

752HF Series High Flow Diaphragm Valves

Installation Guide

Introduction

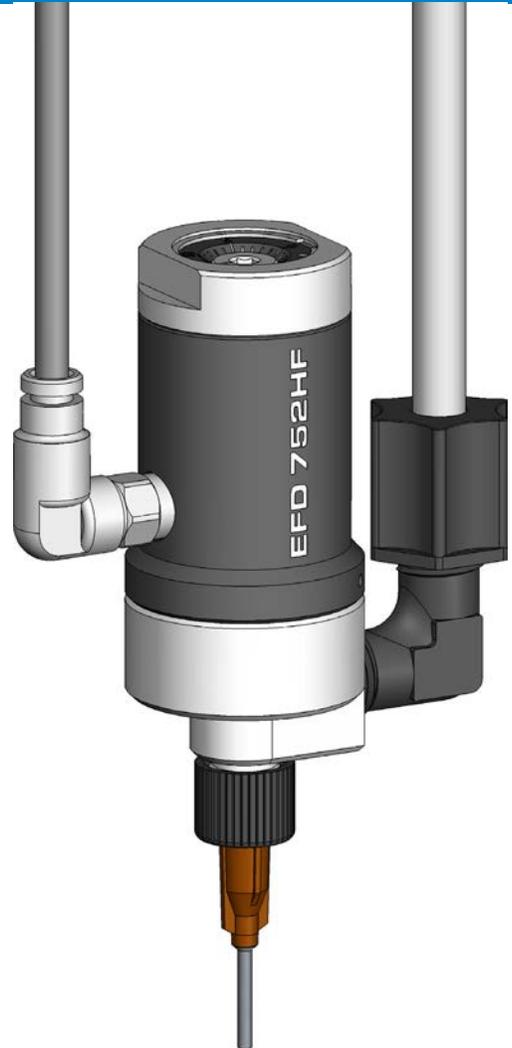
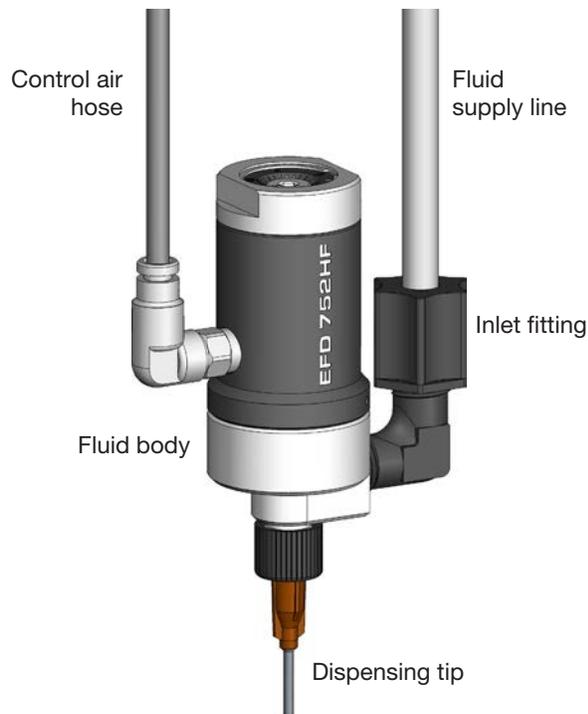
The 752HF Series fluid dispense valves are simple to use and will operate many millions of cycles without maintenance. 752HF Series valves are compact, precise, adjustable diaphragm valves for dispensing low- to medium-viscosity fluids.

All 752HF Series valves use the same actuating assembly, but fluid body materials differ depending on the model. The 752HF Series fluid bodies are constructed with the outlet at the end of the fluid body. Fluid body materials are:

752HF-SS (#7014315): 303 stainless steel

752HF-A (#7014139): Acetal copolymer

Each valve is shipped with a dispensing tip adapter, fluid inlet fitting, and 5-foot actuating air hose installed.

