

Reval 182
Pressure Regulators

Pressure Regulators

Reval 182

Reval 182 is a pilot-controlled pressure regulator for medium and low pressure applications.

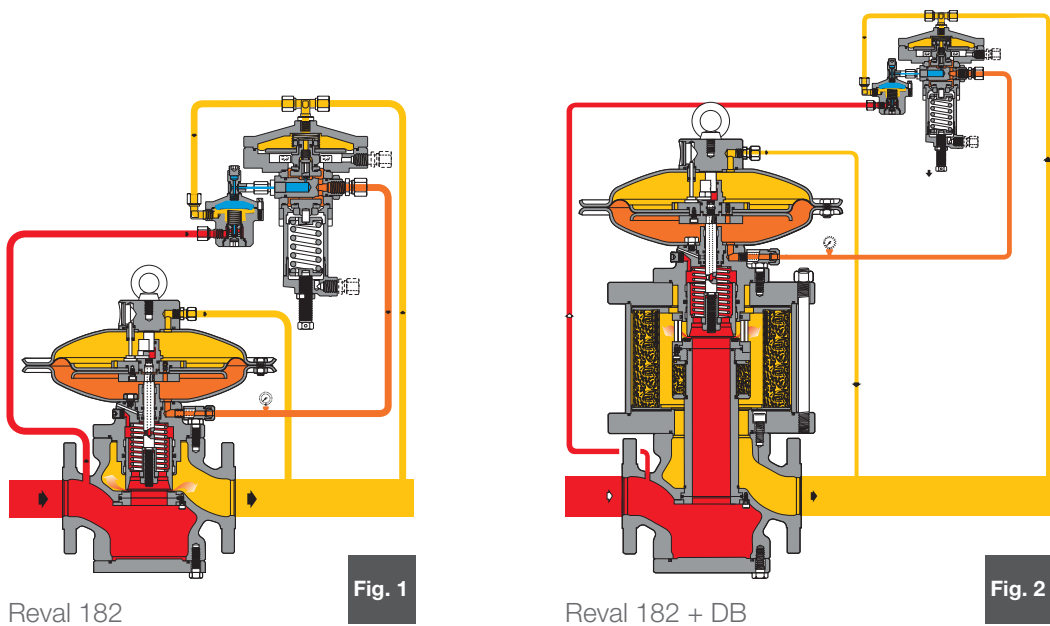
Reval 182 is normally a fail to close regulator that will close under the following conditions:

- breakage of main diaphragm;
- lack of gas feeding to the pilot loop.

This regulator is suitable for use with previously filtered, non-corrosive gases.

Modular Design

The modular design of the Reval 182 pressure regulator allows retrofitting of an emergency monitor PM/182 or slam shut valve and/or silencer on the same body. The Reval 182 regulator is truly a “top entry design” which allows easy maintenance and/or retrofitting options in the field. The unique dynamic balancing system ensures an outstanding turn down ratio combined with an extremely accurate outlet pressure control.



**DESIGNED
WITH YOUR
NEEDS IN MIND**

- COMPACT DESIGN
- EASY MAINTENANCE
- TOP ENTRY
- LOW NOISE

- OUTSTANDING TURN DOWN RATIO
- HIGH ACCURACY
- LOW OPERATION COST
- VERY LOW OPERATING ΔP

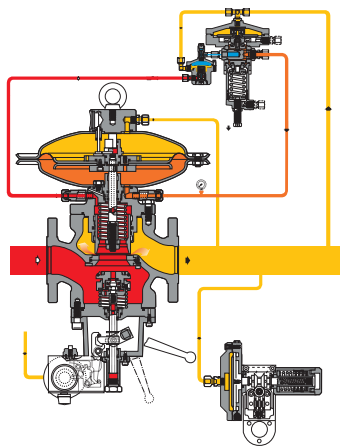
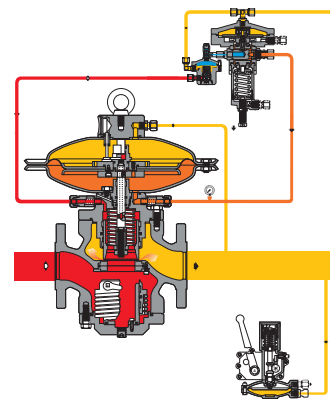
SILENCER DB/182
Reval 182

Whenever a lower noise limit is desired, the silencer allows you to considerably reduce the noise level (dBA) as much as 30 dBA.

