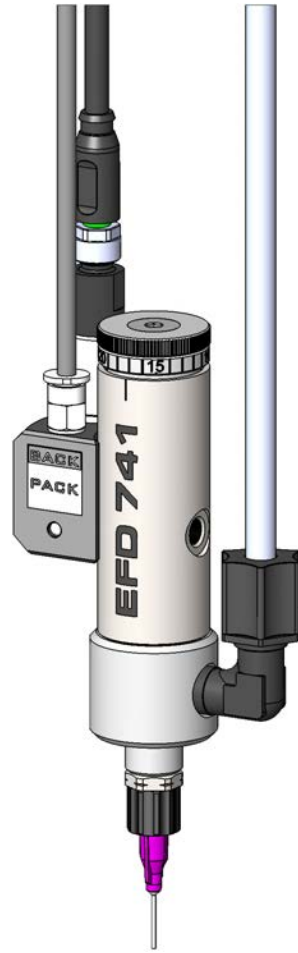


# 741 Series – BackPack™ Valve Actuator

## Operating Manual



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

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## The Nordson EFD Pledge

Thank You!

You have just purchased the world’s finest precision dispensing equipment.

I want you to know that all of us at Nordson EFD value your business and will do everything in our power to make you a satisfied customer.

If at any time you are not fully satisfied with our equipment or the support provided by your Nordson EFD Product Application Specialist, please contact me personally at 800.556.3484 (US), 401.431.7000 (outside US), or [Srini.Subramanian@nordsonefd.com](mailto:Srini.Subramanian@nordsonefd.com).

I guarantee that we will resolve any problems to your satisfaction.

Thanks again for choosing Nordson EFD.

*Srini Subramanian*  
Srini Subramanian, General Manager

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## Introduction

The 741V BackPack Series needle valves are simple to use and will operate many millions of cycles without maintenance. Incorporating advanced miniature solenoid technology with actuation speeds as low as 5–6 milliseconds, cycle rates exceeding 80 hertz can be achieved. Fast valve actuation speeds result in extremely small deposit capability.

Direct mounting of the BackPack Valve Actuator pod to the valve's actuating air cylinder body improves process variation for better dot-to-dot consistency. BackPack's low profile, compact design provides clearance for optimum center-to-center mounting.

Made of lightweight materials for easy end-of-arm installations, the BackPack Valve Actuator pod can also retrofit to all 741V Series model valves. The BackPack Valve Actuator is designed for easy removal and maintenance.

Each valve is shipped with a BackPack Valve Actuator pod, dispensing tip adapter, fluid inlet fitting and 5-foot actuating air hose, and tip kit.

## Specifications

|                              |  |
|------------------------------|--|
| <b>Electrical input:</b>     | 24 VDC, 4 W  |
| <b>Air input:</b>            | 4.8–6.2 bar (70–90 psi)  |
| <b>Min. actuation time:</b>  | 5 milliseconds   |
| <b>Max. actuation time:</b>  | Continuous ON  |
| <b>Cycling frequency:</b>    | 60–80 Hz   |
| <b>BackPack material*:</b>   |  |
| <b>Housing:</b>              | Anodized aluminum  |
| <b>Mounting bolt:</b>        | 303SS  |
| <b>O-rings:</b>              | Buna-N   |
| <b>BackPack dimensions*:</b> | 22.20 X 26.7 x 24.10 mm<br>(0.874" deep X 1.05" high x 0.95" wide) |
| <b>Weight:</b>               |  |
| <b>BackPack only:</b>        | 52.635 g (1.85 oz)   |
| <b>741V-SS-BP:</b>           | 370.1 g (13.05 oz)   |

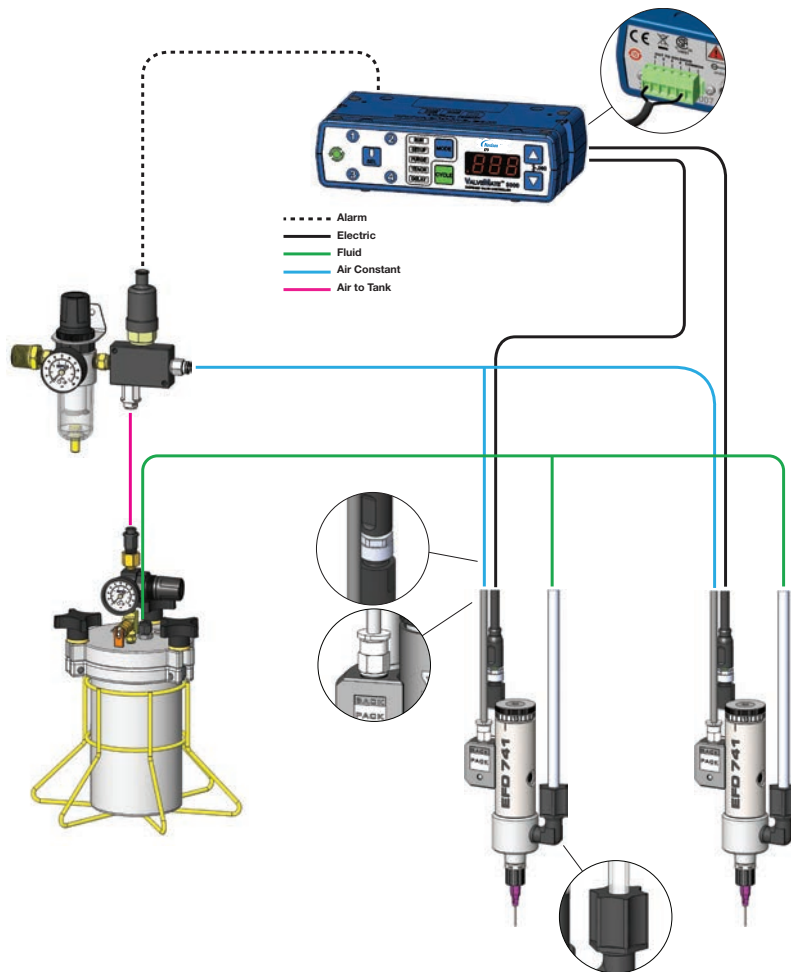
**\*NOTE:** Refer to 741V Installation Guide for complete valve specifications.

