



**Dival 600**  
Pressure Regulators

## Pressure regulators

### Dival 600

Dival 600 series pressure regulators are direct acting devices for low and medium pressure applications controlled by a diaphragm and counter spring. These regulators are suitable for use with previously filtered, non corrosive gases.

### Modular Design

Modular design of pressure regulator Dival 600 series allows the installation of an incorporated slam shut or device for use as “in line monitor” on the same body without changing the face-to-face dimension. Furthermore the truly “top entry design” allows an easy periodical maintenance without removing body from the line. The features of Dival 600 series regulators make it a product suitable for any application.

The fast response time makes it ideal for burner or industrial applications or whenever sudden changes of flowrate are part of the process.

The high accuracy against any inlet pressure variation makes of Dival 600 series an optimum product also for gas district systems, an application generally where piloted operating regulators are preferred.

An extremely easy maintenance and a reduced number of parts are the background of low cost operation.

Accessories on request:

- Incorporated slam shut-valve
- In line monitor function
- Silencer;
- Incorporated relief valve.

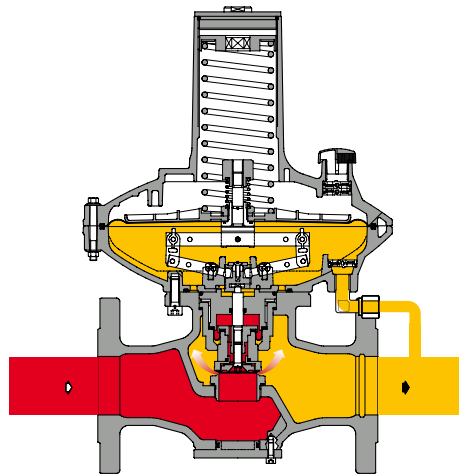


Fig.1

**DESIGNED  
WITH YOUR  
NEEDS IN MIND**

- COMPACT DESIGN
- EASY MAINTENANCE
- TOP ENTRY
- FAST RESPONSE TIME
- HIGH TURN DOWN RATIO
- HIGH ACCURACY
- LOW OPERATION COST
- WIDE RANGE OF APPLICATIONS

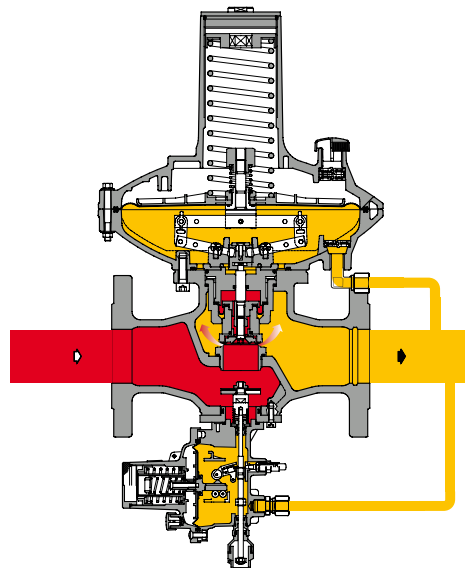
**SLAM SHUT**
**Dival 600**

This is a device which stops immediately gas flow whenever downstream pressure exceeds given set-point. Device can be actuated also manually.

Incorporated LA Slam shut (see figure 2) can be incorporated in the standard regulator and in the in-line monitor. The installation of integral Slam Shut valve does not produce any reduction on regulator KG or Cg values. A further advantage of the incorporated slam-shut valve is that it can be retro fitted at any time on a previously installed Dival 600 series without modifying the regulating unit (only with 4 ways body). Further the slam-shut can be positioned in four different positions (rotation on its axis) in such way to be fixed in the most appropriated position versus the surrounding encumbrance if any.

