# Filling unit, electrically operated, Series AS5-SSU

- adjustable filling time
- Compressed air connection G 3/4 G 1
- Pipe connection
- ATEX optional

| | |
|---|---|
| Type | Poppet valve, Can be assembled into blocks |
| Parts | Filling valve, 3/2-directional valve, electrically operated |
| Nominal flow | 8750 l/min |
| Nominal flow 1 ▸ 2 | 8750 l/min |
| Nominal flow 2 ▸ 3 | 3700 l/min |
| Working pressure min./max. | 2,5 ... 10 bar |
| Medium | Compressed air Neutral gases |
| Medium temperature min./max. | -10 ... 50 °C |
| Ambient temperature min./max. | -10 ... 50 °C |
| Pilot | Internal |
| Sealing principle | Soft sealing |
| Max. particle size | 25 µm |
| Protection class acc. to DIN EN 61140 with plug | IP65 |
| Protection class acc. to DIN EN 61140 Without valve plug connector | See table below |
| Duty cycle | 100 % |
| Weight | See table below |

# Technical data

| Part No. | | | Compressed air connection input | Compressed air connection output | Exhaust |
|---|---|---|---|---|---|
| R412009277 |  | — | G 3/4 | G 3/4 | G 1/2 |
| R412009282 |  | — | G 1 | G 1 | G 1/2 |
| R412009287 |  | — | G 1 | G 1 | G 1/2 |
| R412009278 |  |  | G 3/4 | G 3/4 | G 1/2 |
| R412009280 |  |  | G 3/4 | G 3/4 | G 1/2 |
| R412009378 |  |  | G 1 | G 1 | G 1/2 |
| R412009283 |  |  | G 1 | G 1 | G 1/2 |
| R412009285 |  |  | G 1 | G 1 | G 1/2 |

| Part No. | Operational voltage | Operational voltage | Operational voltage |
|---|---|---|---|
| | DC | AC 50 Hz | AC 60 Hz |
| R412009277 | - | - | - |
| R412009282 | - | - | - |
| R412009287 | - | - | - |
| R412009278 | 24 V | - | - |
| R412009280 | - | 220 V | 230 V |
| R412009378 | 24 V | - | - |
| R412009283 | 24 V | - | - |
| R412009285 | - | 220 V | 230 V |

| Part No. | Power consumption | Holding power | Holding power | Switch-on power |
|---|---|---|---|---|
| | DC | AC 50 Hz | AC 60 Hz | AC 50 Hz |
| R412009277 | - | - | - | - |
| R412009282 | - | - | - | - |
| R412009287 | - | - | - | - |
| R412009278 | 2 W | - | - | - |
| R412009280 | - | 1,6 VA | 1,4 VA | 2,2 VA |
| R412009378 | 2 W | - | - | - |
| R412009283 | 2 W | - | - | - |
| R412009285 | - | 1,6 VA | 1,4 VA | 2,2 VA |

| Part No. | Switch-on power | Electrical connection | Connector standard |
|---|---|---|---|
| | AC 60 Hz | Pilot valve | |
| R412009277 | - | - | - |
| R412009282 | - | - | - |
| R412009287 | - | - | - |
| R412009278 | - | Plug, EN 175301-803, form C | ISO 15217 |
| R412009280 | 1,6 VA | Plug, EN 175301-803, form C | ISO 15217 |
| R412009378 | - | Plug, M12x1 | - |
| R412009283 | - | Plug, EN 175301-803, form C | ISO 15217 |
| R412009285 | 1,6 VA | Plug, EN 175301-803, form C | ISO 15217 |

| Part No. | basic valve with electrical connector |
|---|---|
| R412009277 | Basic valve without pilot valve |
| R412009282 | Basic valve without pilot valve |

| Part No. | basic valve with electrical connector |
|---|---|
| R412009287 | Basic valve without pilot valve, with CNOMO subbase |
| R412009278 | Basic valve with pilot valve |
| R412009280 | Basic valve with pilot valve |
| R412009378 | Basic valve with pilot valve |
| R412009283 | Basic valve with pilot valve |
| R412009285 | Basic valve with pilot valve |

| Part No. | Reverse polarity protection | Weight | Fig. | |
|---|---|---|---|---|
| R412009277 | - | 0,889 kg | Fig. 1 | 1) |
| R412009282 | - | 0,889 kg | Fig. 1 | 1) |
| R412009287 | - | 0,895 kg | Fig. 2 | 1) |
| R412009278 | Protected against polarity reversal | 0,924 kg | Fig. 3 | - |
| R412009280 | Protected against polarity reversal | 0,924 kg | Fig. 3 | - |
| R412009378 | - | 0,9 kg | Fig. 4 | 2) |
| R412009283 | Protected against polarity reversal | 0,924 kg | Fig. 3 | - |
| R412009285 | Protected against polarity reversal | 0,924 kg | Fig. 3 | - |

Nominal flow Qn with secondary pressure p2 = 6 bar at Δp = 1 bar

1) Suitable for use in Ex zones 1, 2, 21, 22.

