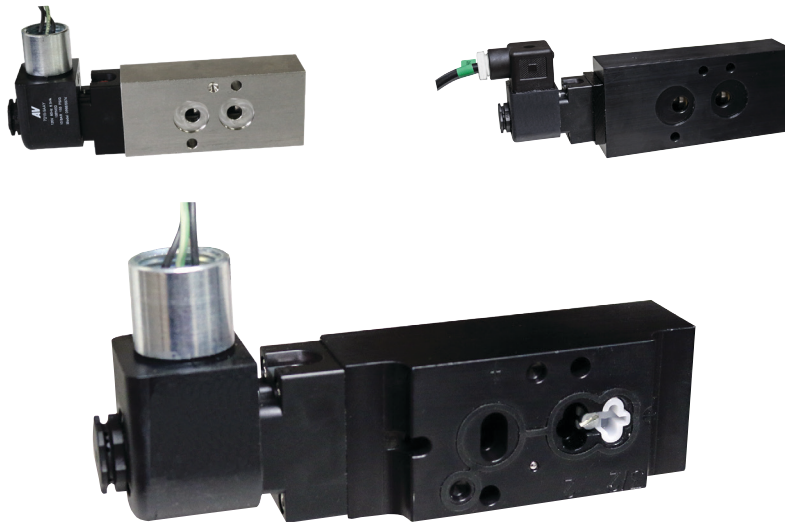




EXPLOSION-PROOF NAMUR INTERFACE VALVES



PRODUCT CATALOG

NAMUR Interface Explosion-Proof Valves

Product Overview

NAMUR interface valves are direct mounted to pneumatic actuators, and are used as pilot valves to control the actuator in many flow processes.

Explosion-Proof Valves are used in hazardous locations where a high level of protection from explosion is required, to prevent potentially explosive situations. The AV Explosion-Proof solenoid pilot controlled valves are ideal for applications in a wide range of industries and environments where safety from electrical ignition of flammable gases, vapors, flammable liquids, combustible dust, or easily ignitable fibers is a concern.



Illustration examples.

VALVE FEATURES

Compact Design	Balanced spool construction, compact size, low profile and high performance
Solenoid Pilot	Pilot uses full air line pressure to shift the valve Solenoid guaranteed against burnout
Explosion-Proof Coil	Contain any spark originating from within the coil or housing preventing the ignition of any flammable material in the surrounding environment, resulting in a larger explosion
Tapered Tee-Seal	Bidirectional tapered Tee-Seal eliminates sticking problems Tested tough & proven reliable according to SAE specifications: rust & water injected every 864,000 cycles for 20-million cycle
Manual Override	Allows the solenoid valve to be used manually in case of electrical failure, or for quick cycle testing
External Pilot Supply	Easily field convertible to external pilot supply

Custom options available, consult AVI.

Applicable Requirements	C22.2 No. 0-10 - General Requirements - Canadian Electrical Code, Part II; CSA C22.2 No. 25-1966 - Enclosures for use in Class II Groups E, F and G Hazardous Locations; CSA C22.2 No. 142-M1987 - Process Control Equipment; C22.2 No. 213-M1987 - Nonincendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations; CAN/CSA E79-0-95 - Electrical apparatus for explosive atmospheres, Part 0: General requirements; CAN/CSA E79-18-95 - Electrical apparatus for explosive atmospheres, Part 18: Encapsulation "m".
APPROVED for use in the following Hazardous Locations	Ex m II T4 and Division 1 – Specifications in accordance to CSA certificate: Class I, Division 1, Groups A, B, C and D; Class II, Groups E, F and G; Class III; Class I, Division 2, Groups A, B, C, D
Specifications in accordance to FM certificate	Explosion-proof Class I, Division 1, Groups A, B, C, D, T4, Ta = 60°C (encapsulation/explosion-proof Class I, Zone 1, AEx m II T4, Ta = 60 °C; dust-ignition-proof for Class II/III, Division 1, Groups E, F and G, T4, Ta = 60°C); Nonincendive Class I, Division 2, Groups A, B, C, D, T4, Ta = 60°C; Suitable for Class II, III, Division 2, Groups E, F, G, T4, Ta = 60°C CSA CLASS 2258 02 – process control equipment – for hazardous locations FM CLASS 3600, 3611, 3615, 3810 – hazardous (classified) location electrical equipment
Specifications in accordance to ATEX certificate	PTB 04 Ex IE CEx 04.0002X PTB 03 ATEX2018X Up to Temperature Class T5

Actuation	Function	Port Size	Series		Maximum Flow C _v (NI/min)	Page
		1/4	D06	D20		
Solenoid Pilot	3/2	●	●	●	1.8 (1800)	4 – 7
	5/2	●		●	1.8 (1800)	8 – 11
	5/3	●		●	1.4 (1400)	12 – 14
Accessories						15 – 17

STANDARD SPECIFICATIONS					
GENERAL	Function	3/2 Valve	Normally Closed		
		5/2 Valve			
		5/3 Valve	Closed Center, Open Center, Power Center		
	Construction Design	Spool			
	Actuation	Electrical	Solenoid Pilot Controlled		
	Mounting	Direct Mount; NAMUR Interface (according to the standard VDI/VDE 3845)			
		Mounting Kit	5 mm Fasteners		
	Connection	Threaded Port	NPT		
G					
Manual Override	Optional; Locking or Non-Locking				
OPERATING CONDITIONS	Temperature	Standard Temperature	Ambient	-20° to 123°F (-29° to 50°C)	
			Media		
		Low Temperature	Ambient	-40° to 123°F (-40° to 50°C)	
			Media		
	For temperatures below 40°F (4°C) air must be free of water vapor to prevent formation of ice.				
	Flow Media	Filtered air			
	Operating Pressure	3/2 Valves	D06 Series	0 to 150 psig (0 to 10.3 bar)	
			D20 Series	35 to 150 psig (2.4 to 10.3 bar)	
5/2 Valves		35 to 150 psig (2.4 to 10.3 bar)			
5/3 Valves		50 to 150 psig (3.4 to 10.3 bar)			
External Pilot Supply Pressure	3/2 Valves	35 to 150 psig (2.4 to 10.3 bar)			
	5/2 Valves				
	5/3 Valves	50 to 150 psig (3.4 to 10.3 bar)			
ELECTRICAL DATA FOR SOLENOID PILOT	Solenoids	Current Flow	Operating Voltage		Power Consumption (each solenoid)
			AC	120 volts, 60 Hz	
		240 volts, 60 Hz		6.8 VA	
		DC	24 volts		4.5 watts
			12 volts		
	Rated for continuous duty				
	Enclosure Rating	IP65			
Electrical Connection	CSA, FM Certified Coil		1/2" Conduit coil with 24" leads		
	ATEX Certified Coil		Strain Relief with 10 feet (3 meter) cord		
CONSTRUCTION MATERIAL	Valve Body	Aluminum Bar Stock			
		Stainless Steel			
	Solenoid Body	Polyamid 66			
	Spool	Aluminum			
Seals	Buna-N				
	Fluoroelastomer				
SAFETY DATA	Safety Integrity Level (SIL)	Certified by SGS-TÜV Saar in accordance to IEC 61508 safety integrity level 2 (SIL 2) in singular application with HFT = 0, and SIL 3 and PL e in redundant application with HFT ≥ 1.			

