

# Gas Pressure Regulators 燃气减压阀



## R&F Series R和F 系列

Direct-acting Gas Pressure Regulator with  
Incorporated SSV According to 2014/68/EU  
Directive, EN334+A1 and EN 14382.

根据 2014/68/EU ,EN334+A1 和 EN 14382  
标准, 集成 SSV 的减压阀



## 产品描述

R,F 系列弹簧加载、隔膜控制、平衡阀设计调压器适用于低、中和高出口压力。“F”系列调压器配有内部导管，并预设可为连接到客户提供的外部导管。特殊的调节器设计与平衡阀相结合导致：

- \* 高流量，
- \* 高精度，即使在大流量的状态下，
- \* 减少响应时间，
- \* 在零流量时没有内漏
- \* 无需从管道上拆除做定期维护。



## PRODUCT DESCRIPTION

The “F” series of spring loaded, diaphragm controlled, balanced valve design regulators are suitable for low, medium and high outlet pressure. The “F” series regulators are supplied with internal sensing lines and are preset for an optional connection to an external sensing line by the customer. The special regulator design combined with a balanced valve results in:

- \* High flow rate coefficient,
- \* High accuracy, even at maximum flow rates,
- \* Reduced response times,
- \* No internal leakage at zero flow rate,
- \* Periodical maintenance without disassembling the body from the pipework,

Suitable for stations in gas transmission, LPG, LNG and CNG facilities.

可用于LPG,LNG和CNG等气站设备。



Suitable for gas pressure regulator all small and medium capacity boiler plant (Hot water boiler, steam boiler, hot oil heaters, etc...)

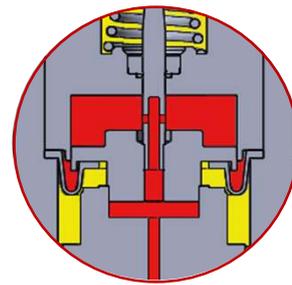
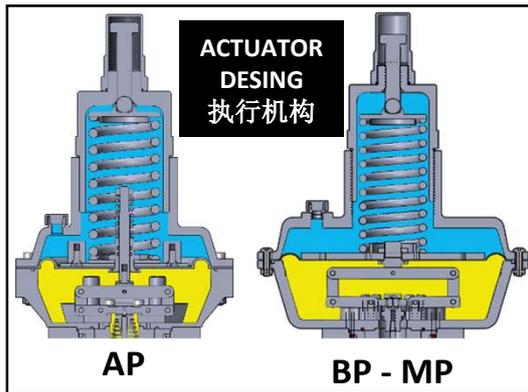
可用于各种民用加热行业，锅炉、热水锅炉、导热油炉等。



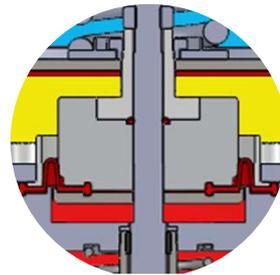
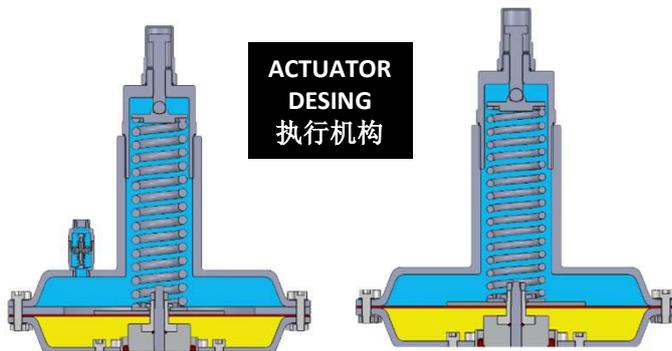
Suitable for process combustion system and all pre-burner gas trains

