

NC PUNCH PRESS

HIGH PERFORMANCE TOOLING

High Quality & Technology For **The Future**

CONIC

Since 1976

KOMATSU TYPE TOOLING



JAPAN QUALITY



CONIC COMPANY GUIDANCE

ABOUT US

Conic has been produced quality punch tools since 1976 in Okayama Japan.

Our tools are used worldwide in the sheetmetal market and that quality is really satisfied from various production customers. Our policy is that we make a high quality tools in timely, in reasonable price to helping customers manufacture sheet metal parts in high productivity and reliability.

We have done a lot of development of new products such as Super Dry Punch (SDP), Conic-Long life Punch (GLP), Conic Hard Punch (CHP) for last long tools.

We recently introduced PROTECH series tool to the market and market reflect strong praise.

Conic would like to be your punch press tool partner.

We look forward to serving you.

QUALITY



Okayama factory :

ISO 9001:2015 provide superior Quality Management System in 1998 Conic Corp, received ISO9001 authorization, and it has been recognized as a very reliable company, both on the international front and Japan.

COMPANY HISTORY

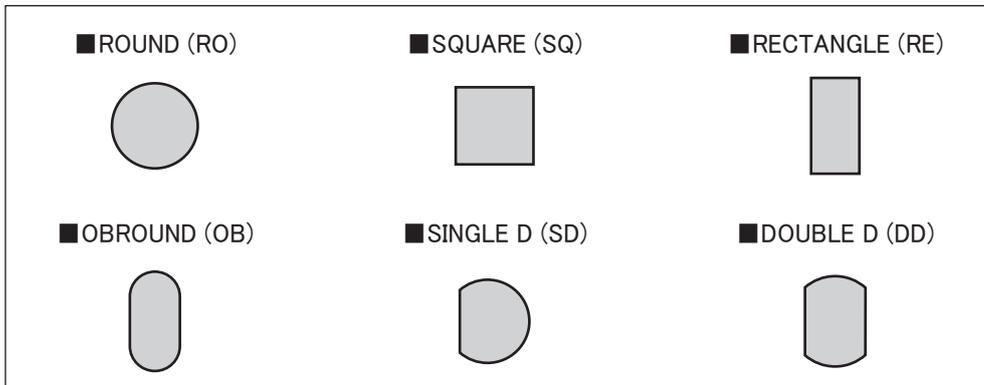
- 1976 Established.
- 1979 Tokyo Sales Office opened.
- 1985 Okayama Factory opened.
- 1990 "International Sheet Metal Symposium" held by the company.
- 1992 Tool information and order receiving office was opened.
- 1993 Osaka Branch opened in Higashi-Osaka city.
- 1993 Head Office moved into Okayama Factory.
- 1998 Okayama factory was registered under required operation of international quality management system "ISO-9001".
- 1999 "Super Dry Punch" newly developed and launched.
- 2000 Internet order and quote receiving system was opened.
- 2002 "Conic Hard Punch" newly developed and launched.
- 2009 PROTECH series tooling newly developed and launched.
- 2012 Thailand Factory opened.
- 2013 "Conic Long life Punch" newly developed and launched.
- 2018 The Representative office in Vietnam opened.