The Reval 182 pressure regulator can be supplied with an incorporated silencer in either the standard version or version with incorporated slam-shut or incorporated monitor regulator.

With the built-in silencer, the C_g and K_G valve coefficients are 5% lower than the corresponding version without the silencer. Given the modular arrangement of the regulator, the silencer may be retrofitted to both the standard Reval 182 version as well as those with incorporated slam-shut or monitor, without any need for piping modifications.

Pressure reduction and control operate in the same manner as the standard version.

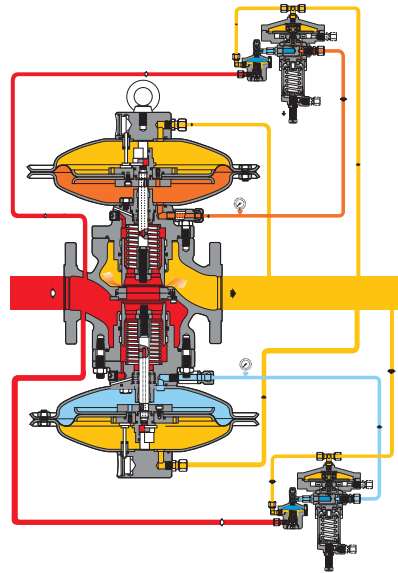
SLAM SHUT SB/82 OR VB/93
Reval 182

Fig. 3

Fig. 4

The Reval 182 pressure regulator offers the option of installing an incorporated slam shut valve SB/82 or VB/93 valve, depending on the regulator size, and this can be done either during the manufacturing process or be retrofitted in the field. Retrofitting can be done without modifying the pressure regulator assembly.

The C_g and K_G coefficients of a regulator plus incorporated slam-shut system are 7 or 10% (depending on the slam shut type) lower than those for standard versions.

The main characteristics of this device are:

- intervention for over pressure and/or under pressure
- manual re-setting with internal by-pass activated by the lever mechanism;
- manual push button control;
- compact dimensions;
- easy maintenance;
- optional pneumatic or electromagnetic remote control;
- optional installation of remote signal devices (contact switches or proximity switches).

MONITOR PM/182**Reval 182****Fig. 5**

This emergency regulator (monitor) is directly connected to the body of the main regulator. Both pressure regulators, therefore, use the same valve body, although they have independent actuators, pilots and valve seats.

The operational characteristics of the PM/182 monitor are the same as for the Reval 182 regulator.

The C_g and K_G coefficients of a regulator having an incorporated monitor are 8% lower than those for standard version.

Another great advantage offered by the incorporated monitor regulator is that it can be installed at any time, even on an already existing regulator, without piping modifications. This solution allows the construction of regulator stations with compact dimensions.

MAIN FEATURES**Reval 182**

- > **Design pressure: up to 274 PSIG (18.9 bar)**
- > **Temperature: Pietro Fiorentini regulators are suitable for a minimum operating ambient temperature:**
 - > -40°F to 140 °F with a Carbon Steel Body
 - > -4°F to 140 °F with a Cast Iron Body
- If the following conditions are met:**
 - Inlet flowing gas temperature shall be always higher than -4 °F;
 - Inlet flowing gas shall filtered, clean and without any liquid impurities;
- > **Range of inlet pressure bpe: 2.2 to 362.5 PSIG (0.15 to 25 bar)**
- > **Range of outlet pressure Wh: 2.8" w.c. to 174 PSIG (7 mbar to 12 bar) depending on installed pilot**
- > **Minimum working differential pressure: 1.45 PSIG (0.1 bar)**
- > **Accuracy class AC: up to 2.5**
- > **Closing pressure class SG: from 10 to 5 depending on outlet pressure**
- > **Available size DN: 1", 2", 2"1/2, 3", 4", 6", 8", 10"**
- > **Flanging: class 150 RF or RTJ according to ANSI B16.5 and PN25/40 according to ISO 7005.**

