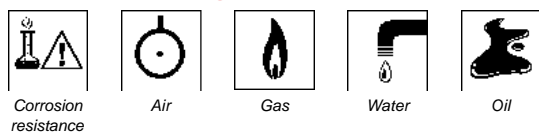


Air Pressure Switch		Page numbers
1/4" 3/2 and 5/2	Pressure switch Option accessories	4500.2 - 4500.3 4500.3
Flow Regulators		Page numbers
1/4" to 1"	Uni-directional flow regulators	4500.4
1/4" to 1/2"	Bi-directional flow regulators	4500.4
Needle Valves		Page numbers
1/4"	Needle valves	4500.5
Exhaust Port Flow Regulators		Page numbers
1/4" to 1/2"	Exhaust port flow regulators	4500.5
Non Return Valves		Page numbers
1/4" to 1"	Non return valves (12 bar)	4500.6
1/4" to 1/2"	Non return valves (25 bar)	4500.6
Quick Exhaust Valves		Page numbers
1/4" to 1"	Quick exhaust valves	4500.7
1/4" to 1/2"	Quick exhaust valves c/w flow regulator	4500.8
Shuttle Valves		Page numbers
1/4" to 1"	Shuttle valves	4500.8
Thermal Fuses		Page numbers
1/2"	Thermal fuses - 70°C to 200°C	4500.9
Visual Indicator		Page numbers
1/8"	Visual indicator	4500.9
N.R.V. Breathers		Page numbers
1/4" to 1/2"	N.R.V. breathers	4500.10
Breathers (Silencers)		Page numbers
1/8" to 1"	Breathers (Silencers)	4500.10
Bug Screen Port Vents		Page numbers
1/8" to 1/2"	'Bug screen' port vents	4500.10
Air Reservoirs, Back-up Air Reservoirs, Pressure Relief Valves, Stop Valves		Page numbers
	Air reservoirs 6 to 150 litres (0.2 to 5.3 cu ft) capacity	4500.11 - 4500.12
	Back-up air reservoirs	4500.11 - 4500.12
1/2" to 2"	Pressure relief valves	4500.11 - 4500.12
1/4" to 1"	Stop valves	4500.11 - 4500.12

Symbols used in this catalogue**NOTE:** All flow factors to ISO 6358 (BS7294)

General description and benefits

A compact fully adjustable pneumatically operated 316 Stainless Steel or Brass pressure switch with operating pressures up to 16 bar (232 psi). For use on failsafe systems.

- Compact / Lightweight.
- 5 pressure ratings.
- Integrated tagging facility.
- Fluoroelastomer seals.
- 3/2 and 5/2 versions.



Operating fluids

Gases

Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases. *Sour gas option available (details on application)*

Liquids

Low pressure hydraulic, mineral oil or water.

Technical data

Ports

1/4"NPT (BSP option available)
1/8"NPT Pilot port

Cv (Kv)

3/2 valves 0.5 (7.5)
5/2 valves 0.7 (10.5)

Working pressure (gases & liquids)

For main directional valve
12 bar (174 psi)

Maximum pilot pressure inlet

16 bar (232 psi)

Regulated pressure (adjustable)

For main directional valve
1.0 to 2.0 bar (14.5 to 29 psi)
1.0 to 4.0 bar (14.5 to 58 psi)
1.0 to 7.0 bar (14.5 to 102 psi)
1.0 to 10 bar (14.5 to 145 psi)
1.0 to 16 bar (14.5 to 232 psi)

(Note 16bar regulated pressure must be fed from independent supply to main directional valve)

Working temperature

-20°C to +80°C (-4°F to +176°F)

Maximum flow

at 6 bar (87 psi), 1 bar (14.5 psi) differential

3/2 valves - 480 L/min (17 SCFM)
5/2 valves - 680 L/min (24 SCFM)

Pressure setting hysteresis

0.25 bar (3.63 psi)

Materials of construction

Body

Stainless steel AISI 316L
to NACE MR-0175
Brass CZ 121M

Spool

Stainless steel AISI 316L
to NACE MR-0175

Springs

316 Stainless steel

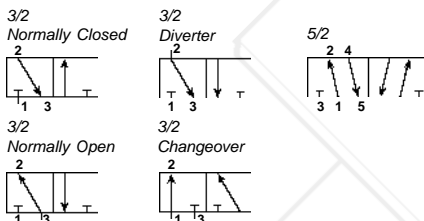
Seals

Fluoroelastomer

Diaphragm

Fluoroelastomer

Functional symbols



Function

APPLICATION FOR SPRING RETURN ACTUATORS 3/2

- 1) **Airfail stay put**
For this application port 3 is plugged. When pilot air is applied to port 1 or 2 in the Normally Closed mode and pilot air is greater than set pressure, air can flow in either direction. When pilot pressure falls below set pressure the integral spool valve closes therefore blocks port 1 to 2 and the output from 2 remains blocked, leaving the actuator or downstream signal in the last controlled position.
- 2) **Venting**
By not plugging port 3 the valve can be used in the Normally Open, Closed, Diverter or Changeover mode and the actuator will vent to atmosphere.

APPLICATION FOR DOUBLE ACTING ACTUATORS 5/2

- 1) **Airfail open or close**
For this application when air is applied to ports 1 and 3 (N/C) or 1 and 5 (N/O) and the actuator is connected to the outlets 2 and 4 and pilot air is greater than set pressure, air from another 5/2 solenoid or air operated valve will control the double acting actuator. The pressure switch can be piped Normally Closed or Normally Open and can detect air falling below the set pressure to either open or close the actuator, via a volume tank.