2) With adjustment screw lock

## Technical information

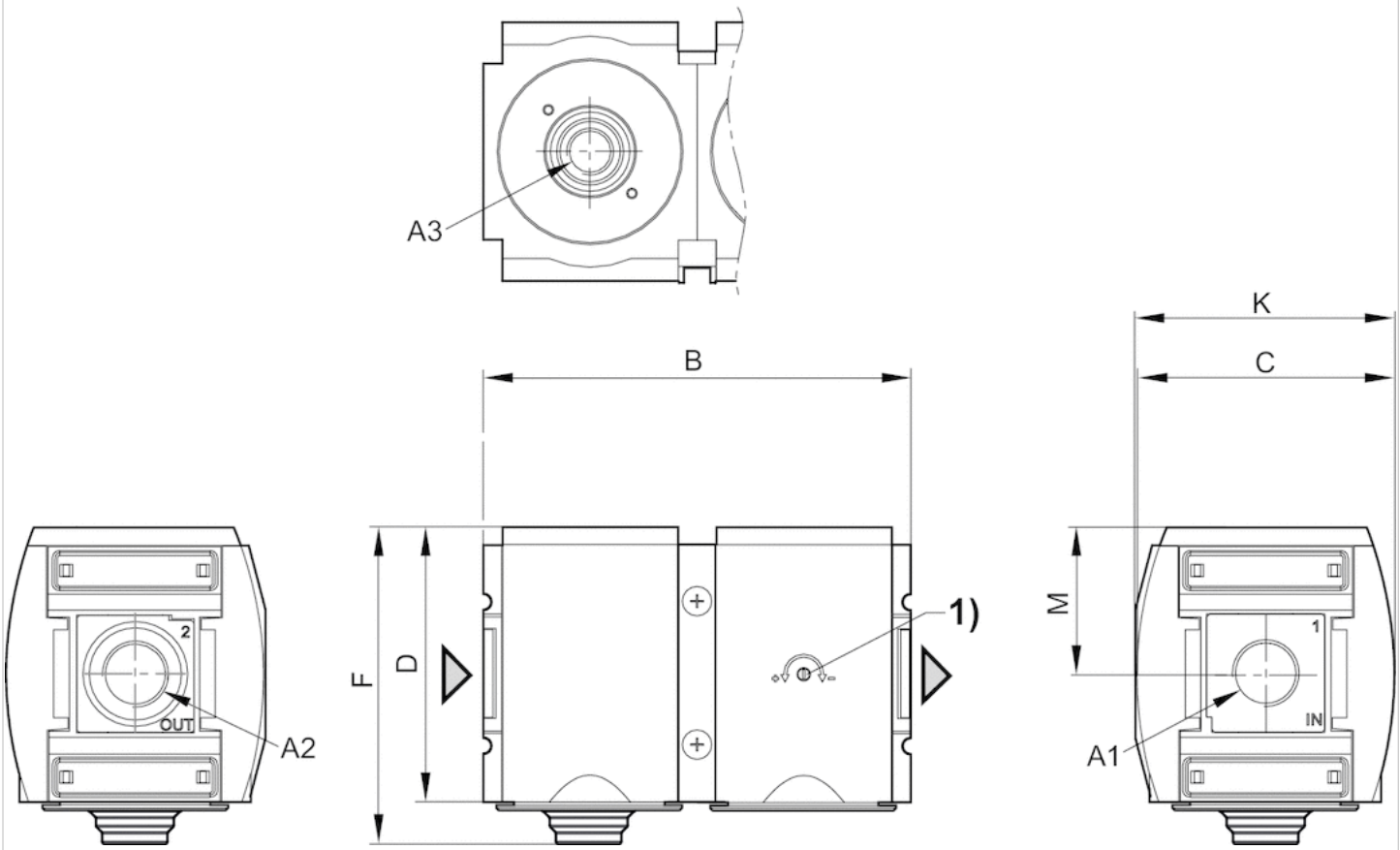
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
A change in the flow direction (from air supply on the left to air supply on the right) occurs by rotating installation by 180° about the vertical axis. Please see the operating instructions for further details.
ATEX optional: The ATEX ID depends on the selected pilot valve.
Do not position filling valves or filling units upstream of open consumers, such as nozzles, air barriers, air curtains, since these may prevent through connection of components.
The filling valve builds up pressure slowly in the pneumatic systems, i.e. prevents a sudden pressure build-up during a recommissioning after a mains pressure failure or avoids emergency OFF switching. This allows dangerous abrupt cylinder motions to be avoided.

## Technical information

| Material | |
|---|---|
| Housing | Polyamide |
| Front plate | Acrylonitrile butadiene styrene |
| Seals | Acrylonitrile butadiene rubber |
| Threaded bushing | Die cast zinc |

