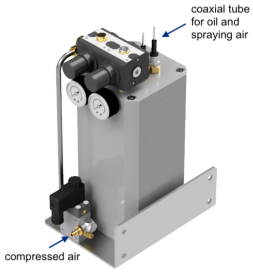
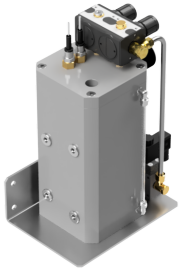
HV 250

Minimum lubrication system for external feed of high-viscosity lubricants

- suitable for viscous, sticky lubricants in the viscosity range 200-500 mm²/sec
- ideal for applications with constant lubricant dosage
- simultaneous operation of up to 6 nozzles
- de-/activation of individual nozzles with optional valves





Operating principle

The HV 250 minimum lubrication system delivers and meters high-viscosity lubricants. The flow rate can be reproducibly adjusted via the feed pressure, which is controlled by a pressure regulator. The maximum possible flow rate depends on the viscosity of the lubricant, the length of the supply line to the nozzle and the dosing head, which can be individually selected for each outlet.

A second pressure regulator is used to set the spray air independently of this. Both media are conveyed separately to the nozzles in coaxial lines.

The process does not require moving parts, complex metering equipment and internal electronics. Throttle valves, which are prone to clogging due to their principle, are not used. Therefore, the HV 250 is characterized by **highest reliability** and at the same time **best possible cost-effectiveness**.

Characteristics

- two pressure regulators for independent metering of lubricant and spray air
- electrical or manual control of the spray function with only one switching signal
- independent de-/activation of individual nozzles with optional solenoid valves
- pressurized reservoir for lubricant delivery without pump or other moving parts
- reproducible flow rates even at low lubricant dosages
- extremely fast response even with long supply lines to the nozzle
- suitable nozzles and spraying devices available for various applications

Versions

Lubricant outlets/nozzles:	1 - 6 pcs.
Flow rate:	0-50 or 0-200 ml/hour (individually selectable for each outlet)

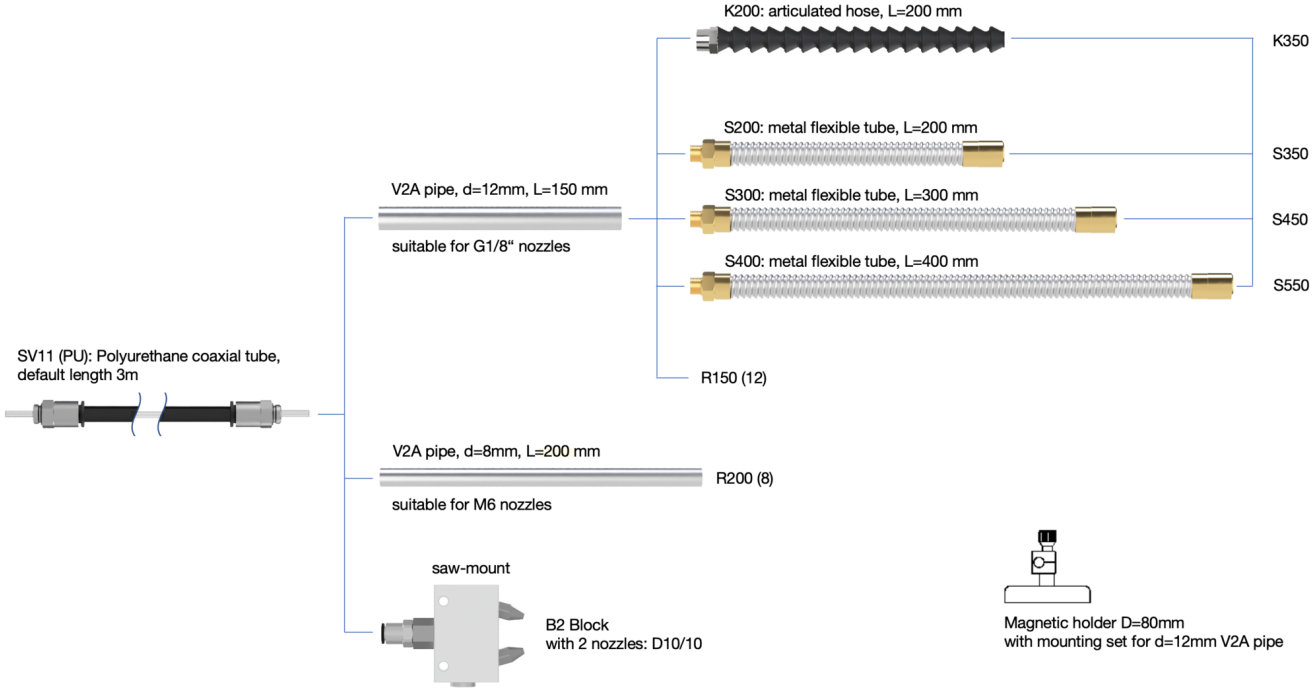
Application areas

- Special applications with viscous, sticky lubricants
- Special machines for cold forming or thread forming
- Applications with low-viscosity lubricants but very long hose lines

Components

Spraying devices

Our spraying devices are the link between the dosing unit for external feeding (HCS, HV or PSD) and the application-specific nozzles. They are used to transport the media and to fix the nozzle in the work chamber of the machine.