BRASS

AIR PRESSURE SWITCH 3/2 and 5/2 1/4" NPT

316

STAINLESS STEEL

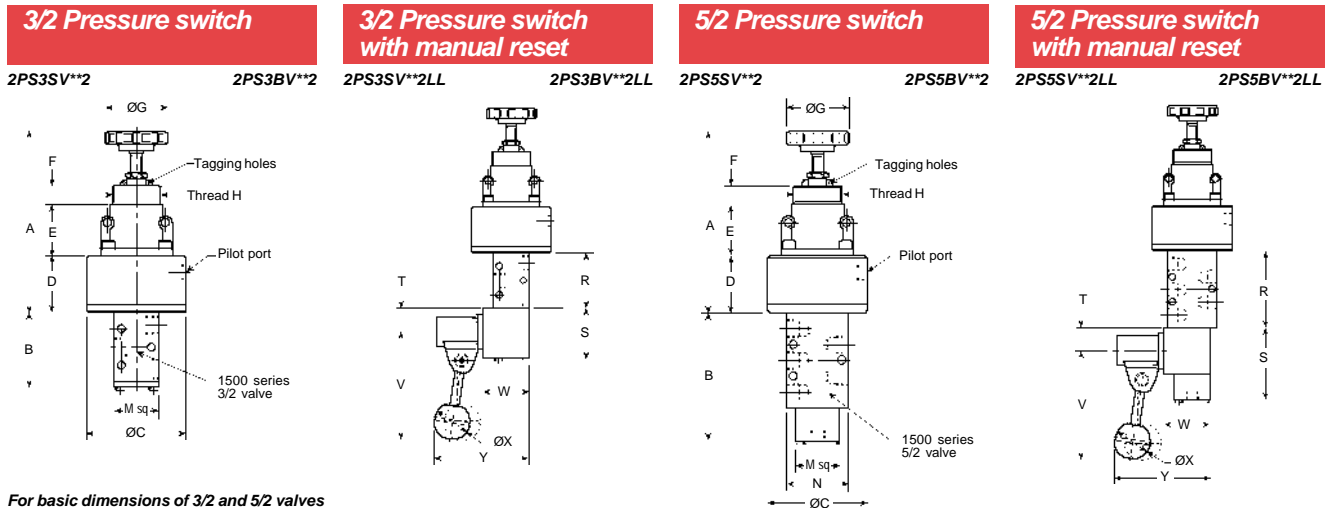
Preferred models

Model No	Description	Mass kg (lbs)	Symbol
2PS3SV**2	1/4"NPT 3/2 Adjustable pressure switch	1.60 (3.53)	
2PS3SV**2LL	1/4"NPT 3/2 Adjustable pressure switch with latch-lock manual reset	2.30 (5.07)	
2PS5SV**2	1/4"NPT 5/2 Adjustable pressure switch	2.05 (4.52)	
2PS5SV**2LL	1/4"NPT 5/2 Adjustable pressure switch with latch-lock manual reset	2.75 (6.06)	

** - for regulated pressure add code:-
 1.0 to 2 bar (14.5 to 29 psi) - code 02, 1.0 to 4 bar (14.5 to 58 psi) - code 04
 1.0 to 7 bar (14.5 to 102 psi) - code 07, 1.0 to 10 bar (14.5 to 145 psi) - code 10
 1.0 to 16 bar (14.5 to 232 psi) - code 16

For above models in BRASS specify 'B' in position 5 (in place of 'S')

Installation dimensions mm (inches)



For basic dimensions of 3/2 and 5/2 valves see 1500 series catalogue page 1500.5 (spring return bases)

Model No	A	B	C	D	E	F	G	H	M	N	R	S	T	V	W	X	Y
2PS3SV**2	127.5 (5.02)	54 (2.13)	70 (2.76)	40 (1.57)	36 (1.42)	13 (0.51)	44 (1.73)	M34 x 1.5 M34 x 1.5	32 (1.26)	-	-	-	-	-	-	-	-
2PS3SV**2LL	127.5 (5.02)	-	70 (2.76)	40 (1.57)	36 (1.42)	13 (0.51)	44 (1.73)	M34 x 1.5 M34 x 1.5	32 (1.26)	-	50 (1.97)	44 (1.73)	20 (0.79)	95 (3.74)	40 (1.57)	32 (1.26)	83.5 (3.29)
2PS5SV**2	127.5 (5.02)	93 (3.66)	70 (2.76)	40 (1.57)	36 (1.42)	13 (0.51)	44 (1.73)	M34 x 1.5 M34 x 1.5	32 (1.26)	45 (1.77)	-	-	-	-	-	-	-
2PS5SV**2LL	127.5 (5.02)	-	70 (2.76)	40 (1.57)	36 (1.42)	13 (0.51)	44 (1.73)	M34 x 1.5 M34 x 1.5	32 (1.26)	45 (1.77)	69 (2.72)	64 (2.52)	20 (0.79)	95 (3.74)	40 (1.57)	32 (1.26)	83.5 (3.29)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

OPTION ACCESSORIES

Mounting bracket

Mounting bracket kit
SSAF 238-25

Kit comprises
1 - Bracket, 1 - Panel nut

Tamper proof cap kit

Tamper proof cap kit
SSAF 238-22

Kit comprises
1 - Pressure adjustment screw, 1 - Tamper proof cap

Panel mounting kit

Panel mounting kit
SSAF 238-20

316

STAINLESS STEEL

UNI-DIRECTIONAL FLOW REGULATORS BI-DIRECTIONAL FLOW REGULATORS

BRASS

1/4", 3/8", 1/2", 3/4", 1" NPT

General description

Uni-directional

316 Stainless Steel or Brass in-line flow regulators for uni-directional operation (free flow return).

Bi-directional

316 Stainless Steel or Brass in-line flow regulators for bi-directional operation (separate flow control in each direction).



Operating fluids

Gases

Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases. Sour gas option available (details on application)

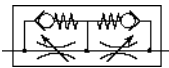
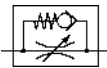
Liquids

Low pressure hydraulic, mineral oil or water.

Functional symbols

Uni-directional

Bi-directional



Technical data

Working pressure (gases & liquids)

12 bar (174 psi)

Working temperature

-20°C to +70°C (-4°F to +158°F)

Maximum flow L/min (SCFM) - Cv(Kv) at 6 bar (87 psi), 1 bar (14.5 psi) differential

Uni-directional

1/4"	1000 (35)	- 1.0 (15.5)
3/8"	1680 (59)	- 1.7 (26)
1/2"	2520 (89)	- 2.5 (39)
3/4"	5428 (192)	- 5.4 (84)
1"	9820 (347)	- 9.8 (152)

Bi-directional

1/4"	620 (22)	- 0.6 (9.6)
3/8"	1290 (45)	- 1.3 (20)
1/2"	2000 (71)	- 2.0 (31)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175
Brass CZ 121M

Internal parts

Stainless steel AISI 316L to NACE MR-0175

Springs

316 Stainless steel

Seals

Nitrile

Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

Uni-Directional Flow Regulators

2REGSN122 (1/4")
3REGSN122 (3/8")
4REGSN122 (1/2")