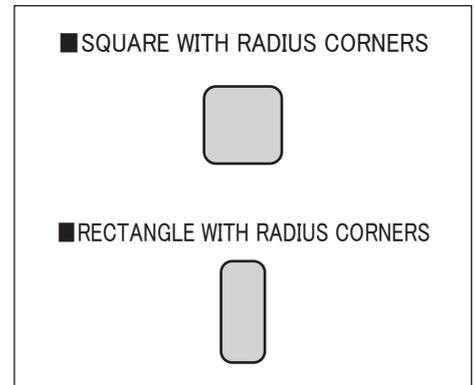
SPECIFICATION OF CONIC TOOLING

■Various Shapes

STANDARD SHAPES

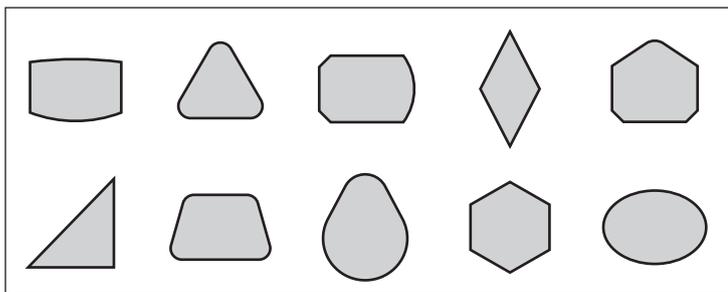


WITH RADIUS CORNERS

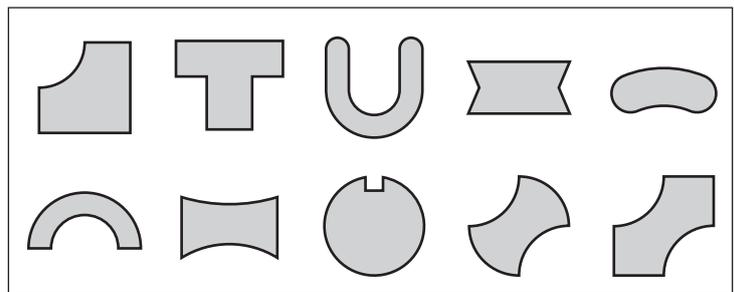


Note : Square and Rectangle punch corner has small radius (R0.2) for prevent crack of punch tip.
If it is not necessary, please inform us.

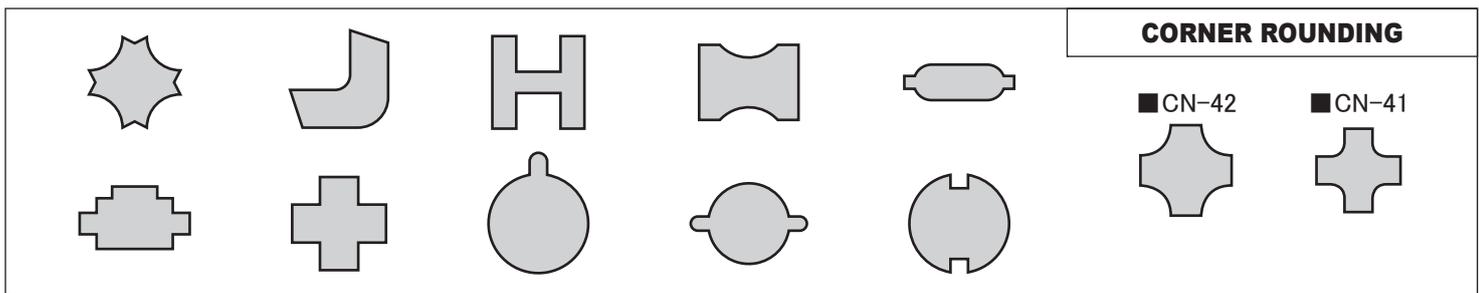
SPECIAL SHAPES (CLASS-1)



SPECIAL SHAPES (CLASS-2)



SPECIAL SHAPES (CLASS-3)

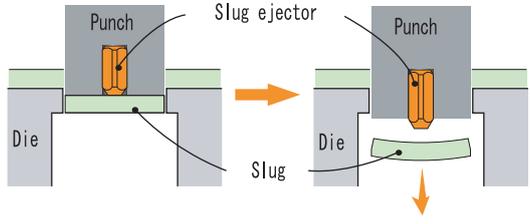
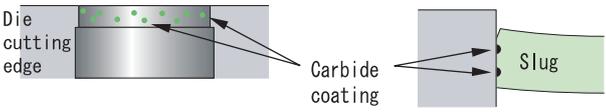


SPECIAL SHAPES (CLASS-4)

More complicated figure

When make order, please inform to us the center position of the tool.
CONIC is possible to produce other than this form list,
please contact us.

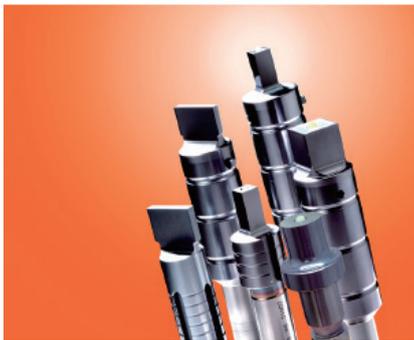
■Prevent Slug Pulling

PUNCH	<p>Slug Ejector</p> <p>Slug ejector push down the slug. It will be installed to over $\phi 4$ for round and over 6 mm width shape tool as our standard. Please contact us, when punch thick material sheet or hard material with small punch diameter.</p> 
DIE	<p>Straight with taper Die</p> <p>Use this specification standard on Blank tool, less than 2mm width die for blank will be parts, punch with heel die clearance is less than 0.1mm</p> 
	<p>Depositron Process</p> <p>Put electrical super hard spot onto inside of die hole Except clearance 0.1mm Standard on die diameter $\phi 2 \sim \phi 4.5$</p> 



SPECIFICATION OF CONIC TOOLING

■ Conic Original Coating

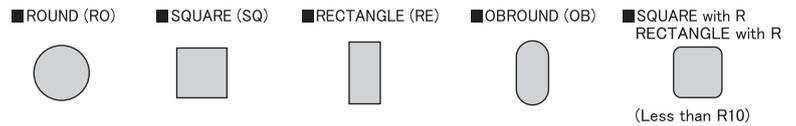


Perfect tool for stainless steel !

