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THIN TURRET TOOLING





■ Ketec Precision Tooling Co., Ltd
Manufacturing CNC Punch Tooling



■ Ketec Precision Tooling Co., Ltd
Manufacturing Press Brake Tooling

KETEC CHINA SERVE THE WORLD

The biggest sheet metal tooling manufacturer in China

- National High Tech Enterprise
- Registered Capital: 50 Million RMB.
- Fix Assets: 150 Million RMB.
- Total factory area: 506,000 square feet (47,000 square meters).
- Annual Product Capacity: 1,200,000 sets for CNC punch press tooling; 20,000 sets for Press Brake Tooling.
- Over 300 high-quality employees in the company, KETEC have completed machining, EDM, heat treatment.
- National high-tech enterprise, features sheet metal technology R&D center.
- Obtains 18 national invention and new utility patent.
- Over 10,000 sheet metal enterprises in the world are using KETEC TOOLS
- 24 Direct sales in China and 18 KETEC Agents in the global countries.

- 1998 Sept. Founded Jiangnan Mold Tools Factory in Guangzhou.
Manufacturing stamping tooling.
- 2001 Aug. Established Ketec Precision Tooling Co.,Ltd.
Manufacturing CNC punch tooling and stamping tooling.
- 2004 Feb. Registered **KETEC**[®] trademark.
- 2004 Aug. ISO9000:2000 certified.
- 2004 Nov. Registered **KETEC**[®] as an international trademark.
- 2007 Dec. Registered enterprise value increasing to 5 Million RMB.
- 2008 Jan. Move to Mingzhu Industrial Park in Conghua Guangzhou with
approximately 323,000 square feet (30,000 square meters).
- 2008 Jan. Registered enterprise value increasing to 10 Million RMB.
- 2008 Mar. Awarded Guangdong Major Products certificate
for CNC punch tooling.
- 2008 Jun. Created guideline with permission from Standardization
Administration of People' s Republic of China for CNC Turret
Punch Tooling standard.
- 2010 Feb. Published JB/T 10928–2010, CNC Turret Punch Tooling standard
by China Ministry of Industry and Information.
Implemented in July 2010.
- 2010 Nov. ISO 9001:2008 Certified.
- 2011 Jun. Started selling TOP series thick turret tooling.
- 2011 Nov. Setup warehouse in Taicang Jiangsu.
- 2012 Mar. Registered enterprise value increasing to 50 Million RMB.
- 2012 Jul. Rated as National High Tech Enterprise.
Certification No: GR201244000059
- 2012 Aug. Second location completed in Industrial Nan Road
Conghua Guangzhou with approximately 183000 square feet
(17000 square meters). Manufacturing press brake tooling.
- 2012 Aug. Established KETEC Precision Tooling Inc. in USA.
- 2013 Oct. Setup warehouse in Tianjin.
- 2015 Oct. Honored the Integrity of Law–Abiding business model in Guangzhou.

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(M80)**

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**DROP IN
TOOLING
(M5/8")**

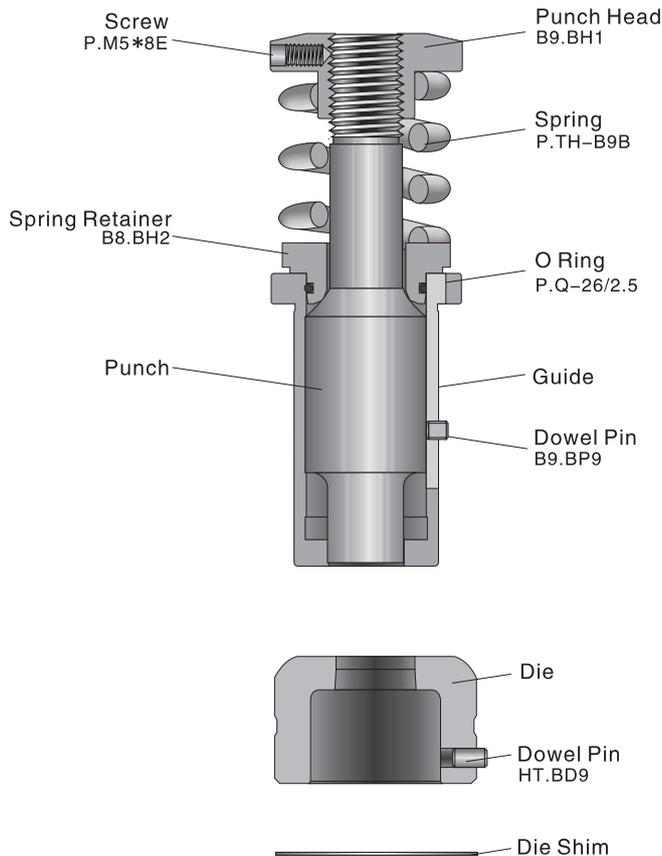
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**FORMING
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THIN TURRET TOOLING (E80)