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

PRODUCT CREDENTIALS				
Functional Safety Approval FUNKTIONALE SICHERHEIT GEPRÜFT FUNCTIONAL SAFETY APPROVED	Safety Integrity Level Per IEC 61508:2001 <i>Up to</i> SIL 3 Functional Safety	Certifications ATEX Factory Mutual APPROVED	Declaration of Conformity 	Certificate of Compliance

Ordering Information

3/2 Valves for Standard Temperature Applications

MODEL NUMBER CONFIGURATOR

3-Way 2-Position Valves

D20

03

G

AWR

-

DB

Y

Valve Function
3/2
Normally Closed

Mounting Kit

5 mm Fasteners
(Leave Blank)

10-24 **8**

10-32 **9**

Series	Port Size	Valve Body Height	
D06	1/4	1"	03
D20	1/4	1-1/4"	03
		1"	13

Series	Actuation	Location	
D06	Single Solenoid	Top	AWR
D20	Single Solenoid	Left	CWR
		Right	AWR

Current	Voltage*	
DC	24 V	DB
	12 V	DA
AC	120 V, 60 Hz	AA
	240 V, 60 Hz	AB

* For other voltages consult AV.

Seals Material	
Buna-N (Leave Blank)	
Fluoroelastomer	A

Pilot Supply	
Internal (Leave Blank)	
External	B

Dustproof (Vent Ports)	
None (Leave Blank)	
With Dustproof	D

Manual Override

Push, Non-Locking
(Leave Blank)

Push Turn-Locking **1**

Extended Turn-Locking **2**

No Override **4**

Coil Certification

CSA / FM **Y**

ATEX **Z**

Port Thread

NPT
(Leave Blank)

G **W**

Body Material

Aluminum Bar Stock
(Leave Blank)

Stainless Steel Grade 303 **S**

Stainless Steel Grade 316 **SS**

Transition Plate *

None
(Leave Blank)

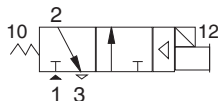
Transition Plate for D2003 Model only **P**

* Designed for use in situations where the sealing face of the solenoid valve extends beyond the mounting surface.

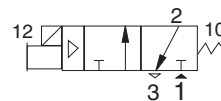
Model Number examples: D2013GAWR-DBY, D2003GAWR-DBASWZ.

Valve Schematic

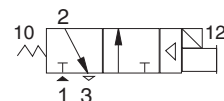
Single Solenoid



Single Solenoid – Left Pilot



Single Solenoid – Right Pilot



3/2 Valves for Low Temperature Applications

MODEL NUMBER CONFIGURATOR

3-Way 2-Position Valves

D20 **03** **G** **AYR** **-** **DB** **K**

Valve Function
3/2
Normally Closed

Series	Port Size	Valve Body Height	
D06	1/4	1"	03
D20	1/4	1"	13

Series	Actuation*	Location	
D06	Single Solenoid	Top	AYR
D20	Single Solenoid	Left	CYR
		Right	AYR

* CSA / FM Certified Coil.

Current	Voltage*	
DC	24 V	DB
	12 V	DA
AC	120 V, 60 Hz	AA
	240 V, 60 Hz	AB

* For other voltages consult AV.

Pilot Supply	
Internal (Leave Blank)	
External	B

Dustproof (Vent Ports)	
None (Leave Blank)	
With Dustproof	D

Mounting Kit	
5 mm Fasteners (Leave Blank)	
10-24	8
10-32	9

Manual Override	
Push, Non-Locking (Leave Blank)	
Push Turn-Locking	1
Extended Turn-Locking	2
No Override	4

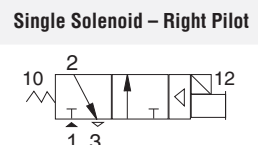
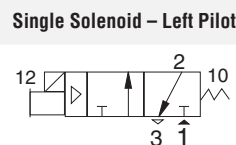
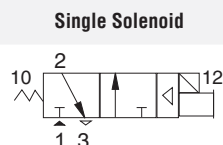
Port Thread	
NPT (Leave Blank)	
G	W

Body Material		
Aluminum Bar Stock (Leave Blank)		
Stainless Steel	Grade 303	S
	Grade 316	SS

Application	Seals Material
Low Temperature	Buna-N

Model Number examples: D2013GAYR-DBK, D2003GAYR-DBBKS1.

