

Tool catalog

Edition 2013



TRUMPF LASER*dur* Bending Tools
TRUMPF ACB® Angle Sensor

Machine Tools / Power Tools
Laser Technology / Electronics
Medical Technology



TRUMPF LASERdur
Bending Tools
TRUMPF ACB[®] Angle Sensor

Edition: **01/2013**

Mat.No.: **1467847 TAT**

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*The **prices** are to be understood as being **exclusive of VAT.***

Before you continue...

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

Please read the section regarding systematic tool divisions on pages 11 to 12 and in the Technical Section chapter.

Reference material

- CD-ROM Bending tools



- E-Shop for Bending tools: <https://www.mytrumpf.com>



Catalog for application examples (available from your sales partner)	
Operator's manual TrumaBend V-Serie (V 50 – V 320)	Mat.No. B317
Operator's manual TruBend Series 3000	Mat.No. B561
Operator's manual TruBend Series 5000 / TrumaBend V-Serie (V 500 – V 3200)	Mat.No. B504
Operator's manual TruBend Series 7000	Mat.No. B631

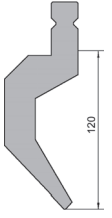
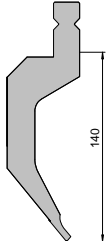
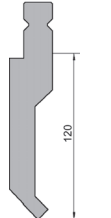
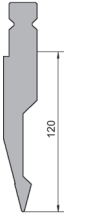
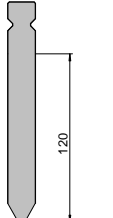
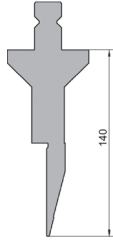
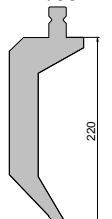

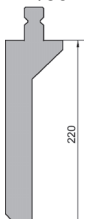
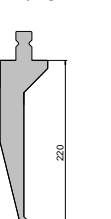
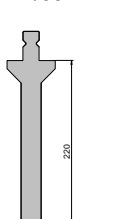
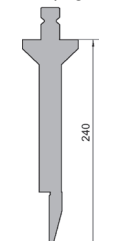
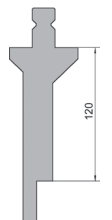
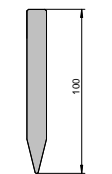
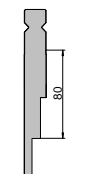
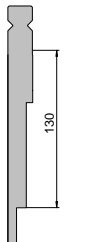
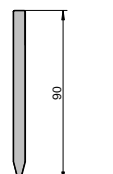
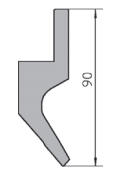
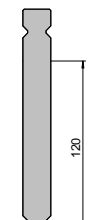
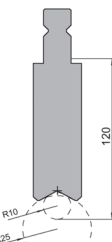
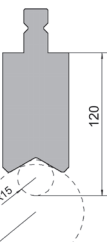
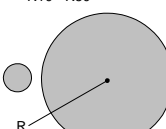
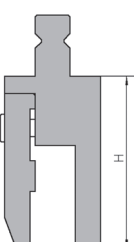
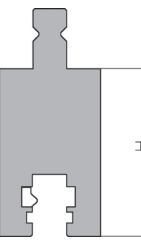
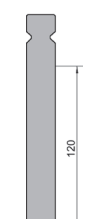
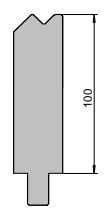
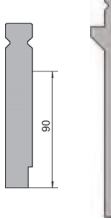


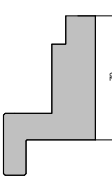
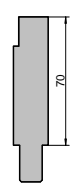
**For further questions,
contact your TRUMPF
sales partner**

See chapter 9

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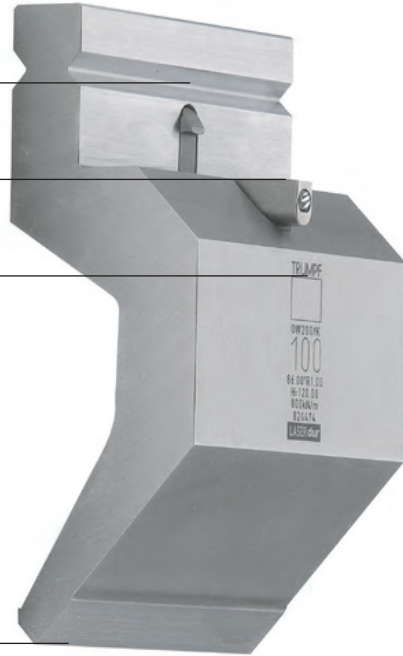
Overview and Important Information

Punches					
<p>OW 200/K R1/86°</p>  <p>120</p> <p>□ 16</p>	<p>OW 280/K R0.5/80°</p>  <p>140</p> <p>□ 20</p>	<p>OW 201/K R1/86°</p>  <p>120</p> <p>□ 24</p>	<p>OW 202/K R1/28°</p>  <p>120</p> <p>□ 28</p>	<p>OW 203/K R4/60°</p>  <p>120</p> <p>□ 32</p>	<p>OW 210 (H=140) R1/28°</p>  <p>140</p> <p>□ 36</p>
<p>OW 200/S R1/86°</p>  <p>220</p> <p>□ 40</p>	<p>OW 300/S R1/86°</p>  <p>300</p> <p>□ 44</p>	<p>OW 201/S R1/86°</p>  <p>220</p> <p>□ 48</p>	<p>OW 202/S R1/28°</p>  <p>220</p> <p>□ 52</p>	<p>OW 203/S R4/60°</p>  <p>220</p> <p>□ 56</p>	<p>OW 210/S (H=240) R1/28°</p>  <p>240</p> <p>□ 60</p>
<p>OW 209/S (for OW320)</p>  <p>120</p> <p>□ 65</p>	<p>OW320 (for OW209/S)</p>  <p>100</p> <p>□ 66</p>	<p>OW/K80 (OW390, OW391)</p>  <p>80</p> <p>□ 70</p>	<p>OW/K130 (OW390, OW391)</p>  <p>130</p> <p>□ 71</p>	<p>OW390</p>  <p>90</p> <p>□ 72</p>	<p>OW391</p>  <p>90</p> <p>□ 72</p>
<p>OW 211 R1/90°</p>  <p>120</p> <p>□ 80</p>	<p>OW308/K R10-R25</p>  <p>120</p> <p>□ 82</p>	<p>OW308/S R15-R40</p>  <p>120</p> <p>□ 82</p>	<p>Round material R10 to R50</p>  <p>R10 - R50</p> <p>□ 83 - 88</p>	<p>Adapter EHT, LVD, Amada</p>  <p>H</p> <p>□ 89</p>	<p>Adapter TRUMPF</p>  <p>H</p> <p>□ 89</p>
Z bending					
<p>OWZ/K 90° Z4-10</p>  <p>120</p> <p>□ 155</p>	<p>EVZ 90° Z4-10</p>  <p>100</p> <p>□ 155</p>	<p>OW/K 90</p>  <p>90</p> <p>□ 160</p>	<p>OW/S 190</p>  <p>190</p> <p>□ 160</p>	<p>ZE 90° Z4-10</p>  <p>30</p> <p>□ 162 - 164</p>	<p>EV/70</p>  <p>30</p> <p>□ 161</p>
					<p>EV/70-M</p>  <p>70</p> <p>□ 161</p>

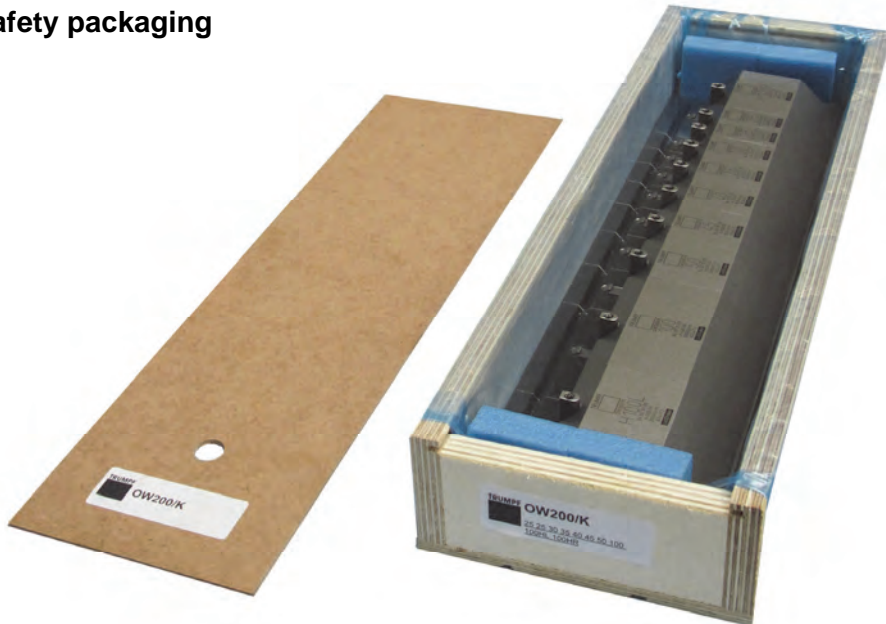
Dies															
30°				30° air bending				30° air bending "narrow"				30° air bending "high"			
	Type	W	R		Type	W	R		Type	W	R				
	EV001	6	0.6		EV/S W4/30°	4	0.6		EV001/H	6	0.6				
	EV002	8	1		EV/S W5/30°	5	0.6		EV002/H	8	1				
	EV003	10	1		EV001/S	6	0.6		EV003/H	10	1				
	EV004	12	1		EV002/S	8	1		EV004/H	12	1				
	EV005	16	1.6		EV003/S	10	1		EV005/H	16	1.6				
	EV006	20	2		EV004/S	12	1		EV006/H	20	2				
	EV007	24	2.5						EV007/H	24	2.5				
	EV W30/30°	30	3												
EV W40/30°	40	5													
EV W50/30°	50	5													
84°				84° air bending				84° air bending "narrow"				84° air bending "high"			
	Type	W	R		Type	W	R		Type	W	R				
	EV W6/84°	6	0.6		EV/S W4/84°	4	0.6		EV/H W6/84°	6	0.6				
	EV W8/84°	8	0.8		EV/S W5/84°	5	0.6		EV/H W8/84°	8	0.8				
	EV W10/84°	10	1		EV/S W6/84°	6	0.6		EV/H W10/84°	10	1				
	EV W12/84°	12	1		EV/S W8/84°	8	0.8		EV/H W12/84°	12	1				
	EV W16/84°	16	1.6		EV/S W10/84°	10	1		EV/H W16/84°	16	1.6				
	EV W20/84°	20	2		EV/S W12/84°	12	1		EV/H W20/84°	20	2				
Low-imp				30° air bending "R3"				30° air bending "KEV"				90° RollBend / Wing Bend			
	Type	W	R		Type	W			Type	H					
	EV001 R3	6	3		KEV W8/30°	8			RB 200	100					
	EV002 R3	8	3		KEV W10/30°	10			RB 300	100					
	EV003 R3	10	3		KEV W12/30°	12			RB 500	100					
	EV004 R3	12	3		KEV W16/30°	16			RB 600	100					
	EV005 R3	16	3		KEV W20/30°	20			WB 120	90					
						KEV W24/30°	24		WB 230	90					
									WB 350	90					
									WB 650	100					
80° (60°)				80° air bending				80° air bending "high"							
	Type	W	R		Type	W	R		Type	W	R				
	EV W24/80°	24	2.5		EV/H W24/80°	24	2.5								
	EV W30/80°	30	5		EV/H W30/80°	30	5								
	EV W40/80°	40	5		EV/H W40/80°	40	5								
	EV W50/80°	50	5		EV/H W50/80°	50	5								
	EV W60/80°	60	5												
	EV W70/80°	70	5												
	EV W80/80°	80	5												
	EV W90/80°	90	8												
	EV W100/80°	100	8												
	EV W120/60°	120	8												
Folding				Folding				Folding "without I axis"				Folding "high"			
	Type	H			Type	W	R		Type	H					
	FWZ	100			FEV W6/30°	6	0.6		FWZ/H	150					
	ZDL	100			FEV W8/30°	8	1		ZDL/H	150					
	MST	100			FEV W10/30°	10	1		MST/H	150					
Coining				90° coining				90° coining "narrow"				Adapter			
	Type	W	R		Type	W	R		Type	H					
	EV040	6	0.6		EV/S W4/90°	4	0.6		TRUMPF EV	50					
	EV041	8	0.8		EV/S W5/90°	5	0.6		TRUMPF DV	50					
	EV042	10	1		EV040/S	6	0.6		EHT	40					
	EV043	12	1		EV041/S	8	0.8		Amada	40					
	EV044	16	1.6		EV042/S	10	1								

Quality is Standard

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



Quality safety packaging




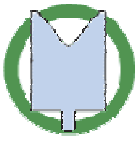
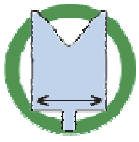



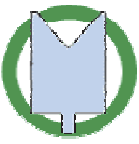



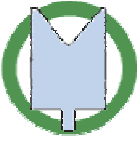





Machine types and tool adaptor

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

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

(Observe installation height of the press brakes)

TruBend/ TrumaBend	Head-bearing tools (OW/K)	Shoulder-bearing tools (OW/S)		Dies	I-axes displacement
 Series 5000/ V series					
 Series 7000					
 Series 3000/ C series		Up to year of manu- facture June 2004	Starting year of manu- facture July 2004		
					

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:

All tool lengths:
 250 tons/meter at head-bearing tools
 300 tons/meter at shoulder-bearing tools


To including year of construction 2001:

Tool length up to 500 mm:
 135 tons/meter at head-bearing tools
 187 tons/meter at shoulder-bearing tools

Tool length exceeding 500 mm:
 180 tons/meter at head-bearing tools
 250 tons/meter at shoulder-bearing tools

Tool clamp

Tools can be rotated by 180°

	<ul style="list-style-type: none"> • Punch partial pieces up to 100 mm in size are equipped with Safety Click security elements and can also be replaced vertically. • The punches are automatically aligned, which means that one can dispense with aligning the tools with the idle stroke during which the working edge of the punch is centered on the bottom of the opening of the die.
---	---

The maximum nesting height

- The maximum nesting height is defined mainly by the installation height of the machine.
- The installation height is the maximum clearance between edge-punch holder and edge-die holder.

Punch height	Max. nesting height
120 mm	64 mm
140 mm	78 mm
220 mm	132 mm
240 mm	145 mm
300 mm	185 mm



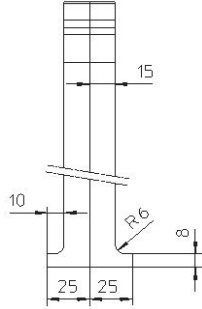

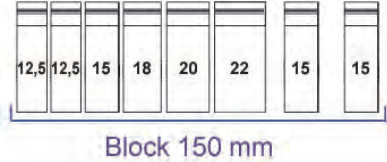




- Calculation by means of CD-ROM and/or E-Shop possible.

Note

See Chapter on Calculations.

System divisions with tools

System division version B	Advantages
<p>Basic division 250 mm</p> <p>100 100 + 100 = 550 mm</p> <p>100 100 + 100 + 2x 200 + 1x 300 = 1050 mm 1250 mm</p> <p>100 100 + 100 + 200 + 300</p> <p>2x 500 = 2050 mm 3x 500 = 2550 mm 4x 500 = 3050 mm 6x 500 = 4050 mm</p> <p>i For weight-dependent division modifications, refer to Technical Section under System Divisions (max. 25 kg/piece).</p>	<ul style="list-style-type: none"> • High flexibility • Short tool set-up time with long tool stations • Low procurement price • Vertically interchangeable up to 100 mm • Fewer tool switches (even greater workpiece quality) • Version most often selected and recommended • Tool lengths from 100 mm are available upon request with 2 Safety Clicks
System division version A	Advantages
<p>100 100 + 25 25 30 35 40 45 50 + 1x 550 mm = 1250 mm</p> <p>Basic division 250 mm</p> <p>100 100 + 25 25 30 35 40 45 50 + 16x 100 = 2050 mm</p>	<ul style="list-style-type: none"> • Maximum flexibility • Minimum tool set-up time • Weight of the individual part pieces very low • All tools can be loaded vertically and horizontally.
Dies	
<p>For dies, the division applies in the same way as for punches. Gooseneck tools are replaced with 100 mm part pieces.</p>	

Additional divisions		Info
<p>OW280/K</p> 	 <p>Block 150 mm</p>	<ul style="list-style-type: none"> This tool division is not included in the B/A standard division. Also available with other tools upon request. Sketch of heels 
<p>OW/K80 OW/K130</p> 	 <p>Block 150 mm</p>	
<p>OW390 OW391</p> 	 <p>Block 150 mm</p>	
<p>EVW 4/30° EVW 5/30°</p> 	 <p>Block 150 mm</p>	

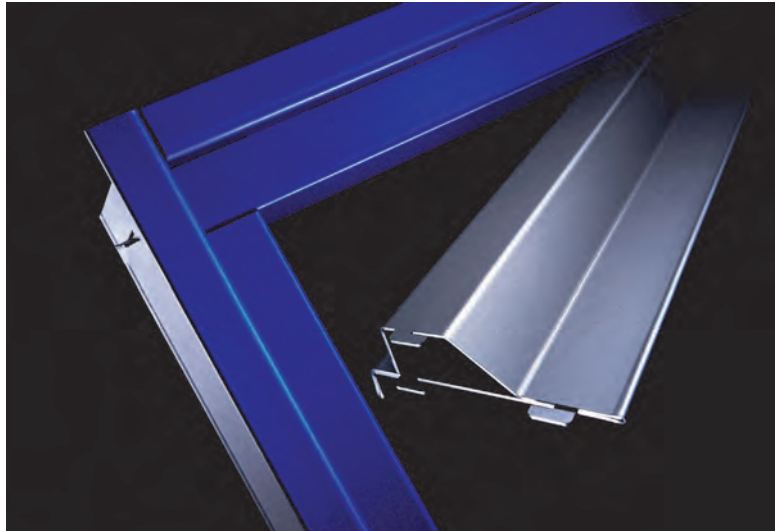
Tool elements < 25 mm, Block 150

Important

- Some punches smaller than 25 mm are delivered without Safety Click (OW.../S, OW200/K).
- 30° dies cannot be supplied with bore holes.

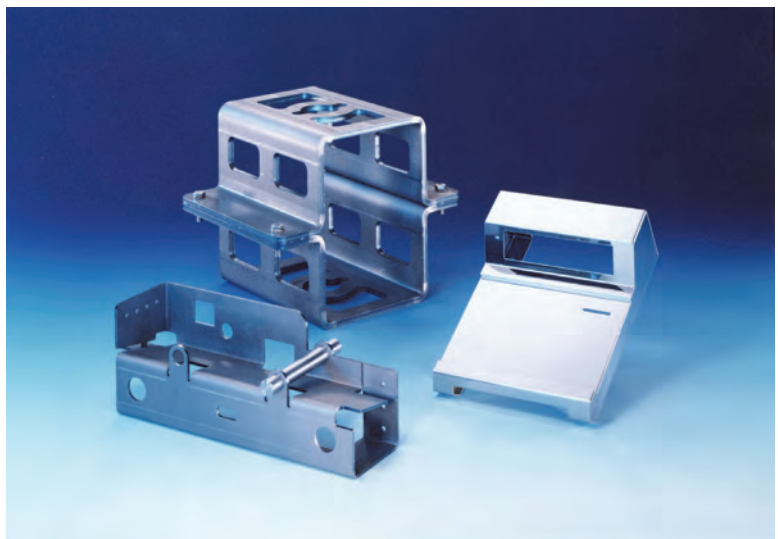
Applications

The sheet metal process chain is accompanied by the central question: how can high-quality parts be produced rapidly and inexpensively? A well-functioning process chain is tailored exactly to sheet metal as a material and to the specifications required by production. The programming is technically oriented. The machine technology is used optimally during production.



- Calculation by means of CD-ROM and/or E-Shop possible.

From a simple sheet metal part to the precision part with its complicated bends: the hydraulic CNC press brakes from TRUMPF put everything in shape. The press brakes of the TruBend Series (3000, 7000 and 5000/TrumaBend V Series) stand for flexible and productive press brake bending. The key to efficient press brake bending does not however lie simply in well-developed machine technology and the intelligent tool system, but primarily in the sensor system. The ACB (Automatically Controlled Bending) angle sensor is a technology developed and patented by TRUMPF.



Additional charges for the modification of standard tools

The prices of the most common modified UT radiuses are already taken into consideration in this price list.

For calculations and requests for special molds, please use the **E-Shop** as well.

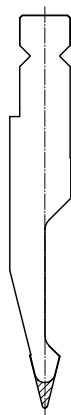
Prices for radius modifications within the values mentioned in the price lists can be determined by an **additional charge**:

- For radius modifications with a height modification, **Additional charge 1 (modification)** shall be used.
- For radius modifications without a height modification, **Additional charge 2 (new manufacture)** shall be used.

Additional charges for modifications outside the values listed in the catalog are available on request.

Valid from total order length 200 mm:

Length [mm]	Additional charge 1	Additional charge 2	
to 100	0	0	EUR
150 block	0	0	EUR
200	0	0	EUR
250 block	0	0	EUR
300	0	0	EUR
500	0	0	EUR
550 block	0	0	EUR
1050 block	0	0	EUR
1250 block	0	0	EUR
2050 block	0	0	EUR
2550 block	0	0	EUR
3050 block	0	0	EUR
4050 block	0	0	EUR



Example **Additional charge 1** (modification)



Example **Additional charge 2** (new manufacture)

Explanation of symbols



Material, tensile strength



Max. load



Weight



Final processing of working surface hardened



Max. nesting height



Shortest side length



Technical information

Dies with bore holes for folding tools



Bore hole available



Bore hole possible (ordering price +10% surcharge)

1. Punches

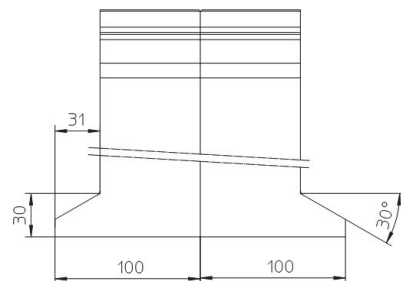
1.1 Punch up to H=140 mm

Punch	Delivery time: ex warehouse		
	OW200/K	R1	Radius
		86°	Angle
	120	Height (mm)	
	Version B	Mat. No.	Price
	Length 4050	0823788	- EUR
	Length 3050	0823787	- EUR
	Length 2550	0835174	- EUR
	Length 2050	0823786	- EUR
	Length 1250	0825696	- EUR
	Length 1050	0867268	- EUR
	Version A		
	Length 2050	0823783	- EUR
	Length 1250	0825695	- EUR
	Length 1050	1576196	- EUR
	Block		
	250	0825692	- EUR
	550	1601819	- EUR
	Single		
	500	0823781	- EUR
	300	0823780	- EUR
	200	0823779	- EUR
	Horn right	0824473	- EUR
	Horn left	0824472	- EUR
	100	0824474	- 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]

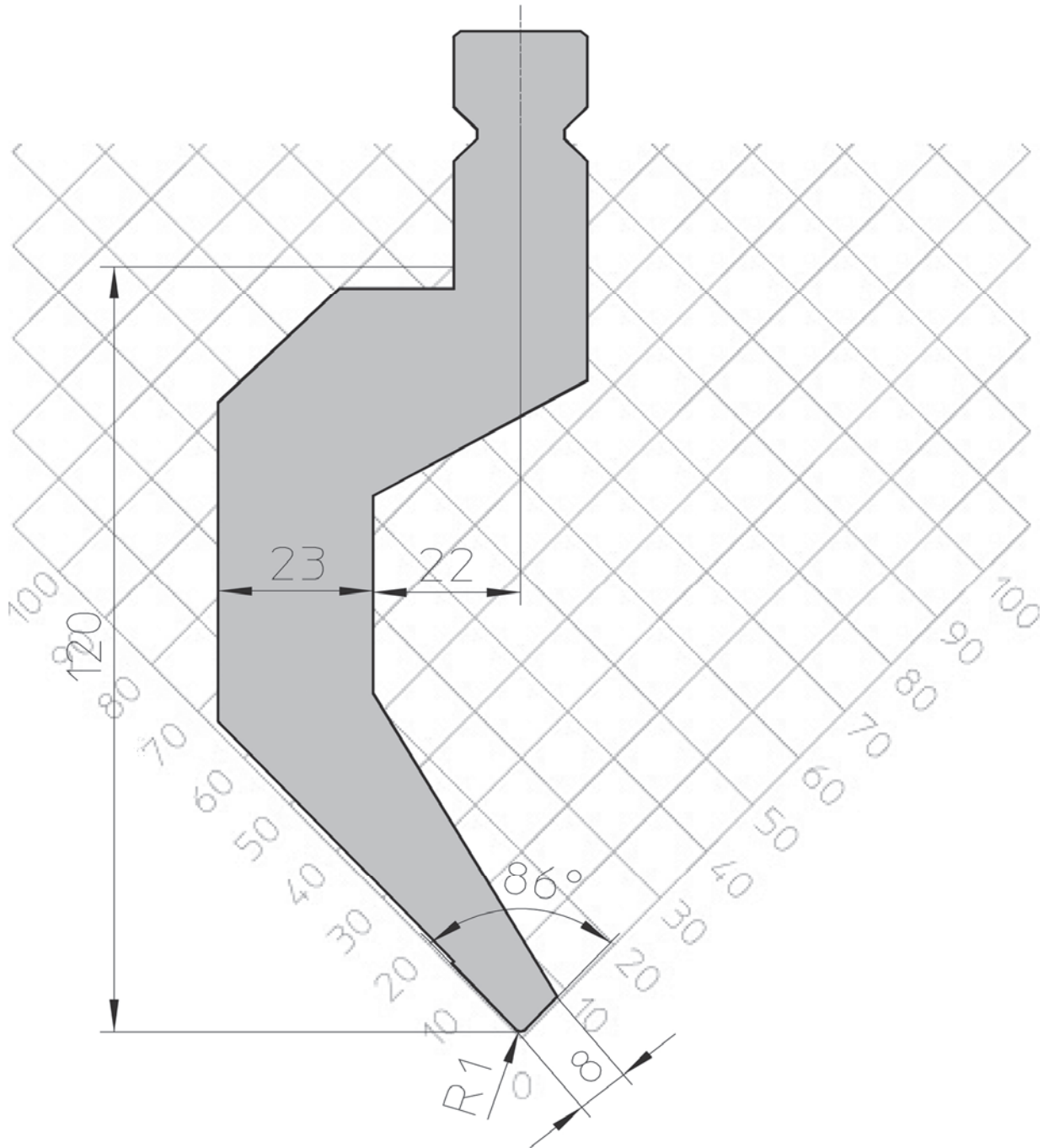
Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	800 kN/m
	29.3 kg/m
	60 – 62 HRC
	65 mm


Horn left/right




Modified working radiuses									Delivery time: 2 weeks	
OW200/K	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2	R4	Radius	
	86°	86°	86°	86°	86°	86°	86°	86°		Angle
	119.8	119.2	119.2	119	119	118.7	118.6	118.3		Height (mm)
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Length 4050	0868289	0868295	0868300	0868312	0868319	0868324	0855080	0868407		- EUR
Length 3050	0846063	0832791	0831478	0839065	0834501	0834516	0839066	0834532		- EUR
Length 2550	0868288	0839388	0847141	0839383	0850076	0853797	0839380	0854438		- EUR
Length 2050	0833552	0839386	0852195	0839384	0854453	0848442	0839381	0848454		- EUR
Length 1250	0848070	0839387	0860478	0839385	0829977	0868325	0839382	0842424		- EUR
Version A										
Length 2050	0868284	0868291	0868296	0868308	0868315	0868321	0868395	0868403		- EUR
Length 1250	0868283	0868290	0866329	0868307	0868314	0868320	0868394	0868402		- EUR
Block										
250	0833575	0832790	0831477	0839331	0829963	0834515	0839282	0834531		- EUR
Single										
500	0833562	0832777	0827213	0839316	0829961	0827226	0839268	0827240		- EUR
300	0833561	0832776	0831471	0839315	0829960	0834506	0839267	0834521		- EUR
200	0833560	0832775	0827212	0839314	0829959	0827225	0839266	0827239		- EUR
Horn right	0833573	0832788	0831475	0839329	0829972	0834513	0839279	0834529		- EUR
Horn left	0833572	0832787	0831474	0839327	0829971	0834512	0839278	0834528		- EUR
100	0833569	0832784	0827218	0839323	0829973	0827234	0839275	0827243		- EUR
50	0833568	0832783	0827217	0839322	0829970	0827233	0839274	0834525		- EUR
45	0833567	0832782	0827216	0839321	0829969	0827232	0839273	0834524		- EUR
40	0833566	0832781	0827215	0839320	0829968	0827231	0839272	0834523		- EUR
35	0833565	0832780	0831473	0839319	0829967	0834508	0839271	0827242		- EUR
30	0833564	0832779	0827214	0839318	0829966	0827230	0839270	0834522		- EUR
25	0833563	0832778	0831472	0839317	0829964	0834507	0839269	0827241		- EUR


Lengths in [mm]








Angle sensor		Delivery time: ex warehouse			
	ACB OW200/K	R1	Radius		
		86°	Angle		
		120	Height (mm)		
	ACB		Mat. No.	Price	
	Sensor tool		0902753	-	EUR
	Initial equipment		0902858	-	EUR
	Initial equipment 2nd gen.		1273588	-	EUR
	Replacement sensor disks				
	L22*		0912267	-	EUR
	L12*		0912266	-	EUR
R28		0902666	-	EUR	
R19		0904046	-	EUR	
R18		0901125	-	EUR	
R10		0901126	-	EUR	
R5		0902436	-	EUR	

The sensor disks marked with a star (*) are not included in the sensor tool scope of delivery.

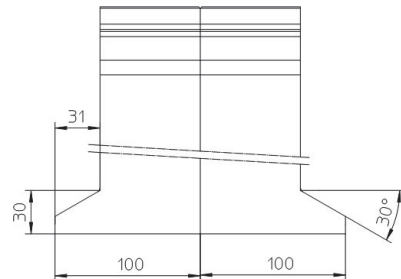
TRUMPF		ACB						
		For bigger tool radii restricted angle measurement ranges are valid ! Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !						
		Mat.	s	W	α	R _{ow}		
R5 / R10	StSt	≤ 2.5	≤ 16	90 - 95	≤ 2			
	St	≤ 2.5	≤ 16	90 - 105	≤ 2			
	Al	≤ 2.5	≤ 16	90 - 105	≤ 2			
R10 / R18	StSt	≤ 3.0	≤ 20	90 - 100	≤ 4			
	St	≤ 4.0	≤ 24	90 - 105	≤ 4			
	Al	≤ 4.0	≤ 24	90 - 105	≤ 4			
R19 / R28	StSt	≤ 6.0	≤ 50	90 - 95	≤ 6			
	St	≤ 10.0	≤ 70	90 - 100	≤ 6			
	Al	≤ 8.0	≤ 70	90 - 100	≤ 6			
L12 / L22	StSt	≤ 2.5	≤ 16	105-135	≤ 3			
	St	≤ 2.5	≤ 16	105-135	≤ 3			
	Al	≤ 2.5	≤ 16	105-135	≤ 3			

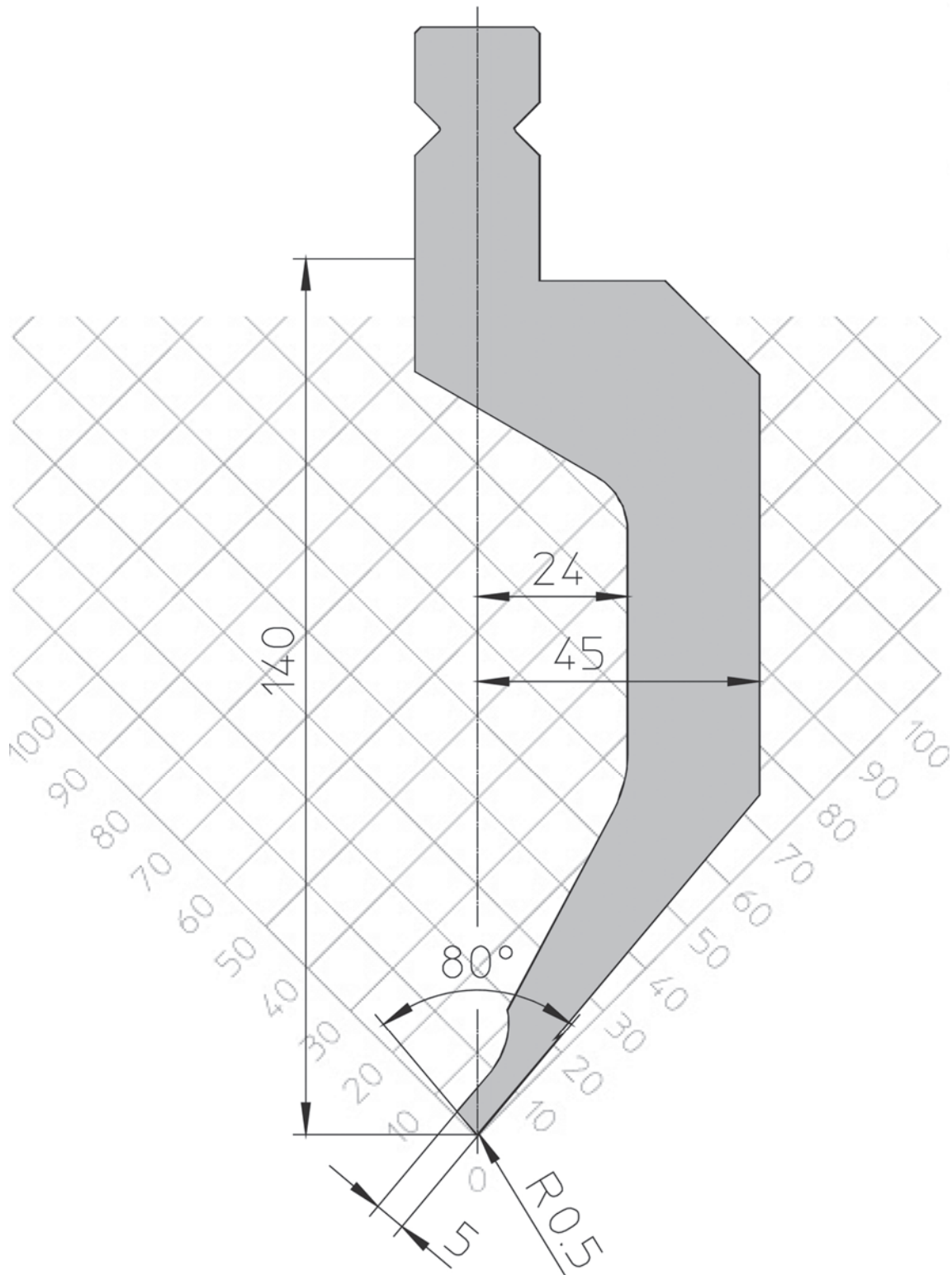
Punch		Delivery time: ex warehouse		
	OW280/K	R0.5	Radius	
		80°	Angle	
	140	Height (mm)		
	Version B	Mat. No.	Price	
	Length 4050	1203552	-	EUR
	Length 3050	1203551	-	EUR
	Length 2550	1203550	-	EUR
	Length 2050	1202371	-	EUR
	Length 1250	0994475	-	EUR
	Length 1050	1483114	-	EUR
	Version A			
	Length 2050	1203506	-	EUR
	Length 1250	1203505	-	EUR
	Length 1050	1607695	-	EUR
	Block			
	150	1207217	-	EUR
	250	0994474	-	EUR
	550	1587197	-	EUR
	Single			
	500	0994464	-	EUR
300	0994463	-	EUR	
200	0994462	-	EUR	
Horn right	0994473	-	EUR	
Horn left	0994472	-	EUR	
100	0994465	-	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]

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	400 kN/m
	30.9 kg/m
	60 – 62 HRC
	78 mm




Horn left/right





Angle sensor	Delivery time: ex warehouse			
	ACB OW280/K	R0.5	Radius	
		80°	Angle	
		140	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	1206823	-	EUR
	Initial equipment	1206824	-	EUR
	Initial equipment 2nd gen.	1273600	-	EUR
	Replacement sensor disks			
	L14	1206832	-	EUR
	L8	1206831	-	EUR
L10	1206830	-	EUR	
L5	1206829	-	EUR	

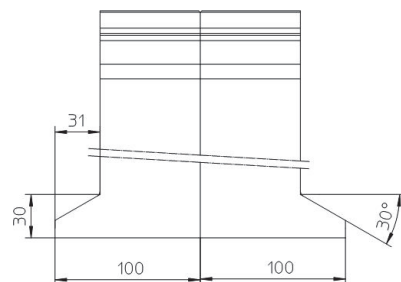
The sensor disks are included in the sensor tool scope of delivery.

 	<p>☞ For bigger tool radii restricted angle measurement ranges are valid !</p> <p>☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !</p>																																						
<p>ACB-Sensor OW280/K</p> 	<table border="1"> <thead> <tr> <th></th> <th>Mat.</th> <th>s</th> <th>W</th> <th>α</th> <th>R_{ow}</th> </tr> </thead> <tbody> <tr> <td rowspan="3">L5 / L10</td> <td>StSt</td> <td>≤ 1.0</td> <td>≤ 8</td> <td>85 - 110</td> <td>≤ 1.0</td> </tr> <tr> <td>St</td> <td>≤ 1.5</td> <td>≤ 10</td> <td>85 - 110</td> <td>≤ 1.5</td> </tr> <tr> <td>Al</td> <td>≤ 1.5</td> <td>≤ 10</td> <td>85 - 110</td> <td>≤ 1.5</td> </tr> <tr> <td rowspan="3">L8 / L14</td> <td>StSt</td> <td>≤ 2.0</td> <td>≤ 12</td> <td>85 - 110</td> <td>≤ 2.0</td> </tr> <tr> <td>St</td> <td>≤ 2.5</td> <td>≤ 16</td> <td>85 - 110</td> <td>≤ 2.5</td> </tr> <tr> <td>Al</td> <td>≤ 2.5</td> <td>≤ 16</td> <td>85 - 110</td> <td>≤ 2.5</td> </tr> </tbody> </table>		Mat.	s	W	α	R _{ow}	L5 / L10	StSt	≤ 1.0	≤ 8	85 - 110	≤ 1.0	St	≤ 1.5	≤ 10	85 - 110	≤ 1.5	Al	≤ 1.5	≤ 10	85 - 110	≤ 1.5	L8 / L14	StSt	≤ 2.0	≤ 12	85 - 110	≤ 2.0	St	≤ 2.5	≤ 16	85 - 110	≤ 2.5	Al	≤ 2.5	≤ 16	85 - 110	≤ 2.5
	Mat.	s	W	α	R _{ow}																																		
L5 / L10	StSt	≤ 1.0	≤ 8	85 - 110	≤ 1.0																																		
	St	≤ 1.5	≤ 10	85 - 110	≤ 1.5																																		
	Al	≤ 1.5	≤ 10	85 - 110	≤ 1.5																																		
L8 / L14	StSt	≤ 2.0	≤ 12	85 - 110	≤ 2.0																																		
	St	≤ 2.5	≤ 16	85 - 110	≤ 2.5																																		
	Al	≤ 2.5	≤ 16	85 - 110	≤ 2.5																																		

Punch		Delivery time: ex warehouse			
	Lengths in [mm]	OW201/K	R1	Radius	
			86°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0823918	-	EUR
		Length 3050	0823917	-	EUR
		Length 2550	0835179	-	EUR
		Length 2050	0823916	-	EUR
		Length 1250	0825685	-	EUR
		Length 1050	0867269	-	EUR
		Version A			
		Length 2050	0823912	-	EUR
		Length 1250	0825684	-	EUR
		Length 1050	1576193	-	EUR
		Block			
		250	0825683	-	EUR
		550	1606659	-	EUR
		Single			
		500	0823908	-	EUR
		300	0823907	-	EUR
200	0823905	-	EUR		
Horn right	0824545	-	EUR		
Horn left	0824542	-	EUR		
100	0824548	-	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		

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	800 kN/m
	24.3 kg/m
	60 – 62 HRC
	65 mm

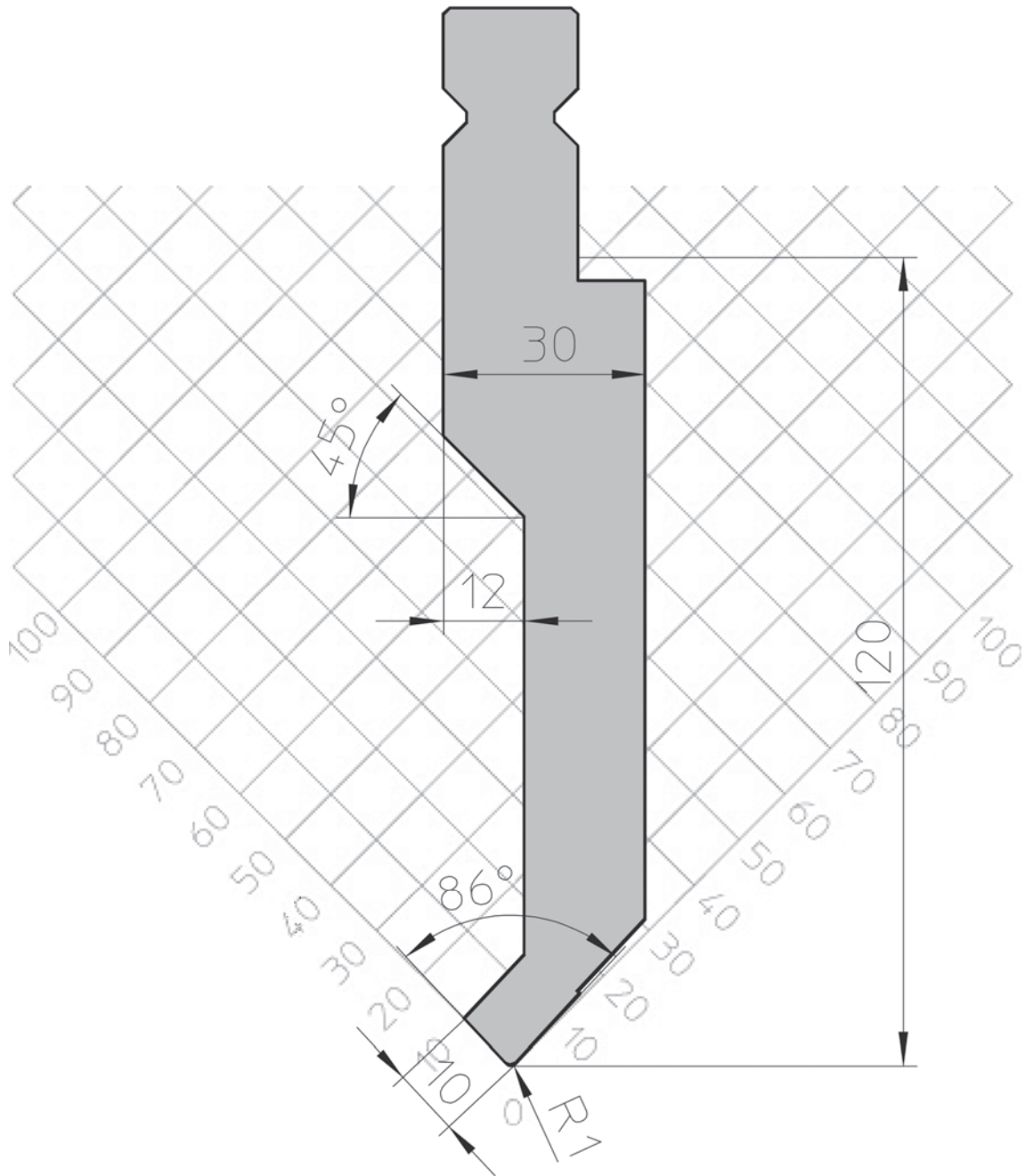
Horn left/right







Modified working radiuses									Delivery time: 2 weeks	
OW201/K	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2	R4	Radius	
	86°	86°	86°	86°	86°	86°	86°	86°		Angle
	119.8	119.4	119.2	119	119	118.8	118.6	118.2		Height (mm)
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Length 4050	0868497	0868656	0826169	0868679	0868688	0868697	0868711	0868719		- EUR
Length 3050	0846122	0839398	0826168	0839402	0859508	0831479	0839406	0859510		- EUR
Length 2550	0868496	0839397	0868660	0839401	0868687	0859662	0839405	0868718		- EUR
Length 2050	0868495	0839396	0826167	0839400	0868686	0850134	0839404	0868717		- EUR
Length 1250	0868494	0839395	0826166	0839399	0868685	0831153	0839403	0848067		- EUR
Version A										
Length 2050	0868490	0868652	0826163	0868675	0868681	0868693	0868707	0868713		- EUR
Length 1250	0868489	0868651	0826162	0868674	0868680	0868692	0868706	0868712		- EUR
Block										
250	0846121	0840090	0826161	0840114	0859507	0831151	0840137	0848066		- EUR
Single										
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
Horn right	0846119	0840088	0826158	0840104	0859505	0831150	0840128	0848064		- EUR
Horn left	0846118	0840087	0826157	0840103	0859504	0831149	0840127	0848063		- EUR
100	0831586	0840086	0826159	0840112	0845639	0831148	0840135	0834061		- 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

Lengths in [mm]



Angle sensor		Delivery time: ex warehouse		
	ACB OW201/K	R1	Radius	
		86°	Angle	
		120	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0902755	-	EUR
	Initial equipment	0908553	-	EUR
	Initial equipment 2nd gen.	1273590	-	EUR
	Replacement sensor disks			
	L22*	0912271	-	EUR
	L12*	0912270	-	EUR
R28	0907795	-	EUR	
R19	0907796	-	EUR	
R18	0907792	-	EUR	
R10	0907793	-	EUR	
R5	0907794	-	EUR	

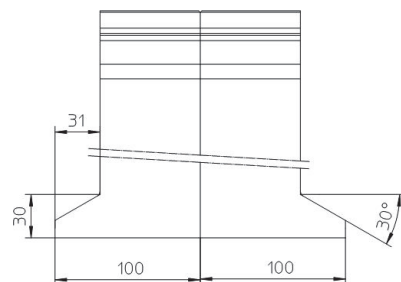
The sensor disks marked with a star (*) are not included in the sensor tool scope of delivery.