2REGBN122 (1/4")
3REGBN122 (3/8")
4REGBN122 (1/2")

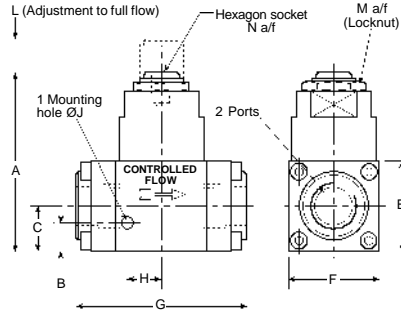
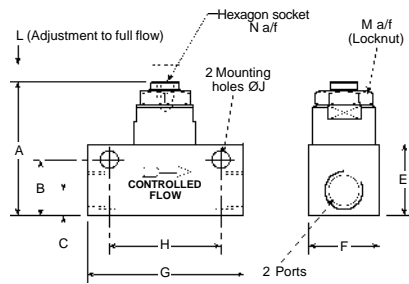
6REGSN122 (3/4")
8REGSN122 (1")

6REGBN122 (3/4")
8REGBN122 (1")

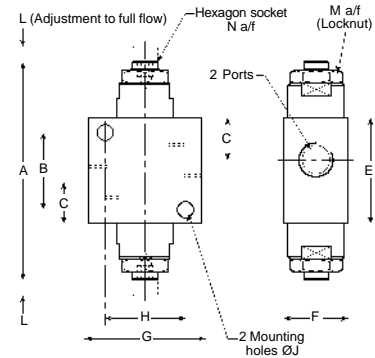
Bi-Directional Flow Regulators

2BIDSN122 (1/4")
3BIDSN122 (3/8")
4BIDSN122 (1/2")

2BIDBN122 (1/4")
3BIDBN122 (3/8")
4BIDBN122 (1/2")



OPTION - Mounting bracket available for 3/4" and 1" models
Model number SSBF 612/MB2



Model No	Ports	A	B	C	E	F	G	H	J	L	M	N	Mass
Uni-directional													
2REGSN122	1/4"NPT	48(1.89)	20(0.79)	9(0.35)	25.4(1.00)	25.4(1.00)	56(2.20)	40(1.57)	6.35(0.25)	6(0.24)	18(0.71)	5(0.20)	0.26(0.57)
3REGSN122	3/8"NPT	70(2.76)	29(1.14)	14.5(0.57)	35(1.38)	35(1.38)	76(2.99)	45(1.77)	6.35(0.25)	12(0.47)	23.3(0.92)	6(0.24)	0.75(1.65)
4REGSN122	1/2"NPT	70(2.76)	29(1.14)	13.5(0.53)	35(1.38)	35(1.38)	76(2.99)	45(1.77)	6.35(0.25)	12(0.47)	23.3(0.92)	6(0.24)	0.75(1.65)
6REGSN122	3/4"NPT	100(3.94)	16(0.63)	25.4(1.00)	50.8(2.00)	50.8(2.00)	95(3.74)	19(0.75)	6.35(0.25)	19(0.75)	30.5(1.20)	10(0.39)	1.75(3.86)
8REGSN122	1"NPT	125(4.92)	19(0.75)	31.75(1.25)	63.5(2.50)	63.5(2.50)	95(3.74)	24(0.94)	6.35(0.25)	19(0.75)	36(1.42)	12(0.47)	2.75(6.06)
Bi-directional													
2BIDSN122	1/4"NPT	85(3.35)	28(1.10)	15.5(0.61)	40(1.57)	25.4(1.00)	44.5(1.75)	32(1.26)	6.35(0.25)	6(0.24)	18(0.71)	5(0.20)	0.43(0.95)
3BIDSN122	3/8"NPT	121(4.76)	35(1.38)	21(0.83)	51(2.00)	35(1.38)	63.5(2.50)	45(1.77)	6.35(0.25)	12(0.47)	23.3(0.92)	6(0.24)	1.40(3.09)
4BIDSN122	1/2"NPT	121(4.76)	35(1.38)	21(0.83)	51(2.00)	35(1.38)	63.5(2.50)	45(1.77)	6.35(0.25)	12(0.47)	23.3(0.92)	6(0.24)	1.40(3.09)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

MIDLAND

PNEUMATIC

BRASS

NEEDLE VALVES EXHAUST PORT FLOW REGULATORS

316

STAINLESS STEEL

1/4", 3/8", 1/2" NPT

General description

Needle Valve

316 Stainless Steel or Brass needle valve with 3mm or 6mm orifice.

Exhaust Port Flow Regulators

316 Stainless Steel exhaust flow regulator/breather supplied complete with tamper proof cap.



Operating fluids

Gases

Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases. Sour gas option available (details on application)

Liquids

Low pressure hydraulic, mineral oil or water.

Technical data

Working pressure (gases & liquids)

12 bar (174 psi)

Working temperature

-20°C to +70°C (-4°F to +158°F)

Maximum flow L/min (SCFM) - Cv(Kv)

at 6 bar (87 psi), 1 bar (14.5 psi) differential

Needle Valve (3mm orifice)

1/4" 290 (10.5) - 0.30 (4.6)

Needle Valve (6mm orifice)

1/4" 640 (23) - 0.64 (10)

Exhaust Port Flow Regulators

1/4" 646 (23) - 0.65 (10)

3/8" 1100 (39) - 1.10 (17)

1/2" 1800 (64) - 1.80 (28)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175
Brass CZ 121M

Internal parts

Stainless steel AISI 316L to NACE MR-0175

Springs

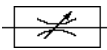
316 Stainless steel

Seals

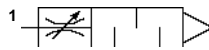
Nitrile

Functional symbols

Needle Valve



Exhaust Port Flow Regulator



Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

Needle Valves

2NDVSN12203 (1/4" - 3mm orifice)
2NDVSN12206 (1/4" - 6mm orifice)

2NDVBN12203 (1/4" - 3mm orifice)
2NDVBN12206 (1/4" - 6mm orifice)

Exhaust Port Flow Regulators

2EFRSN102(1/4")
3EFRSN102(3/8")
4EFRSN102(1/2")



All dimensions as for uni-directional flow regulators model 2REGSN122 on page 4500.4

NOTE:- All units have 0.4mm (0.016") diameter minimum orifice to eliminate complete shut off. Units supplied complete with tamper proof cap.