MATERIALS
Reval 182

Body	Cast steel ASTM A216 WCB for all sizes Ductile iron GS 400-18 ISO 1083 for Size $\leq 8''$
Head covers	Dye stamped carbon steel
Stem	AISI 416 Stainless steel
Plug	ASTM A 350 LF2 Nickel coated on sealing surfaces
Valve seat	Steel + vulcanized rubber
Diaphragm	Rubberized canvas
Seals	Nitrile rubber
Compression fittings	According to DIN 2353 in zinc-plated stainless steel

The characteristics listed above are referred to standard products. Special characteristics and materials for specific applications may be supplied upon request.

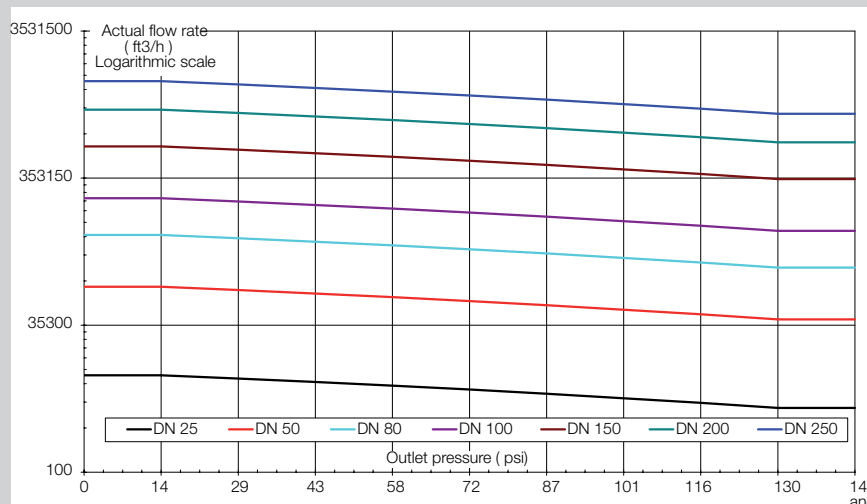
Cg, Kg and C1 coefficient
Reval 182

Nominal diameter (mm)	25	50	65	80	100	150	200	250
Size (inches)	1"	2"	2"1/2	3"	4"	6"	8"	10"
Cg flow coefficient	575	2220	3320	4937	8000	16607	25933	36525
Kg flow coefficient	605	2335	4197	5194	8416	17471	27282	38425
C1 body shape factor	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0

For sizing formula refer to www.fiorentini.com/sizing

CAUTION:

The graph gives a quick reference of maximum recommended regulator capacity depending on selected size. Values are expressed in actual SCFH of Natural gas (s.g. 0.6): to have the data directly in SCFH it is necessary to multiply the value by the outlet pressure value in bar – absolute.



PILOTS

Reval 182

Reval 182 regulators are equipped with series 200 pilot as listed below:

- 201/A control range Wh: 2.8 W.c. to 8.4 Psig; (7 mbar to 0.58 bar)
- 204/A. control range Wh: 4.35 to 174 Psig; (0.3 to 12 bar)

Pilots may be adjusted manually or remotely

Pilot adjustments

Reval 182

Pilot type .../A	Manual setting
Pilot type .../D	Electric remote setting control
Pilot type .../CS	Pneumatic remote setting control
F.I.O.	Smart unit for remote setting, monitoring flow limitation and indirect flow measurement

Pre-Regulators

The pilot loop is completed with a device called a pre-regulator, separate from the pilot.