TRUMPF		ACB						
							☞ For bigger tool radii restricted angle measurement ranges are valid !	
							☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !	
ACB-Sensor OW201/K		Mat.	s	W	α	R _{ow}		
R5 / R10	StSt	≤ 2.5	≤ 16	90 - 95	≤ 2			
	St	≤ 2.5	≤ 16	90 - 105	≤ 2			
	Al	≤ 2.5	≤ 16	90 - 105	≤ 2			
R10 / R18	StSt	≤ 3.0	≤ 20	90 - 100	≤ 4			
	St	≤ 4.0	≤ 24	90 - 105	≤ 4			
	Al	≤ 4.0	≤ 24	90 - 105	≤ 4			
R19 / R28	StSt	≤ 6.0	≤ 50	90 - 95	≤ 6			
	St	≤ 10.0	≤ 70	90 - 100	≤ 6			
	Al	≤ 8.0	≤ 70	90 - 100	≤ 6			
L12 / L22	StSt	≤ 2.5	≤ 16	105-135	≤ 3			
	St	≤ 2.5	≤ 16	105-135	≤ 3			
	Al	< 2.5	< 16	105-135	≤ 3			

Punch		Delivery time: ex warehouse			
	Lengths in [mm]	OW202/K	R1	Radius	
			28°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0823827	-	EUR
		Length 3050	0823826	-	EUR
		Length 2550	0835183	-	EUR
		Length 2050	0823825	-	EUR
		Length 1250	0825705	-	EUR
		Length 1050	0867272	-	EUR
		Version A			
		Length 2050	0823822	-	EUR
		Length 1250	0825704	-	EUR
		Length 1050	1579145	-	EUR
		Block			
		250	0825658	-	EUR
		550	1606730	-	EUR
		Single			
		500	0823820	-	EUR
		300	0823819	-	EUR
200	0823818	-	EUR		
Horn right	0824601	-	EUR		
Horn left	0824599	-	EUR		
100	0824603	-	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		

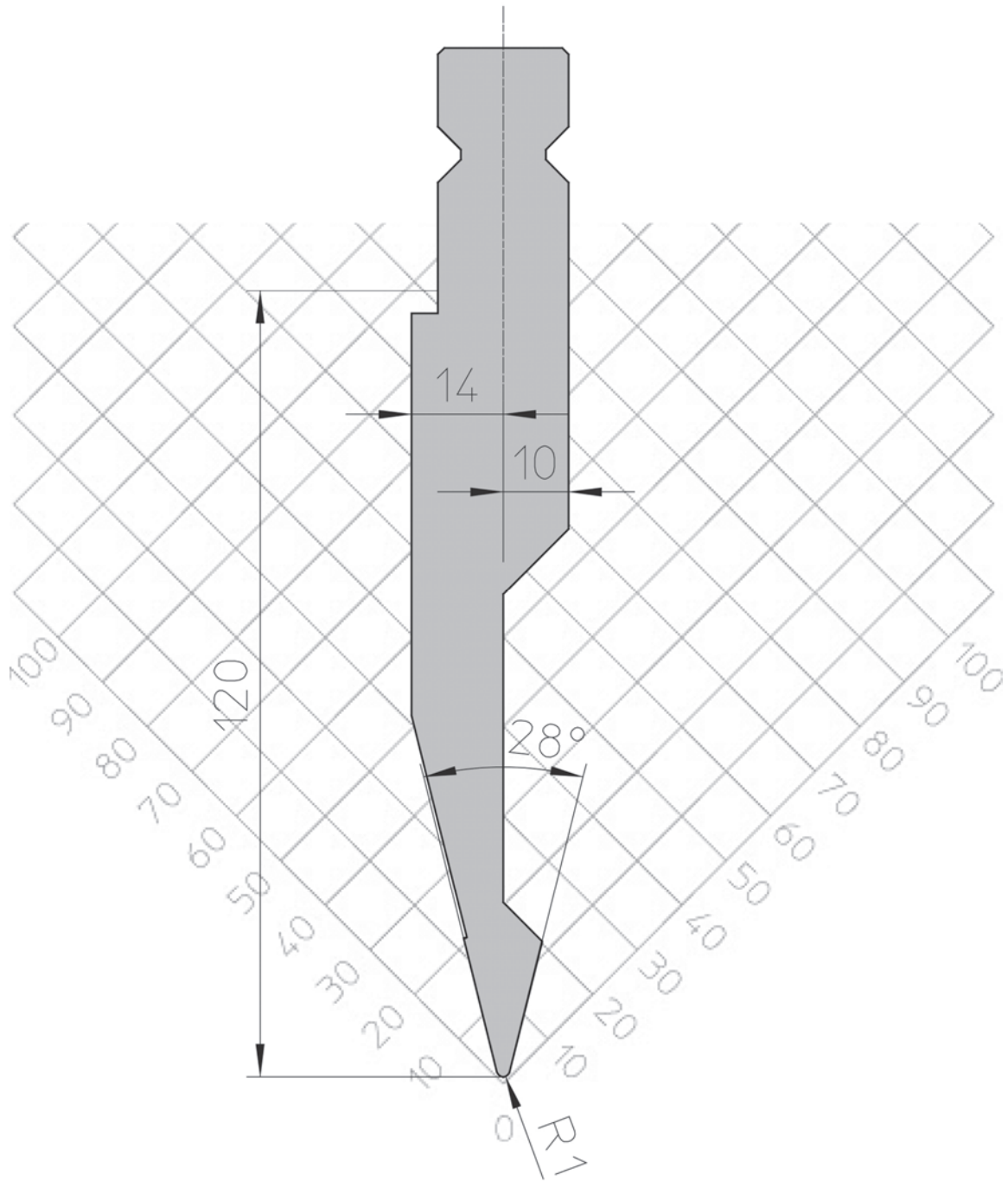
Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	600 kN/m (≤ 800 kN/m)
	19.7 kg/m
	60 – 62 HRC
	65 mm


Horn left/right




Modified working radiuses									Delivery time: 2 weeks	
OW202/K	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2	R4	Radius	
	28°	28°	28°	28°	28°	28°	28°	28°	Angle	
	119.8	117.2	116	115.1	114.4	112.8	112.7	109.8	Height (mm)	
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Length 4050	0868521	0868551	0868558	0868564	0868631	0868639	0868644	0868650	-	EUR
Length 3050	0829264	0839414	0848038	0839392	0859511	0868638	0839389	0840414	-	EUR
Length 2550	0868520	0839413	0868557	0837579	0856001	0868637	0837580	0856002	-	EUR
Length 2050	0866975	0839412	0848443	0839393	0827267	0832092	0839390	0842426	-	EUR
Length 1250	0839904	0839411	0841286	0839394	0831538	0850922	0839391	0848582	-	EUR
Version A										
Length 2050	0868516	0868547	0868553	0868560	0868627	0868633	0868640	0868646	-	EUR
Length 1250	0868515	0868546	0868552	0868559	0868626	0868632	0840008	0868645	-	EUR
Block										
250	0829262	0840067	0841285	0837836	0827266	0832091	0837892	0840413	-	EUR
Single										
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
Horn right	0829258	0840065	0841282	0837834	0827264	0832089	0837890	0840411	-	EUR
Horn left	0829257	0840064	0841281	0837833	0827263	0832088	0837889	0840410	-	EUR
100	0829259	0840061	0841283	0837830	0827262	0832085	0837886	0840401	-	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

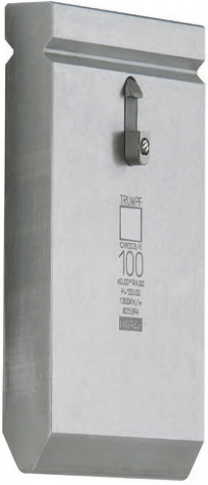
Lengths in [mm]








Angle sensor	Delivery time: ex warehouse			
	ACB OW202/K	R1	Radius	
		28°	Angle	
		120	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0902757	-	EUR
	Initial equipment	0903026	-	EUR
	Initial equipment 2nd gen.	1273592	-	EUR
	Replacement sensor disks			
	L22*	0912273	-	EUR
	L12*	0912272	-	EUR
	R28	0902668	-	EUR
	R19	0904178	-	EUR
R18	0901129	-	EUR	
R10	0901130	-	EUR	
R5	0902438	-	EUR	

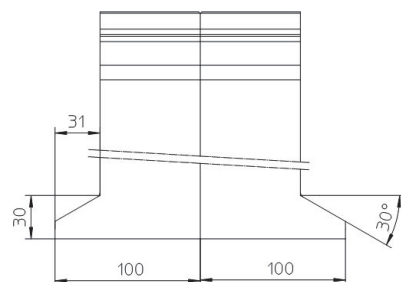
The sensor disks marked with a star (*) are not included in the sensor tool scope of delivery.

TRUMPF	ACB	<p>☞ For bigger tool radii restricted angle measurement ranges are valid !</p> <p>☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !</p>				
ACB-Sensor OW202/K						
		Mat.	s	W	α	R_{ow}
	R5 / R10	StSt	≤ 2.5	≤ 16	75 - 95	≤ 2
		St	≤ 2.5	≤ 16	75 - 105	≤ 2
		Al	≤ 2.5	≤ 16	75 - 105	≤ 2
	R10 / R18	StSt	≤ 3.0	≤ 20	80 - 100	≤ 4
		St	≤ 4.0	≤ 24	80 - 105	≤ 4
		Al	≤ 4.0	≤ 24	80 - 105	≤ 4
	R19 / R28	StSt	≤ 6.0	≤ 50	85 - 95	≤ 6
		St	≤ 10.0	≤ 70	85 - 100	≤ 6
		Al	≤ 8.0	≤ 70	85 - 100	≤ 6
	L12 / L22	StSt	≤ 2.5	≤ 16	105-135	≤ 3
		St	≤ 2.5	≤ 16	105-135	≤ 3
		Al	≤ 2.5	≤ 16	105-135	≤ 3

Punch		Delivery time: ex warehouse			
	Lengths in [mm]	OW203/K	R4	Radius	
			60°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0825385	-	EUR
		Length 3050	0825384	-	EUR
		Length 2550	0835187	-	EUR
		Length 2050	0825383	-	EUR
		Length 1250	0825711	-	EUR
		Length 1050	0867273	-	EUR
		Version A			
		Length 2050	0825380	-	EUR
		Length 1250	0825710	-	EUR
		Length 1050	1606787	-	EUR
		Block			
		250	0825709	-	EUR
		550	1606786	-	EUR
		Single			
		500	0825378	-	EUR
		300	0825377	-	EUR
200	0825376	-	EUR		
Horn right	0825393	-	EUR		
Horn left	0825392	-	EUR		
100	0825394	-	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		

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	1300 kN/m
	23.5 kg/m
	60 – 62 HRC
	65 mm

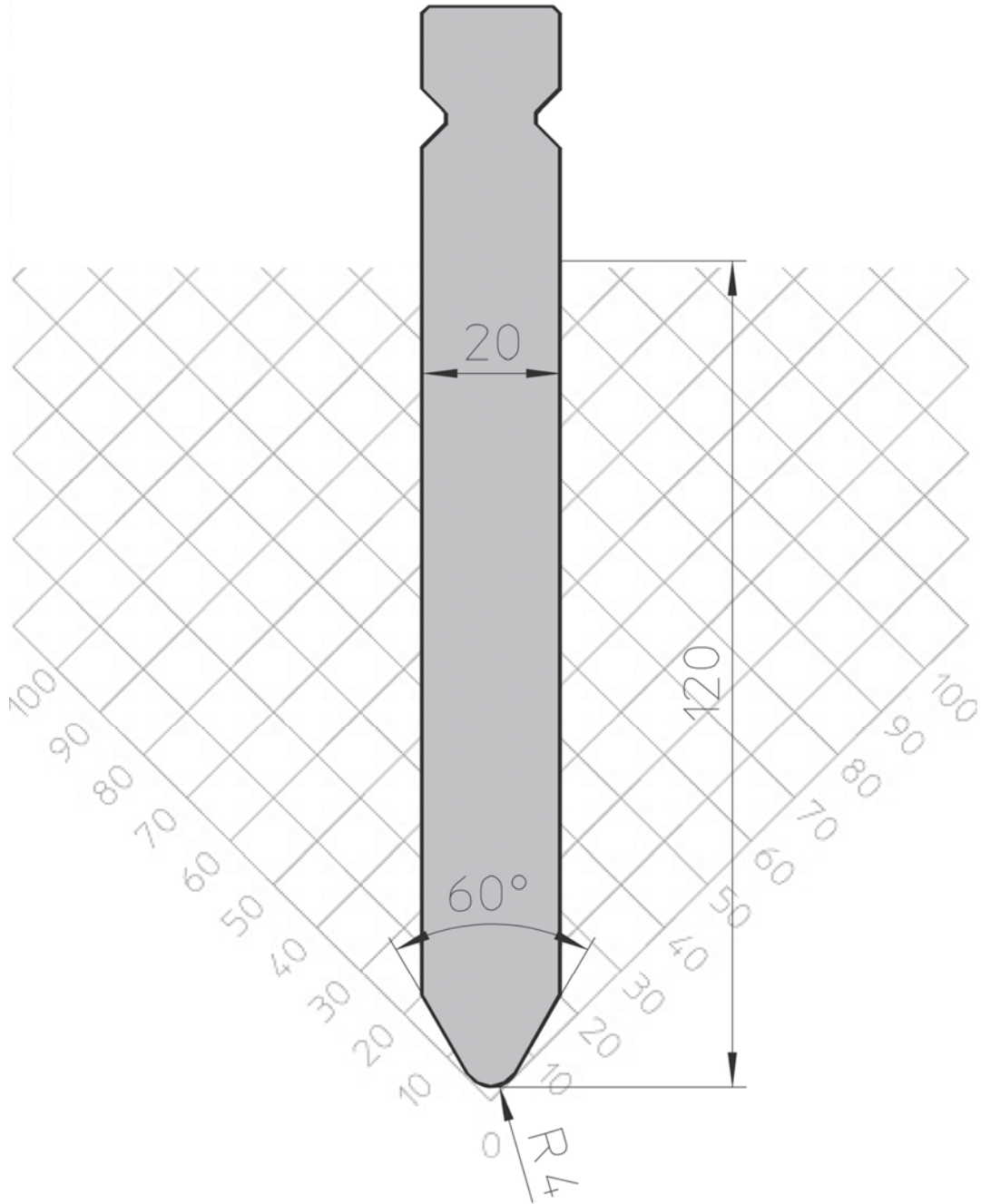
Horn left/right







Modified working radiuses								Delivery time: 2 weeks	
OW203/K	R2	R2.5	R3	R4.7	R5	R6	R6.35	-	Radius
	60°	60°	60°	60°	60°	60°	60°		Angle
	119.8	119.8	119.8	119.1	118.8	117.6	117.2		Height (mm)
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Length 4050	0868931	0868937	0869041	0853703	0869057	0826203	0845500	-	EUR
Length 3050	0868930	0854737	0847913	0869048	0862440	0826202	0865305	-	EUR
Length 2550	0868929	0855748	0869040	0837582	0869056	0847142	0852372	-	EUR
Length 2050	0867449	0865844	0840544	0869047	0855020	0826201	0842342	-	EUR
Length 1250	0842337	0846233	0839343	0858961	0864668	0826200	0869064	-	EUR
Version A									
Length 2050	0868925	0868933	0869036	0869043	0869052	0826197	0869060	-	EUR
Length 1250	0868924	0868932	0859049	0869042	0869051	0826196	0869059	-	EUR
Block									
250	0842336	0846234	0839357	0837915	0855019	0826195	0842515	-	EUR
Single									
500	0842322	0846225	0839349	0837902	0850704	0826182	0842504	-	EUR
300	0842321	0846224	0839348	0837901	0855007	0826181	0842503	-	EUR
200	0842320	0846223	0839347	0837900	0855006	0826180	0842502	-	EUR
Horn right	0842334	0846239	0839355	0837913	0855017	0826192	0842514	-	EUR
Horn left	0842333	0846238	0839354	0837912	0855016	0826191	0842513	-	EUR
100	0842323	0839863	0830319	0837909	0850705	0826193	0842512	-	EUR
50	0842329	0846231	0830990	0837908	0855013	0826190	0842511	-	EUR
45	0842328	0846230	0839351	0837907	0855012	0826188	0842510	-	EUR
40	0842327	0846229	0830989	0837906	0855011	0826187	0842509	-	EUR
35	0842326	0846228	0830988	0837905	0855010	0826186	0842508	-	EUR
30	0842325	0846227	0830987	0837904	0855009	0826184	0842507	-	EUR
25	0842324	0846226	0839350	0837903	0855008	0826183	0842506	-	EUR

Lengths in [mm]







	Angle sensor		Delivery time: ex warehouse	
	ACB OW203/K	R4	Radius	
		60°	Angle	
		120	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0902759	-	EUR
	Initial equipment	0912263	-	EUR
	Initial equipment 2nd gen.	1273594	-	EUR
	Replacement sensor disks			
	L43	0908872	-	EUR
L32	0908873	-	EUR	
L27	0919840	-	EUR	
L18	0919842	-	EUR	

The sensor disks are included in the sensor tool scope of delivery.


TRUMPF 

ACB-Sensor
OW203/K






 

 For bigger tool radii restricted angle measurement ranges are valid !
 Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !

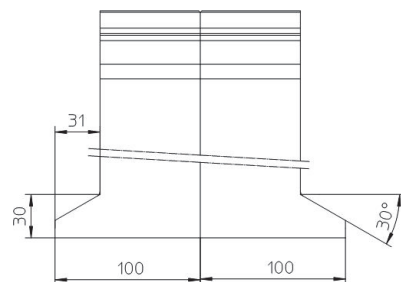
	Mat.	s	W	α	R _{ow}
L18 / L27	StSt	≤ 4.0	≤ 24	85 - 105	≤ 4
	St	≤ 4.0	≤ 24	85 - 105	≤ 4
	Al	≤ 4.0	≤ 24	85 - 105	≤ 4
L32 / L43	StSt	≤ 6.0	≤ 40	85 - 95	≤ 6
	St	≤ 10.0	≤ 70	85 - 95	≤ 6
	Al	≤ 10.0	≤ 70	85 - 95	≤ 6

Punch		Delivery time: ex warehouse		
	OW210 (H=140)	R1	Radius	
		28°	Angle	
	140	Height (mm)		
	Version B	Mat. No.	Price	
	Length 4050	0824010	-	EUR
	Length 3050	0824008	-	EUR
	Length 2550	0835193	-	EUR
	Length 2050	0824006	-	EUR
	Length 1250	0825720	-	EUR
	Length 1050	0867279	-	EUR
	Version A			
	Length 2050	0824000	-	EUR
	Length 1250	0825719	-	EUR
	Length 1050	1576244	-	EUR
	Block			
	250	0825717	-	EUR
	550	1607489	-	EUR
	Single			
	500	0823995	-	EUR
	300	0823993	-	EUR
	200	0823991	-	EUR
	Horn right	0824652	-	EUR
	Horn left	0824651	-	EUR
	100	0824653	-	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]

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	400 kN/m (≪ 1300 kN/m)
	29 kg/m
	60 – 62 HRC
	78 mm

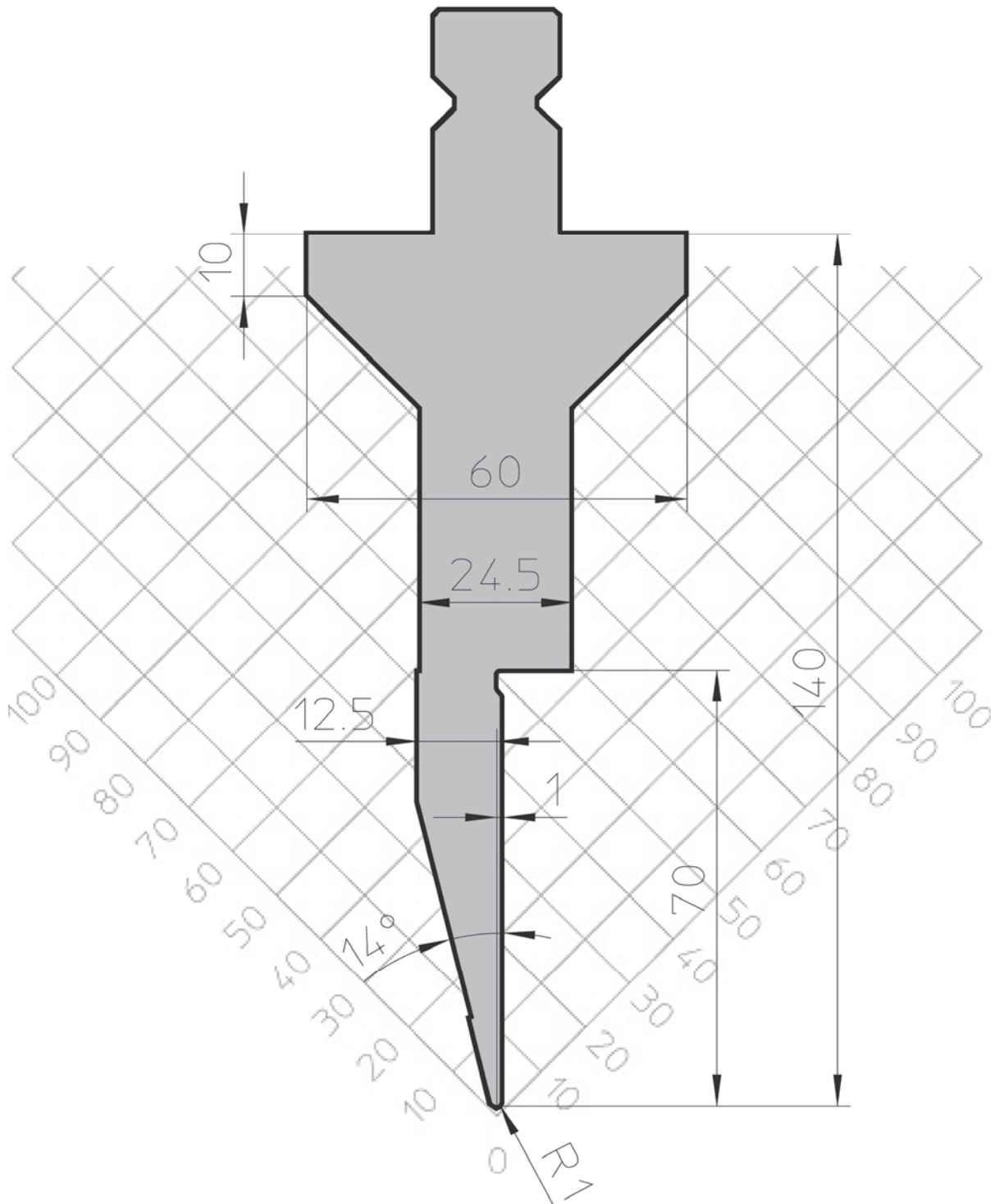
Horn left/right







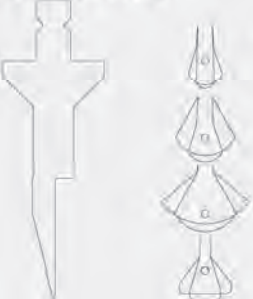
Modified working radiuses								Delivery time: 2 weeks		
OW210	R0.5	-	-	-	-	-	-	-	Radius	
	28°								Angle	
	139.8								Height (mm)	
Version B		Mat. No.							Price	
Length 4050	0869246								- EUR	
Length 3050	0869245								- EUR	
Length 2550	0869244								- EUR	
Length 2050	0833957								- EUR	
Length 1250	0853694								- EUR	
Version A										
Length 2050	0863333								- EUR	
Length 1250	0869240								- EUR	
Block										
250	0833991								- EUR	
Single										
500	0833978								- EUR	
300	0833977								- EUR	
200	0833976								- EUR	
Horn right	0833989								- EUR	
Horn left	0833988								- EUR	
100	0833985								- EUR	
50	0833984								- EUR	
45	0833983								- EUR	
40	0833982								- EUR	
35	0833981								- EUR	
30	0833980								- EUR	
25	0833979								- EUR	

Lengths in [mm]



Angle sensor		Delivery time: ex warehouse		
	ACB OW210	R1	Radius	
		28°	Angle	
		140	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0902761	-	EUR
	Initial equipment	0903028	-	EUR
	Initial equipment 2nd gen.	1273597	-	EUR
	Replacement sensor disks			
	L22*	0912277	-	EUR
	L12*	0912276	-	EUR
R28	0902700	-	EUR	
R19	0904180	-	EUR	
R18	0902627	-	EUR	
R10	0902628	-	EUR	
R5	0902629	-	EUR	

The sensor disks marked with a star (*) are not included in the sensor tool scope of delivery.

TRUMPF		ACB					
						For bigger tool radii restricted angle measurement ranges are valid !	
						Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !	
ACB-Sensor OW210 - H140		Mat.	s	W	α	R_{ow}	
	R5 / R10	StSt	≤ 2.5	≤ 16	75 - 95	≤ 2	
		St	≤ 2.5	≤ 16	75 - 105	≤ 2	
		Al	≤ 2.5	≤ 16	75 - 105	≤ 2	
	R10 / R18	StSt	≤ 3.0	≤ 20	80 - 100	≤ 4	
		St	≤ 4.0	≤ 24	80 - 105	≤ 4	
		Al	≤ 4.0	≤ 24	80 - 105	≤ 4	
	R19 / R28	StSt	≤ 6.0	≤ 50	85 - 95	≤ 6	
		St	≤ 10.0	≤ 70	85 - 100	≤ 6	
		Al	≤ 8.0	≤ 70	85 - 100	≤ 6	
	L12 / L22	StSt	≤ 2.5	≤ 16	105-135	≤ 3	
		St	≤ 2.5	≤ 16	105-135	≤ 3	
		Al	≤ 2.5	≤ 16	105-135	≤ 3	

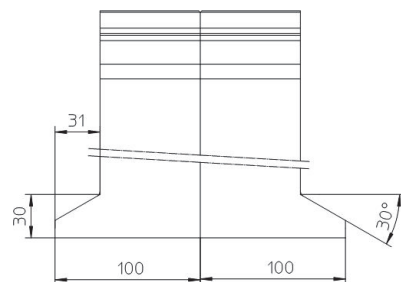
1.2 Punches up to H=300 mm

Punch	Delivery time: ex warehouse			
	OW200/S	R1	Radius	
		86°	Angle	
	220	Height (mm)		
	Version B	Mat. No.	Price	
	Length 4050	0823806	-	EUR
	Length 3050	0823805	-	EUR
	Length 2550	0835176	-	EUR
	Length 2050	0823804	-	EUR
	Length 1250	0825699	-	EUR
	Length 1050	0867275	-	EUR
	Version A			
	Length 2050	0823801	-	EUR
	Length 1250	0825698	-	EUR
	Length 1050	1606802	-	EUR
	Block			
	250	0825697	-	EUR
	550	1606801	-	EUR
	Single			
	300	0823799	-	EUR
	200	0823798	-	EUR
	Horn right	0824482	-	EUR
	Horn left	0824481	-	EUR
	100	0824549	-	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]

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	800 kN/m
	66.6 kg/m
	60 – 62 HRC
	131 mm

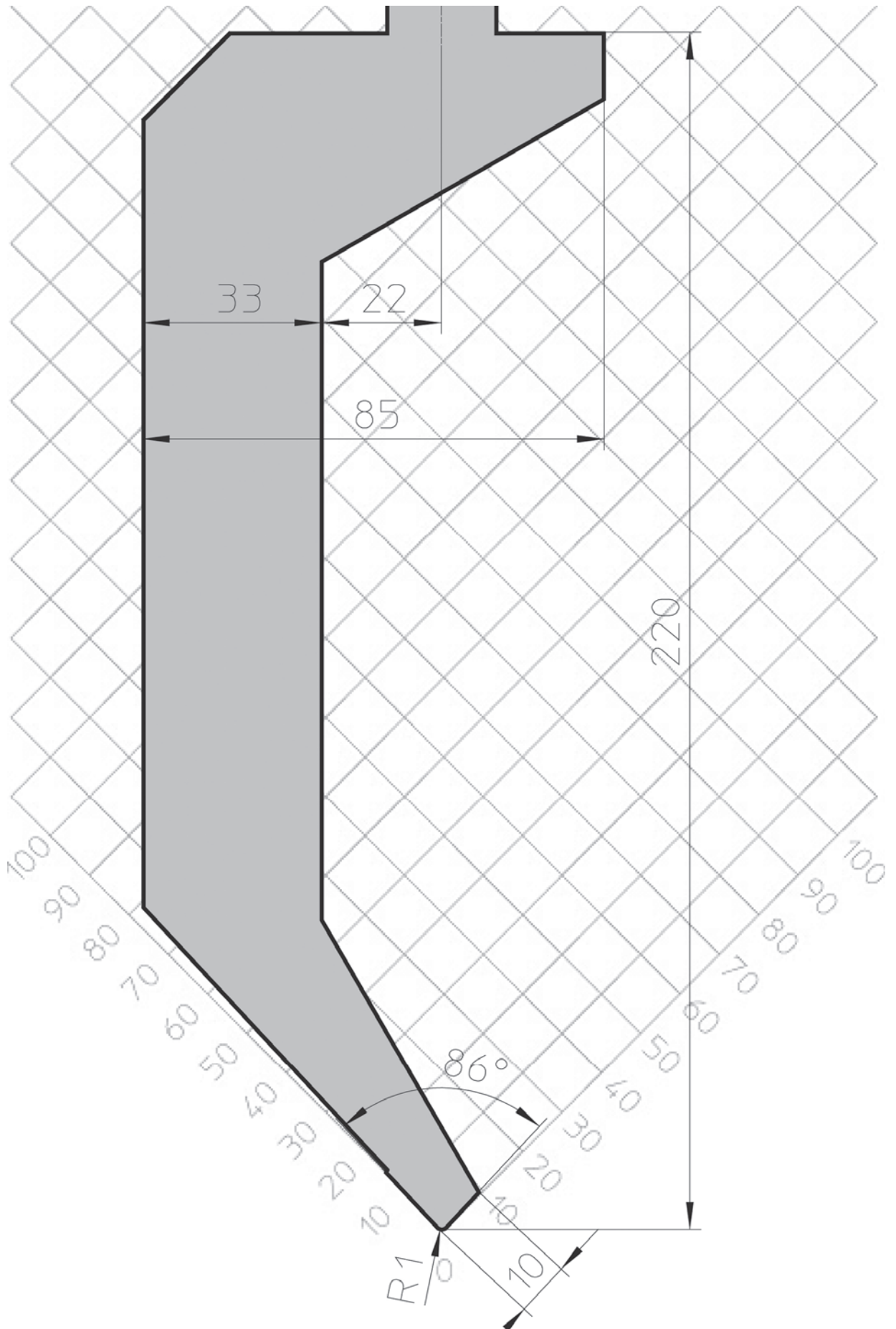
Horn left/right




Modified working radiuses									Delivery time: 2 weeks	
OW200/S	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2	R4	Radius	
	86°	86°	86°	86°	86°	86°	86°	86°	Angle	
	219.8	219.2	219.2	219	218.7	218.5	218.5	218.3	Height (mm)	
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Length 4050	0868415	0828060	0868437	0868470	0828090	0836797	0868485	0825969	-	EUR
Length 3050	0868414	0828059	0857218	0868469	0828089	0847467	0865362	0825968	-	EUR
Length 2550	0865720	0868418	0851010	0868468	0868473	0849135	0868484	0862529	-	EUR
Length 2050	0868413	0828058	0840936	0868467	0828088	0830780	0857669	0825967	-	EUR
Length 1250	0835648	0828054	0841064	0868466	0828087	0850119	0868483	0825966	-	EUR
Version A										
Length 2050	0868409	0828051	0868435	0868462	0828084	0835901	0868479	0825963	-	EUR
Length 1250	0868408	0828050	0868434	0868461	0828083	0868474	0868478	0825962	-	EUR
Block										
250	0835646	0828048	0840958	0868460	0828081	0830778	0857854	0825960	-	EUR
Single										
300	0835634	0828036	0840947	0868447	0828069	0830766	0857822	0825958	-	EUR
200	0835633	0828035	0840946	0868446	0828068	0830765	0857821	0825957	-	EUR
Horn right	0835643	0828047	0840955	0868458	0828080	0830777	0857851	0825978	-	EUR
Horn left	0835642	0828046	0840954	0868457	0828079	0830776	0857849	0825977	-	EUR
100	0835644	0828045	0840956	0868448	0828078	0830773	0857823	0825979	-	EUR
50	0835641	0828044	0840953	0868454	0828077	0830772	0857829	0825976	-	EUR
45	0835640	0828043	0840952	0868453	0828076	0830771	0857828	0825975	-	EUR
40	0835639	0828042	0840951	0868452	0828075	0830770	0857827	0825974	-	EUR
35	0835638	0828041	0840950	0868451	0828074	0830769	0857826	0825973	-	EUR
30	0835637	0828040	0840949	0868450	0828073	0830768	0857825	0825971	-	EUR
25	0835636	0828039	0840948	0868449	0828072	0830767	0857824	0825970	-	EUR
Lengths in [mm]										
Modified working radiuses									Delivery time: 3 weeks	
OW200/S-ZM	R0.5	R1.6	R2	R2.3*	R2.5	R3	R3.2	R4	Radius	
	86°	86°	86°	86°	86°	86°	86°	86°	Angle	
	219.8	219.2	219.2	219	218.7	218.5	218.5	218.3	Height (mm)	
ACB	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Sensor tool	1285225	987320	0933594	1602978	957801	0951078	1271775	0951079	-	EUR
Initial equipment	1285227	987321	0951073	1602979	957802	0951082	1271776	0951083	-	EUR
Initial equipment 2nd gen.	1408977	1397876	1282571	1602990	1354761	1282572	1598742	1282573	-	EUR
Replacement sensor disks										
L43	0949405	0949405	0949405	0949405	0949405	0949405	0949405	0949405	-	EUR
L33	0949404	0949404	0949404	0949404	0949404	0949404	0949404	0949404	-	EUR
L27	0949406	0949406	0949406	0949406	0949406	0949406	0949406	0949406	-	EUR
L17	0949402	0949402	0949402	0949402	0949402	0949402	0949402	0949402	-	EUR
L15	0949407	0949407	0949407	0949407	0949407				-	EUR
L9	0949403	0949403	0949403	0949403	0949403				-	EUR



The sensor disks are included in the sensor tool scope of delivery.


(*) Delivery time upon request








Angle sensor	Delivery time: ex warehouse			
	ACB OW200/S-ZM	R1	Radius	
		86°	Angle	
		220	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0938411	-	EUR
	Initial equipment	0938412	-	EUR
	Initial equipment 2nd gen.	1273589	-	EUR
	Replacement sensor disks			
	L43	0949405	-	EUR
	L33	0949404	-	EUR
L27	0949406	-	EUR	
L17	0949402	-	EUR	
L15	0949407	-	EUR	
L9	0949403	-	EUR	

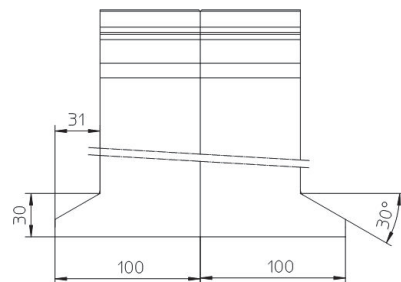
The sensor disks are included in the sensor tool scope of delivery.

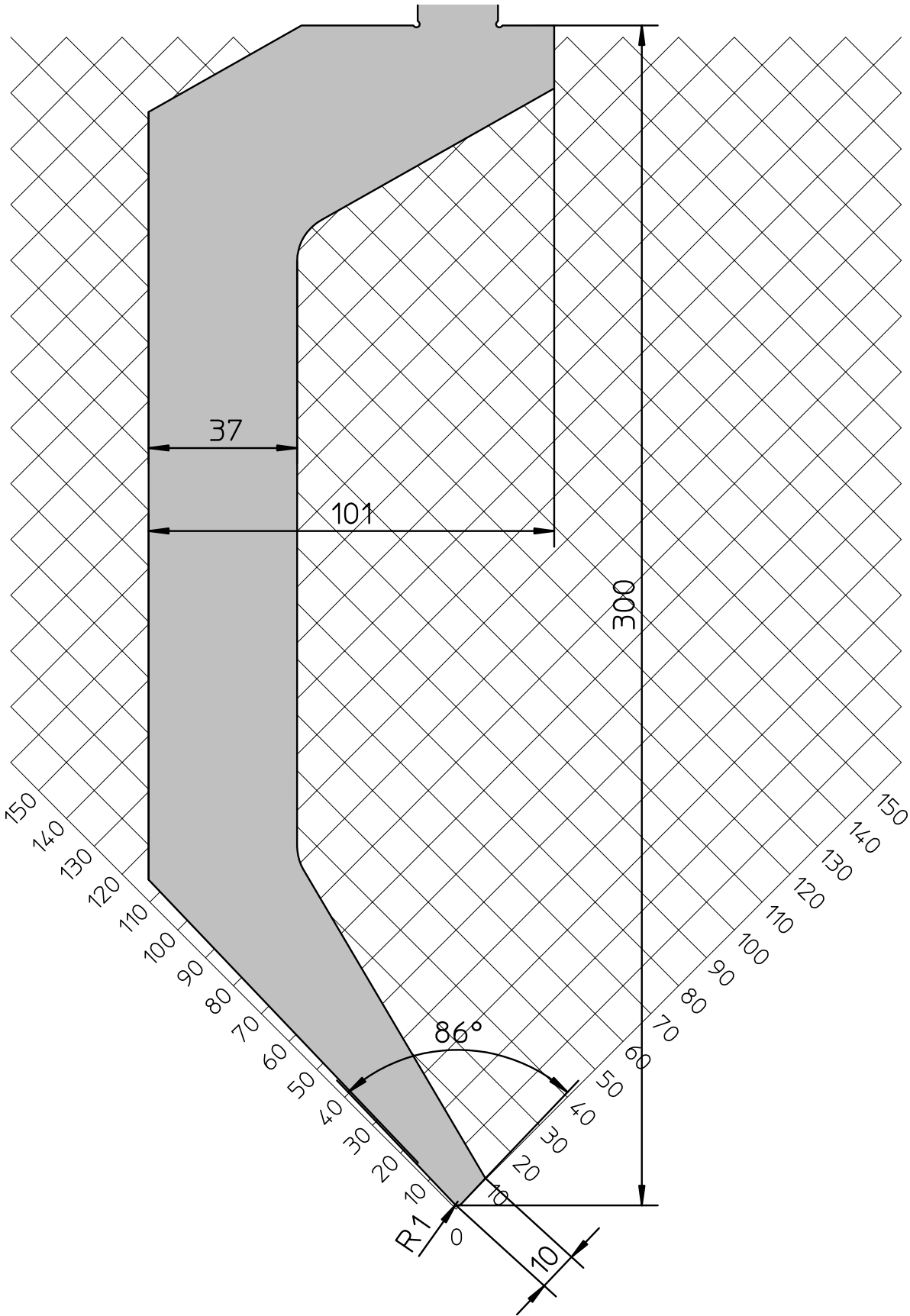
TRUMPF		ACB						
		 For bigger tool radii restricted angle measurement ranges are valid !						
		 Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !						
ACB-Sensor OW200/S-ZM		Mat.	s	W	α	R_{OW}		
L15 / L9	StSt	≤ 2	≤ 16	90 - 105	≤ 2			
	St	≤ 2	≤ 12	90 - 135	≤ 2			
	Al	≤ 2	≤ 12	90 - 135	≤ 2			
L27 / L17	StSt	≤ 3	≤ 24	90 - 135	≤ 4			
	St	≤ 4	≤ 30	90 - 135	≤ 4			
	Al	≤ 4	≤ 24	90 - 135	≤ 4			
L43 / L33	StSt	≤ 6	≤ 50	90 - 135	≤ 6			
	St	≤ 10	≤ 70	90 - 135	≤ 6			
	Al	≤ 10	≤ 70	90 - 135	≤ 6			


Punch		Delivery time: ex warehouse			
	Lengths in [mm]	OW300/S	R1	Radius	
			86°	Angle	
			300	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	1420642	-	EUR
		Length 3050	1420640	-	EUR
		Length 2550	1420638	-	EUR
		Length 2050	1420636	-	EUR
		Length 1250	1420634	-	EUR
		Length 1050	1607677	-	EUR
		Version A			
		Length 2050	1420635	-	EUR
		Length 1250	1420633	-	EUR
		Length 1050	1607676	-	EUR
		Block			
		250	1420632	-	EUR
		550	1607675	-	EUR
		Single			
		300	-		
		200	1420630	-	EUR
Horn right	1420629	-	EUR		
Horn left	1420627	-	EUR		
100	1420613	-	EUR		
50	1420625	-	EUR		
45	1420623	-	EUR		
40	1420621	-	EUR		
35	1420619	-	EUR		
30	1420617	-	EUR		
25	1420615	-	EUR		

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	800 kN/m
	98.9 kg/m
	60 – 62 HRC
	185 mm


Horn left/right






	Delivery time: ex warehouse		
	ACB OW300/S ZM	R1	Radius
		86°	Angle
		300	Height (mm)
	ACB	Mat. No.	Price
	Sensor tool	1428673	- EUR
	Initial equipment	1428665	- EUR
	Initial equipment 2nd gen.	1428666	- EUR
	Replacement sensor disks		
	L43	1434055	- EUR
L33	1434130	- EUR	
L27	1430773	- EUR	
L17	1430828	- EUR	
L15	1434132	- EUR	
L9	1434181	- EUR	

The sensor disks are included in the sensor tool scope of delivery.

TRUMPF 


ACB-Sensor
OW300/S-ZM




☞ For bigger tool radii restricted angle measurement ranges are valid !






☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !

	Mat.	s	W	α	R _{ow}
L15 / L9	StSt	≤ 2	≤ 16	90 - 105	≤ 2
	St	≤ 2	≤ 12	90 - 135	≤ 2
	Al	≤ 2	≤ 12	90 - 135	≤ 2
L27 / L17	StSt	≤ 3	≤ 24	90 - 135	≤ 4
	St	≤ 4	≤ 30	90 - 135	≤ 4
	Al	≤ 4	≤ 24	90 - 135	≤ 4
L43 / L33	StSt	≤ 6	≤ 50	90 - 135	≤ 6
	St	≤ 10	≤ 70	90 - 135	≤ 6
	Al	≤ 10	≤ 70	90 - 135	≤ 6

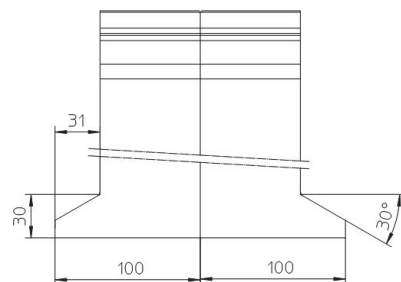


Punch	Delivery time: ex warehouse		
	OW201/S	R1	Radius
		86°	Angle
		220	Height (mm)
	Version B	Mat. No.	Price
	Length 4050	0823966	- EUR
	Length 3050	0823965	- EUR
	Length 2550	0835181	- EUR
	Length 2050	0823964	- EUR
	Length 1250	0825702	- EUR
	Length 1050	0867276	- EUR
	Version A		
	Length 2050	0823961	- EUR
	Length 1250	0825701	- EUR
	Length 1050	1606923	- EUR
	Block		
	250	0825700	- EUR
	550	1606922	- EUR
	Single		
	300	0823959	- EUR
	200	0823958	- EUR
Horn right	0824579	- EUR	
Horn left	0824578	- EUR	
100	0824580	- 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]

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	800 kN/m
	57.1 kg/m
	60 – 62 HRC
	131 mm

Horn left/right

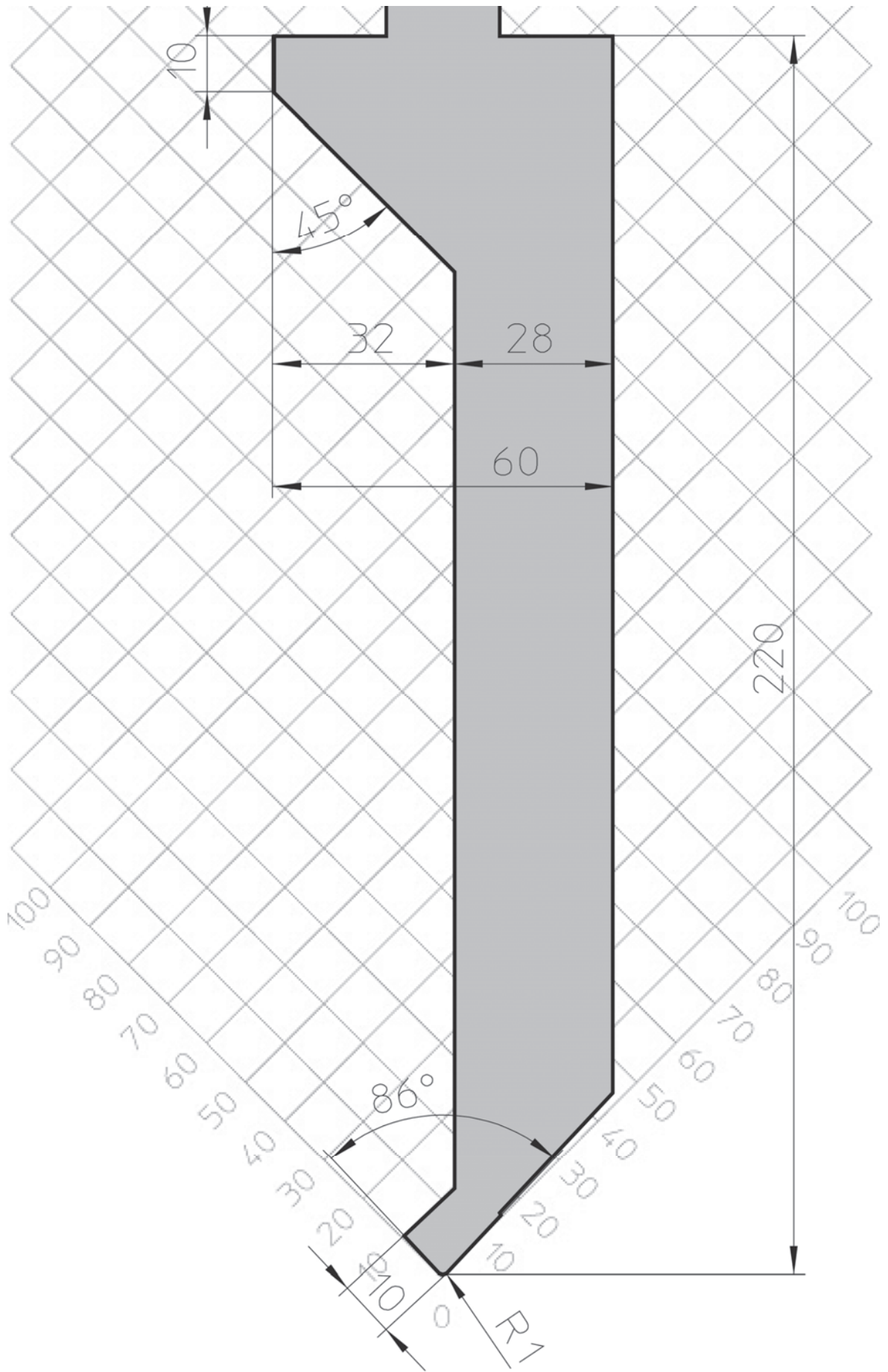





Modified working radiuses									Delivery time: 2 weeks	
OW201/S	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2	R4	Radius	
	86°	86°	86°	86°	86°	86°	86°	86°	Angle	
	219.8	219.4	219.2	219	218.7	218.8	218.6	218.3	Height (mm)	
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Length 4050	0868730	0868738	0868747	0868779	0868811	0868823	0857670	0868838	-	EUR
Length 3050	0868729	0852135	0863335	0868778	0868810	0868822	0852158	0856505	-	EUR
Length 2550	0868728	0868737	0862538	0868777	0868809	0867529	0868831	0862531	-	EUR
Length 2050	0868727	0868736	0868746	0868776	0868808	0867528	0868830	0868837	-	EUR
Length 1250	0862937	0863254	0868744	0868775	0868807	0859471	0868829	0868836	-	EUR
Version A										
Length 2050	0868723	0868732	0868740	0868771	0868803	0868818	0868825	0868833	-	EUR
Length 1250	0868722	0868731	0868739	0868770	0868802	0868817	0868824	0868832	-	EUR
Block										
250	0862936	0852134	0862682	0868769	0868801	0859470	0852157	0846213	-	EUR
Single										
300	0862923	0852121	0862542	0868756	0868788	0859457	0852144	0846196	-	EUR
200	0862922	0852120	0862669	0868755	0868787	0859456	0852143	0846195	-	EUR
Horn right	0862934	0852132	0862680	0868767	0868799	0859468	0852155	0846211	-	EUR
Horn left	0862933	0852131	0862679	0868766	0868798	0859467	0852154	0846210	-	EUR
100	0862924	0852122	0862670	0868757	0868789	0859458	0852145	0846200	-	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
Lengths in [mm]										
Modified working radiuses									Delivery time: 3 weeks	
OW201/S ZM	R0.5*	R1.6	R2	R2.3*	R2.5	R3	R3.2*	R4	Radius	
	86°	86°	86°	86°	86°	86°	86°	86°	Angle	
	219.8	219.4	219.2	219	218.7	218.8	218.6	218.3	Height (mm)	
ACB	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Sensor tool	1602991	1322238	0951101	1602998	1415541	0951102	1603011	0950043	-	EUR
Initial equipment	1602993	1598743	0951103	1602999	1415543	0951104	1603012	0951105	-	EUR
Initial equipment 2nd gen.	1602994	1322269	1282574	1603010	1415606	1282575	1603013	1282576	-	EUR
Replacement sensor disks										
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				-	EUR
L9	0950859	0950859	0950859	0950859	0950859				-	EUR

The sensor disks are included in the sensor tool scope of delivery.