Valve Schematic

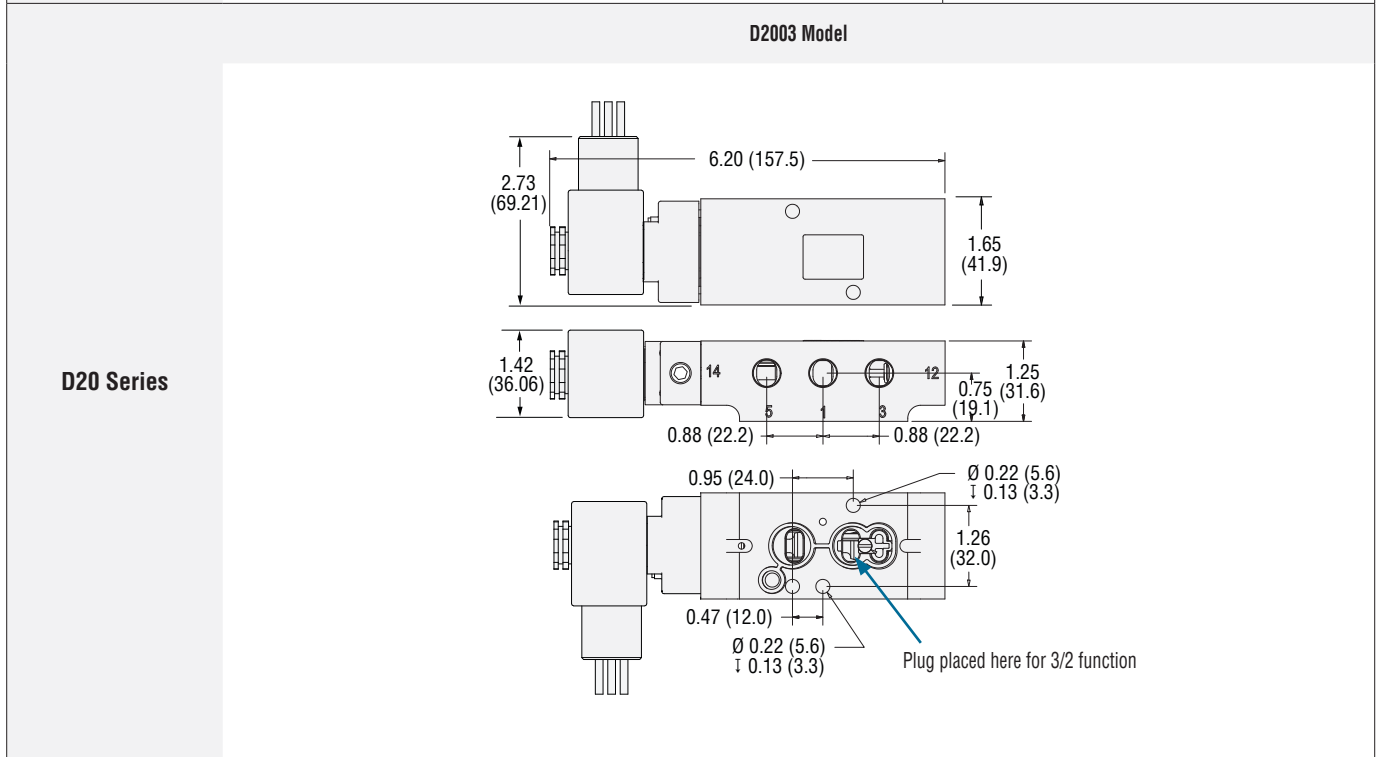
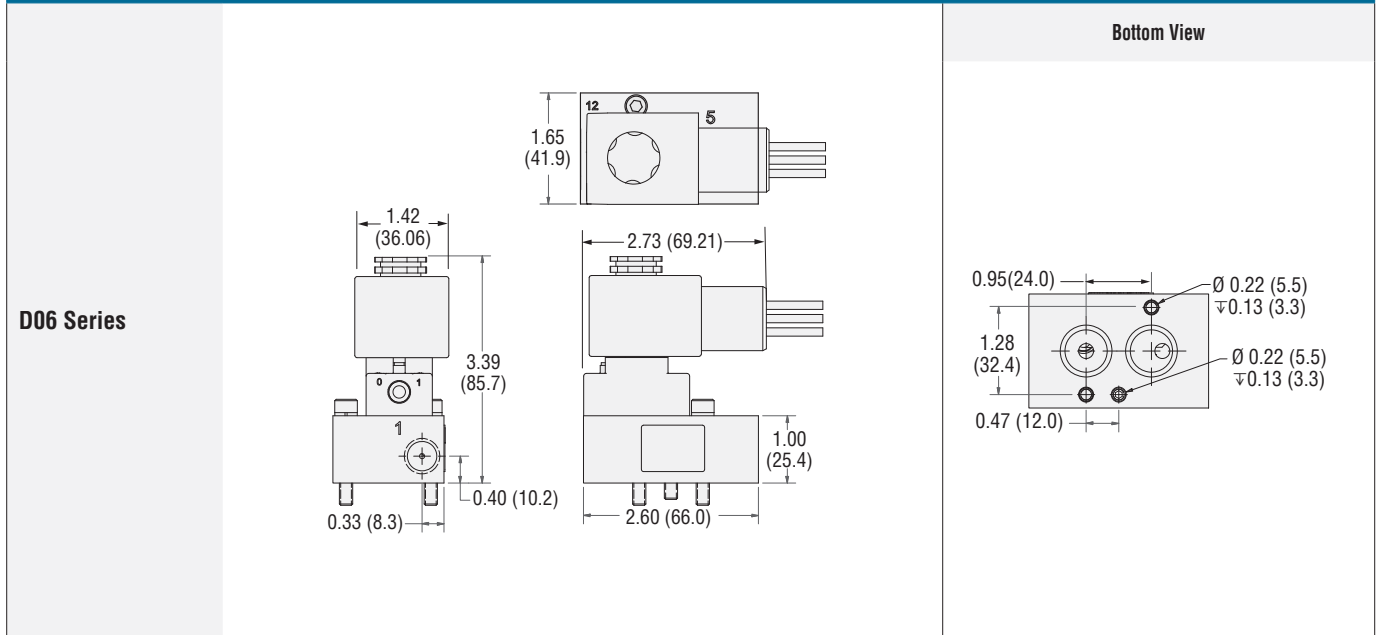


Valve Technical Data

3/2 Valves

Series	Size		Flow Cv (NI/min)	≈ Weight lb (kg)
	Port 1	Port 3		
D06	1/4	1/4	0.06 (59)	0.58 (0.26)
D20	1/4	1/4	1.8 (1800)	0.70 (0.32)

DIMENSIONS



Downloadable CAD models available.

