754V Series Aseptic Valve

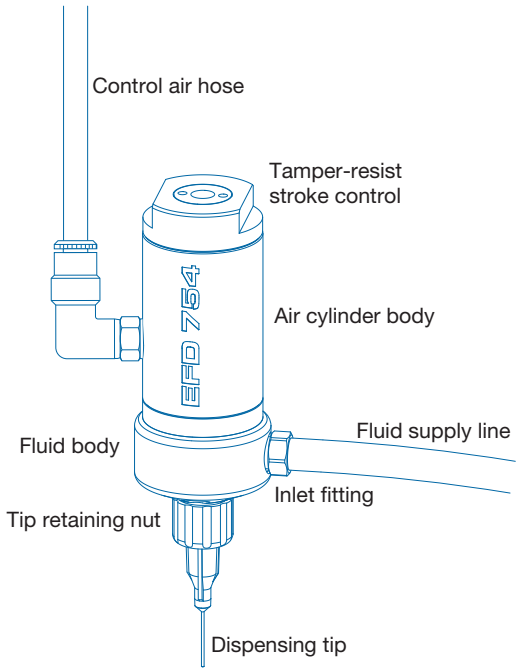
Installation Guide

Introduction

The 754V-SS dispense valve is designed to conform to biopharmaceutical regulations for sterile fluid applications. The 754V-SS wetted components are constructed of 316L stainless steel and PTFE with a smooth aseptic fluid path.

The 754V-SS valve is simple to use and will operate many millions of cycles without maintenance. The valve incorporates a compact, precise, adjustable diaphragm for dispensing low to medium viscosity fluids.

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



Valve Part Number

Part #	Model	Description
7021514	754V-SS	Wetted components are made of 316L stainless steel and PTFE to conform to biopharmaceutical regulations. Internal threads have been removed to provide a smooth, easily cleaned fluid flow path, free of entrapped areas. Fluid body is electro-polished to increase corrosion resistance. 754V valve includes 1.5 m (5 ft) input air hose with male quick-connect, barbed fluid inlet fitting, polypropylene tip adapter, and dispensing tip kit.

Electronic pdf files of Nordson EFD manuals are also available at www.nordsonefd.com

