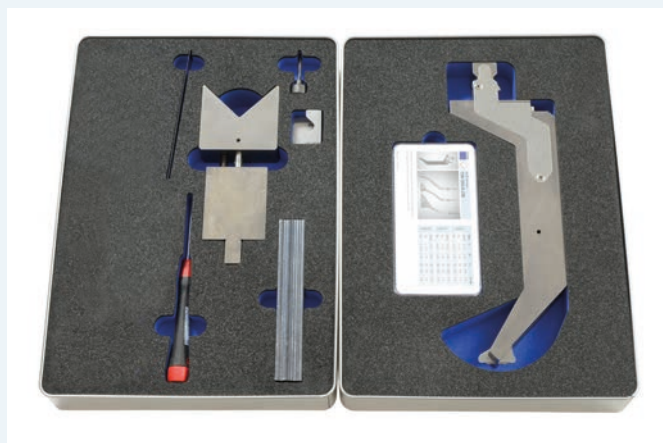


## ACB initial equipment

**Note:** An initial equipment is a requirement for the first machine! A supplementary license is required for each additional machine.

| Technical data                                                 | ACB Wireless                                                    | ACB 2. G.                                                            |
|----------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------|
| Sensor tools                                                   | All usual standard punches.<br>Special radiuses upon request.   | All usual standard punches.<br>Special radiuses upon request.        |
| Tool width                                                     | 25 mm / 35 mm                                                   | 25 mm / 35 mm                                                        |
| Max. number of Sensor tools per ACB module                     |                                                                 | 1                                                                    |
| Max. number of ACB modules per press brake                     |                                                                 | 8                                                                    |
| Max. number of sensors for each bending/Max. number of sensors | 3 / 8                                                           | 3 / 8                                                                |
| <b>Prerequisites</b>                                           |                                                                 |                                                                      |
| Machines                                                       | TruBend Series 5000 (B23), 3rd generation with Wireless Modufix | TruBend Series 5000 (B03/B23)<br>TrumaBend V-Series (V 500 - V 3200) |
| Control system                                                 | Touchpoint                                                      | TASC 6000 / Touchpoint                                               |
| ACB module                                                     |                                                                 | Version A3                                                           |

### Scope of delivery ACB Wireless



#### Initial equipment consisting of:

- 1 ACB Wireless sensor tool (specified by the customer)
- 1 ACB software (form with Code No.)

#### Accessories:

- 1 Locking pin
- 1 90° calibrating die
- 1 Installation device for sensor disks
- 1 Electronic screwdriver 2.5
- 1 Spacer
- 1 Assembly sheet
- 10 Test sheets

### Scope of delivery ACB 2. G.



#### Initial equipment consisting of:

- 1 Sensor tool (specified by the customer)
- 2 ACB module
- 1 ACB software (form with Code No.)

#### Accessories:

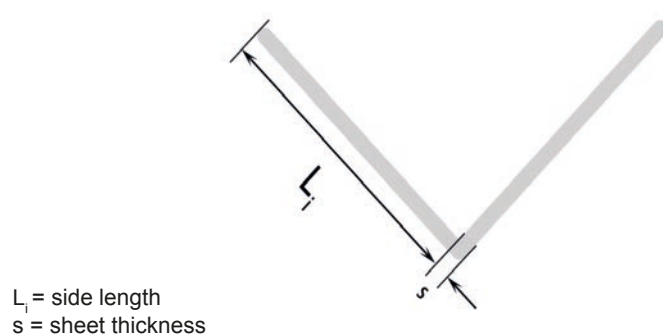
- 1 Locking pin
- 1 90° calibration die + programming diagram
- 1 Installation device for sensor disks
- 1 Electronic screwdriver 2.5
- 1 Spacer
- 1 Assembly sheet
- 10 Test sheets
- 1 Users guide



## Required side length

### Minimum side length $L_i$ – overview

Depending on the material properties and the sensor disk radius, the minimum side length  $L_i$  will vary but it can be reliably determined with the sensor tool.