Super Dry Punch (SDP)

This is our best tool. Incredible durability and defeated the common sense that "Stainless is hard to process".

This tool is suitable for night time unattended operation and dry (no oil lubrication on the sheet metal) condition punching. Super Dry Punch (SDP) is available with only the following shapes.



Perfect tool for thick material!

Heavy Duty Punch (HDP)

High performance for all purpose, especially for thick material. Coating with excellent heat resistance.

The coating is difficult to peel of even with heat generated continuously. Special shapes are also available for this treatment.

Most efficient in long life and cost !

Conic Long life Punch (CLP)

High performance for all purpose, especially for mild steel, galvanized steel with high corrosion resistance !

Special shapes are also available for this treatment.

Ultra cost performance tool for reasonable price !

Conic Hard Punch (CHP)

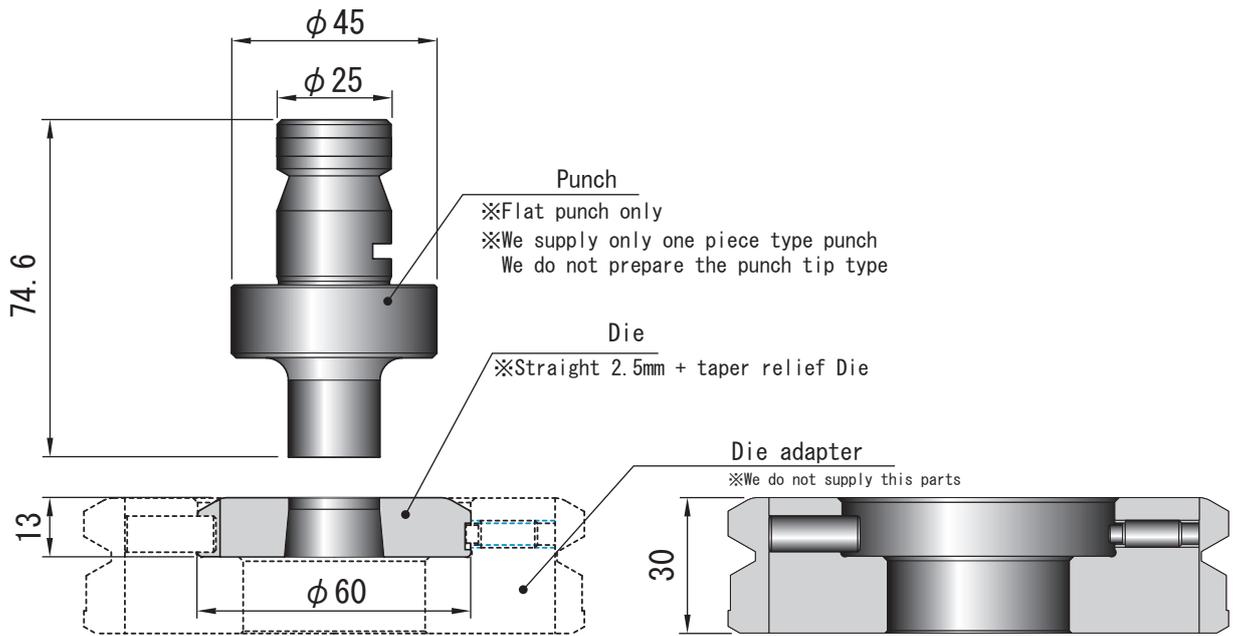
Reasonable price and suitable for all purpose.

CHP shows high performance reducing adhesion and galling which is more likely to be caused by processing Aluminum and Coated steel sheet.