## Dimensions

### Fig. 1: Filling unit without pilot valve with porting configuration for series DO16



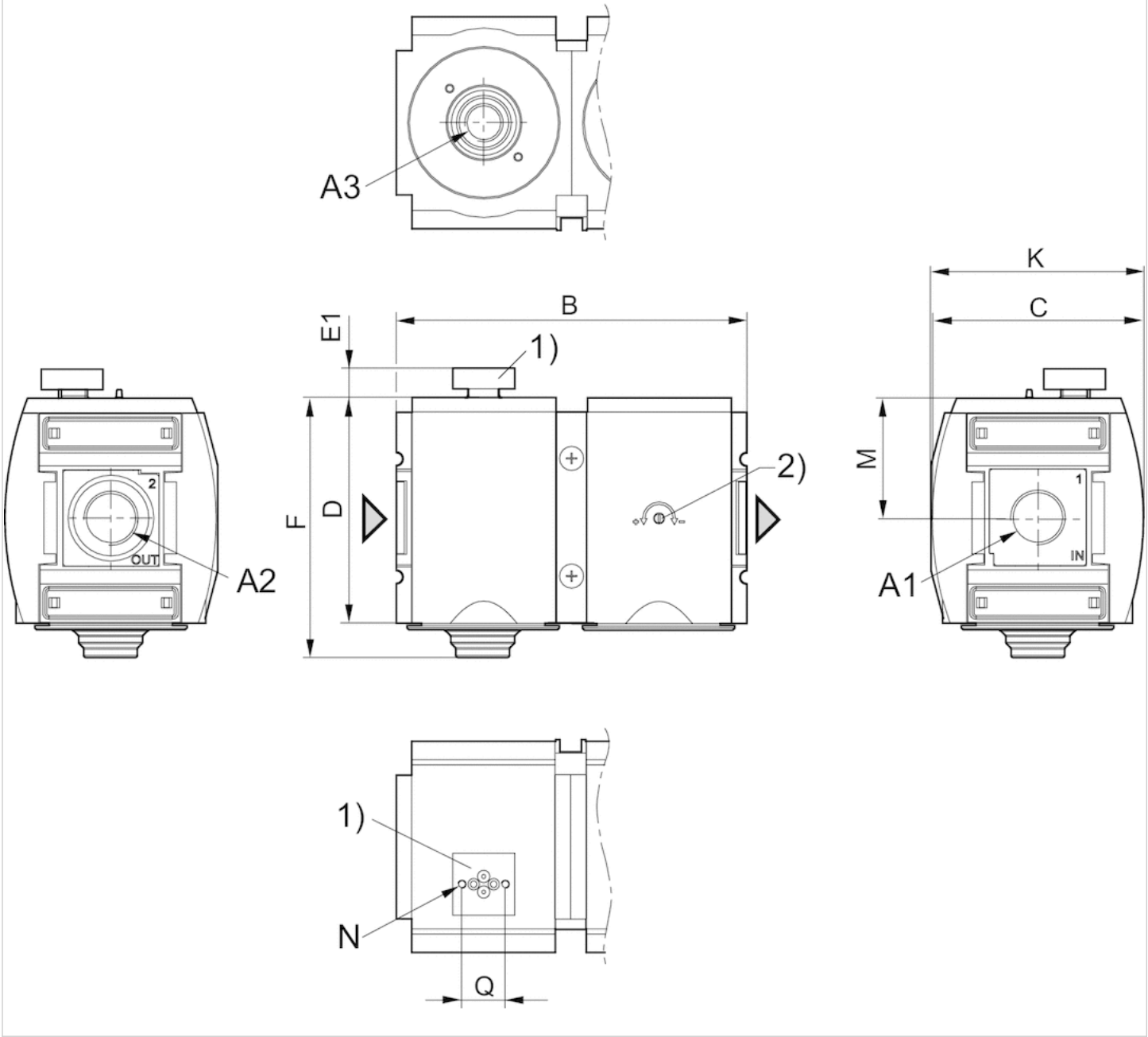

A1 = input
A2 = output
A3 = ventilation port
1) Adjustment screw for filling time

### Dimensions in mm

| A2 | A3 | B | C | D | F | K | M |
|---|---|---|---|---|---|---|---|
| G 3/4 | G 1/2 | 170 | 103 | 109 | 125 | 103.5 | 58 |
| G 1 | G 1/2 | 170 | 103 | 109 | 125 | 103.5 | 58 |