**B STATION
(1-1/4")
1.6~31.7mm**



Description	Code	Price
Punch ass'y		
Round	B8.BA1RO.	
Shape	B8.BA2**.	
Other	B8.BA2**.	
Punch		
Round (no pin)	B8.BP1RO.	
Shape (pin)	B8.BP2**.	
Other (pin)	B8.BP2**.	
Guide		
Round	B8.BG1RO.	
Shape	B8.BG2**.	
Die		
Round (no pin)	HT.BD1RO	
Shape (pin)	HT.BD2**.	
Other (pin)	HT.BD2**.	

Note

1. Standard tooling, interchange with popular tooling
2. One completed set tooling includes Punch ass'y & Die
3. Punch ass'y is installed in upper turret of the CNC punch machine.

Q-ADJUST TOOLING (M90)

B STATION (1-1/4") (1.6~31.7mm)



Description	Code	Price
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Punch ass'y

Round	B9.BA1RO.	
Shape	B9.BA2**.	
Others	B9.BA2**.	

Punch

Round (no pin)	B9.BP1RO.	
Shape (pin)	B9.BP2**.	
Other (pin)	B9.BP2**.	

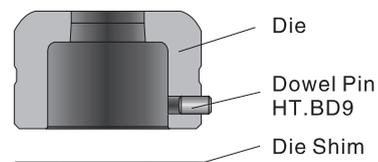
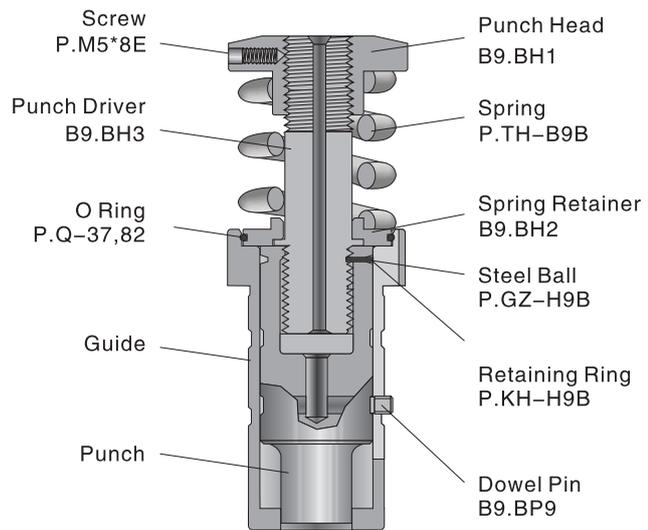
Guide

Round	B9.BG1RO.	
Shape	B9.BG2**.	

Die

Round (no pin)	HT.BD1RO	
Shape (pin)	HT.BD2**.	
Other (pin)	HT.BD2**.	

Driver ass'y	B9.BH9	
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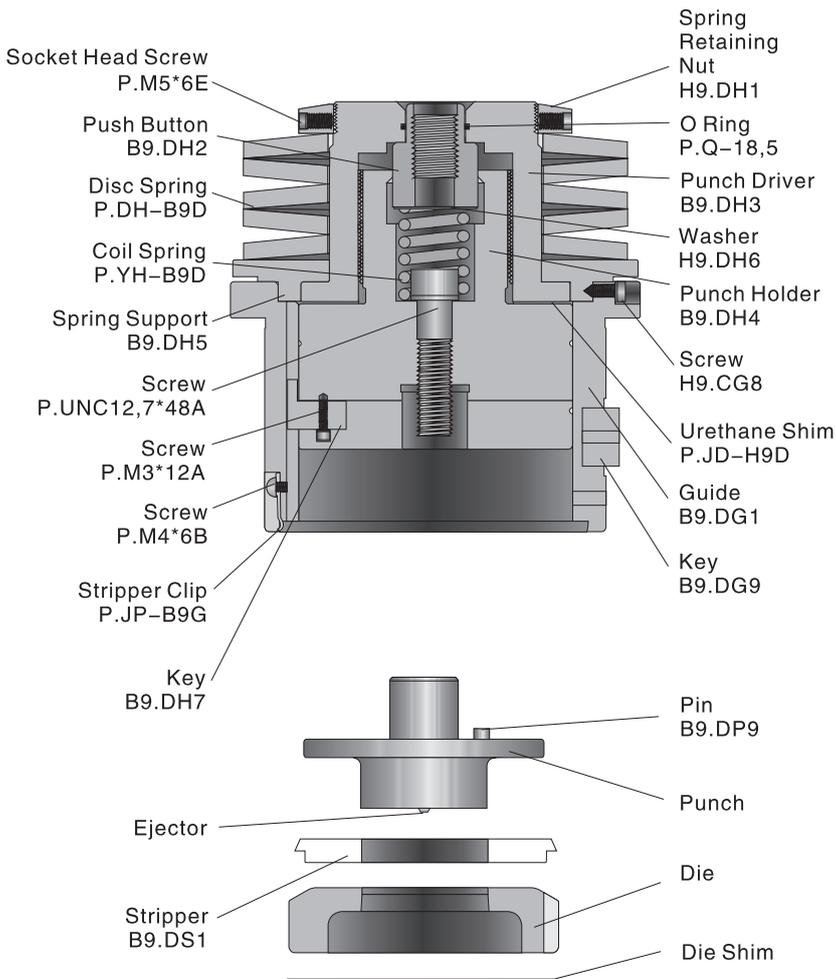
Note