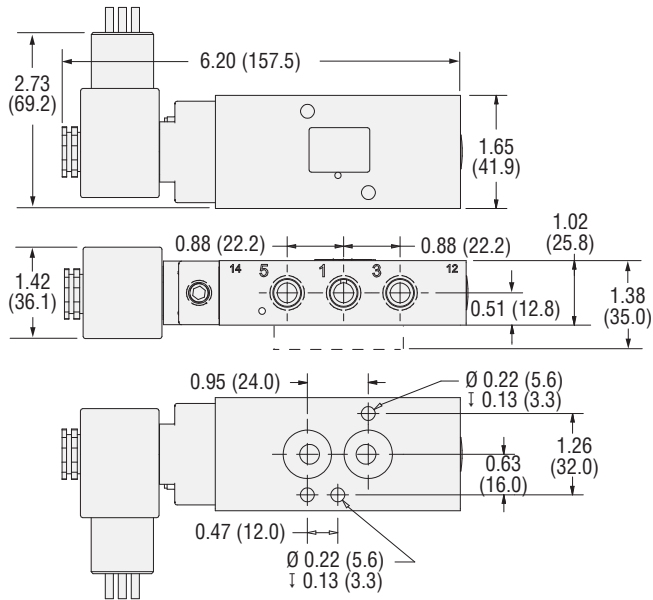
3/2 Valves

DIMENSIONS

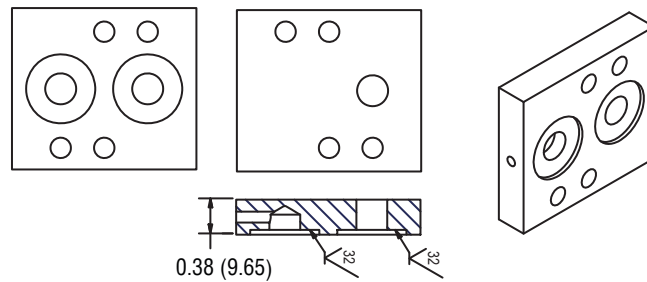
Inches (mm)

D2013 Model

D20 Series



3/2 Valve Conversion Plate (Included) 2013 Models only



Downloadable CAD models available.

Ordering Information

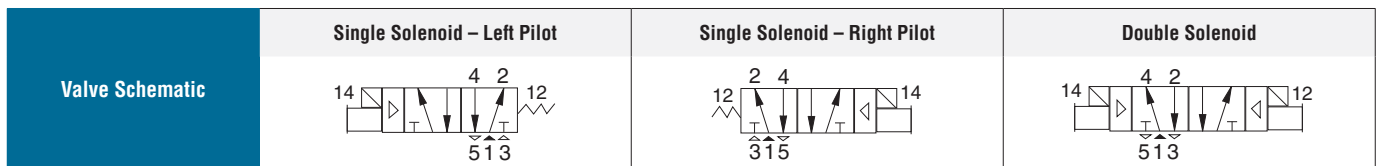
5/2 Valves for Standard Temperature Applications

MODEL NUMBER CONFIGURATOR

5-Way 2-Position Valves

D20	03	A	AWR	-	DB							Y		
Series	Valve Function 5/2													
Port Size	Valve Body Height													
1/4	1-1/4"	03												
	1"	13												
Actuation	Location													
Single Solenoid	Top		AWR											
Single Solenoid	Left		CWR											
	Right		AWR											
Double Solenoid			BWW											
Current	Voltage*													
DC	24 V		DB											
	12 V		DA											
AC	120 V, 60 Hz		AA											
	240 V, 60 Hz		AB											
* For other voltages consult AV.														
Seals Material														
Buna-N (Leave Blank)														
Fluoroelastomer			A											
Pilot Supply														
Internal (Leave Blank)														
External			B											
Dustproof (Vent Ports)														
None (Leave Blank)														
With Dustproof			D											
Coil Certification														
CSA / FM			Y											
ATEX			Z											
Port Thread														
NPT (Leave Blank)														
G			W											
Body Material														
Aluminum Bar Stock (Leave Blank)														
Stainless Steel	Grade 303		S											
	Grade 316		SS											
Transition Plate *														
None (Leave Blank)														
Transition Plate for D2003 Model only			P											
* Designed for use in situations where the sealing face of the solenoid valve extends beyond the mounting surface.														

Model Number examples: D2003AAWR-DBY, D2013AAWR-DBASSWZ.



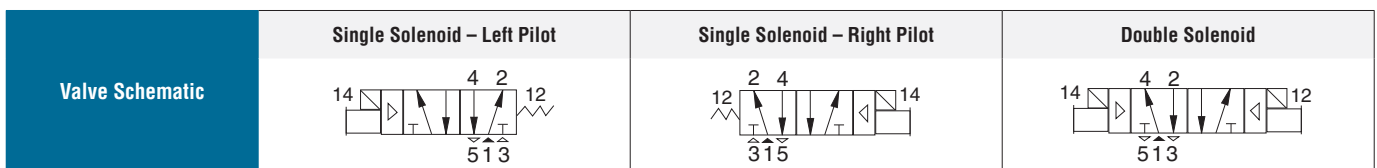
5/2 Valves for Low Temperature Applications

MODEL NUMBER CONFIGURATOR

5-Way 2-Position Valves

D20	03	A	AYR	-	DB			K				
Series	Valve Function 5/2											
Port Size 1/4	Valve Body Height 1"											
Actuation*		Location										
Single Solenoid		Left	CYR									
		Right	AYR									
Double Solenoid				BYR								
* CSA / FM Certified Coil.												
Current		Voltage*										
DC	24 V		DB									
	12 V		DA									
AC	120 V, 60 Hz		AA									
	240 V, 60 Hz		AB									
* For other voltages consult AV.												
Pilot Supply												
Internal (Leave Blank)												
External		B										
Dustproof (Vent Ports)												
None (Leave Blank)												
With Dustproof		D										
Mounting Kit												
5 mm Fasteners (Leave Blank)												
10-24										8		
10-32										9		
Manual Override												
Push, Non-Locking (Leave Blank)												
Push Turn-Locking										1		
Extended Turn-Locking										2		
No Override										4		
Port Thread												
NPT (Leave Blank)												
G										W		
Body Material												
Aluminum Bar Stock (Leave Blank)												
Stainless Steel										Grade 303		S
										Grade 316		SS
Application						Seals Material						
Low Temperature						Buna-N						

Model Number examples: D2003AAYR-DBK, D2013AAYR-DBDKSS1.