Model No	Ports	A	F	Mass
2NDVSN12203	1/4"NPT	48 (1.89)	25.4 (1.00)	0.26 (0.57)
2NDVSN12206	1/4"NPT	48 (1.89)	25.4 (1.00)	0.26 (0.57)

Model No	Thread	A	B	Mass
2EFRSN102	1/4" NPT	47.5 (1.87)	17 (0.67)	0.05 (0.11)
3EFRSN102	3/8" NPT	66 (2.60)	23.4 (0.92)	0.15 (0.33)
4EFRSN102	1/2" NPT	87.5 (3.44)	23.4 (0.92)	0.20 (0.44)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

316

STAINLESS STEEL

NON RETURN VALVES

12 bar and 25 bar

1/4", 3/8", 1/2", 3/4", 1" NPT

BRASS

General description

Non Return Valves

316 Stainless Steel or Brass non return valves for pressures up to 12 bar (174 psi)
316 Stainless Steel non return valves for pressures up to 25 bar (362 psi).



Operating fluids

Gases

Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases.
Sour gas option available (details on application)

Liquids

Low pressure hydraulic, mineral oil or water.

Technical data

Working pressure (gases & liquids)

12 bar (174 psi)
25 bar (362 psi)

Minimum opening pressure

0.2 bar (2.90 psi)

Working temperature

-20°C to +70°C (-4°F to +158°F)

Maximum flow L/min (SCFM) - Cv(Kv)

at 6 bar (87 psi), 1 bar (14.5 psi) differential

Non Return Valves (12 bar)

1/4"	1600 (57)	- 1.6 (25)
3/8"	2200 (80)	- 2.3 (35)
1/2"	3800 (137)	- 3.9 (60)
3/4"	5800 (205)	- 5.8 (90)
1"	7700 (274)	- 7.8 (120)

Non Return Valves (25 bar)

1/4"	736 (26)	- 0.74 (11.4)
3/8"	1840 (65)	- 1.85 (28.5)
1/2"	2600 (91)	- 2.60 (40)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175
Brass CZ 121M

Internal parts

Stainless steel AISI 316L to NACE MR-0175
Acetal poppet

Springs

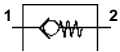
316 Stainless steel

Seals

Nitrile

Functional symbols

Non Return Valves



Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

Non Return Valves (12 bar)

2NRVSN122 (1/4")
3NRVSN122 (3/8")
4NRVSN122 (1/2")

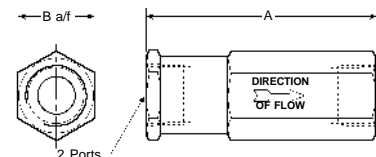
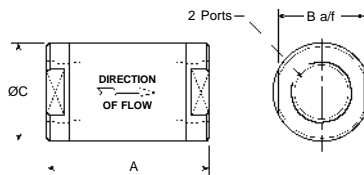
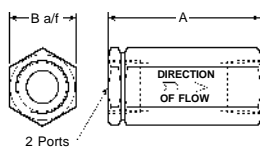
2NRVBN122 (1/4")
3NRVBN122 (3/8")
4NRVBN122 (1/2")

6NRVSN122 (3/4")
8NRVSN122 (1")

6NRVBN122 (3/4")
8NRVBN122 (1")

Non Return Valves (25 bar)

2NRVSN252 (1/4")
3NRVSN252 (3/8")
4NRVSN252 (1/2")



Model No	Ports	A	B	C	Mass
12 bar					
2NRVSN122	1/4" NPT	50 (1.97)	22.2 (0.87)	-	0.12 (0.26)
3NRVSN122	3/8" NPT	65 (2.56)	30.5 (1.20)	-	0.30 (0.66)
4NRVSN122	1/2" NPT	65 (2.56)	30.5 (1.20)	-	0.30 (0.66)
6NRVSN122	3/4" NPT	85 (3.35)	45 (1.77)	50.8 (2.00)	1.00 (2.20)
8NRVSN122	1" NPT	85 (3.35)	45 (1.77)	50.8 (2.00)	1.00 (2.20)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

25 bar

2NRVSN252	1/4" NPT	70 (2.76)	23.4 (0.92)	-	0.19 (0.42)
3NRVSN252	3/8" NPT	80 (3.15)	33 (1.30)	-	0.46 (1.01)
4NRVSN252	1/2" NPT	90 (3.54)	41.3 (1.63)	-	0.76 (1.68)

MIDLAND

PNEUMATIC

BRASS

QUICK EXHAUST VALVES

316

STAINLESS STEEL

1/4", 3/8", 1/2", 3/4", 1" NPT

General description

Quick Exhaust Valves

316 Stainless Steel or Brass quick exhaust valves in 5 sizes.



Operating fluids

Gases

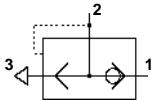
Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases. Sour gas option available (details on application)

Liquids

Low pressure hydraulic, mineral oil or water.

Functional symbols

Quick Exhaust Valve



Technical data

Working pressure (gases & liquids)

12 bar (174 psi)

Working temperature

-20°C to +70°C (-4°F to +158°F)

Maximum flow L/min (SCFM) - Cv(Kv)

at 6 bar (87 psi), 1 bar (14.5 psi) differential

Supply to outlet

1/4"	1290 (46)	- 1.3 (20)
3/8"	1810 (64)	- 1.8 (28)
1/2"	3810 (135)	- 3.8 (59)
3/4"	4520 (160)	- 4.5 (70)
1"	7700 (274)	- 7.8 (120)

Outlet to exhaust

1/4"	2780 (98)	- 2.8 (43)
3/8"	3810 (135)	- 3.8 (59)
1/2"	5490 (194)	- 5.5 (85)
3/4"	6460 (228)	- 6.5 (100)
1"	11000 (388)	- 11.0 (170)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175
Brass CZ 121M

