

 **Aperflux 851**  
Pressure regulator

# APERFLUX 851

## Classification and Area of Application

**APERFLUX 851** is a downstream pressure regulator, self actuated, pilot controlled, for medium and high pressure applications.

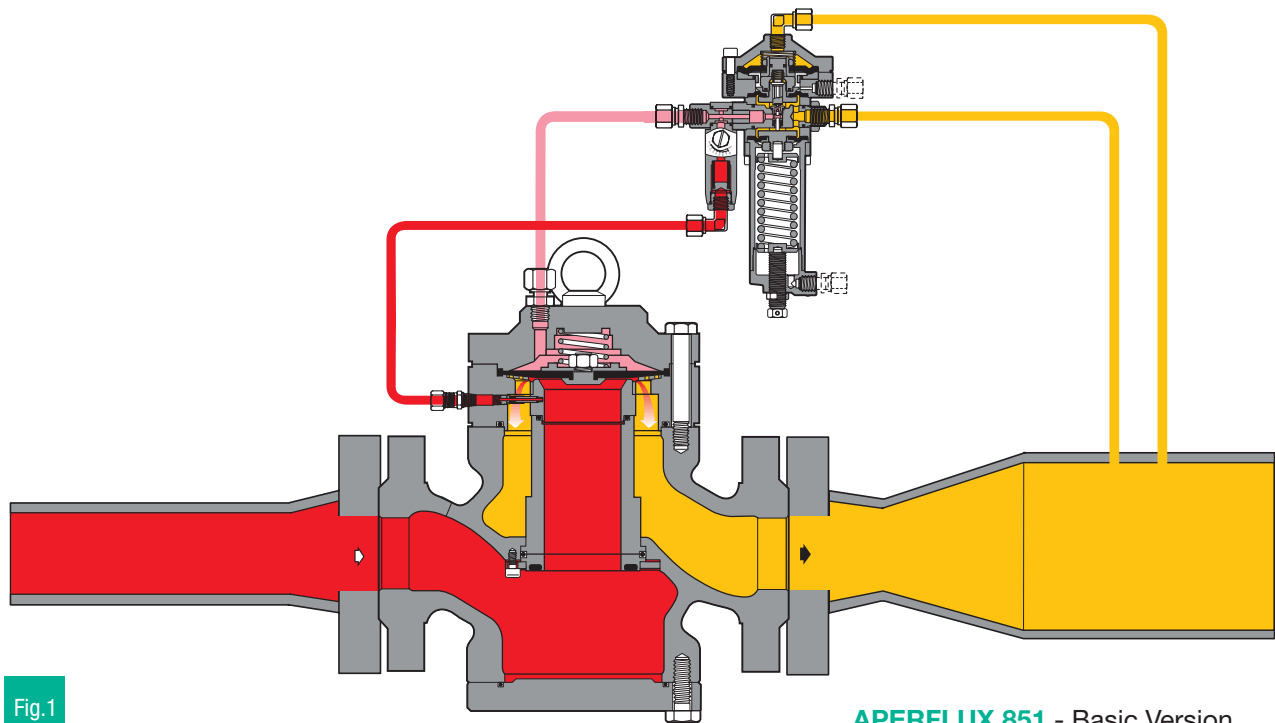
It is suitable for gaseous, non-corrosive, previously filtered fluids.

It is particularly suitable for use within the framework of installations for the distribution of natural gas, as well as for supply networks for civil and industrial use.

The accuracy of the regulated pressure, the high Range Ability ratio, together with the fast adaptation to changes in the operating conditions, even in the presence of abrupt changes in the flow rate.

The **APERFLUX 851** regulator, is classified according to the European standard **EN 334**, as a regulator which reacts in opening (**Fail to Open**).

It is Truly a **TOP ENTRY** design, which confers to the regulator management advantages, for example the ability to perform full maintenance without uninstalling it from the connection pipe.



## FEATURES

### Functional features:\*

- **Maximum inlet pressure:** 1,450 PSIG
- **Temperature:** Pietro Fiorentini regulators are suitable for a minimum operating ambient temperature of: >- 40°F to 140°F with a carbon steel Body  
If the following conditions are met:
  - Inlet gas temperature shall always be higher than - 4°F
  - Inlet flowing gas shall be filtered , clean , and without liquid impurities
- **Range of inlet pressure:** 18.8 to 1,230 PSIG
- **Range of downstream pressure:** 18.8 to 1,170 PSIG depending on installed pilot
- **Minimum working differential pressure:** 7.25 PSIG Recommended . 30 PSIG
- **Accuracy class AC:** Up to 1% Gauge
- **Look-up pressure class SG:** Up to 5% to 2.5% Gauge depending on outlet pressure

### Design features:

- **Nominal dimensions " (DN):** 1" ; 2" ; 3" ; 4" ; 6" ; 8" ; 10"
- **Flanged connections** Class 150-300-600 RF or RTJ, according to ANSI B16.5 and PN 16 according to UNI 2282 or DIN 2263, (ISO 7005).

### Materials:\*\*

- **Body:** Cast steel ASTM A 352 LCC for classes ANSI 600 and 300;  
Cast steel ASTM A 216 WCB for classes Ansi 150 and PN 16.
- **Head covers:** Cast steel ASTM A 350 LF2
- **Diaphragm:** Rubberized canvas
- **Seat:** Stainless steel for DN =< DN 80 (3"), carbon steel with stainless steel sealing edge for DN >= DN 100 (4")
- **Sealing ring:** Nitril rubber
- **Connection fittings:** In zinc-plated carbon steel according to DIN 2353; Stainless steel on request. Execution up - 40°F

REMARK: \* Different functional features available on request.

\*\* The materials indicated above refer to the standard models. Different materials can be provided according to specific needs.

## Cg, KG and K1 coefficient

| Nominal diameter            |       |       |       |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|
| Millimeters                 | 25    | 50    | 80    | 100   | 150   | 200   | 250   |
| Inches                      | 1"    | 2"    | 3"    | 4"    | 6"    | 8"    | 10"   |
| <b>Cg flow coefficient</b>  | 480   | 1550  | 3790  | 5554  | 11112 | 17316 | 24548 |
| <b>KG flow coefficient</b>  | 504   | 1627  | 3979  | 5837  | 11678 | 18199 | 25850 |
| <b>K1 body shape factor</b> | 113.9 | 113.9 | 113.9 | 113.9 | 113.9 | 113.9 | 113.9 |
|                             |       |       |       |       |       |       | Tab.1 |

For sizing formulas refer to: [www.fiorentini.com/sizing](http://www.fiorentini.com/sizing)

## Pilot System

The operation of the regulator **APERFLUX 851** is controlled by a pilot system consisting of two separate devices: the AR 100 **Restrictor** unit and the **Pilot**.

## Restrictor AR 100

With this style of regulator, the restrictor unit is more properly a throttling valve. It is equipped with a built-in filter and it is fed by the high-pressure gas side.

It has a manually adjustable opening positions 1 to 8.

## Pilot

**APERFLUX 851** regulators are equipped with series **300 pilot**.

The available models, according to the pressure to be regulated, are:

- **302/...** Outlet pressure control range 11.6 to 137.7 PSIG (with different setting springs),
- **304/...** Control range from 101.5 to 623.5 PSIG (with different setting springs),
- **305/...** Control range from 290 to 870.2 PSIG (with different setting springs).
- **307/...** Control range from 594.6 to 1,073.3 PSIG (with different setting springs).

Pilots can be adjusted manually, in the field, or remotely to change the regulated pressure from far away.

