



Sealed Valve

Although good Industrial practices always demand the use of filtered, clean air to ensure smooth operation, consideration need to also be given to environmental ingress into the valves through the exhaust ports and the solenoid operators.

There are a few key areas of any valve that, if left unprotected, can put solenoid valve reliability at risk due to ingress issues. We particularly recommend protecting all exhaust ports, body and the solenoid when specifying a valve.

Exhaust Protection

DE –The ideal solution should provide a solid seal against ingress when the exhaust port(s) are inactive while also providing maximum valve flow when exhausting. The dust, dirt, and moisture excluder is fitted onto the exhaust port and only open when the valve is exhausting.

DG/DD – The Dust Proof option removes the external vent from behind the pilot piston, and instead directs the air through a gallery in the valve plunger into the spring cap, thereby creating a closed loop. By removing the vent, any possible dust and/or moisture intrusion is eliminated.

Solenoid Protection

PC – Solenoid operators are significantly vulnerable to the effects of unwanted ingress. One option is to pot the solenoid coil in the housing using epoxy resin to ensure moisture protection. The option -PC is available to add this protection to our XX and XN solenoid operators.

The second option is to select a solenoid operator that makes use of a sealed housing to achieve ingress protection. The XDB, XV, and XT solenoid operators are rated to IP68, giving complete protection to the electrical components.

D14 – The D14 Dust and moisture excluder for the solenoid pilot exhaust port is comprised of a flexible seal sitting in a chamfered groove covering several exhaust drillings. When the solenoid exhausts, the seal flexes to allow the air to pass. Once exhausting is complete, the dust excluder again seals off the internals from the environment.

Stepping It Up

Many of our solenoid operators are already IP rated to IP68, but when combined with the D14 exhaust port protection and the DG/DD dust proof assembly (with no external venting), we can certify our complete valve with an IP65 rating. This gives total protection against dust and low-pressure water jets from all angles.



General Specifications V-Brass

Description:	¼-1" NPT Brass Solenoid valve
Function:	3 & 4-Way
Actuator:	Solenoid/Spring
Pressure:	Based on Option selected
Flow:	1.8 - 11.1 CV
Temperature:	-40°F to 122°F (-40°C to 50°C) (-44 Suffix)
Ports:	¼ - 1" npt
Media:	Air, Inert Gas, Natural Gas & Hydraulic
Materials;	
Body:	Forged Brass
Actuators:	Brass
Seals:	Buna
Options:	
Low temp Buna:	Suffix -44

General Specifications V-316

Description:	¼-½" 316 Stainless Steel Solenoid valve
Function:	3 & 4-Way
Actuator:	Solenoid/Spring
Pressure:	Based on Option selected
Flow:	1.8 - 5.5 CV
Temperature:	-40°F to 149°F (-40°C to 65°C) (-44 Suffix)
Ports:	¼ - ½" npt
Media:	Air, Inert Gas, Natural Gas & Hydraulic
Materials;	
Body:	316 Stainless Steel
Actuators:	316 Stainless Steel
Seals:	FKM
Options:	
Low temp Buna:	Suffix -44





Real World Reliability Matrix

V SG - 3 5 2 1 - 316 - PWR - XXN4 - Voltage

V = V Series brass or stainless steel.

SG = Solenoid Spring Return
AA = RAK
SA = PWR

3 = Three-way
4 = Four-way

3 = 1/4" NPT Series V or V-316
4 = 3/8" NPT Series V or V-316
5 = 1/2" NPT Series V or V-316
6 = 3/4" NPT Series V or V-316
7 = 1" NPT Series V or V-316

2 = Threaded sideports Inpilot solenoid

1 = 3-Way NC
2 = 4-Way/2-Position

Add "316" for stainless steel valves. Leave blank for brass valves

Valve Reliability Packages

-NGS: -S, -10, -31, -55M, -155
-NGST: -S, -10, -31, -55M, -155, -44
-B894: -S, -10, -31, -55C, -155,
-B895: -10, -31, -55C, -155

Temperature

-44 Low Temp -40°F
-PLR Extreme Low Temp -67°F

Diagnostic

-20 Remote sensor port
-407 Spring cap proximity switch port

Power Shift

-PWR:
-SS Super strong spring
-DP Double pilot piston on solenoid actuator

Dust Proof

-DD Plunger, drilled end to end, (protective seals between body/caps)
-DG Plunger, drilled end to end

XXN4:

-XX Explosion-proof solenoid operator
-D14 Water & dust excluder / silencer Assembly
-LB 1.8 Watt
-PC NEMA 4X

Additional solenoid packages available; consult factory.