可用于各种工业过程加热的燃烧系统中。





**BALANCE  
D DESING  
平衡机构**



**BALANCE  
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### 技术性能 / Technical Features

设计压力 Desing Pressure, PS	16~25 bar	1600~2500 kPa	232~362.5 PSIG
入口压力范围 Inlet Pressure Range,	0.2 – 25 bar	20 – 2500 kPa	2.9 – 362.5 PSIG
形式 Type	DS		
故障现象 Fail Mode	Fail to Open 故障全开		
BP型号 BP Model	10 - 85 mbar	1 – 8.5 kPa	0.14 – 1.23 PSIG
MP型号 MP Model	80 - 350 mbar	8 – 35 kPa	1.16 – 5.07 PSIG
AP型号 AP Model	300 - 5000 mbar	30 – 500 kPa	4.35 – 72.5 PSIG
运行温度 Operating Temperature	-20°C to +60°C / -4°F to 140 °F		
环境温度 Ambiente Temperature	-30°C to +60°C / -22°F to 140 °F		
Accuracy & lock-up pressure (AC-SG)	up to AC5 / up to SG10 BP Model AC5, SG20 – MP-AP Model AC5, SG10		
Lock-up Zone	Qmin, Pu / Qmax, Pu = 2,5 / 100		
Type of Fluid	Natural gas, Town gas, Propane, Butane, Air, Nitrogen or any noncorrosive and filtered dry gases. Group1,2,3		
Diameter	DN25 - DN40 - DN50 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 -		
Safety Devices	Over Pressure Shutoff and Under Pressure Shutoff. <b>On request</b> Int. Safety Relief Valve		
Options	Monitor Regulator, Silencer.		

### 材料 / Metarials

<b>Body</b>	Cast Spheroidal Graphite Iron EN GJS 500-7 (GGG50) <b>on request</b> Cast steel ASTM A216 WCB
<b>Head</b>	Die cast aluminium <b>on request</b> Steel
<b>Seat</b>	Brass <b>on request</b> Stainless Steel
<b>Diaphragm</b>	Nitril Rubberized canvas with hot pressing
<b>Sealing</b>	NBR
<b>Internal Parts</b>	Brass, Stainless Steel and Nickel coated on sealing surfaces

## 安全切断阀

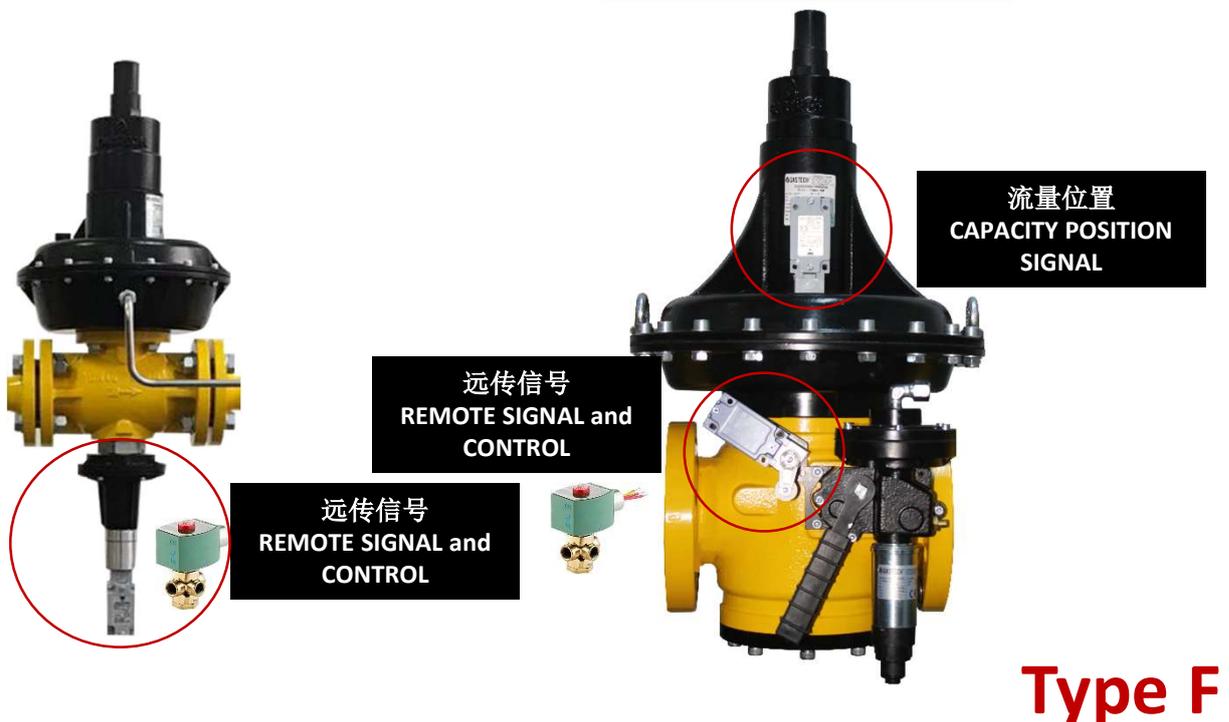
R,F 系列调压器可集成高压安全停机 (OPSO) 或低压和高压 (UPSO/OPSO) 安全停机机制。由于这种机制, 当调节器的出口压力增加或减少时, 气流会自动停止。安全关闭机构可以独立于调节器而调整到所需的关闭压力。由于内置旁路机构, 它可以在所有入口压力下轻松安装。使用开关、气动或电磁阀元件可以进行远程控制和监控。

