

# Prospector® 2/2 & 3/2 way solenoid & pilot actuated poppet valves 3/8" ... 1"

- Exceptionally high flow
- High reliability
- Durable, robust construction
- Reversible seals



## Technical features and data – basic valve without solenoid operator

<b>Medium:</b> Filtered and lubricated compressed air	<b>Port size:</b> G 3/8, G 1/2, G 3/4 or G 1 3/8 PTF, 1/2 PTF, 3/4 PTF or 1 PTF	<b>Ambient temperature:</b> Solenoid pilot: -20°C ... +50°C [-4°F ... +122°F] Air pilot: -20°C ... +80°C [-4°F ... +176°F] Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).	<b>Materials</b> Body, piston, poppets and sub-base: aluminium alloy Operators: zinc or aluminium solenoid pilot operators, stainless steel or steel, reinforced polyester, brass or polyurethane, acetal, copper wire Elastomers: nitrile rubbers seals
<b>Operating pressure:</b> Pilot actuated 2 ... 10 bar (29 ... 145 psi) Solenoid actuated 0 ... 20 bar (0 ... 290 psi) air pilot	<b>Pilot port size:</b> G 1/4 for ISO G version only 1/4 PTF		
	<b>Mounting:</b> Through-holes in valve body		

## Technical data – solenoid operators

Type	22 mm solenoid valve with sub base inlet and outlet connections
Circuit function	3/2 Normally closed
Orifice	1,6 mm
Seal material	Flourine rubber
Body & coil material	Glass reinforced nylon
Nominal voltages	12, 24, 37.5, 52, 74, 96, 110 Volts
Port connection	Exhaust port M5 plugged with diffuser
Voltage tolerance	±10% of nominal
Electrical connection	3 pin industrial standard

Manual override	Turn and lock
Pressure range	2 ... 10 bar
Weight	0,01 kg
Fluid temperature range	-20 ... +90°C *1)
Ambient temperature range	-20 ... +50°C *1)
Duty cycle	100% ED
Opening/closing time	10 ... 20/5 ... 10 ms
Protection class	IP65 with connector

\*1) -40°C is available upon request

## Solenoid pilot valves – voltage codes and part numbering

Voltage	Power		Voltage code – solenoid pilot valve with manual override	Spare – replacement coil part number with manual override
	Inrush/hold			
24 V d.c.	7,5 W	–	83J	QM/48/83J/21
110 V a.c.	–	8 VA	88J	QM/48/88J/21
230 V a.c.	–	8 VA	89J	QM/48/89J/2

Note: Solenoid pilot valve without manual override also available – contact Norgren Technical service

## Accessories

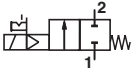
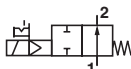
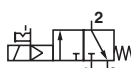
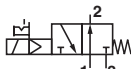


## Option selector

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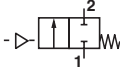
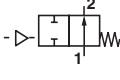
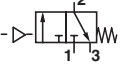
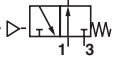
<table border="1"> <thead> <tr> <th>Function</th> <th>Substitute</th> </tr> </thead> <tbody> <tr> <td>2/2 NC</td> <td>A</td> </tr> <tr> <td>2/2 NO</td> <td>B</td> </tr> <tr> <td>3/2 NC</td> <td>D</td> </tr> <tr> <td>3/2 NO</td> <td>E</td> </tr> <tr> <td>Thread form</td> <td>Substitute</td> </tr> <tr> <td>BSPP</td> <td>A</td> </tr> <tr> <td>PTF</td> <td>1</td> </tr> <tr> <td>Basic body size</td> <td>Function</td> <td>Substitute</td> </tr> <tr> <td>1/2"</td> <td>A &amp; B</td> <td>01</td> </tr> <tr> <td>1/2"</td> <td>D &amp; E</td> <td>02</td> </tr> <tr> <td>1"</td> <td>A &amp; B</td> <td>02</td> </tr> <tr> <td>1"</td> <td>D &amp; E</td> <td>03</td> </tr> </tbody> </table>	Function	Substitute	2/2 NC	A	2/2 NO	B	3/2 NC	D	3/2 NO	E	Thread form	Substitute	BSPP	A	PTF	1	Basic body size	Function	Substitute	1/2"	A & B	01	1/2"	D & E	02	1"	A & B	02	1"	D & E	03	<table border="1"> <thead> <tr> <th>Voltage code</th> <th>Substitute</th> </tr> </thead> <tbody> <tr> <td colspan="2">For voltage code please see tables below Standard: with manual override</td> </tr> <tr> <td>Pilot operated</td> <td>AA</td> </tr> <tr> <td>Operation</td> <td>Substitute</td> </tr> <tr> <td>Solenoid</td> <td>C</td> </tr> <tr> <td>Air pilot or external pilot solenoid</td> <td>H</td> </tr> <tr> <td>Port size</td> <td>Substitute</td> </tr> <tr> <td>3/8"</td> <td>3</td> </tr> <tr> <td>1/2"</td> <td>4</td> </tr> <tr> <td>3/4"</td> <td>5</td> </tr> <tr> <td>1"</td> <td>6</td> </tr> </tbody> </table>	Voltage code	Substitute	For voltage code please see tables below Standard: with manual override		Pilot operated	AA	Operation	Substitute	Solenoid	C	Air pilot or external pilot solenoid	H	Port size	Substitute	3/8"	3	1/2"	4	3/4"	5	1"	6
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Solenoid pilot operated

