

# VOLUME BOOSTER SVB60-SS4N BROCHURE



# Volume Booster SVB60-SS4N

VB60 (G 1/2, G 3/4) (SS316L)

## FEATURES

- Type 60 Volume Booster amplifies the volume at a 1:1 ratio whenever input isolation or increased flow capacity is required.
- High capacity Volume Booster, with a fixed minimum deadband, are designed to substantially improve the stroking speed of large actuators.
- An integral adjustable bypass valve provide good operational system stability over wide range of actuator sizes.
- Soft Valve seat design minimizes air consumption.
- CE, ATEX, EAC [(CUTR-10) equivalent to GOST R &K] approved.
- All External parts are NACE MR 0175\* approved.
- SIL3 capable as per IEC 61508.

(\*National Association of Corrosion Engineers MR-0175 defines requirements for sulphide stress cracking resistant materials used in oilwells and corrosive environments).

| PARAMETERS                                                                                                                                                 | SPECIFICATIONS                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| Fluid                                                                                                                                                      | Compressed Air                                            |
| Pipe size                                                                                                                                                  | 1/2" , 3/4"                                               |
| Pipe Thread<br>(Supply/output connection)                                                                                                                  | NPT - Standard<br>BSPT, BSP - Optional                    |
| Signal Connection                                                                                                                                          | 1/4" NPT - Standard                                       |
| Signal / Output Ratio                                                                                                                                      | 1 : 1                                                     |
| Supply Pressure                                                                                                                                            | 150 psig (10 bar) maximum (not to exceed actuator rating) |
| Signal / Output Pressure                                                                                                                                   | 100 psig (7.0 bar) maximum                                |
| Flow Capacity<br>Standard Nominal Flow Rate at 150 psi<br>(10 bar) inlet pressure 87 psi (6 bar) set<br>pressure and a drop of 14.5 psi(1 bar)<br>from set | 1/2" or 3/4" : 145 SCFM (4080 lpm)<br>CV : 2.72           |
| Flow capacity (CV)                                                                                                                                         | Exhaust : 2.08<br>Output : 2.72                           |
| Signal to output ratio                                                                                                                                     | 1:1 5% of 100 psi output span                             |
| Material of Construction<br>Body, Spacer, Top cover<br>Internals wetted parts                                                                              | SS316L<br>SS316L, SS304, etc.                             |
| Elastomers                                                                                                                                                 | Low Temperature Nitrile : -60 C to<br>+ 80 C              |
| Weight                                                                                                                                                     | 2.5 kgs.                                                  |

Note :Screw, mounting bracket will not be NACE MR 0175 approved.

Exhaust port - M8 tapped.



ATEX Version



Non ATEX Version

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### Option Selector

Sample Model Number → **S V B 6 0 - S H 4 A - N B - X X X - N - X X X**

Position → **0 1 2 3 4 - 5 6 7 8 - 9 10 - 11 12 13 - 14 - 15 16 17**

0

S = Shavo

12

Product

VB = Volume Booster

34

Series

60 = Basic Designer

5

Basic MOC

A = Aluminium MOC (Body, Spacer, Top cover)

6

Flow

H = High Flow

7

Size

4 = 1/2"

6 = 3/4"

8

Port Threads

| Type | Main Port | Gauge Port | Signal Port |
|------|-----------|------------|-------------|
| A    | NPT       | BSPT       | 1/4" NPT    |
| B    | BSPT      | BSPT       | 1/4" BSPT   |
| G    | BSP       | BSPT       | 1/4" NPT    |
| N    | NPT       | NPT        | 1/4" NPT    |

9

Elastomer Material

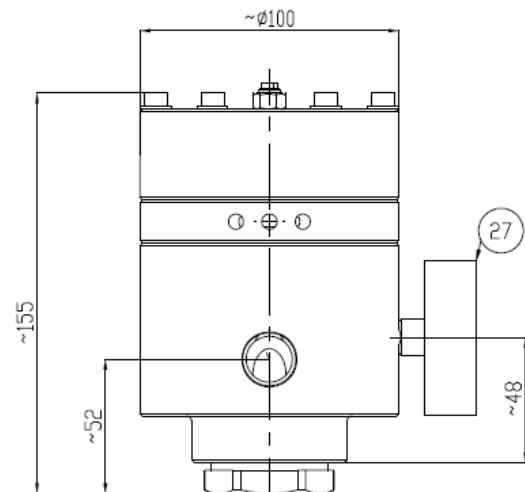
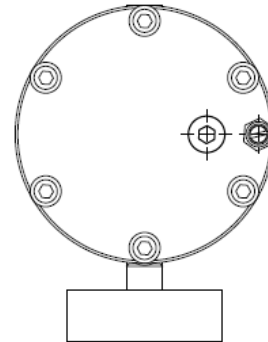
L = Low Temp.Nitrile

10

Mounting

N = No Mounting Bracket

B = Standard Mounting Bracket



**11 12 13** 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                   |

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|   |   |   |                                     |
|---|---|---|-------------------------------------|
| 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                       |
| 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           |

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## VB60 (G 1/2, G 3/4) (SS316L)

|     |     |     |                                                   |
|-----|-----|-----|---------------------------------------------------|
| 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                            |

14 Pressure Gauge

N = No Gauge  
G = With Pressue Gauge (SS316)  
(0-16 kg/cm2. without ATEX approved.)

15 16 17 Compliance

|   |   |   |                                                                   |
|---|---|---|-------------------------------------------------------------------|
| X | X | X | Standard Unit Without any Compliance                              |
| 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)        |



Manderlay House  
Manderlay Gardens  
Emley  
West Yorkshire  
HD8 9TY

Email: [enquiries@part-hunter.co.uk](mailto:enquiries@part-hunter.co.uk)