



**Reval 182**  
Pressure Regulators

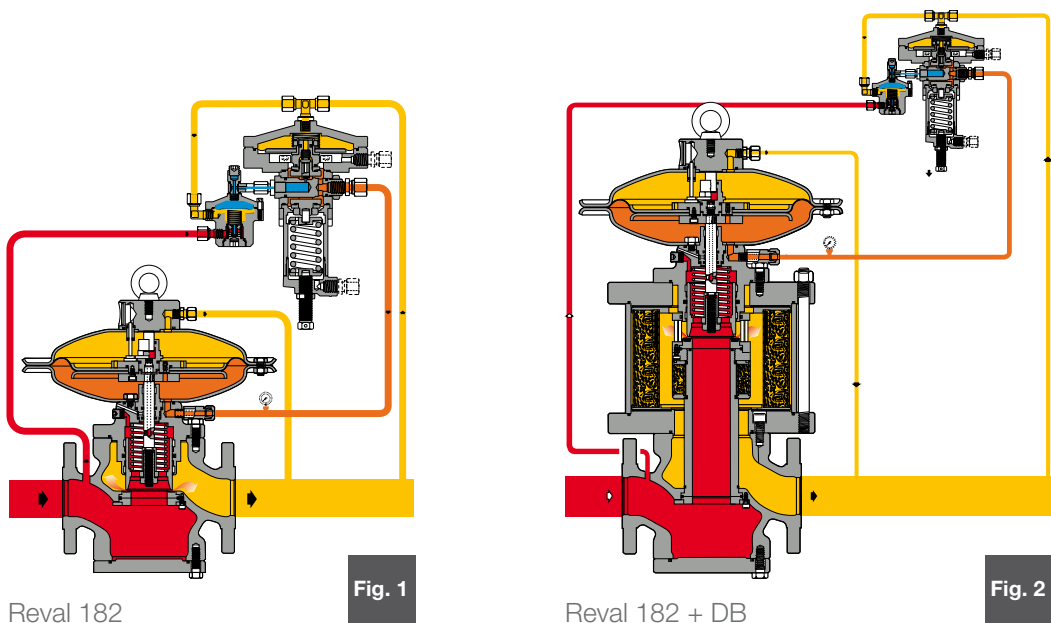
## Pressure regulators

### Reval 182

- Reval 182 is pilot-controlled pressure regulator for medium and low pressure applications.
- Reval 182 is normally a fail to close regulator and specifically will close under the following conditions:
  - breakage of main diaphragm;
  - lack of feeding to the pilot loop.
- This regulator is suitable for use with previously filtered, non-corrosive gases.

### Modular Design

The modular design of pressure regulator Reval 182 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 extreme 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  $\Delta P$

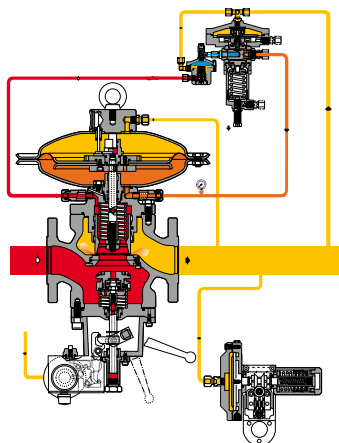
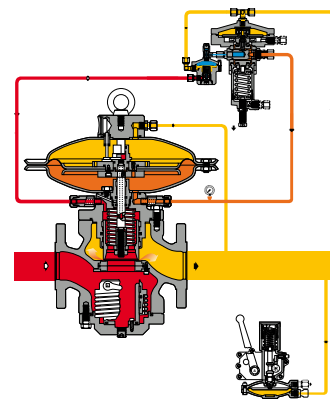
**SILENCER DB/182**
**Reval 182**

Whenever certain noise limit is desired, the silencer allows you to considerably reduce the noise level (dBA) up to the required value.

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 Cg and KG 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 standard Reval 182 version as well as those with incorporated slam-shut or monitor, without any need to piping modification.

