

METALWORK

HERO

MACHINE CO.

PRESS BRAKE TOOLING CATALOG

ENGINEERED TO PERFORM. BUILT TO LAST.

PRECISION TOOLING FOR SUPERIOR RESULTS



PRECISION

Precision ground tooling



DURABILITY

Laser heat treated tool steel



PERFORMANCE

Repeatable bends every time



COMPATIBILITY

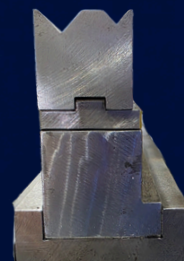
American & European Styles



SPRINGFIELD, TN



THE WORLD'S BEST METAL
WORKING MACHINES.



HERO MACHINE CO.

METALWORKING MACHINES

Table of Contents

Capacity chart for air bending	2
Upper tooling clamping	3
Dies tooling clamping.....	5
Standard punches.....	7
85/Standard punches 85.....	8
88/Standard punches 88.....	10
90/Standard punches 90.....	12
60/Standard punches 60.....	13
Standard Punch 26, 30, 35	14
Standard R-type round tooling	15
Standard round tooling.....	17
Hemming tooling	18
Standard Z-type tooing	20
Standard heavy duty direct-link type tooling.....	21
Accessories of upper tooling	22
1V lower dies.....	23
2V lower dies.....	35
multi-V lower dies	38
Combined dies.....	40
Accessories of lower dies	41

Capacity chart for air bending

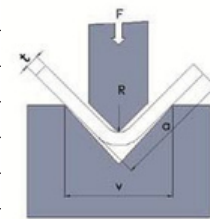
90

=420MPa

1m

The given data has been calculated based upon bending material with a tensile strength of =420 MPa over a length of 1m.

V	6	8	10	12	16	18	20	24	32	35	40	50	60	63	80	100	120	130	140	150	160	180	190	200	230	260
b	4.5	5	7	8.5	12	13	15	17	23	25	28	35	43	45	57	71	85	92	100	105	115	130	135	140	160	180
r	1	1.2	1.6	2	2.5	2.8	3	3.5	5	5.5	6	8	9.5	10	12	15.5	19	21	23	24.5	26	28	30	32	36	40
0.5	2.5																									
0.8	7	4.8																								
1.0	11	8	6																							
1.2		12	9	7																						
1.5			15	12	8																					
2.0				23	16	13	12	9.5																		
2.5					26	22	20	15	11																	
3.0							30	24	16	14	12															
4.0								44	31	28	23	18														
5.0									53	47	43	31	25													
6.0																										
8.0																										
10												88	69	65	47	36										
12														11	80	60	47	43	39							
16														0	120	90	71	65	58	55	50					
18																	140	125	115	105	95	81	80	71		
20																			148	135	125	110	100	95	80	
																						140	130	120	110	90



R

V 16%

The internal radius R corresponds to approximate 16% of the die opening V

V

Recommended die opening V for air bending

/Material thickness t	0.5~2.5mm	3~8mm	9~10mm	>12mm
/Die opening V	6 t	8 t	10 t	12 t

/Bending force for

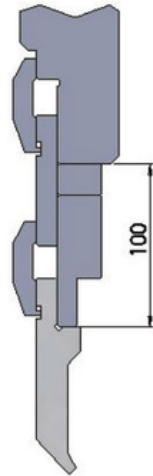
Alu	=300 MPa	F=F 0.65 F=F chart 0.65
S.S	=700 MPa	F=F 1.6 F=F chart 1.6

Determination of the bending force for air bending (approximation)

