

# Consistent, precise 781S spray valve systems.

activators coatings grease inks liquid fluxes oils silicones solvents



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 4.3 to 50.8 mm (0.17" to 2.0") and in fan patterns with widths up to 165.1 mm (6.5").

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.



## Features

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

*"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."*

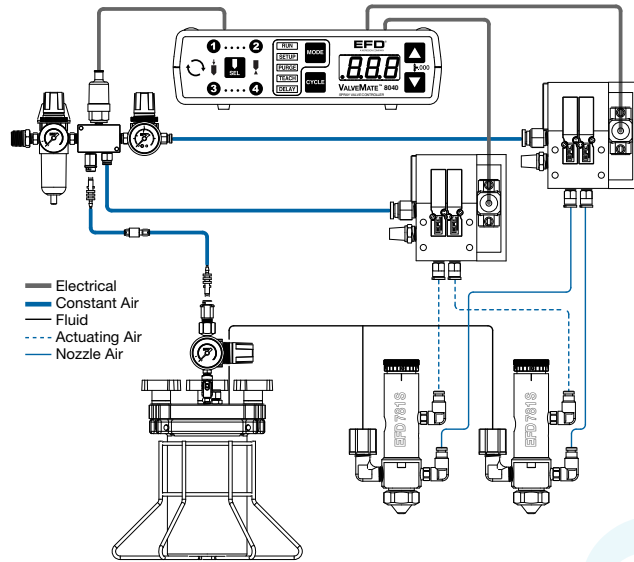
—Ford Motor Company

Electronic pdf files of Nordson EFD manuals are also available at [www.nordsonefd.com](http://www.nordsonefd.com)

# Spray valve systems



The complete system includes the 781S dispense valve, ValveMate 8040 controller, and the fluid reservoir. Expert technical assistance and high quality standards ensure productive, trouble-free performance. Nordson EFD offers a full line of reliable dispensing systems to meet your specific application requirements.



## 781S Series Valves

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.

**Size:** 104.6 mm x 26.9 mm diameter (4.12" x 1.06")

**Weight:** 405.3 g (14.2 oz) for 781S-SS model  
235.3 g (8.2 oz) for 781S model

**Actuating air pressure required:** 70 to 90 psi (4.8 to 6.2 bar)

**Maximum input fluid pressure:** 300 psi (20.7 bar)

**Fluid inlet thread:** 1/8 NPT female

**Mounting:** (1) 1/4-28 UNF tapped hole or adjustable mounting block

**Cycle rate:** Exceeds 400 per minute

**Air cylinder body:** 781S-SS: Type 303 stainless steel  
781S: Hard-coated aluminum

**Fluid body:** 781S-SS: Type 303 stainless steel  
781S: Hard-coated aluminum

**Air cap:** Type 303 stainless steel

**Piston:** Type 303 stainless steel

**Needle and nozzle:** Type 303 stainless steel

**Needle packings:** Teflon®

All stainless steel parts are passivated.

## Spray Area Coverage

Stainless steel model #	Aluminum model #	nozzle diameter mm inches	pattern	Nozzle distance from surface							
				mm 25.4	inches 1"	mm 50.8	inches 2"	mm 76.2	inches 3"	mm 152.4	inches 6"
781S-SS	781S	1.1 0.046"	round	6.3 0.25"		12.7 0.50"		19.0 0.75"		38.1 1.50"	
781S-SS-28	781S-28	0.7 0.028"	round	5.0 0.20"		10.1 0.40"		15.2 0.60"		30.4 1.20"	
781S-SS-14	781S-14	0.3 0.014"	round	4.3 0.17"		8.6 0.34"		12.7 0.50"		25.4 1.00"	
781S-SS-WA	781S-WA	1.1 0.046"	round	19.0 0.75"		38.1 1.50"		50.8 2.00"		n/a	
781S-SS-46F	781S-46F	1.1 0.046"	fan	25.4 1.00"		38.1 1.50"		50.8 2.00"		82.6 3.25"	
781S-SS-28F	781S-28F	0.7 0.028"	fan	10.1 0.40"		20.3 0.80"		30.4 1.20"		60.9 2.40"	
781S-SS-14F	781S-14F	0.3 0.014"	fan	8.6 0.34"		17.2 0.68"		25.4 1.00"		50.8 2.00"	
781S-SS-WF	781S-WF	1.1 0.046"	fan	38.1 1.50"		63.5 2.50"		82.6 3.25"		165.1 6.50"	

For tamper-resist model, specify part #781S-TR or #781S-SS-TR.

## 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

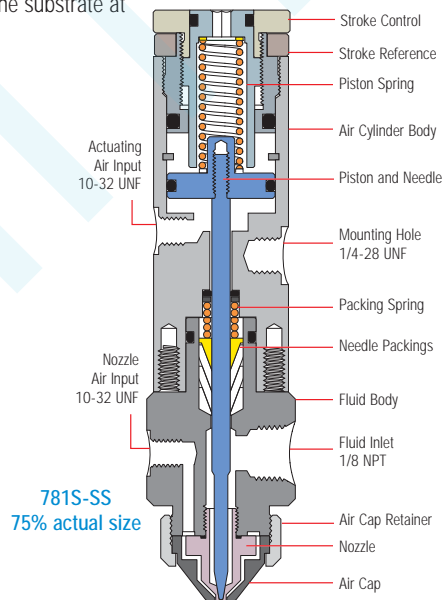
## Automation: XYZ & XYZR Robot Dispensing Systems

Nordson EFD offers a wide selection of XYZ and XYZR robot systems that are fully compatible with ValveMate valve controller systems. Consistent, accurate, repeatable and complex dispensing applications can be easily performed with EFD robots, with working envelopes that range from 200 x 200 x 50mm to 510 x 510 x 100mm. Scara robot systems are also available for larger, heavier products or inline dispensing applications.

## Fluid Reservoirs

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 (75 cc to 950 cc).



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