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

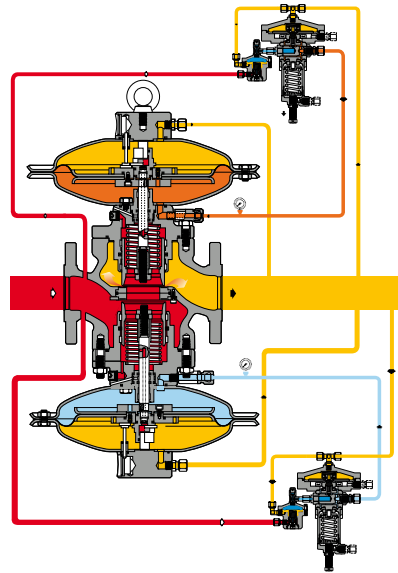
**SLAM SHUT SB/82 OR VB/93**
**Reval 182**

**Fig. 3**

**Fig. 4**

The Reval 182 pressure regulator offers the possibility 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 manufacture process or be retrofitted in the field. Retrofitting can be done without modifying the pressure regulator assembly.

The Cg and KG coefficients of a regulator plus incorporated slam-shut system are 7 or 10% (depending on the slam shuth 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 remote signal devices (contact switches or proximity switches).

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

This emergency regulator (monitor) is directly integrated 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 Cg and KG coefficients of 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 modification. This solution allows the construction of reduction lines with compact dimensions.

**MAIN FEATURES****Reval 182**

- > Design pressure: up to 25 bar (362,5 Psig)
- > Design temperature: -10°C to + 60°C (+14 to + 140 °F) (-20°C to + 60°C + 4 to + 140°F on request)
- > Ambient temperature: -10°C to + 60°C (+14 to + 140°F) (-20°C to + 60°C + 4 to + 140°F on request)
- > Range of inlet pressure bpe: 0,15 to 25 bar ( 2,2 to 362,5 Psig)
- > Range of outlet pressure Wh: 7 mbar to 12 bar (2,8" w.c. to 174 Psig) depending on installed pilot
- > Minimum working differential pressure: 0,1 bar (1,45 Psig)
- > 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 carbon steel

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

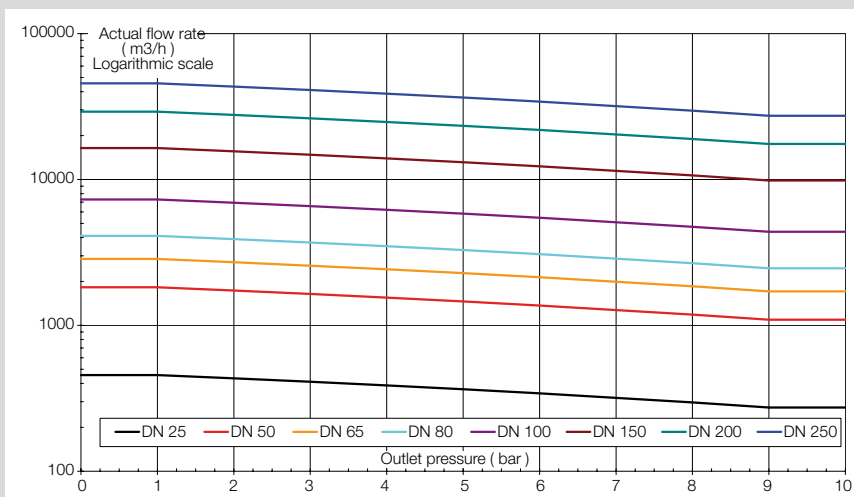
**Cg, Kg and K1 coefficient**
**Reval 182**

Nominal diameter (mm)	25	50	65	80	100	150	200	250
Size (inches)	1"	2"	2"1/2	3"	4"	6"	8"	10"
<b>Cg flow coefficient</b>	575	2220	3320	4937	8000	16607	25933	36525
<b>K<sub>G</sub> flow coefficient</b>	605	2335	4197	5194	8416	17471	27282	38425
<b>K1 body shape factor</b>	106,78	106,78	106,78	106,78	106,78	106,78	106,78	106,78

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 m<sup>3</sup>/h of Natural gas (s.g. 0,6): to have the data directly in Nm<sup>3</sup>/h 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: 7 mbar to 0,58 bar; (2,8 W.c. to 8.4 Psig)
- 204/A. control range Wh: 0,3 to 12 bar; (4,35 to 174 Psig)

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

## Preregulators

The pilot loop is completed with a device called preregulator, separate from the pilot.

