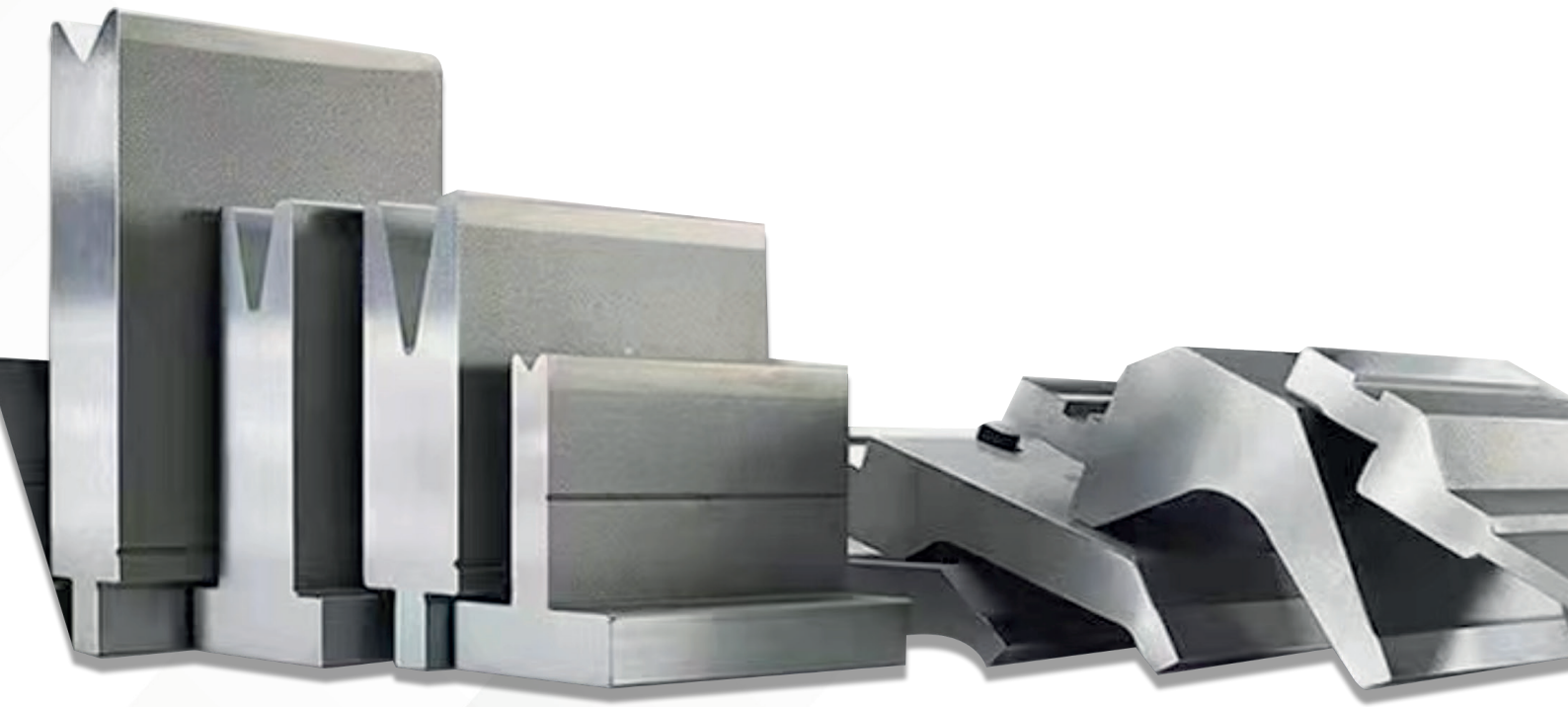


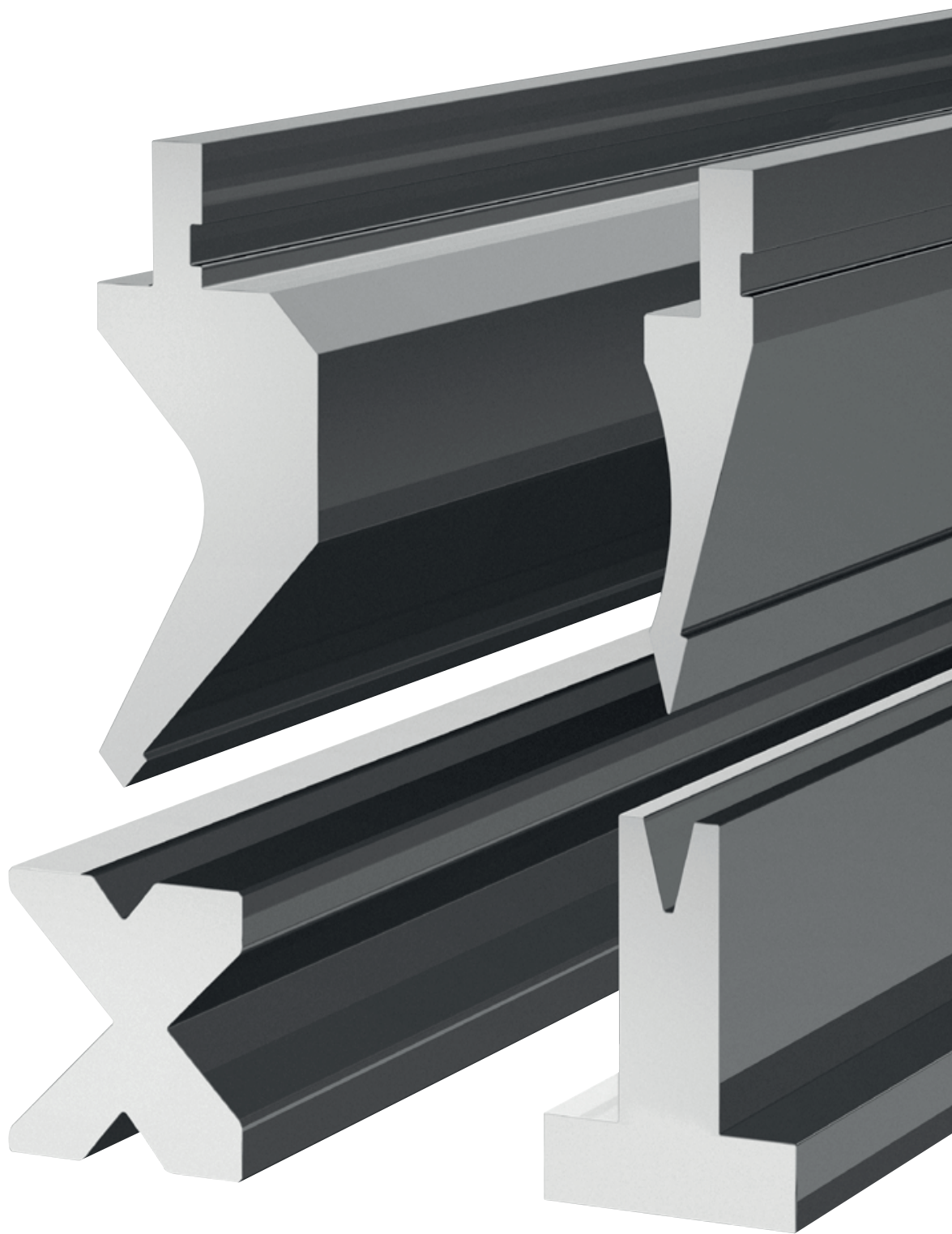
PRESS BRAKE TOOLS

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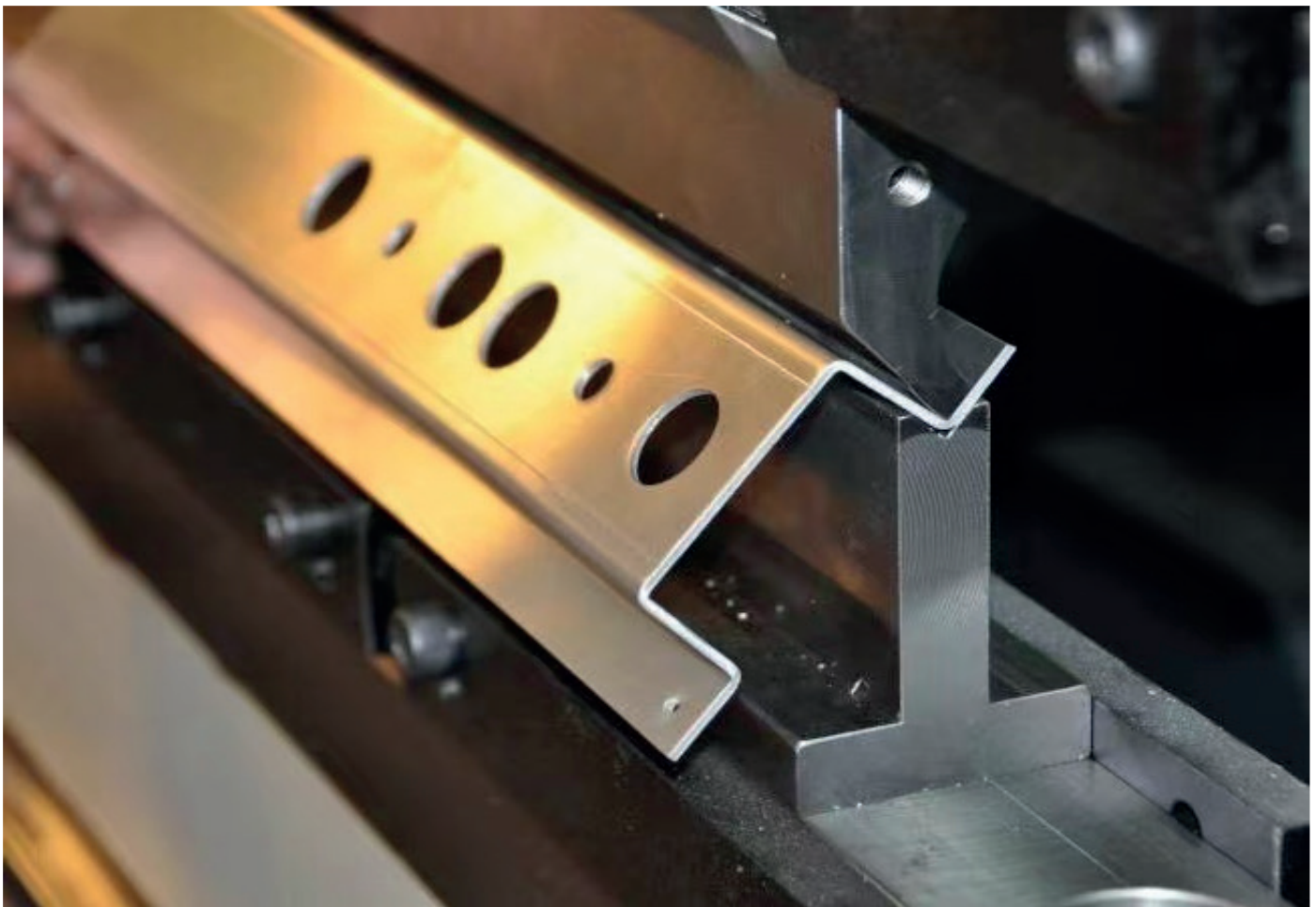
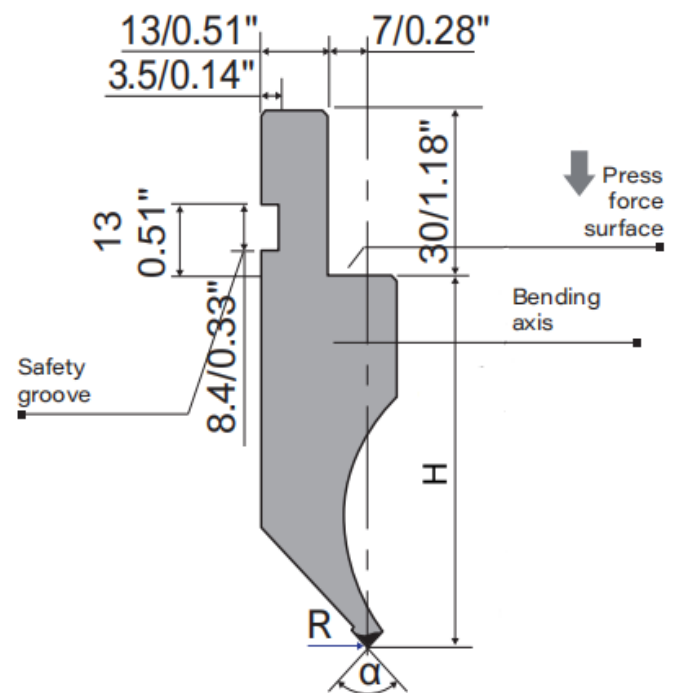


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Quality and precision

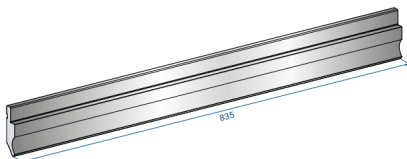
- Optimum materials
 - 42 CrMo4, tempered to 1100 - 1200 N/mm²
 - C45, tempered to 800 - 850 N/mm²
 - C45, 650 - 800 N/mm²
- Bending radius/intake radii hardened up to 54 - 60 HRC
- Precision ground
- Guaranteed exchangeability and parallelism
- Tool marking with all technical information



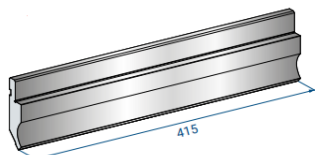
Tool lengths

PUNCHES/TOP TOOLS

Length **835 mm**

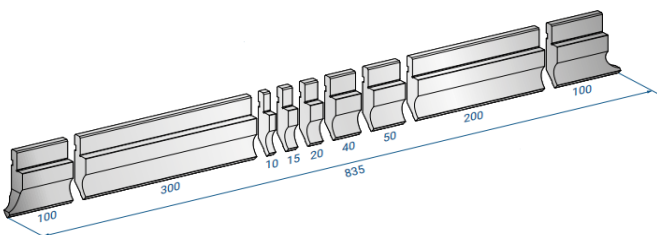


Length **415 mm**



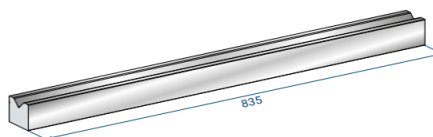
Length **835 mm sectionalized**

- Sectionalized punches/top tools are delivered as a complete set
- 9 Segments, with horn extension left and right

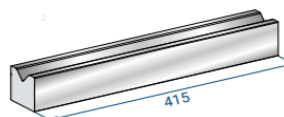


DIES

Length **835 mm**

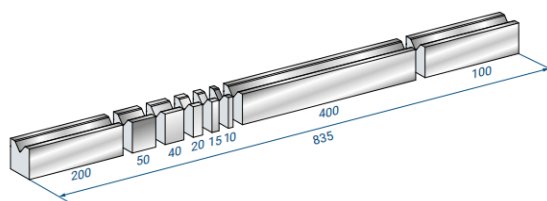


Length **415 mm**



Length **835 mm sectionalized**

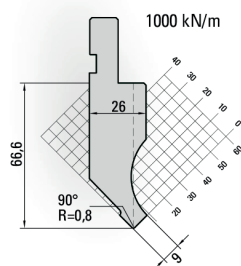
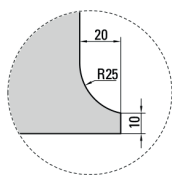
- Sectionalized dies are delivered as a complete set
- 8 Segments



90° Punches/top tools

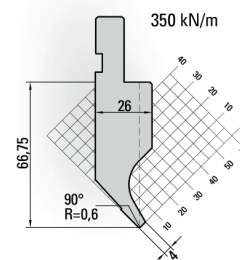
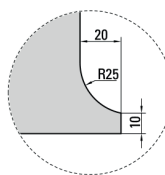
11.100 Material

835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



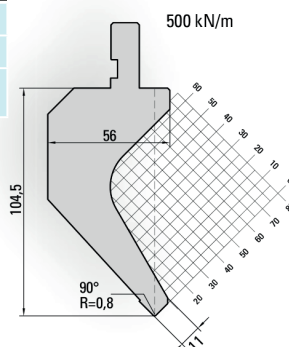
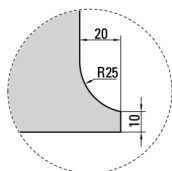
10.175 Material

835 mm	42CrMo4	10,5 kg
415 mm	42CrMo4	5,2 kg
835 mm sectionalized	42CrMo4	10,5 kg



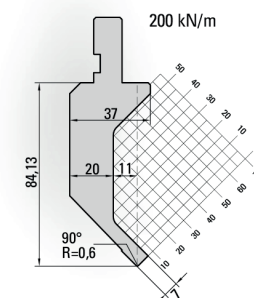
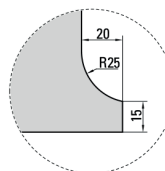
11.107 Material

835 mm	42CrMo4	23,0 kg
415 mm	42CrMo4	11,5 kg
835 mm sectionalized	42CrMo4	23,0 kg



10.150 Material

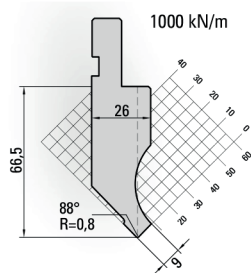
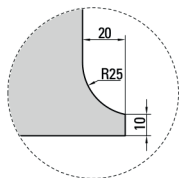
835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



88° Punches/top tools

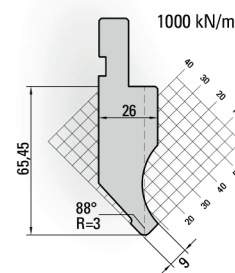
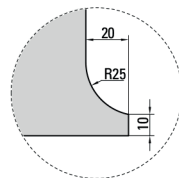
11.145 Material

835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



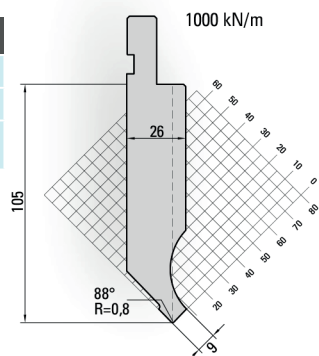
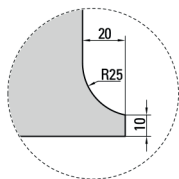
11.101 Material

835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



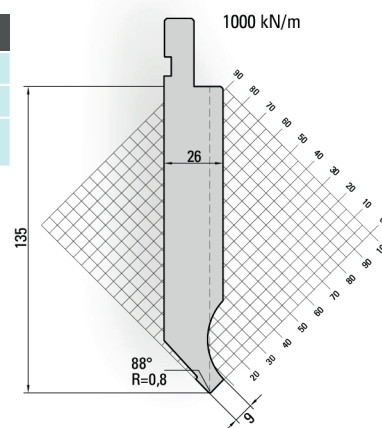
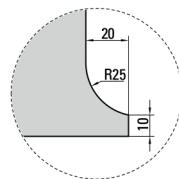
11.228 Material

835 mm	42CrMo4	17,5 kg
415 mm	42CrMo4	8,7 kg
835 mm sectionalized	42CrMo4	17,5 kg



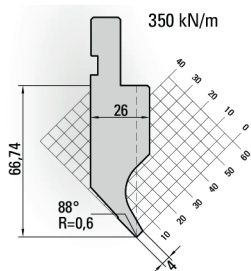
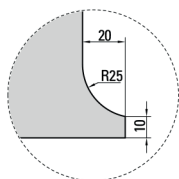
11.870 Material

835 mm	42CrMo4	22,5 kg
415 mm	42CrMo4	11,2 kg
835 mm sectionalized	42CrMo4	22,5 kg



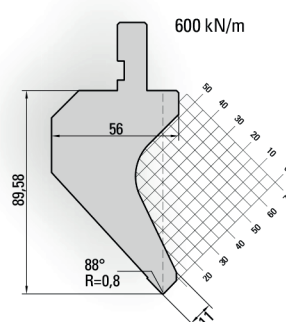
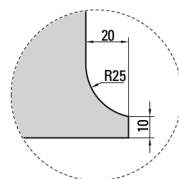
10.176 Material

835 mm	42CrMo4	10,5 kg
415 mm	42CrMo4	5,2 kg
835 mm sectionalized	42CrMo4	10,5 kg



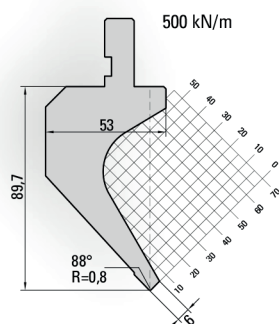
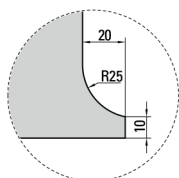
11.146 Material

835 mm	42CrMo4	21,0 kg
415 mm	42CrMo4	10,5 kg
835 mm sectionalized	42CrMo4	21,0 kg



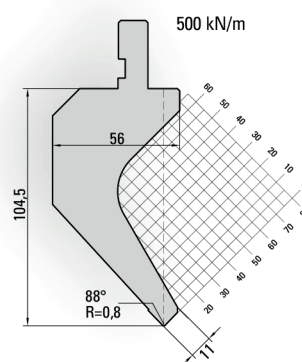
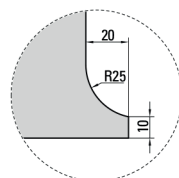
10.502 Material

835 mm	42CrMo4	17,0 kg
415 mm	42CrMo4	8,5 kg
835 mm sectionalized	42CrMo4	17,0 kg



11.147 Material

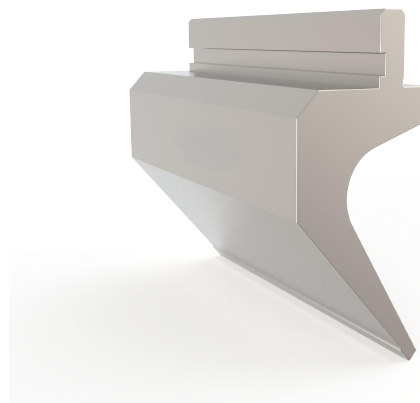
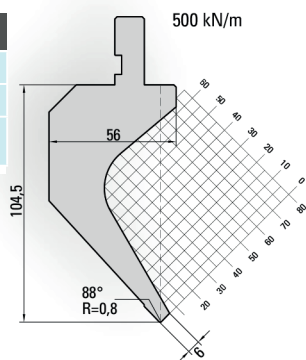
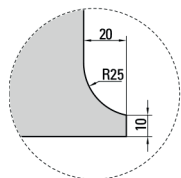
835 mm	42CrMo4	23,0 kg
415 mm	42CrMo4	11,5 kg
835 mm sectionalized	42CrMo4	23,0 kg



88° Punches/top tools

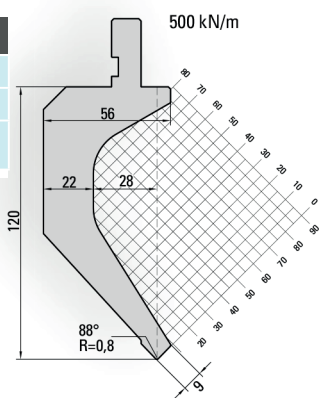
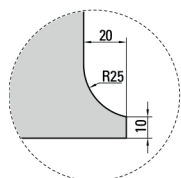
10.504 Material

835 mm	42CrMo4	21,5 kg
415 mm	42CrMo4	10,7 kg
835 mm sectionalized	42CrMo4	21,5 kg



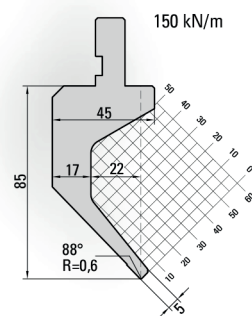
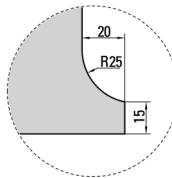
10.505 Material

835 mm	42CrMo4	22,0 kg
415 mm	42CrMo4	11,0 kg
835 mm sectionalized	42CrMo4	22,0 kg



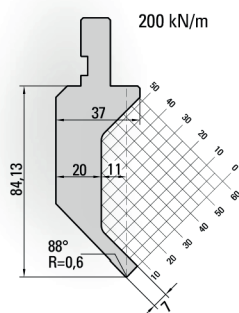
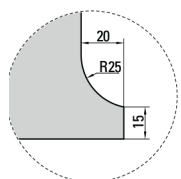
11.830 Material

835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



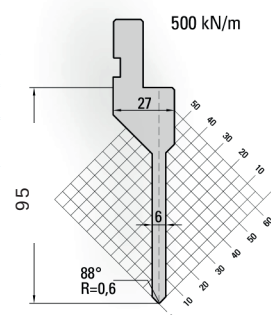
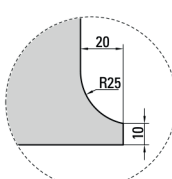
10.512 Material

835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



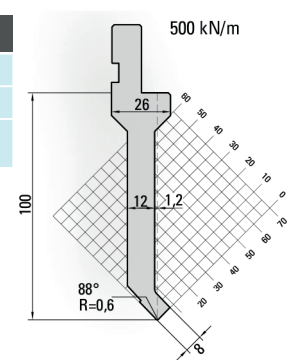
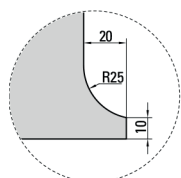
11.260 Material

835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg
835 mm sectionalized	42CrMo4	9,0 kg



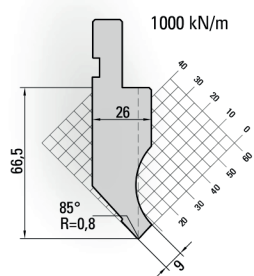
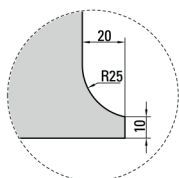
10.262 Material

835 mm	42CrMo4	11,5 kg
415 mm	42CrMo4	5,7 kg
835 mm sectionalized	42CrMo4	11,5 kg

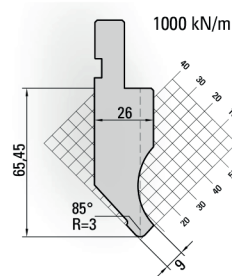
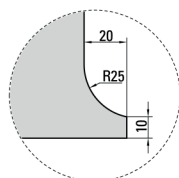


85° Punches/top tools

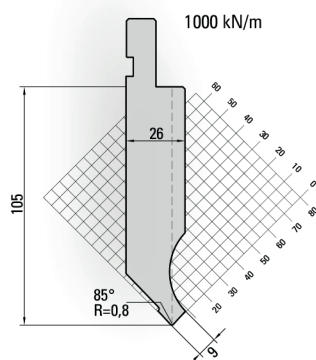
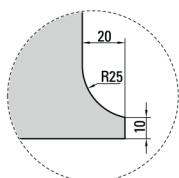
11.200	Material	
835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



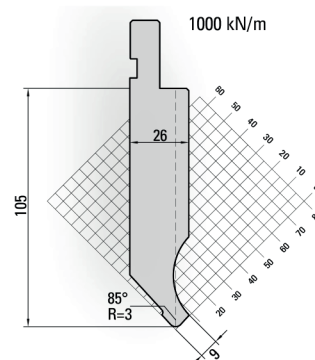
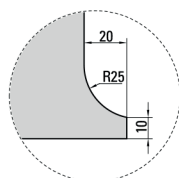
11.201	Material	
835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



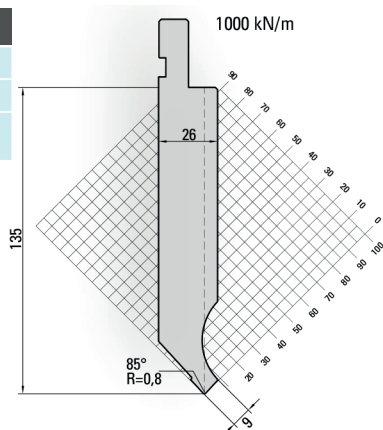
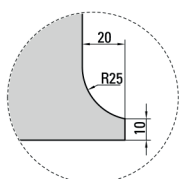
11.230	Material	
835 mm	42CrMo4	17,5 kg
415 mm	42CrMo4	8,7 kg
835 mm sectionalized	42CrMo4	17,5 kg



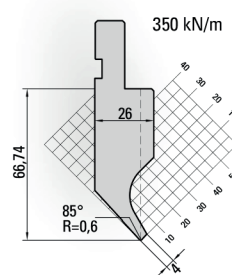
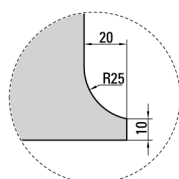
11.231	Material	
835 mm	42CrMo4	17,5 kg
415 mm	42CrMo4	8,7 kg
835 mm sectionalized	42CrMo4	17,5 kg



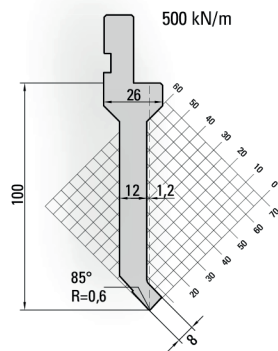
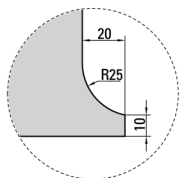
11.232	Material	
835 mm	42CrMo4	22,5 kg
415 mm	42CrMo4	11,2 kg
835 mm sectionalized	42CrMo4	22,5 kg



10.170	Material	
835 mm	42CrMo4	10,5 kg
415 mm	42CrMo4	5,2 kg
835 mm sectionalized	42CrMo4	10,5 kg

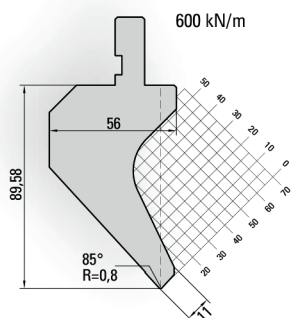
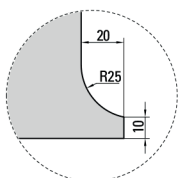


11.861	Material	
835 mm	42CrMo4	11,5 kg
415 mm	42CrMo4	5,7 kg
835 mm sectionalized	42CrMo4	11,5 kg

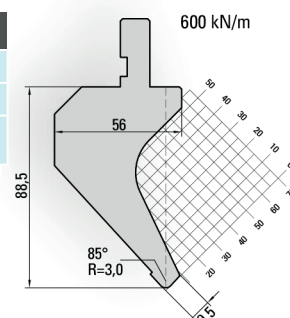
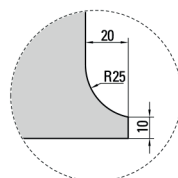


85° Punches/top tools

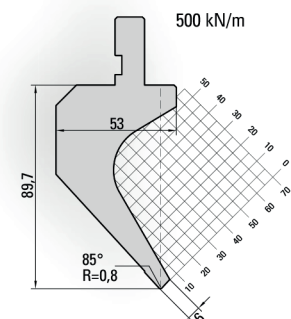
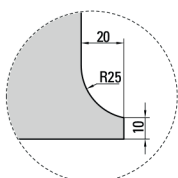
11.660	Material	
835 mm	42CrMo4	21,0 kg
415 mm	42CrMo4	10,5 kg
835 mm sectionalized	42CrMo4	21,0 kg



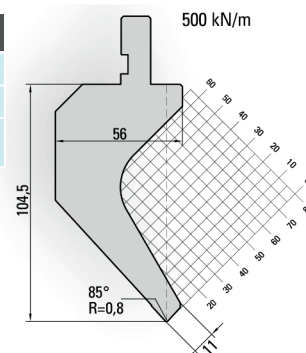
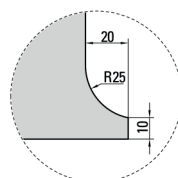
11.863	Material	
835 mm	42CrMo4	21,0 kg
415 mm	42CrMo4	10,5 kg
835 mm sectionalized	42CrMo4	21,0 kg



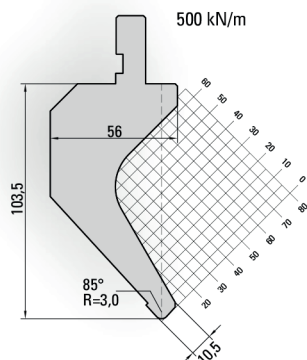
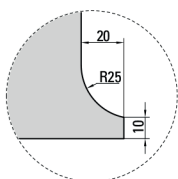
11.865	Material	
835 mm	42CrMo4	17,0 kg
415 mm	42CrMo4	8,5 kg
835 mm sectionalized	42CrMo4	17,0 kg



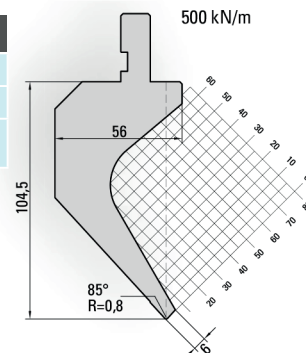
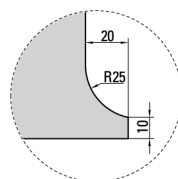
11.151	Material	
835 mm	42CrMo4	23,0 kg
415 mm	42CrMo4	11,5 kg
835 mm sectionalized	42CrMo4	23,0 kg



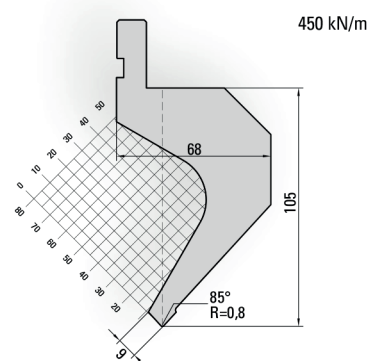
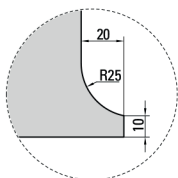
11.866	Material	
835 mm	42CrMo4	23,0 kg
415 mm	42CrMo4	11,5 kg
835 mm sectionalized	42CrMo4	23,0 kg



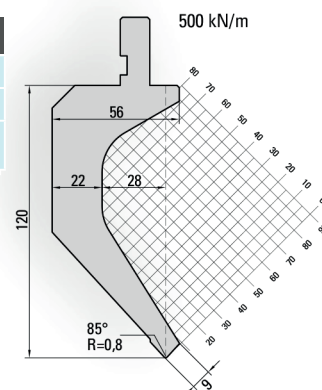
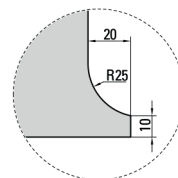
11.650	Material	
835 mm	42CrMo4	21,5 kg
415 mm	42CrMo4	10,7 kg
835 mm sectionalized	42CrMo4	21,5 kg



11.869	Material	
835 mm	42CrMo4	25,0 kg
415 mm	42CrMo4	12,5 kg
835 mm sectionalized	42CrMo4	25,0 kg



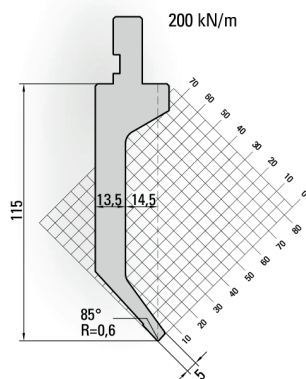
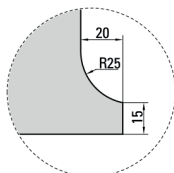
11.835	Material	
835 mm	42CrMo4	22,0 kg
415 mm	42CrMo4	11,0 kg
835 mm sectionalized	42CrMo4	22,0 kg



85° Punches/top tools

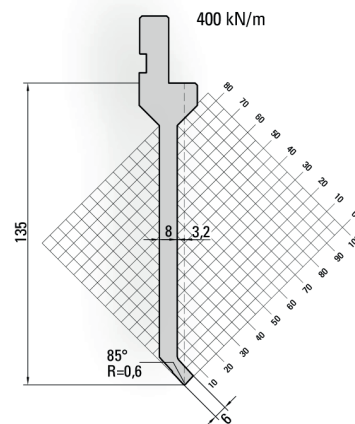
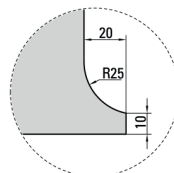
11.820 Material

