

Trumpf Tooling System



MAXIMA - POLSKA

MAXIMA POLSKA

ul. Trzech Kotwic 11j,
49-300 Brzeg

+48 601 983 521

+48 601 983 522

tel/fax : 077 411 88 76

a.wojczyszyn@maximapolska.com.pl

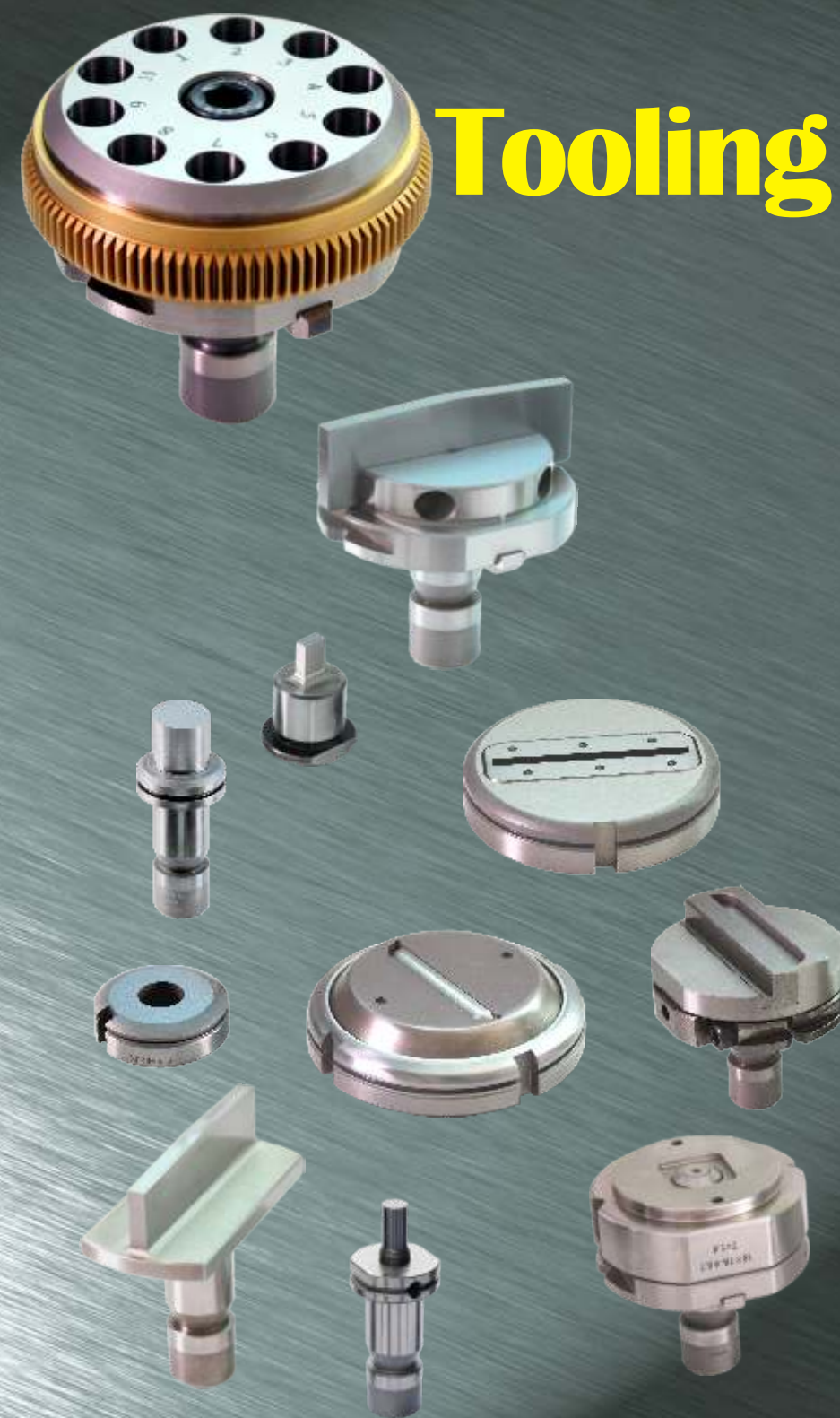
s.wojczyszyn@maximapolska.com.pl

info@maximapolska.com.pl

www.maximapolska.com.pl

• HIGH PRECISION • HIGH QUALITY • HIGH PERFORMANCE •

Trumpf Tooling System



MAXIMA - POLSKA

CONTENTS

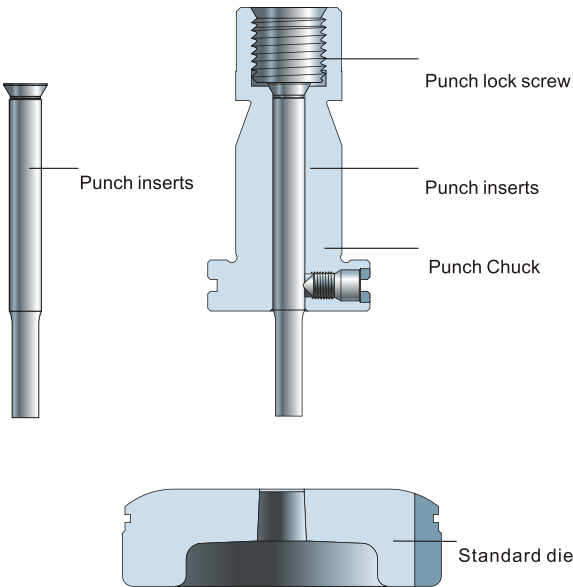
TRUMPF STANDARD SYSTEM ●	01
Inserts punch ●	01
Size: I ●	02
Size: II ●	03
Size:III ●	05
TRUMPF HEAVY-DUTY SYSTEM ●	06
TRUMPF MULTITool SYSTEM ●	07
5 Station ●	07
10 Station ●	08
TRUMPF QUICK SET SYSTEM ●	09
Quick Set Punch ●	09
Quick Set Die ●	10
RT241 SYSTEM ●	11
RT241 I Station ●	11
RT241 I Station ●	12
TRUMPF STRIPPERS ●	13
TRUMPF C RINGS ●	13
TRUMPF DIE ADAPTERS ●	13
TRUMPF DIE PLATE ●	13
TRUMPF ALIGNMENT RINGS SYSTEM ●	14
ASSEMBLY DESCRIPTION ●	15
SPECIALASSEMBLIESINTRODUCTION ●	16
TRUMPF FORMING SYSTEM ●	17
Louver ●	17
Cluster ●	18
Bridge ●	19
Extrusion ●	20
Emboss ●	21
PierceEmboss Multitooling ●	22
Wheel Tooling ●	23
New Products ●	24



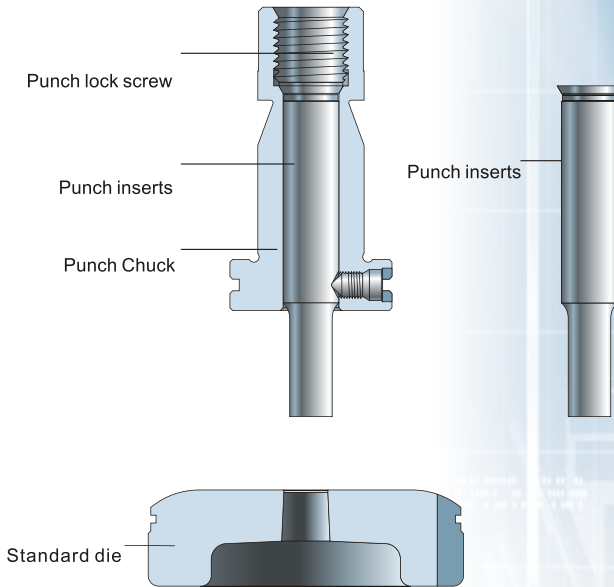


★ PUNCH INSERTS

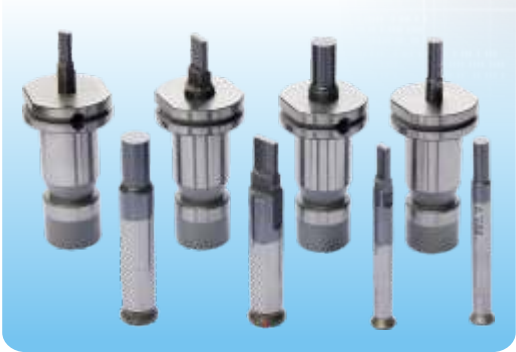
Size: 0-A (Within 6.0mm Diameter)



Size: 0-B (Within 10.5mm Diameter)

