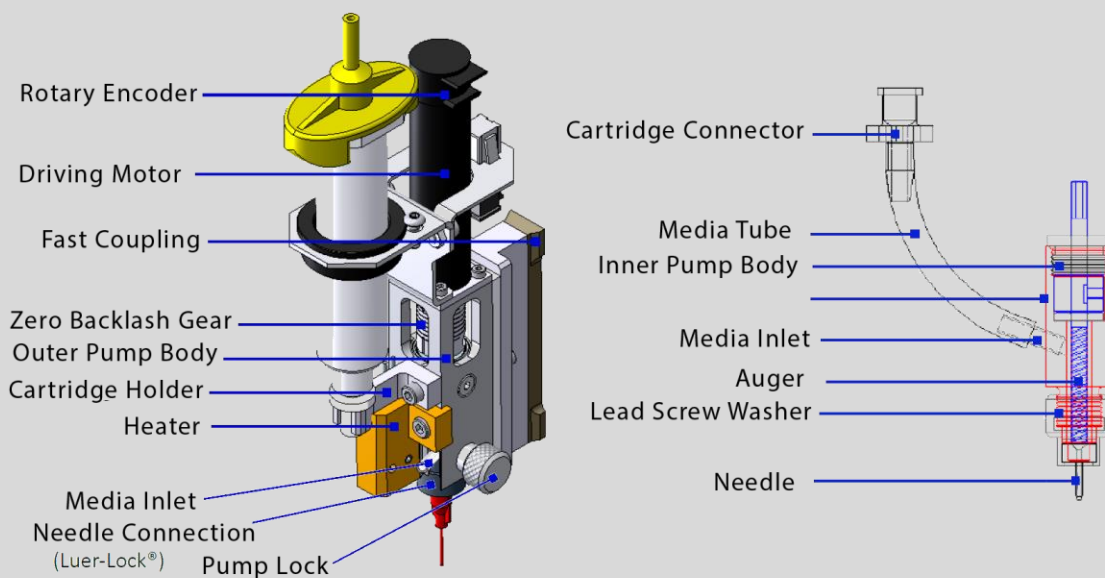


# MICROSCREW DISPENSER



The volumetric based dispenser uses a micro precision lead screw to displace high viscose media with filler particles, i.e. solder paste through the dispense needle. It is specifically designed for dispensing micro volumes of material in precise, repeatable patterns. The precision micro screw dispense unit with rotary drive is mounted with a quick-change system directly on the Z-axis. With the integrated zero-backlash gear the dispense unit can be positioned with high accuracy to allow precise and repeatable dispense results.

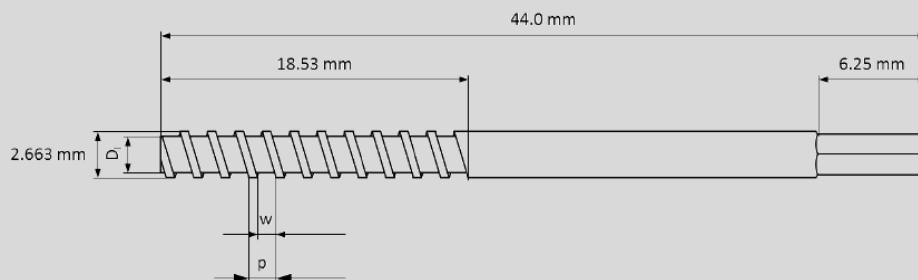
## Configuration:



## General Specifications:

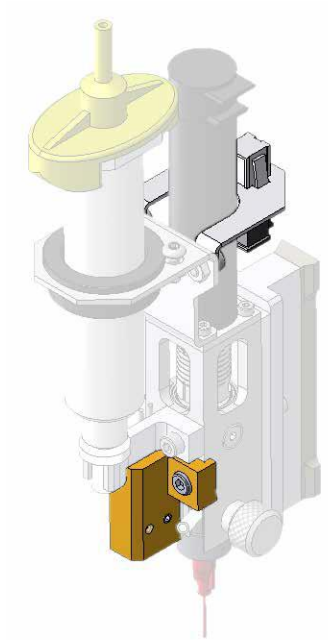
- Cartridge Pressure: 0 ... 5 bar
- Supported Cartridge Size: 3 cc, 5 cc, 10 cc, 30 cc
- Rotational Speed: 0.01 ... 2`000 deg/s
- Parameters for Line Patterns:
  - Line Speed (applicable for line pattern) 0.01 ... 250 mm/s
  - Start Delay 0 ... 10`000 ms
  - Stop Delay 0 ... 10`000 ms
- Parameters for Dot Patterns:
  - Angle (Rotation Angle per Dot) 0.01 ... 50`000 deg
  - Angle Speed 0.01 ... 2`000 deg/s
  - Tear-Off Angle (Negative Rotation) 0.01 ... 50`000 deg
  - Delay Before 0 ... 10`000 ms
  - Delay After 0 ... 10`000 ms

## Available Screws:



Art.Nbr.	Description	Inner Diameter ( $D_i$ )	Slope ( $p$ )	Recess Depth ( $w$ )	Volume per turn <sup>1)</sup> [mm <sup>3</sup> ]
112.04.013	Standard	2.080	1.580	0.950	0.254
112.04.017	Shallow	2.343	1.580	0.950	0.076
112.04.018	High Volume	1.800	1.580	0.960	0.562
112.04.086	For filled media	2.067	1.580	0.965	0.269

## Heater & Specifications



The MICROSCREW Heater supports dispense processes with temperature by heating up and holding the media temperature at a specific value. Thus, the viscosity of the media could be kept on a constant value independently from the environment temperature to maintain more consistent dispensing. This module could be integrated in the MICROSCREW and could be heated up to 180°C.

- Electrical Power: 40 W
- Temperature Range: +30 °C ... +100 °C
- Temperature Stability: 0.044 °C
- Temperature Accuracy: 0.25 °C
- Heating Rates:
  - 0.94 K/s (Average Slope) @ max. 80°C  
25 °C to 80 °C ~ 58.0 s
  - 0.77 K/s (Average Slope) @ max. 60°C  
25 °C to 60 °C ~ 46.0 s
  - 0.62 K/s (Average Slope) @ max. 40°C  
25 °C to 40 °C ~ 25.0 s

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