In the different cases, in order to identify them properly, they take the following suffixes:

.../A Manual setting in place

.../D Electric/Electronic remote setting control

.../CS Pneumatic remote setting control

.../F.I.O. Smart unit for remote setting, monitoring flow limitation and indirect flow measurement

## MODULARITY AND ACCESSORIES

The **APERFLUX 851** regulator has been designed with a high degree of modularity that allows to incorporate, within the basic regulator, alternative devices and additional accessories.

These can also be added to a basic regulator at a later time, with no need to remove the regulator from the pipeline.

### Incorporated Silencer DB/851

Due to its design, the regulator **Aperflux 851** is basically a regulation valve featuring a low level of noise emissions.

.../DB-851 is the silencer that can be built-in in the basic regulator and that allows further reducing the noise that is produced during the gas throttling stage.

Its great efficiency is due to the fact that noise absorption takes place at the same point where it is generated, thus preventing its propagation.

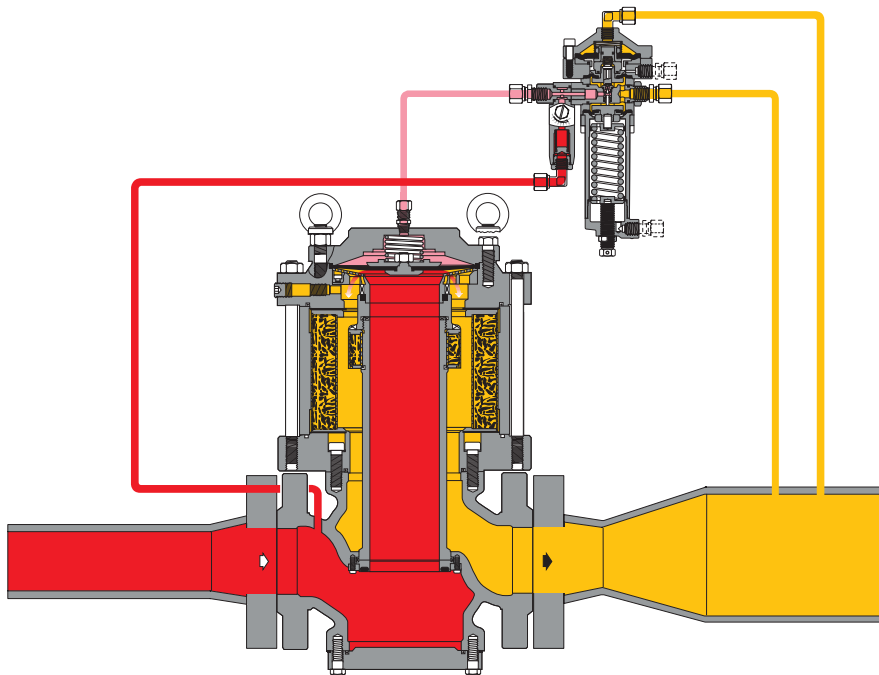


Fig.2

### APERFLUX - With incorporated silencer

This mechanical solution allows to still have the possibility of incorporating in the basic regulator, besides the silencer, also the slam-shut valve or the monitor.

With the application of the 851 silencer the Cg and KG valve coefficients are 5% lower than the corresponding basic regulator.

## Slam shut devices model SB/82 o HB/97

Slam shut **Safety Accessories** whose task is cutting the gas flow if abnormal pressure conditions appear, compared to the one set during set point of the slam shut pressure switch.

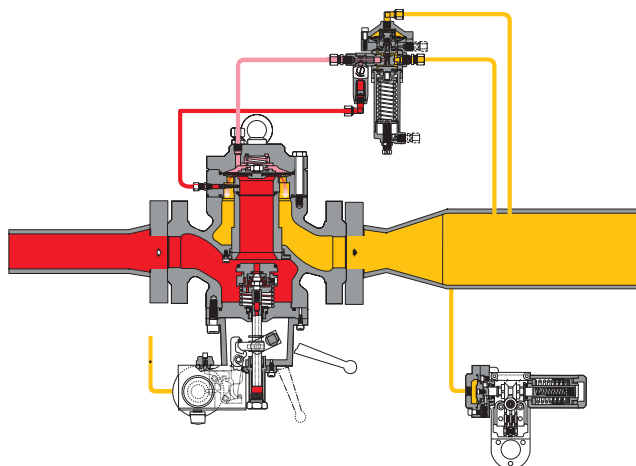


Fig.3

**APERFLUX 851** - With slam shuth SB

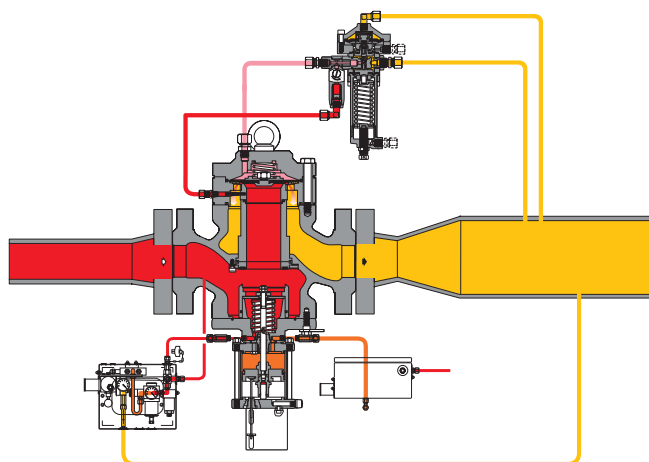


Fig.4

**APERFLUX 851** - With slam shuth HB

The set point can be changed according to the operating conditions, in the ranges referred to in the table N.2, according to the specific model of pressure switch installed.

The slam shut device is equipped with a button for local manual control of the slam shut operation (this can be disabled).

The resetting of the slam shut device, for safety reasons, is exclusively manual, and inside the slam shut device, a bypass device is provided, in order to make the reset operation easier.

The slam shut device can be equipped with accessories of pneumatic or electromagnetic type allowing control, as well as with sensors (micro-switches) for the remote signaling of its tripping.

## Pressure switch

| MOD. SB       | MIN.              | MAX               |
|---------------|-------------------|-------------------|
| <b>101M</b>   | 0.14* ÷ 3.77*     | 0.29 ÷ 14.5*      |
| <b>102M</b>   | 0.58 ÷ 40.61      | 2.9 ÷ 79.77       |
| <b>102MH</b>  | 40.61 ÷ 79.77     | 2.9 ÷ 79.77       |
| <b>103M</b>   | 2.9 ÷ 116.03      | 29 ÷ 319.02       |
| <b>103MH</b>  | 116.03 ÷ 275.57   | 29 ÷ 319.02       |
| <b>104M</b>   | 23.2 ÷ 261.06     | 108.77 ÷ 652.66   |
| <b>104MH</b>  | 261.06 ÷ 594.65   | 108.77 ÷ 652.66   |
| <b>105M</b>   | 43.51 ÷ 638.16    | 435.11 ÷ 1,305.33 |
| <b>105MH</b>  | 638.16 ÷ 1,305.33 | 435.11 ÷ 1,305.33 |
| MOD. HB       |                   |                   |
| <b>103</b>    | 5.8 - 98.62       | 1.3 - 159.54      |
| <b>104</b>    | 14.64 - 290.94    | 145.03 - 456.86   |
| <b>105</b>    | 36.25 - 725.18    | 362.59 - 1,102.28 |
| <b>105/92</b> | 652.66 - 1,087.78 | 841.21 - 1,232.82 |
|               |                   | Tab.2             |

Values in PSIG

The slam shut valve can be set for pressure increase, **over pressure shut off (OPSO)** and/or for pressure drop, **under pressure shut off (UPS0)**.

The two intervention modes can be adjusted independently, using the dedicated springs: a spring for the tripping of maximum pressure and a second spring for the tripping of minimum pressure.