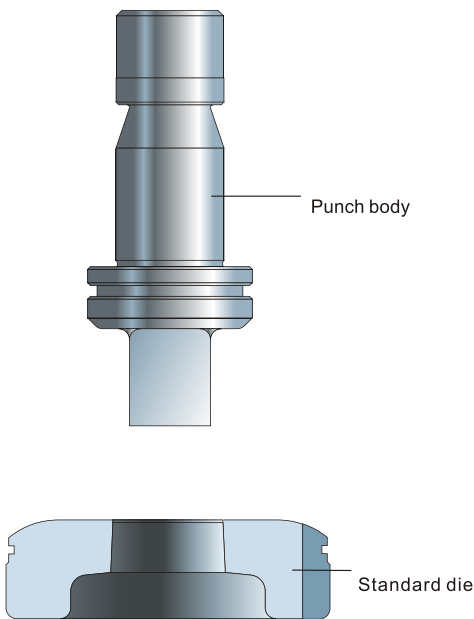


Description	Round	Price	Shape	Price
Size 0-A Punch Inserts	TC0A02P0		TC0A02P1	
Size 0-B Punch Inserts	TC0B02P0		TC0B02P1	
I Size I Standard die	TC010100		TC010101	
Size 0-A Punch Chuck	TC0A02R0			
Size 0-B Punch Chuck	TC0B02R0			

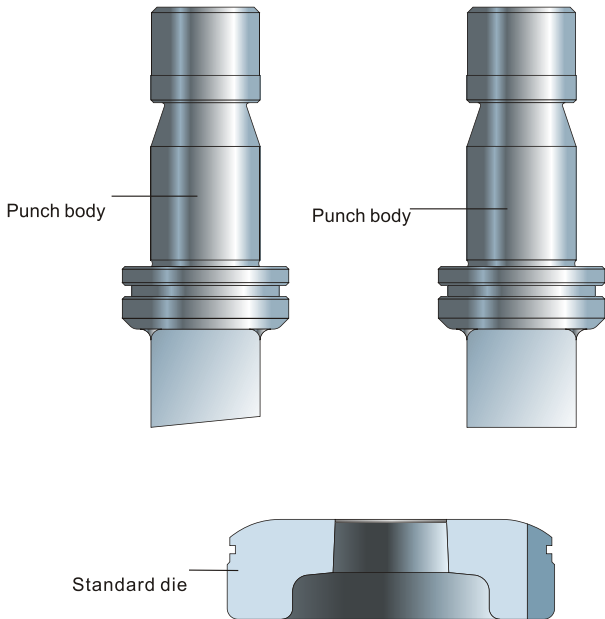


I ★ SIZE : I

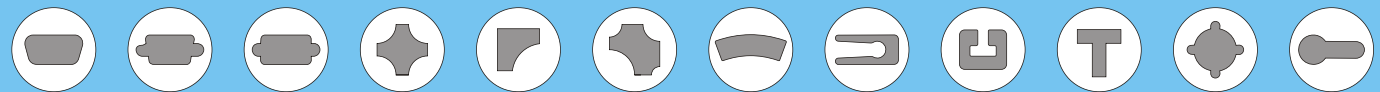
Size: I-A (Within 15.1mm Diameter)



Size: I-B (Within 30.0mm Diameter)



Description	Round	Price	Shape	Price
Size I-A Punch Body	TC1A0200		TC1A0201	
Size I-B Punch Body	TC1B0200		TC1B0201	
Size I Standard die	TC010100		TC010101	





II ★ SIZE : II

II

Size:II-A (Within 40.0mm Diameter)

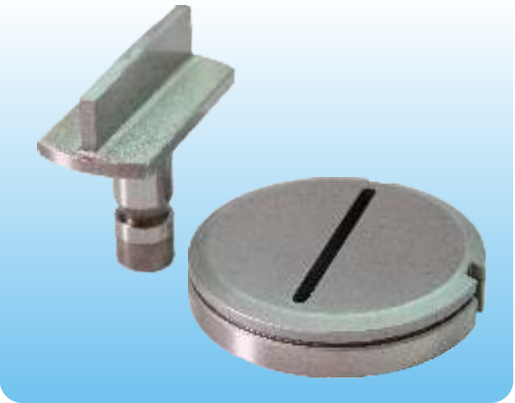
Description	Round	Price	Shape	Price
II Size II-A Punch Body	TC2A0200		TC2A0001	
II Size II-B Punch Body	TC2B0200		TC2B0001	
II Size II Standard die	TC020100		TC020101	

II

Size: II-B (Within 50.8mm Diameter)

II

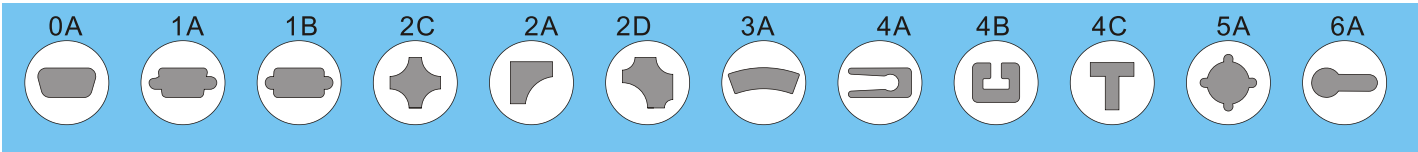
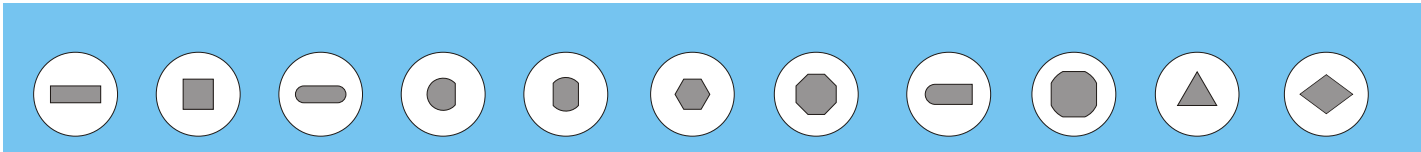
Size:II-C (Within 60.0mm Diameter)



II

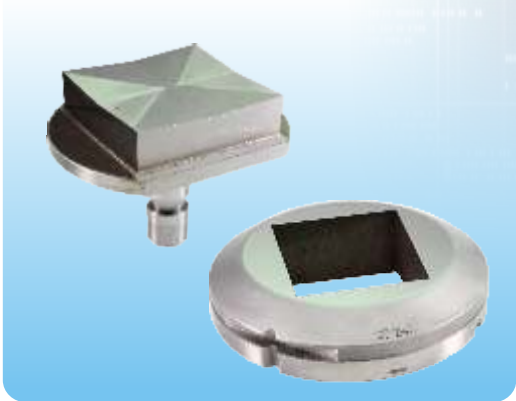
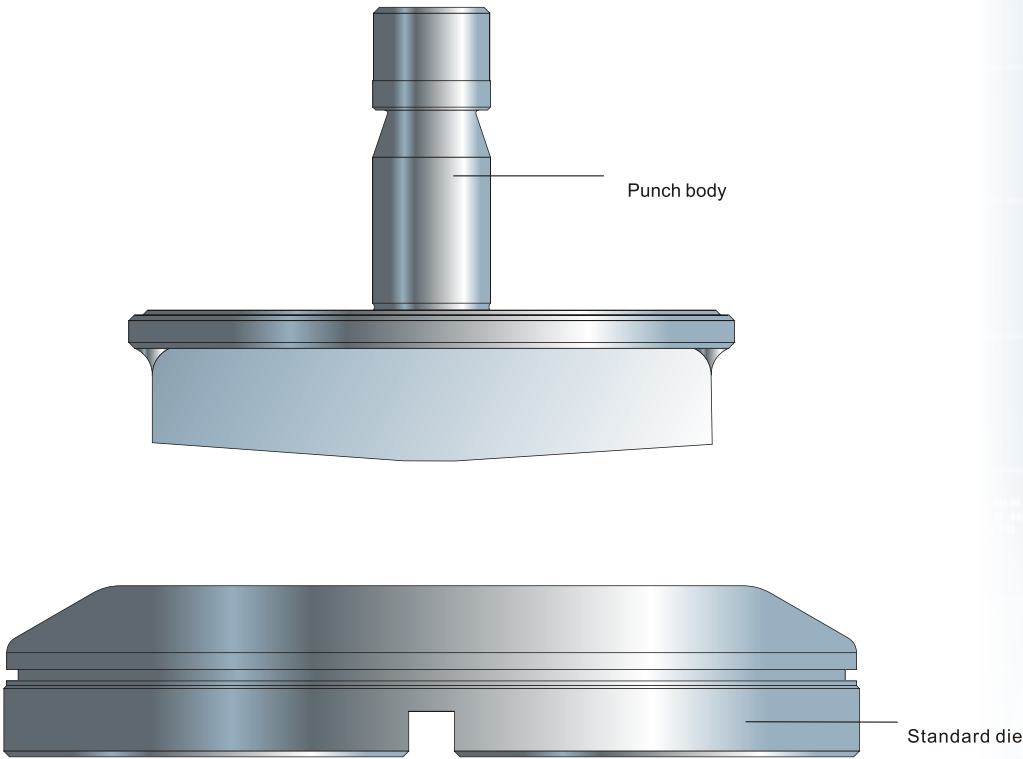
Size: II-D (Within 76.2mm Diameter)