F chart =

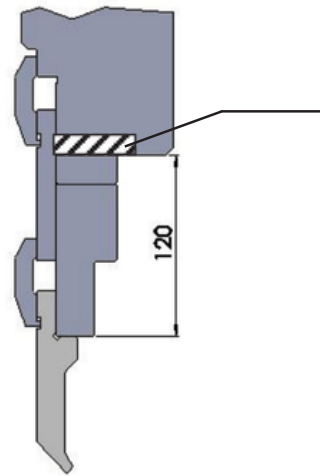
Upper tooling clamping

common wedge clamping



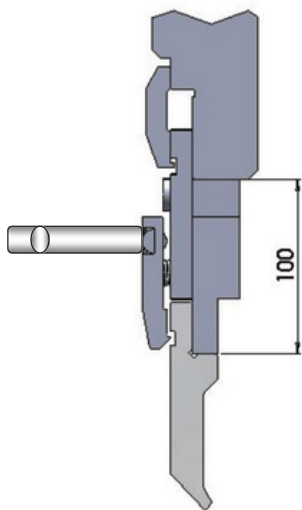
50t~160t

High-duty wedge clamping

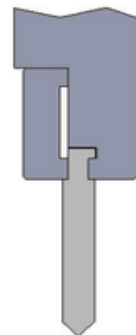


220t +

Mechanical rapid clamping

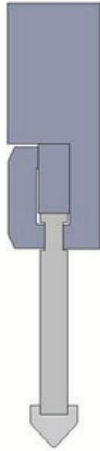


American type clamping



Upper tooling clamping

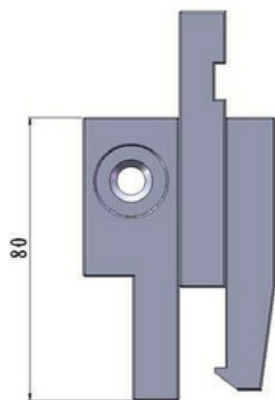
Heavy duty direct-link type clamping



Heavy duty direct-link type clamping



YAWEI upper tooling hydraulic clamping

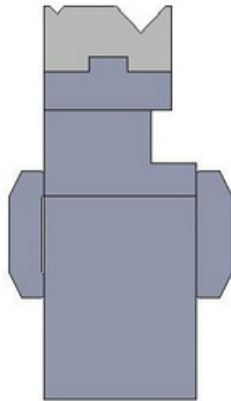


WILA upper tooling hydraulic clamping



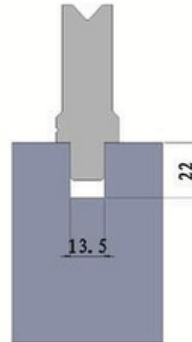
Dies tooling clamping

2V- quick-change type



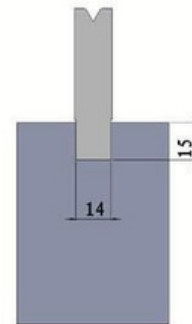
the die opening can be quick changed

1Vslot



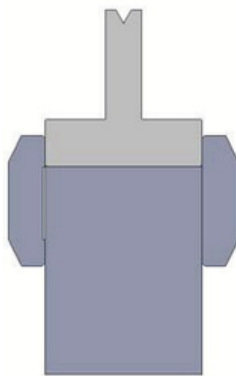
the shoulder of tooling bear the force

1Vslot

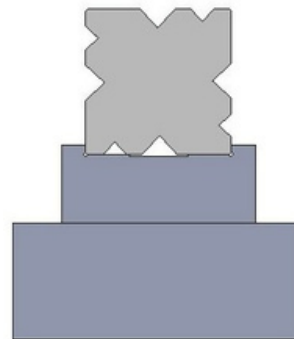


the bottom of tooling bear the force

1V- clamping type

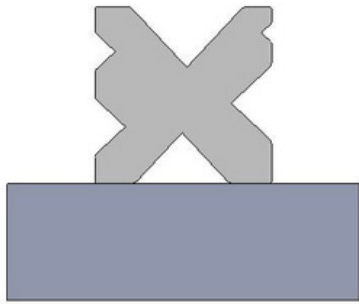


multi-V slot subsection



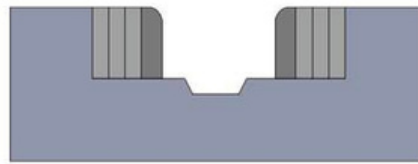
Dies tooling clamping

multi-V worktable type

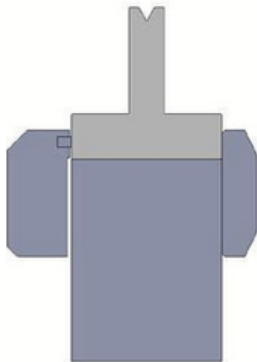


V

insert type for bottom tooling clamping



YAWEI bottom tooling hydraulic clamping



Suited to quick install the bottom tooling

WILAbottom tooling hydraulic clamping

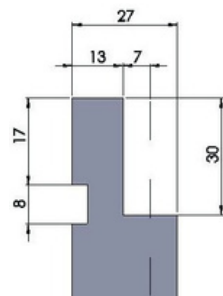


NSCR with OZU bottom tooling

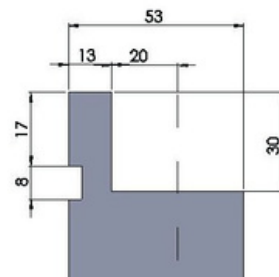
Standard punches

Upper tooling fixtures

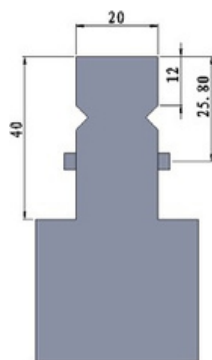
European type tooling



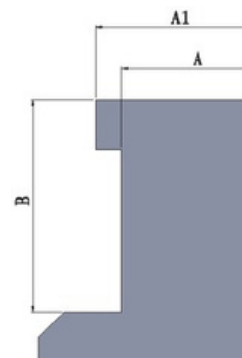
European type tooling



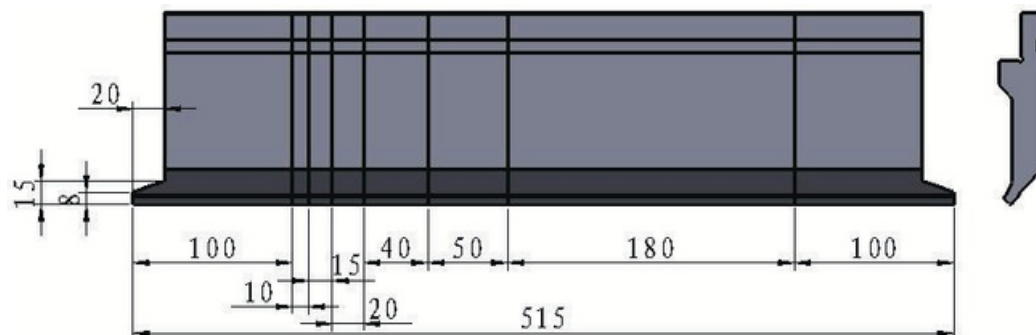
WILA type tooling



Heavy-duty direct-link type



Segmented Punch

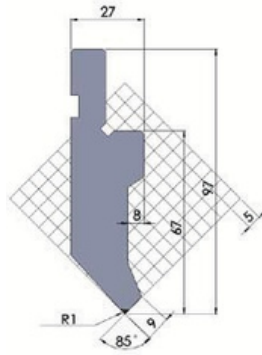


85°

Standard punch 85 °

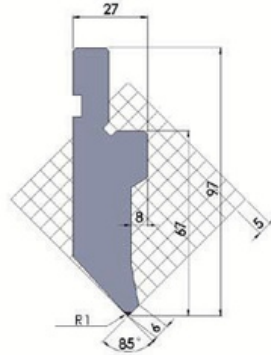
10.100

Max Tons:100t/m



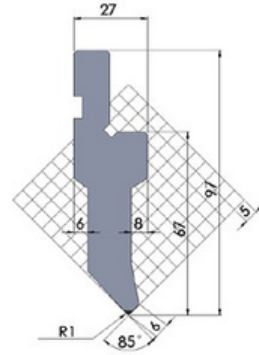
10.101

Max Tons:80t/m



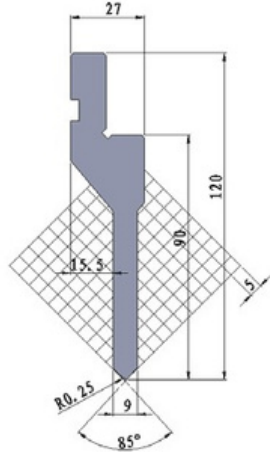
10.102

Max Tons:60t/m



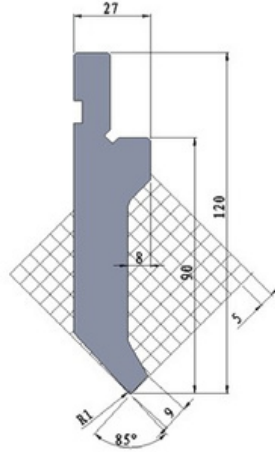
10.103

Max Tons:80t/m



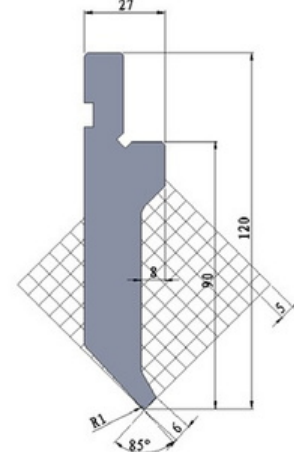
10.104

Max Tons:100t/m



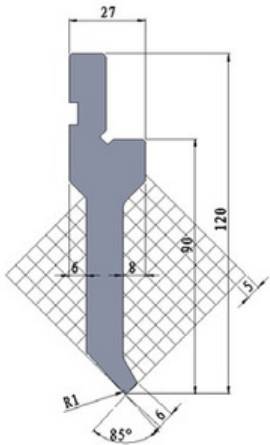
10.105

Max Tons:80t/m



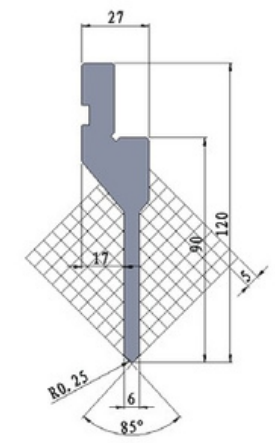
10.106

Max Tons:50t/m



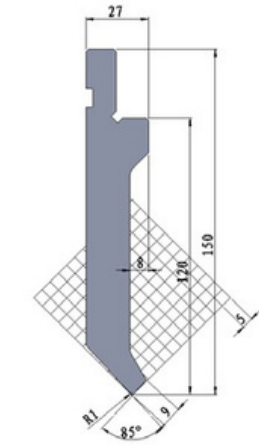
10.107

Max Tons:50t/m



10.108

Max Tons:100t/m

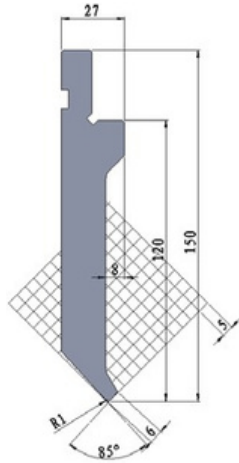


85°

Standard punch 85 °

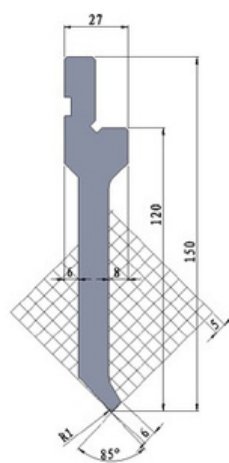
10.109

Max Tons:80t/m



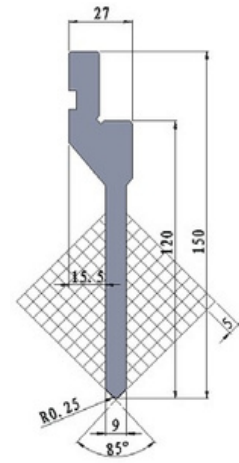
10.110

Max Tons:40t/m



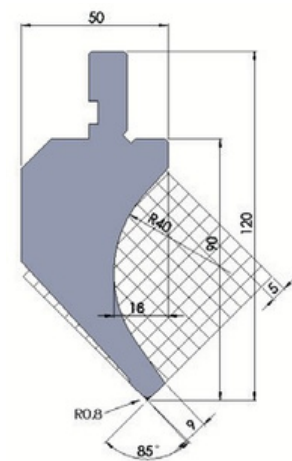
10.111

Max Tons:80t/m



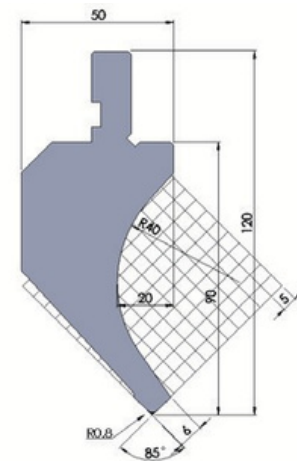
10.112

Max Tons:70t/m



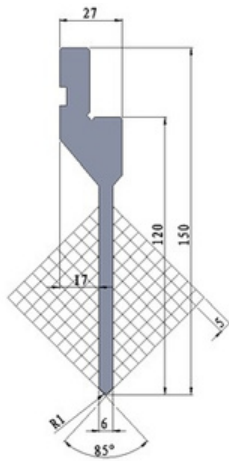
10.113

Max Tons:40t/m



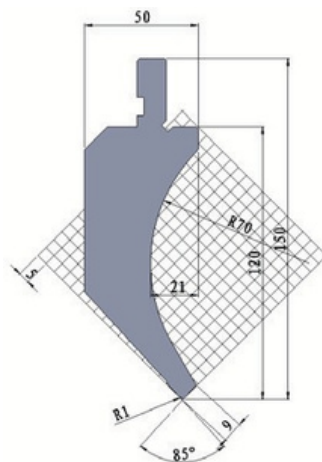
10.114

Max Tons:50t/m



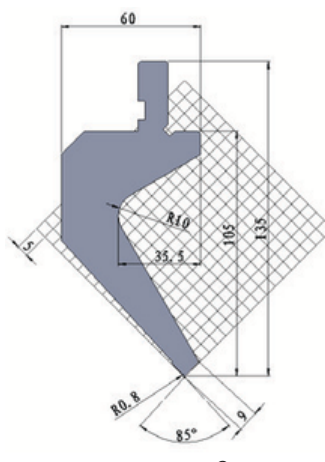
10.115

Max Tons:50t/m



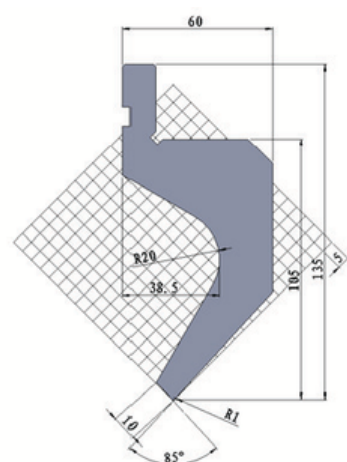
10.116

Max Tons:60t/m



10.117

Max Tons:45t/m

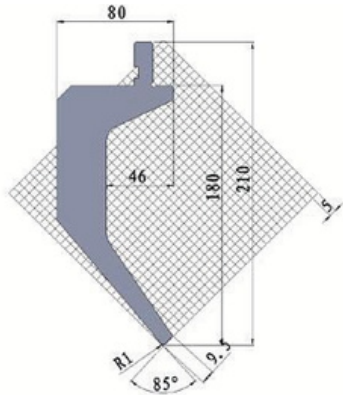


85°

Standard punch 85 °

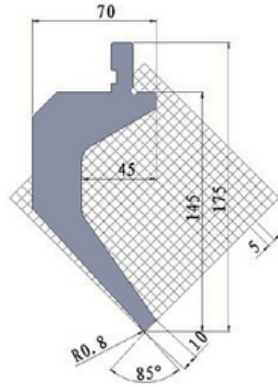
10.118

Max Tons:80t/m



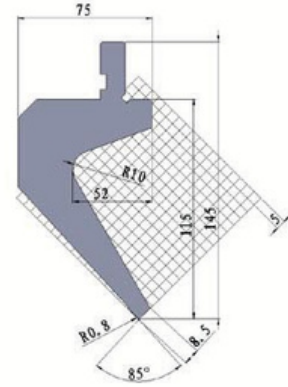
10.119

Max Tons:80t/m



10.120

Max Tons:50t/m

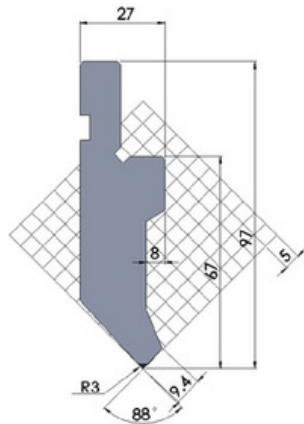


