

| TECHNICAL MANUAL |

WIFORCE™

F-TYP PUSH COLLET
FOR INTERNAL CLAMPING APPLICATION



GENERAL INFORMATION

The WIFORCE collet (Push Type F) is designed for internal clamping of workpieces. It consists of two main components: Body + head.

3 types of head are available:

- A** | Soft head blank, requiring pre-operation and machine finishing.
- B** | Hardened head blank, requiring machine finishing.
- C** | Hardened finished head, no operations required, the collet is ready to use.

▶ GOLDEN RULES

- Tightening the collet when not in use can add excessive stress on the mechanism and can seriously damage it: **Using the limitation ring or a part during settings.**
- All our collets have a radial runout (concentricity) of 0.01mm, if you require greater accuracy, or if the jaws have been unscrewed, we recommend finishing the jaws directly on the machine: **Turning the jaws by a few hundredths (0.02mm – 0.05mm)**
- Work as close as possible to the machine spindle. **Cut the blank jaws down the shortest possible length (part length + limitation ring width).**

▶ ADDITIONAL RECOMMANDATIONS

- The work piece must be pressed firmly against the head to improve clamping efficiency and reduce the risk of the work piece « coming loose » during machining operations.
- Use oil to rinse the collet nose carefully to prevent any chips from getting stuck in the head – this could prevent the mechanism from closing and cause it to jam when loading the next work piece.
- Filter the oil used to rinse the head to prevent small pieces of chips from entering the mechanism - this can significantly reduce the collet's service life.
- Ensure that the main spindle and counter-spindle rotate in perfect synchronisation.
- Wiforce collet hardened blank nose requires machine finishing in place on the counter spindle. We recommend using the insert TiAlN coating or equivalent with high cutting speed of 60m/min and machining of 0.01 per lap.

WIFORCE COLLET PARTS DIAGRAM

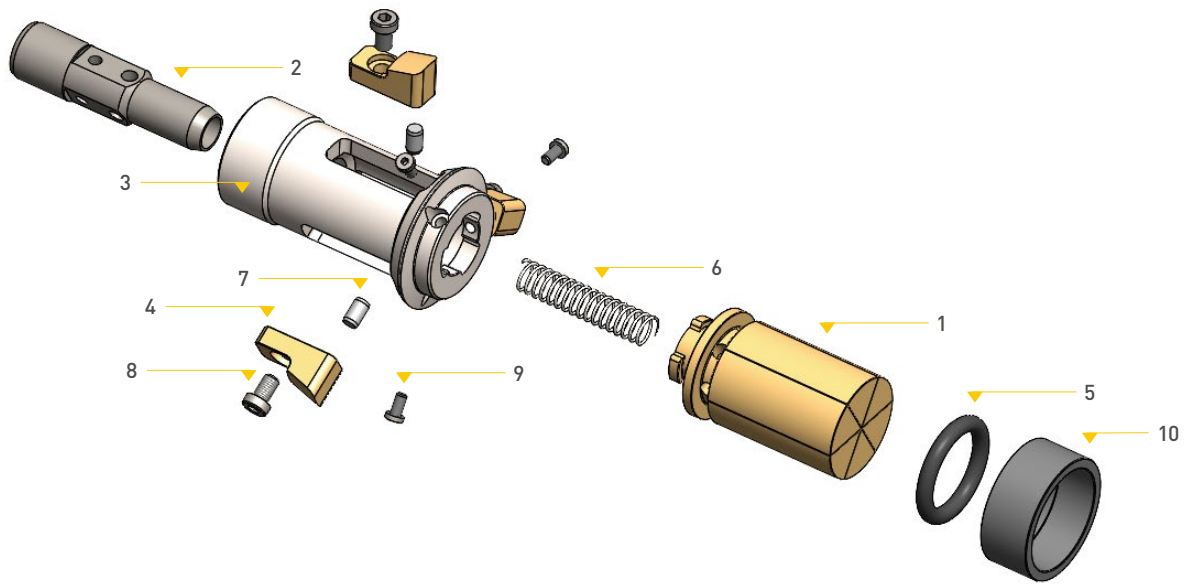


FIGURE 1

1 INTERCHANGEABLE HEAD	1 pc	6 SPRING	1 pc
2 PUSH ROD	1 pc	7 KEY POSITIONING PIN	3 pcs
3 BODY	1 pc	8 KEY RETAINING SCREW	3 pcs
4 KEY	3 pcs	9 HEAD RETAINING SCREW	3 pcs
5 O-RING	1 pc	10 LIMITATION RING	1 pc

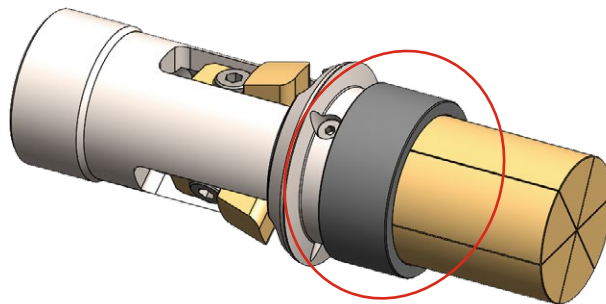


FIGURE 2

► SOFT HEAD PREPARATION – 2 METHODS ARE AVAILABLE

A | Pre-cutting on the machine

- Machine the jaws to the desired length directly on the machine.
- Maximum material removal: **0.5 mm** diameter and **0.5 mm** length.