The preregulators listed below are available:

- **R14/A**: self adjusting pre-regulator that automatically regulates the feeding pressure to the pilot complete with integral filter at the inlet. Standard supply with pilot 204/A.
- **R31/A**: self adjusting pre-regulator that automatically regulates the feeding pressure to the pilot complete with integral filter at the inlet. Standard supply with pilot 201/A
- **R32/A**: with adjustable set point, range of feeding pressure to the pilot $Pep = 0.1$ to 1.7 bar (1.44 to 24.6) PSIG
- **R42/A**: with adjustable set point, range of feeding pressure to the pilot $Pep = 0.8$ to 9.5 bar (11 to 137) PSIG

SLAM SHUT SWITCH

Reval 182

MOD. SB	MIN.	MAX
101M	0.14* -3.77*	0.29 - 14.5*
102M	0.58 - 40.61	2.9 - 79.77
102MH	40.61 - 79.77	2.9 - 79.77
103M	2.9 - 116.03	29 - 319.08
103MH	116.03 - 275.57	29 - 319.08

values in PSIG

MOD. VB	MIN.	MAX
31	0.11 - 13.05	0.23 - 17.4
32	3.62 - 39.16	10.15- 72.51
33	11.6 - 84.12	43.51 - 152.28

values in PSIG

OPTIONALS
Reval 182
For Regulator

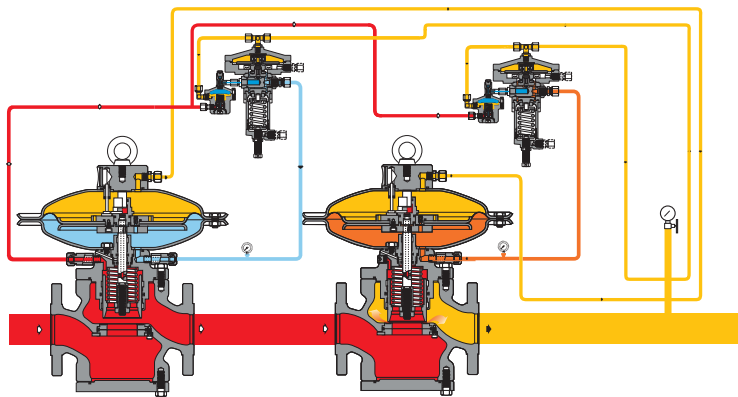
- stroke limiter
- flow-limiting devices
- limit switches
- position transmitters
- steel fittings, single or dual sealing

For Pilot

- supplementary filter CF 14
- dehydrating filter CF 14/D

IN-LINE MONITOR
Reval 182

The monitor is generally installed upstream of the main regulator. Although the function of the monitor regulator is different, the two regulators are virtually identical from the point of view of their mechanical components. The only difference is that the monitor is set at a higher pressure than the main regulator. The C_g and K_G coefficients of the regulator plus in-line monitor system are about 20% lower than those of the regulator alone.


M/A ACCELERATOR
Reval 182

When the monitor is required to take over rapidly in the event of a main regulator failure, an M/A or V/25 accelerator pilot installed on the monitor is recommended. Installation of the accelerator is mandatory when the monitor is used as safety accessory according to PED directive. This device, connected by a sensing line to the downstream pressure, discharges the gas enclosed in the motorization chamber of the monitor regulator, allowing the monitor to take over control quickly.

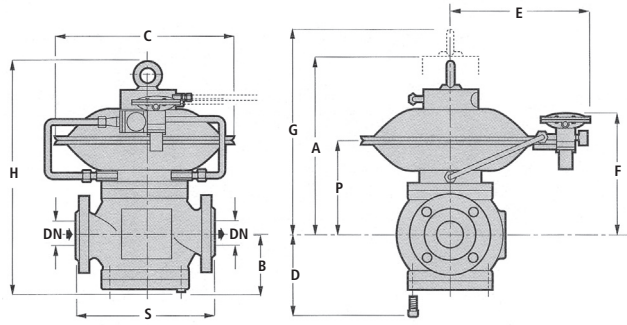
The set point of M/A accelerator is usually higher than set point of the monitor by 4.35 to 7.25 PSIG.

A V/25 accelerator is also available with pressure set range Who 0,17 PSIG to 87 PSIG.

In case of a working monitor configuration (two stage pressure cut with monitor override) the accelerator may not be necessary.