Description	Round	Price	Shape	Price
II Size II-C Punch Body	TC2C0200		TC2C0201	
II Size II-D Punch Body	TC2D0200		TC2D0201	
II Size II Standard die	TC020100		TC020101	

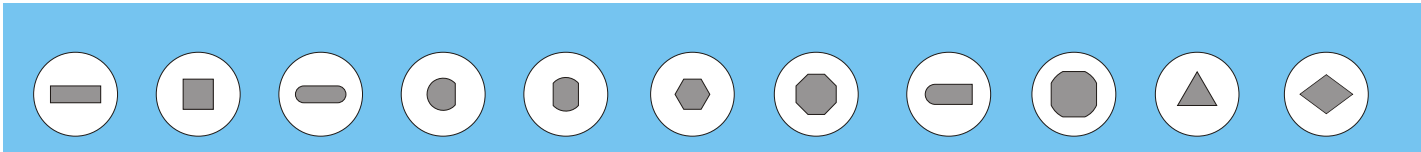


III ★ SIZE : III

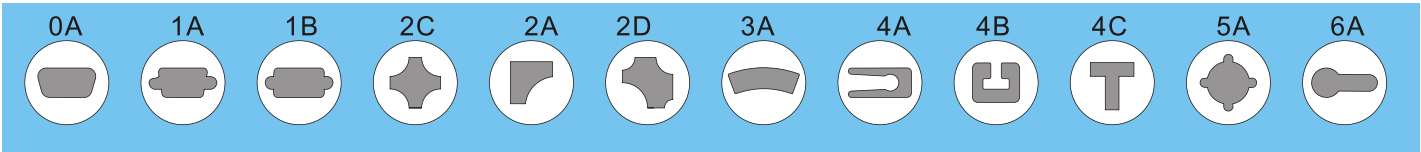
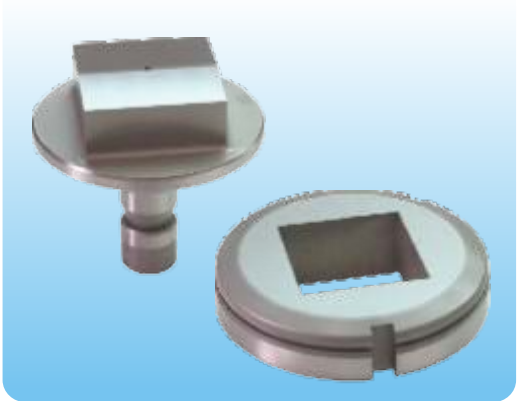
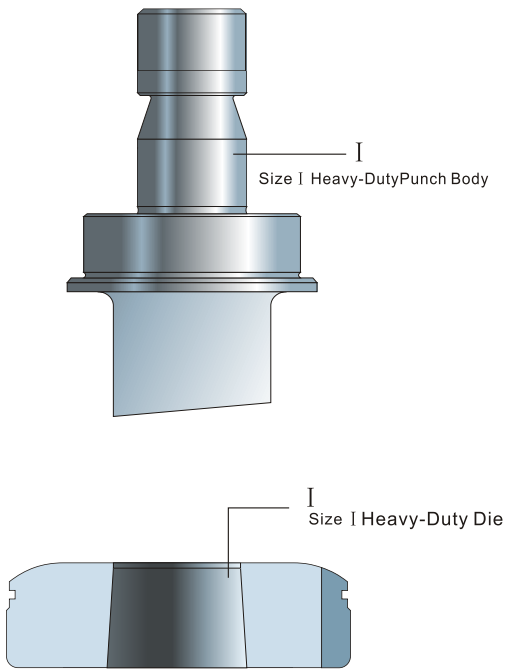
III
Size: III (Within 105.0mm Diameter)



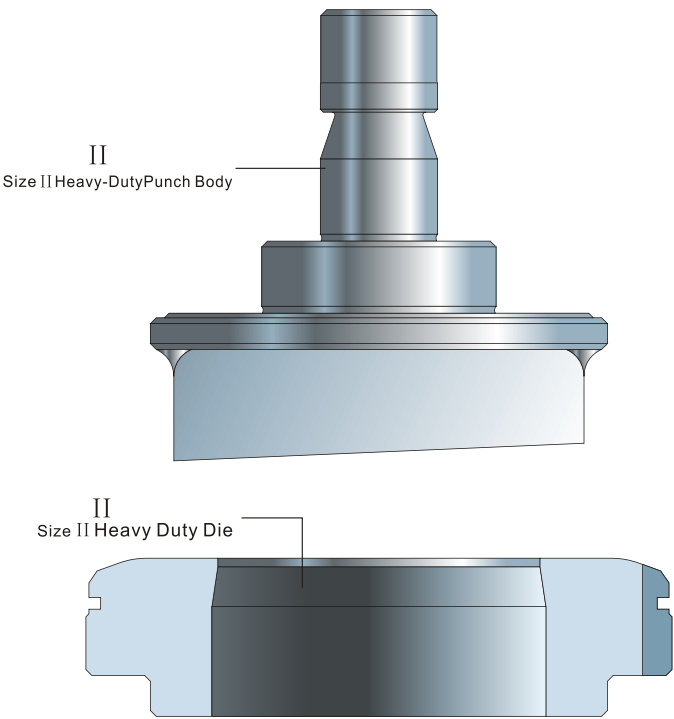
Description	Round	Price	Shape	Price
Size III Punch Body	TC030200		TC030201	
Size III Standard die	TC030100		TC030101	



I
Punch Size: I (6.35-30.0mm Diameter)
I
Die Size: I (Within 25.0mm Diameter)



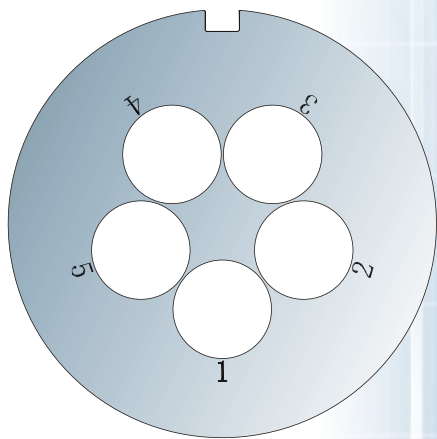
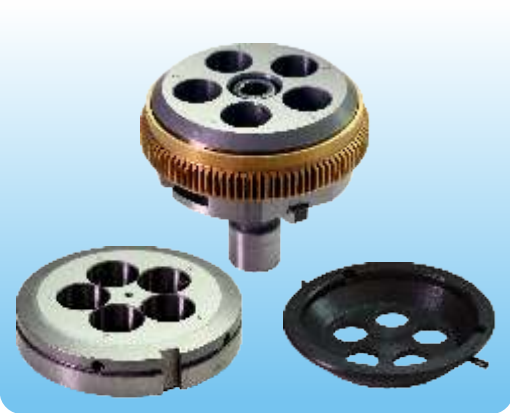
II
Punch Size: II (30.0-76.2mm Diameter)
II
Die Size: II (Within 52.5mm Diameter)



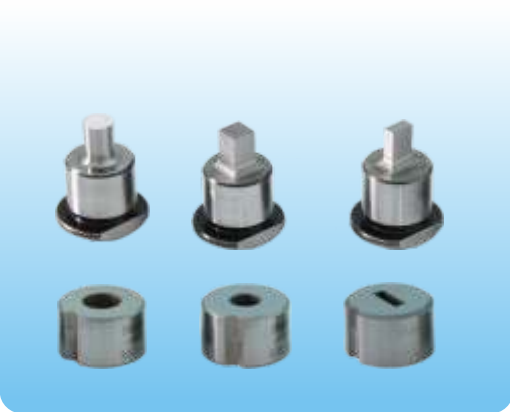
Description	Round	Price	Shape	Price
I Size I Heavy-Duty Punch Body	TC1A0200		TC1A0201	
II Size II Heavy-Duty Punch Body	TC2H0200		TC2H0201	
I Size I Heavy-Duty Die	TC1H0100		TC1H0101	
II Size II Heavy Duty Die	TC2H0100		TC2H0101	