835 mm	42CrMo4	14,0 kg
415 mm	42CrMo4	7,0 kg
835 mm sectionalized	42CrMo4	14,0 kg



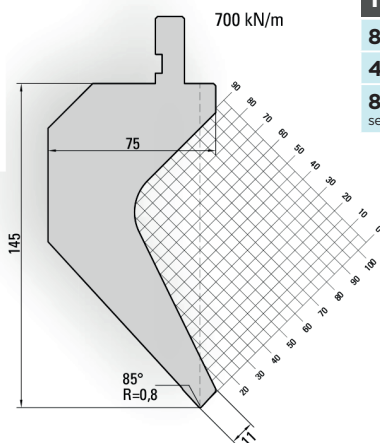
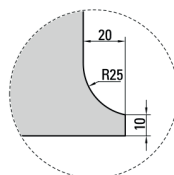
11.855 Material

835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



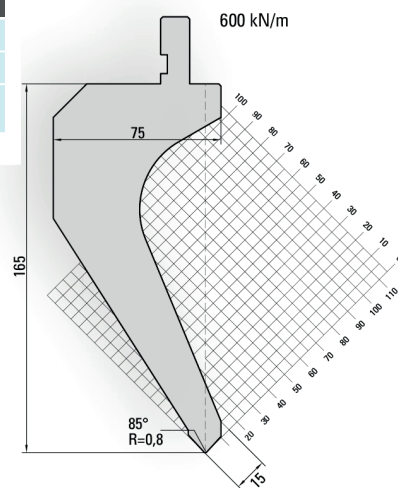
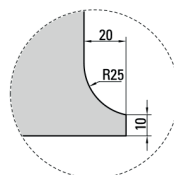
11.848 Material

835 mm	42CrMo4	39,0 kg
415 mm	42CrMo4	19,5 kg
835 mm sectionalized	42CrMo4	39,0 kg



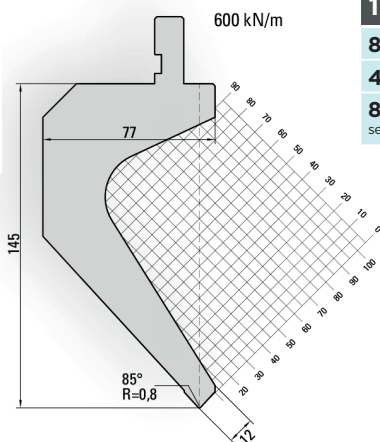
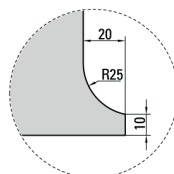
11.849 Material

835 mm	42CrMo4	41,0 kg
415 mm	42CrMo4	20,5 kg
835 mm sectionalized	42CrMo4	41,0 kg



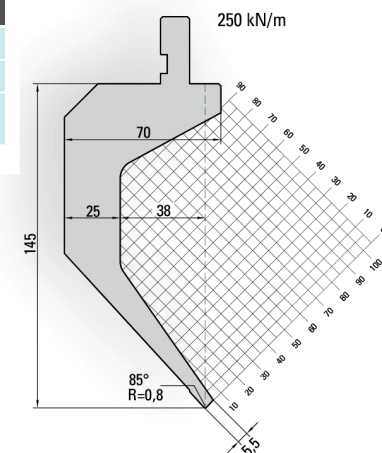
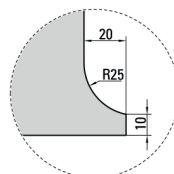
11.670 Material

835 mm	42CrMo4	34,5 kg
415 mm	42CrMo4	17,3 kg
835 mm sectionalized	42CrMo4	34,5 kg



11.680 Material

835 mm	42CrMo4	27,6 kg
415 mm	42CrMo4	13,7 kg
835 mm sectionalized	42CrMo4	27,6 kg

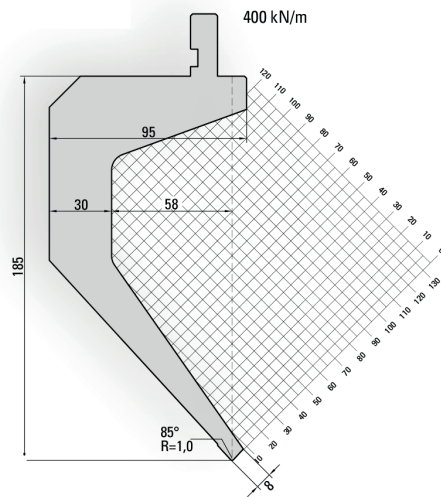
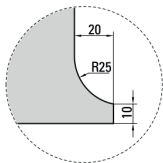


85° Punches/top tools

11.850 Material

505 mm	42CrMo4	26,0 kg
500 mm sectionalized	42CrMo4	25,7 kg

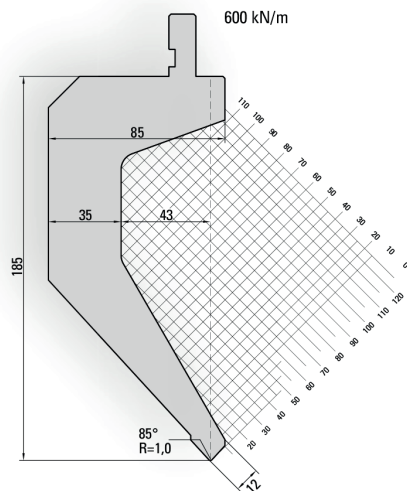
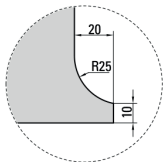
Length 500 mm sectionalized:
9 segments
(100, 20, 25, 30, 35, 40, 50,
100, 100)



11.840 Material

505 mm	42CrMo4	29,5 kg
500 mm sectionalized	42CrMo4	29,2 kg

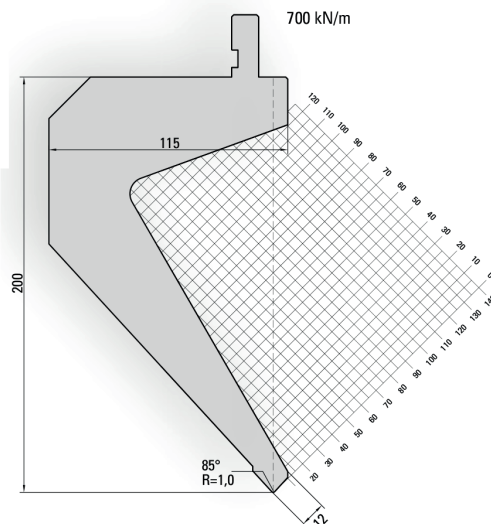
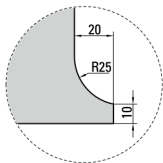
Length 500 mm sectionalized:
9 segments
(100, 20, 25, 30, 35, 40, 50,
100, 100)



11.800 Material

505 mm	42CrMo4	40,0 kg
500 mm sectionalized	42CrMo4	39,6 kg

Length 500 mm sectionalized:
9 segments
(100, 20, 25, 30, 35, 40, 50,
100, 100)



90°/88°/85° Punch/top tool end pieces with movable horn extensions

90°

Model	Suitable for punch/top tool	α	R (mm)	H	kg	Material
40.112	11.100	90°	0,8	66,60	3,5	42CrMo4
40.120	10.175	90°	0,6	66,75	3,5	42CrMo4

Delivery time on request

88°

Model	Suitable for punch/top tool	α	R (mm)	H	kg	Material
40.113	11.145	88°	0,8	66,50	3,5	42CrMo4
40.115	11.101	88°	3,0	65,45	3,5	42CrMo4
40.121	10.176	88°	0,6	66,74	3,5	42CrMo4

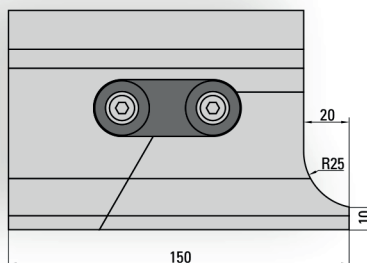
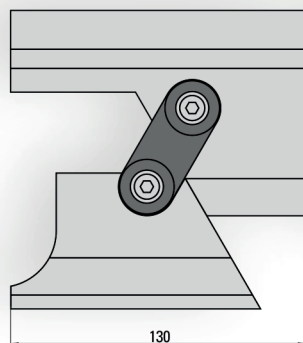
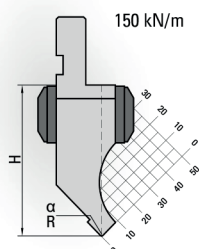
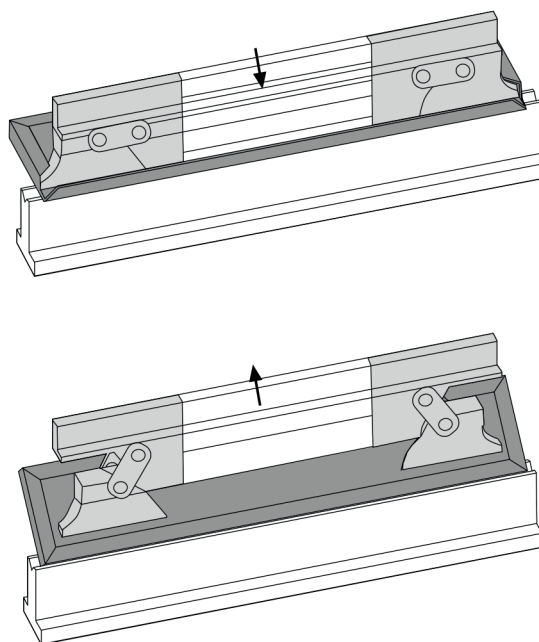
Delivery time on request

85°

Model	Suitable for punch/top tool	α	R (mm)	H	kg	Material
40.114	11.200	85°	0,8	66,50	3,5	42CrMo4
40.116	11.201	85°	3,0	65,45	3,5	42CrMo4
40.122	10.170	85°	0,6	66,74	3,5	42CrMo4

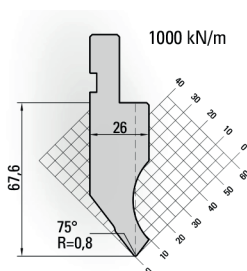
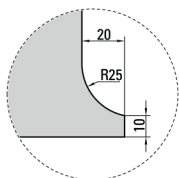
Delivery time on request

EXAMPLE OF USE



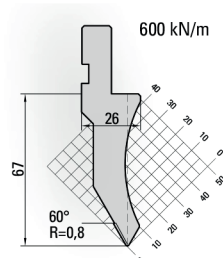
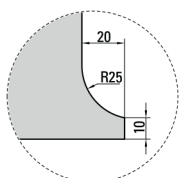
75° Punch/top tool

11.275	Material	
835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg

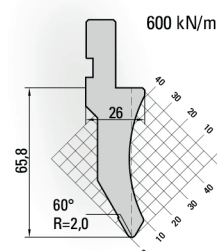
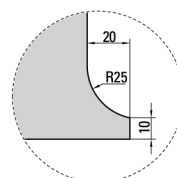


60° Punches/top tools

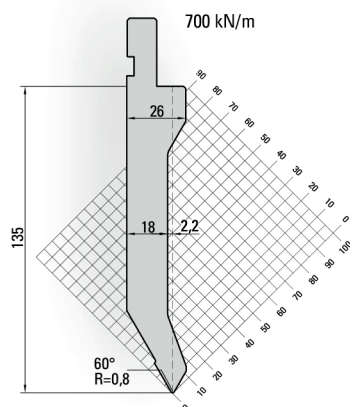
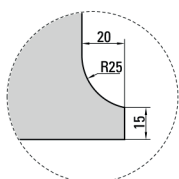
10.142	Material	
835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg
835 mm sectionalized	42CrMo4	9,0 kg



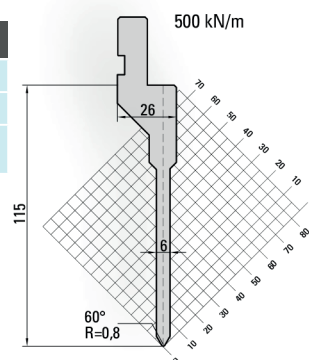
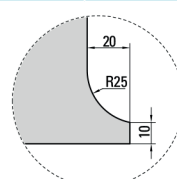
10.143	Material	
835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg
835 mm sectionalized	42CrMo4	9,0 kg



11.750	Material	
835 mm	42CrMo4	18,0 kg
415 mm	42CrMo4	9,0 kg
835 mm sectionalized	42CrMo4	18,0 kg

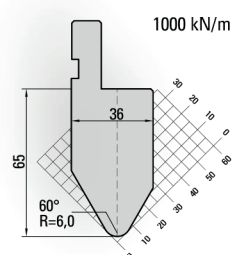
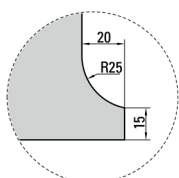


10.520	Material	
835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg



10.136	Material	
835 mm	42CrMo4	14,0 kg
415 mm	42CrMo4	7,0 kg
835 mm sectionalized	42CrMo4	14,0 kg

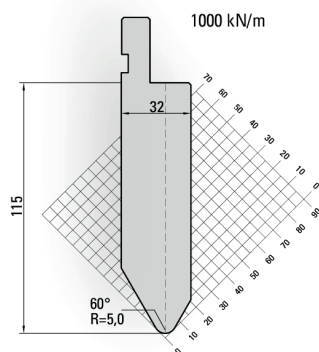
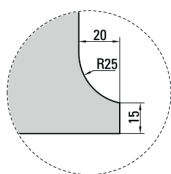
1500 kN/m if the tool clamping has the corresponding load



60° Punches/top tools

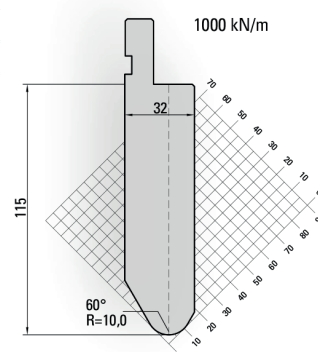
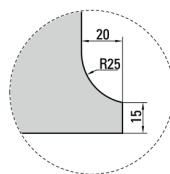
11.710	Material	
835 mm	42CrMo4	24,5 kg
415 mm	42CrMo4	12,2 kg
835 mm sectionalized	42CrMo4	24,5 kg

1200 kN/m if the tool clamping has the corresponding load

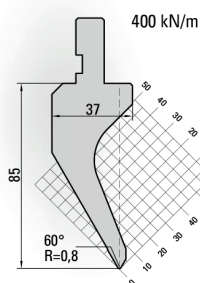
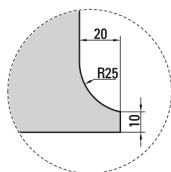


11.720	Material	
835 mm	42CrMo4	25,0 kg
415 mm	42CrMo4	12,5 kg
835 mm sectionalized	42CrMo4	25,0 kg

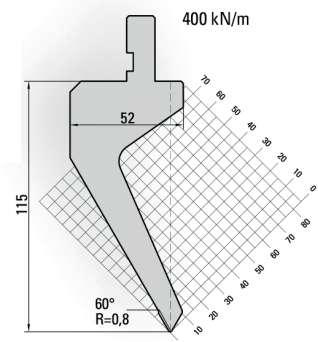
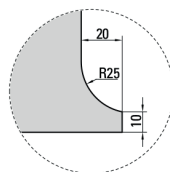
1200 kN/m if the tool clamping has the corresponding load



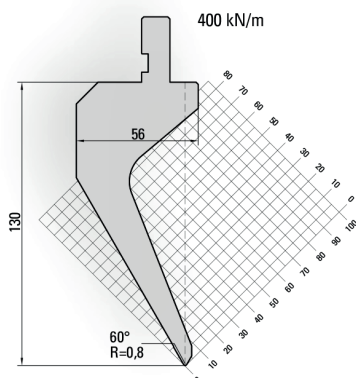
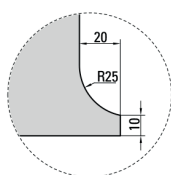
10.516	Material	
835 mm	42CrMo4	12,0 kg
415 mm	42CrMo4	6,0 kg
835 mm sectionalized	42CrMo4	12,0 kg



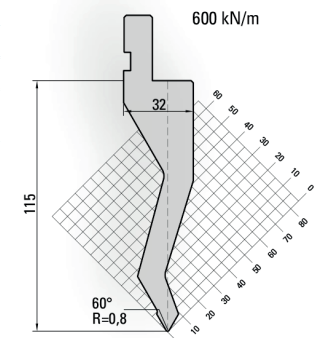
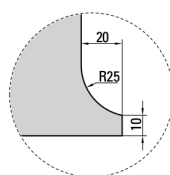
10.500	Material	
835 mm	42CrMo4	19,5 kg
415 mm	42CrMo4	9,7 kg
835 mm sectionalized	42CrMo4	19,5 kg



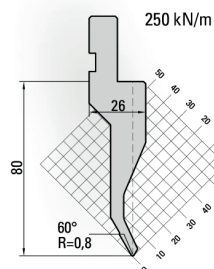
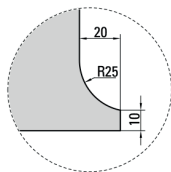
10.506	Material	
835 mm	42CrMo4	22,5 kg
415 mm	42CrMo4	11,2 kg
835 mm sectionalized	42CrMo4	22,5 kg



10.510	Material	
835 mm	42CrMo4	15,0 kg
415 mm	42CrMo4	7,5 kg
835 mm sectionalized	42CrMo4	15,0 kg

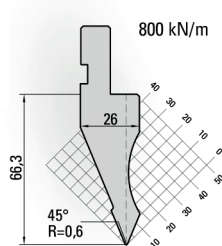
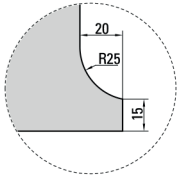


10.517	Material	
835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg
835 mm sectionalized	42CrMo4	9,0 kg

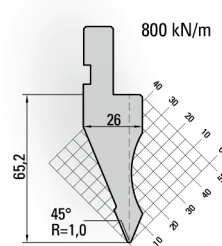
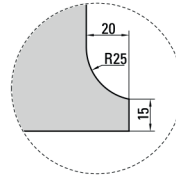


45° Punches/top tools

11.134	Material	
835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg

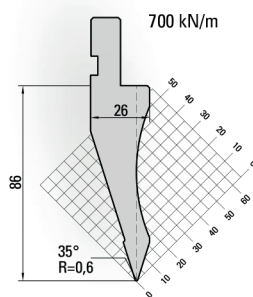
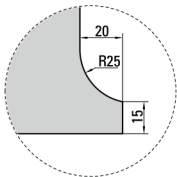


11.102	Material	
835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg

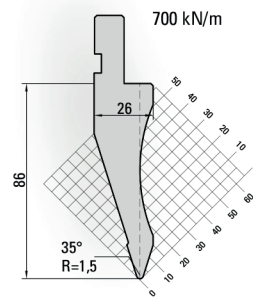
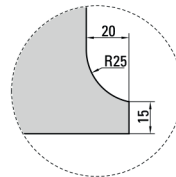


35° Punches/top tools

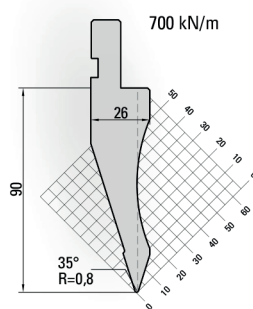
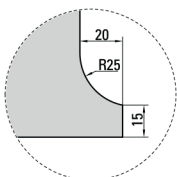
11.103	Material	
835 mm	42CrMo4	11,5 kg
415 mm	42CrMo4	5,7 kg
835 mm sectionalized	42CrMo4	11,5 kg



11.104	Material	
835 mm	42CrMo4	11,5 kg
415 mm	42CrMo4	5,7 kg
835 mm sectionalized	42CrMo4	11,5 kg

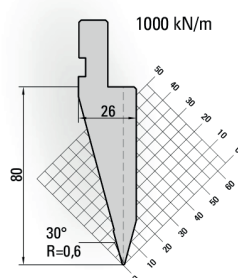
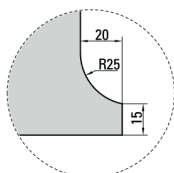


11.600	Material	
835 mm	42CrMo4	11,5 kg
415 mm	42CrMo4	5,7 kg
835 mm sectionalized	42CrMo4	11,5 kg

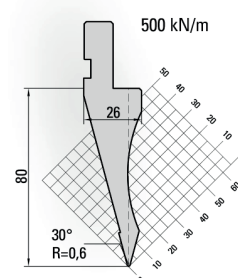
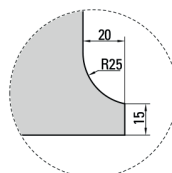


30° Punches/top tools

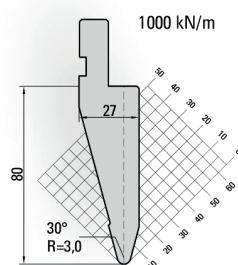
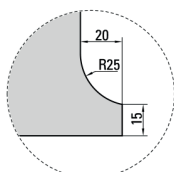
11.158	Material	
835 mm	42CrMo4	10,5 kg
415 mm	42CrMo4	5,2 kg
835 mm sectionalized	42CrMo4	10,5 kg



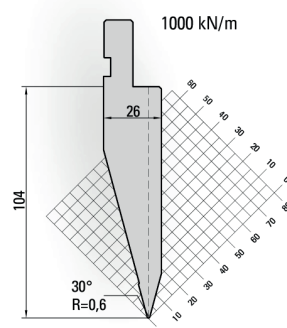
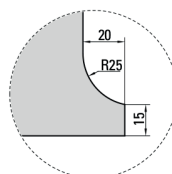
10.514	Material	
835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg
835 mm sectionalized	42CrMo4	9,0 kg



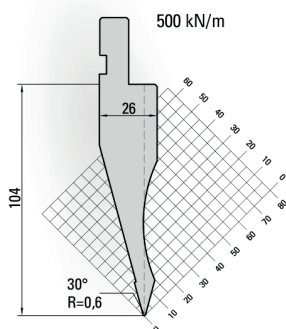
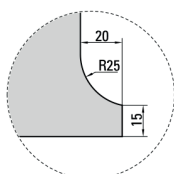
10.511	Material	
835 mm	42CrMo4	12,5 kg
415 mm	42CrMo4	6,2 kg
835 mm sectionalized	42CrMo4	12,5 kg



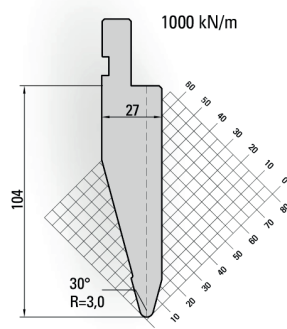
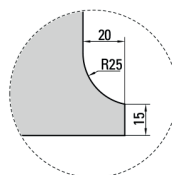
11.258	Material	
835 mm	42CrMo4	15,5 kg
415 mm	42CrMo4	7,7 kg
835 mm sectionalized	42CrMo4	15,5 kg



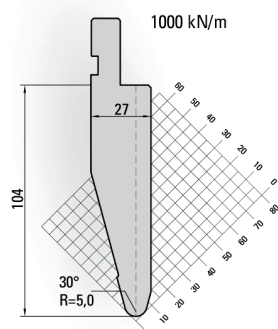
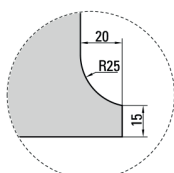
11.514	Material	
835 mm	42CrMo4	14,0 kg
415 mm	42CrMo4	7,0 kg
835 mm sectionalized	42CrMo4	14,0 kg



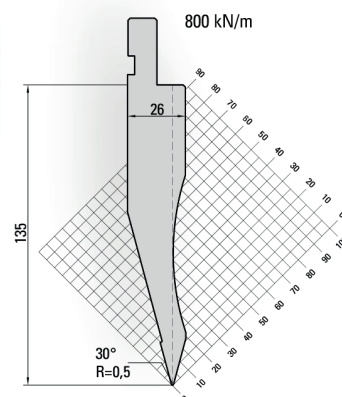
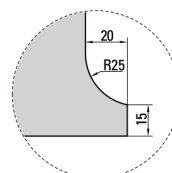
11.528	Material	
835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,5 kg



11.530	Material	
835 mm	42CrMo4	17,0 kg
415 mm	42CrMo4	8,5 kg
835 mm sectionalized	42CrMo4	17,0 kg

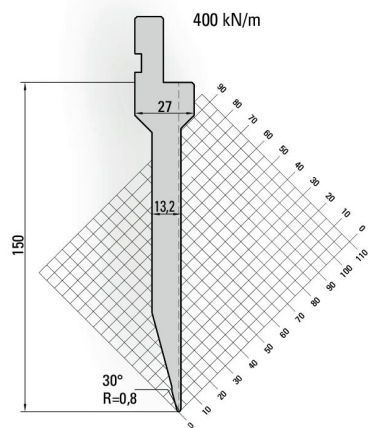
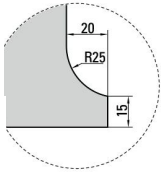


11.780	Material	
835 mm	42CrMo4	18,5 kg
415 mm	42CrMo4	9,2 kg
835 mm sectionalized	42CrMo4	18,5 kg

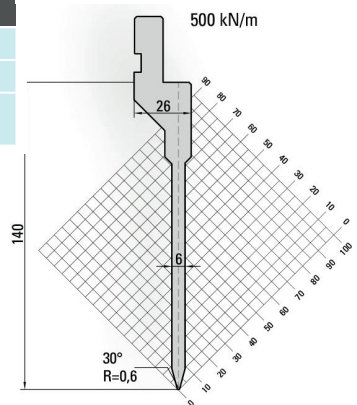
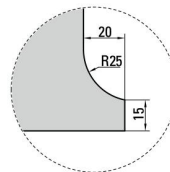


30° Punches/top tools

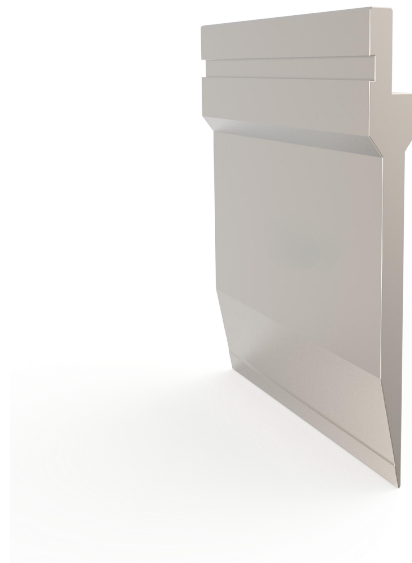
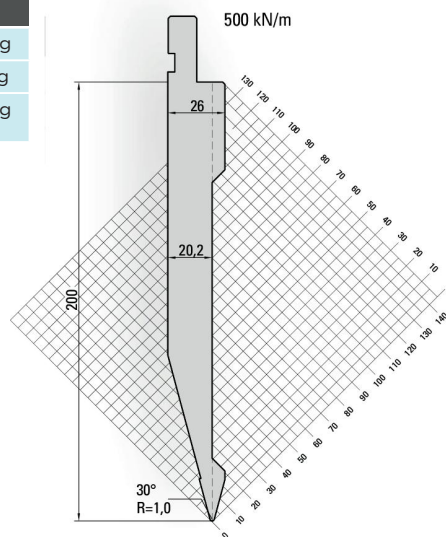
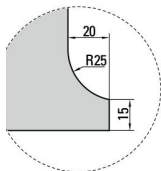
11.880	Material	
835 mm	42CrMo4	15,0 kg
415 mm	42CrMo4	7,5 kg
835 mm sectionalized	42CrMo4	15,0 kg



10.515	Material	
835 mm	42CrMo4	11,0 kg
415 mm	42CrMo4	5,5 kg
835 mm sectionalized	42CrMo4	11,0 kg



11.810	Material	
835 mm	42CrMo4	26,0 kg
415 mm	42CrMo4	13,0 kg
835 mm sectionalized	42CrMo4	26,0 kg



FIELD SERVICE

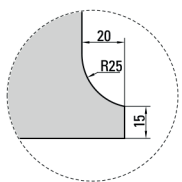
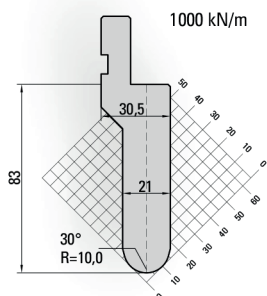
- Individual advice and sale
- Technical solutions for special bending tasks
- Test bending on-site or at the
- Pick up service for tools to rework

30° Punches/top tools

11.904 Material

835 mm	42CrMo4	14,4 kg
415 mm	42CrMo4	7,2 kg
835 mm sectionalized	42CrMo4	14,4 kg

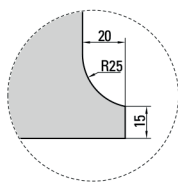
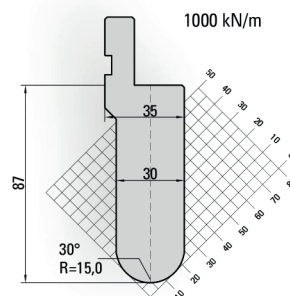
Compatible to radius-tool holder 10.115 and radius-tool 10.311/11.311 1500 kN/m if the tool clamping has the corresponding load



11.911 Material

835 mm	42CrMo4	19,2 kg
415 mm	42CrMo4	9,6 kg
835 mm sectionalized	42CrMo4	19,2 kg

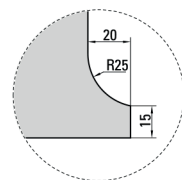
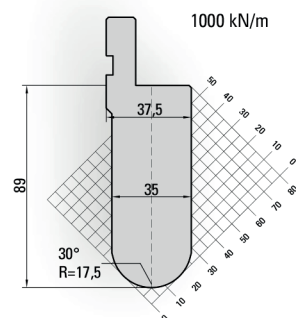
Compatible to radius-tool holder 10.115 and radius-tool 10.311/11.311 1500 kN/m if the tool clamping has the corresponding load



11.914 Material

835 mm	42CrMo4	22,0 kg
415 mm	42CrMo4	11,0 kg
835 mm sectionalized	42CrMo4	22,0 kg

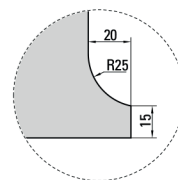
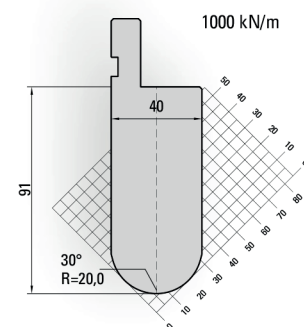
Compatible to radius-tool holder 10.115 and radius-tool 10.311/11.311 1500 kN/m if the tool clamping has the corresponding load



11.916 Material

835 mm	42CrMo4	25,0 kg
415 mm	42CrMo4	12,5 kg
835 mm sectionalized	42CrMo4	25,0 kg

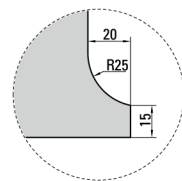
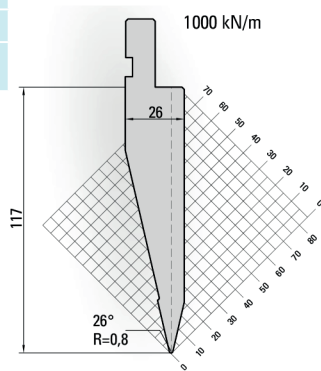
Compatible to radius-tool holder 10.115 and radius-tool 10.311/11.311 1500 kN/m if the tool clamping has the corresponding load



26° Punch/top tool

11.540 Material

835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,5 kg

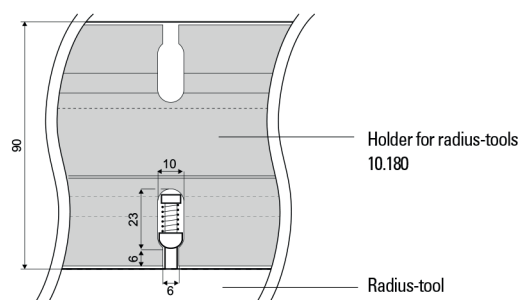


Holder for radius-tools and radius-tools R 3,0 - 6,5

ADVANTAGES

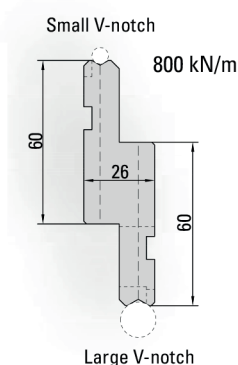
- Cost-saving: One holder for different radius-tools
- Easy handling
- No adjustment necessary
- High stability
- Flexible application through changeable radius-tools
- Sectionalized radius-tools on request

EXAMPLE OF USE



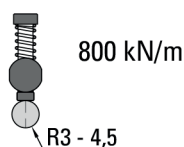
10.180	Material	
830 mm	42CrMo4	9,0 kg
412 mm	42CrMo4	4,5 kg

Holder for radius-tools



R 3,0 - 4,5			
R (mm)	Model	835 mm Weight	415 mm Weight
3,0	10.181	0,20 kg	0,10 kg
3,5	10.182	0,25 kg	0,12 kg
4,0	10.183	0,35 kg	0,17 kg
4,5	10.184	0,50 kg	0,25 kg

Usable on holder for radius-tools 10.180, small V-notch, radius-tools are not hardened

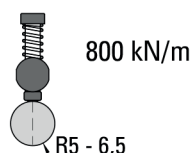


HOLDERS FOR
RADIUS-TOOLS AND
RADIUS-TOOLS
R 7,0 - 50,0



R 5,0 - 6,5			
R (mm)	Model	835 mm Weight	415 mm Weight
5,0	10.185	0,60 kg	0,30 kg
5,5	10.186	0,70 kg	0,35 kg
6,0	10.187	0,80 kg	0,40 kg
6,5	10.188	1,00 kg	0,50 kg

Usable on holder for radius-tools 10.180, large V-notch, radius-tools are not hardened



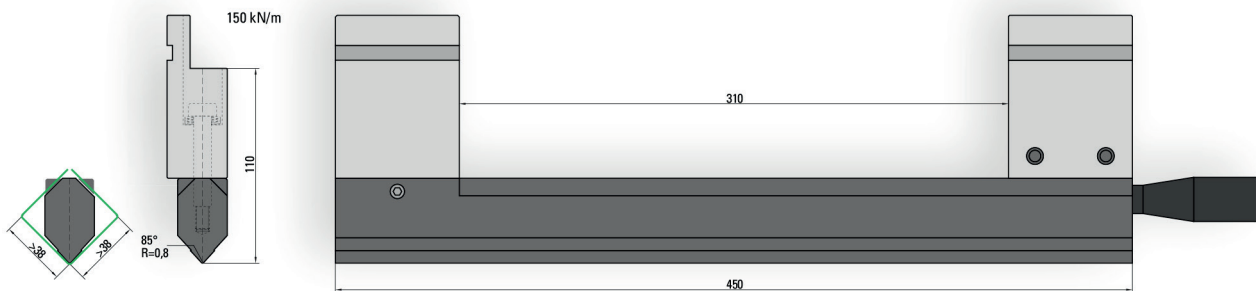
85° Window punch/top tool for closed boxes „Rotax®“

ADVANTAGES

- Bending of closed profiles
- High U-profiles
- Easy removal by opening the pivot arm

40.680 Material

42CrMo4 7,0 kg



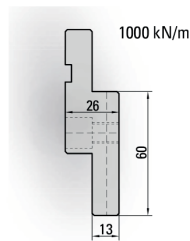
Individual production possible

Punch/top tool distance pieces

50.959 Material

150 mm 42CrMo4 1,8 kg

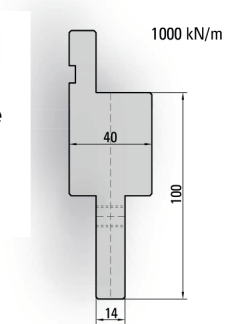
H = 60 mm
Heightening of the side
flange about 35 mm
Needed clamp



