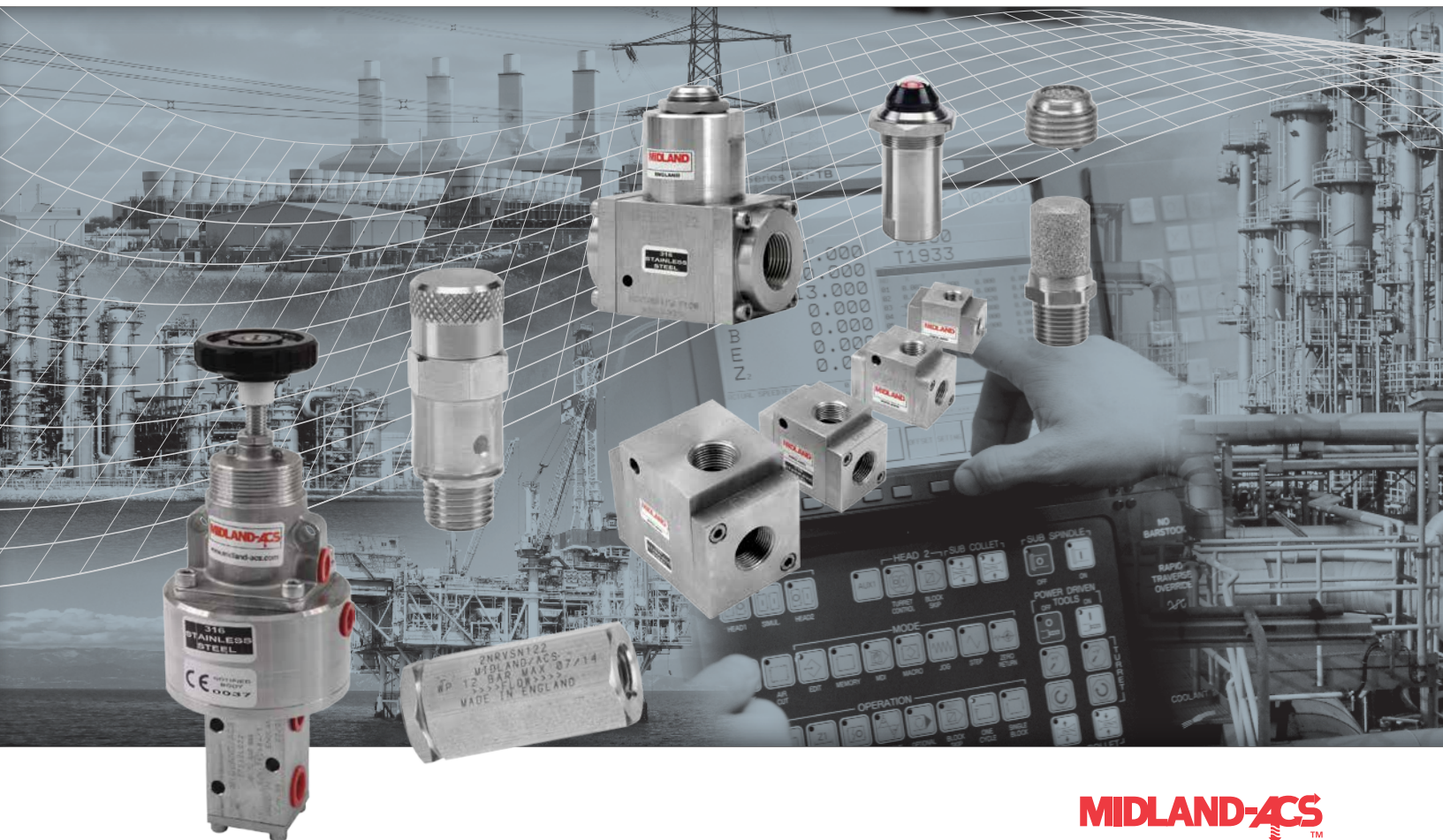


Ancillaries and Accessories

4500 series



MIDLAND-ACS
A rotork[®] Brand

Keeping the World Flowing

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Rotork is the global market leader in valve automation and flow control. Our products and services are helping organisations around the world to improve efficiency, assure safety and protect the environment.

We strive always for technical excellence, innovation and the highest quality standards in everything we do. As a result, our people and products remain at the forefront of flow control technology.

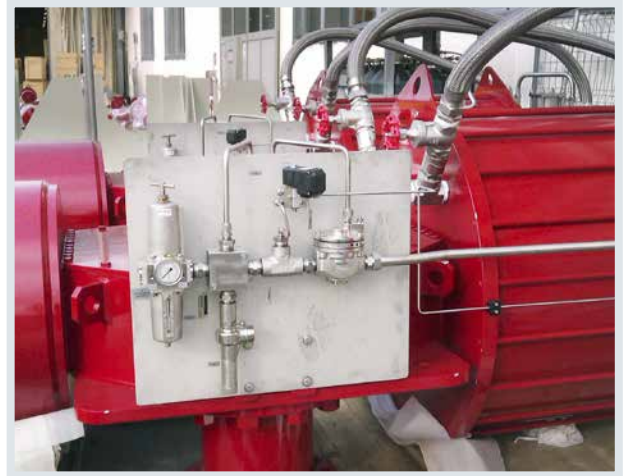
Uncompromising reliability is a feature of our entire product range, from our flagship electric actuator range through to our pneumatic, hydraulic and electro-hydraulic actuators, as well as instruments, gear boxes and valve accessories.

Rotork is committed to providing first class support to each client throughout the whole life of their plant, from initial site surveys to installation, maintenance, audits and repair. From our network of national and international offices, our engineers work around the clock to maintain our position of trust.

Rotork. Keeping the world flowing.

Introduction

Rotork Midland manufactures a full range of ancillary products in 316L stainless steel to compliment our full range of products. Suitable for use in industrial and severe environments, we have a range of solutions for all your control valve requirements.



Certification Options Available



4500 Series Ancillary Products – Air Pressure Switch

A compact fully adjustable pneumatically operated 316L stainless steel pressure switch with operating pressures up to 16 bar (232) psi. For use on fail-safe systems.

Features and Benefits

- Specifically designed for severe environments
- Compact and lightweight
- Up to 5 Pressure Ratings
- Tagging Facility
- Fluoroelastomer seals
- 3/2 and 5/2 Versions
- Ambient temperature range -20 °C to +80° C
- Low temperature option available
- NACE standard on application
- PED Certified 1/4" only

Working Temperature Range

- Valve only version
-20 to +80 °C (-4 to +176 °F)¹
- Low temperature version
-50 to +80 °C (-58 to +176 °F optional)²

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

² When product is ordered as 'ATEX' ambient temperature range is -50 °C to +40 °C (-58 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure (for main directional valve)

- 12 bar (174 psi) maximum

Maximum Pilot Pressure Inlet

- 16 bar (232 psi)

Pressure setting hysteresis

- 0.25 bar (3.63 psi)



Ports NPT (BSP option available)

- 1/4" - 1/2" NPT line port
- 1/8" NPT pilot port

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available

Construction Materials

- Body: 316L Stainless Steel
- Spool: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Fluoroelastomer
- Diaphragm: Fluoroelastomer

Maximum Flow

At 6 bar, 1 bar differential:

1/4" 3/2 Valves - 1000 L/Min (35.3 SCFM)

1/4" 5/2 Valves - 1200 L/Min (42.4 SCFM)

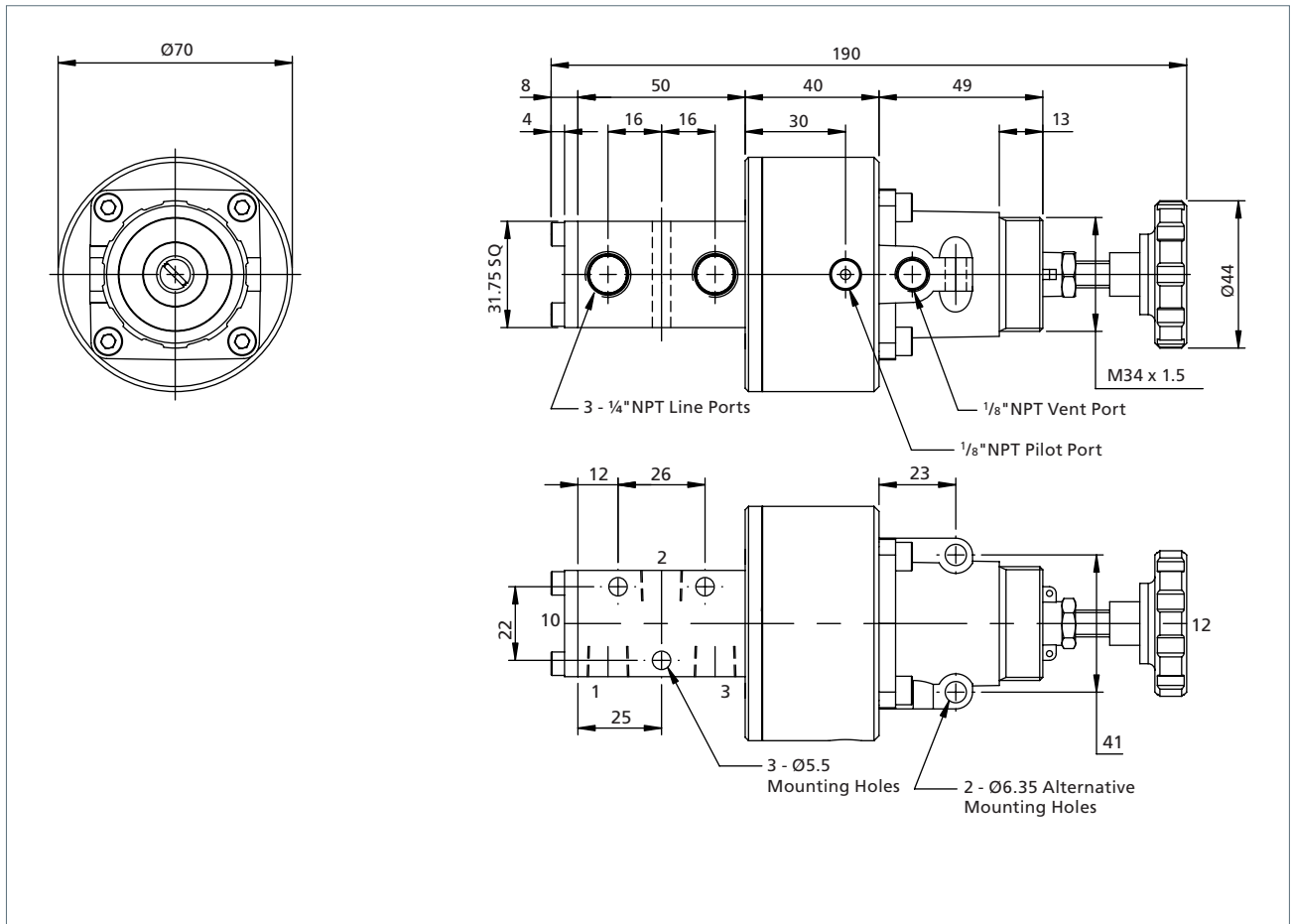
1/2" 3/2 Valves - 3500 L/Min (123 SCFM)

1/2" 5/2 Valves - 3500 L/Min (123 SCFM)

Certification Options Available



4500 Series Ancillary Products – 1/4" NPT 3/2 Air Pressure switch



Ordering Information

Product Code	Low Temperature Version	CV	Weight (kg)	Regulated Pressure (Adjustable) for Main Directional Valve
2PS3SV022	2PS3SL022	1.0	1.60	1.0 to 2.0 bar (14.5 to 29 psi)
2PS3SV042	2PS3SL042			1.0 to 4 bar (14.5 to 58 psi)
2PS3SV072	2PS3SL072			1.0 to 7 bar (14.5 to 102 psi)
2PS3SV102	2PS3SL102			1.0 to 10 bar (14.5 to 145 psi)
2PS3SV162	2PS3SL162			1.0 to 16 bar (14.5 to 232 psi)

If ATEX certification is required suffix product code with 'ATEX'.

NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.



Function

Application for spring return actuators 3/2

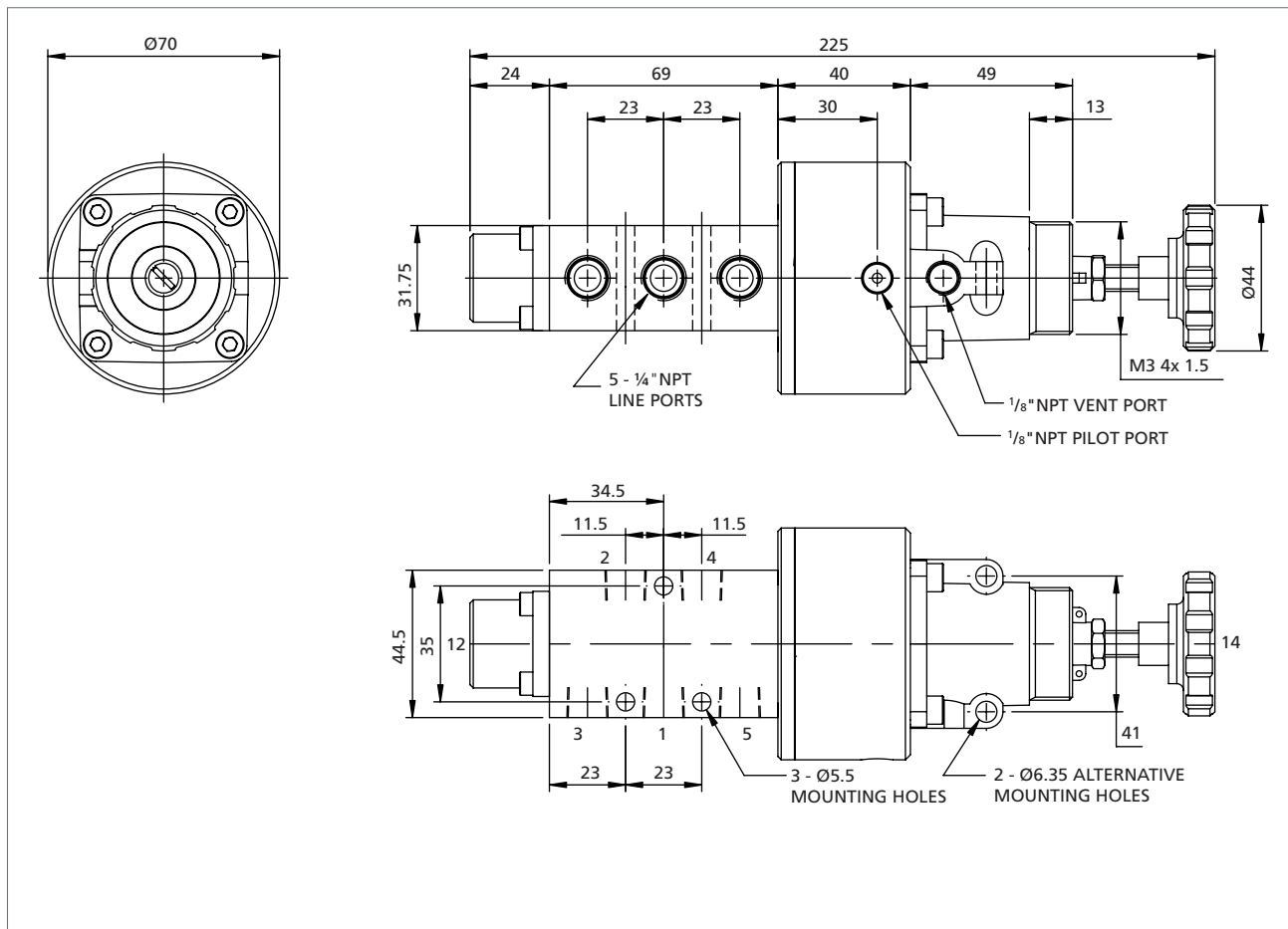
1. Airfail stay put

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 and 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.

