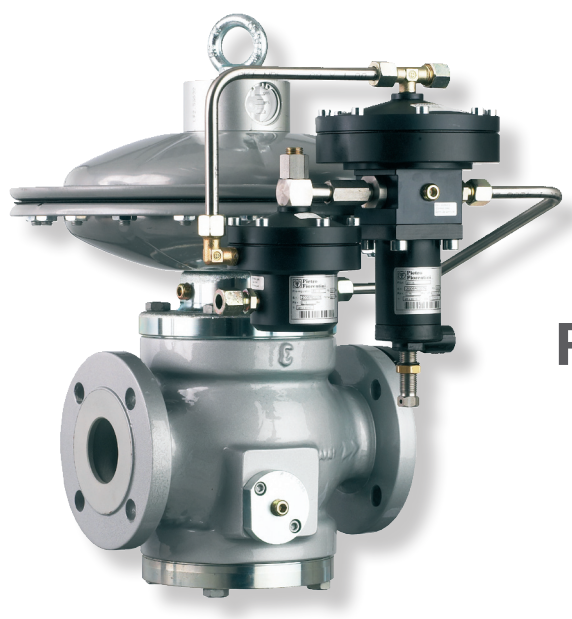


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**Reval 182**  
Pressure Regulators

## Pressure Regulators

### Reval 182

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

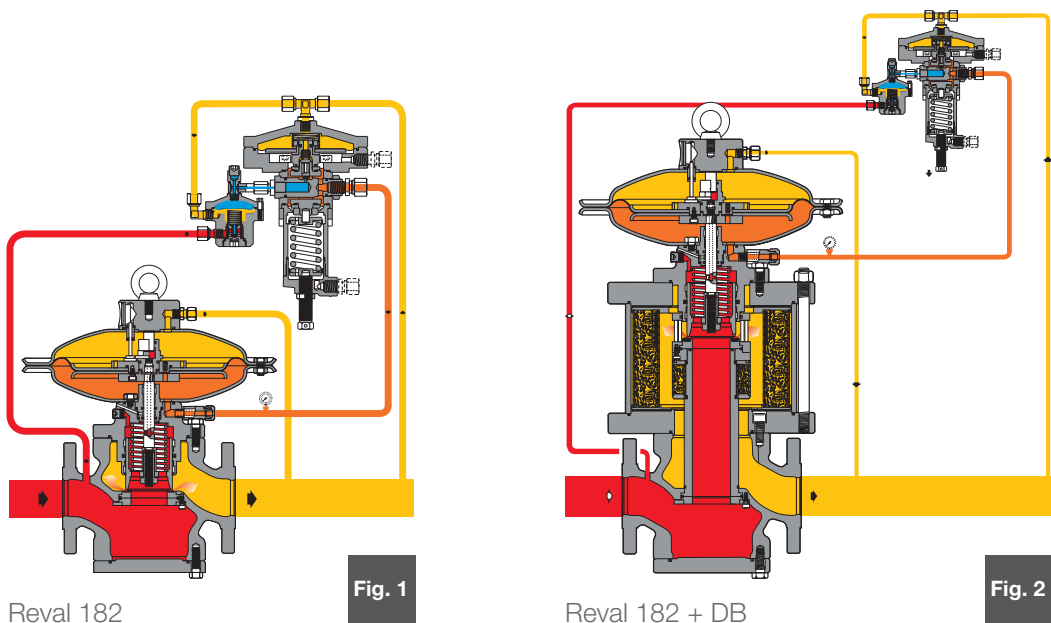
Reval 182 is normally a fail to close regulator that will close under the following conditions:

- 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  $\Delta P$

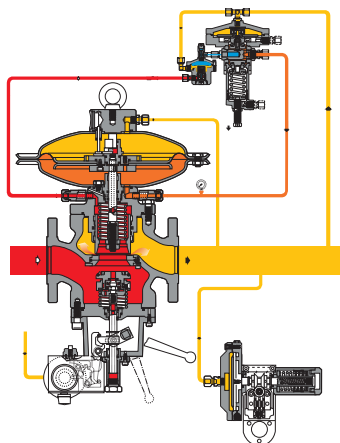
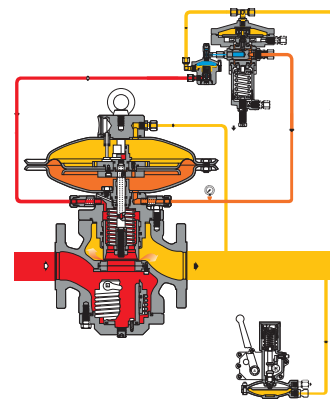
**SILENCER DB/182**
**Reval 182**

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.