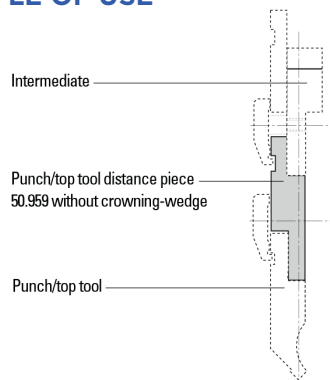
50.671 Material

150 mm 42CrMo4 3,6 kg

H = 100 mm
Heightening of the side
flange about 70 mm
Needed clamp

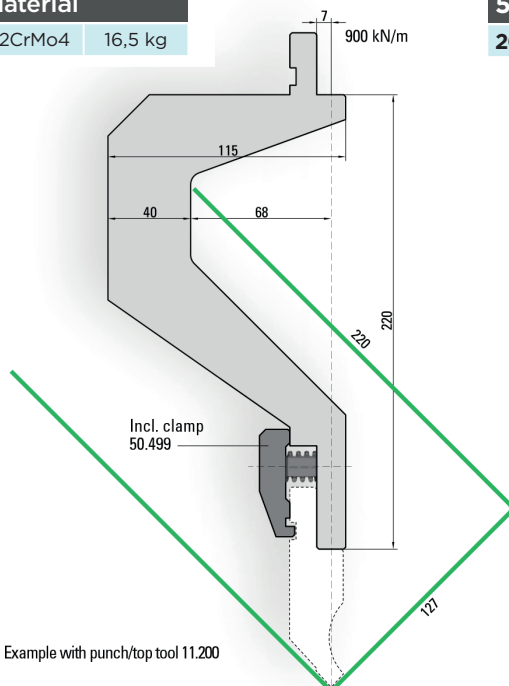


EXAMPLE OF USE



50.500 Material

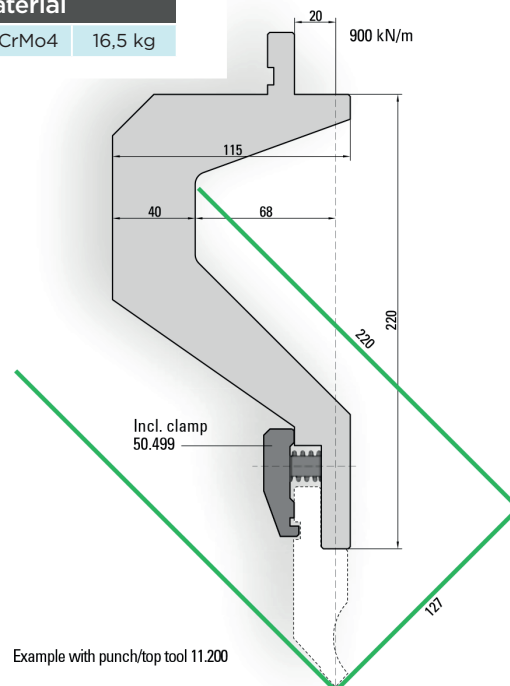
200 mm 42CrMo4 16,5 kg



Example with punch/top tool 11.200

50.501 Material

200 mm 42CrMo4 16,5 kg



Example with punch/top tool 11.200

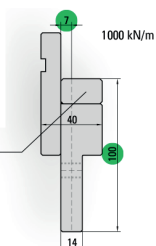
Intermediates L = 150 mm

50.666 Material

150 mm 42CrMo4 4,0 kg

H = 100 mm

With crowning wedge

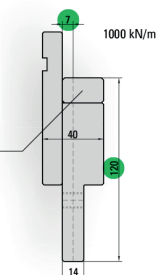


50.668 Material

150 mm 42CrMo4 4,0 kg

H = 120 mm

With crowning wedge

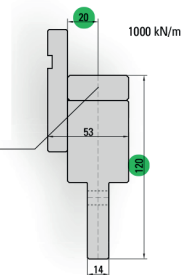


50.667 Material

150 mm 42CrMo4 5,0 kg

H = 120 mm

With crowning wedge

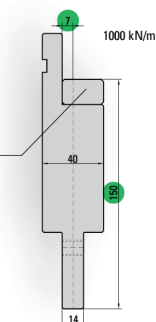


50.512 Material

150 mm 42CrMo4 6,3 kg

H = 150 mm

With crowning wedge

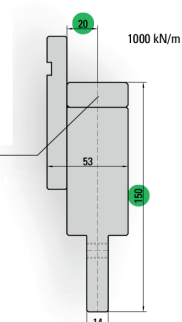


50.669 Material

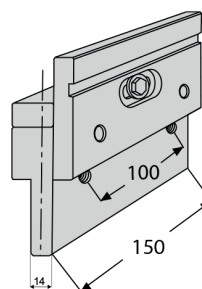
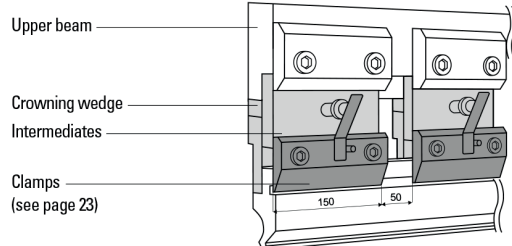
150 mm 42CrMo4 6,5 kg

H = 150 mm

With crowning wedge



EXAMPLE OF USE



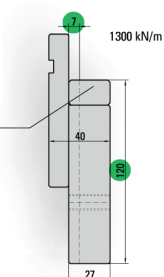
Intermediates „Heavy Duty“ L = 150 mm

50.674 Material

150 mm 42CrMo4 4,5 kg

H = 120 mm

With crowning wedge

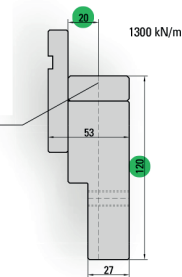


50.673 Material

150 mm 42CrMo4 5,5 kg

H = 120 mm

With crowning wedge



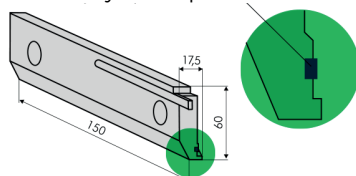
Clamps L = 150 mm

50.903 Material

150 mm 42CrMo4 0,7 kg

Mechanical fast clamp
Adjusted by eccentric lever

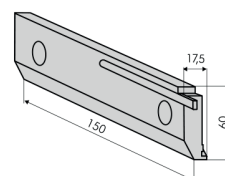
ADVANTAGE:
Improved clamping
via nylon strip



50.900 Material

150 mm 42CrMo4 0,7 kg

Mechanical fast clamp
Adjusted by eccentric lever

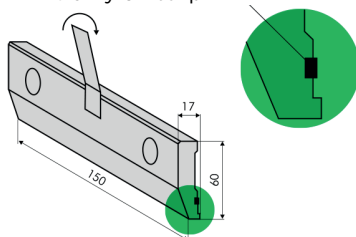


50.905 Material

150 mm 42CrMo4 1,0 kg

Mechanical fast clamp
Adjusted by handle

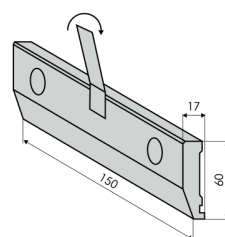
ADVANTAGE:
Improved clamping
via nylon strip



50.551 Material

150 mm 42CrMo4 1,0 kg

Mechanical fast clamp
Adjusted by handle

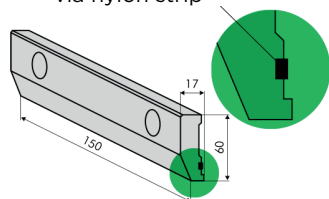


50.910 Material

150 mm 42CrMo4 0,8 kg

Clamp
Clamping by screws

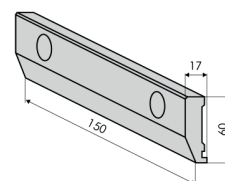
ADVANTAGE:
Improved clamping
via nylon strip



50.571 Material

150 mm 42CrMo4 0,7 kg

Clamp
Clamping by screws

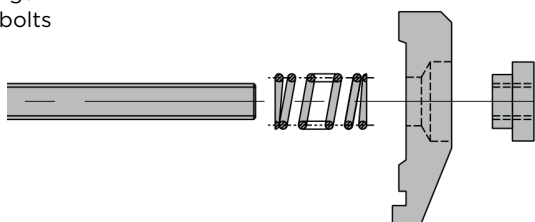


Clamp L = 150 mm for double-sided clamping

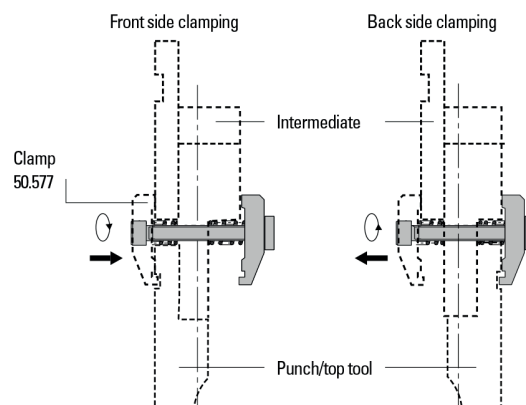
50.577 Material

150 mm 42CrMo4 1,5 kg

Set consist of:
Clamp 50.571
2 Screws
2 Springs
2 Nut bolts



EXAMPLE OF USE



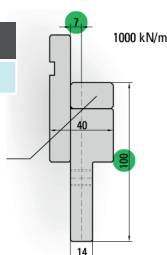
Intermediates L = 70 mm

50.705 Material

70 mm 42CrMo4 2,0 kg

H = 100 mm

With crowning wedge

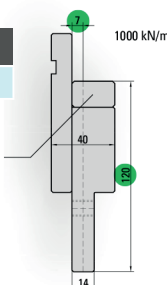


50.706 Material

70 mm 42CrMo4 2,0 kg

H = 120 mm

With crowning wedge

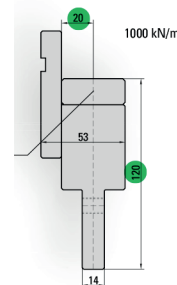


50.707 Material

70 mm 42CrMo4 2,5 kg

H = 120 mm

With crowning wedge

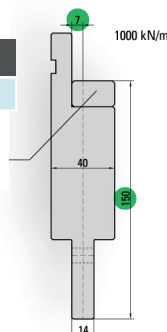


50.708 Material

70 mm 42CrMo4 3,0 kg

H = 150 mm

With crowning wedge

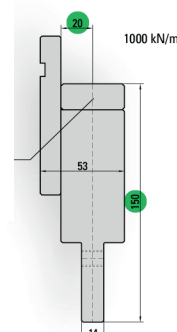


50.710 Material

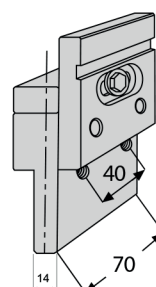
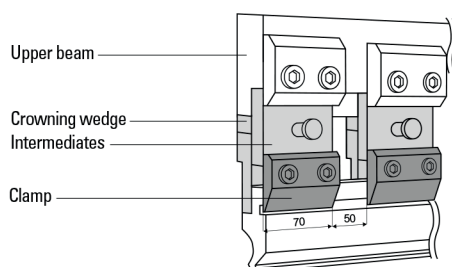
70 mm 42CrMo4 3,5 kg

H = 150 mm

With crowning wedge



EXAMPLE OF USE



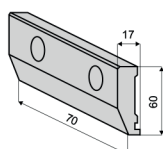
Clamp L = 70 mm

50.693 Material

70 mm 42CrMo4 0,4 kg

Clamp

Clamping by screws

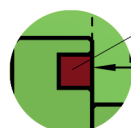
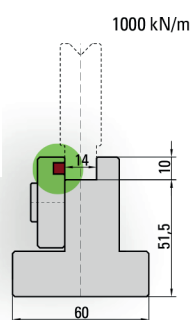


Die holder for central 1-V dies

22.010 Material

835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg

Die holder incl. clamp
with nylon-strip

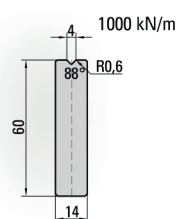


ADVANTAGE:
Improved clamping
via 14 nylon strip

88° Central 1-V dies

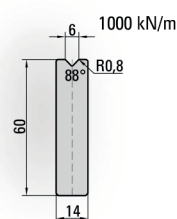
22.804 Material

835 mm	42CrMo4	5,5 kg
415 mm	42CrMo4	2,7 kg
835 mm sectionalized	42CrMo4	5,5 kg



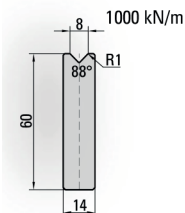
22.806 Material

835 mm	42CrMo4	5,4 kg
415 mm	42CrMo4	2,7 kg
835 mm sectionalized	42CrMo4	5,4 kg



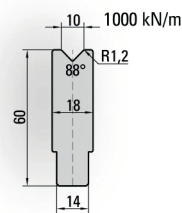
22.808 Material

835 mm	42CrMo4	5,4 kg
415 mm	42CrMo4	2,7 kg
835 mm sectionalized	42CrMo4	5,4 kg



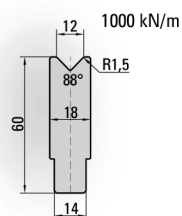
22.810 Material

835 mm	42CrMo4	6,5 kg
415 mm	42CrMo4	3,2 kg
835 mm sectionalized	42CrMo4	6,5 kg



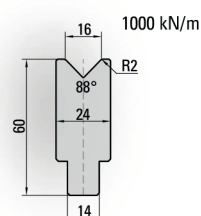
22.812 Material

835 mm	42CrMo4	6,4 kg
415 mm	42CrMo4	3,2 kg
835 mm sectionalized	42CrMo4	6,4 kg



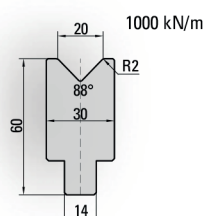
22.816 Material

835 mm	42CrMo4	8,0 kg
415 mm	42CrMo4	4,0 kg
835 mm sectionalized	42CrMo4	8,0 kg



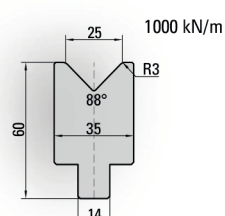
22.820 Material

835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg

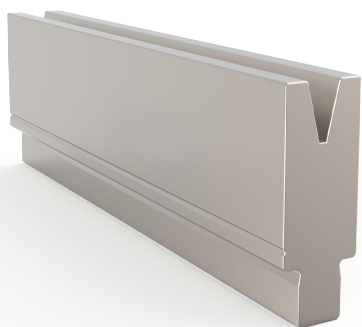


22.825 Material

835 mm	42CrMo4	10,6 kg
415 mm	42CrMo4	5,3 kg
835 mm sectionalized	42CrMo4	10,6 kg

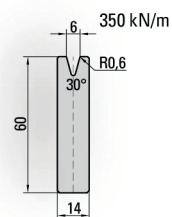


30° Central 1-V dies



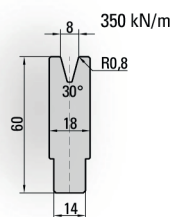
22.306 Material

835 mm	42CrMo4	5,3 kg
415 mm	42CrMo4	2,6 kg
835 mm sectionalized	42CrMo4	5,3 kg



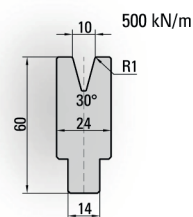
22.308 Material

835 mm	42CrMo4	6,3 kg
415 mm	42CrMo4	3,1 kg
835 mm sectionalized	42CrMo4	6,3 kg



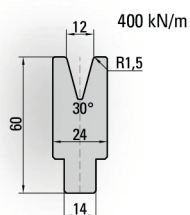
22.310 Material

835 mm	42CrMo4	7,8 kg
415 mm	42CrMo4	3,9 kg
835 mm sectionalized	42CrMo4	7,8 kg



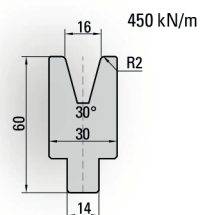
22.312 Material

835 mm	42CrMo4	7,6 kg
415 mm	42CrMo4	3,8 kg
835 mm sectionalized	42CrMo4	7,6 kg



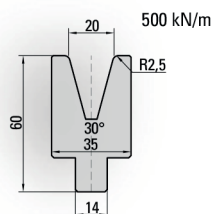
22.316 Material

835 mm	42CrMo4	8,8 kg
415 mm	42CrMo4	4,4 kg
835 mm sectionalized	42CrMo4	8,8 kg



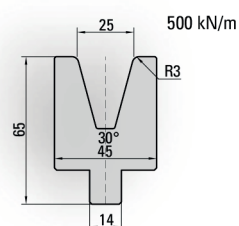
22.320 Material

835 mm	42CrMo4	9,4 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,4 kg



22.325 Material

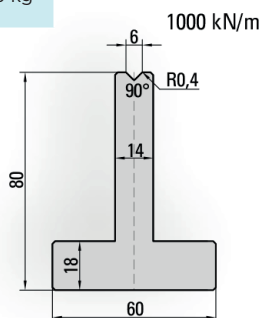
835 mm	42CrMo4	12,7 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,7 kg



90° T-dies, H = 80 mm

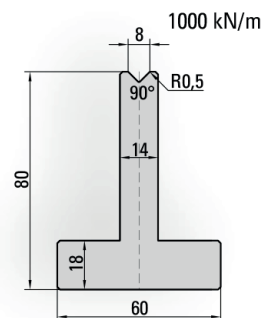
20.243 Material

835 mm	42CrMo4	12,6 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,6 kg



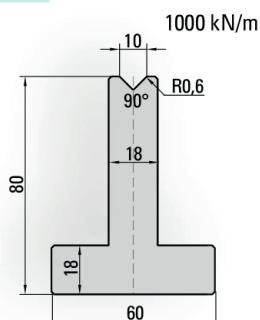
20.258 Material

835 mm	42CrMo4	12,6 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,6 kg



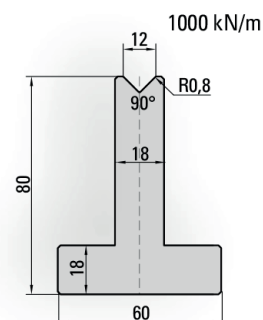
20.244 Material

835 mm	42CrMo4	14,2 kg
415 mm	42CrMo4	7,1 kg
835 mm sectionalized	42CrMo4	14,2 kg



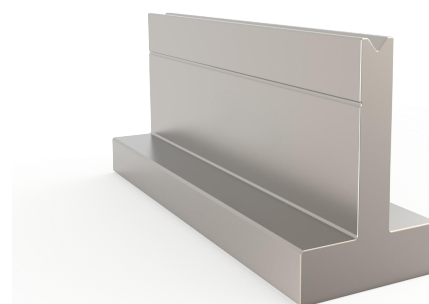
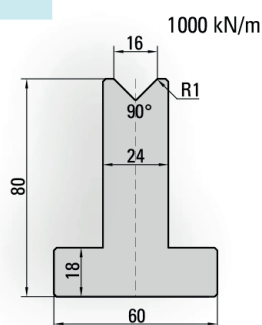
20.245 Material

835 mm	42CrMo4	15,0 kg
415 mm	42CrMo4	7,5 kg
835 mm sectionalized	42CrMo4	15,0 kg



20.246 Material

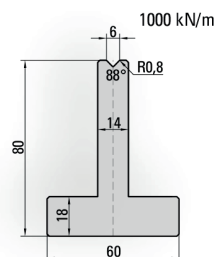
835 mm	42CrMo4	17,5 kg
415 mm	42CrMo4	8,7 kg
835 mm sectionalized	42CrMo4	17,5 kg



88° T-dies, H = 80 mm

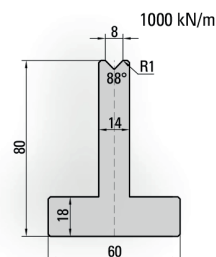
20.806 Material

835 mm	42CrMo4	12,6 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,6 kg



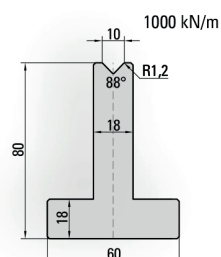
20.808 Material

835 mm	42CrMo4	12,6 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,6 kg



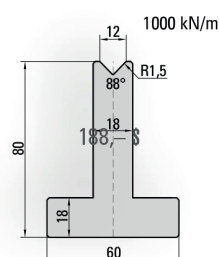
20.810 Material

835 mm	42CrMo4	14,2 kg
415 mm	42CrMo4	7,1 kg
835 mm sectionalized	42CrMo4	14,2 kg



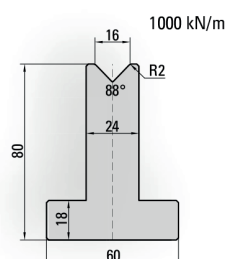
20.371 Material

835 mm	42CrMo4	14,1 kg
415 mm	42CrMo4	7,0 kg
835 mm sectionalized	42CrMo4	14,1 kg



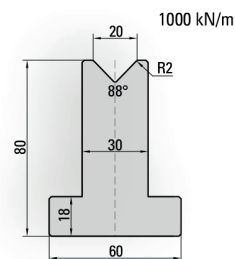
20.327 Material

835 mm	42CrMo4	16,4 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,4 kg



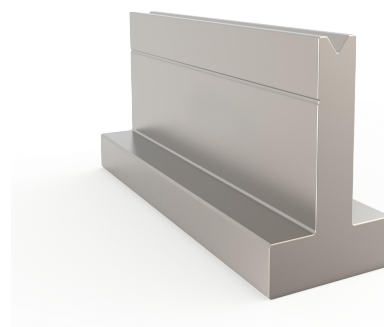
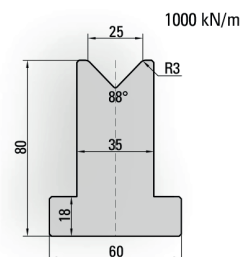
20.310 Material

835 mm	42CrMo4	18,6 kg
415 mm	42CrMo4	9,3 kg
835 mm sectionalized	42CrMo4	18,6 kg



20.309 Material

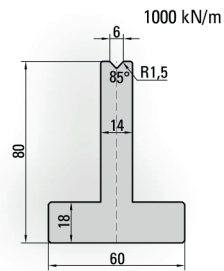
835 mm	42CrMo4	20,2 kg
415 mm	42CrMo4	10,1 kg
835 mm sectionalized	42CrMo4	20,2 kg



85° T-dies, H = 80 mm

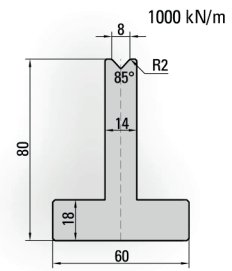
20.506 Material

835 mm	42CrMo4	12,6 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,6 kg



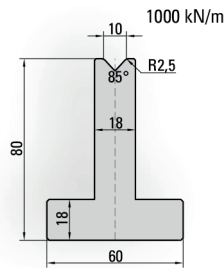
20.508 Material

835 mm	42CrMo4	12,6 kg
415 mm	42CrMo4	6,3 kg
835 mm sectionalized	42CrMo4	12,6 kg



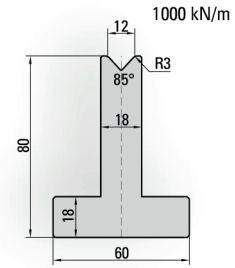
20.510 Material

835 mm	42CrMo4	14,2 kg
415 mm	42CrMo4	7,1 kg
835 mm sectionalized	42CrMo4	14,2 kg



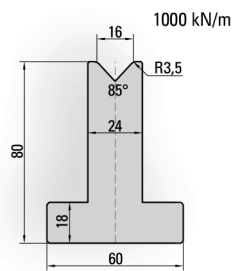
20.512 Material

835 mm	42CrMo4	14,1 kg
415 mm	42CrMo4	7,0 kg
835 mm sectionalized	42CrMo4	14,1 kg



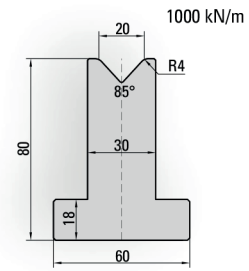
20.516 Material

835 mm	42CrMo4	16,4 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,4 kg



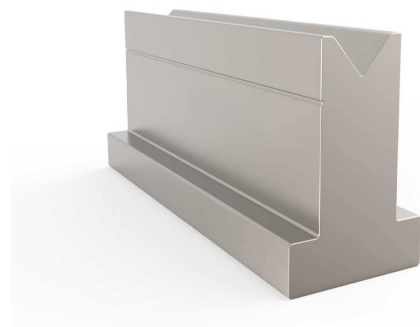
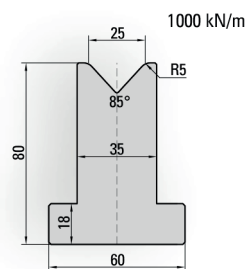
20.520 Material

835 mm	42CrMo4	18,6 kg
415 mm	42CrMo4	9,3 kg
835 mm sectionalized	42CrMo4	18,6 kg



20.525 Material

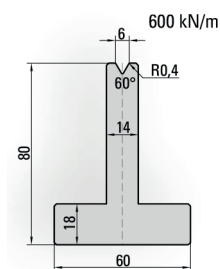
835 mm	42CrMo4	20,2 kg
415 mm	42CrMo4	10,1 kg
835 mm sectionalized	42CrMo4	20,2 kg



60° T-dies, H = 80 mm

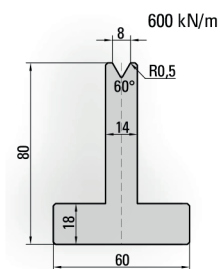
20.297 Material

835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



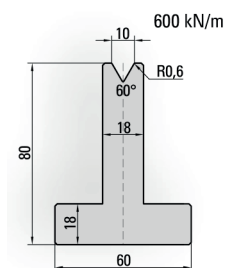
20.298 Material

835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



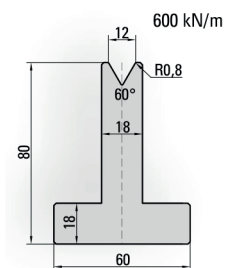
20.299 Material

835 mm	42CrMo4	15,0 kg
415 mm	42CrMo4	7,5 kg
835 mm sectionalized	42CrMo4	15,0 kg



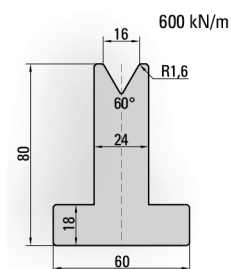
20.300 Material

835 mm	42CrMo4	15,0 kg
415 mm	42CrMo4	7,5 kg
835 mm sectionalized	42CrMo4	15,0 kg



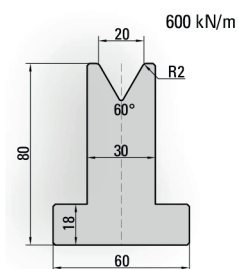
20.301 Material

835 mm	42CrMo4	17,5 kg
415 mm	42CrMo4	8,7 kg
835 mm sectionalized	42CrMo4	17,5 kg



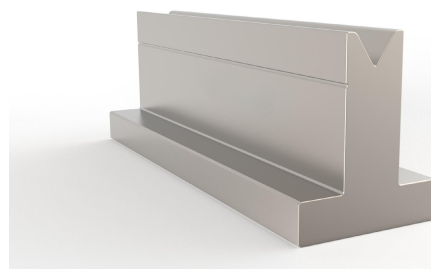
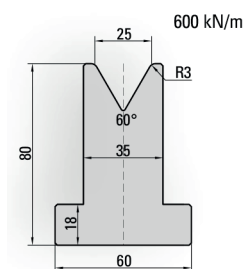
20.308 Material

835 mm	42CrMo4	18,1 kg
415 mm	42CrMo4	9,0 kg
835 mm sectionalized	42CrMo4	18,1 kg



20.311 Material

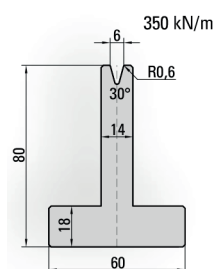
835 mm	42CrMo4	19,5 kg
415 mm	42CrMo4	9,7 kg
835 mm sectionalized	42CrMo4	19,5 kg



30° T-dies, H = 80 mm

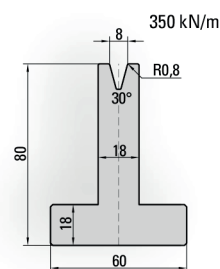
20.317 Material

835 mm	42CrMo4	12,5 kg
415 mm	42CrMo4	6,2 kg
835 mm sectionalized	42CrMo4	12,5 kg



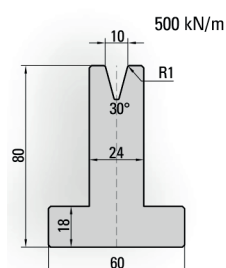
20.318 Material

835 mm	42CrMo4	14,0 kg
415 mm	42CrMo4	7,0 kg
835 mm sectionalized	42CrMo4	14,0 kg



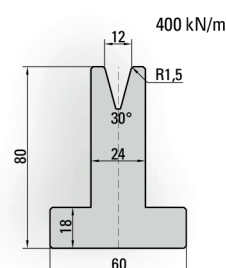
20.319 Material

835 mm	42CrMo4	16,2 kg
415 mm	42CrMo4	8,1 kg
835 mm sectionalized	42CrMo4	16,2 kg



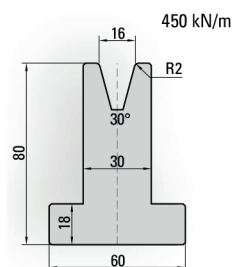
20.320 Material

835 mm	42CrMo4	15,9 kg
415 mm	42CrMo4	7,9 kg
835 mm sectionalized	42CrMo4	15,9 kg



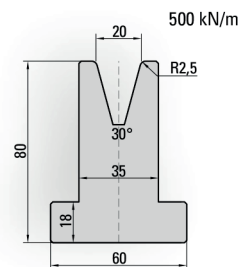
20.321 Material

835 mm	42CrMo4	17,8 kg
415 mm	42CrMo4	8,9 kg
835 mm sectionalized	42CrMo4	17,8 kg



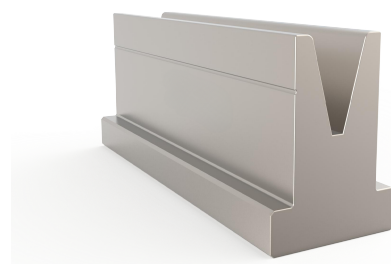
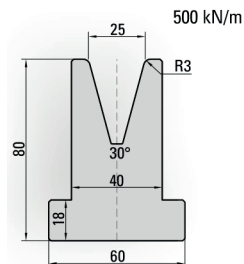
20.322 Material

835 mm	42CrMo4	19,0 kg
415 mm	42CrMo4	9,5 kg
835 mm sectionalized	42CrMo4	19,0 kg



20.323 Material

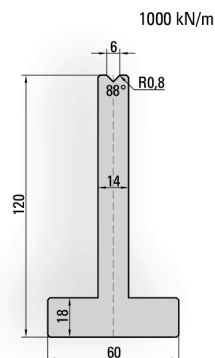
835 mm	42CrMo4	19,6 kg
415 mm	42CrMo4	9,8 kg
835 mm sectionalized	42CrMo4	19,6 kg



88° T-dies, H = 120 mm

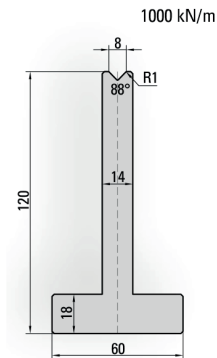
21.806 Material

835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,5 kg



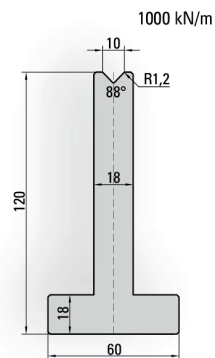
21.808 Material

835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,5 kg



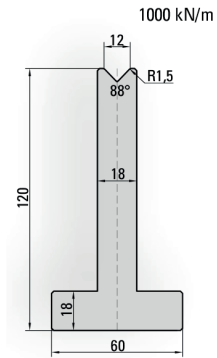
21.810 Material

835 mm	42CrMo4	19,0 kg
415 mm	42CrMo4	9,5 kg
835 mm sectionalized	42CrMo4	19,0 kg



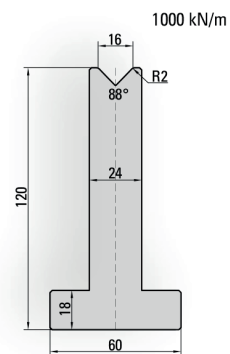
20.382 Material

835 mm	42CrMo4	18,8 kg
415 mm	42CrMo4	9,4 kg
835 mm sectionalized	42CrMo4	18,8 kg



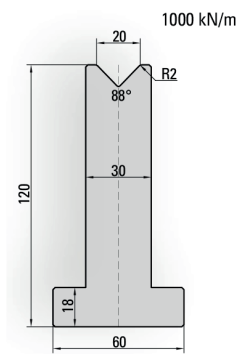
20.383 Material

835 mm	42CrMo4	22,7 kg
415 mm	42CrMo4	11,3 kg
835 mm sectionalized	42CrMo4	22,7 kg



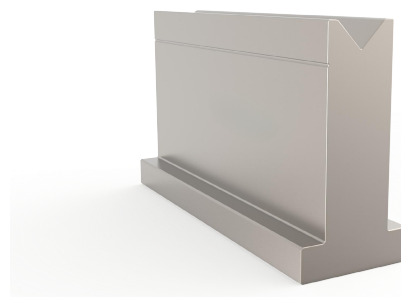
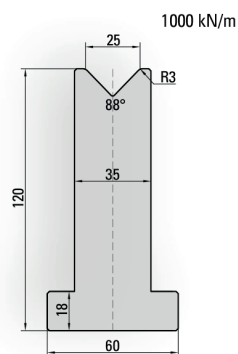
20.384 Material

835 mm	42CrMo4	26,4 kg
415 mm	42CrMo4	13,2 kg
835 mm sectionalized	42CrMo4	26,4 kg



20.385 Material

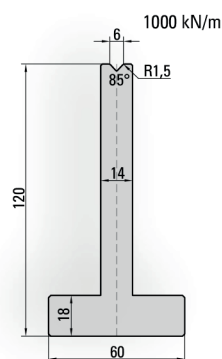
835 mm	42CrMo4	29,4 kg
415 mm	42CrMo4	14,7 kg
835 mm sectionalized	42CrMo4	29,4 kg



85° T-dies, H = 120 mm

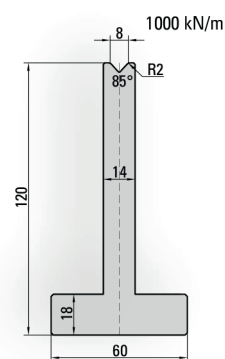
21.506 Material

835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,5 kg



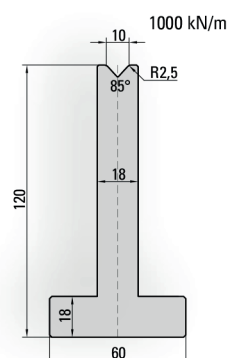
21.508 Material

835 mm	42CrMo4	16,5 kg
415 mm	42CrMo4	8,2 kg
835 mm sectionalized	42CrMo4	16,5 kg