4500 Series Ancillary Products – 1/4" NPT 5/2 Air Pressure switch



Ordering Information

Product Code	Low Temperature Version	CV	Weight (kg)	Regulated Pressure (Adjustable) for Main Directional Valve
2PS5SV022	2PS5SL022	1.2	2.05	1.0 to 2.0 bar (14.5 to 29 psi)
2PS5SV042	2PS5SL042			1.0 to 4 bar (14.5 to 58 psi)
2PS5SV072	2PS5SL072			1.0 to 7 bar (14.5 to 102 psi)
2PS5SV102	2PS5SL102			1.0 to 10 bar (14.5 to 145 psi)
2PS5SV162	2PS5SL162			1.0 to 16 bar (14.5 to 232 psi)

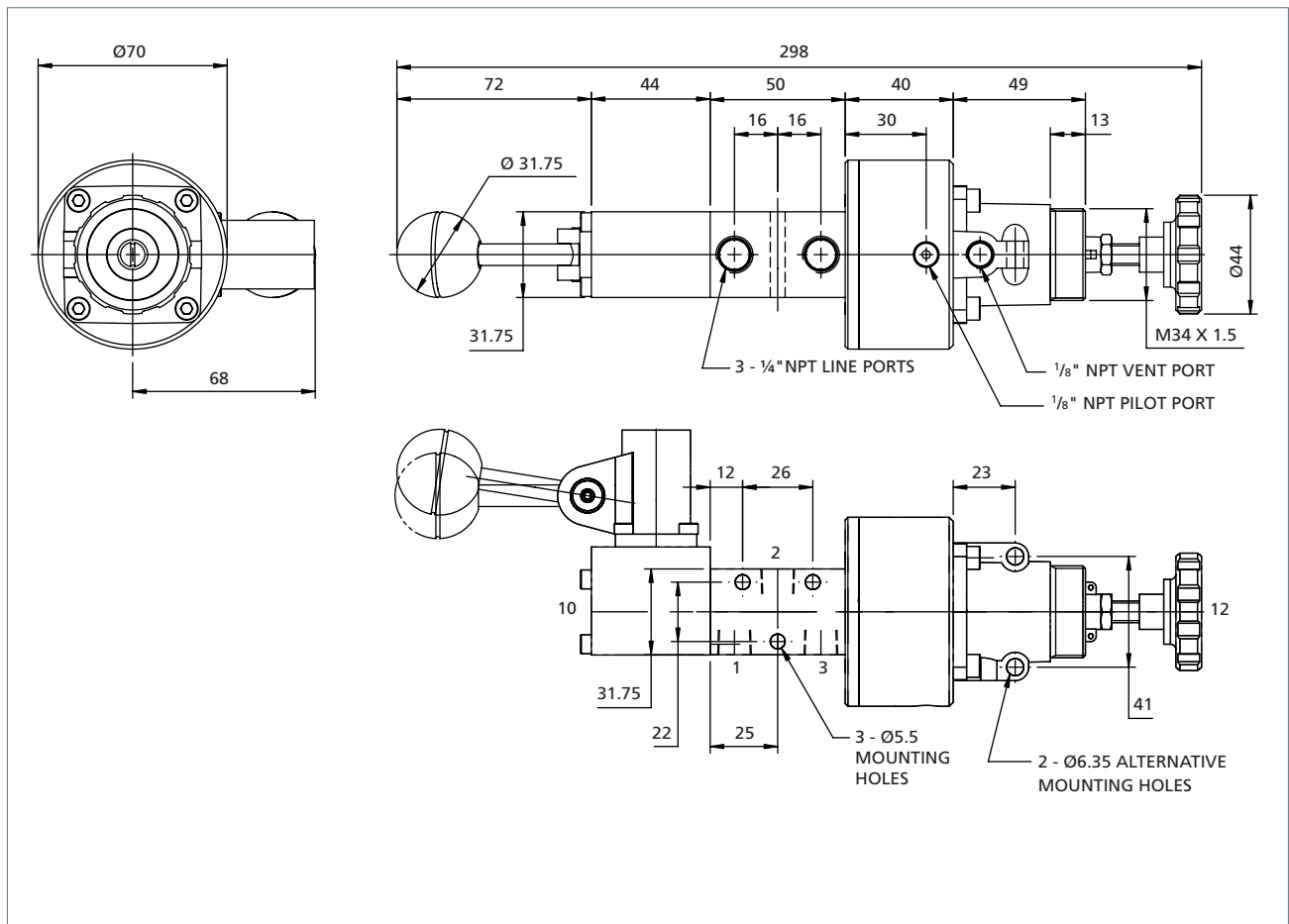
If ATEX certification is required suffix product code with 'ATEX'.
 NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.



Function

Application for double acting actuators 5/2

4500 Series Ancillary Products – 1/4" NPT 3/2 Air Pressure switch with latch-lock manual reset



Ordering Information

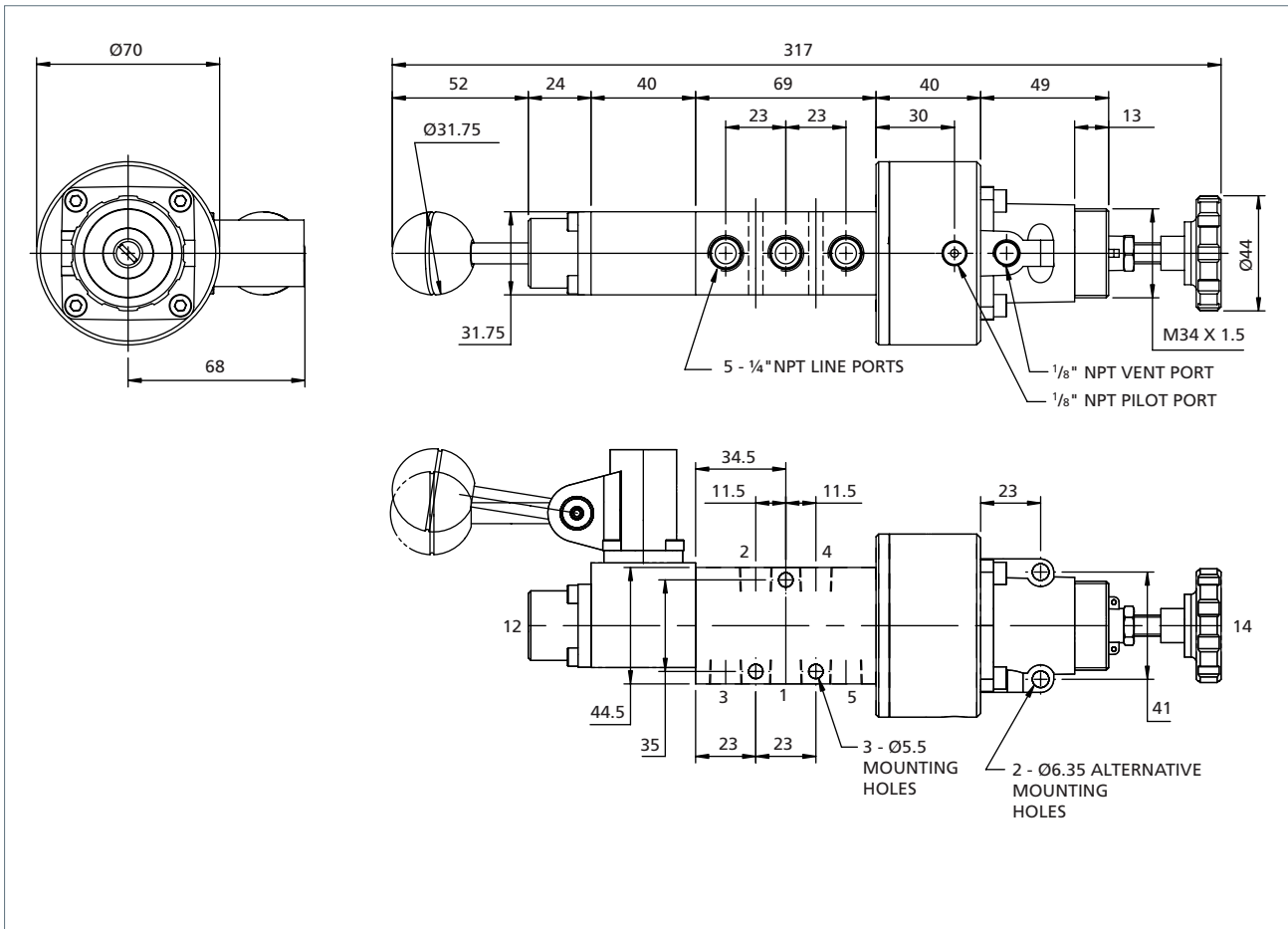
Product Code	Low Temperature Version	CV	Weight (kg)	Regulated Pressure (Adjustable) for Main Directional Valve
2PS3SV022LL	2PS3SL022LL	1.0	2.30	1.0 to 2.0 bar (14.5 to 29 psi)
2PS3SV042LL	2PS3SL042LL			1.0 to 4 bar (14.5 to 58 psi)
2PS3SL072LL	2PS3SL072LL			1.0 to 7 bar (14.5 to 102 psi)
2PS3SV102LL	2PS3SL102LL			1.0 to 10 bar (14.5 to 145 psi)
2PS3SV162LL	2PS3SL162LL			1.0 to 16 bar (14.5 to 232 psi)

If ATEX certification is required suffix product code with 'ATEX'.

NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.



4500 Series Ancillary Products – 1/4" NPT 5/2 Air Pressure switch with latch-lock manual reset



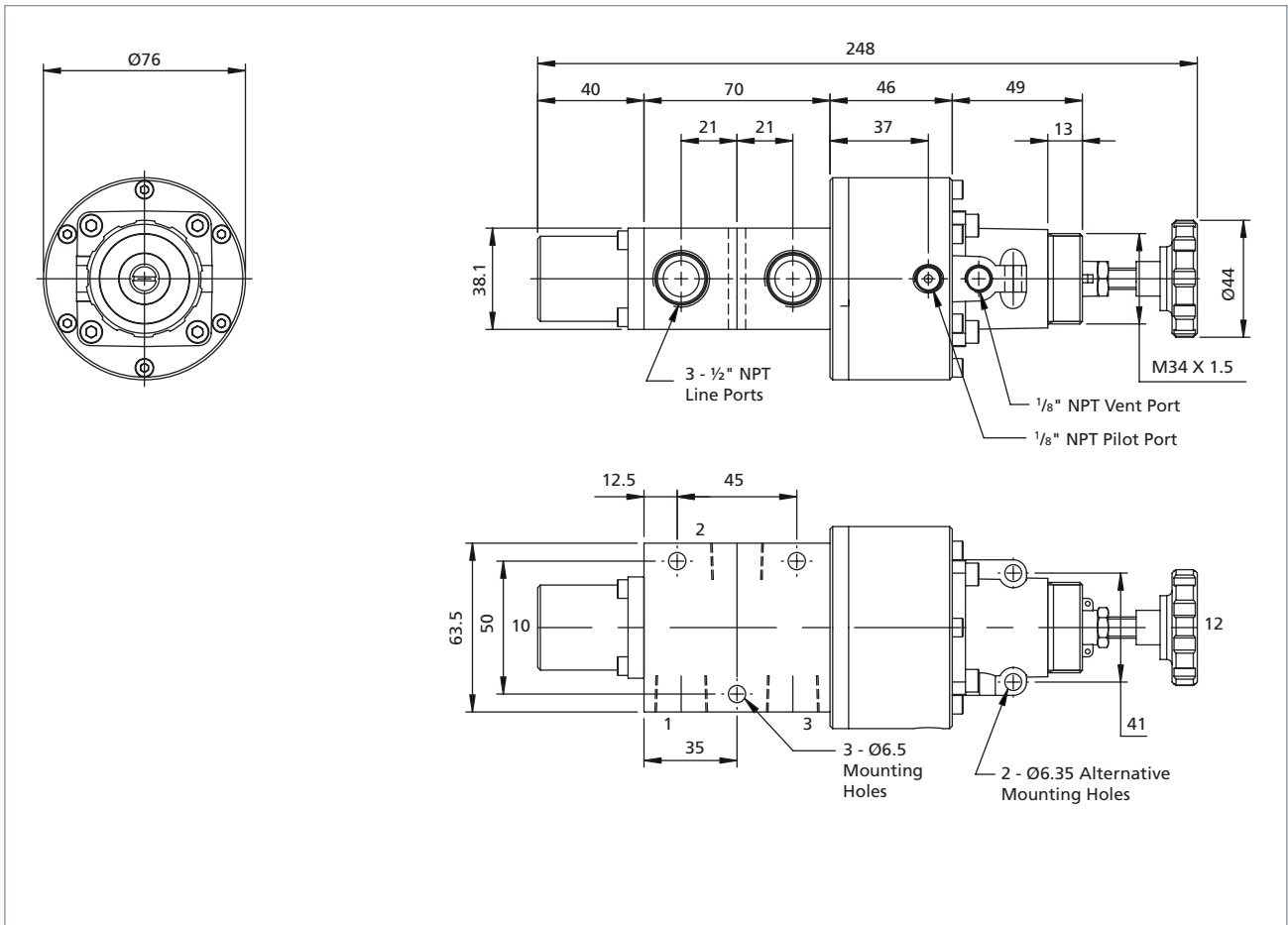
Ordering Information

Product Code	Low Temperature Version	CV	Weight (kg)	Regulated Pressure (Adjustable) for Main Directional Valve
2PS5SV022LL	2PS5SL022LL	1.2	2.75	1.0 to 2.0 bar (14.5 to 29 psi)
2PS5SV042LL	2PS5SL042LL			1.0 to 4 bar (14.5 to 58 psi)
2PS5SL072LL	2PS5SL072LL			1.0 to 7 bar (14.5 to 102 psi)
2PS5SV102LL	2PS5SL102LL			1.0 to 10 bar (14.5 to 145 psi)
2PS5SV162LL	2PS5SL162LL			1.0 to 16 bar (14.5 to 232 psi)



If ATEX certification is required suffix product code with 'ATEX'.
 NOTE: 16 bar regulated pressure must be fed from independent supply to main directional valve.

