

PRECISION FILTER / REGULATOR

11-4SN (G 3/8, 1/2)

Features

- Shavo's Filter / Regulator combination unit offers extremely precise control.
- Unique valve design and large ratio of diaphragm to valve area affords highly sensitive performance.
- Specially designed to meet instrumentation requirements.
- CE, ATEX, EAC Ex (CUTR 12), EAC(CUTR 10) approved.
- SIL3 capable as per IEC 61508.

| PARAMETERS | SPECIFICATIONS |
|--|--|
| Fluid | Compressed Air |
| Pipe size | 3/8", 1/2" |
| Port Thread | BSPT - Standard NPT, BSP - Optional |
| Max. Inlet Pressure | 17.5 bar (250 psi) - Aluminium |
| Max. Operating Temp. (Ambient) | +80° C |
| Filter Element Size | 25 micron - Standard 5, 40 micron - Optional |
| Filter Element Material | Sintered Bronze -Standard Stainless Steel-Optional |
| Material of Construction(Aluminium) | |
| Body, Bonnet, Bowl | Aluminium Alloy die-cast |
| Internal parts | Aluminium, SS304, SS316L, Acetal resin, Nylon, brass |
| External parts | SS 316L |
| Diaphragm Assembly | Synthetic Rubber without PTFE - Standard |
| Elastomers | Low Temp. Nitrile (LNBR)-AL ver. -40°C to +80°C EPDM -35°C to +120°C Fluorocarbon (Viton-FKM) -20°C to +180°C |
| Bowl Capacity | 50 ml. |
| Regulated secondary pressure ranges | 0.07 to 0.70 bar (1-10 psi) - Optional 0.21 to 2.10 bar (3-30 psi) - Optional 0.35 to 3.50 bar (5-50 psi) - Optional 0.50 to 5.0 bar (7-70 psi) - Optional 0.70 to 7.0 bar (10-100 psi) - Standard |
| Standard Nominal Flow Rate at 10 bar (150psi) inlet pressure 6 bar (87 psi) set pr. and a drop of 1 bar(14.5 psi) from set | 3/8" - 55 scfm (26 dm ³ /sec) 1/2" - 55 scfm (26 dm ³ /sec) |
| CV Value | 3/8", 1/2" - (1.04) |
| Drain | Manual - Standard |
| Type | Relieving - Standard Non-Relieving - Optional |
| Pressure Adjustment | Hex Head Adjusting screw - Standard |
| Gauge Port (2 nos.) | 1/4" BSPT (Fe) - Standard 1/4" NPT (Fe) - Optional |
| Gauge size (dial size) | 50 mm (Nominal) - Std. |
| Mounting | Mounting bracket - Standard |
| Weight | 0.70 Kgs. |

Pressure Gauge (scale) : Kg/cm² (PSI) - Standard (For Domestic Market)
Bar (PSI) - Standard (Export)



| Size | Flow (dm ³ /s) | Element (um) | Drain | Bowl | Operation | Model |
|------|---------------------------|--------------|--------|-------|-----------|----------------------|
| 1/2" | 55 scfm | 5 | Manual | Metal | 10-100 | 11-4SN-450M-M6KA-ENA |

Note :

- 1) Pressure gauge will not have CE, EAC, SIL3 and NACE MR0175 approval.
- 2) Pressure gauge will have ATEX approval.
- 2) PM nut, mounting bracket and Grub screw will not be to NACE specifications.