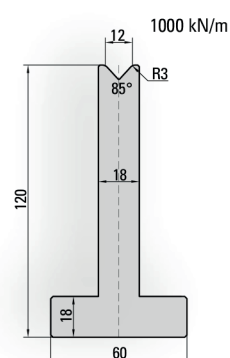
21.510 Material

835 mm	42CrMo4	19,0 kg
415 mm	42CrMo4	9,5 kg
835 mm sectionalized	42CrMo4	19,0 kg



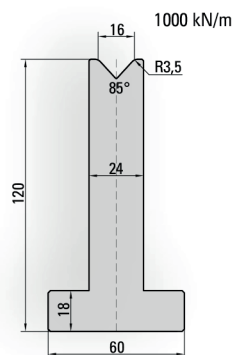
21.512 Material

835 mm	42CrMo4	18,8 kg
415 mm	42CrMo4	9,4 kg
835 mm sectionalized	42CrMo4	18,8 kg



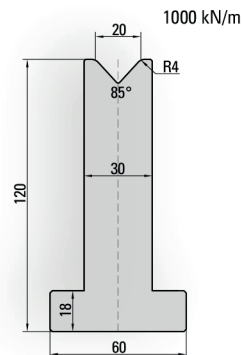
21.516 Material

835 mm	42CrMo4	22,7 kg
415 mm	42CrMo4	11,3 kg
835 mm sectionalized	42CrMo4	22,7 kg



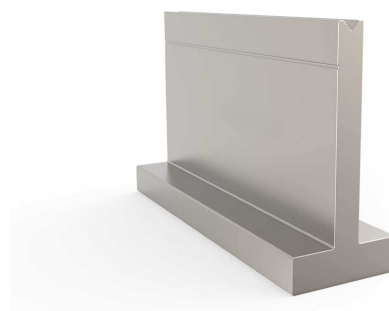
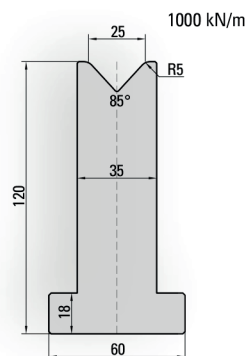
21.520 Material

835 mm	42CrMo4	26,4 kg
415 mm	42CrMo4	13,2 kg
835 mm sectionalized	42CrMo4	26,4 kg



21.525 Material

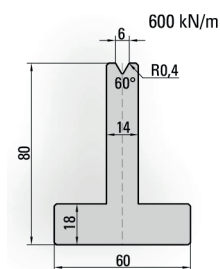
835 mm	42CrMo4	29,4 kg
415 mm	42CrMo4	14,7 kg
835 mm sectionalized	42CrMo4	29,4 kg



60° T-dies, H = 120 mm

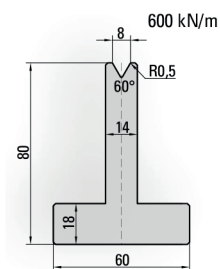
20.386 Material

835 mm	42CrMo4	16,3 kg
415 mm	42CrMo4	8,1 kg
835 mm sectionalized	42CrMo4	16,3 kg



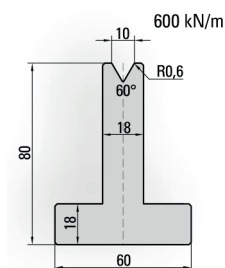
20.387 Material

835 mm	42CrMo4	16,2 kg
415 mm	42CrMo4	8,1 kg
835 mm sectionalized	42CrMo4	16,2 kg



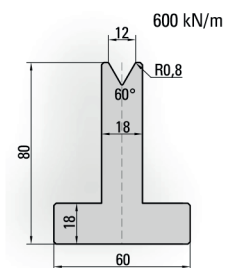
20.388 Material

835 mm	42CrMo4	18,8 kg
415 mm	42CrMo4	9,4 kg
835 mm sectionalized	42CrMo4	18,8 kg



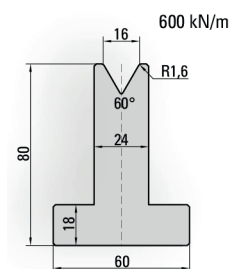
20.389 Material

835 mm	42CrMo4	18,7 kg
415 mm	42CrMo4	9,3 kg
835 mm sectionalized	42CrMo4	18,7 kg



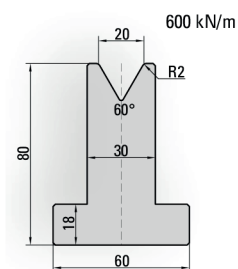
20.390 Material

835 mm	42CrMo4	22,4 kg
415 mm	42CrMo4	11,2 kg
835 mm sectionalized	42CrMo4	22,4 kg



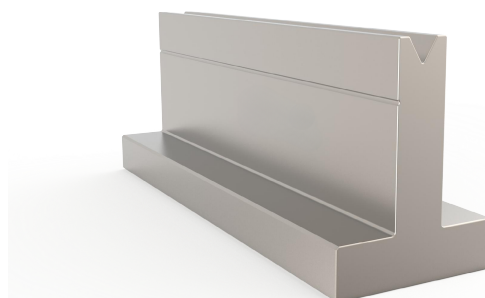
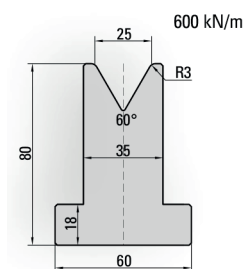
20.391 Material

835 mm	42CrMo4	26,0 kg
415 mm	42CrMo4	13,0 kg
835 mm sectionalized	42CrMo4	26,0 kg



20.392 Material

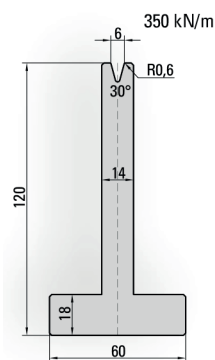
835 mm	42CrMo4	28,7 kg
415 mm	42CrMo4	14,3 kg
835 mm sectionalized	42CrMo4	28,7 kg



30° T-dies, H = 120 mm

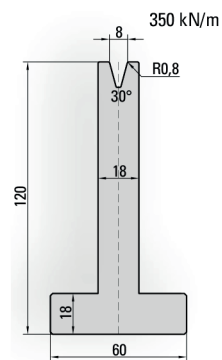
20.351 Material

835 mm	42CrMo4	16,2 kg
415 mm	42CrMo4	8,1 kg
835 mm sectionalized	42CrMo4	16,2 kg



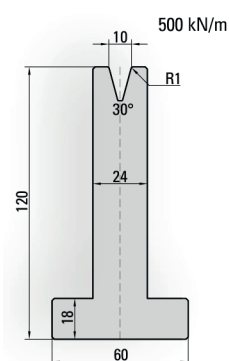
20.352 Material

835 mm	42CrMo4	18,7 kg
415 mm	42CrMo4	9,3 kg
835 mm sectionalized	42CrMo4	18,7 kg



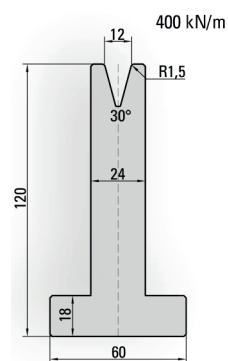
20.353 Material

835 mm	42CrMo4	22,5 kg
415 mm	42CrMo4	11,2 kg
835 mm sectionalized	42CrMo4	22,5 kg



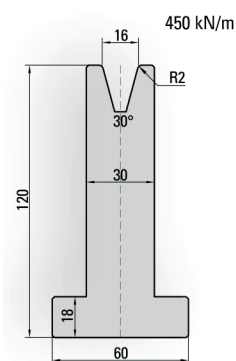
20.354 Material

835 mm	42CrMo4	22,2 kg
415 mm	42CrMo4	11,1 kg
835 mm sectionalized	42CrMo4	22,2 kg



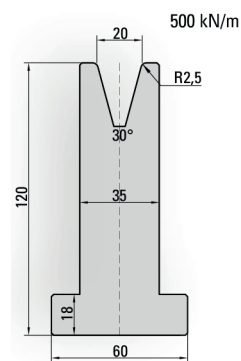
20.401 Material

835 mm	42CrMo4	25,7 kg
415 mm	42CrMo4	12,8 kg
835 mm sectionalized	42CrMo4	25,7 kg



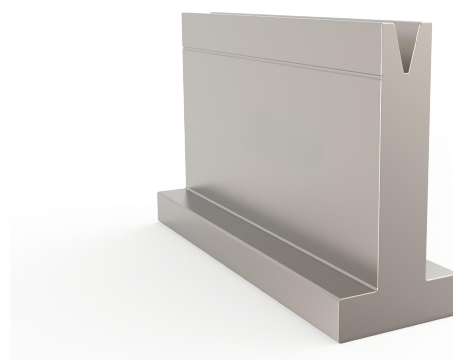
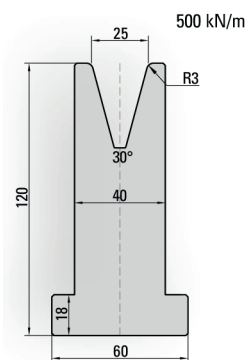
20.402 Material

835 mm	42CrMo4	28,0 kg
415 mm	42CrMo4	14,0 kg
835 mm sectionalized	42CrMo4	28,0 kg



20.403 Material

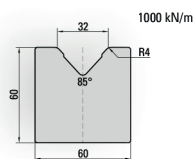
835 mm	42CrMo4	30,0 kg
415 mm	42CrMo4	15,0 kg
835 mm sectionalized	42CrMo4	30,0 kg



85° 1-V dies

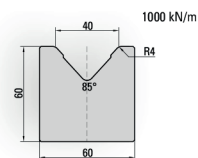
20.210 Material

835 mm	42CrMo4	22,0 kg
415 mm	42CrMo4	11,0 kg
835 mm sectionalized	42CrMo4	22,0 kg



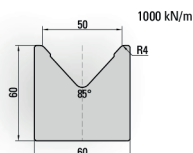
20.211 Material

835 mm	42CrMo4	21,0 kg
415 mm	42CrMo4	10,5 kg
835 mm sectionalized	42CrMo4	21,0 kg



20.212 Material

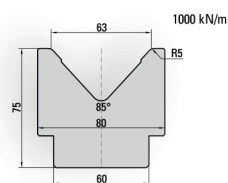
835 mm	42CrMo4	19,0 kg
415 mm	42CrMo4	9,5 kg
835 mm sectionalized	42CrMo4	19,0 kg



20.213 Material

835 mm	42CrMo4	29,0 kg
415 mm	42CrMo4	14,5 kg
835 mm sectionalized	42CrMo4	29,0 kg

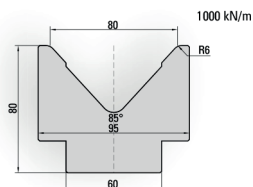
1200 kN/m if the tool clamping has the corresponding load



20.214 Material

835 mm	42CrMo4	33,2 kg
415 mm	42CrMo4	16,6 kg
835 mm sectionalized	42CrMo4	33,2 kg

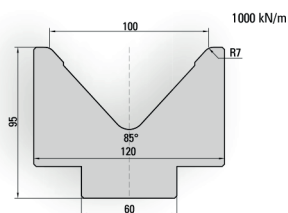
1200 kN/m if the tool clamping has the corresponding load



20.215 Material

835 mm	42CrMo4	50,0 kg
415 mm	42CrMo4	25,0 kg
835 mm sectionalized	42CrMo4	50,0 kg

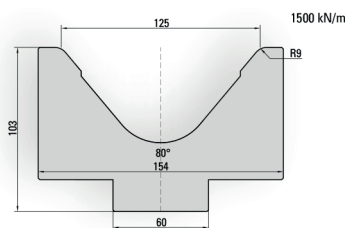
1500 kN/m if the tool clamping has the corresponding load



80° 1-V dies

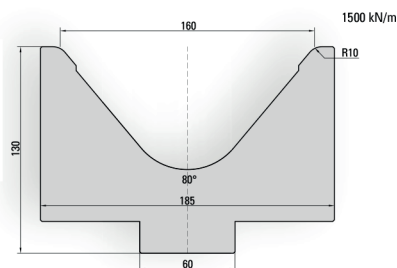
21.125 Material

415 mm	42CrMo4	31,0 kg
200 mm	42CrMo4	15,0 kg



21.160 Material

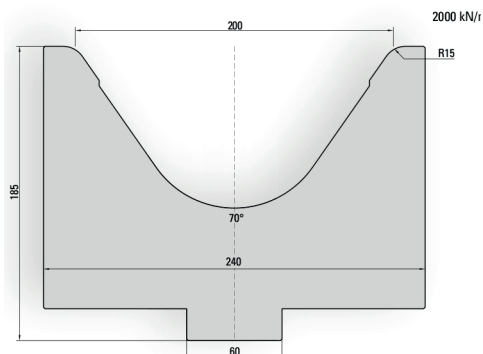
415 mm	42CrMo4	46,5 kg
200 mm	42CrMo4	22,4 kg



70° 1-V die

21.200 Material

415 mm	42CrMo4	88,0 kg
200 mm	42CrMo4	42,5 kg

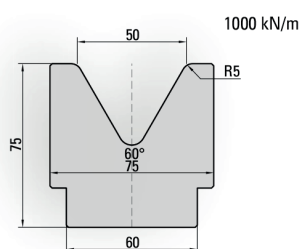


60° 1-V dies

20.650 Material

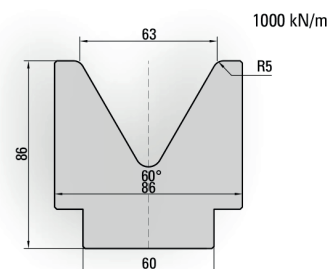
835 mm	42CrMo4	27,5 kg
415 mm	42CrMo4	13,7 kg
835 mm sectionalized	42CrMo4	27,5 kg

1200 kN/m if the tool clamping has the 24h corresponding load



20.370 Material

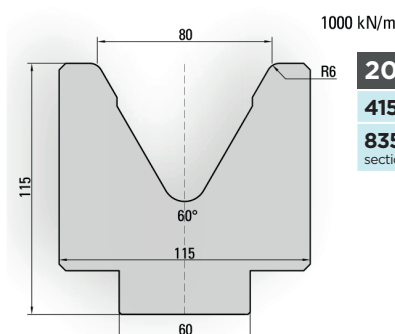
835 mm	42CrMo4	34,3 kg
415 mm	42CrMo4	17,1 kg
835 mm sectionalized	42CrMo4	34,3 kg



20.680 Material

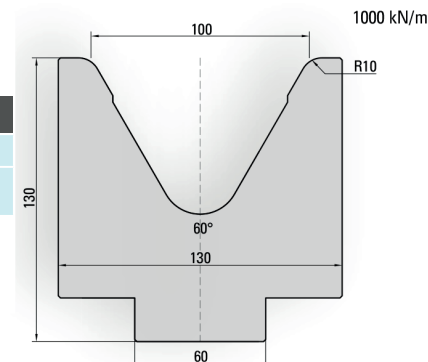
835 mm	42CrMo4	60,0 kg
415 mm	42CrMo4	30,0 kg
835 mm sectionalized	42CrMo4	60,0 kg

1200 kN/m if the tool clamping has the corresponding load



20.610 Material

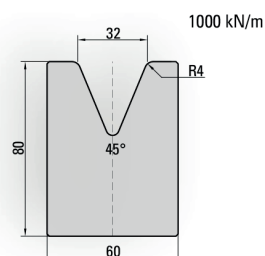
415 mm	42CrMo4	37,0 kg
835 mm sectionalized	42CrMo4	74,0 kg



45° 1-V dies

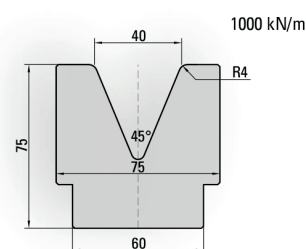
20.484 Material

835 mm	42CrMo4	27,5 kg
415 mm	42CrMo4	13,7 kg
835 mm sectionalized	42CrMo4	27,5 kg



20.440 Material

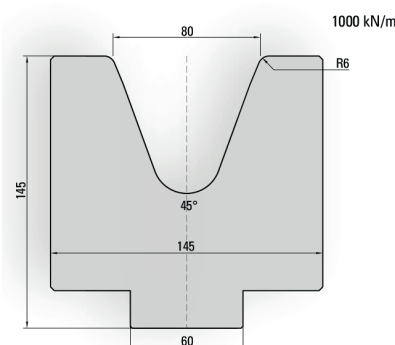
835 mm	42CrMo4	28,5 kg
415 mm	42CrMo4	14,2 kg
835 mm sectionalized	42CrMo4	28,5 kg



20.380 Material

415 mm	42CrMo4	50,0 kg
200 mm	42CrMo4	24,0 kg

1500 kN/m if the tool clamping has the corresponding load

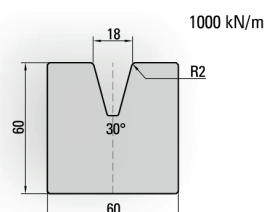


30° 1-V dies

20.494 Material

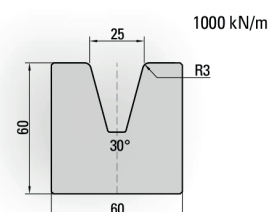
835 mm	42CrMo4	22,0 kg
415 mm	42CrMo4	11,0 kg
835 mm sectionalized	42CrMo4	22,0 kg

1200 kN/m if the tool clamping has the corresponding load



20.325 Material

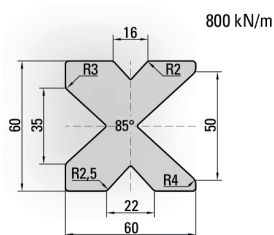
835 mm	42CrMo4	20,1 kg
415 mm	42CrMo4	10,0 kg
835 mm sectionalized	42CrMo4	20,1 kg



Die blocks

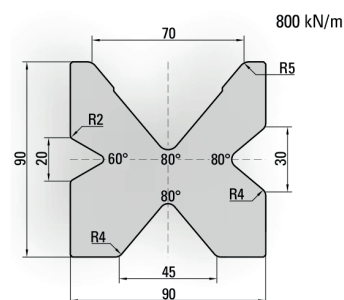
21.207 Material

835 mm	42CrMo4	15,5 kg
415 mm	42CrMo4	7,7 kg
835 mm sectionalized	42CrMo4	15,5 kg



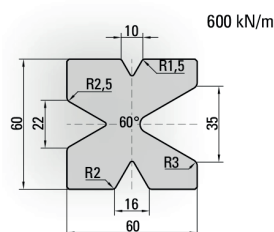
28.820 Material

835 mm	42CrMo4	36,0 kg
415 mm	42CrMo4	18,0 kg
835 mm sectionalized	42CrMo4	36,0 kg



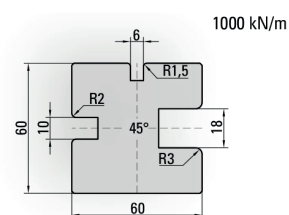
20.350 Material

835 mm	42CrMo4	17,8 kg
415 mm	42CrMo4	8,9 kg
835 mm sectionalized	42CrMo4	17,8 kg



21.209 Material

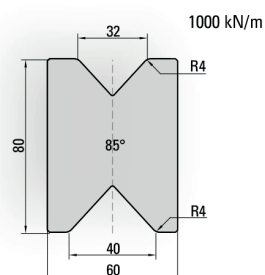
835 mm	42CrMo4	20,0 kg
415 mm	42CrMo4	10,0 kg
835 mm sectionalized	42CrMo4	20,0 kg



20.820 Material

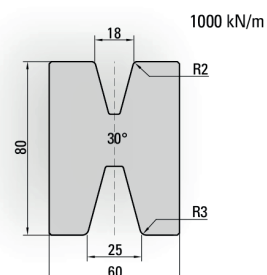
835 mm	42CrMo4	27,0 kg
415 mm	42CrMo4	13,5 kg
835 mm sectionalized	42CrMo4	27,0 kg

1500 kN/m if the tool clamping has the corresponding load



20.830 Material

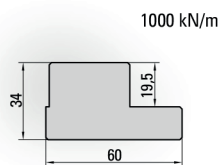
835 mm	42CrMo4	26,0 kg
415 mm	42CrMo4	13,0 kg
835 mm sectionalized	42CrMo4	26,0 kg



Die holders

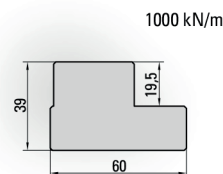
20.200 Material

835 mm	42CrMo4	9,3 kg
415 mm	42CrMo4	4,6 kg



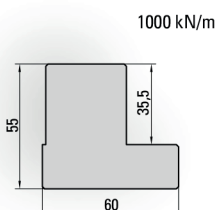
20.316 Material

835 mm	42CrMo4	11,5 kg
415 mm	42CrMo4	5,7 kg



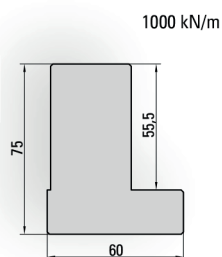
20.201 Material

835 mm	42CrMo4	14,2 kg
415 mm	42CrMo4	7,1 kg



20.306 Material

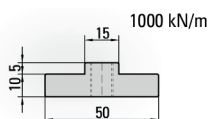
835 mm	42CrMo4	18,9 kg
415 mm	42CrMo4	9,4 kg



Die holders for central 2-V dies

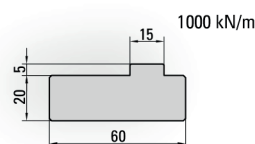
20.287 Material

835 mm	42CrMo4	4,0 kg
415 mm	42CrMo4	2,0 kg



20.400 Material

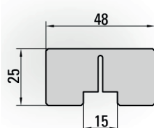
835 mm	42CrMo4	8,3 kg
415 mm	42CrMo4	4,1 kg



Clamping piece for central 2-V dies

20.336 Material

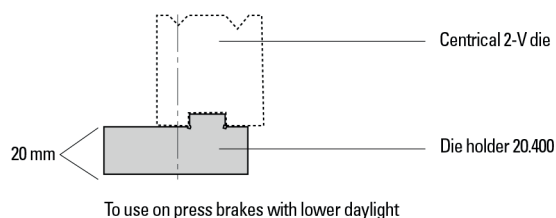
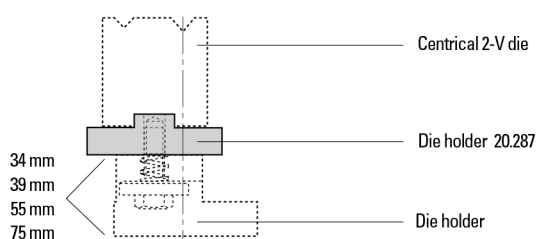
Per piece	42CrMo4	0,2 kg
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Clamping piece to fix small central 2-V dies on the die holder 20.287 and 20.400



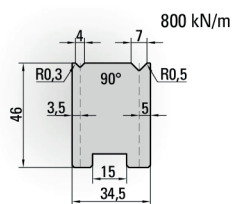
EXAMPLE OF USE



90° Centrical 2-V dies

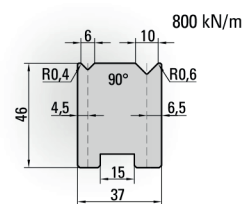
20.275 Material

835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg



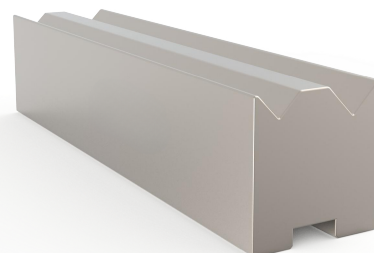
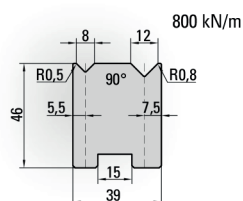
20.276 Material

835 mm	42CrMo4	10,0 kg
415 mm	42CrMo4	5,0 kg
835 mm sectionalized	42CrMo4	10,0 kg



20.277 Material

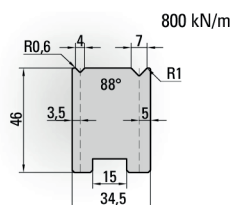
835 mm	42CrMo4	10,5 kg
415 mm	42CrMo4	5,2 kg
835 mm sectionalized	42CrMo4	10,5 kg



88° Centrical 2-V dies

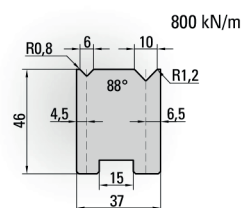
21.275 Material

835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg



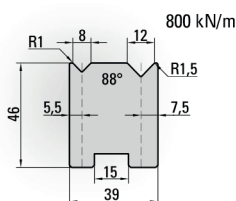
21.276 Material

835 mm	42CrMo4	10,0 kg
415 mm	42CrMo4	5,0 kg
835 mm sectionalized	42CrMo4	10,0 kg



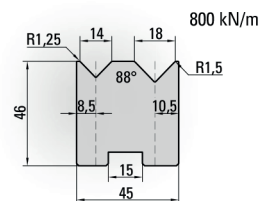
20.339 Material

835 mm	42CrMo4	10,8 kg
415 mm	42CrMo4	5,4 kg
835 mm sectionalized	42CrMo4	10,8 kg



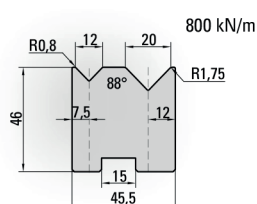
20.278 Material

835 mm	42CrMo4	12,0 kg
415 mm	42CrMo4	6,0 kg
835 mm sectionalized	42CrMo4	12,0 kg



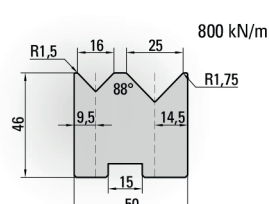
20.279 Material

835 mm	42CrMo4	12,0 kg
415 mm	42CrMo4	6,0 kg
835 mm sectionalized	42CrMo4	12,0 kg



20.280 Material

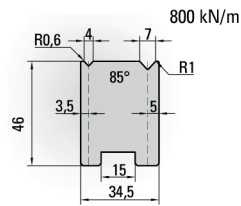
835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



85° Centrical 2-V dies

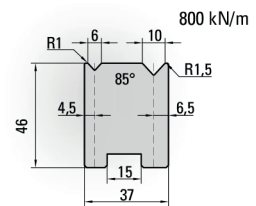
20.344 Material

835 mm	42CrMo4	9,5 kg
415 mm	42CrMo4	4,7 kg
835 mm sectionalized	42CrMo4	9,5 kg



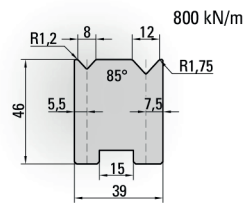
20.345 Material

835 mm	42CrMo4	10,0 kg
415 mm	42CrMo4	5,0 kg
835 mm sectionalized	42CrMo4	10,0 kg



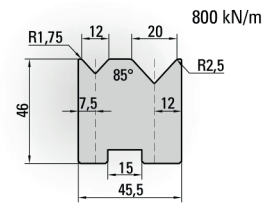
20.346 Material

835 mm	42CrMo4	10,5 kg
415 mm	42CrMo4	5,3 kg
835 mm sectionalized	42CrMo4	10,5 kg



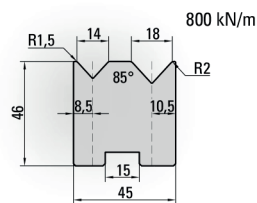
20.347 Material

835 mm	42CrMo4	12,0 kg
415 mm	42CrMo4	6,0 kg
835 mm sectionalized	42CrMo4	12,0 kg



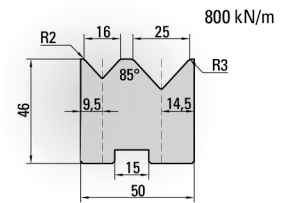
20.349 Material

835 mm	42CrMo4	12,0 kg
415 mm	42CrMo4	6,0 kg
835 mm sectionalized	42CrMo4	12,0 kg



20.348 Material

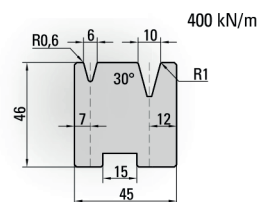
835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



30° Centrical 2-V dies

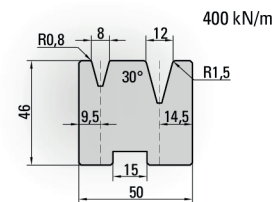
20.438 Material

835 mm	42CrMo4	12,5 kg
415 mm	42CrMo4	6,2 kg
835 mm sectionalized	42CrMo4	12,5 kg



20.478 Material

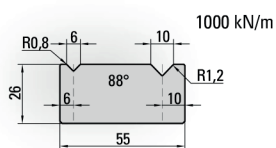
835 mm	42CrMo4	13,0 kg
415 mm	42CrMo4	6,5 kg
835 mm sectionalized	42CrMo4	13,0 kg



88° 2-V dies

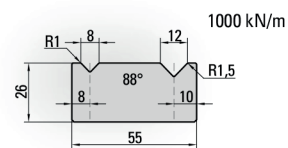
21.202 Material

835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg



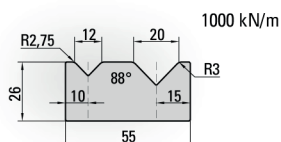
20.338 Material

835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg



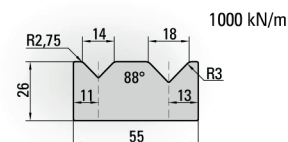
20.204 Material

835 mm	42CrMo4	8,5 kg
415 mm	42CrMo4	4,2 kg



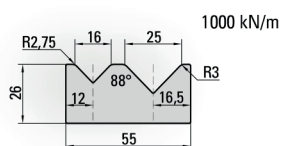
20.296 Material

835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg

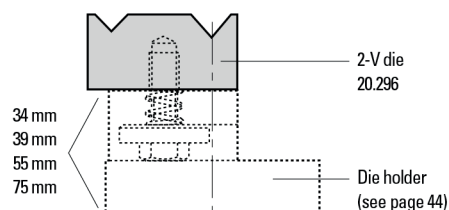


20.205 Material

835 mm	42CrMo4	8,0 kg
415 mm	42CrMo4	4,0 kg



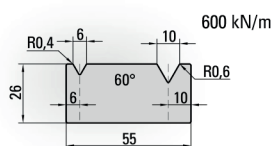
EXAMPLE OF USE



60° 2-V dies

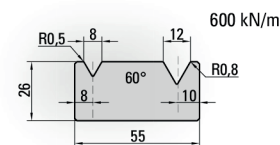
20.235 Material

835 mm	42CrMo4	9,0 kg
415 mm	42CrMo4	4,5 kg



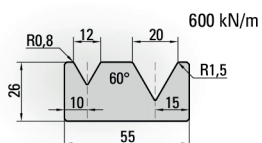
20.229 Material

835 mm	42CrMo4	8,5 kg
415 mm	42CrMo4	4,2 kg



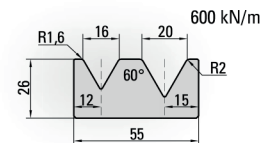
20.230 Material

835 mm	42CrMo4	8,0 kg
415 mm	42CrMo4	4,0 kg



20.267 Material

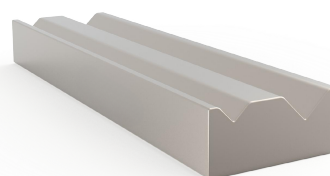
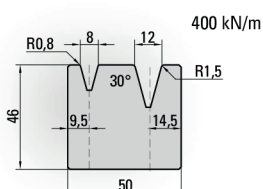
835 mm	42CrMo4	7,5 kg
415 mm	42CrMo4	3,7 kg



30° 2-V die

20.418 Material

835 mm	42CrMo4	13,5 kg
415 mm	42CrMo4	6,7 kg

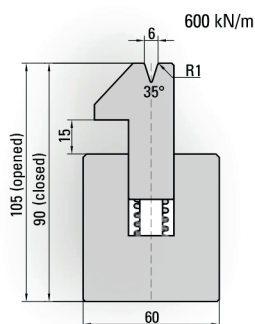


Spring-loaded flattening dies

20.264 Material

835 mm	42CrMo4	30,5 kg
415 mm	42CrMo4	15,2 kg

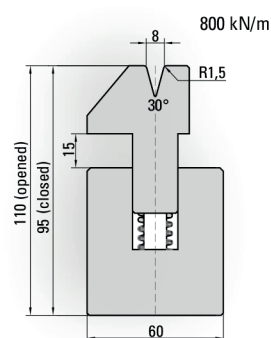
Max. 1,0 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



20.303 Material

835 mm	42CrMo4	33,0 kg
415 mm	42CrMo4	16,5 kg

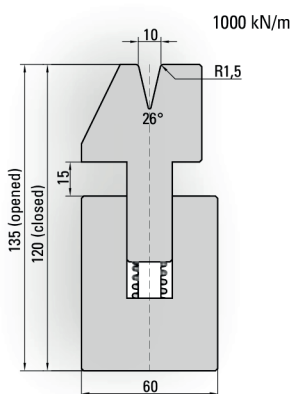
Max. 1,5 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



20.231 Material

835 mm	42CrMo4	41,5 kg
415 mm	42CrMo4	20,7 kg

Max. 2,0 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



20.305 Material

835 mm	42CrMo4	43,5 kg
415 mm	42CrMo4	21,7 kg

Max. 3,0 mm material thickness
 $R_m = 400 \text{ N/mm}^2$

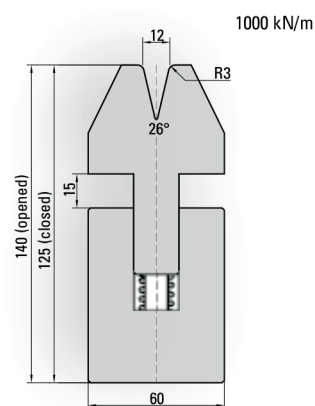


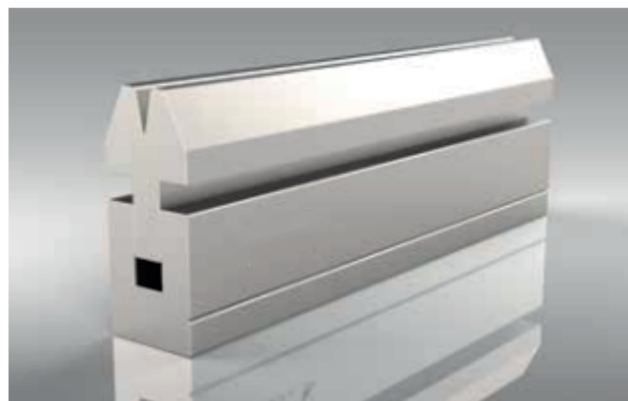
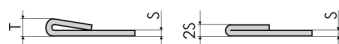
Table of force for flattening

Material: $R_m = 400 \text{ N/mm}^2$ (St)

S (mm)	(t/m)	T (mm)	(t/m)	2S (mm)
0,6	9	3,0	23	1,2
0,8	12	3,0	32	1,6
1,0	15	3,5	40	2,0
1,25	17	3,5	50	2,5
1,5	22	4,6	63	3,0
2,0	30	5,5	80	4,0
2,5	55	6,5	90	5,0
3,0	70	8,0	100	6,0

Material: $R_m = 700 \text{ N/mm}^2$ (VA)

S (mm)	(t/m)	T (mm)	(t/m)	2S (mm)
0,6	15	3,0	35	1,2
0,8	20	3,0	50	1,6
1,0	25	3,5	60	2,0
1,25	26	3,5	80	2,5
1,5	38	4,6	95	3,0
2,0	50	5,5	130	4,0



Pneumatic flattening dies

ADVANTAGES

- > Faster bending through 15 mm less stroke
- > More precise bending
- > Less attrition
- > Connectable to existing free control-output I/O