Valve Technical Data

5/2 Valves

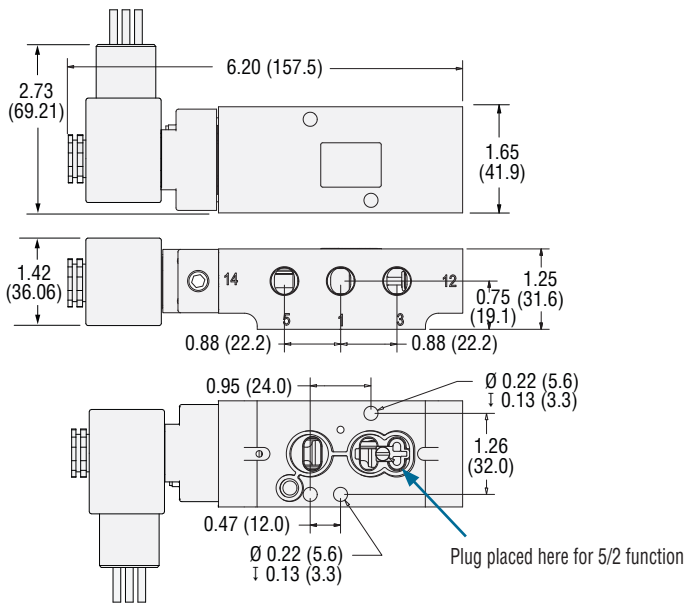
Solenoid	Size		Flow Cv (NI/min)	≈ Weight lb (kg)
	Port 1	Port 3, 5		
Single	1/4	1/4	1.8 (1800)	0.70 (0.32)
Double	1/4	1/4	1.8 (1800)	0.75 (0.34)

DIMENSIONS

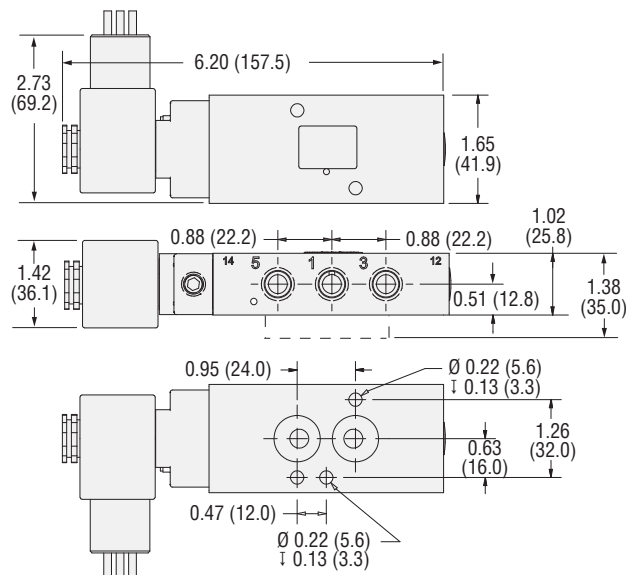
Inches (mm)

Single Solenoid Valve

D2003 Model



D2013 Model

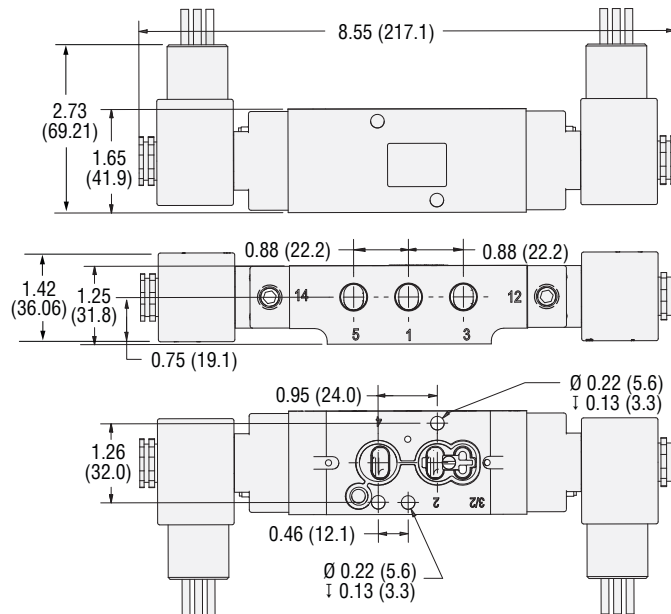


Downloadable CAD models available.

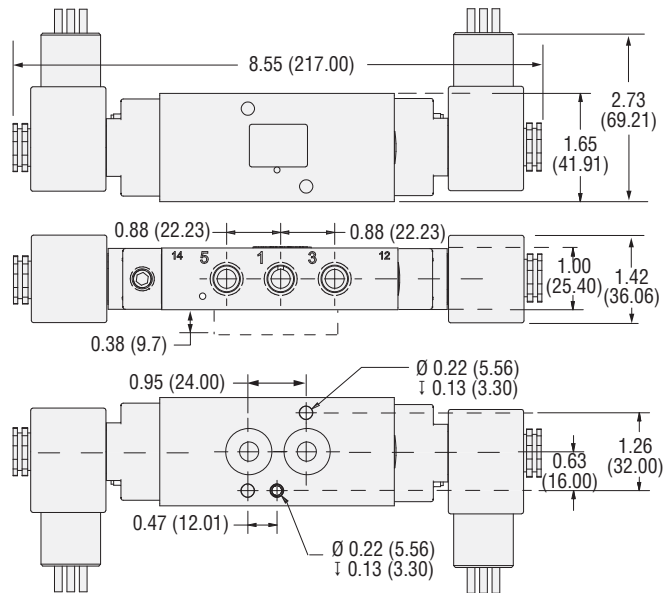
DIMENSIONS Inches (mm)

Double Solenoid Valve

D2003 Model

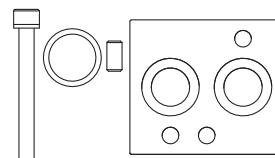


D2013 Model



Downloadable CAD models available.