## SAFETY SLUM SHUT VALVE

The F series of regulators can be fitted with safety shut-off valve for overpressure (OPSO) or combined under-and-over pressure (UPSO/OPSO) protection. Shutoff gas flow when the outlet pressure of the regulator increases or/and decreases. The Slum shut valve trip pressure can easily be adjusted independently of the regulator set point. Built internal bypass, for balancing pressure before relatching the safety shut-off valve, is operated by pulling the valve stem. Possibility of application of devices for remote signal and remote control.

### 切断阀技术性能 / Slum Shut Valve Technical Futures

Type	IS		
Operation Class	A		
Response Time	< 2 s		
Maximum Pressure Set Range Wdo	35 – 5500 mbar	3.5 – 550 kPa	0.5 – 79.7 PSIG
Minimum Pressure Set Range Wdu	10 – 3200 mbar	1 – 320 kPa	0.14 – 46.6 PSIG
Accuracy (AG)	BP Model AG10 – MP Model AG5 – AP Model AG5		
Options	Remote Control (Pneumatic or electromagnetic) Remote Signal (contact or inductive microswitches).		



## R 10系列

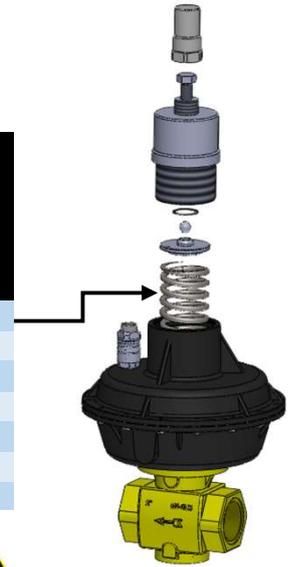
出口压力设定范围及弹簧编号 [Wds]  
 SET RANGE, Outlet Pressure, Springs Code [Wds]

BP mbar	MP mbar	AP mbar	D	Lo	De	Spring Colour	Spring Code
-	100-220	-	3.2	60	30	Black	GT1155
-	200-350	300-500	3.5	60	30	Purple	GT1156
-	-	450-900	3.8	60	30	Silver	GT1157
-	-	600-1200	4.0	60	30	Pink	GT1158
-	-	1000-1800	4.5	60	30	White	GT1159
-	-	1600-2300	5.0	60	30	Orange	GT1160
-	-	2000-3000	5.5	60	30	Red	GT1260



**Spring characteristics:**

D : Wire diameter De: Outside Diameter Lo: Length Lt : of spires All dimensions in mm



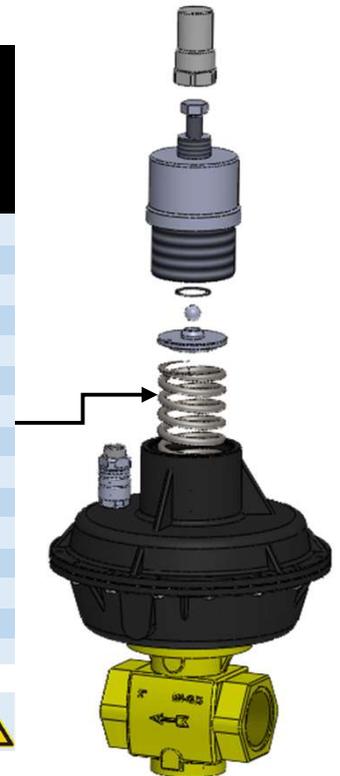
## R 25-40系列

出口压力设定范围及弹簧编号 [Wds]  
 SET RANGE, Outlet Pressure, Springs Code [Wds]