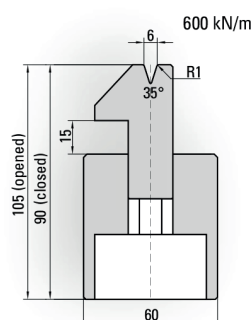
21.264 Material

835 mm	42CrMo4	30,5 kg
415 mm	42CrMo4	15,2 kg

Max. 1,0 mm material thickness

$R_m = 400 \text{ N/mm}^2$

Delivery time on request



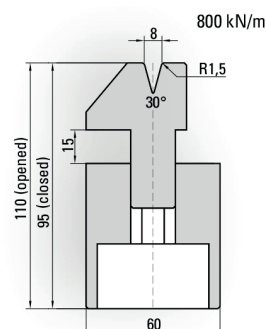
21.303 Material

835 mm	42CrMo4	33,0 kg
415 mm	42CrMo4	16,5 kg

Max. 1,5 mm material thickness

$R_m = 400 \text{ N/mm}^2$

Delivery time on request



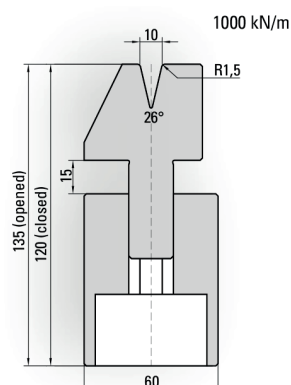
21.231 Material

835 mm	42CrMo4	41,5 kg
415 mm	42CrMo4	20,7 kg

Max. 2,0 mm material thickness

$R_m = 400 \text{ N/mm}^2$

Delivery time on request



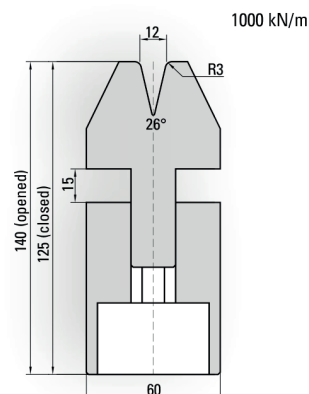
21.305 Material

835 mm	42CrMo4	43,5 kg
415 mm	42CrMo4	21,7 kg

Max. 3,0 mm material thickness

$R_m = 400 \text{ N/mm}^2$

Delivery time on request



50.720 Material

Per piece	42CrMo4	3,5 kg
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Accessory kit for pneumatic flattening dies consist of pressure-reducing valve and 12/24V electromagnetic valve

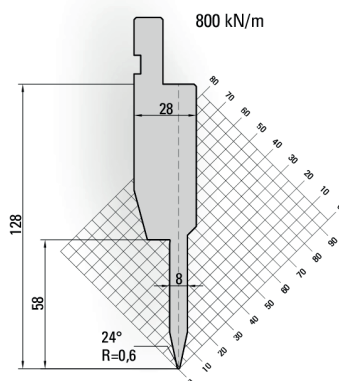
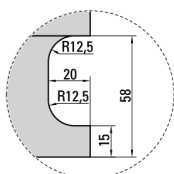
Delivery time on request



Flattening punches/top tools and flattening dies

11.550 Material

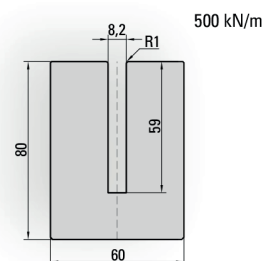
835 mm	42CrMo4	17,5 kg
415 mm	42CrMo4	8,7 kg
835 mm sectionalized	42CrMo4	17,5 kg



20.550 Material

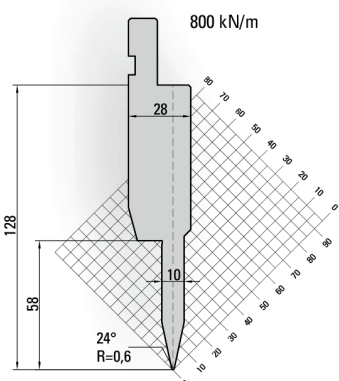
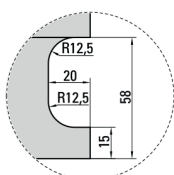
835 mm	42CrMo4	28,5 kg
415 mm	42CrMo4	14,2 kg
835 mm sectionalized	42CrMo4	28,5 kg

Max. 1,2 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



11.554 Material

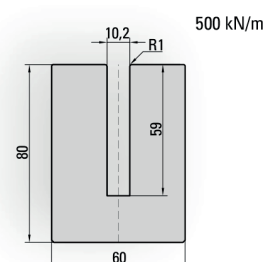
835 mm	42CrMo4	18,6 kg
415 mm	42CrMo4	9,3 kg
835 mm sectionalized	42CrMo4	18,6 kg



20.554 Material

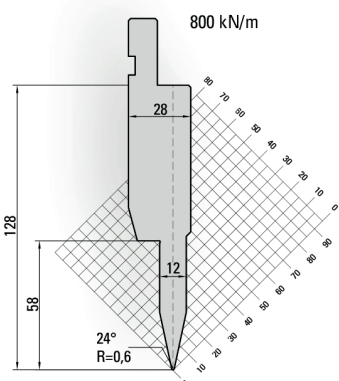
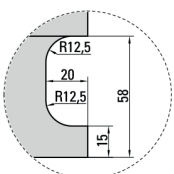
835 mm	42CrMo4	27,6 kg
415 mm	42CrMo4	13,8 kg
835 mm sectionalized	42CrMo4	27,6 kg

Max. 1,8 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



11.560 Material

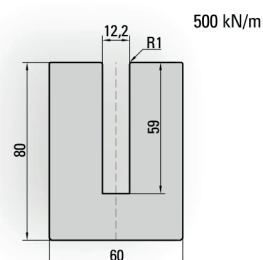
835 mm	42CrMo4	18,6 kg
415 mm	42CrMo4	9,3 kg
835 mm sectionalized	42CrMo4	18,6 kg



20.560 Material

835 mm	42CrMo4	26,8 kg
415 mm	42CrMo4	13,4 kg
835 mm sectionalized	42CrMo4	26,8 kg

Max. 2,5 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



EXAMPLE OF USE

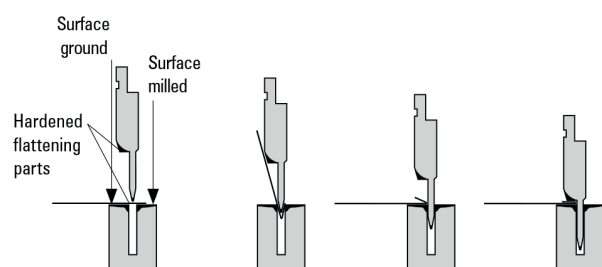


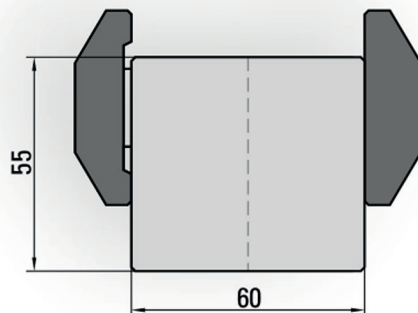
Table of force for flattening see page 48

Die heightening

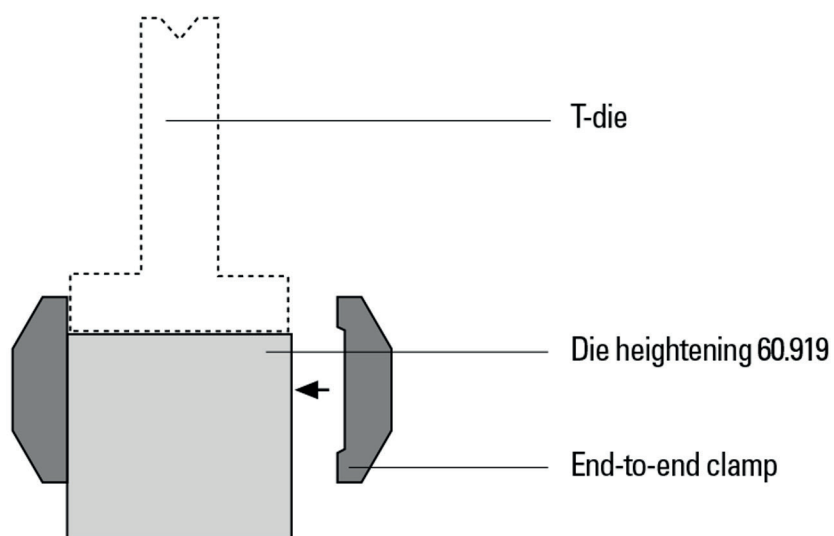
60.919 Material

835 mm	42CrMo4	29,0 kg
415 mm	42CrMo4	14,5 kg

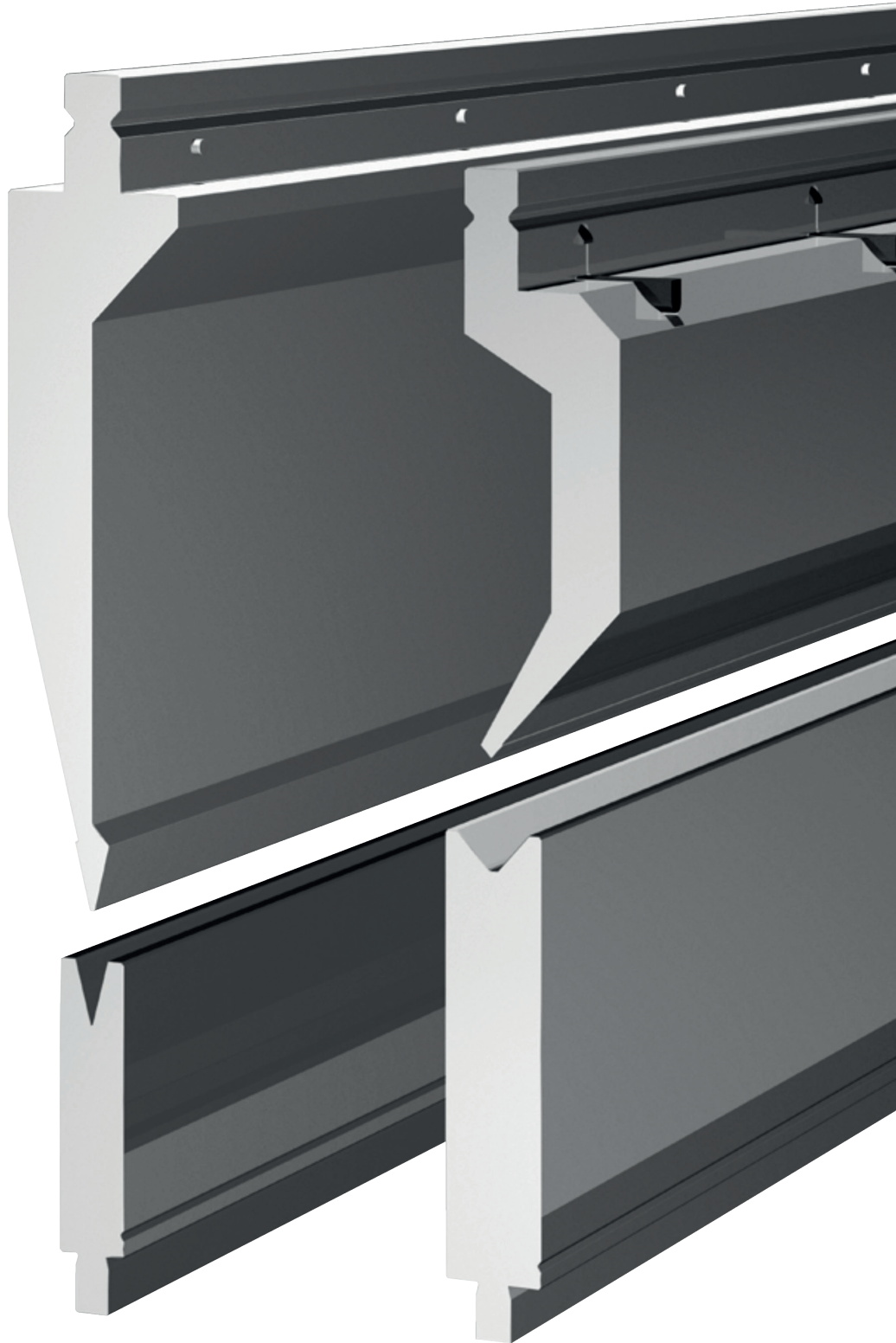
1000 kN/m



EXAMPLE OF USE

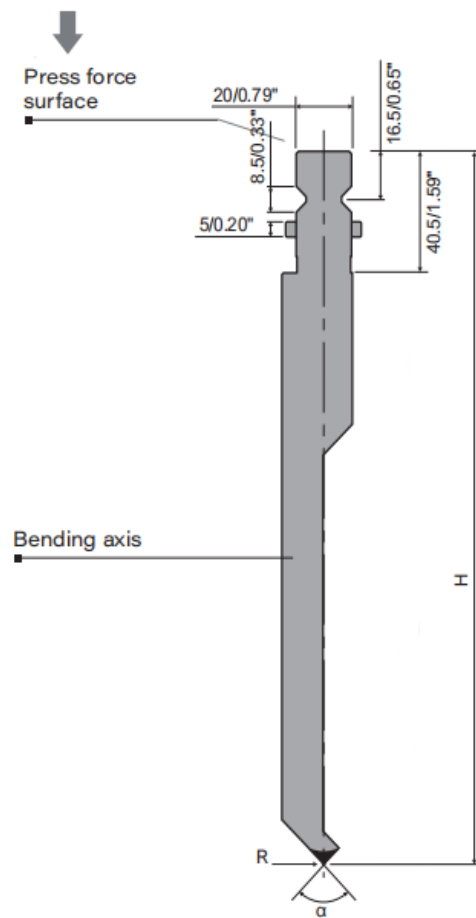
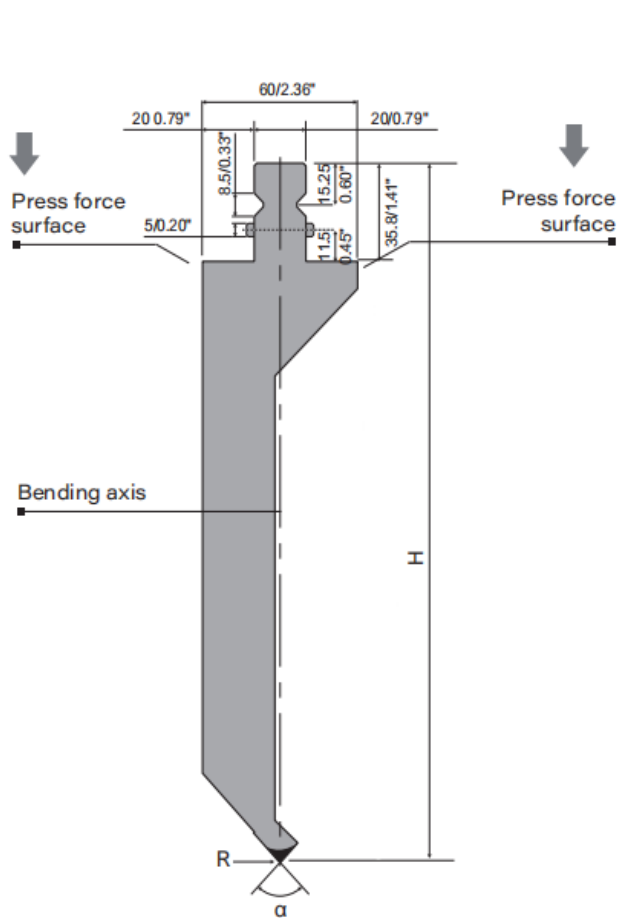


Explanation	54-55
Punches/top tools	
Simple Clamp	56
Safety pins	56
Flexible modification	57
Insertion of a steel insert	57
Punches/top tools H = 120 mm	58-59
Punches/top tools H = 140 mm	59
Punches/top tools H = 158 mm	60-61
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84° Dies, H = 100 mm	68 - 69
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Screwable flattening die H = 100 mm	79
Screwable flattening die H = 150 mm	79
Flattening punches/top tools and flattening dies	80-81
Die heightenings	81



Quality and precision

- Optimum materials
 - 42 CrMo4, tempered to 1100 – 1200 N/mm²
 - C45, tempered to 800 – 850 N/mm²
 - C45, 650 – 800 N/mm!
- Bending radius/intake radii hardened up to 54 – 60 HRC
- Precision ground
- Guaranteed exchangeability and parallelism
- Punch/top tool clampings in two different models
 - Simple Clamp at segments < 12,5 kg
 - Safety Pin at segments > 12,5 kg
- Self centering
- Usable on both sides
- Tool marking with all technical information



Tool lengths

PUNCHES / TOP TOOLS WITH SIMPLE CLAMP

Length **500 mm**



Length **300 mm**



Length **200 mm**

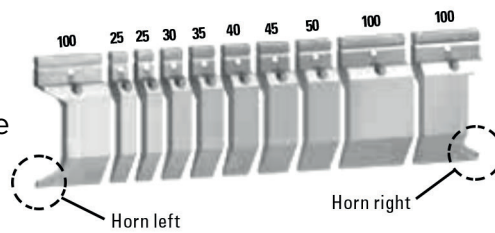


Length **100 mm**



Length **550 mm sectionalized**

- Sectionalized punches/top tools are delivered as a complete set
- 10 Segments, with horn extension left and right



Simple Clamp

PUNCHES/TOP TOOLS WITH SAFETY PINS

Length **500 mm**



Length **300 mm**



Length **200 mm**

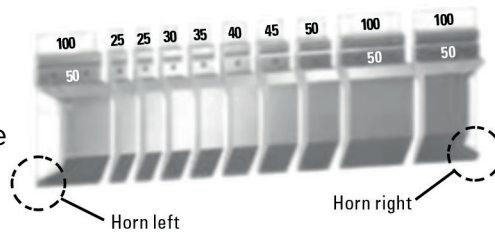


Length **100 mm**



Length **550 mm sectionalized**

- Sectionalized punches/top tools are delivered as a complete set
- 10 Segments, with horn extension left and right



Safety pin

DIES

Length **500 mm**



Length **300 mm**



Length **200 mm**

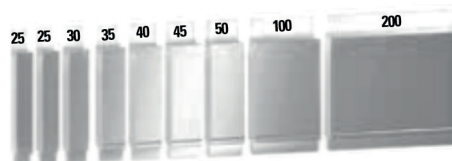


Length **100 mm**



Length **550 mm sectionalized**

- Sectionalized dies are delivered as a complete set
- 9 Segments



INFO

Create your own individual tool lengths set for punches/top tools and dies!
Offers for sets 1050 / 2050 / 3050 / 4050 mm, contact us!

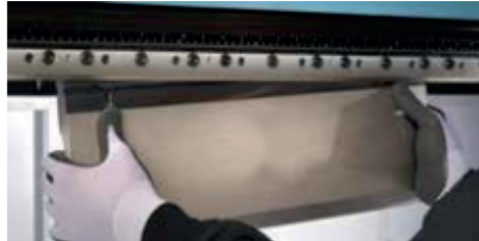
Simple Clamp

ADVANTAGES

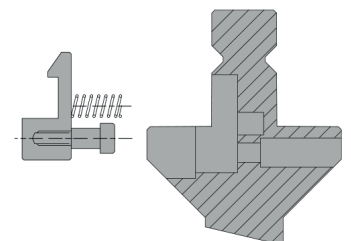
- > **Vertical** tool change for segments **up to 12,5 kg**
- > Less set-up time
- > Easy handling



Set consists of screw, spring and Simple Clamp



Vertical tool change



70.714 Material

Set 42CrMo4 0,012 kg

Suitable for punches/top tools
15.010 / 15.310 / 15.610



70.715 Material

Set 42CrMo4 0,014 kg

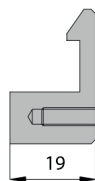
Suitable for punches/top tools
15.320/15.620



70.716 Material

Set 42CrMo4 0,016 kg

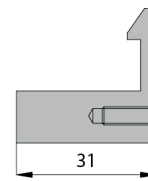
Suitable for punches/top tools
15.330/15.335/15.630/15.635
15.755/15.902/15.904/15.905



70.717 Material

Set 42CrMo4 0,023 kg

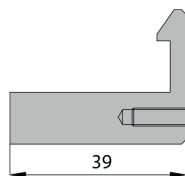
Suitable for punches/top tools
15.450 / 15.710 / 15.720
15.730 / 15.750 / 15.760



70.718 Material

Set 42CrMo4 0,027 kg

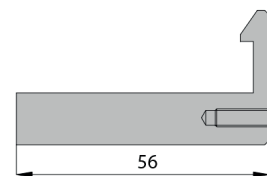
Suitable for punches/top tools
15.370/15.480/15.670/15.680



70.719 Material

Set 42CrMo4 0,038 kg

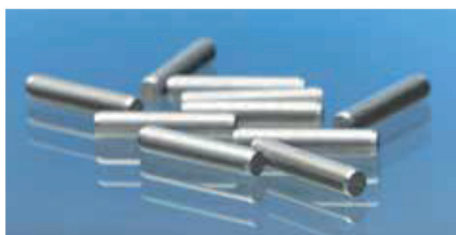
Suitable for punches/top tools
15.380 / 15.700 / 15.800



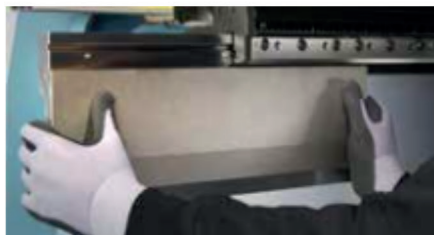
Safety pins

ADVANTAGES

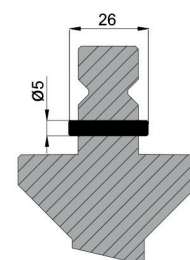
- > **Horizontal** tool change for segments **more than 12,5 kg**
- > Favorable purchase price (in comparison with Simple Clamp)
- > Hardened Safety pins on demand



Safety pins



Horizontal tool change



70.130 Material

10 pieces 42CrMo4 0,16 kg

Hardened

70.140 Material

10 pieces 42CrMo4 0,16 kg

Not hardened

Flexible modification**PUNCHES / TOP TOOLS**

- > Special cuttings
- > Individual horn extensions
- > Insertion of Simple Clamp
- > Insertion of Safety pins
- > Laser marking

550mm

- > mm: 100-100-50-45-40-35-30-25-25-10

**DIES**

- > Special cuttings
- > Laser marking

550mm

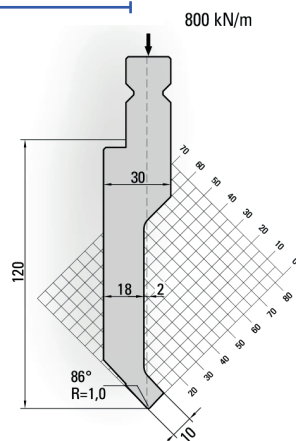
- > mm: 200-100-50-45-40-35-30-25-25



Punches/top tools H = 120 mm

15.330

Simple Clamp	Material	
500 mm	42CrMo4	12,0 kg
300 mm	42CrMo4	7,2 kg
200 mm	42CrMo4	4,8 kg
100 mm	42CrMo4	2,4 kg
550 mm sectionalized	42CrMo4	13,2 kg

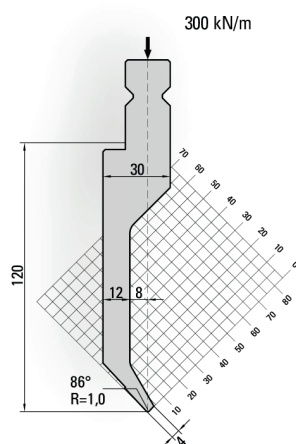


Further radii

R (mm)	H (mm)
0,5	119,8
2,0	119,2
2,5	119,0
3,0	118,8
4,0	118,2
5,0	117,7
6,0	117,2

15.335

Simple Clamp	Material	
500 mm	42CrMo4	9,9 kg
300 mm	42CrMo4	6,0 kg
200 mm	42CrMo4	4,0 kg
100 mm	42CrMo4	2,0 kg
550 mm sectionalized	42CrMo4	11,0 kg



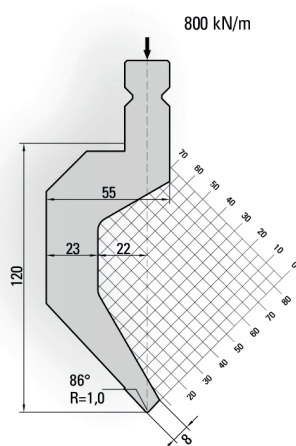
Further radii

R (mm)	H (mm)
0,5	119,8
2,0	119,2
2,5	119,0
3,0	118,8

15.370

Safety pins	Material	
500 mm	42CrMo4	14,5 kg

Simple Clamp	Material	
300 mm	42CrMo4	8,7 kg
200 mm	42CrMo4	5,8 kg
100 mm	42CrMo4	2,9 kg
550 mm sectionalized	42CrMo4	16,0 kg



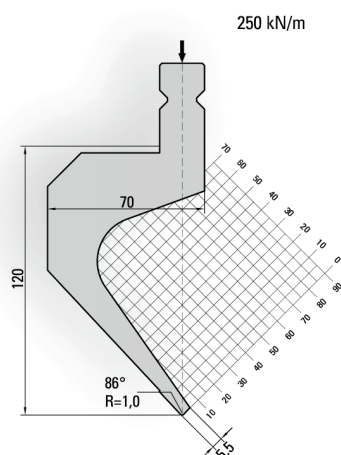
Further radii

R (mm)	H (mm)
0,5	119,8
2,0	119,2
2,5	119,0
3,0	118,7
4,0	118,3
5,0	117,8
6,0	117,3

15.380

Safety pins	Material	
500 mm	42CrMo4	15,4 kg

Simple Clamp	Material	
300 mm	42CrMo4	9,3 kg
200 mm	42CrMo4	6,2 kg
100 mm	42CrMo4	3,1 kg
550 mm sectionalized	42CrMo4	17,0 kg



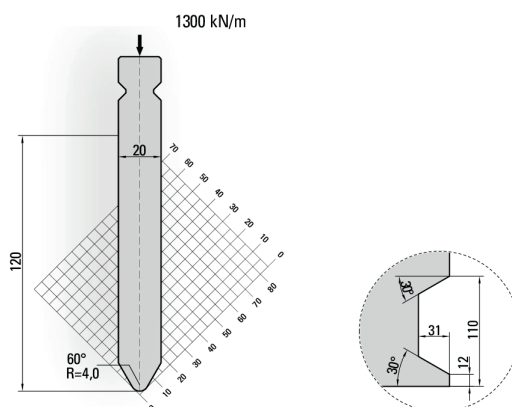
Further radii

R (mm)	H (mm)
0,5	119,8
2,0	119,2
2,5	119,0
3,0	118,7
4,0	118,3

Punches / top tools H = 120 mm

15.310

Simple Clamp	Material	
500 mm	42CrMo4	12,0 kg
300 mm	42CrMo4	7,2 kg
200 mm	42CrMo4	4,8 kg
100 mm	42CrMo4	2,4 kg
550 mm sectionalized	42CrMo4	13,2 kg

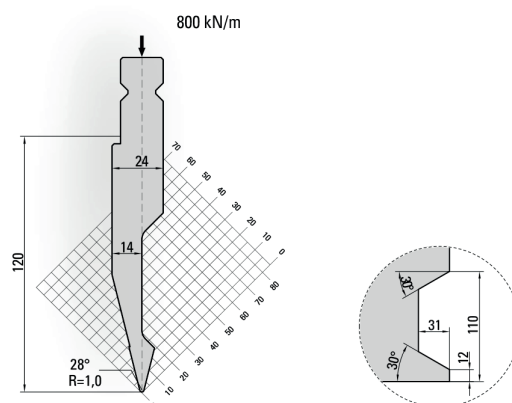


Further radii

R (mm)	H (mm)
2,0	119,8
2,5	119,8
3,0	119,8
5,0	118,8
6,0	117,6

15.320

Simple Clamp	Material	
500 mm	42CrMo4	10,0 kg
300 mm	42CrMo4	6,0 kg
200 mm	42CrMo4	4,0 kg
100 mm	42CrMo4	2,0 kg
550 mm sectionalized	42CrMo4	11,0 kg



Further radii

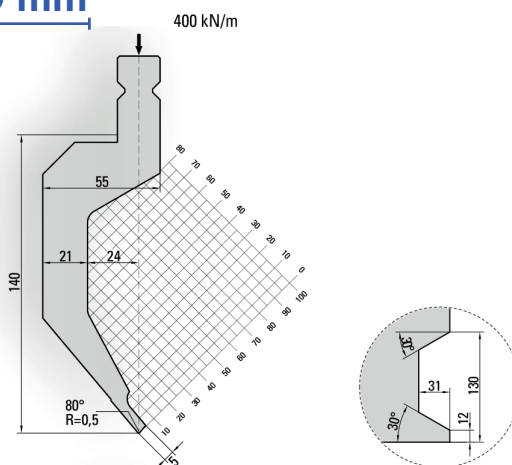
R (mm)	H (mm)
0,5	119,8
2,0	116,0
2,5	114,4
3,0	112,8
4,0	109,8

Punches / top tools H = 140 mm

15.480

Safety pins	Material	
500 mm	42CrMo4	15,3 kg

Simple Clamp	Material	
300 mm	42CrMo4	9,3 kg
200 mm	42CrMo4	6,2 kg
100 mm	42CrMo4	3,1 kg
550 mm sectionalized	42CrMo4	17,0 kg



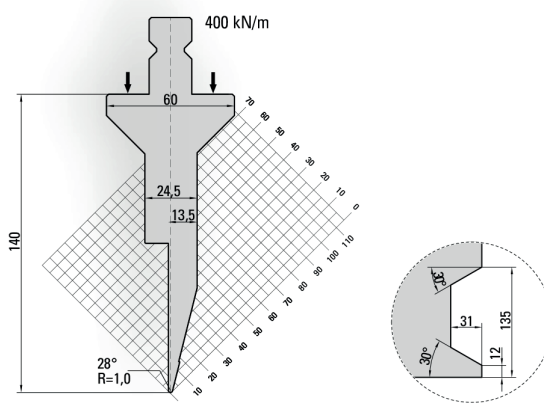
Further radii

R (mm)	H (mm)
1,0	139,4
2,0	138,8
2,5	138,5
3,0	138,2

15.450

Safety pins	Material	
500 mm	42CrMo4	14,5 kg

Simple Clamp	Material	
300 mm	42CrMo4	8,7 kg
200 mm	42CrMo4	5,8 kg
100 mm	42CrMo4	2,9 kg
550 mm sectionalized	42CrMo4	16,0 kg



Further radii

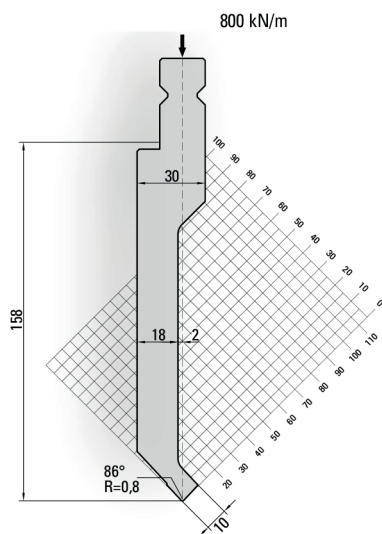
R (mm)	H (mm)
0,5	139,8

Punches / top tools H = 158 mm

15.630

Safety pins	Material	
500 mm	42CrMo4	15,0 kg

Simple Clamp	Material	
300 mm	42CrMo4	9,0 kg
200 mm	42CrMo4	6,0 kg
100 mm	42CrMo4	3,0 kg
550 mm sectionalized	42CrMo4	16,5 kg



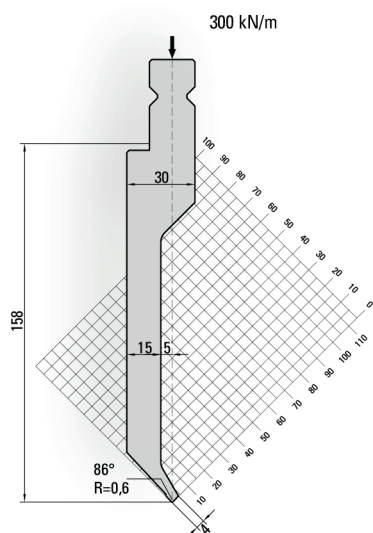
Further radii

R (mm)	H (mm)
0,5	157,8
1,0	157,6
2,0	157,2
2,5	157,0
3,0	156,7
4,0	156,3
5,0	155,8
6,0	155,3

15.635

Safety pins	Material	
500 mm	42CrMo4	13,5 kg

Simple Clamp	Material	
300 mm	42CrMo4	8,1 kg
200 mm	42CrMo4	5,4 kg
100 mm	42CrMo4	2,7 kg
550 mm sectionalized	42CrMo4	14,9 kg



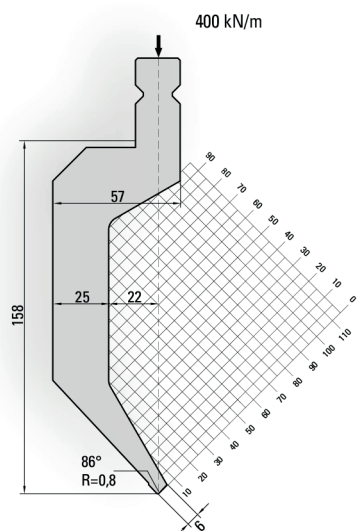
Further radii

R (mm)	H (mm)
0,5	157,8
1,0	157,6
2,0	157,2
2,5	157,0
3,0	156,7

15.670

Safety pins	Material	
500 mm	42CrMo4	19,0 kg

Simple Clamp	Material	
300 mm	42CrMo4	11,4 kg
200 mm	42CrMo4	7,6 kg
100 mm	42CrMo4	3,8 kg
550 mm sectionalized	42CrMo4	20,9 kg



Further radii

R (mm)	H (mm)
0,5	157,8
1,0	157,6
2,0	157,2
2,5	157,0
3,0	156,7
4,0	156,3
5,0	155,8

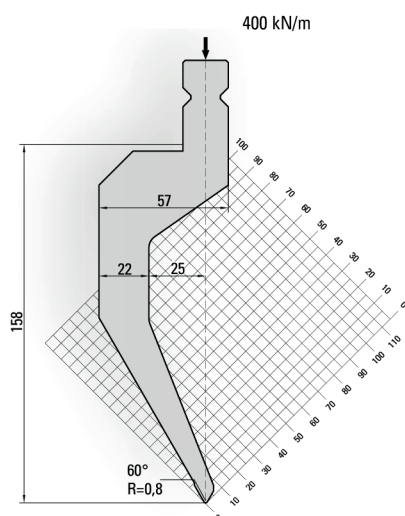
Punches/top tools H = 158 mm

15.680

Safety pins	Material	
500 mm	42CrMo4	17,5 kg

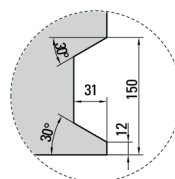
Simple Clamp

Material	
300 mm	42CrMo4 10,5 kg
200 mm	42CrMo4 7,0 kg
100 mm	42CrMo4 3,5 kg
550 mm sectionalized	42CrMo4 19,3 kg



Further radii

R (mm)	H (mm)
0,5	157,8
1,0	157,4
2,0	156,4
2,5	155,9
3,0	155,4

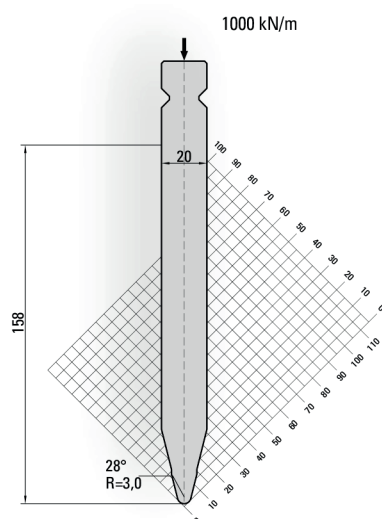


15.610

Safety pins	Material	
500 mm	42CrMo4	14,0 kg

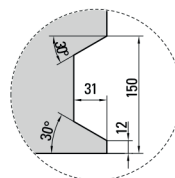
Simple Clamp

Material	
300 mm	42CrMo4 8,4 kg
200 mm	42CrMo4 5,6 kg
100 mm	42CrMo4 2,8 kg
550 mm sectionalized	42CrMo4 15,4 kg