(*) Delivery time upon request








Angle sensor	Delivery time: ex warehouse			
	ACB OW201/S ZM	R1	Radius	
		86°	Angle	
		220	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0950821	-	EUR
	Initial equipment	0950822	-	EUR
	Initial equipment	1273591	-	EUR
	Replacement sensor disks			
	L43	0950856	-	EUR
	L33	0950857	-	EUR
L27	0950855	-	EUR	
L17	0950858	-	EUR	
L15	0950854	-	EUR	
L9	0950859	-	EUR	

The sensor disks are included in the sensor tool scope of delivery.

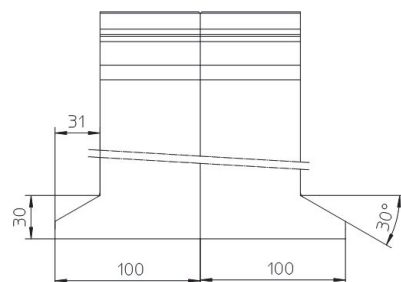
TRUMPF		ACB					
				☞ For bigger tool radii restricted angle measurement ranges are valid !			
				☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !			
ACB-Sensor OW201/S-ZM							
		Mat.	s	W	α	R _{ow}	
L15 / L9	StSt	≤ 2	≤ 16	90 - 105	≤ 2		
	St	≤ 2	≤ 12	90 - 135	≤ 2		
	Al	≤ 2	≤ 12	90 - 135	≤ 2		
L27 / L17	StSt	≤ 3	≤ 24	90 - 135	≤ 4		
	St	≤ 4	≤ 30	90 - 135	≤ 4		
	Al	≤ 4	≤ 24	90 - 135	≤ 4		
L43 / L33	StSt	≤ 6	≤ 50	90 - 135	≤ 6		
	St	≤ 10	≤ 70	90 - 135	≤ 6		
	Al	≤ 10	≤ 70	90 - 135	≤ 6		

Punch		Delivery time: ex warehouse		
	OW202/S	R1	Radius	
		28°	Angle	
		220	Height (mm)	
	Version B		Mat. No.	Price
	Length 4050	0823869	-	EUR
	Length 3050	0823868	-	EUR
	Length 2550	0835185	-	EUR
	Length 2050	0823867	-	EUR
	Length 1250	0825708	-	EUR
	Length 1050	0867277	-	EUR
	Version A			
	Length 2050	0823863	-	EUR
	Length 1250	0825707	-	EUR
	Length 1050	1606976	-	EUR
	Block			
	250	0825706	-	EUR
	550	1606974	-	EUR
	Single			
	500	0823859	-	EUR
	300	0823858	-	EUR
200	0823857	-	EUR	
Horn right	0824626	-	EUR	
Horn left	0824625	-	EUR	
100	0824628	-	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]

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	600 kN/m (≪ 800 kN/m)
	49.9 kg/m
	60 – 62 HRC
	131 mm

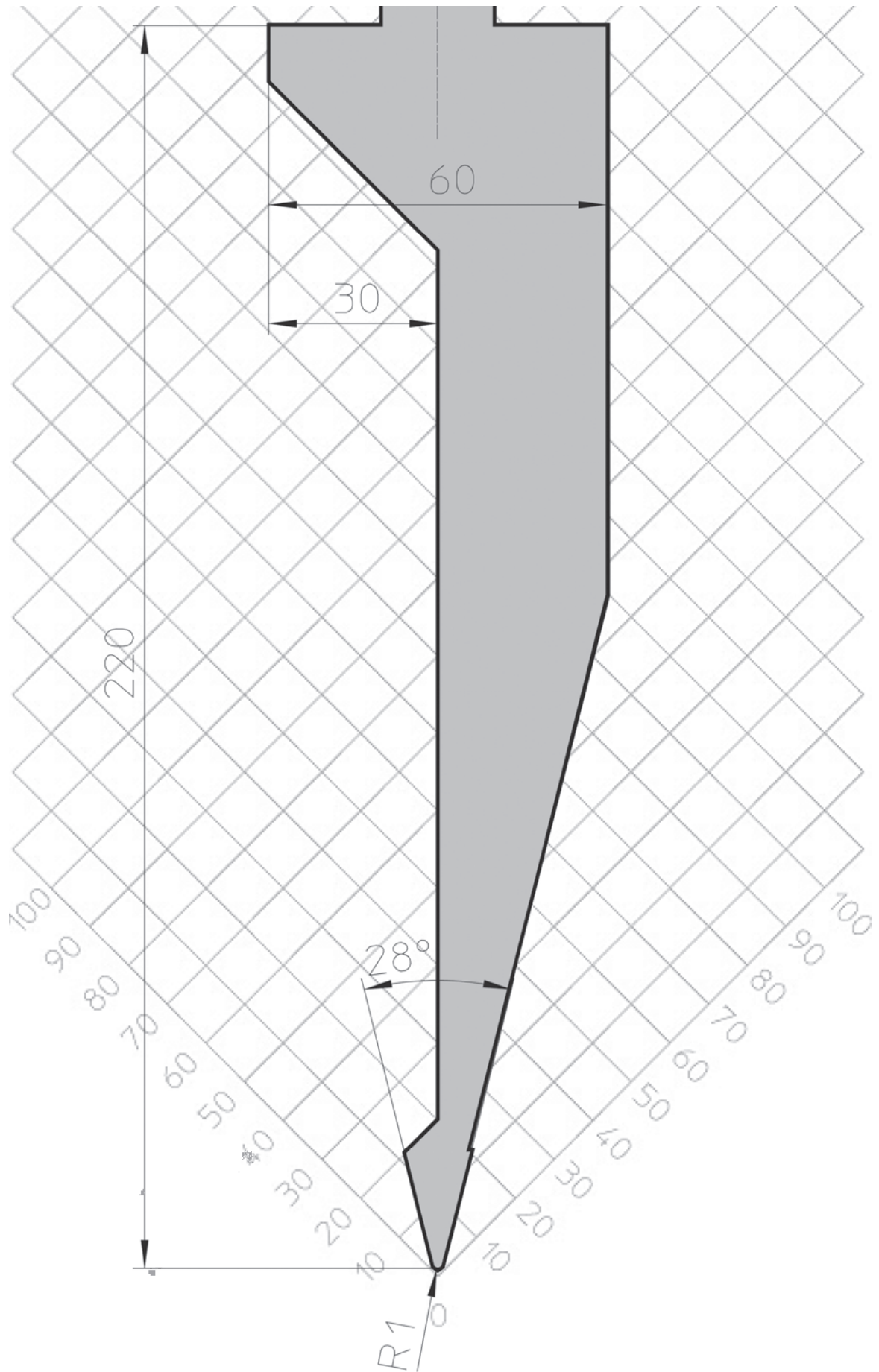
Horn left/right




Modified working radiuses									Delivery time: 2 weeks	
OW202/S	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2	R4	Radius	
	28°	28°	28°	28°	28°	28°	28°	28°	Angle	
	219.8	217.8	216	215.6	214	212.8	212.7	209.8	Height (mm)	
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Length 4050	0868847	0851552	0868860	0868872	0852105	0868881	0868916	0868923		- EUR
Length 3050	0868846	0867084	0868859	0868871	0828020	0868880	0868915	0868922		- EUR
Length 2550	0868845	0868854	0856362	0863624	0846150	0854127	0868914	0860007		- EUR
Length 2050	0868844	0868853	0841516	0868870	0840022	0846169	0868913	0865409		- EUR
Length 1250	0836896	0864327	0848015	0868869	0845258	0860121	0868912	0868921		- EUR
Version A										
Length 2050	0868840	0868849	0868856	0868864	0868874	0835867	0868908	0868918		- EUR
Length 1250	0868839	0868848	0868855	0868863	0868873	0854916	0868907	0868917		- EUR
Block										
250	0837415	0851545	0841515	0855933	0828017	0835866	0868906	0844749		- EUR
Single										
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
Horn right	0837419	0851549	0841513	0859517	0828016	0835862	0868903	0844747		- EUR
Horn left	0837418	0851548	0841512	0859516	0828015	0835861	0868902	0844746		- EUR
100	0837414	0851537	0841502	0851389	0828014	0835858	0868892	0844736		- 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
Lengths in [mm]										
Modified working radiuses									Delivery time: 3 weeks	
OW202/S ZM	R0.5	R1.6	R2	R2.3	R2.5	R3	R3.2*	R4	Radius	
	28°	28°	28°	28°	28°	28°	28°	28°	Angle	
	219.8	217.8	216	215.6	214	212.8	212.7	209.8	Height (mm)	
ACB	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price
Sensor tool	1285233	0951117	0951118	0933578	0951119	0951120	1603014	970511		- EUR
Initial equipment	1285234	0951122	0951123	0951124	0951125	0951126	1603015	970512		- EUR
Initial equipment 2nd gen.	1329274	1282884	1282577	1282885	1282886	1282578	1603016	1282579		- EUR
Replacement sensor disks										
L43	0949420	0949420	0949420	0962191	0962191	0962191	0962191	0962191		- EUR
L33	0949421	0949421	0949421	0962190	0962190	0962190	0962190	0962190		- EUR
L27	0949409	0949409	0949409	0962189	0962189	0962189	0962189	0962189		- EUR
L17	0949422	0949422	0949422	0962128	0962128	0962128	0962128	0962128		- EUR
L15	0949408	0949408	0949408	-	-	-	-	-		- EUR
L9	0949423	0949423	0949423	-	-	-	-	-		- EUR


The sensor disks are included in the sensor tool scope of delivery.


(*) Delivery time upon request








Angle sensor	Delivery time: ex warehouse			
	ACB OW202/S ZM	R1	Radius	
		28°	Angle	
		220	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0943008	-	EUR
	Initial equipment	0943006	-	EUR
	Initial equipment 2nd gen.	1273593	-	EUR
	Replacement sensor disks			
	L43	0949420	-	EUR
	L33	0949421	-	EUR
L27	0949409	-	EUR	
L17	0949422	-	EUR	
L15	0949408	-	EUR	
L9	0949423	-	EUR	

The sensor disks are included in the sensor tool scope of delivery.

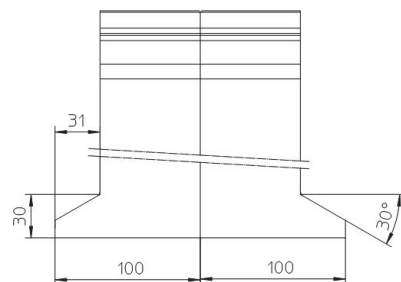
TRUMPF		ACB						
				For bigger tool radii restricted angle measurement ranges are valid ! Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !				
ACB-Sensor								
OW202/S-ZM								
		Mat.	s	W	α	R_{ow}		
	L15 / L9	StSt	≤ 2	≤ 16	45 - 105	≤ 2		
		St	≤ 2	≤ 12	45 - 135	≤ 2		
		Al	≤ 2	≤ 12	55 - 135	≤ 2		
	L27 / L17	StSt	≤ 3	≤ 24	55 - 135	≤ 4		
		St	≤ 4	≤ 30	55 - 105	≤ 4		
		Al	≤ 4	≤ 24	55 - 105	≤ 4		
	L43 / L33	Al	≤ 10	≤ 70	65 - 135	≤ 6		

Punch	Delivery time: ex warehouse			
	OW203/S	R4	Radius	
		60°	Angle	
		220	Height (mm)	
	Version B	Mat. No.	Price	
	Length 4050	0825649	-	EUR
	Length 3050	0825648	-	EUR
	Length 2550	0835189	-	EUR
	Length 2050	0825647	-	EUR
	Length 1250	0825646	-	EUR
	Length 1050	0867278	-	EUR
	Version A			
	Length 2050	0825643	-	EUR
	Length 1250	0825642	-	EUR
	Length 1050	1607008	-	EUR
	Block			
	250	0825714	-	EUR
	550	1607007	-	EUR
	Single			
	300	0825630	-	EUR
	200	0825629	-	EUR
Horn right	0825638	-	EUR	
Horn left	0825637	-	EUR	
100	0825639	-	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]

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	1300 kN/m
	52.3 kg/m
	60 – 62 HRC
	131 mm

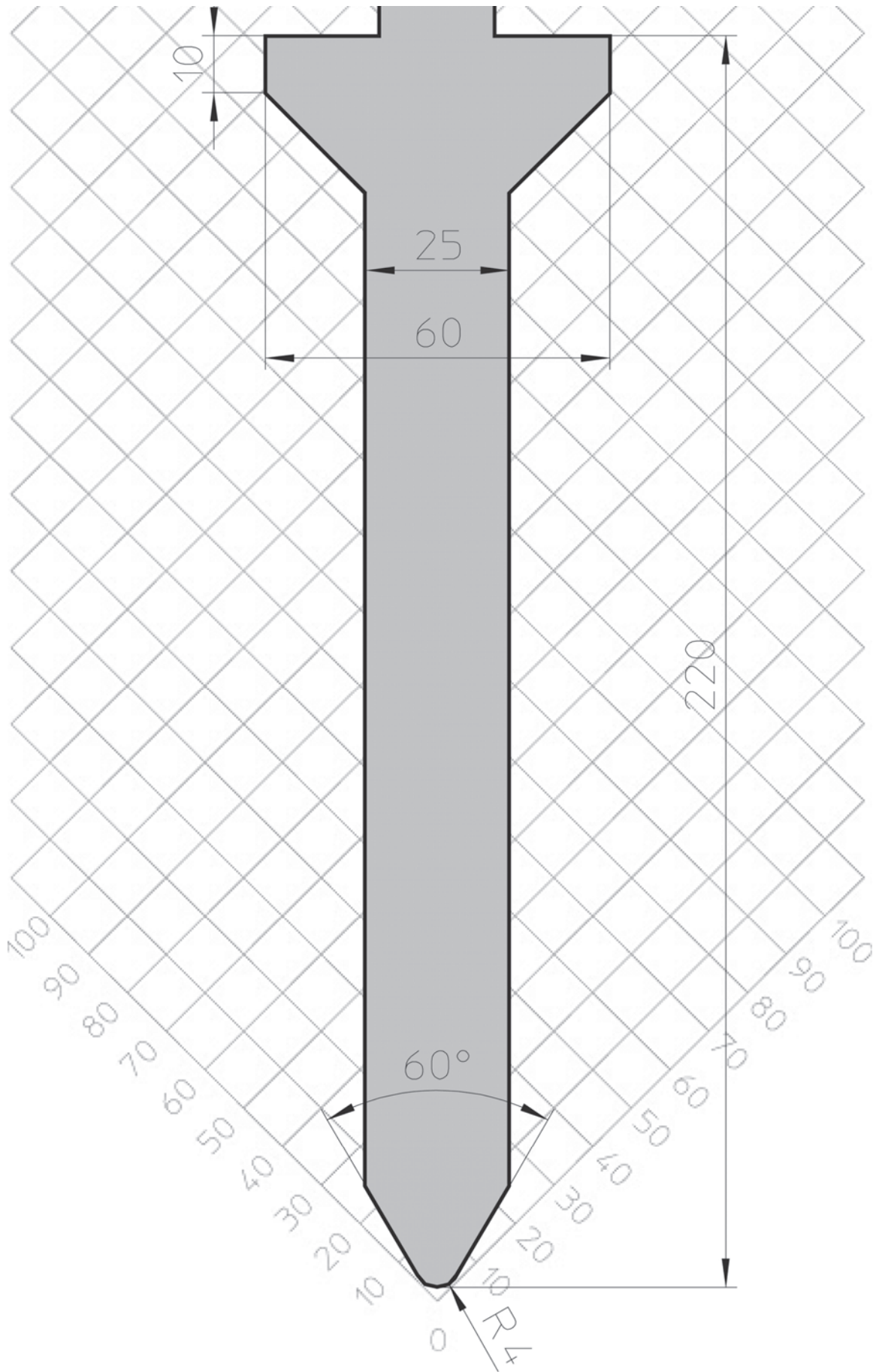
Horn left/right



Modified working radiuses									Delivery time: 2 weeks	
OW203/S	R2	R2.5	R3	R4.7	R5	R6	R6.35	R8	Radius	
	60°	60°	60°	60°	60°	60°	60°	60°	Angle	
	219.8	219.8	219.8	219	218.6	217.6	217.2	220	Height (mm)	
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Length 4050	0869083	0869091	0869118	0869151	0869160	0869192	0869237	0859117	-	EUR
Length 3050	0869082	0862842	0860541	0869150	0860542	0869191	0869236	0853168	-	EUR
Length 2550	0862914	0852164	0869117	0869149	0869159	0869190	0869235	0862534	-	EUR
Length 2050	0869081	0849062	0869116	0869148	0841566	0869189	0869234	0874848	-	EUR
Length 1250	0840295	0869090	0841541	0869147	0860122	0869188	0869233	0874743	-	EUR
Version A										
Length 2050	0869078	0869086	0869111	0869143	0869155	0869184	0869229	1321484	-	EUR
Length 1250	0869077	0869085	0869110	0869142	0860120	0869183	0869228	1249949	-	EUR
Block										
250	0840294	0849050	0841540	0869141	0841565	0869182	0869227	0841577	-	EUR
Single										
300	0840281	0849048	0841519	0869128	0841546	0869169	0869214	0830784	-	EUR
200	0840280	0849047	0841518	0869127	0841545	0869168	0869213	0846166	-	EUR
Horn right	0840292	0849061	0841537	0869139	0841555	0869180	0869225	0852988	-	EUR
Horn left	0840291	0849060	0841543	0869138	0841556	0869179	0869223	0852987	-	EUR
100	0840288	0849051	0841526	0869129	0841557	0869170	0869215	0830786	-	EUR
50	0840287	0849057	0841527	0869135	0841558	0869176	0869221	0830785	-	EUR
45	0840286	0849056	0841528	0869134	0841559	0869175	0869220	0841572	-	EUR
40	0840285	0849055	0841529	0869133	0841560	0869174	0869219	0841573	-	EUR
35	0840284	0849054	0841530	0869132	0841561	0869173	0869218	0841574	-	EUR
30	0840283	0849053	0841531	0869131	0841562	0869172	0869217	0841575	-	EUR
25	0840282	0849052	0841532	0869130	0841563	0869171	0869216	0841578	-	EUR
Lengths in [mm]										
Modified working radiuses									Delivery time: 3 weeks	
OW203/S ZM	R2	R2.5*	R3	R4.7	R5	R6	R6.35	R8	Radius	
	60°	60°	60°	60°	60°	60°	60°	60°	Angle	
	219.8	219.8	219.8	219	218.6	217.6	217.2	220	Height (mm)	
ACB	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Sensor tool	0947302	1603017	966925	1311911	1331083	0973357	1320686	952910	-	EUR
Initial equipment	0947304	1603018	966926	1311912	1331084	0973358	1320688	952912	-	EUR
Initial equipment 2nd gen.	1282580	1603019	1598744	1383964	1471986	1282591	1402719	1320673	-	EUR
Replacement sensor disks										
L43	0940335	0940335	0940335	0940335	0940335	0940335	0940335	940335	-	EUR
L33	0940338	0940338	0940338	0940338	0940338	0940338	0940338	940338	-	EUR
L27	0932791	0932791	0932791	0932791	0932791	0932791	0932791	932791	-	EUR
L17	0940333	0940333	0940333	0940333	0940333	0940333	0940333	940333	-	EUR

The sensor disks are included in the sensor tool scope of delivery.

(*) Delivery time upon request




Angle sensor	Delivery time: ex warehouse			
	ACB OW203/S ZM	R4	Radius	
		60°	Angle	
		220	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0940059	-	EUR
	Initial equipment	0940381	-	EUR
	Initial equipment 2nd gen.	1273595	-	EUR
	Replacement sensor disks			
	L43	0940335	-	EUR
	L33	0940338	-	EUR
L27	0932791	-	EUR	
L17	0940333	-	EUR	
Angle sensor for thick sheet (L = 35 mm)	Delivery time: ex warehouse			
	ACB OW203/S ZM DB	R4	Radius	
		60°	Angle	
		220	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool 35 mm	1211228	-	EUR
	Initial equipment	1211229	-	EUR
	Initial equipment 2nd gen.	1273596	-	EUR
	Replacement sensor disks			
	L58	1306820	-	EUR
	L47	1306737	-	EUR
L44	1221932	-	EUR	
L31	1221931	-	EUR	
L28	1221930	-	EUR	
L16	1221929	-	EUR	






The sensor disks are included in the sensor tool scope of delivery.

	☞ For bigger tool radii restricted angle measurement ranges are valid ! ☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !					
ACB-Sensor OW203/S-ZM						
	L27 / L17	Mat.	s	W	α	R _{ow}
		StSt	≤ 4	≤ 30	65 - 135	≤ 4
		St	≤ 4	≤ 24	65 - 135	≤ 4
	L43 / L33	Al	≤ 4	≤ 24	65 - 135	≤ 4
		StSt	≤ 6	≤ 40	65 - 135	≤ 6
		St	≤ 10	≤ 70	65 - 135	≤ 6
Al	≤ 10	≤ 70	65 - 135	≤ 6		

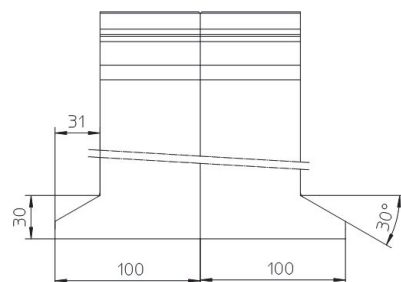
	☞ For bigger tool radii restricted angle measurement ranges are valid ! ☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !					
ACB-Sensor OW203/S-ZM-DB						
	L28 / L16	Mat.	s	W	α	R _{ow}
		StSt	≤ 4	≤ 24	70 - 135	4
		St	≤ 4	≤ 24	70 - 135	4
	L44 / L31	Al	≤ 4	≤ 24	70 - 135	4
		StSt	≤ 8	≤ 50	70 - 135	4
		St	≤ 8	≤ 50	70 - 135	4
	L58 / L47	Al	≤ 8	≤ 50	70 - 135	4
		StSt	≤ 12	≤ 80	70 - 135	4
		St	≤ 15	≤ 100	70 - 135	4
	Al	≤ 12	≤ 80	70 - 135	4	

Punch	Delivery time: ex warehouse		
	OW210/S (H=240)	R1	Radius
		28°	Angle
		240	Height (mm)
	Version B	Mat. No.	Price
	Length 4050	0824045	- EUR
	Length 3050	0824043	- EUR
	Length 2550	0835195	- EUR
	Length 2050	0824041	- EUR
	Length 1250	0825725	- EUR
	Length 1050	0867280	- EUR
	Version A		
	Length 2050	0824036	- EUR
	Length 1250	0825724	- EUR
	Length 1050	1607536	- EUR
	Block		
	250	0825722	- EUR
	550	1607535	- EUR
	Single		
	500	0824033	- EUR
	300	0824032	- EUR
	200	0824031	- EUR
	Horn right	0824678	- EUR
	Horn left	0824677	- EUR
	100	0824679	- 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]

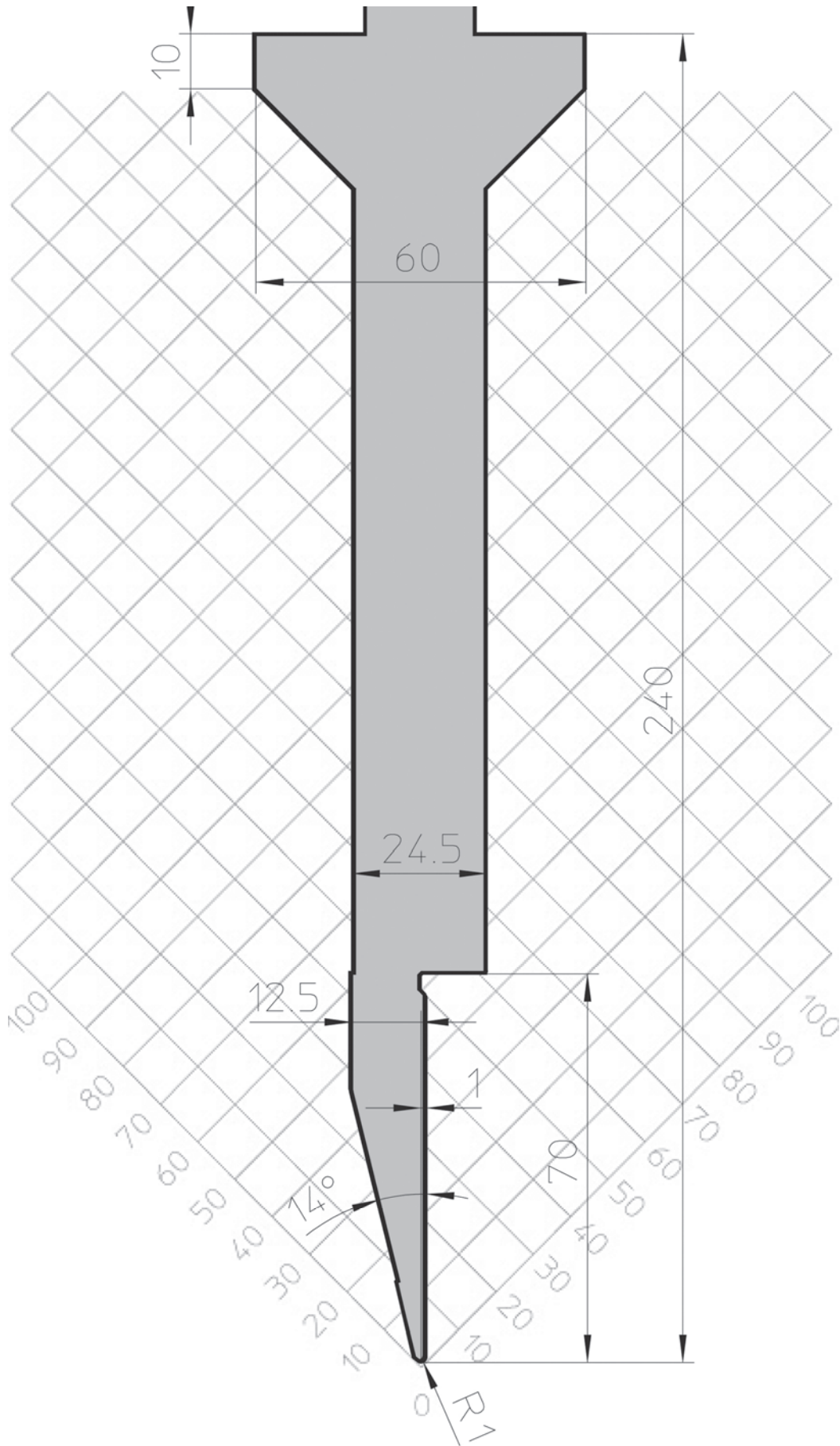
Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	400 kN/m (≪ 1300 kN/m)
	47.9 kg/m
	60 – 62 HRC
	145 mm


Horn left/right






Modified working radiuses									Delivery time: 2 weeks	
OW210/S	R0.5	-	-	-	-	-	-	-	Radius	
	28°								Angle	
	239.8								Height (mm)	
Version B		Mat. No.							Price	
Length 4050	0869285								-	EUR
Length 3050	0869284								-	EUR
Length 2550	0865725								-	EUR
Length 2050	0869283								-	EUR
Length 1250	0869282								-	EUR
Version A										
Length 2050	0869278								-	EUR
Length 1250	0869277								-	EUR
Block										
250	0865724								-	EUR
Single										
500	0865722								-	EUR
300	0856233								-	EUR
200	0865721								-	EUR
Horn right	0839688								-	EUR
Horn left	0839687								-	EUR
100	0839679								-	EUR
50	0839685								-	EUR
45	0839744								-	EUR
40	0839743								-	EUR
35	0839682								-	EUR
30	0839681								-	EUR
25	0839680								-	EUR

Lengths in [mm]



Angle sensor	Delivery time: ex warehouse			
	ACB OW210/S ZM	R1	Radius	
		28°	Angle	
		240	Height (mm)	
	ACB	Mat. No.	Price	
	Sensor tool	0932643	-	EUR
	Initial equipment	0932644	-	EUR
	Initial equipment 2nd gen.	1273598	-	EUR
	Replacement sensor disks			
	L27	1238673	-	EUR
	L18	1238672	-	EUR
L16	1226063	-	EUR	
R7	1226061	-	EUR	

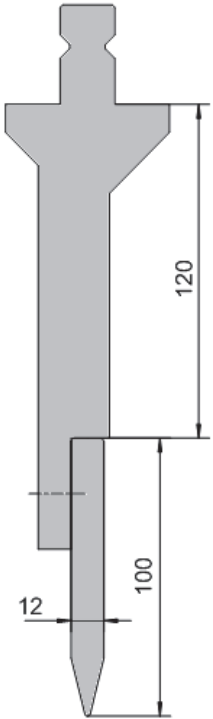
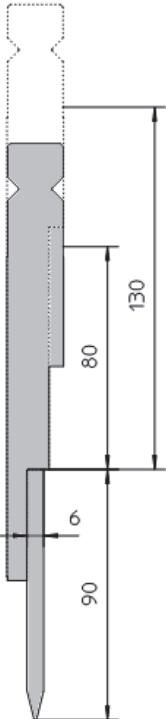
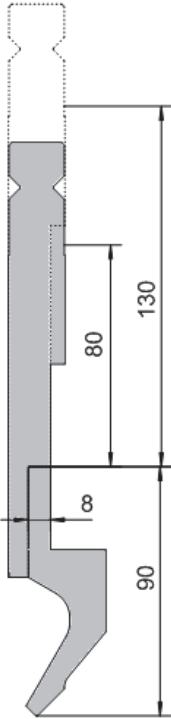
The sensor disks are included in the sensor tool scope of delivery.

 		<p>☞ For bigger tool radii restricted angle measurement ranges are valid !</p> <p>☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !</p>				
<p>ACB-Sensor OW210/S-ZM H240</p>						
		Mat.	s	W	α	R_{ow}
	L16 / R7	StSt	≤ 2	≤ 12	45 - 135	≤ 2
		St	≤ 3	≤ 16	45 - 120	≤ 2
		Al	≤ 2	≤ 12	45 - 135	≤ 2
	L27 / L18	StSt	≤ 3	≤ 24	52 - 135	≤ 4
		St	≤ 4	≤ 30	52 - 135	≤ 4
Al		≤ 4	≤ 24	52 - 135	≤ 4	

1.3 Tool holders and punch inserts

Technical information concerning tool adapters with interchangeable inserts

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

OW209/S	OWK 130 OWK 80	OWK 130 OWK 80
		
OW320	OW390	OW391

Tool holders		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1000 kN/m 38.7 kg/m 131 mm 60 – 62 HRC		OW209/S (H=120)	R	Radius	
			-	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0832205	-	EUR
		Length 3050	0832204	-	EUR
		Length 2550	0835191	-	EUR
		Length 2050	0832203	-	EUR
		Length 1250	0830316	-	EUR
		Length 1050	0867281	-	EUR
Version A					
Length 2050	0823613	-	EUR		
Length 1250	0831970	-	EUR		
Length 1050	1607019	-	EUR		
Block					
250	0829335	-	EUR		
550	1607018	-	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]

Angle sensor		Delivery time: ex warehouse		
	ACB OW209/S ZM	R	Radius	
		-	Angle	
		120	Height (mm)	
	ACB		Mat. No.	Price
	Sensor tool	0914983	-	EUR
	Initial equipment	0940286	-	EUR
	Initial equipment 2nd gen.	1278416	-	EUR
	Replacement sensor disks			
	L43	0949478	-	EUR
	L33	0949477	-	EUR
L27	0940845	-	EUR	
L17	0940846	-	EUR	
L15	0940847	-	EUR	
L9	0940849	-	EUR	

ACB-Sensor
OW209/S-ZM

☞ For bigger tool radii restricted angle measurement ranges are valid !

☞ Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !

	Mat.	s	W	α	R _{OW}
L15 / L9	StSt	≤ 2	≤ 16	45 - 105	≤ 2
	St	≤ 2	≤ 12	45 - 135	≤ 2
	Al	≤ 2	≤ 12	52 - 135	≤ 2
L27 / L17	StSt	≤ 3	≤ 24	65 - 135	≤ 4
	St	≤ 4	≤ 30	65 - 135	≤ 4
	Al	≤ 4	≤ 24	65 - 135	≤ 4
L43 / L33	StSt	≤ 6	≤ 50	65 - 135	≤ 6
	St	≤ 10	≤ 70	65 - 135	≤ 6
	Al	≤ 10	≤ 70	65 - 135	≤ 6

The sensor disks are included in the sensor tool scope of delivery.

Insert for UT209/S		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1000 kN/m (< R 0.5 mm 400 KN/m) 8.6 kg/m 60 – 62 HRC For UT209/S L=100 heels NOT included in the block!		Lengths in [mm]	OW320 28°			
			R1	Radius		
			28°	Angle		
			100	Height (mm)		
			Version B	Mat. No.	Price	
			Length 4050	0836147	-	EUR
			Length 3050	0834649	-	EUR
			Length 2550	0836146	-	EUR
			Length 2050	0834451	-	EUR
			Length 1250	0836145	-	EUR
			Length 1050	0867283	-	EUR
			Version A			
			Length 2050	0836142	-	EUR
			Length 1250	0831982	-	EUR
			Length 1050	1607066	-	EUR
			Block			
			250	0831981	-	EUR
			550	1607065	-	EUR
			Single			
			500	0831980	-	EUR
300	0831979	-	EUR			
200	0831978	-	EUR			
130 Horn right *	0868240	-	EUR			
130 Horn left *	0868239	-	EUR			
100	0831977	-	EUR			
50	0831976	-	EUR			
45	0831975	-	EUR			
40	0831974	-	EUR			
35	0831973	-	EUR			
30	0831972	-	EUR			
25	0831971	-	EUR			
Insert for OW209/S lock-seam prepared		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1000 kN/m (< R 0.5 mm 400 KN/m) 9.4 kg/m 60 – 62 HRC For UT209/S L=100 heels NOT included in the block!		Lengths in [mm]	OW320 F			
			R1	Radius		
			28°	Angle		
			100	Height (mm)		
			Version B	Mat. No.	Price	
			Length 4050	1245034	-	EUR
			Length 3050	0992142	-	EUR
			Length 2550	1235032	-	EUR
			Length 2050	1304504	-	EUR
			Length 1250	1357597	-	EUR
			Length 1050	1607217	-	EUR
			Version A			
			Length 2050	1461846	-	EUR
			Length 1250	1385813	-	EUR
			Length 1050	1607216	-	EUR
			Block			
			250	0992141	-	EUR
			550	1607215	-	EUR
			Single			
			500	0992140	-	EUR
300	0992139	-	EUR			
200	0992138	-	EUR			
130 Horn right *	0994761	-	EUR			
130 Horn left *	0994760	-	EUR			
100	0992061	-	EUR			
50	0992137	-	EUR			
45	0992136	-	EUR			
40	0992135	-	EUR			
35	0992134	-	EUR			
30	0992133	-	EUR			
25	0992132	-	EUR			



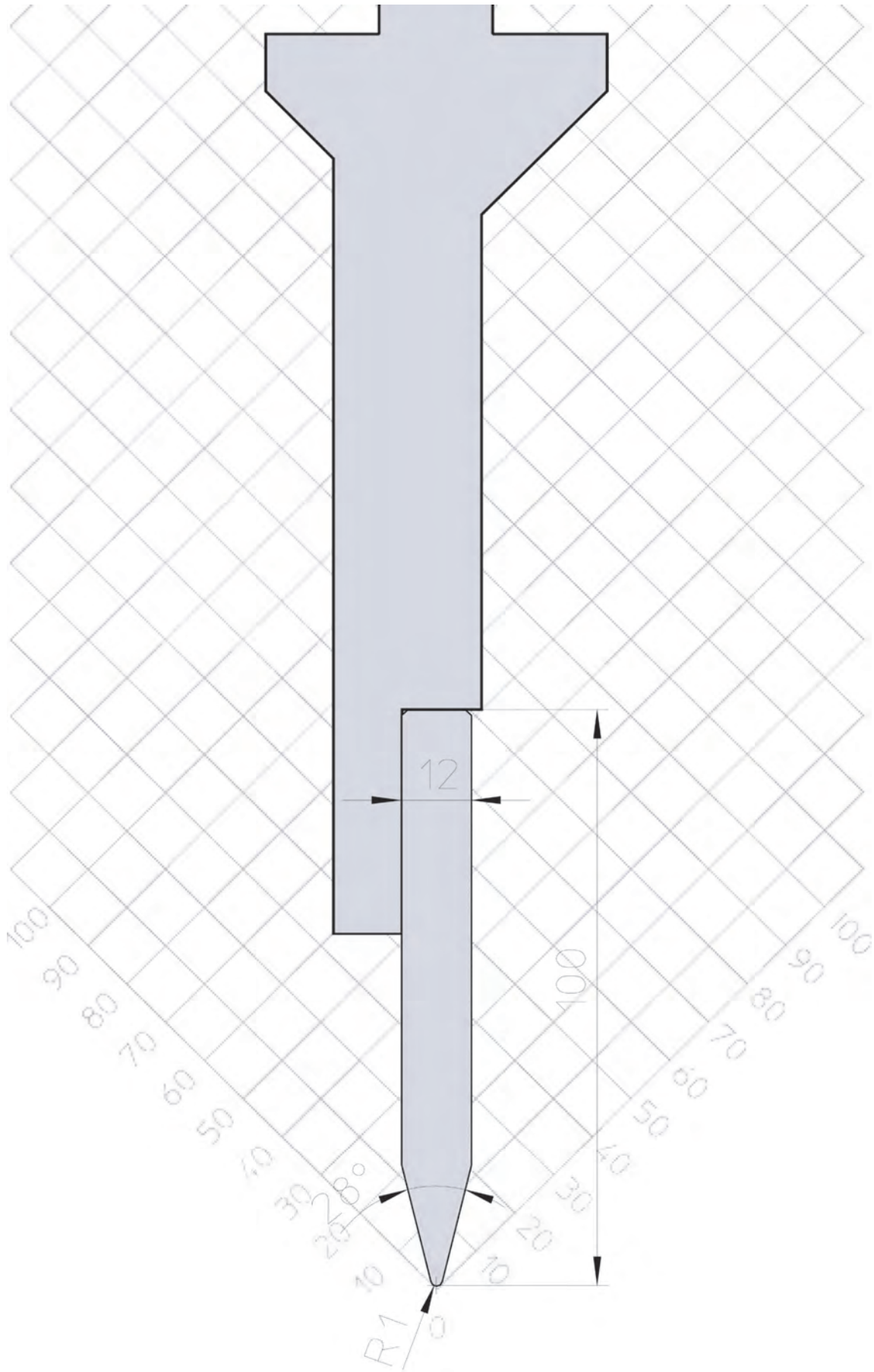
See Accessories for I axis distance blocks





Additional standard radiuses								Delivery time: ex warehouse	
OW320 28°	R0.3	R1.6	R2	R3	R4	R5	R6	-	Radius
	28°	28°	28°	28°	28°	28°	-		Angle
	100	100	100	100	100	100	100		Height (mm)
Version B	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Length 4050	0869326	0869334	0869340	0869348	0869354	0869361	0839426	-	EUR
Length 3050	0869325	0869333	0866096	0843348	0850269	0862750	0850270	-	EUR
Length 2550	0869324	0869050	0869339	0869347	0857681	0864278	1271425	-	EUR
Length 2050	0869323	0869332	0866604	0869346	0869353	0869360	0843336	-	EUR
Length 1250	0866149	0855221	0846921	0846909	0838041	0869359	0862938	-	EUR
Length 1050	1607057	1607098	1607113	1607117	1607167	1607194	1607210	-	EUR
Version A									
Length 2050	0869319	0869328	0869335	0869342	0869349	0869355	1271410	-	EUR
Length 1250	0869318	0869327	0852572	0852573	0852574	0852575	0845139	-	EUR
Length 1050	1607056	1607097	1607112	1607116	1607166	1607193	1607199	-	EUR
Block									
250	0866148	0855220	0846920	0843347	0833089	0832296	0839427	-	EUR
550	1607055	1607096	1607111	1607115	1607165	1607192	1607198	-	EUR
Single									
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
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 in [mm]

Modified working radiuses								Delivery time: ex warehouse	
OW320 28°	R0.3	R1.6	R2	R3	R4	R5	R6	-	Radius
	28°	28°	28°	28°	28°	28°	-		Angle
	100	100	100	100	100	100	100		Height (mm)
ACB 320	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Mat. No.	Price	
Insert L=11.3 mm	0960827	0959784	0948203	0944436	0952945	0949642	0949643	-	EUR
<p>Note: 2 pcs of ACB OW320 are needed for each OW209/S sensor.</p>									



Insert for angle sensor		Delivery time: ex warehouse			
 <p>2 pcs of ACB OW320 are needed for each OW209/S sensor.</p>	ACB OW320 28°	R1	Radius		
		28°	Angle		
		100	Height (mm)		
	ACB 320		Mat. No.	Price	
	Insert L=11.3 mm		0914136	-	EUR

Insert for angle sensor		Delivery time: ex warehouse			
 <p>1 pc each of ACB OW320 F (1369850) and 1 pc ACB OW320 F with web (1369849) are needed for each OW209/S sensor.</p>	ACB OW320 F	R1	Radius		
		28°	Angle		
		100	Height (mm)		
	ACB 320		Mat. No.	Price	
	Insert L=11.3 mm		1369850	-	EUR
	Insert L=13.7 mm		1369849	-	EUR

Tool holders		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1000 kN/m 18.8 kg/m 60 – 62 HRC 98 mm 	Lengths in [mm]	OW/K80	R		
		-	Radius		
		80	Angle		
			Height (mm)		
		Version B	Mat. No.	Price	
		Length 4050	1203581	-	EUR
		Length 3050	1203580	-	EUR
		Length 2550	1203569	-	EUR
		Length 2050	1203568	-	EUR
		Length 1250	0994305	-	EUR
Length 1050	1606513	-	EUR		
	Version A				
Length 2050	1203564	-	EUR		
Length 1250	1203563	-	EUR		
Length 1050	1606512	-	EUR		
	Block				
150	1207319	-	EUR		
250	0994304	-	EUR		
550	1606511	-	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		







Angle sensor		Delivery time: ex warehouse			
	Lengths in [mm]	ACB	R		
		OW/K80	-		
			80		
			Radius		
			Angle		
			Height (mm)		
		ACB	Mat. No.	Price	
		Sensor tool	1204549	-	EUR
		Initial equipment	1204580	-	EUR
		Initial equipment 2nd gen.	1273587	-	EUR
	Replacement sensor disks				
OW 391 L14	1205791	-	EUR		
OW 391 L8	1205790	-	EUR		
OW 391 L10	1205789	-	EUR		
OW 391 L5	1205788	-	EUR		
OW 390 L14	1205780	-	EUR		
OW 390 L8	1205778	-	EUR		
OW 390 L10	1205777	-	EUR		
OW 390 L5	1205754	-	EUR		

For bigger tool radii restricted angle measurement ranges are valid !
 Bei größerem Werkzeugradius gelten eingeschränkte Winkelmessbereiche !


ACB-Sensor
 OW/K-H80
 OW/K-H130



	Mat.	s	W	α	R _{ow}
L5 / L10	StSt	≤ 1.0	≤ 8	45 - 110	≤ 1.0
	St	≤ 1.5	≤ 10	45 - 110	≤ 1.5
	Al	≤ 1.5	≤ 10	45 - 110	≤ 1.5
L8 / L14	StSt	≤ 2.0	≤ 12	45 - 110	≤ 2.0
	St	≤ 2.5	≤ 16	45 - 110	≤ 2.5
	Al	≤ 2.5	≤ 16	45 - 110	≤ 2.5



The sensor disks are included in the sensor tool scope of delivery.

Tool holders		Delivery time: ex warehouse			
 42 Cr Mo 4 1080 – 1180 N/mm ²  1000 kN/m  24.7 kg/m  60 – 62 HRC  131 mm		OW/K130	R	Radius	
			-	Angle	
		130	Height (mm)		
		Version B	Mat. No.	Price	
		Length 4050	1203718	-	EUR
		Length 3050	1203717	-	EUR
		Length 2550	1203716	-	EUR
		Length 2050	1203715	-	EUR
		Length 1250	0994275	-	EUR
		Length 1050	1606544	-	EUR
Version A					
Length 2050	1203711	-	EUR		
Length 1250	1203710	-	EUR		
Length 1050	1606543	-	EUR		
Block 150					
150	1207339	-	EUR		
250	0994274	-	EUR		
550	1606542	-	EUR		
Single					
500	0994273	-	EUR		
300	0994272	-	EUR		
200	0994251	-	EUR		
100	0994244	-	EUR		
50	0994250	-	EUR		
45	0994249	-	EUR		
40	0994248	-	EUR		
35	0994247	-	EUR		
30	0994246	-	EUR		
25	0994245	-	EUR		

Lengths in [mm]

Angle sensor		Delivery time: ex warehouse		
	ACB OW/K130	R	Radius	
		-	Angle	
	130	Height (mm)		
	ACB	Mat. No.	Price	
	Sensor tool	1204585	-	EUR
	Initial equipment	1204586	-	EUR
	Initial equipment 2nd gen.	1273133	-	EUR
	Replacement sensor disks			
	OW 391 L14	1205791	-	EUR
	OW 391 L8	1205790	-	EUR
OW 391 L10	1205789	-	EUR	
OW 391 L5	1205788	-	EUR	
OW 390 L14	1205780	-	EUR	
OW 390 L8	1205778	-	EUR	
OW 390 L10	1205777	-	EUR	
OW 390 L5	1205754	-	EUR	










 For bigger tool radii restricted angle measurement ranges are valid !
 Bei größerem Werkzeugradius gelten eingeschränkte Winkelmeßbereiche !