## Dimensions

### Fig. 2: Filling unit with transition plate for pilot valve series DO30



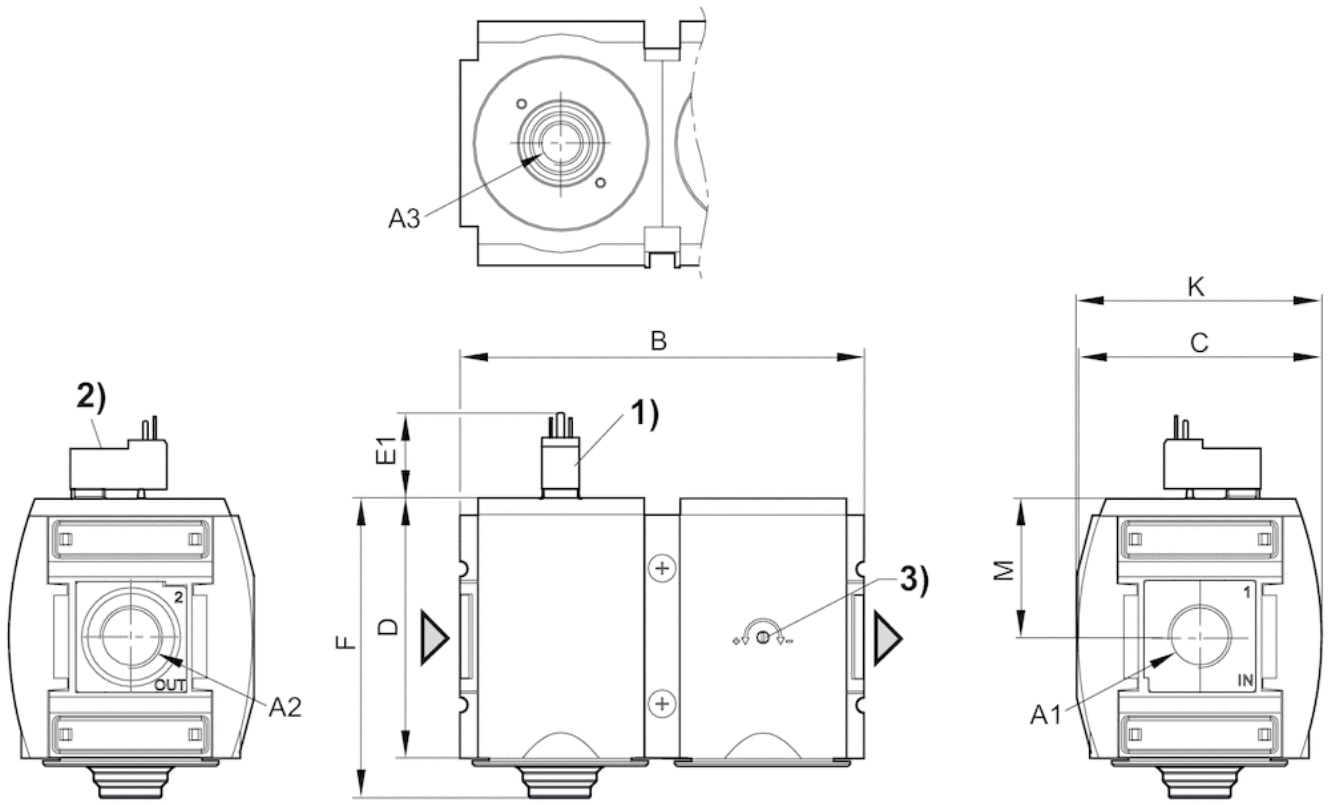

A1 = input
A2 = output
A3 = ventilation port
1) Transition plate with CNOMO porting configuration for pilot valve DO30
2) Adjustment screw for filling time

### Dimensions in mm

| A1 | A2 | A3 | B | C | D | E1 | F | K | M | N | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| G 1 | G 1 | G 1/2 | 170 | 103 | 109 | 14.2 | 125 | 103.5 | 58 | M4 | 21 |

