

No.108

Solid Dies: D

Dies

【Consultation】



I ordered a cutting die according to YAMAWA specifications. When it arrived it was a solid die. Is an adjustable die with an adjusting screw the normal standard for dies? Are solid dies more difficult to use than adjustable dies? Please tell me the difference between the two die types.

【Answer】

In order to provide easy to use cutting dies to the market, Yamawa has converted the standard offering of cutting dies to solid dies. Cutting dies are not fixed as adjustable dies. There are two types of solid die and adjustable die specified in the JIS B 4451 Threading Round Die standard. The way cutting dies are used today, I think the most easy to use die is the solid die.

Solid die: D



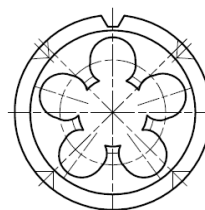
[History of transition to solid dies]

An adjustable die is used by manually adjusting the die size with the adjustment screw according to the size of the external thread to be produced. In the old days a skilled workers could fine tune the die and process Class 1 and Class 2 external threads with one adjustable die. Occasionally, the die was reground and reused, so it was necessary to finely adjust the adjustment screw after re-grinding to produce the correct size of external thread. In recent years, the number of skilled workers who can fine tune an adjustable die has been drastically reduced. There is a strong need for a die that produces accurate external threads simply without adjustments. This concept uses a solid die in a holder that can be used simply. In this way, as the requirements from the processing site are changing rapidly, Yamawa is promoting the use of all dies to solid dies.

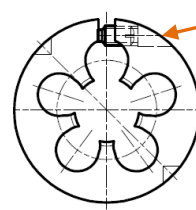


Solid Die: Advantages of D

- The dimensions of machined threads are guaranteed at the time of shipment from the manufacturer, so even non-skilled workers can perform accurate machining.
- Solid die: D is not split and does not spread, so the dimensions of the machined thread are very stable.
- There is no thread distortion, so there is less deviation of the outer diameter and less surface distortion. There is no run-out, so an accurately machined thread with a better surface finish can be obtained.
- Since the die material is HSS (High Speed Tool Steel), longer tool life can be obtained.



Solid die



Adjustable die

You will need to fine-tune the adjustment screws yourself to get the optimum