The main features of this slam-shut device are:

- design pressure 290 Psi (20 bar) for all the components;
- accuracy (AG): ap to 5 for pressure increase, up to 15 for pressure decreasing;
- internal by-pass;
- intervention for over pressure and/or under pressure;
- manual push-button control;
- possibility of pneumatic or electromagnetic remote control;
- compact overall dimensions;
- easy maintenance;
- possibility of application of devices for remote signal (contact or inductive microswitches).

**DIVAL 600 + SLAM SHUT LA**
**Dival 600**

**Fig. 2**

## VERSIONS

## Dival 600

### BODY

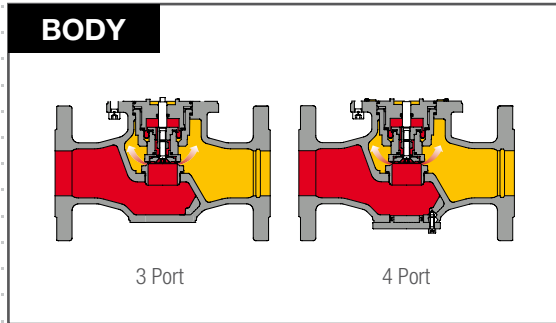


Fig. 3

### HEADS

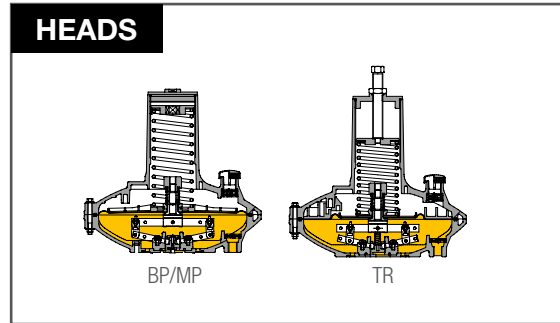


Fig. 4

## INCORPORATED SILENCER

## Dival 600

Whenever specific noise limits are required, the silencer allows you to considerably reduce the decibel (dBA) noise emissions during the gas pressure regulators operation.

The Dival 600 pressure regulator can be supplied with an incorporated silencer in either the standard version, with incorporated slam-shut or in line monitor version.

With the built-in silencer the Cg and KG valve coefficients are not affected. Given the modular arrangement of the regulator, the silencer may be retrofitted to both standard Dival 600 version as well as those with incorporated slam-shut or monitor version, without any need to piping modification. Pressure reduction and control operate the same manner as in standard version.

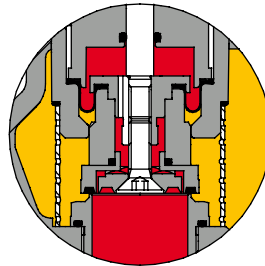
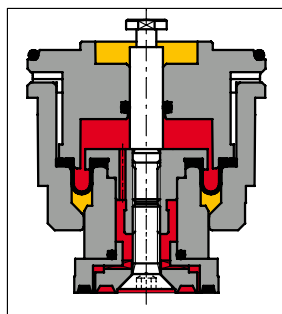


Fig. 5

## MONITOR VERSION

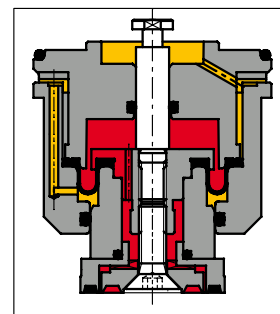
## Dival 600

Dival 600 series functioning as an in-line monitor is a regulator which, in addition to the standard version, has a further mobile assembly balancing device guaranteeing greater accuracy of regulated pressure and therefore an equally precise value for the intervention pressure without risk of interference with main regulator.