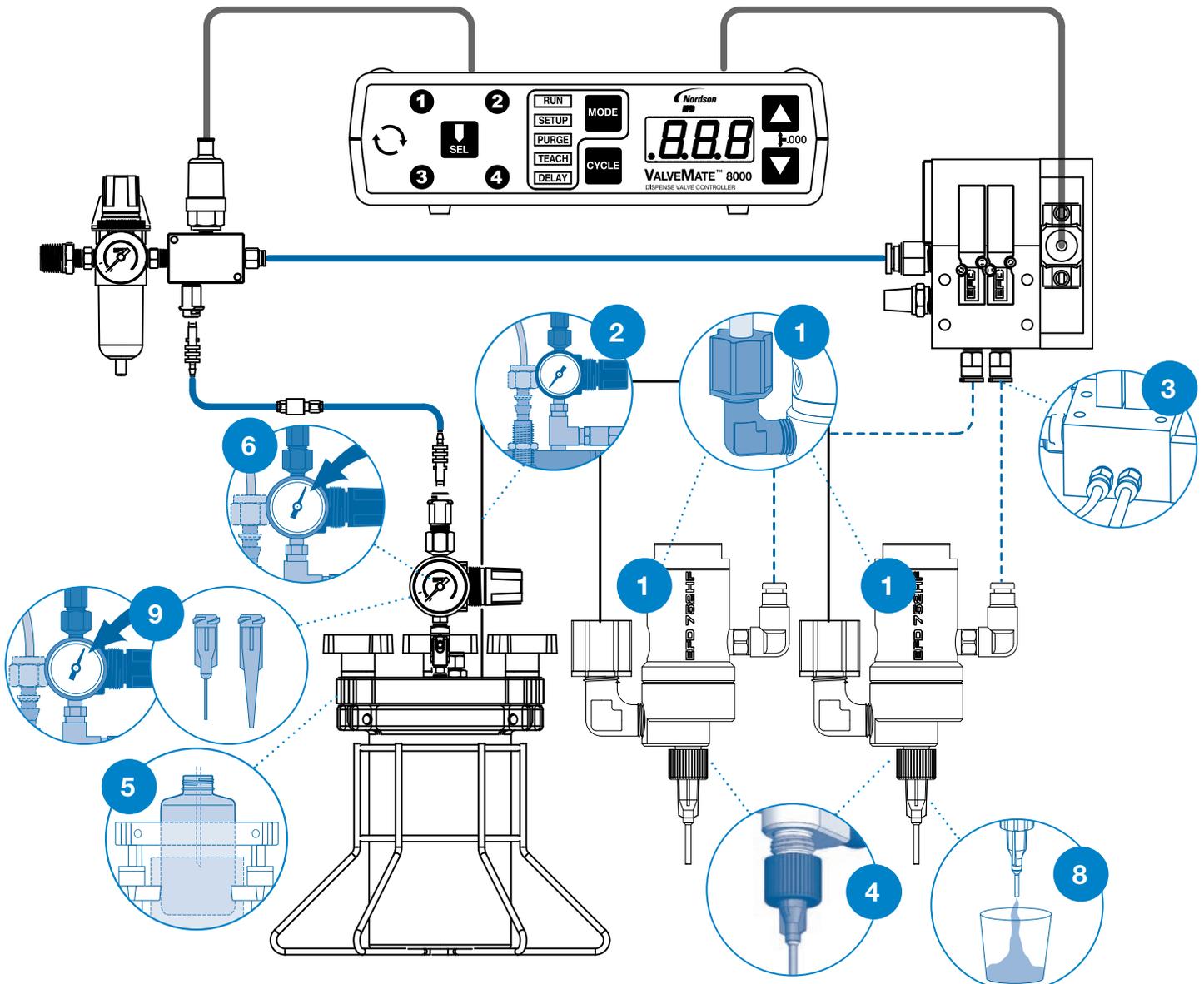


Installation

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

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 #7007038, supplied.
 2. Connect the fluid supply line to reservoir.
 3. Connect the valve control air hose to the ValveMate™ 8000 controller (solenoid pack) used to control valve open time.
 4. Press the tip onto the luer slip of the fluid body. Install the tip retaining nut. Finger-tighten only. Do not over-tighten as this may cause damage / cracking of the tip hub.
 5. Fill the reservoir by pouring fluid directly into the tank liner, or the manufacturer's bottle placed inside the reservoir. Secure the cover prior to setting the pressure.
 6. Set the reservoir pressure to low for thin fluids and higher for thick fluids.
 7. Set the diaphragm stroke starting at no more than 1/2 turn open. *
 8. Place a cup under the dispensing tip and actuate the valve until the fluid lines, valve, and dispensing tip are free of air.
 9. Set the desired flow rate by adjusting the fluid reservoir pressure or changing the dispensing tip.
- *Do not over-tighten the stroke adjustment knob or open it more than two full turns. If it is opened more than two turns, pressurized liquid could force open the diaphragm seal, resulting in continuous liquid flow.