5 Station (Within 16.0+0.6mm Diameter)

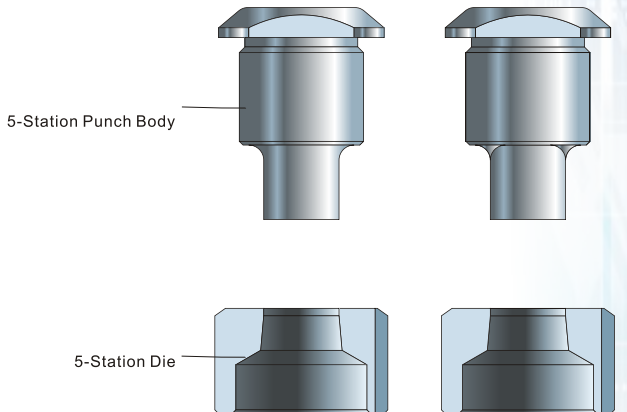


Die schematic

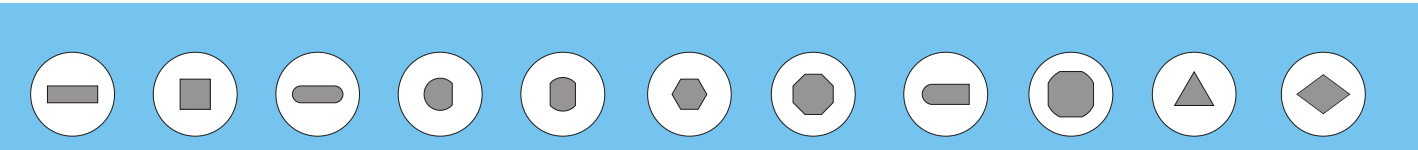


Component for MT5

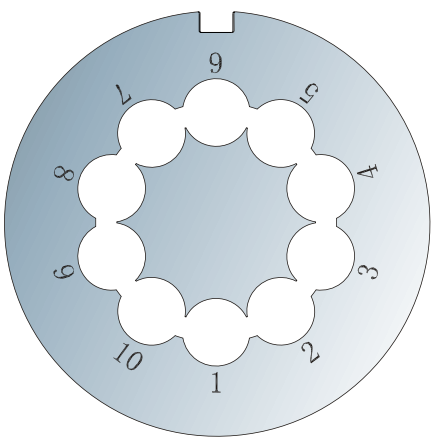
Description	Part Number	Price
Punch Assembly	TC05S02R	
Die Assembly	TC05S01R	
All-purpose Stripper	TC05S06R	



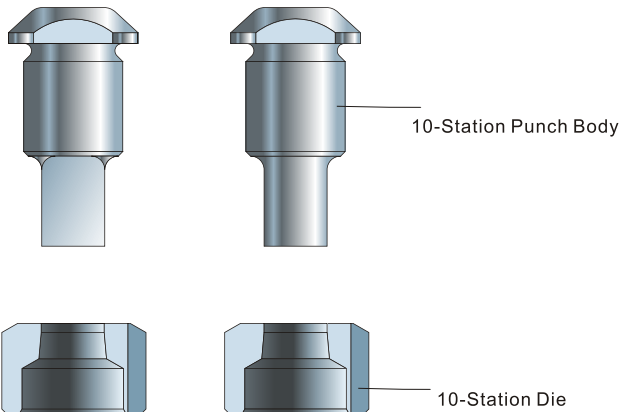
Description	Round	Price	Shape	Price
5-Station Punch Body	TC05S020		TC05S021	
5-Station Die	TC05S010		TC05S011	



10 Station (Within 10.5+0.6mm Diameter)



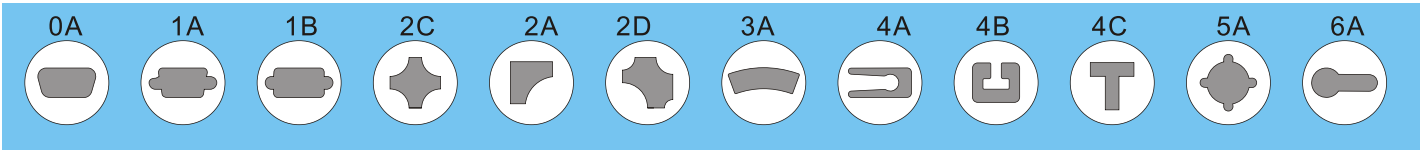
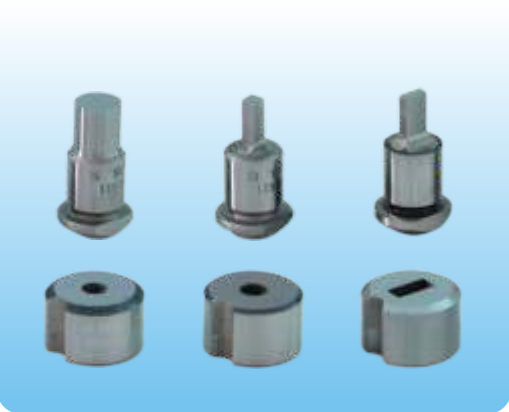
Die schematic



Component for MT10

Description	Part Number	Price
Punch Assembly	TC10S02R	
Die Assembly	TC10S01R	
All-purpose Stripper	TC10S06R	

Description	Round	Price	Shape	Price
10-Station Punch Body	TC10S020		TC10S021	
10-Station die	TC10S010		TC10S011	

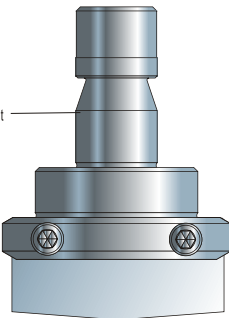





Quick Set Punch And Die (Slitting Tool)


Quick Set Punch Without Heavy Alignment Ring

Without Heavy Duty Alignment Ring Punch Assembly

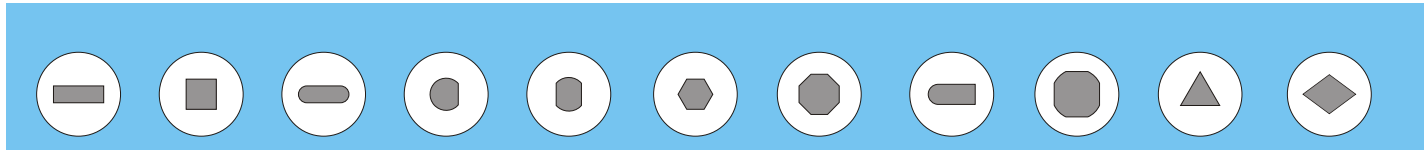


56mm*5mm Punch Blade



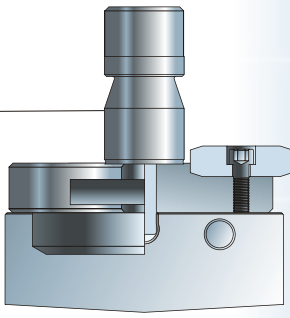


Description		Price
Within Heavy Duty Alignment Ring Punch Assembly	TC0202D1	
Without Heavy Duty Alignment Ring Punch Assembly	TC0202N1	
56mm*5mm Punch Blade	TC2C02P1	
76.2mm*5mm Punch Blade	TC2D02P1	

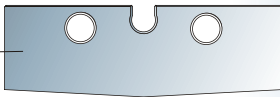



Quick Set Punch With Integral Alignment Ring

Within Heavy Duty Alignment Ring Punch Assembly

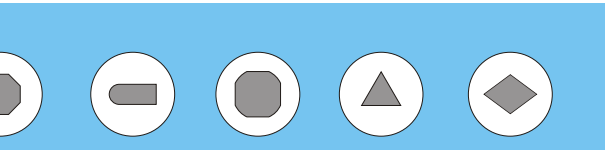


76.2mm*5mm Punch Blade

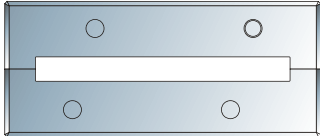





Description		Price
Within Heavy Duty Alignment Ring Punch Assembly	TC0202D1	
Without Heavy Duty Alignment Ring Punch Assembly	TC0202N1	
56mm*5mm Punch Blade	TC2C02P1	
76.2mm*5mm Punch Blade	TC2D02P1	



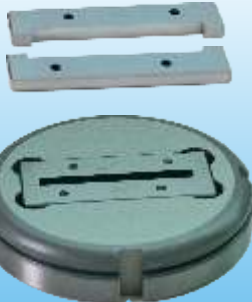
Replaceable die insert (Rectangle:56*5.0)



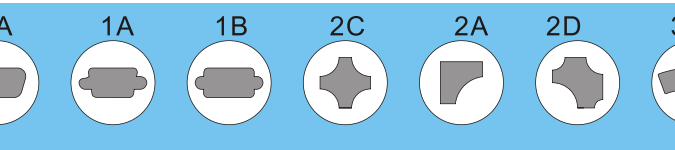
56mm*5mm Die Blade



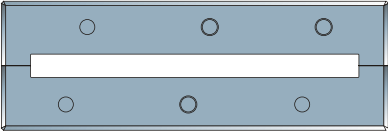
56mm*5mm Slitting die complete




Description		Price
56mm*5mm Slitting die complete	TC2C01R1	
76.2mm*5mm Slitting die complete	TC2D01R1	
56mm*5mm Die Blade	TC2C01P1	
76.2mm*5mm Die Blade	TC2D01P1	