Symbol	Valve size (inch)	Port size	Function	Flow (l/min)	Weight (kg)	Drawing No.	Model
	1/2	G 3/8	2/2 NC	3,351	0,98	1	AA013C-00-CE***
	1/2	3/8 PTF	2/2 NC	3,351	0,98	1	A1013C-00-CE***
	1/2	G 1/2	2/2 NC	5,224	0,98	1	AA014C-00-CE***
	1/2	1/2 PTF	2/2 NC	5,224	0,98	1	A1014C-00-CE***
	1/2	G 3/4	2/2 NC	6,407	0,98	1	AA015C-00-CE***
	1/2	3/4 PTF	2/2 NC	6,407	0,98	1	A1015C-00-CE***
	1	G 1	2/2 NC	13,307	1,97	2	AA026C-00-CE***
	1	1 PTF	2/2 NC	13,307	1,97	2	A1026C-00-CE***
	1/2	G 3/8	2/2 NO	3,746	0,98	1	BA013C-00-CE***
	1/2	3/8 PTF	2/2 NO	3,746	0,98	1	B1013C-00-CE***
	1/2	G 1/2	2/2 NO	5,323	0,98	1	BA014C-00-CE***
	1/2	1/2 PTF	2/2 NO	5,323	0,98	1	B1014C-00-CE***
	1/2	G 3/4	2/2 NO	6,21	0,98	1	BA015C-00-CE***
	1/2	3/4 PTF	2/2 NO	6,21	0,98	1	B1015C-00-CE***
	1	G 1	2/2 NO	15,18	1,97	2	BA026C-00-CE***
	1	1 PTF	2/2 NO	15,18	1,97	2	B1026C-00-CE***
	1/2	G 3/8	3/2 NC	4,830	1,11	3	DA023C-00-CE***
	1/2	3/8 PTF	3/2 NC	4,830	1,11	3	D1023C-00-CE***
	1/2	G 1/2	3/2 NC	5,717	1,11	3	DA024C-00-CE***
	1/2	1/2 PTF	3/2 NC	5,717	1,11	3	D1024C-00-CE***
	1/2	G 3/4	3/2 NC	6,111	1,11	3	DA025C-00-CE***
	1/2	3/4 PTF	3/2 NC	6,111	1,11	3	D1025C-00-CE***
	1	G 1	3/2 NC	14,391	2,02	4	DA036C-00-CE***
	1	1 PTF	3/2 NC	14,391	2,02	4	D1036C-00-CE***
	1/2	G 3/8	3/2 NO	4,534	1,11	3	EA023C-00-CE***
	1/2	3/8 PTF	3/2 NO	4,534	1,11	3	E1023C-00-CE***
	1/2	G 1/2	3/2 NO	5,421	1,11	3	EA024C-00-CE***
	1/2	1/2 PTF	3/2 NO	5,421	1,11	3	E1024C-00-CE***
	1/2	G 3/4	3/2 NO	5,717	1,11	3	EA025C-00-CE***
	1/2	3/4 PTF	3/2 NO	5,717	1,11	3	E1025C-00-CE***
	1	G 1	3/2 NO	13,602	2,02	4	EA036C-00-CE***
	1	1 PTF	3/2 NO	13,602	2,02	4	E1036C-00-CE***