## Installing the Backpack Valve Actuator

1. Mount the Backpack 741V Dispense Valve
2. Interconnect the Backpack to the ValveMate™ 8000 controller using the cable supplied.
3. Connect a regulated and filtered air supply to the Backpack push-in fitting.
4. Supply pressure to the Backpack should be set to 4.8–6.2 bar (70–90 psi).

### Important Note: Installing the Dispense Valves

All EFD valves are supplied with an installation manual. The manual will explain the operation of the valve and also how to set up the valve with the fluid reservoir.



## Final Setup Checklist

1. Air pressure to BackPack is set to 4.8–6.2 bar (70–90 psi).
  2. BackPack and I/O are wired correctly.
  3. Valves and fluid reservoir are properly connected.
  4. Valves are set up and dispensing tips installed in accordance with the dispense valve installation guide.
  5. Turn ValveMate 8000 power ON. Confirm indicator lamps and LED display are lit.
- NOTE:** The ValveMate 8000 is not equipped with an ON / Off switch and remains in ON condition as long as input power supply voltage is maintained.

## Valve Disassembly and Reassembly Procedures

### BackPack Removal from Valve

1. Loosen mounting screw to release BackPack from valve air cylinder body.  
Caution: Don't fully remove mounting screw from BackPack housing. Be careful not to lose mounting screw face seal O-ring.

### Replace Bullet Valve

2. Remove spiral wrap (if used) around BackPack wires and air hose.
3. Unplug air line from BackPack.
4. Disconnect solenoid cable wires from ValveMate 8000 or other control device.
5. Engage wrench flats on bullet valve and rotate counterclockwise to remove. When loose, pull bullet valve up to release.
6. Replace bullet valve by rotating clockwise until fully tightened.
7. Reconnect wires and air line to BackPack.

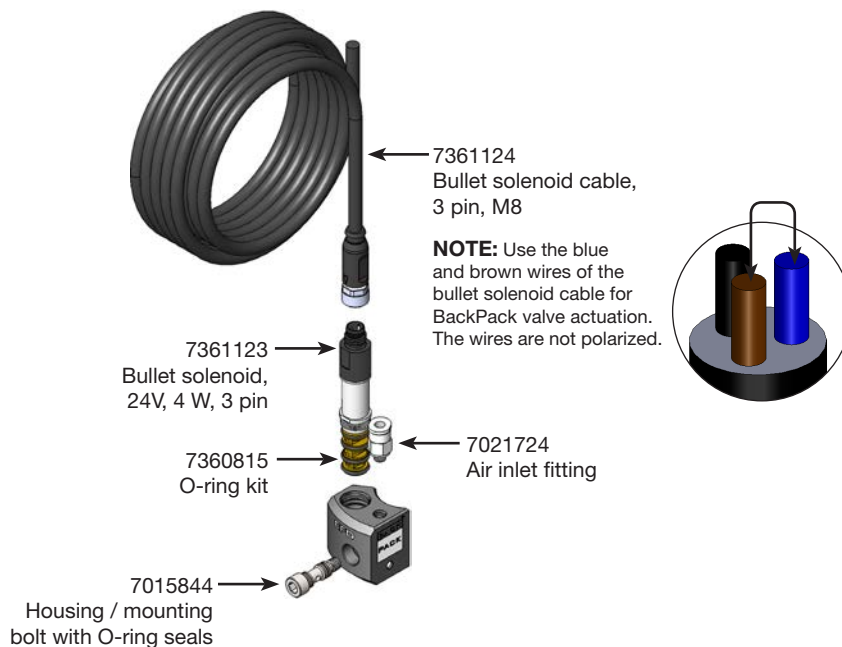


## Troubleshooting Guide

| Trouble   | Solution   |
|---|--|
| BackPack Valve Actuator won't cycle             | Confirm main air supply is ON                          |
|   | Inspect cable wires for loose connection or damage     |
|   | Replace bullet valve                                   |
| Air leakage from BackPack housing               | Check if housing is loose. Re-tighten.                 |
|   | Check mounting bolt for damaged O-ring seals. Replace. |
|   | Check bullet valve O-rings for damage                  |
| Cable wires are broken at solenoid bullet valve | Replace bullet valve                                   |

If trouble cannot be corrected, or if you need further assistance, please contact us.

## Replacement Parts



## NORDSON EFD ONE YEAR LIMITED WARRANTY

Nordson EFD products are warranted for one year from date of purchase to be free from defects in material and workmanship (but not against damage caused by misuse, abrasion, corrosion, negligence, accident, faulty installation or by dispensing material incompatible with equipment) when the equipment is installed and operated in accordance with factory recommendations and instructions. Nordson EFD will repair or replace free of charge any part of the equipment thus found to be defective, on authorized return of the part prepaid to our factory during the warranty period. In no event shall any liability or obligation of Nordson EFD arising from this warranty exceed the purchase price of the equipment. This warranty is valid only when oil-free, clean, dry, filtered air is used.

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