88°

Standard punches 88°

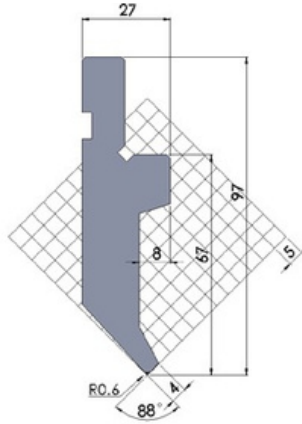
10.130

Max Tons:100t/m



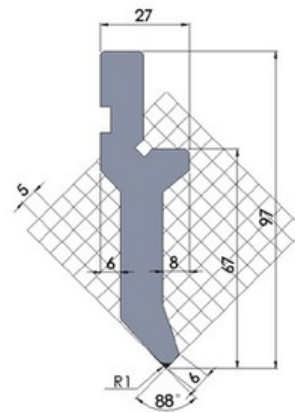
10.131

Max Tons:80t/m



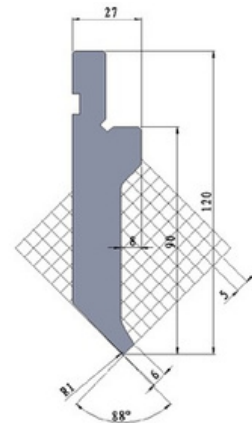
10.132

Max Tons:60t/m



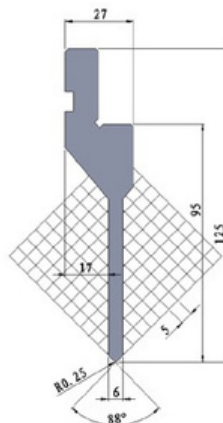
10.133

Max Tons:100t/m



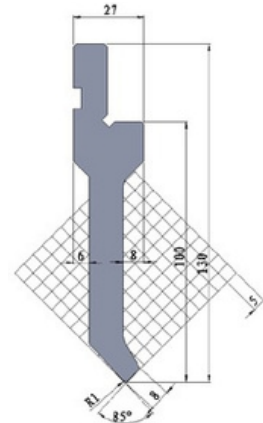
10.134

Max Tons:50t/m



10.135

Max Tons:20t/m

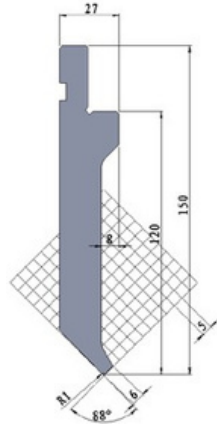


88°

Standard punch 88 °

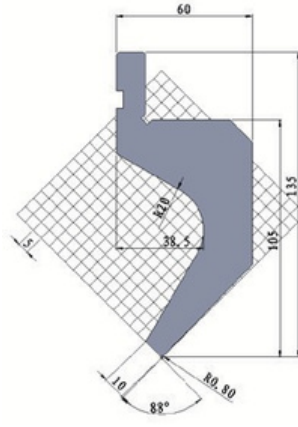
10.136

Max Tons:80t/m



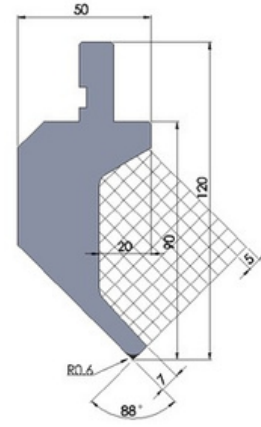
10.137

Max Tons:45t/m



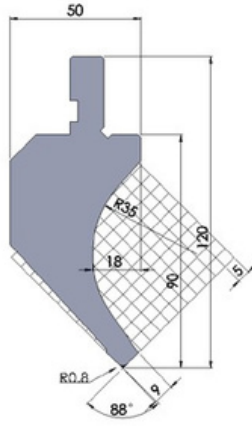
10.138

Max Tons:20t/m



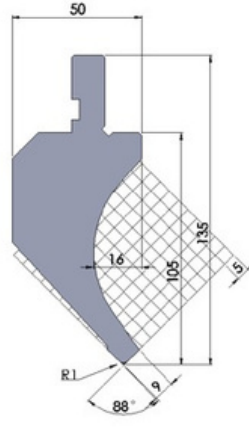
10.139

Max Tons:70t/m



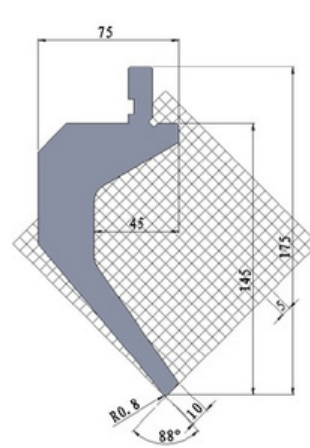
10.140

Max Tons:50t/m



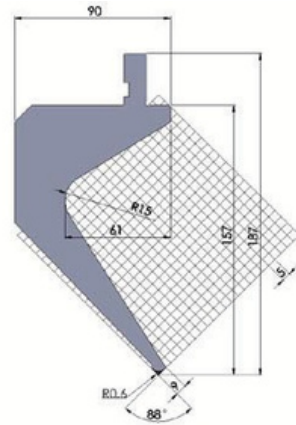
10.141

Max Tons:50t/m



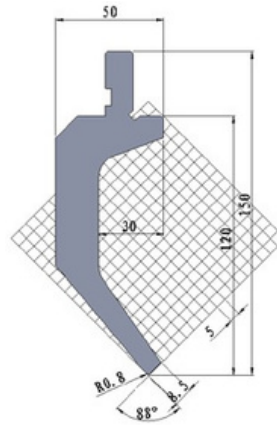
10.142

Max Tons:30t/m



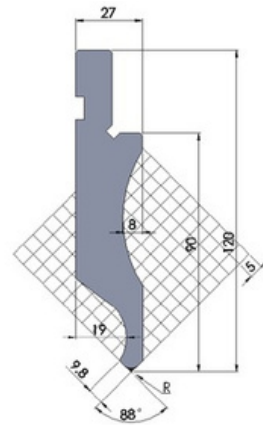
10.143

Max Tons:20t/m



10.144

Max Tons:50t/m

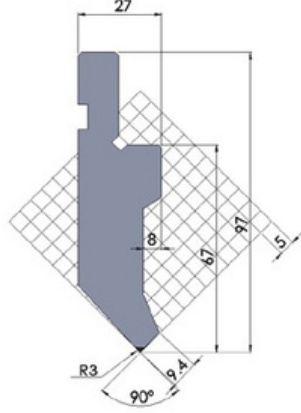


90°

Standard punch 90 °

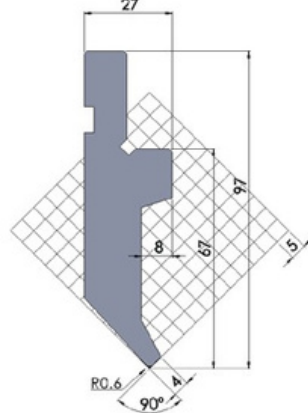
10.150

Max Tons:100t/m



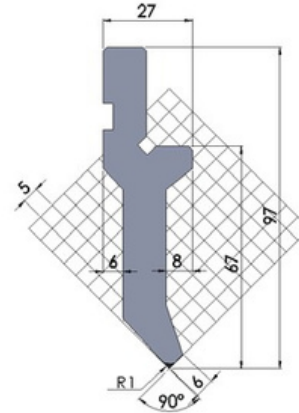
10.151

Max Tons:35t/m



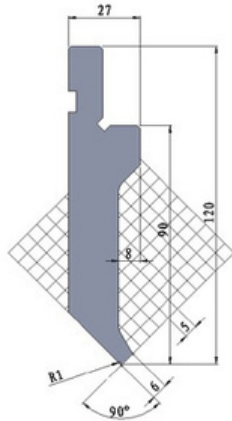
10.152

Max Tons:80t/m



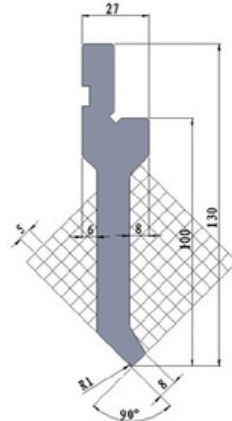
10.153

Max Tons:80t/m



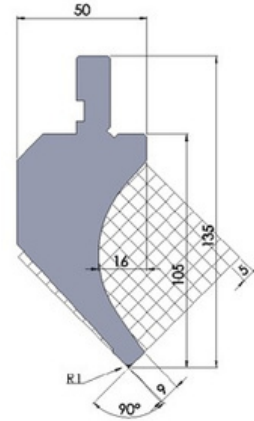
10.154

Max Tons:20t/m



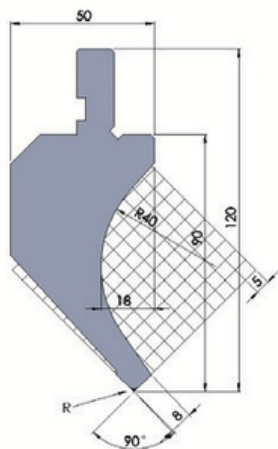
10.155

Max Tons:50t/m



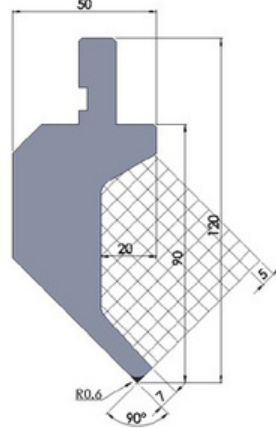
10.156

Max Tons:60t/m



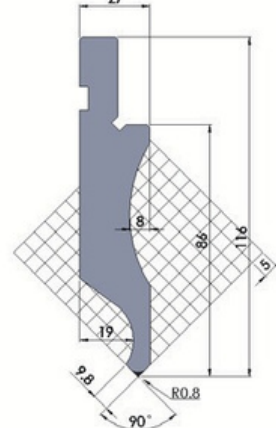
10.157

Max Tons:20t/m



10.158

Max Tons:50t/m

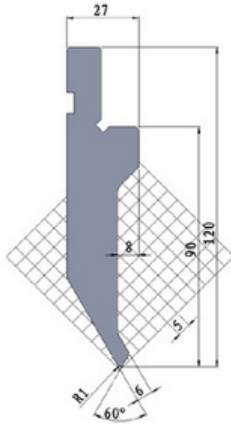


60°

Standard punch 60 °

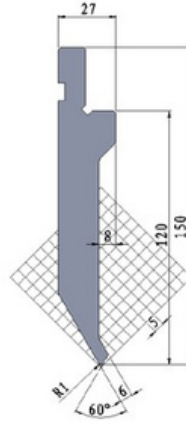
10.170

Max Tons:80t/m



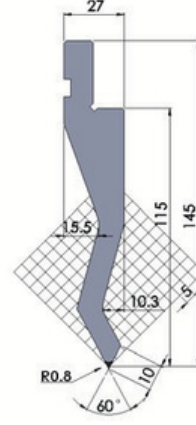
10.171

Max Tons:80t/m



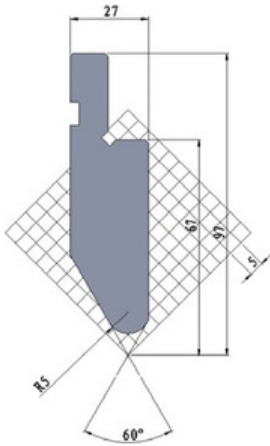
10.172

Max Tons:40t/m



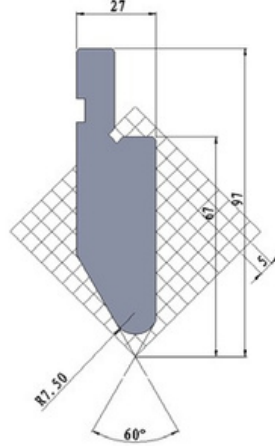
10.173

Max Tons:100t/m



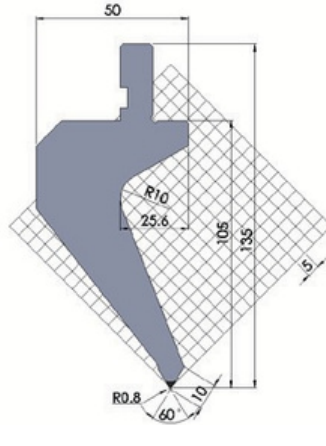
10.174

Max Tons:100t/m



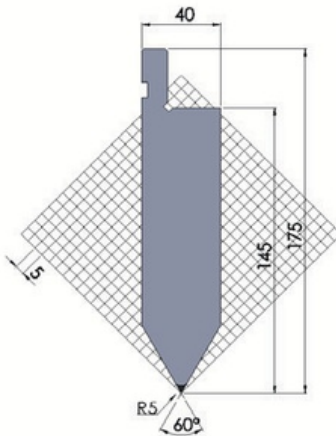
10.175

Max Tons:60t/m



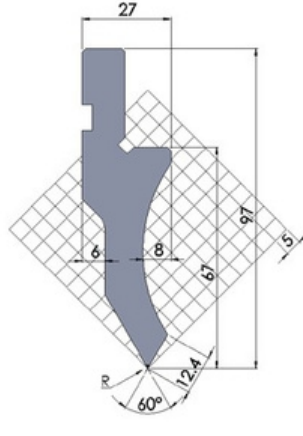
10.176

Max Tons:160t/m



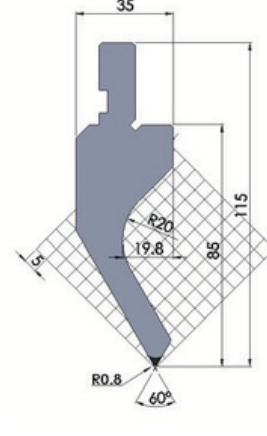
10.177

Max Tons:60t/m



10.178

Max Tons:40t/m

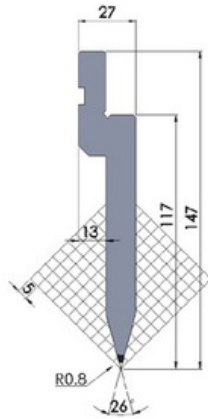


26° 30° 35°

Standard punch 26 ° 30° 35°

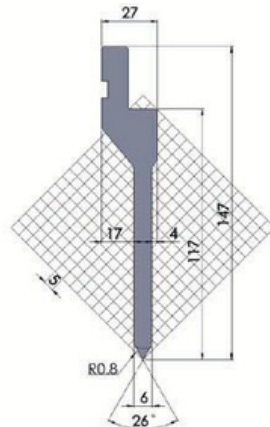
10.190

Max Tons:80t/m



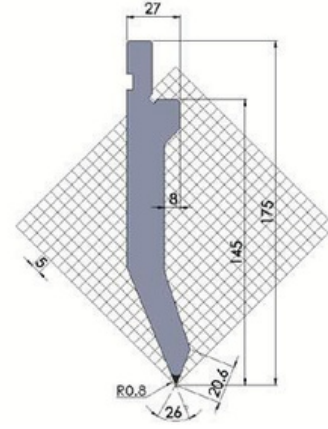
10.191

Max Tons:80t/m



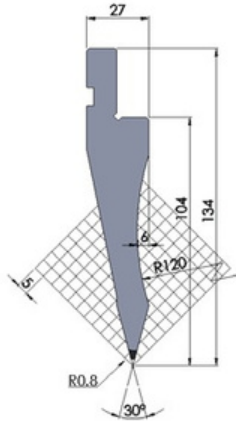
10.192

Max Tons:90t/m



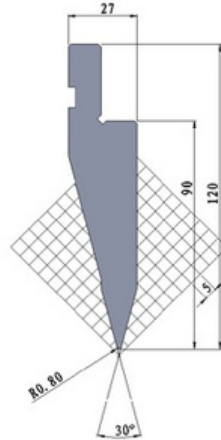
10.193

Max Tons:70t/m



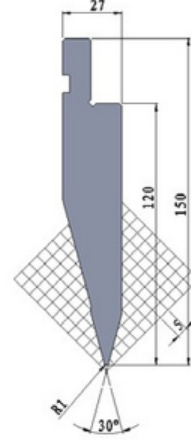
10.194

Max Tons:100t/m



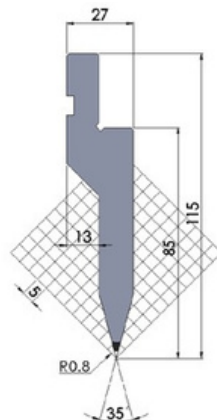
10.195

Max Tons:100t/m



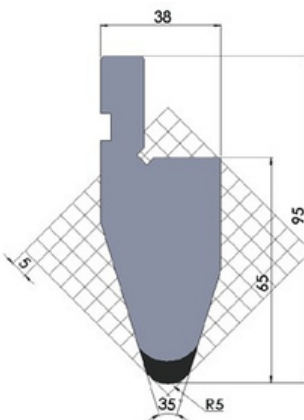
10.196

Max Tons:80t/m



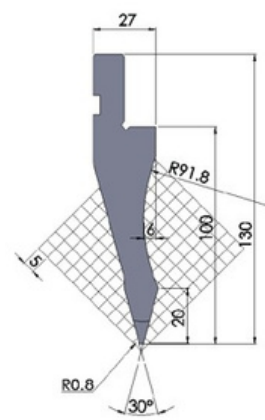
10.197

Max Tons:160t/m



10.198

Max Tons:70t/m

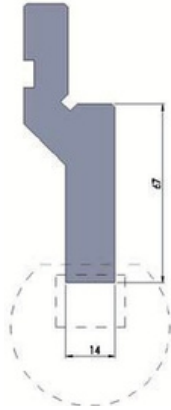


R

Standard R-type round tooling

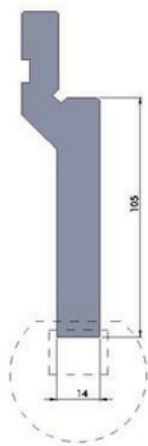
10.210

Max Tons:100t/m



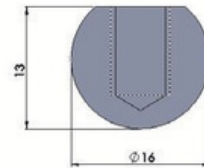
10.211

Max Tons:100t/m



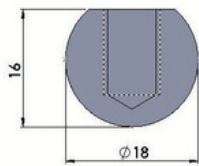
10.212

Max Tons:80t/m