1. 90 punch grind life 6.3mm, reduce cost 60%
2. Adjusting tool faster by using independent punch head ass'y
3. Standard tooling, interchange with popular tooling
4. One completed set tooling includes Punch ass'y & Die
5. Punch ass'y is installed in upper turret of the CNC punch machine



Q-ADJUST TOOLING (M90)

D STATION (3-1/2") (31.7~88.9mm)



Description	Code	Price
Punch ass'y	(31.71~50.8)	
Round	B9.DA1RO.	
Shape	B9.DA1**.	
Other	B9.DA1**.	
Punch ass'y	(50.81~88.9)	
Round	B9.DA2RO.	
Shape	B9.DA2**.	
Other	B9.DA2**.	
Guide ass'y	B9.DC1.	
Punch	(31.71~50.8)	
Round	B9.DP1RO.	
Shape	B9.DP1**.	
Other	B9.DP1**.	
Punch	(50.81~88.9)	
Round	B9.DP2RO.	
Shape	B9.DP2**.	
Other	B9.DP2**.	
Stripper		
Round	B9.DS1RO.	
Shape	B9.DS1**.	
Other	B9.DS1**.	
Die		
Round (0°)	B9.DD1RO	
Shape (0°, 90°)	B9.DD2**.	
Other (0°, 90°)	B9.DD2**.	
Square (Opt. 0°, 135°)	B9.DD3SQ.	

Note

1. 90 punch grind life 10mm, reduce cost 60%
2. Adjust conveniently and without shim after grinding
3. Standard tooling, interchange with popular tooling
4. High strength guide, no deformation

DROP IN STYLE TOOLING (M5/8")

