

725D Series Piston Valve

Installation Guide

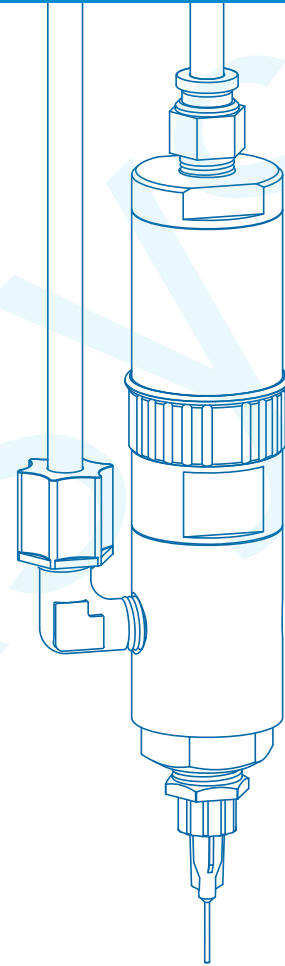
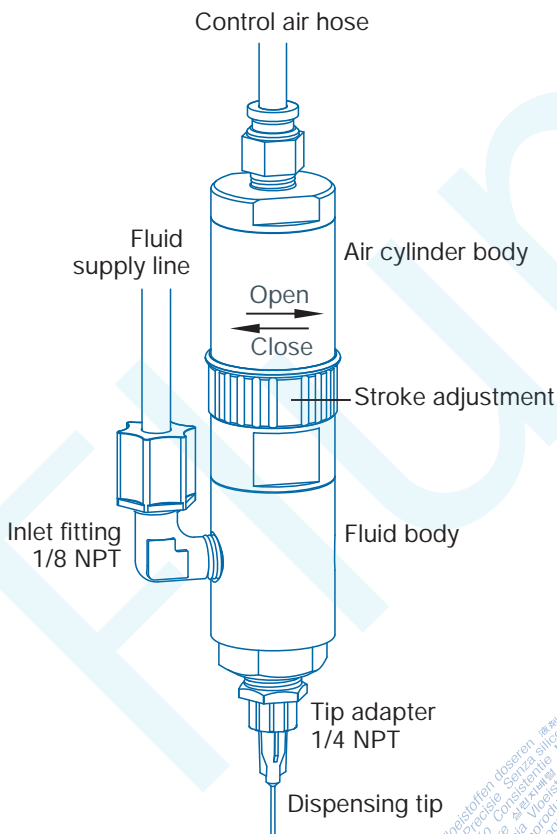
Introduction

The 725D Series is simple to use and will operate many millions of cycles without maintenance.

The unique design of the 725D Series valve provides a clean fluid cutoff with pullback for precise fluid application at high cycle rates.

The 725DA-SS and 725DA valves feature an adjustable pullback and flow control. The 725D and 725D-SS do not have the adjustable feature.

Each valve is shipped with a dispensing tip adapter, fluid inlet fitting and 5-foot actuating air hose installed. For high flow applications, the dispensing tip adapter can be removed for installation of 1/4 NPT metal or plastic nozzles.



Installation

Prior to installing this valve, please read the associated reservoir and valve controller operating instructions to become familiar with the operation of all components of the dispensing system.