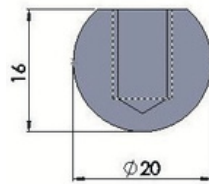
10.213

Max Tons:80t/m



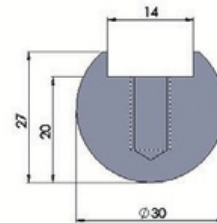
10.214

Max Tons:80t/m



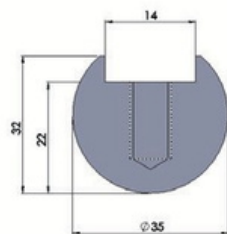
10.215

Max Tons:80t/m



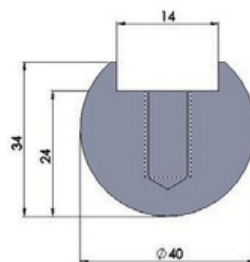
10.216

Max Tons:80t/m



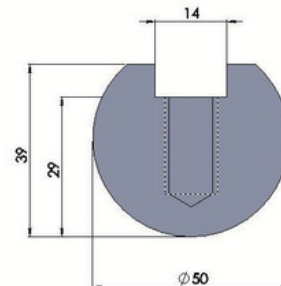
10.217

Max Tons:80t/m



10.218

Max Tons:80t/m

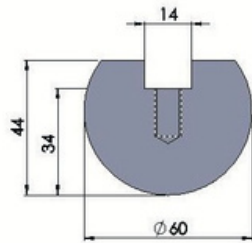


R

Standard R-type round tooling

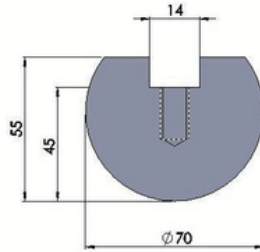
10.219

Max Tons:80t/m



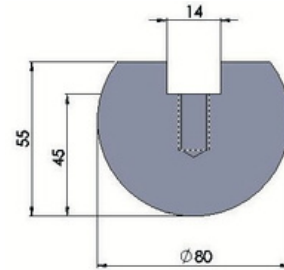
10.220

Max Tons:80t/m



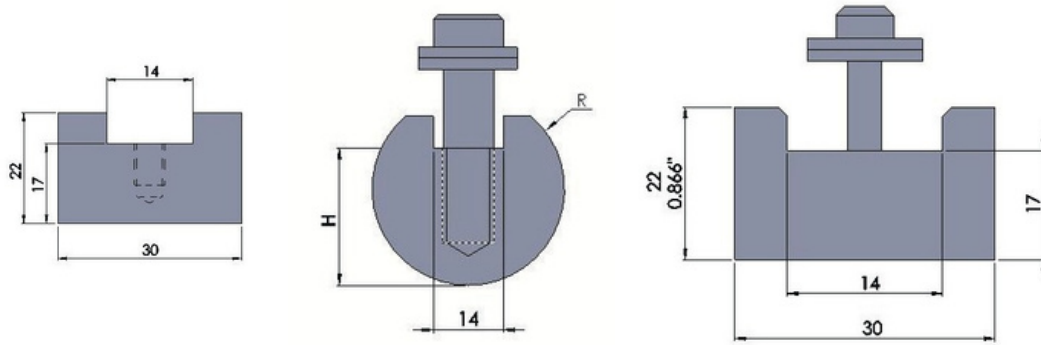
10.221

Max Tons:80t/m



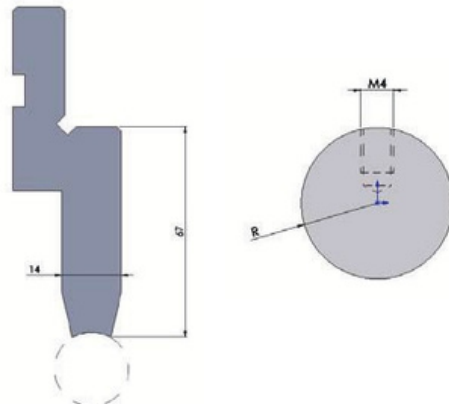
10.222

Max Tons:80t/m



10.230

Max Tons:80t/m

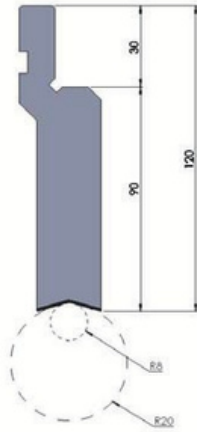


		Rmm		Rmm
10.231	R3	3	R5.5	5.5
10.232	R3.5	3.5	R6	6
10.233	R4	4	R6.5	6.5
10.234	R4.5	4.5	R7	7
10.235	R5	5	R7.5	7.5

Standard round tooling

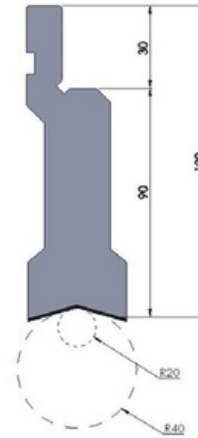
10.240

Max Tons:100t/m

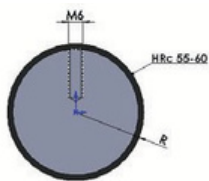
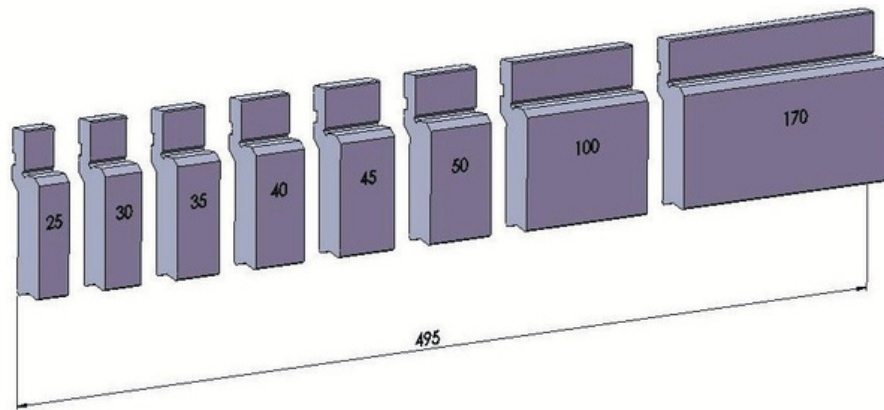


10.241

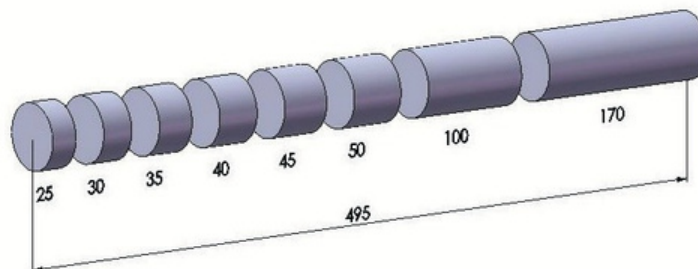
Max Tons:100t/m



/ Segmentation



		Rmm		Rmm
10.242	R8	8	R20	20
10.243	R10	10	R25	25
10.244	R12.5	12.5	R30	30
10.245	R15	15	R35	35
10.246	R17.5	17.5	R40	40

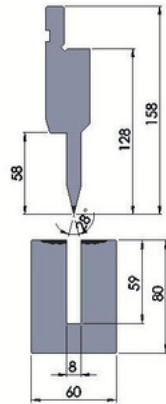


Flattening/hemming tooling

10.250+20.134

10.250 Max Tons:A 80t/m B100t/m

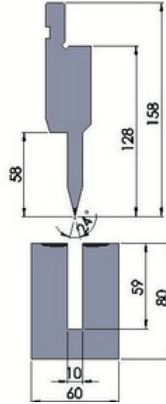
20.134 Max Tons:A 50t/m B100t/m



10.251+20.135

10.251 Max Tons:A 80t/m B100t/m

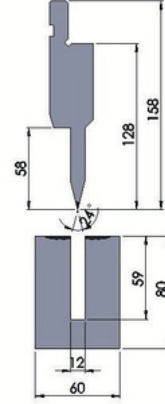
20.135 Max Tons:A 50t/m B100t/m



10.252+20.136

10.252 Max Tons:A 80t/m B100t/m

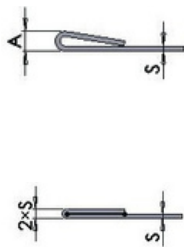
20.136 Max Tons:A 50t/m B100t/m



A



B

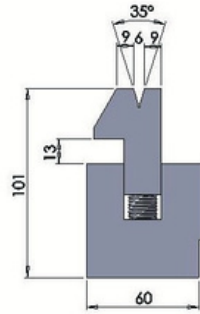


s mm	A mm	450Mpa t/m	700Mpa t/m	s mm	A mm	450Mpa t/m	700Mpa t/m
0.6	3.0	9	15	0.6	1.2	23	35
0.8	3.0	12	20	0.8	1.6	32	50
1.0	3.5	15	25	1.0	2.0	40	60
1.25	3.5	17	26	1.25	2.5	50	80
1.5	4.6	22	38	1.5	3.0	63	95
2.0	5.5	30	50	2.0	4.0	80	130

Flattening/hemming tooling

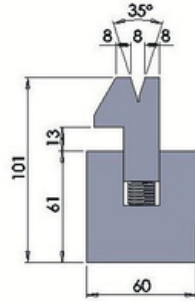
10.260

Max Tons:60t/m



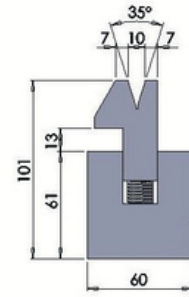
10.261

Max Tons:60t/m



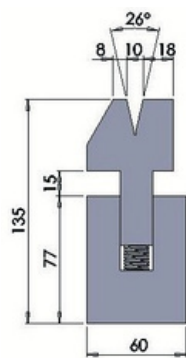
10.262

Max Tons:60t/m



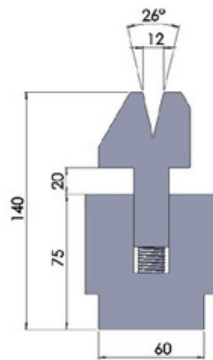
10.263

Max Tons:100t/m



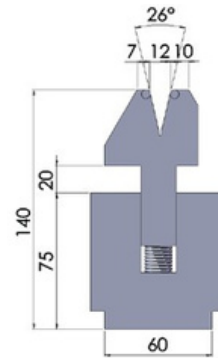
10.264

Max Tons:100t/m



10.265

Max Tons:100t/m



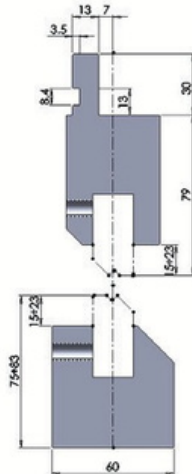
s mm	A mm	450Mpa t/m	700Mpa t/m	s mm	A mm	450Mpa t/m	700Mpa t/m
0.6	3.0	9	15	0.6	1.2	23	35
0.8	3.0	12	20	0.8	1.6	32	50
1.0	3.5	15	25	1.0	2.0	40	60
1.25	3.5	17	26	1.25	2.5	50	80
1.5	4.6	22	38	1.5	3.0	63	95
2.0	5.5	30	50	2.0	4.0	80	130
2.5	6.5	55		2.5	5.0	90	
3.0	8.0	70		3.0	6.0	100	

Z

Standard Z-type tooing

10.270

Max Tons:100t/m



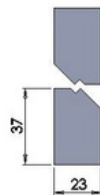
10.271

Max Tons:100t/m

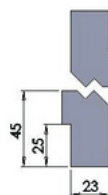


10.272

Max Tons:100t/m



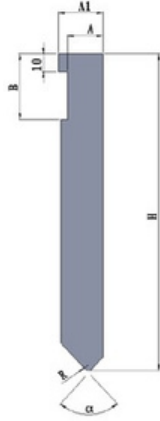
	Z mm	B	S max	max t/m
Z-1	1	160	0.5	100
Z-1.5	1.5	160	0.6	100
Z-2	2	150	0.8	100
Z-2.5	2.5	140	1.0	100
Z-3	3	90	1.0	100
Z-3.5	3.5	90	1.2	100
Z-4	4	90	1.2	100
Z-4.5	4.5	90	1.5	100
Z-5	5	90	1.5	100
Z-5.5	5.5	90	1.5	100
Z-6	6	90	1.5	100
Z-6.5	6.5	90	1.5	100
Z-7	7	90	2	100
Z-7.5	7.5	90	2	100
Z-8	8	90	2.5	100