BP mbar	MP mbar	AP mbar	D	Lo	De	Spring Colour	Spring Code
20-35	-	-	2.5	130	35	Grey	GT130
30-50	-	-	2.8	130	35	Yellow	GT131
40-70	-	-	3.0	130	35	Blue	GT132
50-85	70-130	-	3.2	130	35	Black	GT133
-	110-200	-	3.5	130	35	Orange	GT134
-	140-250	-	3.7	130	35	Purple	GT135
-	200-360	-	4.0	130	35	Pink	GT136
-	-	250-450	4.5	100	35	Red	GT236
-	-	400-600	5.0	100	35	Green	GT137
-	-	500-900	5.5	100	35	Silver	GT138
-	-	700-1200	6.0	100	35	Black	GT139
-	-	1000-1600	6.5	100	35	Purple	GT140
-	-	1400-2500	7.5	100	35	Grey	GT141
-	-	2200-3600	12.0	155	73	White	GT1143
-	-	3400-5000	13.0 - 7	155 - 155	74 - 45	Orange	GT1144

**Spring characteristics:**

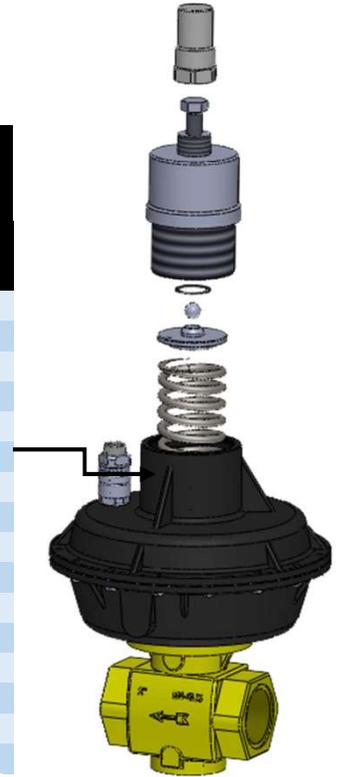
D : Wire diameter De: Outside Diameter Lo: Length Lt : of spires All dimensions in mm



# R 50 系列

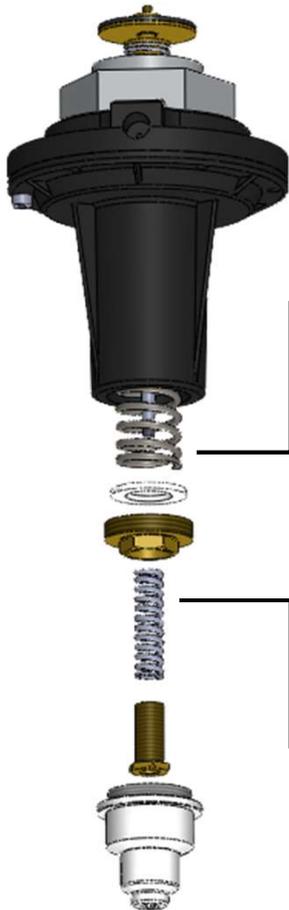
## 出口压力设定范围及弹簧编号 [Wds] SET RANGE, Outlet Pressure, Springs Code [Wds]

BP mbar	MP mbar	AP mbar	D	Lo	De	Lt	Spring Colour	Spring Code
12-16	-	-	3.5	220	57	24	Grey	GT1130
16-28	-	-	4.0	220	58	24	Yellow	GT1131
28-50	-	-	4.5	220	59	20	Blue	GT1132
50-75	-	-	5.0	220	60	19	Black	GT1133
75-85	80-120	-	5.5	220	61	17	Orange	GT1134
-	120-195	-	6.0	220	62	16	Purple	GT1135
-	195-300	-	6.5	220	63	15	Pink	GT1136
-	220-330	-	7.0	220	63	13	Red	GT1236
-	300-500	-	7.5	220	65	14	Green	GT1137
-	-	300-500	7.5	155	70	9.5	Silver	GT1138
-	-	400-600	8.0	155	70	9.5	Black	GT1139
-	-	600-1000	9.0	155	70	9.5	Purple	GT1140
-	-	800-1600	10.0	155	70	9.5	Grey	GT1141
-	-	1400-2400	11.0	155	70	9.5	Pink	GT1142
-	-	2200-3600	12.0	155	73	8.5	White	GT1143
-	-	3400-5000	13.0 - 7	155 - 155	74 - 45	8.5 - 10	Orange	GT1144