ACB-Sensor
OW/K-H80
OW/K-H130

	Mat.	s	W	α	R _{ow}
L5 / L10	StSt	≤ 1.0	≤ 8	45 - 110	≤ 1.0
	St	≤ 1.5	≤ 10	45 - 110	≤ 1.5
	Al	≤ 1.5	≤ 10	45 - 110	≤ 1.5
L8 / L14	StSt	≤ 2.0	≤ 12	45 - 110	≤ 2.0
	St	≤ 2.5	≤ 16	45 - 110	≤ 2.5
	Al	≤ 2.5	≤ 16	45 - 110	≤ 2.5

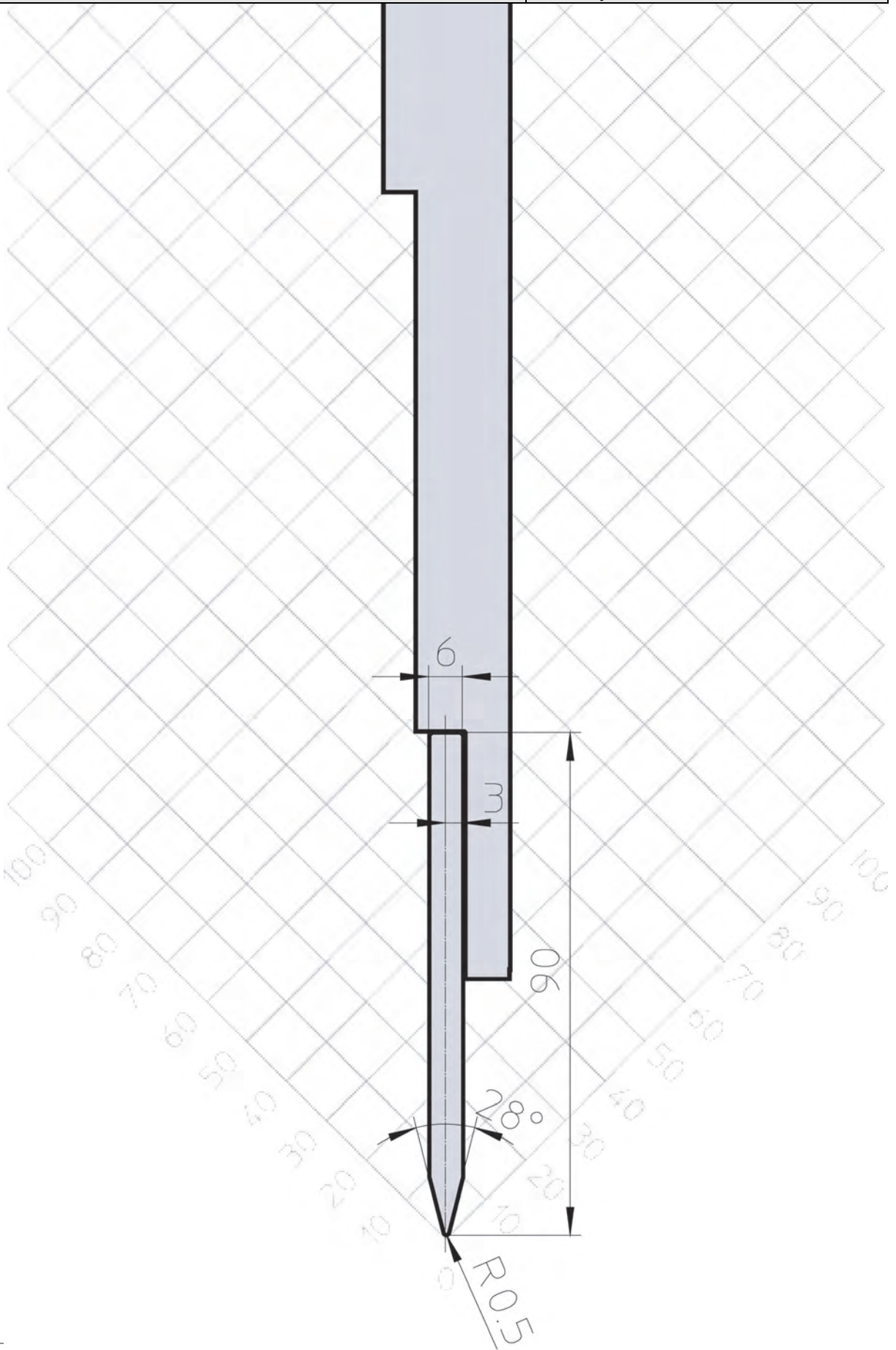
The sensor disks are included in the sensor tool scope of delivery.

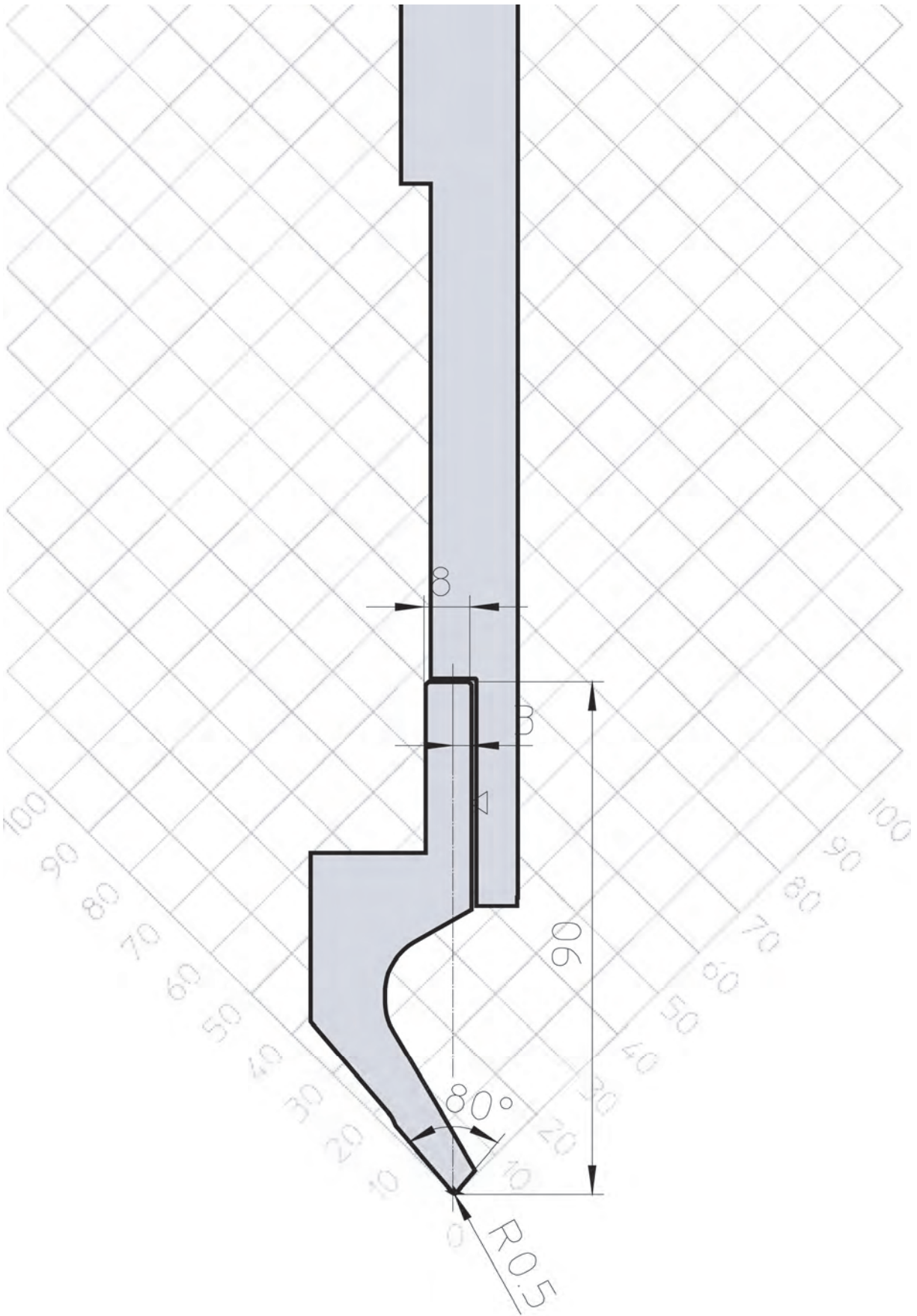
Insert for OW/K 80, OW/K 130		Delivery time: ex warehouse			
 42 Cr Mo 4 1080 – 1180 N/mm ²  400 kN/m  4 kg/m  60 – 62 HRC  Heels upon request		OW390	R0.5	Radius	
			28°	Angle	
			90	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1203729	-	EUR
		Length 3050	1203728	-	EUR
		Length 2550	1203727	-	EUR
		Length 2050	1203726	-	EUR
		Length 1250	0994352	-	EUR
		Length 1050	1607325	-	EUR
		Version A			
		Length 2050	1203722	-	EUR
		Length 1250	1203721	-	EUR
		Length 1050	1607324	-	EUR
		Block 150			
150	1207359	-	EUR		
250	0994351	-	EUR		
550	1607323	-	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		Delivery time: ex warehouse			
 42 Cr Mo 4 1080 – 1180 N/mm ²  400 kN/m  8.9 kg/m  60 – 62 HRC  Heels upon request		OW391	R0.5	Radius	
			80°	Angle	
			90	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1204647	-	EUR
		Length 3050	1204646	-	EUR
		Length 2550	1204645	-	EUR
		Length 2050	1204642	-	EUR
		Length 1250	0994418	-	EUR
		Length 1050	1607414	-	EUR
		Version A			
		Length 2050	1204627	-	EUR
		Length 1250	1204626	-	EUR
		Length 1050	1607413	-	EUR
		Block 150			
150	1207416	-	EUR		
250	0994417	-	EUR		
550	1607412	-	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]





Insert for angle sensor		Delivery time: ex warehouse			
	ACB OW390	R0.5	Radius		
		28°	Angle		
		90	Height (mm)		
	ACB 390		Mat. No.	Price	
	Insert L=12.5 mm	1205729	-	EUR	
<p>2 pcs ACB OW390 (1205729) are needed for each OW/K 80 and OW/K 130 sensor.</p>					

Insert for angle sensor		Delivery time: ex warehouse			
	ACB OW391	R0.5	Radius		
		80°	Angle		
		90	Height (mm)		
	ACB 391 D		Mat. No.	Price	
	Insert L=12.5 mm	1205751	-	EUR	
ACB 391 G					
Insert L=12.5 mm	1205750	-	EUR		
<p>1 pc of ACB OW391 (1205751) and 1 pc of ACB OW391 (1205750) are needed for each OW/K 80 and OW/K 130 sensor.</p>					

1.4 Coining

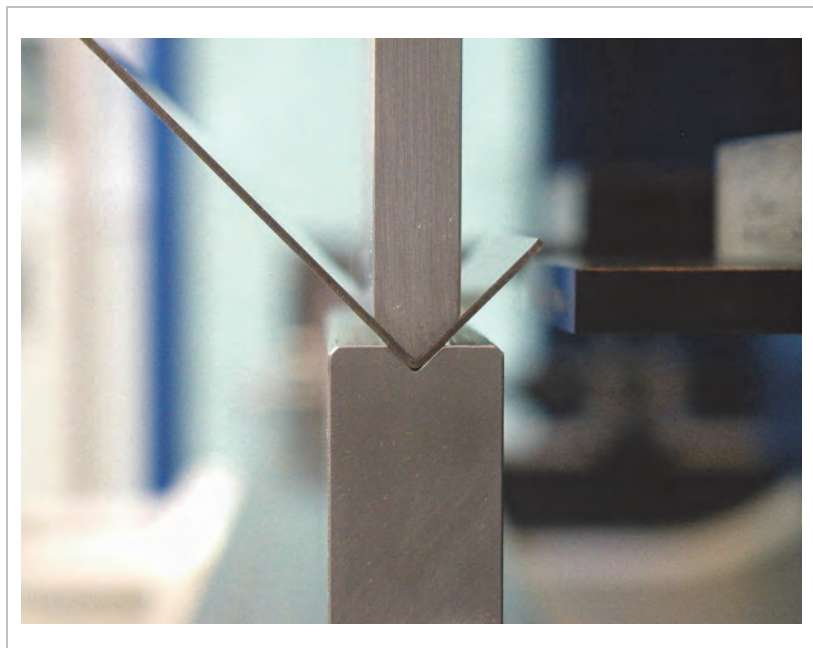
Applications







- 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/K/130		Delivery time: one week				
 42 Cr Mo 4 1080 – 1180 N/mm ²  800 kN/m  6.2 kg/m  60 – 62 HRC  Coining Chapter Heels available upon request		Lengths in [mm]	OW390	R0.5	Radius	
				90°	Angle	
				90	Height (mm)	
			Version B	Mat. No.	Price	
			Length 4050	1203801	-	EUR
			Length 3050	1203800	-	EUR
			Length 2550	1203749	-	EUR
			Length 2050	1203748	-	EUR
			Length 1250	0994375	-	EUR
			Length 1050	1607329	-	EUR
			Version A			
			Length 2050	1203744	-	EUR
			Length 1250	1203743	-	EUR
			Length 1050	1607328	-	EUR
			Block			
150	1207401	-	EUR			
250	0994374	-	EUR			
550	1607327	-	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			

Insert for coining for OW/K80, OW/K/130		Delivery time: one week				
 42 Cr Mo 4 1080 – 1180 N/mm ²  400 kN/m  9 kg/m  60 – 62 HRC  Coining Chapter Heels available upon request		Lengths in [mm]	OW391	R0.5	Radius	
				90°	Angle	
				90	Height (mm)	
			Version B	Mat. No.	Price	
			Length 4050	1205113	-	EUR
			Length 3050	1205112	-	EUR
			Length 2550	1205111	-	EUR
			Length 2050	1205110	-	EUR
			Length 1250	0994440	-	EUR
			Length 1050	1607452	-	EUR
			Version A			
			Length 2050	1205095	-	EUR
			Length 1250	1205093	-	EUR
			Length 1050	1607451	-	EUR
			Block			
150	1207445	-	EUR			
250	0994439	-	EUR			
550	1607450	-	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			

Tool holders		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1000 kN/m 38.7 kg/m 131 mm 60 – 62 HRC		OW209/S	R	Radius	
			-	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0832205	-	EUR
		Length 3050	0832204	-	EUR
		Length 2550	0835191	-	EUR
		Length 2050	0832203	-	EUR
		Length 1250	0830316	-	EUR
		Length 1050	0867281	-	EUR
		Version A			
		Length 2050	0823613	-	EUR
		Length 1250	0831970	-	EUR
		Length 1050	1607019	-	EUR
		Block			
250	0829335	-	EUR		
550	1607018	-	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]







Insert for OW209/S		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1000 kN/m 38.7 kg/m 60 – 62 HRC Coining Chapter Heels available upon request		OW320 90°	R1	Radius	
			90°	Angle	
			100	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0832200	-	EUR
		Length 3050	0832199	-	EUR
		Length 2550	0835206	-	EUR
		Length 2050	0832198	-	EUR
		Length 1250	0832169	-	EUR
		Length 1050	0867284	-	EUR
		Version A			
		Length 2050	0832195	-	EUR
		Length 1250	0832194	-	EUR
		Length 1050	1607299	-	EUR
		Block			
250	0832168	-	EUR		
550	1607298	-	EUR		
Single					
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]

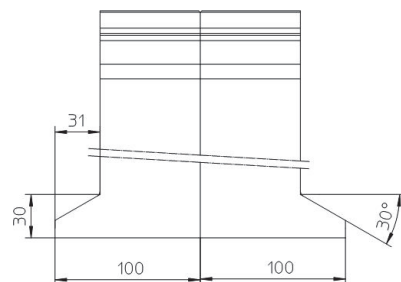
Additional standard radiuses				Delivery time: ex warehouse					
OW320 90°	R0.2	R0.5	R1.5	-	-	-	-	-	Radius
	90°	90°	90°						Angle
	100	100	100						Height (mm)
Version B	Mat. No.	Mat. No.	Mat. No.						Price
Length 4050	0869317	0832226	0833007						- EUR
Length 3050	0869316	0832225	0833006						- EUR
Length 2550	0869315	0835204	0835208						- EUR
Length 2050	0855123	0832224	0833005						- EUR
Length 1250	0849957	0832223	0833004						- EUR
Length 1050	1607274	0867282	0867285						- EUR
Version A									
Length 2050	0869311	0829336	0833001						- EUR
Length 1250	0844986	0832023	0831070						- EUR
Length 1050	1607273	1607295	1607321						- EUR
Block									
250	0832285	0829315	0831068						- EUR
550	1607272	1607294	1607320						- 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 in [mm]

Punch for coining		Delivery time: ex warehouse			
	Lengths in [mm]	OW211/K	R1	Radius	
			89.66°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0824077	-	EUR
		Length 3050	0824076	-	EUR
		Length 2550	0835197	-	EUR
		Length 2050	0824074	-	EUR
		Length 1250	0825730	-	EUR
		Length 1050	0867274	-	EUR
		Version A			
		Length 2050	0824070	-	EUR
		Length 1250	0825729	-	EUR
		Length 1050	1576242	-	EUR
		Block			
		250	0825728	-	EUR
		550	1607722	-	EUR
		Single			
		500	0824063	-	EUR
		300	0824062	-	EUR
200	0824060	-	EUR		
Horn right	0824731	-	EUR		
Horn left	0824729	-	EUR		
100	0824732	-	EUR		
50	0824726	-	EUR		
45	0824724	-	EUR		
40	0824722	-	EUR		
35	0824720	-	EUR		
30	0824718	-	EUR		
25	0824712	-	EUR		

Symbol	Technical data
	42 Cr Mo 4 1080 – 1180 Nmm ²
	1300 kN/m
	38.7 kg/m
	60 – 62 HRC
	65 mm
	Coining Chapter





Horn left/right







Modified working radiuses								Delivery time: 2 weeks	
OW211/K	R0.2	R0.5	-	-	-	-	-	-	Radius
	89.66°	90°							Angle
	119.8	119.8							Height (mm)
Version B		Mat. No.	Mat. No.						Price
Length 4050	0869302	0869310							- EUR
Length 3050	0869301	0869309							- EUR
Length 2550	0869300	0869308							- EUR
Length 2050	0869299	0833955							- EUR
Length 1250	0842901	0869307							- EUR
Version A									
Length 2050	0869295	0829419							- EUR
Length 1250	0869294	0869303							- EUR
Block									
250	0842931	0829421							- EUR
Single									
500	0842918	0829409							- EUR
300	0842917	0829408							- EUR
200	0842916	0829407							- EUR
Horn right	0842929	0829417							- EUR
Horn left	0842928	0829416							- EUR
100	0842925	0829418							- 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

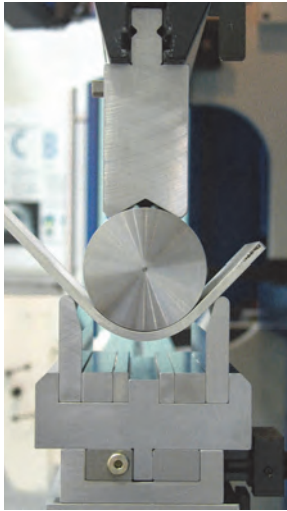
Lengths in [mm]

1.5 Radius bending

Tool adapter (R10-R25)		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  1300 kN/m  33.3 kg/m 	Lengths in [mm]	OW308/K	10-25	Radius		
			-	Angle		
			106	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0832213	-	EUR	
		Length 3050	0832212	-	EUR	
		Length 2550	0835202	-	EUR	
		Length 2050	0832211	-	EUR	
		Length 1250	0832210	-	EUR	
		Length 1050	0867643	-	EUR	
		Version A				
		Length 2050	0832207	-	EUR	
		Length 1250	0832206	-	EUR	
		Length 1050	1607839	-	EUR	
		Block				
250	0831722	-	EUR			
550	1607838	-	EUR			
Single						
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			

Tool adapter (R15-R40)		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  1500 kN/m  46.5 kg/m 	Lengths in [mm]	OW308/S	15-40	Radius		
			-	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0842446	-	EUR	
		Length 3050	0839573	-	EUR	
		Length 2550	0842445	-	EUR	
		Length 2050	0842444	-	EUR	
		Length 1250	0842427	-	EUR	
		Length 1050	0867644	-	EUR	
		Version A				
		Length 2050	0842448	-	EUR	
		Length 1250	0842447	-	EUR	
		Length 1050	1607830	-	EUR	
		Block				
250	0839572	-	EUR			
550	1607809	-	EUR			
Single						
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			

Technical Information concerning radius inserts



- Optimum tool angle ~30°
- Overbending by ~10° is necessary (depends on material)
- Minimum die width: ~ (radius + sheet thickness) x 2
Round off the result upwards.
- Hardened radius shaft ~ 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: (s=1.5 mm, St37 ~ 400 N/mm²)

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

Insert for OW 308/K		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 2.6 kg/m ~ 60 HRC		Round material	R10	Radius	
			-	Angle	
			-	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841925	-	EUR
		Length 3050	0842538	-	EUR
		Length 2550	0842067	-	EUR
		Length 2050	0835550	-	EUR
		Length 1250	0835020	-	EUR
		Length 1050	1607908	-	EUR
		Version A			
		Length 2050	0842534	-	EUR
		Length 1250	0837974	-	EUR
		Length 1050	1607907	-	EUR
		Block			
250	0830948	-	EUR		
550	1607906	-	EUR		
Single					
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 OW308/K		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 3.8 kg/m ~ 60 HRC		Round material	R12.5	Radius	
			-	Angle	
			-	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	1782831	-	EUR
		Length 3050	1782829	-	EUR
		Length 2550	1782827	-	EUR
		Length 2050	1541448	-	EUR
		Length 1250	1782824	-	EUR
		Length 1050	1782822	-	EUR
		Version A			
		Length 2050	1782825	-	EUR
		Length 1250	1782823	-	EUR
		Length 1050	1782821	-	EUR
		Block			
250	1541447	-	EUR		
550	1782790	-	EUR		
Single					
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		

Insert for OW308/K, OW308/S		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 5.48 kg/m ~ 60 HRC		Round material	R15	Radius	
			-	Angle	
			-	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0853731	-	EUR
		Length 3050	0861406	-	EUR
		Length 2550	0861877	-	EUR
		Length 2050	0841924	-	EUR
		Length 1250	0835021	-	EUR
		Length 1050	1607936	-	EUR
		Version A			
		Length 2050	0864237	-	EUR
		Length 1250	0869384	-	EUR
		Length 1050	1607935	-	EUR
		Block			
250	0832340	-	EUR		
550	1607934	-	EUR		
Single					
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		

Insert for OW308/K, OW308/S		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 7.6 kg/m ~ 60 HRC 	Lengths in [mm]	Round material	R17.5	Radius	
		-	-	Angle	
		-	-	Height (mm)	
		Version B	Mat.No.	Price	
		Length 4050	1782889	-	EUR
		Length 3050	1782887	-	EUR
		Length 2550	1782885	-	EUR
		Length 2050	1782883	-	EUR
		Length 1250	0852881	-	EUR
		Length 1050	1782860	-	EUR
		Version A			
		Length 2050	1782882	-	EUR
		Length 1250	1782881	-	EUR
		Length 1050	1782859	-	EUR
		Block			
250	0852880	-	EUR		
550	1782858	-	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		





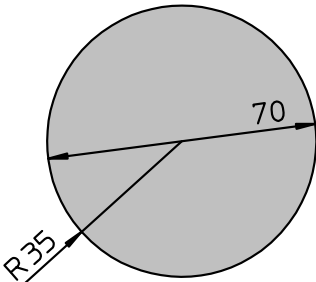
Insert for OW308/K, OW308/S		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 9.8 kg/m ~ 60 HRC 	Lengths in [mm]	Round material	R20	Radius	
		-	-	Angle	
		-	-	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0859434	-	EUR
		Length 3050	0861407	-	EUR
		Length 2550	0851579	-	EUR
		Length 2050	0855423	-	EUR
		Length 1250	0835004	-	EUR
		Length 1050	1607946	-	EUR
		Version A			
		Length 2050	0869389	-	EUR
		Length 1250	0869388	-	EUR
		Length 1050	1607945	-	EUR
		Block			
250	0835019	-	EUR		
550	1607944	-	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		





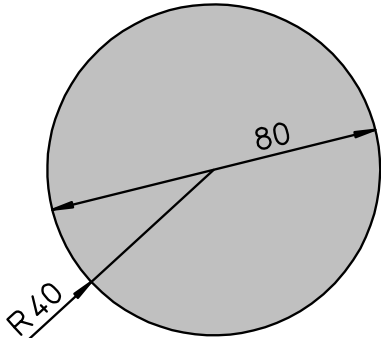
Insert for OW308/K, OW308/S		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 15.3 kg/m ~ 60 HRC		Round material	R25	Radius	
			-	Angle	
		-	Height (mm)		
		Version B	Mat. No.	Price	
		Length 4050	0842299	-	EUR
		Length 3050	0848761	-	EUR
		Length 2550	0842070	-	EUR
		Length 2050	0835809	-	EUR
		Length 1250	0841800	-	EUR
		Length 1050	1607981	-	EUR
Version A					
Length 2050	0869394	-	EUR		
Length 1250	0869393	-	EUR		
Length 1050	1607980	-	EUR		
Block					
250	0835032	-	EUR		
550	1607949	-	EUR		
Single					
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		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 22.2 kg/m ~ 60 HRC		Round material	R30	Radius	
			-	Angle	
		-	Height (mm)		
		Version B	Mat. No.	Price	
		Length 4050	0869405	-	EUR
		Length 3050	0869404	-	EUR
		Length 2550	0864142	-	EUR
		Length 2050	0869403	-	EUR
		Length 1250	0864112	-	EUR
		Length 1050	1607984	-	EUR
Version A					
Length 2050	0869399	-	EUR		
Length 1250	0869398	-	EUR		
Length 1050	1607983	-	EUR		
Block					
250	0864111	-	EUR		
550	1607982	-	EUR		
Single					
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		Delivery time: ex warehouse			
 C 45 650 – 800 N/mm ²  1500 kN/m  30.2 kg/m  ~ 60 HRC 	Lengths in [mm]	Round material	R35	Radius	
		-	-	Angle	
		-	-	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0869413	-	EUR
		Length 3050	0869412	-	EUR
		Length 2550	0864151	-	EUR
		Length 2050	0869411	-	EUR
		Length 1250	0863579	-	EUR
		Length 1050	1607987	-	EUR
		Version A			
		Length 2050	0869407	-	EUR
		Length 1250	0869406	-	EUR
		Length 1050	1607986	-	EUR
		Block			
250	0864150	-	EUR		
550	1607985	-	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		

Insert for OW308/S		Delivery time: ex warehouse			
 C 45 650 – 800 N/mm ²  1500 kN/m  39.5 kg/m  ~ 60 HRC 	Lengths in [mm]	Round material	R40	Radius	
		-	-	Angle	
		-	-	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0869421	-	EUR
		Length 3050	0869420	-	EUR
		Length 2550	0856344	-	EUR
		Length 2050	0847638	-	EUR
		Length 1250	0869419	-	EUR
		Length 1050	1607992	-	EUR
		Version A			
		Length 2050	0869415	-	EUR
		Length 1250	0869414	-	EUR
		Length 1050	1607991	-	EUR
		Block			
250	0847637	-	EUR		
550	1607990	-	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		




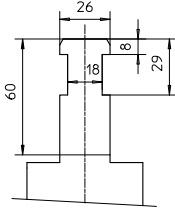



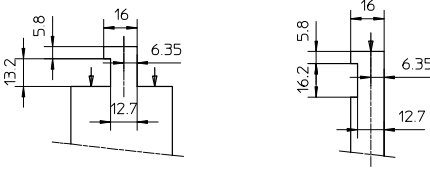



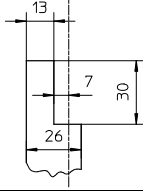



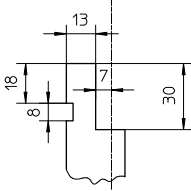
Insert for OW308/S		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 49.3 kg/m ~ 60 HRC		Round material	R45	Radius	
			-	Angle	
				-	Height (mm)
		Version B		Mat. No.	Price
		Length 4050	1461664	-	EUR
		Length 3050	1461663	-	EUR
		Length 2550	1461661	-	EUR
		Length 2050	0871222	-	EUR
		Length 1250	1461660	-	EUR
		Length 1050	1608027	-	EUR
Version A					
Length 2050	1461589	-	EUR		
Length 1250	1461582	-	EUR		
Length 1050	1608026	-	EUR		
Block					
250	0871221	-	EUR		
550	1608025	-	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		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1500 kN/m 29.9 kg/m ~ 60 HRC		Round material	R50	Radius	
			-	Angle	
				-	Height (mm)
		Version B		Mat. No.	Price
		Length 4050	1461702	-	EUR
		Length 3050	1461700	-	EUR
		Length 2550	1245215	-	EUR
		Length 2050	1461699	-	EUR
		Length 1250	0860395	-	EUR
		Length 1050	1608054	-	EUR
Version A					
Length 2050	1461693	-	EUR		
Length 1250	1444371	-	EUR		
Length 1050	1608053	-	EUR		
Block					
250	0860474	-	EUR		
550	1608052	-	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]

1.6 Adapter

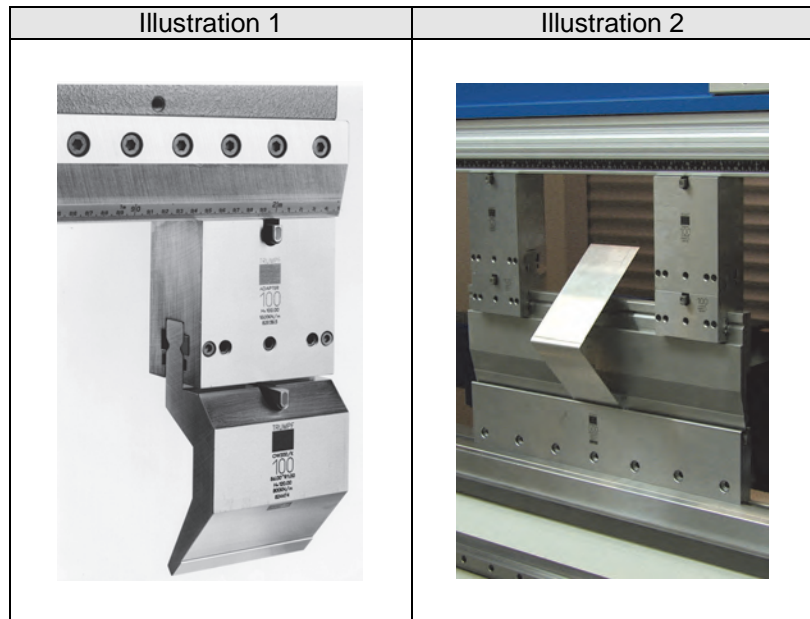
Adapter		Delivery time: 4 weeks or upon request		
 42 Cr Mo 4 1080 – 1180 N/mm ²		EHT	R	Radius
			-	Angle
 1300 kN/m			40	Height (mm)
			Single	Mat. No.
		Length 200	1281055	- EUR
				
Adapter		Delivery time: ex warehouse		
 C 50 650 – 800 N/mm ²		LVD 80	R	Radius
			-	Angle
 1300 kN/m			80	Height (mm)
			Single	Mat. No.
		Length 200	0831700	- EUR
				
Adapter		Delivery time: ex warehouse		
 C 45 650 – 800 N/mm ²		Amada Type A	R	Radius
			-	Angle
 1000 kN/m			80	Height (mm)
			Single	Mat. No.
		Length 150	0831214	- EUR
				
Adapter		Delivery time: ex warehouse		
 C 45 650 – 800 N/mm ²		Amada Type B	R	Radius
			-	Angle
 1000 kN/m			80	Height (mm)
			Single	Mat. No.
		Length 150	0831331	- EUR
				

Lengths in [mm]













Adapter for other tool adapters available upon request.

Technical information concerning TRUMPF adapter as extension





- Concerning tool extension (Illustration 1) → e.g. with nesting.
- Individual window solutions can be generated (Illustration 2).
- Observe installation height of the press brakes.



Adapter		Delivery time: ex warehouse			
Ck45 1080 – 1180 N/mm ² 1500 kN/m 26.3 kg/m 	Lengths in [mm]	Modufix H=60	R	Radius	
			-	Angle	
			60	Height (mm)	
		Version A	Mat. No.	Price	
		Length 4050	0832616	-	EUR
		Length 3050	0832615	-	EUR
		Length 2550	0836965	-	EUR
		Length 2050	0832614	-	EUR
		Length 1250	0832613	-	EUR
		Length 1050	1605787	-	EUR
Block					
250	0831695	-	EUR		
550	1605786	-	EUR		
Single					
100	0831691	-	EUR		
50	0831690	-	EUR		
45	0831689	-	EUR		
40	0831688	-	EUR		
35	0831687	-	EUR		
30	0831686	-	EUR		
25	0831685	-	EUR		

Adapter		Delivery time: ex warehouse				
 Ck45 1080 – 1180 N/mm ²  1500 kN/m  35.7 kg/m		Lengths in [mm]	Modufix H=80		R	Radius
			-	Angle		
			80	Height (mm)		
			Version A	Mat. No.	Price	
			Length 4050	0832714	-	EUR
			Length 3050	0832713	-	EUR
			Length 2550	0836962	-	EUR
			Length 2050	0832712	-	EUR
			Length 1250	0832711	-	EUR
			Length 1050	1605810	-	EUR
			Block			
			250	0832710	-	EUR
			550	1605789	-	EUR
			Single			
			100	0832708	-	EUR
50	0832707	-	EUR			
45	0832706	-	EUR			
40	0832705	-	EUR			
35	0832704	-	EUR			
30	0832703	-	EUR			
25	0832702	-	EUR			
 Ck45 1080 – 1180 N/mm ²  1500 kN/m  45.3 kg/m		Lengths in [mm]	Modufix H=100		R	Radius
			-	Angle		
			100	Height (mm)		
			Version A	Mat. No.	Price	
			Length 4050	0830711	-	EUR
			Length 3050	0830710	-	EUR
			Length 2550	0836961	-	EUR
			Length 2050	0830709	-	EUR
			Length 1250	0829283	-	EUR
			Length 1050	1605817	-	EUR
			Block			
			250	0828387	-	EUR
			550	1605816	-	EUR
			Single			
			100	0828383	-	EUR
50	0828382	-	EUR			
45	0828381	-	EUR			
40	0828380	-	EUR			
35	0828379	-	EUR			
30	0828378	-	EUR			
25	0828377	-	EUR			
 Ck45 1080 – 1180 N/mm ²  1500 kN/m  68.6 kg/m		Lengths in [mm]	Modufix H=150		R	Radius
			-	Angle		
			150	Height (mm)		
			Version A	Mat. No.	Price	
			Length 4050	0832734	-	EUR
			Length 3050	0832733	-	EUR
			Length 2550	0836959	-	EUR
			Length 2050	0832732	-	EUR
			Length 1250	0832731	-	EUR
			Length 1050	1605862	-	EUR
			Block			
			250	0832730	-	EUR
			550	1605861	-	EUR
			Single			
			100	0832728	-	EUR
50	0832727	-	EUR			
45	0832726	-	EUR			
40	0832725	-	EUR			
35	0832724	-	EUR			
30	0832723	-	EUR			
25	0832722	-	EUR			



Adapter		Delivery time: ex warehouse			
 Ck45 1080 – 1180 N/mm ²  1000 kN/m  62.5 kg/m		Modufix H=200	R	Radius	
			-	Angle	
			200	Height (mm)	
		Version A	Mat.No.	Price	
		Length 4050	1766444	-	EUR
		Length 3050	1766443	-	EUR
		Length 2550	1766442	-	EUR
		Length 2050	1766441	-	EUR
		Length 1250	1766440	-	EUR
		Length 1050	1766439	-	EUR
		Block			
		250	1766437	-	EUR
		550	1766438	-	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]

2. Dies

Note: modifications are possible upon request.

- Height
- Radius
- Angle
- Length
-



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.

Tool selection of standard tools using as an example 84°-80° tools (for sheet steel)

Optimum sheet thickness	Type (die width)	Minimum side length
0.5 – 0.6	EV/S-W4/84°	3.1
0.6 – 0.8	EV/S-W5/84°	3.8
0.8 -1.0	EV W6/84°	4.5
1.0 – 1.25	EV W8/84°	5.7
1.25 – 1.5	EV W10/84°	7.1
1.5 – 2.0	EV W12/84°	8.2
2.0 – 2.5	EV W16/84°	11.1
2.5 – 3.0	EV W20/84°	14.5
3.0 -3.5	EV W24/80°	19
3.5 – 4.0	EV W30/80°	22
4 – 5	EV W40/80°	28
5 – 6	EV W50/80°	34.5
6 – 7	EV W60/80°	40
7 – 8	EV W70/80°	48
8 – 9	EV W80/80°	54
8 -10	EV W90/80°	65
10 – 12	EV W100/80°	68

For further information, see Technical Section

2.1 4 mm, 5 mm die width

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 250 kN/m 10.2 kg/m 60 – 62 HRC 3.1 mm		EV/S-W4/84°	4	Die width	
			84°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1206630	-	EUR
		Length 3050	1206619	-	EUR
		Length 2550	1206618	-	EUR
		Length 2050	1206617	-	EUR
		Length 1250	1206616	-	EUR
		Length 1050	1574984	-	EUR
Version A					
Length 2050	1206612	-	EUR		
Length 1250	1206611	-	EUR		
Length 1050	1574983	-	EUR		
Block					
250	1206610	-	EUR		
550	1603586	-	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		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 250 kN/m 10.1 kg/m 60 – 62 HRC 3.8 mm		EV/S-W5/84°	5	Die width	
			84°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1206698	-	EUR
		Length 3050	1206697	-	EUR
		Length 2550	1206696	-	EUR
		Length 2050	1206695	-	EUR
		Length 1250	1206694	-	EUR
		Length 1050	1603632	-	EUR
Version A					
Length 2050	1206690	-	EUR		
Length 1250	1206669	-	EUR		
Length 1050	1603631	-	EUR		
Block					
250	1206668	-	EUR		
550	1603630	-	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		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 150 kN/m 14.1 kg/m 60 – 62 HRC 3.3 mm Bore hole available		EV/S-W4/30°	4	Die width	
			30°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1205134	-	EUR
		Length 3050	1205133	-	EUR
		Length 2550	1205132	-	EUR
		Length 2050	1205131	-	EUR
		Length 1250	0994487	-	EUR
		Length 1050	1575074	-	EUR
Version A					
Length 2050	1205117	-	EUR		
Length 1250	1205116	-	EUR		
Length 1050	1575073	-	EUR		
Block					
150	1210141	-	EUR		
250	0994486	-	EUR		
550	1603524	-	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		
25 with groove (ACB)	1211855	-	EUR		
20	1440483	-	EUR		
15	1440482	-	EUR		
10	1236598	-	EUR		
	Lengths in [mm]				
Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 150 kN/m 14 kg/m 60 – 62 HRC 4.1 mm Bore hole available		EV/S-W5/30°	5	Die width	
			30°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1205451	-	EUR
		Length 3050	1205450	-	EUR
		Length 2550	1205449	-	EUR
		Length 2050	1205448	-	EUR
		Length 1250	0994528	-	EUR
		Length 1050	1603529	-	EUR
Version A					
Length 2050	1205444	-	EUR		
Length 1250	1205443	-	EUR		
Length 1050	1603528	-	EUR		
Block					
150	1210148	-	EUR		
250	0994527	-	EUR		
550	1603527	-	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		
25 with groove (ACB)	1211884	-	EUR		
20	1463126	-	EUR		
15	1463125	-	EUR		
10	1345667	-	EUR		
	Lengths in [mm]				

Die		Delivery time: one week				
42 Cr Mo 4 1080 – 1180 N/mm ² 250 kN/m 11.1 kg/m 60 – 62 HRC 3.1 mm Coining Chapter		EV/S-W4/90°	4	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	1207818	-	EUR	
		Length 3050	1207817	-	EUR	
		Length 2550	1207816	-	EUR	
		Length 2050	1207815	-	EUR	
		Length 1250	1207814	-	EUR	
		Length 1050	1603639	-	EUR	
Version A						
Length 2050	1207810	-	EUR			
Length 1250	1207789	-	EUR			
Length 1050	1603638	-	EUR			
Block						
250	1207788	-	EUR			
550	1603637	-	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			

Die		Delivery time: one week				
42 Cr Mo 4 1080 – 1180 N/mm ² 390 kN/m 11.9 kg/m 60 – 62 HRC 3.8 mm Coining Chapter		EV/S-W5/90°	5	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	1207853	-	EUR	
		Length 3050	1207851	-	EUR	
		Length 2550	1207850	-	EUR	
		Length 2050	1207849	-	EUR	
		Length 1250	1207848	-	EUR	
		Length 1050	1603663	-	EUR	
Version A						
Length 2050	1207842	-	EUR			
Length 1250	1207841	-	EUR			
Length 1050	1603662	-	EUR			
Block						
250	1207840	-	EUR			
550	1603661	-	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			

6 mm die width

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17.5 kg/m 60 – 62 HRC 4.8 mm Bore hole available		EV001 30°	6	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0823872	-	EUR
		Length 3050		0823871	-	EUR
		Length 2550		0835213	-	EUR
		Length 2050		0823870	-	EUR
		Length 1250		0825738	-	EUR
		Length 1050		0867465	-	EUR
Version A						
Length 2050		0823860	-	EUR		
Length 1250		0825737	-	EUR		
Length 1050		1603666	-	EUR		
Block						
250		0823844	-	EUR		
550		1603665	-	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		
25 with groove (ACB)		0932559	-	EUR		
20		0836703	-	EUR		
15		0836702	-	EUR		
10		0836701	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 25.6 kg/m 60 – 62 HRC 4.8 mm Bore holes possible +10%		EV001/H 30°	6	Die width		
			30°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0823913	-	EUR
		Length 3050		0823911	-	EUR
		Length 2550		0835215	-	EUR
		Length 2050		0823909	-	EUR
		Length 1250		0825740	-	EUR
		Length 1050		0867472	-	EUR
Version A						
Length 2050		0823901	-	EUR		
Length 1250		0825739	-	EUR		
Length 1050		1603778	-	EUR		
Block						
250		0823895	-	EUR		
550		1603777	-	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 (ACB)		0932573	-	EUR		

Lengths in [mm]

Dies

W4

W5

W6

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17.3 kg/m 60 – 62 HRC 6.4 mm Bore hole available		Lengths in [mm]	EV001 R3 30°			
			6	Die width		
			30°	Angle		
			100	Height (mm)		
			Version B	Mat. No.	Price	
			Length 4050	0860494	-	EUR
			Length 3050	0858917	-	EUR
			Length 2550	0860493	-	EUR
			Length 2050	0860492	-	EUR
			Length 1250	0860491	-	EUR
			Length 1050	0867287	-	EUR
			Version A			
			Length 2050	0860487	-	EUR
			Length 1250	0860486	-	EUR
			Length 1050	1576246	-	EUR
Block						
250	0858916	-	EUR			
550	1603743	-	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			
25 with groove (ACB)	0869966	-	EUR			
20	1242166	-	EUR			
15	1242165	-	EUR			
10	1455402	-	EUR			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 170 kN/m 14.6 kg/m 60 – 62 HRC 4.8 mm Bore hole available		Lengths in [mm]	EV001/S 30°			
			6	Die width		
			30°	Angle		
			100	Height (mm)		
			Version B	Mat. No.	Price	
			Length 4050	0859051	-	EUR
			Length 3050	0867266	-	EUR
			Length 2550	0870607	-	EUR
			Length 2050	0849843	-	EUR
			Length 1250	0849815	-	EUR
			Length 1050	0989588	-	EUR
			Version A			
			Length 2050	0870604	-	EUR
			Length 1250	0870603	-	EUR
			Length 1050	1603740	-	EUR
Block						
250	0849814	-	EUR			
550	1603699	-	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			
25 with groove (ACB)	0869970	-	EUR			
20	1200444	-	EUR			
15	1200443	-	EUR			
10	1200442	-	EUR			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17.6 kg/m 60 – 62 HRC 4.5 mm		EV W6/84°	6	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0857516	-	EUR	
		Length 3050	0861833	-	EUR	
		Length 2550	0861832	-	EUR	
		Length 2050	0861831	-	EUR	
		Length 1250	0858874	-	EUR	
		Length 1050	0867292	-	EUR	
Version A						
Length 2050	0861827	-	EUR			
Length 1250	0861826	-	EUR			
Length 1050	1603177	-	EUR			
Block						
250	0857515	-	EUR			
550	1603176	-	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			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 26.3 kg/m 60 – 62 HRC 4.5 mm		EV/H W6/84°	6	Die width		
			84°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	1274520	-	EUR	
		Length 3050	1274519	-	EUR	
		Length 2550	1274517	-	EUR	
		Length 2050	1274516	-	EUR	
		Length 1250	1274515	-	EUR	
		Length 1050	1603205	-	EUR	
Version A						
Length 2050	1274485	-	EUR			
Length 1250	1274480	-	EUR			
Length 1050	1603204	-	EUR			
Block						
250	1274479	-	EUR			
550	1603203	-	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			

Dies

W6

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 250 kN/m 10.6 kg/m 60 – 62 HRC 4.5 mm		EV/S W6/84°	6	Die width	
			84°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1206507	-	EUR
		Length 3050	0867527	-	EUR
		Length 2550	1206506	-	EUR
		Length 2050	1206505	-	EUR
		Length 1250	0864724	-	EUR
		Length 1050	1575077	-	EUR
Version A					
Length 2050	1206502	-	EUR		
Length 1250	1206501	-	EUR		
Length 1050	1575076	-	EUR		
Block					
250	0858802	-	EUR		
550	1603521	-	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		

Die	Delivery time: 2 weeks							
W6/86°	EV020		EV020/H		EV020/S			
Version B	Mat. No.	Price	Mat. No.	Price	Mat. No.	Price		
Length 4050	0824221	- EUR	0824238	- EUR	0843836	- EUR		
Length 3050	0824220	- EUR	0824237	- EUR	0840838	- EUR		
Length 2550	0835244	- EUR	0835246	- EUR	0843835	- EUR		
Length 2050	0824219	- EUR	0824236	- EUR	0832799	- EUR		
Length 1250	0825763	- EUR	0825765	- EUR	0840837	- EUR		
Version A								
Length 2050	0824216	- EUR	0824233	- EUR	0841463	- EUR		
Length 1250	0825762	- EUR	0825764	- EUR	0843831	- EUR		
Block								
250	0824215	- EUR	0824232	- EUR	0832033	- EUR		
Single								
500	0824214	- EUR	0824231	- EUR	0832798	- EUR		
300	0824213	- EUR	0824230	- EUR	0832797	- EUR		
200	0824212	- EUR	0824229	- EUR	0832796	- EUR		
100	0824211	- EUR	0824228	- EUR	0832032	- EUR		
50	0824210	- EUR	0824227	- EUR	0832031	- EUR		
45	0824209	- EUR	0824226	- EUR	0832030	- EUR		
40	0824208	- EUR	0824225	- EUR	0832029	- EUR		
35	0824207	- EUR	0824224	- EUR	0832028	- EUR		
30	0824206	- EUR	0824223	- EUR	0832027	- EUR		
25	0824205	- EUR	0824222	- EUR	0832026	- EUR		
Lengths in [mm]								
	Previous model to 84°							

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1100 kN/m 18.4 kg/m 60 – 62 HRC 4.5 mm Coining Chapter		EV040 90°	6	Die width	
			90°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0824522	-	EUR
		Length 3050	0824521	-	EUR
Length 2550	0835289	-	EUR		
Length 2050	0824520	-	EUR		
Length 1250	0825870	-	EUR		
Length 1050	0867598	-	EUR		
Version A					
Length 2050	0824517	-	EUR		
Length 1250	0825869	-	EUR		
Length 1050	1604335	-	EUR		
Block					
250	0824516	-	EUR		
550	1604334	-	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		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 390 kN/m 11 kg/m 60 – 62 HRC 4.5 mm Coining Chapter		EV040/S 90°	6	Die width	
			90°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0844139	-	EUR
		Length 3050	0844138	-	EUR
Length 2550	0844137	-	EUR		
Length 2050	0844136	-	EUR		
Length 1250	0840673	-	EUR		
Length 1050	0867608	-	EUR		
Version A					
Length 2050	0844141	-	EUR		
Length 1250	0844140	-	EUR		
Length 1050	1604372	-	EUR		
Block					
250	0840672	-	EUR		
550	1604371	-	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		