	Z mm	B	S max	max t/m
Z-9	9	90	2.5	100
Z-10	10	90	3	100
Z-11	11	90	3	100
Z-12	12	90	3	100

Standard heavy duty direct –link type tooling

10.280



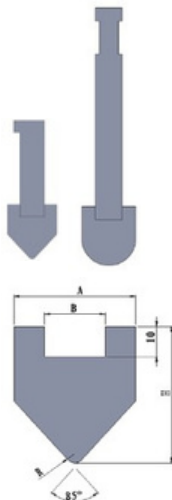
	A	A1	H	B		R Top end R	
1	20	25	180	37		R3	100
2	25	30	180	42		R5	120
3	30	35	200	42		R8	150
4	40	45	200	52		R10	200

10.281



Code	A	A1	H	B		R Top end R	
1	20	25	180	37		R3	100
2	25	30	180	42		R5	120
3	30	35	200	42		R8	150
4	40	45	200	52		R10	200

10.290



Code	A	B	H	R Top end R	Tooling angle
1	40	20	45	R3	85°
2	45	25	50	R3	85°
3	50	30	55	R5	85°
4	55	35	60	R5	85°
5	60	40	65	R8	85°
6	70	50	80	R10	85°

Accessories of upper tooling

10.300

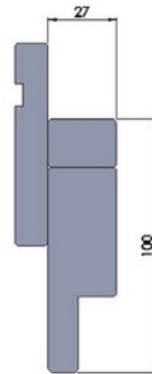


10.301



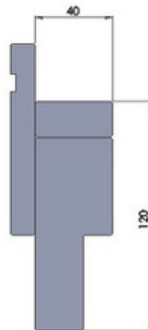
10.302

Max Tons:100t/m



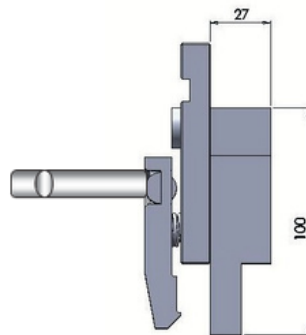
10.303

Max Tons:100t/m



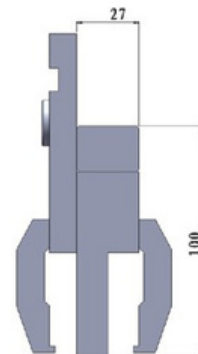
10.304

Max Tons:100t/m



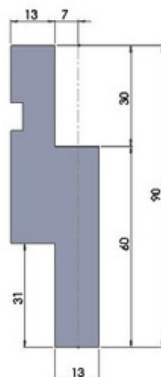
10.305

Max Tons:100t/m

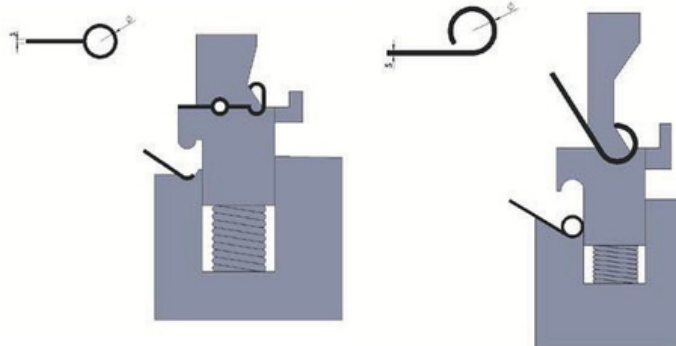


10.306

Max Tons:100t/m



Hinge & Barrel forming

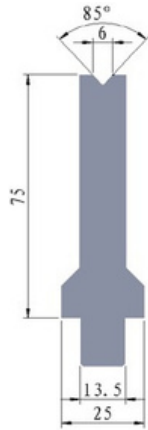


1V

1V lower dies

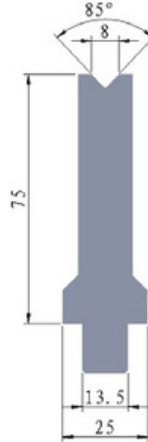
20.100

Max Tons:40t/m



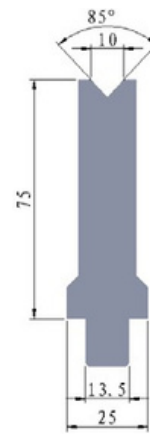
20.101

Max Tons:40t/m



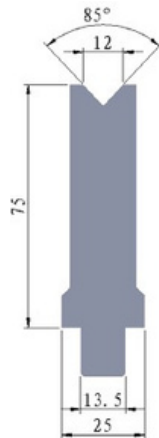
20.102

Max Tons:50t/m



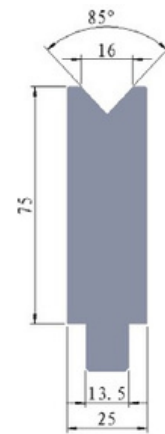
20.103

Max Tons:60t/m



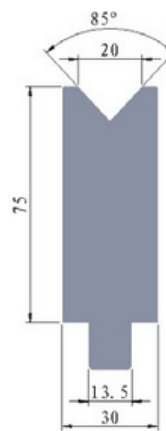
20.104

Max Tons:80t/m



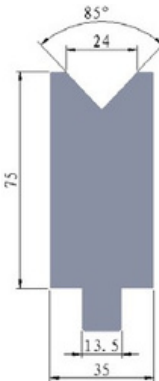
20.105

Max Tons:85t/m



20.106

Max Tons:90t/m



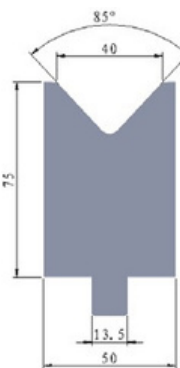
20.107

Max Tons:100t/m



20.108

Max Tons:100t/m

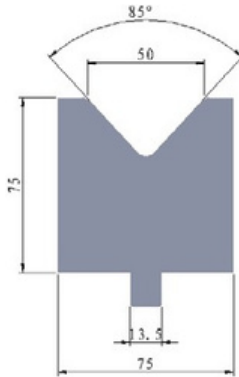


1V

1V lower dies

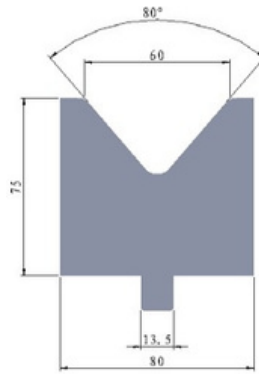
20.109

Max Tons:100t/m



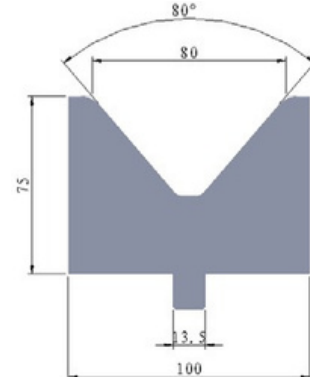
20.110

Max Tons:100t/m



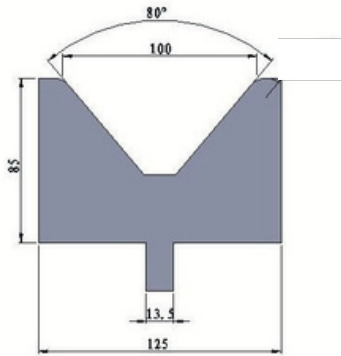
20.111

Max Tons:100t/m



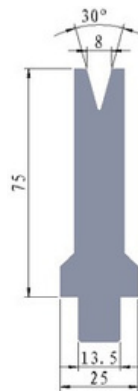
20.112

Max Tons:145t/m



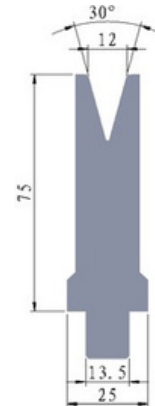
20.120

Max Tons:40t/m



20.121

Max Tons:40t/m



20.122

Max Tons:55t/m



20.123

Max Tons:55t/m



20.124

Max Tons:60t/m

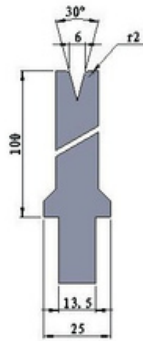


1V

1V lower dies

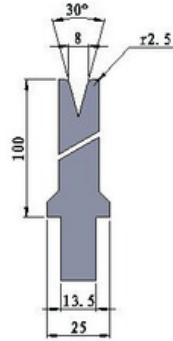
20.125

Max Tons:40t/m



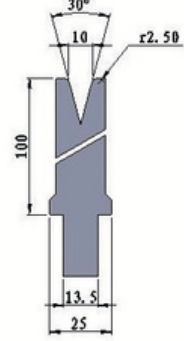
20.126

Max Tons:40t/m



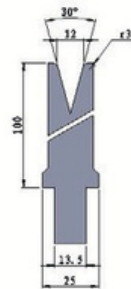
20.127

Max Tons:40t/m



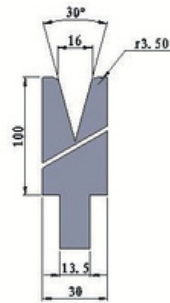
20.128

Max Tons:40t/m



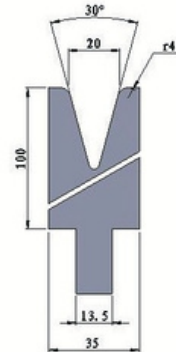
20.129

Max Tons:55t/m



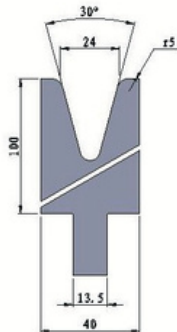
20.130

Max Tons:55t/m



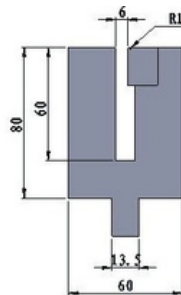
20.131

Max Tons:60t/m



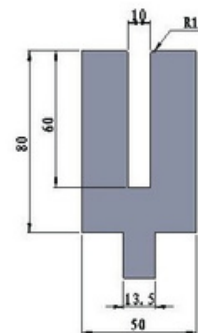
20.132

Max Tons:50t/m



20.133

Max Tons:50t/m

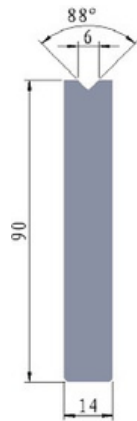


1V

1V lower dies

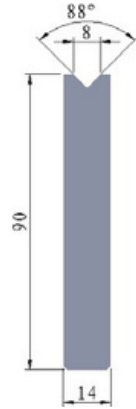
20.140

Max Tons:95t/m



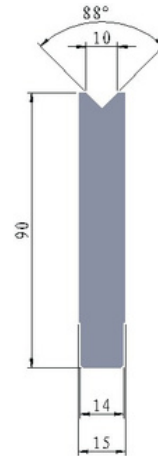
20.141

Max Tons:95t/m



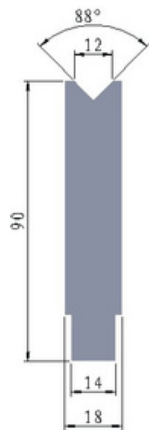
20.142

Max Tons:95t/m



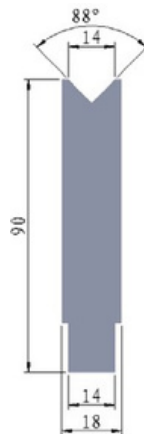
20.143

Max Tons:95t/m



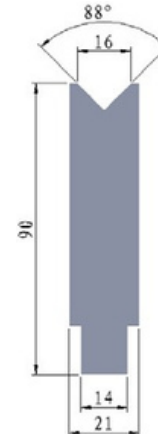
20.144

Max Tons:95t/m



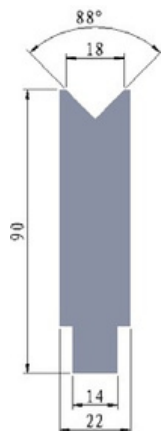
20.145

Max Tons:95t/m



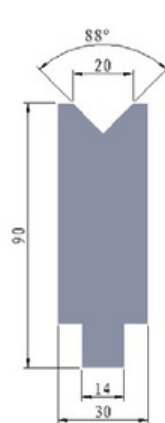
20.146

Max Tons:95t/m



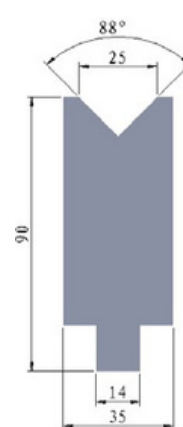
20.147

Max Tons:95t/m