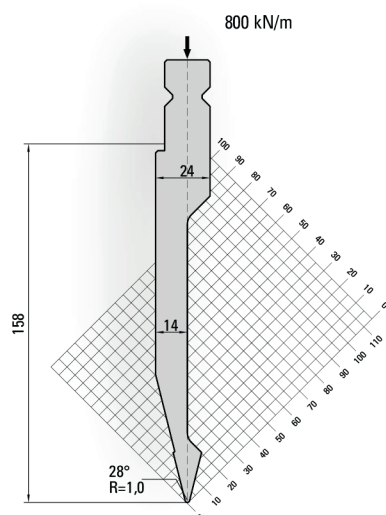
Further radii

R (mm)	H (mm)
0,5	157,8
1,0	157,8
2,0	157,8
2,5	157,8
4,0	154,0
5,0	150,8



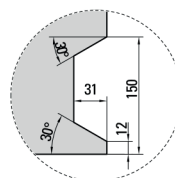
15.620

Simple Clamp	Material	
500 mm	42CrMo4	11,5 kg
300 mm	42CrMo4	6,9 kg
200 mm	42CrMo4	4,6 kg
100 mm	42CrMo4	2,3 kg
550 mm sectionalized	42CrMo4	12,7 kg



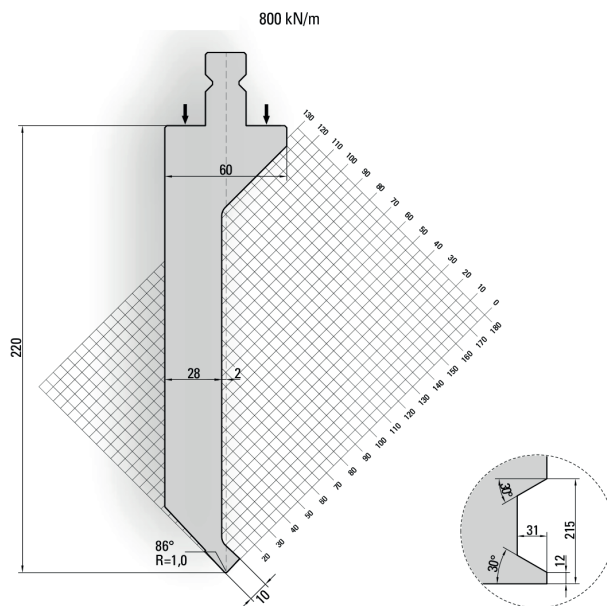
Further radii

R (mm)	H (mm)
0,5	157,8
2,0	154,0
2,5	152,4
3,0	150,8
4,0	147,8



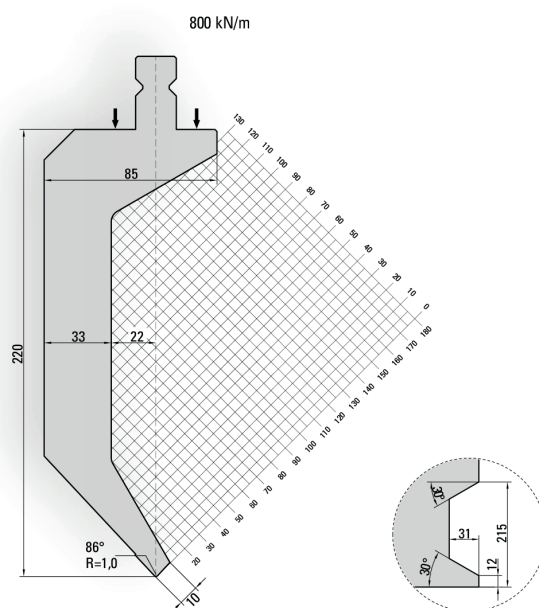
Punches/top tools H = 220 mm

15.710		
Safety pins	Material	
500 mm	42CrMo4	28,5 kg
300 mm	42CrMo4	17,1 kg
Simple Clamp	Material	
200 mm	42CrMo4	11,4 kg
100 mm	42CrMo4	5,7 kg
550 mm sectionalized	42CrMo4	31,4 kg



Further radii	
R (mm)	H (mm)
0,5	219,8
2,0	219,2
2,5	218,7
3,0	218,5
4,0	218,3
5,0	217,8
6,0	217,5

15.700		
Safety pins	Material	
500 mm	42CrMo4	33,5 kg
300 mm	42CrMo4	20,1 kg
200 mm	42CrMo4	13,4 kg
Simple Clamp	Material	
200 mm	42CrMo4	6,7 kg
550 mm sectionalized	42CrMo4	36,9 kg



Further radii	
R (mm)	H (mm)
0,5	219,8
2,0	219,2
2,5	218,7
3,0	218,5
4,0	218,3
5,0	217,8
6,0	217,5

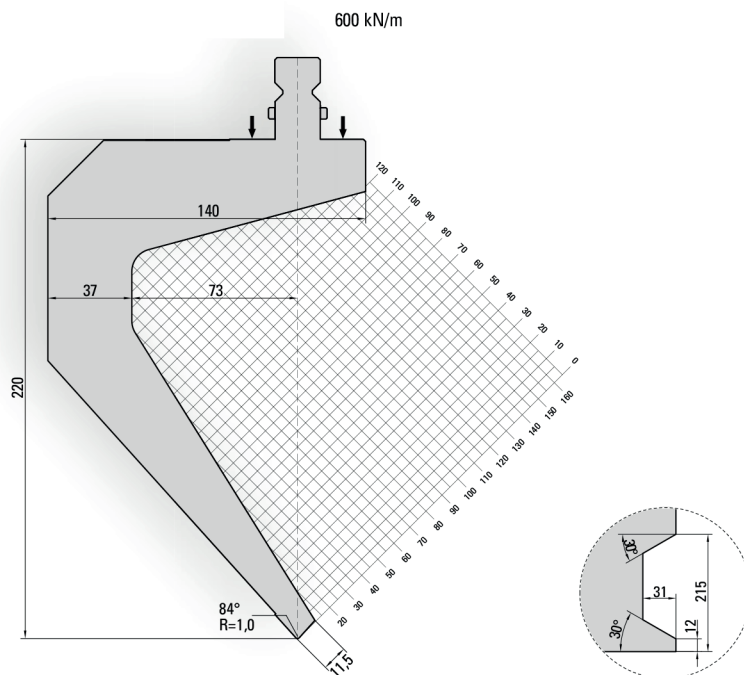
INFO

Punches/top tools System WILA type I and System LVD type I can also be used in a clamping Trumpf!

Punches / top tools H = 220 mm

15.790

Safety pins	Material	
200 mm	42CrMo4	17,6 kg
100 mm	42CrMo4	8,8 kg
550 mm sectionalized	42CrMo4	48,4 kg



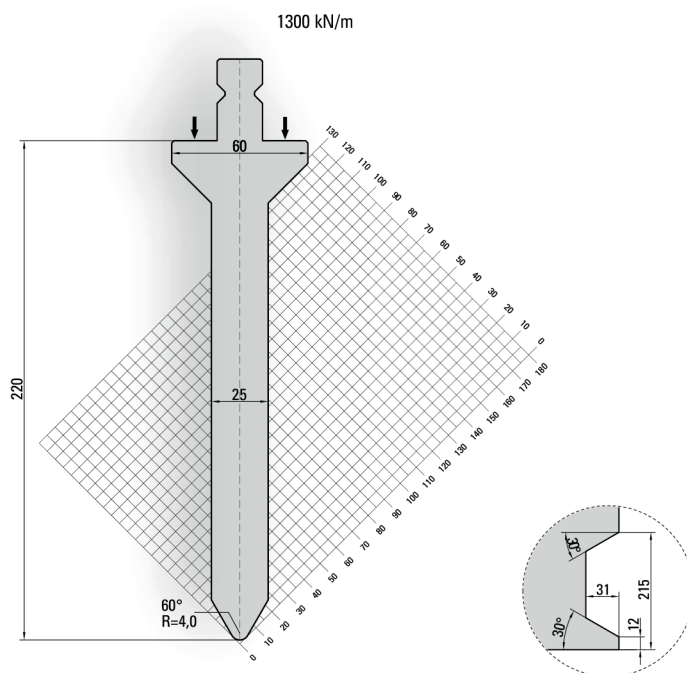
Further radii

R (mm)	H (mm)
0,5	219,8
2,0	219,2
2,5	218,7
3,0	218,5
4,0	218,3
5,0	217,8
6,0	217,5

15.730

Safety pins	Material	
500 mm	42CrMo4	26,0 kg
300 mm	42CrMo4	15,6 kg

Simple Clamp	Material	
200 mm	42CrMo4	10,4 kg
100 mm	42CrMo4	5,2 kg
550 mm sectionalized	42CrMo4	28,6 kg



Further radii

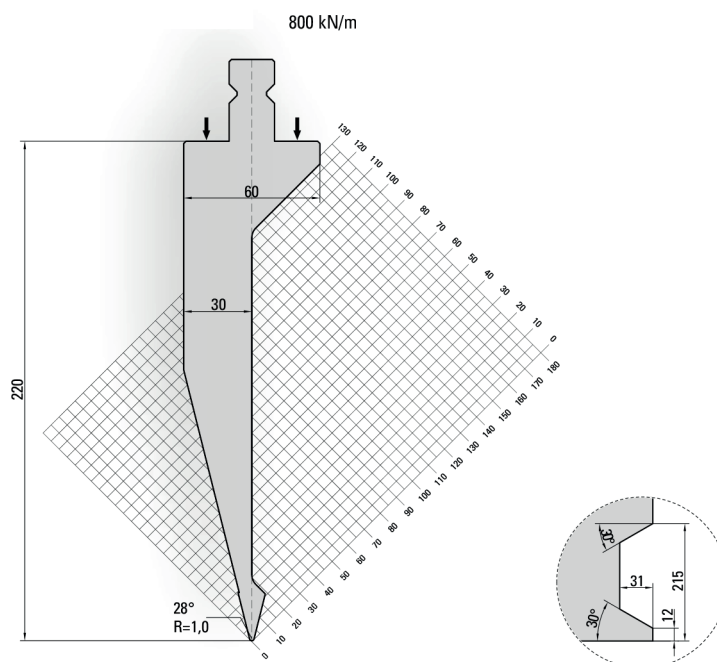
R (mm)	H (mm)
2,0	219,8
2,5	219,8
3,0	219,8
5,0	218,6
6,0	217,6

Punch / top tool H = 220 mm

15.720

Safety pins	Material	
500 mm	42CrMo4	25,0 kg
300 mm	42CrMo4	15,0 kg

Simple Clamp	Material	
200 mm	42CrMo4	10,0 kg
100 mm	42CrMo4	5,0 kg
550 mm sectionalized	42CrMo4	27,5 kg



Further radii

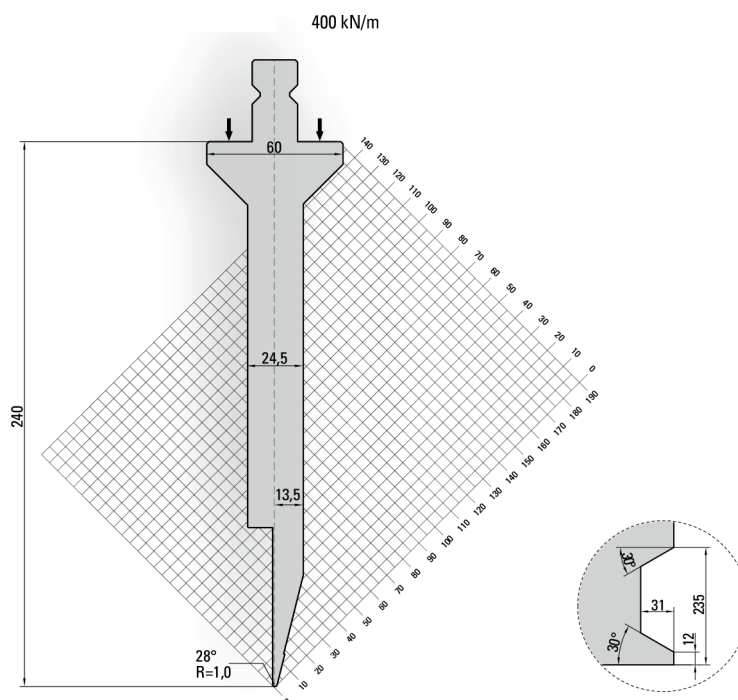
R (mm)	H (mm)
0,5	219,8
2,0	216,0
2,5	214,0
3,0	212,8
4,0	209,8

Punch/top tool H = 240 mm

15.750

Safety pins	Material	
500 mm	42CrMo4	24,0 kg
300 mm	42CrMo4	14,4 kg

Simple Clamp	Material	
200 mm	42CrMo4	9,6 kg
100 mm	42CrMo4	4,8 kg
550 mm sectionalized	42CrMo4	26,4 kg



Further radii

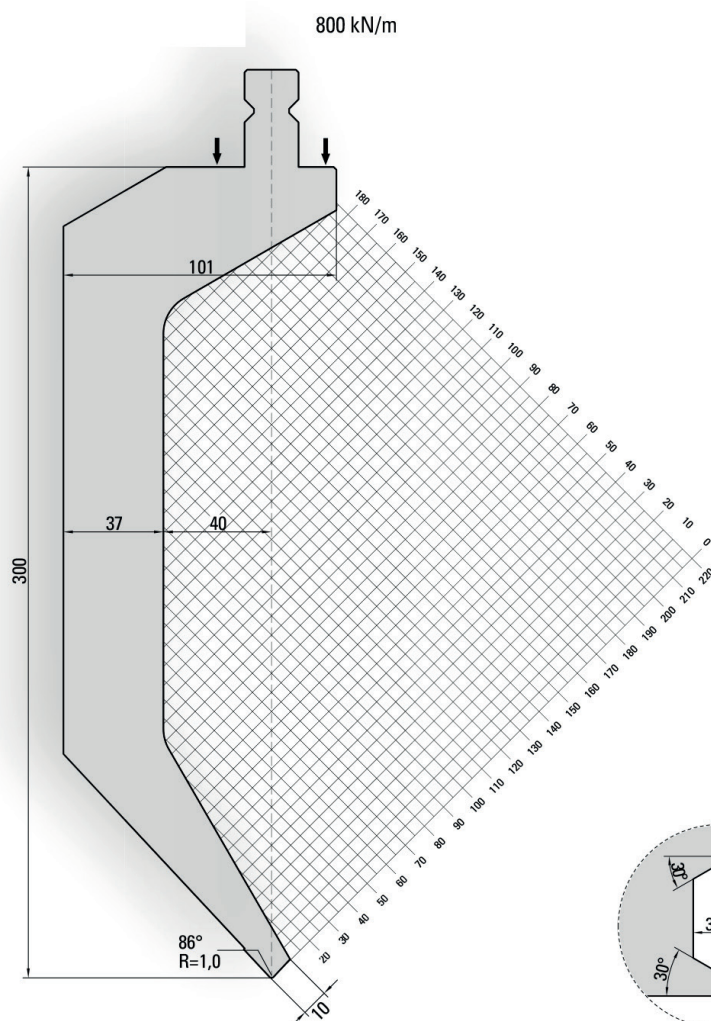
R (mm)	H (mm)
0,5	239,8

Punch / top tool H = 300 mm

15.800

Safety pins	Material	
200 mm	42CrMo4	19,6 kg

Simple Clamp	Material	
100 mm	42CrMo4	9,8 kg
550 mm sectionalized	42CrMo4	53,9 kg



Further radii

R (mm)	H (mm)
0,5	219,8
2,0	216,0
2,5	214,0
3,0	212,8
4,0	209,8
5,0	297,8
6,0	297,5

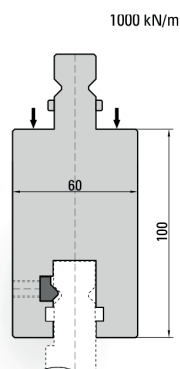
INFO

Punches/top tools System WILA type I and System LVD type I can also be used in a clamping System Trumpf!

Punch / top tool distance pieces, H = 100 mm

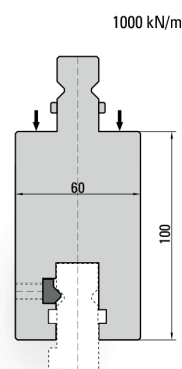
50.410

Safety pins	Material	
150 mm	42CrMo4	6,9 kg



50.415

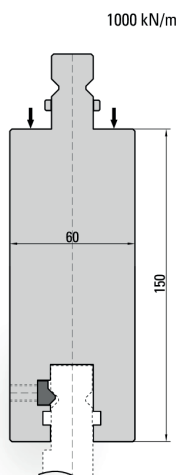
Safety pins	Material	
50 mm	42CrMo4	2,3 kg



Punch / top tool distance pieces, H = 150 mm

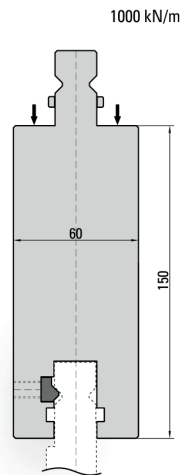
50.440

Safety pins	Material	
150 mm	42CrMo4	10,5 kg



50.445

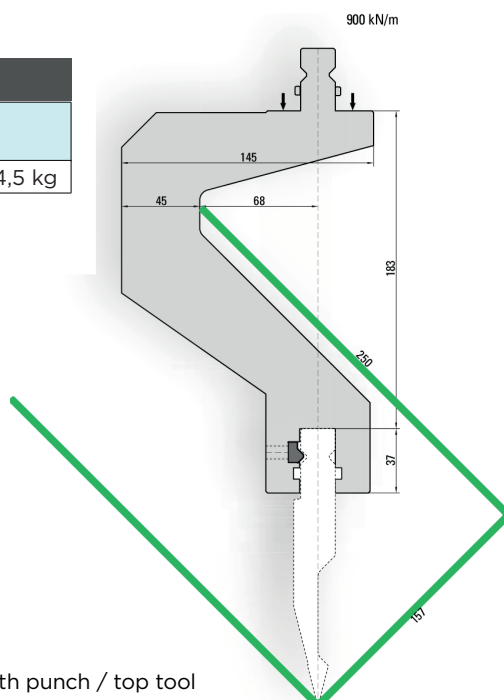
Safety pins	Material	
50 mm	42CrMo4	3,5 kg



Punch / top tool distance piece, H = 220 mm

50.503

Safety pins	Material	
200 mm	42CrMo4	24,5 kg

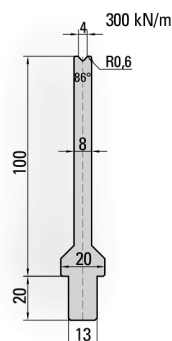


Example with punch / top tool
15.320

86° Dies, H = 100 mm

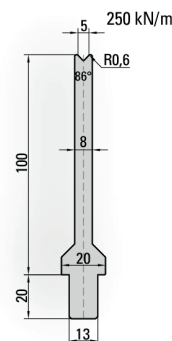
25.100 Material

500 mm	42CrMo4	4,5 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm	42CrMo4	5,0 kg
sectionalized		



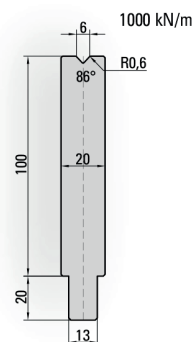
25.350 Material

500 mm	42CrMo4	4,5 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm	42CrMo4	5,0 kg
sectionalized		



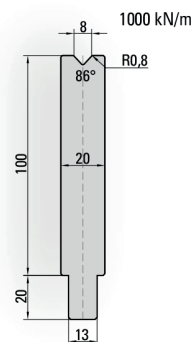
25.101 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm	42CrMo4	9,9 kg
sectionalized		



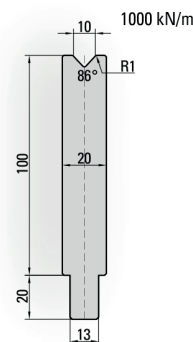
25.102 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm	42CrMo4	9,9 kg
sectionalized		



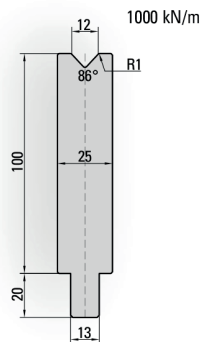
25.103 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm	42CrMo4	9,9 kg
sectionalized		



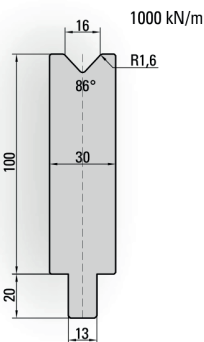
25.104 Material

500 mm	42CrMo4	10,5 kg
300 mm	42CrMo4	6,3 kg
200 mm	42CrMo4	4,2 kg
100 mm	42CrMo4	2,1 kg
550 mm	42CrMo4	11,6 kg
sectionalized		



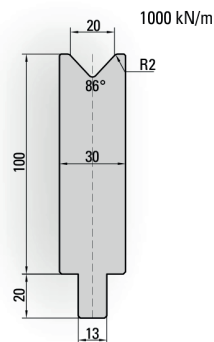
25.105 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm	42CrMo4	13,8 kg
sectionalized		



25.106 Material

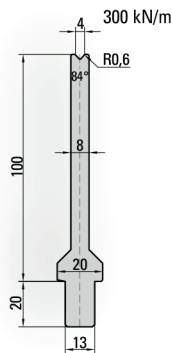
500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm	42CrMo4	13,8 kg
sectionalized		



84° Dies, H = 100 mm

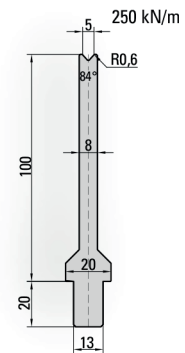
25.200 Material

500 mm	42CrMo4	4,5 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm sectionalized	42CrMo4	5,0 kg



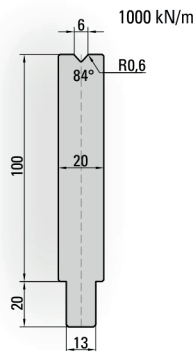
25.300 Material

500 mm	42CrMo4	4,5 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm sectionalized	42CrMo4	5,0 kg



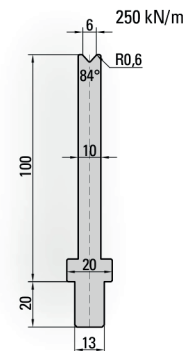
25.201 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg



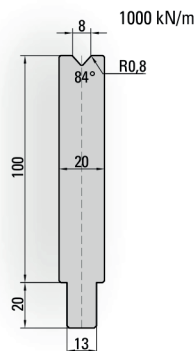
25.301 Material

500 mm	42CrMo4	5,5 kg
300 mm	42CrMo4	3,3 kg
200 mm	42CrMo4	2,2 kg
100 mm	42CrMo4	1,1 kg
550 mm sectionalized	42CrMo4	6,0 kg



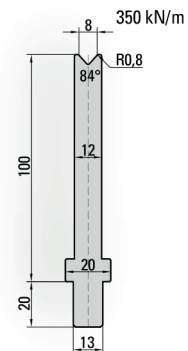
25.202 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg



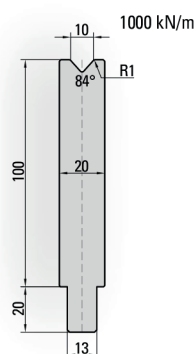
25.302 Material

500 mm	42CrMo4	6,0 kg
300 mm	42CrMo4	3,6 kg
200 mm	42CrMo4	2,4 kg
100 mm	42CrMo4	1,2 kg
550 mm sectionalized	42CrMo4	6,6 kg



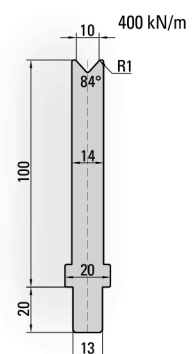
25.203 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg



25.303 Material

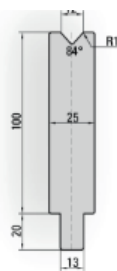
500 mm	42CrMo4	6,5 kg
300 mm	42CrMo4	3,9 kg
200 mm	42CrMo4	2,6 kg
100 mm	42CrMo4	1,3 kg
550 mm sectionalized	42CrMo4	7,2 kg



84° Dies, H = 100 mm

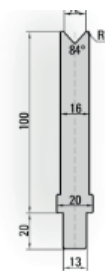
25.204 Material

500 mm	42CrMo4	10,5 kg
300 mm	42CrMo4	6,3 kg
200 mm	42CrMo4	4,2 kg
100 mm	42CrMo4	2,1 kg
550 mm sectionalized	42CrMo4	11,6 kg



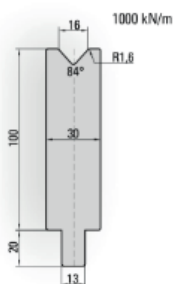
25.304 Material

500 mm	42CrMo4	7,0 kg
300 mm	42CrMo4	4,2 kg
200 mm	42CrMo4	2,8 kg
100 mm	42CrMo4	1,4 kg
550 mm sectionalized	42CrMo4	7,7 kg



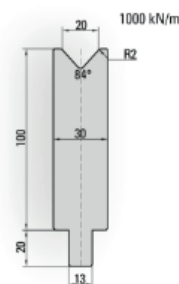
25.205 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



25.206 Material

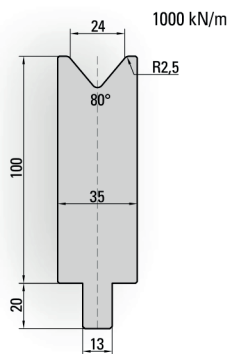
500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



80° Dies, H = 100 mm

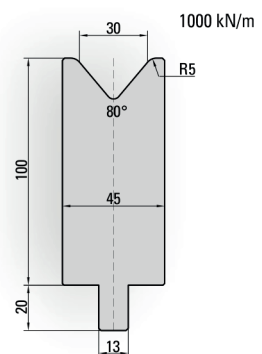
25.207 Material

500 mm	42CrMo4	14,0 kg
300 mm	42CrMo4	8,4 kg
200 mm	42CrMo4	5,6 kg
100 mm	42CrMo4	2,8 kg
550 mm sectionalized	42CrMo4	15,4 kg



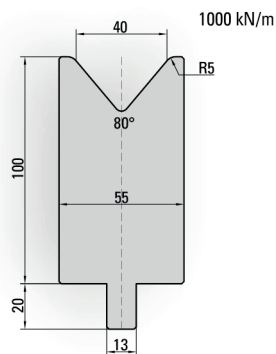
25.208 Material

500 mm	42CrMo4	17,5 kg
300 mm	42CrMo4	10,5 kg
200 mm	42CrMo4	7,0 kg
100 mm	42CrMo4	3,5 kg
550 mm sectionalized	42CrMo4	19,3 kg



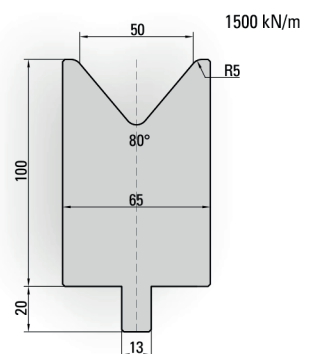
25.209 Material

500 mm	42CrMo4	20,5 kg
300 mm	42CrMo4	12,3 kg
200 mm	42CrMo4	8,2 kg
100 mm	42CrMo4	4,1 kg
550 mm sectionalized	42CrMo4	22,6 kg



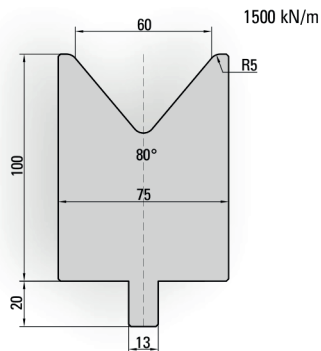
25.210 Material

500 mm	42CrMo4	23,0 kg
300 mm	42CrMo4	13,8 kg
200 mm	42CrMo4	9,2 kg
100 mm	42CrMo4	4,6 kg
550 mm sectionalized	42CrMo4	25,3 kg



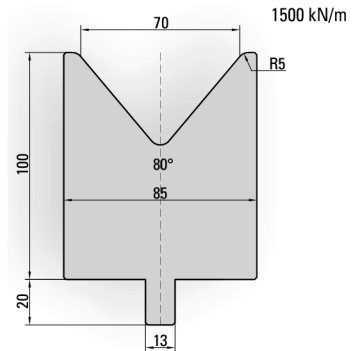
25.111 Material

500 mm	42CrMo4	26,0 kg
300 mm	42CrMo4	15,6 kg
200 mm	42CrMo4	10,4 kg
100 mm	42CrMo4	5,2 kg
550 mm sectionalized	42CrMo4	28,6 kg



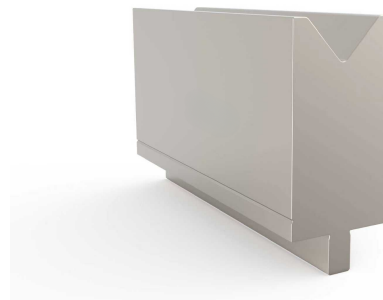
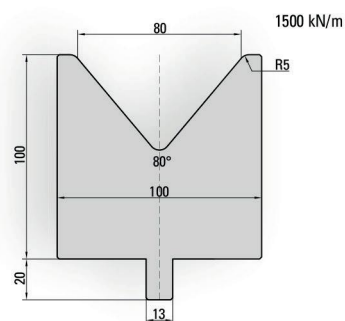
25.112 Material

500 mm	42CrMo4	28,0 kg
300 mm	42CrMo4	16,8 kg
200 mm	42CrMo4	11,2 kg
100 mm	42CrMo4	5,6 kg
550 mm sectionalized	42CrMo4	30,8 kg



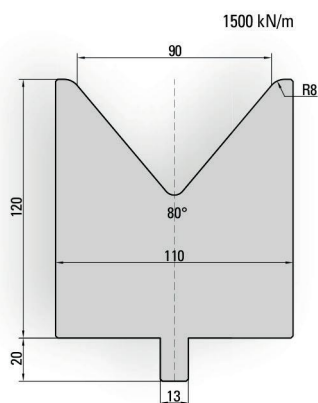
80° Die, H = 100 mm

25.113	Material	
500 mm	42CrMo4	32,0 kg
300 mm	42CrMo4	19,2 kg
200 mm	42CrMo4	12,8 kg
100 mm	42CrMo4	6,4 kg
550 mm sectionalized	42CrMo4	35,2 kg

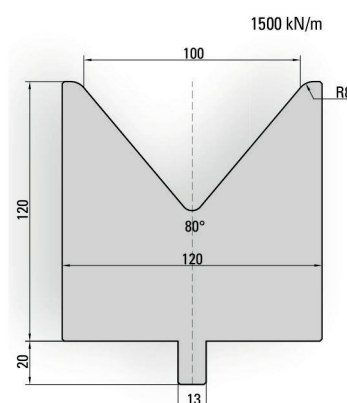


80° Dies, H = 120 mm

25.114	Material	
500 mm	42CrMo4	42,5 kg
300 mm	42CrMo4	25,5 kg
200 mm	42CrMo4	17,0 kg
100 mm	42CrMo4	8,5 kg
550 mm sectionalized	42CrMo4	46,8 kg

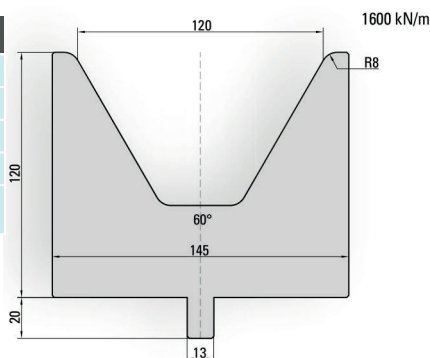


25.115	Material	
500 mm	42CrMo4	44,5 kg
300 mm	42CrMo4	26,7 kg
200 mm	42CrMo4	17,8 kg
100 mm	42CrMo4	8,9 kg
550 mm sectionalized	42CrMo4	49,0 kg



60° Die, H = 120 mm

25.116	Material	
500 mm	42CrMo4	45,5 kg
300 mm	42CrMo4	27,3 kg
200 mm	42CrMo4	18,2 kg
100 mm	42CrMo4	9,1 kg
550 mm sectionalized	42CrMo4	50,0 kg

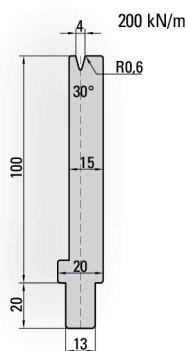


30° Dies, H = 100 mm

25.400 Material

500 mm	42CrMo4	7,0 kg
300 mm	42CrMo4	4,2 kg
200 mm	42CrMo4	2,8 kg
100 mm	42CrMo4	1,4 kg
550 mm sectionalized	42CrMo4	7,7 kg

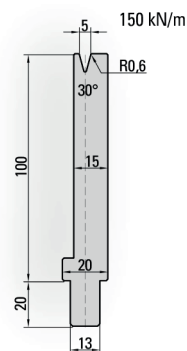
60.120



25.500 Material

500 mm	42CrMo4	7,0 kg
300 mm	42CrMo4	4,2 kg
200 mm	42CrMo4	2,8 kg
100 mm	42CrMo4	1,4 kg
550 mm sectionalized	42CrMo4	7,7 kg

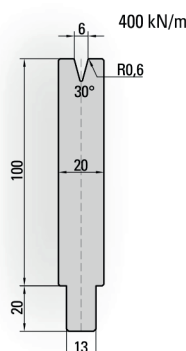
60.120



25.401 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg

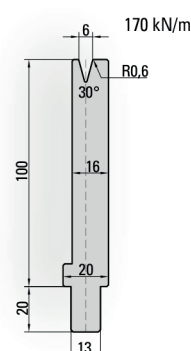
60.120



25.501 Material

500 mm	42CrMo4	7,5 kg
300 mm	42CrMo4	4,5 kg
200 mm	42CrMo4	3,0 kg
100 mm	42CrMo4	1,5 kg
550 mm sectionalized	42CrMo4	8,3 kg

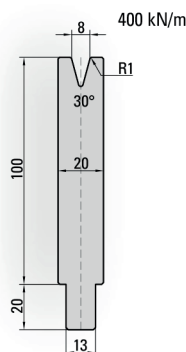
60.120



25.402 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg

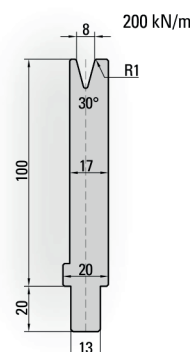
60.120



25.502 Material

500 mm	42CrMo4	7,5 kg
300 mm	42CrMo4	4,5 kg
200 mm	42CrMo4	3,0 kg
100 mm	42CrMo4	1,5 kg
550 mm sectionalized	42CrMo4	8,3 kg

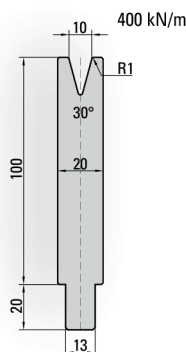
60.120



25.403 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg

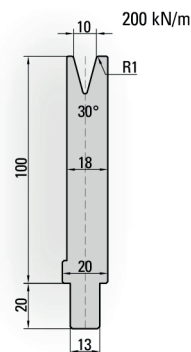
60.120



25.503 Material

500 mm	42CrMo4	8,0 kg
300 mm	42CrMo4	4,8 kg
200 mm	42CrMo4	3,2 kg
100 mm	42CrMo4	1,6 kg
550 mm sectionalized	42CrMo4	8,8 kg

