

# 781S Series General Purpose Spray Valve

Consistent, precise spray valve systems



781S spray valve uses low volume low pressure (LVLP) technology to apply a fine coating of silicone oil inside medical syringes.

*"In manufacturing, reliability is everything. That's what we get from Nordson EFD valves. If all our equipment worked as well... our jobs would be easier."*

—Ford Motor Company

The 781S Series Low Volume Low Pressure (LVLP) spray systems provide consistent coating of low to medium viscosity fluids.

Microliter to milliliter amounts can be reliably dispensed in round patterns with diameters ranging from 0.17" to 2.0" (4.3 to 50.8 mm) and in fan patterns with widths up to 6.5" (165.1 mm).

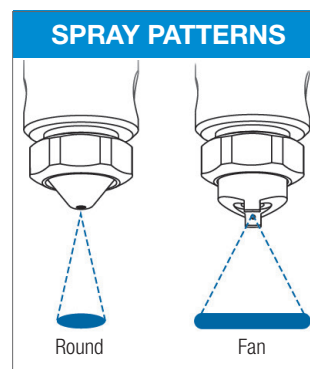
The combination of adjustable fluid flow, adjustable nozzle air and post-air cutoff provides excellent spray control.

The system includes compact spray valve, ValveMate™ controller and tank. The controller is set for length of time and air pressure required for precise coverage. Programmable nozzle air delay after each spray cycle keeps the spray nozzle clog-free and reduces maintenance and downtime.

The 781S Series valves are used with ValveMate 8040 controllers for precise control of fluids without mist or overspray. Adjustable Low Volume Low Pressure (LVLP) nozzle air transfers fluid from the nozzle to the substrate at low velocity and high transfer efficiency.

## Features and Benefits

- High transfer efficiency
- No overspray, no mist, no bounce
- Adjustable fluid flow rate
- Adjustable nozzle air
- Extremely consistent area of coverage
- Cycle rate exceeds 400/minute
- Low-maintenance design



Part #	Description
7007031	781S-SS Spray Valve: Nozzle size is 1.17 mm (0.046") diameter. Round pattern, narrow angle.
7021600	781S-AL: Nozzle size is 1.17 mm (0.046") diameter. Round pattern, narrow angle. Fluid body and air cylinder body are aluminum.
7021615	781S-SS-46F: Nozzle size is 1.17 mm (0.046") diameter, fan shape.
7021611	781S-SS-14: Nozzle size is 0.36 mm (0.014") diameter. Round pattern, narrow angle.
7021613	781S-SS-28: Nozzle size is 0.71 mm (0.028") diameter. Round pattern, narrow angle.
7021618	781S-SS-WF: Same as 781S-SS-46F except wide fan pattern is 2x the width.
7021612	781S-SS-14F: Nozzle size is 0.36 mm (0.014") diameter, fan shape. All metal parts are passivated 303 stainless steel.
7021617	781S-SS-WA: Same as 781S-SS except round pattern is 2x as large.
7021614	781S-SS-28F: Nozzle size is 0.71 mm (0.028") diameter, fan shape. All metal parts are passivated 303 stainless steel.

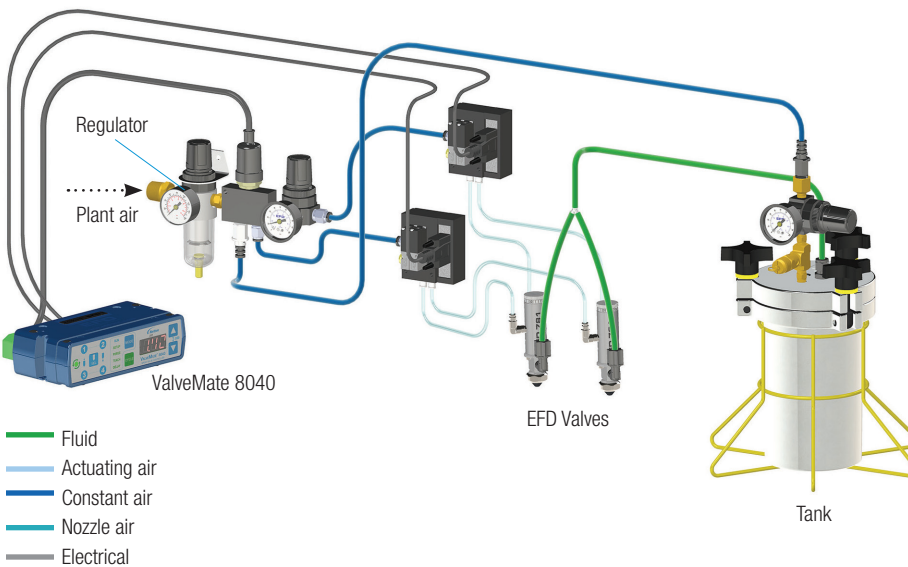
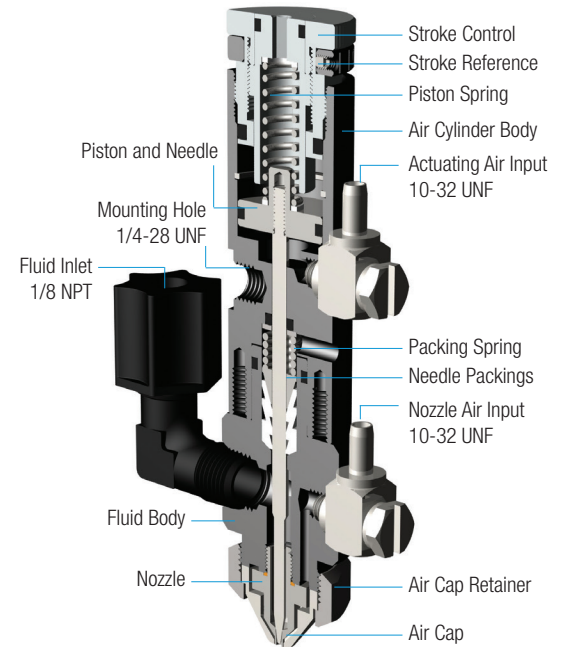