20.148

Max Tons:95t/m

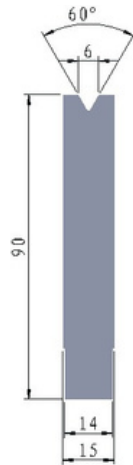


1V

1V lower dies

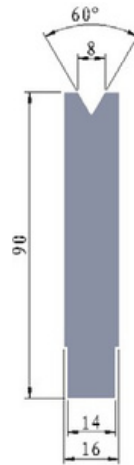
20.160

Max Tons:60t/m



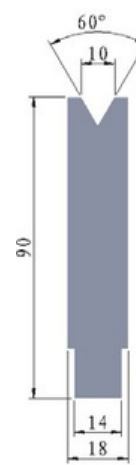
20.161

Max Tons:65t/m



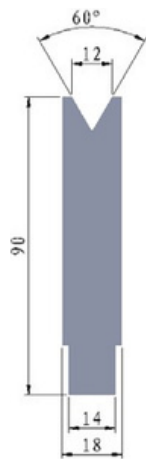
20.163

Max Tons:70t/m



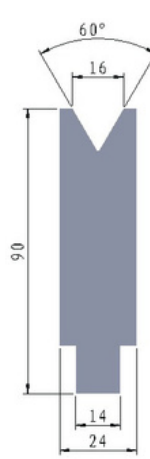
20.164

Max Tons:70t/m



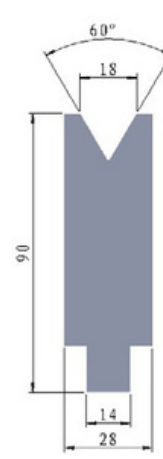
20.165

Max Tons:70t/m



20.166

Max Tons:70t/m



20.167

Max Tons:70t/m



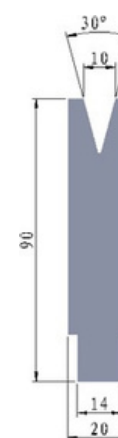
20.168

Max Tons:65t/m



20.169

Max Tons:70t/m

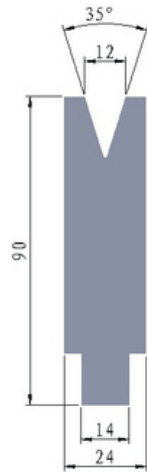


1V

1V lower dies

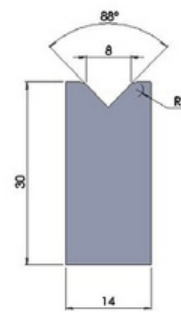
20.170

Max Tons:70t/m



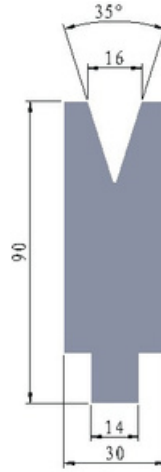
20.173

Max Tons:95t/m



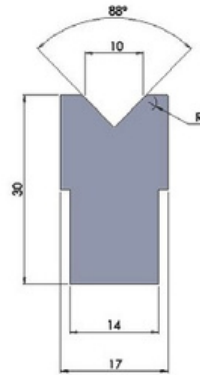
20.171

Max Tons:70t/m



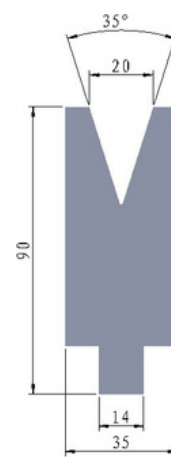
20.174

Max Tons:95t/m



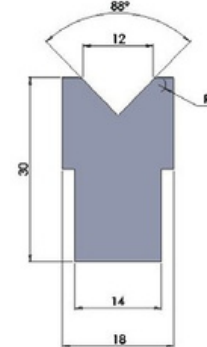
20.172

Max Tons:70t/m

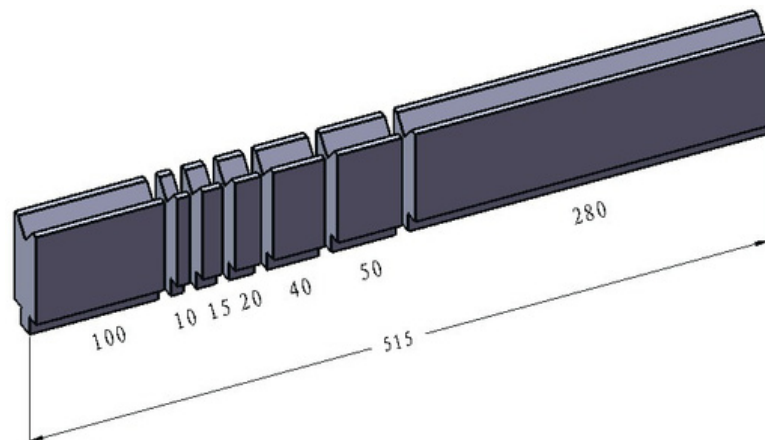


20.175

Max Tons:95t/m



Segmentation of lower dies



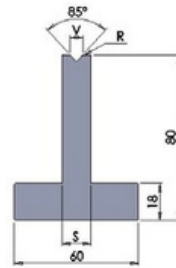
1V

1V lower dies

20.350/Tx

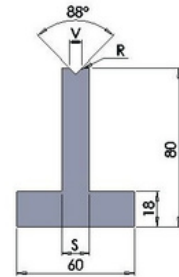
Max Tons:100t/m

	Vmm	Rmm	Smm	max t/m
T6	6	0.4	14	100
T8	8	0.5	14	100
T10	10	0.8	18	100
T12	12	2.75	18	100
T16	16	2.75	24	100
T20	20	3	30	100
T25	25	3	35	100
TR6	6	2.75	14	100
TR8	8	2.75	14	100
TR10	10	2.75	18	100



20.351/Tx

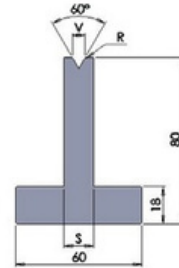
Max Tons:100t/m



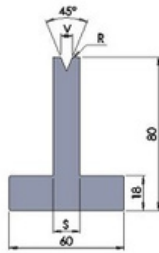
20.352/Tx

Max Tons:60t/m

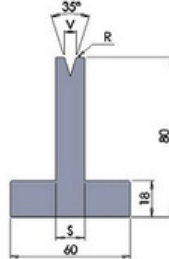
	Vmm	Rmm	Smm	max t/m
T6	6	0.5	14	60
T8	8	0.8	14	60
T10	10	0.8	18	60
T12	12	0.8	18	60
T16	16	2.75	24	60
T20	20	3	30	60
T25	25	3	35	60
TR6	6	1.5	14	60
TR8	8	1.5	14	60
TR10	10	2.75	18	60
TR12	12	2.75	18	60



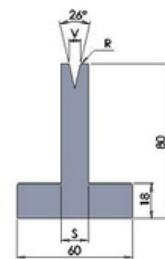
20.353/Tx



20.354/Tx



20.355/Tx



	Vmm	Rmm	Smm	max t/m		Vmm	Rmm	Smm	max t/m		Vmm	Rmm	Smm	max t/m
T6	6	0.8	14	50	T6	6	0.8	14	35	T6	6	0.8	16	20
T8	8	1	18	50	T8	8	1	16	35	T8	8	1	20	20
T10	10	1.2	18	50	T10	10	1.2	20	40	T10	10	1.2	24	20
T12	12	1.6	24	50	T12	12	1.6	22	40	T12	12	1.6	26	20
T16	16	2.75	26	50	T16	16	3	30	45					
T20	20	3	30	50	T20	20	3	35	50					
T25	25	3	37	50	T25	25	3	40	50					

1V

1V lower dies

20.356/Tx

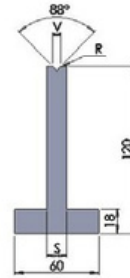
Max Tons:100t/m

	Vmm	Rmm	Smm	max t/m
T6	6	0.4	14	100
T8	8	0.5	14	100
T10	10	0.8	18	100
T12	12	2.75	18	100
T16	16	2.75	24	100
T20	20	3	30	100
T25	25	3	35	100
TR6	6	2.75	14	100
TR8	8	2.75	14	100
TR10	10	2.75	18	100



20.357/Tx

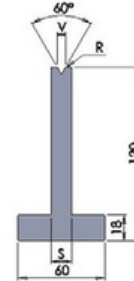
Max Tons:100t/m



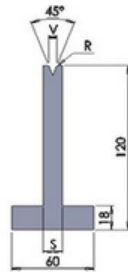
20.358/Tx

Max Tons:60t/m

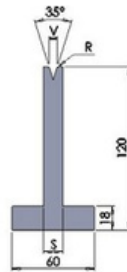
	Vmm	Rmm	Smm	max t/m
T6	6	0.5	14	60
T8	8	0.8	14	60
T10	10	0.8	18	60
T12	12	0.8	18	60
T16	16	2.75	24	60
T20	20	3	30	60
T25	25	3	35	60
TR6	6	1.5	14	60
TR8	8	1.5	14	60
TR10	10	2.75	18	60
TR12	12	2.75	18	60



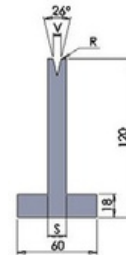
20.359/Tx



20.360/Tx



20.361/Tx



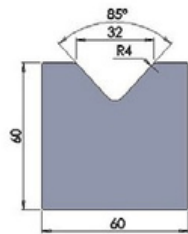
	Vmm	Rmm	Smm	max t/m		Vmm	Rmm	Smm	max t/m		Vmm	Rmm	Smm	max t/m
T6	6	0.8	14	50	T6	6	0.8	14	35	T6	6	0.8	16	20
T8	8	1	18	50	T8	8	1	16	35	T8	8	1	20	20
T10	10	1.2	18	50	T10	10	1.2	20	40	T10	10	1.2	24	20
T12	12	1.6	24	50	T12	12	1.6	22	40	T12	12	1.6	26	20
T16	16	2.75	26	50	T16	16	3	30	45					
T20	20	3	30	50	T20	20	3	35	50					
T25	25	3	37	50	T25	25	3	40	50					