## Dimensions

### Fig. 3: Filling unit with pilot valve and port for electrical connector form C



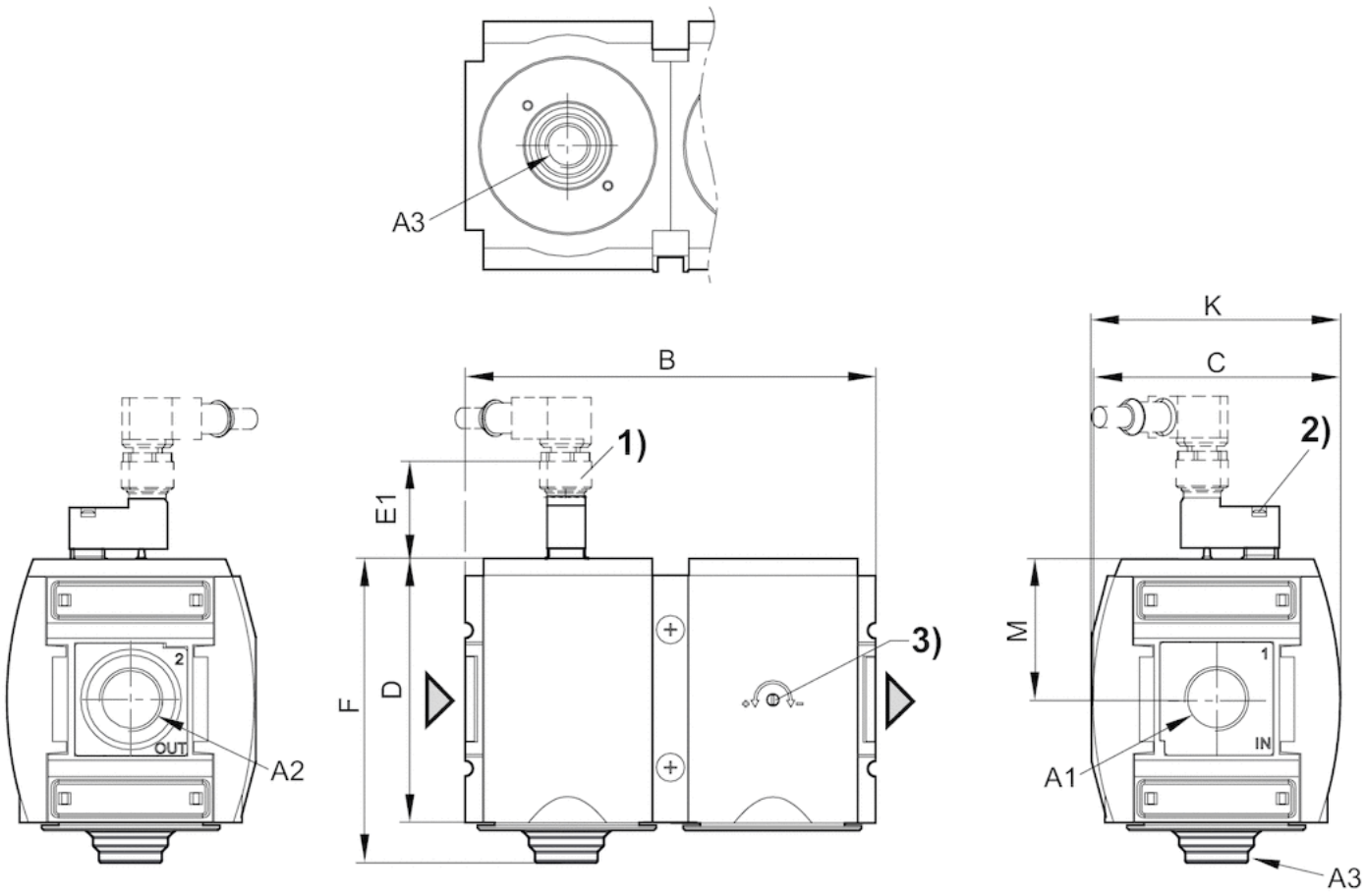

A1 = input
A2 = output
A3 = ventilation port
1) Connection for valve plug connector according to ISO 15217 (form C)
2) Manual override
3) Adjustment screw for filling time

### Dimensions in mm

| A1 | A2 | A3 | B | C | D | E1 | F | K | M |
|---|---|---|---|---|---|---|---|---|---|
| G 3/4 | G 3/4 | G 1/2 | 170 | 103 | 109 | 25.1 | 125 | 103.5 | 58 |
| G 1 | G 1 | G 1/2 | 170 | 103 | 109 | 25.1 | 125 | 103.5 | 58 |