B | Pre-cutting off machine

- Remove the jaws from the WIFEX body by unscrewing the **6 jaws retaining screws**
- Pre-cut the jaws to length using a saw or milling machine.
- Reinstall the jaws in the correct sequence (1–2–3) before machining.

ASSEMBLY INSTRUCTIONS

	SOFT HEAD BLANK	HARDENED HEAD BLANK	HARDENED FINISHED HEAD
1	Reduce the machine's clamping force (set the clamping pressure to minimum)		
2	Clean the sleeve and put the Wiforce collet		
3	Make sure that the manual adjustment lever is in the "open" position		
4	Screw the nut on the sub spindle nose		
5	Put the limitation ring (<i>see figure 2</i>) on the Wiforce head		Put the part on the Wiforce head
6	Adjust the machine's clamping force (<i>The limiting ring or the part fitted in step 5 will act as a stop</i>)		
7	Machine the jaws to the correct clamping diameter. Do not add or remove any extra thickness. <i>Exemple: for a clamping diameter of 12.50 mm, machine the head to 12.50 mm</i>		
8	Loosen the collet		
9	Remove the limitation ring		Remove the part
10	The collet is ready to use		

EJECTION OF PARTS

WIBEMO recommends using the fork to eject the part properly. This is the only way to guarantee to 100% the good ejection to avoid risk of collision when loading the next part.

- | | |
|--------------------|------|
| 1 ROD | 1 pc |
| 2 EJECTION PLATE | 1 pc |
| 3 SCREW | 1 pc |

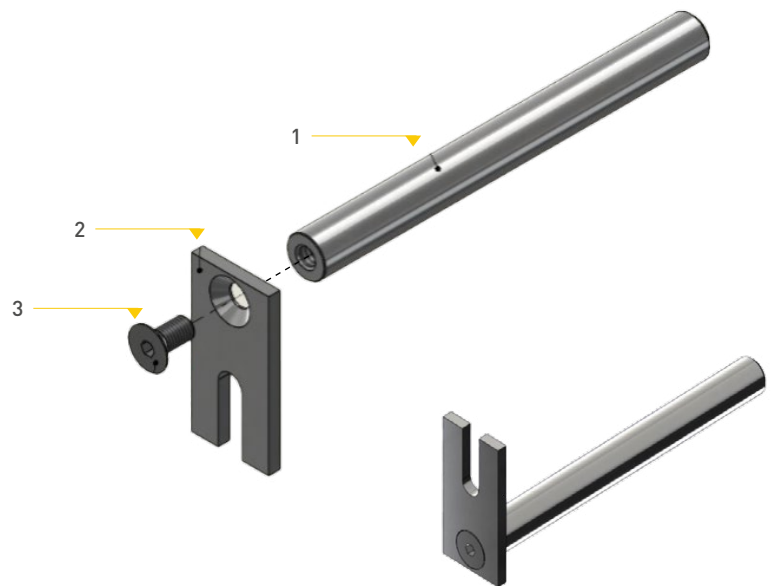


FIGURE 3

► FORK INSTALLATION AND USE

- 1 | Install the fork in a drilling position on the back spindle turret.
- 2 | Adjust the angular position of the fork insert to fit behind the workpiece (see Figure 4).
- 3 | Set X and Z references.
- 4 | Add the following code lines at the end of the machining process:
 - A | Position the fork behind the workpiece
 - B | Loosen the collet
 - C | Extract the workpiece out of the head using the fork

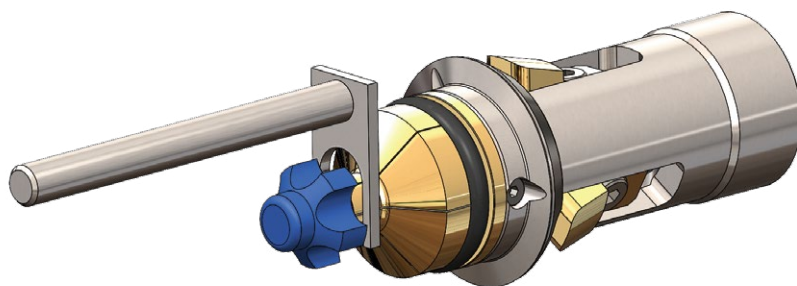


FIGURE 4