60.120

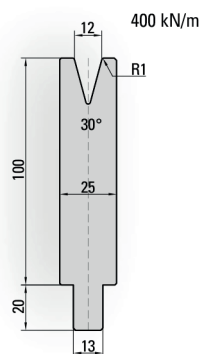


30° Dies, H = 100 mm

25.404 Material

500 mm	42CrMo4	10,0 kg
300 mm	42CrMo4	6,0 kg
200 mm	42CrMo4	4,0 kg
100 mm	42CrMo4	2,0 kg
550 mm sectionalized	42CrMo4	11,0 kg

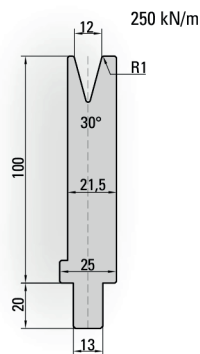
60.120



25.504 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg

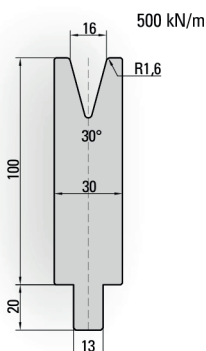
60.120



25.405 Material

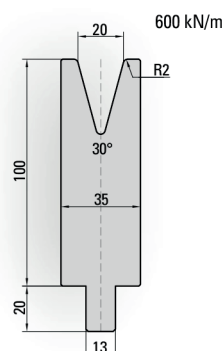
500 mm	42CrMo4	12,0 kg
300 mm	42CrMo4	7,2 kg
200 mm	42CrMo4	4,8 kg
100 mm	42CrMo4	2,4 kg
550 mm sectionalized	42CrMo4	13,2 kg

60.120



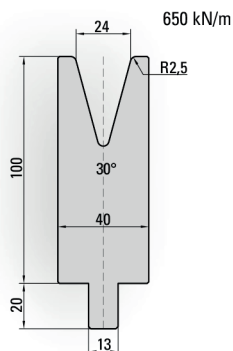
25.406 Material

500 mm	42CrMo4	13,0 kg
300 mm	42CrMo4	7,8 kg
200 mm	42CrMo4	5,2 kg
100 mm	42CrMo4	2,6 kg
550 mm sectionalized	42CrMo4	14,3 kg



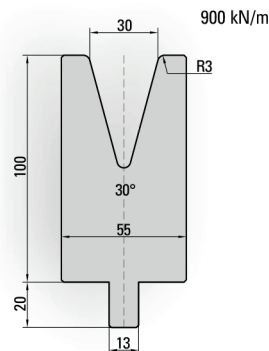
25.407 Material

500 mm	42CrMo4	14,5 kg
300 mm	42CrMo4	8,7 kg
200 mm	42CrMo4	5,8 kg
100 mm	42CrMo4	2,9 kg
550 mm sectionalized	42CrMo4	16,0 kg



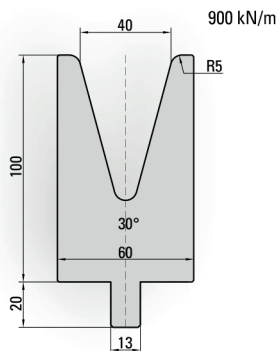
25.408 Material

500 mm	42CrMo4	19,0 kg
300 mm	42CrMo4	11,4 kg
200 mm	42CrMo4	7,6 kg
100 mm	42CrMo4	3,8 kg
550 mm sectionalized	42CrMo4	20,9 kg



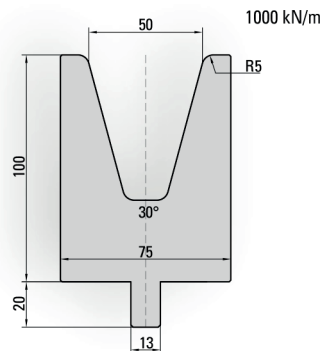
25.409 Material

500 mm	42CrMo4	18,5 kg
300 mm	42CrMo4	11,1 kg
200 mm	42CrMo4	7,4 kg
100 mm	42CrMo4	3,7 kg
550 mm sectionalized	42CrMo4	20,4 kg



25.410 Material

500 mm	42CrMo4	21,5 kg
300 mm	42CrMo4	12,9 kg
200 mm	42CrMo4	8,6 kg
100 mm	42CrMo4	4,3 kg
550 mm sectionalized	42CrMo4	23,7 kg



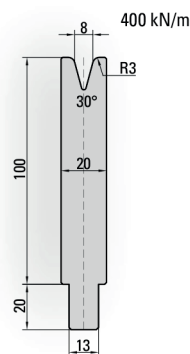
30° Dies, H = 100 mm, R = 3,0

ADVANTAGES

- Reduces marks on bended sheets
- Applicable for foil-coated sheets

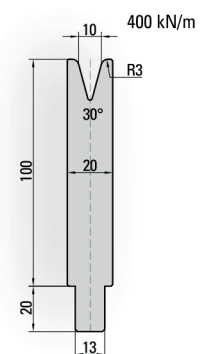
25.422 Material		
500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg

60.120



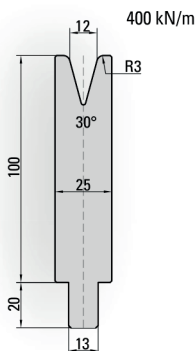
25.423 Material		
500 mm	42CrMo4	8,5 kg
300 mm	42CrMo4	5,1 kg
200 mm	42CrMo4	3,4 kg
100 mm	42CrMo4	1,7 kg
550 mm sectionalized	42CrMo4	9,4 kg

60.120



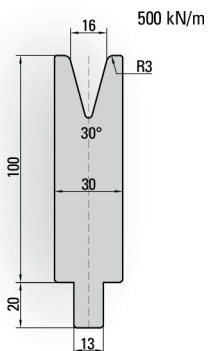
25.424 Material		
500 mm	42CrMo4	10,0 kg
300 mm	42CrMo4	6,0 kg
200 mm	42CrMo4	4,0 kg
100 mm	42CrMo4	2,0 kg
550 mm sectionalized	42CrMo4	11,0 kg

60.120

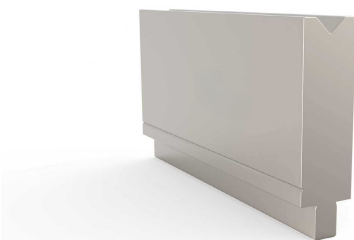


25.425 Material		
500 mm	42CrMo4	12,0 kg
300 mm	42CrMo4	7,2 kg
200 mm	42CrMo4	4,8 kg
100 mm	42CrMo4	2,4 kg
550 mm sectionalized	42CrMo4	13,2 kg

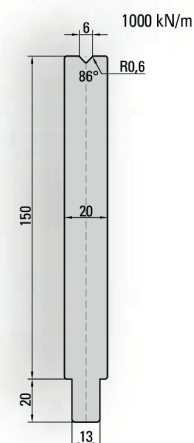
60.120



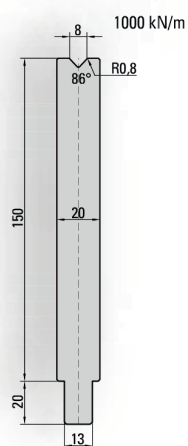
86° Dies, H = 150 mm



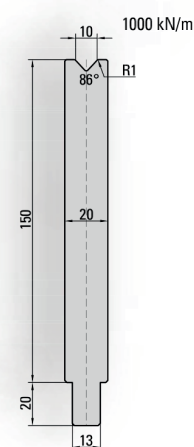
25.601	Material	
500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



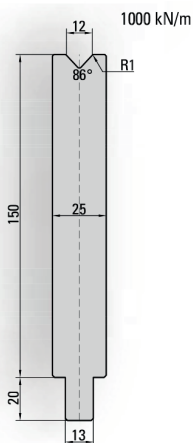
25.602	Material	
500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



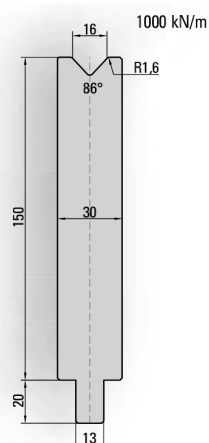
25.603	Material	
500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



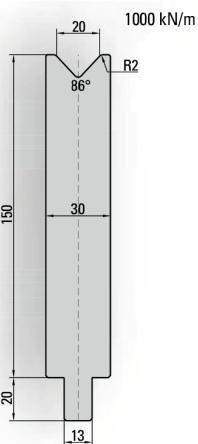
25.604	Material	
500 mm	42CrMo4	15,5 kg
300 mm	42CrMo4	9,3 kg
200 mm	42CrMo4	6,2 kg
100 mm	42CrMo4	3,1 kg
550 mm sectionalized	42CrMo4	17,1 kg



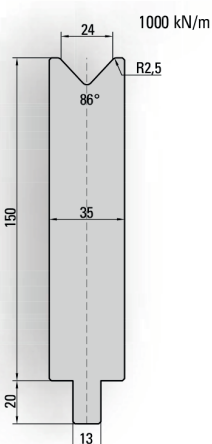
25.605	Material	
500 mm	42CrMo4	18,0 kg
300 mm	42CrMo4	10,8 kg
200 mm	42CrMo4	7,2 kg
100 mm	42CrMo4	3,6 kg
550 mm sectionalized	42CrMo4	19,8 kg



25.606	Material	
500 mm	42CrMo4	18,0 kg
300 mm	42CrMo4	10,8 kg
200 mm	42CrMo4	7,2 kg
100 mm	42CrMo4	3,6 kg
550 mm sectionalized	42CrMo4	19,8 kg



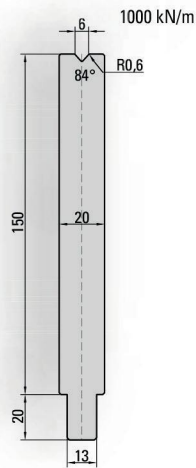
25.607	Material	
500 mm	42CrMo4	21,0 kg
300 mm	42CrMo4	12,6 kg
200 mm	42CrMo4	8,4 kg
100 mm	42CrMo4	4,2 kg
550 mm sectionalized	42CrMo4	23,1 kg



84° Dies, H = 150 mm

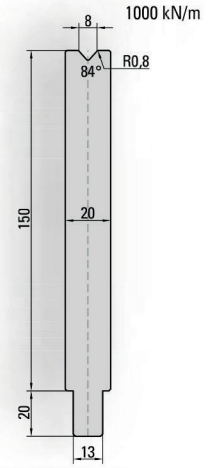
25.621 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



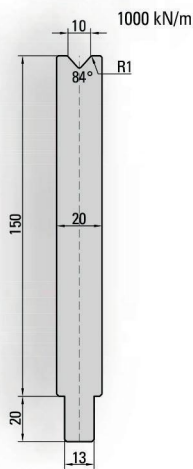
25.622 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



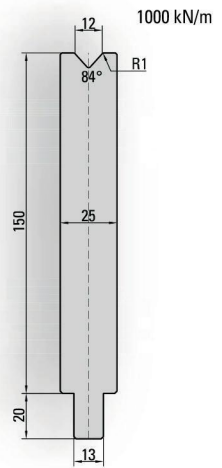
25.623 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



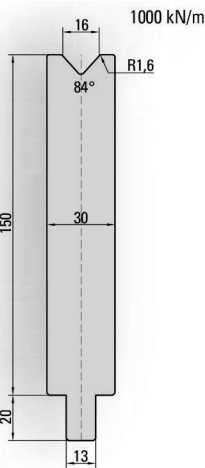
25.624 Material

500 mm	42CrMo4	15,5 kg
300 mm	42CrMo4	9,3 kg
200 mm	42CrMo4	6,2 kg
100 mm	42CrMo4	3,1 kg
550 mm sectionalized	42CrMo4	17,1 kg



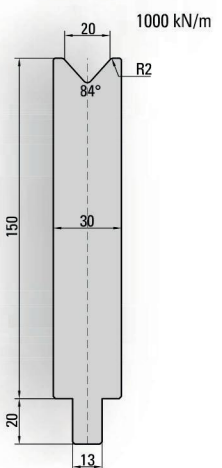
25.625 Material

500 mm	42CrMo4	18,0 kg
300 mm	42CrMo4	10,8 kg
200 mm	42CrMo4	7,2 kg
100 mm	42CrMo4	3,6 kg
550 mm sectionalized	42CrMo4	19,8 kg



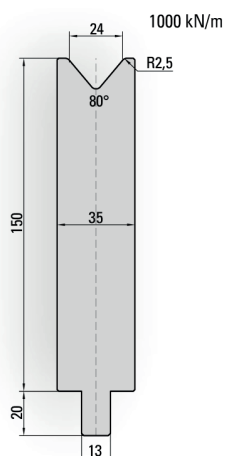
25.626 Material

500 mm	42CrMo4	18,0 kg
300 mm	42CrMo4	10,8 kg
200 mm	42CrMo4	7,2 kg
100 mm	42CrMo4	3,6 kg
550 mm sectionalized	42CrMo4	19,8 kg

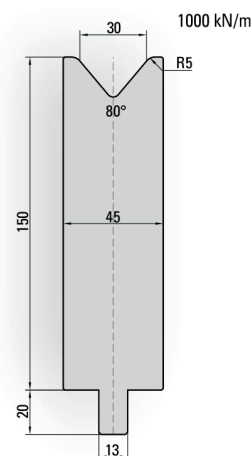


80° Dies, H = 150 mm

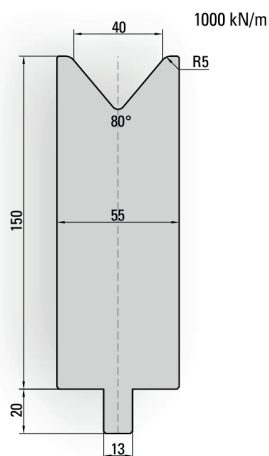
25.627	Material		
500 mm	42CrMo4	21,0 kg	
300 mm	42CrMo4	12,6 kg	
200 mm	42CrMo4	8,4 kg	
100 mm	42CrMo4	4,2 kg	
550 mm sectionalized	42CrMo4	23,1 kg	



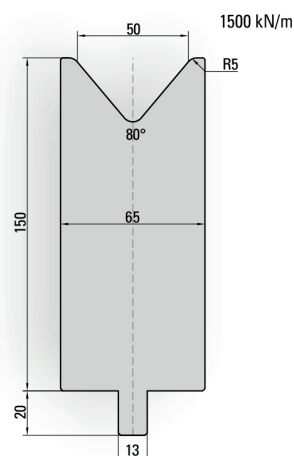
25.628	Material		
500 mm	42CrMo4	26,0 kg	
300 mm	42CrMo4	15,6 kg	
200 mm	42CrMo4	10,4 kg	
100 mm	42CrMo4	5,2 kg	
550 mm sectionalized	42CrMo4	28,6 kg	



25.629	Material		
500 mm	42CrMo4	31,0 kg	
300 mm	42CrMo4	18,6 kg	
200 mm	42CrMo4	12,4 kg	
100 mm	42CrMo4	6,2 kg	
550 mm sectionalized	42CrMo4	34,1 kg	



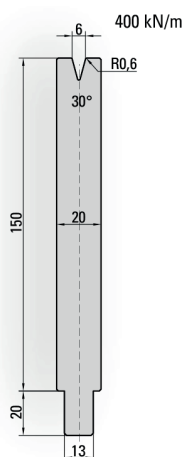
25.630	Material		
500 mm	42CrMo4	36,0 kg	
300 mm	42CrMo4	21,6 kg	
200 mm	42CrMo4	14,4 kg	
100 mm	42CrMo4	7,2 kg	
550 mm sectionalized	42CrMo4	39,6 kg	



30° Dies, H = 150 mm

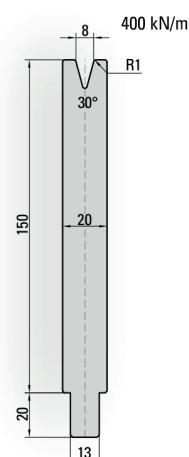
25.901	Material		
500 mm	42CrMo4	12,5 kg	
300 mm	42CrMo4	7,5 kg	
200 mm	42CrMo4	5,0 kg	
100 mm	42CrMo4	2,5 kg	
550 mm sectionalized	42CrMo4	13,8 kg	

60.130



25.902	Material		
500 mm	42CrMo4	12,5 kg	
300 mm	42CrMo4	7,5 kg	
200 mm	42CrMo4	5,0 kg	
100 mm	42CrMo4	2,5 kg	
550 mm sectionalized	42CrMo4	13,8 kg	

60.130

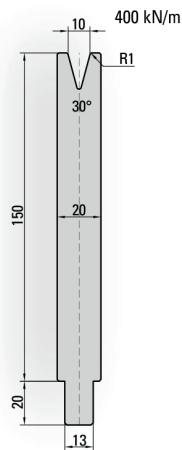


30° Dies, H = 150 mm

25.903 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg

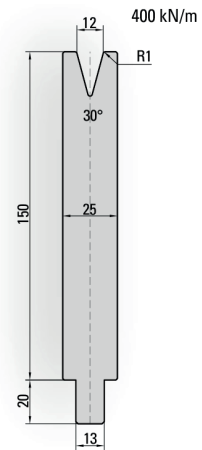
60.130



25.904 Material

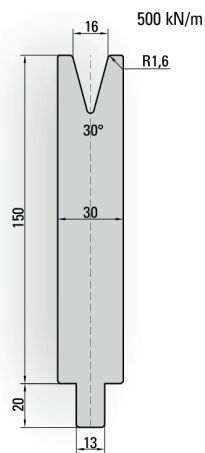
500 mm	42CrMo4	15,0 kg
300 mm	42CrMo4	9,0 kg
200 mm	42CrMo4	6,0 kg
100 mm	42CrMo4	3,0 kg
550 mm sectionalized	42CrMo4	16,5 kg

60.130



25.905 Material

500 mm	42CrMo4	17,5 kg
300 mm	42CrMo4	10,5 kg
200 mm	42CrMo4	7,0 kg
100 mm	42CrMo4	3,5 kg
550 mm sectionalized	42CrMo4	19,3 kg

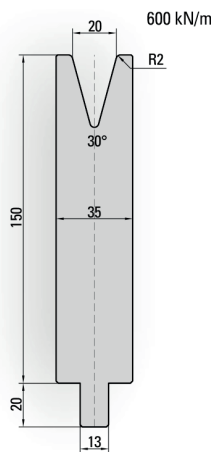


INFO

Dies with this symbol can be used with an additional drill hole 70.810 with screwable flattening die 60.130 - further information

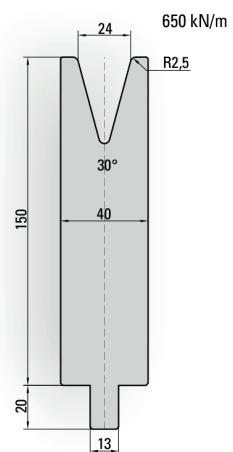
25.906 Material

500 mm	42CrMo4	20,0 kg
300 mm	42CrMo4	12,0 kg
200 mm	42CrMo4	8,0 kg
100 mm	42CrMo4	4,0 kg
550 mm sectionalized	42CrMo4	22,0 kg



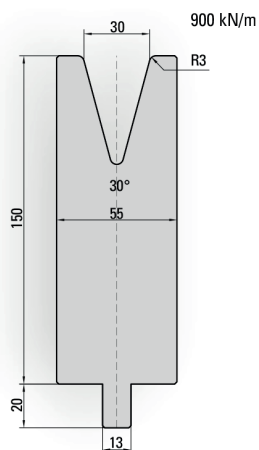
25.907 Material

500 mm	42CrMo4	22,5 kg
300 mm	42CrMo4	13,5 kg
200 mm	42CrMo4	9,0 kg
100 mm	42CrMo4	4,5 kg
550 mm sectionalized	42CrMo4	24,8 kg



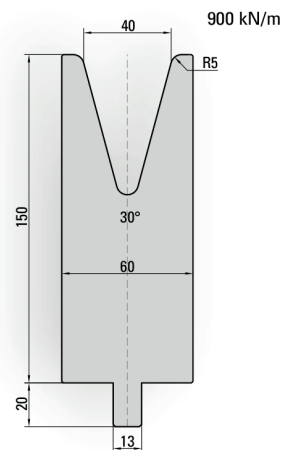
25.908 Material

500 mm	42CrMo4	30,0 kg
300 mm	42CrMo4	18,0 kg
200 mm	42CrMo4	12,0 kg
100 mm	42CrMo4	6,0 kg
550 mm sectionalized	42CrMo4	33,0 kg



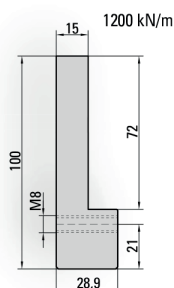
25.909 Material

500 mm	42CrMo4	30,0 kg
300 mm	42CrMo4	18,0 kg
200 mm	42CrMo4	12,0 kg
100 mm	42CrMo4	6,0 kg
550 mm sectionalized	42CrMo4	33,0 kg

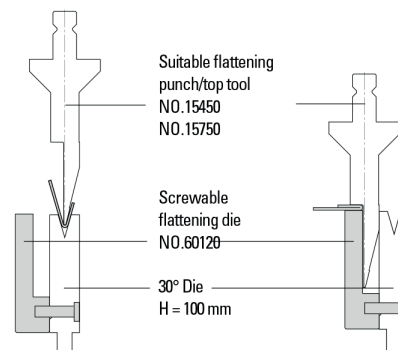


Screwable flattening die H = 100 mm

60.120	Material	
500 mm	42CrMo4	7,5 kg
300 mm	42CrMo4	4,5 kg
200 mm	42CrMo4	3,0 kg
100 mm	42CrMo4	1,5 kg
550 mm sectionalized	42CrMo4	8,3 kg

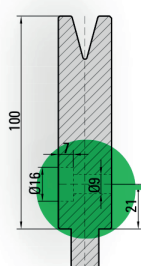


EXAMPLE OF USE



Only usable with i-axis displacement

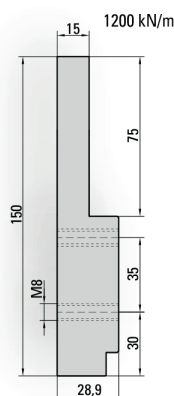
70.800	Material	
500 mm	42CrMo4	
300 mm	42CrMo4	
200 mm	42CrMo4	
100 mm	42CrMo4	
550 mm sectionalized	42CrMo4	



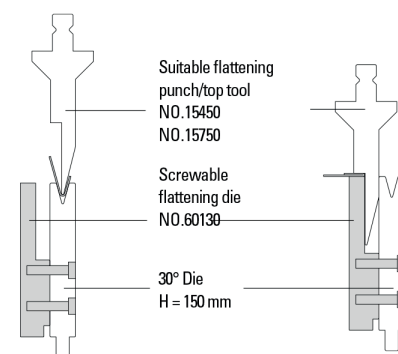
Drill hole in the die for the use of screwable flattening die NO.60120

Screwable flattening die H = 150 mm

60.130	Material	
500 mm	42CrMo4	13,0 kg
300 mm	42CrMo4	7,8 kg
200 mm	42CrMo4	5,2 kg
100 mm	42CrMo4	2,6 kg
550 mm sectionalized	42CrMo4	14,3 kg



EXAMPLE OF USE



Only usable with i-axis displacement

70.810	Material	
500 mm	42CrMo4	
300 mm	42CrMo4	
200 mm	42CrMo4	
100 mm	42CrMo4	
550 mm sectionalized	42CrMo4	



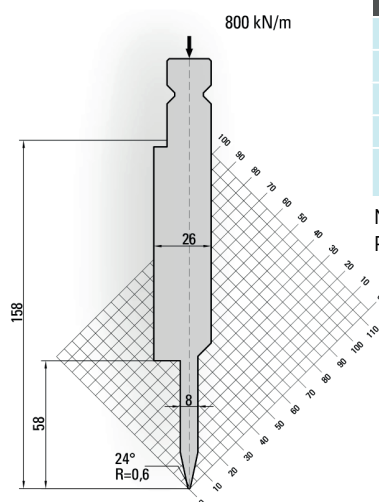
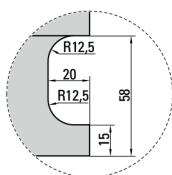
Drill holes in the die for the use of screwable flattening die NO.60130

Flattening punches/top tools and flattening dies

15.902

Safety pins	Material	
500 mm	42CrMo4	14,0 kg

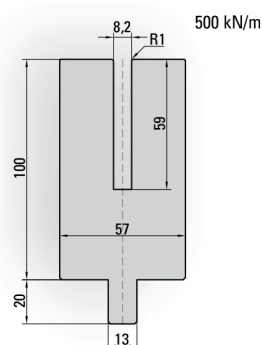
Simple Clamp	Material	
300 mm	42CrMo4	8,4 kg
200 mm	42CrMo4	5,6 kg
100 mm	42CrMo4	2,8 kg
550 mm sectionalized	42CrMo4	15,4 kg



25.992 Material

500 mm	42CrMo4	21,5 kg
300 mm	42CrMo4	12,9 kg
200 mm	42CrMo4	8,6 kg
100 mm	42CrMo4	4,3 kg
550 mm sectionalized	42CrMo4	23,6 kg

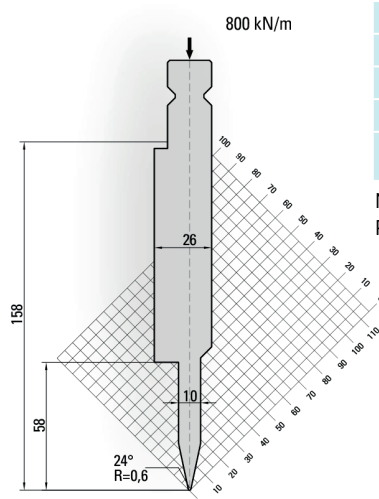
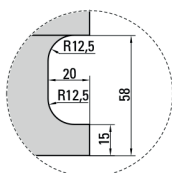
Max. 1,2 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



15.904

Safety pins	Material	
500 mm	42CrMo4	14,5 kg

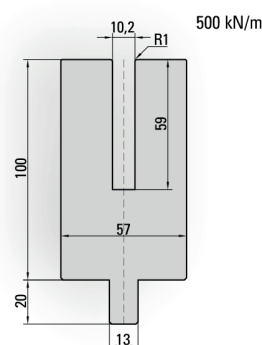
Simple Clamp	Material	
300 mm	42CrMo4	8,7 kg
200 mm	42CrMo4	5,8 kg
100 mm	42CrMo4	2,9 kg
550 mm sectionalized	42CrMo4	16,0 kg



25.994 Material

500 mm	42CrMo4	21,0 kg
300 mm	42CrMo4	12,6 kg
200 mm	42CrMo4	8,4 kg
100 mm	42CrMo4	4,2 kg
550 mm sectionalized	42CrMo4	23,1 kg

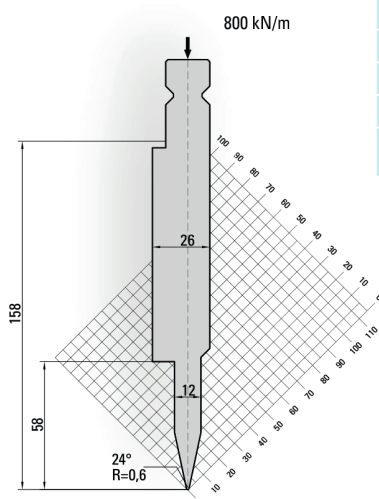
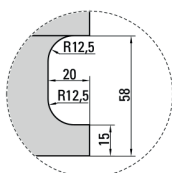
Max. 1,8 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



15.905

Safety pins	Material	
500 mm	42CrMo4	15,0 kg

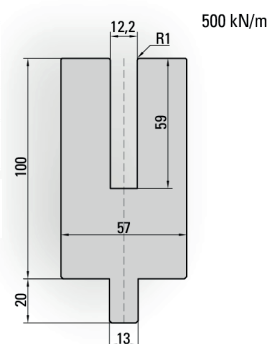
Simple Clamp	Material	
300 mm	42CrMo4	9,0 kg
200 mm	42CrMo4	6,0 kg
100 mm	42CrMo4	3,0 kg
550 mm sectionalized	42CrMo4	16,5 kg



25.995 Material

500 mm	42CrMo4	20,5 kg
300 mm	42CrMo4	12,3 kg
200 mm	42CrMo4	8,2 kg
100 mm	42CrMo4	4,1 kg
550 mm sectionalized	42CrMo4	22,6 kg

Max. 2,5 mm material thickness
 $R_m = 400 \text{ N/mm}^2$



Flattening punches/top tools and flattening dies

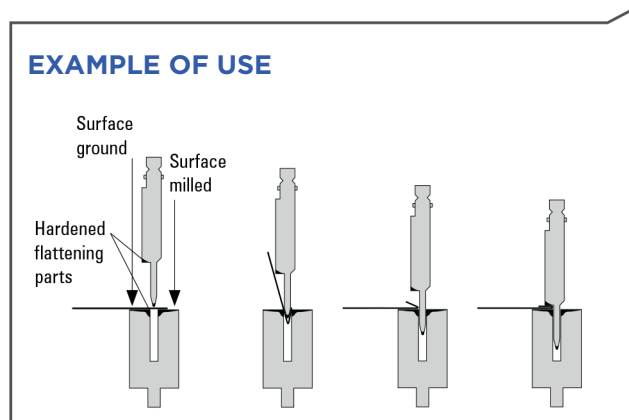
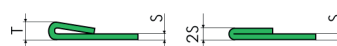


Table of force for flattening

Material: $R_m = 400 \text{ N/mm}^2$ (St)				
S (mm)	(t/m)	T (mm)	(t/m)	2S (mm)
0,6	9	3,0	23	1,2
0,8	12	3,0	32	1,6
1,0	15	3,5	40	2,0
1,25	17	3,5	50	2,5
1,5	22	4,6	63	3,0
2,0	30	5,5	80	4,0
2,5	55	6,5	90	5,0
3,0	70	8,0	100	6,0

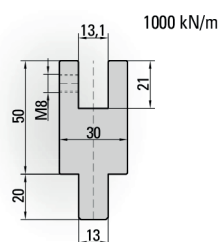
Material: $R_m = 700 \text{ N/mm}^2$ (VA)				
S (mm)	(t/m)	T (mm)	(t/m)	2S (mm)
0,6	15	3,0	35	1,2
0,8	20	3,0	50	1,6
1,0	25	3,5	60	2,0
1,25	26	3,5	80	2,5
1,5	38	4,6	95	3,0
2,0	50	5,5	130	4,0



Die heightenings

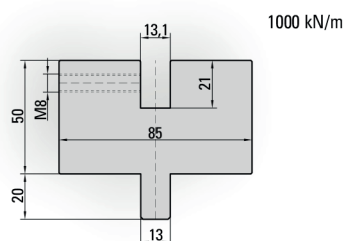
60.960 Material

500 mm 42CrMo4 5,8 kg

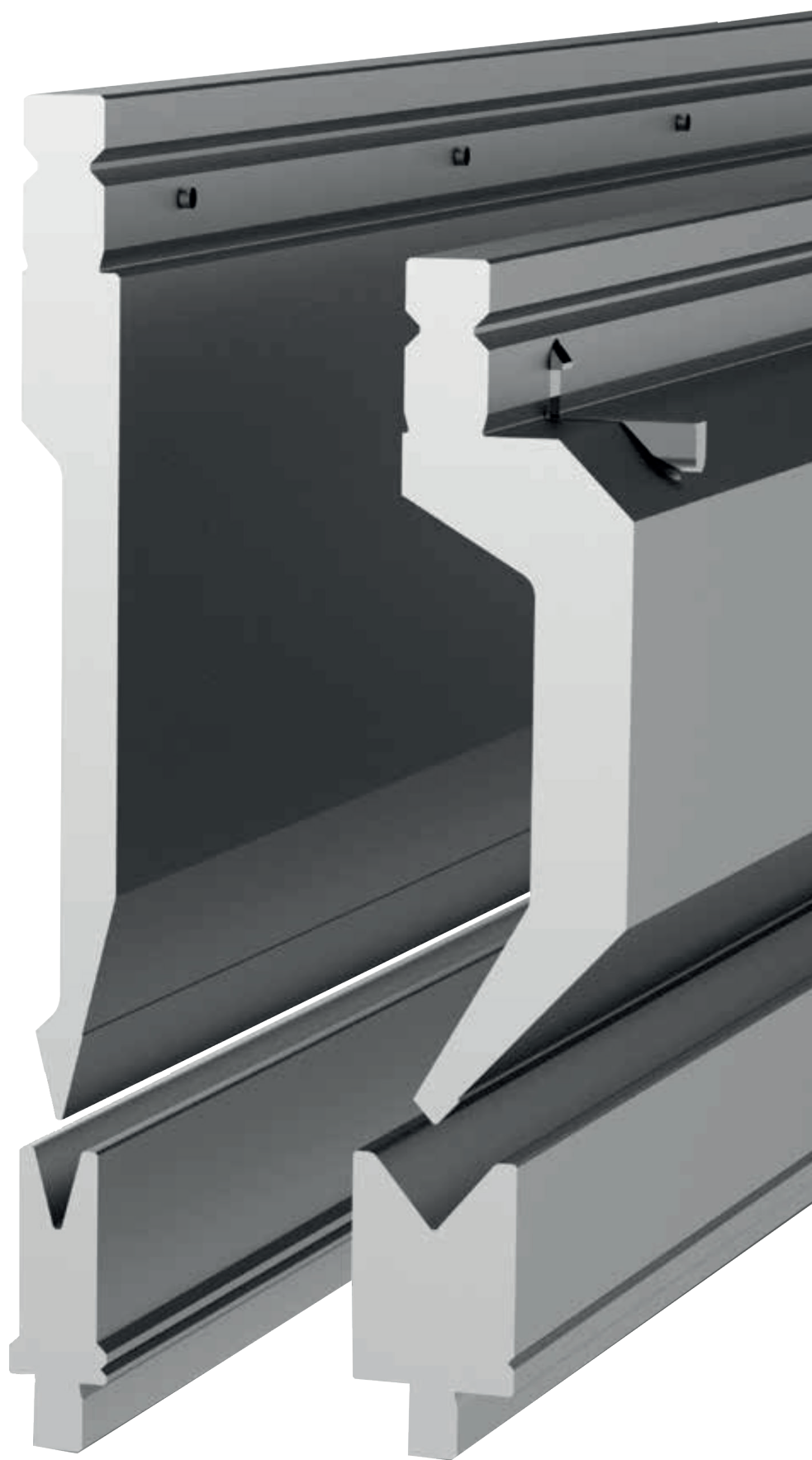


60.965 Material

500 mm 42CrMo4 16,6 kg



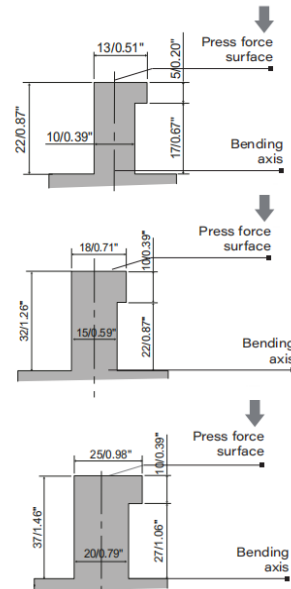
Explanation	84 - 85
Punches/top tools	
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Insertion of a steel insert	87
Punches/top tools Wila type I, H = 163 mm	88 - 89
Punches/top tools Wila type I, H = 200 mm	90 - 91
Punches/top tools Wila type II, H = 95/175 mm	92
Dies	
86° Dies, H = 55 mm	93
80° Dies, H = 55/65 mm	94
30° Dies, H = 55 mm.....	95