Replaceable die insert (Rectangle:76.2*5.0)



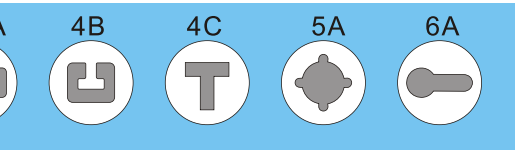
76.2mm*5mm Die Blade



76.2mm*5mm Slitting die complete

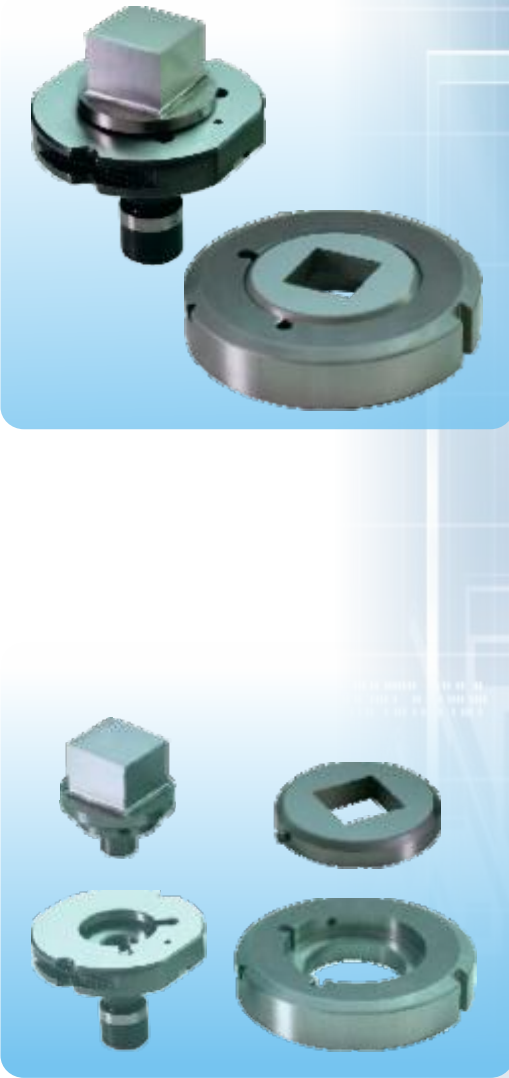
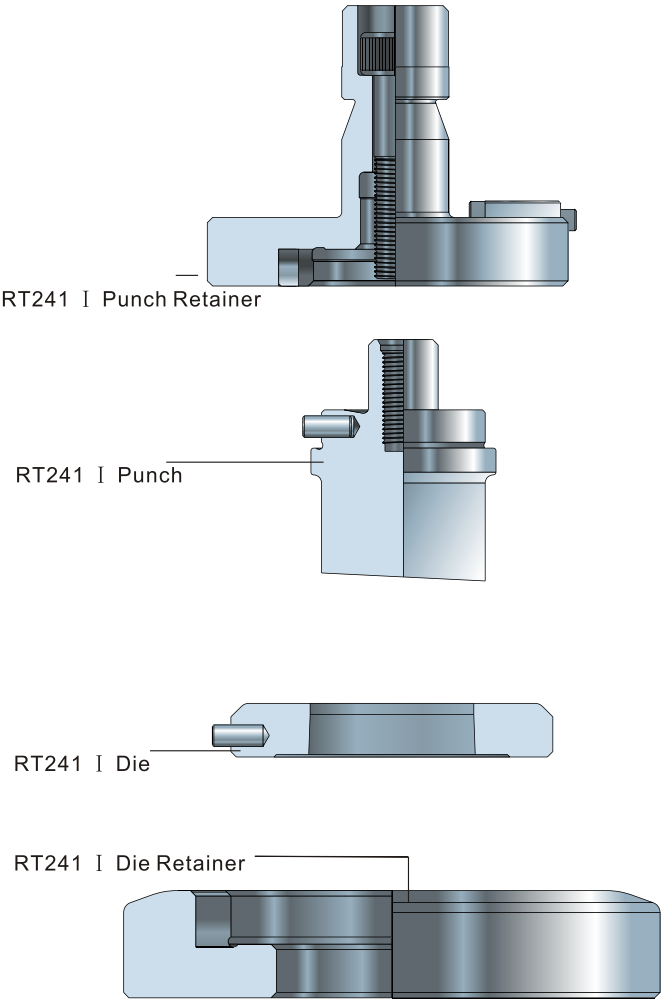


Description		Price
56mm*5mm Slitting die complete	TC2C01R1	
76.2mm*5mm Slitting die complete	TC2D01R1	
56mm*5mm Die Blade	TC2C01P1	
76.2mm*5mm Die Blade	TC2D01P1	



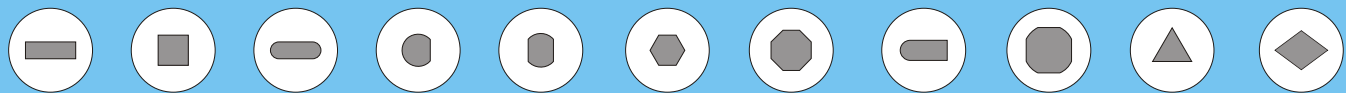


RT241 I Station(Within40+0.6Diameter)

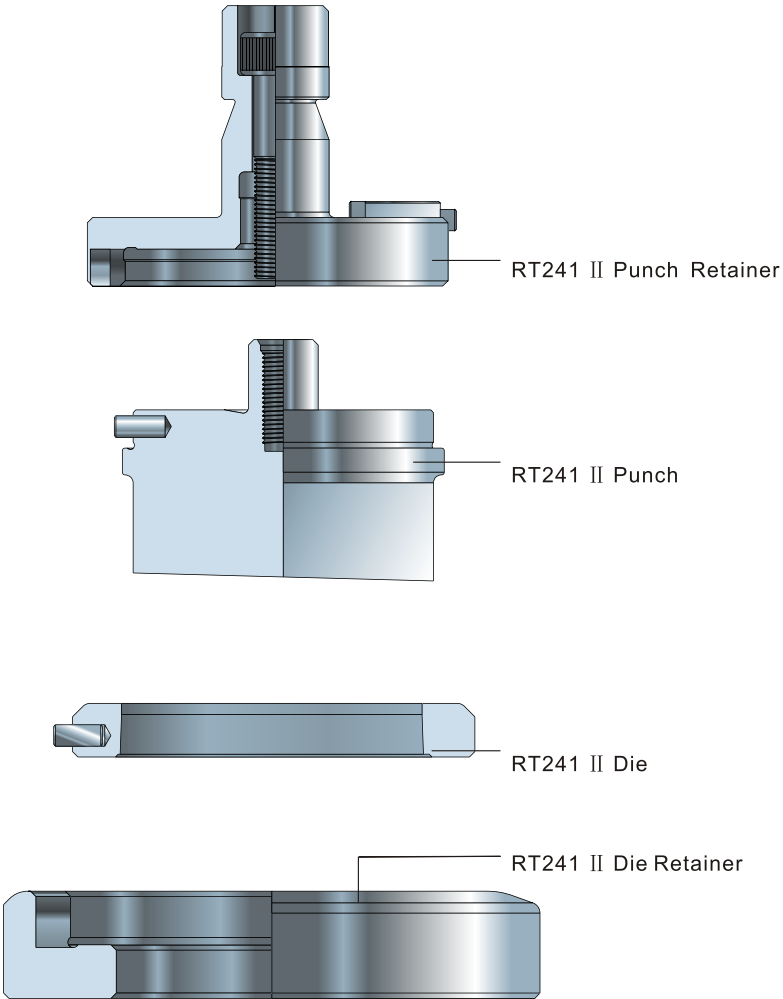
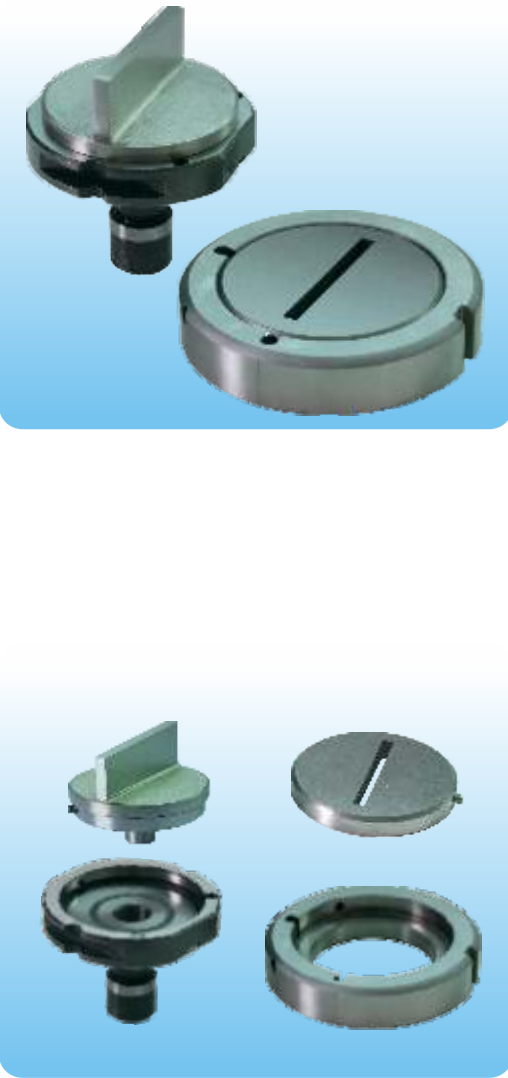