Internal parts

Stainless steel AISI 316L to NACE MR-0175

Springs

316 Stainless steel

Seals

Nitrile

Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

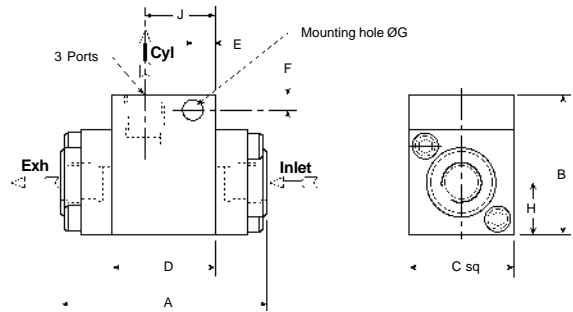
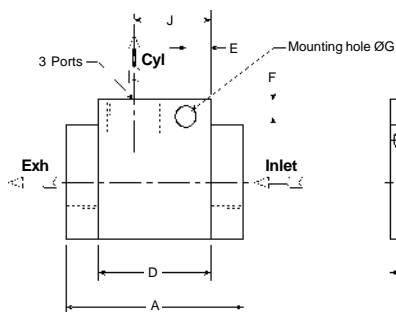
Quick Exhaust Valves (1/4", 3/8", 1/2")

2QEVS122(1/4")
3QEVS122(3/8")
4QEVS122(1/2")

Quick Exhaust Valves (3/4", 1")

6QEVS122 (3/4")
8QEVS122 (1")

6QEVB122 (3/4")
8QEVB122 (1")



Model No	Ports	A	B	C	D	E	F	G	H	J	Mass
2QEVS122	1/4"NPT	52 (2.05)	38 (1.50)	32 (1.26)	32 (1.26)	-	-	-	16 (0.63)	22 (0.87)	0.34 (0.75)
3QEVS122	3/8"NPT	60 (2.36)	42 (1.65)	35 (1.38)	35 (1.38)	-	-	-	17.5 (0.69)	23 (0.91)	0.48 (1.06)
4QEVS122	1/2"NPT	70 (2.76)	55 (2.17)	45 (1.77)	45 (1.77)	10 (0.39)	6.5 (0.26)	8.5 (0.33)	22.5 (0.88)	31 (1.22)	0.80 (1.76)
6QEVS122	3/4"NPT	102 (4.02)	70 (2.76)	54 (2.13)	54 (2.13)	10 (0.39)	12 (0.47)	8.5 (0.33)	27 (1.06)	35 (1.38)	1.60 (3.53)
8QEVS122	1"NPT	114 (4.49)	99 (3.90)	74 (2.91)	74 (2.91)	16 (0.63)	12 (0.47)	11 (0.43)	37 (1.46)	52 (2.05)	3.6 (7.94)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

316

STAINLESS STEEL

QUICK EXHAUST VALVES C/W FLOW REGULATOR SHUTTLE VALVES

BRASS

1/4", 3/8", 1/2", 3/4", 1" NPT

General description

Quick Exhaust Valves with Flow Regulator

316 Stainless Steel or Brass quick exhaust valves complete with flow regulators to control the speed of exhaust.

Shuttle Valves

316 Stainless Steel or Brass shuttle valves for three way "OR" function.

Operating fluids

Gases

Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases.
Sour gas option available (details on application)

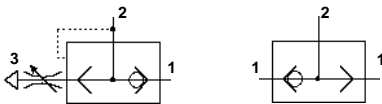
Liquids

Low pressure hydraulic, mineral oil or water.

Functional symbols

Quick Exhaust Valve c/w Flow Regulator

Shuttle Valve



Technical data

Working pressure (gases & liquids)

Quick Exhaust Valve c/w Flow Regulator

12 bar (174 psi)

Shuttle Valve

10 bar (145 psi)

Working temperature

-20°C to +70°C (-4°F to +158°F)

Maximum flow L/min (SCFM) - Cv(Kv)

at 6 bar (87 psi), 1 bar (14.5 psi) differential

Quick Exhaust Valve c/w Flow Regulator

Supply to outlet

1/4" 1290 (46) - 1.3 (20)

3/8" 1810 (64) - 1.8 (28)

1/2" 3810 (135) - 3.8 (59)

Quick Exhaust Valve c/w Flow Regulator

Outlet to exhaust

1/4" 2780 (98) - 2.8 (43)

3/8" 3810 (135) - 3.8 (59)

1/2" 5490 (194) - 5.5 (85)

Shuttle Valve

1/4" 1350 (45) - 1.36 (21)

3/8" 1830 (65) - 1.8 (28.4)

1/2" 3550 (126) - 3.6 (55)

3/4" 5500 (194) - 5.5 (85)

1" 9000 (319) - 9.0 (140)



Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175
Brass CZ 121M

Internal parts

Stainless steel AISI 316L to NACE MR-0175

Springs

316 Stainless steel

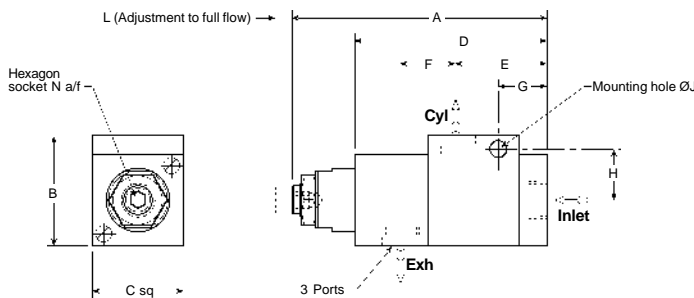
Seals

Nitrile

Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

Quick Exhaust Valves c/w Flow Regulator

2QERSN122(1/4")
3QERSN122(3/8")
4QERSN122(1/2")



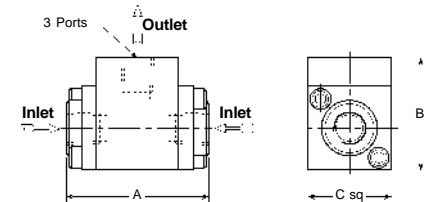
Model No	Ports	A	B	C	D	E	F	G	H	J	Mass
2QERSN122	1/4"NPT	90.5 (3.56)	38 (1.50)	32 (1.26)	68 (2.68)	32 (1.26)	20 (0.79)	-	-	-	0.41 (0.90)
3QERSN122	3/8"NPT	101 (3.98)	42 (1.65)	35 (1.38)	78.5 (3.09)	35.5 (1.40)	25 (0.98)	-	-	-	0.69 (1.52)
4QERSN122	1/2"NPT	127.3 (5.01)	55 (2.17)	44.5 (1.75)	92.3 (3.63)	43.3 (1.70)	28 (1.10)	22.8 (0.90)	26 (1.02)	8.3 (0.33)	1.10 (2.43)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

Shuttle Valves

2SHVSN102 (1/4")
3SHVSN102 (3/8")
4SHVSN102 (1/2")
6SHVSN102 (3/4")
8SHVSN102 (1")