The choice between the two models - SB/82 and HB/97 - depends on the size of the regulator and on the maximum instantaneous flow rate to be provided.

In general, up to a size of 3" you would only use the model SB/82, while for larger sizes, it is necessary to assess whether it is suitable to use the model HB/97 instead of model SB/82 depending on the application by using the PF sizing program.

For accurate sizing please contact our technical and sales department.

The slam-shut device incorporated in the regulators, causes a reduction of the coefficients Cg and Kg equal to about 5% of the value of the basic regulator.

## Monitor incorporated PM/819

The **MONITOR REGULATOR** is a safety regulator whose task is to control the functions of the worker regulator in case of failure of the worker regulator.

This is a regulator that is normally in fully open position during normal operation of the worker regulator.

It is generally installed in the gas flow direction, upstream of worker pressure regulator that acts as worker regulator.

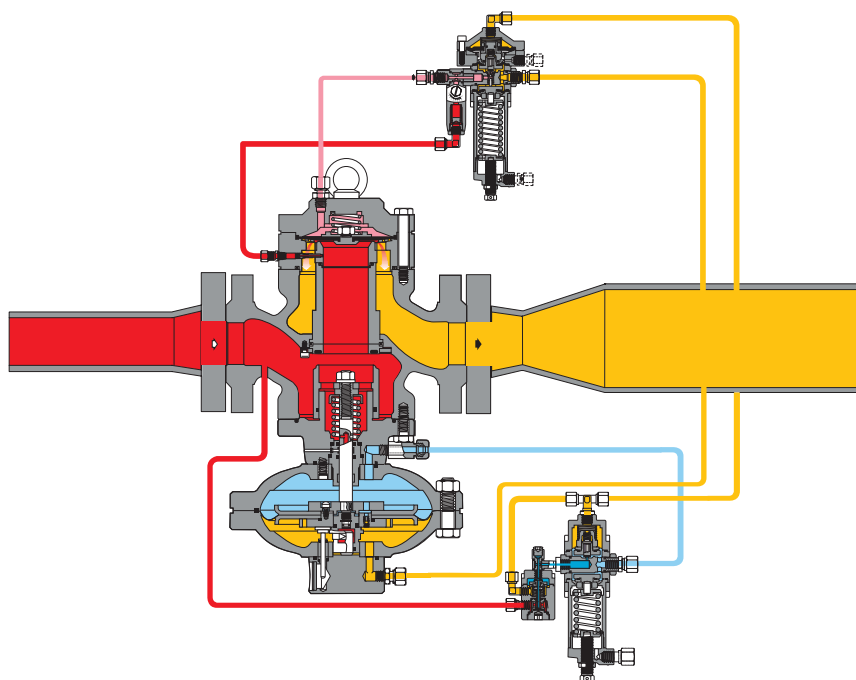


Fig.5

### APERFLUX 851 - With monitor incorporated

The Monitor **PM/819** is mounted on the same body of the worker regulator but it is provided with its own sealing seat, pilot system, and an independent motorization.

The functional characteristics of the **Monitor PM/819** are the same of the basic regulator **REFLUX 819** (see specific catalog).

The assembly **APERFLUX 851 + Monitor PM 819** is characterized by equivalent coefficients  $C_g$  and  $K_G$  reduced by **5%** compared to those of the basic regulator.

This option allows creating regulating stations featuring very small overall dimensions and lower pressure drops compared to the traditional solution of the two regulators installed in line.



## In-line Monitor

The Monitor regulator and Worker are installed in series.

Fig. 6 represents the traditional solution where the monitor is usually installed upstream and the worker regulator is installed downstream (following the gas flow direction).

The Monitor regulator is set at a value that is slightly higher than the set-point of the Worker regulator.

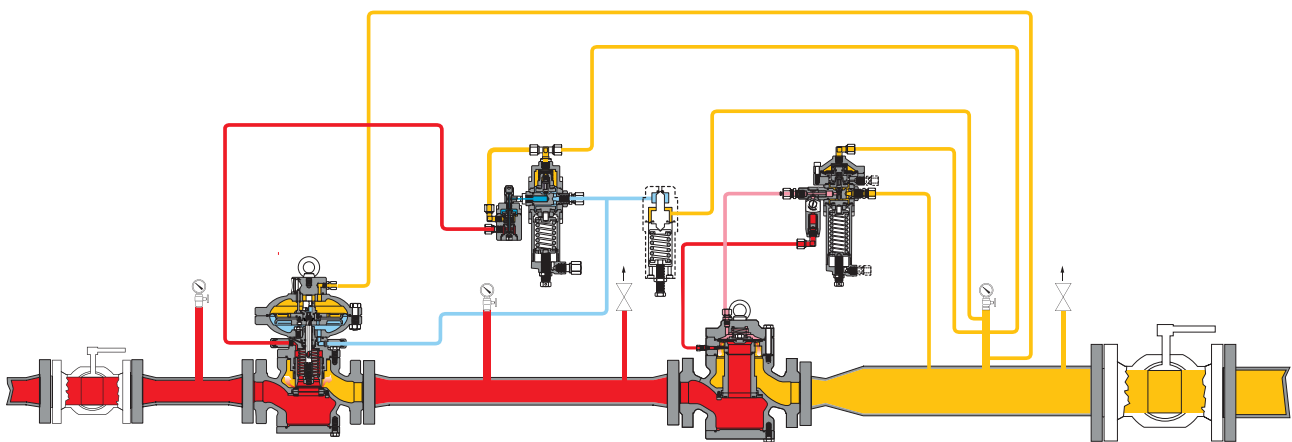


Fig.6

**APERFLUX 851** - Solution with in-line monitor

## Optional

### For the pressure regulators:

- Limit switches
- Position transmitters
- Steel fittings, single or dual sealing

### For the pilot circuit

- M/A Accelerators
- R14/A/S Preregulator for the high pressure circuit ( $P > 174$  PSIG (12 bar))
- Heating cable for preheating the pilot circuit
- Supplementary Filter CF 14
- Dehydrating Filter CF 14/D
- Fluid Control 896, Pilots for pressure regulation modulation
- .../F.I.O. SMART unit for remote adjustment

## Sizing of pressure Regulator

In general, the selection of a regulator is made based on the calculation of the flow rate determined by the use of formulas and on the flow rate coefficients (Cg or KG) as indicated by the EN 334 standard.

For the sizing of the involved regulators, kindly refer to our website: [www.fiorentini.com/sizing](http://www.fiorentini.com/sizing).

For different gases and for natural gas with a different density than 0.61 shall be applied the correction coefficients resulting from the following formula:

$$F_c = \sqrt{\frac{175.8}{S \times (273.16 + t)}} \quad S = \text{relative density to air}$$

| Correction factors FC |                  |           |
|-----------------------|------------------|-----------|
| Type of gas           | Relative density | Fc factor |
| Air                   | 1.0              | 0.78      |
| Propane               | 1.53             | 0.63      |
| Butane                | 2.0              | 0.55      |
| Nitrogen              | 0.97             | 0.79      |
| Oxygen                | 1.14             | 0.73      |
| Carbon dioxide        | 1.52             | 0.63      |

Tab.3

The chart show the correction factors FC valid for above mentioned gas at 15°C and the relative density declared..

| Flow rate conversion |   |         |                      |
|----------------------|---|---------|----------------------|
| Stm <sup>3</sup> /h  | x | 0,94795 | = Nm <sup>3</sup> /h |