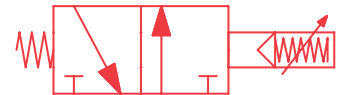
4500 Series Ancillary Products – 1/2" NPT 3/2 Air Pressure switch



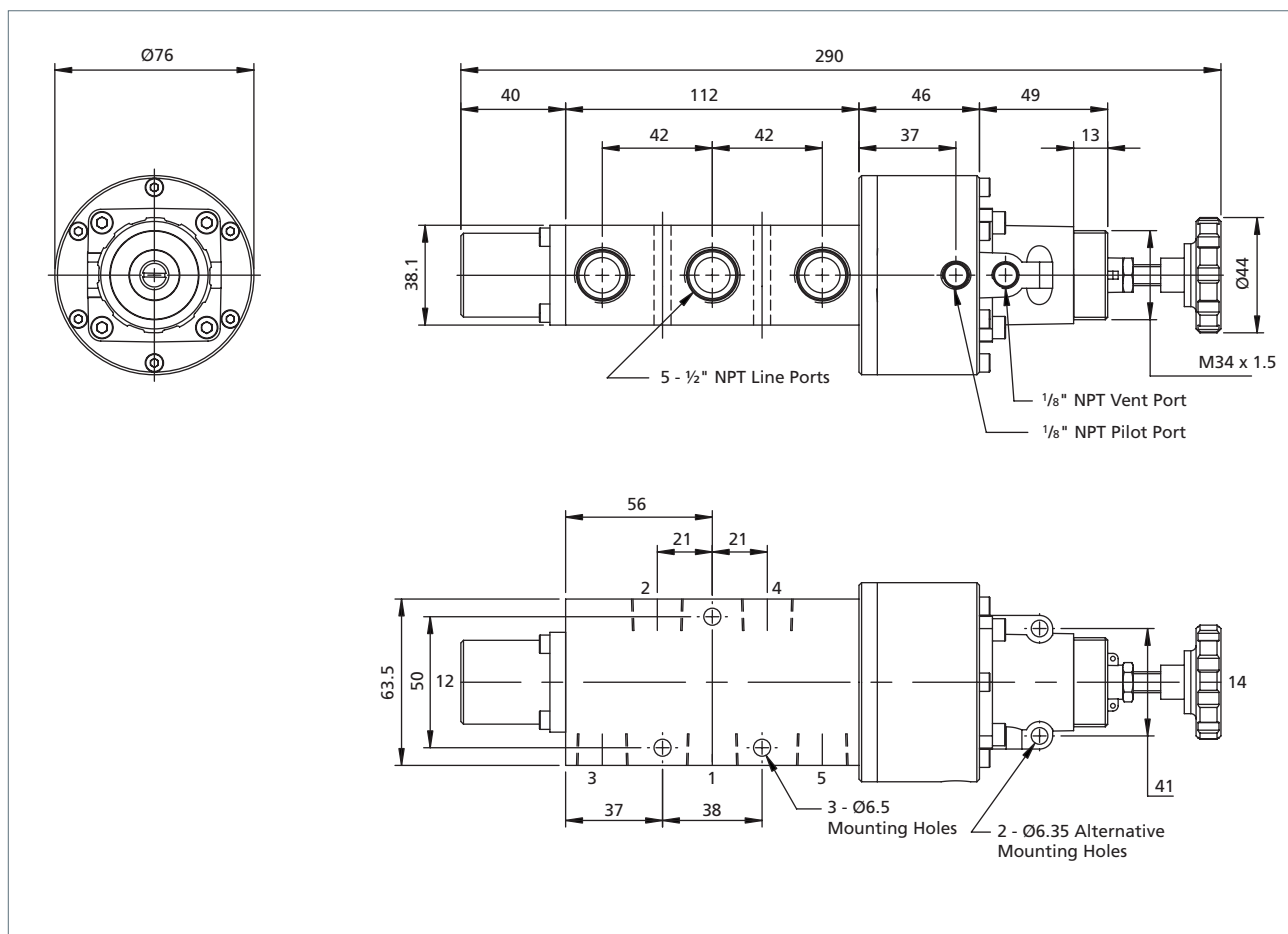
Ordering Information

Product Code	Low Temperature Version	CV	Weight (kg)	Regulated Pressure (Adjustable) for Main Directional Valve
4PS3SV022	4PS3SL022	3.5	3.0	1.0 to 2.0 bar (14.5 to 29 psi)
4PS3SV042	4PS3SL042			1.0 to 4.0 bar (14.5 to 58 psi)
4PS3SV072	4PS3SL072			1.0 to 7.0 bar (14.5 to 102 psi)
4PS3SV102	4PS3SL102			1.0 to 10 bar (14.5 to 145 psi)

If ATEX certification is required suffix product code with 'ATEX'.



4500 Series Ancillary Products – 1/2" NPT 5/2 Air Pressure switch



Ordering Information

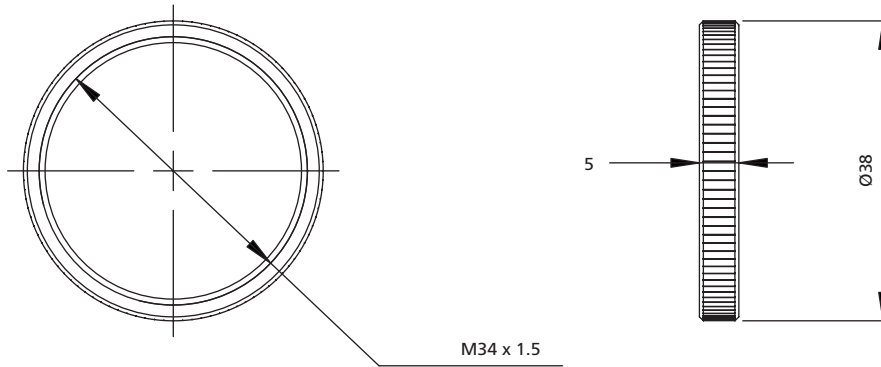
Product Code	Low Temperature Version	CV	Weight (kg)	Regulated Pressure (Adjustable) for Main Directional Valve
4PS5SV022	4PS5SL022	3.5	3.6	1.0 to 2.0 bar (14.5 to 29 psi)
4PS5SV042	4PS5SL042			1.0 to 4 bar (14.5 to 58 psi)
4PS5SV072	4PS5SL072			1.0 to 7 bar (14.5 to 102 psi)
4PS5SV102	4PS5SL102			1.0 to 10 bar (14.5 to 145 psi)

If ATEX certification is required suffix product code with 'ATEX'.



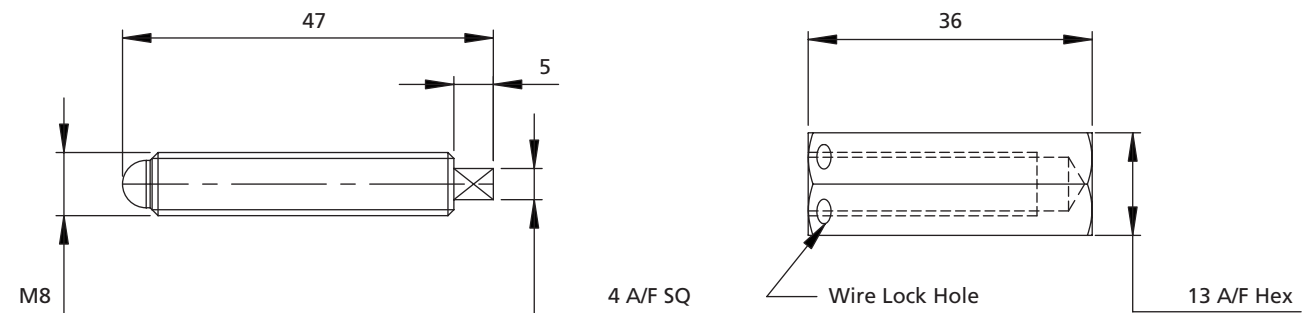
4500 Series Ancillary Products – Pressure switch optional accessories

Panel Mounting Ring



Product Code	Description
SSAF238/20	Panel mounting ring

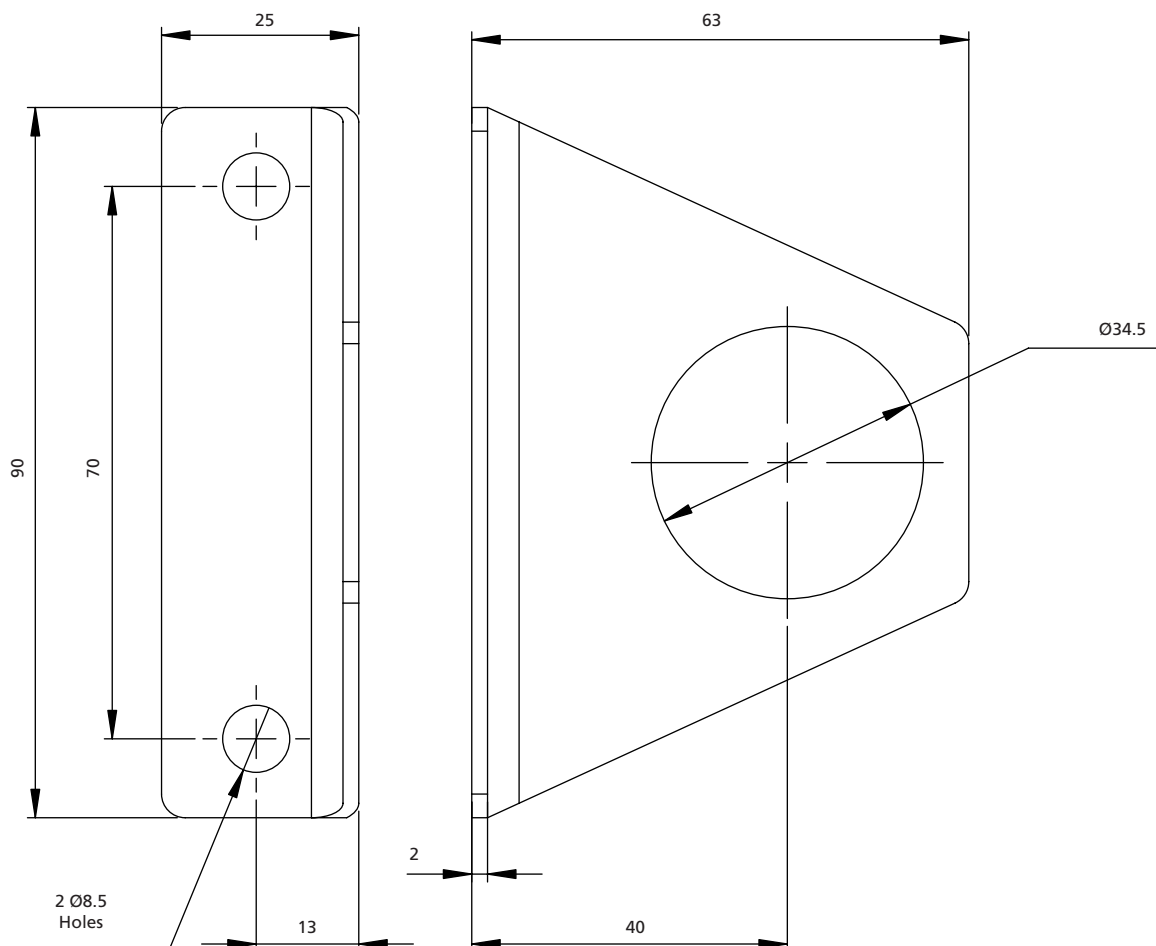
Tamper-proof cap kit



Product Code	Description
SSAF238/22	Kit comprises of 1 Pressure adjusting screw and 1 Tamperproof Cap. All material 316 Stainless Steel

4500 Series Ancillary Products – Pressure switch optional accessories

Mounting Bracket Kit



Product Code	Description
SSAF238/26	Kit comprises of 1 Bracket and 1 Panel Mounting Ring

4500 Series Ancillary Products – 1/4" to 1" Flow Regulators

Uni-directional flow regulators:

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

Bi-directional flow regulators:

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

Features and Benefits

- Specifically designed for severe environments
- For use on fail-safe systems
- In-line flow
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)¹
- Low temp: -50 to +80 °C (-58 to +176 °F optional)²

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

² When product is ordered as 'ATEX' ambient temperature range is -50 °C to +40 °C (-58 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure

- 12 bar (174 psi) maximum

Ports NPT (BSP option available)

Operating Media

- Gases - Filtered lubricated or non-lubricated air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water.

Construction Materials

- Body: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)
- Internals: 316L Stainless Steel

Certification Options Available



Maximum Flow

At 6 bar, 1 bar differential:

Uni-Directional

- 1/4" - 1000 L/Min (35 SCFM)
- 3/8" - 1680 L/Min (59 SCFM)
- 1/2" - 2520 L/Min (89 SCFM)
- 3/4" - 5428 L/Min (192 SCFM)
- 1" - 9820 L/Min (347 SCFM)

Bi-Directional

- 1/4" - 620 L/Min (22 SCFM)
- 3/8" - 1290 L/Min (45 SCFM)
- 1/2" - 2000 L/Min (71 SCFM)