REVAL 182

Reval 182



Overall dimensions in inches

Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
S - Ansi 150/PN 16	7.2	10	10.86	11.73	13.85	17.75	21.49	26.49
A	12.59	13.77	16.92	16.92	18.5	21.65	25.59	30.31
B	3.93	5.11	5.51	5.90	7.48	8.66	10.23	12.2
C	14.76	14.76	19.48	19.48	19.48	24.8	24.8	24.8
D	5.11	6.29	7.08	7.87	9.84	10.62	12.4	15.66
E	13.77	13.77	16.14	16.14	16.14	18.7	18.7	18.5
F	9.84	11.22	12.99	13.38	14.56	15.74	17.71	21.65
G	16.14	16.92	20.86	20.86	23.62	28.93	33.46	29.92
H	16.92	18.89	22.44	22.83	25.98	30.31	35.82	42.12
P	6.69	8.07	9.84	10.23	11.41	12.59	14.56	18.5
Tubing Connections	1/4" NPT							

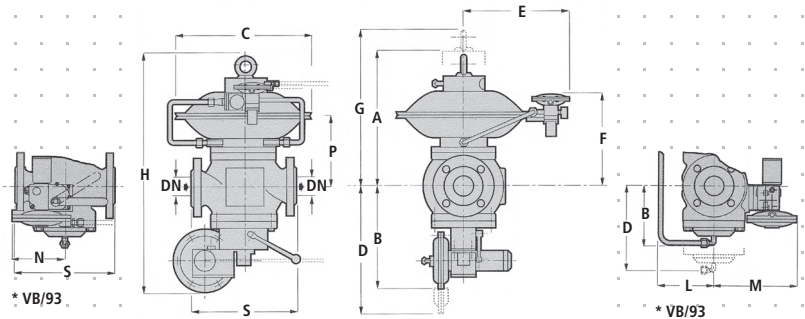
Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

Weights in Lbs

S - Ansi 150/PN 16	72	110	127	154	242	429	661	1.278
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REVAL 182 + SB82

Reval 182



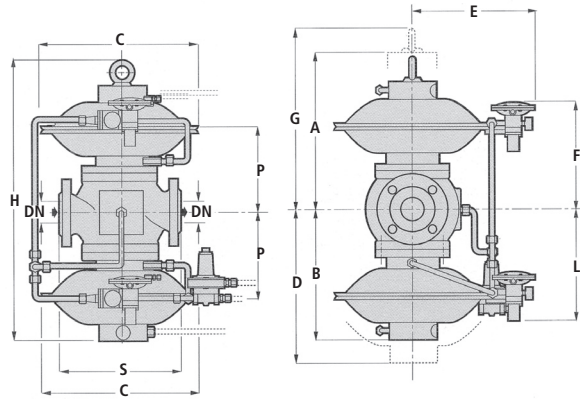
Overall dimensions in inches

Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
S - Ansi 150/PN 16	7.2	10	10.86	11.73	13.85	17.75	21.37	26.49
A	12.59	13.77	16.92	16.92	18.5	21.65	25.59	30.31
B	11.81	5.7*	11.81	6.33*	12.4	7*	13.18	7.28*
C	14.76	14.76	19.48	19.48	19.48	24.8	24.8	24.8
D	15.35	8.34*	15.35	10.03*	16.73	11.49*	17.51	12.67*
E	13.77	13.77	16.14	16.14	16.14	19.68	25.03*	19.68
F	9.84	11.22	12.99	13.38	14.56	15.74	17.71	21.65
G	16.14	16.92	20.86	20.86	23.62	28.93	33.46	29.92
H	24.4	18.3*	25.59	20.11*	29.33	23.93*	30.11	24.21*
P	6.69	8.07	9.84	10.23	11.41	12.59	14.56	18.5
L	3.85*	5.74*	5.74*	5.74*	5.74*	5.74*	5.74*	5.74*
M	7.63*	8.62*	9.13*	9.68*	10.35*	10.35*	10.35*	10.35*
N	4.92*	4.92*	4.92*	4.92*	5.11*	5.11*	5.11*	5.11*
Tubing Connections	1/4" NPT							

*indicated Dimensions with the MODEL VB/93.