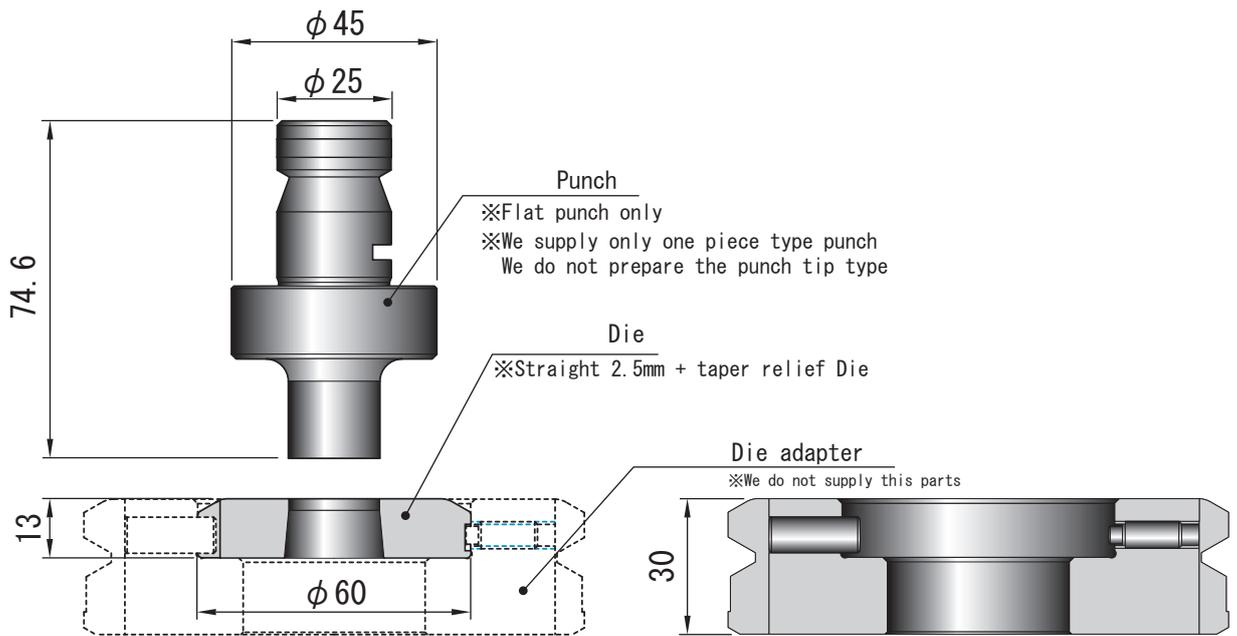
Total Performance	Punch type	Aptitude			
		Stainless steel (SUS)	Mild steel (SPCC)	Aluminum	Galvanized
	Super Dry Punch (SDP)	★★★★★★	★★★★★★	★★★	★★★
	Heavy Duty Punch (HDP)	★★★★★	★★★★★★★	★★★★★★★	★★★★★★★
	Conic Long life Punch (CLP)	★★★★	★★★★★★	★★★★★★★	★★★★★★★
	Conic Hard Punch (CHP)	★★★	★★★★	★★★★★	★★★★
	HSS	★★	★★★	★★★	★★★
	D2	★	★	★★	★

KOMATSU TYPE 1/8" & 1/4"

