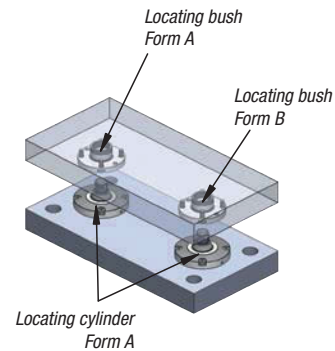


Pneumatic positioning and clamping system

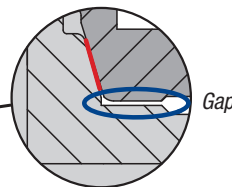
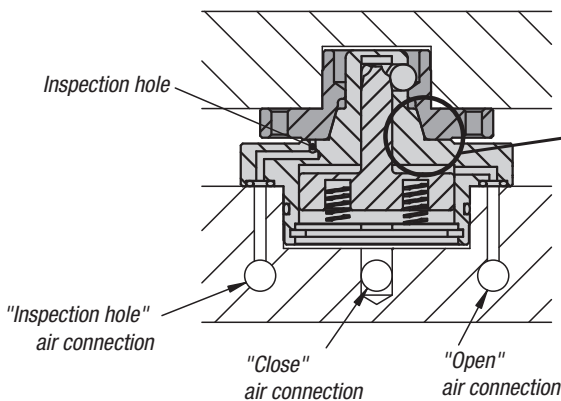
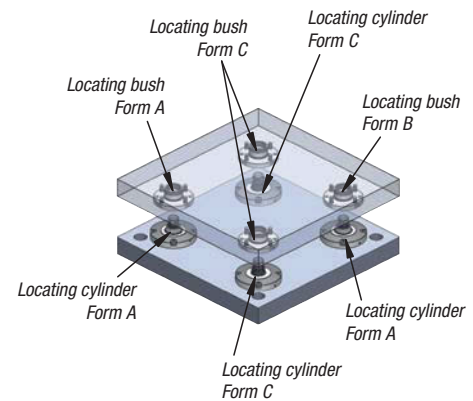
General information

1. The pneumatic positioning and clamping system allows precise positioning and fastening of tooling and base plates in seconds. The system consists of a locating cylinder and locating bush.
2. The locating cylinders are actuated pneumatically.
3. The positioning and clamping system is made ready for use in three easy steps:
Install two (or 4) locating cylinders in the machine table or baseplate. Likewise, the locating bushes with the interchangeable subplates are installed according to the specified dimensions.
To release the locating cylinder mechanism, introduce air into the opening circuit. As a result, the clamping balls move inwards. Insert the interchangeable subplate with the locating bushes and actuate the air valve for the closing circuit. No more air may now be in the opening circuit. The interchangeable subplate is thus positioned and clamped.
To open the mechanism, an air connection of at least 4.5 bar is required.
4. In the clamped state, the system must remain connected to the air of the „close“ connection. The air valve remains opened.
If the air pressure drops off, the locating cylinder still clamps with the reduced force of the clamping springs.
5. There are 2 system sizes to choose from.

Application example for 2x clamping station:

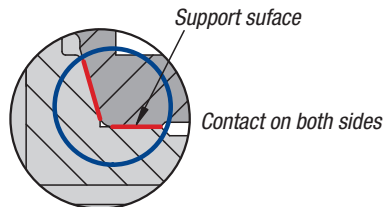


Application example for 4x clamping station:



Tension-free state:

Contact between Form A locating cylinder (cone) and Form A locating bush.
Gap in the contact face.



Clamped state:

Cone surfaces and contact faces have contact.

- If the air pressure suddenly drops off, the wedge mechanism and the springs of the locating cylinder prevent sudden dropping of the retaining force.

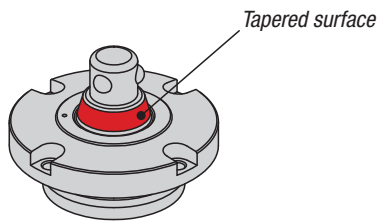
Retaining force of the locating cylinder when no air is connected (only retaining force of the springs):

- D1 = 70: ... 1.2 kN
- D1 = 85: ... 1.8 kN

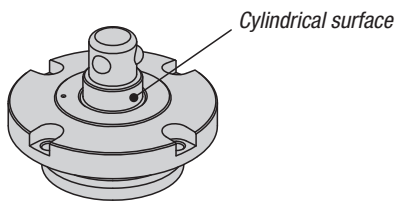
- The air connection for support control is used to check if the locating bush lies correctly on the locating cylinder.
- Repeat accuracy at 3 µm.

Pneumatic positioning and clamping system

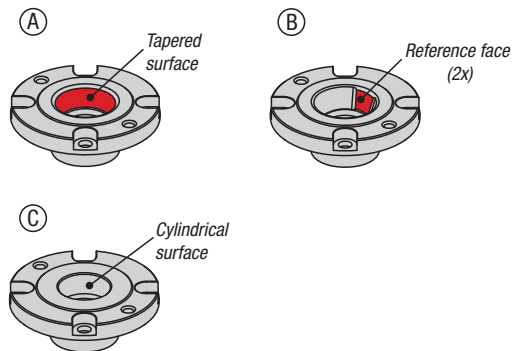
Function:



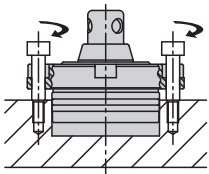
Positioning via tapered Form A locating cylinder



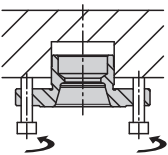
Clamping with cylindrical Form C locating cylinder



Disassembly of the locating cylinders:



Disassembly of the locating bushes:



Arrangement of the locating bushes:

Mount the Form A locating bush (centring) and the Form B locating bush (compensation) as in the following illustrations. Observe the installation angle of the Form B locating bush (compensation), as this differs for a 2x station and a 4x station.