Tab.4

### CAUTION:

In order to get optimal performance, to avoid premature erosion phenomena and to limit noise emissions, it is recommended to check that gas speed at the outlet flange. The gas speed at the outlet flange may be calculated by means of the following formula:

$$V = 345.92 \times \frac{Q}{DN^2} \times \frac{1 - 0.002 \times Pd}{1 + Pd}$$

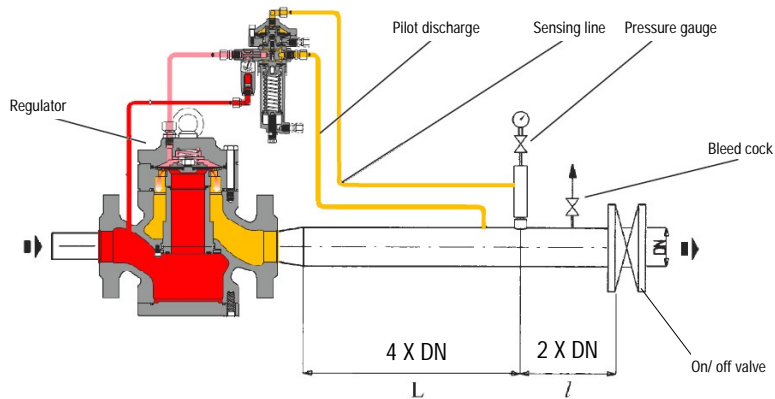
### where:

- V** = gas speed in m/sec
- Q** = gas flow rate in Stm<sup>3</sup>/h
- DN** = nominal size of regulator in mm
- Pd** = outlet pressure in barg.

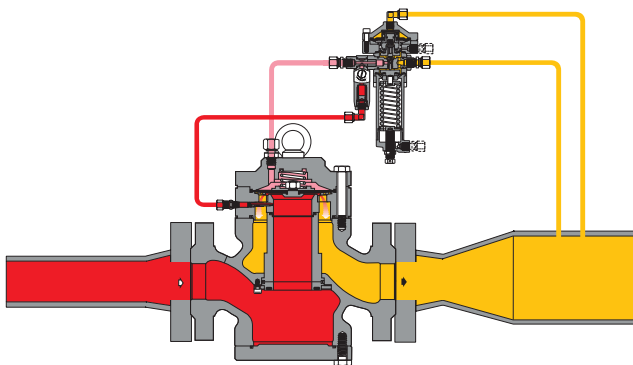
## TYPICAL CONNECTION DIAGRAMS

The following examples are provided as a recommendation to get the best performance from the regulator **APER-FLUX 851**.

### IN-LINE INSTALLATION

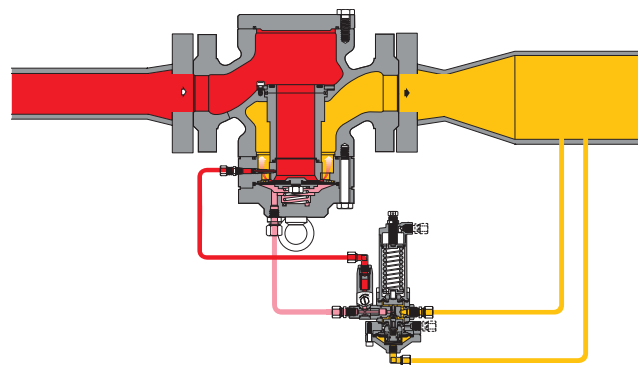


## RECOMMENDED INSTALLATIONS



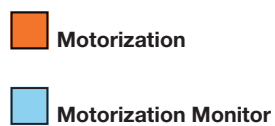
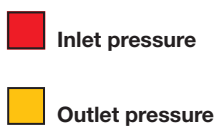
Standard position

Fig.8



Upside down position

Fig.9



## RECOMMENDED INSTALLATIONS

### Regulator APERFLUX 851 with built-in monitor regulator PM/819

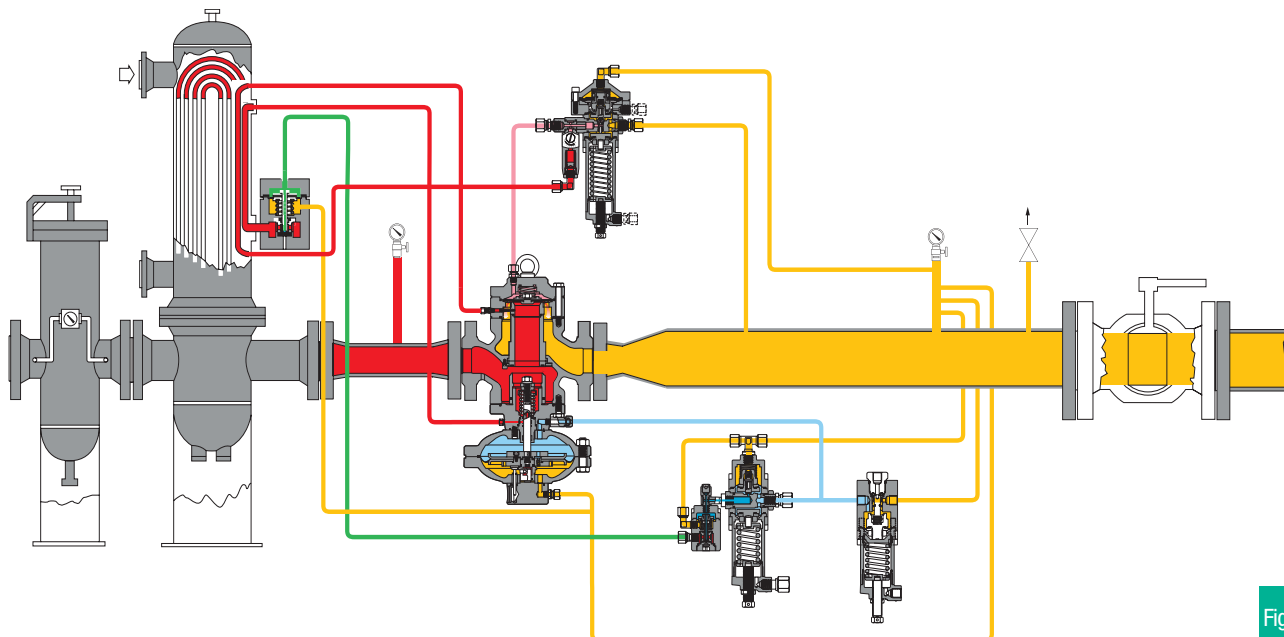


Fig.10

### Slam-shut valve SBC 782 and regulator APERFLUX 851 with built-in slam-shut device SB82

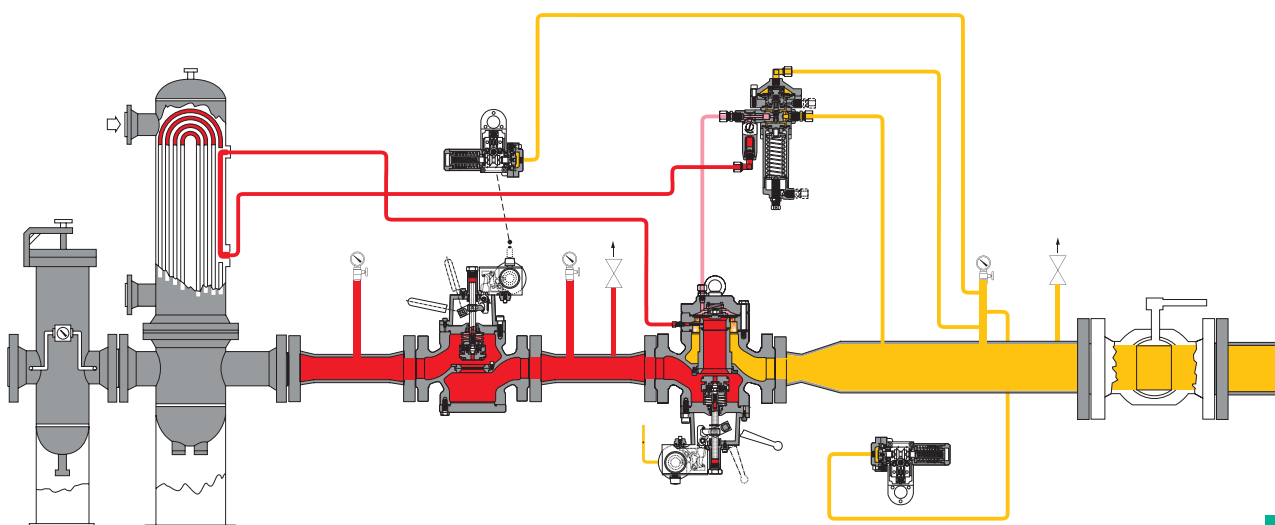


Fig.11

Monitor regulator APERFLUX 851 with built-in slam-shut device HB/97 and regulating regulator APERFLUX 851