How the Valve Operates

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

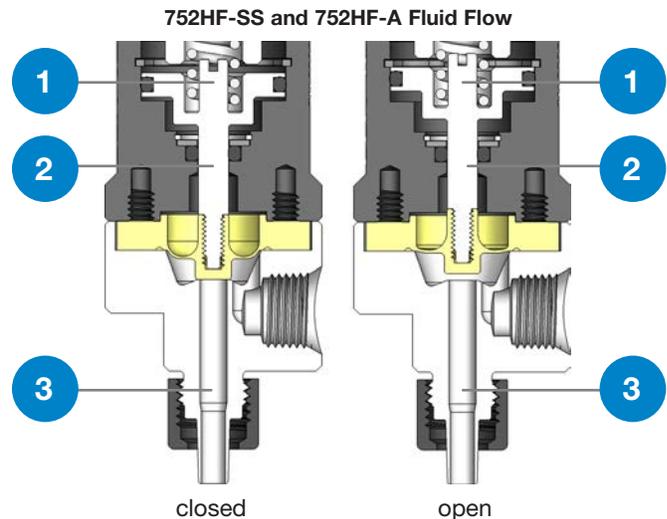
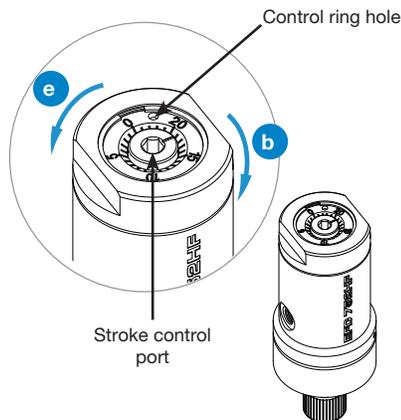
Input air pressure at 4.8 bar (70 psi) forces the internal piston **1** to move. **2** The piston rod pulls open the diaphragm seal, **3** permitting fluid flow. When the input air pressure is relieved, the spring retracts the piston and the diaphragm closes.

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

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

To calibrate the valve:

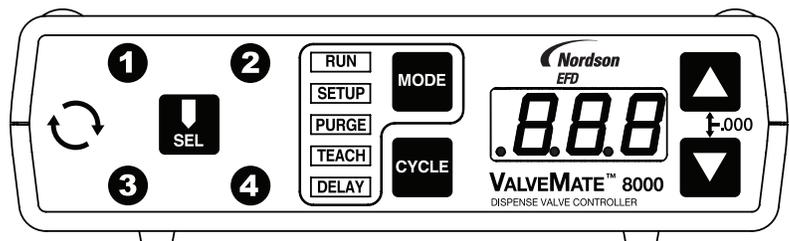
- Insert a 3 mm hex wrench into the stroke control port.
- Turn the inner knob clockwise until there is a full stop against the internal actuator piston.
- Insert a 1.5 mm hex wrench into the stroke control ring hole.
- Apply slight pressure and rotate until the 0 aligns with the stroke control port hash mark.
- The stroke control is now calibrated. Insert a 3 mm hex wrench into the stroke control port and turn counterclockwise to secure the stroke flow control.



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.



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

Specifications

General

Diaphragm: UHMW* polyethylene

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

Maximum fluid pressure: 4.8 bar (70 psi)

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

Mounting: M5 x 0.8

752HF-SS and 752HF-A

Size: 77.3 mm length x 28.6 mm diameter (3.04" x 1.13")

Weight: 752HF-SS: 123 g (4.30 oz)

752HF-A: 81 g (2.85 oz)

Air cylinder body: 752HF-SS: Hard-coated aluminum
752HF-A: Hard-coated aluminum

Fluid body: 752HF-SS: 303 stainless steel
752HF-A: Acetal copolymer

Free flow orifice: 3.18 mm (0.125")

Fluid inlet thread: 1/8-27 NPT

Tip retaining nut: Standard for EFD dispense tips

*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 automated dispensing systems integrate with ValveMate controllers for operating all pneumatic dispense valves.

Contact Nordson EFD for details.



For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to www.nordsonefd.com.

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