### Spring characteristics:

D : Wire diameter De: Outside Diameter Lo : Length Lt : of spires All dimensions in mm



## SSV 高压压力设定范围, 弹簧编号[Wdso]

### SSV Maximum Set Range, Springs Code [Wdso]

Spring Code	Spring Colour	D	Lo	De	BP mbar	MP mbar	AP mbar
GT1152	Red	2.2	60	30.0	35-125		
GT1153	Blue	2.5	60	30.0	65-180	170-280	
GT1154	Yellow	2.7	60	30.0	80-230	240-370	
GT1155	Black	3.2	60	30.0		280-490	
GT1156	Purple	3.5	60	30.0		480-800	490-1000
GT1157	Silver	3.7	60	30.0			750-1250
GT1158	Pink	4.0	60	30.0			1000-1750
GT1159	White	4.5	60	30.0			1500-2500
GT1160	Orange	5.0	60	30.0			2000-5500

## SSV 低压压力设定范围, 弹簧编号 [Wdsu]

### SSV Minimum Set Range, Springs Code [Wdsu]

Spring Code	Spring Colour	D	Lo	De	BP mbar	MP mbar	AP mbar
GT1145	Red	1.20	55	10.1	15-35		
GT1146	Blue	1.50	55	12.2	25-40		
GT1147	Yellow	2.0	55	12.2	35-110	30-100	
GT1148	Black	2.3	55	12.2		60-240	
GT1149	Purple	2.5	55	12.2		70-400	165-450
GT1150	Silver	2.8	60	15.0			350-900
GT1151	Pink	3.5	60	15.0			700-3200

# R 系列

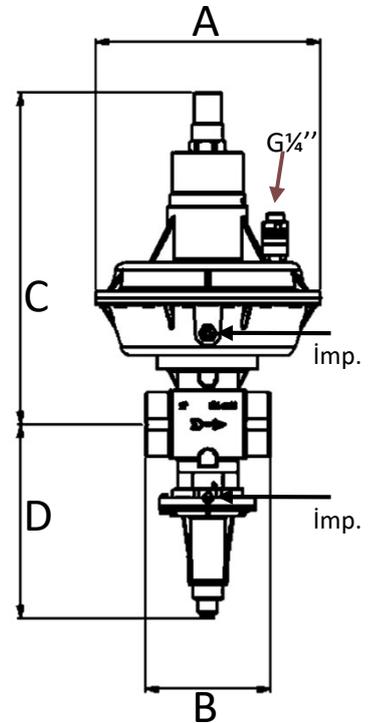


尺寸单位 mm

All dimensions in mm

## 尺寸和重量 REGULATOR+SSV DIEMENSIONS AND WEIGHTS

型号 Code	连接方式 Connec.	A	B	C	D	imp	Kg
R10/S MP	1" x 1"	145	104	200	195	10	4.1
R10/S AP	1" x 1"	145	104	200	195	10	4.1
R25/S BP	1" x 1"	210	104	238	195	10	5.2
R25/S MP	1" x 1"	210	104	238	195	10	5.2
R25/S AP	1" x 1"	210	104	238	195	10	5.2
R40/S BP	1"1/2 x 1"1/2	210	132	238	195	10	6
R40/S MP	1"1/2 x 1"1/2	210	132	238	195	10	6
R40/S AP	1"1/2 x 1"1/2	210	132 <td 238	195	10	6	
R50/S BP	2" x 2"	280	156	440	245	10	14
R50/S MP	2" x 2"	280	156	440	245	10	14
R50/S AP	2" x 2"	210	156	395	245	10	14