1/8" in



1/4" in



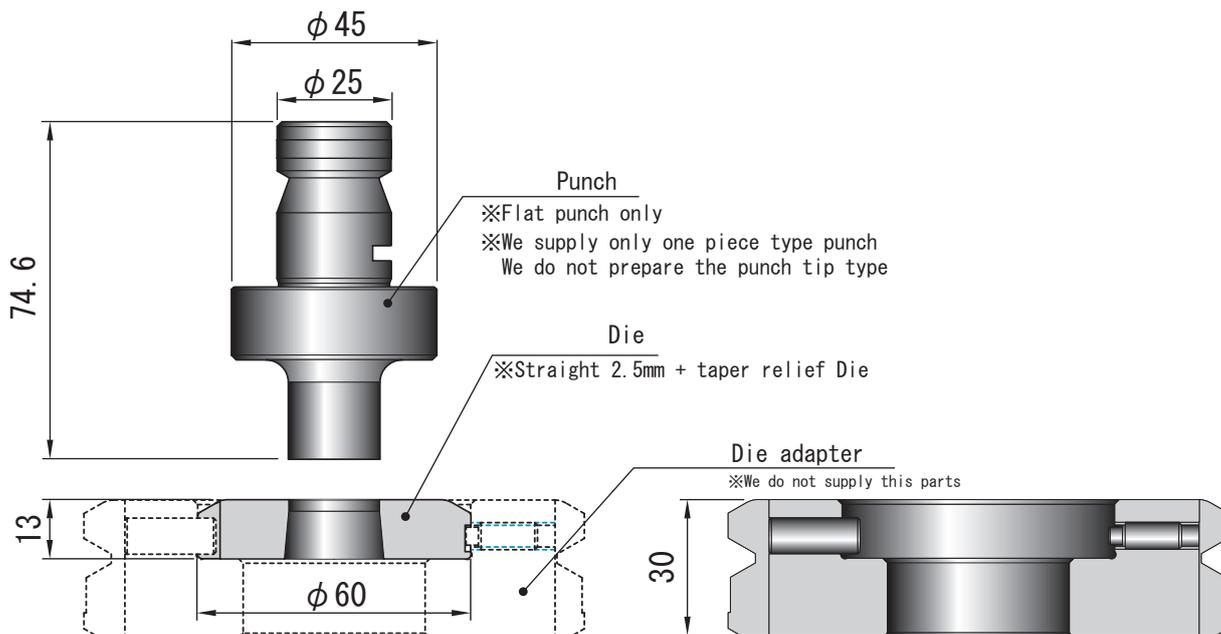
	Parts	Shape	Dimension (mm)
1/8"	Punch (HSS)	ROUND	cutting edge diameter $\phi 1$ or more - $\phi 2.59$ or less
		SHAPE	diagonal dimension 1 or more - 2.59 or less
	Die (D2)	ROUND	cutting edge diameter $\phi 1$ or more - $\phi 2.59$ or less
		SHAPE	diagonal dimension 1 or more - 2.59 or less
1/4"	Punch (HSS)	ROUND	cutting edge diameter $\phi 2.6$ or more - $\phi 5.99$ or less
		SHAPE	diagonal dimension 2.6 or more - 5.99 or less
	Die (D2)	ROUND	cutting edge diameter $\phi 2.6$ or more - $\phi 5.99$ or less
		SHAPE	diagonal dimension 2.6 or more - 5.99 or less

※1 We do not supply stripper plate and punch ring. We supply punch and die.

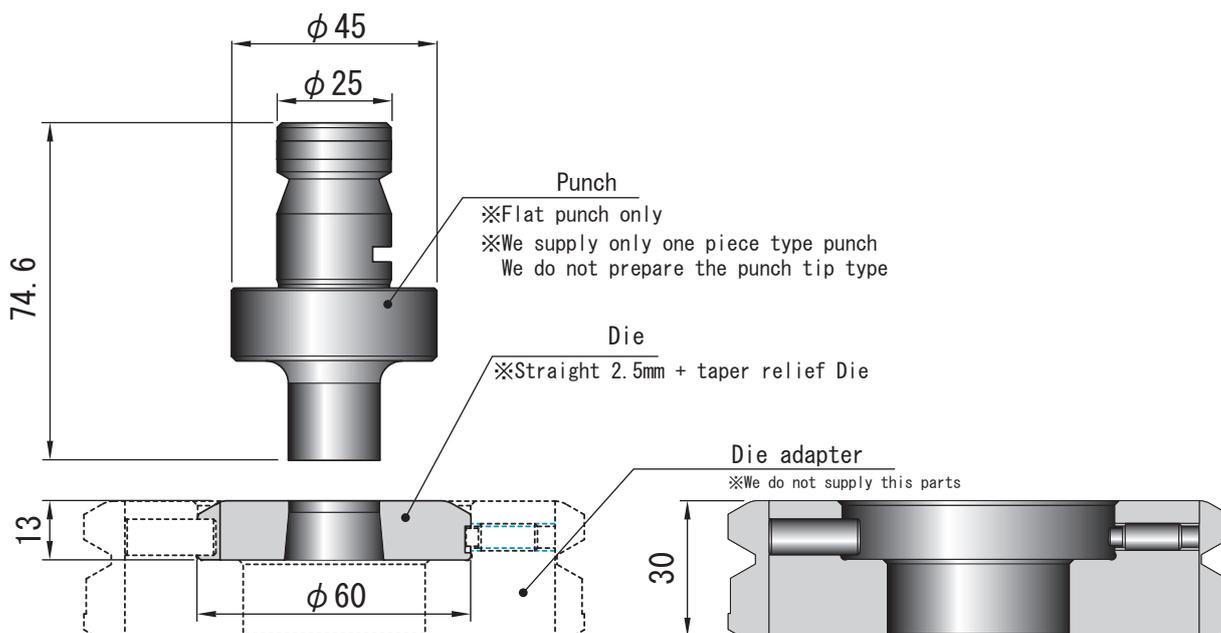
※2 We do not supply barcode.