Standard regulator

Fig. 6



Monitor regulator

Fig. 7

**MAIN FEATURES**
**Dival 600**

- Design pressure PS: up to 290 Psig (20 bar)
- Design temperature: -4 °F to + 140 °F (-20 °C to +60 °C)
- Ambient temperature: -4 °F to + 140 °F (-20 °C to +60 °C)
- Max inlet pressure Pu: 290 Psig (20 bar)
  
- Outlet pressure range of Wd:
  - DN 25 from 5" w.c. to 4.9 psig (12 to 340) mbar for control head BP/MP  
from 4.3 psig to 60.9 psig (300 to 4200 mbar) for control head TR
  - DN 40-50 from 5" w.c. to 34" w.c. (12 to 85 mbar) for control head BP  
from 32 w.c. to 4.9 psig (80 to 340 mbar) for control head MP  
from (4,3 psig to 60.9 psig) 300 to 4200 mbar for control head TR
  
- Accuracy class AC: up to 5
- Lock-up pressure class SG: up to 10
- Available size DN: 1" (25) - 1"1/2 (40) - 2" (50)
- Flanging: class PN 16/25 according to ISO 7005-1, ISO 7005-2; class ANSI 150RF according to ANSI B16.5, ASME B16.42 and class ANSI 125 FF according to ASME B16.1
- Threaded connections: DN 2" Rp ISO 7-1 or DN 2"NPTF ASME B1.20.1 (only ductile iron)

**MATERIALS**
**Dival 600**

<b>Body</b>	Cast steel ASTM A216 WCB Ductile cast iron GS 400-18 ISO 1083
<b>Head covers</b>	Die cast aluminium EN AC-AISI 12 UNI EN 1706
<b>Diaphragm</b>	Rubberized canvas
<b>Valve seat</b>	Brass
<b>Seals</b>	Nitril rubber

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

**Coefficient**
**Dival 600**

	ø 280 BP/MP			ø280/TR		
	25	40	50	25	40	50
<b>Nominal diameter (mm)</b>	25	40	50	25	40	50
<b>Size (inches)</b>	1"	1"1/2	2"	1"	1"1/2	2"
<b>Cg flow coefficient</b>	269	652	781	315	692	770
<b>KG flow coefficient</b>	283	685	821	331	727	809
<b>K1 body shape factor</b>	94	94	86	97	95	97

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

### Flow Rate DN 25 ( MBTU/h lpg )

Flow rate valid for LPG with caloric value = 3,083 MBTU/foot<sup>3</sup> and specific gravity 1,825

		Outlet pressure																			
		mbar	20,68	41,37	55,16	68,95	103,42	137,90	206,84	275,79	344,74	551,58	689,48	1034,21	1378,95	1723,69	2068,43	2757,90	3447,38	3792,12	
Inlet pressure	bar	psi	0,3	0,6	0,8	1	1,5	2	3	4	5	8	10	15	20	25	30	40	50	55	
	0,34	5	5,8	6,0	6,0	5,7	5,3	4,9	4,4												
	0,69	10	9,6	9,2	9,2	9,5	8,6	8,6	8,3	7,4	5,0										
	1,38	20	15,6	15,5	15,6	16,1	15,1	15,7	15,6	14,6	9,7	11,6	10,9	9,4							
	2,07	30	21,8	22,4	22,4	21,6	21,3	21,9	20,8	21,5	15,1	16,7	16,3	15,5	13,9	12,4					
	2,76	40	23,6	24,7	24,7	23,3	23,6	24,4	22,6	23,4	19,0	20,1	19,9	19,3	17,6	16,0	14,8				
	3,45	50	25,6	27,1	27,1	25,1	25,8	26,1	24,3	25,4	27,5	23,7	23,6	23,2	21,4	19,6	18,2	18,2			
	5,17	75	34,5	37,9	39,1	38,2	35,3	35,3	35,7	39,2	36,2	35,6	36,5	38,1	35,7	33,3	31,2	29,7	28,3	27,6	
	6,89	100	37,5	39,8	40,3	38,6	35,3	35,3	35,7	39,2	37,0	38,5	39,7	42,4	41,7	40,9	40,2	38,8	37,4	36,7	
	10,34	150	46,2	41,5	44,3	38,2	35,3	35,3	35,7	39,2	39,2	44,9	48,3	56,0	61,3	66,5	70,4	68,1	65,7	64,5	
	13,79	200	31,5	35,9	37,9	38,1	35,3	35,3	35,7	39,2	39,2	44,9	48,5	57,1	66,9	76,7	84,6	84,8	85,1	85,2	
17,24	250	24,2	34,0	38,4	38,0	35,3	35,3	35,7	39,2	39,2	44,9	48,9	58,1	69,9	81,5	91,5	97,9	104,2	107,3		

