

| TECHNICAL MANUAL |

WIFEX™ COLLET

PATENDED COLLET
FOR INTERNAL CLAMPING



GENERAL INFORMATION

The WIFEX collet (Push Type F) is designed for internal clamping of workpieces. It consists of two main components: Body + set of 3 jaws.

3 types of jaws are available:

- A | Soft jaws (blank), requiring pre-operation and machine finishing
- B | Hardened jaws (blank), requiring finishing on the machine
- C | Hardened finished jaws, fully machined and ready for immediate 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 RECOMMENDATIONS

- The work piece must be pressed firmly against the jaws 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 jaws – 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 jaws 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.
- Wifex 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.

WIFEX COLLET PARTS DIAGRAM

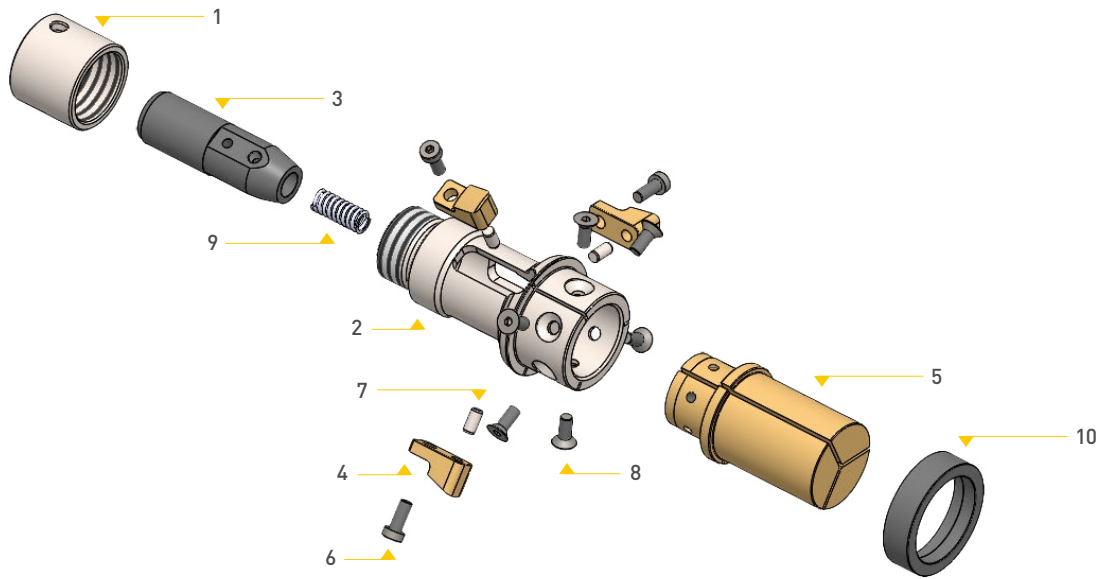


FIGURE 1

1 NUT	1 pc	6 KEY RETAINING SCREW	3 pcs
2 BODY	1 pc	7 KEY POSITIONING PIN	3 pcs
3 PUSHROD	1 pc	8 JAWS RETAINING SCREW	6 pcs
4 KEY	3 pcs	9 SPRING	1 pc
5 INTERCHANGEABLE JAWS	1 pc	10 LIMITING RING	1 pc

