



## Coupling Elements without Coupling Stroke

### threaded-body type, ND 4, depressurised coupling, max. operating pressure 200 bar

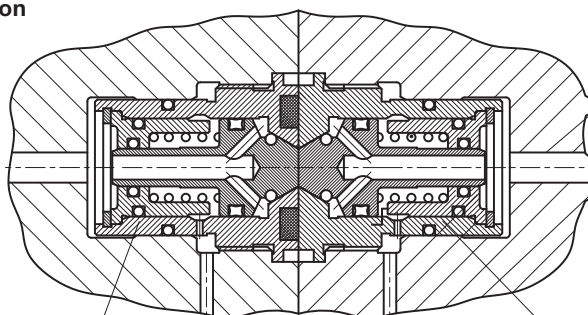


#### Advantages

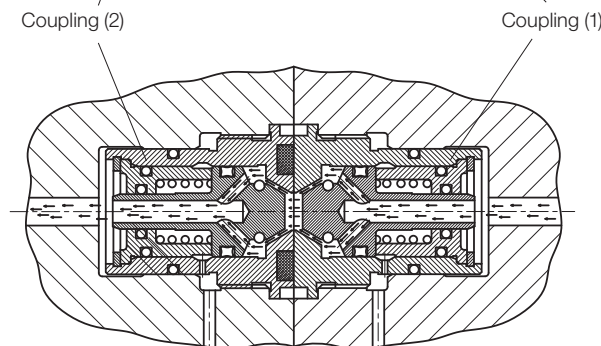
- Radial misalignment of 2 mm is possible
- No coupling stroke required
- No protruding contours
- Compact dimensions

#### Coupling situation

##### Closed



##### Opened



Fixture

Pressure generator side

#### Application

Coupling elements are used on machine tools with pallet changing systems in order to transmit hydraulic oil and compressed air from the machine tool table to the fixture.

#### Description

These automatically closing couplings have a flat surface and do not have protruding elements for sealing. Therefore exact positioning is not required and a radial positioning misalignment of up to 2 mm is admitted.

Cleaning of the coupling surfaces is easily possible due to the flat surfaces.

Because of the omitted active axial coupling stroke completely new solutions for the coupling motion can be realised.

#### Function

These patented couplings do not open their check valves as usual by mutual pushing open via the coupling stroke but due to the pressure increase in the hydraulic line.

The internal check valves (coupling ram) of both coupling elements are designed as pistons.

In depressurised mode they are maintained closed by a pressure spring. As soon as a pressure is built up in the line, which is higher than the force of the pressure spring, coupling (1) at the pressure generator side will be opened. Now the pressure is also available at the front face of the opposite coupling (2) and opens this coupling correspondingly. The line has free passage to the connected cylinder.

If the line will be relieved from pressure, the couplings close automatically as soon as the pressure drops below the closing pressure.

#### Coupling versions

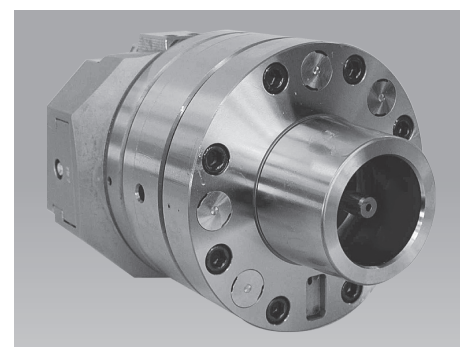
##### Version „S“

This coupling is equipped with a standard pressure spring. Therefore this version is particularly suitable for double-acting hydraulic cylinders (see minimum opening pressure and closing pressure).

##### Version „L“

This coupling is equipped with a pressure-reduced pressure spring. Thereby the minimum opening pressure and the closing pressure are reduced. This version is particularly suitable for single-acting cylinders as well as for pneumatic applications with some restrictions (pay attention to the minimum opening pressure and closing pressure).

#### Application example



Changing fixture with 6 couplings for the machining of turbine blades.