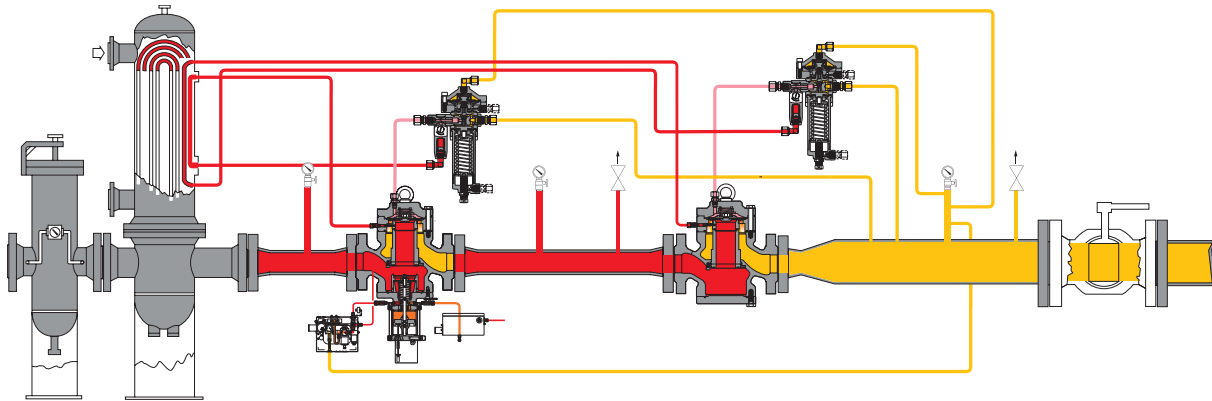


Fig.12

Operating monitor regulator APERFLUX 851 and regulating regulator APERFLUX 851

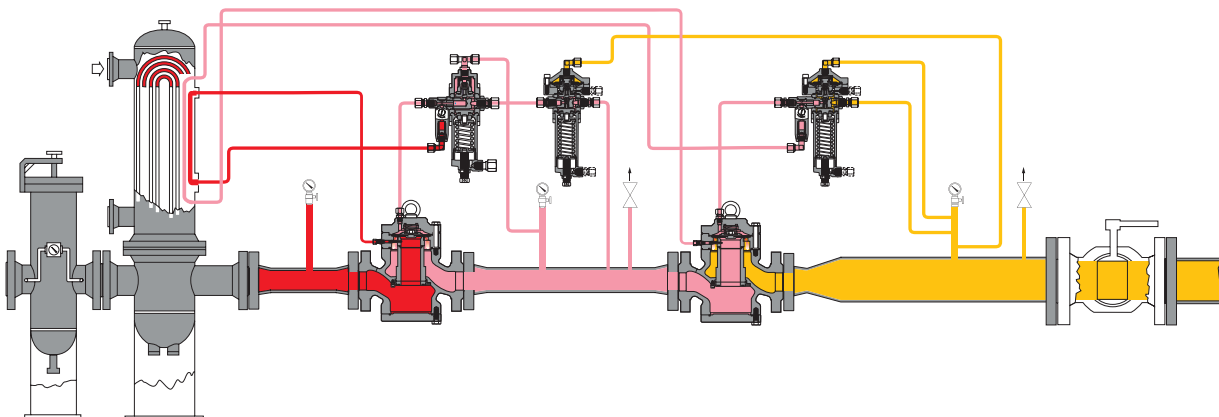


Fig.13

## APERFLUX 851

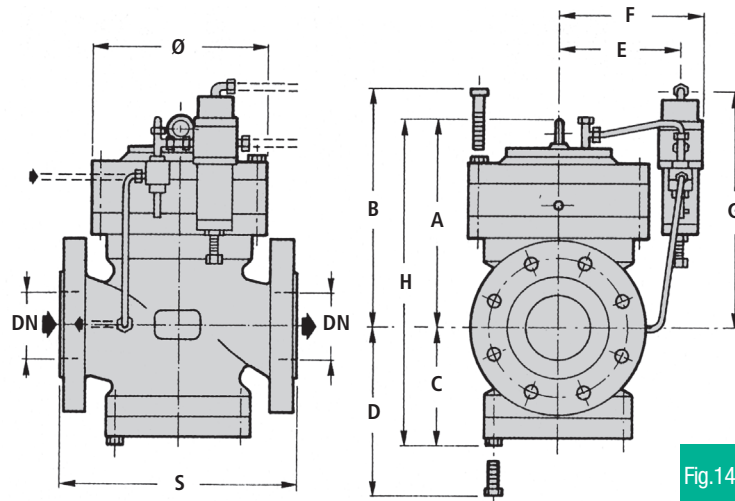


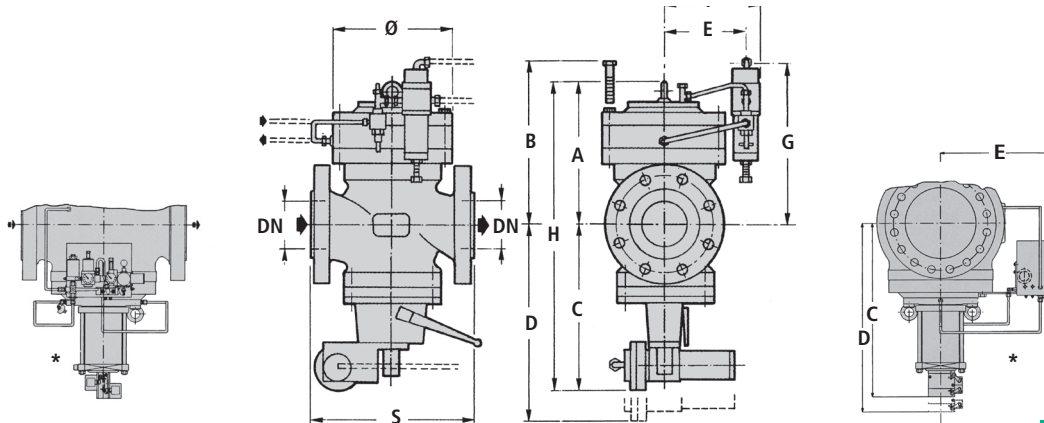
Fig.14

| Dimensions         |       |       |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| Inches             | 1"    | 2"    | 3"    | 4"    | 6"    | 8"    | 10"   |
| S - Ansi 150/PN 16 | 7.25  | 10    | 11.75 | 13.88 | 17.75 | 21.38 | 26.5  |
| S - Ansi 300       | 7.75  | 10.5  | 12.5  | 14.5  | 18.62 | 22.38 | 27.88 |
| S - Ansi 600       | 8.25  | 11.25 | 13.25 | 15.5  | 20    | 24    | 29.62 |
| Ø                  | 4.92  | 6.29  | 9.64  | 11.41 | 15.15 | 19.29 | 24.21 |
| A                  | 7.87  | 9.05  | 11.81 | 13.38 | 16.53 | 17.91 | 22.83 |
| B                  | 9.05  | 10.23 | 13.38 | 14.96 | 18.5  | 20.07 | 20.47 |
| C                  | 3.93  | 5.11  | 5.9   | 7.48  | 9.44  | 10.43 | 13.38 |
| D                  | 5.11  | 6.29  | 7.87  | 9.84  | 11.81 | 12.59 | 17.32 |
| E                  | 5.51  | 5.7   | 7.48  | 8.26  | 10.23 | 12.4  | 14.56 |
| F                  | 6.29  | 6.88  | 8.66  | 9.44  | 11.41 | 13.58 | 16.33 |
| G                  | 10.23 | 11    | 13.77 | 14.96 | 11.71 | 12.29 | 14.96 |
| H                  | 11.81 | 14.17 | 17.71 | 20.86 | 25.98 | 28.34 | 36.22 |
|                    |       |       |       |       |       |       | Tab.5 |