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Option Selector

Sample Model Number → **1 1 - 4 S N - 2 0 0 M - M 4 K A - E N - X X X - X X X**

Position → **1 2 - 3 4 5 - 6 7 8 9 - 10 11 12 13 - 14 15 - 16 17 18 - 19 20 21**

1 2 3 4 5

Instrument Filter / Regulator

6 Pipe Size

3 = 3/8"
4 = 1/2"

7 8 Options

| | Relieving | | Non-Relieving | |
|-----------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Hex Headed Slotted Screw | Hex Headed Slotted Screw | Hex Headed Slotted Screw | Hex Headed Slotted Screw |
| No Gauge | 50 | 50 | 60 | 60 |
| With Gauge (SS) | 52 | 52 | 62 | 62 |

(Pressure gauge will be ATEX approved)

9 Body, Bowl, Bonnet

M = Aluminium Metallic (Body, Bowl, Bonnet)

10 Drain

M = Manual Drain

11 Filter Element

| Plastic | Sintered Bronze | S.S. |
|---------------|-----------------|---------------|
| 1 = 5 Micron | 6 = 5 Micron | 5 = 5 Micron |
| 2 = 25 Micron | 7 = 25 Micron | 9 = 25 Micron |
| 3 = 40 Micron | 8 = 40 Micron | 4 = 40 Micron |

12 Secondary Pressure Range

A = 0.07 - 0.7 bar (1-10 psi)
C = 0.21 - 2.1 bar (3-30 psi)
E = 0.35 - 3.5 bar (5-50 psi)
F = 0.50 - 5.0 bar (7-70 psi)
K = 0.70 - 7.0 bar (10-100 psi)

13 Port Thread

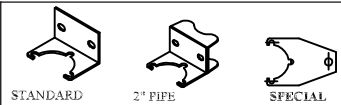
| | Main Ports | Gauge Ports |
|---|------------|-------------|
| A | NPT | BSPT |
| B | BSPT | BSPT |
| G | BSP | BSPT |
| N | NPT | NPT |

14 Elastomer Material

[E] = EPDM
[V] = Viton
L = Low. Temp. Nitrile(LNBR)

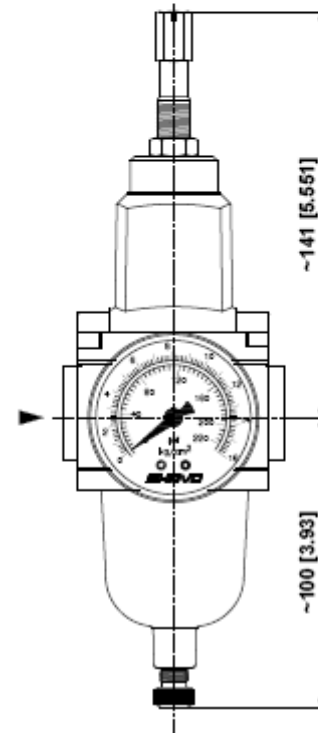
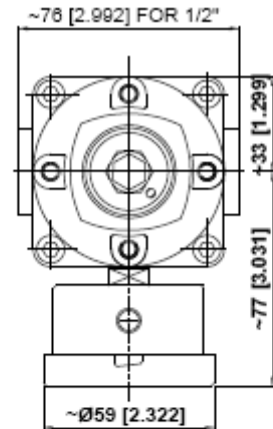
15 Mounting

N = No Mounting Bracket
B = Standard Mounting Bracket
P = 2" Pipe Mounting Bracket



Bracket for ATEX units will be SS316

(brackets used for Aluminium unit)



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16 | 17 | 18 Test / Approval