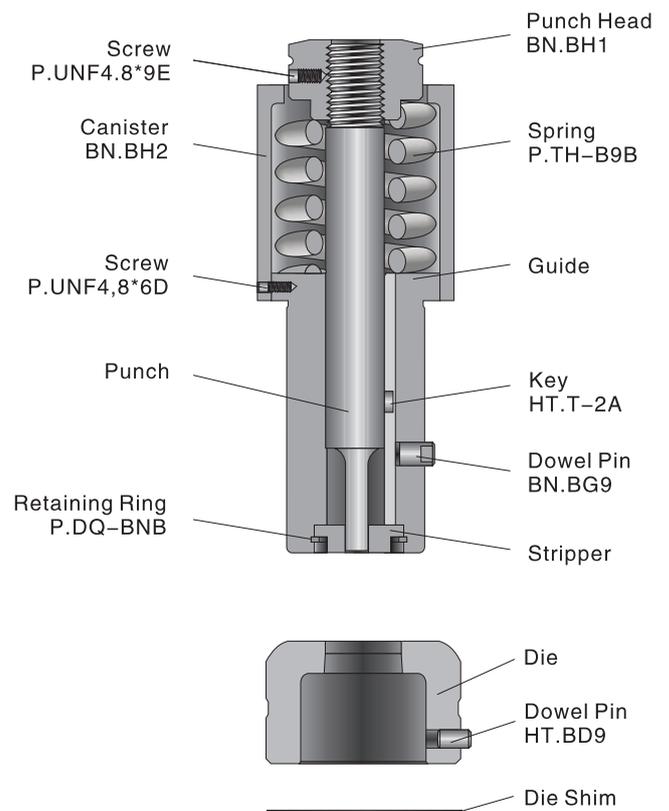
**B STATION
(5/8")
(1.6~15.8mm)**



Description	Code	Price
Punch ass'y		
Round	BN.BA1RO.	
Shape	BN.BA2**.	
Other	BN.BA2**.	
Guide ass'y		
Round	BN.BC1	
Shape	BN.BC2	
Punch		
Round (no pin)	BN.BP1RO.	
Shape (pin)	BN.BP2**.	
Other (pin)	BN.BP2**.	
Stripper		
Round	BN.BS1RO.	
Shape	BN.BS1**.	
Other	BN.BS1**.	
Die		
Round (no pin)	HT.BD1RO.	
Shape (pin)	HT.BD2**.	
Other (pin)	HT.BD2**.	
Guide		
Round	BN.BG1	
Shape	BN.BG2	

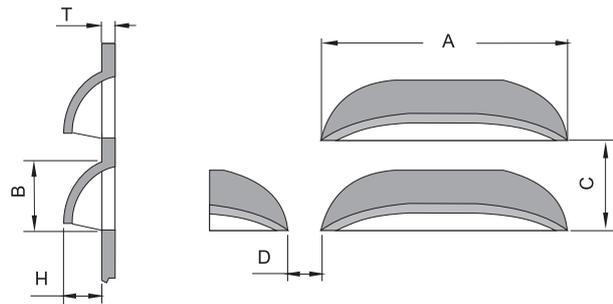
Note

1. Guide ass'y is for general use, replaceable stripper only
2. Lower cost for punch, grind life is 6 mm
3. Adjust conveniently and without shim after grinding
4. One completed set tooling includes Punch ass'y & Die
5. Punch ass'y is installed in upper turret of the CNC punch machine





FORMING TOOLS



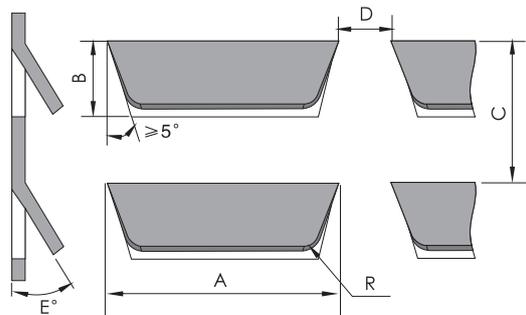
Machine _____
Material _____

A _____ D _____
B _____ H _____
C _____ T _____



CLOSE LOUVER

1. Tooling is made for specific sheet metal thickness
2. Consider the moving direction of the material when programming
3. Adjust length without shim, replaceable insert
4. Form up only



Machine _____
Material _____

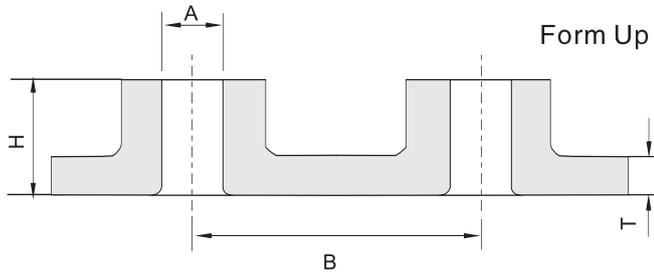
A _____ D _____
B _____ E _____
C _____ T _____ R _____



OPEN LOUVER

1. Tooling is made for specific sheet metal thickness
2. Consider the moving direction of the material when programming
3. Adjust length without shim, replaceable insert
4. Form up only

EXTRUSION TAPPING



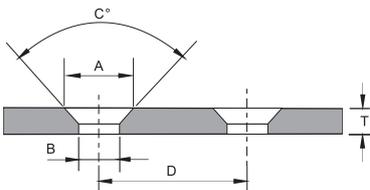
Machine _____ A _____
 Material _____ B _____ T _____
 H _____



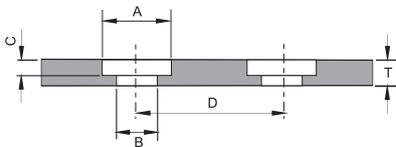
1. Need prepunch
2. Give tool enough time to strip
3. Replaceable insert design on extrusion
4. Form Up & Form Down
5. Max. thickness: Mild steel 2.3mm [0.09"], AL 2.0mm[0.08"], SS 1.2mm [0.05"]
 Max. forming height: over 3 x thread pitch