Weights in Lbs

S - Ansi 150/PN 16	99	77*	123	114*	154	132*	194	158*	291	249*	542	780	1.499
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Overall dimensions in inches

Size (mm)	25	50	65	80	100	150	200
Inches	1"	2"	2 ¹ / ₂ "	3"	4"	6"	8"
S - Ansi 150/PN 16	7.2	10	10.86	11.73	13.85	17.75	21.37
A	12.59	13.77	16.92	16.92	18.5	21.65	25.59
B	10.23	11.41	14.56	14.96	16.14	19.29	23.22
C	14.76	14.76	19.48	19.48	19.48	24.8	24.8
D	16.14	16.92	20.86	20.86	23.62	28.93	33.46
E	13.77	13.77	16.14	16.14	16.14	18.7	18.7
F	9.84	11.22	12.99	13.38	14.56	15.74	17.71
G	16.14	16.92	20.86	20.86	23.62	28.93	33.46
H	25.19	27.55	33.85	33.85	37	4.33	51.18
L	10.23	11.61	13.38	13.77	14.96	16.14	18.11
P	6.69	8.07	9.84	10.23	11.41	12.59	14.56

Tubing Connections

1/4" NPT

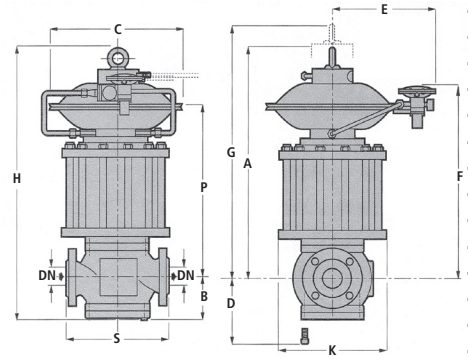
Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

Weights in Lbs

S - Ansi 150/PN 16	119	165	187	220	330	562	870
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REVAL 182 + DB/182

Reval 182



Overall dimensions in inches

Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
S - Ansi 150/PN 16	7.2	10	10.86	11.73	13.89	17.75	21.37	26.49
A	20.47	21.65	25.59	26.57	29.72	36.22	41.33	49.68
B	3.93	5.11	5.51	5.9	7.48	8.66	10.23	12.2
C	14.76	14.76	19.48	19.48	19.48	24.8	24.8	24.8
D	5.11	6.29	7.08	7.87	9.84	10.62	12.4	15.66
E	13.77	13.77	16.14	16.14	16.14	18.7	18.7	18.5
F	17.71	18.89	21.65	23.03	25.78	30.31	33.46	40.94
G	24.01	25.19	30.7	30.9	35.23	44.09	49.21	57.08
H	32.28	33.46	37.99	39.76	43.89	53.14	60.03	62
P	8.46	11.61	12.79	12.79	15.35	18.5	23.62	37.79
K	14.56	15.74	18.5	19.88	22.63	27.16	30.31	27.55

Tubing Connections

1/4" NPT

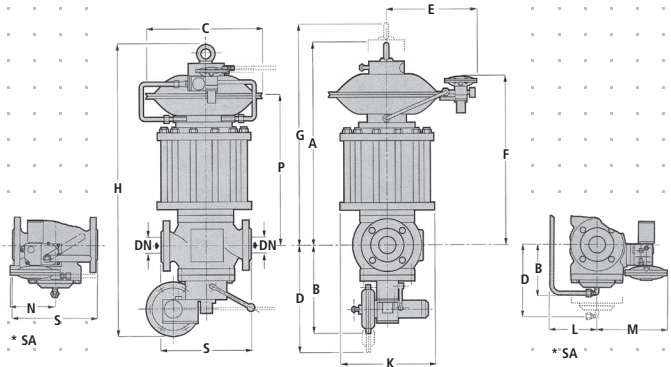
Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

Weights in Lbs

S - Ansi 150/PN 16	97	185	194	246	392	747	1.181	1.984
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REVAL 182+DB/182+SB82

