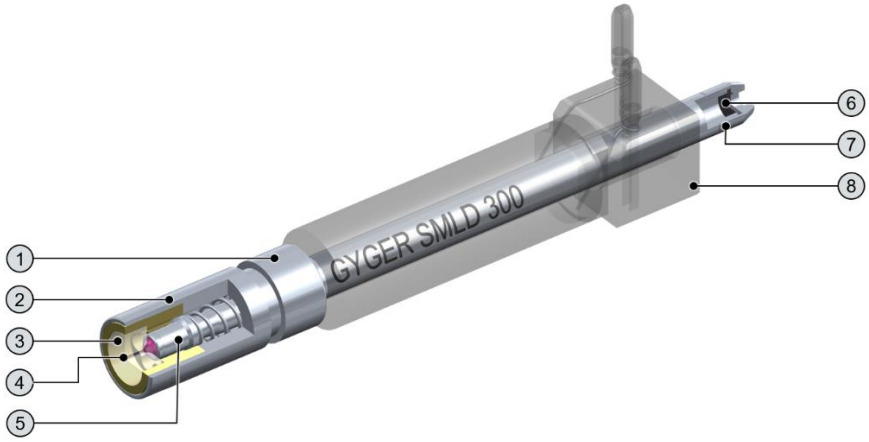
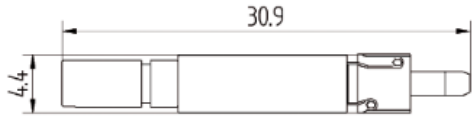
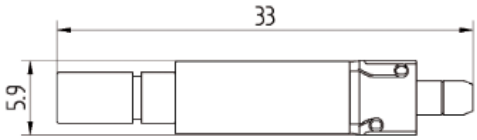
OVERVIEW OF MICRO VALVE CONFIGURATION AND VARIANTS

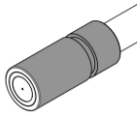
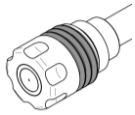


1. Basic valve type
2. Fastening
3. Outlet
4. Nozzle diameter
5. Valve travel
6. Valve filter
7. Valve inlet
8. Valve coil

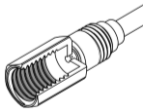
1. BASIC VALVE TYPE

Variants	Usage
SMLD 300  	- Smallest size - Small dispensing volumes - Low-viscosity media - Inner volume 25 µl - Minimal grid width 4.5 mm (With special coil package 4 mm)
SMLD 300G  	- Low- and high-viscosity media - Small and large dispensing volumes - Inner volume 65 µl - Minimal grid width 6 mm - Can be combined with heated valve holder

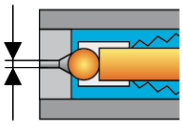
2. FASTENING

Variants	Usage
Cylinder 	Grid width with highest resolution, small size. Suitable to our adapter nozzles.
Thread 	The micro valve can be screwed into a valve holder from the front, which allows easy replacement; Suitable for our valve holders.

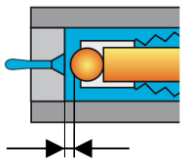
3. OUTLET

Variants	Usage
Jet 	Precise free jet dispensing, directly from the valve nozzle.
Outlet adapter 	For connecting tubes to the valve output. Only in connection with the “thread” fastening type.

4. NOZZLE DIAMETER

Picture	Usage
	The nozzle diameter and valve travel are important influential parameters for drop formation and the dispensing volume. Depending on the desired dispensing result, corresponding combinations can be selected.

5. VALVE TRAVEL

Picture	Usage
	The valve travel (stroke) defines how much the ball lifts out of the seat at the opening. The valve travel together with the nozzle diameter has a great influence on the drop formation and dispensing quantity.

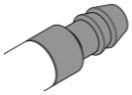
6. VALVE FILTER

If the valve with filter is selected, a filter disc made of stainless wire mesh is integrated in the inlet connector. This filter protects the valve interior from harmful particles. An upstream large-area filter with fine grid for basic cleaning of the dispensing medium is recommended.

Variants	Usage
With Filter 	Low-viscosity, filterable media. Only in connection with the „manifold“ valve inlet.
Without Filter 	High-viscosity or non-filterable media (E.g. certain types of grease or reagents)

7. VALVE INLET

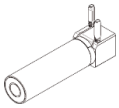
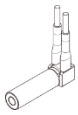
Two different inlet connectors are available. The manifold connection offers the greatest possible flexibility. In combination with our valve holders, a large number of inlet adapters with standard threads can be used.

Variants	Usage
Manifold 	Suitable for our valve holders, installation in distributor systems with O-ring seal.
Barbed Tube connector 	The tube is directly connected to the micro valve. Only in connection with “cylinder” fastening type.

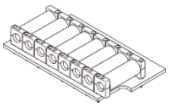
8. VALVE COIL

The valve coils are removable and available in different versions. They are optimised for very fast actuation times and minimal size.

Single

Variants	Usage
Single coil 	With solder connections, suitable for installation on printed circuit boards or for customer-specific wiring.
Single coil with wire 	With wire AWG26, end tinplated or with plug, the plug fits our cable sets.

Package

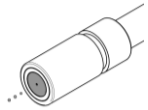
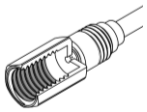
Variant	Usage
Coil package 	Coil packages for multi-channel systems on printed circuit board in various designs.

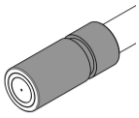
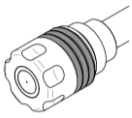
The various configuration options are described on the next page and on our website.

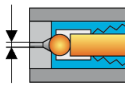
ORDERING MATRIX, MICRO VALVES SMLD

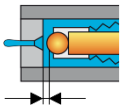
Valve coils must be ordered separately.

MICRO VALVE SMLD 300

Valve outlet	
	
Jet	10-32 UNF conical

Valve fastening	
	
Ø 3.50 mm	M5×0.5
	M5×0.5 With O-ring seal

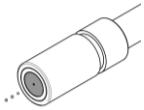
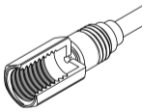
Valve nozzle

Ø 0.10 mm
Ø 0.15 mm
Ø 0.20 mm

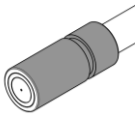
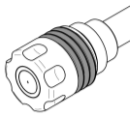
Valve travel

0.03 mm (T1)
0.06 mm (T2)

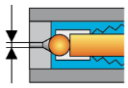
Valve inlet	
	
Manifold Ø 1.80 mm	Tube connector Ø 1.25 mm

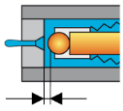
Valve filter	
	
17 µm	Without

MICRO VALVE SMLD 300G

Valve outlet	
	
Jet	¼-28 UNF
	M5
	10-32 UNF conical

Valve fastening	
	
Ø 4.00 mm	M6×0.75
	M6x0.75 With O-ring seal

Valve nozzle

Ø 0.10 mm
Ø 0.15 mm
Ø 0.20 mm
Ø 0.30 mm
Ø 0.45 mm
Ø 0.60 mm

Valve travel

0.03 mm (T1)
0.06 mm (T2)
0.10 mm (T3)
0.15 mm (T4)

Valve inlet	
	
Manifold Ø 2.70 mm	Tube connector Ø 2.30 mm

Valve filter	
	
40 µm	Without