Prepunch size (Stainless steel)						Prepunch size (Mild steel, Aluminum)							
Extrusion		Thickness: T				Extrusion		Thickness: T					
Size	ϕA	0.6 [0.02]	0.8 [0.03]	1.0 [0.04]	1.2 [0.05]	Size	ϕA	0.8 [0.03]	1.0 [0.04]	1.2 [0.04]	1.6 [0.06]	2.0 [0.08]	2.3 (no AL) [0.09]
M2.6	2.21	1.3 [0.05]	1.3	1.3		M2.6	2.21	1.3 [0.05]	1.3	1.3	1.6		
M3	2.60	1.3	1.3	1.6 [0.06]	1.8 [0.07]	M3	2.60	1.3	1.3	1.6	1.6		
M4	3.40		2.0 [0.08]	2.0	2.0	M4	3.40	2.0 [0.08]	2.0	2.0	2.3 [0.09]	2.3	2.5 [0.10]
M5	4.30			2.3 [0.09]	2.3	M5	4.30		2.3	2.3	2.8 [0.04]	2.8	3.0 [0.12]
M6	5.10			3.0 [0.12]	3.0	M6	5.10			3.0	3.0	3.8 [0.15]	3.8

COUNTERSINK



Machine _____ A _____ D _____
 Material _____ B _____ T _____
 C _____

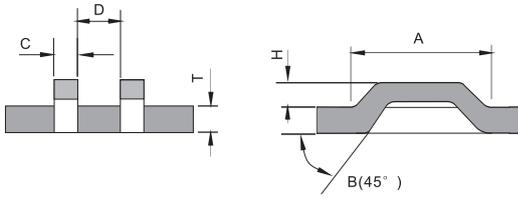


Machine _____ A _____ D _____
 Material _____ B _____ T _____
 C _____



1. Need prepunch
2. Adjust prepunch size to get different depth
3. Form Up & Form Down
4. Min. thickness: $T \geq 1.0\text{mm}$ [0.04"]

BRIDGE



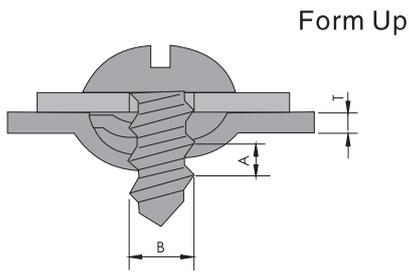
Machine _____
Material _____

A _____
B _____
C _____

D _____
H _____
T _____

1. Can be designed in single or double bridge
2. Form Up & Form Down
3. Width of the Bridge: $C \geq 2T$ & $C \geq 1.8\text{mm}$

THREAD FORM

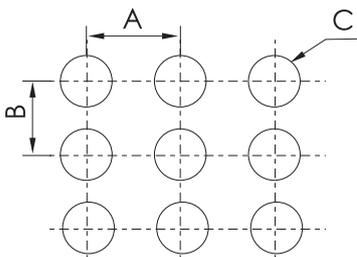


Machine _____
Material _____

A _____
B _____
T _____

1. Form Up & Form Down
2. Thickness: 0.5mm ~ 1.2mm [0.02" ~ 0.05"]

CLUSTER

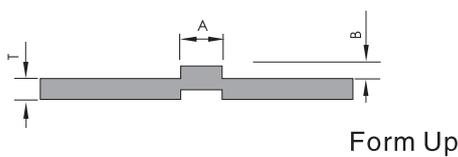


Machine _____
Material _____

A _____
B _____
C _____

1. Space of holes must be over 3.2mm [0.125"] or 2T
2. Please fill in the left form.

HALF SHEAR

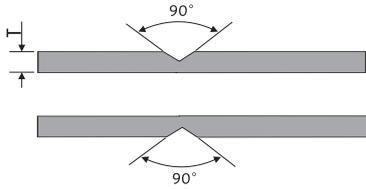


Machine _____
Material _____

A _____
B _____
T _____

1. Form Up & Form Down
2. Max. B size: 0.6T
3. Please fill in the left form

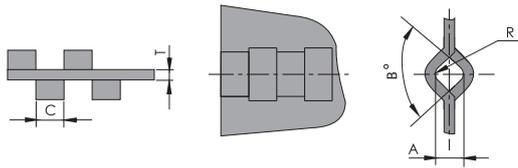
CENTER POINT



1. Forbid punching without sheet
2. Adjust the height of the tool to change the depth when punching
3. Form Up & Form Down
4. Angle: 90 degree, Max. thickness: 6.0mm [0.236"]