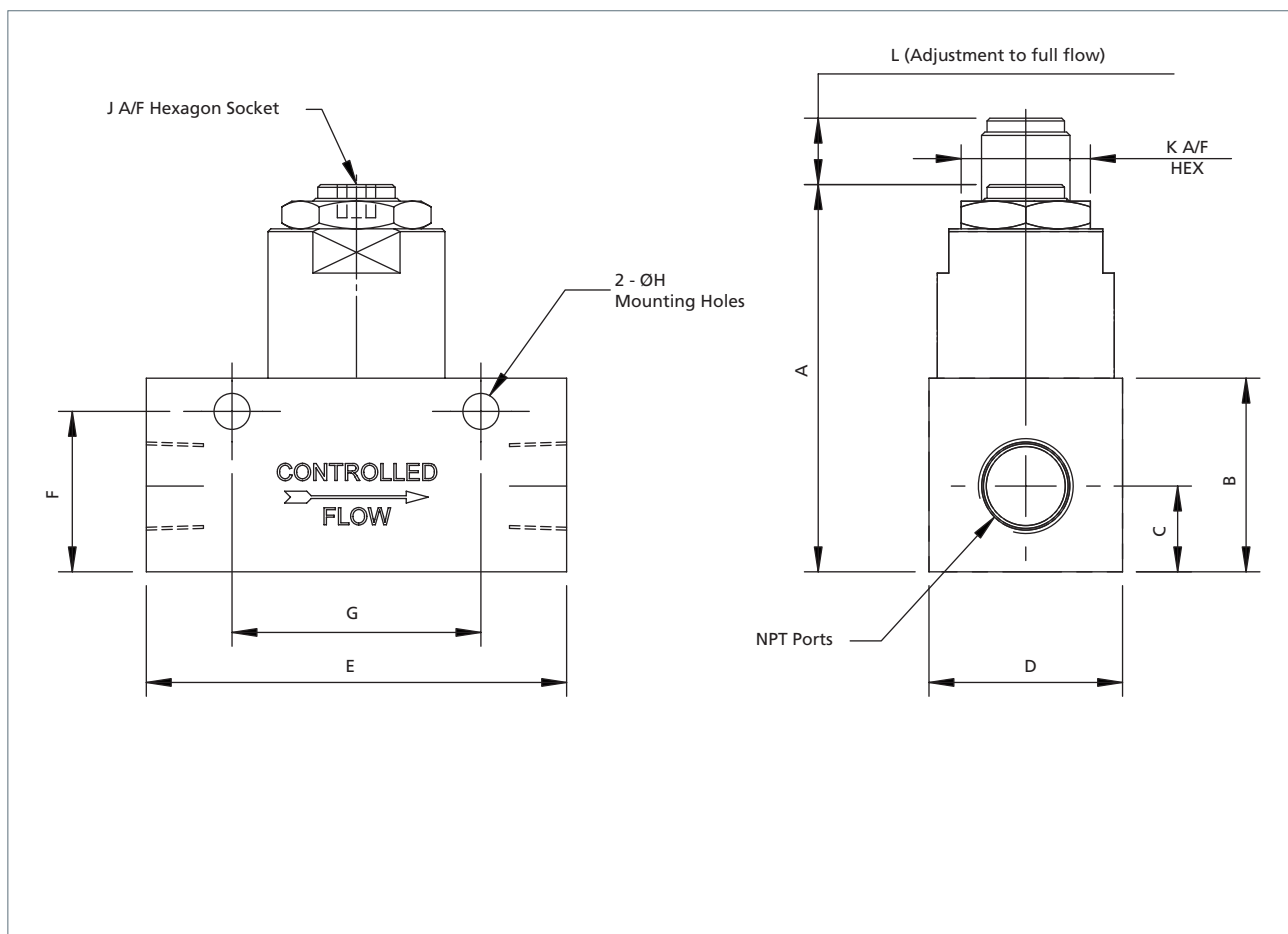
Uni-directional flow regulators

Product Code	Low Temperature Version	Size	CV	Weight (kg)
2REGSN122	2REGSE122	1/4"	1.0	0.26
3REGSN122	3REGSE122	3/8"	1.7	0.75
4REGSN122	4REGSE122	1/2"	2.5	0.75
6REGSN122	6REGSE122	3/4"	5.4	1.75
8REGSN122	8REGSE122	1"	9.8	3.1

Bi-directional flow regulators

Product Code	Low Temperature Version	Size	CV	Weight (kg)
2BIDSN122	2BIDSE122	1/4"	0.6	0.38
3BIDSN122	3BIDSE122	3/8"	1.3	1.0
4BIDSN122	4BIDSE122	1/2"	2.0	1.0

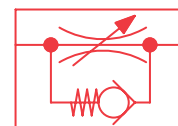
4500 Series Ancillary Products – 1/4" to 1/2" Uni-Directional Flow Regulators



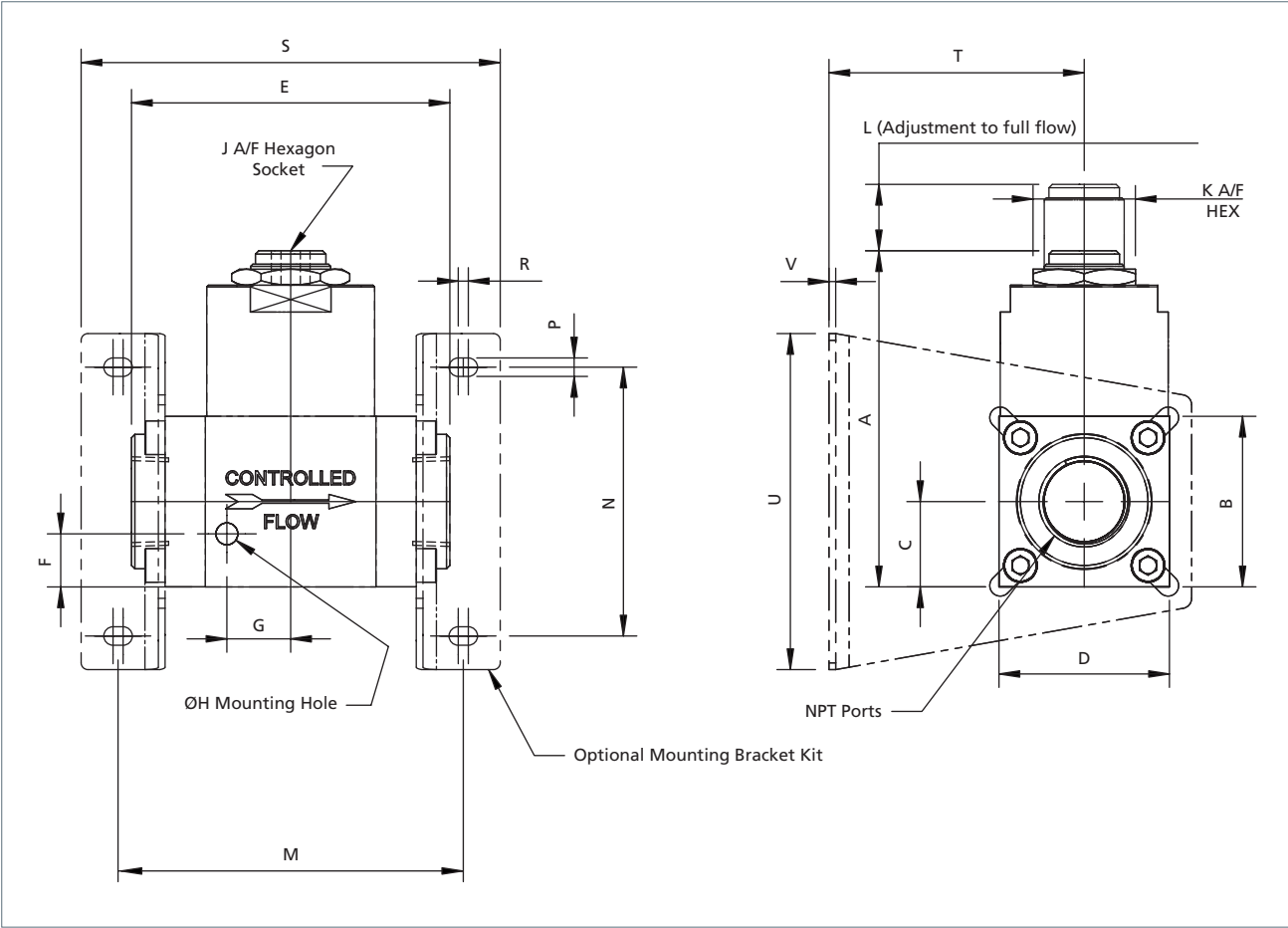
Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F	G	H	J	K	L
2REGSN122	2REGSE122	1/4"	48	25.4	9	25.4	54	20	40	6.35	5	18	6
3REGSN122	3REGSE122	3/8"	70	35	15.5	35	76	29	45	6.35	6	23.4	12
4REGSN122	4REGSE122	1/2"	70	35	13.5	35	76	29	45	6.35	6	23.4	12

If ATEX certification is required suffix product code with 'ATEX'.



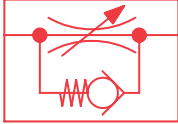
4500 Series Ancillary Products – 3/4" to 1" Uni-Directional Flow Regulators



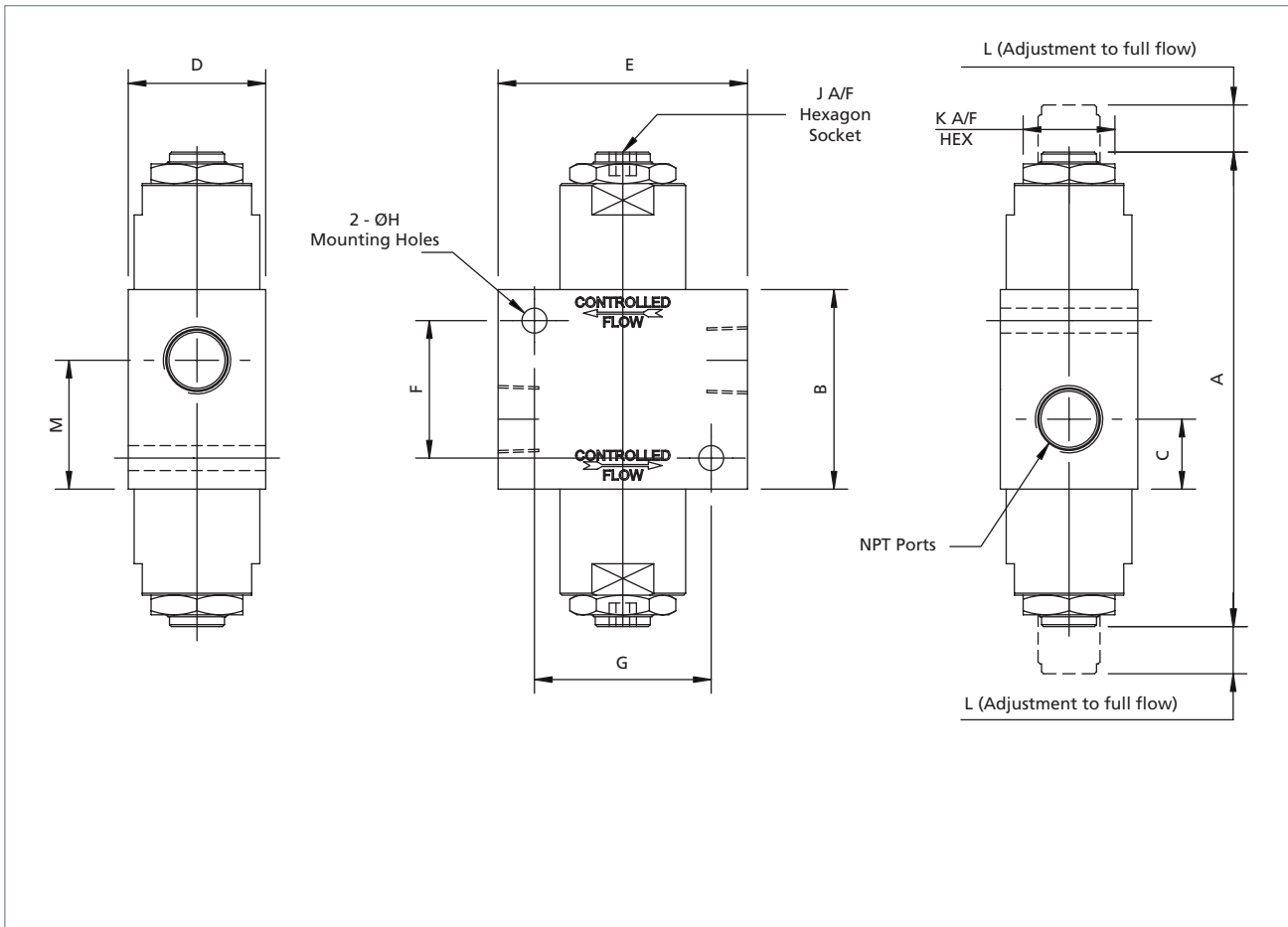
Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V
6REGSN122	6REGSE122	3/4"	100	50.8	25.4	50.8	95	16	19	6.35	10	30.5	20	103	80	5.5	3	125	76	100	2
8REGSN122	8REGSE122	1"	125	63.5	31.75	63.5	107.5	19	24	6.35	12	36	25	115.5	80	5.5	3	137.5	76	100	2

If ATEX certification is required suffix product code with 'ATEX'.



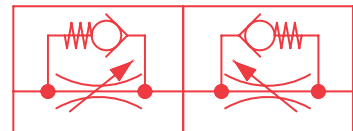
4500 Series Ancillary Products – 1/4" to 1/2" Bi-Directional Flow Regulators



Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F	G	H	J	K	L	M
2BIDSN122	2BIDSE122	1/4"	85	40	15.5	25.4	44.5	28	32	6.35	5	18	6	24.5
3BIDSN122	3BIDSE122	3/8"	121	51	18	35	63.5	35	45	6.35	6	23.4	12	33
4BIDSN122	4BIDSE122	1/2"	121	51	21	35	63.5	35	45	6.35	6	23.4	12	30

If ATEX certification is required suffix product code with 'ATEX'.



4500 Series Ancillary Products – 1/4" to 1/2" Needle Valves

Needle valve: 316L stainless steel needle valve with 3mm, 6mm or 12mm orifice.

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available
- 316L Stainless Steel

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)¹
- Low temp: -50 to +80 °C (-58 to +176 °F optional)²

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

² When product is ordered as 'ATEX' ambient temperature range is -50 °C to +40 °C (-58 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure

- 12 bar (174 psi)

Ports NPT (BSP option available)

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Construction Materials

- Body: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Nitrile (EPDM on Low Temperature option)
- Internals: 316L Stainless Steel



Maximum Flow

At 6 bar, 1 bar differential:

Needle Valve (3mm orifice)

- 1/4" - 290 L/Min (10.5 SCFM)

Needle Valve (6mm orifice)

- 1/4" - 640 L/Min (23 SCFM)

Needle Valve (12mm orifice)

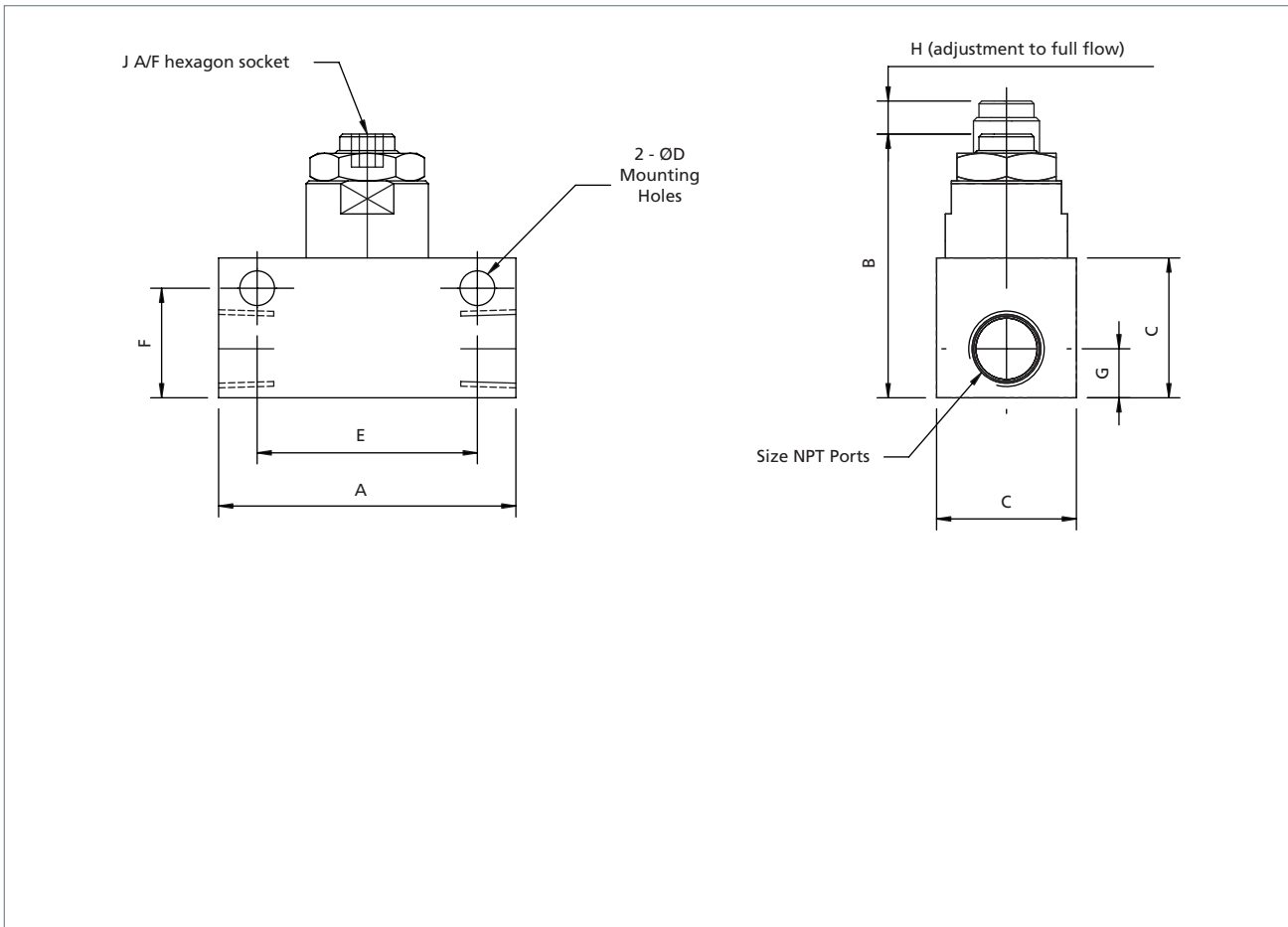
- 1/2" - 2240 L/Min (79 SCFM)

