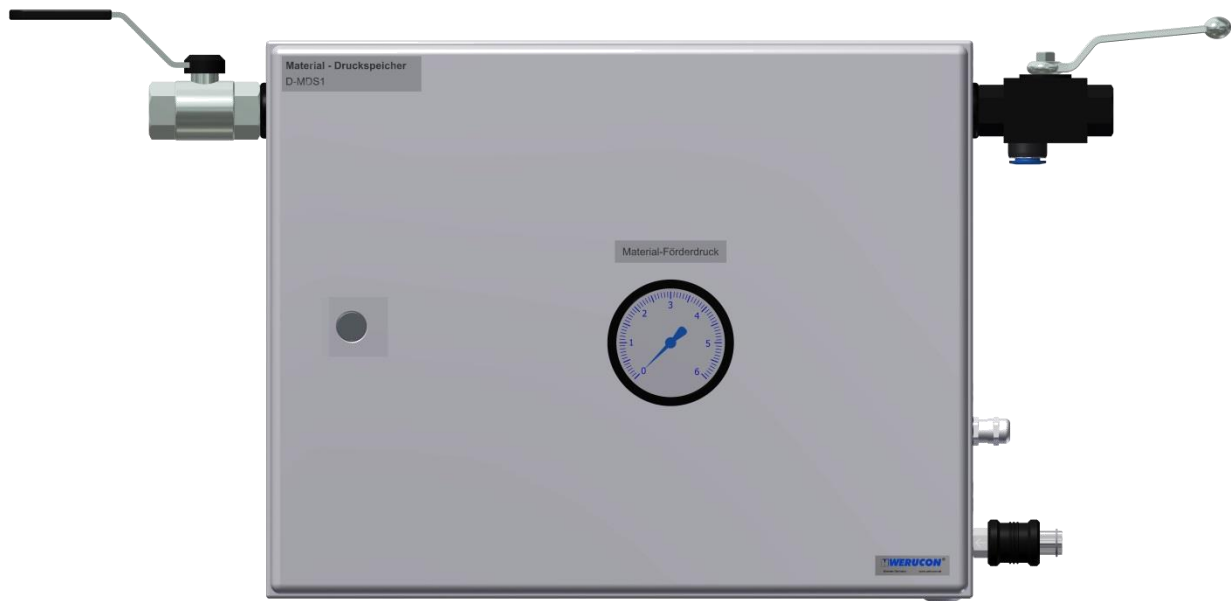


operator's manual material accumulator

Type: D-MDS1-01



1. Application:

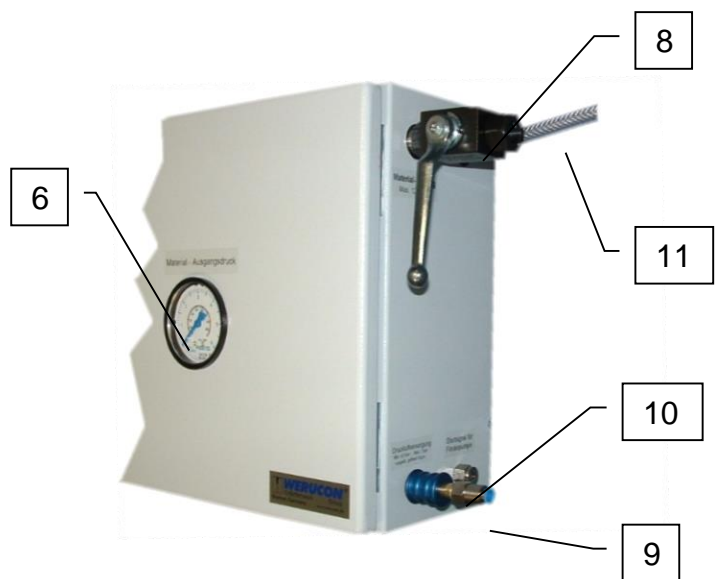
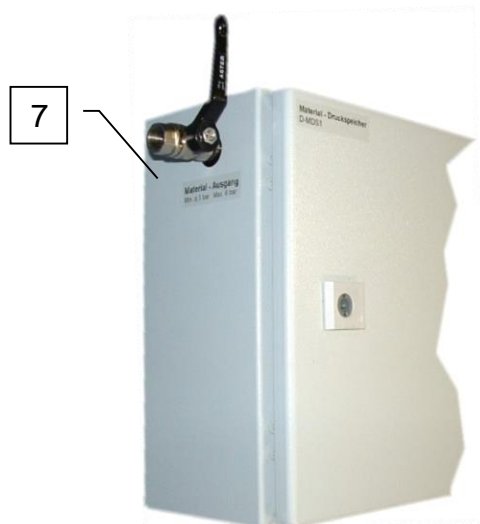
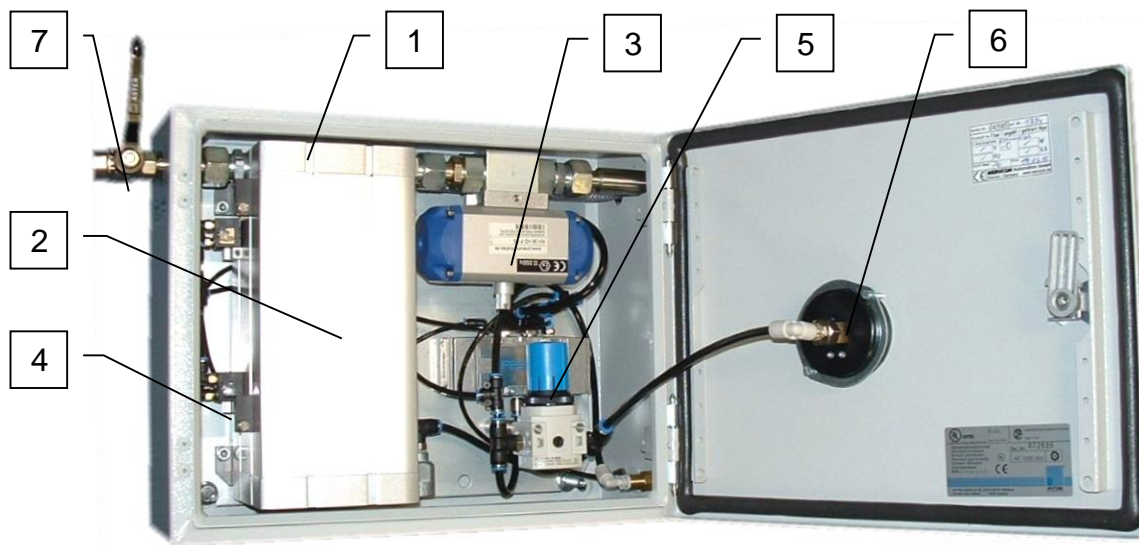
High viscosity liquids or pasty industrial lubricants are extracted from maker's casks at high and pulsing pressure by commercial supplying systems. Material pressure exceeding 100 bar can be found frequently. In general the maximum feeding pressure for a lot of dosing units is max. 8 bar depending on their design. Some materials (such as lubricants with solid content) can be damaged at high pressure influence (separation!).