\*\*\* Insert voltage code, see page 1

## Air pilot operated

Symbol	Valve size (inch)	Port size	Pilot port size	Function	Flow (l/min)	Weight (kg)	Drawing No.	Model
	1/2	G 3/8	G 1/4	2/2 NC	3,351	0,83	5	AA013H-AA
	1/2	3/8 PTF	1/4 PTF	2/2 NC	3,351	0,83	5	A1013H-AA
	1/2	G 1/2	G 1/4	2/2 NC	5,224	0,83	5	AA014H-AA
	1/2	1/2 PTF	1/4 PTF	2/2 NC	5,224	0,83	5	A1014H-AA
	1/2	G 3/4	G 1/4	2/2 NC	6,407	0,83	5	AA015H-AA
	1/2	3/4 PTF	1/4 PTF	2/2 NC	6,407	0,83	5	A1015H-AA
	1	G 1	G 1/4	2/2 NC	13,307	1,82	6	AA026H-AA
	1	1 PTF	1/4 PTF	2/2 NC	13,307	1,82	6	A1026H-AA
	1/2	G 3/8	G 1/4	2/2 NC	3,746	0,83	5	BA013H-AA
	1/2	3/8 PTF	1/4 PTF	2/2 NC	3,746	0,83	5	B1013H-AA
	1/2	G 1/2	G 1/4	2/2 NC	5,323	0,83	5	BA014H-AA
	1/2	1/2 PTF	1/4 PTF	2/2 NC	5,323	0,83	5	B1014H-AA
	1/2	G 3/4	G 1/4	2/2 NC	6,21	0,83	5	BA015H-AA
	1/2	3/4 PTF	1/4 PTF	2/2 NC	6,21	0,83	5	B1015H-AA
	1	G 1	G 1/4	2/2 NC	15,18	1,82	6	BA026H-AA
	1	1 PTF	1/4 PTF	2/2 NC	15,18	1,82	6	B1026H-AA
	1/2	G 3/8	G 1/4	3/2 NC	4,830	0,96	7	DA023H-AA
	1/2	3/8 PTF	1/4 PTF	3/2 NC	4,830	0,96	7	D1023H-AA
	1/2	G 1/2	G 1/4	3/2 NC	5,717	0,96	7	DA024H-AA
	1/2	1/2 PTF	1/4 PTF	3/2 NC	5,717	0,96	7	D1024H-AA
	1/2	G 3/4	G 1/4	3/2 NC	6,111	0,96	7	DA025H-AA
	1/2	3/4 PTF	1/4 PTF	3/2 NC	6,111	0,96	7	D1025H-AA
	1	G 1	G 1/4	3/2 NC	14,391	1,86	8	DA036H-AA
	1	1 PTF	1/4 PTF	3/2 NC	14,391	1,86	8	D1036H-AA
	1/2	G 3/8	G 1/4	3/2 NC	4,534	0,96	7	EA023H-AA
	1/2	3/8 PTF	1/4 PTF	3/2 NC	4,534	0,96	7	E1023H-AA
	1/2	G 1/2	G 1/4	3/2 NC	5,421	0,96	7	EA024H-AA
	1/2	1/2 PTF	1/4 PTF	3/2 NC	5,421	0,96	7	E1024H-AA
	1/2	G 3/4	G 1/4	3/2 NC	5,717	0,96	7	EA025H-AA
	1/2	3/4 PTF	1/4 PTF	3/2 NC	5,717	0,96	7	E1025H-AA
	1	G 1	G 1/4	3/2 NC	13,602	1,86	8	EA036H-AA
	1	1 PTF	1/4 PTF	3/2 NC	13,602	1,86	8	E1036H-AA