The following values for  $L_i$  were established in test sequences. The table does not take spring-back angle into account. This way the values for  $L_i$  are independent of materials:

| Sensor discs pair | R5/<br>R10 | R10/<br>R18 | R19/<br>R28 | L5/<br>L10 | L8/<br>L14 | L9/<br>L15 | L12/<br>L22 | L16/<br>R7 | L16/<br>L28 | L17/<br>L27 | L18/<br>L27 | L26/<br>L36 | L31/<br>L44 | L32/<br>L43 | L33/<br>L43 | L47/<br>L58 |
|-------------------|------------|-------------|-------------|------------|------------|------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Angle             |            |             |             |            |            |            |             |            |             |             |             |             |             |             |             |             |
| 40°               |            |             |             | 17.6       | 22.9       | 24.3       |             | 25.7       |             |             |             |             |             |             |             |             |
| 45°               |            |             |             | 15.8       | 20.5       | 21.7       |             | 23.0       |             |             | 37.4        |             |             |             |             |             |
| 50°               |            |             |             | 14.3       | 18.5       | 19.7       |             | 20.9       |             |             | 33.9        |             |             |             |             |             |
| 55°               |            |             |             | 13.1       | 17.0       | 18.0       |             | 19.1       |             |             | 31.0        |             |             |             |             |             |
| 60°               |            |             |             | 12.1       | 15.7       | 16.6       |             | 17.6       |             |             | 28.7        |             |             |             | 44.7        |             |
| 65°               |            |             |             | 11.2       | 14.6       | 15.5       |             | 16.4       | 29.0        | 26.7        | 26.7        |             | 44.6        |             | 41.5        | 57.6        |
| 70°               | 15.3       |             |             | 10.5       | 13.6       | 14.5       |             | 15.3       | 27.0        | 25.0        | 25.0        |             | 41.4        |             | 38.9        | 53.6        |
| 75°               | 14.0       | 24.5        |             | 9.8        | 12.8       | 13.6       |             | 14.4       | 25.2        | 23.5        | 23.5        |             | 38.7        |             | 36.6        | 50.2        |
| 80°               | 12.9       | 22.5        | 34.8        | 9.3        | 12.1       | 12.9       |             | 13.6       | 23.7        | 22.2        | 22.2        | 29.2        | 36.3        | 34.7        | 34.7        | 47.1        |
| 85°               | 11.9       | 20.6        | 31.6        | 8.8        | 11.5       | 12.2       |             | 12.9       | 22.3        | 21.1        | 21.1        | 27.7        | 34.1        | 32.9        | 32.9        | 44.5        |
| 90°               | 11.0       | 19.0        | 29.0        | 8.4        | 10.9       | 11.6       |             | 12.3       | 21.1        | 20.1        | 20.1        | 26.5        | 32.2        | 31.4        | 31.4        | 42.1        |
| 95°               | 10.2       | 17.5        | 26.7        | 8.0        | 10.4       | 11.1       |             | 11.8       | 20.1        | 19.2        | 19.2        | 25.3        | 30.5        | 30.1        | 30.1        | 40.0        |
| 100°              | 9.4        | 16.1        | 24.5        | 7.6        | 10.0       | 10.6       | 15.7        | 11.3       | 19.1        | 18.5        | 18.5        | 24.3        | 29.0        |             | 28.9        | 38.1        |
| 105°              | 8.7        | 14.8        |             | 7.3        | 9.6        | 10.2       | 15.1        | 10.8       | 18.2        | 17.8        | 17.8        |             | 27.6        |             | 27.9        | 36.4        |
| 110°              |            |             |             | 7.0        | 9.2        | 9.8        | 14.6        | 10.4       | 17.4        | 17.2        | 17.2        |             | 26.3        |             | 26.9        | 34.9        |
| 115°              |            |             |             | 6.8        | 8.9        | 9.5        | 14.1        | 10.1       | 16.7        | 16.6        | 16.6        |             | 25.2        |             | 26.1        | 33.5        |
| 120°              |            |             |             | 6.5        | 8.6        | 9.2        | 13.7        | 9.8        | 16.0        | 16.1        | 16.1        |             | 24.1        |             | 25.4        | 32.2        |
| 125°              |            |             |             |            |            | 8.9        | 13.3        | 9.5        | 15.4        | 15.7        | 15.7        |             | 23.1        |             | 24.7        | 31.0        |
| 130°              |            |             |             |            |            | 8.6        | 13.0        | 9.2        | 14.8        | 15.3        | 15.3        |             | 22.2        |             | 24.1        | 29.9        |
| 135°              |            |             |             |            |            | 8.4        | 12.7        | 9.0        | 14.3        | 14.9        | 14.9        |             | 21.4        |             | 23.6        | 29.0        |
| 140°              |            |             |             |            |            |            |             |            |             |             |             |             |             |             |             |             |
| 145°              |            |             |             |            |            |            |             |            |             |             |             |             |             |             |             |             |