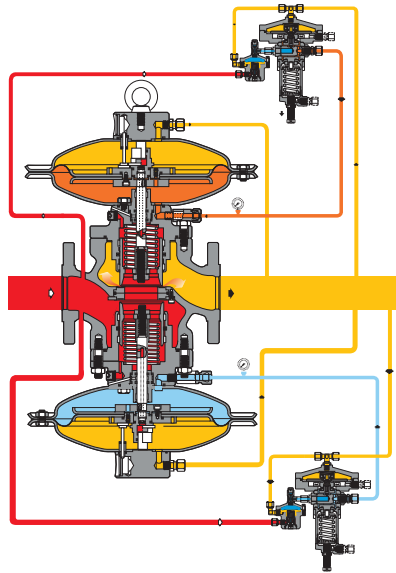
**SLAM SHUT SB/82 OR VB/93**
**Reval 182**

**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)**
- > **Design temperature: +14 to + 140 °F (-10°C to + 60°C) (+ 4 to + 140°F -20°C to + 60°C on request)**
- > **Ambient temperature: +14 to + 140°F (-10°C to + 60°C) (+ 4 to + 140°F-20°C to + 60°C on request)**
- > **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**

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

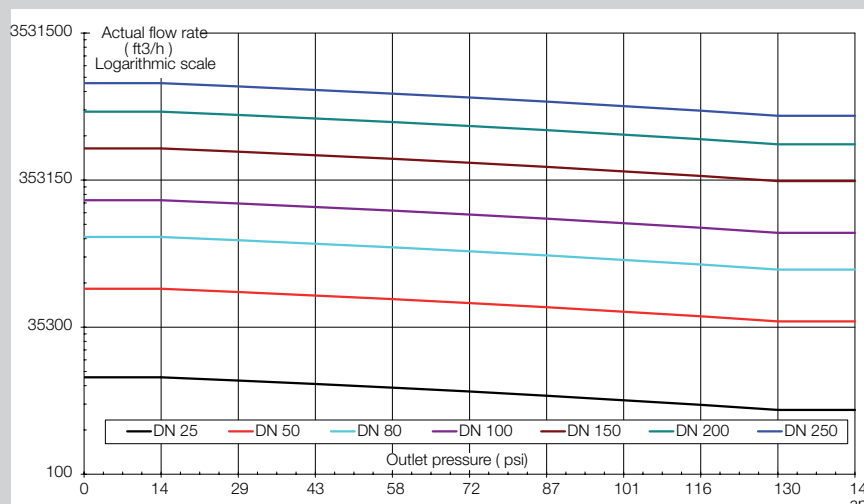
**Cg, Kg and C1 coefficient**
**Reval 182**

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

<b>Pilot type .../A</b>	Manual setting
<b>Pilot type .../D</b>	Electric remote setting control
<b>Pilot type .../CS</b>	Pneumatic remote setting control
<b>F.I.O.</b>	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**

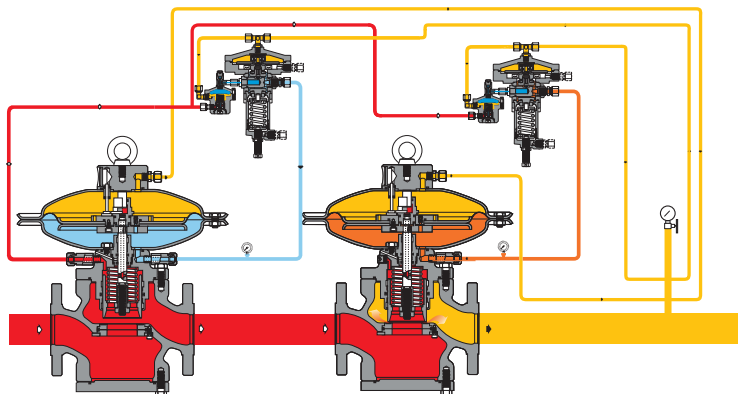
- stroke limiter
- flow-limiting devices
- limit switches
- position transmitters
- steel fittings, single or dual sealing