Pneumatic fittings: 1/4" NPT

Dimensions S according to EN 334 and IEC 534-3.

| Weight in Lbs  |      |      |       |       |       |       |         |
|----------------|------|------|-------|-------|-------|-------|---------|
| Ansi 150/PN 16 | 44   | 77.1 | 167.5 | 253.5 | 518   | 738.5 | 1,543.2 |
| Ansi 300       | 46.2 | 79.3 | 180.7 | 282.1 | 566.5 | 870.8 | 1,653.4 |
| Ansi 600       | 48.5 | 83.7 | 187.3 | 304.2 | 639.3 | 959   | 1,873.9 |
|                |      |      |       |       |       |       | Tab.6   |

**APERFLUX 851 + SB/82 + HB/97**

**Fig.15**

| Dimensions         |       |       |       |       |        |       |        |       |        |       |        |
|--------------------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|--------|
| Inches             | 1"    | 2"    | 3"    | 4"    | 6"     | 8"    | 10"    |       |        |       |        |
| S - Ansi 150/PN 16 | 7.25  | 10    | 11.75 | 13.88 | 17.75  | 21.38 | 26.5   |       |        |       |        |
| S - Ansi 300       | 7.75  | 10.5  | 12.5  | 14.5  | 18.62  | 22.38 | 27.88  |       |        |       |        |
| S - Ansi 600       | 8.25  | 11.25 | 13.25 | 15.5  | 20     | 24    | 29.62  |       |        |       |        |
| Ø                  | 4.92  | 6.29  | 9.64  | 11.41 | 15.15  | 19.29 | 24.21  |       |        |       |        |
| A                  | 7.87  | 9.05  | 11.81 | 13.38 | 16.53  | 17.91 | 22.83  |       |        |       |        |
| B                  | 9.05  | 10.23 | 13.38 | 14.96 | 18.50  | 20.07 | 20.47  |       |        |       |        |
| C                  | 8.46  | 9.44  | 10.62 | 11.81 | 20.39* | 14.76 | 25.39* | 17.71 | 27.04* | 26.77 | 31.33* |
| D                  | 12.59 | 14.56 | 16.53 | 18.89 | 25.59* | 23.62 | 32.87* | 26.18 | 35.43* | 35.43 | 41.73* |
| E                  | 5.51  | 5.7   | 7.48  | 8.26  | 14.09* | 10.23 | 16.14* | 12.4  | 17.51* | 14.56 | 20.07* |
| F                  | 6.29  | 6.88  | 8.66  | 9.44  | 11.41  | 13.58 | 16.33  |       |        |       |        |
| G                  | 10.23 | 11.02 | 13.77 | 14.96 | 11.71  | 19.29 | 14.96  |       |        |       |        |
| H                  | 16.33 | 18.5  | 22.44 | 25.19 | 31.29  | 35.62 | 49.6   |       |        |       |        |
|                    |       |       |       |       |        |       |        |       |        | Tab.7 |        |

**Pneumatic fittings: 1/4" NPT**

\*indicated Dimensions with the MODEL HB/97      Dimensions S according to EN 334 and IEC 534-3.

| Weight in Lbs         |      |       |       |       |       |         |         |       |
|-----------------------|------|-------|-------|-------|-------|---------|---------|-------|
| <b>Ansi 150/PN 16</b> | 59.5 | 97    | 189.5 | 286.6 | 573.2 | 881.8   | 1,653.4 |       |
| <b>Ansi 300</b>       | 59.5 | 101.4 | 202.8 | 319.7 | 639.3 | 1,036.1 | 1,763.6 |       |
| <b>Ansi 600</b>       | 66.1 | 105.8 | 211.6 | 341.7 | 705.4 | 1,124.1 | 1,984.1 |       |
|                       |      |       |       |       |       |         |         | Tab.8 |