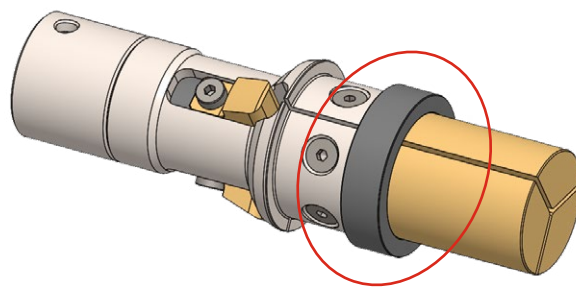


FIGURE 2

► SOFT JAWS 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 JAWS BLANK	HARDENED JAWS BLANK	HARDENED FINISHED JAWS
1	Reduce the machine clamping pressure (<i>set the clamping pressure to minimum</i>)		
2	Clean the spindle sleeve and install the Wifex collet		
3	Ensure the manual adjustment lever is in the “Open” position		
4	Screw the nut onto the sub-spindle nose		
5	Install the limitation ring (<i>see figure 2</i>) on the Wifex jawse		Mount the part onto the Wifex jaws
6	Adjust the machine’s clamping pressure (<i>The limitation ring or part acts as the clamping stop</i>)		
7	Machine the jaws to the correct clamping diameter. Do not add or remove extra thickness. <i>Example: for a clamping diameter of 12.50 mm, machine the jaws to 12.50 mm.</i>		
8	Loosen the collet		
9	Remove the limitation ring		Remove the part
10	The collet is now ready for 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.

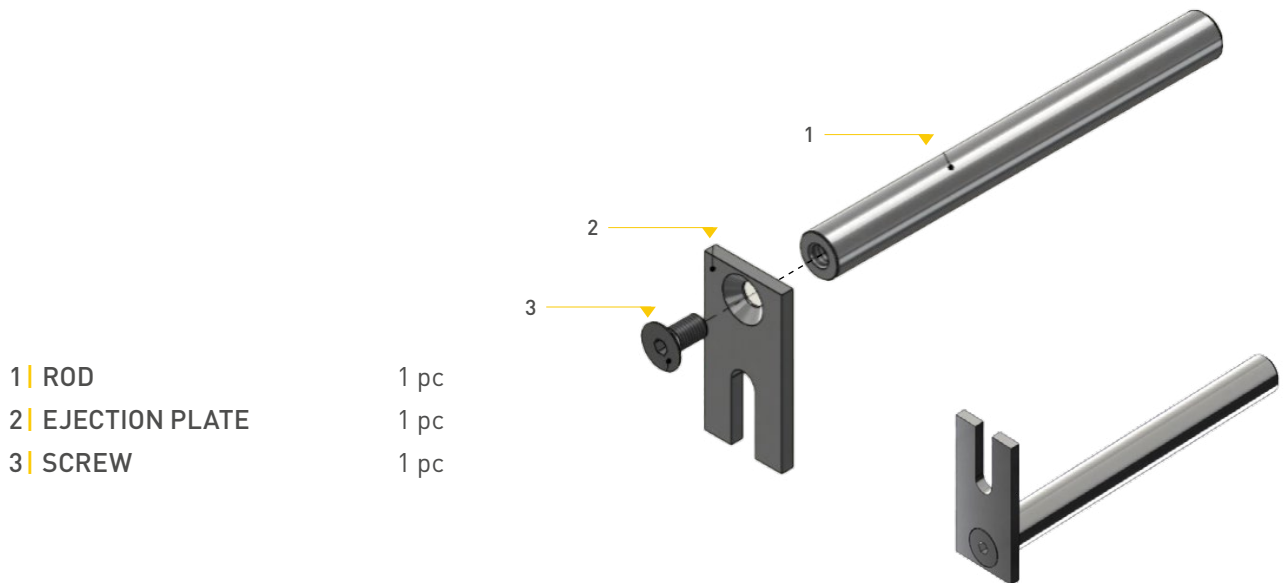


FIGURE 3

► 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 jaws using the fork

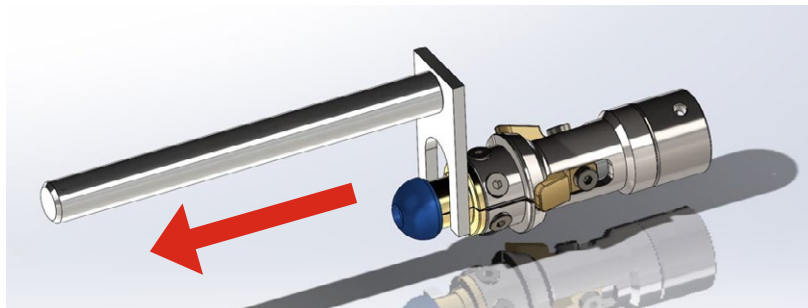


FIGURE 4