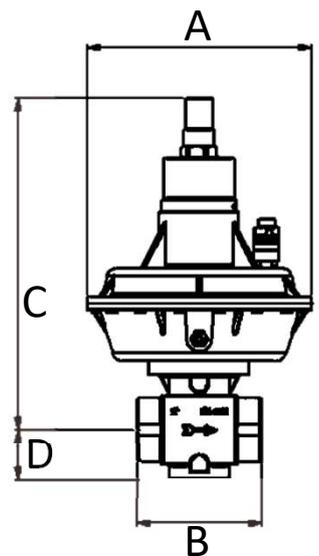


尺寸单位 mm

All dimensions in mm

## 尺寸和重量 REGULATOR DIEMENSIONS AND WEIGHTS

型号 Code	连接方式 Connec.	A	B	C	D	imp	Kg
R10 MP-AP	1" x 1"	145	104	200	35	10	2,8
R25 BP-MP	1" x 1"	210	104	238	35	10	4.0
R25 AP	1" x 1"	210	104	238	35	10	4.4
R40 BP-MP	1"1/2 x 1"1/2	210	132	238	35	10	4.8
R40 AP	1"1/2 x 1"1/2	210	132	238	35	10	4.8
R50 BP-MP	2" x 2"	280	156	410	60	10	13
R50 AP	2" x 2"	210	156	395	60	10	13



# F 25-40-50系列

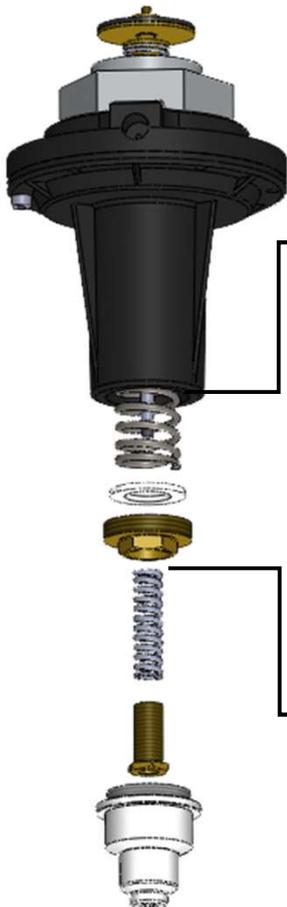
## 出口压力设定范围及弹簧编号 [Wds] SET RANGE, Outlet Pressure, Springs Code [Wds]

BP mbar	MP mbar	AP mbar	D	Lo	De	Lt	Spring Colour	Spring Code
12-16	-	-	3.5	220	57	24	Grey	GT1130
16-28	-	-	4.0	220	58	24	Yellow	GT1131
28-50	-	-	4.5	220	59	20	Blue	GT1132
50-75	-	-	5.0	220	60	19	Black	GT1133
75-85	80-120	-	5.5	220	61	17	Orange	GT1134
-	120-195	-	6.0	220	62	16	Purple	GT1135
-	195-300	-	6.5	220	63	15	Pink	GT1136
-	220-330	-	7.0	220	63	13	Red	GT1236
-	300-500	-	7.5	220	65	14	Green	GT1137
-	-	300-500	7.5	155	70	9.5	Silver	GT1138
-	-	400-600	8.0	155	70	9.5	Black	GT1139
-	-	600-1000	9.0	155	70	9.5	Purple	GT1140
-	-	800-1600	10.0	155	70	9.5	Grey	GT1141
-	-	1400-2400	11.0	155	70	9.5	Pink	GT1142
-	-	2200-3600	12.0	155	73	8.5	White	GT1143
-	-	3400-5000	13.0 - 7	155 - 155	74 - 45	8.5 - 10	Orange	GT1144



### Spring characteristics:

D : Wire diameter De: Outside Diameter Lo : Length Lt : of spires All dimensions in mm



## SSV 高压压力设定范围, 弹簧编号[Wdso]

### SSV Maximum Set Range, Springs Code [Wds0]

Spring Code	Spring Colour	D	Lo	De	BP mbar	MP mbar	AP mbar
GT1152	Red	2.2	60	30.0	35-125		
GT1153	Blue	2.5	60	30.0	65-180	170-280	
GT1154	Yellow	2.7	60	30.0	80-230	240-370	
GT1155	Black	3.2	60	30.0		280-490	
GT1156	Purple	3.5	60	30.0		480-800	490-1000
GT1157	Silver	3.7	60	30.0			750-1250
GT1158	Pink	4.0	60	30.0			1000-1750
GT1159	White	4.5	60	30.0			1500-2500
GT1160	Orange	5.0	60	30.0			2000-5500