### Flow Rate DN 40 ( MBTU/h lpg )

		Outlet pressure																			
		mbar	20,68	41,37	55,16	68,95	103,42	137,90	206,84	275,79	344,74	551,58	689,48	1034,21	1378,95	1723,69	2068,43	2757,90	3447,38	3792,12	
Inlet pressure	bar	psi	0,3	0,6	0,8	1	1,5	2	3	4	5	8	10	15	20	25	30	40	50	55	
	0,34	5	12,7	14,4	14,6	13,2	14,8	11,3	13,3												
	0,69	10	23,9	22,7	20,7	22,7	22,4	21,6	20,2	15,1	4,34										
	1,38	20	37,9	40,3	40,3	37,0	41,1	41,4	38,4	39,1	32,5	30,7	29,2	25,9							
	2,07	30	55,5	55,5	55,5	55,5	55,5	55,5	50,8	54,3	45,9	42,4	42,4	42,4	38,0	34,0					
	2,76	40	58,1	58,1	58,1	58,1	58,1	57,6	57,6	57,6	51,3	50,5	50,5	50,5	47,4	44,6	42,8				
	3,45	50	60,6	60,6	60,6	60,6	60,6	60,6	60,6	60,6	56,6	58,6	58,6	58,1	56,5	55,5	55,5	55,5			
	5,17	75	80,8	80,8	80,8	80,8	80,8	80,8	80,8	80,8	80,8	90,9	88,9	85,8	88,7	90,9	90,9	85,8	75,7	75,7	
	6,89	100	80,8	80,8	80,8	80,8	80,8	80,8	80,8	80,8	80,8	90,9	90,9	90,9	90,9	90,9	90,9	85,8	80,8	75,7	
	10,34	150	80,8	80,8	80,8	80,8	80,8	80,8	80,8	80,8	80,8	95,9	90,9	90,9	94,4	98,5	98,5	95,9	95,9	95,9	
	13,79	200	50,5	75,7	90,9	90,9	80,8	88,4	85,8	89,6	80,8	95,9	90,9	90,9	94,4	98,5	101,0	98,5	95,9	95,9	
17,24	250	40,4	75,7	90,9	90,9	90,9	90,9	90,9	90,9	80,8	101,0	101,0	101,0	101,0	101,0	101,0	101,0	101,0	101,0		

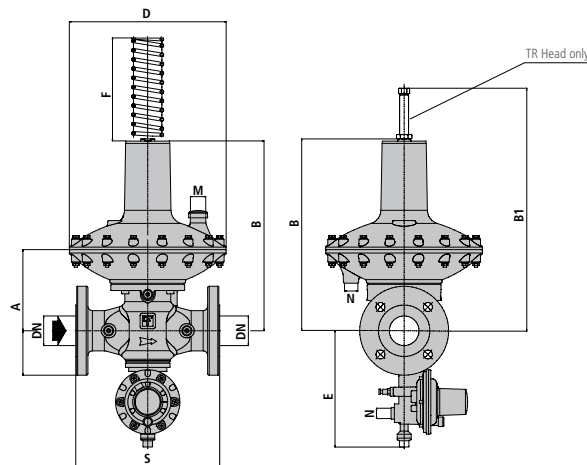
### Flow Rate DN 50 ( MBTU/h lpg )