KOMATSU TYPE 1/2" & 1-1/4"

1/2ⁱⁿ



1-1/4ⁱⁿ



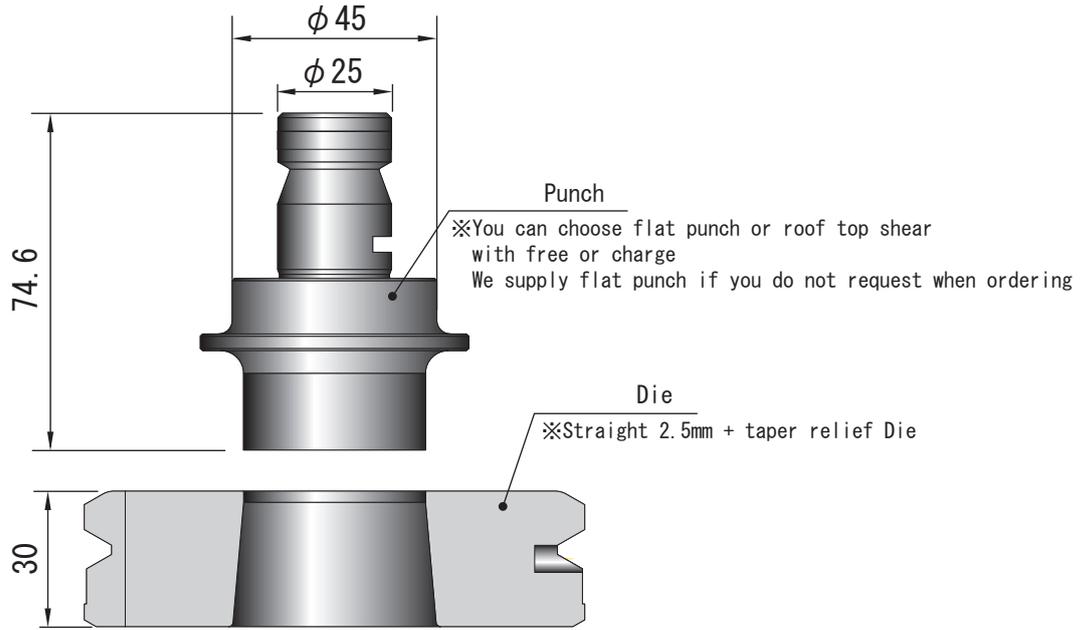
	Parts	Shape	Dimension (mm)
1/2"	Punch (HSS)	ROUND	cutting edge diameter $\phi 6$ or more - $\phi 12.7$ or less
		SHAPE	diagonal dimension 6 or more - $\phi 12.7$ or less
	Die (D2)	ROUND	cutting edge diameter $\phi 6$ or more - $\phi 12.7$ or less
		SHAPE	diagonal dimension 6 or more - 12.7 or less
1-1/4"	Punch (HSS)	ROUND	cutting edge diameter $\phi 12.71$ or more - $\phi 31.7$ or less
		SHAPE	diagonal dimension 12.71 or more - 31.7 or less
	Die (D2)	ROUND	cutting edge diameter $\phi 12.71$ or more - $\phi 31.7$ or less
		SHAPE	diagonal dimension 12.71 or more - 31.7 or less

※1 We do not supply stripper plate and punch ring. We supply punch and die.

