Technical Information

Vol. 34

THE ORDERING GUIDE 5

DIE SPECIFICATION SELECTION

When ordering a die, please select and refer to the following specifications.

■ SELECTION OF DIE MATERIAL

We have two types of die materials available.

- 1. D2 (Improved D2 steel is standard)
- 2. HSS (High speed steel)

Improved D2 material is a material that has improved toughness and chipping resistance by making micronized carbides.

Unless otherwise specified, the material is D2 steel (improved D2 steel).

However, if wear resistance is required, please specify the die for the high speed steel and the high speed steel for the punch body.

■SELECTION OF DIE CUTTING EDGE

Standard die cutting edge specifications are as follows. (Some models and sizes may differ from the following specifications.)

Name of cutting edge	Shape of cutting edge	Specification	Application
Straight edge with straight relief		The cutting edge and relief part are straight. This is a general cutting edge shape.	Adopted in a round shape.
Slug catcher (S.C)		Cutting edge shape with excellent slug-pulling preventive effect with a reverse-tapered cutting edge.	Adopted for standard square shape and special shape.
All taper		The shape of the entire cutting edge is tapered.	Adopted in a cyclone die.
Straight edge with taper relief		The shape of the cutting edge that cutting edge part is straight and relief part is tapered.	Adopted for blank type, die size with clearance less than 2 mm widths, punch with heel, and s tandard square shape with clearance less than 0.1mm.
All taper II		Cutting edge shape with two-stage taper shape.	Large-station die suitable for machines with a scrap suction device.

We have also a die for preventing slug pulling other than the above. Please contact our tool sales desk for more detail.

■SELECTION OF DIE CLEARANCE

Refer to Technical Information Vol.30 "Ordering Guide 1" for selection of die clearance.

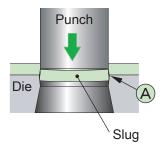
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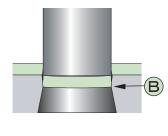
MEASURES TO PREVENT SLAG PULLING

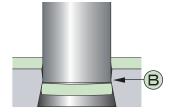
■SLUG CATCHER DIE

By attaching a negative taper (reverse taper) to the die cutting edge and pushing the slug into the die, we adopt the standard square die as standard. (Excluding some models and sizes)

- 1. Material is cut off at {A} part.
- 2. The slug is compressed in the process of punching at {B} part.
- 3. Drags the slug through the relief.
- 4. {B} part is narrower than {C} part so the slug cannot comes up.







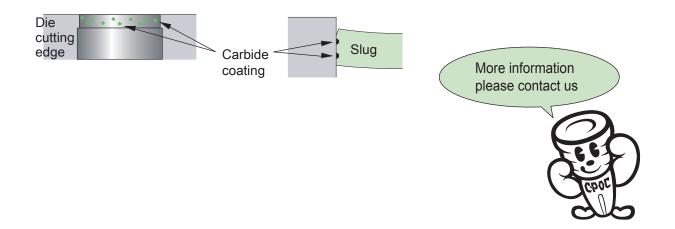


■DEPOSITRON TREATMENT

As a prevent slug pulling, this is a process in which cemented carbide alloy was applied to the die cutting edge with a discharge coating.

Slug pulling is prevented by pushing out the slug into the part protruding from the cutting edge. We use it as a standard for round dies with cutting edge diameters of φ 2 to φ 4.5.

It is not recommended if the clearance is less than 0.1mm and the workpiece is aluminum.



For More information, please contact CONIC tool sales desk.

CONIC Co.. Ltd.

10-5 Taiheidai, Shoo-cho, Katsuta-gun, Okayama 709-4321 Japan Email: tools@conic.co.jp

https://www.conic.co.jp

CONIC PRECISION Co., Ltd.

55/22 Moo 4, Buengkumphroy, Lumlukka, Phatumthani 12150 Thailand TEL: (662) 159-9870 FAX: (662) 159-9872

Email: conic_thai@conic.co.jp