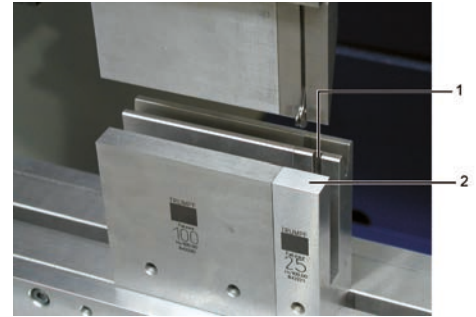
$L_i$  = [mm]



## Folding with the ACB angle measuring system

### Die with groove

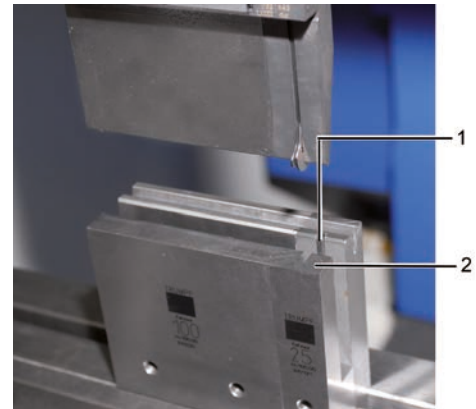
- Punch OW210/S-ZM
- Sensor disks: L16/R7
- Die with groove + FWZ (see Chapter folding)



1 ... Die with groove  
2 ... FWZ

### FWZ with groove (for „rapid“ folding)

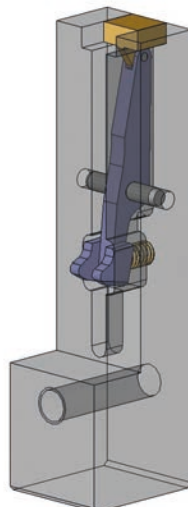
- Punch OW210/S-ZM
- Sensor disks: L16/R7
- Die with groove + FWZ with groove (see Chapter folding)



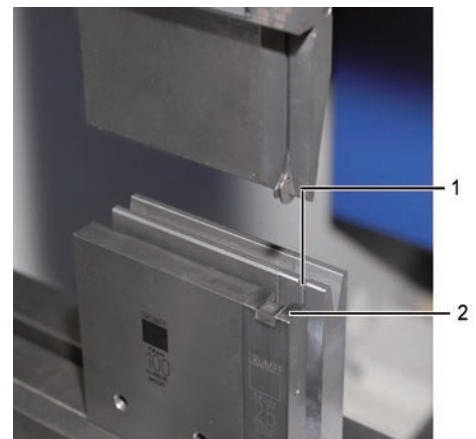
1 ... Die with groove  
2 ... FWZ with groove

### Low-impression FWZ with groove (for „rapid“ folding)

- Punch OW210/S-ZM
- Sensor disks: L16/R7
- Die with groove + low-impression FWZ (see Chapter folding)



Sketch of low-impression FWZ



1 ... Die with groove  
2 ... Low-impression FWZ

## Maintaining and servicing TRUMPF Bending Tools

### General rules for workpiece maintainance

Please comply with the following instructions to ensure a high quality standard for your bending tools and products:

Use gloves in order to avoid rust  
(do not use solvents for degreasing purposes).