more info

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## Specifications

Item	Specifications
Size	104.6L x 26.9DIA mm (4.12L x 1.06DIA")
Weight	781S-SS: 405.3 g (14.2 oz) 781S: 235.3 g (8.2 oz)
Actuating air pressure required	4.8–6.2 bar (70–90 psi)
Maximum fluid pressure	20.7 bar (300 psi)
Fluid inlet	1/8 NPT female
Mounting	(1) 1/4-28 UNF tapped hole
Cycle rate	Exceeds 400 per minute
Air cylinder body	781S-SS: 303 stainless steel
Fluid body	781S: Hard-coated anodized aluminum
Air cap	303 stainless steel
Piston	303 stainless steel
Needle and nozzle	303 stainless steel
Maximum operating temperature	102 °C (215 °F)
Warranty	1 year, limited



## ValveMate 8040 Controller

The ValveMate controls valve open time and nozzle pressure. Its compact size allows the controller to be mounted near the valve for easy setup and spray adjustment.

- Multi-valve control — up to (2) spray valves
- Partner to Programmable Logic Controller (PLC)
- Easy control for consistent coverage
- Precise control of nozzle air pressure
- End-of-cycle air delay prevents valve from clogging
- End user convenience
- Maximum machine efficiency

## Spray Area Coverage

Model #	Nozzle Orifice		Spray Pattern	Nozzle distance from surface																	
				inches		mm		inches		mm		inches		mm							
	inches	mm		1.0	25.4	2.0	50.8	3.0	76.2	6.0	152.4	1.0	25.4	2.0	50.8	3.0	76.2	4.0	101.6	5.0	127.0
7007031: 781S-SS 7021600: 781S-AL	0.046	1.1	Round	0.25	6.3	0.50	12.7	0.75	19.0	1.50	38.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021613: 781S-SS-28	0.028	0.7	Round	0.20	5.0	0.40	10.1	0.60	15.2	1.20	30.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021611: 781S-SS-14	0.014	0.3	Round	0.17	4.3	0.34	8.6	0.50	12.7	1.00	25.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021617: 781S-SS-WA	0.046	1.1	Round	0.75	19.0	1.50	38.1	2.00	50.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021615: 781S-SS-46F	0.046	1.1	Fan	1.00	25.4	1.50	38.1	2.00	50.8	3.25	82.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021618: 781S-SS-WF	0.046	1.1	Fan	1.50	38.1	2.50	63.5	3.25	82.6	6.50	165.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021612: 781S-SS-14F	0.014	0.3	Fan	0.34	8.63	0.68	17.27	1.00	25.4	2.00	50.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
7021614: 781S-SS-28F	0.028	0.7	Fan	0.40	10.16	0.80	20.32	1.20	30.48	2.40	60.96	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a



## Select Your Controller

See the Valve Selection Guide for the controllers compatible with this valve — [www.nordsonefd.com/ValveGuide](http://www.nordsonefd.com/ValveGuide).

## Automated Dispensing Systems

Nordson EFD automated dispensing systems deliver market-leading repeatability and accuracy in fluid placement and positioning. Specialized dispensing software simplifies setup and programming. Optimize dispensing results with features such as laser height sensing and smart vision CCD cameras.

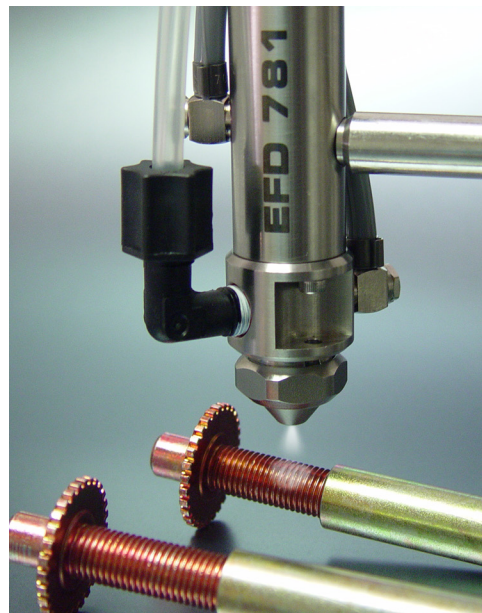
## Fluid Reservoirs

Nordson EFD reservoirs are supplied with precision, constant-bleed regulators to ensure consistent fluid pressure to the valve. Tank reservoirs are available in 1.0, 5.0 and 19.0 liter capacities. Cartridge sizes range from 2.5 to 32 ounces (75cc to 950cc).

## Request a Process Evaluation

Contact Nordson EFD to configure a precision dispense system that meets your specific needs, with:

- A complimentary process evaluation by experienced fluid dispensing experts
- Samples processed for customer evaluation and approval prior to purchase



781S sprays lubricant on automotive brake adjusters.



**EFD**

For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to [www.nordsonefd.com](http://www.nordsonefd.com).

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