2SHVBN102 (1/4")
3SHVBN102 (3/8")
4SHVBN102 (1/2")
6SHVBN102 (3/4")
8SHVBN102 (1")



Model No	Ports	A	B	C	Mass
2SHVSN102	1/4"NPT	56 (2.20)	43 (1.69)	32 (1.26)	0.40 (0.88)
3SHVSN102	3/8"NPT	56 (2.20)	43 (1.69)	32 (1.26)	0.40 (0.88)
4SHVSN102	1/2"NPT	74 (2.91)	55 (2.17)	38 (1.50)	0.70 (1.54)
6SHVSN102	3/4"NPT	104 (4.09)	75 (2.95)	54 (2.13)	2.00 (4.41)
8SHVSN102	1"NPT	108 (4.25)	82 (3.23)	63.5 (2.50)	3.00 (6.62)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

MIDLAND

PNEUMATIC

THERMAL FUSES VISUAL INDICATOR

1/8", 1/2" NPT

316
STAINLESS STEEL

General description

Thermal Fuses

316 Stainless Steel thermal fuses for fire release. Available for temperature settings.

Visual Indicators

Compact 316 Stainless Steel panel mounted visual indicator with various colour options.



Operating fluids

Gases

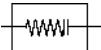
Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases. Sour gas option available (details on application)

Liquids

Low pressure hydraulic, mineral oil or water.

Functional symbols

Thermal Fuse



Visual Indicator



Technical data

Working pressure (gases & liquids)

Thermal Fuses

12 bar (174 psi)

Visual Indicator

1 to 12 bar (14.5 to 174 psi)

Working temperature

Thermal Fuses

-20°C to + 70°C (-4°F to +158°F)

-20°C to + 96°C (-4°F to +205°F)

-20°C to +102°C (-4°F to +216°F)

-20°C to +124°C (-4°F to +255°F)

-20°C to +137°C (-4°F to +279°F)

-20°C to +200°C (-4°F to +392°F)

Visual Indicator

2°C to +65°C (36°F to +149°F)

Maximum flow L/min (SCFM) - Cv(Kv)

at 6 bar (87 psi), 1 bar (14.5 psi) differential

Thermal Fuses

1/2" 5800 (205) - 5.8 (90)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175

Internal parts

Stainless steel AISI 316L to NACE MR-0175

Springs

316 Stainless steel

Seals

Nitrile

Visual Indicator piston

Acetal

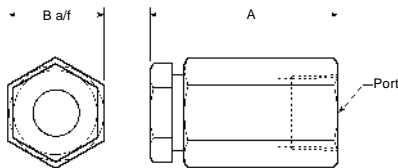
Visual Indicator assembly

Acetal with acrylic lens

Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

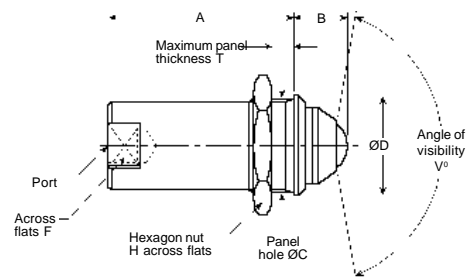
Thermal Fuses

4THFSN102070 (70°C)
4THFSN102096 (96°C)
4THFSN102102 (102°C)
4THFSN102124 (124°C)
4THFSN102137 (137°C)
4THFSN102200 (200°C)



Visual Indicator

1VISSN122G (1/8" NPT Red/Green)
1VISSN121G (1/8" BSP Red/Green)



IMPORTANT:

Fuse opening must be directed towards deck to safe guard personnel from shot accident by fire release.

Model No	Port	A	B	Mass
4THFSN102070	1/2" NPT	51 (2.00)	25.6 (1.01)	0.15 (0.33)
4THFSN102096	1/2" NPT	51 (2.00)	25.6 (1.01)	0.15 (0.33)
4THFSN102102	1/2" NPT	51 (2.00)	25.6 (1.01)	0.15 (0.33)
4THFSN102124	1/2" NPT	51 (2.00)	25.6 (1.01)	0.15 (0.33)
4THFSN102137	1/2" NPT	51 (2.00)	25.6 (1.01)	0.15 (0.33)
4THFSN102200	1/2" NPT	51 (2.00)	25.6 (1.01)	0.15 (0.33)

Model No	Port	Mass
1VISSN122G	1/8" NPT	0.1 (0.22)
1VISSN121G	1/8" BSP	0.1 (0.22)

Alternative colours available in RED - GREEN - AMBER - BLACK. Specify colour combination required.

A	B	C	D	F	H	T	V
46 (1.81)	13.25 (0.52)	24 (0.94)	25.4 (1.00)	19 (0.75)	30.5 (1.20)	6 (0.24)	160° 160°

316

STAINLESS STEEL

N.R.V. BREATHERS, BREATHERS 'BUG SCREEN' PORT VENTS

BRASS

1/8", 1/4", 3/8", 1/2", 3/4", 1" NPT

General description

N.R.V. Breathers

316 Stainless Steel non return breather to prevent ingress into exhaust and vent ports.

Breathers (Silencers)

316 Stainless Steel or Brass sintered element silencers used to protect ports open to the atmosphere.

'Bug Screen' Port Vent

316 Stainless Steel sintered element used to protect vent ports to atmosphere.



Operating fluids

Gases

Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases. Sour gas option available (details on application)

Liquids

Low pressure hydraulic, mineral oil or water.