The material accumulator D-MDS1-01 will be installed in front of the feeding of the dosing unit. The initial pressure will be kept precisely constant and pulsation free at a range to be adjusted between 0.1 and 7 bar. This progress does not depend on varying high input pressures.

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2. Technical description:



- | | |
|---|--|
| <p>1. housing, item No.: 6032
w=380; h=300, d=155mm,
powder coated steel plate RAL 7035 (light gray)</p> <p>2. accumulator (with separating piston), item No.: 6035
piston top side: material
piston bottom side: compressed air
volume: 1,1 l</p> <p>3. pneum. high pressure ball valve, item No.: 5993</p> <p>4. pneum. float switch, item No.: 0395</p> <p>5. precision pressure valve, item No.: 5793
0 - 6bar</p> <p>6. precision gauge, item No.: 2554
0 - 6bar</p> | <p>7. ball valve, item No.: 5786
material-outlet G 3/8"</p> <p>8. high pressure ball valve, item No.: 5785
max. feeding pressure: 120 bar
material-input G 3/8"</p> <p>9. manual valve, item No.: 3832
compressed air supply: oil-free and filtered 10µm
4,5 - 7bar
connecting hose: ø6x1</p> <p>10. pneumatic output (monostable)
signal for material supplying pump ON
4,5 - 7 bar
connecting hose: ø4x0,75</p> <p>11. safety outlet
discharge at P > 10 bar, G 3/8"</p> |
|---|--|

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3. Functional principle:

The material is pumped into the *material accumulator (2)* on top of the separation piston by means of an external supply pump. The bottom side of the piston is pressurized with compressed air via *precision pressure valve (5)*. During filling the adjusted compressed air and material output pressure is kept at a constant value by the *pressure valve (5)*. As soon as the *accumulator (2)* is filled completely (separating piston in bottom position) the *pneumatic high pressure ball valve (3)* will close the feeding of material automatically.

Furthermore a *pneumatic signal (10)* is active. This will enable the operator to shut down the external supplying pump.

When the *accumulator (2)* is almost empty (separating piston in top position) the feeding process will start again; material feed is automatically opened by the *pneumatic high pressure ball valve (3)*, the *pneumatic signal (10)* is active and the external feeding pump starts operation.

During feeding process the output material flow will keep active without any break.

4. Installation

- Mounting: The rear part the *housing (1)* has four drillings for M8-screws. Open the door of the *housing (1)* and insert the screws from inside the cabinet. Centred hole distance: 340 x 260 mm
- Installation: as shown
- Connect compressed air hose
- Deaerate the material hose of the supplying system (e.g. feeding pump) and let a skilled worker connect it to the *high pressure ball valve (8)*

Attention: Maximum feeding pressure = 120 bar!

5. Start-up / operation:

Initial operation (deaeration of pressure tank):

- Dosing unit has not been connected yet
- Material feeding pump and material hose are deaerated
- Apply compressed air. Open *manual valve (9)*
- Adjust *precision pressure valve (5)* to 6 bar
- Close *ball valve (7)*
- Open *high pressure ball valve (8)*, switch-on material feeding pump
- As soon as the *accumulator (2)* is filled completely, open *ball valve (7)* and dump approx. 1 l of the material into a separate container. The *accumulator (2)* shall be deaerated completely now
- Connect dosing unit

Adjust your custom designed output pressure at *precision pressure valve (5)*.

Readout will be realized at the *precision pressure gauge (6)* at the housing door.