In order to achieve an optimum edge result, clean  
the tool adapter thoroughly.



After use, carefully clean and preserve the tools  
(using a commercially available preservative)



Prevent damage by providing contact-free  
storage.

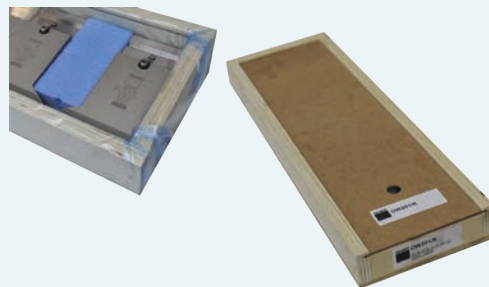




Replace wearing parts on a regular basis (pins, Safety-Click,...) with original TRUMPF replacement parts in order to avoid damage to the Modufix or to the tools



Use TRUMPF security packaging for any return deliveries you might make (please enclose a delivery slip with the merchandise, listing our order number and the precise reason for returning the items). Please coordinate your return delivery by telephone with your sales partner!



## Maintenance accessories

The use of fine-grained polishing substances (e.g.: Sctoch-Brite™) in conjunction with oil can remove unusually severe soiling from the working zones.

As a basic rule, damaged segments should be replaced. Regrinding and renewed hardening are however available upon request. Please note however that combinations with new tools will no longer be possible afterwards because of the dimensional changes involved.

**Scotch-Brite™**  
(see General Accessories)



## Special care tips for processing hot rolled sheet steel

Particles from the scale layer become loose during the press brake bending of hot rolled sheet steel and form deposits on both the dies and the clamping. With inadequate equipment maintenance servicing, this leads to irreparable damage to the tools and impairs the quality of the finished product.



Early and regular maintenance servicing of the elements described above with an oil-soaked rag increases the service life and has a positive effect on the exactness of the bent parts. Determination of the cleaning interval here is always the responsibility of the machine operator.





## Full service

### Full service for bending tools

Despite the extreme wear-resistance of the contact zone of TRUMPF bending tools, wear can occur with certain applications due to the constant relative movement between the tool and the workpiece. When tools are worn, there can no longer be a 100% guarantee for the precision of the bend. The TRUMPF full service (grinding etc.) makes this possible again.

### Your advantages at a glance

- The guarantee of functionality and reliability thanks to full service.
- ACB sensor tools can be reground together with the punches
- For tool segments that can no longer be reworked, there is the possibility of an immediate exchange for new ones.
- New tool data are supplied via USB flash drive or are available in the download area of the My-TRUMPF customer portal - interchangeability is guaranteed again.

**Before**



Example

**After**



### Additional information

Requirement: original TRUMPF tools

Machine types: TruBend Series 3000 / 5000 / 7000, TrumaBend V Series and C Series

Tool data: USB flash drive / MyTRUMPF customer portal download area

## Customized solutions

### Technical customer consulting

Unusual projects need unusual tools: our experts check your inquiry with regard to feasibility and work with you to develop complex special tools according to your specifications. You can rely on our expertise.

### The advantage to you

- No loss of time in finding solutions and testing them
- No loss of production due to missing tools
- Increased productivity

### What we offer

- Experience and expertise in bending technology
- Tools and machine from a single provider

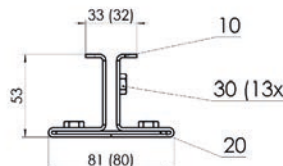
### Sequence Query

From the query to the development stage to the tool.