Machine _____
 Material _____ T _____

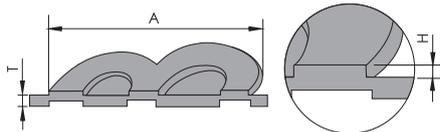
THREAD LOOP



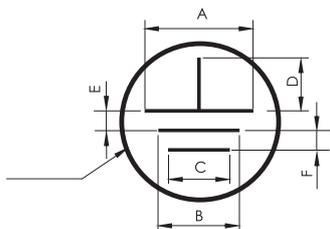
Machine _____
 Material _____
 A _____ B _____ C _____
 R _____ T _____

1. Angle B = 90°
2. Please fill in the left form.

STAMPING



Machine _____
 Material _____
 A _____ H _____ T _____



Machine _____
 Material _____
 A _____ B _____ C _____
 D _____ E _____ F _____
 G (width) _____
 H (depth) _____

1. Forbid punching without sheet
2. Adjust the height of the tool to change the depth when punching
3. Form Up or Form Down
4. Please fill in the left form

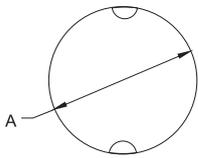
RIB TOOL



Machine _____
 Material _____
 A _____ B _____
 H _____ T _____

1. Form Up
2. Increment of ribbing rib should be 0.5~2.0mm [0.02"~0.08"]
3. For Max. thickness:
 Mild steel & AL 2.7 mm, Stainless steel 2.3mm

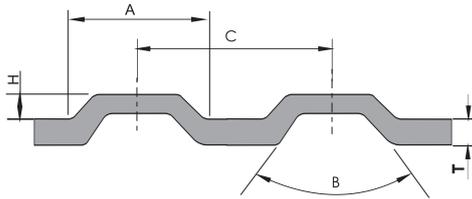
KNOCKOUT



Machine _____
Material _____ A _____ T _____

1. For small thickness range only
2. Changeable insert for another size

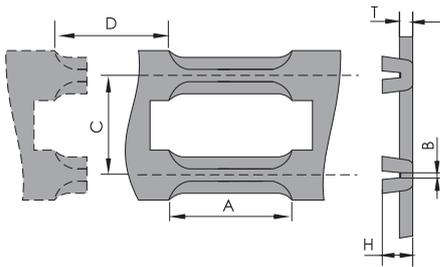
EMBOSS



Machine _____ A _____ H _____
Material _____ B _____ C _____ T _____

1. Escape clamp or punching hole
2. Can form in Round or Shape
3. Form Up & Form Down

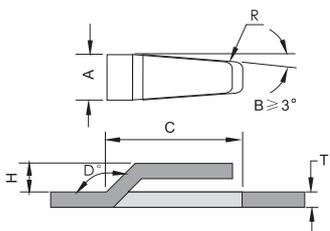
CARD GUIDE



Machine _____ A _____ D _____
Material _____ B _____ H _____
C _____ T _____

1. Tooling is made for specific thickness.
2. Adjust length without shim, replaceable insert
Forming Height $\leq 2T$, Otherwise will be deformation easily.

LANCE & FORM

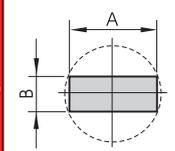
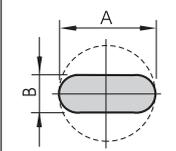
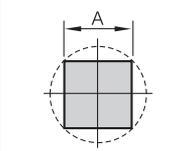
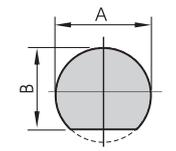
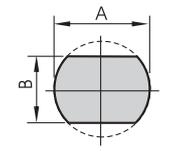
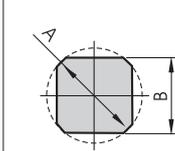
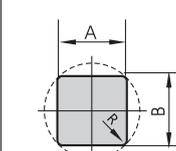
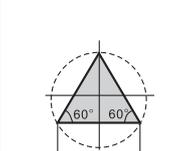
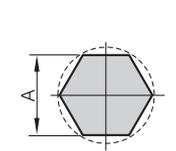
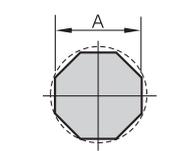