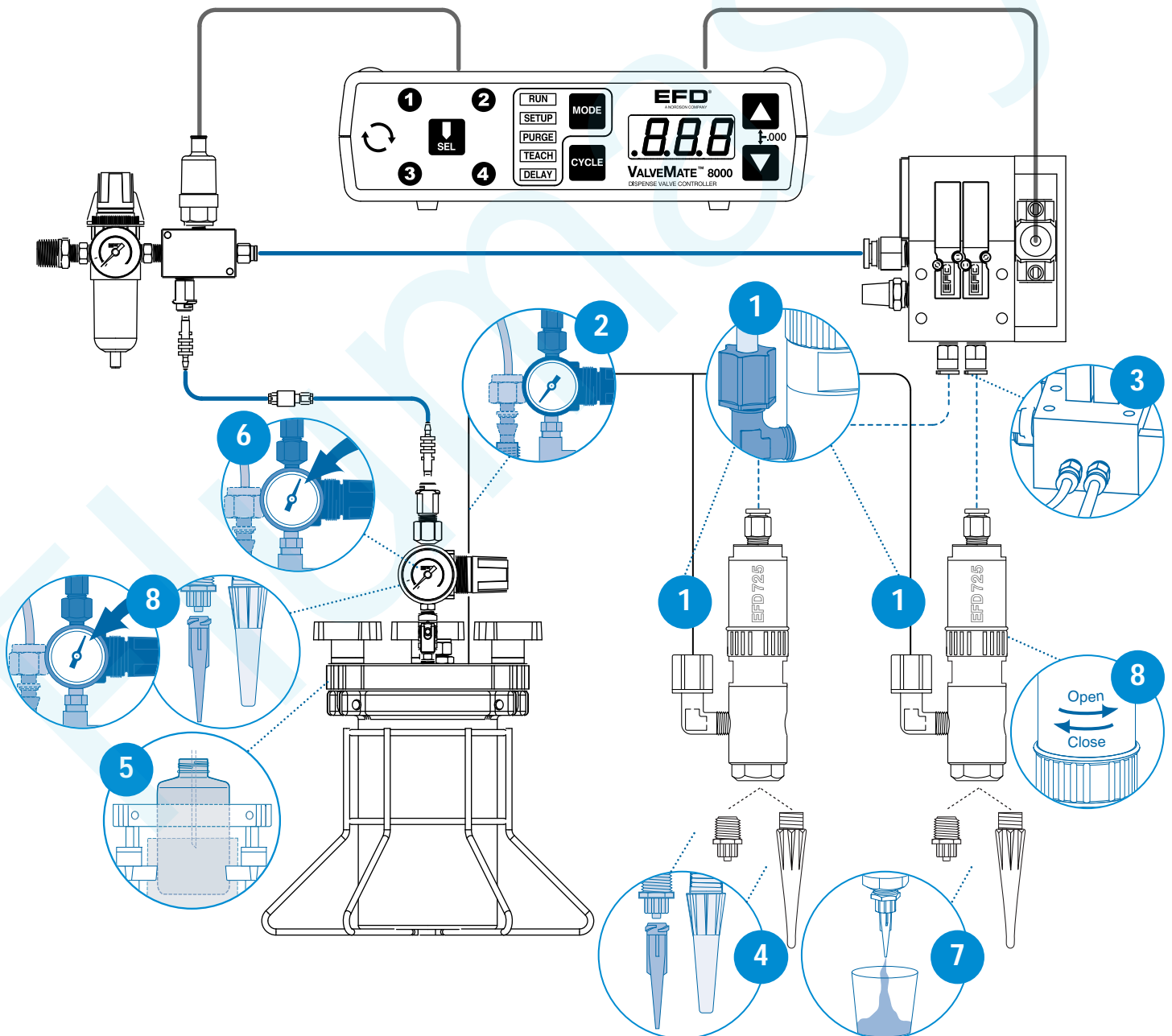
1. Connect fluid supply line to valve. If 3/8" OD tubing is used, change to fitting #7610BP supplied.
2. Connect the fluid supply line to reservoir. The reservoir can accept either 1/4" OD or 3/8" OD tubing using #62518PT supplied.

3. Connect valve control air hose to ValveMate™ 8000 (solenoid pack) used to control valve open time.
4. Choose a dispensing tip or nozzle—small tips (18-20 gauge) for low viscosity fluid and larger tip or nozzle for higher viscosities.
5. Fill reservoir by pouring fluid directly into tank liner or manufacturer's bottle placed inside reservoir. Secure cover prior to setting pressure.

6. Set reservoir pressure to low for thin fluids and higher for thick fluids.
7. Place a cup under the dispensing tip or nozzle and actuate the valve until fluid lines, valve and dispensing tip are free of air.
8. Set desired flow rate by adjusting fluid reservoir pressure, valve stroke setting* or changing dispensing tip or nozzle.

*725DA and 725DA-SS only

Important Note: Set desired deposit size by adjusting valve open time. Refer to valve controller operating manual.



How the Valve Operates

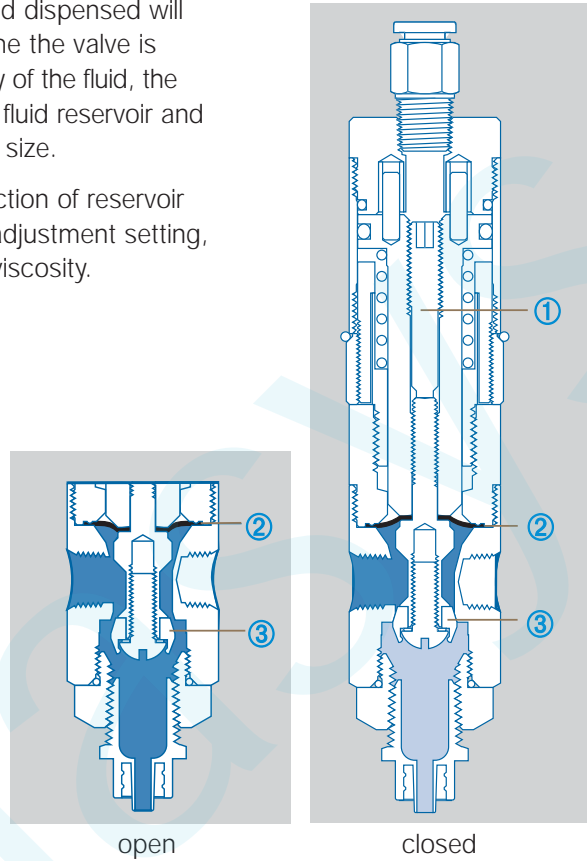
Input air pressure at 70 psi* (4.8 bar) forces the internal piston ① to move down, causing the diaphragm seal ② to deflect and the sealing head ③ to open and permit fluid flow. When the input air pressure exhausts, the spring retracts the piston and the sealing head closes, stopping the fluid flow and pulling back a slight amount of fluid.