		Outlet pressure																			
		mbar	20,68	41,37	55,16	68,95	103,42	137,90	206,84	275,79	344,74	551,58	689,48	1034,21	1378,95	1723,69	2068,43	2757,90	3447,38	3792,12	
Inlet pressure	bar	psi	0,3	0,6	0,8	1	1,5	2	3	4	5	8	10	15	20	25	30	40	50	55	
	0,34	5	17,7	18,4	18,2	16,7	15,9	13,1	12,6												
	0,69	10	27,8	26,8	26,1	25,2	23,2	24,2	24,7	20,7	14,4										
	1,38	20	41,9	41,2	40,9	41,3	43,4	31,3	36,7	39,4	30,3	35,3	36,9	40,4							
	2,07	30	46,5	66,6	70,7	62,3	55,8	59,1	51,6	61,9	40,6	50,5	50,5	50,5	46,5	43,2					
	2,76	40	47,0	68,7	75,7	72,6	61,2	68,2	61,6	71,9	53,3	63,1	62,6	62,6	58,1	53,9	50,5				
	3,45	50	47,0	70,7	80,8	80,8	65,6	75,7	71,6	101,0	75,7	90,9	75,2	75,2	70,7	65,6	60,6	60,6			
	5,17	75	50,5	80,8	95,9	95,9	101,0	121,2	101,0	121,2	106,0	126,2	126,2	126,2	114,6	101,0	95,9	95,9	95,9	95,9	
	6,89	100	50,5	85,8	101,0	101,0	111,1	121,2	111,1	126,2	116,1	126,2	126,2	126,2	131,3	141,4	151,5	151,5	151,5	151,5	
	10,34	150	50,5	85,8	101,0	101,0	111,1	126,2	121,2	131,3	126,2	126,2	126,2	126,2	161,6	196,9	227,2	227,2	227,2	227,2	
	13,79	200	36,9	80,8	101,0	101,0	111,1	126,2	126,2	131,3	126,2	126,2	126,2	126,2	161,6	196,9	227,2	227,2	227,2	227,2	
17,24	250	34,6	70,7	101,0	101,0	111,1	131,3	126,2	131,3	126,2	126,2	126,2	126,2	161,6	196,9	227,2	227,2	227,2	227,2		

**Slam-shut pressure switches**
**Dival 600**

Pressure switch	LA/BP	LA/MP	LA/TR
<b>Set point range for Overpressure (OPSO)</b>	12" W.c. ÷ 72" W.c.	2 ÷ 6.5	3.6 ÷ 80
<b>Set point range for Underpressure (UPSO)</b>	2.4" W.c. ÷ 24" W.c.	0.14 ÷ 3.5	1.45 ÷ 50.8

Working pressure in W.c and Psi

**DIMENSIONS**
**Dival 600**

**Overall dimensions in Inches**
**Dival 600**

Type	DN	NPS	S	A	B	B1	D	E	F	M	N
<b>Dival 600</b>	25	1"	7.20	5.71	13.5	17.04	11.02	8.46	7.87	Rp1/2"	Rp1/4"
<b>Dival 600</b>	40	1 1/2"	8.78	5.71	13.5	17.04	11.02	8.46	7.87	Rp1/2"	Rp1/4"
<b>Dival 600</b>	50	2"	9.88	5.71	13.5	17.04	11.02	8.46	7.87	Rp1/2"	Rp1/4"
<b>Dival 600</b>	G 2"	2" NPTF	6	5.71	13.5	17.04	11.02	8.46	7.87	Rp1/2"	Rp1/4"

**Weights in pounds**
**Dival 600**

Type	DN	NPS	Dival	Dival with slam shut LA/...
<b>Dival 600</b>	25	1"	33.06	35.27
<b>Dival 600</b>	40	1 1/2"	34.48	39.68
<b>Dival 600</b>	50	2"	44.09	266.76
<b>Dival 600</b>	G 2"	2" NPTF	39.68	41.89

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



Reducing Stations



Metering



Butterfly Valves



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