

No.111 The front and back of Solid Round Dies and the role of each part

Dies

[Consultation]



I heard that YAMAWA's "Solid Round Dies D" cannot be used from the back side. Can you explain why and is there a way to distinguish the front side and the back side?

[Answer]

In the past, we used to produce solid dies that had chamfers to cut from both sides in accordance with JIS standards. Because the chamfer lengths and the cutting performances are different for both sides, it was necessary for machine operators to have sufficient knowledge about how to use the dies. We developed our "Solid Round Dies D" with the chamfer on the front face only in order to improve the overall cutting performance. This change makes it easier for the operator to understand and use correctly. We also added a countersink on the back side to improve the contact surface with the die holder. This stabilizes the machining process with less run-out on the surface. The front side of the solid round dies D is marked with "YAMAWA" and should be visible when in the die holder.

[The name and role of each part of Solid Round Dies D]

Back face Front face Thickne Chamfered (1) Chamfer Back side part Front side (2.5 P)Outside dia. (4)(2)Thread part Clearance holes Countersink (5)Push hole

The name and role of each part of Solid Round Dies D

- (1) Chamfer part: This part cuts into the workpiece to produce the external threads. It also acts to guide the dies itself.
- (2) Thread part: This part consists of the chamfer and full threads. The full thread portion also acts as a thread guide after cutting the external threads by the chamfer part.
- (3) Countersink: The back side of the dies is countersinked. It improves the contact with the die holder.
- (4) Clearance holes: These holes works to hold the chips and feed cutting fluid for smoother machining.
- (5) Push hole: This is the hole where the set screws are tightened to secure the die to the holder.



The picture on the right shows stable machining with a Solid Round Dies D. You can find more information about solid round dies in the "Bag full of wisdom when you are in a trouble". Please click "Products" -> "Dies" on the search menu of YAMAWA website.