Description	Part Number	Price
RT241 I Punch Retainer	TC4102R1	
RT241 I Die Retainer	TC4101R1	

Description	Round	Price		Price
RT241 I Punch	TC410200		TC420101	
RT241 I Die	TC410100		TC420101	

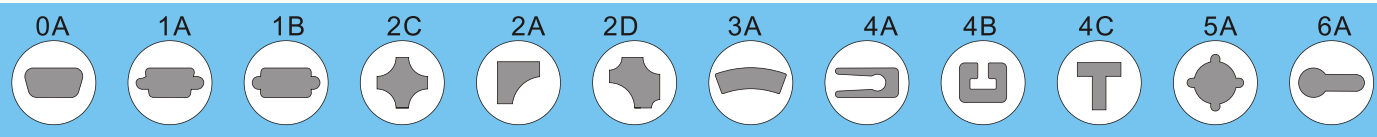


RT241 II Station(Within76.2+0.6Diameter)



Description	Part Number	Price
RT241 II Punch Retainer	TC4202R1	
RT241 II Die Retainer	TC4201R1	

Description	Round	Price	Shape	Price
RT241 II Punch	TC420200		TC420201	
RT241 II Die	TC420100		TC420101	

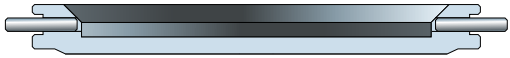


I II
Size I/II Stripper



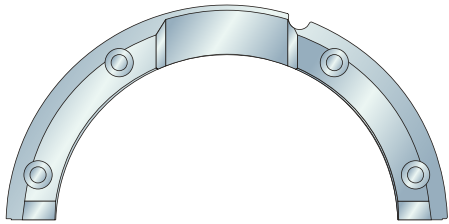
Description	Round	Price	Shape	Price
Stripper	TC1206S0		TC1206S1	

I II
Size I/II Stripper



Description	Round	Price	Shape	Price
Stripper	TC1208S0		TC1208S1	

C Ring



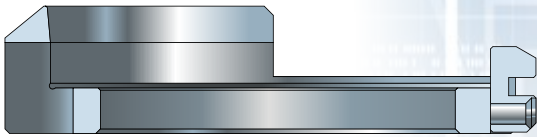
Description	Part Number	Price
C Ring	TC00MC01	

Die Adapters

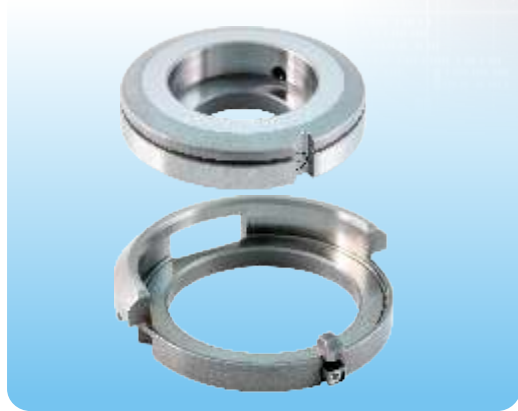


Description	Part Number	Price
Die Adapters	TC02010S	

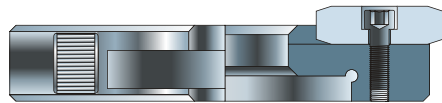
Die



Description	Part Number	Price
Die	TC00010S	

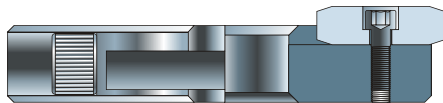


I
Size I Alignment Ring



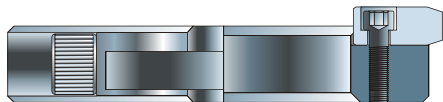
Description	Part Number	Price
I Size I Alignment Ring	TC0102AR	

II III
Size II/III Alignment Ring



Description	Part Number	Price
II III Size II/III Alignment Ring	TC0202AR	

Size I/II/III Alignment Ring



Description	Part Number	Price
Size I / II / III Alignment Ring	TCHD02AR	

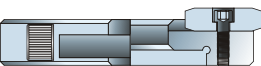
TRUMATIC

F	G	H	I	S
TRUMATIC	TRUMATIC	TRUMATIC	TRUMATIC	TRUMATIC
240	300W	500R	2000	120R
240R	300LW	200R	2000R	160R
250	300PW	600L	2010R	
260R	300TOP		2020	
	400W		2020R	
			3000-1300R	
			3000-1600R	

Size I Assembly Description

Size II Assembly Description

Heavy duty Assembly Description



Alignment Ring



Punch body



Stripper



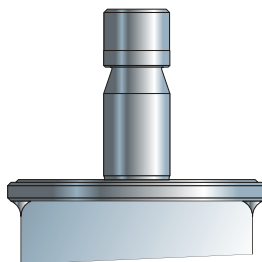
Standard die



Die Adapters



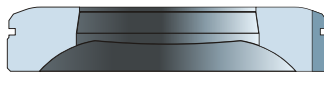
Alignment Ring



Punch body



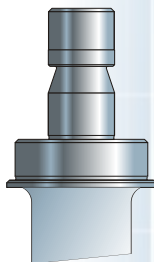
Stripper



Standard die



Alignment Ring



Heavy-Duty Punch Body



Stripper



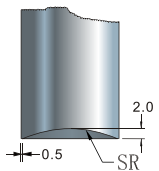
Heavy Duty Die

Punch shear recommendations

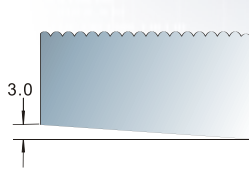
Standard Punches	Shear
(Round punch& punch inserts)	(Flat)
(Round)	(None/cup)
(Round&Shapes)	(Whisper)
(Round&Shapes)	(Whisper)
(Round&Shapes)	(Rooftop)
Heavy Duty Punches	
(Round&Shapes)	(Whisper)
(Round&Shapes)	(Rooftop)



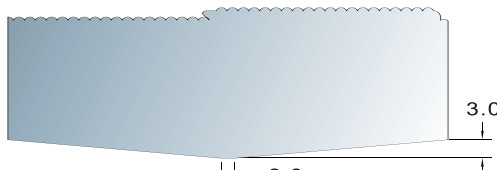
(Flat)



(Cup)



(Whisper)



(Rooftop)

SPECIAL ASSEMBLIES INTRODUCTION

(Countersink)



(CenterPoint)



(Form:Round)

(Form:up&down)

(Extrusion)

(Form:Round&Shape)



(Form:up&down)

(EmbossContinuous)

(Form:Shape)



(Form:up&down)

(CardGuide)

(Form:Shape)



(Form:up)

(ShearButton)

(Form:Round&Shape)



(Form:up&down)

(Bridge)

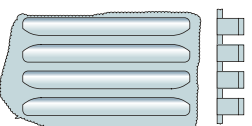
(Form:Shape)



(Form:up&down)

ouble ridge

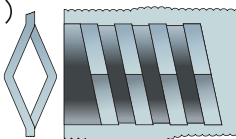
(Form:Shape)



(Form:up&down)

(ThreadLoop)

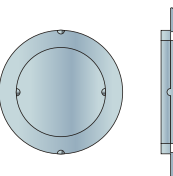
(Form:Shape)



(Form:up&down)

(Knockout)

(Form:Round&Shape)



(Form:up&down)

(Louver)

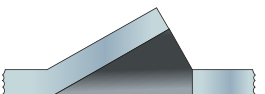
(Form:Shape)



(Form:up)

Opened countersink

(Form:Shape)



(Form:up)

(LanceAndForm)

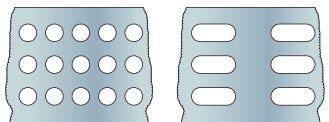
(Form:Round&Shape)



(Form:up&down)

(Cluster)

(Form:Round&Shape)



(Form:Punch)

(PierceEmboss)

(Form:Round&Shape)



(Form:up&down)