Product Code	Low Temperature Version	Size	Orifice (mm)	CV	Weight (kg)
2NDVSN12203	2NDVSE12203	1/4"	3	0.3	0.27
2NDVSN12206	2NDVSE12206	1/4"	6	0.7	0.27
4NDVSN12206	4NDVSE12206	1/2"	6	1.1	0.71
4NDVSN12212	4NDVSE12212	1/2"	12	2.8	0.71

Certification Options Available



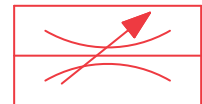
4500 Series Ancillary Products – 1/4" to 1/2" Needle Valves



Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F	G	H	J
2NDVSN12203	2NDVSE12203	1/4"	54	48	25.4	6.35	40	20	9	6	5
2NDVSN12206	2NDVSE12206	1/4"	54	48	25.4	6.35	40	20	9	6	5
4NDVSN12206	4NDVSE12206	1/2"	76	70	35	6.35	45	29	13.5	12	6
4NDVSN12212	4NDVSE12212	1/2"	76	70	35	6.35	45	29	13.5	12	6

If ATEX certification is required suffix product code with 'ATEX'.



4500 Series Ancillary Products – 1/4" to 1/2" Exhaust port flow regulators

Exhaust port flow regulators: 316L stainless steel exhaust flow regulator/breather supplied complete with tamper proof cap.

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available
- 316L Stainless Steel

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)
- Low temperature version
-50 to +80 °C (-58 to +176 °F optional)

Working Pressure

- 12 bar (174 psi)

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Construction Materials

- Body: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Nitrile (EPDM on Low Temperature option)
- Internals: 316L Stainless Steel

Maximum Flow

At 6 bar, 1 bar differential:

Exhaust Port Flow Regulators

- 1/4" - 646 L/Min (23 SCFM)
- 3/8" - 1100 L/Min (39 SCFM)
- 1/2" - 1800 L/Min (64 SCFM)

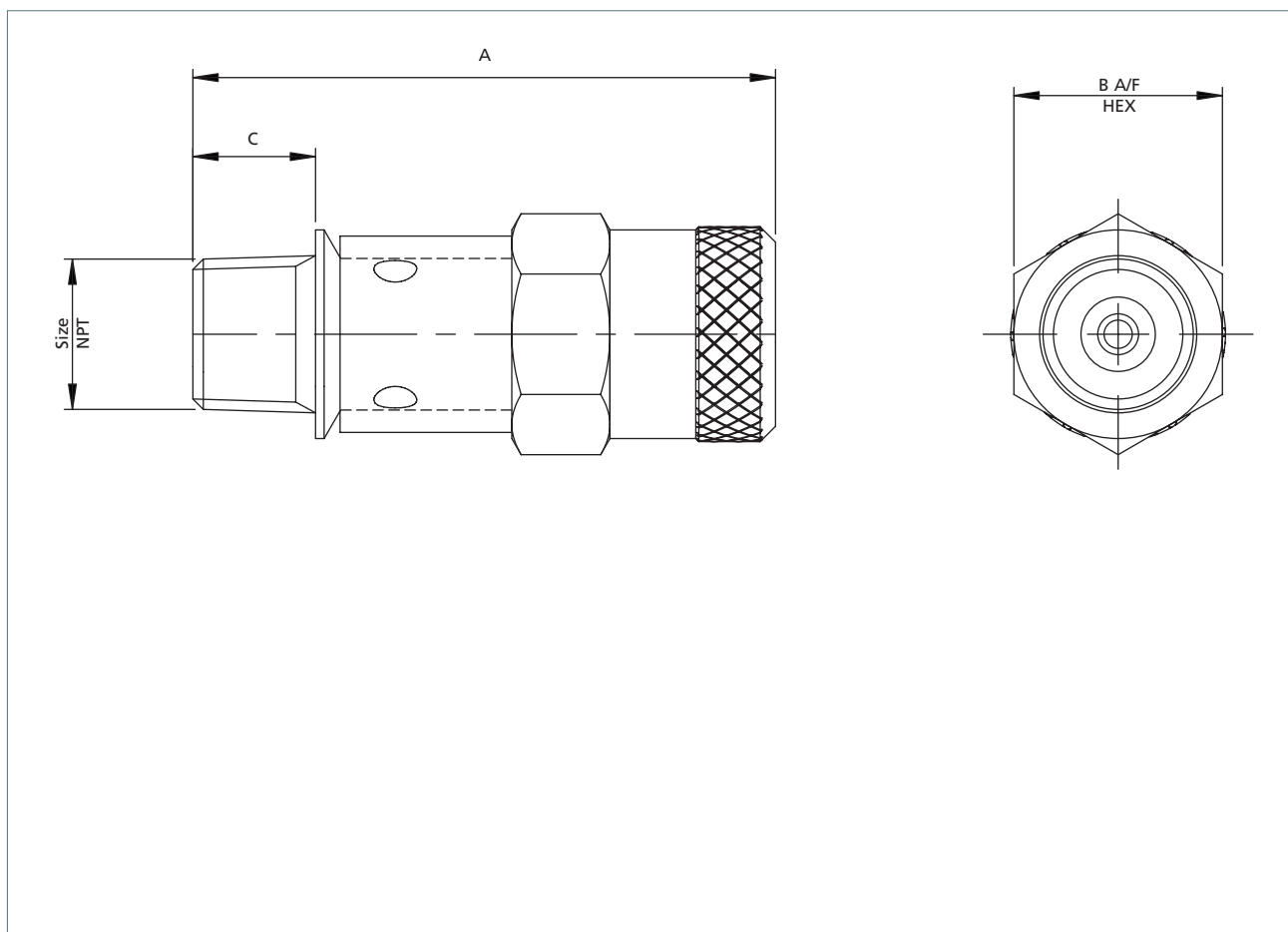


Product Code	Low Temperature Version	Size	CV	Weight (kg)
2EFRSN102	2EFRSE122	1/4"	0.65	0.06
3EFRSN102	3EFRSE122	3/8"	1.1	0.15
4EFRSN102	4EFRSE122	1/2"	1.8	0.22

Certification Options Available



4500 Series Ancillary Products – 1/4" to 1/2" Exhaust port flow regulators



Ordering Information

Product Code	Low Temperature Version	Size	A	B	C
2EFRSN102	2EFRSE102	1/4"	47.5	17	10
3EFRSN102	3EFRSE102	3/8"	66	23.4	12.5
4EFRSN102	4EFRSE102	1/2"	87	23.4	17



4500 Series Ancillary Products – 1/4" to 2" NPT non-return valve

316L Stainless Steel non-return valves for pressures up of 12 bar (174 psi) and 27 bar (391 psi).

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available
- 316L Stainless Steel

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)¹
- Low temperature version
-50 to +80 °C (-58 to +176 °F optional)²

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

² When product is ordered as 'ATEX' ambient temperature range is -50 °C to +40 °C (-58 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure

- 12 bar (174 psi)
- 27 bar (391 psi)

Ports NPT (BSP option available)

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Construction Materials

- Body: 316L Stainless Steel
- Spring: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)
- Internals: 316L Stainless Steel



Maximum Flow

At 6 bar, 1 bar differential:

Non Return Valves (12 bar)

- 1/4" - 1600 L/Min (57 SCFM)
- 3/8" - 2200 L/Min (80 SCFM)
- 1/2" - 3800 L/Min (137 SCFM)
- 3/4" - 5800 L/Min (205 SCFM)
- 1" - 7700 L/Min (274 SCFM)

Non-Return Valves (27 bar)

- 1/4" - 736 L/Min (26 SCFM)
- 3/8" - 1840 L/Min (65 SCFM)
- 1/2" - 2600 L/Min (91 SCFM)

Non-return valves 12 Bar

Product Code	Low Temperature Version	Size	CV	Weight (kg)
2NRVSN122	2NRVSE122	1/4"	1.6	0.10
3NRVSN122	3NRVSE122	3/8"	2.3	0.26
4NRVSN122	4NRVSE122	1/2"	3.9	0.24
6NRVSN122	6NRVSE122	3/4"	14	0.74
8NRVSN122	8NRVSE122	1"	15.7	0.66
7NRVSN122	7NRVSE122	1 1/2"	49	6.65
9NRVSN122	9NRVSE122	2"	51	6.25

Non-return valves 27 Bar

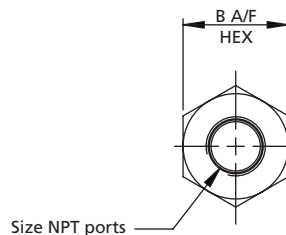
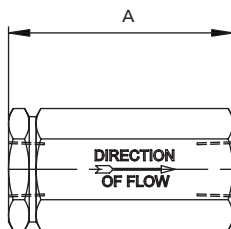
Product Code	Low Temperature Version	Size	CV	Weight (kg)
2NRVSN272	2NRVSE272	1/4"	1.6	0.10
3NRVSN272	3NRVSE272	3/8"	1.9	0.53
4NRVSN272	4NRVSE272	1/2"	3.3	0.58

Certification Options Available

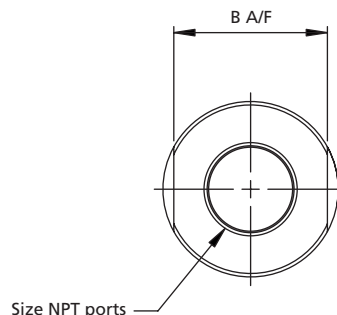
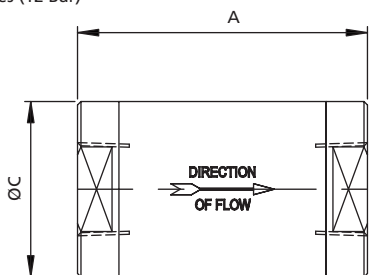


4500 Series Ancillary Products – 1/4" to 2" NPT non-return valves (12 Bar)

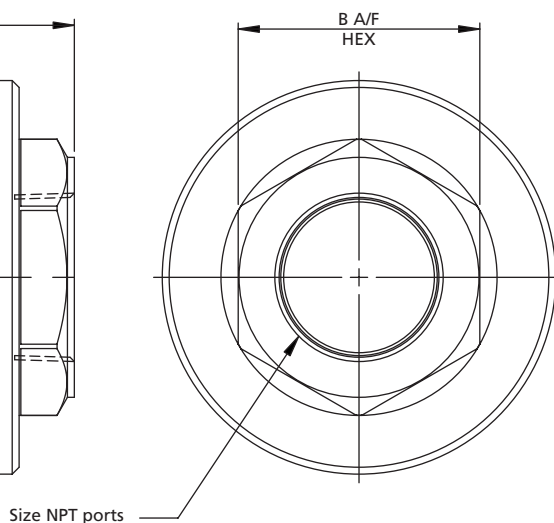
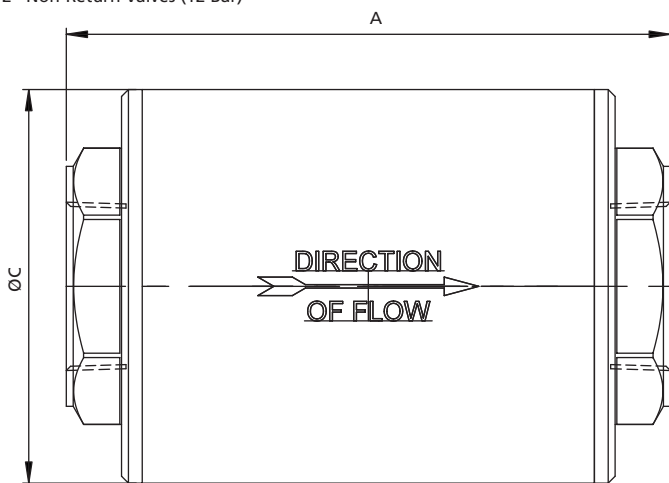
1/4" to 1/2" Non-Return Valves (12 bar)



3/4" to 1" Non-Return Valves (12 Bar)

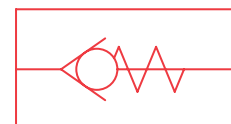


1 1/2" to 2" Non-Return Valves (12 Bar)