Reval 182



Overall dimensions in inches

Size (mm)	25	50	65	80	100	150	200	250					
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"					
S - Ansi 150/PN 16	7.2	10	10.86	11.73	13.85	17.75	21.37	26.49					
A	20.47	21.65	25.59	26.57	29.72	36.22	41.33	49.68					
B	11.81	5.7*	11.81	6.33*	12.4	7*	13.18	7.28*	14.17	15.9*	16.92	18.7	21.65
C	14.76	14.76	19.48	19.48	19.48	24.8	24.8	24.8					
D	15.35	8.34*	15.35	10.03*	16.73	11.49*	17.51	12.67*	19.68	25.03*	24.21	27.36	31.49
E	13.77	13.77	16.14	16.14	16.14	18.7	18.7	18.5					
F	9.84	18.89	21.65	23.03	25.78	30.31	33.46	40.94					
G	24.01	25.19	30.7	30.9	35.23	44.09	49.21	57.08					
H	32.28	18.3*	33.46	20.11*	37.99	23.93*	39.76	24.21*	43.89	34.4*	53.14	60.03	71.33
K	8.46	11.61	12.79	12.79	15.35	18.5	23.62	37.79					
P	370	15.74	18.5	19.88	22.63	27.16	30.31	27.55					
L	3.85*	5.74*	5.74*	5.74*	5.74*	5.74*							
M	7.63*	8.62*	9.13*	9.68*	10.35*								
N	4.92*	4.92*	4.92*	5.11*	5.11								

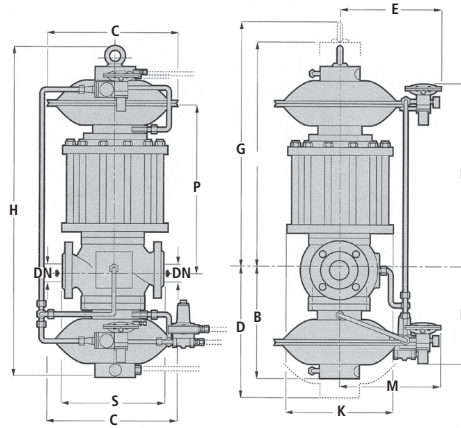
Tubing Connections

1/4" NPT

*indicated Dimensions with the MODEL VB/93

Weights in Lbs

S - Ansi 150/PN 16	123	77*	198	114*	220	132*	286	158*	440	249*	859	1.300	2.204
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Overall dimensions in inches

Size (mm)	25	50	65	80	100	150	200
Inches	1"	2"	2 1/2"	3"	4"	6"	8"
S - Ansi 150/PN 16	27,56	10	10,86	11,73	13,85	17,75	21,37
A	20,47	21,65	25,59	26,57	29,72	36,22	41,33
B	10,23	11,41	14,56	14,96	16,14	19,29	23,22
C	14,76	14,76	19,48	19,48	19,48	24,8	24,8
D	16,14	16,92	20,86	20,86	23,62	28,93	33,46
E	13,77	13,77	16,14	16,14	16,14	18,7	18,7
F	17,71	18,89	21,65	23,03	25,78	30,31	33,46
G	24,01	25,19	30,7	30,9	35,23	44,09	49,21
H	30,7	33,07	40,15	41,53	45,86	55,51	64,56
L	10,23	11,61	13,38	13,77	14,96	16,14	18,11
M	13,77	13,77	16,14	16,14	16,14	18,7	18,7
K	8,46	11,61	12,79	12,79	15,35	18,5	23,62
P	14,56	15,74	18,5	19,88	22,63	27,16	30,31

Tubing Connections

1/4" NPT

Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

Weights in Lbs

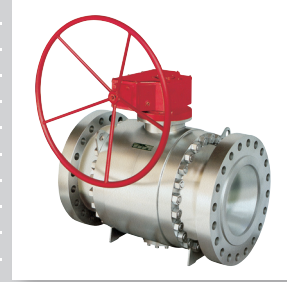
S - Ansi 150/PN 16	143	240	253	313	480	879	1.391
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