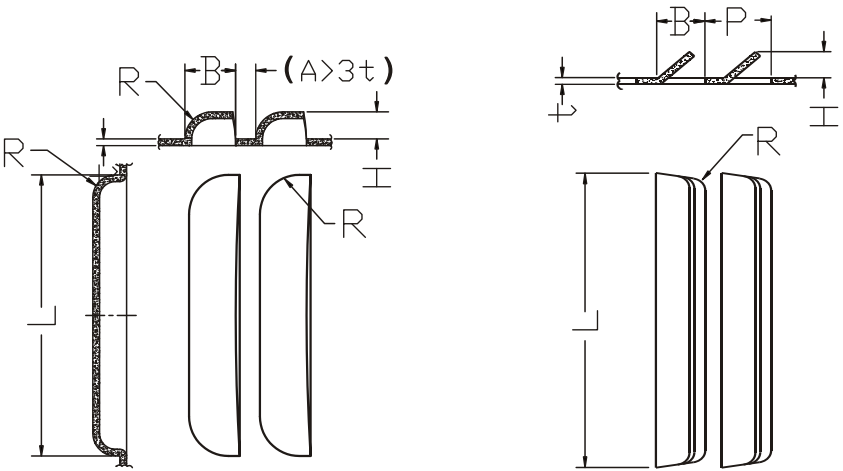
(EmbossColdForged)

(Form:Shape)

(Form:up&down)



Louver (Form-up)



(Relative information)

Equipment and model _____
 Mould type _____
 The type of material being processed _____
 Requested station _____

*L _____
 *B _____
 *H _____
 *P _____
 *t _____

(Order parameters)

(Notices)

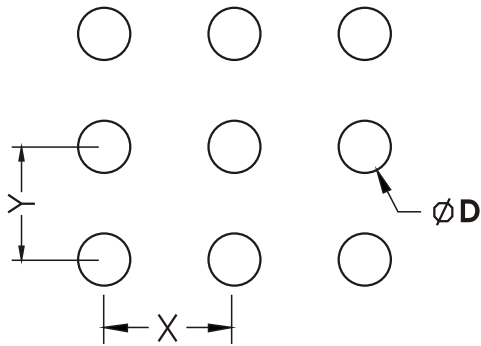
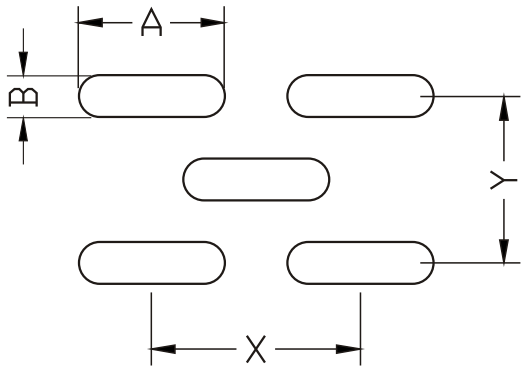
The height of molding is higher, the phenomenon of "reverse pulling" is more serious.

For panels that are smaller than 1.2, the Rc should be over 10mm so as to prevent the angle from splitting.

The interval space (A) for non-molding should not be less than 3 times of the panel thickness.



Cluster tool



(Relative information)

Equipment and model _____
 Mould type _____
 The type of material being processed _____
 Requested station _____

(Order parameters)

*L _____
 *B _____
 *H _____
 *P _____
 *t _____

(Notices)

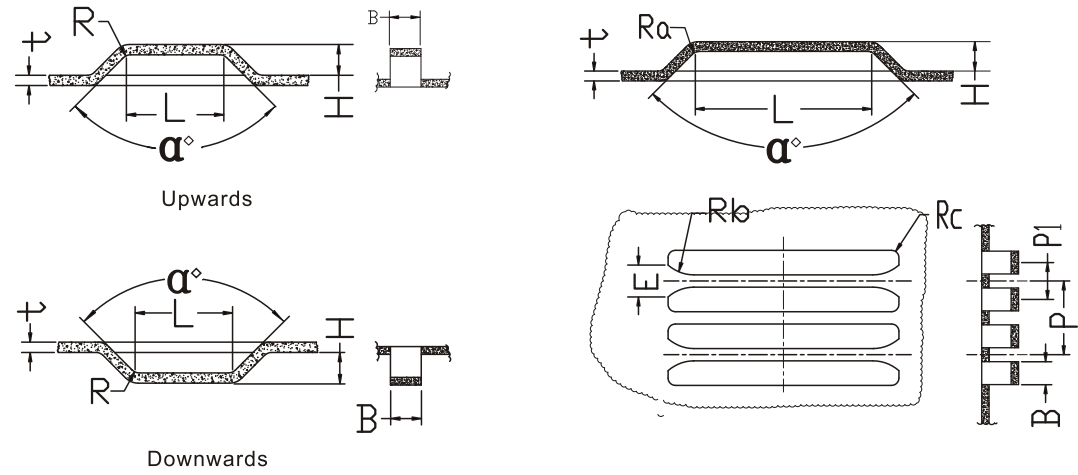
The minimum distance between two holes is 3.2mm, or double the thickness of the material;

The punching pitch must be bigger than the size of the hole;

According to customer request, besides cluster punch with replacement inserts, one-piece clusters with full station range capacity are also available.



Bridge (Form-Up/Down)



(Relative information)

(Order parameters)

Equipment and model _____
 Mould type _____
 The type of material being processed _____
 Requested station _____

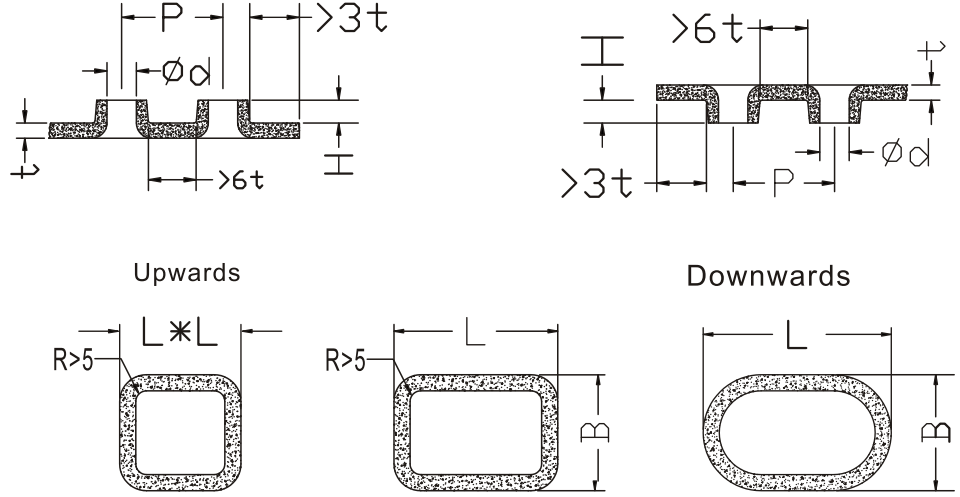
*B _____ *Ra _____
 *H _____ *Rb _____
 *L _____ *Rc _____
 *E _____ *t _____
 *P _____ a° _____
 *P1 _____ *R _____

(Notices)

- The proportion between theoretical bridge wideness and panel thickness is over 1.25:1.
- Difficulty will be increased when the bridge wideness is less than 2mm.
- The moulds are made according to the panels provided by customers. Therefore, it is not advised to process different panels simultaneously.
- Show clearly the smallest distance between the bridge-shape.



Extrusion (Form-Up/Down)



(Relative information)

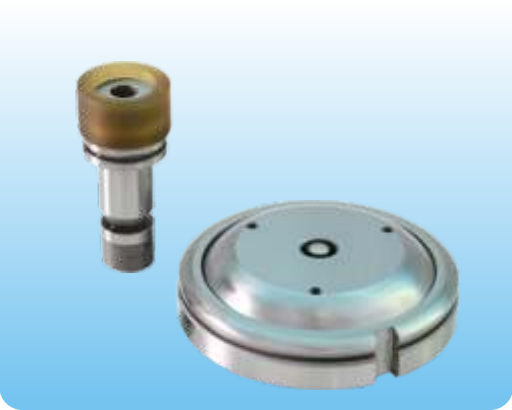
(Order parameters)

Equipment and model _____
 Mould type _____
 The type of material being processed _____
 Requested station _____

*H _____ *L _____
 *t _____ *P _____
 *phi d _____ *B _____

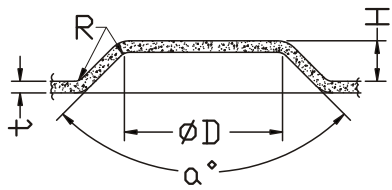
(Notices)

- The parts of flanging dies belong to the thinned stretching area.
- At the mouth of flanging dies bears a slight slope.
- It needs process punch before flanging.
- It depends to design punch flanging compound dies.