#### Query

Drawing or sketch

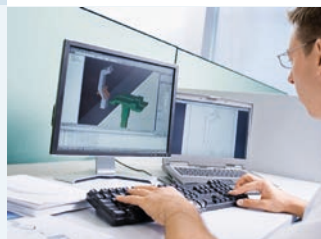
- e-mail (dxf,..), fax, regular mail



#### Development

According to customer requirements

- SolidWorks, ME10, TruTops Bend



#### Quotation

Listing of tools

- Length of piece, geometry sketch, delivery time







## Ordering procedure

### Start of the test phase

- Provision of customer material
- Test with 100 mm long test tools (wire EDM)
- Short response time to contour change
- High contour precision



### Production

- Preparation of 3D production drawings using SolidWorks
- Production of bending tools incorporating the latest machine technology with accuracy down to the  $\mu\text{m}$

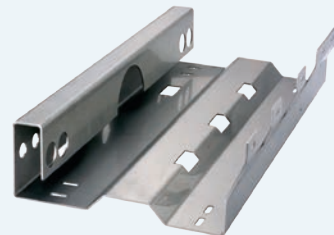


### Test of bending tools with customer's sheet metal

- Establishing the press force, Y position, index positions
- Checking the part geometry



Upon request, a **sample part** will be sent to the customer for checking and approval.



The **bending tools** are sent with control data on a USB stick or available online in the download area of the MyTRUMPF customer portal.







## Special solution examples

You will find some special solution examples on the following pages. You can find these and other tool solutions in the bending technology catalog or in the E-Shop for bending tool under [www.mytrumpf.com](http://www.mytrumpf.com).

