

Notes on setting and handling KS flange adapter

1. Assembling and aligning the KS flange adapter with radial alignment



1. Clean taper and face surfaces on the flange adapter and adapter.



4. Insert test arbor or tool and fasten using clamping screw.



2. Insert flange adapter. Tighten fastening screws to 50 % of the tightening torque stated (see table).



5. Place dial gauge in contact at the position for the radial run-out check. On MAPAL tools it is also possible to use the HSK collar for alignment. Take highest measuring point and set dial gauge to "zero".



3. Clean taper and face surface on test arbor or tool.





6. Roughly align flange adapter (approx. 0.01 mm).
Relieve adjusting screws again after each actuation.



7. Set radial run-out using adjusting screws.
Again relieve the adjusting screws after each actuation. Repeat process until radial run-out error is $< 3 \mu\text{m}$.

8. Tighten fastening screws diagonally and bring up to tightening torque (see table). After reaching the full tightening torque, check radial alignment again and correct if necessary. Place adjusting screws in light contact.

The radial alignment can also be undertaken using measuring probes. For this purpose the feeler is placed in contact with the taper on the flange adapter.

Tightening torques

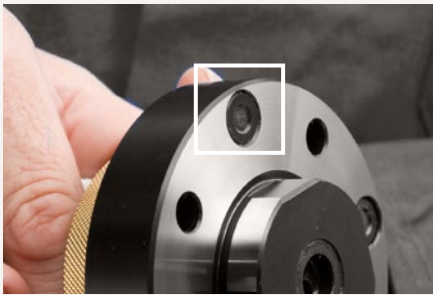
Nominal size	Module diameter [mm]	Fastening screw	Tightening torque [Nm]
HSK32	60	ISO 4762 – M5x16 – 12.9	8,7
HSK40	70	ISO 4762 – M6x20 – 12.9	15
HSK50	80	ISO 4762 – M6x20 – 12.9	15
HSK63	100	ISO 4762 – M8x25 – 12.9	36
HSK80	117	ISO 4762 – M8x25 – 12.9	36
HSK100	140	ISO 4762 – M10x30 – 12.9	72

The basis for the maximum tightening torque of the cylinder head screws in accordance with DIN 912 is the general DIN standard for strength class 10.9.

MAPAL only uses cylinder head screws in accordance with ISO 4762 with the property class 12.9.

Notes on setting and handling KS flange adapter

2. Assembling and aligning KS flange adapters and MAPAL Module adapters with radial and angular alignment



1. Clean face surfaces on flange adapter and adapter. Ensure that the face surface on the alignment screw does not protrude beyond the face surface in the flange adapter.



2. Insert flange adapter.
Place fastening screws in contact.



3. Clean taper and face surface on the test arbor very carefully. Insert test arbor or tool.



4. Place dial gauge in contact at the position for the radial run-out check. On MAPAL tools it is also possible to use the HSK collar for alignment. Take lowest measuring point and set dial gauge to "zero". Align radially.



5. For the angular alignment, the dial gauge is positioned at the upper point to be checked or approx. 100 mm from the connection. Align angularly using alignment screws. Do not relieve the alignment screws after actuation.

6. Once the angular alignment is set to $< 3 \mu\text{m}$, check again radial alignment at the position for the radial run-out check on the collar and correct if necessary. Should it be necessary to correct the radial alignment, then check the angular alignment again afterwards.