The preregulators listed below are available:

- **R14/A:** self adjusting preregulator 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 preregulator 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  $P_{ep} = 0,1$  to 1,7 bar (1,44 to 24,6 psig)
- **R42/A:** with adjustable set point, range of feeding pressure to the pilot  $P_{ep} = 0,8$  to 9,5 bar (11 to 137) psig

## PRESSOSTATIC DEVICE

## Reval 182

MOD. SB	MIN.	MAX
101M	0,01* ÷ 0,26*	0,02 ÷ 1*
102M	0,04 ÷ 2,8	0,2 ÷ 5,5
102MH	2,8 ÷ 5,5	0,2 ÷ 5,5
103M	0,2 ÷ 8	2 ÷ 22
103MH	8 ÷ 19	2 ÷ 22

values in bar(g)

MOD. VB	MIN.	MAX
31	8 ÷ 900	16 ÷ 1200
32	250 ÷ 2700	700 ÷ 5000
33	800 ÷ 5800	3000 ÷ 10500

values in mbar(g)

**OPTIONALS**
**Reval 182**
**For Regulator**

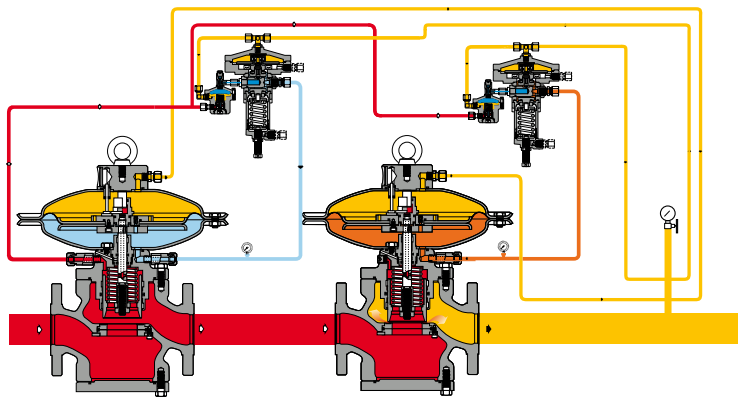
- stroke limiter
- flow-limiting devices
- limit switches
- position transmitters
- steel fittings, single or dual sealing

**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 monitor is set at a higher pressure than the main regulator. The Cg and KG coefficients of the regulator plus in-line monitor system are about 20% lower than those of the regulator alone.

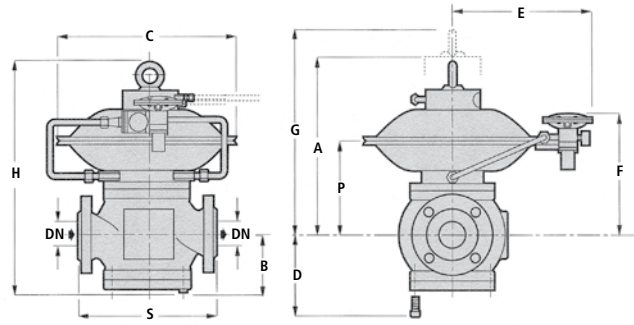

**M/A ACCELERATOR**
**Reval 182**

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 installation on the monitor is recommended. Installation of the accelerator is mandatory when monitor is used as safety accessory according to PED directive. This device, connected by sensing line to the downstream pressure, discharges the gas enclosed in the motorization chamber of the monitor regulator, allowing the monitor to take over faster.

The set point of M/A accelerator is usually higher than set point of the monitor by 0.3 to 0.5 bar.

A V/25 accelerator is available too with pressure set range  $W_{ho}$  15 mbar to 6 bar.