## APERFLUX 851 + PM/819

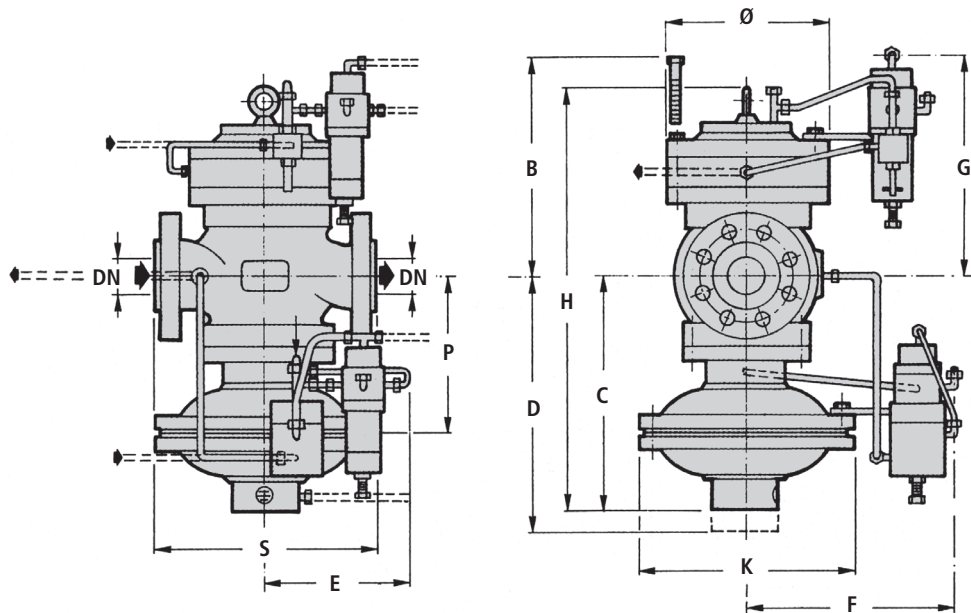


Fig.16

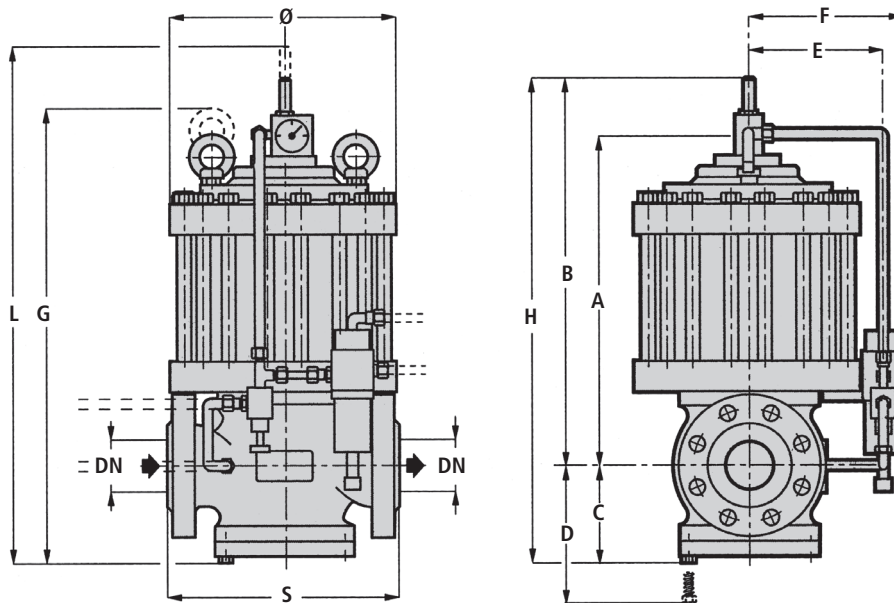
| Dimensioni                |       |       |       |       |       |       |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|
| Inches                    | 1"    | 2"    | 3"    | 4"    | 6"    | 8"    | 10"   |
| <b>S - Ansi 150/PN 16</b> | 7.25  | 10    | 11.75 | 13.88 | 17.75 | 21.38 | 26.5  |
| <b>S - Ansi 300</b>       | 7.75  | 10.5  | 12.5  | 14.5  | 18.62 | 22.38 | 27.88 |
| <b>S - Ansi 600</b>       | 8.25  | 11.25 | 13.25 | 15.5  | 20    | 24    | 29.62 |
| <b>Ø</b>                  | 4.92  | 6.29  | 9.64  | 11.41 | 15.51 | 19.29 | 24.21 |
| <b>B</b>                  | 9.05  | 10.23 | 13.38 | 14.96 | 18.5  | 20.07 | 20.47 |
| <b>C</b>                  | 12.59 | 13.77 | 16.92 | 19.29 | 25.59 | 29.52 | 26.77 |
| <b>D</b>                  | 16.14 | 16.92 | 20.86 | 23.62 | 28.93 | 33.46 | 35.43 |
| <b>E</b>                  | 14.56 | 14.56 | 16.14 | 16.14 | 19.09 | 19.09 | 14.56 |
| <b>F</b>                  | 10.62 | 10.62 | 12.2  | 12.2  | 15.15 | 15.15 | 16.33 |
| <b>G</b>                  | 10.23 | 11.02 | 13.77 | 14.96 | 17.71 | 19.29 | 14.96 |
| <b>H</b>                  | 20.47 | 22.83 | 28.74 | 32.67 | 42.12 | 47.44 | 54.33 |
| <b>K</b>                  | 10.94 | 10.94 | 14.17 | 14.17 | 20.07 | 20.07 | 24.01 |
| <b>P</b>                  | 6.69  | 7.87  | 10.23 | 11.41 | 12.59 | 14.56 | 19.68 |
|                           |       |       |       |       |       |       | Tab.9 |

**Pneumatic fittings:** 1/4 NPT

Dimensions S according to EN 334 and IEC 534-3.

| Weight in Lbs         |      |       |       |       |       |         |         |
|-----------------------|------|-------|-------|-------|-------|---------|---------|
| <b>Ansi 150/PN 16</b> | 72.7 | 149.9 | 297.6 | 352.7 | 815.7 | 1,157.4 | 2,425   |
| <b>Ansi 300</b>       | 74.9 | 154.3 | 304.2 | 363.7 | 859.8 | 1,289.7 | 2,535.3 |
| <b>Ansi 600</b>       | 77.1 | 158.7 | 326.2 | 418.8 | 925.9 | 1,377.8 | 2,755.7 |
|                       |      |       |       |       |       |         | Tab.10  |



**APERFLUX 851 + DB/851**

**Fig.17**

| Dimensions         |       |       |       |       |       |       |        |
|--------------------|-------|-------|-------|-------|-------|-------|--------|
| Inches             | 1"    | 2"    | 3"    | 4"    | 6"    | 8"    | 10"    |
| S - Ansi 150/PN 16 | 7.25  | 10    | 11.75 | 13.88 | 17.75 | 21.38 | 26.5   |
| S - Ansi 300       | 7.75  | 10.5  | 12.5  | 14.5  | 18.62 | 22.38 | 27.88  |
| S - Ansi 600       | 8.25  | 11.25 | 13.25 | 15.5  | 20    | 24    | 29.62  |
| Ø                  | 8.66  | 11.81 | 12.99 | 15.35 | 18.89 | 25.39 | 29.13  |
| A                  | 13.97 | 16.53 | 19.68 | 22.44 | 28.14 | 12.2  | 40.35  |
| B                  | 18.3  | 20.86 | 24.6  | 27.36 | 33.46 | 41.14 | 42.71  |
| C                  | 3.93  | 5.11  | 5.9   | 7.48  | 9.44  | 10.43 | 13.38  |
| D                  | 5.11  | 6.29  | 7.87  | 9.84  | 11.81 | 12.59 | 17.32  |
| E                  | 6.37  | 7.71  | 8.5   | 9.48  | 9.21  | 9.33  | 10.31  |
| F                  | 7.55  | 8.89  | 9.68  | 10.66 | 10.39 | 10.51 | 11.49  |
| G                  | 14.56 | 17.32 | 20.66 | 23.42 | 29.33 | 37.4  | 54.96  |
| H                  | 17.91 | 21.65 | 25.59 | 29.92 | 38.58 | 46.25 | 47.83  |
| L                  | 22.04 | 26.49 | 31.18 | 35.31 | 42.55 | 52.44 | 54.01  |
|                    |       |       |       |       |       |       | Tab.11 |

**Pneumatic fittings: 1/4"NPT**

Dimensions S according to EN 334 and IEC 534-3.

| Weight in Lbs         |       |       |       |       |         |         |         |
|-----------------------|-------|-------|-------|-------|---------|---------|---------|
| <b>Ansi 150/PN 16</b> | 103.6 | 220.4 | 370.3 | 529.1 | 862     | 1,675.5 | 2,733.7 |
| <b>Ansi 300</b>       | 108   | 224.8 | 390.2 | 590.8 | 954.6   | 1,838.6 | 2,848.3 |
| <b>Ansi 600</b>       | 110.2 | 229.2 | 396.8 | 612.8 | 1,027.3 | 1,926.8 | 3,068.8 |
|                       |       |       |       |       |         |         | Tab.12  |