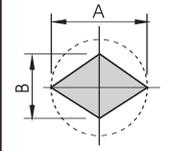
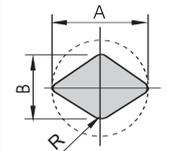
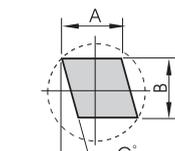
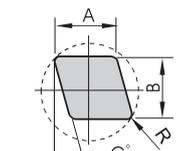
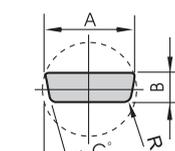
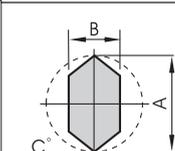
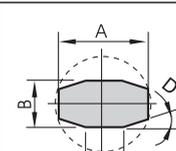
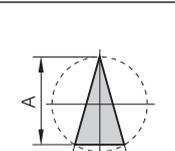
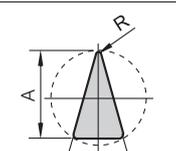
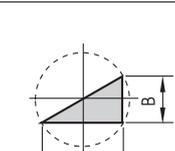
Machine _____ A _____ C _____ R _____
Material _____ B _____ D _____ H _____ T _____

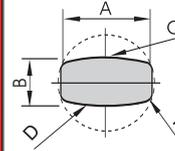
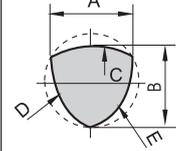
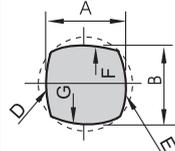
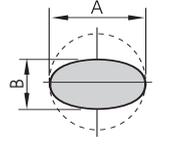
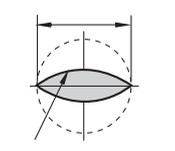
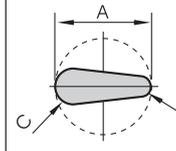
1. Tooling is made for specific thickness, can not use thicker sheet metal, otherwise the tool will be damaged.
2. Max. height: Over 2 T for 90 degree lance & form.



SHAPE CLASSES

STANDARD SHAPE					
	Code: RE Name: Rectangle Size: B/A	Code: OB Name: Oblong Size: B/A	Code: SQ Name: Square Size: A	Code: SD Name: Single D Size: B/A	Code: DD Name: Double D Size: B/A
					
	Code: QD Name: Quad D Size: B/A	Code: QR Name: Quad R Size: B/A/R	Code: ET Name: Equilateral Triangle Size: A	Code: HX Name: Hexagon Size: A	Code: OT Name: Octagon Size: A

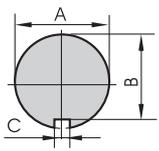
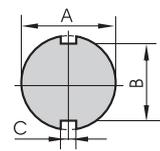
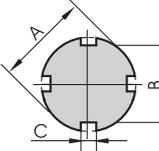
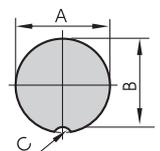
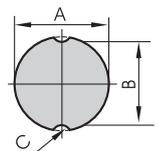
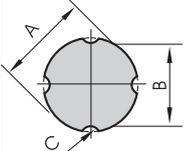
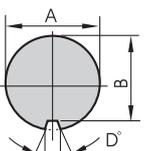
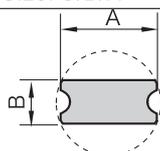
GROUP A					
	Code: A0 Name: Diamond Size: B/A	Code: A1 Name: Diamond Size: B/A/R	Code: A2 Name: Diamond Size: B/A/C	Code: A3 Name: Diamond Size: B/A/C/R	Code: A4 Name: Cable Connector Size: B/A/C/R
					
	Code: A5 Name: Six Edges Size: B/A/C	Code: A6 Name: Eight Edges Size: C/B/A/D	Code: A7 Name: Triangle Size: B/A	Code: A8 Name: Triangle w/R Size: A/B/R	Code: A9 Name: Right Triangle Size: B/A

GROUP B						
	Code: B0 Name: Double R Size: B/A/C/D/R	Code: B1 Name: Tri-R Size: B/A/C/D/E	Code: B2 Name: Quad-R Size: B/A/D/E/F/G	Code: B3 Name: Ellipse Size: B/A/C/R	Code: B4 Name: Football Size: A/B	Code: B5 Name: Key Hole Size: A/B/C

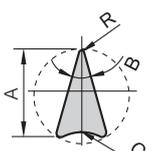
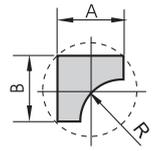
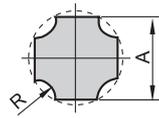
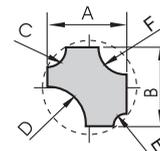
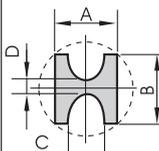
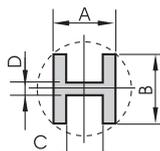
SPECIAL SHAPE	<p>Special shape follows the attached drawing</p> <p>CODE: FT</p>
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SAME STATION TOOLING, SAME GROUP SHAPE, SAME PRICE!