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



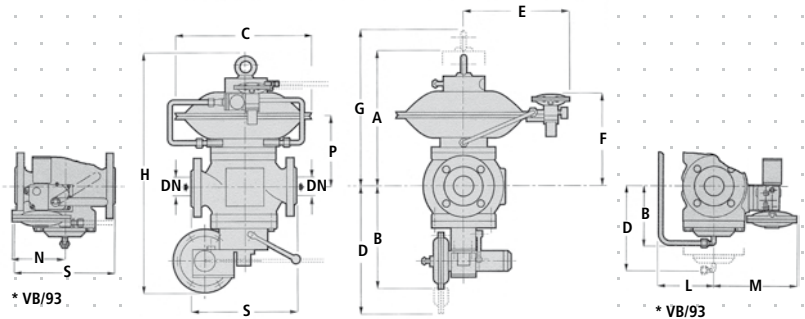
Overall dimensions in mm

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	183	254	276	298	352	451	546	673
A	320	350	430	430	470	550	650	770
B	100	130	140	150	190	220	260	310
C	375	375	495	495	495	630	630	630
D	130	160	180	200	250	270	315	398
E	350	350	410	410	410	475	475	470
F	250	285	330	340	370	400	450	550
G	410	430	530	530	600	735	850	760
H	430	480	570	580	660	770	910	1070
P	170	205	250	260	290	320	370	470
Tubing Connections	Δe10 x Δi 8							

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

Weights in Kgf

S - Ansi 150/PN 16	33	50	58	70	110	195	300	580
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Overall dimensions in mm

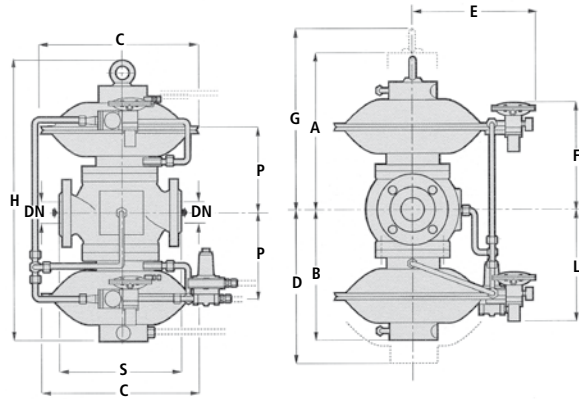
Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
S - Ansi 150/PN 16	183	254	276	298	352	451	543	673
A	320	350	430	430	470	550	650	770
B	300	145*	300	161*	315	178*	335	185*
C	375	375	495	495	495	630	630	630
D	390	212*	390	255*	425	292*	445	322*
E	350	350	410	410	410	475	475	470
F	250	285	330	340	370	400	450	550
G	410	430	530	530	600	735	850	760
H	620	465*	650	511*	745	608*	765	615*
P	170	205	250	260	290	320	370	470
L	98*	146*	146*	146*	146*	146*	146*	146*
M	194*	219*	232*	246*	263*	263*	263*	263*
N	125*	125*	125*	130*	130*	130*	130*	130*
Tubing Connections	Δe10 x Δi 8							

\*indicated Dimensions with the MODEL VB/93.

Weights in Kgf

S - Ansi 150/PN 16	45	35*	56	52*	70	60*	88	72*	132	113*	246	354	680
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**Overall dimensions in mm**

Size (mm)	25	50	65	80	100	150	200
Inches	1"	2"	2 1/2"	3"	4"	6"	8"
S - Ansi 150/PN 16	183	254	276	298	352	451	543
A	320	350	430	430	470	550	650
B	260	290	370	380	410	490	590
C	375	375	495	495	495	630	630
D	410	430	530	530	600	735	850
E	350	350	410	410	410	475	475
F	250	285	330	340	370	400	450
G	410	430	530	530	600	735	850
H	640	700	860	860	940	1110	1300
L	260	295	340	350	380	410	460
P	170	205	250	260	290	320	370

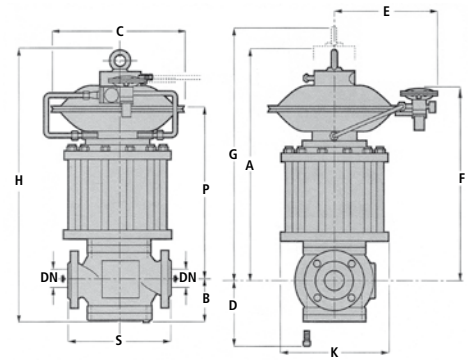
**Tubing Connections**

Δe10 x Δi 8

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

**Weights in Kgf**

S - Ansi 150/PN 16	54	75	85	100	150	255	395
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**REVAL 182 + DB/182**
**Reval 182**