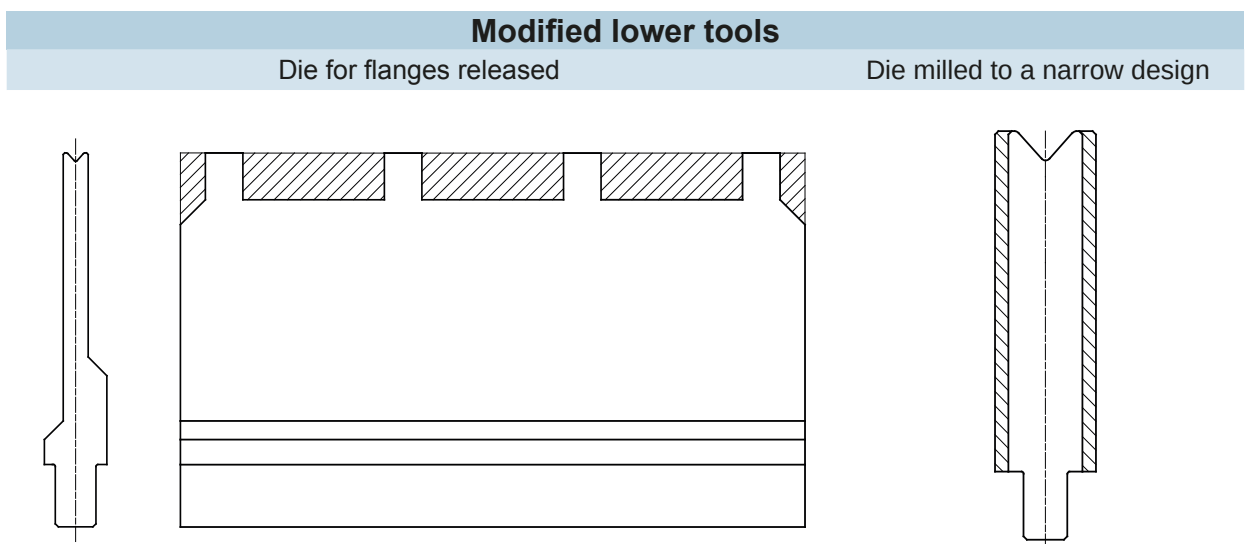
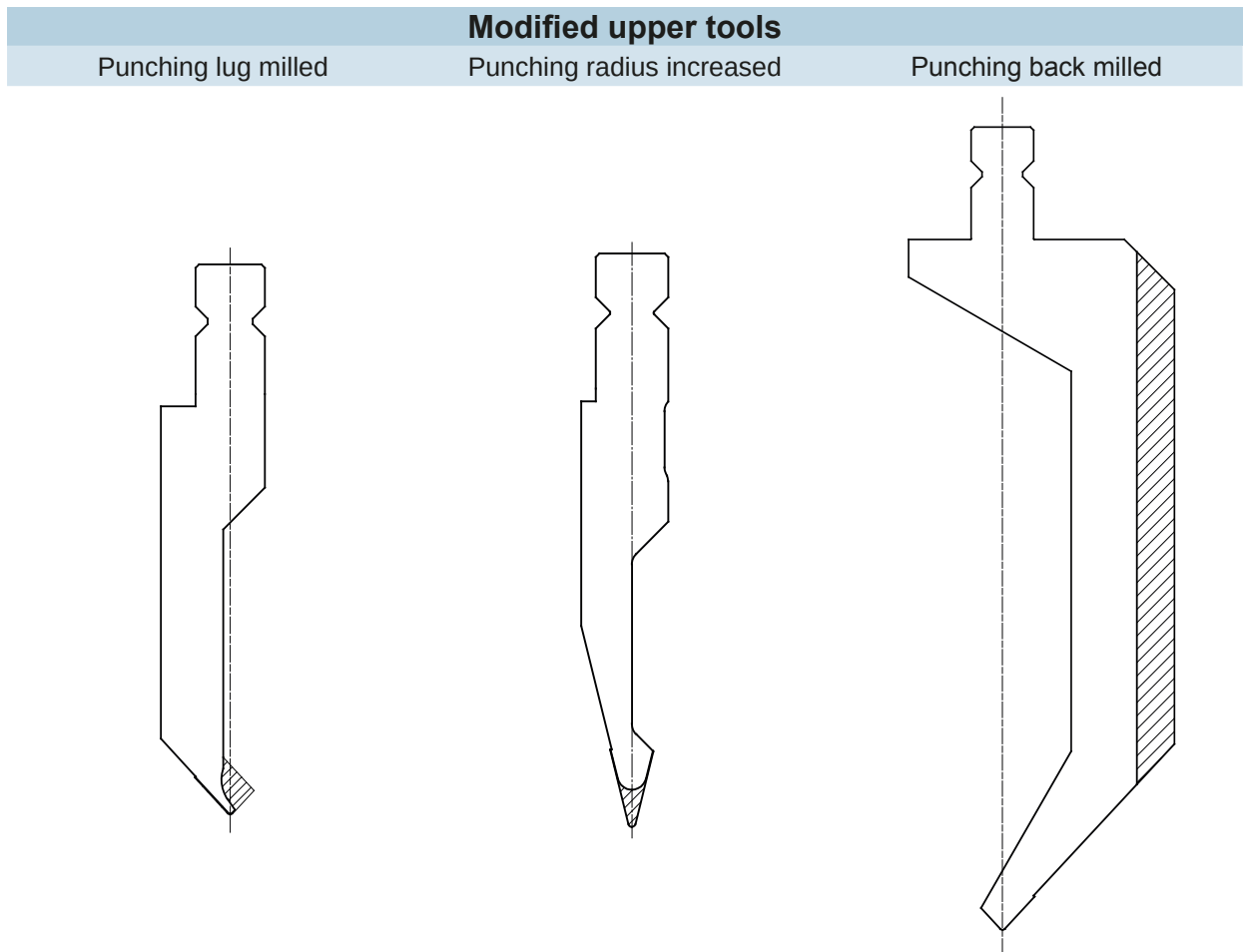