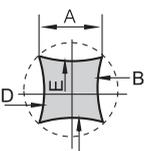
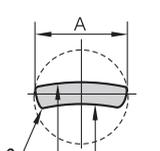
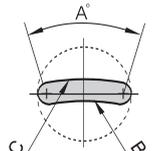
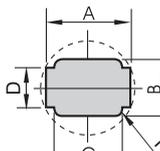
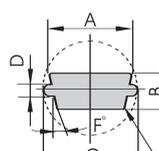
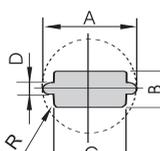
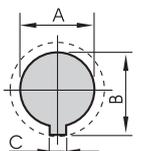
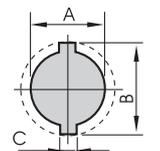
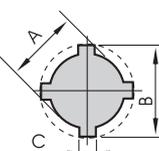
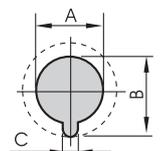
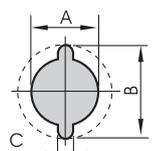
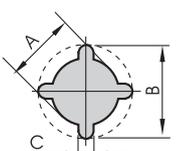
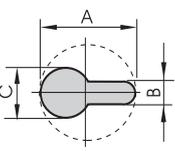
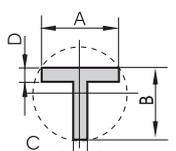
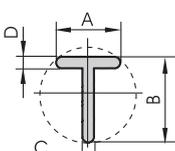
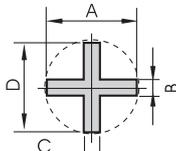
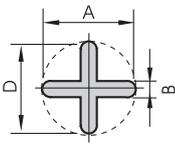
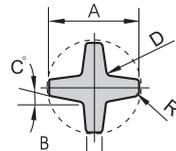
GROUP C

 <p>Code: C0 Name: Key Way Size: C/B/A</p>	 <p>Code: C1 Name: Double Key Way Size: C/B/A</p>	 <p>Code: C2 Name: Quad Key Way Size: C/B/A</p>	 <p>Code: C3 Name: Key Way Size: C/B/A</p>	 <p>Code: C4 Name: Key Way Size: C/B/A</p>	 <p>Code: C5 Name: Key Way Size: C/B/A</p>
 <p>Code: C6 Name: Key Way Size: C/B/A/D</p>	 <p>Code: C7 Name: Micro-joint Size: B/A</p>				

GROUP D

 <p>Code: D0 Name: Triangle w/R Size: A/B/C/R</p>	 <p>Code: D1 Name: One way radius Size: B/A/R</p>	 <p>Code: D2 Name: Four way radius Size: A/R</p>	 <p>Code: D3 Name: Four way radius Size: A/B/C/D/E/F</p>	 <p>Code: D4 Name: H w/radius Size: D/C/B/A</p>	 <p>Code: D5 Name: H shape Size: D/C/B/A</p>
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GROUP E F

 <p>Code: E0 Name: Four radius Size: A/B/C/D/E</p>	 <p>Code: E1 Name: Banana Size: A/C/D/R</p>	 <p>Code: E2 Name: Banana Size: B/C/A</p>	 <p>Code: E3 Name: Connector Size: D/B/C/A/R</p>	 <p>Code: E4 Name: Connector Size: D/B/A/C/F/R</p>	 <p>Code: E5 Name: Connector Size: D/B/C/A/R</p>
 <p>Code: E6 Name: Key Hole Size: C/A/B</p>	 <p>Code: E7 Name: Key Hole Size: C/A/B</p>	 <p>Code: E8 Name: Key Hole Size: C/A/B</p>	 <p>Code: F0 Name: Key Hole Size: C/A/B</p>	 <p>Code: F1 Name: Key Hole Size: C/A/B</p>	 <p>Code: F2 Name: Key Hole Size: C/A/B</p>
 <p>Code: F3 Name: Key Hole Size: B/C/A</p>	 <p>Code: F4 Name: T shape Size: D/C/B/A</p>	 <p>Code: F5 Name: T shape Size: D/C/A/B</p>	 <p>Code: F6 Name: Cross Size: C/B/D/A</p>	 <p>Code: F7 Name: Cross Size: B/A/D</p>	 <p>Code: F8 Name: Cross Size: B/A/C/D/R</p>

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