**Coupling Units**
for manual operation, for single and double acting cylinders
max. operating pressure 400/500 bar

**Application**
This coupling unit is used if the clamping fixture is manually separated from the pressure generator, e.g. in flexible manufacturing systems or when using one pressure generator only for several clamping fixtures. It can be supplied with two different accumulators:

- **Size 1** for clamping fixtures with a big oil volume.
- **Size 2** for clamping fixtures with a small oil volume.

Important notes see page 2.

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**Coupling unit**
for single-acting cylinders, size 1

**Coupling unit**
for double-acting cylinders, size 2

**Multi-coupler**
Aluminium version

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**Accumulator as per data sheet F 9.601**

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- **Nominal volume** [cm³] 75 13 13
- **Gas-preload pressure** [bar] 100 100 160
- **Range of operating pressure** [bar] 110...500 110...400 175...500
- **Stored oil volume at max. operating pressure** [cm³] 59 9.75 8.8
- **Coupling unit for single-acting cylinders**
- **Coulpler “Push-Pull”** see F9.381
- **Dust cap for coupler**
- **Safety support for coupler (page 2)**
- **Coupling nipple (spare part)**
- **Dust cap for nipple (spare part)**
- **for double-acting cylinders**
- **Multi-coupler (aluminum)**
- **Dust cap for coupler**
- **Safety support for multi-coupler (page 2)**
- **Coupling nipple with DVV 6 bar (spare part)**
- **Coupler for multi-coupler (spare part)**

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Subject to change without prior notice
**Power Unit**

Oil supply can be made by means of a power unit as per data sheet D 8.0115. However, the versions for double-acting cylinders require another switch, which has to be connected instead of the normal hand switch according to the electric circuit diagram shown below.

**Control panel for double-acting cylinders**, with green signal lamp for “Clamped” and selector switch with 3 positions “unclamp-clamp-couple”.

**Operating sequence for unclamping/clamping**

**a) Single-acting cylinders**

Operating sequence for unclamping with coupling unit for single-acting cylinders:

1. Remove dust cap and clean coupling parts, if necessary.
2. Connect coupler of quick-disconnect coupling in depressurised mode.
3. Open high-pressure shut-off valve.
4. Set pressure generator to unclamping position.
5. Disconnect coupler of quick-disconnect coupling and put it into a safety support, if necessary.
6. Attach dust cap to coupling nipple and coupler.

**b) Double-acting cylinders**

Operating sequence for unclamping with coupling unit for double-acting cylinders:

1. Coupler of quick-disconnect coupling is coupled and high-pressure shut-off valve is opened.
2. Actuate power unit until pressure gauge shows required clamping pressure.
3. Shut high-pressure shut-off valve.
4. Set pressure generator to unclamping position.
5. Disconnect coupler of quick-disconnect coupling and put it into a safety support, if necessary.
6. Attach dust cap to coupling nipple and coupler.

**Safety elements**

1. The coupling units are equipped with a firmly adjusted pressure relief valve. This pressure relief valve is adjusted as a safety valve against overload of the pressure accumulator to an opening pressure of 500 bar.
2. All coupling nipples are provided with a pre-loaded valve, which limits a pressure increase in the nipple in uncoupled mode to a possible leakage of approx. 5 bar.
3. The coupling units for double-acting cylinders are provided with a pilot-controlled check valve. Thereby a higher operating safety is achieved. These coupling units can also be used for single-acting cylinders, however a power unit for double-acting cylinders has to be used as pressure generator.
4. With coupling units for double-acting cylinders a multi-coupler can be used a) to simplify the coupling motion, b) to prevent the exchange of the clamping and unclamping line.
5. The safety support is used as holder for coupler or multi-coupler after uncoupling has been made. The release signal of the integrated switch makes sure that the clamping fixture can only be moved, if the coupler or multi-coupler has been correctly removed from the clamping fixture.

**Important notes**

- Accessory
  - Subject to change without prior notice