**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.

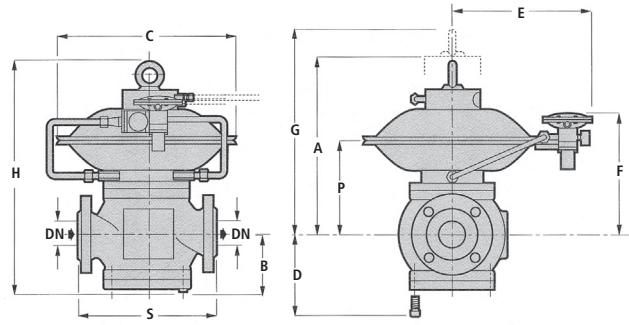
The set point of M/A accelerator is usually higher than set point of the monitor by 4.35 to 7.25 PSIG.

A V/25 accelerator is also available with pressure set range  $W_{ho}$  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"
<b>S - Ansi 150/PN 16</b>	7.2	10	10.86	11.73	13.85	17.75	21.49	26.49
<b>A</b>	12.59	13.77	16.92	16.92	18.5	21.65	25.59	30.31
<b>B</b>	3.93	5.11	5.51	5.90	7.48	8.66	10.23	12.2
<b>C</b>	14.76	14.76	19.48	19.48	19.48	24.8	24.8	24.8
<b>D</b>	5.11	6.29	7.08	7.87	9.84	10.62	12.4	15.66
<b>E</b>	13.77	13.77	16.14	16.14	16.14	18.7	18.7	18.5
<b>F</b>	9.84	11.22	12.99	13.38	14.56	15.74	17.71	21.65
<b>G</b>	16.14	16.92	20.86	20.86	23.62	28.93	33.46	29.92
<b>H</b>	16.92	18.89	22.44	22.83	25.98	30.31	35.82	42.12
<b>P</b>	6.69	8.07	9.84	10.23	11.41	12.59	14.56	18.5
<b>Tubing Connections</b>	1/4" NPT							

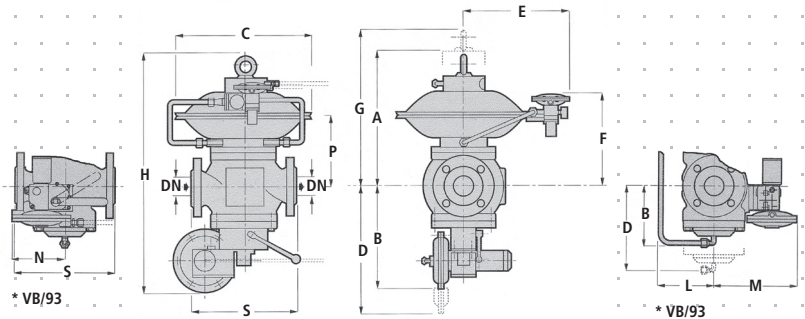
Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

**Weights in Lbs**

<b>S - Ansi 150/PN 16</b>	72	110	127	154	242	429	661	1,278
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**REVAL 182 + SB82**