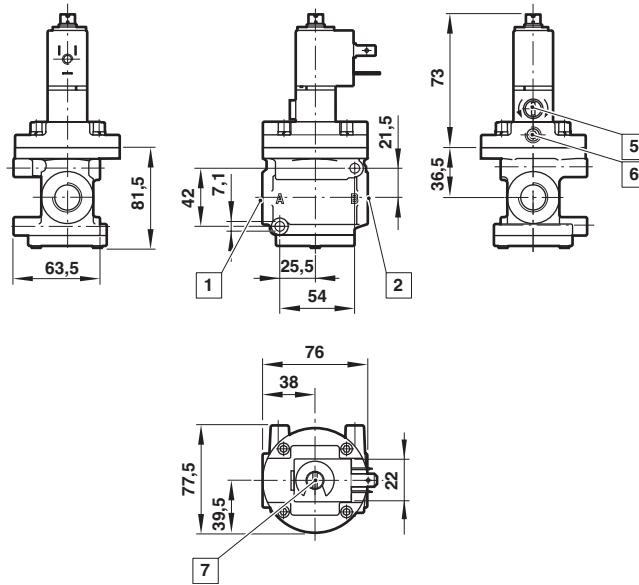
**Dimensions**

Dimensions shown in mm  
Projection/First angle



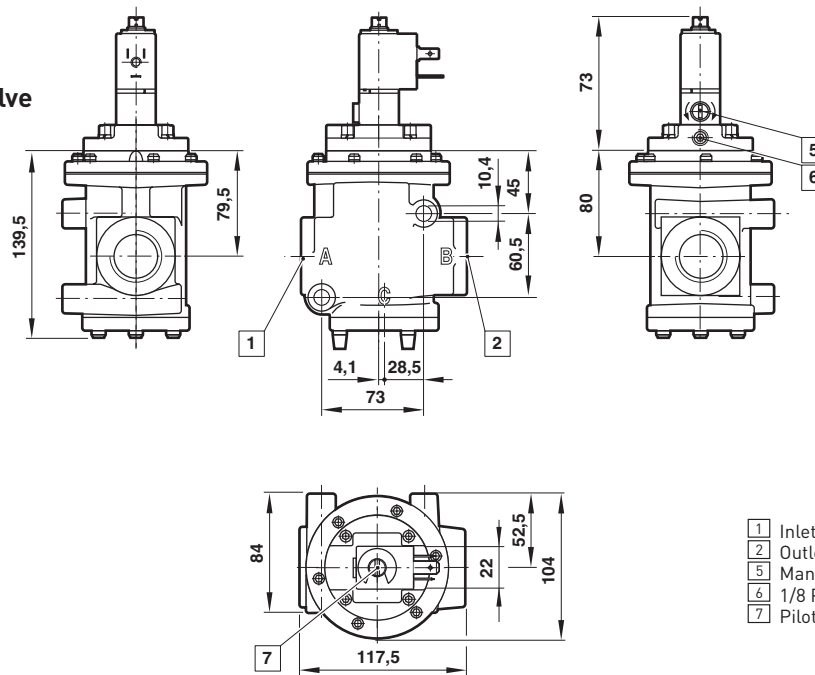
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1/2" valve size, solenoid valve  
Port size: 3/8" 1/2 or 3/4"



2

1" valve size, solenoid valve  
Port size: 1"



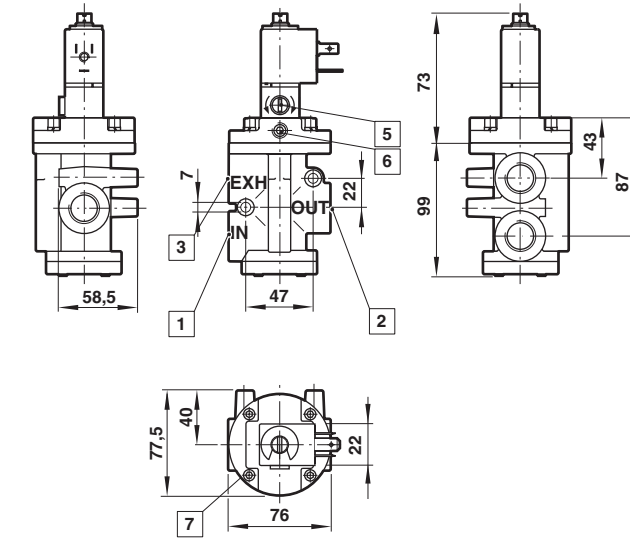
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- 2 Outlet port
- 5 Manual override
- 6 1/8 PTF exhaust port
- 7 Pilot valve exhaust with diffuser