Dies

W6

8 mm die width

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17.2 kg/m 60 – 62 HRC 6.3 mm Bore hole available		EV002 30°	8	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0823936	-	EUR
		Length 3050		0823934	-	EUR
		Length 2550		0835217	-	EUR
		Length 2050		0823933	-	EUR
		Length 1250		0825742	-	EUR
		Length 1050		0867466	-	EUR
Version A						
Length 2050		0823930	-	EUR		
Length 1250		0825741	-	EUR		
Length 1050		1594286	-	EUR		
Block						
250		0823929	-	EUR		
550		1594285	-	EUR		
Single						
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		
25 with groove (ACB)		0932570	-	EUR		
20		0836064	-	EUR		
15		0836063	-	EUR		
10		0839096	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 25.4 kg/m 60 – 62 HRC 6.3 mm Bore holes possible +10%		EV002/H 30°	8	Die width		
			30°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0823974	-	EUR
		Length 3050		0823973	-	EUR
		Length 2550		0835220	-	EUR
		Length 2050		0823972	-	EUR
		Length 1250		0825744	-	EUR
		Length 1050		0867474	-	EUR
Version A						
Length 2050		0823969	-	EUR		
Length 1250		0825743	-	EUR		
Length 1050		1603916	-	EUR		
Block						
250		0823968	-	EUR		
550		1603915	-	EUR		
Single						
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 (ACB)		0932574	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17.1 kg/m 60 – 62 HRC 8 mm Bore hole available 	Lengths in [mm]	EV002 R3 30°	8	Die width	
			30°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0857864	-	EUR
		Length 3050	0848421	-	EUR
		Length 2550	0860500	-	EUR
		Length 2050	0859479	-	EUR
		Length 1250	0853761	-	EUR
		Length 1050	0867288	-	EUR
		Version A			
		Length 2050	0860496	-	EUR
		Length 1250	0860495	-	EUR
		Length 1050	1576399	-	EUR
		Block			
		250	0848420	-	EUR
		550	1603911	-	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		
25 with groove (ACB)	0869967	-	EUR		
20	1465568	-	EUR		
15	1465567	-	EUR		
10	1465566	-	EUR		
Die	Delivery time: ex warehouse	EV002/S 30°	8	Die width	
42 Cr Mo 4 1080 – 1180 N/mm ² 200 kN/m 15.1 kg/m 60 – 62 HRC 6.3 mm Bore hole available 	Lengths in [mm]		30°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0870611	-	EUR
		Length 3050	0857458	-	EUR
		Length 2550	0855649	-	EUR
		Length 2050	0855208	-	EUR
		Length 1250	0849803	-	EUR
		Length 1050	0989589	-	EUR
		Version A			
		Length 2050	0870608	-	EUR
		Length 1250	0867079	-	EUR
		Length 1050	1603800	-	EUR
		Block			
		250	0849802	-	EUR
		550	1603779	-	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		
25 with groove (ACB)	0869971	-	EUR		
20	1220177	-	EUR		
15	1220175	-	EUR		
10	1269504	-	EUR		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17.6 kg/m 60 – 62 HRC 5.7 mm		EV W8/84°	8	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0861842	-	EUR	
		Length 3050	0861841	-	EUR	
		Length 2550	0861840	-	EUR	
		Length 2050	0861839	-	EUR	
		Length 1250	0858875	-	EUR	
		Length 1050	0867293	-	EUR	
Version A						
Length 2050	0861835	-	EUR			
Length 1250	0861834	-	EUR			
Length 1050	1603381	-	EUR			
Block						
250	0858736	-	EUR			
550	1603380	-	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			






Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 26.2 kg/m 60 – 62 HRC 5.7 mm		EV/H W8/84°	8	Die width		
			84°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	1272807	-	EUR	
		Length 3050	1272806	-	EUR	
		Length 2550	1272805	-	EUR	
		Length 2050	1272803	-	EUR	
		Length 1250	1272802	-	EUR	
		Length 1050	1603384	-	EUR	
Version A						
Length 2050	1272656	-	EUR			
Length 1250	1272655	-	EUR			
Length 1050	1603383	-	EUR			
Block						
250	1272654	-	EUR			
550	1603382	-	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			

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 350 kN/m 10.9 kg/m 60 – 62 HRC 5.7 mm		EV/S W8/84°	8	Die width	
			84°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	1206548	- EUR	
		Length 3050	0860807	- EUR	
		Length 2550	0861294	- EUR	
		Length 2050	0865349	- EUR	
		Length 1250	0864725	- EUR	
		Length 1050	1601276	- EUR	
Version A					
Length 2050	1206545	- EUR			
Length 1250	0862969	- EUR			
Length 1050	1601275	- EUR			
Block					
250	0858817	- EUR			
550	1601274	- 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			

Die	Delivery time: 2 weeks							
W8/86°	EV021		EV021/H		EV021/S			
Version B	Mat. No.	Price	Mat. No.	Price	Mat. No.	Price		
Length 4050	0824258	- EUR	0824276	- EUR	0843734	- EUR		
Length 3050	0824257	- EUR	0824275	- EUR	0843733	- EUR		
Length 2550	0835248	- EUR	0835250	- EUR	0843732	- EUR		
Length 2050	0824256	- EUR	0824274	- EUR	0843731	- EUR		
Length 1250	0825767	- EUR	0825769	- EUR	0840970	- EUR		
Version A								
Length 2050	0824253	- EUR	0824271	- EUR	0843736	- EUR		
Length 1250	0825766	- EUR	0825768	- EUR	0843735	- EUR		
Block								
250	0824252	- EUR	0824270	- EUR	0840969	- EUR		
Single								
500	0824251	- EUR	0824269	- EUR	0840968	- EUR		
300	0824250	- EUR	0824268	- EUR	0840967	- EUR		
200	0824249	- EUR	0824267	- EUR	0840966	- EUR		
100	0824248	- EUR	0824266	- EUR	0840959	- EUR		
50	0824247	- EUR	0824265	- EUR	0840965	- EUR		
45	0824246	- EUR	0824264	- EUR	0840964	- EUR		
40	0824245	- EUR	0824263	- EUR	0840963	- EUR		
35	0824244	- EUR	0824262	- EUR	0840962	- EUR		
30	0824243	- EUR	0824261	- EUR	0840961	- EUR		
25	0824241	- EUR	0824259	- EUR	0840960	- EUR		
Lengths in [mm]								
	Previous model to 84°							

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1100 kN/m 18.4 kg/m 60 – 62 HRC 5.7 mm Coining Chapter		EV041 90°	8	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0824567	-	EUR
		Length 3050		0824565	-	EUR
		Length 2550		0835293	-	EUR
		Length 2050		0824564	-	EUR
		Length 1250		0825874	-	EUR
		Length 1050		0867599	-	EUR
Version A						
Length 2050		0824561	-	EUR		
Length 1250		0825873	-	EUR		
Length 1050		1604376	-	EUR		
Block						
250		0824560	-	EUR		
550		1604375	-	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		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 460 kN/m 12,3 kg/m 60 – 62 HRC 5,7 mm Coining Chapter		EV041/S 90°	8	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat.No.	Price	
		Länge 4050		0844148	-	EUR
		Länge 3050		0844147	-	EUR
		Länge 2550		0844146	-	EUR
		Länge 2050		0844145	-	EUR
		Länge 1250		0840689	-	EUR
		Länge 1050		0867609	-	EUR
Version A						
Länge 2050		0844150	-	EUR		
Länge 1250		0844149	-	EUR		
Länge 1050		1604421	-	EUR		
Block						
250		0840688	-	EUR		
550		1604420	-	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		

Die		Delivery time: ex warehouse					
 42 Cr Mo 4 1080 – 1180 N/mm ²	 200 kN/m	 21.2 kg/m	 7.6 mm				
					KEV W8/30°	8	Die width
					30°	Angle	
					100	Height (mm)	
		Version B	Mat. No.	Price			
		Length 4050	0846302	- EUR			
		Length 3050	0846301	- EUR			
		Length 2550	0846300	- EUR			
		Length 2050	0846299	- EUR			
		Length 1250	0844967	- EUR			
		Length 1050	0867618	- EUR			
		Version A					
		Length 2050	0846311	- EUR			
		Length 1250	0846303	- EUR			
		Length 1050	1605336	- EUR			
		Block					
		250	0844966	- EUR			
		550	1605335	- 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			

Dies

W8

10 mm die width

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 17 kg/m 60 – 62 HRC 7.8 mm Bore hole available		EV003 30°	10	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0824011	-	EUR
		Length 3050		0824009	-	EUR
		Length 2550		0835223	-	EUR
		Length 2050		0824007	-	EUR
		Length 1250		0825746	-	EUR
		Length 1050		0867467	-	EUR
Version A						
Length 2050		0824001	-	EUR		
Length 1250		0825745	-	EUR		
Length 1050		1603974	-	EUR		
Block						
250		0823999	-	EUR		
550		1603973	-	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		
25 with groove (ACB)		0932571	-	EUR		
20		0845257	-	EUR		
15		0845256	-	EUR		
10		0845255	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 25.2 kg/m 60 – 62 HRC 7.8 mm Bore holes possible +10%		EV003/H 30°	10	Die width		
			30°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0824047	-	EUR
		Length 3050		0824046	-	EUR
		Length 2550		0835225	-	EUR
		Length 2050		0824044	-	EUR
		Length 1250		0825749	-	EUR
		Length 1050		0867475	-	EUR
Version A						
Length 2050		0824037	-	EUR		
Length 1250		0825748	-	EUR		
Length 1050		1604077	-	EUR		
Block						
250		0824034	-	EUR		
550		1604076	-	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 (ACB)		0932575	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 16.8 kg/m 60 – 62 HRC 9.5 mm Bore hole available		Lengths in [mm]	EV003 R3 30°			
			10	Die width		
			30°	Angle		
			100	Height (mm)		
			Version B	Mat. No.	Price	
			Length 4050	0857866	-	EUR
			Length 3050	0849665	-	EUR
			Length 2550	0860512	-	EUR
			Length 2050	0859474	-	EUR
			Length 1250	0860511	-	EUR
			Length 1050	0867289	-	EUR
			Version A			
			Length 2050	0860507	-	EUR
			Length 1250	0860506	-	EUR
			Length 1050	1576412	-	EUR
Block						
250	0849664	-	EUR			
550	1604057	-	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			
25 with groove (ACB)	0869968	-	EUR			
20	1465591	-	EUR			
15	1444679	-	EUR			
10	1465590	-	EUR			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 200 kN/m 15.5 kg/m 60 – 62 HRC 7.8 mm Bore hole available		Lengths in [mm]	EV003/S 30°			
			10	Die width		
			30°	Angle		
			100	Height (mm)		
			Version B	Mat. No.	Price	
			Length 4050	0870618	-	EUR
			Length 3050	0849845	-	EUR
			Length 2550	0870617	-	EUR
			Length 2050	0857460	-	EUR
			Length 1250	0849790	-	EUR
			Length 1050	0989590	-	EUR
			Version A			
			Length 2050	0870613	-	EUR
			Length 1250	0870612	-	EUR
			Length 1050	1604055	-	EUR
Block						
250	0849789	-	EUR			
550	1604054	-	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			
25 with groove (ACB)	0869972	-	EUR			
20	0858858	-	EUR			
15	0858857	-	EUR			
10	0858856	-	EUR			

Dies

W10

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 17.5 kg/m 60 – 62 HRC 7.1 mm		EV W10/84°	10	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0857528	-	EUR
		Length 3050		0860118	-	EUR
		Length 2550		0861849	-	EUR
		Length 2050		0861848	-	EUR
		Length 1250		0858876	-	EUR
		Length 1050		0867294	-	EUR
Version A						
Length 2050		0861844	-	EUR		
Length 1250		0861843	-	EUR		
Length 1050		1594072	-	EUR		
Block						
250		0857527	-	EUR		
550		1594071	-	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		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 26.1 kg/m 60 – 62 HRC 7.1 mm		EV/H W10/84°	10	Die width		
			84°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0992251	-	EUR
		Length 3050		1272109	-	EUR
		Length 2550		1272107	-	EUR
		Length 2050		1272106	-	EUR
		Length 1250		1272104	-	EUR
		Length 1050		1594102	-	EUR
Version A						
Length 2050		1272078	-	EUR		
Length 1250		1272076	-	EUR		
Length 1050		1594101	-	EUR		
Block						
250		0992250	-	EUR		
550		1594100	-	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		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 13.3 kg/m 60 – 62 HRC 7.1 mm		EV/S W10/84°	10	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0872304	-	EUR	
		Length 3050	0861962	-	EUR	
		Length 2550	1206568	-	EUR	
		Length 2050	1206567	-	EUR	
		Length 1250	0868088	-	EUR	
		Length 1050	1601200	-	EUR	
Version A						
Length 2050	1206562	-	EUR			
Length 1250	1206561	-	EUR			
Length 1050	1601169	-	EUR			
Block						
250	0861961	-	EUR			
550	1601168	-	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			





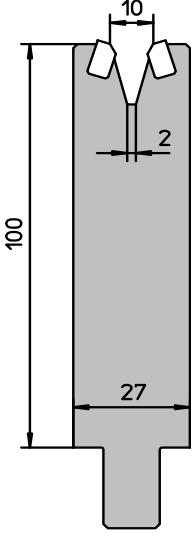
Die		Delivery time: 2 weeks							
W10/86°		EV022		EV022/H		EV022/S			
Version B	Mat. No.	Price		Mat. No.	Price		Mat. No.	Price	
Length 4050	0824293	-	EUR	0824310	-	EUR	0843876	-	EUR
Length 3050	0824292	-	EUR	0824309	-	EUR	0834571	-	EUR
Length 2550	0835252	-	EUR	0835254	-	EUR	0843875	-	EUR
Length 2050	0824291	-	EUR	0824308	-	EUR	0843874	-	EUR
Length 1250	0825771	-	EUR	0825842	-	EUR	0841897	-	EUR
Version A									
Length 2050	0824288	-	EUR	0824305	-	EUR	0843870	-	EUR
Length 1250	0825770	-	EUR	0825841	-	EUR	0843869	-	EUR
Block									
250	0824287	-	EUR	0824304	-	EUR	0834570	-	EUR
Single									
500	0824286	-	EUR	0824303	-	EUR	0834569	-	EUR
300	0824285	-	EUR	0824302	-	EUR	0834568	-	EUR
200	0824284	-	EUR	0824301	-	EUR	0834567	-	EUR
100	0824283	-	EUR	0824300	-	EUR	0834566	-	EUR
50	0824282	-	EUR	0824299	-	EUR	0834565	-	EUR
45	0824281	-	EUR	0824298	-	EUR	0834564	-	EUR
40	0824280	-	EUR	0824297	-	EUR	0834563	-	EUR
35	0824279	-	EUR	0824296	-	EUR	0834562	-	EUR
30	0824278	-	EUR	0824295	-	EUR	0834561	-	EUR
25	0824277	-	EUR	0824294	-	EUR	0834560	-	EUR
Lengths in [mm]									
Previous model to 84°									

Dies

W10

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1100 kN/m 18.3 kg/m 60 – 62 HRC 7 mm Coining Chapter		EV042 90°	10	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824621	-	EUR	
		Length 3050	0824620	-	EUR	
		Length 2550	0835297	-	EUR	
		Length 2050	0824619	-	EUR	
		Length 1250	0825878	-	EUR	
		Length 1050	0867600	-	EUR	
Version A						
Length 2050	0824613	-	EUR			
Length 1250	0825877	-	EUR			
Length 1050	1605155	-	EUR			
Block						
250	0824612	-	EUR			
550	1605154	-	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			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 530 kN/m 13.7 kg/m 60 – 62 HRC 7 mm Coining Chapter		EV042/S 90°	10	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0844156	-	EUR	
		Length 3050	0844155	-	EUR	
		Length 2550	0844154	-	EUR	
		Length 2050	0842072	-	EUR	
		Length 1250	0840690	-	EUR	
		Length 1050	0867610	-	EUR	
Version A						
Length 2050	0844158	-	EUR			
Length 1250	0844157	-	EUR			
Length 1050	1605158	-	EUR			
Block						
250	0840703	-	EUR			
550	1605157	-	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			

Die		Delivery time: ex warehouse																																												
 42 Cr Mo 4 1080 – 1180 N/mm ²	 200 kN/m	 22.5 kg/m	 8.7 mm																																											
					<table border="1"> <tr> <td rowspan="3">KEV W10/30°</td> <td>10</td> <td>Die width</td> </tr> <tr> <td>30°</td> <td>Angle</td> </tr> <tr> <td>100</td> <td>Height (mm)</td> </tr> </table>	KEV W10/30°	10	Die width	30°	Angle	100	Height (mm)																																		
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							30°	Angle																																						
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Single		Price																																												
500	0839927	-	EUR																																											
300	0839926	-	EUR																																											
200	0839925	-	EUR																																											
100	0839918	-	EUR																																											
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45	0839923	-	EUR																																											
40	0839922	-	EUR																																											
35	0839921	-	EUR																																											
30	0839920	-	EUR																																											
25	0839919	-	EUR																																											

Dies

W10

2.2 12 mm die width

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 20.5 kg/m 60 – 62 HRC 9.3 mm Bore hole available		EV004 30° 12 30° 100 Die width Angle Height (mm)			
			Version B	Mat. No.	Price
			Length 4050	0824084	- EUR
		Length 3050	0824083	- EUR	
		Length 2550	0835227	- EUR	
		Length 2050	0824082	- EUR	
		Length 1250	0825751	- EUR	
		Length 1050	0867468	- EUR	
		Version A			
		Length 2050	0824079	- EUR	
Length 1250	0825750	- EUR			
Length 1050	1594313	- EUR			
Block					
250	0824078	- EUR			
550	1594312	- 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			
25 with groove (ACB)	0932572	- EUR			
20	0840390	- EUR			
15	0840389	- EUR			
10	0840388	- EUR			

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 30.3 kg/m 60 – 62 HRC 9.3 mm Bore holes possible +10%		EV004/H 30° 12 30° 150 Die width Angle Height (mm)			
			Version B	Mat. No.	Price
			Length 4050	0824122	- EUR
		Length 3050	0824121	- EUR	
		Length 2550	0835229	- EUR	
		Length 2050	0824120	- EUR	
		Length 1250	0825753	- EUR	
		Length 1050	0867476	- EUR	
		Version A			
		Length 2050	0824116	- EUR	
Length 1250	0825752	- EUR			
Length 1050	1604134	- EUR			
Block					
250	0824114	- EUR			
550	1604133	- 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 (ACB)	0932576	- EUR			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 20.5 kg/m 60 – 62 HRC 10.3 mm Bore hole available		EV004 R3 30°	12	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0858954	-	EUR
		Length 3050		0851555	-	EUR
		Length 2550		0851203	-	EUR
		Length 2050		0836666	-	EUR
		Length 1250		0859473	-	EUR
		Length 1050		0867290	-	EUR
		Version A				
		Length 2050		0860514	-	EUR
		Length 1250		0860513	-	EUR
		Length 1050		1576414	-	EUR
		Block				
250		0836665	-	EUR		
550		1604130	-	EUR		
Single						
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		
25 with groove (ACB)		0869677	-	EUR		
20		1309986	-	EUR		
15		1238776	-	EUR		
10		1309985	-	EUR		
Lengths in [mm]						
Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 250 kN/m 18.1 kg/m 60 – 62 HRC 9.3 mm Bore hole available		EV004/S 30°	12	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0870625	-	EUR
		Length 3050		0857169	-	EUR
		Length 2550		0855662	-	EUR
		Length 2050		0859417	-	EUR
		Length 1250		0870624	-	EUR
		Length 1050		0989634	-	EUR
		Version A				
		Length 2050		0870620	-	EUR
		Length 1250		0867080	-	EUR
		Length 1050		1604101	-	EUR
		Block				
250		0855661	-	EUR		
550		1604100	-	EUR		
Single						
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		
25 with groove (ACB)		0869973	-	EUR		
20		1440526	-	EUR		
15		1354980	-	EUR		
10		1354978	-	EUR		
Lengths in [mm]						

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 21.3 kg/m 60 – 62 HRC 8.2 mm		EV W12/84°	12	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0861856	-	EUR
		Length 3050		0859201	-	EUR
		Length 2550		0861295	-	EUR
		Length 2050		0861855	-	EUR
		Length 1250		0860324	-	EUR
		Length 1050		0867298	-	EUR
Version A						
Length 2050		0861851	-	EUR		
Length 1250		0861850	-	EUR		
Length 1050		1594130	-	EUR		
Block						
250		0858725	-	EUR		
550		1594129	-	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		





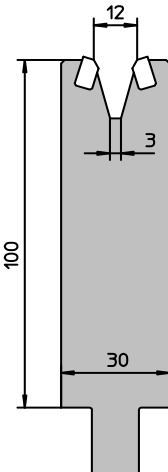
Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 31.1 kg/m 60 – 62 HRC 8.2 mm		EV/H W12/84°	12	Die width		
			84°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		1273207	-	EUR
		Length 3050		1273206	-	EUR
		Length 2550		1273201	-	EUR
		Length 2050		1273198	-	EUR
		Length 1250		1273142	-	EUR
		Length 1050		1594152	-	EUR
Version A						
Length 2050		1273118	-	EUR		
Length 1250		1273116	-	EUR		
Length 1050		1594151	-	EUR		
Block						
250		1273115	-	EUR		
550		1594150	-	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		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 14.6 kg/m 60 – 62 HRC 8.2 mm		EV/S W12/84°	12	Die width	
			84°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0864777	-	EUR
		Length 3050	0860808	-	EUR
		Length 2550	1206572	-	EUR
		Length 2050	0990813	-	EUR
		Length 1250	0875026	-	EUR
		Length 1050	1601270	-	EUR
Version A					
Length 2050	1206569	-	EUR		
Length 1250	0864328	-	EUR		
Length 1050	1601259	-	EUR		
Block					
250	0858832	-	EUR		
550	1601258	-	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		

Die		Delivery time: 2 weeks							
W12/86°		EV023		EV023/H		EV023/S			
Version B	Mat. No.	Price		Mat. No.	Price		Mat. No.	Price	
Length 4050	0824334	-	EUR	0824351	-	EUR	0843887	-	EUR
Length 3050	0824333	-	EUR	0824350	-	EUR	0842416	-	EUR
Length 2550	0835256	-	EUR	0835258	-	EUR	0843886	-	EUR
Length 2050	0824332	-	EUR	0824349	-	EUR	0843885	-	EUR
Length 1250	0825682	-	EUR	0825845	-	EUR	0832448	-	EUR
Version A									
Length 2050	0824329	-	EUR	0824346	-	EUR	0843881	-	EUR
Length 1250	0825681	-	EUR	0825844	-	EUR	0843880	-	EUR
Block									
250	0824328	-	EUR	0824345	-	EUR	0832447	-	EUR
Single									
500	0824327	-	EUR	0824344	-	EUR	0832446	-	EUR
300	0824325	-	EUR	0824343	-	EUR	0832445	-	EUR
200	0824324	-	EUR	0824342	-	EUR	0832444	-	EUR
100	0824323	-	EUR	0824341	-	EUR	0832443	-	EUR
50	0824322	-	EUR	0824340	-	EUR	0832442	-	EUR
45	0824321	-	EUR	0824339	-	EUR	0832441	-	EUR
40	0824319	-	EUR	0824338	-	EUR	0832440	-	EUR
35	0824318	-	EUR	0824337	-	EUR	0832439	-	EUR
30	0824317	-	EUR	0824336	-	EUR	0832438	-	EUR
25	0824315	-	EUR	0824335	-	EUR	0832437	-	EUR
Lengths in [mm]									
Previous model to 84°									

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1100 kN/m 18.2 kg/m 60 – 62 HRC 8.2 mm Coining Chapter		EV043 90°	12	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824676	-	EUR	
		Length 3050	0824674	-	EUR	
Length 2550	0835301	-	EUR			
Length 2050	0824673	-	EUR			
Length 1250	0825882	-	EUR			
Length 1050	0867601	-	EUR			
Version A						
Length 2050	0824668	-	EUR			
Length 1250	0825881	-	EUR			
Length 1050	1576550	-	EUR			
Block						
250	0824666	-	EUR			
550	1605214	-	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			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 550 kN/m 15 kg/m 60 – 62 HRC 8.2 mm Coining Chapter		EV043/S 90°	12	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0844165	-	EUR	
		Length 3050	0844164	-	EUR	
Length 2550	0844163	-	EUR			
Length 2050	0844162	-	EUR			
Length 1250	0840716	-	EUR			
Length 1050	0867612	-	EUR			
Version A						
Length 2050	0844167	-	EUR			
Length 1250	0844166	-	EUR			
Length 1050	1605281	-	EUR			
Block						
250	0840717	-	EUR			
550	1605280	-	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			

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  200 kN/m  24.6 kg/m  10.5 mm		KEV W12/30°	12	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0846171	-	EUR	
		Length 3050	0846184	-	EUR	
		Length 2550	0846324	-	EUR	
		Length 2050	0846323	-	EUR	
		Length 1250	0841609	-	EUR	
		Length 1050	0867620	-	EUR	
Version A						
Length 2050	0846325	-	EUR			
Length 1250	0845873	-	EUR			
Length 1050	1605414	-	EUR			
Block						
250	0841607	-	EUR			
550	1605413	-	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			

Dies

W12

16 mm die width

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 23.6 kg/m 60 – 62 HRC 12.1 mm Bore hole available	<p style="text-align: center;">Lengths in [mm]</p>	EV005 30°	16	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824145	-	EUR	
		Length 3050	0824144	-	EUR	
		Length 2550	0835231	-	EUR	
		Length 2050	0824143	-	EUR	
		Length 1250	0825755	-	EUR	
		Length 1050	0867469	-	EUR	
Version A						
Length 2050	0824140	-	EUR			
Length 1250	0825754	-	EUR			
Length 1050	1604170	-	EUR			
Block						
250	0824139	-	EUR			
550	1604139	-	EUR			
Single						
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			
25 with groove (ACB)	0939526	-	EUR			
20	0840387	-	EUR			
15	0840386	-	EUR			
10	0840385	-	EUR			

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 35.4 kg/m 60 – 62 HRC 12.1 mm Bore holes possible +10%		EV005/H 30°	16	Die width		
			30°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824165	-	EUR	
		Length 3050	0824164	-	EUR	
		Length 2550	0835233	-	EUR	
		Length 2050	0824163	-	EUR	
		Length 1250	0825757	-	EUR	
		Length 1050	0867483	-	EUR	
Version A						
Length 2050	0824159	-	EUR			
Length 1250	0825756	-	EUR			
Length 1050	1604211	-	EUR			
Block						
250	0824160	-	EUR			
550	1604210	-	EUR			
Single						
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 (ACB)	0939527	-	EUR			

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 23.4 kg/m 60 – 62 HRC 13.5 mm Bore hole available		EV005 R3 30°	16	Die width	
			30°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0857867	-	EUR
		Length 3050	0850447	-	EUR
		Length 2550	0860524	-	EUR
		Length 2050	0860523	-	EUR
		Length 1250	0860522	-	EUR
		Length 1050	0867291	-	EUR
Version A					
Length 2050	0860519	-	EUR		
Length 1250	0860518	-	EUR		
Length 1050	1604176	-	EUR		
Block					
250	0850446	-	EUR		
550	1604175	-	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		
25 with groove (ACB)	0869969	-	EUR		
20	1465619	-	EUR		
15	1465618	-	EUR		
10	1465617	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 200 kN/m 27.8 kg/m 12.8 mm		KEV W16/30°	16	Die width	
			30°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0846331	-	EUR
		Length 3050	0846330	-	EUR
		Length 2550	0839941	-	EUR
		Length 2050	0846329	-	EUR
		Length 1250	0844955	-	EUR
		Length 1050	0867633	-	EUR
Version A					
Length 2050	0846333	-	EUR		
Length 1250	0846332	-	EUR		
Length 1050	1605700	-	EUR		
Block					
250	0839940	-	EUR		
550	1605679	-	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		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 700 kN/m 25 kg/m 60 – 62 HRC 11.1 mm		EV W16/84°	16	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0861863	-	EUR
		Length 3050		0859203	-	EUR
		Length 2550		0861297	-	EUR
		Length 2050		0857541	-	EUR
		Length 1250		0861862	-	EUR
		Length 1050		0867299	-	EUR
		Version A				
		Length 2050		0861858	-	EUR
		Length 1250		0861857	-	EUR
		Length 1050		1594191	-	EUR
		Block				
250		0857539	-	EUR		
550		1594190	-	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		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 700 kN/m 36.7 kg/m 60 – 62 HRC 11.1 mm		EV/H W16/84°	16	Die width		
			84°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0872583	-	EUR
		Length 3050		0864723	-	EUR
		Length 2550		1271923	-	EUR
		Length 2050		1271922	-	EUR
		Length 1250		1271909	-	EUR
		Length 1050		1594229	-	EUR
		Version A				
		Length 2050		1264621	-	EUR
		Length 1250		1271904	-	EUR
		Length 1050		1594228	-	EUR
		Block				
250		0858787	-	EUR		
550		1594227	-	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		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1400 kN/m 25 kg/m 60 – 62 HRC 11 mm Coining Chapter	<p style="text-align: center;">90° 16 R16 30 100</p> <p style="text-align: right;">Lengths in [mm]</p>	EV044 90°	16	Die width		
			90°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824730	-	EUR	
		Length 3050	0824728	-	EUR	
		Length 2550	0835305	-	EUR	
		Length 2050	0824727	-	EUR	
		Length 1250	0825886	-	EUR	
		Length 1050	0867602	-	EUR	
Version A						
Length 2050	0824721	-	EUR			
Length 1250	0825885	-	EUR			
Length 1050	1605286	-	EUR			
Block						
250	0824719	-	EUR			
550	1605285	-	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			

Die		Delivery time: 2 weeks			
W16/86° Version B Length 4050 Length 3050 Length 2550 Length 2050 Length 1250 Version A Length 2050 Length 1250 Block 250 Single 500 300 200 100 50 45 40 35 30 25 Lengths in [mm]	EV024		EV024/H		
	Mat. No.	Price	Mat. No.	Price	
	0824370	- EUR	0824387	- EUR	
	0824369	- EUR	0824386	- EUR	
	0835260	- EUR	0835262	- EUR	
	0824368	- EUR	0824385	- EUR	
	0825847	- EUR	0825849	- EUR	
	0824363	- EUR	0824382	- EUR	
	0825846	- EUR	0825848	- EUR	
	0824362	- EUR	0824381	- EUR	
	0824364	- EUR	0824380	- EUR	
	0824361	- EUR	0824379	- EUR	
	0824360	- EUR	0824378	- EUR	
	0824359	- EUR	0824377	- EUR	
	0824358	- EUR	0824376	- EUR	
	0824357	- EUR	0824375	- EUR	
	0824356	- EUR	0824374	- EUR	
	0824355	- EUR	0824373	- EUR	
	0824354	- EUR	0824372	- EUR	
	0824353	- EUR	0824371	- EUR	
Previous model to 84°					

Dies

W16





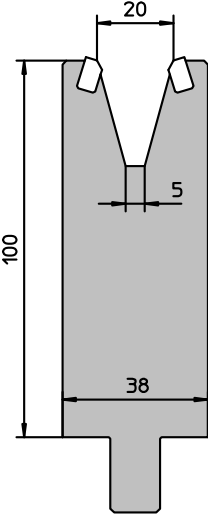
20 mm die width

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 600 kN/m 26.4 kg/m 60 – 62 HRC 15.7 mm Bore holes possible +10%		EV006 30° 20 30° 100 Die width Angle Height (mm)			
			Version B	Mat. No.	Price
			Length 4050	0827762	- EUR
		Length 3050	0827285	- EUR	
		Length 2550	0835235	- EUR	
		Length 2050	0827764	- EUR	
		Length 1250	0827763	- EUR	
		Length 1050	0867470	- EUR	
		Version A			
		Length 2050	0827766	- EUR	
Length 1250	0827765	- EUR			
Length 1050	1604213	- EUR			
Block					
250	0827284	- EUR			
550	1604212	- EUR			
Single					
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			
25 with groove (ACB)	0869960	- EUR			
20	0840383	- EUR			
15	0840382	- EUR			
10	0840381	- EUR			

Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 600 kN/m 40.1 kg/m 60 – 62 HRC 15.7 mm Bore holes possible +10%		EV006/H 30° 20 30° 150 Die width Angle Height (mm)			
			Version B	Mat. No.	Price
			Length 4050	0831196	- EUR
		Length 3050	0831195	- EUR	
		Length 2550	0835237	- EUR	
		Length 2050	0830757	- EUR	
		Length 1250	0831194	- EUR	
		Length 1050	0867486	- EUR	
		Version A			
		Length 2050	0831198	- EUR	
Length 1250	0831197	- EUR			
Length 1050	1604217	- EUR			
Block					
250	0830756	- EUR			
550	1604216	- EUR			
Single					
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 (ACB)	0864915	- EUR			


Lengths in [mm]

Die		Delivery time: ex warehouse					
 42 Cr Mo 4 1080 – 1180 N/mm ²	 200 kN/m	 29.1 kg/m	 15.2 mm				
					KEV W20/30°	20	Die width
					30°	Angle	
					100	Height (mm)	
		Version B	Mat. No.	Price			
		Length 4050	0870633	- EUR			
		Length 3050	0864524	- EUR			
		Length 2550	0862175	- EUR			
		Length 2050	0870632	- EUR			
		Length 1250	0870631	- EUR			
		Length 1050	1605707	- EUR			
		Version A					
		Length 2050	0870627	- EUR			
		Length 1250	0870626	- EUR			
		Length 1050	1605706	- EUR			
		Block					
		250	0862174	- EUR			
		550	1605705	- 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			

Dies

W20



Die	Delivery time: 2 weeks					
W20/86°	EV025			EV025/H		
Version B	Mat. No.	Price		Mat. No.	Price	
Length 4050	0825907	-	EUR	0825928	-	EUR
Length 3050	0825905	-	EUR	0825929	-	EUR
Length 2550	0835264	-	EUR	0835266	-	EUR
Length 2050	0825903	-	EUR	0825930	-	EUR
Length 1250	0825901	-	EUR	0825931	-	EUR
Version A						
Length 2050	0825902	-	EUR	0825925	-	EUR
Length 1250	0825900	-	EUR	0825924	-	EUR
Block						
250	0825899	-	EUR	0825923	-	EUR
Single						
500	0825898	-	EUR	0825922	-	EUR
300	0825897	-	EUR	0825921	-	EUR
200	0825896	-	EUR	0825920	-	EUR
100	0825895	-	EUR	0825919	-	EUR
50	0825894	-	EUR	0825918	-	EUR
45	0825893	-	EUR	0825917	-	EUR
40	0825892	-	EUR	0825916	-	EUR
35	0825891	-	EUR	0825915	-	EUR
30	0825890	-	EUR	0825914	-	EUR
25	0825889	-	EUR	0825913	-	EUR
Lengths in [mm]						
 Previous model to 84°						

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 700 kN/m 24.6 kg/m 60 – 62 HRC 14.5 mm		EV W20/84°	20	Die width		
			84°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0857561	-	EUR
		Length 3050		0861420	-	EUR
		Length 2550		0861870	-	EUR
		Length 2050		0861869	-	EUR
		Length 1250		0860323	-	EUR
		Length 1050		0867300	-	EUR
Version A						
Length 2050		0861865	-	EUR		
Length 1250		0861864	-	EUR		
Length 1050		1594471	-	EUR		
Block						
250		0857560	-	EUR		
550		1594470	-	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		

Dies

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 700 kN/m 36.4 kg/m 60 – 62 HRC 14.5 mm		EV/H W20/84°	20	Die width		
			84°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0992283	-	EUR
		Length 3050		1230842	-	EUR
		Length 2550		1271617	-	EUR
		Length 2050		1271615	-	EUR
		Length 1250		1214666	-	EUR
		Length 1050		1594583	-	EUR
Version A						
Length 2050		1271604	-	EUR		
Length 1250		1271602	-	EUR		
Length 1050		1594582	-	EUR		
Block						
250		0992282	-	EUR		
550		1594581	-	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		

W20





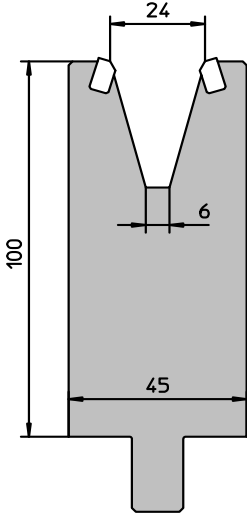
2.3 24 mm die width

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 650 kN/m 29.5 kg/m 60 – 62 HRC 19.1 mm Bore holes possible +10%		EV007 30°	24	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824185	-	EUR	
		Length 3050	0824184	-	EUR	
		Length 2550	0835239	-	EUR	
		Length 2050	0824183	-	EUR	
		Length 1250	0825759	-	EUR	
		Length 1050	0867471	-	EUR	
Version A						
Length 2050	0824180	-	EUR			
Length 1250	0825758	-	EUR			
Length 1050	1594318	-	EUR			
Block						
250	0824179	-	EUR			
550	1594317	-	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 (ACB)	0869961	-	EUR			

Lengths in [mm]

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 650 kN/m 49.2 kg/m 60 – 62 HRC 19.1 mm Bore holes possible +10%		EV007/H 30°	24	Die width		
			30°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0824203	-	EUR	
		Length 3050	0824202	-	EUR	
		Length 2550	0835242	-	EUR	
		Length 2050	0824201	-	EUR	
		Length 1250	0825761	-	EUR	
		Length 1050	0867488	-	EUR	
Version A						
Length 2050	0824198	-	EUR			
Length 1250	0825760	-	EUR			
Length 1050	1604333	-	EUR			
Block						
250	0824197	-	EUR			
550	1604332	-	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 (ACB)	0869965	-	EUR			

Lengths in [mm]


Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  200 kN/m  33.4 kg/m  17.3 mm		KEV W24/30°	24	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0870684	-	EUR	
		Length 3050	0870683	-	EUR	
		Length 2550	0870682	-	EUR	
		Length 2050	0870681	-	EUR	
		Length 1250	0860208	-	EUR	
		Length 1050	1605734	-	EUR	
Version A						
Length 2050	0870677	-	EUR			
Length 1250	0870676	-	EUR			
Length 1050	1605733	-	EUR			
Block						
250	0860207	-	EUR			
550	1605732	-	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			






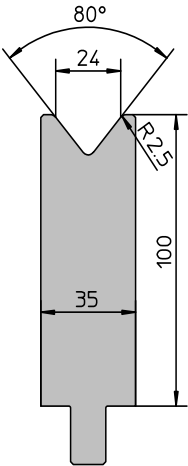
Lengths in [mm]

Dies






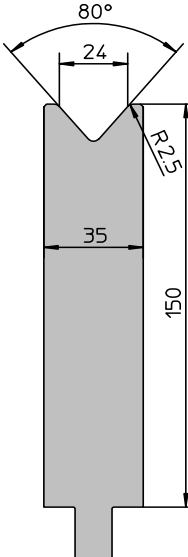
W24



Die	Delivery time: 2 weeks					
W24/86°	EV026			EV026/H		
Version B	Mat. No.	Price		Mat. No.	Price	
Length 4050	0824404	-	EUR	0824421	-	EUR
Length 3050	0824403	-	EUR	0824420	-	EUR
Length 2550	0835268	-	EUR	0835270	-	EUR
Length 2050	0824402	-	EUR	0824419	-	EUR
Length 1250	0825851	-	EUR	0825853	-	EUR
Version A						
Length 2050	0824399	-	EUR	0824416	-	EUR
Length 1250	0825850	-	EUR	0825852	-	EUR
Block						
250	0824398	-	EUR	0824415	-	EUR
Single						
500	0824397	-	EUR	0824414	-	EUR
300	0824396	-	EUR	0824413	-	EUR
200	0824395	-	EUR	0824412	-	EUR
100	0824394	-	EUR	0824411	-	EUR
50	0824393	-	EUR	0824410	-	EUR
45	0824392	-	EUR	0824409	-	EUR
40	0824391	-	EUR	0824408	-	EUR
35	0824390	-	EUR	0824407	-	EUR
30	0824389	-	EUR	0824406	-	EUR
25	0824388	-	EUR	0824405	-	EUR
Lengths in [mm]						
 Previous model to 80°						

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  700 kN/m  28 kg/m  60 – 62 HRC  19 mm		EV W24/80°	24	Die width		
			80°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	0853235	-	EUR	
		Length 3050	0867146	-	EUR	
		Length 2550	0870696	-	EUR	
		Length 2050	0870695	-	EUR	
		Length 1250	0869678	-	EUR	
		Length 1050	1545487	-	EUR	
Version A						
Length 2050	0870691	-	EUR			
Length 1250	0870690	-	EUR			
Length 1050	1596558	-	EUR			
Block						
250	0853234	-	EUR			
550	1596557	-	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			

Dies

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  700 kN/m  41.7 kg/m  60 – 62 HRC  19 mm		EV/H W24/80°	24	Die width		
			80°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050	1271639	-	EUR	
		Length 3050	1271638	-	EUR	
		Length 2550	1271637	-	EUR	
		Length 2050	1271635	-	EUR	
		Length 1250	1271633	-	EUR	
		Length 1050	1600913	-	EUR	
Version A						
Length 2050	1271599	-	EUR			
Length 1250	1271598	-	EUR			
Length 1050	1600912	-	EUR			
Block						
250	1271597	-	EUR			
550	1600911	-	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			






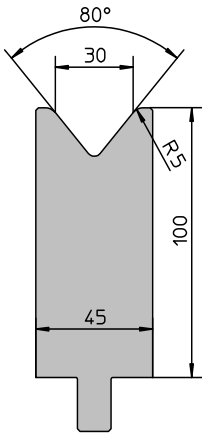
W24

30 mm die width






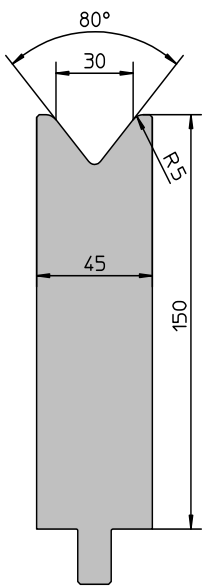
Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 900 kN/m 38.2 kg/m 60 – 62 HRC 22.5 mm Bore holes possible +10%		EV W30/30°			
		30	Die width		
		30°	Angle		
		100	Height (mm)		
		Version B	Mat. No.	Price	
		Length 4050	0827787	-	EUR
		Length 3050	0827786	-	EUR
		Length 2550	0870698	-	EUR
		Length 2050	0827785	-	EUR
		Length 1250	0827784	-	EUR
Length 1050	1593984	-	EUR		
Version A					
Length 2050	0827781	-	EUR		
Length 1250	0827780	-	EUR		
Length 1050	1593983	-	EUR		
Block					
250	0827779	-	EUR		
550	1601486	-	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 (ACB)	0869974	-	EUR		

Lengths in [mm]

Die		Delivery time: 2 weeks			
W30/86°		EV027		EV027/H	
Version B	Mat. No.	Price		Mat. No.	Price
Length 4050	0824438	-	EUR	0824454	- EUR
Length 3050	0824437	-	EUR	0824453	- EUR
Length 2550	0835273	-	EUR	0835275	- EUR
Length 2050	0824436	-	EUR	0824452	- EUR
Length 1250	0825855	-	EUR	0825858	- EUR
Version A					
Length 2050	0824433	-	EUR	0824449	- EUR
Length 1250	0825854	-	EUR	0825857	- EUR
Block					
250	0824432	-	EUR	0824448	- EUR
Single					
500	0824431	-	EUR	-	-
300	0824430	-	EUR	0824447	- EUR
200	0824429	-	EUR	0824446	- EUR
100	0824428	-	EUR	0824445	- EUR
50	0824427	-	EUR	0824444	- EUR
45	0824426	-	EUR	0824443	- EUR
40	0824425	-	EUR	0824442	- EUR
35	0824424	-	EUR	0824441	- EUR
30	0824423	-	EUR	0824440	- EUR
25	0824422	-	EUR	0824439	- EUR
Lengths in [mm]					
Previous model to 80°					

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  900 kN/m  34.8 kg/m  60 – 62 HRC  22 mm		EV W30/80°	30	Die width		
			80°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0866948	-	EUR
		Length 3050		0862762	-	EUR
		Length 2550		0870706	-	EUR
		Length 2050		0870705	-	EUR
		Length 1250		0870704	-	EUR
		Length 1050		1601515	-	EUR
Version A						
Length 2050		0870700	-	EUR		
Length 1250		0870699	-	EUR		
Length 1050		1601514	-	EUR		
Block						
250		0862761	-	EUR		
550		1601513	-	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		

Dies






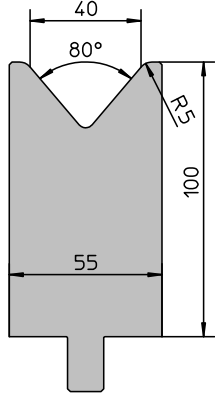
Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  900 kN/m  52.5 kg/m  60 – 62 HRC  22 mm		EV/H W30/80°	30	Die width		
			80°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		1212782	-	EUR
		Length 3050		1230843	-	EUR
		Length 2550		1271580	-	EUR
		Length 2050		1271577	-	EUR
		Length 1250		1271576	-	EUR
		Length 1050		1601498	-	EUR
Version A						
Length 2050		1271560	-	EUR		
Length 1250		1271557	-	EUR		
Length 1050		1601497	-	EUR		
Block						
250		1212781	-	EUR		
550		1601496	-	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		

W30






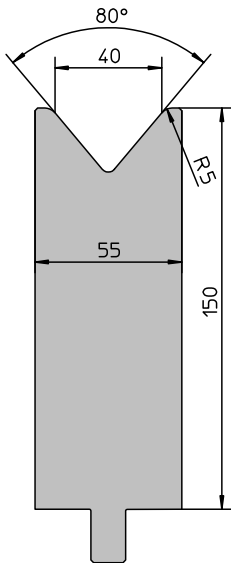
40 mm die width

Die		Delivery time: ex warehouse							
42 Cr Mo 4 1080 – 1180 N/mm ² 900 kN/m 36.7 kg/m 60 – 62 HRC 30 mm	<p>40 30° R5 100 60</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Lengths in [mm]</p>	EV W40/30°	<table border="1"> <tr> <td>40</td> <td>Die width</td> </tr> <tr> <td>30°</td> <td>Angle</td> </tr> <tr> <td>100</td> <td>Height (mm)</td> </tr> </table>	40	Die width	30°	Angle	100	Height (mm)
		40	Die width						
		30°	Angle						
		100	Height (mm)						
		Version B	Mat. No.	Price					
Length 4050	1372754	-	EUR						
Length 3050	1244636	-	EUR						
Length 2550	0864277	-	EUR						
Length 2050	1408935	-	EUR						
Length 1250	0994425	-	EUR						
Length 1050	1601594	-	EUR						
Version A									
Length 2050	1461705	-	EUR						
Length 1250	1461704	-	EUR						
Length 1050	1601593	-	EUR						
Block									
250	0864276	-	EUR						
550	1601592	-	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						

Die	Delivery time: 2 weeks					
W40/86°	EV028			EV028/H		
Version B	Mat. No.	Price		Mat. No.	Price	
Length 4050	0827714	-	EUR	0831837	-	EUR
Length 3050	0827713	-	EUR	0835520	-	EUR
Length 2550	0835519	-	EUR	0835521	-	EUR
Length 2050	0827649	-	EUR	0835522	-	EUR
Length 1250	0827715	-	EUR	0835523	-	EUR
Version A						
Length 2050	0835515	-	EUR	0835525	-	EUR
Length 1250	0835514	-	EUR	0835524	-	EUR
Block						
250	0827648	-	EUR	0831836	-	EUR
Single						
500	0827647	-	EUR	-		
300	0827646	-	EUR	0831835	-	EUR
200	0827645	-	EUR	0831834	-	EUR
100	0827644	-	EUR	0831833	-	EUR
50	0827643	-	EUR	0831832	-	EUR
45	0827642	-	EUR	0831831	-	EUR
40	0827641	-	EUR	0831830	-	EUR
35	0827640	-	EUR	0831829	-	EUR
30	0827639	-	EUR	0831828	-	EUR
25	0827638	-	EUR	0831827	-	EUR
Lengths in [mm]						
	Previous model to 80°					

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  1200 kN/m  40.9 kg/m  60 – 62 HRC  28 mm		EV W40/80°	40	Die width		
			80°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0867596	-	EUR
		Length 3050		0862703	-	EUR
		Length 2550		0868663	-	EUR
		Length 2050		0861605	-	EUR
		Length 1250		0868581	-	EUR
		Length 1050		1534873	-	EUR
Version A						
Length 2050		0870708	-	EUR		
Length 1250		0870707	-	EUR		
Length 1050		1601662	-	EUR		
Block						
250		0861604	-	EUR		
550		1601661	-	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		

Dies

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  1200 kN/m  62.5 kg/m  60 – 62 HRC  28 mm		EV/H W40/80°	40	Die width		
			80°	Angle		
			150	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		1271508	-	EUR
		Length 3050		1230934	-	EUR
		Length 2550		1271504	-	EUR
		Length 2050		1271502	-	EUR
		Length 1250		1271477	-	EUR
		Length 1050		1603085	-	EUR
Version A						
Length 2050		1271428	-	EUR		
Length 1250		1271427	-	EUR		
Length 1050		1603084	-	EUR		
Block						
250		1230931	-	EUR		
550		1603083	-	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		

