

- Brief description:** Low pressure system for spraying low viscose substances in medium quantities.
- Main application range:** External MQL in simple metal-cutting operations. As a spray system in application of substances in not to small quantities. Depending on the substance and type of application, a suction is recommended.
- Operating principle:** In the Venturi nozzle ⑤, the spray air produces a partial vacuum, which causes the liquid to be sucked out of the unpressurized reservoir ④ and sprayed.
- Adjustability:** Spray air ③ quantity (manual), quantity of liquid ② (manual), spray air pressure ① (manual), switch on/off actuation (electric, pneumatic or manual)

## Technical Data:

|                       |                              | Nozzle VD07             | Nozzle VD15             |
|-----------------------|------------------------------|-------------------------|-------------------------|
| Operating pressure    | bar                          | 4 - 7                   | 4 - 7                   |
| Liquid throughput     | ml/h per nozzle              | 0 - 1.000 <sup>1)</sup> | 0 - 6.000 <sup>1)</sup> |
| Typical consumption   | ml/h per nozzle              | 30 - 50 <sup>1)</sup>   | 50 - 100 <sup>1)</sup>  |
| Lubricoolant          |                              | Lubrimax® and others    | Lubrimax® and others    |
| Recommended viscosity | mm <sup>2</sup> /s (at 40°C) | 1 - 25 <sup>1)</sup>    | 1 - 50 <sup>1)</sup>    |
| Max. suction height   | mm                           | 1.000 <sup>1)</sup>     | 3.000 <sup>1)</sup>     |
| Max. feed tube length | mm                           | 10.000 <sup>1)</sup>    | 20.000 <sup>1)</sup>    |

<sup>1)</sup> Partly application-specific, depending on operating pressure, medium used, tube length and suction height

Dimensions (HxWxD) of the standard version, depending on reservoir

|            |                 |
|------------|-----------------|
| S700/1-Y1W | 250 x 175 x 150 |
| S700/1-Y6W | 250 x 300 x 200 |
| S700/1-Y20 | 300 x 400 x 300 |
| S700/1-Y40 | 300 x 600 x 400 |

## System components:

### 1. Base / Base addition

- For each nozzle a **needle valve** to adjust **air spray** and one to adjust quantity of **liquid**.
- **Pressure reducing valve** for spray air to adjust spray jet (low pressure = coarse spray droplets; high pressure = fine spray droplets).
- Manometer (0 – 10 bar) on pressure reducing valve to indicate spray air pressure.
- **Ascending pipe** for liquid with non-return valve and liquid filter.

### 2. Reservoirs 1.0 to 40 litres available:

- Reservoir 1.0 litre PE (S700/1 only) with aluminium screw cap, ventilation plug and wall bracket (with 2 round magnets Ø57, on request).
- Reservoir 6.0 / 20 or 40 litre PP, with filler neck, screw plug, detachable sieve, automatic ventilation, hinged cover, visual fill level display on the outside. Can be supplied with float switch min or min+max (potential-free, either NC or NO). Wall bracket for reservoir 6.0 litre on request, with or without 4 round magnets Ø57.

### 3. Actuation electric, pneumatic or manual option:

- Solenoid valve 3/2 way (up to 4 nozzles 120 NI/min, over 4 nozzles 1300 NL/min) with auxiliary actuation (for occasional manual switching on/off). Coil with plug in 24VDC, 24VAC, 110VAC or 230VAC. In case of separate actuation each nozzle (group) controlled via a dedicated solenoid valve. Pneumatic valve 3/2 way (up to 4 nozzles 550 NI/min, over 1300 NL/min)
- Hand actuated ball valve (2/2 way).

**4. Feed tube**, coaxial, PUN Ø8 outer with internal PUN Ø3. Standard length: 1,000; non-standard length: see Technical Data. On request with outer metal protection sleeve.

### 5. Nozzle

- Venturi nozzle VD07 for lower capacity of up to 1l/h. Available in copper tube or multi link tube style, length 300. Nozzle tip full jet as standard or flat-jet. Different mounting options available.



Fig.: S700 with reservoir Y6



Fig. S700 with reservoir Y1W

# Spraymat® S700

- Venturi nozzle VD15 for higher capacity of up to 6 l/h. Available in copper tube or multi link tube style, length 300. Nozzle tip full jet. Different mounting options available.



Fig.: Multi link tube and copper tube style

## 6. Option

- Pneumatic drip shut-off system (per nozzle) in FPM. Required if the nozzle is inserted underneath (otherwise danger of subsequent dripping) or far above (otherwise increased reaction time) of the reservoir level.



Fig.: Detail showing nozzle tip VD15, VD07F and VD07

## Order codes:

|                         |   |   |
|-------------------------|---|---|
| <b>0. Base</b>          | S700  | Spray system with Venturi nozzle  |
| <b>1. Base addition</b> | /.....<br>/.....S...  | (state number of nozzles, e.g. „/4“)<br>(separate drive. All nozzles separately, e.g.: „/3S“ or in groups, e.g.: „/3S2+1“)  |
| <b>2. Reservoir</b>     | Y1W<br>Y1WR<br>Y6<br>Y6W<br>Y6WR<br>Y6...NC<br>Y6...NO<br>Y6...NCNC<br>Y20<br>Y20....<br>Y40<br>Y40....                             | 1.0-litre PE with wall bracket (S700/1 only)<br>... with 2 x round magnet Ø57<br>6.0-litre PP<br>... with wall bracket<br>... with wall bracket and 4 x round magnet Ø57<br>... with float switch min NC<br>... with float switch min NO<br>... with float switch min NC + max NC<br>20-litre PP<br>... with float switch variations as Y6<br>40-litre PP,<br>... with float switch variations as Y6  |
| <b>3. Actuation</b>     | e...V..<br>E...V..<br>pv3 (PV3)<br>H2   | electric, up to 4 nozzles (24VDC, 24VAC, 110VAC or 230VAC) actuation<br>electric, over 4 nozzles (24VDC, 24VAC, 110VAC or 230VAC) actuation<br>pneumatic actuation, up to 4 nozzles<br>hand actuation   |
| <b>4. Feed tube</b>     | ZP1000<br>ZP.....<br>ZPM.....   | feed tube, PUN Ø3 inner / PUN Ø8 outer, L=1,000<br>non-standard length, L=... (min. 500, in increments of 500)<br>feed tube as ZP, but with metal protection sleeve, length like ZP   |
| <b>5. Nozzle</b>        | VD07GLB<br>VD07GLBR<br>VD07GLF...<br>VD07KK<br>VD07KB<br>VD07KBR<br>VD07KF...<br>VD15GLB<br>VD15GLBR<br>VD15KK<br>VD15KB<br>VD15KBR | Venturi nozzle, full jet, multi link tube, L= 300, with connection block<br>... with round magnet Ø80<br>Venturi nozzle VD07GL like above, but flat-jet<br>Venturi nozzle, full jet, copper tube (L= 300) with 2 clamps<br>Venturi nozzle, full jet, copper tube (L= 300) with connection block<br>... with connection block and round magnet Ø80<br>Venturi nozzle VD07K like above, but flat-jet<br>Venturi nozzle, full jet, multi link tube, L= 300, with connection block<br>... with round magnet Ø80<br>Venturi nozzle, full jet, copper tube (L= 300) with 2 clamps<br>Venturi nozzle, full jet, copper tube (L= 300) with connection block<br>... with connection block and round magnet Ø80 |
| <b>6. Option</b>        | NpF   | pneumatic drip shut-off system, FPM   |

**Sample order code:** S700/3 - Y6WRNC - e24VDC - ZP1000 - VD07KBR - NpF