**Reval 182**



**Overall dimensions in inches**

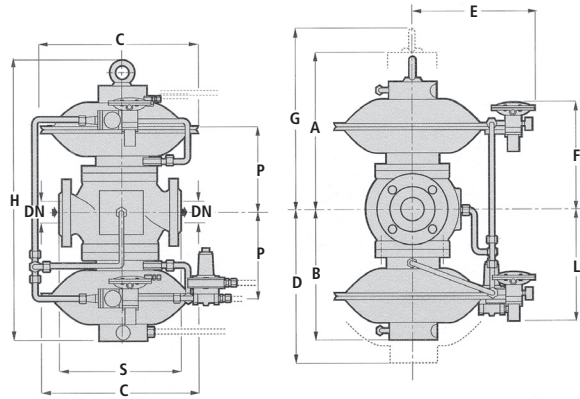
Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
<b>S - Ansi 150/PN 16</b>	7.2	10	10.86	11.73	13.85	17.75	21.37	26.49
<b>A</b>	12.59	13.77	16.92	16.92	18.5	21.65	25.59	30.31
<b>B</b>	11.81	5.7*	11.81	6.33*	12.4	7*	13.18	7.28*
<b>C</b>	14.76	14.76	19.48	19.48	19.48	24.8	24.8	24.8
<b>D</b>	15.35	8.34*	15.35	10.03*	16.73	11.49*	17.51	12.67*
<b>E</b>	13.77	13.77	16.14	16.14	16.14	18.7	18.7	18.5
<b>F</b>	9.84	11.22	12.99	13.38	14.56	15.74	17.71	21.65
<b>G</b>	16.14	16.92	20.86	20.86	23.62	28.93	33.46	29.92
<b>H</b>	24.4	18.3*	25.59	20.11*	29.33	23.93*	30.11	24.21*
<b>P</b>	6.69	8.07	9.84	10.23	11.41	12.59	14.56	18.5
<b>L</b>	3.85*	5.74*	5.74*	5.74*	5.74*	5.74*	5.74*	5.74*
<b>M</b>	7.63*	8.62*	9.13*	9.68*	10.35*	10.35*	10.35*	10.35*
<b>N</b>	4.92*	4.92*	4.92*	4.92*	5.11*	5.11*	5.11*	5.11*
<b>Tubing Connections</b>	1/4" NPT							

\*indicated Dimensions with the MODEL VB/93.

**Weights in Lbs**

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

**Tubing Connections**

1/4" NPT

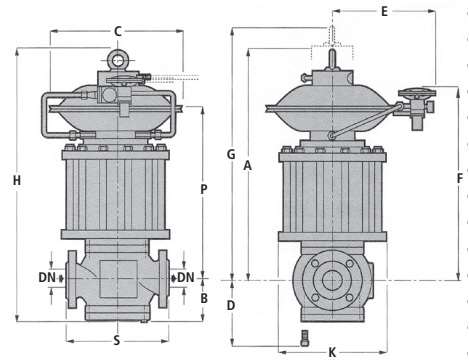
Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

**Weights in Lbs**

<b>S - Ansi 150/PN 16</b>	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

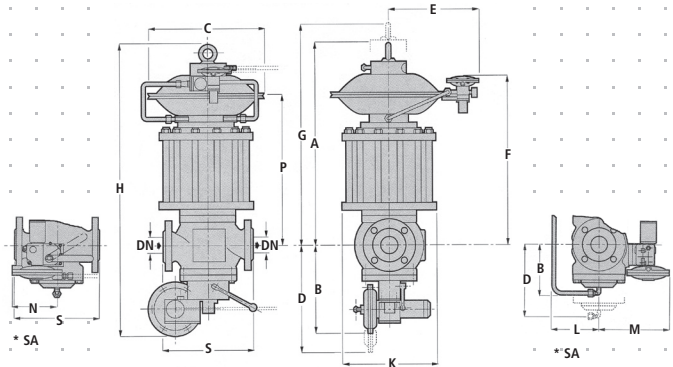
Face to face dimensions S according to ANSI, IEC 534-3 and EN 334

**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*										

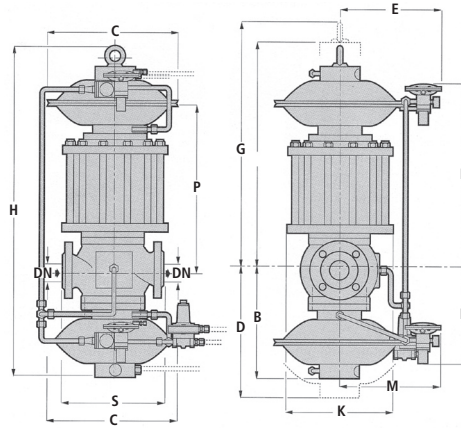
**Tubing Connections**

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

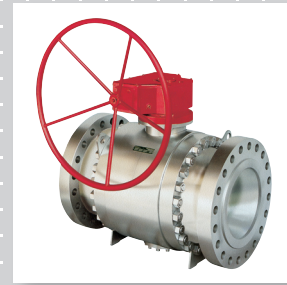
<b>S - Ansi 150/PN 16</b>	143	240	253	313	480	879	1.391
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Reducing and metering stations



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I-36057 Arcugnano (VI) Italy

Tel: +39 0444 968.511  
Fax: +39 0444 960.468

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This data is not binding. We reserve the right to make changes without prior notice.

CT-s 503-US October 13