Adapter Plate Included
(for D2013 Model only)



Ordering Information

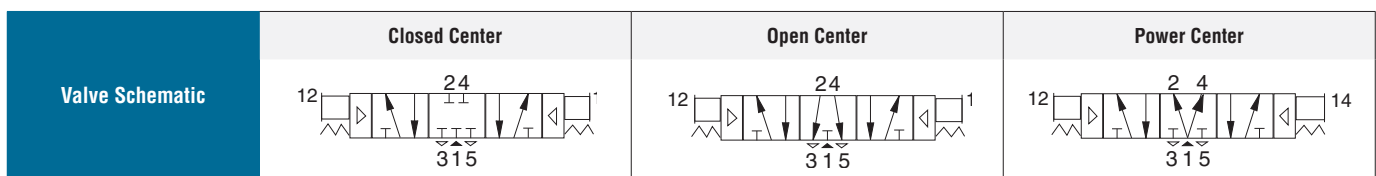
5/3 Valves for Standard Temperature Applications

MODEL NUMBER CONFIGURATOR

5-Way 3-Position Valves

D20	03	C	BWDW	-	DB							Y		
Series			Actuation Double Solenoid											
Port Size	Valve Body Height													
1/4	1-1/4"	03												
	1"	13												
Valve Function														
5/3 Closed Center		C												
5/3 Open Center		D												
5/3 Power Center		E												
Current	Voltage*													
DC	24 V	DB												
	12 V	DA												
AC	120 V, 60 Hz	AA												
	240 V, 60 Hz	AB												
* For other voltages consult AV.														
Seals Material														
Buna-N (Leave Blank)														
Fluoroelastomer		A												
Pilot Supply														
Internal (Leave Blank)														
External		B												
Dustproof (Vent Ports)														
None (Leave Blank)														
With Dustproof		D												
Mounting Kit														
5 mm Fasteners (Leave Blank)														
10-24		8												
10-32		9												
Manual Override														
Push, Non-Locking (Leave Blank)														
Push Turn-Locking		1												
Extended Turn-Locking		2												
No Override		4												
Coil Certification														
CSA / FM		Y												
ATEX		Z												
Port Thread														
NPT (Leave Blank)														
G		W												
Body Material														
Aluminum Bar Stock (Leave Blank)														
Stainless Steel	Grade 303	S												
	Grade 316	SS												
Transition Plate *														
None (Leave Blank)														
Transition Plate for D2003 Model only		P												

Model Number examples: D2003CBWDW-DBY, D2013DBWDW-DBASSWZ.



5/3 Valves for Low Temperature Applications

MODEL NUMBER CONFIGURATOR

5-Way 3-Position Valves

D20	03	C	BYDY	-	DB			K				
------------	-----------	----------	-------------	----------	-----------	--	--	----------	--	--	--	--

Series

Actuation
Double Solenoid
* CSA / FM Certified Coil.

Port Size	Valve Body Height
1/4	1"

Valve Function

5/3 Closed Center	C
5/3 Open Center	D
5/3 Power Center	E

Current	Voltage*	
DC	24 V	DB
	12 V	DA
AC	120 V, 60 Hz	AA
	240 V, 60 Hz	AB

* For other voltages consult AV.

Pilot Supply

Internal (Leave Blank)	
External	B

Dustproof (Vent Ports)

None (Leave Blank)	
With Dustproof	D

Mounting Kit

5 mm Fasteners (Leave Blank)	
10-24	8
10-32	9

Manual Override

Push, Non-Locking (Leave Blank)	
Push Turn-Locking	1
Extended Turn-Locking	2
No Override	4

Port Thread

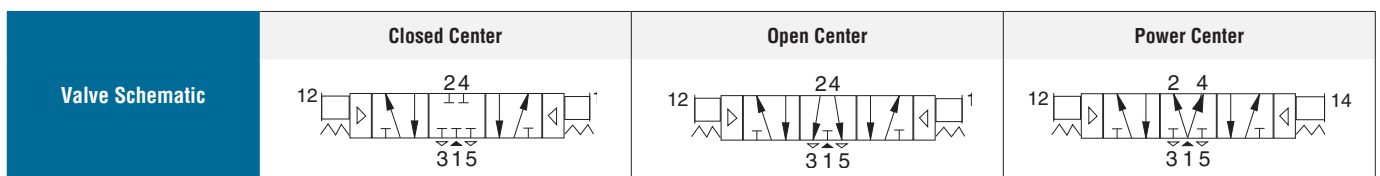
NPT (Leave Blank)	
G	W

Body Material

Aluminum Bar Stock (Leave Blank)		
Stainless Steel	Grade 303	S
	Grade 316	SS

Application	Seals Material
Low Temperature	Buna-N

Model Number examples: D2003CBYDY-DBK, D2013DBYDY-DBBKSSW2.