Dimensions shown in mm  
Projection/First angle



3

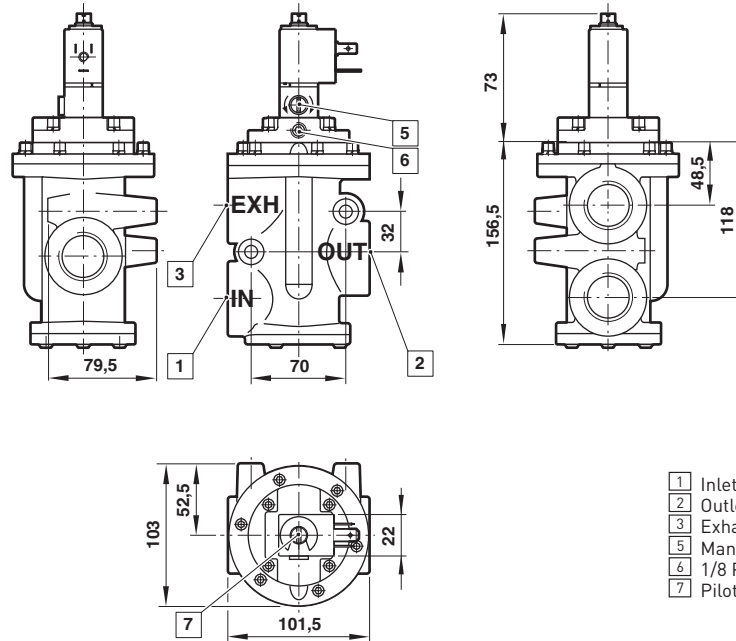
1/2" valve size, solenoid valve  
Port size: 3/8" 1/2 or 3/4"



1 Manual override

4

1" valve size, solenoid valve  
Port size: 1"



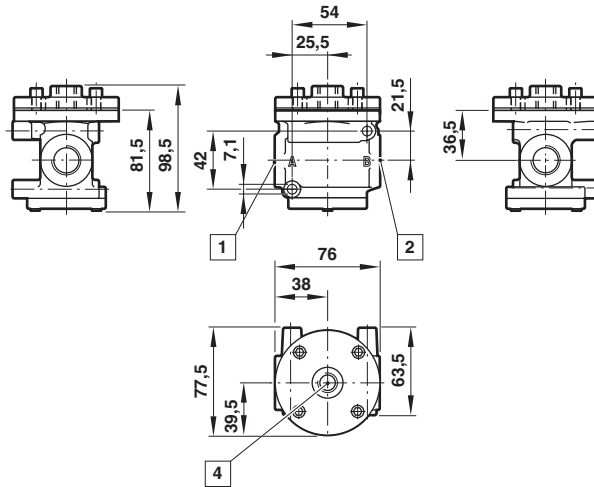
- 1 Inlet port
- 2 Outlet port
- 3 Exhaust port
- 5 Manual override
- 6 1/8 PTF exhaust port
- 7 Pilot valve exhaust with diffuser

