

PICO™ Slider Valve System

The PICO SV-060 Slider Valve is ideal for dispensing small, accurate deposits of solder paste, silver epoxies and other filled materials. Piezoelectric actuation enables it to achieve dispensing speeds almost twice as fast as auger valves.

An integrated heater controls the temperature of the material and ensures the consistency and repeatability of the deposits, which are applied through a precision dispensing needle that contacts the substrate.

When the valve is closed, two sliding ceramic plates create a positive shutoff that eliminates the drooling issues associated with some open fluid path valve systems.

Features

- Ceramic valve seats for long wear
- Maintenance-free piezo drive mechanism
- Integrated heater keeps material at optimum dispensing consistency
- Positive shutoff prevents drooling between shots

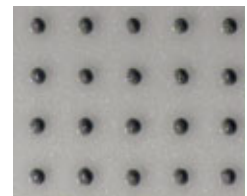
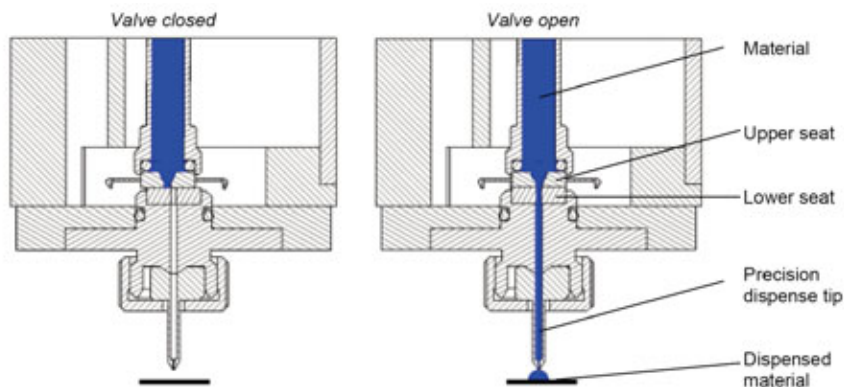
Benefits

- Fast, accurate dispensing of filled materials
- Shots as small as 10 nl
- Up to 10 shots per second
- Shot size adjustable in extremely fine increments

How It Works

The SV-060 Slider Valve is driven by two piezoelectric actuators. In the closed position, the orifices of the upper and the lower ceramic seats “slide” out of alignment, preventing the flow of material. When the valve is opened, the upper seat slides parallel to the lower seat until the orifices of both seats are aligned, allowing material to flow through the precision dispense tip. Deposit size / diameter / volume / mass can be influenced by the dispensing time and inner diameter of the dispense tip.

The minimum metering time of 2 ms allows the dispensing of deposits as small as 10 nl, depending on the material. Due to the 10 microseconds resolution of the PICO Controller, it is possible to adjust deposit size in very fine increments.

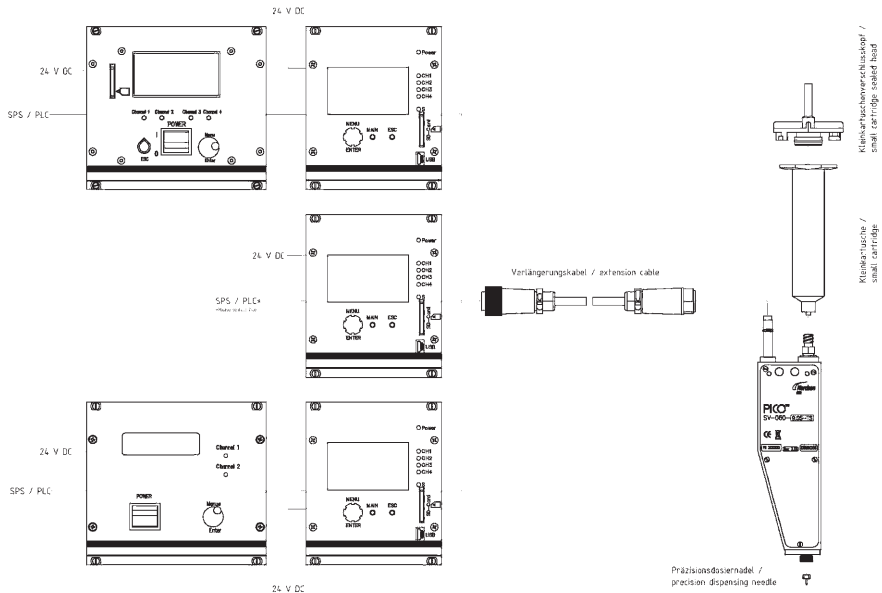


Dot diameters slightly >0.3 mm, type 6, lead-free, Nordson EFD paste

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System Overview

A complete PICO SV-060 Slider Valve system consists of a PICO SV-060 Slider Valve, a PICO DCON Driver, a PICO Controller, and connection and adapter cables.



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Specifications

Dimensions:	(L x W x H): 154 x 50 x 30 mm (without needle)
Fluid compatibility:	Solder pastes, conductive adhesives and other particle-filled materials
Viscosity range:	> 10,000 mPa*s
Minimum on time:	2 ms (one open and close)
Maximum on time:	∞ endless (continuous line dispensing)
Minimum off time:	10 ms
Maximum off time:	∞ endless
Dispense frequency:	< 10 Hz
Maximum working pressure:	6 bar (86 PSI)
Ambient temperature range:	+ 15 to + 45 °C
Fluid temperature range:	+ 60 °C maximum
Standard orifice diameter:	400 µm, other diameters on request
Maintenance and inspection interval:	
Valve seat:	Approx. 3,000,000 cycles*
Piezo drive:	Approx. 150,000,000 cycles*

*Actual seal and valve seat lifetimes depend on fluid type used.