The amount of fluid dispensed will depend on the time the valve is open, the viscosity of the fluid, the air pressure in the fluid reservoir and the dispensing tip size.

Flow rate is a function of reservoir pressure, stroke adjustment setting, tip size and fluid viscosity.

* For stripes and lines, input air pressure can be lowered to eliminate opening surge.

The primary control of deposit size is the valve open time.

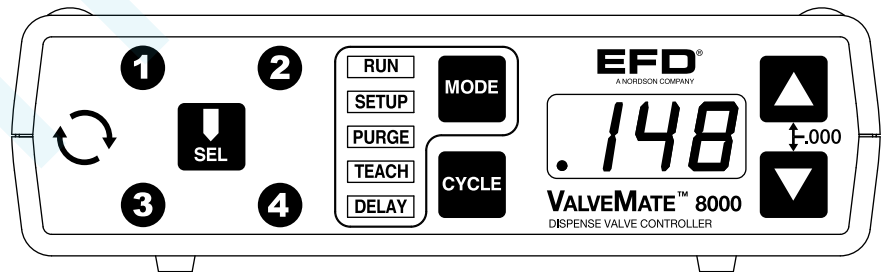


ValveMate Concept

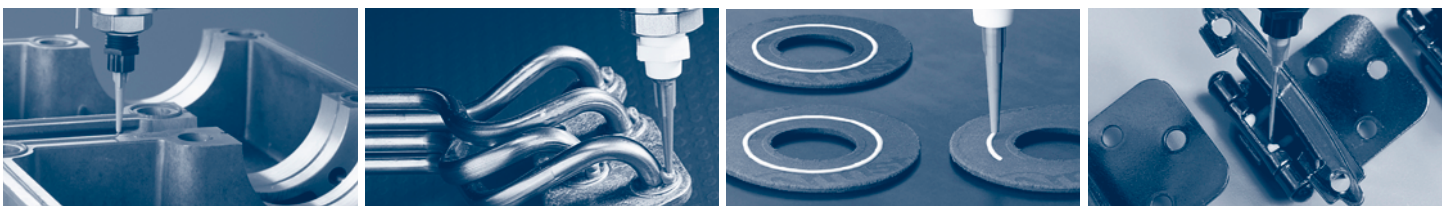
The ValveMate 8000 provides easy adjustment of valve output for maximum end-user convenience and efficiency. Valve open time is the primary control of deposit. The 8000 puts push-button adjustment of valve open time where it needs to be—at the valve.

The ValveMate 8000 features micro-processor circuitry for extremely precise control of deposit size. Feed lines can be purged, initial deposit sizes set, and adjustments made quickly and easily at the dispensing station, without stopping the production line.

Note: Nordson EFD XYZ automated dispensing systems have integrated ValveMate controllers for operating all EFD dispense valves.



Important Note: Order your 1, 2, 3 or 4 solenoid manifold block assembly separately. Consult EFD for recommendations.



Specifications

725DA-SS and 725DA

Size: 149.1 mm length x 29.5 mm diameter
(5.87" x 1.16")

Weight:

725DA-SS: 321 grams (11.32 oz)

725DA: 241 grams (8.5 oz)

Fluid body and cap:

725DA-SS: Type 303 stainless steel

725DA: Hard-coated aluminum

725D-SS and 725D

Size: 123.4 mm length x 28.5 mm diameter
(4.86" x 1.12")

Weight:

725D-SS: 279 grams (9.85 oz)

725D: 196 grams (6.91 oz)

Fluid body and cap:

725D-SS: Type 303 stainless steel

725D: Hard-coated aluminum

General

Valve seal/diaphragm: FDA-approved UHMW* polymer

Fluid inlet thread: 1/8 NPT female

Output thread: 1/4 NPT female

Mounting hole: (1) 1/8 NPT female blind hole

Air pressure required: 70 to 90 psi (4.8 to 6.2 bar)

Maximum fluid pressure: 100 psi (6.9 bar)

Maximum operating temperature: 43°C (110°F)

* Ultra High Molecular Weight

For consistent dispense valve operation and easy adjustment of valve output, Nordson EFD recommends using the ValveMate 8000 controller on all automatic, semi-automatic and benchtop applications.

Nordson EFD dispensing robots incorporate dispensing control into the main system.

Contact the EFD Dispense Valve Systems Group for details.