| | | | |
|---|---|---|--------------------------------|
| A | 0 | 0 | ATEX |
| A | 0 | 1 | UKEX |
| A | 0 | 2 | UKCA |
| A | 0 | 3 | ATEX, UKEX, EAC Ex, UKCA |
| A | 0 | 4 | ATEX, UKEX, EAC Ex |
| A | 0 | 5 | ATEX, UKEX, UKCA |
| A | 0 | 6 | ATEX, UKEX, EAC Ex |
| B | 0 | 0 | ATEX, CE |
| B | 0 | 1 | ATEX, CE, UKEX, EAC Ex, UKCA |
| B | 0 | 2 | ATEX, CE, UKEX, EAC Ex |
| B | 0 | 3 | ATEX, CE, UKEX, UKCA |
| B | 0 | 4 | ATEX, CE, UKCA, EAC Ex |
| B | 0 | 5 | ATEX, CE, EAC Ex |
| C | 0 | 0 | CE |
| C | 0 | 1 | CE, UKEX, EAC Ex, UKCA |
| C | 0 | 2 | CE, UKEX, EAC Ex |
| C | 0 | 3 | CE, UKEX, UKCA |
| C | 0 | 4 | CE, EAC Ex, UKCA |
| C | 0 | 5 | CE, EAC Ex |
| D | 0 | 0 | ATEX, EAC |
| D | 0 | 1 | ATEX, EAC, UKEX, EAC Ex, UKCA |
| D | 0 | 2 | ATEX, EAC, UKEX, EAC Ex |
| D | 0 | 3 | ATEX, EAC, UKEX, UKCA |
| D | 0 | 4 | ATEX, EAC, EAC Ex, UKCA |
| E | 0 | 0 | EAC |
| E | 0 | 1 | EAC, UKEX, EAC Ex, UKCA |
| E | 0 | 2 | EAC, UKEX, EAC Ex |
| E | 0 | 3 | EAC, UKEX, UKCA |
| E | 0 | 4 | EAC, EAC Ex, UKCA |
| F | 0 | 0 | ATEX, SIL3 |
| F | 0 | 1 | ATEX, SIL3, UKEX, EAC Ex, UKCA |
| F | 0 | 2 | ATEX, SIL3, UKEX, EAC Ex |
| F | 0 | 3 | ATEX, SIL3, UKEX, UKCA |
| F | 0 | 4 | ATEX, SIL3, EAC Ex, UKCA |
| F | 0 | 5 | ATEX, SIL3, EAC Ex |
| G | 0 | 0 | CE, EAC |
| G | 0 | 1 | CE, EAC, UKEX, EAC Ex, UKCA |
| G | 0 | 2 | CE, EAC, UKEX, EAC Ex |
| G | 0 | 3 | CE, EAC, UKEX, UKCA |
| G | 0 | 4 | CE, EAC, EAC Ex, UKCA |
| H | 0 | 0 | CE, SIL3 |
| H | 0 | 1 | CE, SIL3, UKEX, EAC Ex, UKCA |
| H | 0 | 2 | CE, SIL3, UKEX, EAC Ex |
| H | 0 | 3 | CE, SIL3, UKEX, UKCA |
| H | 0 | 4 | CE, SIL3, EAC Ex, UKCA |
| H | 0 | 5 | CE, SIL3, EAC Ex |
| J | 0 | 0 | EAC, SIL3 |
| J | 0 | 1 | EAC, SIL3, UKEX, EAC Ex, UKCA |
| J | 0 | 2 | EAC, SIL3, UKEX, EAC Ex |
| J | 0 | 3 | EAC, SIL3, UKEX, UKCA |
| J | 0 | 4 | EAC, SIL3, EAC Ex, UKCA |
| K | 0 | 0 | CE, EAC, SIL3 |