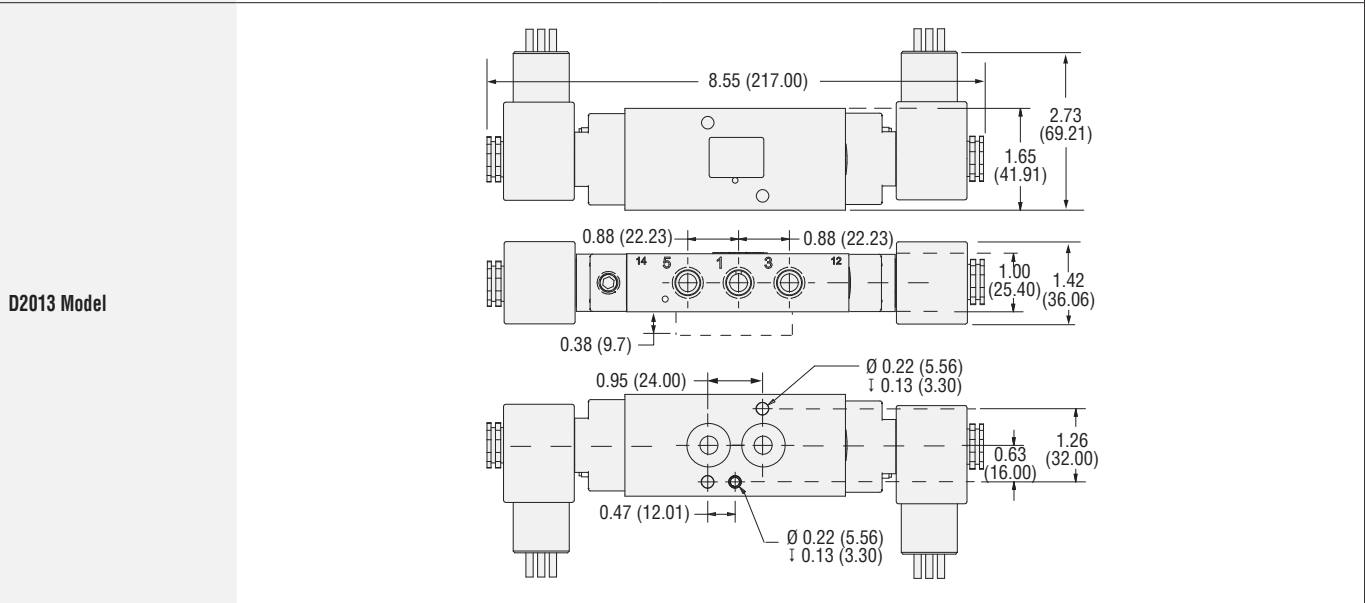
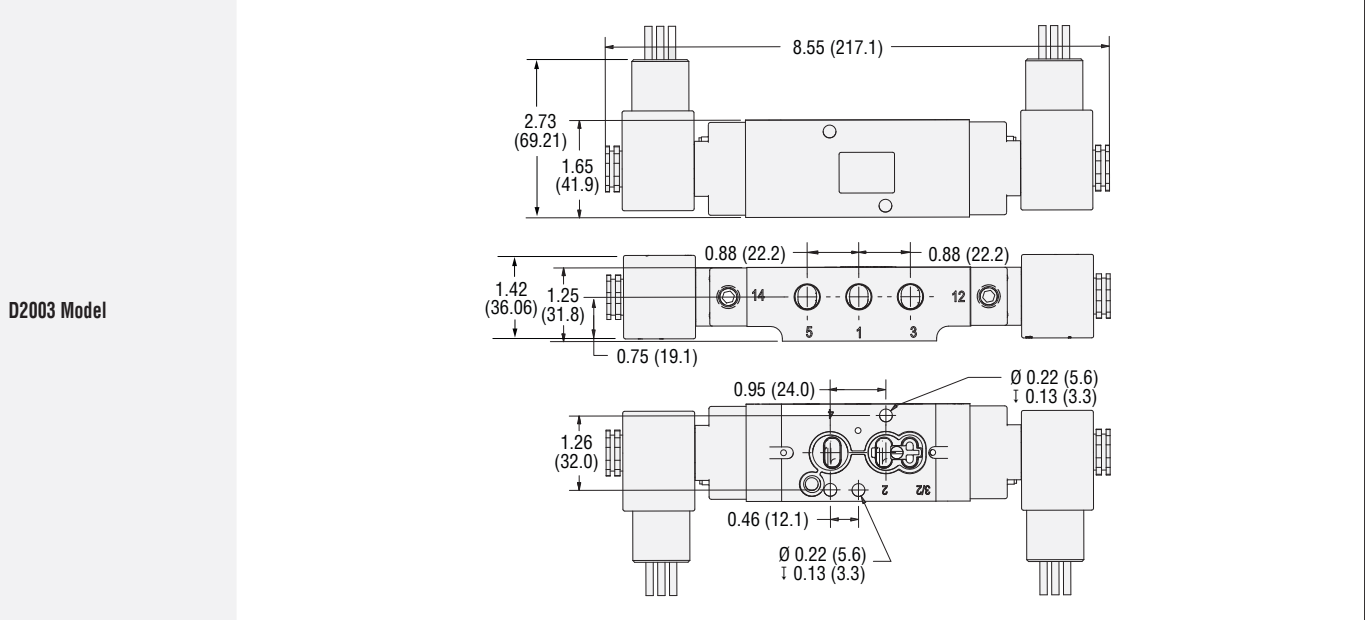
Valve Technical Data

5/3 Valves

Solenoid	Size		Flow Cv (NI/min)	≈ Weight lb (kg)
	Port 1	Port 3, 5		
Double	1/4	1/4	1.4 (1400)	0.80 (0.36)

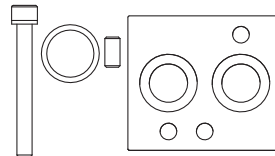
DIMENSIONS

Inches (mm)



Downloadable CAD models available.

Adapter Plate Included
(for D2013 Model only)



EXHAUST SILENCERS

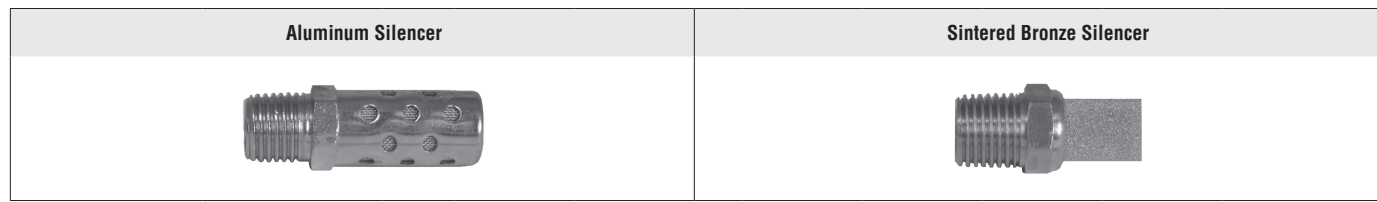


Illustration examples.

Silencers	Material	Port Size	Port Thread	Model Number	Flow C _v (NI/min)	Dimensions Inches (mm)		≈ Weight lb (kg)	Pressure Range psig (bar)
						Length	Hex Size		
	Aluminum	1/4	NPT - Male	84C-2	2.3 (2100)	1.69 (42.9)	0.56 (14.3)	0.04 (0.02)	0-300 (0-20) maximum
Sintered Bronze	1/4	NPT - Male	84D-2	0.7 (600)	1.31 (33.3)	0.56 (14.3)	0.03 (0.01)		

EXHAUST RESTRICTOR SILENCER



Illustration example.