## APERFLUX 851 + DB/851+SB/82+HB/97

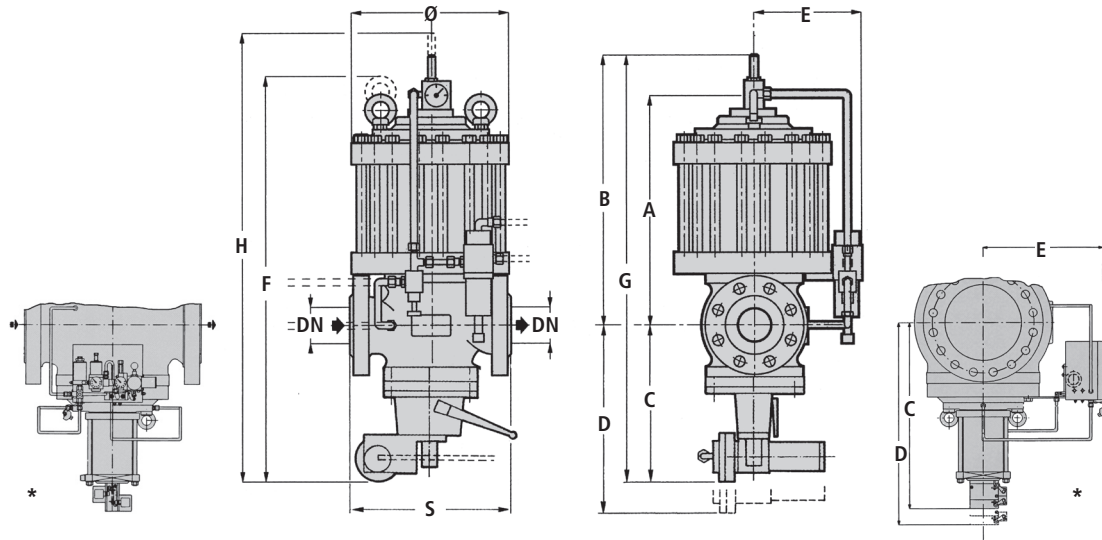


Fig.18

| Dimensions         |       |       |       |       |        |       |        |       |        |       |        |
|--------------------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|--------|
| Inches             | 1"    | 2"    | 3"    | 4"    | 6"     | 8"    | 10"    |       |        |       |        |
| S - Ansi 150/PN 16 | 7.25  | 10    | 11.75 | 13.88 | 17.75  | 21.38 | 26.5   |       |        |       |        |
| S - Ansi 300       | 7.75  | 10.5  | 12.5  | 14.5  | 18.62  | 22.38 | 27.88  |       |        |       |        |
| S - Ansi 600       | 8.25  | 11.25 | 13.25 | 15.5  | 20     | 24    | 29.62  |       |        |       |        |
| Ø                  | 8.66  | 11.81 | 12.99 | 15.35 | 18.89  | 25.39 | 29.13  |       |        |       |        |
| A                  | 13.18 | 16.53 | 19.68 | 22.44 | 28.14  | 35.82 | 40.35  |       |        |       |        |
| B                  | 18.3  | 20.86 | 24.6  | 27.36 | 33.46  | 41.14 | 42.71  |       |        |       |        |
| C                  | 8.46  | 9.44  | 10.62 | 11.81 | 20.39* | 14.76 | 25.39* | 17.71 | 27.04* | 26.77 | 31.33* |
| D                  | 12.59 | 14.56 | 16.53 | 18.89 | 25.59* | 23.62 | 32.87* | 26.18 | 35.43* | 35.43 | 41.73* |
| E                  | 7.55  | 8.89  | 9.68  | 10.66 | 14.09* | 10.39 | 16.14* | 10.51 | 17.51* | 11.49 | 20.07* |
| F                  | 19.09 | 21.65 | 25.39 | 27.75 | 34.64  | 44.68 | 68.34  |       |        |       |        |
| G                  | 22.44 | 25.98 | 30.31 | 34.25 | 43.89  | 53.54 | 61.22  |       |        |       |        |
| H                  | 26.57 | 30.82 | 35.9  | 39.64 | 47.87  | 59.72 | 67.40  |       |        |       |        |

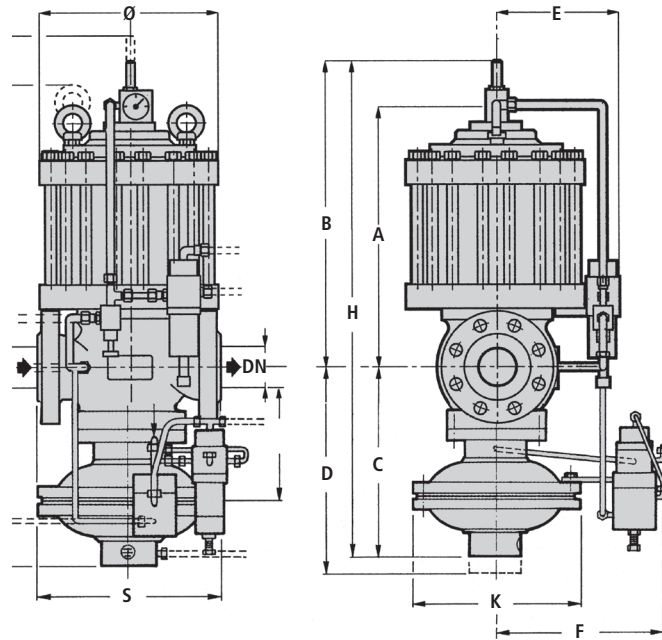
Tab.13

**Pneumatic fittings:** 1/4" NPT

indicated Dimensions with the MODEL HB/97    Dimensions S according to EN 334 and IEC 534-3.

| Weight in Lbs  |       |       |       |       |         |         |         |
|----------------|-------|-------|-------|-------|---------|---------|---------|
| Ansi 150/PN 16 | 119   | 240.3 | 392.4 | 562.1 | 917.1   | 1,818.8 | 2,843.9 |
| Ansi 300       | 123.4 | 246.9 | 412.4 | 623.9 | 1,027.3 | 2,004   | 2,958.6 |
| Ansi 600       | 127.8 | 251.3 | 421   | 648.1 | 1,100.1 | 2,092.1 | 3,179   |

Tab.14

**APERFLUX 851 + DB/819 + PM/819**

**Fig.19**
**Dimensions**

| Inches                    | 1"    | 2"    | 3"    | 4"    | 6"    | 8"    | 10"    |
|---------------------------|-------|-------|-------|-------|-------|-------|--------|
| <b>S - Ansi 150/PN 16</b> | 7.25  | 10    | 11.75 | 13.88 | 17.75 | 21.38 | 26.5   |
| <b>S - Ansi 300</b>       | 7.75  | 10.5  | 12.5  | 14.5  | 18.62 | 22.38 | 27.88  |
| <b>S - Ansi 600</b>       | 8.25  | 11.25 | 13.25 | 15.5  | 20    | 24    | 29.62  |
| <b>Ø</b>                  | 8.66  | 11.81 | 12.99 | 15.35 | 18.89 | 25.39 | 29.13  |
| <b>A</b>                  | 13.9  | 16.53 | 19.68 | 22.44 | 28.14 | 35.82 | 40.35  |
| <b>B</b>                  | 18.3  | 20.86 | 24.6  | 27.36 | 33.46 | 41.14 | 42.71  |
| <b>C</b>                  | 12.59 | 13.77 | 16.92 | 19.29 | 25.59 | 29.52 | 31.49  |
| <b>D</b>                  | 16.14 | 16.92 | 20.86 | 23.62 | 28.93 | 33.46 | 35.43  |
| <b>E</b>                  | 7.55  | 8.89  | 9.68  | 10.66 | 10.39 | 10.51 | 11.49  |
| <b>F</b>                  | 10.62 | 10.62 | 12.2  | 12.2  | 15.15 | 15.15 | 16.33  |
| <b>G</b>                  | 27.16 | 25.92 | 31.69 | 35.23 | 45.47 | 52.46 | 73.07  |
| <b>H</b>                  | 26.96 | 29.52 | 35.62 | 39.17 | 49.6  | 60.23 | 60.82  |
| <b>I</b>                  | 35.62 | 38.18 | 46.65 | 50.98 | 65.74 | 79.33 | 78.93  |
|                           |       |       |       |       |       |       | Tab.15 |

**Pneumatic fittings:** 1/4"NPT

Dimensions S according to EN 334 and IEC 534-3..

**Weight in Lbs**

|                |       |       |       |       |         |         |         |
|----------------|-------|-------|-------|-------|---------|---------|---------|
| Ansi 150/PN 16 | 132.2 | 293.2 | 491.6 | 650.3 | 1,159.6 | 2,094.3 | 3,615.5 |
| Ansi 300       | 136.6 | 297.6 | 511.4 | 716.5 | 1,252.2 | 2,257.5 | 3,730.2 |
| Ansi 600       | 138.8 | 302   | 518   | 738.5 | 1,324.9 | 2,345.7 | 3,950.6 |
|                |       |       |       |       |         |         | Tab.16  |

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