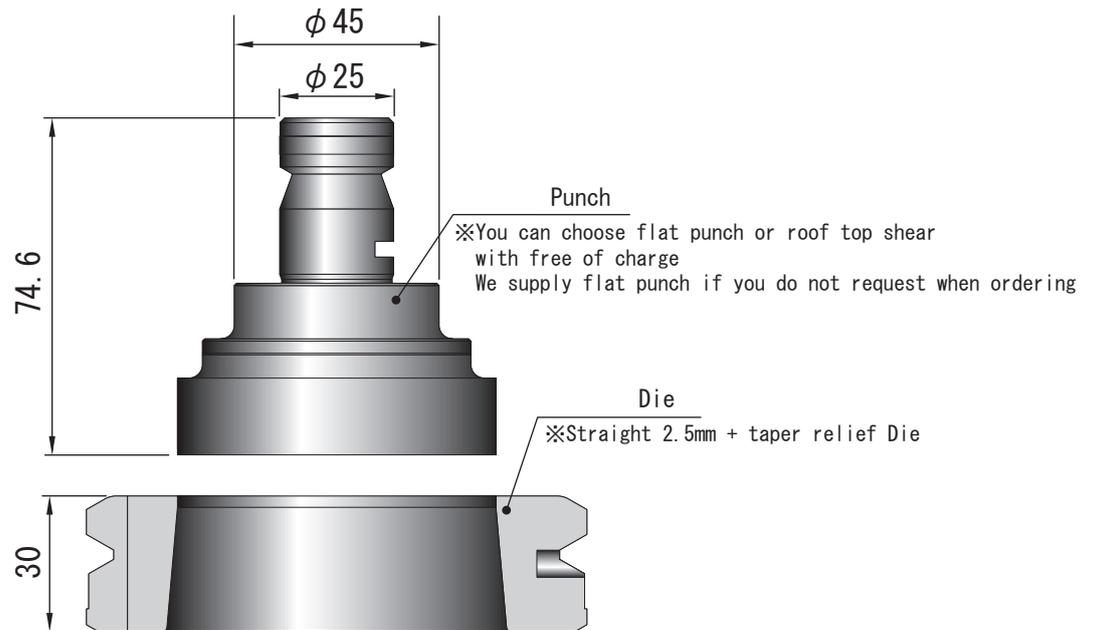
※2 We do not supply barcode.

KOMATSU TYPE 2" & 3"

2in



3in



	Parts	Shape	Dimension (mm)
2"	Punch (HSS)	ROUND	cutting edge diameter $\phi 31.71$ or more - $\phi 50.8$ or less
		SHAPE	diagonal dimension 31.71 or more - 50.8 or less
	Die (D2)	ROUND	cutting edge diameter $\phi 31.71$ or more - $\phi 50.8$ or less
		SHAPE	diagonal dimension 31.71 or more - 50.8 or less
3"	Punch (HSS)	ROUND	cutting edge diameter $\phi 50.81$ or more - $\phi 76$ or less
		SHAPE	diagonal dimension 50.81 or more - 76 or less
	Die (D2)	ROUND	cutting edge diameter $\phi 50.81$ or more - $\phi 76$ or less
		SHAPE	diagonal dimension 50.81 or more - 76 or less

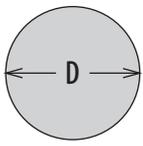
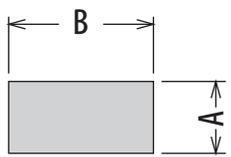
※1 We do not supply stripper plate and punch ring. We supply punch and die.
 ※2 We do not supply barcode.

TECHNICAL INFORMATION

CALCULATE PUNCHING FORCE (TONNAGE)

Tonnage capacity is different depending on machines.
Use the calculation formula below to prevent from over tonnage.

$$\text{Tonnage (ton)} = \frac{\text{Circumference(mm)} \times \text{Material thickness(mm)} \times \text{Shear resistance(kg/mm}^2\text{)}}{1000}$$

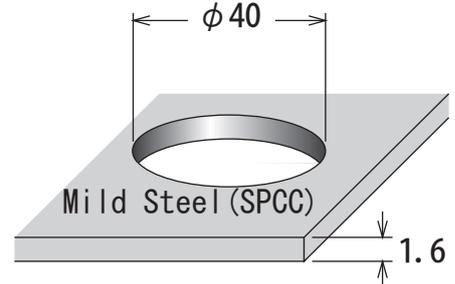
Circumference	
Round	Shaped
Diameter x 3.14	(Length dimension + Width dimension) x 2
	
Circumference = D x 3.14	Circumference = (A + B) x 2

Shear resistance by material	
Material	Shear resistance (kg/mm ²)
Mild Steel	26~35
SS400	33~42
Stainless Steel	52~56
Aluminum	7~16
Copper	18~30
Brass	22~40

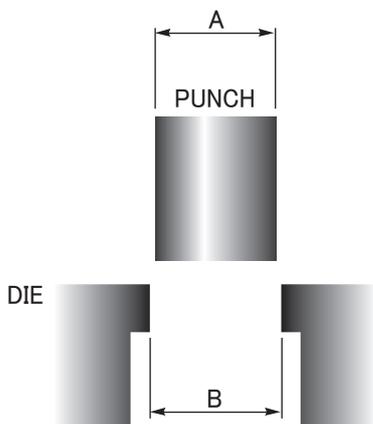
<Calculation example>

The tonnage when piercing $\Phi 40$ to Mild Steel T=1.6mm.

$$\frac{40 \times 3.14 \times 1.6 \times 35}{1000} = 7 \text{ (ton)}$$



DIE CLEARANCE



DIE CLERANCE IS ...

