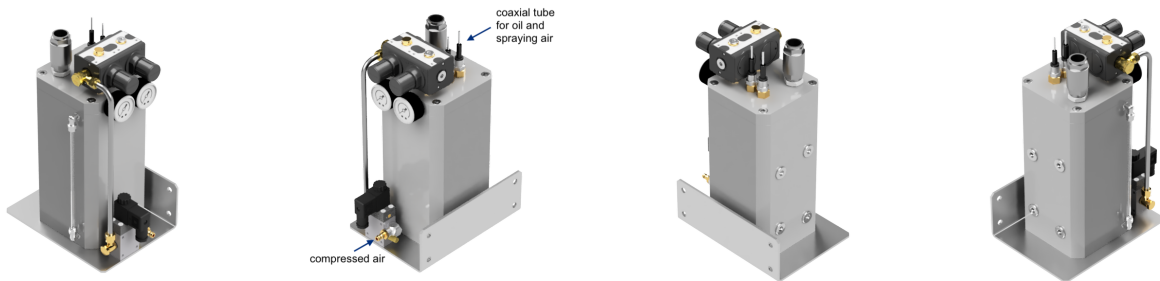


HCS 250

Minimum lubrication system for external supply of liquid lubricants

- ✓ suitable for lubricants in the viscosity range 20-200 mm²/sec
- ✓ ideal for applications with constant lubricant dosage
- ✓ simultaneous operation of up to 6 nozzles
- ✓ activation/deactivation of individual nozzles with optional valves



Operating principle

The HCS 250 minimum lubrication system generates an air-lubricant mixture from lubricants in the viscosity range 20-200 mm²/sec. The volume flow of the mixture can be reproducibly adjusted via the air 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 meter the additional spray air independently. 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 HCS 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 activation/deactivation 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

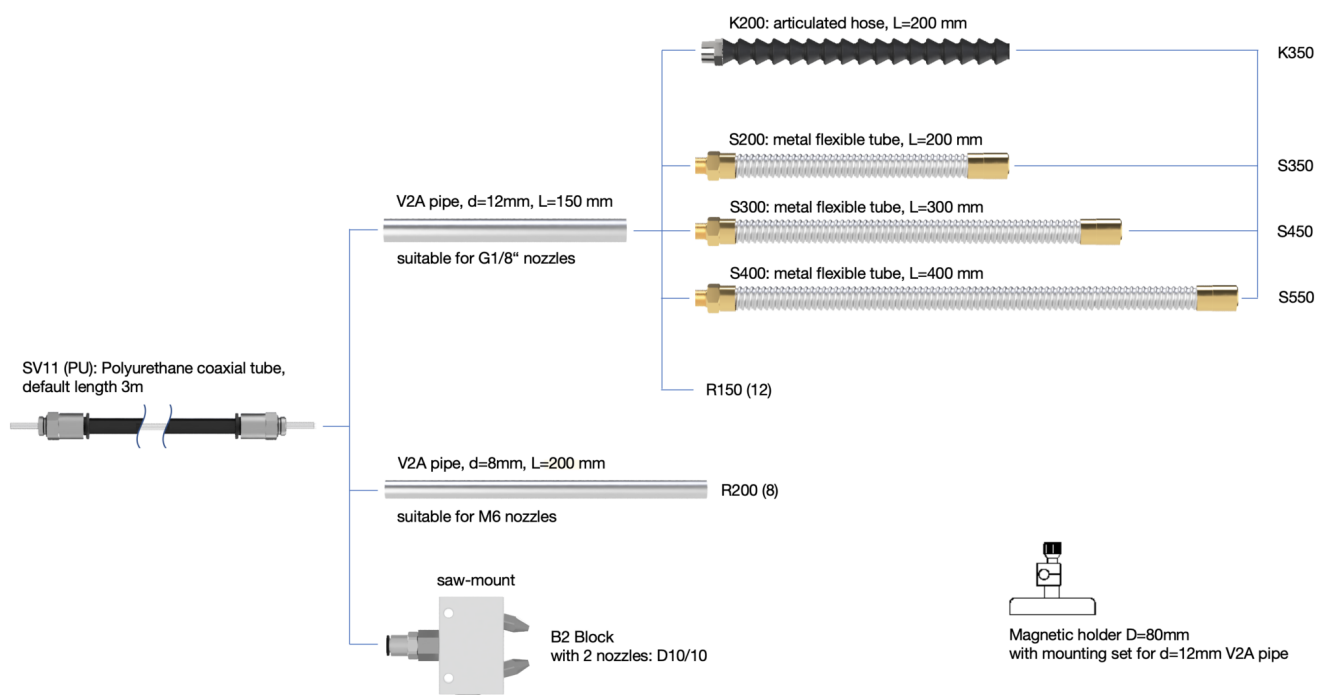
Versions

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

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

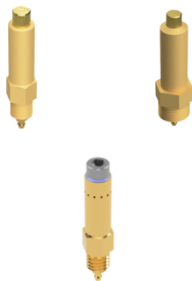


Spray cone: 10°

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.

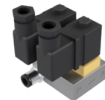
2/2-way valve for integration into a coaxial line:

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 HCS 250:

Pressure monitoring:

Electronic pressure switches from various manufacturers



Level monitoring:

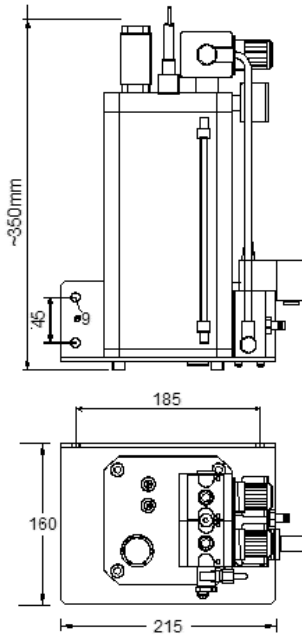
Optoelectronic sensors with cable or M12 connection



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

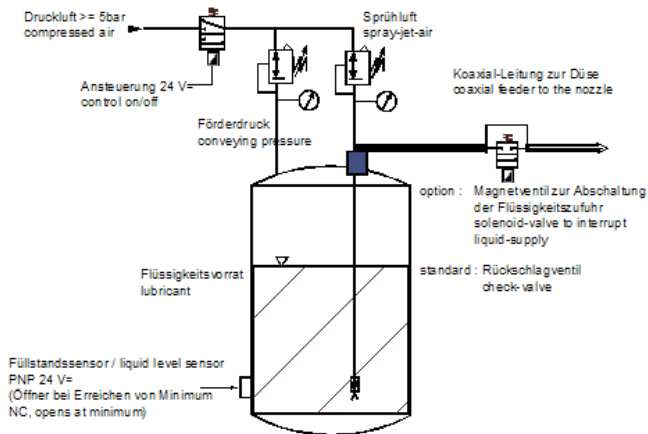
Further information

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:	<p>A switching signal for de-/activation of the lubrication function:</p> <ul style="list-style-type: none">• electrically actuated solenoid valve,• pneumatically actuated valve,• mechanically actuated valve <p>If necessary, further coaxial solenoid valves for independent control of individual nozzles</p>
Compressed air supply:	4 - 6 bar; dry and filtered
Operating pressure:	1 - 6 bar (delivery pressure)