### A small excerpt from the bending type catalog table of contents:

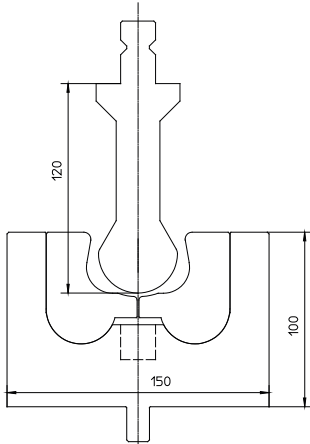
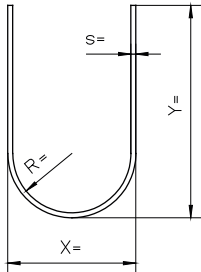
- Radius tools
- Tools for U-parts
- Tools for hat profiles
- Rotating jaw tools
- Clamp tools
- Tools and additional equipment for reduced-imprint bending
- Swivel bending tool
- Countersink forming tools
- Window tools
- Hinge tools
- Upper tool and die rotated by 180°
- Offset bending line
- Reinforcing beads
- Tools for frames
- Coated dies
- Lightweight bending tools

Better yet, see the options offered by TRUMPF for yourself.

The key to success is combining Know – How with quality and technology.  
We believe in technical consultation so that we can do justice to your requirements.



# Large rotating jaw

| Tool                                                                              | Drawing                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>■ Measure the drawing (incl. length).</li><li>■ Specify the tolerances.</li><li>■ Specify the material type: _____</li><li>■ Specify the sheet thickness: _____</li></ul>  |

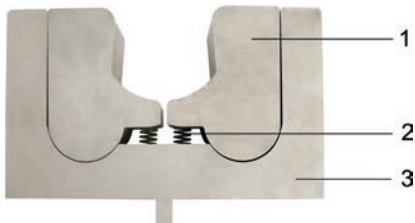
## Producing U parts in one step



Lower tool



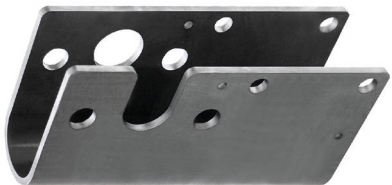
Upper tool



- 1 ... Rotating jaw
- 2 ... Return spring
- 3 ... Rotating jaw body

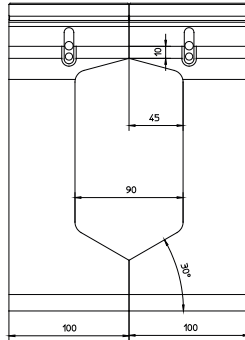


## Product

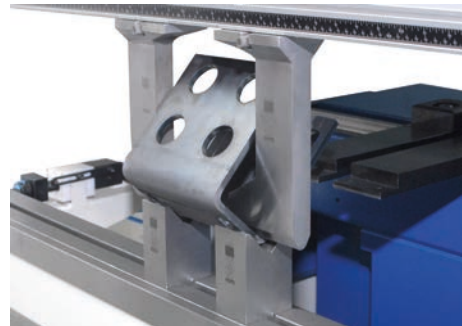
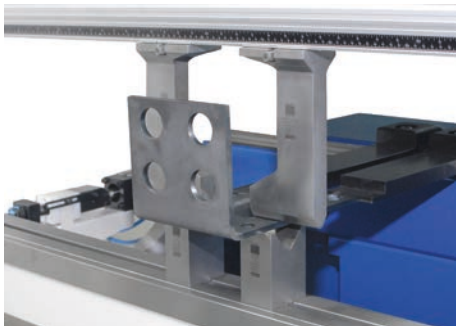
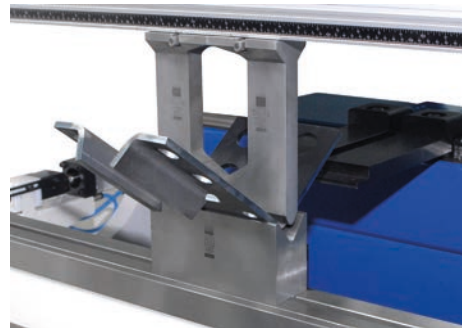
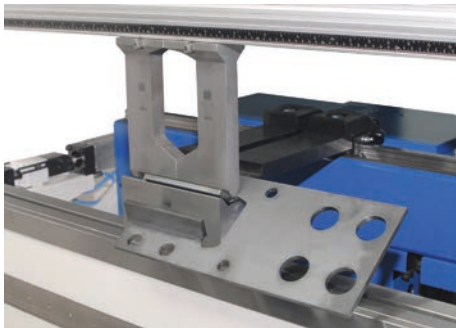