Dimensions shown in mm  
Projection/First angle



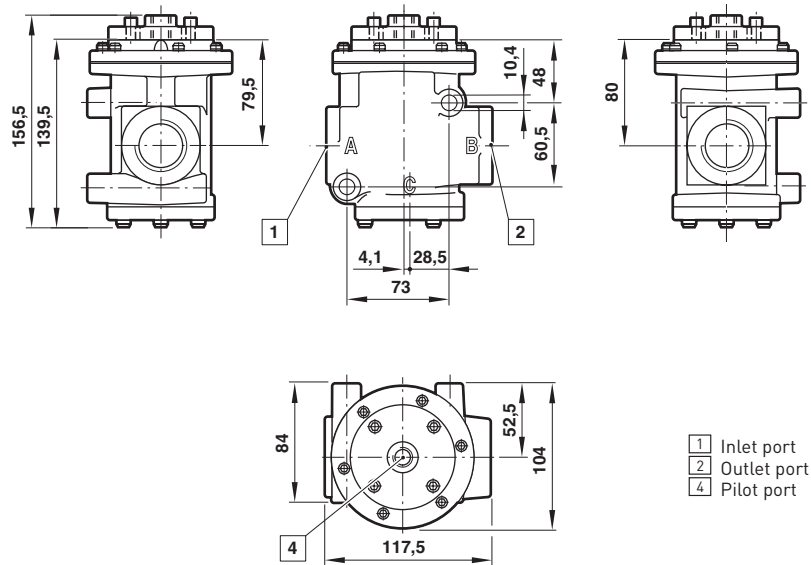
5

1/2" valve size, solenoid valve  
Port size: 3/8" 1/2 or 3/4"



6

1" valve size, solenoid valve  
Port size: 1"



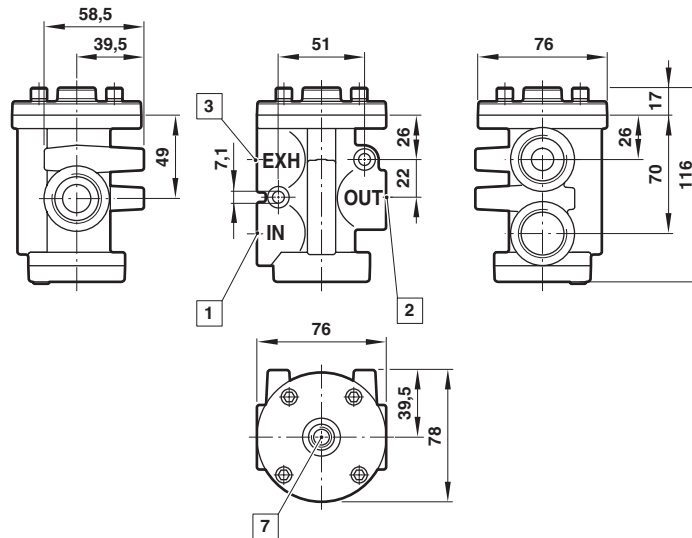
- 1 Inlet port
- 2 Outlet port
- 4 Pilot port

Dimensions shown in mm  
Projection/First angle



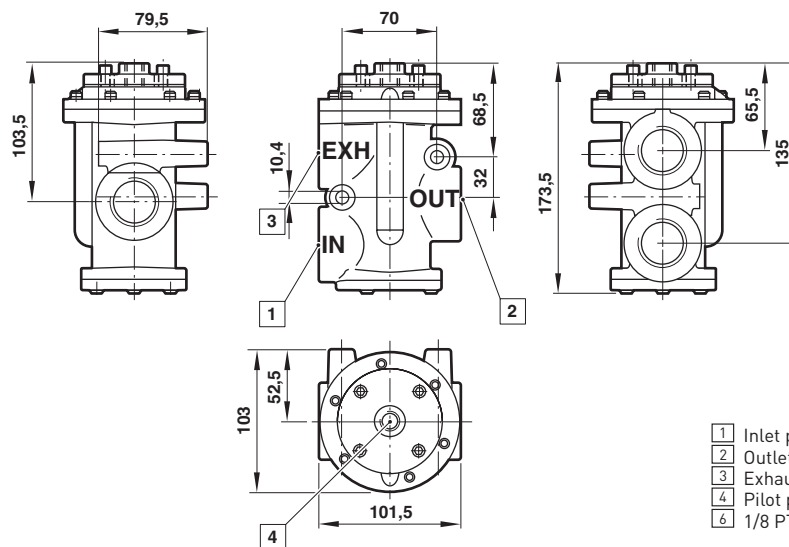
7

1/2" valve size, solenoid valve  
Port size: 3/8" 1/2 or 3/4"



8

1" valve size, solenoid valve  
Port size: 1"



- 1 Inlet port
- 2 Outlet port
- 3 Exhaust port
- 4 Pilot port
- 6 1/8 PTF exhaust port

## Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in pneumatic systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.