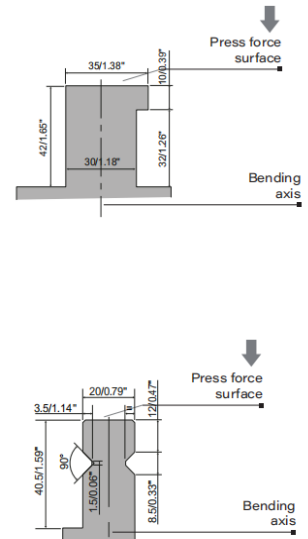
Quality and precision

- Optimum materials
 - 42 CrMo4, tempered to 1100 – 1200 N/mm²
 - C45, tempered to 800 – 850 N/mm²
 - C45, 650 – 800 N/mm²
- Bending radius/intake radii hardened up to 54 – 60 HRC
- Precision ground
- Guaranteed exchangeability and parallelism
- Punch/top tool clampings Wila type I in two different models
 - Simple Clamp at segments < 12,5 kg
 - Safety pin at segments > 12,5 kg
- Punch/top tool clampings Wila type II
 - Self centering
 - Usable on both sides
- Tool marking with all technical information

Wila type I



Wila type II



Tool lengths

PUNCHES / TOP TOOLS WITH SIMPLE CLAMP

Length **515 mm**



Length **300 mm**



Length **200 mm**

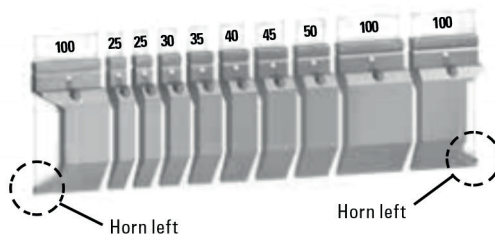


Length **100 mm**



Length **550 mm sectionalized**

- Sectionalized punches/top tools are delivered as a complete set
- 10 Segments with horn extension left and right



Simple Clamp

PUNCHES / TOP TOOLS WITH SAFETY PINS

Length **515 mm**



Length **300 mm**



Length **200 mm**

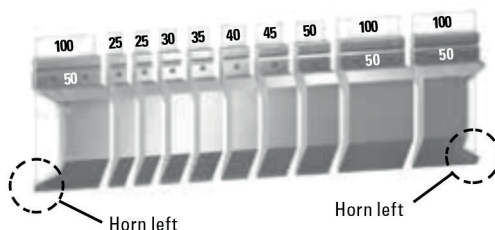


Length **100 mm**



Length **550 mm sectionalized**

- Sectionalized punches/top tools are delivered as a complete set
- 10 Segments with horn extension left and right



Safety pin

DIES

Length **515 mm**



Length **300 mm**



Length **200 mm**

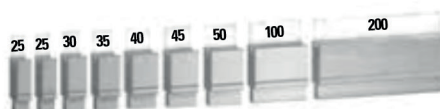


Length **100 mm**



Length **550 mm sectionalized**

- Sectionalized dies are delivered as a complete set
- 9 Segments



Simple Clamp

ADVANTAGES

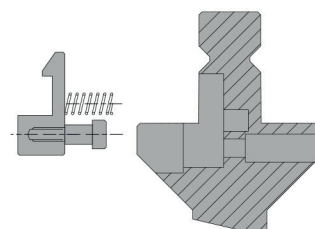
- **Vertical** tool change for segments **up to 12,5 kg**
- Less set-up time
- Easy handling



Set consists of screw, spring and Simple Clamp



Vertical tool change



70.714 Material

Set 42CrMo4 0,012 kg

Suitable for punches/top tools
19.034 / 19.024



70.715 Material

Set 42CrMo4 0,014 kg

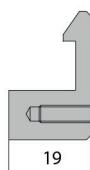
Suitable for punches/top tools
19.031 / 19.021 / 19.224



70.716 Material

Set 42CrMo4 0,016 kg

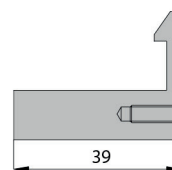
Suitable for punches/top tools
19.032 / 19.022



70.718 Material

Set 42CrMo4 0,027 kg

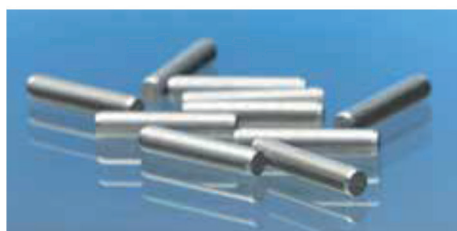
Suitable for punches/top tools
19.033 / 19.233 / 19.023 / 19.226



Safety pins

ADVANTAGES

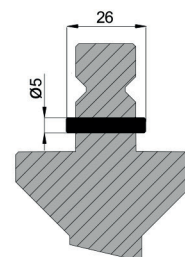
- **Horizontal** tool change for segments **more than 12,5 kg**
- Favorable purchase price (in comparison with Simple Clamp)
- Hardened Safety pins on demand



Safety pins



Horizontal tool change



70.130 Material

10 pieces 42CrMo4 0,16 kg

Hardened

70.140 Material

10 pieces 42CrMo4 0,16 kg

Not hardened

Flexible modification**PUNCHES / TOP TOOLS**

- > Special cuttings
- > Individual horn extensions
- > Insertion of Simple Clamp
- > Insertion of Safety pins
- > Laser marking

550mm

> mm: 100-100-50-45-40-35-30-25-25-100

**DIES**

- > Special cuttings
- > Laser marking

550mm

> mm: 200-100-50-45-40-35-30-25-25

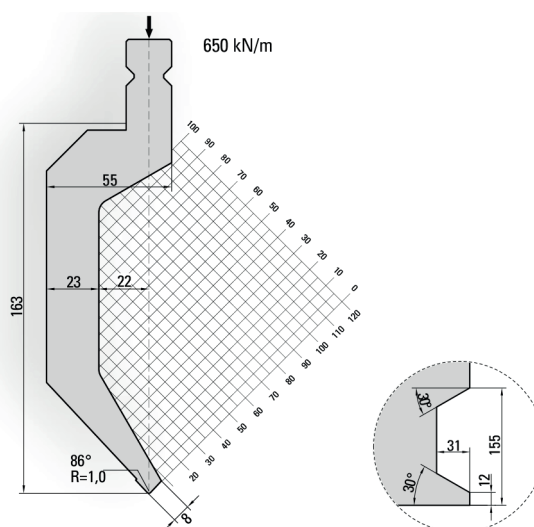


Punches/top tools Wila type I, H = 163 mm

19.023

Safety pins	Material	
515 mm	42CrMo4	19,1 kg

Simple Clamp	Material	
300 mm	42CrMo4	11,1 kg
200 mm	42CrMo4	7,4 kg
100 mm	42CrMo4	3,7 kg
550 mm sectionalized	42CrMo4	20,4 kg

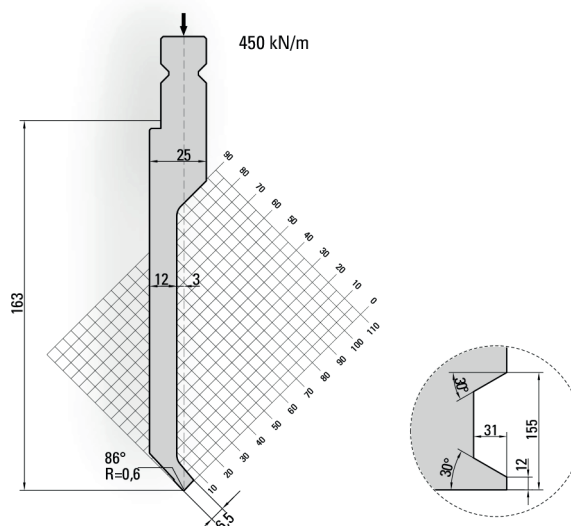


Further radii

R (mm)	H (mm)
0,5	162,8
2,0	162,2
2,5	162,0
3,0	161,7
4,0	161,3
5,0	160,8
6,0	160,3

19.224

Simple Clamp	Material	
515 mm	42CrMo4	12,2 kg
300 mm	42CrMo4	7,1 kg
200 mm	42CrMo4	4,7 kg
100 mm	42CrMo4	2,4 kg
550 mm sectionalized	42CrMo4	13,0 kg



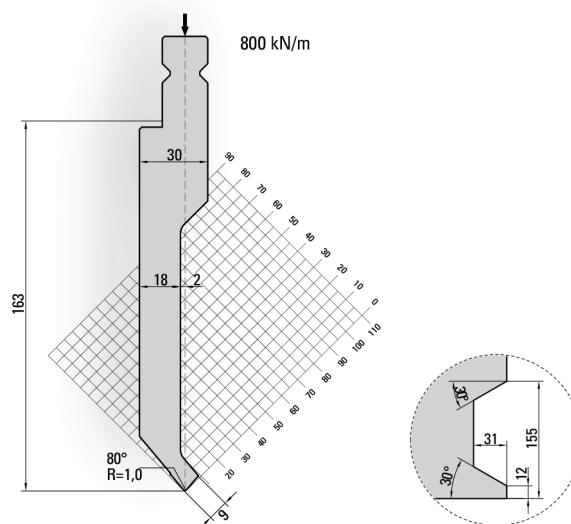
Further radii

R (mm)	H (mm)
1,0	162,4
2,0	162,0
2,5	161,7
3,0	161,5
4,0	161,0
5,0	160,6

19.022

Safety pins	Material	
515 mm	42CrMo4	16,0 kg

Simple Clamp	Material	
300 mm	42CrMo4	9,3 kg
200 mm	42CrMo4	6,2 kg
100 mm	42CrMo4	3,1 kg
550 mm sectionalized	42CrMo4	17,1 kg



Further radii

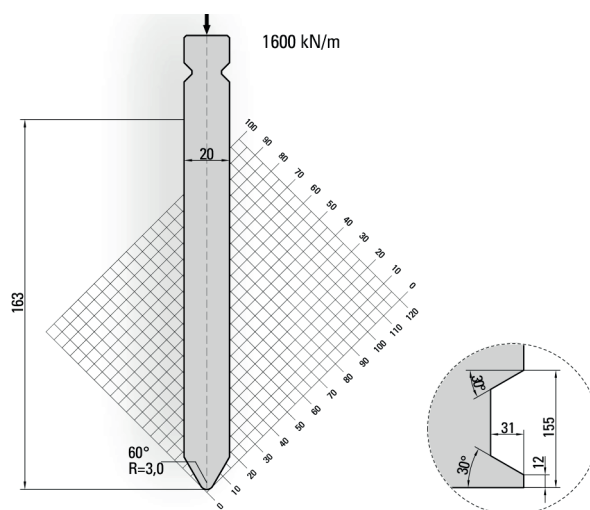
R (mm)	H (mm)
0,5	162,8
2,0	162,2
2,5	161,9
3,0	161,6
4,0	161,1
5,0	160,5
6,0	160,0

Punches/top tools Wila type I, H = 163 mm

19.024

Safety pins	Material	
515 mm	42CrMo4	16,0 kg

Simple Clamp	Material	
300 mm	42CrMo4	9,3 kg
200 mm	42CrMo4	6,2 kg
100 mm	42CrMo4	3,1 kg
550 mm sectionalized	42CrMo4	17,1 kg



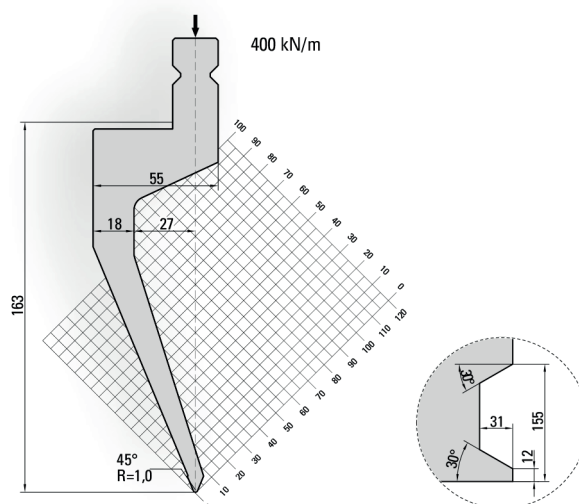
Further radii

R (mm)	H (mm)
1,0	162,8
2,0	162,8
2,5	162,8
4,0	161,6
5,0	160,6
6,0	159,6

19.226

Safety pins	Material	
515 mm	42CrMo4	15,5 kg

Simple Clamp	Material	
300 mm	42CrMo4	9,0 kg
200 mm	42CrMo4	6,0 kg
100 mm	42CrMo4	3,0 kg
550 mm sectionalized	42CrMo4	16,5 kg

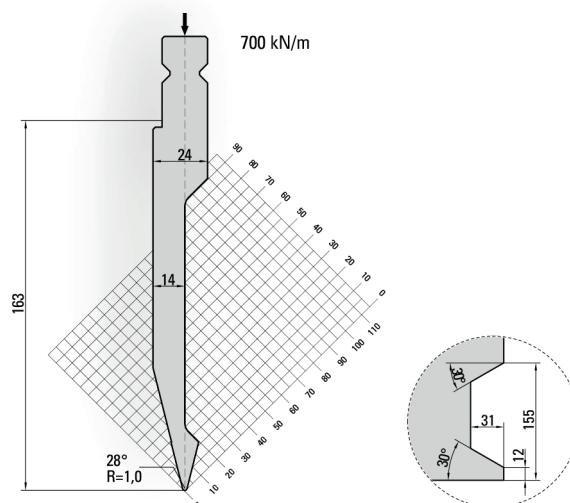


Further radii

R (mm)	H (mm)
0,5	162,8
2,0	160,8
2,5	159,2

19.021

Simple Clamp	Material	
515 mm	42CrMo4	12,4 kg
300 mm	42CrMo4	7,2 kg
200 mm	42CrMo4	4,8 kg
100 mm	42CrMo4	2,4 kg
550 mm sectionalized	42CrMo4	13,2 kg



Further radii

R (mm)	H (mm)
0,5	162,8
2,0	159,0
2,5	157,4
3,0	155,8
4,0	152,8

Punches/top tools Wila type I, H = 200 mm

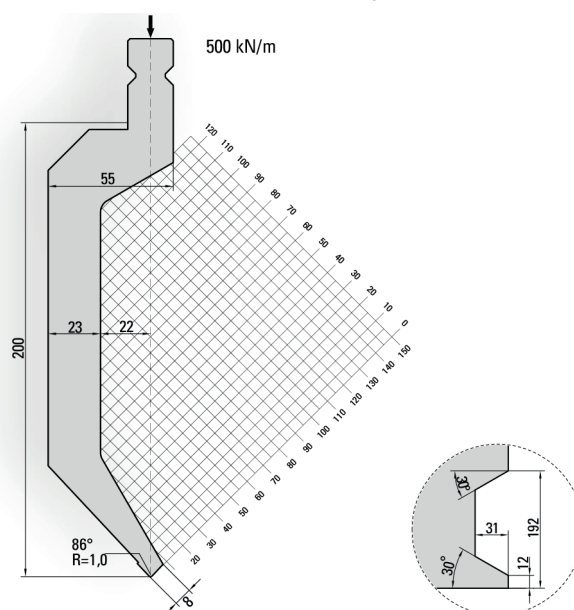
19.033

Safety pins	Material	
515 mm	42CrMo4	22,7 kg
300 mm	42CrMo4	13,2 kg

Simple Clamp

Material		
200 mm	42CrMo4	8,8 kg
100 mm	42CrMo4	4,4 kg
550 mm	42CrMo4	24,2 kg

sectionalized



Further radii

R (mm)	H (mm)
0,5	199,8
2,0	199,2
2,5	199,0
3,0	198,7
4,0	198,3
5,0	197,8
6,0	197,3

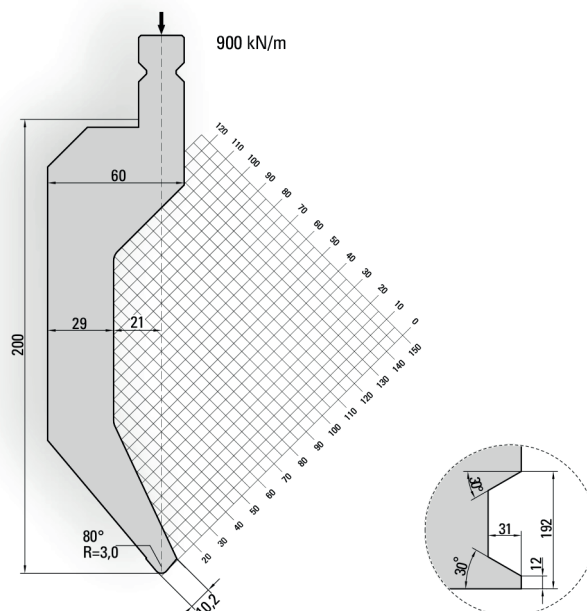
19.233

Safety pins	Material	
515 mm	42CrMo4	28,9 kg
300 mm	42CrMo4	16,8 kg

Simple Clamp

Material		
200 mm	42CrMo4	11,2 kg
100 mm	42CrMo4	5,6 kg
550 mm	42CrMo4	30,9 kg

sectionalized



Further radii

R (mm)	H (mm)
2,0	199,8
2,5	199,8
4,0	199,1
5,0	198,5
6,0	198,0

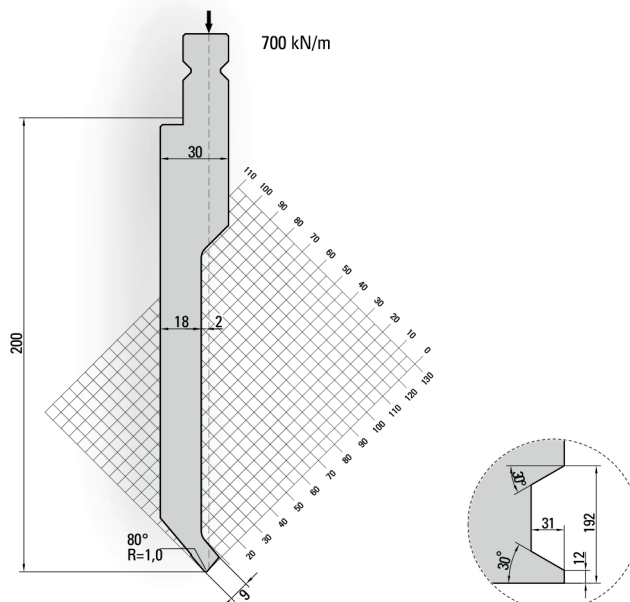
19.032

Safety pins	Material	
515 mm	42CrMo4	19,6 kg

Simple Clamp

Material		
300 mm	42CrMo4	11,4 kg
200 mm	42CrMo4	7,6 kg
100 mm	42CrMo4	3,8 kg
550 mm	42CrMo4	20,9 kg

sectionalized



Further radii

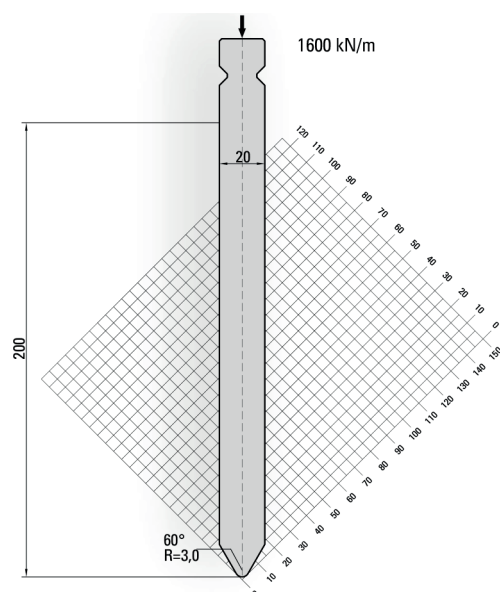
R (mm)	H (mm)
0,5	199,8
2,0	199,2
2,5	198,9
3,0	198,6
4,0	198,1
5,0	197,5
6,0	197,0

Punches/top tools Wila type I, H = 200 mm

19.034

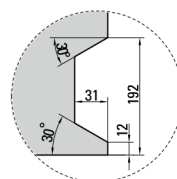
Safety pins	Material	
515 mm	42CrMo4	19,0 kg

Simple Clamp	Material	
300 mm	42CrMo4	11,1 kg
200 mm	42CrMo4	7,4 kg
100 mm	42CrMo4	3,7 kg
550 mm sectionalized	42CrMo4	20,4 kg



Further radii

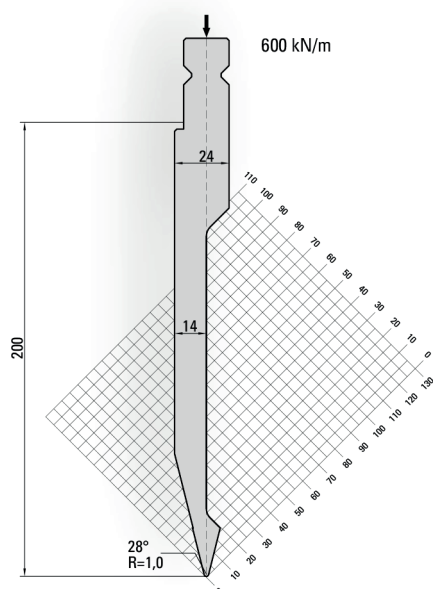
R (mm)	H (mm)
1,0	199,8
2,0	199,8
2,5	199,8
4,0	198,6
5,0	197,6
6,0	196,6



19.031

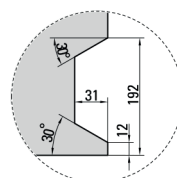
Safety pins	Material	
515 mm	42CrMo4	15,0 kg

Simple Clamp	Material	
300 mm	42CrMo4	8,7 kg
200 mm	42CrMo4	5,8 kg
100 mm	42CrMo4	2,9 kg
550 mm sectionalized	42CrMo4	16,0 kg



Further radii

R (mm)	H (mm)
0,5	199,8
2,0	196,0
2,5	194,4
3,0	192,8
4,0	189,8



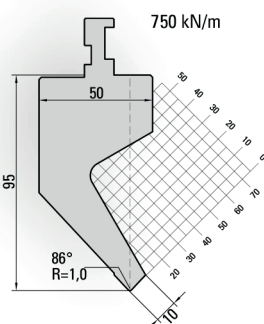
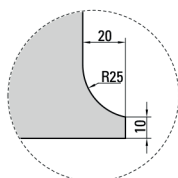
INFO

Punches/top tools System Trumpf and System LVD type I can also be used in a clamping System Wila!

Punches/top tools Wila type II, H = 95/175 mm

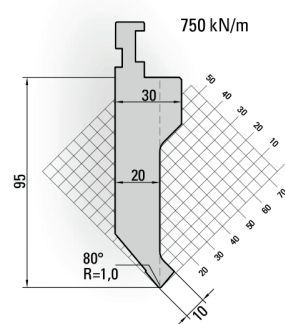
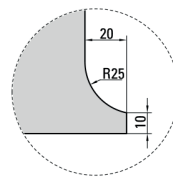
14.040 Material

500 mm	42CrMo4	12,5 kg
300 mm	42CrMo4	7,5 kg
200 mm	42CrMo4	5,0 kg
100 mm	42CrMo4	2,5 kg
550 mm sectionalized	42CrMo4	13,8 kg



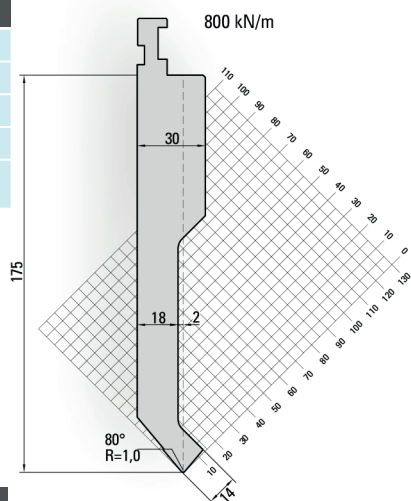
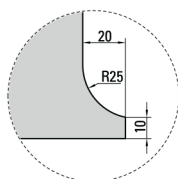
14.020 Material

500 mm	42CrMo4	9,0 kg
300 mm	42CrMo4	5,4 kg
200 mm	42CrMo4	3,6 kg
100 mm	42CrMo4	1,8 kg
550 mm sectionalized	42CrMo4	9,9 kg



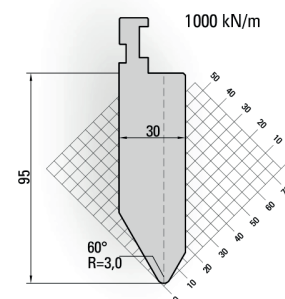
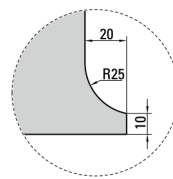
14.060 Material

500 mm	42CrMo4	17,0 kg
300 mm	42CrMo4	10,2 kg
200 mm	42CrMo4	6,8 kg
100 mm	42CrMo4	3,4 kg
550 mm sectionalized	42CrMo4	18,7 kg



14.010 Material

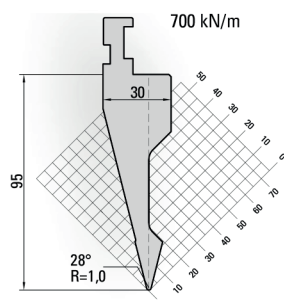
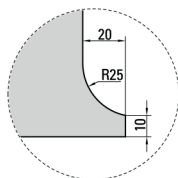
500 mm	42CrMo4	11,0 kg
300 mm	42CrMo4	6,6 kg
200 mm	42CrMo4	4,4 kg
100 mm	42CrMo4	2,2 kg
550 mm sectionalized	42CrMo4	12,1 kg



1500 kN/m if the tool clamping has the corresponding load

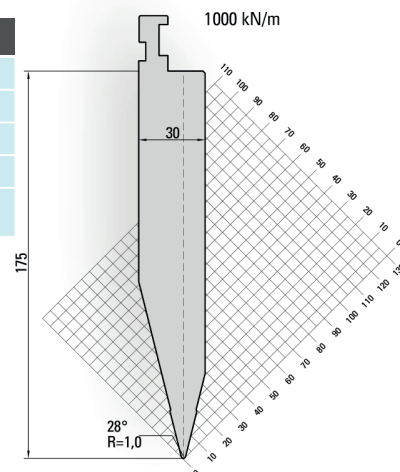
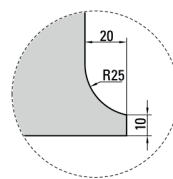
14.030 Material

500 mm	42CrMo4	7,0 kg
300 mm	42CrMo4	4,2 kg
200 mm	42CrMo4	2,8 kg
100 mm	42CrMo4	1,4 kg
550 mm sectionalized	42CrMo4	7,7 kg

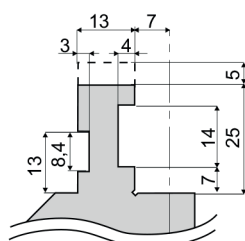


14.050 Material

500 mm	42CrMo4	18,0 kg
300 mm	42CrMo4	10,8 kg
200 mm	42CrMo4	7,2 kg
100 mm	42CrMo4	3,6 kg
550 mm sectionalized	42CrMo4	19,8 kg



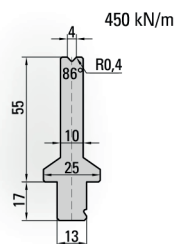
MODIFICATION OF CLAMPING VEOELL-SYSTEM AMADA



86° Dies H = 55 mm

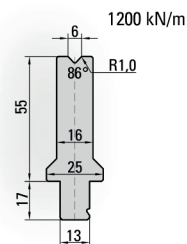
29.524 Material

515 mm	42CrMo4	3,6 kg
300 mm	42CrMo4	2,1 kg
200 mm	42CrMo4	1,4 kg
100 mm	42CrMo4	0,7 kg
550 mm sectionalized	42CrMo4	3,9 kg



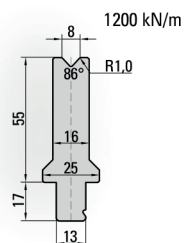
29.521 Material

515 mm	42CrMo4	4,6 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm sectionalized	42CrMo4	5,0 kg



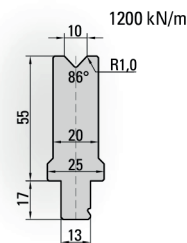
29.510 Material

515 mm	42CrMo4	4,6 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm sectionalized	42CrMo4	5,0 kg



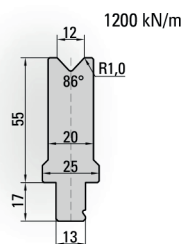
29.522 Material

515 mm	42CrMo4	5,7 kg
300 mm	42CrMo4	3,3 kg
200 mm	42CrMo4	2,2 kg
100 mm	42CrMo4	1,1 kg
550 mm sectionalized	42CrMo4	6,0 kg



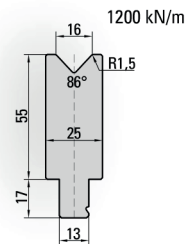
29.511 Material

515 mm	42CrMo4	5,2 kg
300 mm	42CrMo4	3,0 kg
200 mm	42CrMo4	2,0 kg
100 mm	42CrMo4	1,0 kg
550 mm sectionalized	42CrMo4	5,5 kg



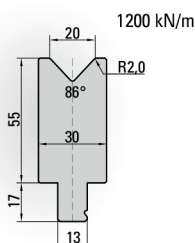
29.512 Material

515 mm	42CrMo4	6,2 kg
300 mm	42CrMo4	3,6 kg
200 mm	42CrMo4	2,4 kg
100 mm	42CrMo4	1,2 kg
550 mm sectionalized	42CrMo4	6,6 kg



29.523 Material

515 mm	42CrMo4	7,2 kg
300 mm	42CrMo4	4,2 kg
200 mm	42CrMo4	2,8 kg
100 mm	42CrMo4	1,4 kg
550 mm sectionalized	42CrMo4	7,7 kg

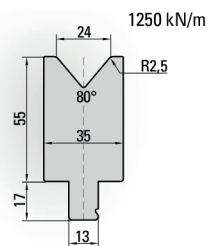


INFO

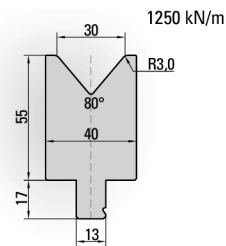
More dies height 55 mm see
System Bystronic

80° Dies, H = 55/65 mm

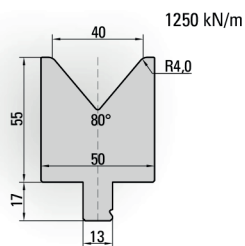
29.513	Material	
515 mm	42CrMo4	8,2 kg
300 mm	42CrMo4	4,8 kg
200 mm	42CrMo4	3,2 kg
100 mm	42CrMo4	1,6 kg
550 mm sectionalized	42CrMo4	8,8 kg



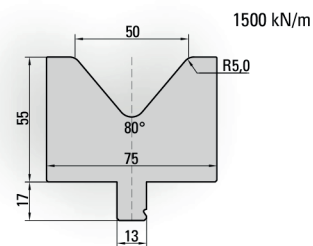
29.514	Material	
515 mm	42CrMo4	8,8 kg
300 mm	42CrMo4	5,1 kg
200 mm	42CrMo4	3,4 kg
100 mm	42CrMo4	1,7 kg
550 mm sectionalized	42CrMo4	9,3 kg



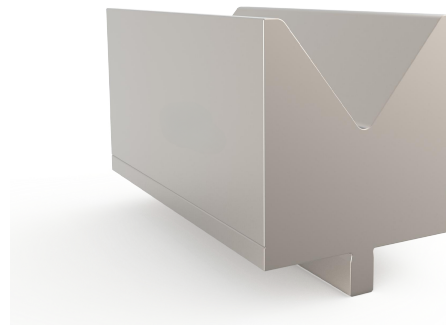
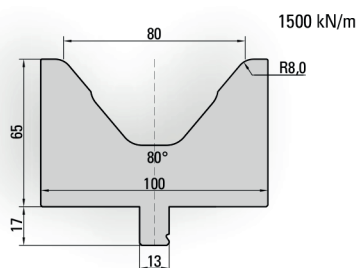
29.515	Material	
515 mm	42CrMo4	10,3 kg
300 mm	42CrMo4	6,0 kg
200 mm	42CrMo4	4,0 kg
100 mm	42CrMo4	2,0 kg
550 mm sectionalized	42CrMo4	11,0 kg



29.535	Material	
515 mm	42CrMo4	14,9 kg
300 mm	42CrMo4	8,7 kg
200 mm	42CrMo4	5,8 kg
100 mm	42CrMo4	2,9 kg
550 mm sectionalized	42CrMo4	15,9 kg

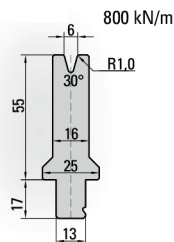


29.517	Material	
515 mm	42CrMo4	19,6 kg
300 mm	42CrMo4	11,4 kg
200 mm	42CrMo4	7,6 kg
100 mm	42CrMo4	3,8 kg
550 mm sectionalized	42CrMo4	20,9 kg

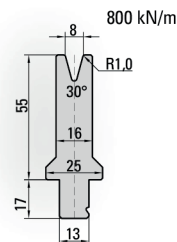


30° Dies, H = 55 mm

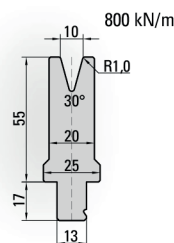
29.561	Material	
515 mm	42CrMo4	4,6 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm sectionalized	42CrMo4	5,0 kg



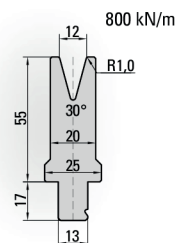
29.551	Material	
515 mm	42CrMo4	4,6 kg
300 mm	42CrMo4	2,7 kg
200 mm	42CrMo4	1,8 kg
100 mm	42CrMo4	0,9 kg
550 mm sectionalized	42CrMo4	5,0 kg



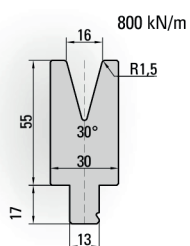
29.562	Material	
515 mm	42CrMo4	5,2 kg
300 mm	42CrMo4	3,0 kg
200 mm	42CrMo4	2,0 kg
100 mm	42CrMo4	1,0 kg
550 mm sectionalized	42CrMo4	5,5 kg



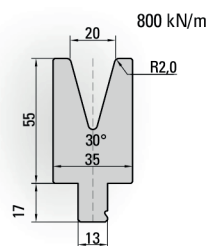
29.552	Material	
515 mm	42CrMo4	5,2 kg
300 mm	42CrMo4	3,0 kg
200 mm	42CrMo4	2,0 kg
100 mm	42CrMo4	1,0 kg
550 mm sectionalized	42CrMo4	5,5 kg



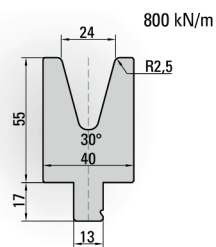
29.553	Material	
515 mm	42CrMo4	6,7 kg
300 mm	42CrMo4	3,9 kg
200 mm	42CrMo4	2,6 kg
100 mm	42CrMo4	1,3 kg
550 mm sectionalized	42CrMo4	7,2 kg



29.563	Material	
515 mm	42CrMo4	7,2 kg
300 mm	42CrMo4	4,2 kg
200 mm	42CrMo4	2,8 kg
100 mm	42CrMo4	1,4 kg
550 mm sectionalized	42CrMo4	7,7 kg



29.554	Material	
515 mm	42CrMo4	7,7 kg
300 mm	42CrMo4	4,5 kg
200 mm	42CrMo4	3,0 kg
100 mm	42CrMo4	1,5 kg
550 mm sectionalized	42CrMo4	8,3 kg



INFO

*Dies System Trumpf
and System Bystronic can also
be used in a clamping
System Wila!*