W40

50 mm die width

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 43.3 kg/m ~ 60 HRC 38 mm		EV W50/30°	50	Die width		
			30°	Angle		
			100	Height (mm)		
		Version B		Mat.No.	Price	
		Länge 4050		1567856	-	EUR
		Länge 3050		0871432	-	EUR
		Länge 2550		1766454	-	EUR
		Länge 2050		1766452	-	EUR
		Länge 1250		1279646	-	EUR
		Länge 1050		1766449	-	EUR
Version A						
Länge 2050		1766451	-	EUR		
Länge 1250		1766450	-	EUR		
Länge 1050		1766448	-	EUR		
Block						
250		0871431	-	EUR		
550		1766447	-	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		

Die		Delivery time: ex warehouse				
42 Cr Mo 4 1080 – 1180 N/mm ² 1500 kN/m 46.5 kg/m 60 – 62 HRC 34.5 mm		EV W50/80°	50	Die width		
			80°	Angle		
			100	Height (mm)		
		Version B		Mat. No.	Price	
		Length 4050		0866949	-	EUR
		Length 3050		0862774	-	EUR
		Length 2550		0870717	-	EUR
		Length 2050		0863205	-	EUR
		Length 1250		0870716	-	EUR
		Length 1050		1603100	-	EUR
Version A						
Length 2050		0870713	-	EUR		
Length 1250		0870712	-	EUR		
Length 1050		1603089	-	EUR		
Block						
250		0862773	-	EUR		
550		1603088	-	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		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1500 kN/m 72 kg/m 60 – 62 HRC 34.5 mm		EV/H W50/80°			
		50	Die width		
		80°	Angle		
		150	Height (mm)		
		Version B		Mat. No.	Price
		Length 4050	1275889	-	EUR
		Length 3050	1275887	-	EUR
		Length 2550	1275884	-	EUR
		Length 2050	1275879	-	EUR
		Length 1250	1275877	-	EUR
Length 1050	1603105	-	EUR		
Version A					
Length 2050	1275816	-	EUR		
Length 1250	1275815	-	EUR		
Length 1050	1603104	-	EUR		
Block					
250	1275812	-	EUR		
550	1603103	-	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		

Dies

Die		Delivery time: 2 weeks			
W50/86°		EV029		EV029/H	
Version B		Mat. No.	Price	Mat. No.	Price
Length 4050	0824490	-	EUR	0824505	-
Length 3050	0824489	-	EUR	0824504	-
Length 2550	0835277	-	EUR	0835279	-
Length 2050	0824488	-	EUR	0824503	-
Length 1250	0825863	-	EUR	0825867	-
Version A					
Length 2050	0824485	-	EUR	0824500	-
Length 1250	0825862	-	EUR	0825866	-
Block					
250	0824483	-	EUR	0824499	-
Single					
500	-	-		-	
300	0824465	-	EUR	-	
200	0824464	-	EUR	0824498	-
100	0824463	-	EUR	0824497	-
50	0824462	-	EUR	0824496	-
45	0824461	-	EUR	0824495	-
40	0824460	-	EUR	0824494	-
35	0824459	-	EUR	0824493	-
30	0824458	-	EUR	0824492	-
25	0824457	-	EUR	0824491	-
Lengths in [mm]					
Previous model to 80°					

W50






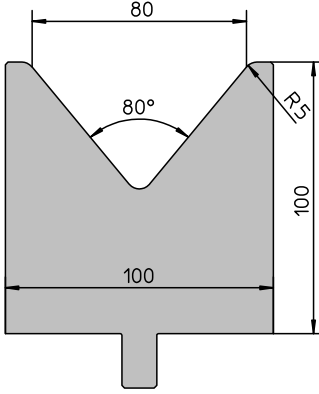
2.4 60-120 mm die width

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1500 kN/m 51.7 kg/m 60 – 62 HRC 40 mm		EV W60/80°	60	Die width	
			80°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0848821	-	EUR
		Length 3050	0848820	-	EUR
		Length 2550	0848819	-	EUR
		Length 2050	0848818	-	EUR
		Length 1250	0848817	-	EUR
		Length 1050	0867614	-	EUR
		Version A			
		Length 2050	0848813	-	EUR
		Length 1250	0848812	-	EUR
		Length 1050	1603242	-	EUR
		Block			
250	0848811	-	EUR		
550	1603241	-	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		






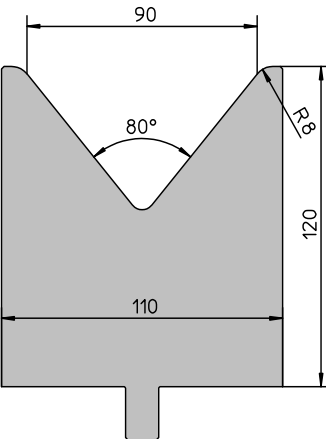
Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1500 kN/m 56.3 kg/m 60 – 62 HRC 48 mm		EV W70/80°	70	Die width	
			80°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0848841	-	EUR
		Length 3050	0848840	-	EUR
		Length 2550	0848839	-	EUR
		Length 2050	0848838	-	EUR
		Length 1250	0848837	-	EUR
		Length 1050	0867616	-	EUR
		Version A			
		Length 2050	0848833	-	EUR
		Length 1250	0848832	-	EUR
		Length 1050	1603303	-	EUR
		Block			
250	0848831	-	EUR		
550	1603302	-	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		






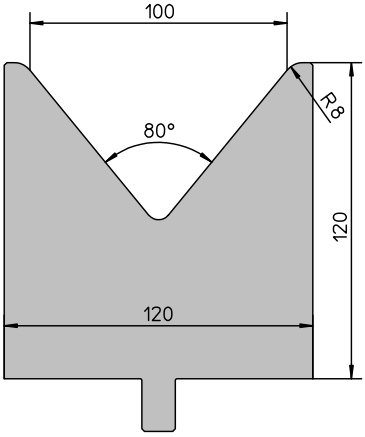
Lengths in [mm]






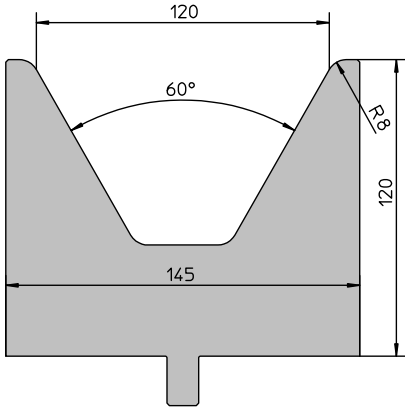
Die		Delivery time: ex warehouse	
 42 Cr Mo 4 1080 – 1180 N/mm ²  1500 kN/m  64.5 kg/m  60 – 62 HRC  54 mm		EV W80/80°	
		80	Die width
		80°	Angle
		100	Height (mm)
		Version B	Mat. No.
Length 4050	0848862	-	EUR
Length 3050	0848861	-	EUR
Length 2550	0848859	-	EUR
Length 2050	0848858	-	EUR
Length 1250	0848857	-	EUR
Length 1050	0867617	-	EUR
Version A			
Length 2050	0848853	-	EUR
Length 1250	0848852	-	EUR
Length 1050	1603307	-	EUR
Block			
250	0848851	-	EUR
550	1603306	-	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

Dies

Die		Delivery time: ex warehouse	
 42 Cr Mo 4 1080 – 1180 N/mm ²  1500 kN/m  84.7 kg/m  60 – 62 HRC  65 mm		EV W90/80°	
		90	Die width
		80°	Angle
		120	Height (mm)
		Version B	Mat. No.
Length 4050	0848881	-	EUR
Length 3050	0848880	-	EUR
Length 2550	0848879	-	EUR
Length 2050	0848878	-	EUR
Length 1250	0848877	-	EUR
Length 1050	1603310	-	EUR
Version A			
Length 2050	0848873	-	EUR
Length 1250	0848872	-	EUR
Length 1050	1603309	-	EUR
Block			
250	0848871	-	EUR
550	1603308	-	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

W60-
W90

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  1500 kN/m  89.4 kg/m  60 – 62 HRC  68 mm	 <p>100</p> <p>80°</p> <p>R 8</p> <p>120</p> <p>120</p> <p>Lengths in [mm]</p>	EV W100/80°	100	Die width		
			80°	Angle		
			120	Height (mm)		
				Version B	Mat. No.	Price
				Length 4050	0848900	- EUR
		Length 3050	0848899	- EUR		
		Length 2550	0848898	- EUR		
		Length 2050	0848897	- EUR		
		Length 1250	0848896	- EUR		
		Length 1050	1601449	- EUR		
		Version A				
		Length 2050	0848892	- EUR		
		Length 1250	0848891	- EUR		
		Length 1050	1601448	- EUR		
		Block				
		250	0848890	- EUR		
		550	1601447	- 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		

Die		Delivery time: ex warehouse				
 42 Cr Mo 4 1080 – 1180 N/mm ²  1600 kN/m  92.4 kg/m  60 – 62 HRC  82 mm	 <p>120</p> <p>60°</p> <p>R 8</p> <p>120</p> <p>145</p> <p>Lengths in [mm]</p>	EV W120/60°	120	Die width		
			60°	Angle		
			120	Height (mm)		
				Single	Mat. No.	Price
				100	867227	- EUR
		100x10	1465311	- EUR		
		200	867228	- EUR		
		200x5	1465313	- EUR		
		200x10	1465314	- EUR		

Lengths in [mm]

2.5 Folding

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 14.8 kg/m 60 – 62 HRC See Technical Section and Screw Selection		FWZ - - 100	Die width -		
			Angle -		
			Height (mm) 100		
		Version B		Mat. No.	Price
		Length 4050	0843943	-	EUR
		Length 3050	0843115	-	EUR
		Length 2550	0843942	-	EUR
		Length 2050	0842348	-	EUR
		Length 1250	0843244	-	EUR
		Length 1050	0867525	-	EUR
Version A					
Length 2050	0843939	-	EUR		
Length 1250	0843938	-	EUR		
Length 1050	1606377	-	EUR		
Block					
250	0842230	-	EUR		
550	1606376	-	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 with groove (ACB)	1226331	-	EUR		
25 low-impresion (ACB)	1411454	-	EUR		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 25.3 kg/m 60 – 62 HRC See Technical Section and Screw Selection		FWZ/H - - 150	Die width -		
			Angle -		
			Height (mm) 150		
		Version B		Mat. No.	Price
		Length 4050	0843937	-	EUR
		Length 3050	0843936	-	EUR
		Length 2550	0843935	-	EUR
		Length 2050	0842953	-	EUR
		Length 1250	0843934	-	EUR
		Length 1050	0867526	-	EUR
Version A					
Length 2050	0843930	-	EUR		
Length 1250	0843929	-	EUR		
Length 1050	1606412	-	EUR		
Block					
250	0842952	-	EUR		
550	1606411	-	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 with groove (ACB)	1256340	-	EUR		
25 low-impresion (ACB)	1457105	-	EUR		

Dies

W100-
W120
Folding

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1300 kN/m 11.7 kg/m 60 – 62 HRC See Technical Section and Screw Selection		ZDL	-	Die width	
			-	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0824895	-	EUR
		Length 3050	0824894	-	EUR
		Length 2550	0835283	-	EUR
		Length 2050	0824887	-	EUR
		Length 1250	0825838	-	EUR
		Length 1050	0867520	-	EUR
		Version A			
		Length 2050	0824884	-	EUR
		Length 1250	0825837	-	EUR
		Length 1050	1606465	-	EUR
		Block			
250	0824883	-	EUR		
550	1606464	-	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		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1300 kN/m 16.4 kg/m 60 – 62 HRC See Technical Section and Screw Assortment		ZDL/H	-	Die width	
			-	Angle	
			150	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0824915	-	EUR
		Length 3050	0824914	-	EUR
		Length 2550	0835287	-	EUR
		Length 2050	0824913	-	EUR
		Length 1250	0825840	-	EUR
		Length 1050	0867521	-	EUR
		Version A			
		Length 2050	0824909	-	EUR
		Length 1250	0825839	-	EUR
		Length 1050	1606505	-	EUR
		Block			
250	0824908	-	EUR		
550	1606504	-	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		

Die		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1300 kN/m 18.7 kg/m See Technical Section and Screw Assortment		MST - - 100	Die width		
			Angle		
			Height (mm)		
		Version B		Mat. No.	Price
		Length 4050	0824932	-	EUR
		Length 3050	0824931	-	EUR
		Length 2550	0835281	-	EUR
		Length 2050	0824930	-	EUR
		Length 1250	0825799	-	EUR
		Length 1050	0867522	-	EUR
Version A		Mat. No.	Price		
Length 2050	0824927	-	EUR		
Length 1250	0825798	-	EUR		
Length 1050	1606439	-	EUR		
Block		Mat. No.	Price		
250	0825797	-	EUR		
550	1606438	-	EUR		
Single		Mat. No.	Price		
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		

Dies

Die		Delivery time: ex warehouse			
C 45 650 – 800 N/mm ² 1300 kN/m 30.6 kg/m See Technical Section and Screw Assortment		MST/H - - 150	Die width		
			Angle		
			Height (mm)		
		Version B		Mat. No.	Price
		Length 4050	0825819	-	EUR
		Length 3050	0825818	-	EUR
		Length 2550	0835285	-	EUR
		Length 2050	0825817	-	EUR
		Length 1250	0825816	-	EUR
		Length 1050	0867523	-	EUR
Version A		Mat. No.	Price		
Length 2050	0825813	-	EUR		
Length 1250	0825812	-	EUR		
Length 1050	1606462	-	EUR		
Block		Mat. No.	Price		
250	0825811	-	EUR		
550	1606461	-	EUR		
Single		Mat. No.	Price		
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		

Folding

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 12 mm.
- Ideal in combination with OW202/K, OW202/S.
- Folding: – stainless steel max. 1.5 mm.
– steel, alu max. 2.0 mm.

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 20.9 kg/m 60 – 62 HRC 4.8 mm		FEV W6/30°	6	Die width	
			30°	Angle	
			100/108	Height (mm)	
		Single	Mat. No.	Price	
		500	1239747	-	EUR
300	1239746	-	EUR		
200	1239743	-	EUR		
100	1239742	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 21 kg/m 60 – 62 HRC 6.3 mm		FEV W8/30°	8	Die width	
			30°	Angle	
			100/110	Height (mm)	
		Single	Mat. No.	Price	
		500	1231050	-	EUR
300	1231049	-	EUR		
200	1231048	-	EUR		
100	1229818	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 20.7 kg/m 60 – 62 HRC 7.8 mm		FEV W10/30°	10	Die width	
			30°		Angle
			100/110		Height (mm)
		Single	Mat. No.	Price	
		500	1240001	-	EUR
300	1239920	-	EUR		
200	1239919	-	EUR		
100	1239918	-	EUR		

Lengths in [mm]

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 400 kN/m 21.5 kg/m 60 – 62 HRC 9.3 mm		FEV W12/30°	12	Die width	
			30°		Angle
			100/110		Height (mm)
		Single	Mat. No.	Price	
		500	1240043	-	EUR
300	1240042	-	EUR		
200	1240041	-	EUR		
100	1240010	-	EUR		

Lengths in [mm]

2.6 Adapter

Adapter		Delivery time: 4 weeks or upon request			
C 50 650 – 800 N/mm ²	1300 kN/m	38.1 kg/m		EHT with clamping	
				-	Die width
				-	Angle
		40	Height (mm)		
		Single	Mat. No.	Price	
Length 500		1282380	-	EUR	

Lengths in [mm]

Adapter		Delivery time: ex warehouse			
C 50 650 – 800 N/mm ²	1300 kN/m	32.4 kg/m		Amada with clamping	
				-	Die width
				-	Angle
		40	Height (mm)		
		Single	Mat. No.	Price	
Length 500		1464474	-	EUR	

Lengths in [mm]

Adapter		Delivery time: ex warehouse			
C 50 650 – 800 N/mm ²	1300 kN/m	38.1 kg/m		Amada without clamping	
				-	Die width
				-	Angle
		40	Height (mm)		
		Single	Mat. No.	Price	
Length 500		0831443	-	EUR	
Delivery time: four weeks					
		Single (undivided)	Mat. No.	Price	
Length 1250		0826515	-	EUR	
Length 2050		0831441	-	EUR	
Length 2550		0836719	-	EUR	
Length 3050		0831442	-	EUR	
Length 4050		0836966	-	EUR	

Lengths in [mm]

Adapter		Delivery time: ex warehouse		
C 50 650 – 800 N/mm ² 1300 kN/m 26 kg/m See Technical section		TRUMPF DV Adapter	-	Die width
			-	Angle
			50	Height (mm)
		Single	Mat. No.	Price
Length 500	0853308	-	EUR	

Lengths in [mm]

Adapter		Delivery time: ex warehouse		
C 50 650 – 800 N/mm ² 1000 kN/m 11.6 kg/m See Technical Section		TRUMPF EV Adapter	-	Die width
			-	Angle
			50	Height (mm)
		Single	Mat. No.	Price
Length 500	1210798	-	EUR	

Lengths in [mm]

2.7 VLM – Adjustable die

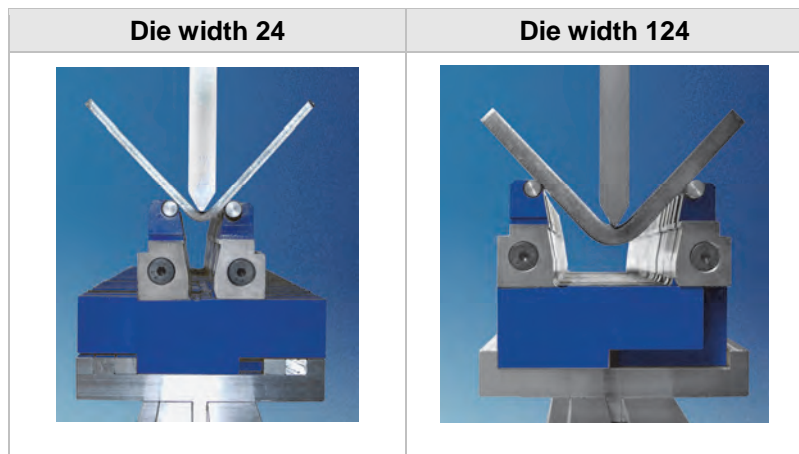
Application The VLM die from TRUMPF helps with convenient bending of various sheet thicknesses in a single set-up. The die widths can be adjusted as per the request of a customer quickly and easily using setting bars.

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.



Die VLMBN (adjustable W24 – W124)		Delivery time: 2 weeks or upon request		
Hardened track rollers 60 – 62 HRC 800 – 1250 kN/m s=3 to 15 mm 220 kg/m		VLMBN	W24 – W124	Die width
			30° – 70°	Angle
			185	Height (mm)
		Single	Mat. No.	Price
	250	1392021	-	EUR
	500	1392023	-	EUR
		- Length 1000 mm available upon request. - The tool is comprised of holder, strips, track rollers and die jaws.		
Die VLMDN (adjustable W62 – W182)		Delivery time: 2 weeks or upon request		
Hardened track rollers 60 – 62 HRC 1500 – 2000 kN/m s=5 to 20 mm 330 kg/m		VLMDN	W62 – W182	Die width
			60° – 80°	Angle
			195	Height (mm)
		Single	Mat. No.	Price
	250	1392025	-	EUR
	500	1392026	-	EUR
		- Length 1000 mm available upon request. - The tool is comprised of holder, strips, track rollers and die jaws.		
Accessories VLM		Protective foils L=10 m		
	VLMBN Protective foil set 1			
	Width	Mat. No.	Price	
	150 mm	1544581	- EUR	
	VLMDN Protective foil set 2			
Width	Mat. No.	Price		
190 mm	1544582	- EUR		
Comprising 25 meters Velcro strap and 5 meters protective foil				

Dies

VLM

2.8 SBW – Swivel bending tool

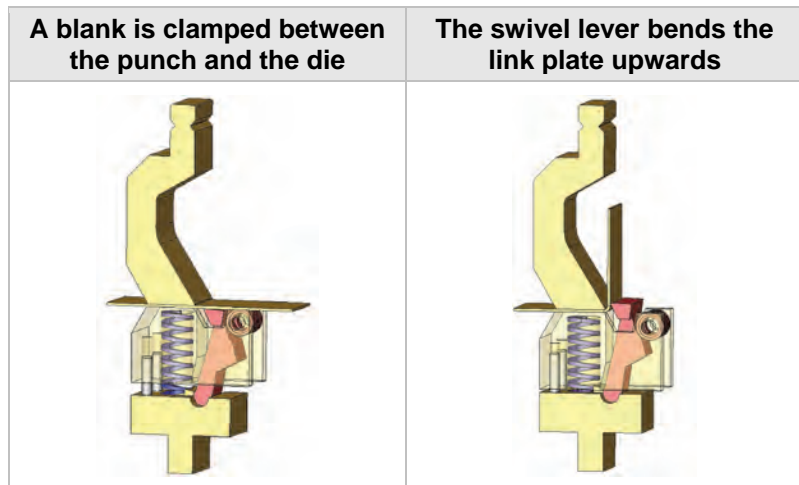
Application The workpiece is placed on the swivel unit and positioned through the backgauge as usual. The swivel bending punch clamps the workpiece between the support surfaces. As soon as the press beam moves downwards, the swivel level bends the link plate around the tip of the swivel bending punch.

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 link plates.
- No time-consuming tracking of the high swiveling bending 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 variable widths.



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		Delivery time: 1 week			
42 Cr Mo 4 1080 – 1180 N/mm ² 500 kN/m 60 – 62 HRC 35 kg/m		Punch OW/K-SBW			
		R1	Radius		
		120	Height (mm)		
		Single	Mat. No.	Price	
		50	1386073	-	EUR
		- tool can be lengthened with MF/S adapter (for station operation) - other lengths for OW/K – SBT available upon request			
SBW		Delivery time: 1 week			
500 kN/m 60 – 62 HRC 4.9 kg/pc		Swivel unit			
		110	Height		
		Single	Mat. No.	Price	
		50	1381470	-	EUR
Upper part swivel lever		Delivery time: 1 week			
for 0.5 – 1.0 mm sheet for 1.5 mm sheet		Swivel lever W4			
		Single	Mat. No.	Price	
		W4 L=10	1386707	-	EUR
		W4 L=20	1386706	-	EUR
		W4 L=50	1386704	-	EUR
		Swivel lever W5			
		Single	Mat. No.	Price	
		W5 L=10	1386687	-	EUR
		W5 L=20	1386685	-	EUR
		W5 L=25	1422498	-	EUR
		W5 L=40	1422499	-	EUR
		W5 L=50	1386684	-	EUR
Spacer		Delivery time: 1 week			
		Spacer 23.5 mm			
		Single	Mat. No.	Price	
		Spacer	1402081	-	EUR

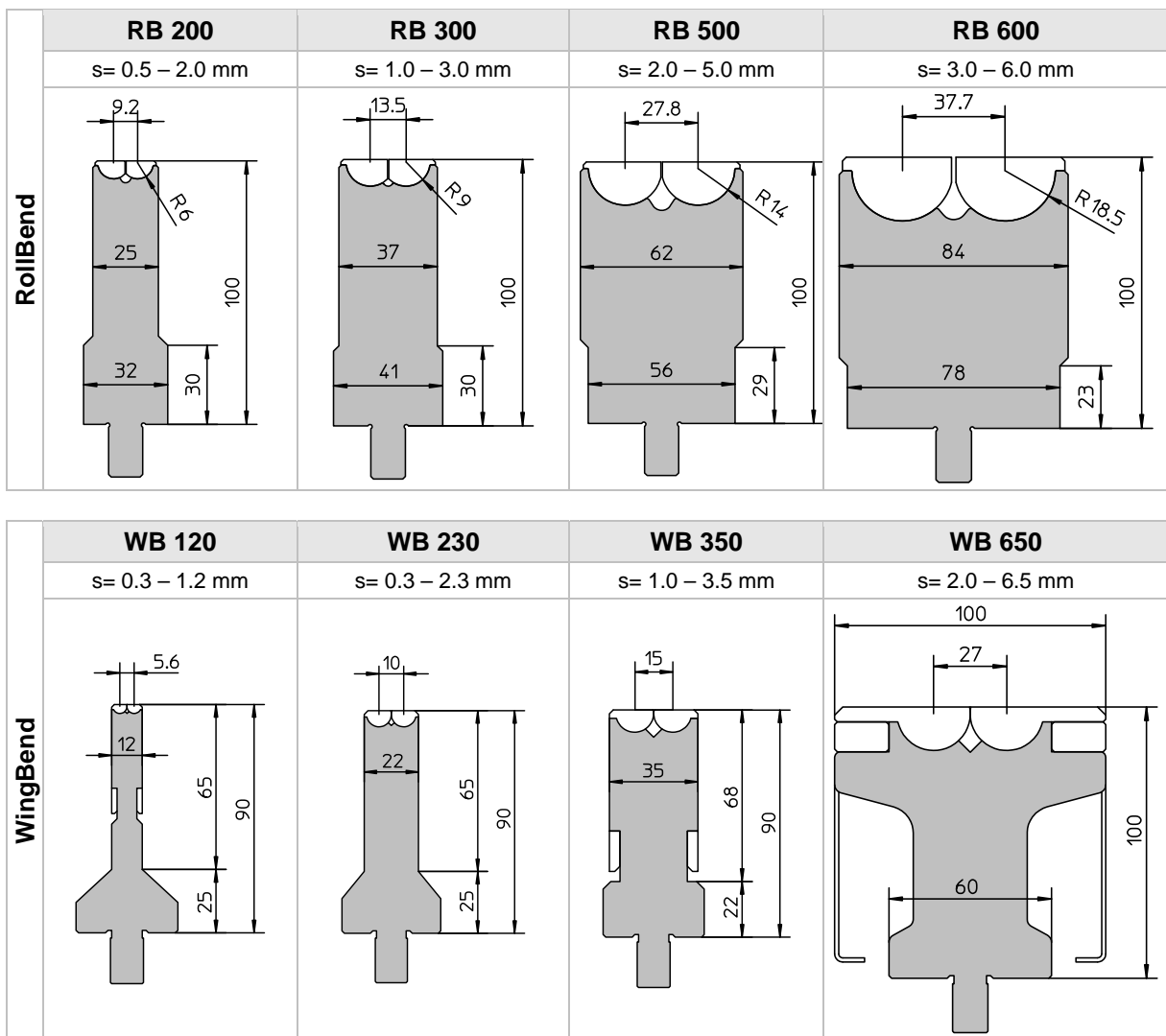
Dies

SBW





















2.9 RollBend / WingBend

Application During the bending procedure, 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 line, without deformation.
 - Extremely short sides can be edged.
 - Ideal for diagonal or tapered parts.
 - Variable material thickness.
 - No foil damage on foil-coated sheets.



For a detailed description of RollBend / WingBend see the chapter RollBend / WingBend in the technical section.

RollBend		Delivery time: ex warehouse		
 42 Cr Mo 4 1080 – 1180 N/mm ²  1000 kN/m  56 – 60 HRC  20 kg/m		RB 200	8	Die width
			40°	Angle
			100	Height (mm)
				Single
		500	1785939	- EUR
		300	1785938	- EUR
		200	1785937	- EUR
		100	1781483	- EUR
		50	1785936	- EUR
		Block		
		4 x 500	1785940	- EUR
		Lengths 25, 30, 35, 40 und 45 available upon request.		
RollBend		Delivery time: ex warehouse		
 42 Cr Mo 4 1080 – 1180 N/mm ²  1300 kN/m  56 – 60 HRC  28 kg/m		RB 300	12	Die width
			60°	Angle
			100	Height (mm)
				Single
		500	1786043	- EUR
		300	1786042	- EUR
		200	1786041	- EUR
		100	1780175	- EUR
		50	1786030	- EUR
		Block		
		4 x 500	1786044	- EUR
		Lengths 25, 30, 35, 40 und 45 available upon request.		
RollBend		Delivery time: ex warehouse		
 42 Cr Mo 4 1080 – 1180 N/mm ²  1500 kN/m  56 – 60 HRC  43 kg/m		RB 500	24	Die width
			60°	Angle
			100	Height (mm)
				Single
		500	1786114	- EUR
		300	1786113	- EUR
		200	1786112	- EUR
		100	1769612	- EUR
		50	1786111	- EUR
		Block		
		4 x 500	1786115	- EUR
RollBend		Delivery time: ex warehouse		
 42 Cr Mo 4 1080 – 1180 N/mm ²  2000 kN/m  56 – 60 HRC  59 kg/m		RB 600	30	Die width
			65°	Angle
			100	Height (mm)
				Single
		500	1786160	- EUR
		300	1786159	- EUR
		200	1786158	- EUR
		100	1781557	- EUR
		50	1786157	- EUR
		Block		
		4 x 500	1786171	- EUR

Lengths in [mm]

WingBend		Delivery time: on request		
C 60 E 800 – 950 N/mm ² 500 kN/m 60 – 62 HRC 13 kg/m		WB 120	-	Die width
			-	Angle
			90	Height (mm)
				Single
		200	1240792	- EUR
		100	1240791	- EUR
		50	1240780	- EUR
		Lengths 10, 15, 20, and 40 available upon request.		
WingBend		Delivery time: on request		
C 60 E 800 – 950 N/mm ² 500 kN/m 60 – 62 HRC 19 kg/m		WB 230	-	Die width
			-	Angle
			90	Height (mm)
				Single
		200	1240876	- EUR
		100	1240875	- EUR
		50	1240873	- EUR
		Lengths 15, 20, 25, and 30 available upon request.		
WingBend		Delivery time: on request		
C 60 E 800 – 950 N/mm ² 700 kN/m 60 – 62 HRC 24 kg/m		WB 350	-	Die width
			-	Angle
			90	Height (mm)
				Single
		200	1240879	- EUR
		100	1240878	- EUR
		50	1240877	- EUR
WingBend		Delivery time: on request		
C 60 E 800 – 950 N/mm ² 1300 kN/m 60 – 62 HRC 53 kg/m		WB 650	-	Die width
			-	Angle
			100	Height (mm)
				Single
		200	1240882	- EUR
		100	1240881	- EUR
		50	1240880	- EUR

Note: WingBend 950 available upon request.

Lengths in [mm]

3. Z bending/inserts

Punch		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 24 kg/m 60 – 62 HRC		OWZ/K 90°	Z4	Jogging	
			90°	Angle	
			120	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0841685	-	EUR
		Length 3050	0841684	-	EUR
		Length 2550	0841683	-	EUR
		Length 2050	0832862	-	EUR
		Length 1250	0841682	-	EUR
		Length 1050	1606294	-	EUR
Version A					
Length 2050	0841689	-	EUR		
Length 1250	0841690	-	EUR		
Length 1050	1606293	-	EUR		
Block					
250	0832861	-	EUR		
550	1606291	-	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		

Dies

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 18.2 kg/m 60 – 62 HRC		EVZ 90°	Z4	Jogging	
			90°	Angle	
			100	Height (mm)	
		Version B	Mat. No.	Price	
		Length 4050	0841673	-	EUR
		Length 3050	0841672	-	EUR
		Length 2550	0841674	-	EUR
		Length 2050	0832935	-	EUR
		Length 1250	0841245	-	EUR
		Length 1050	1606173	-	EUR
Version A					
Length 2050	0841668	-	EUR		
Length 1250	0841667	-	EUR		
Length 1050	1606172	-	EUR		
Block					
250	0832934	-	EUR		
550	1606171	-	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		

WingBend
Z bending

Punch		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 24 kg/m 60 – 62 HRC		OWZ/K 90°	Z6	Joggling	
			90°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841692	-	EUR
		Length 3050	0841691	-	EUR
		Length 2550	0841693	-	EUR
		Length 2050	0832882	-	EUR
		Length 1250	0839545	-	EUR
		Length 1050	1606279	-	EUR
Version A					
Length 2050	0841695	-	EUR		
Length 1250	0841694	-	EUR		
Length 1050	1606278	-	EUR		
Block					
250	0832881	-	EUR		
550	1606277	-	EUR		
Single					
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		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 18.2 kg/m 60 – 62 HRC		EVZ 90°	Z6	Joggling	
			90°	Angle	
			100	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841710	-	EUR
		Length 3050	0841709	-	EUR
		Length 2550	0841708	-	EUR
		Length 2050	0832936	-	EUR
		Length 1250	0839546	-	EUR
		Length 1050	1606210	-	EUR
Version A					
Length 2050	0841714	-	EUR		
Length 1250	0841715	-	EUR		
Length 1050	1606179	-	EUR		
Block					
250	0832937	-	EUR		
550	1606178	-	EUR		
Single					
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		

Punch		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 32.7 kg/m 60 – 62 HRC		OWZ/K 90°	Z8	Jogging	
			90°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841744	-	EUR
		Length 3050	0841743	-	EUR
		Length 2550	0841742	-	EUR
		Length 2050	0841741	-	EUR
		Length 1250	0841740	-	EUR
		Length 1050	1606335	-	EUR
		Version A			
		Length 2050	0841736	-	EUR
		Length 1250	0841735	-	EUR
		Length 1050	1606334	-	EUR
		Block			
250	0841727	-	EUR		
550	1606333	-	EUR		
Single					
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		

Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 24.8 kg/m 60 – 62 HRC		EVZ 90°	Z8	Jogging	
			90°	Angle	
			100	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841765	-	EUR
		Length 3050	0841764	-	EUR
		Length 2550	0841763	-	EUR
		Length 2050	0841762	-	EUR
		Length 1250	0841761	-	EUR
		Length 1050	1606236	-	EUR
		Version A			
		Length 2050	0841757	-	EUR
		Length 1250	0841756	-	EUR
		Length 1050	1606235	-	EUR
		Block			
250	0841755	-	EUR		
550	1606234	-	EUR		
Single					
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		

Z bending

Punch		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 32.7 kg/m 60 – 62 HRC		OWZ/K 90°	Z10	Jogging	
			90°	Angle	
			120	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841769	-	EUR
		Length 3050	0841768	-	EUR
		Length 2550	0841767	-	EUR
		Length 2050	0832902	-	EUR
		Length 1250	0841766	-	EUR
		Length 1050	1606374	-	EUR
Version A					
Length 2050	0841773	-	EUR		
Length 1250	0841774	-	EUR		
Length 1050	1606373	-	EUR		
Block					
250	0832901	-	EUR		
550	1606372	-	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		

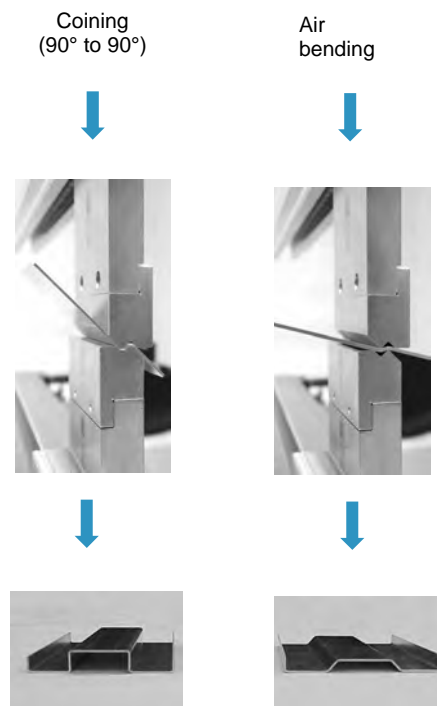
Die		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 24.8 kg/m 60 – 62 HRC		EVZ 90°	Z10	Jogging	
			90°	Angle	
			100	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0841778	-	EUR
		Length 3050	0841777	-	EUR
		Length 2550	0841776	-	EUR
		Length 2050	0832959	-	EUR
		Length 1250	0841775	-	EUR
		Length 1050	1606282	-	EUR
Version A					
Length 2050	0841781	-	EUR		
Length 1250	0841783	-	EUR		
Length 1050	1606281	-	EUR		
Block					
250	0832958	-	EUR		
550	1606280	-	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		

Technical information




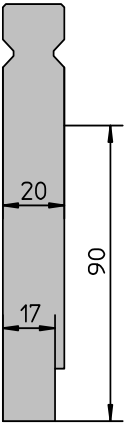
- With a set, you can achieve either 4, 6, 8 or 10 mm joggings with 90° to 90° (coining process) or achieve different joggings and angles > 90° in the air bending process.
- Modified inserts, e.g. ZE5/90° available upon request.
- Tools are suitable for station operation (with EV/70).
- Inexpensive solution with the usage of several inserts (Z inserts, form inserts,...).




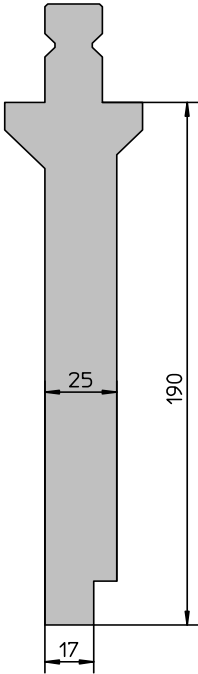
Maximum sheet thicknesses with Z bending

Z dimension: (mm)	Coining: (mm)	Air bending: (mm)
4	1	1.5
6	1.5	2
8	2	2.5
10	2.5	3



Z bending

Tool adapter for Z insert		Delivery time: ex warehouse		
 42 Cr Mo 4 1080 – 1180 N/mm ²  1200 kN/m  19.3 kg/m 	Lengths in [mm]	OW/K90	-	Joggling
		-	Angle	
		90	Height (mm)	
		Version B	Mat. No.	Price
		Length 4050	0843417	- EUR
		Length 3050	0843416	- EUR
		Length 2550	0843415	- EUR
		Length 2050	0843414	- EUR
		Length 1250	0843413	- EUR
		Length 1050	0867642	- EUR
		Version A		
		Length 2050	0844005	- EUR
		Length 1250	0844004	- EUR
		Length 1050	1606653	- EUR
		Block		
250	0843412	- EUR		
550	1606652	- EUR		
Single				
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		

Tool adapter for Z insert		Delivery time: ex warehouse		
 42 Cr Mo 4 1080 – 1180 N/mm ²  1200 kN/m  44.5 kg/m 	Lengths in [mm]	OW/S190	-	Joggling
		-	Angle	
		190	Height (mm)	
		Version B	Mat. No.	Price
		Length 4050	1461571	- EUR
		Length 3050	1461559	- EUR
		Length 2550	1461555	- EUR
		Length 2050	1461554	- EUR
		Length 1250	0856439	- EUR
		Length 1050	1606657	- EUR
		Version A		
		Length 2050	1461508	- EUR
		Length 1250	1461507	- EUR
		Length 1050	1606656	- EUR
		Block		
250	0856438	- EUR		
550	1606655	- EUR		
Single				
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		

Tool adapter for Z insert		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 18 kg/m See Technical Section Displacement of the I axis 		EV/70	-	Joggling	
			-	Angle	
			70	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0843433	-	EUR
		Length 3050	0843432	-	EUR
		Length 2550	0843431	-	EUR
		Length 2050	0843430	-	EUR
		Length 1250	0843429	-	EUR
		Length 1050	0867641	-	EUR
Version A					
Length 2050	0844010	-	EUR		
Length 1250	0844009	-	EUR		
Length 1050	1605950	-	EUR		
Block					
250	0843428	-	EUR		
550	1605929	-	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		

Tool adapter for Z insert		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 12.7 kg/m		EV/70-M	-	Joggling	
			-	Angle	
			70	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	1206770	-	EUR
		Length 3050	1206759	-	EUR
		Length 2550	1206758	-	EUR
		Length 2050	1206757	-	EUR
		Length 1250	1206756	-	EUR
		Length 1050	1605991	-	EUR
Version A					
Length 2050	1206752	-	EUR		
Length 1250	1206750	-	EUR		
Length 1050	1605990	-	EUR		
Block					
250	0871240	-	EUR		
550	1605989	-	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		

Z bending

Insert for OWK 90, OW/S 190, EV70, EV70-M		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 6.5 kg/m 60 – 62 HRC		Z insert 90°	Z4	Joggling	
			90°	Angle	
			30	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0844183	-	EUR
		Length 3050	0844182	-	EUR
		Length 2550	0844181	-	EUR
		Length 2050	0844180	-	EUR
		Length 1250	0843601	-	EUR
		Length 1050	1607728	-	EUR
Version A					
Length 2050	0844185	-	EUR		
Length 1250	0844184	-	EUR		
Length 1050	1607727	-	EUR		
Block					
250	0843600	-	EUR		
550	1607726	-	EUR		
Single					
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		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 6.4 kg/m 60 – 62 HRC		Z insert 90°	Z6	Joggling	
			90°	Angle	
			30	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050	0869070	-	EUR
		Length 3050	0857168	-	EUR
		Length 2550	0865204	-	EUR
		Length 2050	0849444	-	EUR
		Length 1250	0846933	-	EUR
		Length 1050	1607731	-	EUR
Version A					
Length 2050	0869363	-	EUR		
Length 1250	0869362	-	EUR		
Length 1050	1607730	-	EUR		
Block					
250	0846932	-	EUR		
550	1607729	-	EUR		
Single					
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		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 6.4 kg/m 60 – 62 HRC		Z insert 90°	Z8	Joggling	
			90°	Angle	
			30	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050		0869073	- EUR
		Length 3050		0869372	- EUR
		Length 2550		0869371	- EUR
		Length 2050		0847586	- EUR
		Length 1250		0846945	- EUR
		Length 1050		1607800	- EUR
Version A					
Length 2050		0869367	- EUR		
Length 1250		0852614	- EUR		
Length 1050		1607799	- EUR		
Block					
250		0846944	- EUR		
550		1607798	- EUR		
Single					
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		Delivery time: ex warehouse			
42 Cr Mo 4 1080 – 1180 N/mm ² 1200 kN/m 6.4 kg/m 60 – 62 HRC		Z insert 90°	Z10	Joggling	
			90°	Angle	
			30	Height (mm)	
		Version B		Mat. No.	Price
		Length 4050		0869075	- EUR
		Length 3050		0860119	- EUR
		Length 2550		0857248	- EUR
		Length 2050		0857465	- EUR
		Length 1250		0846957	- EUR
		Length 1050		1607803	- EUR
Version A					
Length 2050		0869380	- EUR		
Length 1250		0852615	- EUR		
Length 1050		1607802	- EUR		
Block					
250		0846956	- EUR		
550		1607801	- EUR		
Single					
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]

Z bending

Flat insert





Flat insert for OWK 90, OW/S 190, EV70, EV70-M		Delivery time: ex warehouse																																																																																																																	
42 Cr Mo 4 1080 – 1180 N/mm ²	1300 kN/m	6.8 kg/m	60 – 62 HRC																																																																																																																
				For holder, see Chapter 3 Z – bending/inserts																																																																																																															
						Lengths in [mm]																																																																																																													
							<table border="1"> <thead> <tr> <th>Insert flat</th> <th></th> <th>Joggling</th> <th>Angle</th> </tr> </thead> <tbody> <tr> <td></td> <td>30</td> <td>Height (mm)</td> <td></td> </tr> <tr> <th>Version B</th> <th>Mat. No.</th> <th colspan="2">Price</th> </tr> <tr> <td>Length 4050</td> <td>1461879</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 3050</td> <td>1461878</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 2550</td> <td>1461876</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 2050</td> <td>0863682</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 1250</td> <td>1461872</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 1050</td> <td>1605924</td> <td>-</td> <td>EUR</td> </tr> <tr> <th>Version A</th> <td></td> <td></td> <td></td> </tr> <tr> <td>Length 2050</td> <td>1461860</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 1250</td> <td>1461849</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>Length 1050</td> <td>1605923</td> <td>-</td> <td>EUR</td> </tr> <tr> <th>Block</th> <td></td> <td></td> <td></td> </tr> <tr> <td>250</td> <td>0863681</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>550</td> <td>1605922</td> <td>-</td> <td>EUR</td> </tr> <tr> <th>Single</th> <td></td> <td></td> <td></td> </tr> <tr> <td>500</td> <td>0852366</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>300</td> <td>0863680</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>200</td> <td>0863679</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>100</td> <td>0848033</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>50</td> <td>0848034</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>45</td> <td>0863678</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>40</td> <td>0863677</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>35</td> <td>0863676</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>30</td> <td>0863675</td> <td>-</td> <td>EUR</td> </tr> <tr> <td>25</td> <td>0852376</td> <td>-</td> <td>EUR</td> </tr> </tbody> </table>	Insert flat		Joggling	Angle		30	Height (mm)		Version B	Mat. No.	Price		Length 4050	1461879	-	EUR	Length 3050	1461878	-	EUR	Length 2550	1461876	-	EUR	Length 2050	0863682	-	EUR	Length 1250	1461872	-	EUR	Length 1050	1605924	-	EUR	Version A				Length 2050	1461860	-	EUR	Length 1250	1461849	-	EUR	Length 1050	1605923	-	EUR	Block				250	0863681	-	EUR	550	1605922	-	EUR	Single				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
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30	0863675	-	EUR																																																																																																																
25	0852376	-	EUR																																																																																																																

4. Accessories/spare parts



4.1 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, OW 308/S, OW/S190, Modufix H=60, Modufix H=80, Modufix H=100, Modufix H=150		0826078	-	EUR
Safety Click for OW201/K, OW308/K		0826077	-	EUR
Safety Click for OW202/K, OWZ/K Z8, OWZ/K Z10		0826079	-	EUR
Safety Click for OW203/K, OW211/K, OW/K90, OWK/80, OW/K130, OWZ/K Z4, OWZ/K Z6		0826080	-	EUR
10 piece safety pin for OW without Safety Click (DIN 1475)		0872631	-	EUR

4.2 Tool holders

Designation	Illustration	Mat. No.	Price	
10 piece cap screws M6x10 DIN6912 (OW/K 80, OW/K 130)		1413689	-	EUR
10 piece cap screws M6x20 DIN6912 (OW209/S)		1413674	-	EUR
10 piece cap screws M6x16 ISO4762 (OW/K 90, EV/70, OW/S190)		1413690	-	EUR
10 piece cap screws M8x90 ISO4762 (OW308/K, OW308/S)		1413691	-	EUR



4.3 Spacers

Spacer 35		0845425	-	EUR
Spacer 32.5		0861938	-	EUR



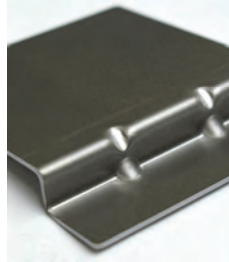
See Technical section Folding

4.4 Dies





Designation	Illustration	Mat. No.	Price	
Plastic insert l = 500 mm		0839792	-	EUR
Bending foil (width=100 mm, thickness=0.4 mm, length=30 m/roll)		0845855	-	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

Beading bar R1/60° H=97.5 mm s=1.0 to 3.0 mm	Detail 	1257288	-	EUR
Beading bar R2 H=149 mm s=to 2.0 mm	Detail 	1213530	-	EUR
Beading bar R2 H=99 mm s= to 2.0 mm	Detail 	0855836	-	EUR
Beading bar R2.5 H=95.5 mm s=2.0 to 3.0 mm	Detail 	0855544	-	EUR

Designation	Illustration	Mat. No.	Price	
10 piece cap screws M8x25 DIN 6912		0872433	-	EUR
10 piece cap screws M8x30 DIN 6912		0872434	-	EUR
10 piece cap screws M8x35 DIN 6912		0872437	-	EUR
10 piece cap screws M8x40 DIN 6912		0872435	-	EUR
10 piece cap screws M8x45 DIN 6912		0872439	-	EUR
10 piece cap screws M8x50 DIN 6912		0872438	-	EUR
10 piece cap screws M8x55 DIN 6912		0872440	-	EUR
10 piece cap screws M8x60 DIN 6912		0872441	-	EUR
10 pieces nut M8x10 DIN 934		0872436	-	EUR

Screw selection

Dies (height 100 and 150)	MST + ZDL ZDL + FWZ	10 pieces	ZDL	10 pieces	FWZ	10 pieces
EV/S-W4/30° EV/S-W5/30° EV001(/S)-W6/30° EV002(/S)-W8/30° EV003(/S)-W10/30°	016381 (M8x40-DIN6912)	872435	016373 (M8x30-DIN6912) 022365 (M8-10-DIN934)	872434 872436	016357 (M8x25-DIN6912)	872433
EV004(/S)-W12/30°	809531 (M8x45-DIN6912)	872439	105889 (M8x35-DIN6912) 022365 (M8-10-DIN934)	872437 872436	016373 (M8x30-DIN6912)	872434
EV005-W16/30°	800276 (M8x50-DIN6912)	872438	016381 (M8x40-DIN6912) 022365 (M8-10-DIN934)	872435 872436	105889 (M8x35-DIN6912)	872437
EV006-W20/30°	831445 (M8x55-DIN6912)	872440	809531 (M8x45-DIN6912) 022365 (M8-10-DIN934)	872439 872436	016381 (M8x40-DIN6912)	872435
EV007-W24/30°	833069 (M8x60-DIN6912)	872441	800276 (M8x50-DIN6912) 022365 (M8-10-DIN934)	872438 872436	809531 (M8x45-DIN6912)	872439
						

Required quantity







Single pieces	Height H=100	Height H=150
Length	Quantity	Quantity
25 – 40 mm	1	2
45 – 100 mm	2	4
200 mm	4	8
300 mm	6	12
500 mm	7	14




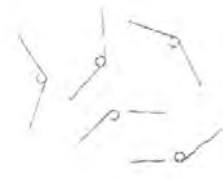
Blocks	H=100		H=150	
	Version A	Version B	Version A	Version B
250 mm	9	9	14	14
1250 mm	29	29	54	54
2050 mm	45	39	86	74
2550 mm	52	46	93	81
3050 mm	65	53	126	102
4050 mm	85	67	166	130

4.5 ACB

Designation	Illustration	Mat. No.	Price	
ACB case empty		0140603	-	EUR
Electronic screw driver		0140800	-	EUR
Locking pin		0902665	-	EUR
Supplementary license for software		0853185	-	EUR
Additional electronic sensor system TrumaBend V series (V 50 – V 320)		0903033	-	EUR
Additional extension cable (L=1500 mm) for sensor tools TrumaBend V series (V 50 – V 320)		0919112	-	EUR

Designation	Illustration	Mat. No.	Price	
ACB module TruBend Series 5000/ TrumaBend V series (V 500 – V 3200)		1253913	-	EUR
Additional extension cable short (L=500 mm) for sensor tools TruBend Series 5000/ TrumaBend V series (V 500 – V 3200)		1273132	-	EUR
Retaining clip		0358056	-	EUR
Magnet with clip		0342979	-	EUR
Attachment 90°		0932898	-	EUR
Attachment 120°		0932899	-	EUR
Calibration die 90° complete		0935355	-	EUR
Installation device for sensor disks		0932914	-	EUR
Screw M1.6 x 8 for sensor disk (OW200/K, OW.../S)		0902819	-	EUR
Screw M2 x 8 for sensor disk (OW/K80, OW/K130, OW280/K)		0755413	-	EUR
Screw M1.6 x 6 for sensor disk (OW201/K, OW202/K, OW203/K)		0138704	-	EUR

Designation	Illustration	Mat. No.	Price	
Replacement part for safety element: lever for OW200/K		0901184	-	EUR
Replacement part for safety element: lever for OW200/S		0901188	-	EUR
Replacement part for safety element: lever for OW202/K		0901190	-	EUR
Replacement part for safety element: lever for OW201/S, OW202/S, OW203/S, OW209/S		0901191	-	EUR
Replacement part for safety element: lever for OW201/K		0902640	-	EUR
Replacement part for safety element: lever for OW203/K		0908885	-	EUR

Designation	Illustration	Mat. No.	Price	
Spacer 0.1x12.7		0903268	-	EUR
Assembly sheet		0906262	-	EUR
Replacement part for safety element: 4 x screws M3 x 5		0872632	-	EUR
Replacement part for safety element: 5 pc spiral springs		0872633	-	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

4.6 General accessories

Designation	Illustration	Mat. No.	Price	
QuickStop		0843809	-	EUR
Side stop complete		0843740	-	EUR
Oil spray bottle Available from your spare parts distributor upon request!		0111309	-	EUR
Oil spray bottle (tools are oiled at the time of delivery with "VCI special oil")		1597173	-	EUR
Scotch-Brite, fine version		0814638	-	EUR
Scotch-Brite, coarse version		0814639	-	EUR
Hand magnet with release lever		0982944	-	EUR

5. Technical Section Bending tools

5.1 LASERdur TRUMPF hardening process – Hardness through laser exposure

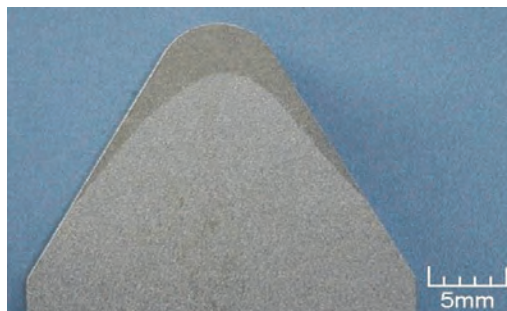


TRUMPF tools are laser-hardened. Thanks to utilization of a TRUMPF TLF high-performance laser with innovative special hardening optics, improvements over earlier laser hardening in terms of hardening depth and the width of the hardened zone have been achieved:

- Degree of hardness 60-62 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)

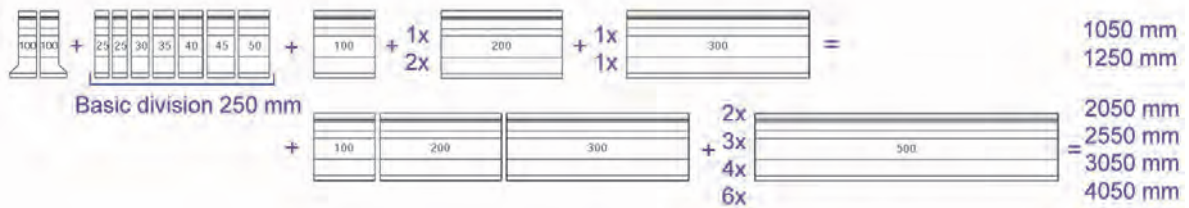
5.2 System divisions (according to weight)

Each segment listed is of course also available on an individual basis.