Functional symbols

N.R.V. Breather

Breather (Silencer)

'Bug Screen' Port Vent



Technical data

Working pressure (gases & liquids)

12 bar (174 psi)

Working temperature

-20°C to +70°C (-4°F to +158°F)

Maximum flow L/min (SCFM) - Cv(Kv) at 6 bar (87 psi), 1 bar (14.5 psi) differential

N.R.V. Breathers

1/4"	646 (23)	- 0.65 (10)
3/8"	1300 (45)	- 1.3 (20)
1/2"	1550 (54)	- 1.6 (24)

Breathers (Silencers)

1/4"	1550 (55)	- 1.5 (24)
3/8"	1940 (68)	- 2.0 (30)
1/2"	3410 (123)	- 3.5 (54)
3/4"	5500 (194)	- 5.5 (85)
1"	5700 (201)	- 5.7 (88)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175
Brass CZ 121M

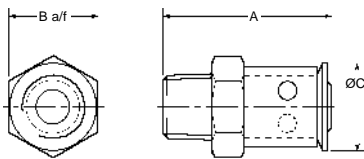
Internal parts

Stainless steel AISI 316L to NACE MR-0175

Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

N.R.V. Breathers

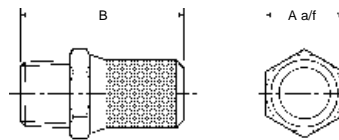
2NRBSN102(1/4")
3NRBSN102(3/8")
4NRBSN102(1/2")



Breathers (Silencers)

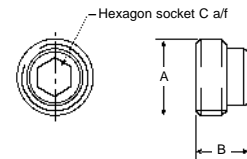
1BRESN102 (1/8")
2BRESN102 (1/4")
3BRESN102 (3/8")
4BRESN102 (1/2")
6BRESN102 (3/4")
8BRESN102 (1")

1BREBN102 (1/8")
2BREBN102 (1/4")
3BREBN102 (3/8")
4BREBN102 (1/2")
6BREBN102 (3/4")
8BREBN102 (1")



'Bug Screen' Port Vents

1VPBSN122 (1/8")
2VPBSN122 (1/4")
3VPBSN122 (3/8")
4VPBSN122 (1/2")



Model No	Thread	A	B	C	Mass
2NRBSN102	1/4" NPT	34 (1.34)	17 (0.67)	17 (0.67)	0.028 (0.062)
3NRBSN102	3/8" NPT	40 (1.57)	23.4 (0.92)	21 (0.83)	0.059 (0.130)
4NRBSN102	1/2" NPT	45 (1.77)	23.4 (0.92)	21 (0.83)	0.063 (0.139)

Model No	Thread	A	B	Mass
1BRESN102	1/8" NPT	31 (1.22)	14 (0.55)	0.012 (0.026)
2BRESN102	1/4" NPT	38 (1.50)	17 (0.67)	0.022 (0.048)
3BRESN102	3/8" NPT	44 (1.73)	22 (0.87)	0.034 (0.075)
4BRESN102	1/2" NPT	55 (2.16)	24 (0.94)	0.045 (0.099)
6BRESN102	3/4" NPT	70 (2.76)	32 (1.26)	0.10 (0.22)
8BRESN102	1" NPT	75 (2.95)	36 (1.42)	0.15 (0.33)

Model No	Thread	A	B	C	Mass
1VPBSN122	1/8" NPT		9 (0.35)	4 (0.16)	0.003 (0.007)
2VPBSN122	1/4" NPT		9 (0.35)	6 (0.24)	0.004 (0.009)
3VPBSN122	3/8" NPT		11 (0.43)	8 (0.31)	0.009 (0.020)
4VPBSN122	1/2" NPT		13 (0.51)	12 (0.47)	0.018 (0.040)

For above models in BRASS specify 'B' in position 5 (in place of 'S')

MIDLAND

PNEUMATIC

AIR RESERVOIRS, BACK-UP AIR RESERVOIRS PRESSURE RELIEF VALVES, STOP VALVES

316

STAINLESS STEEL

1/4", 3/8", 1/2", 3/4", 1", 1 1/2", 2" NPT

General description

Air Reservoirs

316 Stainless Steel wall mounted high quality air receivers with full penetration butt welds on all main seams.

Floor mounted units - details on application

Back-up Reservoirs

316 Stainless Steel back-up reservoirs of tie-rod construction.

Pressure Relief Valves

316 Stainless Steel valves for preventing excess pressure in pressurised systems.

Stop Valves

316 Stainless Steel ball valves of bi-directional flow.



Operating fluids

Gases

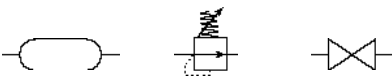
Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases.
Sour gas option available (details on application)

Liquids

Low pressure hydraulic, mineral oil or water.

Functional symbols

Air Reservoir Pressure Relief Valve Stop Valve



Technical data

Working pressure (gases & liquids)

Air Reservoirs

16 bar (232 psi)
ASME VIII above 30 litres please check

Back-up Air Reservoirs

10 bar (145 psi)

Pressure Relief Valves

21 bar (305 psi)

Stop Valves

69 bar (1000 psi)

Working temperature

Air Reservoirs

-50°C to +50°C (-58°F to +122°F)

Back-up Air Reservoirs

-20°C to +70°C (-4°F to +158°F)

Pressure Relief Valves

-60°C to +350°C (-76°F to +662°F)

Stop Valves

-45°C to +230°C (-49°F to +446°F)

Materials of construction

Body

Stainless steel AISI 316L to NACE MR-0175

Internal parts

Stainless steel AISI 316L to NACE MR-0175

Springs

316 Stainless steel

Seals

Pressure Relief Valves
Red fibre (asbestos free)
Stop Valves
P.T.F.E.

Design codes

Air Reservoirs - Type SSR

Manufactured in accordance with BS.5500/97. Cat 3 or ASME VIII Div 1 (not U - Stamped)
LLoyds survey is mandatory.

Note: BS.5500/97 Cat 1 and Cat 2 on application.

Preferred models

Air Reservoirs

Model No	Capacity litres (cu ft)	Mass kg (lbs)
SSR6L	6 (0.2)	7 (15.4)
SSR8L	8 (0.3)	8 (17.6)
SSR10L	10 (0.4)	9 (19.8)
SSR12L	12 (0.4)	10 (22.0)
SSR15L	15 (0.5)	15 (33.1)
SSR20L	20 (0.7)	17 (37.5)
SSR30L	30 (1.1)	27 (59.5)
SSR40L	40 (1.4)	31 (68.3)
SSR50L	50 (1.8)	38 (83.8)
SSR75L	75 (2.7)	48 (105.8)
SSR100L	100 (3.5)	58 (127.9)
SSR120L	120 (4.2)	74 (163.1)
SSR150L	150 (5.3)	83 (183.0)

Other sizes available - details on request

Back-up Air Reservoirs

Model No	Bore mm (inches)	Mass kg (lbs)
SSRES426/*N	107.9 (4.25)	8 (17.6) + 1.26 (2.8) per litre
SSRES600/*N	152.4 (6.00)	16.8 (37.0) + 2.0 (4.4) per litre
SSRES800/*N	203.2 (8.00)	30 (66.1) + 1.5 (3.3) per litre