## Horn window tool

Tool



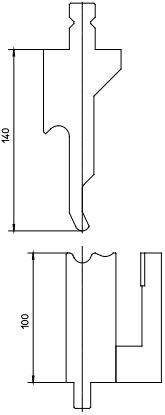
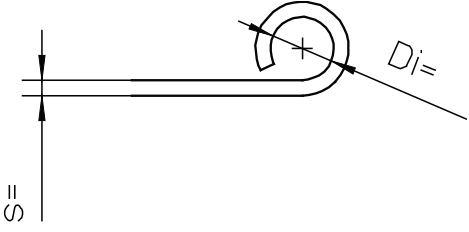
Part swivels in the horn recess



**Product**  
(Frame part for car industrie)



## Hinge tool assembly

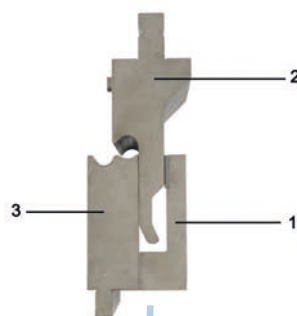
| Tool                                                                              | Drawing                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>■ Measure the drawing (incl. length).</li> <li>■ Specify the tolerances.</li> <li>■ Specify the material type: _____</li> <li>■ Specify the sheet thickness: _____</li> </ul>  |

### Producing hinge in three steps



### Complete tool

- 1 ... Torque stay rod with slide rail
- 2 ... Punch for pre-bending and rolling in
- 3 ... Die for pre-bending and rolling in



### Product





## Addresses / Fax templates

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Österreich Industriepark 24  
A-4061 Pasching

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✉ +43 7221 603 42037  
🌐 [www.trumpf.com](http://www.trumpf.com)  
@ [biegewerkzeuge@at.trumpf.com](mailto:biegewerkzeuge@at.trumpf.com)

### TRUMPF Werkzeugmaschinen Deutschland, Vertrieb + Service GmbH + Co KG

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D-71254, Ditzingen

☎ +49 7156 303 33222  
✉ +49 7156 303-31473  
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✉  
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@ [sten.tammesvirta@tammesvirta-co.fi](mailto:sten.tammesvirta@tammesvirta-co.fi)

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✉ +44-158 2399 261  
🌐 [www.trumpf.com](http://www.trumpf.com)  
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TRUMPF



# FAX REQUEST

## BENDING TOOLS

### Special

Examples for  
**TRUMPF** special bending tools  
 can be found in the catalogue for application examples (or at [mytrumpf.com](http://mytrumpf.com))

Company: \_\_\_\_\_  
 Street: \_\_\_\_\_  
 ZIP code/place: \_\_\_\_\_  
 Contact person: \_\_\_\_\_  
 Telephone/extension: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-mail: \_\_\_\_\_  
 Date: \_\_\_\_\_



#### Important information

(please fill out as completely as possible)

Machine type: \_\_\_\_\_

Desired tool length: \_\_\_\_\_ mm

Mounting height: \_\_\_\_\_

Division: \_\_\_\_\_

Material: ☐ CRS ☐ SST ☐ Alum  
☐ \_\_\_\_\_

**Are there important tolerances:**

☐ No ☐ Yes (Please attach a sketch)

Sheet thickness s: \_\_\_\_\_ mm

Length: \_\_\_\_\_ mm

**Please attach a sketch with an inquiry.**

Radiuses: ☐ R1 ☐ R \_\_\_\_\_ mm  
☐ Should be defined by  
 TRUMPF.

Sketch/comments (we will be glad to accept your drawings in DXF format as well)