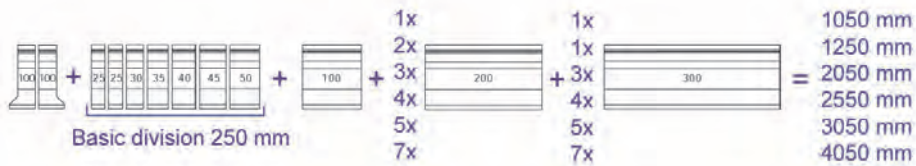
Punches

Version B

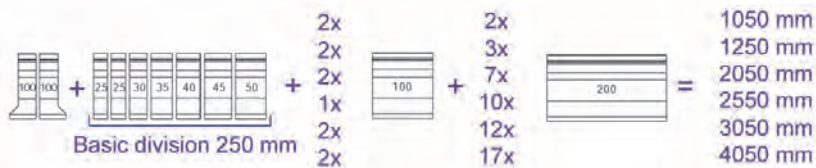
Division version for tool sets with a **weight of up to 50 kg/m**



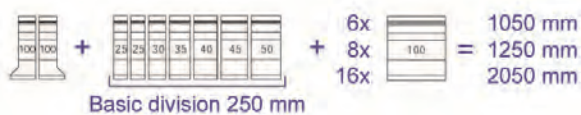
Division version for tool sets with a **weight of more than 50 kg/m**
(type OW200/S, OW201/S, OW203/S)



Division variants for tool sets with **weights 83 kg/m or more**
(type OW300/S)



Version A



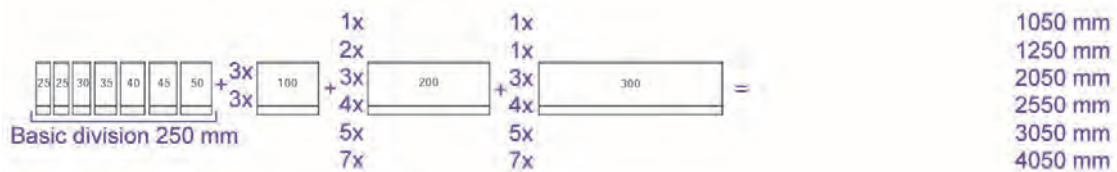
Dies

Version B

Division version for tool sets with a **weight of up to 50 kg/m**



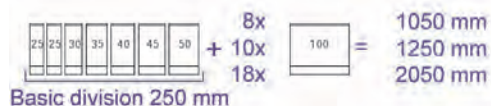
Division version for tool sets with **weights starting from 50 kg/m**
 (type EV W60/80°, EV W70/80°, EV W80/80°)



Division version for tool sets with a **weight of more then 83 kg/m**
 (type EV W90/80°, EV W100/80°, EV W120/60°)



Version A



5.3 Folding

Application Folding tool can only be used in combination with a TruBend series 5000/TrumaBend V series, because the utilization of these tools requires I axle 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.

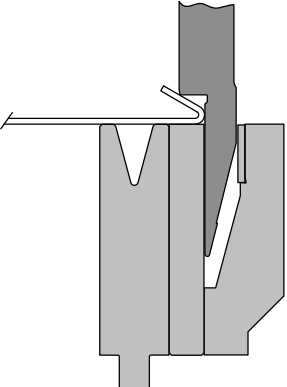
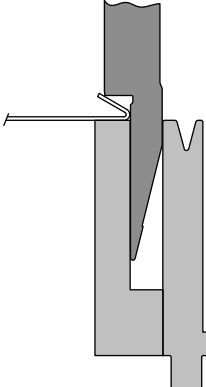
1. Bend to an angle of 30°. I axis is located thereby in the front position.
2. Flattening. I axis is located thereby in the rear position.

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.

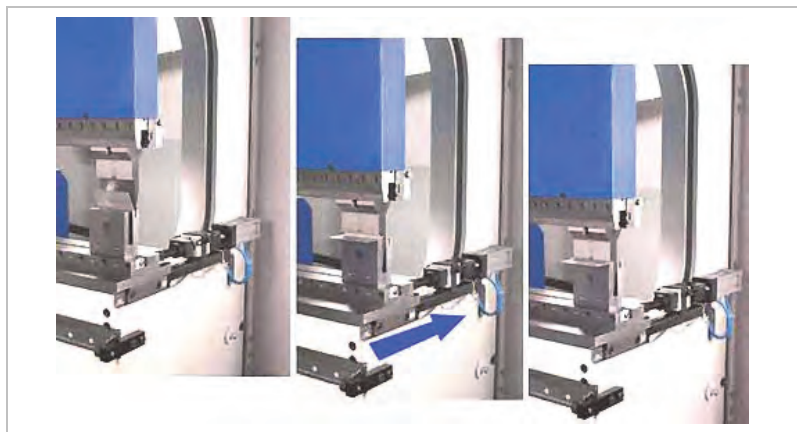
Flattening in the rear tool position: I axis is at the front.	Flattening in the front tool position: I axis is at the rear.
	

Displacement of the I axis with OW210/S

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

Displacement of the I axis with OW210/S							
Folding tool rear				Folding tool front			
	Distance stop		Displacement to the front		Distance stop		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.



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 I axis with OW209/S

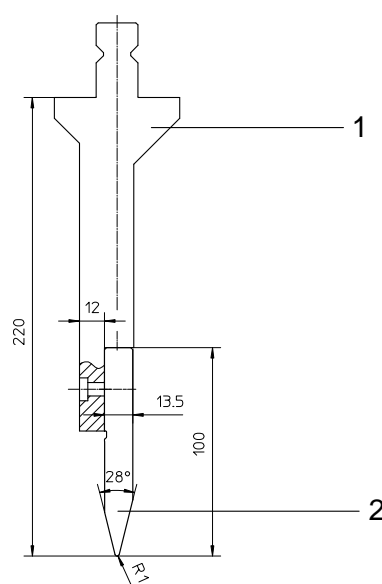
Application This tool system with OW209/S holder + insert OW320 can only be used in combination with a TruBend series 5000/TrumaBend V series, because the utilization of these tools requires I axis displacement.

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 radiiuses (replaceable OW320 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.

Displacement of the I axis with OW209/S				Tool		
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				1 Holder OW209/S standard 2 Insert OW320 R1/28°, b=13.5 mm (ready for folding)		
	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

Press force during folding

ST37: ~ 400 N/mm ²		
Sheet thickness: (mm)	Press force:	Press force:
0.8	320 kN/m	120 kN/m
1	500 kN/m	150 kN/m
1.25	550 kN/m	170 kN/m
1.5	650 kN/m	220 kN/m
2	800 kN/m	300 kN/m
2.5	1000 kN/m	550 kN/m
3	1300 kN/m	800 kN/m

Stainless steel (1.4301): ~700 N/mm ²		
Sheet thickness: (mm)	Press force:	Press force:
0.8	500 kN/m	200 kN/m
1	600 kN/m	250 kN/m
1.25	800 kN/m	300 kN/m
1.5	950 kN/m	500 kN/m
2	1300 kN/m	800 kN/m

5.4 Calculations (nesting height, press force table)

Calculations can be performed in the simplest way with the aid of the CD-ROM or E-Shop.

CD-ROM



Selection
Punches and/or dies
Calculation help

Rechnung

Presskraft und Biegeanlagenberechnung

Gesenköffnung	freie Eingabe: oder Auswahl:	<input type="text" value="4"/> mm	erforderliche Presskraft:
Blechdicke		<input type="text" value="1"/> mm	<input type="text" value="111"/>
max. Zugfestigkeit nach Normangabe	freie Eingabe: oder Auswahl:	<input type="text" value="450"/> N/mm ²	Biegelänge:
Oberwerkzeugradius (wirkt sich nur bei großen Radien entscheidend aus).		<input type="text" value="1"/> mm	<input type="text" value="1"/> m <small>Bitte oben Presskraft oder Biegelänge eingeben!</small>
<input type="button" value="Berechnen"/>			

K-Max Berechnung

Radius R:	Gesenkwerte (W):	<input type="text"/>	<input type="text"/>
Winkel α:	Büchmess X:	<input type="text"/>	<input type="text"/>
<input type="button" value="Berechnen"/>			

Berechnung der Schachtelhöhe:

Oberwerkzeughöhe:	mm	Schachtelinnenhöhe:	mm
Druckbalenmitte bis Modul: Außenkante (standard Zähnm)	<input type="text" value="24"/> mm		

Berechnung Innenradius

Gesenkwerte:	<input type="text" value="8"/>	Blechdicke:	<input type="text" value="15"/>
Innenradius:	<input type="text" value="1"/>	Minimale Gesenkwerte:	<input type="text"/>
Minimale Schenkellänge:	<input type="text" value="4.5"/>	Maximale Gesenkwerte:	<input type="text"/>
Überbandbreite: Nichtwerte bei Stempelradius R1 und 90° Biegewinkel.			

Berechnung Gewicht

Werkzeug:	Adapter Amoda Typ A	Gewicht: --
Länge(mm)	<input type="text" value="4050"/>	

E-Shop <https://www.mytrumpf.com>



Selection
Punches and/or dies
Calculation help

Calculation of the maximum nest height

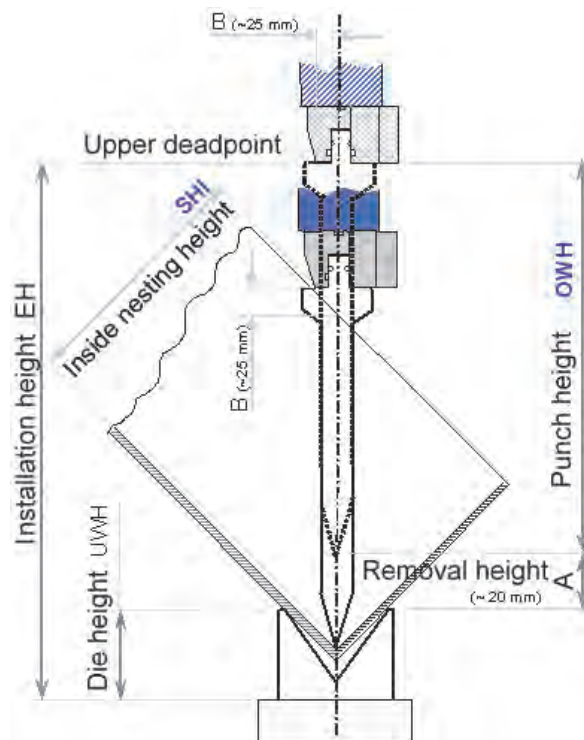
- The maximum nesting height is defined mainly by the installation height of the machine.
- The installation height is the maximum clearance between lower edge-punch adaptor and upper edge-die adaptor.
- Calculation by means of CD-ROM and/or E-Shop possible.

Punch height	Nesting 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
510	327
520	333
530	340
540	347
550	353
560	360
570	367
580	374
590	380
600	387
Standard heights	

$$OWH = EH - UWH - A$$

$$SHI = \frac{OWH - B}{1.414} * 0.95$$

$$OWH = \frac{SHI}{0,95} * 1.414 + B$$



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.

Standard values:

Sheet thickness s:	0.5 – 2.6 mm	3.0 – 8.0 mm	9.0 – 12.0 mm
Die width w:	6 * s	8 * s	10 * s

Yields an inner radius:

$$R_i \cong 0.16 * w$$

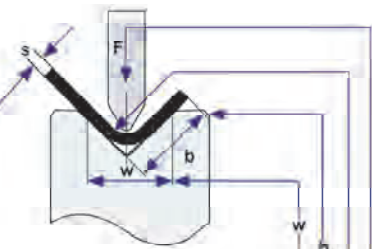
$$R_i \cong w/6$$

or

$$R_i \cong 0.16 * (6 \dots 10 * s)$$

Press force table (recommended values)

Press force required for 90° air bending



Material: 450 N/mm², STEEL

s	4	5	6	8	10	12	16	20	24	30	40	50	60	70	80	90	100	120	150		
0,7	0,7	0,8	0,9	1,4	1,7	1,9	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		187	131	91	70	57	41														
1,25			204	142	109	88	64	50													
1,5				294	204	157	127	92	72												
1,75					278	213	173	126	99	81											
2						279	226	164	129	106											
2,5							353	256	201	166	131										
3								369	290	238	188	140									
3,5									503	394	325	256	190	151							
4										515	424	335	248	197	163						
4,5											852	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																930	805	710	634	523	415
12																	1159	1022	914	754	597
15																		1597	1427	1178	933

Material: 700 N/mm², NIRO

s	4	5	6	8	10	12	16	20	24	30	40	50	60	70	80	90	100	120	150		
0,8	0,8	1	0,8	2	1,9	2,3	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	64														
1,25			317	221	169	137	100	78													
1,5				457	318	244	198	144	113												
1,75					433	332	269	195	153	126											
2						434	352	256	200	165											
2,5							550	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

5.5 Selection of dies 30°/84°(86°)/80°/ reduced-imprint bending

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.

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.

Material: 700 N/mm², NIRO 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	
EV004 R3 30°	OK	OK	OK	
EV005 R3 30°		OK	OK	OK

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.

80°

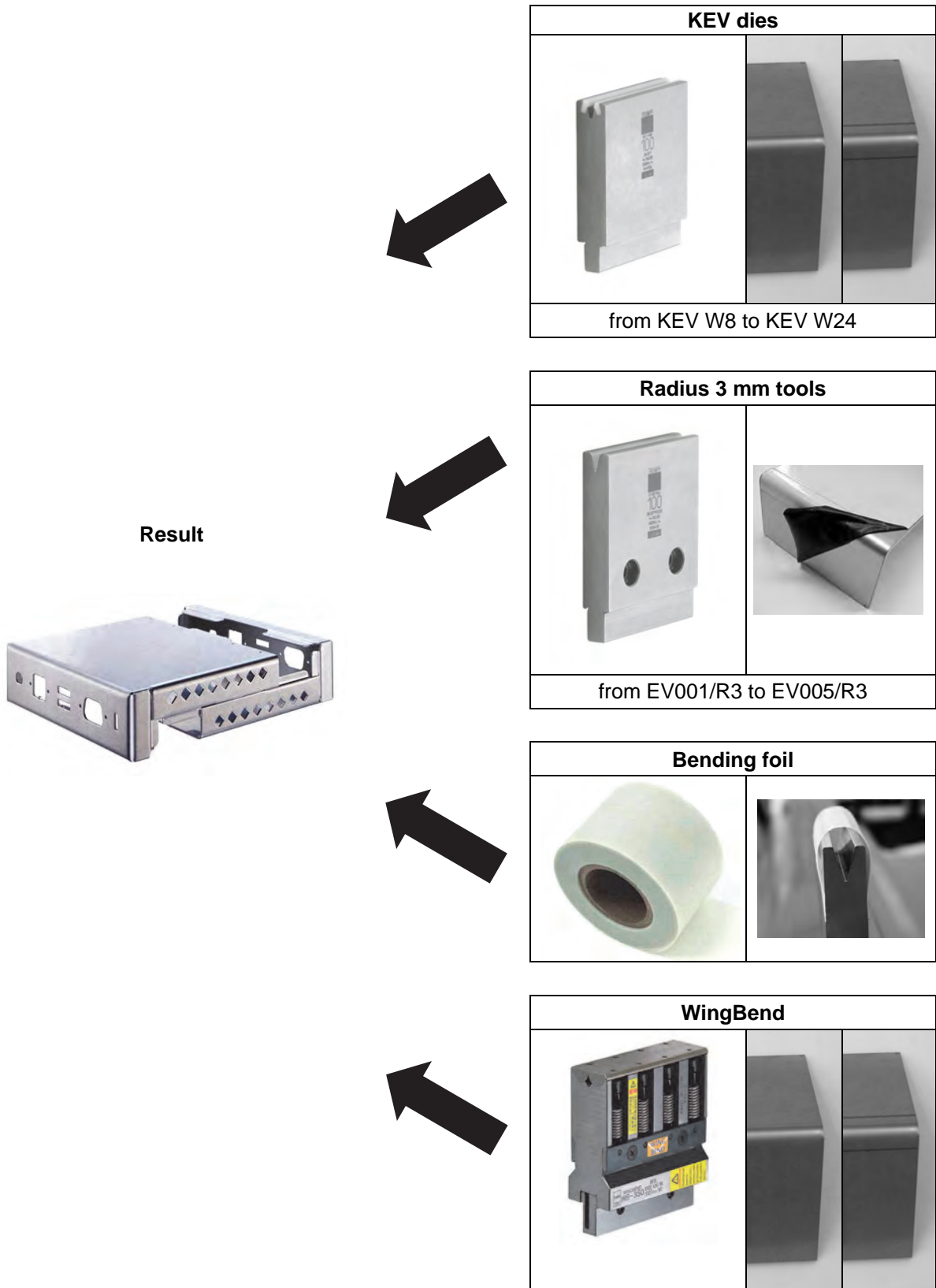


- Starting with W24, now only 80° (instead of 84°) is available, since bending is often done with larger punch-radiuses that produce greater spring-back.
- Standard: H100, H150.

Reduced-imprint bending

Note

More detailed information can be found in the new catalog application examples.



5.6 RollBend

Application During the bending procedure, 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 6.0 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.

Press force table (kN/m)

Note


All specifications for when using a punch-radius of R1.

Material	Sheet thickness [mm]	RB 200	RB 300	RB 500	RB 600
		Bending angle			
		90°	90°	90°	90°
STEEL	0,5	30	30		
	1,0	100	60	30	
	1,5	240	130	50	
	2,0	530	260	100	80
	2,5		460	160	130
	3,0		770	270	180
	4,0			530	400
	5,0			880	660
	6,0				1050
NIRO	0,5	30	30		
	1,0	120	70	40	
	1,5	330	180	80	
	2,0	800	400	150	110
	2,5		680	230	170
	3,0		1030	380	210
	4,0			710	520
	5,0			1020	780
	6,0				1260
ALUMINIUM	0,5	20	20		
	1,0	40	40	20	
	1,5	130	80	40	
	2,0	290	140	60	50
	2,5		240	100	70
	3,0		360	170	100
	4,0			320	240
	5,0				350

kN/m

Table with minimum side lengths

Material	Sheet thickness [mm]	Side length [mm]							
		RB 200		RB 300		RB 500		RB 600	
		Punch radius							
		R 0,5	R 1,0	R 1,0	R 1,0	R 4,0	R 1,0	R 4,0	
STEEL	0,5	4,6	4,7	5,6					
	1,0	5,3	5,3	6,8	15,6	15,7			
	1,5	5,6	5,5	7,6	16,0	16,2			
	2,0	5,9	6,1	8,0	16,3	17,8	19,4	19,5	
	2,5			8,2	16,4	17,9	19,8	20,0	
	3,0			8,3	16,5	18,5	20,6	20,6	
	4,0				16,8	18,7	21,1	21,2	
	5,0				17,0	19,3	22,0	22,0	
	6,0						23,4	23,2	
NIRO	0,5	4,7	4,8	6,1					
	1,0	5,5	5,4	7,4	16,4	16,3			
	1,5	5,8	5,7	8,0	17,3	16,6			
	2,0	6,1	6,0	8,3	17,4	17,1	20,0	20,2	
	2,5			8,4	17,6	17,5	20,2	20,7	
	3,0			8,5	17,8	17,7	20,8	20,9	
	4,0				18,1	18,0	21,4	21,2	
	5,0				18,3	18,7	22,2	22,4	
	6,0						23,5	23,2	
ALUMINIUM	0,5	3,5	3,6	5,7					
	1,0	4,9	5,1	7,0	15,0	14,6			
	1,5	5,1	5,5	7,7	15,5	15,3			
	2,0	5,8	6,0	8,1	15,8	16,3	18,7	18,8	
	2,5			8,7	16,1	16,6	19,9	19,6	
	3,0			9,0	16,4	16,7	20,0	20,4	
	4,0				16,9	17,2	20,8	21,3	
	5,0						21,9	21,5	

 Optimum area of application

5.7 WingBend®

Application During the bending procedure, 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**
- WingBend® can be used on all TRUMPF bending presses.
 - From 0.5 mm to 6.5 mm sheet thickness (up to 10 mm with WB950 on request).
 - For foil-coated sheets, but also for painted and coated surfaces.
 - Painted or powdered surfaces are not damaged.
 - Bends of 180° to 90° 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

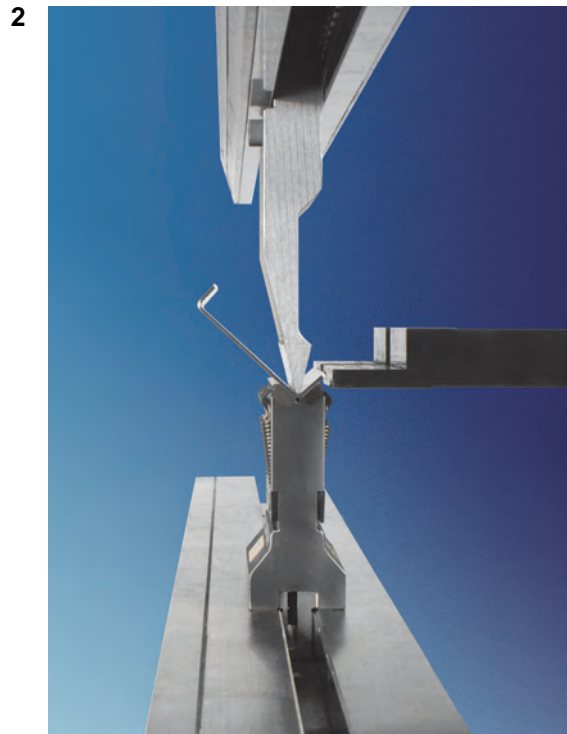
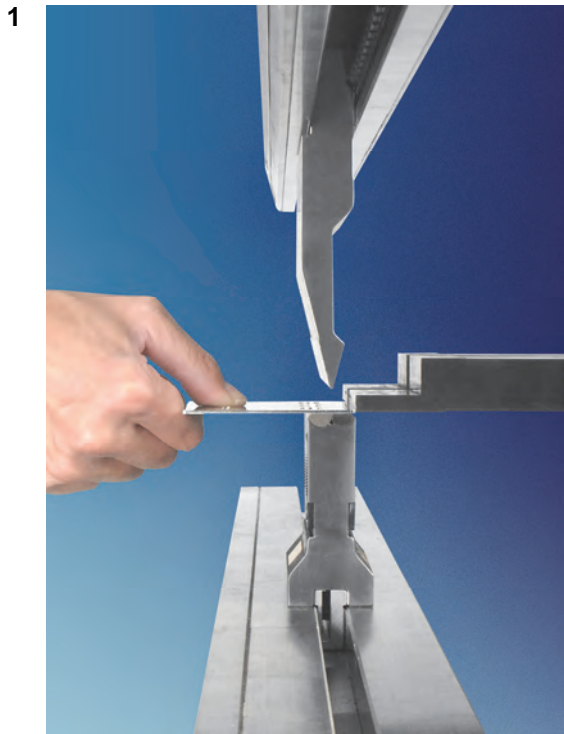
- ACB (automatic angle measurement system) cannot be used in combination with WingBend®!

Press force table

Sheet thickness [mm]	WingBend 120		WingBend 230			WingBend 350			WingBend 650				
	R0.2	R1.0	R0.2	R1.0	R3.0	R0.2	R1.0	R3.0	R0.2	R1.0	R3.0	R5.0	R10.0
0.3	40	50	40	50	50								
0.5	50	60	50	50	50	40	40	40	100	100	100	100	220
0.8	100	130	70	80	90	40	50	50	100	100	110	130	230
1.0	150	190	80	100	130	60	60	70	110	120	120	140	250
1.2	240	300	110	140	180	70	70	80	110	120	120	150	270
1.6			200	220	250	120	130	140	110	120	130	160	280
2.0			300	330		190	200	220	120	130	140	160	360
2.3			400	420		240	240	260	140	140	150	190	390
2.6						340	360	470	180	190	200	240	510
3.2						550	660		250	270	280	310	
4.0									410	430	440	510	
4.6									500	530	540	660	
6.0									970	1000	1070		
													kN/m

R= Punch radius
(based on mildsteel)

Using WingBend® to bend a part in an imprint-free manner



WingBend® versions



- 1 WingBend 120
- 2 WingBend 230
- 3 WingBend 350

- 4 WingBend 650
- 5 Exchangeable 13 mm TRUMPF adapter ledge
- 6 "Wing Unit" from hardened jaws and tension springs

↓
Products



Standard values for minimum flange length (outside dimensions)

Material	Sheet thickness [mm]	Side length [mm]						
		WB 120		WB 230		WB 350	WB 650	
		Punch radius [mm]						
		R0.5	R1	R0.5	R1	R1	R1	R4
Steel	0.50	2.80	3.00					
	0.80	3.20	3.40	5.00	4.80	5.70		
	1.00	3.40	3.50	5.50	5.40	7.00	6.80	7.30
	1.50			5.90	6.10	8.00	8.10	9.20
	2.00			5.70	6.60	8.30	10.40	10.80
	2.50					8.80	11.80	12.30
	3.00					9.40	13.40	13.90
	4.00						15.00	15.80
	5.00						16.20	16.10
	6.00							
Stainless steel	0.50	2.90	3.10					
	0.80	3.40	3.50	5.40	5.20	6.50		
	1.00	3.60	3.70	5.80	5.60	7.50	7.40	8.20
	1.50			6.00	6.00	8.60	10.00	10.50
	2.00			6.50	6.30	8.60	12.00	11.90
	2.50					9.00	13.00	13.00
	3.00					9.30	14.20	13.90
	4.00						15.10	15.20
	5.00							
	6.00							
Aluminum	0.50	2.60	2.80					
	0.80	3.10	3.20	3.80	3.60	4.70		
	1.00	3.30	3.40	5.00	5.00	6.00	5.10	8.30
	1.50			5.80	5.90	7.50	7.20	9.00
	2.00			6.40	6.50	8.00	10.00	10.40
	2.50					8.80	10.40	11.70
	3.00					9.20	12.10	12.80
	4.00						13.80	14.70
	5.00						15.00	16.10
	6.00							

5.8 Safety Click®

Application Safety Click secures the punch against falling out. Safety Click is available from a tool length of 10 mm onwards. Punches from TRUMPF are equipped with the patented Safety Click, one of the spring-loaded safety mechanisms 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:

- Head-bearing tools from 10 mm onwards.
- Shoulder-bearing tools from 25 mm onwards.
- Tool lengths of up to 100 mm are equipped with one Safety Click.
- Tool lengths of up to 100 mm are equipped with two Safety Clicks on request.
- Max. permissible tool weight 12.5 kg.

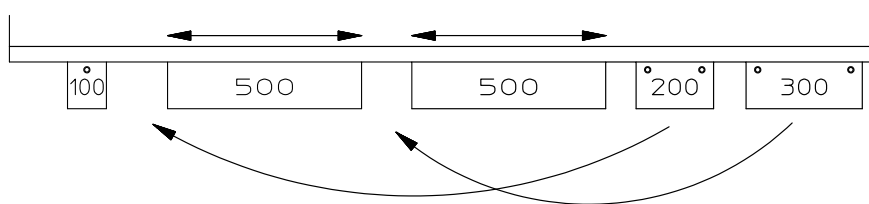
Advantages

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

Note

- In case of large weight (over 12.5 kg), the tools are equipped with fixed locking pins and can be thus replaced only horizontally.
- For shoulder-bearing tools from 10 mm – 25 mm, an adapted safety system is provided by TRUMPF on customer request.

Example



Application situation, if the part pieces up to 300 mm piece are equipped with Safety Click and the 500 mm piece is equipped with locking pins. Lateral pushing out is not required when modifying the station lengths.

5.9 QuickStop

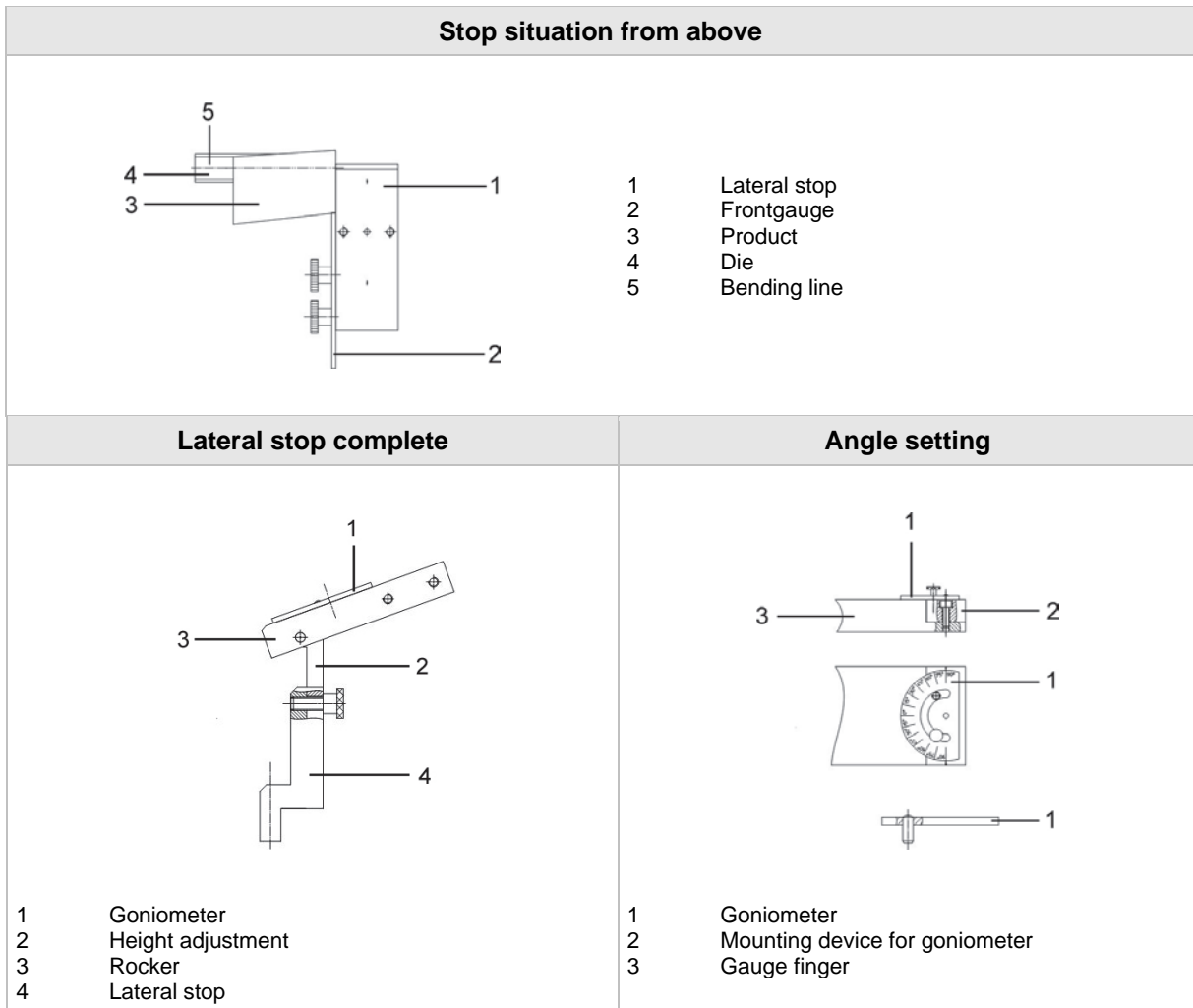
Application The stop aids for the TruBend/TrumaBend – called short "QuickStop" – can be used in 2 and 4 axis machines. Here, QuickStop can be used together on individual (mounted only on one gauge finger) as well as on both gauge fingers.

Application range

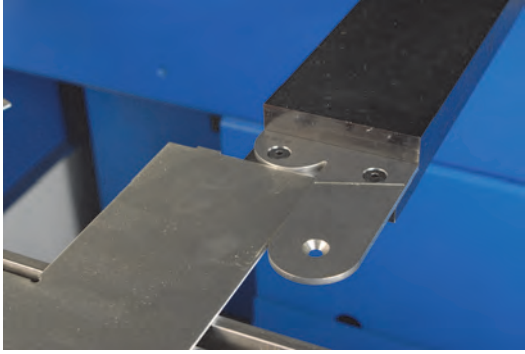
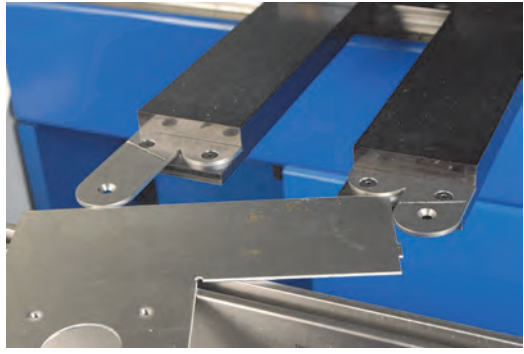

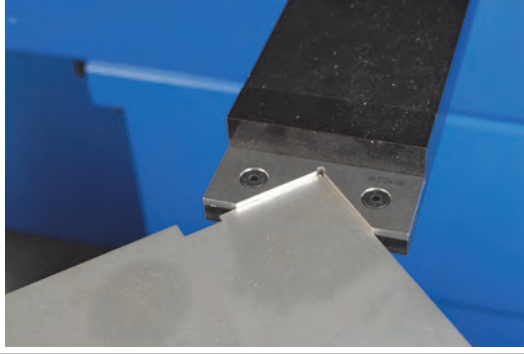
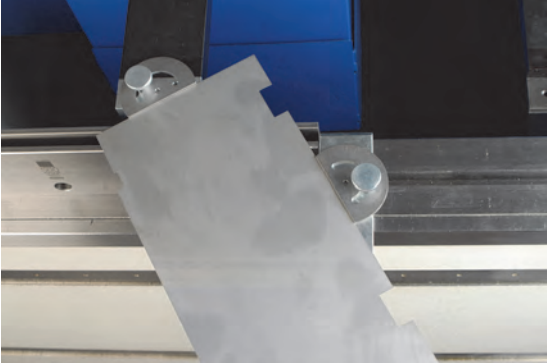
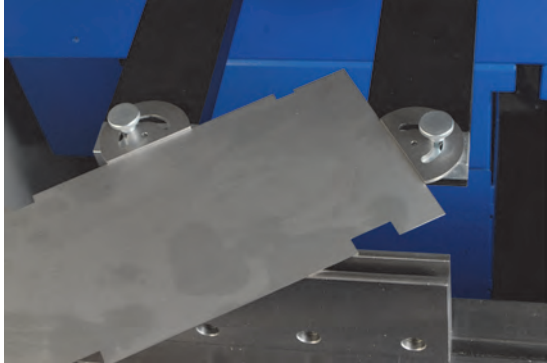
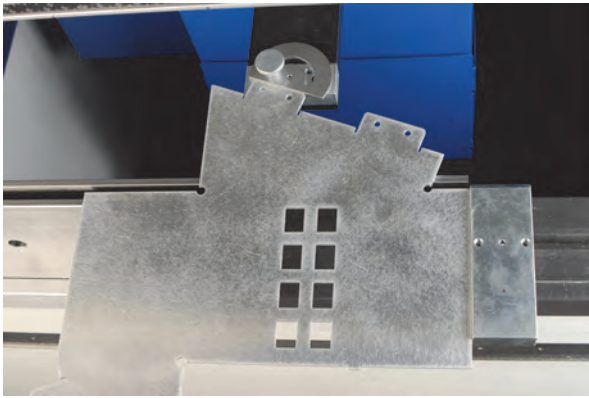

- Up to 5 mm sheet thickness.
- Bending of smaller and medium parts.
- For 2 and 4 axis backgauge.

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 other stop finger shapes as well as the programming option of the backgauges separated without these.



Application examples

<p>Stop plates round</p>	<p>2 x stop plates round</p>
	
<p>2 x 90° stop plates</p>	<p>Stop plates 90°</p>
	
<p>Angle setting/lateral stop</p>	<p>Angle setting</p>
	
<p>Angle setting/lateral stop</p>	<p>QuickStop case</p>
	

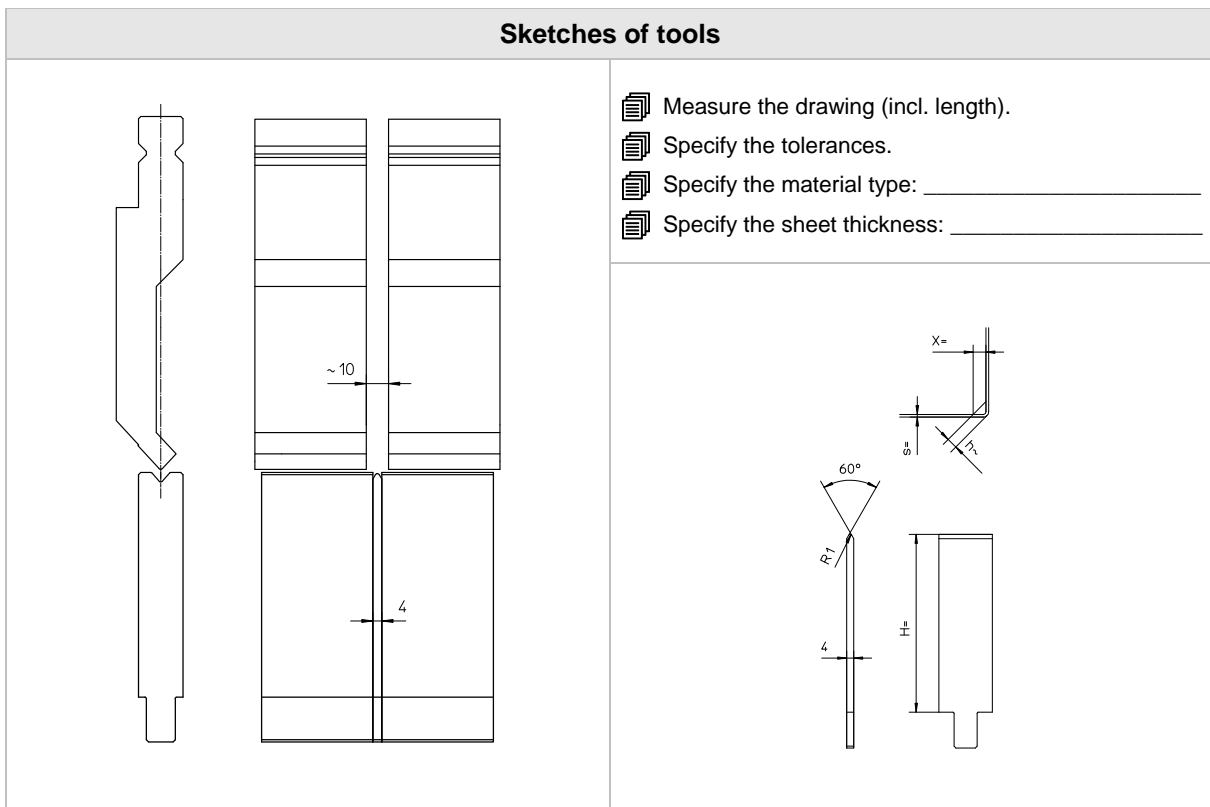
5.10 Application of beading bars

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 bending sides in case of thin sheet metals.
 - Available as a standard tool.
 - Beading bars provide maximum flexibility – beading distances freely selectable.