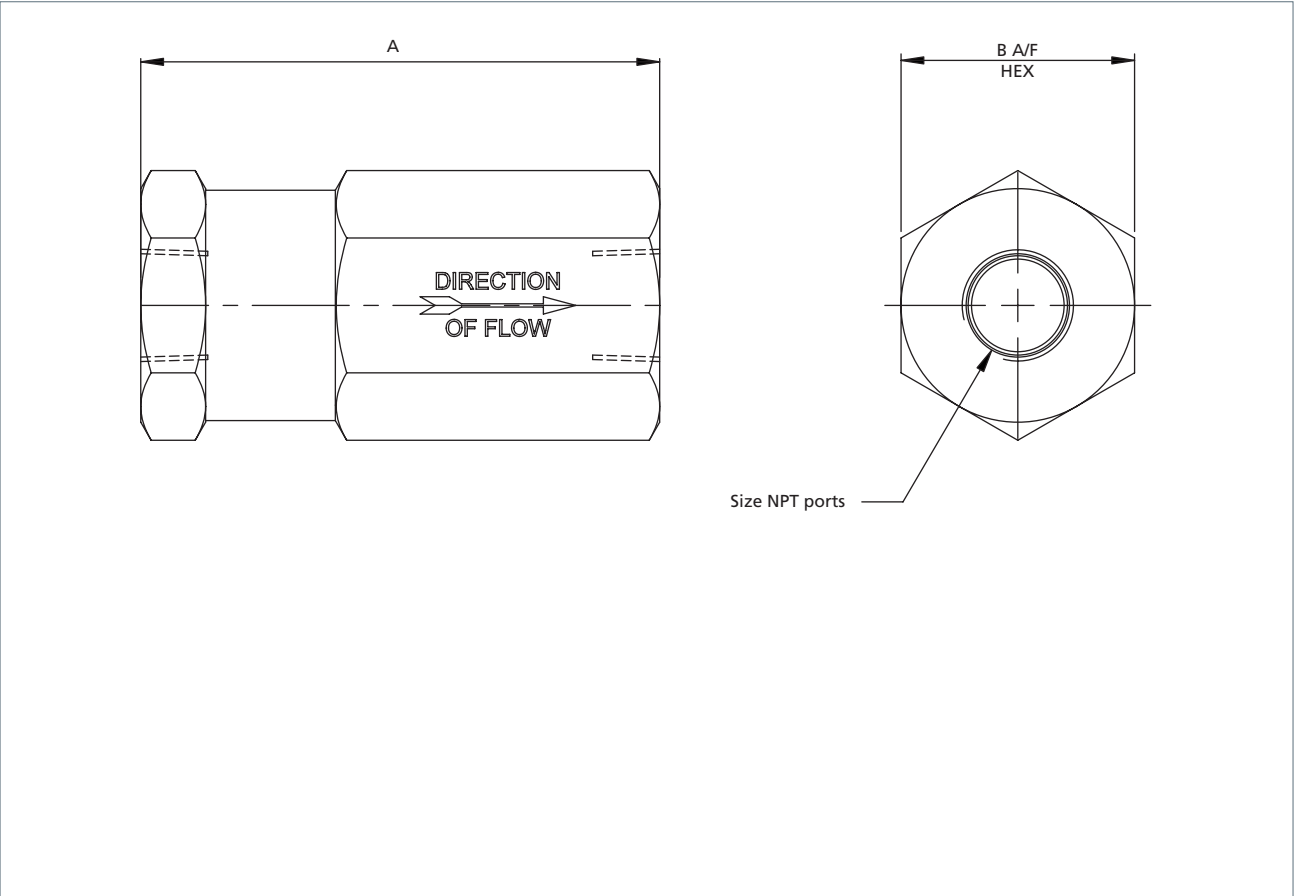
Ordering Information

Product Code	Low Temperature Version	Size	A	B	C
2NRVSN122	2NRVSE122	1/4"	50	22.2	-
3NRVSN122	3NRVSE122	3/8"	65	30.5	-
4NRVSN122	4NRVSE122	1/2"	68	30.5	-
6NRVSN122	6NRVSE122	3/4"	84	44.5	51
8NRVSN122	8NRVSE122	1"	84	44.5	51
7NRVSN122	7NRVSE122	1 1/2"	175	70	114
9NRVSN122	9NRVSE122	2"	175	70	114



If ATEX certification is required suffix product code with 'ATEX'.

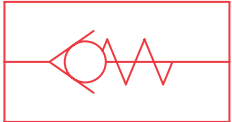
4500 Series Ancillary Products – 1/4" to 1/2" NPT Non-return valves (27 Bar)



Ordering Information

Product Code	Low Temperature Version	Size	A	B
2NRVSN272	2NRVSE272	1/4"	50	22.2
3NRVSN272	3NRVSE272	3/8"	80	36
4NRVSN272	4NRVSE272	1/2"	90	36

If ATEX certification is required suffix product code with 'ATEX'.



4500 Series Ancillary Products – 1/4" to 2" NPT Quick exhaust valve

316L Stainless Steel quick exhaust valves.

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)¹
- Low temperature version
-50 to +80 °C (-58 to +176 °F optional)²

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

² When product is ordered as 'ATEX' ambient temperature range is -50 °C to +40 °C (-58 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure

- 12 bar (174 psi)

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Maximum Flow

At 6 bar, 1 bar differential:

Supply to outlet

- 1/4" - 1290 L/Min (46 SCFM)
- 3/8" - 1810 L/Min (64 SCFM)
- 1/2" - 3810 L/Min (135 SCFM)
- 3/4" - 4520 L/Min (160 SCFM)
- 1" - 7700 L/Min (274 SCFM)
- 1 1/2" - 22000 L/Min (777 SCFM)
- 2" - 32000 L/Min (1130 SCFM)



Outlet to Exhaust

- 1/4" - 2780 L/Min (98 SCFM)
- 3/8" - 3810 L/Min (135 SCFM)
- 1/2" - 5490 L/Min (194 SCFM)
- 3/4" - 6460 L/Min (228 SCFM)
- 1" - 11000 L/Min (388 SCFM)
- 1 1/2" - 32000 L/Min (1130 SCFM)
- 2" - 45000 L/Min (1589 SCFM)

Construction Materials

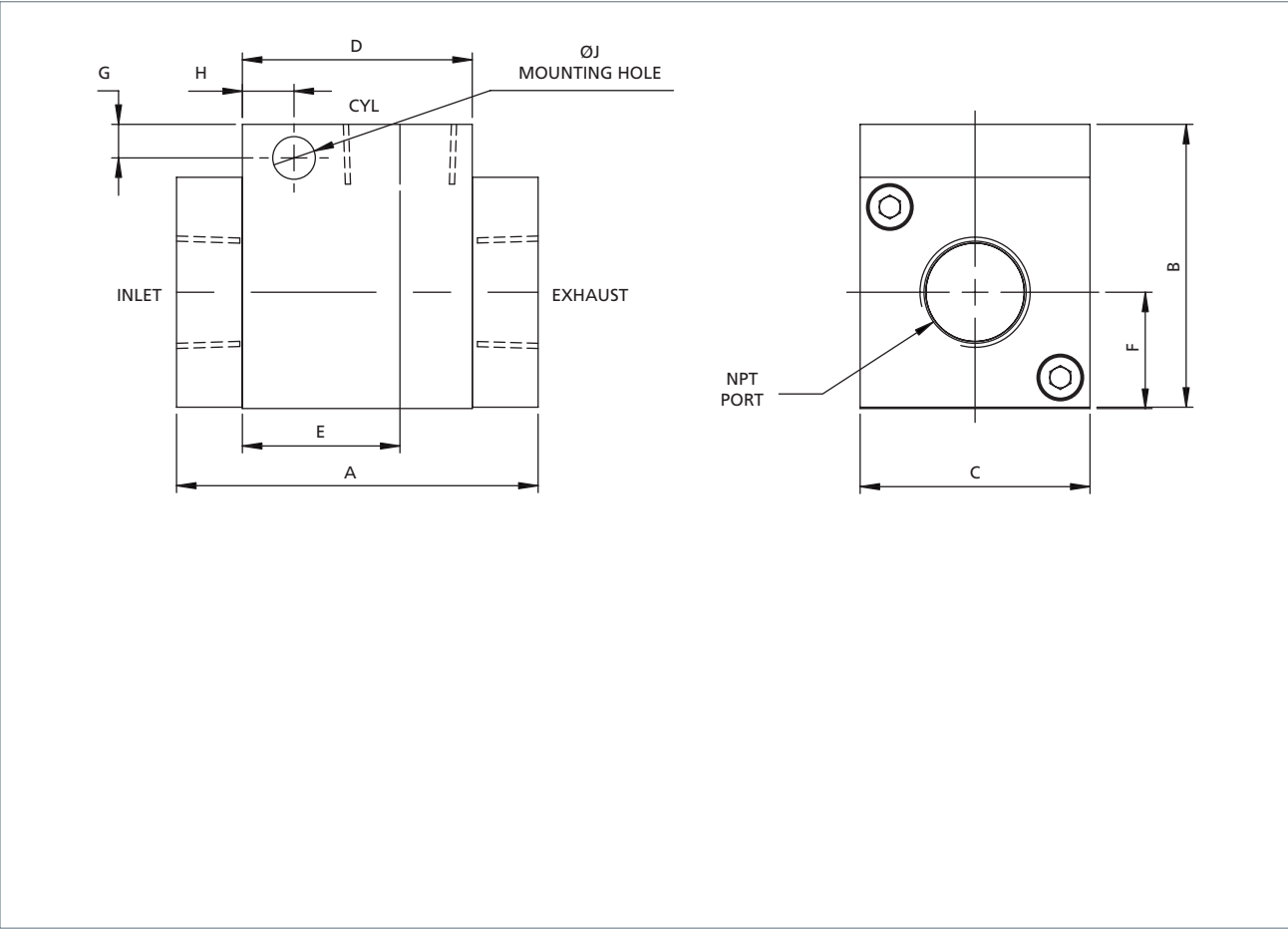
- Body: 316L Stainless Steel
- Internal Parts: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)

Product Code	Low Temperature Version	Size	CV Supply to Outlet	CV Outlet to Exhaust
2QEVSN122	2QEVSE122	1/4"	1.3	2.8
3QEVSN122	3QEVSE122	3/8"	1.8	3.8
4QEVSN122	4QEVSE122	1/2"	3.8	5.5
6QEVSN122	6QEVSE122	3/4"	4.5	6.5
8QEVSN122	8QEVSE122	1"	7.8	11.0
7QEVSN122	7QEVSE122	1 1/2"	22.0	32.0
9QEVSN122	9QEVSE122	2"	32.0	45.0

Certification Options Available



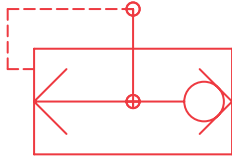
4500 Series Ancillary Products – 1/4" to 1" NPT Quick exhaust valve



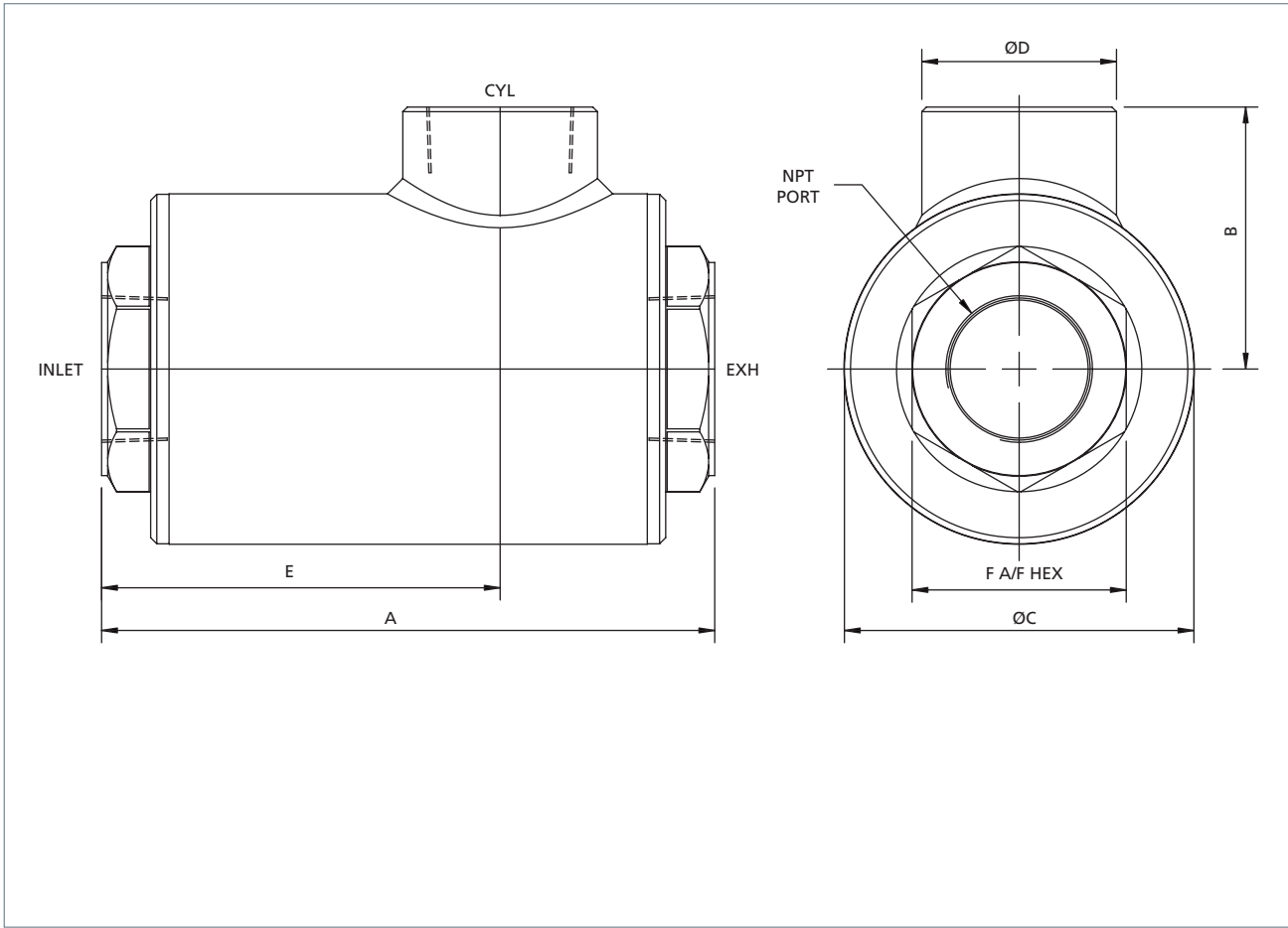
Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F	G	H	J
2QEVSN122	2QEVSE122	1/4"	52	38	31.75	31.75	22	16	-	-	-
3QEVSN122	3QEVSE122	3/8"	60	42	35	35	23	17.5	-	-	-
4QEVSN122	4QEVSE122	1/2"	70	55	44.5	44.5	30.5	22.5	6.5	10	8.25
6QEVSN122	6QEVSE122	3/4"	80	60	50.8	50.8	33.5	25.4	7.5	10	8.5
8QEVSN122	8QEVSE122	1"	106.2	91	76.2	76.2	52.2	38.1	10	16	11

If ATEX certification is required suffix product code with '/ATEX'.