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| | | | |
|-----|-----|-----|---|
| K | 0 | 1 | CE, EAC, SIL3, UKEX, EAC Ex, UKCA |
| K | 0 | 2 | CE, EAC, SIL3, UKEX, UKCA |
| K | 0 | 3 | CE, EAC, SIL3, UKEX, EAC Ex |
| K | 0 | 4 | CE, EAC, SIL3, EAC Ex, UKCA |
| L | 0 | 0 | ATEX, EAC, SIL3 |
| L | 0 | 1 | ATEX, EAC, SIL3, UKEX, EAC Ex, UKCA |
| L | 0 | 2 | ATEX, EAC, SIL3, UKEX, EAC Ex |
| L | 0 | 3 | ATEX, EAC, SIL3, UKEX, UKCA |
| L | 0 | 4 | ATEX, EAC, SIL3, EAC Ex, UKCA |
| M | 0 | 0 | ATEX, CE, SIL3 |
| M | 0 | 1 | ATEX, CE, SIL3, UKEX, EAC Ex, UKCA |
| M | 0 | 2 | ATEX, CE, SIL3, UKEX, EAC Ex |
| M | 0 | 3 | ATEX, CE, SIL3, UKEX, UKCA |
| M | 0 | 4 | ATEX, CE, SIL3, EAC Ex, UKCA |
| N | 0 | 0 | ATEX, CE, EAC |
| N | 0 | 1 | ATEX, CE, EAC, UKEX, EAC Ex, UKCA |
| N | 0 | 2 | ATEX, CE, EAC, UKEX, EAC Ex |
| N | 0 | 3 | ATEX, CE, EAC, UKEX, UKCA |
| N | 0 | 4 | ATEX, CE, EAC, EAC Ex, UKCA |
| [O] | [0] | [0] | Other customer special requirement if Any |
| P | 0 | 0 | ATEX, CE, EAC, SIL3 |
| P | 0 | 1 | ATEX, CE, EAC, SIL3, UKEX, EAC Ex, UKCA |
| P | 0 | 2 | ATEX, CE, EAC, SIL3, UKEX, EAC Ex |
| P | 0 | 3 | ATEX, CE, EAC, SIL3, UKEX, UKCA |
| P | 0 | 4 | ATEX, CE, EAC, SIL3, EAC Ex, UKCA |
| Q | 0 | 0 | ATEX, EAC Ex |
| R | 0 | 0 | EAC Ex |
| R | 0 | 1 | EAC Ex, UKEX, UKCA |
| R | 0 | 2 | EAC Ex, UKCA |
| S | 0 | 0 | SIL3 |
| S | 0 | 1 | SIL3, UKEX, EAC Ex, UKCA |
| S | 0 | 2 | SIL3, UKEX, EAC Ex |
| S | 0 | 3 | SIL3, UKEX, UKCA |
| S | 0 | 4 | SIL3, EAC Ex, UKCA |
| V | 0 | 0 | ATEX, CE, SIL3, EAC Ex |
| V | 0 | 1 | ATEX, CE, SIL3, EAC Ex, UKEX, UKCA |
| V | 0 | 2 | ATEX, CE, SIL3, EAC Ex, UKEX |
| V | 0 | 3 | ATEX, CE, SIL3, EAC Ex, UKCA |
| X | X | X | STANDARD UNITS WITHOUT ANY CERTIFICATE / APPROVAL |
| Y | 0 | 0 | ATEX, SIL3, EACEx |
| y | 0 | 1 | ATEX, SIL3, EACEx, UKEX, UKCA |
| Y | 0 | 2 | ATEX, SIL3, EAC Ex, UKEX |
| Y | 0 | 3 | ATEX, SIL3, EACEx, UKCA |
| Z | 0 | 1 | CE, SIL3, EAC Ex, UKEX, UKCA |
| Z | 0 | 2 | CE, SIL3, EAC Ex, UKEX |
| Z | 0 | 3 | CE, SIL3, EAC Ex, UKCA |

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[19][20][21] Compliance

| | | | |
|---|---|---|---|
| X | X | X | Standard Unit Without any Complinance |
| A | 0 | 1 | RoHS 3 Compliance |
| A | 0 | 2 | REACH Compliance |
| A | 0 | 3 | Copper Free (Only Applicable Aluminium Version) |
| A | 0 | 4 | RoHS3, REACH Compliance |
| A | 0 | 5 | RoHS3, REACH, Copper Free (Only Applicable for Aluminium Version) |
| A | 0 | 6 | RoHS3, Copper Free (Only Applicable for Aluminium Version) |
| A | 0 | 7 | REACH, Copper Free (Only Applicable for Aluminium Version) |

Note : Option shown in the [] bracket are special, Please contact Sales HQ/Manufacturing.