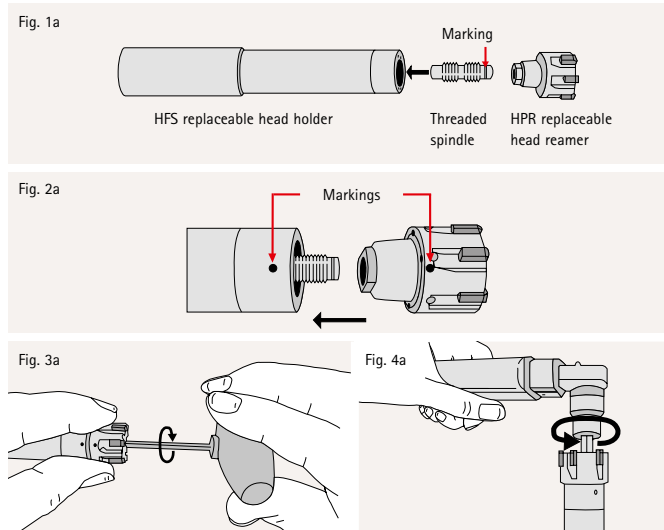


Handling notes for HFS® system

MAPAL HFS® system with axial clamping



Cleaning

Clean all individual parts and make sure that the internal and external taper as well as the face surface on the HFS taper are free of foreign bodies (e.g. chips). To clean the internal taper we recommend the special taper wiper (see Accessories page 324).

Clamping

1. Fit the end of the threaded spindle without marking into the HFS replaceable head holder, without screwing in the threaded spindle (see Fig. 1a).
2. Fit the HPR replaceable head reamer to the threaded spindle. During this process align the markings on the HPR replaceable head reamer and the HFS replaceable head holder: "point to point" (see Fig. 2a). Then fit the HPR replaceable head reamer all the way into the HFS replaceable head holder and hold both parts firmly.
3. Screw together the HPR replaceable head reamer and the HFS replaceable head holder using a hex-wrench and tighten firmly. Make sure that the markings are aligned and the face surface is in contact (see Fig. 3a).
Note: HPR 100, 110, 150 are tightened through the reamer (direction of rotation clockwise). HPR 130, 131, 180 are tightened through the holder (direction of rotation counter-clockwise). The directions of rotation are stated on the holder.
4. **Note:** The HFS replaceable head holders are labelled with the necessary tightening torque. Tighten the HPR replaceable head reamer clockwise using a torque wrench (see Fig. 4a).

Undoing

1. **Note:** The direction of rotation on undoing the HPR replaceable head reamer is the opposite to the direction of rotation for the clamping process. To undo the HPR replaceable head reamer, turn the threaded spindle using a hex-wrench.
2. Remove the HPR replaceable head reamer.

Adjustment of the HPR replaceable head reamer with fine adjustment feature

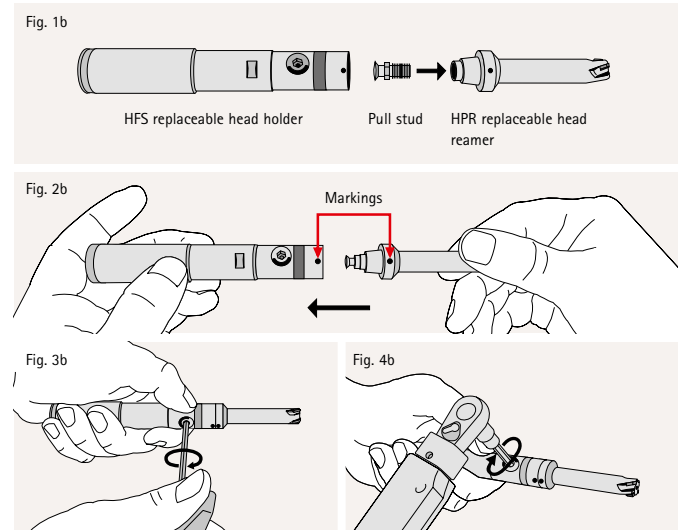
1. **Note:** The opposing pair of cutting edges in line with the round marking points on HFS replaceable head holders and HPR replaceable head reamers is used as the reference for the measurement and adjustment of the tool diameter. Fasten the HPR replaceable head reamer in the HFS replaceable head holder.
2. Set the required tool diameter using a precision pointer micrometer. Then place the precision micrometer on the reference cutting edges.
3. Place the TORX® wrench on the adjusting screw and turn clockwise slowly. Set the HPR replaceable head reamer to the required dimension.



On HPR variants with adjusting system please note:

On finely adjustable HPR replaceable head reamers up to \varnothing 30 mm and HFS size 12 up to 20, it is only possible to clamp the HPR replaceable head reamer radially. From \varnothing 30 mm and HFS size 24 the HPR replaceable head reamer can also be clamped via the threaded spindle.

MAPAL HFS® system with radial clamping



Clamping

1. Screw the threaded end of the pull stud into the HPR replaceable head reamer using the left-hand thread (see Fig. 1b).
2. Fit the HPR replaceable head reamer all the way into the HFS replaceable head holder. During this process align the markings on the HPR replaceable head reamer and the HFS replaceable head holder: "point to point" (see Fig. 2b). Then hold both parts firmly.
3. Turn the clamping stud clockwise using a hex-wrench (see Fig. 3b). The direction of rotation is stated on the HFS replaceable head holder.
4. **Note:** The HFS replaceable head holders are labelled with the necessary tightening torque. Tighten the HPR replaceable head reamer clockwise using a torque wrench (see Fig. 4b).

Connection size HFS	Tightening torque [Nm]	
	axial	radial
10	4	-
12	6	7
14	6	7
16	15	12
20	15	12
24	20	-

Undoing

1. To undo the reamer turn the clamping stud counter-clockwise to the stop using a hex-wrench.
→ The HPR replaceable head reamer is ejected and can be removed.