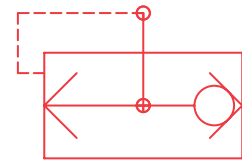


4500 Series Ancillary Products — 1½" to 2" NPT Quick exhaust valve



Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F
7QEVSN122	7QEVSE122	1½"	200	85.5	114	63.5	130	70
9QEVSN122	9QEVSE122	2"	200	85.5	114	76	130	70



4500 Series Ancillary Products – 1/4" to 2" NPT Quick exhaust valve c/w exhaust flow regulator

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

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)
- Low temperature version
-50 to +80 °C (-58 to +176 °F optional)

Working Pressure

- Quick exhaust valve c/w flow regulator
12 bar (174 psi)

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water

Maximum Flow

At 6 bar, 1 bar pressure drop:

Quick exhaust valve c/w flow regulator

Supply to outlet

- 1/4" - 1290 L/Min (46 SCFM)
- 3/8" - 1810 L/Min (64 SCFM)
- 1/2" - 3810 L/Min (135 SCFM)
- 3/4" - 4520 L/Min (160 SCFM)
- 1" - 7700 L/Min (274 SCFM)
- 1 1/2" - 22000 L/Min (777 SCFM)
- 2" - 32000 L/Min (1130 SCFM)

Quick exhaust valve c/w Flow Regulator

Outlet to exhaust

- 1/4" - 2780 L/Min (98 SCFM)
- 3/8" - 3810 L/Min (135 SCFM)
- 1/2" - 5490 L/Min (194 SCFM)
- 3/4" - 6460 L/Min (228 SCFM)
- 1" - 11000 L/Min (388 SCFM)
- 1 1/2" - 32000 L/Min (1130 SCFM)
- 2" - 45000 L/Min (1589 SCFM)

Construction Materials

- Body: 316L Stainless Steel
- Internal Parts: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile (EPDM on Low temperature option)

1/4" to 1" Quick Exhaust Valve with Exhaust Flow Regulator

Standard Product Code	Standard Product Code with by-pass	Low Temperature Version	Low Temperature Version with by-pass	Size	CV Supply to Outlet	CV Outlet to Exhaust	Weight (kg)
2QERSN122	2QEBSN122	2QERSE122	2QEBSE122	1/4"	1.3	2.8	0.5
3QERSN122	3QEBSN122	3QERSE122	3QEBSE122	3/8"	1.8	3.8	0.7
4QERSN122	4QEBSN122	4QERSE122	4QEBSE122	1/2"	3.8	5.5	1.7
6QERSN122	6QEBSN122	6QERSE122	6QEBSE122	3/4"	4.5	6.5	2.4
8QERSN122	8QEBSN122	8QERSE122	8QEBSE122	1"	7.8	11	6

1 1/2" to 2" Quick Exhaust Valve with Exhaust Flow Regulator and By-pass

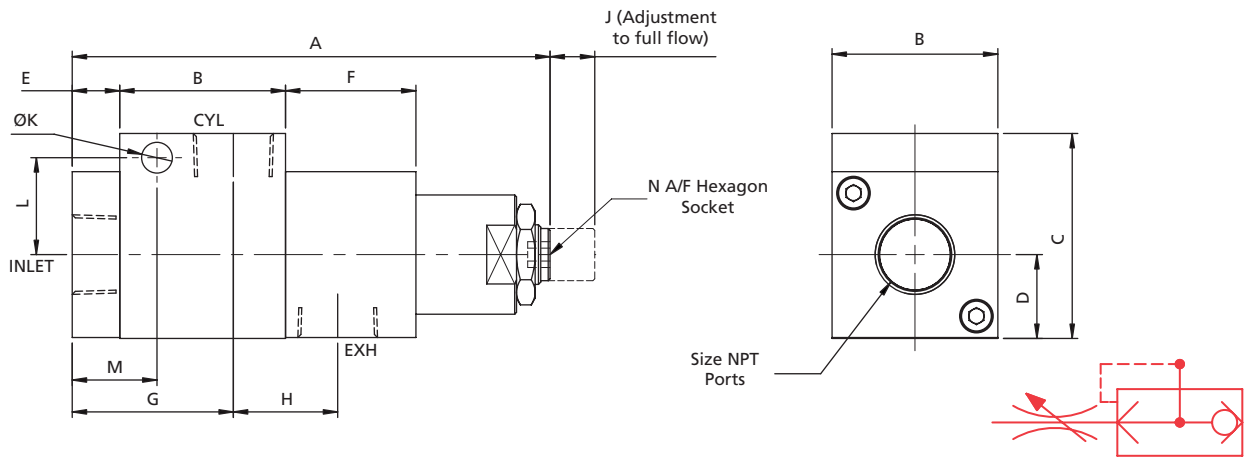
Standard Product Code	Low Temperature Version	Size	CV Supply to Outlet	CV Outlet to Exhaust	Weight (kg)
7QEBSN122	7QEBSE122	1 1/2"	22	32	13.4
9QEBSN122	9QEBSE122	2"	32	46	13.4

Certification Options Available



4500 Series Ancillary Products

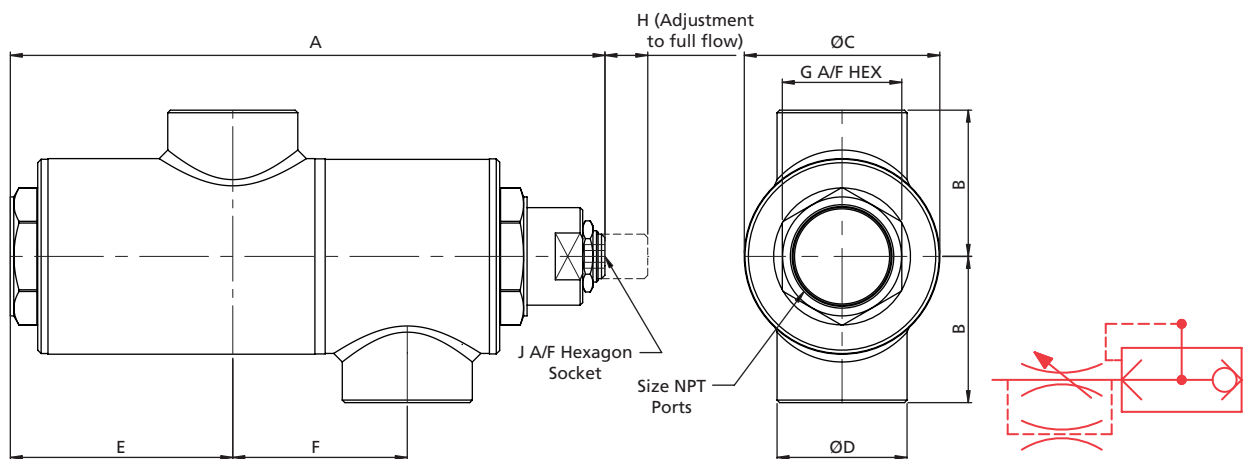
1/4" to 1" NPT Quick exhaust valve c/w exhaust flow regulator



Ordering Information

Standard Product Code	Standard Product Code with by-pass	Low Temperature Version	Low Temperature Version with by-pass	Size	A	B	C	D	E	F	G	H	J	K	L	M	N
2QERSN122	2QEBSN122	2QERSE122	2QEBSE122	1/4"	90	31.75	38	16	10	26	32	19.75	6	-	-	-	5
3QERSN122	3QEBSN122	3QERSE122	3QEBSE122	3/8"	101	35	42	17.5	12.5	31	35.5	25	6	-	-	-	5
4QERSN122	4QEBSN122	4QERSE122	4QEBSE122	1/2"	128	44.5	55	22.5	12.75	35	43.3	28	12	8.25	26	22.75	6
6QERSN122	6QEBSN122	6QERSE122	6QEBSE122	3/4"	145	50.8	60	25.4	14.5	41.5	48	35.3	10	8.5	27	24.5	6
8QERSN122	8QEBSN122	8QERSE122	8QEBSE122	1"	210	76.2	91	38.1	15	57	67.2	47	25	11	43	41	12

1 1/2" to 2" NPT Quick exhaust valve c/w exhaust flow regulator & by-pass



Ordering Information

Standard Product Code	Low Temperature Version	Size	A	B	C	D	E	F	G	H	J
7QEBSN122	7QEBSE122	1 1/2"	347.5	85.5	114	76	130	102	70	25	12
9QEBSN122	9QEBSE122	2"	347.5	85.5	114	76	130	102	70	25	12

4500 Series Ancillary Products – 1/4" to 1" NPT shuttle valve

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

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- Low temperature option available
- 316L Stainless Steel
- 5 sizes available

Working Temperature Range

- -20 to +70 °C (-4 to +158 °F)¹
- Low temperature version
-50 to +80 °C (-58 to +176 °F optional)²

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

² When product is ordered as 'ATEX' ambient temperature range is -50 °C to +40 °C (-58 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure

- 12 bar (174 psi)

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases
- Sour gas option available
- Liquids - Low pressure hydraulic, mineral oil or water



Maximum Flow

At 6 bar, 1 bar pressure drop:

Shuttle Valve

- 1/4" - 1350 L/Min (45 SCFM)
- 3/8" - 1830 L/Min (65 SCFM)
- 1/2" - 3550 L/Min (126 SCFM)
- 3/4" - 5500 L/Min (194 SCFM)
- 1" - 9000 L/Min (319 SCFM)

Construction Materials

- Body: 316L Stainless Steel
- Internal Parts: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile (EPDM on low temperature option)

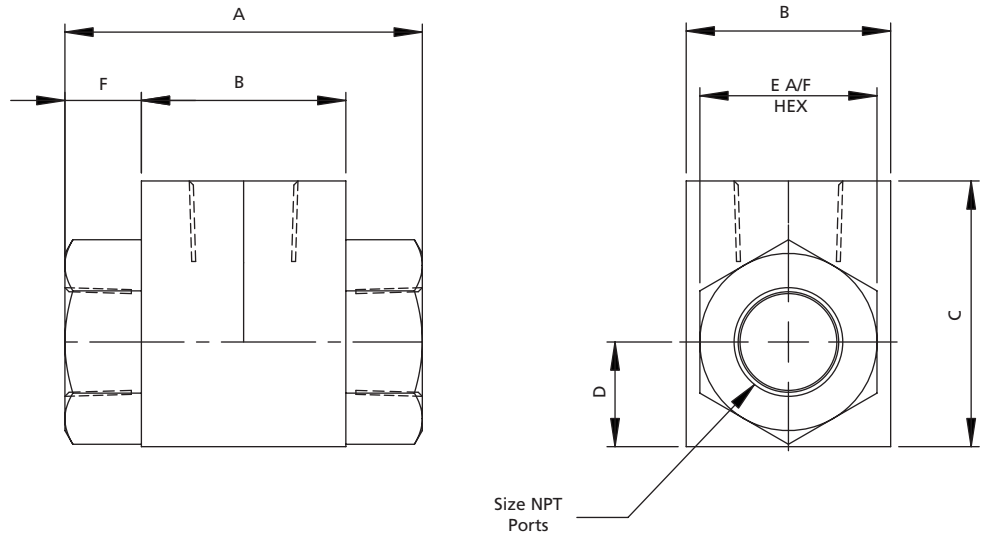
Standard Product Code	Low Temperature Version	Size	CV	Weight (kg)
2SHVSN122	2SHVSE122	1/4"	1.3	0.16
3SHVSN122	3SHVSE122	3/8"	1.9	0.19
4SHVSN122A	4SHVSE122A	1/2"	3.7	0.34
6SHVSN122	6SHVSE122	3/4"	9.0	0.94
8SHVSN122	8SHVSE122	1"	15	1.41

Certification Options Available

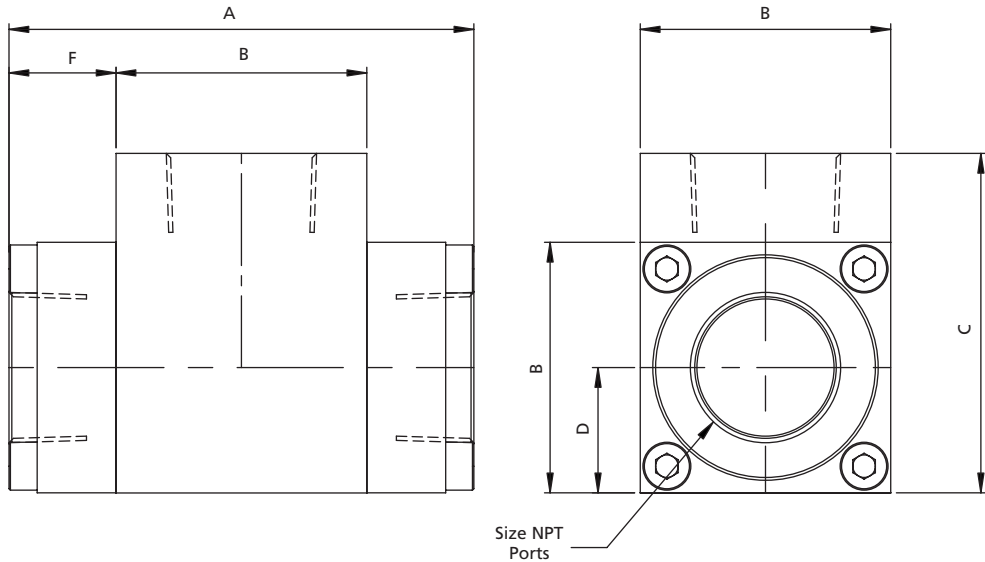


4500 Series Ancillary Products

1/4" to 1/2" Shuttle valve



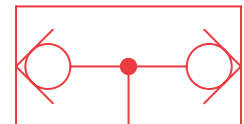
3/4" to 1" Shuttle valve



Ordering Information

Product Code	Low Temperature Version	Size	A	B	C	D	E	F
2SHVSN122	2SHVSE122	1/4"	44.5	25.4	33	13	22	9.5
3SHVSN122	3SHVSE122	3/8"	54	25.4	38	13	22	14.3
4SHVSN122A	4SHVSE122A	1/2"	63.8	31.8	48	16	28	16
6SHVSN122	6SHVSE122	3/4"	82.5	44.5	60	22.2	-	19
8SHVSN122	8SHVSE122	1"	100	50.8	70	25.4	-	24.6

If ATEX certification is required suffix product code with 'ATEX'.



4500 Series Ancillary Products – 1/2" NPT Thermal Fuses

316L Stainless Steel thermal fuses for fire release.
Available in a range of temperature settings.

Features and Benefits

- Specifically designed for severe environments
- 316L Stainless Steel
- For fire release

Working Temperature Range

- -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)

Working Pressure

- 12 bar (174 psi)

Ports NPT

- 1/2"

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

Maximum Flow

At 6 bar, 1 bar differential:

Supply to outlet

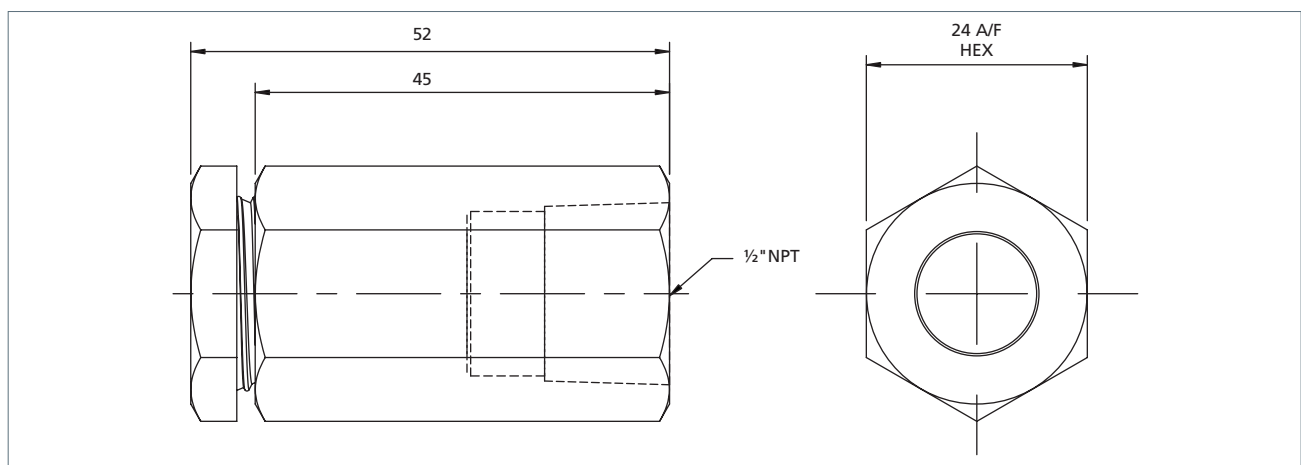
- 1/2" - 5800 L/Min (205 SCFM)



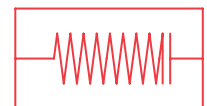
Construction Materials

- Body: 316L Stainless Steel
- Thermal plug: Low melting point alloy (bismuth-based)

Product Code	Temperature (°C)	Size	CV	Weight (kg)
4THFSN102070	70	1/2"	5.8	0.15
4THFSN102096	96			
4THFSN102102	102			
4THFSN102124	124			
4THFSN102137	137			
4THFSN102200	200			



Certification Options Available



4500 Series Ancillary Products – Visual Indicator

Compact 316L Stainless Steel panel mounted visual red/green indicator.