Nordson EFD

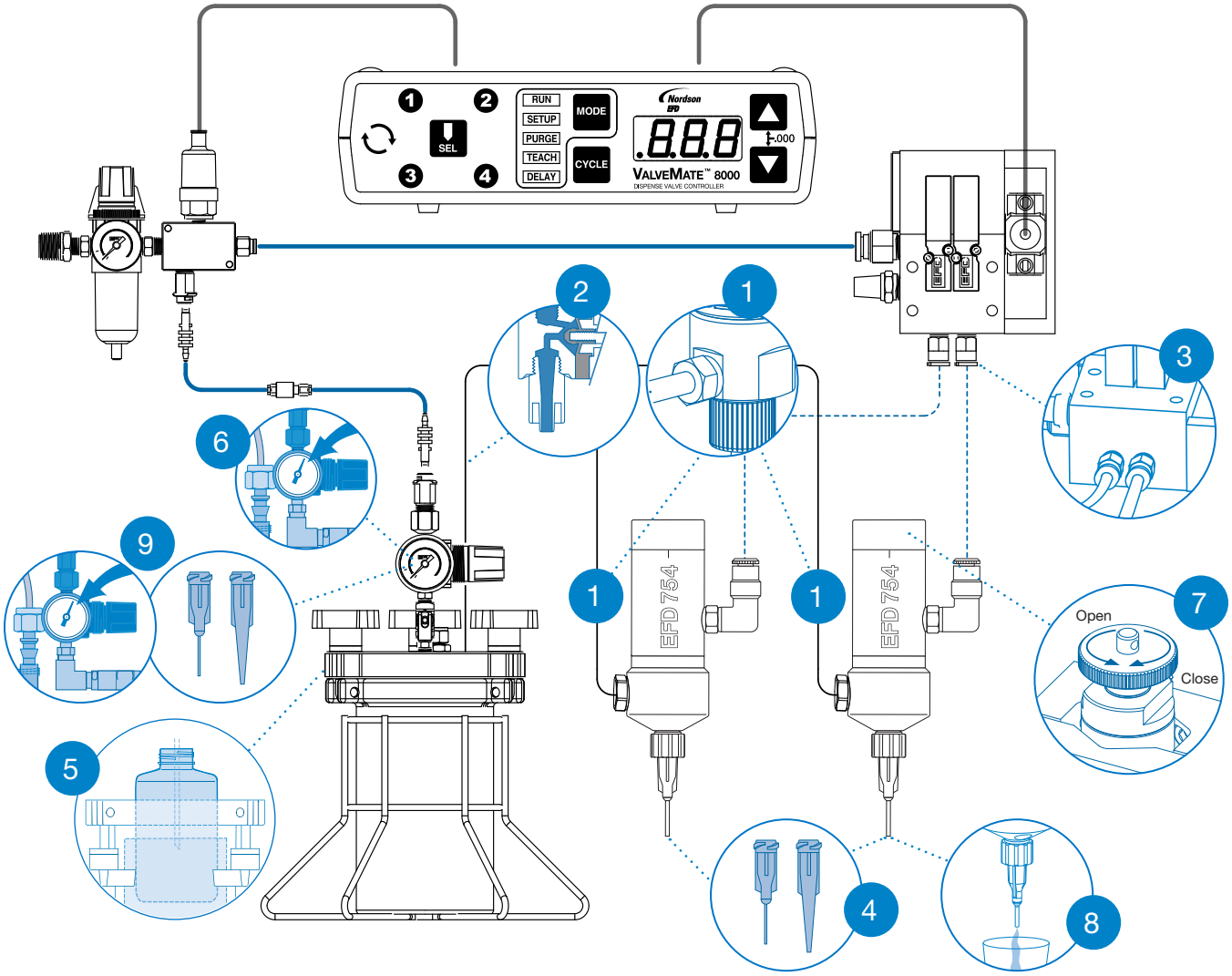
Installation

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

1. Connect the fluid supply line to the valve.
2. Connect the fluid supply line to the reservoir.
3. Connect the valve control air hose to the ValveMate™ 8000 (solenoid pack) used to control valve open time.
4. Choose a dispensing tip—small tips (20 gauge) for low-viscosity fluids and larger (14 gauge) for higher viscosities.
5. Fill the reservoir by pouring fluid directly into the tank liner or 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 or higher for thick fluids.
7. Set the diaphragm stroke starting with 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, diaphragm stroke, or changing the dispensing tip.

*Do not overtighten 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.

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

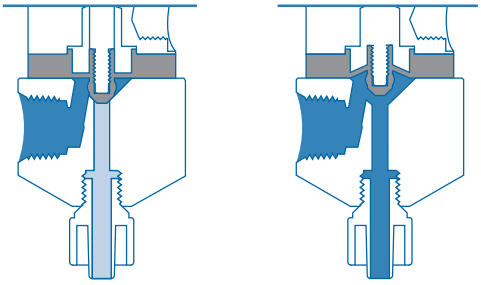


How the Valve Operates

Input air pressure at 70 psi (4.8 bar) forces the internal piston to move.

The piston rod pulls open the diaphragm seal, permitting fluid flow. When the input air pressure is relieved, the spring retracts the piston and the diaphragm closes. 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, the dispensing tip size and the diaphragm stroke.

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



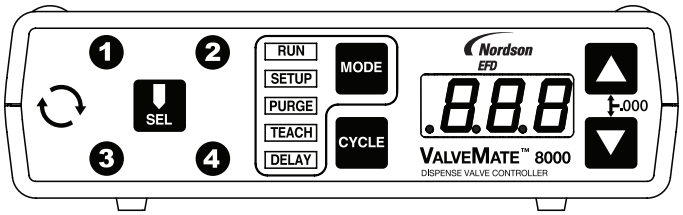
Closed Open

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

ValveMate Concept

The ValveMate 8000 controller 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 ValeMate 8000 controller features micro-processor circuity 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.

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 and BackPack dispense valves.

Contact Nordson EFD for details.

Specifications

NOTE: Specifications and technical details are subject to change without prior notification.

Item	Specification
Size	77.5L x 26.9DIA mm (3.05L x 1.06DIA")
Weight	193.3 g (6.8 oz)
Actuating air pressure required	4.8–6.2 bar (70–90 psi)
Maximum fluid pressure	4.8 bar (70 psi)
Fluid inlet	5/16-24 UNF
Mounting	None
Cycle rate	Exceeds 500 per minute
Air cylinder body	316L stainless steel
Fluid body	316L stainless steel
Piston	316L stainless steel
Diaphragm	PTFE
Tip retaining nut	316L stainless steel
Maximum operating temperature	43° C (110° F)
Maximum temperature — autoclaving	260°C (500°F) **NOTE:** The valve PTFE diaphragm should not stay in the autoclaving process longer than 15 minutes to prevent diaphragm warping.

All stainless steel parts are passivated.

Nordson EFD

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