1V

1V lower dies

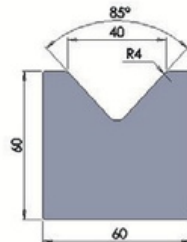
20.400

Max Tons:100t/m



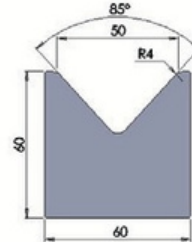
20.401

Max Tons:100t/m



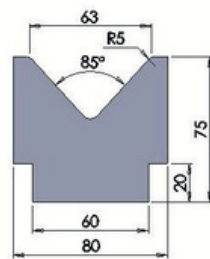
20.402

Max Tons:100t/m



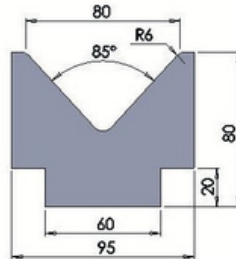
20.403

Max Tons:100t/m



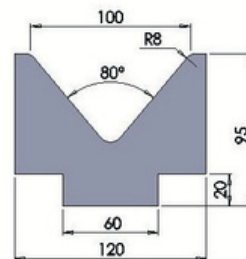
20.404

Max Tons:100t/m



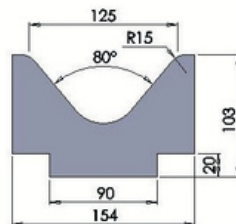
20.410

Max Tons:100t/m



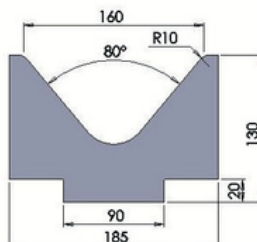
20.411

Max Tons:100t/m



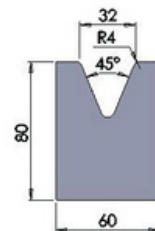
20.412

Max Tons:100t/m



20.420

Max Tons:100t/m



1V

1V lower dies

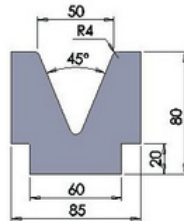
20.421

Max Tons:100t/m



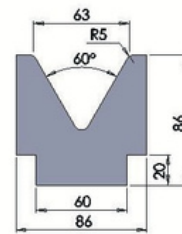
20.422

Max Tons:100t/m



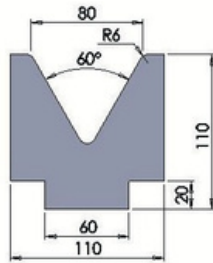
20.430

Max Tons:100t/m



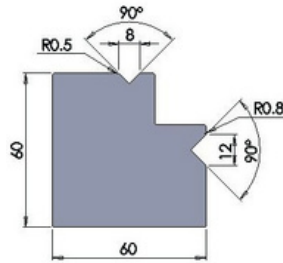
20.431

Max Tons:100t/m



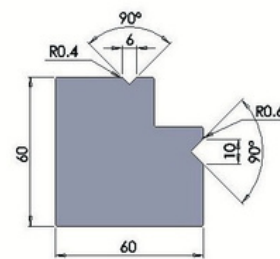
20.440

Max Tons:80t/m

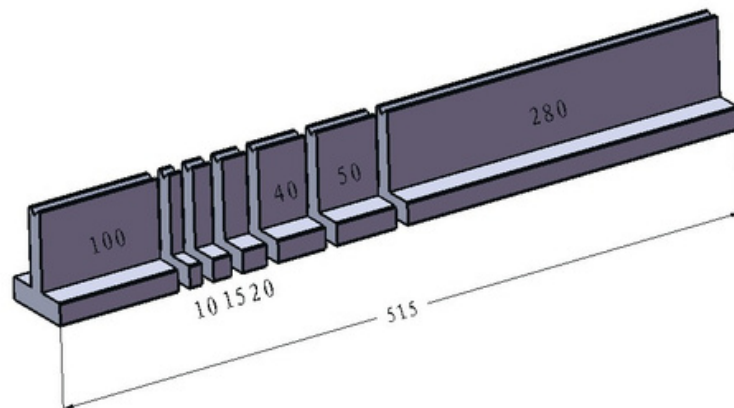


20.441

Max Tons:80t/m



Segmentation of lower dies



1V

1V lower dies

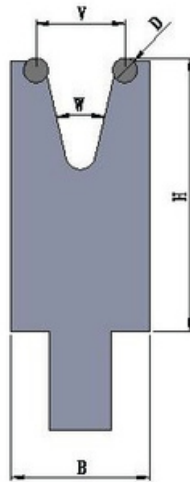
/ Low Friction Dies 20.181~20.186

Compound dies are press brake dies for “airbending” only.

Minimal marking on the bend parts.

The die bars are interchangeable in case of wear.

Choose of optimal radius material, Bronze or non metallic bars can be supplied for special application, The bars can be TIN coated for longer life and less friction.

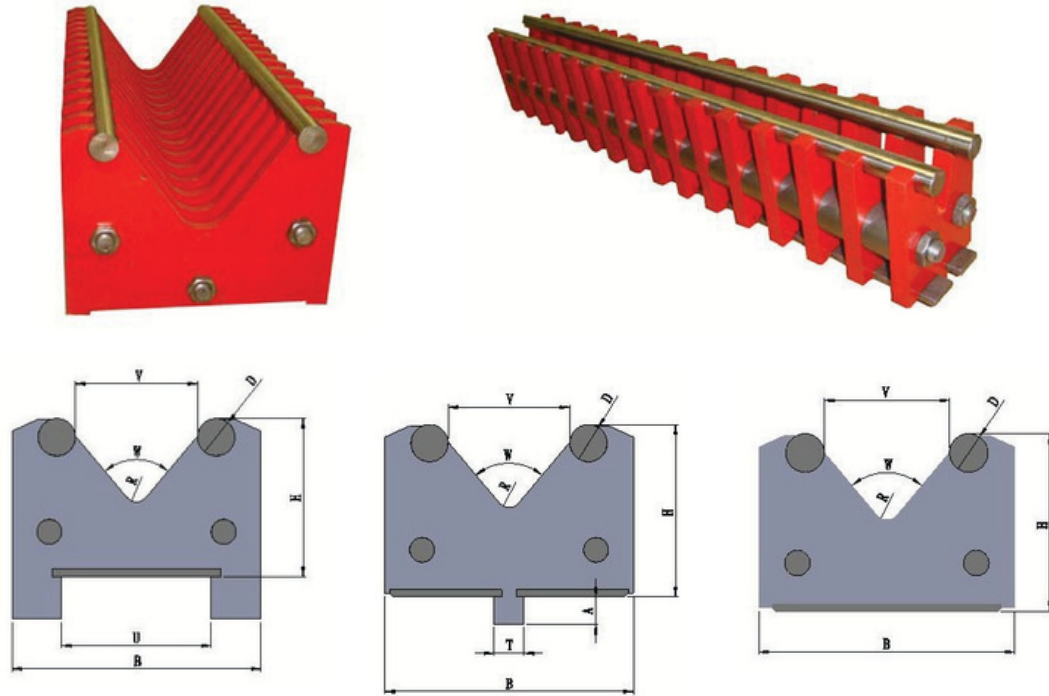


	V mm	D mm	W ()	B mm	H mm	Max Tons t/m
20.181	8	3	30	20	75	20
20.182	12	4	30	24	75	30
20.183	16	5	30	28	75	40
20.184	20	5	30	32	75	45
20.185	24	6	30	40	75	50
20.186	32	8	60	52	75	60

1V

1V lower dies

/ Low Friction Dies 20.191~20.204



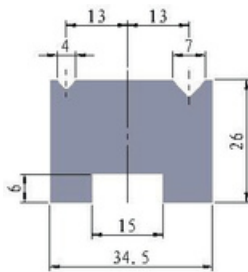
	V mm	D mm	W ()	B mm	H mm	R mm	Max Tons t/m
20.191	32	10	28	53	75	5	50
20.192	32	10	85	53	75	5	70
20.193	40	10	85	62	75	5	80
20.194	48	10	85	70	75	5	90
20.195	50	15	40	85	90	7	80
20.196	60	15	40	110	110	10	100
20.197	80	20	50	150	130	10	120
20.198	100	20	60	170	140	18	150
20.199	120	25	60	190	160	18	180
20.200	150	25	60	235	180	25	200
20.201	200	30	80	300	220	30	250
20.202	250	30	80	350	300	40	300
20.203	300	40	80	440	360	40	400
20.204	400	50	80	570	400	50	500