## Dimensions

### Fig. 4: Filling unit with pilot valve, push-in fitting M12x1



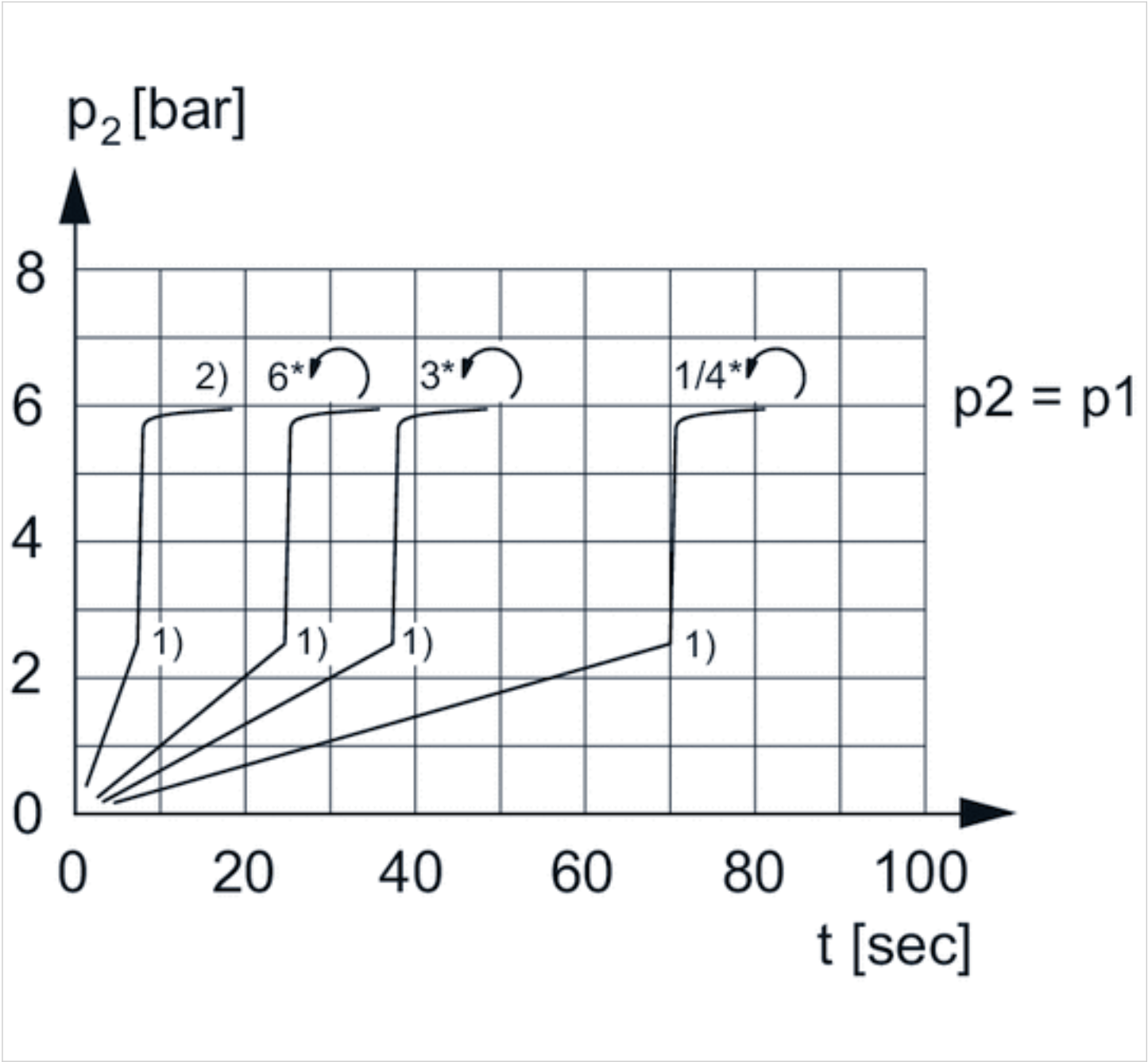

A1 = input
A2 = output
A3 = ventilation port
1) plug M12
2) Manual override
3) Adjustment screw for filling time

### Dimensions in mm

| A1 | A2 | A3 | B | C | D | E1 | F | M |
|---|---|---|---|---|---|---|---|---|
| G 1 | G 1 | G 1/2 | 170 | 103 | 109 | 39 | 125 | 58 |

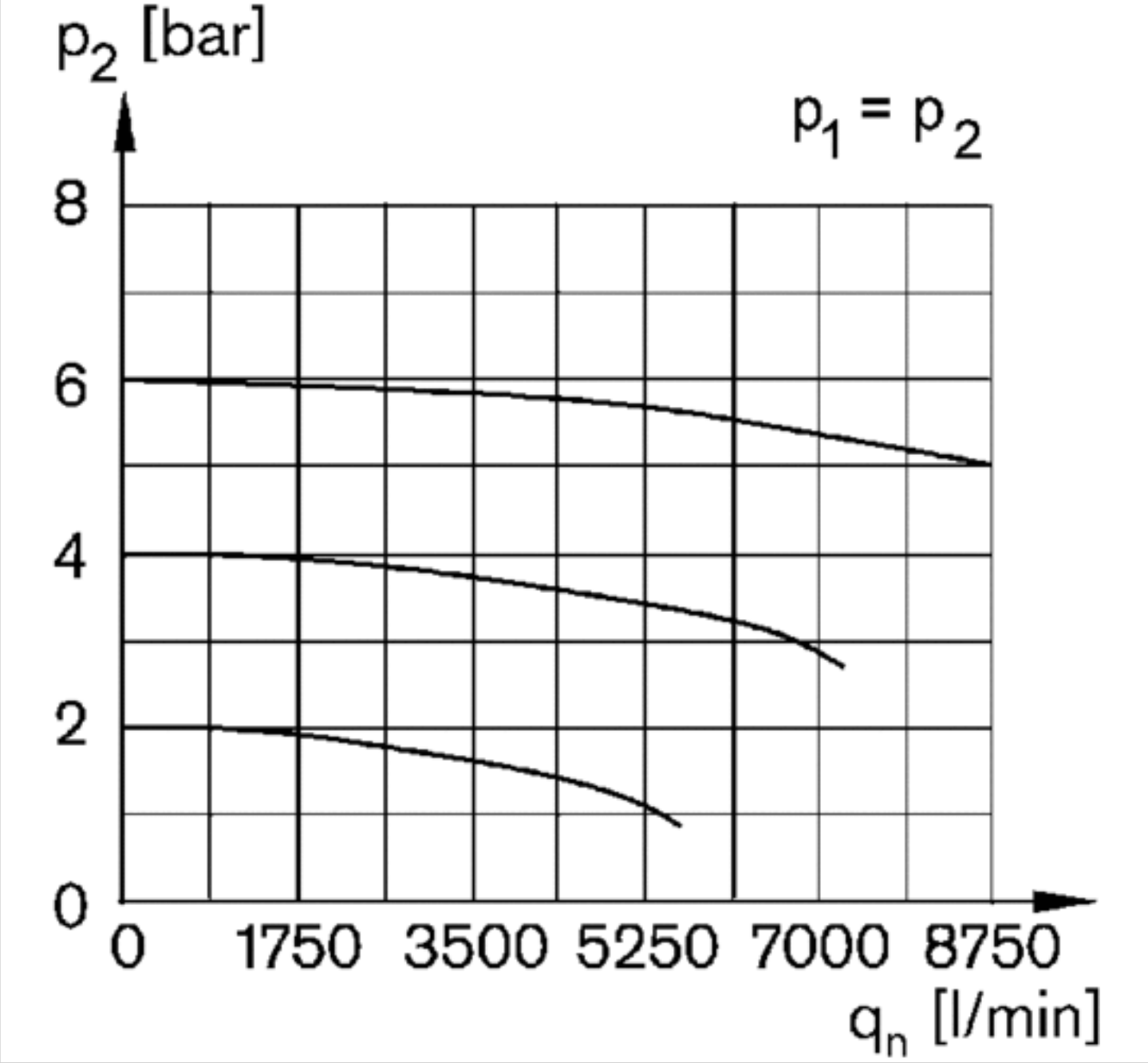
## Diagrams

### Secondary pressure while filling




p1 = working pressure
p2 = secondary pressure
t = filling time, adjustable via adjustment screw (throttle)
1) Switching point: adjustable filling time, fixed change-over pressure ≈ 0.5 x p1 (50%)
2) Throttle fully opened
* Adjustment screw rotations