* = capacity in litres (specify requirements)
i.e. 1 = 1 litre, 5 = 5 litre etc

Pressure Relief Valves

See details on page 4500.12 (overleaf)

Stop Valves

See details on page 4500.12 (overleaf)

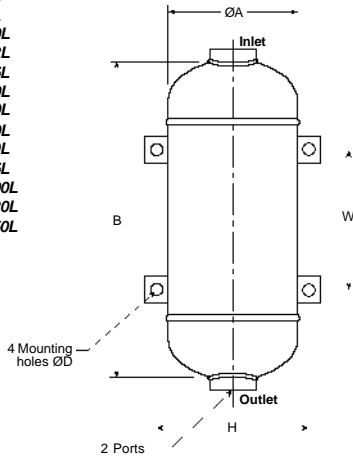
AIR RESERVOIRS, BACK-UP AIR RESERVOIRS PRESSURE RELIEF VALVES, STOP VALVES

1/4", 3/8", 1/2", 3/4", 1", 1 1/2", 2" NPT

Installation dimensions mm (inches)

Air Reservoirs

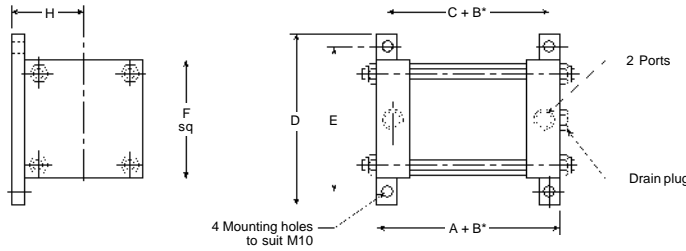
SSR6L
SSR8L
SSR10L
SSR12L
SSR15L
SSR20L
SSR30L
SSR40L
SSR50L
SSR75L
SSR100L
SSR120L
SSR150L



Model	Ports	A	B	D	H	W
SSR6L	1"NPT	168 (6.6)	325 (12.8)	9 (0.35)	175 (6.9)	80 (3.1)
SSR8L	1"NPT	168 (6.6)	423 (16.7)	9 (0.35)	175 (6.9)	150 (5.9)
SSR10L	1"NPT	168 (6.6)	520 (20.5)	9 (0.35)	175 (6.9)	250 (9.8)
SSR12L	1"NPT	168 (6.6)	618 (24.3)	9 (0.35)	175 (6.9)	350 (13.8)
SSR15L	1"NPT	219 (8.6)	465 (18.3)	10 (0.39)	175 (6.9)	150 (5.9)
SSR20L	1"NPT	219 (8.6)	607 (23.9)	10 (0.39)	175 (6.9)	250 (9.8)
SSR30L	1"NPT	273 (10.7)	600 (23.6)	12 (0.47)	240 (9.4)	210 (8.3)
SSR40L	1"NPT	273 (10.7)	781 (30.7)	12 (0.47)	240 (9.4)	390 (15.4)
SSR50L	2"NPT	324 (12.8)	700 (27.6)	12 (0.47)	260 (10.2)	260 (10.2)
SSR75L	2"NPT	324 (12.8)	1021 (40.2)	12 (0.47)	260 (10.2)	500 (19.7)
SSR100L	2"NPT	324 (12.8)	1343 (52.9)	12 (0.47)	260 (10.2)	700 (27.6)
SSR120L	2"NPT	406 (16.0)	1090 (42.9)	12 (0.47)	285 (11.2)	800 (31.5)
SSR150L	2"NPT	406 (16.0)	1333 (52.5)	18 (0.71)	285 (11.2)	800 (31.5)

Back-up Air Reservoirs

SSRES426/*N
SSRES600/*N
SSRES800/*N



Installation should be vertical
with drain plug at bottom

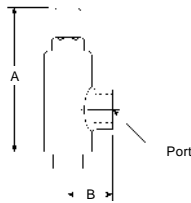
B* = dimension per litre

Model No	Ports	A	B*	C	D	E	F	H
SSRES426/*N	1/2"NPT	64(2.52)	110(4.33)	40(1.57)	165(6.50)	140(5.51)	119(4.69)	72(2.83)
SSRES600/*N	1/2"NPT	81(3.19)	55(2.17)	55(2.17)	216(8.50)	195(7.68)	172(6.77)	98(3.86)
SSRES800/*N	1/2"NPT	64(2.52)	31(1.22)	38(1.50)	273(10.75)	252(9.92)	229(9.02)	127(5.00)

Model codes, Installation dimensions mm (inches) and Mass kg (lbs)

Pressure Relief Valves

4RELS-**2 (1/2")
6RELS-**2 (3/4")
8RELS-**2 (1")
7RELS-**2 (1 1/2")
9RELS-**2 (2")

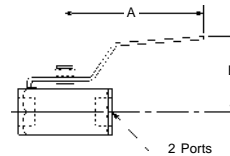


** = Spring pressure range :-
03 = 0-3.5bar (0-50psi)
10 = 3.5-10.5bar (50-150psi)
21 = 10.5-21bar (150-300psi)

Colour code - Red/White
Colour code - Blue/White
Colour code - Yellow/White

Stop Valves

BV2N (1/4")
BV3N (3/8")
BV4N (1/2")
BV6N(3/4")
BV8N (1")



Model No	Port/Thread	A	B	Mass
4RELS-**2	1/2" NPT	125 (4.92)	33 (1.30)	0.6 (1.3)
6RELS-**2	3/4" NPT	135 (5.31)	40 (1.57)	0.7 (1.5)
8RELS-**2	1" NPT	160 (6.30)	44 (1.73)	1.4 (3.1)
7RELS-**2	1 1/2" NPT	190 (7.48)	56 (2.20)	2.6 (5.7)
9RELS-**2	2" NPT	190 (7.48)	62 (2.44)	3.4 (7.5)

Model No	Ports	A	B	Mass
BV2N	1/4" NPT	60 (2.37)	30 (1.18)	0.13 (0.29)
BV3N	3/8" NPT	82 (3.23)	38 (1.50)	0.21 (0.47)
BV4N	1/2" NPT	83 (3.25)	42 (1.65)	0.21 (0.47)
BV6N	3/4" NPT	104 (4.10)	51 (2.00)	0.34 (0.75)
BV8N	1" NPT	104 (4.10)	53 (2.10)	0.47 (1.04)