## SSV 低压压力设定范围, 弹簧编号[Wdsu]

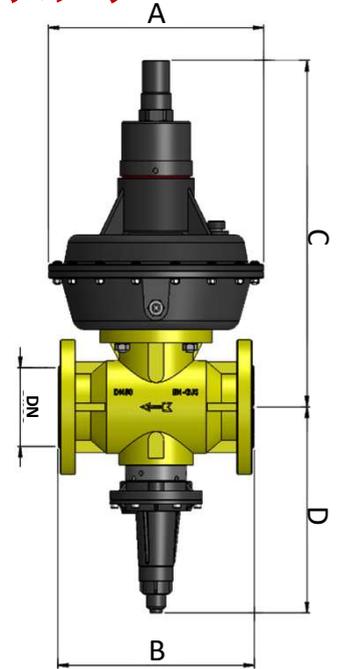
### SSV Minimum Set Range, Springs Code [Wdsu]

Spring Code	Spring Colour	D	Lo	De	BP mbar	MP mbar	AP mbar
GT1145	Red	1.20	55	10.1	15-35		
GT1146	Blue	1.50	55	12.2	25-40		
GT1147	Yellow	2.0	55	12.2	35-110	30-100	
GT1148	Black	2.3	55	12.2		60-240	
GT1149	Purple	2.5	55	12.2		70-400	165-450
GT1150	Silver	2.8	60	15.0			350-900
GT1151	Pink	3.5	60	15.0			700-3200

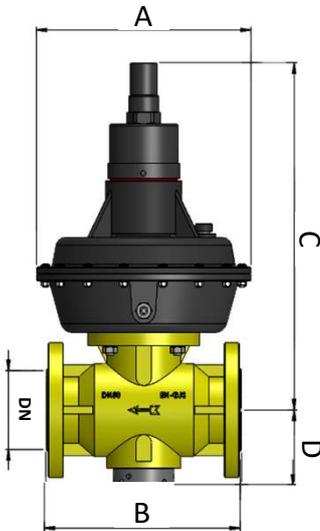
# F 25-40-50系列

 尺寸为mm  
All dimensions in mm

尺寸和重量 DIEMENSIONS AND WEIGHTS		REGULATOR+SSV					
型号 Code	连接方式 Connc.	A	B	C	D	imp	Kg
F25/S BP	DN25 PN or ANSI	280	222	410	242	10	22
F25/S MP	DN25 PN or ANSI	280	222	410	242	10	22
F25/S AP	DN25 PN or ANSI	210	222	400	250	10	23
F40/S BP	DN40 PN or ANSI	280	222	410	242	10	23
F40/S MP	DN40 PN or ANSI	280	222	410	242	10	23
F40/S AP	DN40 PN or ANSI	210	222	400	250	10	24
F50/S BP	DN50 PN or ANSI	280	254	420	255	10	30
F50/S MP	DN50 PN or ANSI	280	254	420	255	10	30
F50/S AP	DN50 PN or ANSI	210	254	400	260	10	31



 Tüm ölçüler mm  
All dimensions in mm



尺寸和重量 DIEMENSIONS AND WEIGHTS		REGULATOR					
型号 Code	连接方式 Connc.	A	B	C	D	imp	Kg
F25 BP-MP	DN25 PN or ANSI	280	222	410	85	10	18
F25 AP	DN25 PN or ANSI	210	222	400	85	10	19
F40 BP-MP	DN40 PN or ANSI	280	222	410	85	10	19
F40 AP	DN40 PN or ANSI	210	222	400	85	10	20
F50 BP-MP	DN50 PN or ANSI	280	254	420	90	10	27
F50 AP	DN50 PN or ANSI	210	254	400	90	10	28

## 包装重量 PACKAGING WEIGHTS

型号 Code	包装尺寸(cm) Diemensions	体积 Volume	重量 (Kg) Weight
F25/S	75 x 30 x 30	0.07	24
F40/S	75 x 30 x 30	0.07	25
F50/S	75 x 30 x 30	0.07	32