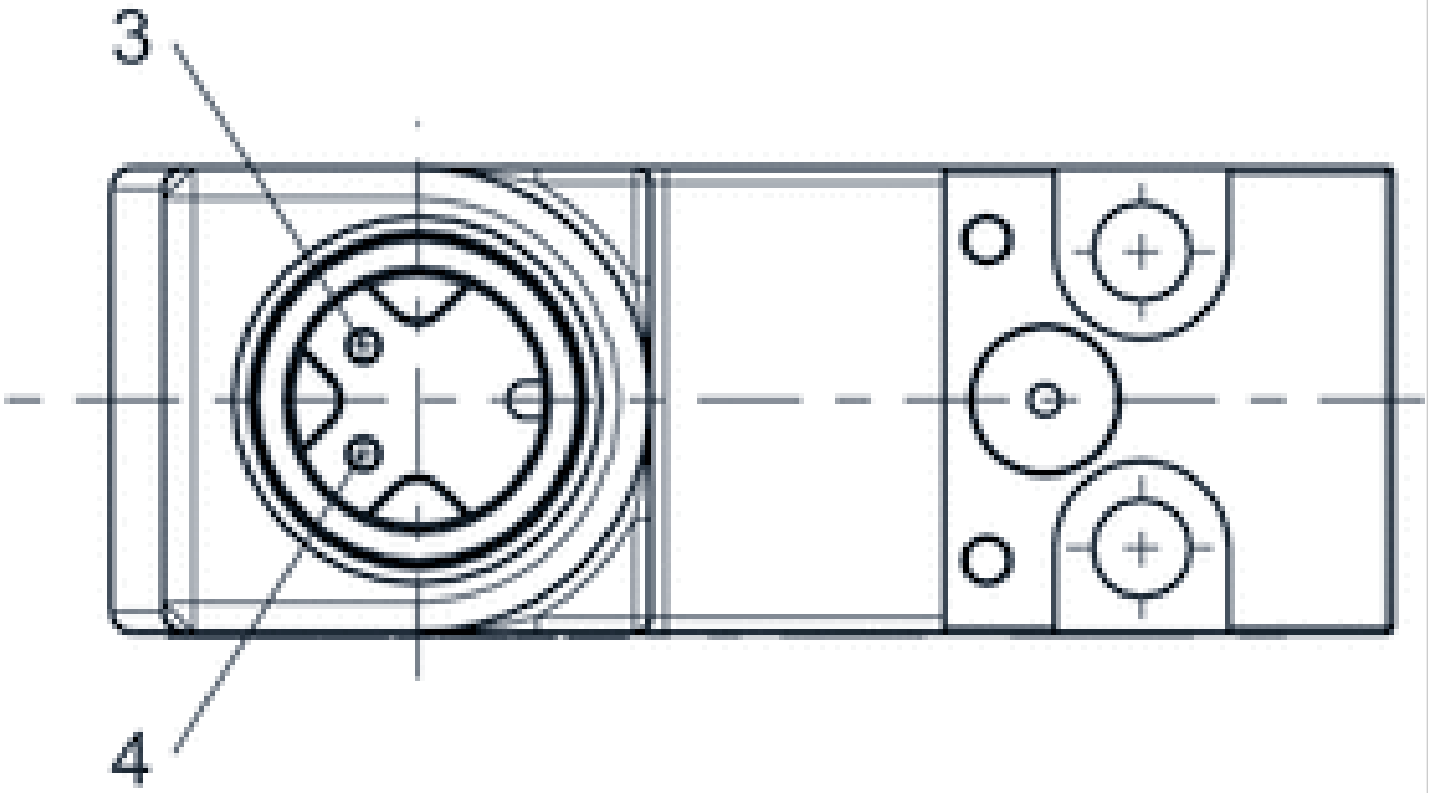
## Flow rate characteristic




p1 = Working pressure
p2 = Secondary pressure
qn = Nominal flow

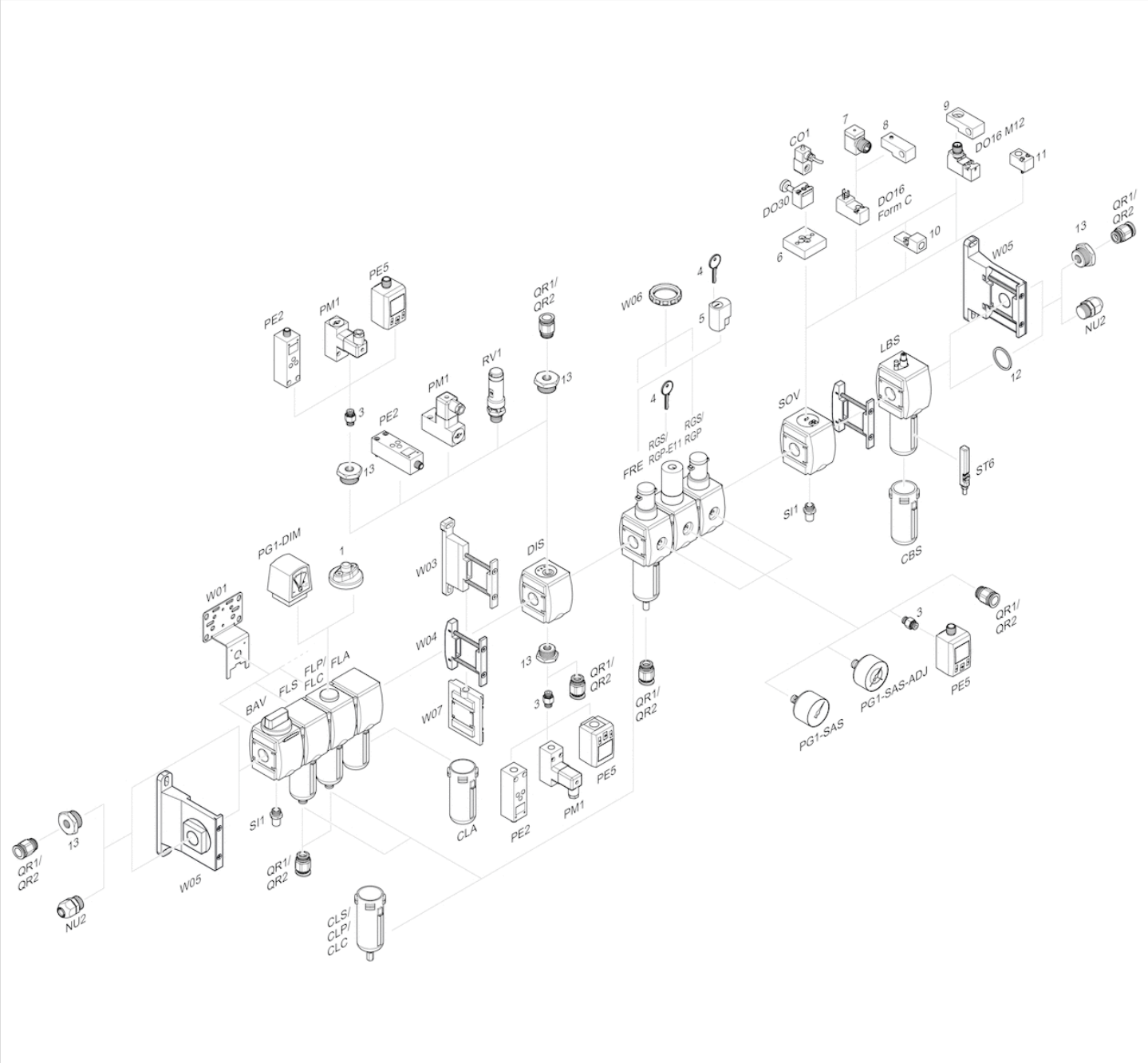
## Pin assignments

### Pin assignment M12x1



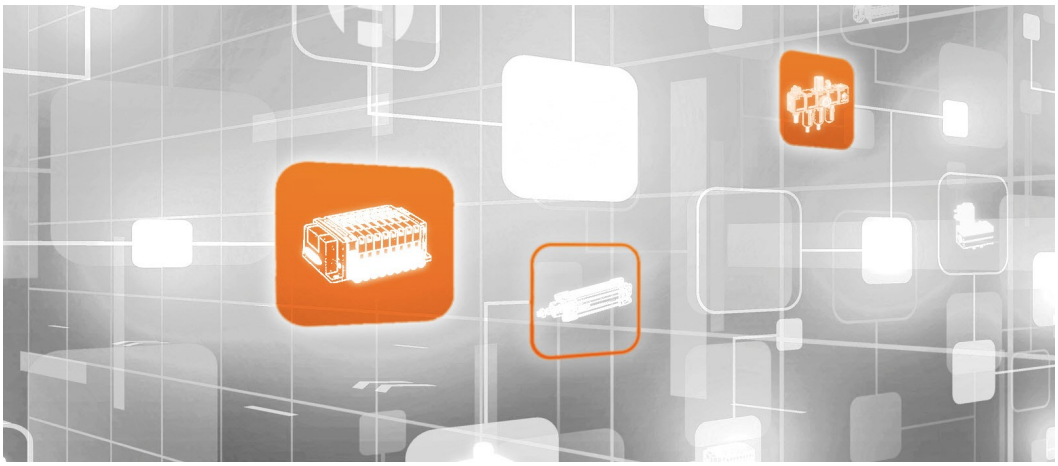

3: +/-
4: +/-

# Accessories overview




1 = contamination display
3 = Double nipple
4 = Key for E11 locking
5 = mortise lock
6 = Transition plate DO30
7 = Adapter, Series CON-VP
8 = Mounting aid DO16, form C
9 = Mounting aid DO16, M12
10 = Adapter for external pilot air
11 = Adapter pneumatic operation
12 = Sealing ring
13 = Reducing nipple

# Efficient pneumatic solutions, our program: cylinders and drives, valves and valve systems, air supply management



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