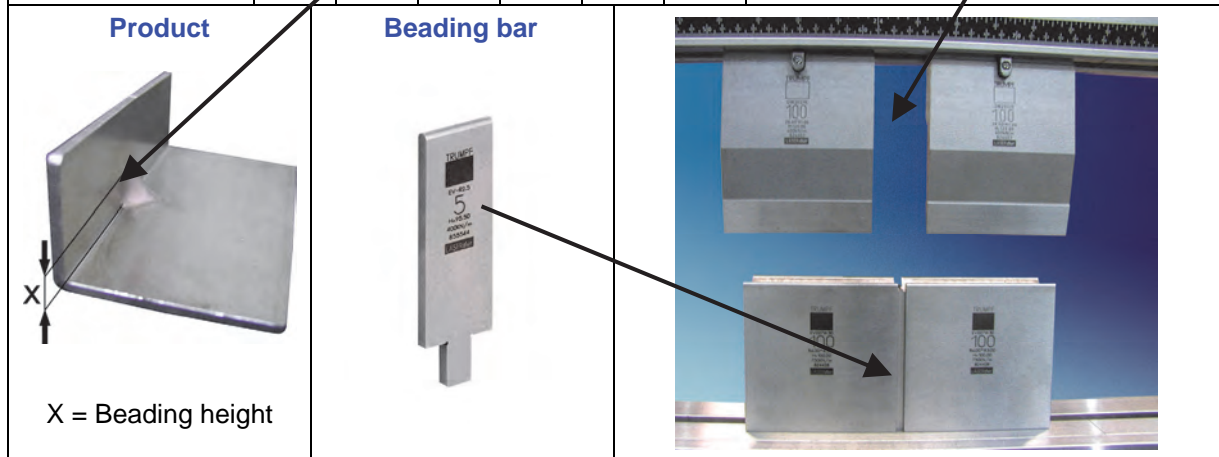


Application of standard beading bars (standard values)

Die 80° 84° 86° (30°)	Sheet thickness (mm)						Beading bar R2 H=99.0 mm (149.0)
	0.8	1	1.5	2	2.5	3	
EV W6	3.5						Beading height X
	10						Distance of the punches (R1 mm)
EV W8	5	4.5					Beading height X
	12	12					Distance of the punches (R1 mm)
EV W10	6	6	6.5	6			Beading height X
	14	14	15	16			Distance of the punches (R1 mm)
EV W12		7.5	7.5	7.5			Beading height X
		16	17	18			Distance of the punches (R1 mm)
EV W16			10.5	10			Beading height X
			21	22			Distance of the punches (R1 mm)

Die 80° 84° 86° (30°)	Sheet thickness (mm)						Beading bar R1/60° H=97.5 mm
	0.8	1	1.5	2	2.5	3	
EV W10		4	3.5	3			Beading height X
		10	12	14			Distance of the punches (R1 mm)
EV W12		5.5	5	5			Beading height X
		10	12	16			Distance of the punches (R1 mm)
EV W16			8	8	7.5		Beading height X
			12	16	18		Distance of the punches (R1 mm)
EV W20				11	10.5	10.5	Beading height X
				18	20	22	Distance of the punches (R1 mm)
EV W24					13	13	Beading height X
					18	22	Distance of the punches (R1 mm)

Die 80° 84° 86° (30°)	Sheet thickness (mm)						Beading bar R2.5 H=95.5 mm
	0.8	1	1.5	2	2.5	3	
EV W16				6	5		Beading height X
				14	18		Distance of the punches (R1 mm)
EV W20				9	8.5	8	Beading height X
				20	20	20	Distance of the punches (R1 mm)
EV W24					11.5	11	Beading height X
					20	20	Distance of the punches (R1 mm)
EV W30							Beading height X
							Distance of the punches (R1 mm)

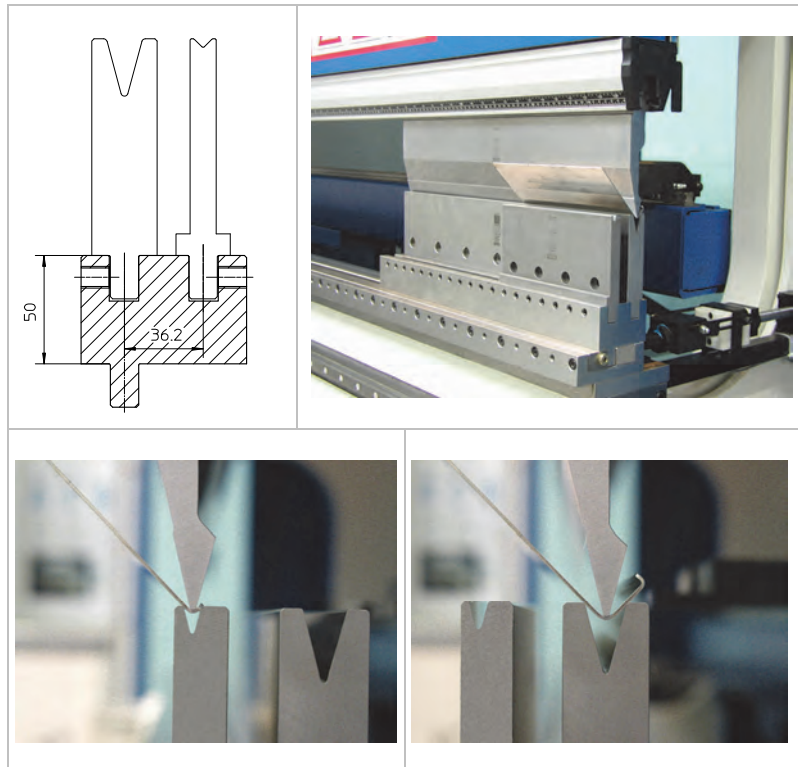


5.11 Use of DV adapters

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 length of bend as the length of bend of the machine (drawing 2). Various lengths of bend 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 bending 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).

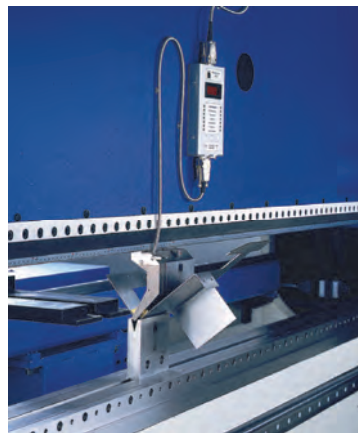


6. ACB[®] angle sensor technical section

6.1 Use the ACB[®] angle sensor

- 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 sensor measures and regulates the angle – independent of material fluctuations.
- 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 which are processed with the ACB angle sensor 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.

Additional information and opportunities for ordering the ACB angle measurement system can be obtained from the CD-ROM bending tool catalog and/or in the E-Shop.



ACB[®] angle sensor
TrumaBend V series
(V 50 – V 320)

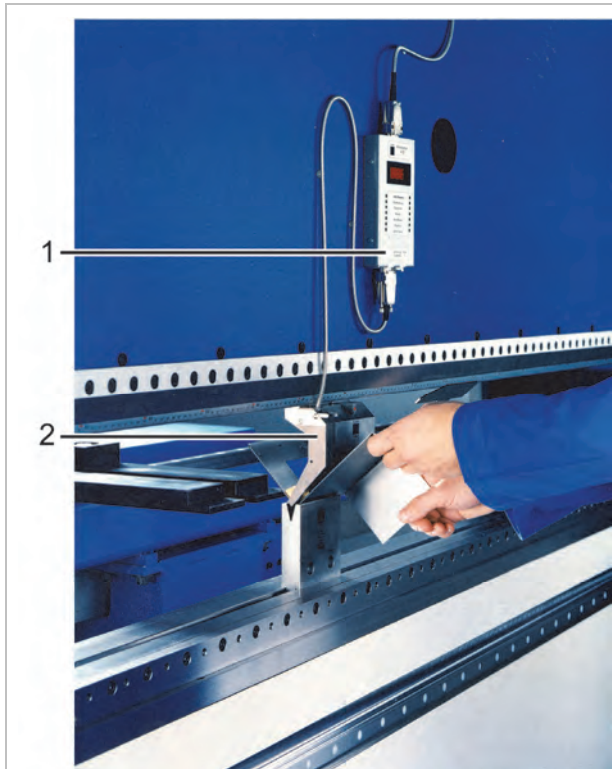


ACB[®] angle sensor
TruBend series 5000
TrumaBend V series (V 500 – V 3200)

6.2 Structure of the ACB[®] angle sensor

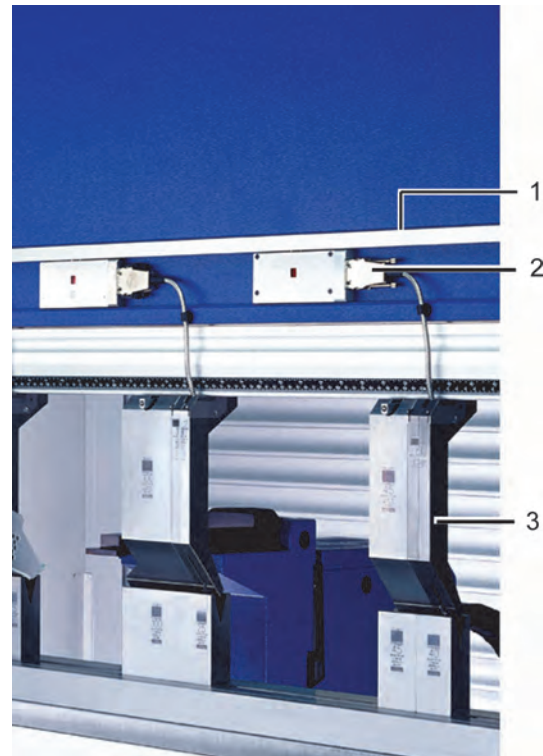
The ACB[®] angle sensor measurement system consists of a sensor tool and an electronic sensor system/ACB module to connect with the control system.

Magnets are attached to the sensor electronic unit and the connection cables thereby allowing the sensor electronic unit to be placed anywhere on the upper beam.



ACB[®] angle sensor
TrumaBend V series (V 50 – V 320)

- 1 Sensor electronics
- 2 Sensor tool



ACB[®] angle sensor
TruBend series 5000
TrumaBend V series (V 500 – V 3200)

- 1 Contact strip for ACB module
- 2 ACB module
- 3 Sensor tool

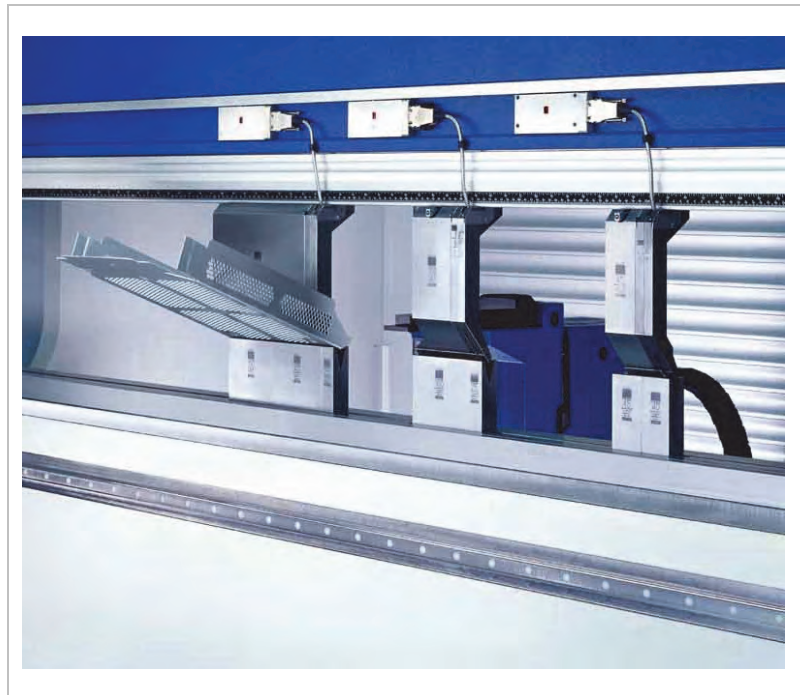
6.3 ACB[®] angle sensor

Note

For TruBend series 5000/TrumaBend V series (V 500 – V 3200).

Reconditionings

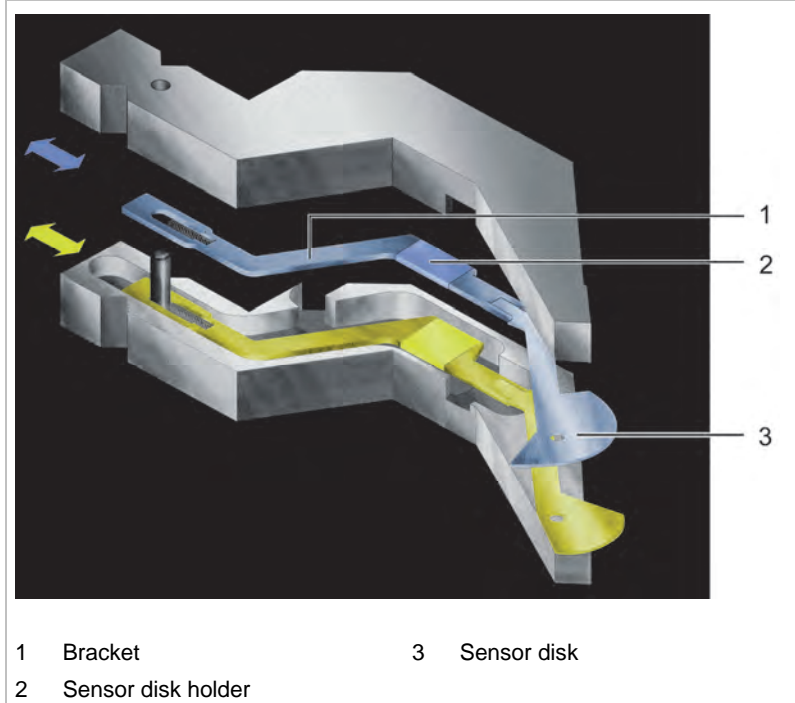
- Considerably shorter cycle times.
- 8 sensors that can be tooled simultaneously.
- Full text display via control system.
- No cables on the beam (no collision contours).
- Existing sensors continue to be utilizable.



6.4 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.



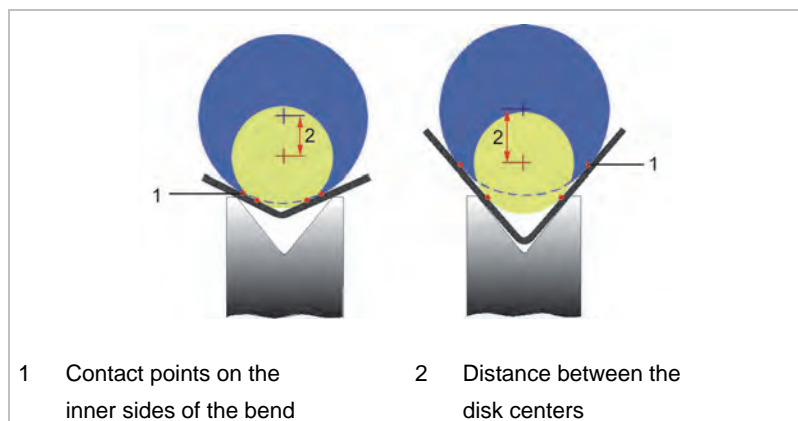
Sensor components integrated into the punch

Four-point measurement with sensor disks

Two sensor disks with different diameters are located in the sensor tool which center themselves in the bending 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:



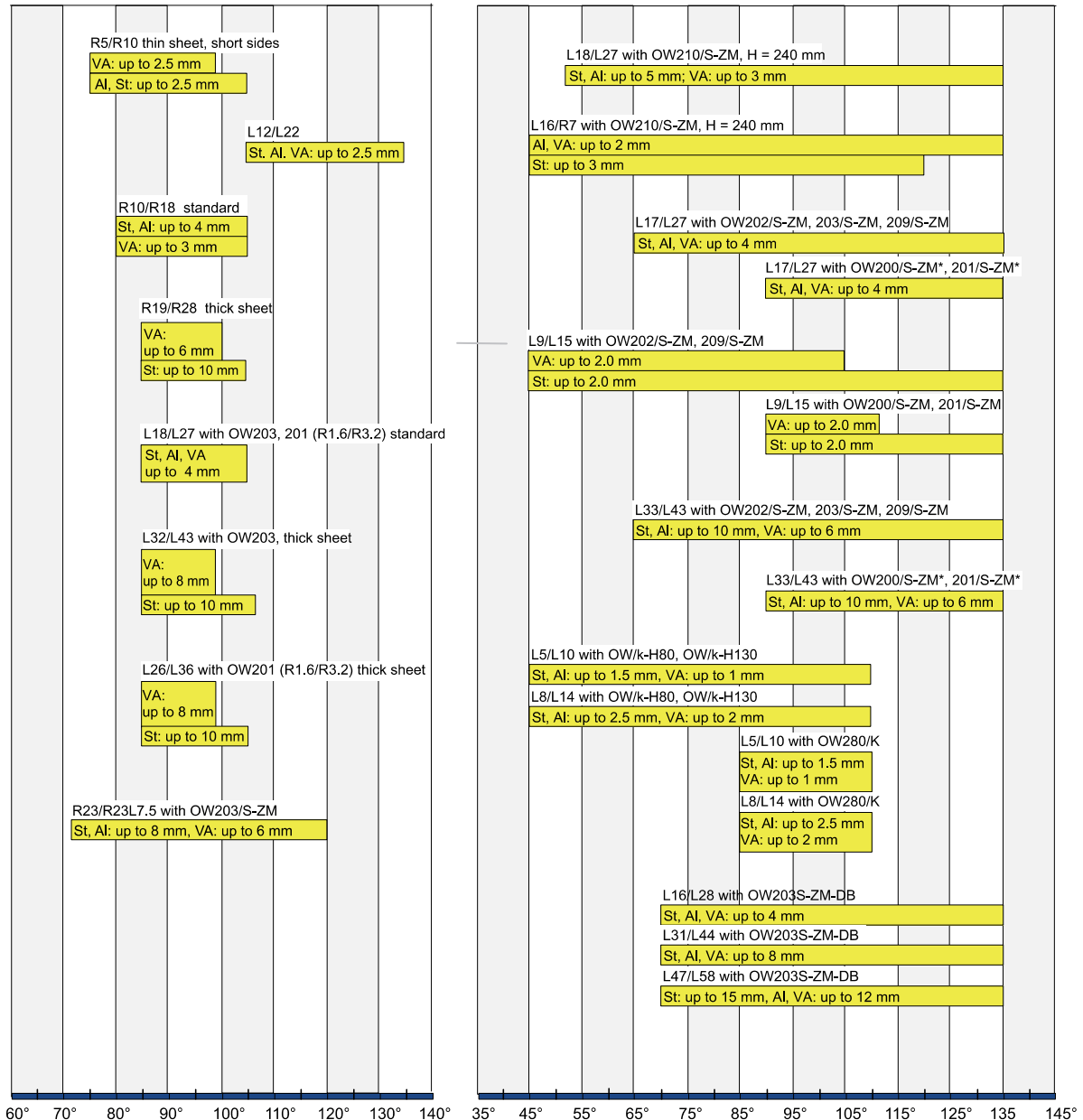
6.5 Areas of utilization of the sensor disks

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)

ACB angle sensor





* The lower measurement range limit applies for elbowed tools: 90°



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!

6.6 Technical data

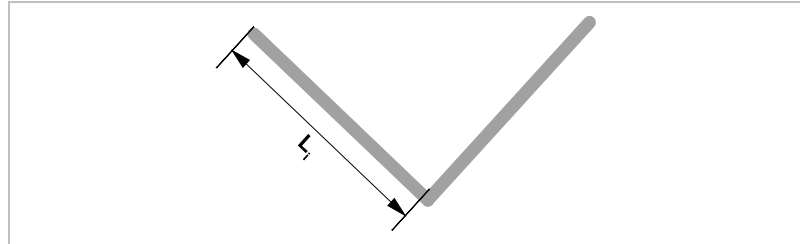
Note: An Initial equipment is a requirement for the first machine!
A supplementary license is required for each additional machine.

ACB initial equipment (TrumaBend V series V 50 – V 320)	
Sensor tools	All usual standard punches. Special radiuses upon request.
Tool width	25 mm/35 mm
Max. number of sensor tools per electronic sensor system	2
Max. number of sensor tools per press brake	2
Max. number of sensors for each bending/Max. number of sensors	3/4
Prerequisites	
Machines	TrumaBend V series (V 50 – V 320)
Control system	DA-65 with software \geq Version 3.4. DA-69 TWC, TWV or TWVP with software \geq Version 1.3.
Sensor electronics	Version \geq 2.91
Scope of delivery	
	<p>Initial equipment consisting of:</p> <ul style="list-style-type: none"> 1 Case 1 Sensor tool (specified by the customer) with the associated sensor disks 1 Sensor electronics 1 90° calibration die + programming diagram 1 ACB® software (form with Code No.) 1 User's guide <p>Accessories:</p> <ul style="list-style-type: none"> 1 Locking pin 1 Electronic screwdriver 2.5 1 Spacer 1 Assembly sheet 10 Test sheets 1 Installation device for sensor disks
ACB Initial equipment 2.G. (TruBend series 5000/TrumaBend V series V 500 – V 3200)	
Sensor tools	All usual standard punches. Special radiuses upon request.
Tool width	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
Prerequisites	
Machines	TruBend series 5000/TrumaBend V series (V 500 – V 3200)
Control system	TASC 6000
ACB module	Version A3
Scope of delivery	
	<p>Initial equipment consisting of:</p> <ul style="list-style-type: none"> 1 Case 1 Sensor tool (specified by the customer) with the associated sensor disks 2 ACB module 1 90° calibration die + programming diagram 1 ACB® software (form with Code No.) 1 User's guide <p>Accessories:</p> <ul style="list-style-type: none"> 1 Locking pin 1 Electronic screwdriver 2.5 1 Spacer 1 Assembly sheet 10 Test sheets 1 Installation device for sensor disks 1 Extension cable short 500 mm

6.7 Required side lengths

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 angle sensor.



Side length L_i

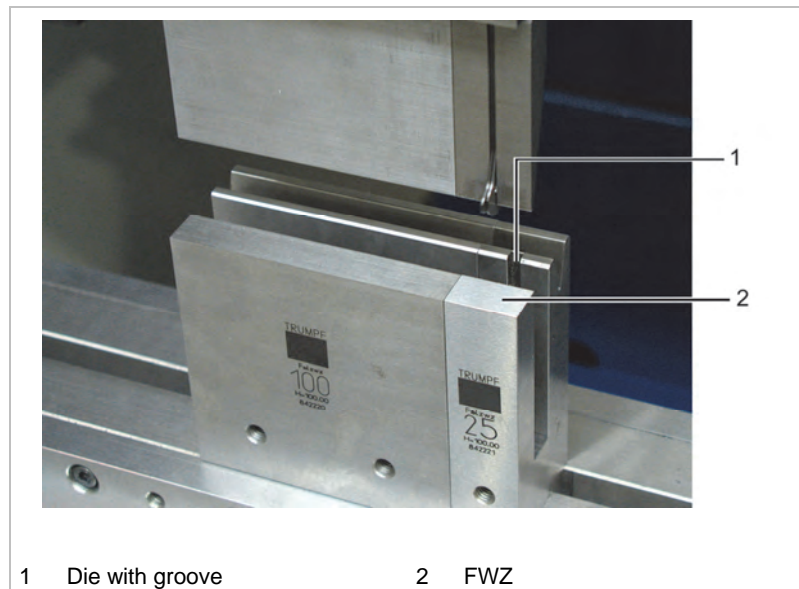
The following values for L_i were established in test sequences. The table does not take spring-back angle into account. This way the values for L_i are independent of materials:

Angle	Sensor disk pair	R5/ R10	R10/ R18	R19/ R28	R23/R 23 L7.5	L5/ L10	L8/ L14	L9/ L15	L12/ L22	L16/ R7	L16/ L28	L17/ L27	L18/ L27	L26/ L36	L31/ L44	L32/ L43	L33/ L43	L47/ L58
35°	L _i [mm]																	
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°					51.1	11.2	14.6	15.5		16.4	29.0	26.7	26.7		44.6		41.5	57.6
70°		15.3			46.9	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		43.3	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	40.1	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	37.2	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	26.7	34.6	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	16.1	24.5	32.2	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	14.8		30.1	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			28.1	7.3	9.6	10.2	15.1	10.8	18.2	17.8	17.8		27.6		27.9	36.4
110°					26.3	7.0	9.2	9.8	14.6	10.4	17.4	17.2	17.2		26.3		26.9	24.9
115°					24.5	6.8	8.9	9.5	14.1	10.1	16.7	16.6	16.6		25.2		26.1	38.5
120°					22.9	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°																		

6.8 Folding with the ACB[®] angle sensor

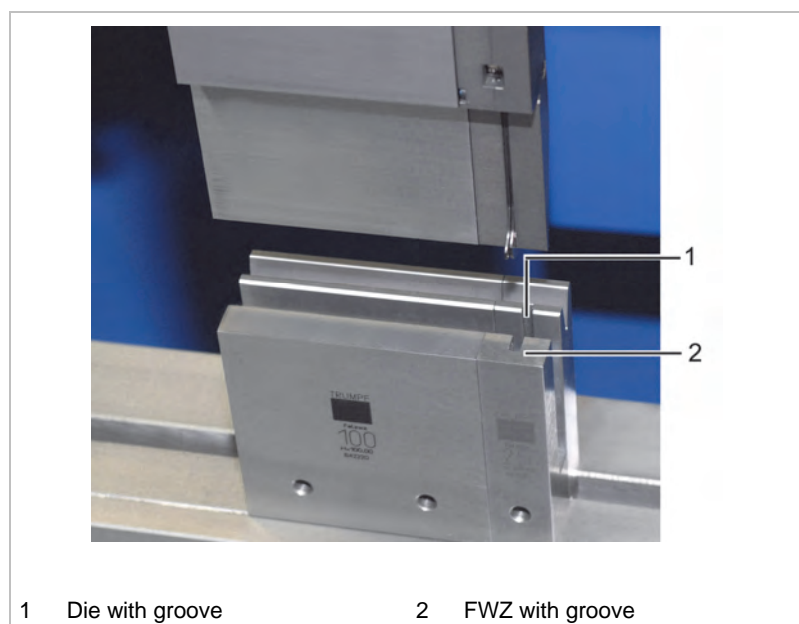
Die with groove:

- Punch OW210/S-ZM.
- Sensor disks: L16/R7.
- Die with groove + FWZ (see Chapter 2.5).



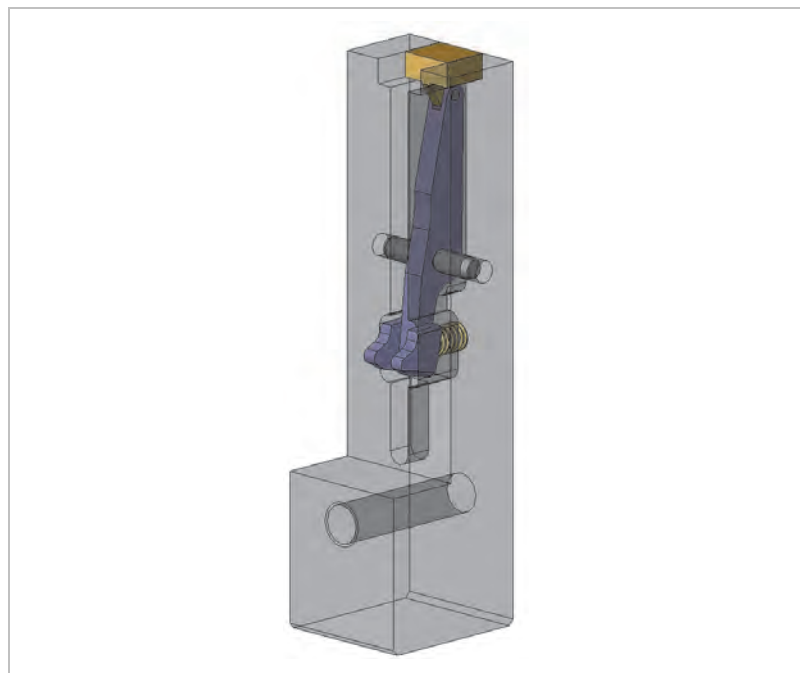
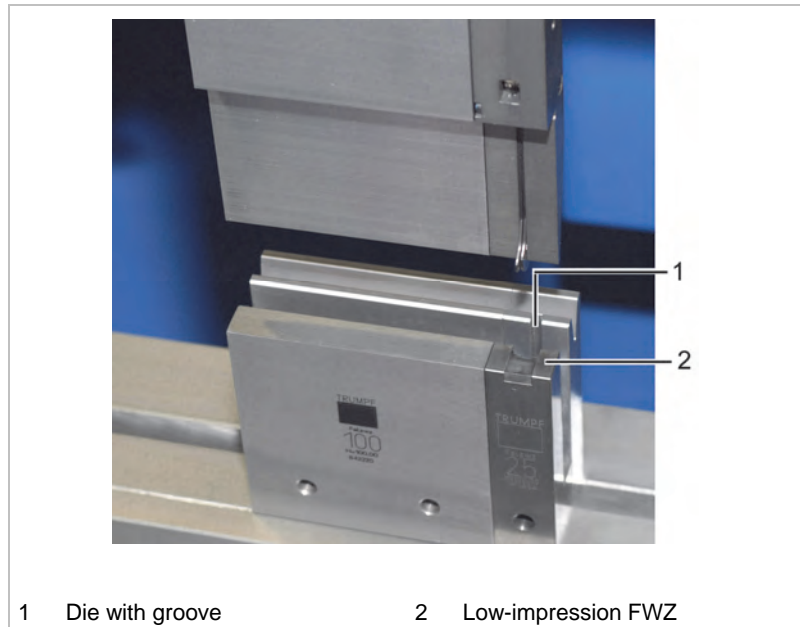
FWZ with groove (for "rapid" folding):

- Punch OW210/S-ZM.
- Sensor disks: L16/R7.
- Die with groove + FWZ with groove (see Chapter 2.5).



Low-impession FWZ with groove (for "rapid" folding):

- Punch OW210/S-ZM.
- Sensor disks: L16/R7.
- Die with groove + low-impession FWZ (see Chapter 2.5).




Sketch of low-impession FWZ

7. Maintenance and servicing of TRUMPF bending tools

General rules for workpiece maintenance

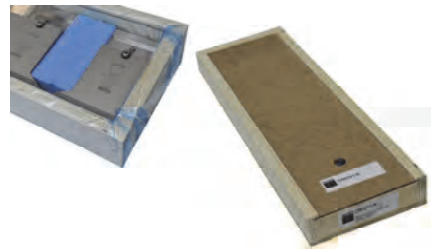
Please comply with the following instructions to ensure a high quality standard for your bending tools and products:

<p>Use gloves in order to avoid rust (do not use solvents for degreasing purposes).</p>	
<p>In order to achieve an optimum edge result, clean the tool adapter thoroughly.</p>	
<p>Carefully clean the tools after use.</p>	
<p>Prevent damage by providing contact-free storage.</p>	

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.

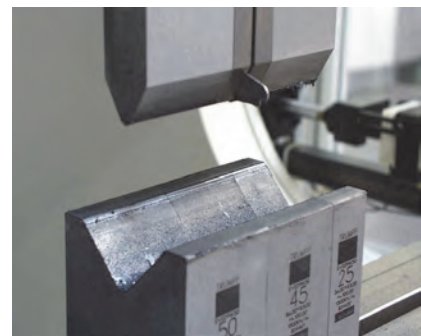
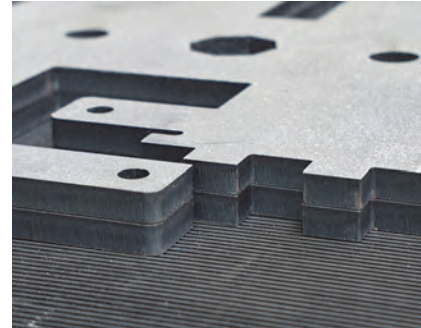


Use TRUMPF security packaging for any return deliveries you might make (please enclose a delivery slip with the merchandise, listing our order number and the precise reason for returning the items). Please coordinate your return delivery by telephone with your sales partner!



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.



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.

<p>Oil spray can (see General Accessories)</p>	
<p>Scotch-Brite™ (see General Accessories)</p>	

8. Customized solutions

Why a customized solution?

The advantage to you


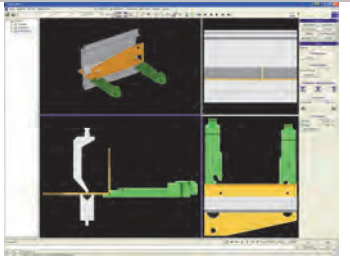
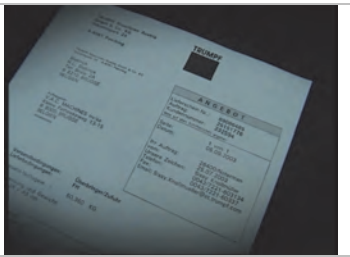
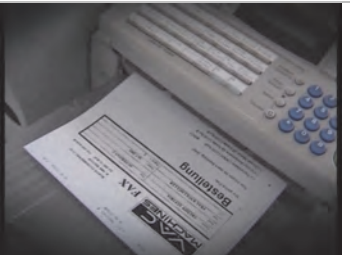
- No loss of time in finding solutions and testing them.
- No loss of production due to missing tools.
- Increased productivity.

What we offer

- Experience and expertise in bending technology.
- Tools and machine from a single provider.

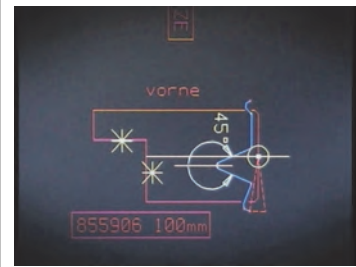
Sequence

From the query to the development stage to the tool.

<p>Query Drawing or sketch</p> <p>-E-mail (dxf,..), fax, regular mail</p>	
<p>Development According to customer requirements</p> <p>-SolidWorks, ME10, TruTops Bend</p>	
<p>Quotation Listing of tools</p> <p>-Length of piece, geometry sketch, delivery time</p>	
<p>Order Start of test phase</p> <p>-Provision of test material</p>	

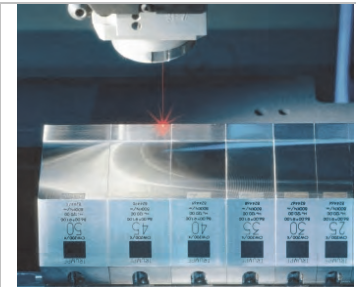
Wire EDM of 100 mm-long blanks

- According to developed tool geometry
- Short response time for contour modification
- High contour precision



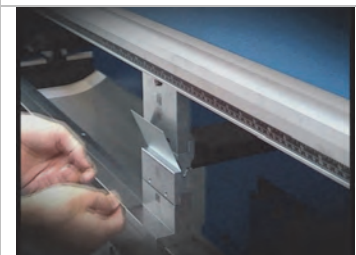
Hardening

Short machining time for laser hardening



Test of test tools with sheet provided by customer

- Program generation
- BendGuard capability
- Determination of the press force, Y position, stop position
- Checking the part geometry
- possible redefinition/improvement of the tool contour



Checking the tolerance and geometry by means of a sample part



OK ➔ Production of final tool solution



Upon customer request, a sample part will be sent to the customer for checking and approval.

Documentation provided for reference purposes

- Customer's questions
- Groundwork and basis for new orders

Examples for special solutions

Note

More detailed information can be found in the new catalog for application examples.



Info-Service Biegen

Alles rund ums Thema Biegen

[mehr \[+\]](#)



E-Shop Biegewerkzeuge

Online-Bestellung von Biegewerkzeugen

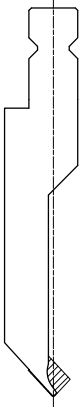

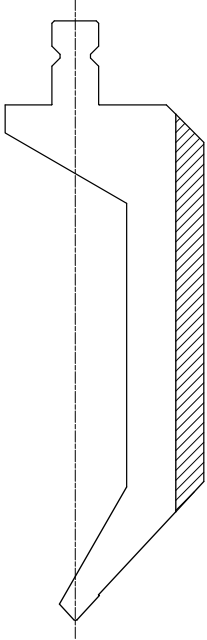
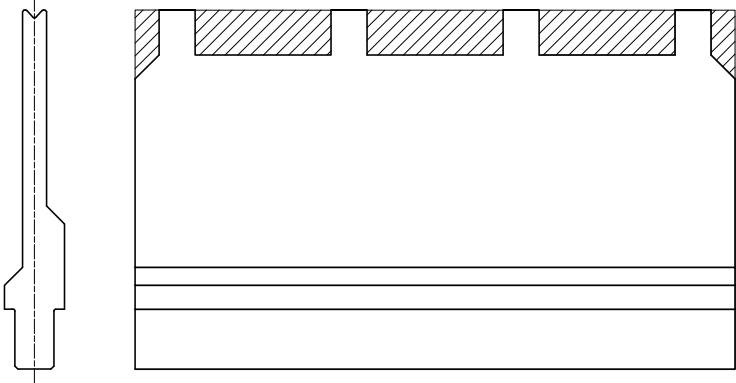
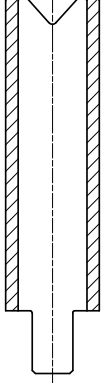
[mehr \[+\]](#)

Application examples:

- Corner reshaping
- Closed profiles
- Louver tools
- Radius tools
- Round rods
- Hinge tools
- Rotating jaw tool
- Countersink shaped tool
- Marking
- U parts
- Reshaping tools
- Various materials
- Moved bending line
- Bracing beading
- Tools for frames

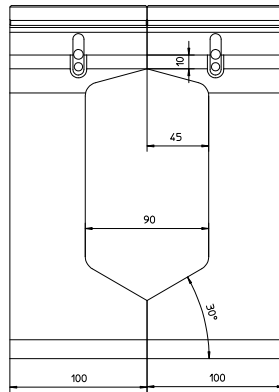
You can see for yourself the options that TRUMPF offers to you.

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.

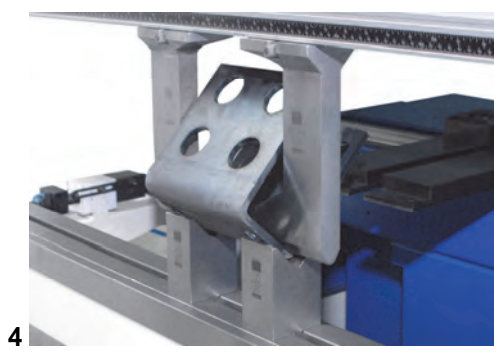
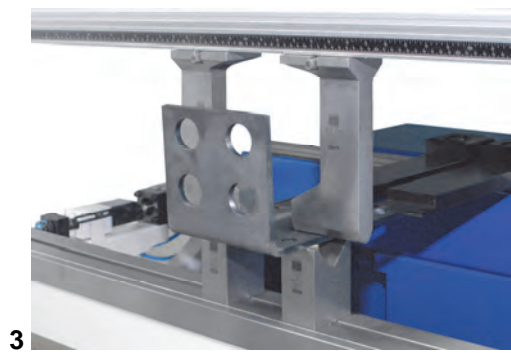
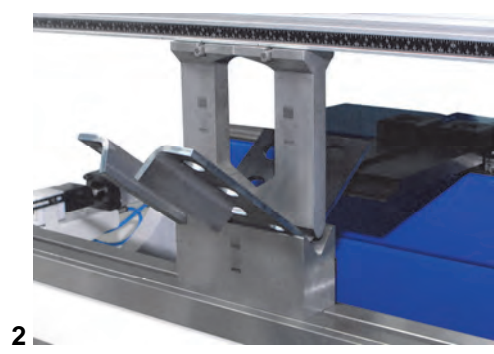
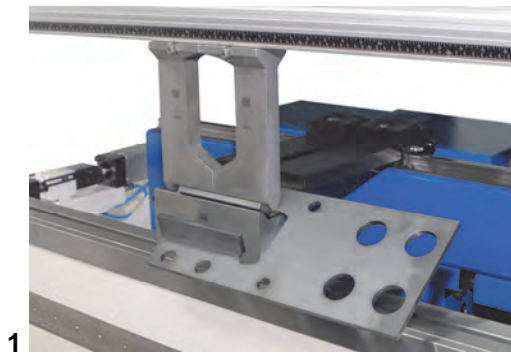
Modified upper tools		
Punching lug milled	Punching radius increased	Punching back milled
		
Modified lower tools		
Die for link plates released	Die milled to a narrow design	
		

Horn window tool

Tool



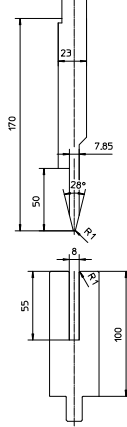
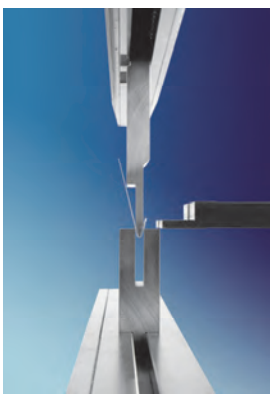
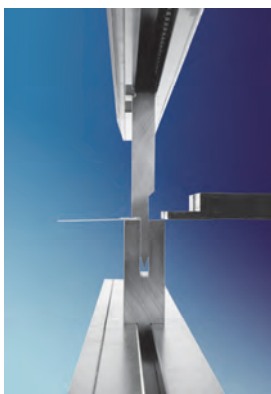


Part swivels in the horn recess



Product
(Frame part for the car industry)

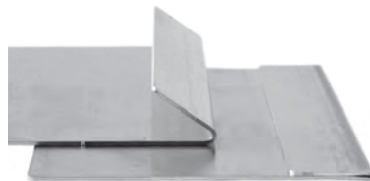


Special folding tool (die with U-shape):

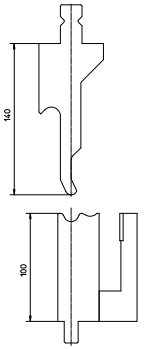




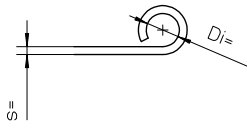
Tool	
	
Pre-bending and folding parts on the solid tool system	
 <p>1</p>	 <p>2</p>
Upper tool	Lower tool (U shape)
	



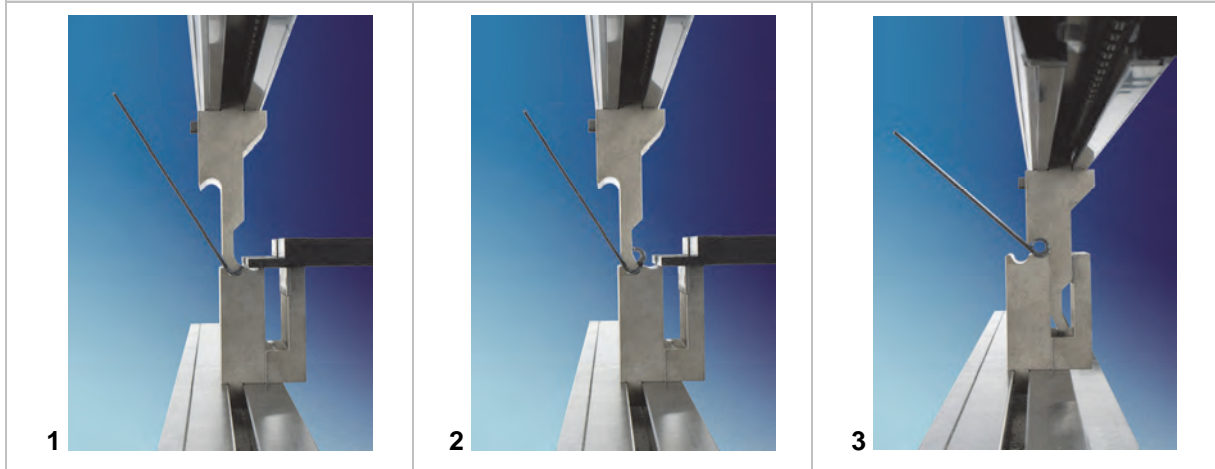
Product



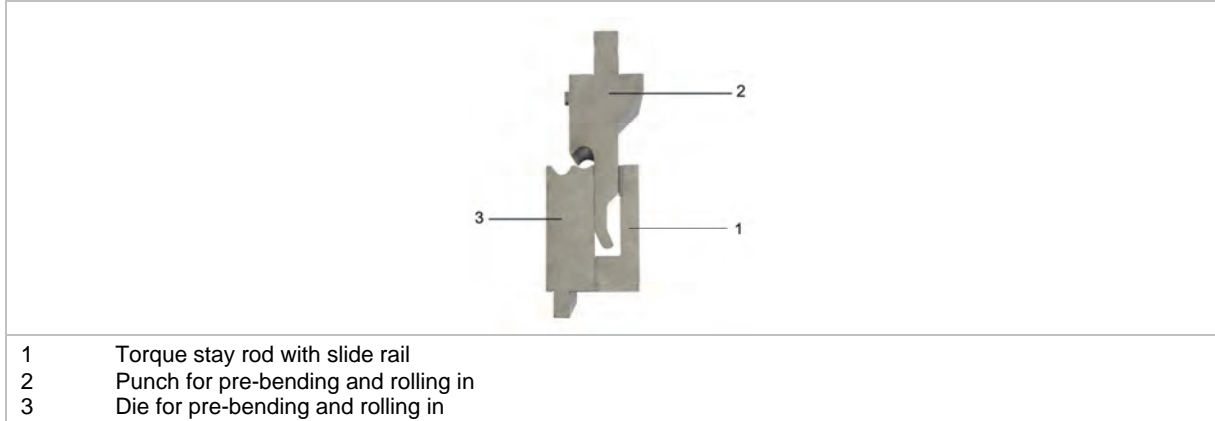
Producing hinge in three steps:

Tool	Drawing
	<ul style="list-style-type: none">  Measure the drawing (incl. length).  Specify the tolerances.  Specify the material type: _____  Specify the sheet thickness: _____ 

Producing a hinge in three steps



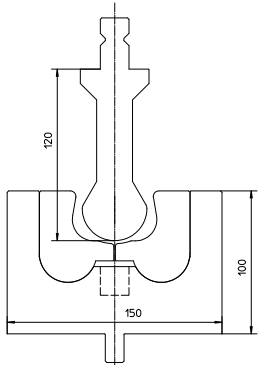




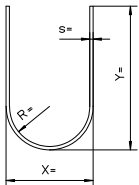
Complete tool



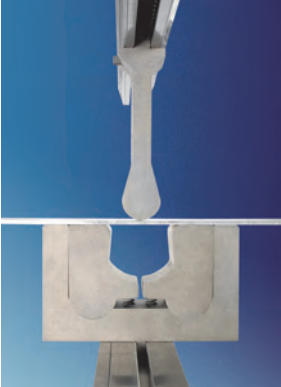

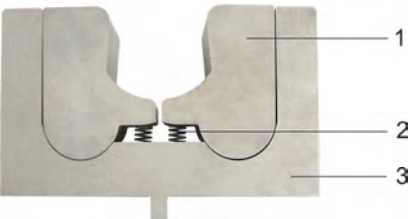

Product



Large rotating jaw:

Tool	Drawing
	<ul style="list-style-type: none">  Measure the drawing (incl. length).  Specify the tolerances.  Specify the material type: _____  Specify the sheet thickness: _____ 

Producing U parts in a single step

	
<p>Lower tool</p>	<p>Upper tool</p>
	
<p>1 Rotating jaw 2 Return spring 3 Rotating jaw body</p>	



Product



9. Address / fax templates

TRUMPF Werkzeugmaschinen GmbH + Co. KG	
Deutschland Germany Allemagne	✉ Johann-Maus-Straße 2 D-71254 Ditzingen
	☎ 0 71 56/3 03-0 ☎ Int. +49 (0) 71 56/3 03-0

TRUMPF S.A.R.L	
Frankreich France France	✉ ZI Paris Nord 2 86, Allée des Erables B.P. 52239 Villepinte F-95956 Roissy-Charles de Gaulle Cedex
	☎ 01 48/17 80-42 ☎ +33 (0) 1 48/17 80-42

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Tschech.Republik Czech Republic Tchéquie	✉ K Hájum 2a CZ-155 00 Praha 5
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TRUMPF Corporation	
Japan Japan Japon	✉ 1-18-2 Hakusan Midori-ku J-Yokohama 226 0006
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TRUMPF Nederland B.V.	
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OY Tammesvirta & Co.	
Finnland Finland Finlande	✉ Elannontie 5 FIN-01510 Vantaa
	☎ 0 20 728 9880 ☎ Int. +358 (0) 728 9880

TRUMPF Maschinen Austria GesmbH & Co. KG	
Österreich Austria Autriche	✉ Industriepark 24 A-4061 Pasching
	☎ 072 21/6 03-0 ☎ Int. +43 (0) 7221/6 03-0

TRUMPF Maschinen AG	
Schweiz Switzerland Suisse	✉ Ruessenstr. 8 CH-6341 Baar
	☎ 0 41/76 96-6200 ☎ Int. +41 (0) 41/76 96-6200

TRUMPF Maquinaria S.A.	
Spanien Spain Espagne	✉ C/Valportillo Primera, n° 1 E-28108 Alcobendas (Madrid)
	☎ 0 91/6 57 36 69 ☎ Int. +34 (0) 91/6 57 36 69

TRUMPF Slovakia, s.r.o	
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	☎ 0 55/ 728 09 17 ☎ Int. +421 (0) 55 728 09 17

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	☎ 0 22/575 3900 ☎ Int. +48 (0) 22 5753900

TRUMPF Ltd.	
Großbritannien Great Britain Grande-Bretagne	✉ President Way Airport Executive Park GB-Luton, Beds., LU2 9NL
	☎ 0 844 482 0192 ☎ +44 (0) 844 482 0192

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VAC Machines nv/sa	
Belgien Belgium Belgique	✉ Kleine Pathoekeweg 13-15 B-8000 Brugge
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AVN Pladeteknik A-S	
Dänemark Denmark Danemark	✉ Dalager 1 DK-2605 Brøndby
	☎ 0 432 45 537 ☎ Int. +45 (0) 432 45 537





FAX REQUEST

BENDING TOOLS

Special

Examples for **TRUMPF** special bending tools can be found in the catalogue for application examples (or at 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)