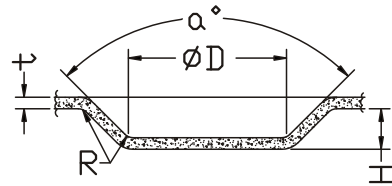




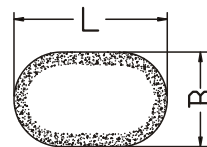
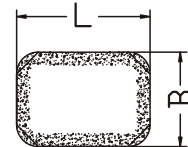
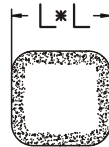
Emboss (Form-Up/Down)



Upwards molding



Downwards molding



(Relative information)

Equipment and model _____

Mould type _____

The type of material being processed _____

Requested station _____

(Order parameters)

* ϕD _____ *t _____

*R _____ α° _____

*H _____ *L _____

*B _____

(Notices)

Reasonable angle and round angle ensure a better molding.

The special height, angle and round angle will enhance the stress of materials.

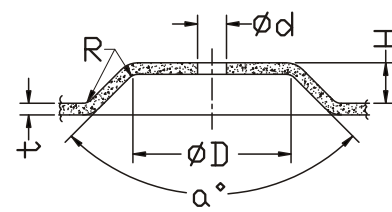
For those higher and deeper moldings, the materials should be smooth or lubricate the panels when processing.

The reasonable angle should be 90 degree.

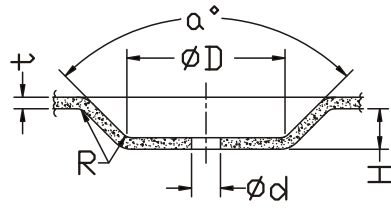
The optimal height of the molding is less than 3 times of the thickness of the panel.



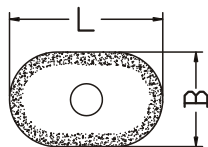
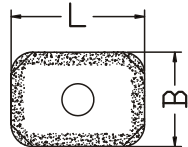
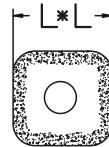
PierceEmboss Multitooling (Form-Up/Down)



Upwards molding



Downwards molding



(Relative information)

Equipment and model _____

Mould type _____

The type of material being processed _____

Requested station _____

(Order parameters)

* ϕD _____ *t _____

*R _____ α° _____

*H _____ *L _____

* ϕd _____ *B _____

(Notices)

Reasonable angle and round angle ensure a better molding.

The special height, angle and round angle will enhance the stress of materials.

For those higher and deeper moldings, the materials should be smooth or lubricate the panels when processing.

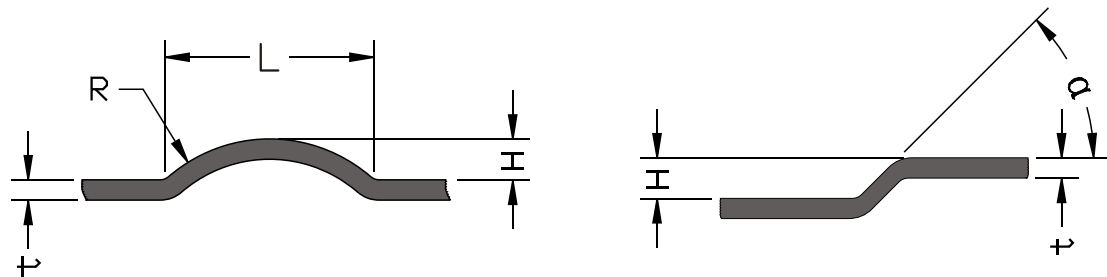
The reasonable angle should be 90 degree.

The optimal height of the molding is less than 3 times of the thickness of the panel.

In order to prevent weakening the intensity of lowering mould when punching, it should be ensured that $\phi D > 5t + \phi d$.



Wheel Tooling



(Relative information)

Equipment and model _____

Mould type _____

The type of material being processed _____

Requested station _____

(Order parameters)

*L _____ *t _____
*R _____ a° _____
*H _____

(Notices)

The punch press must have the corresponding control procedures;

On the indexing station can process curve, arc and circle;

After the processing, without over-lapping and stamping marks;

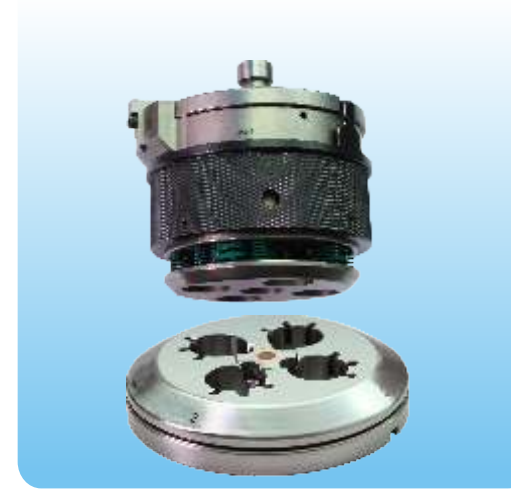
The high-speed forming equivalent to moving speed of the carriage;

The minimum turning radius is 40mm, depending on the width of the rolling wheels;

The machining range: Thickness SUS 0.8-1.5mm, SPCC 0.8-2.0mm, AL 0.8-2.5mm. The forming height is 2-3 times of the material thickness, the forming width is 2 times of the forming height, and the maximum width is 12.7mm.



Manual Multi Tools



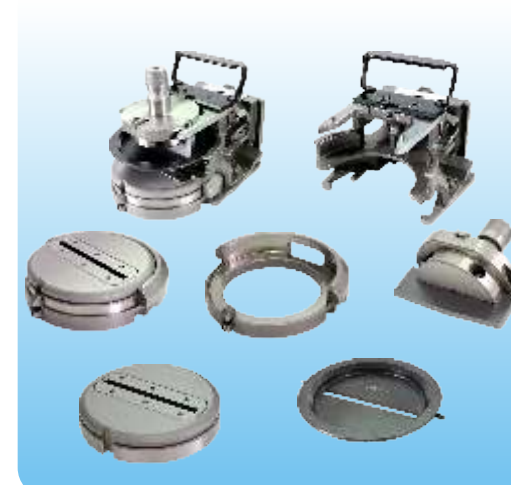
Applicable for Boschert Germany and LFK tiger series single station punching machine. Reduce changing time, Increase efficiency by 3 to 4 times;

Automatic Trimming Tools



Suitable for TRUMPF type machine, Blade insert can be replaced and effectively reduce the tool cost;

Tool Cartridges



For the user, Tool Cartridges can be installed beforehand, Improve production efficiency, 2-3 times;

Grinding Tool For TRUMPF



Grinding machine has the function of indexing can grind punches with various angles. Through the adaptor the machine can grind both MT10 and MT5 punches and dies.

Grinding Device for Surface Grinder



Instructions:

1. It's difficult to set and locate punch and die when grinding them by surface grinder.
2. Easy and simple to set and locate punch and die when use our grinding device.
3. The punch and die will not touch the magnetic chuck, the tooling won't be magnetized after grinding.
4. Rooftop and Whisper shear grinding available.
5. Available to use for Thick Turret A\B\C\D station punch & die grinding.
6. Rate Auto Grinder is better solution if you have high requirement of tooling grinding.



Classification for mold, locate, and better protect the mold, the installation more convenient and efficient

Easy to storage tooling, better protect tooling, convenient & efficient installation of tooling.
Can storage many sets of tooling:
A station, 3 layers, 25 sets of tooling per layer.
B station, 2 layers, 18 sets of tooling per layer.
C\D\E station, 2 layers, 16 sets of tooling per layer.



- Save worry: Dust-proof, rust-proof, crash-proof;
- Save time: With size label for each tooling set, efficient when select tooling;
- Save trouble: With lock, tooling won't lose, neat display.



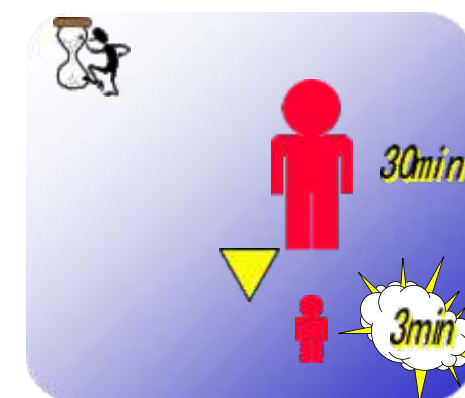
Assembling and Disassembling Tool & Station A and B Wrench



Instructions:

1. Most of customers use vise to clamp, it's unsafe, easy to damage tooling and waste of time.
2. With station A&B wrench, you can assembly and disassembly easily.
3. Available to all thick turret (long type) tooling, standard is A/B/C/D station, E station is a option.
4. Available to some thin turret (short type) tooling, also can disassembly thin turret standard B & D station tooling,
5. Safety, easy, time-saving, convenient.

Rate Auto Grinder



- !Simple operation, auto grinding.
- !Process monitoring system, highly intelligent, safety, high precision.
- !Combine servo system and CBN grinding wheel, high quality and efficient grinding.
- !With red, yellow, green single light, monitor working statues easily.
- !Small size, place it beside punching machine, you can grinding the tooling as soon as tooling need grinding.