Features and Benefits

- Specifically designed for severe environments
- 316L Stainless Steel
- Can be panel mounted

Working Temperature Range

- -20 °C to +65 °C (-4 °F to +149 °F)¹

¹ When product is ordered as 'ATEX' ambient temperature range is -10 °C to +40 °C (14 °F to +104 °F) (T6) (EC Directive 94/9/EC).

Working Pressure

- 1 to 12 bar (14.5 to 174 psi)

Ports NPT (BSP option available)

- 1/8" NPT

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

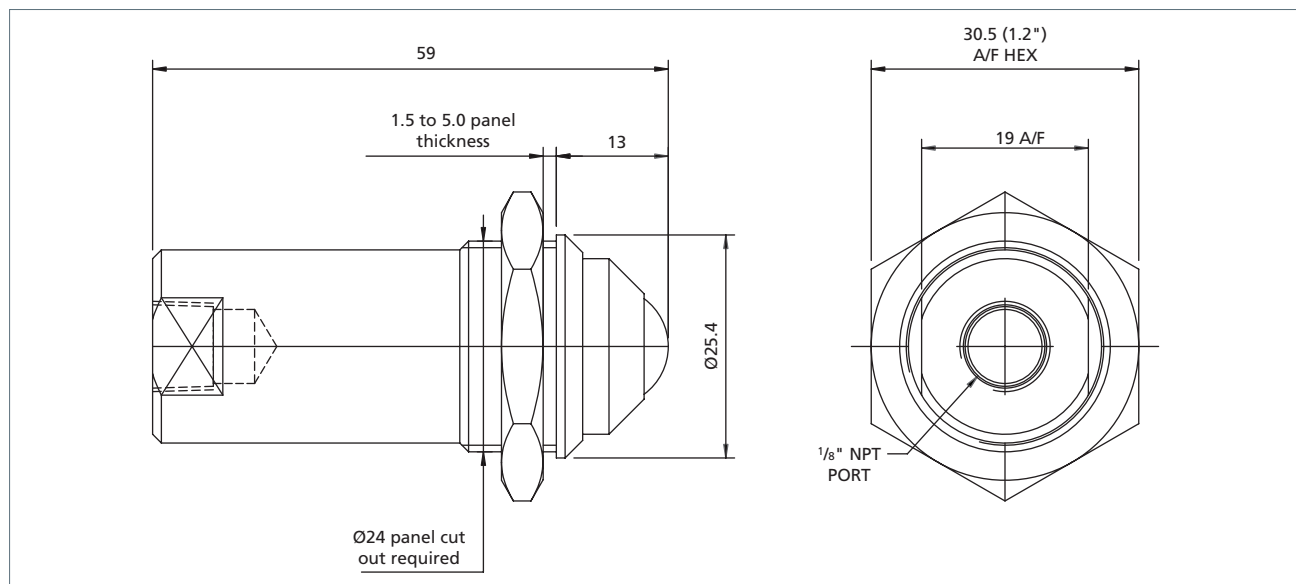


Construction Materials

- Body: 316L Stainless Steel
- Springs: 316 Stainless Steel
- Seals: Nitrile
- Visual indicator piston: acetal
- Visual indicator assembly: acetal with acrylic lens.

Product Code	Ports	Weight (kg)
1VISSN122G	1/8" NPT	0.1
1VISSN121G	1/8" BSP	

If ATEX certification is required suffix product code with 'ATEX'.



Certification Options Available



4500 Series Ancillary Products – 1/4" to 1/2" Non-return valve breather

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

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70° C
- 316L Stainless Steel

Working Temperature Range

- -20 °C to +70 °C (-4 °F to +158 °F)

Working Pressure

- 12 bar (174 psi)

Ports NPT (BSP option available)

- 1/4" to 1/2"

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

Maximum Flow

At 6 bar, 1 bar differential:

- 1/4" - 646 L/Min (23 SCFM)
- 3/8" - 1300 L/Min (45 SCFM)
- 1/2" - 1550 L/Min (54 SCFM)



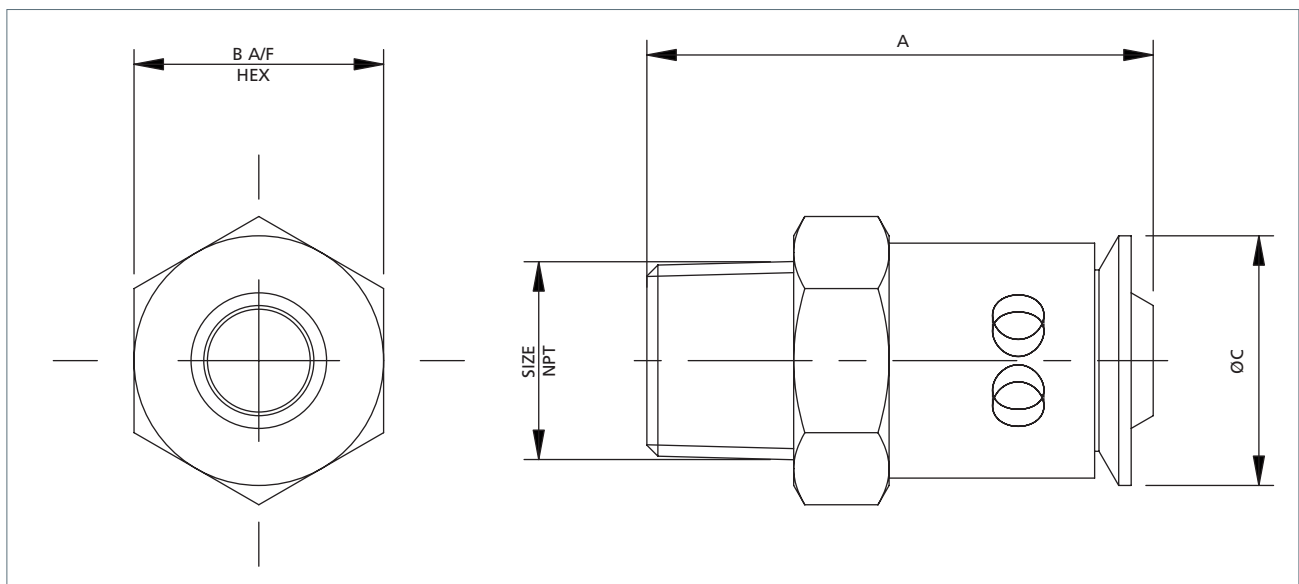
Construction Materials

- 316L Stainless Steel
- Non-return sleeve: silicon

Product Code	Size	CV	Weight (kg)
2NRBSN102	1/4"	0.65	0.02
3NRBSN102	3/8"	1.3	0.06
4NRBSN102	1/2"	1.6	0.063

Ordering Information

Product Code	Size	A	B	C
2NRBSN102	1/4"	34	17	17
3NRBSN102	3/8"	40	23.4	21
4NRBSN102	1/2"	45	23.4	21



Certification Options Available



4500 Series Ancillary Products – 1/8" to 1" Breathers (Silencers)

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

Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70 °C
- 316L Stainless Steel

Working Temperature Range

- -20 °C to +70 °C (-4 °F to +158 °F)

Working Pressure

- 12 bar (174 psi)

Ports NPT (BSP option available)

- 1/8" to 1"

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

Maximum Flow

At 6 bar, 1 bar differential:

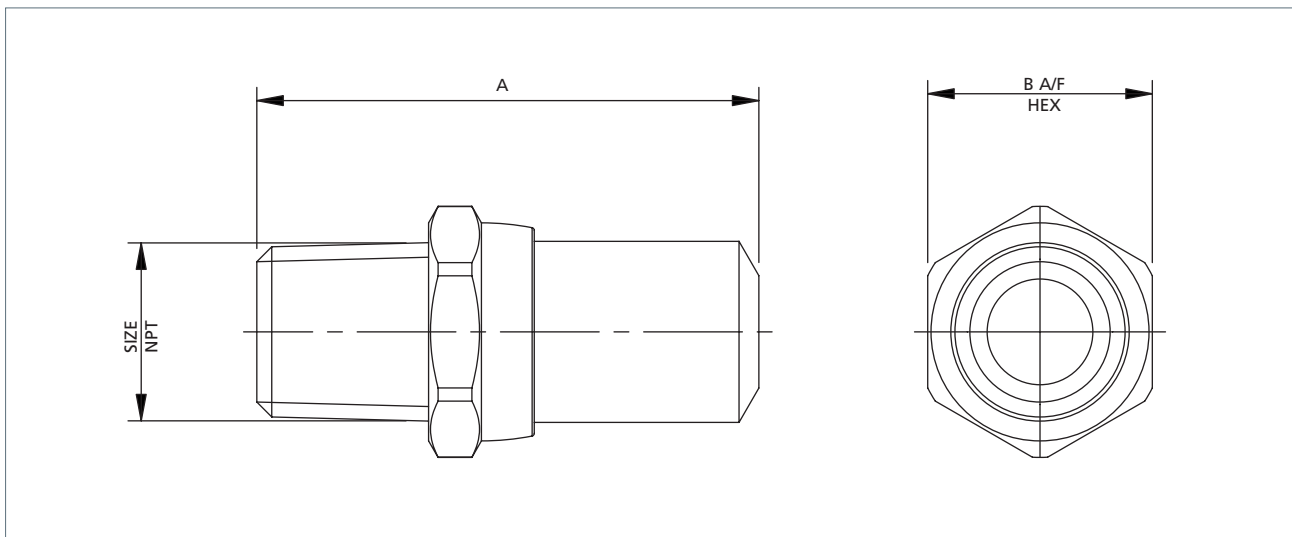
- 1/8" - 1200 L/Min (42 SCFM)
- 1/4" - 1550 L/Min (55 SCFM)
- 3/8" - 1940 L/Min (68 SCFM)
- 1/2" - 3410 L/Min (123 SCFM)
- 3/4" - 5500 L/Min (194 SCFM)
- 1" - 5700 L/Min (201 SCFM)



Construction Materials

- Body: 316L Stainless Steel
- Porous element: 316 Stainless Steel

Product Code	Size	CV	A	B	Weight (kg)
1BRESN102	1/8"	1.3	31	14	0.015
2BRESN102	1/4"	1.7	38	17	0.02
3BRESN102	3/8"	2.0	44	22	0.032
4BRESN102	1/2"	3.7	55	24	0.05
6BRESN102	3/4"	5.8	70	32	0.12
8BRESN102	1"	6.0	75	36	0.15



Certification Options Available



4500 Series Ancillary Products – 1/8" to 1/4" 'Bug Screen' port vents

316L Stainless Steel sintered elements used to protect vent ports open to the atmosphere.



Features and Benefits

- Specifically designed for severe environments
- Ambient Temperature Range -20 °C to +70° C
- 316L Stainless Steel

Working Temperature Range

- -20 °C to +70 °C (-4 °F to +158 °F)

Working Pressure

- 12 bar (174 psi)

Ports NPT

- 1/8" to 1/4"

Operating Media

- Gases - filtered lubricated or non-lubricated
- Air, inert gas, sweet (natural) gases

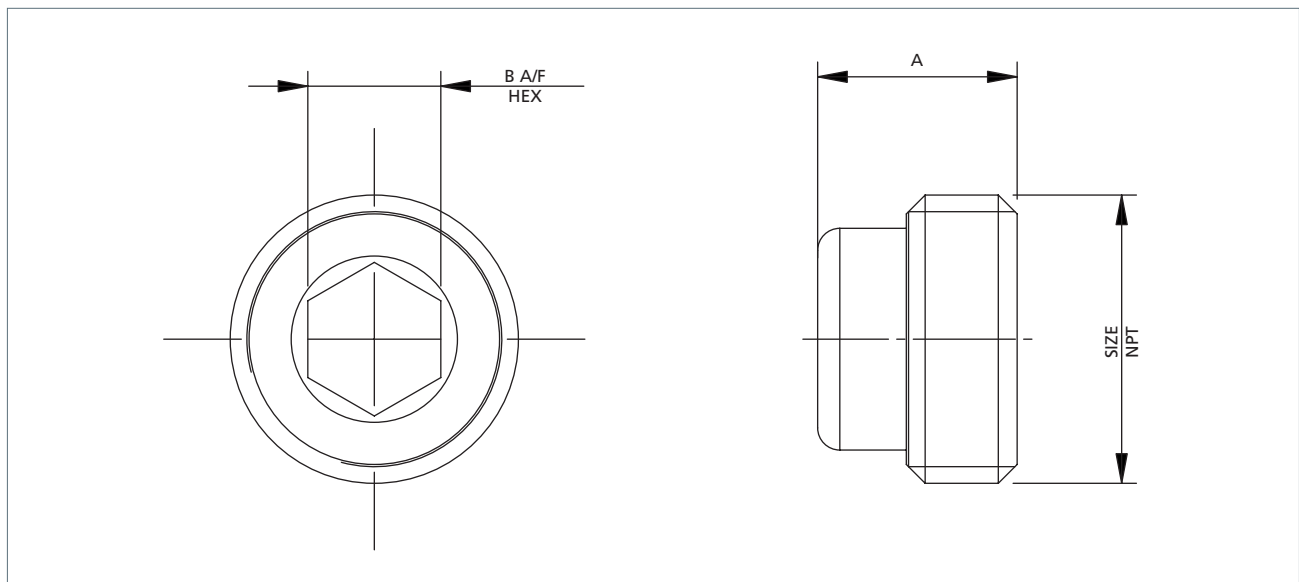
Construction Materials

- Body: 316L Stainless Steel

Product Code	Size	CV	Weight (kg)
1VPBSN122	1/8"	1.3	0.015
2VPBSN122	1/4"	1.7	0.02

Ordering Information

Product Code	Size	A	B
1VPBSN122	1/8"	6	5
2VPBSN122	1/4"	9	6



Certification Options Available