Die clearance is difference between punch diameter and die diameter.

$$\text{Die clearance} = B - A$$

RECOMMENDED DIE CLERANCE

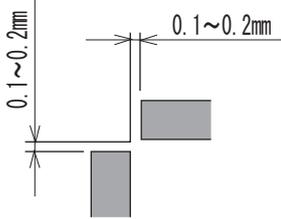
$$\text{Die clearance} = \text{Material thickness} \times \text{Clearance Ratio}$$

Material	Clearance Ratio	Material thickness					
		0.5~1.0	1.2	1.5	2.0	2.3	3.2
Mild steel	0.15	0.15	0.2	0.25	0.3	0.4	0.5
Stainless steel	0.2	0.2	0.25	0.3	0.4	0.5	0.6
Aluminum	0.1	0.15	0.15	0.15	0.2	0.25	0.35
Copper	0.1	0.15	0.15	0.15	0.2	0.25	0.35

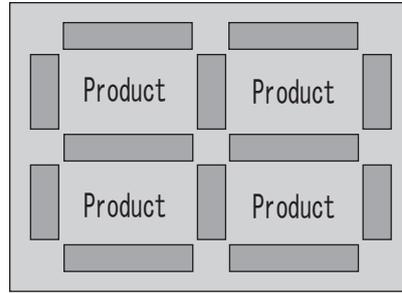
TECHNICAL INFORMATION

JOINT METHOD

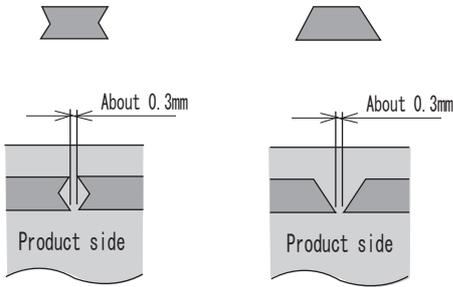
CORNER JOINT



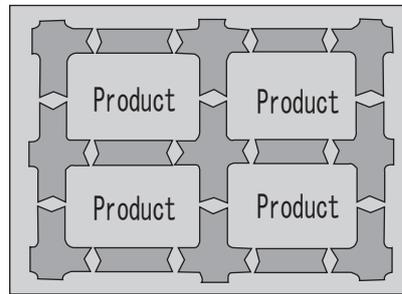
Joint of corner part



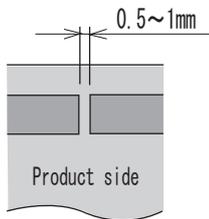
MICRO JOINT



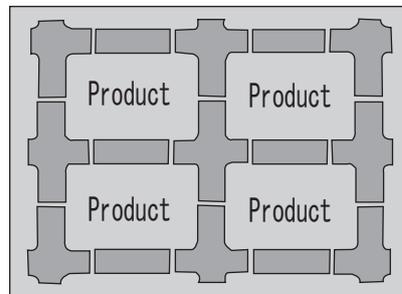
Joint of straight part



WIRE JOINT



Joint of straight part



CORNER ROUNDING

Standard Corner rounding tool	Corner rounding tool with tangent line	Corner rounding tool with joint
		<p>Product</p>

Punching Tool Quote/Order Form

Fax : +81-868-38-6331

CONIC
Tool Sales Desk

Date / (DD) (MM) (YYYY) 20

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of

URL <http://www.conic.co.jp/>
E-mail tools@conic.co.jp

1.Quote		2.Order		CONIC's person in charge :	
Your company name		Country name	TEL ()	Preferred delivery date (DD) (MM)	
Person in charge			FAX ()		

Machine maker's name <small>(For example : Komatsu)</small>	Name of machine <small>(For example : GT3300)</small>	Our lineup for 1/8, 1/4, 1/2, 1-1/4, 2, 3
--	--	--

Tool range	Shapes and dimensions	Die clearance	Q'ty				Punch shear angle	Remarks
			Punch and Die	Punch (HSS)	Die (D2)	Others		
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	
							Flat Roof top	

Please indicate in remarks when you need coated punch.

◆ Please draw special shapes here.

0412 ※ Please draw the shape when you see the die from top, and specify key direction.

CONIC HIGH PERFORMANCE TOOLING

- Amada type tooling
- Murata type tooling
- Trumpf type tooling
- Komatsu type tooling
also available.

High Quality & Technology For The Future
CONIC

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Dea l e r