**Overall dimensions in mm.**

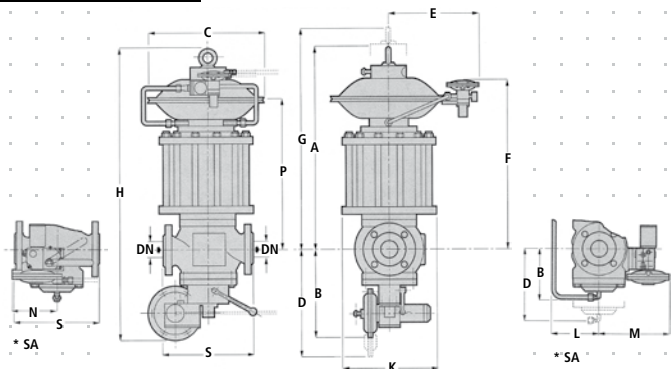
Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
S - Ansi 150/PN 16	183	254	276	298	353	451	543	673
A	520	550	650	675	755	920	1050	1262
B	100	130	140	150	190	220	260	310
C	375	375	495	495	495	630	630	630
D	130	160	180	200	250	270	315	398
E	350	350	410	410	410	475	475	470
F	450	480	550	585	655	770	850	1040
G	610	640	780	785	895	1120	1250	1450
H	820	850	965	1010	1115	1350	1525	1575
P	215	295	325	325	390	470	600	960
K	370	400	470	505	575	690	770	700

**Tubing Connections**
 $\Delta e10 \times \Delta i 8$ 

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

**Weights in Kgf**

S - Ansi 150/PN 16	44	84	88	112	178	339	536	900
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**REVAL 182+DB/182+SB82**
**Reval 182**

**Overall dimensions in mm**

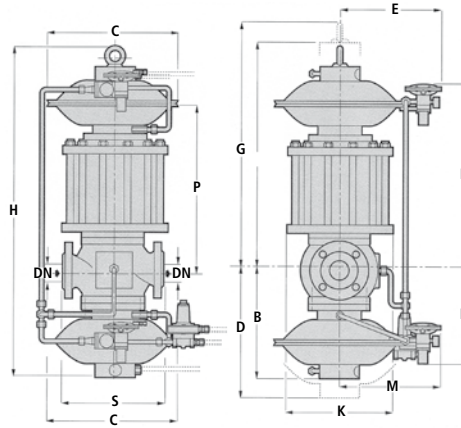
Size (mm)	25	50	65	80	100	150	200	250
Inches	1"	2"	2 1/2"	3"	4"	6"	8"	10"
S - Ansi 150/PN 16	183	254	276	298	352	451	543	673
A	520	550	650	675	755	920	1050	1262
B	300	145*	300	161*	315	178*	335	185*
C	375	375	495	495	495	630	630	630
D	390	212*	390	255*	425	292*	445	322*
E	350	350	410	410	410	500	636*	615
F	250	480	550	585	655	770	850	1040
G	610	640	780	785	895	1120	1250	1450
H	820	465*	850	511*	965	608*	1010	615*
K	215	295	325	325	390	470	600	960
P	370	400	470	505	575	690	770	700
L	98*	146*	146*	146*	146*	146*		
M	194*	219*	232*	246*	263*			
N	125*	125*	125*	130*	130*			

**Tubing Connections**
 $\Delta e10 \times \Delta i 8$ 

\*indicated Dimensions with the MODEL VB/93

**Weights in Kgf**

S - Ansi 150/PN 16	56	35*	90	52*	100	60*	130	72*	200	113*	390	590	1000
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**Overall dimensions in mm**

Size (mm)	25	50	65	80	100	150	200
Inches	1"	2"	2 <sup>1</sup> / <sub>2</sub> "	3"	4"	6"	8"
S - Ansi 150/PN 16	183	254	276	298	352	451	543
A	520	550	650	675	755	920	1050
B	260	290	370	380	410	490	590
C	375	375	495	495	495	630	630
D	410	430	530	530	600	735	850
E	350	350	410	410	410	475	475
F	450	480	550	585	655	770	850
G	610	640	780	785	895	1120	1250
H	780	840	1020	1055	1165	1410	1640
L	260	295	340	350	380	410	460
M	350	350	410	410	410	475	475
K	215	295	325	325	390	470	600
P	370	400	470	505	575	690	770

**Tubing Connections**

Δe10 x Δi 8

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

**Weights in Kgf**

S - Ansi 150/PN 16	65	109	115	142	218	399	631
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Reducing and metering stations



Metering



Ball valves



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CT-s 520-E October 13

[www.fiorentini.com](http://www.fiorentini.com)