The precisely metered lubricant is transported in the inner hose of the **coaxial hose**, protected from the outer hose - in which the spray air is conveyed. The standard polyurethane coaxial hose can optionally be replaced by a metal braided coaxial hose. The coaxial hose is typically connected to a **V2A mounting tube**, which is used for installation in the working area of the machine. As an optional accessory, we offer a holding magnet with a suitable mounting set for this purpose.
For precise and changeable alignment, our nozzles with G1/8" connection can be screwed to a **flexible articulated** or **metal hose**.

The length specifications of the coaxial hose, the V2A tube and the articulated hose are to be understood as standard values. We will be pleased to supply you with application-specific designs.

Nozzles

Our nozzles operate based on the coaxial principle, in which the lubricant spray jet is stabilized by a surrounding air jacket jet. A low-pressure atomization occurs at the nozzle outlet, which ensures a homogeneous spray jet with relatively large liquid particles. In combination with the air-jacket jet, fogging is successfully avoided. The lubricant jet, which is protected by the air jacket jet, can be sprayed specifically onto the tool over relatively long distances.

Nozzle assortment

D10/10

Spray cone: 10°

Connection thread: G1/8"

Spraying distance: up to 80 mm

D05/10

Spray cone: 5°

Connection thread: G1/8"

Spraying distance: up to 150 mm

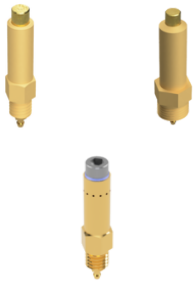
D10/06

Spray cone: 10°

Connection thread: M6

Spraying distance: up to 60 mm

Radial nozzles



Spray pattern: hollow cone or disc-shaped

Width across flats: SW10 or SW7

Connection thread: G1/8" or M6

Flat-jet nozzles

Spray pattern: oval

Opening angle: 60°

Connection thread: G1/8"

Saw block

Nozzle holder with coaxial hose connection for double-sided lubrication of a saw blade with 2xD10/10 nozzles

Coaxial solenoid valves

Our MQL devices for external feeding can be equipped with up to six outputs, depending on the design. The media feed is (de)activated for all outputs together with a switching signal on the device. In order to nevertheless be able to control individual outputs/nozzles separately, we offer coaxial solenoid valves for integration into the nozzle feed lines.

2/2-way valve for integration into a coaxial line:

Allows the lubricant to be switched off individually,
while the spray air is simply passed through

2x 2/2-way valve for integration into a coaxial line:

Allows the lubricant and the spraying air to be switched off individually
and independently of each other

Sensors

We offer the following sensors as standard for monitoring the HV 250:

Pressure monitoring:

Electronic pressure switches from various manufacturers

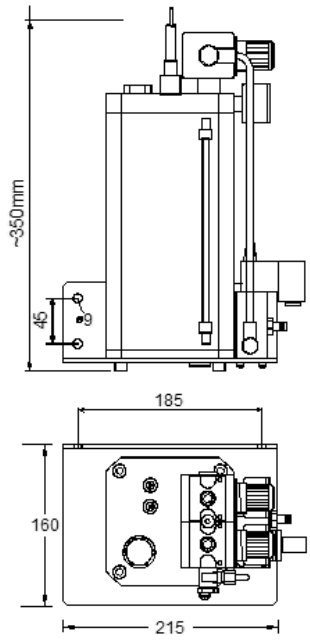
Level monitoring:

Optoelectronic sensors with cable or
M12 connection

- HV 250 can be combined with our tank extension
- Automatic refilling with filtered lubricant during operation

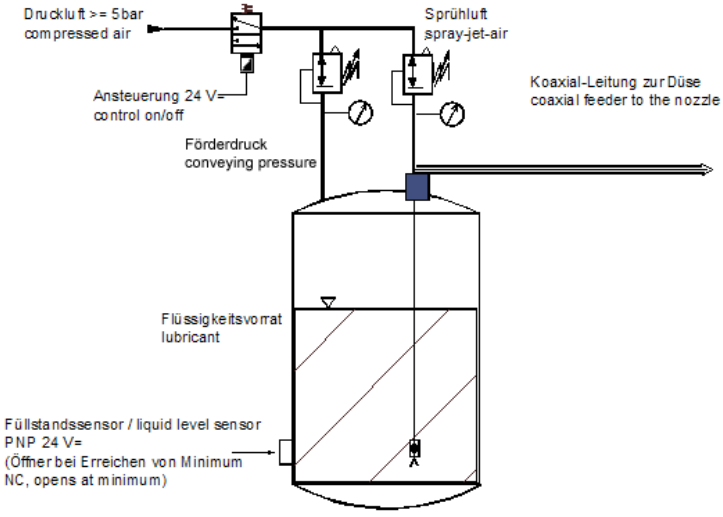
Further information

Dimensions



A free space of 300 mm is required above the unit for unobstructed filling. All dimensions in mm.

Connection diagram



Technical specifications

Filling volume:	1.8 liters
Unladen weight:	8.0 kg
Control:	A switching signal for de-/activation of the lubrication function: • electrically actuated solenoid valve, • pneumatically actuated valve, • mechanically actuated valve If necessary, further coaxial solenoid valves for independent control of individual nozzles
Compressed air supply:	4 - 6 bar; dry and filtered
Operating pressure:	1 - 6 bar (delivery pressure)