Speed Control Silencers	Material	Port Size	Port Thread	Model Number	Flow C _v (NI/min)	Dimensions Inches (mm)		≈ Weight lb (kg)	Pressure Range psig (bar)
						Length	Hex Size		
Sintered Bronze	1/4	NPT - Male	266B-2	0.7 (600)	1.69 (42.9)	0.56 (14.3)	0.07 (0.32)	0-300 (0-20) maximum	

Accessories

TRANSITION PLATE (Option P)

Model Number	Option P – When ordering the plate with a valve.
A8021-339	The Transition Plate is designed for use in situations where the sealing face of the solenoid valve extends beyond the mounting surface. The minimum required mounting area measures 6,4 cm x 3,5 cm (2 1/2" x 1 3/8")


90° MOUNTING PLATE

Model Number	<ul style="list-style-type: none"> Allows horizontal installation of the directional control valve Orientates the valve 90° to the actuator
A8022-438	
Dimensions: Inches (mm)	


SPEED CONTROL VALVE

Model Number	<ul style="list-style-type: none"> Mounts between the Directional Control Valve and the Actuator Mounts on the NAMUR pad Functions as a flow control for both cylinder ports Is easily adjustable, turn the needles clockwise to decrease speed and counterclockwise to increase speed 	
A7106-554		
	Dimensions: Inches (mm)	
<p>Operating Pressure: 35 to 150 psig (2 to 10 bar)</p> <p>Operating Temperature: 0°F to +125°F (-18°C to +52°C)</p> <p>Weight: 0.16 lb (0.07 kg)</p>		

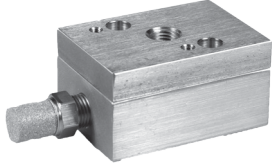
INTERPOSED LOCKOUT AND VENT VALVE

Description	Model Number	Dimensions Inches (mm)				
		Length (min)	Length (max)	Width	Height	
Mounts between the solenoid valve and actuator to prevent unintended air flow during maintenance.	D20-106	4.91 (124.7)	5.26 (133.5)	1.75 (44.5)	0.98 (24.9)	
NOTE: Per specifications and regulations, these products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.						


INTERPOSED LOCKOUT AND VENT VALVE

Description	Model Number	Dimensions Inches (mm)			
		Length	Width	Height	
Provides 1/4 NPT connections for mounting of remote control valves and accessories.	D20-114	2.76 (70.0)	1.97 (50.0)	0.75 (19.1)	

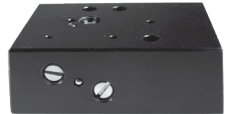
NAMUR QUICK EXHAUST

Description	Construction Material	Model Number	Dimensions Inches (mm)			
			Length	Width	Height	
Mounts between the control valve and actuator to improve closing speed and prevents corrosive atmospheres from being pulled into the spring chamber.	Aluminum	D20-111	3.76 (95.4)	1.97 (50.0)	1.82 (46.2)	
	Stainless Steel	D20-111S				

DUAL FLOW CONTROL

Description	Model Number	Dimensions Inches (mm)			
		Length	Width	Height	
Controls the speed of double acting actuator.	D20-112	2.76 (70.0)	50.0 (1.97)	0.75 (19.1)	

DUAL FUNCTION FLOW CONTROL

Description	Model Number	Dimensions Inches (mm)			
		Length	Width	Height	
Independently controls opening and closing speeds of spring return actuators.	D20-113	2.76 (70.0)	1.97 (50.0)	0.98 (24.9)	

ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the “ROSS Group”.

PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure all sources of energy are turned off, the entire pneumatic system is shut down and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).
2. All ROSS Group Products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any product can be tampered with and/or need servicing after installation, persons responsible for the safety of others or the care of equipment must check ROSS Group Products on a regular basis and perform all necessary maintenance to ensure safe operating conditions.
3. All applicable instructions should be read and complied with before using any fluid power system to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS Group location.
4. Each ROSS Group Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Group Products.

WARNINGS:

Failure to follow these instructions can result in personal injury and/or property damage.

FILTRATION and LUBRICATION

1. Dirt, scale, moisture, etc., are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. The ROSS Group recommends a filter with a 5-micron rating for normal applications.
2. All standard ROSS Group filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition and hazardous leakage. Immediately replace crazed, cracked, or deteriorated bowls.
3. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum base oils with oxidation inhibitors, an aniline point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with

phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks personal injury, and/or damage to property.

WARNINGS:

Failure to follow these instructions can result in personal injury and/or property damage.

AVOID INTAKE/EXHAUST RESTRICTION

1. Do not restrict air flow in the supply line. To do so could reduce the pressure of the supply air below minimum requirements for the valve and thereby causing erratic action.
2. Do not restrict a valve's exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

SAFETY APPLICATIONS

1. Mechanical Power Presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.
2. Safe Exhaust (dump) valves without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All Safe Exhaust valve installations should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.
3. Per specifications and regulations, the ROSS L-O-X® and L-O-X® with EEZ-ON®, N06 and N16 Series operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

WARNINGS:





Failure to follow these instructions can result in personal injury and/or property damage.

STANDARD WARRANTY

All products sold by the ROSS Group are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators (“FRLs”) which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods, warranted to be free of defects in material and workmanship. The ROSS Group's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Group freight prepaid.

THE WARRANTY EXPRESSED ABOVE IS IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES AND THE ROSS GROUP EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ROSS GROUP MAKES NO WARRANTY WITH RESPECT TO ITS PRODUCTS MEETING THE PROVISIONS OF ANY GOVERNMENTAL OCCUPATIONAL SAFETY AND/OR HEALTH LAWS OR REGULATIONS. IN NO EVENT IS THE ROSS GROUP LIABLE TO PURCHASER, USER, THEIR EMPLOYEES OR OTHERS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM A BREACH OF THE WARRANTY DESCRIBED ABOVE OR THE USE OR MISUSE OF THE PRODUCTS. NO STATEMENT OF ANY REPRESENTATIVE OR EMPLOYEE OF THE ROSS GROUP MAY EXTEND THE LIABILITY OF THE ROSS GROUP AS SET FORTH HEREIN.

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