2V

2V lower dies

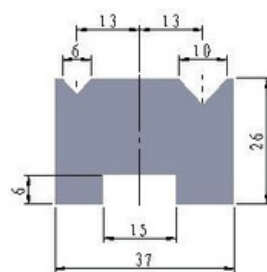
20.220

Max Tons:70t/m



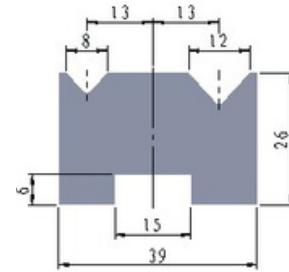
20.221

Max Tons:80t/m



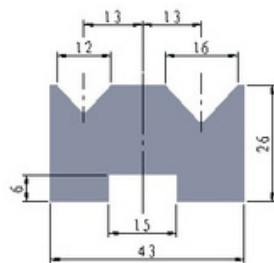
20.222

Max Tons:80t/m



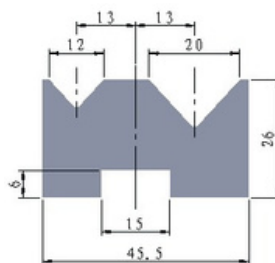
20.223

Max Tons:80t/m



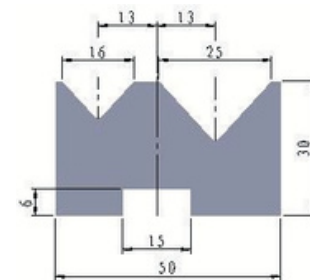
20.224

Max Tons:80t/m



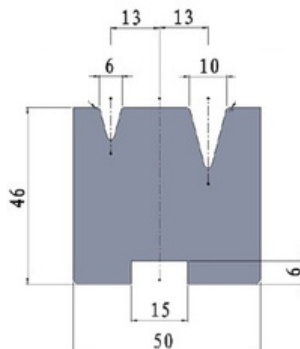
20.225

Max Tons:80t/m



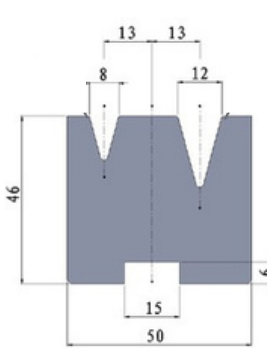
20.230

Max Tons:60t/m



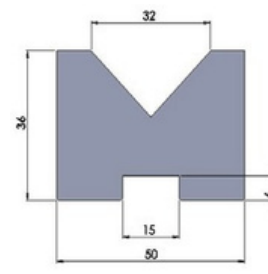
20.231

Max Tons:60t/m



20.232

Max Tons:100t/m

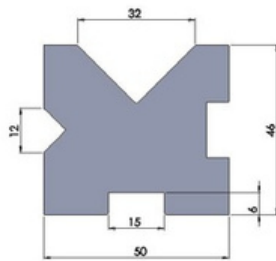


2V

2V lower dies

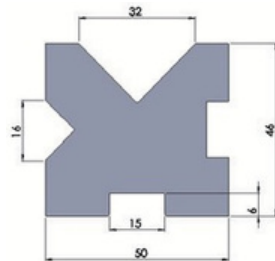
20.233

Max Tons:100t/m



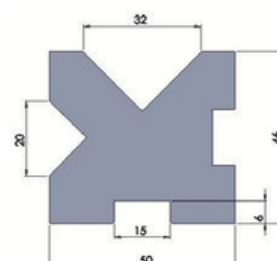
20.234

Max Tons:100t/m



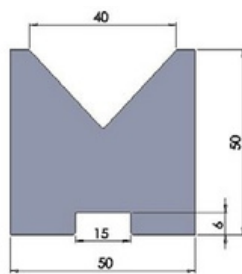
20.235

Max Tons:100t/m



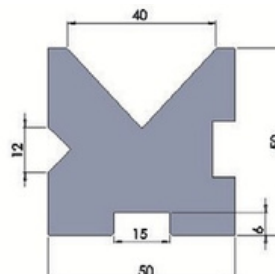
20.236

Max Tons:100t/m



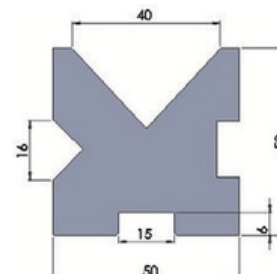
20.237

Max Tons:100t/m



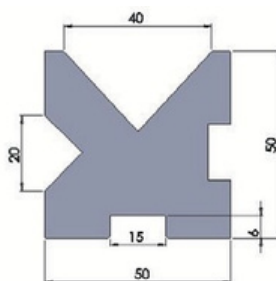
20.238

Max Tons:100t/m



20.239

Max Tons:1000t/m

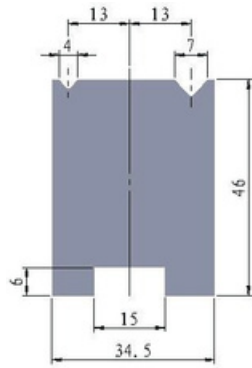


2V

2Vlower dies

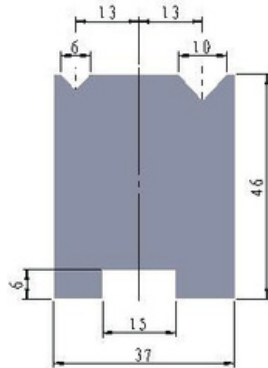
20.250

Max Tons:80t/m



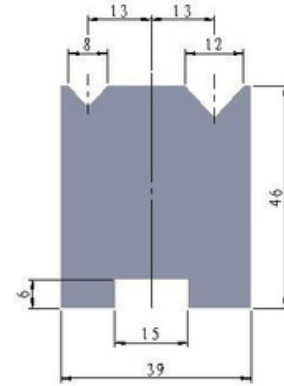
20.251

Max Tons:80t/m



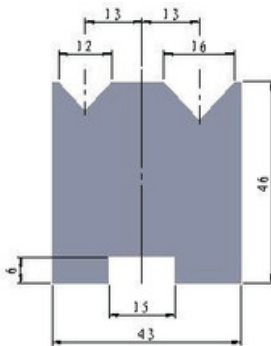
20.252

Max Tons:80t/m



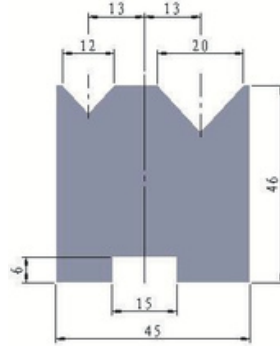
20.253

Max Tons:80t/m



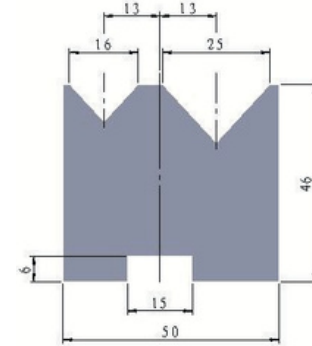
20.254

Max Tons:80t/m



20.255

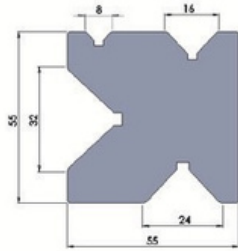
Max Tons:80t/m



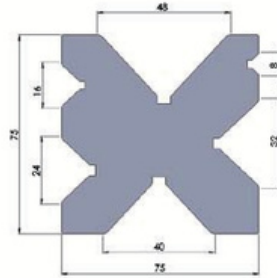
V

multi-V lower dies

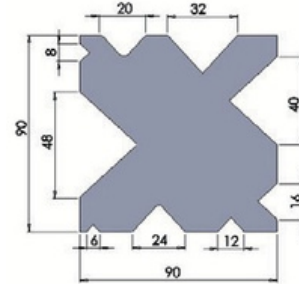
20.500



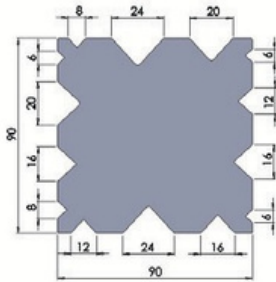
20.501



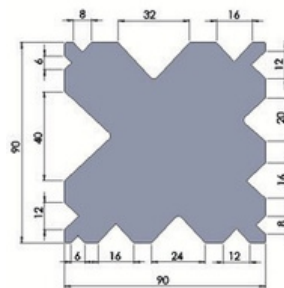
20.502



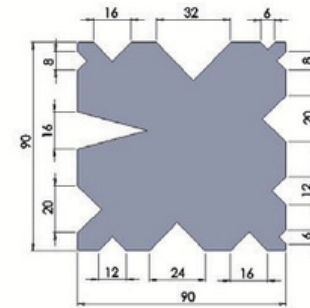
20.503



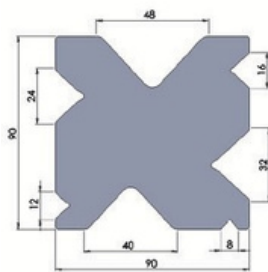
20.504



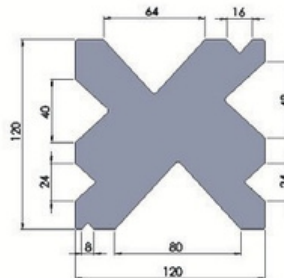
20.505



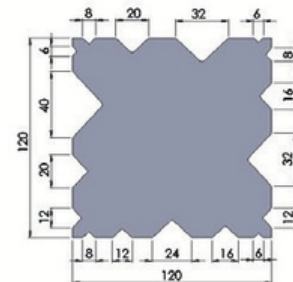
20.506



20.507



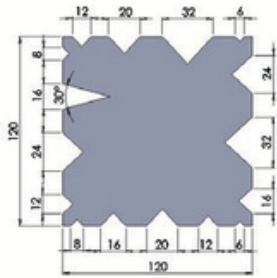
20.508



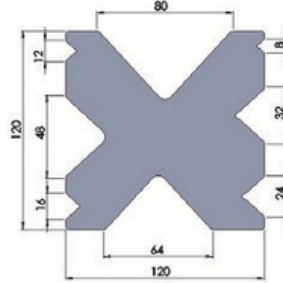
V

multi-V lower dies

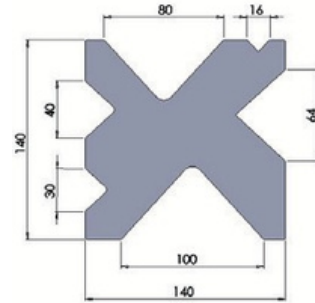
20.509



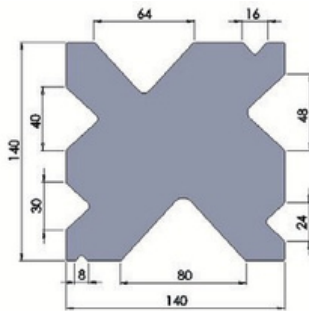
20.510



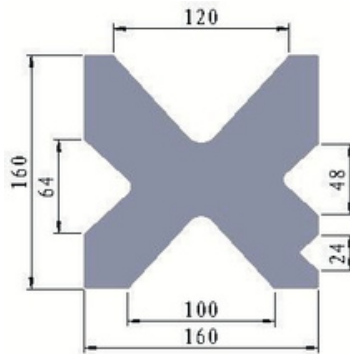
20.511



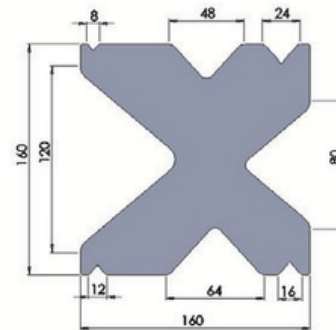
20.512



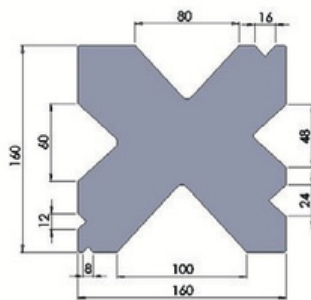
20.513



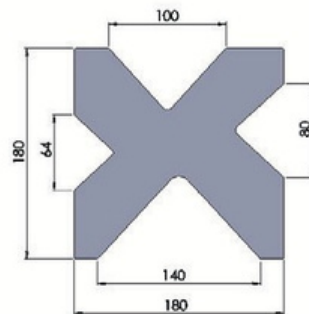
20.514



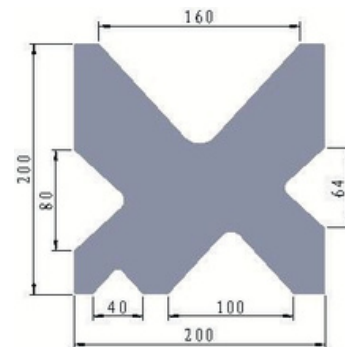
20.515



20.516



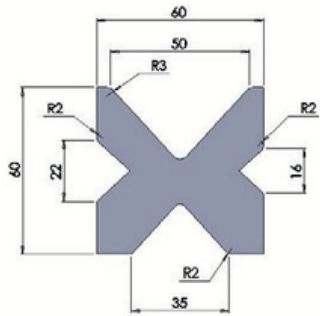
20.517



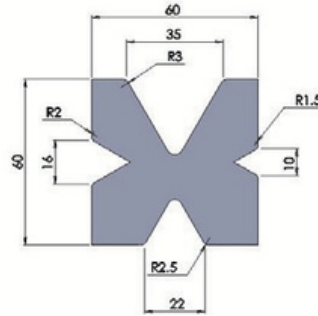
V

multi-V lower dies

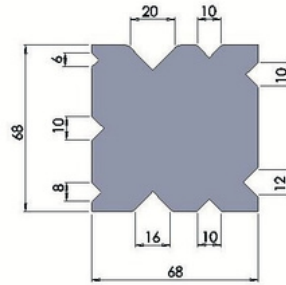
20.530



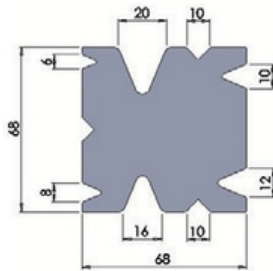
20.531



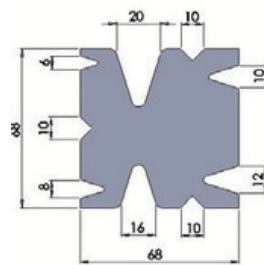
20.540



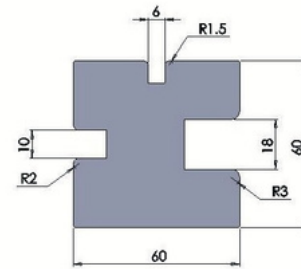
20.541



20.550



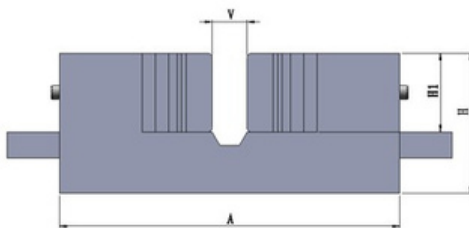
20551



Combined dies

20.560

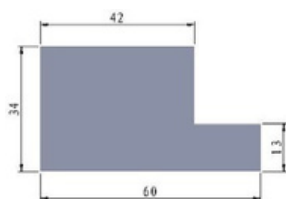
Max Tons:200t/m



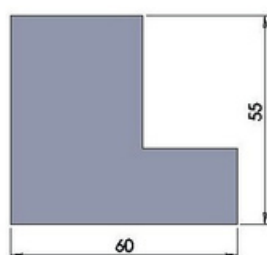
Code	Vmax	A	H	H1
1	200	390	160	90
2	240	460	190	110
3	280	540	220	130
4	320	620	250	150
5	360	700	260	160
6	400	800	290	180

Accessories of lower dies

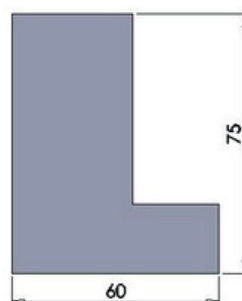
20.600



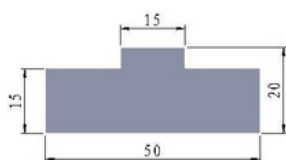
20.601



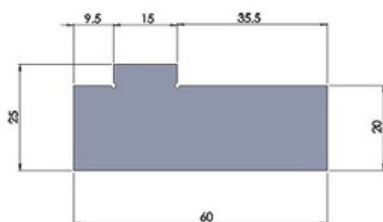
20.602



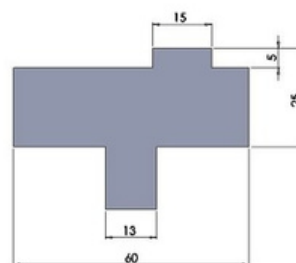
20.603



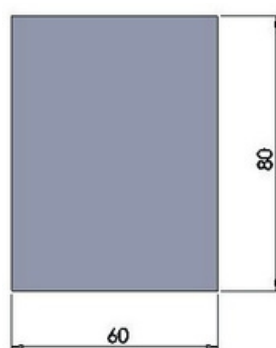
20.604



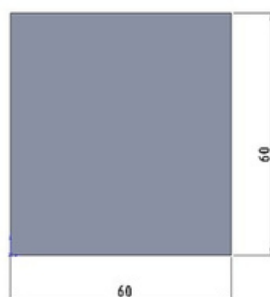
20.605



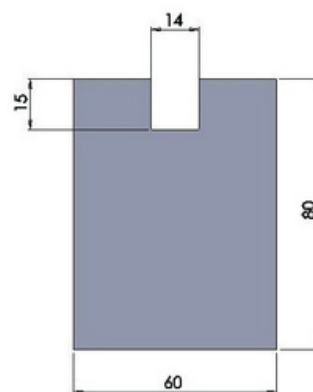
20.606



20.607

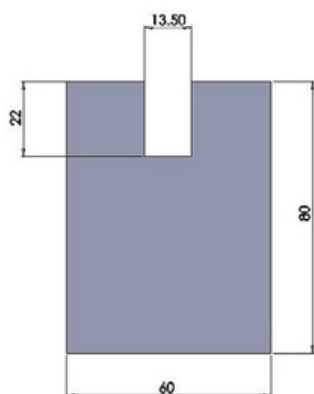


20.608

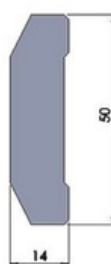


Accessories of lower dies

20.609



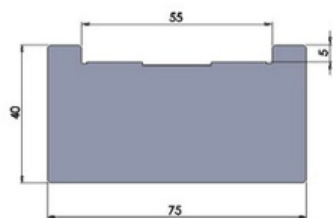
20.610



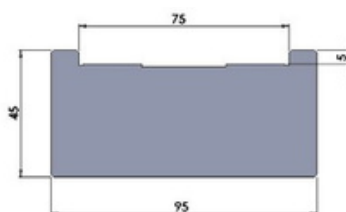
20.611



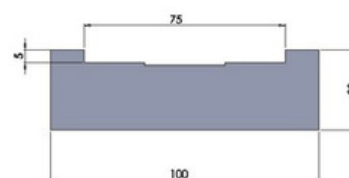
20.612



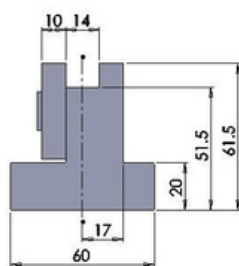
20.613



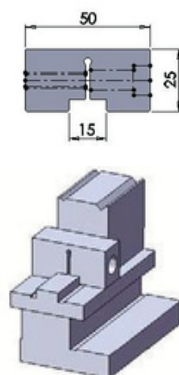
20.614



20.615



20.616



20.617