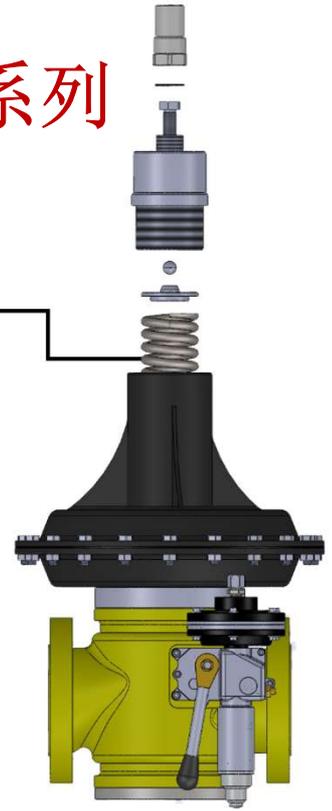


# Type F

# F 65-80-100系列

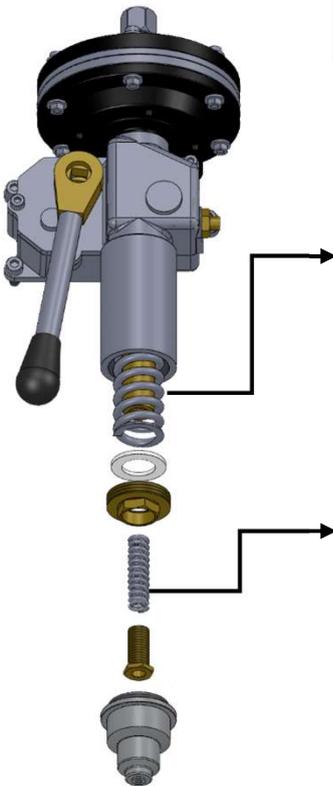
出口压力设定范围及弹簧编号 [Wds]  
 SET RANGE, Outlet Pressure, Springs Code [Wds]

BP mbar	MP mbar	AP mbar	Wire Dia.	Lngh	Outs. Dia.	Spring Colour	Spring Code
20-45			5.0	300	70	Red	GT1161
40-70	80-125		6.0	300	70	Blue	GT1162
60-85	120-180		7.0	300	70	Yellow	GT1163
	160-290	350-480	8.0	300	70	Black	GT1164
	230-350	400-560	9.0	300	70	Purple	GT1165
		550-950	10.0	300	70	Silver	GT1166
		800-1500	11.0	300	70	Pink	GT1167
		1100-2400	12.0	300	70	White	GT1168
		2200-2900	13.0	300	70	Orange	GT1169
		2800-4000	14.0	300	70	Red-Blue	GT1170



SSV 高压压力设定范围, 弹簧编号[Wdso]  
 SSV Maximum Set Range, Springs Code [Wdso]

Spring Code	Spring Colour	Wire Dia.	Length	Outside Dia.	BP mbar	MP mbar	AP mbar
GT1173	Red-Pink	1.8	60	30.0	30-110		
GT1171	Red-Yellow	2.0	60	30.0	100-180		
GT1152	Red	2.2	60	30.0		130-250	
GT1154	Yellow	2.7	60	30.0		200-470	
GT1155	Black	3.2	60	30.0			320-750
GT1158	Pink	4.0	60	30.0			550-1700
GT1159	White	4.5	60	30.0			1000-3000
GT1160	Orange	4.8	60	30.0			1500-3500
GT1172	Red-Black	5	60	30.0			2500-5800



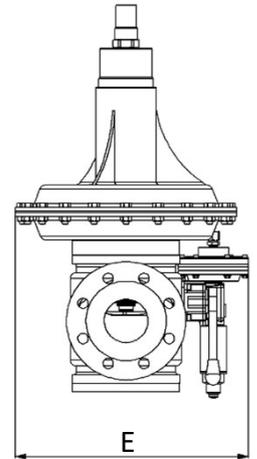
SSV 低压压力设定范围, 弹簧编号[Wdsu]  
 SSV Minimum Set Range, Springs Code [Wdsu]

Spring Code	Spring Colour	Wire Dia.	Length	Outs. Dia.	BP mbar	MP mbar	AP mbar
GT1172	Blue	1.50	55	12.2	20-90		
GT1147	Yellow	2.0	55	12.2	80-300	80-300	
GT1149	Purple	2.5	55	12.2		150-400	300-800
GT1150	Silver	2.8	55	12.2			700-1700
GT1151	Pink	3.0	55	12.5			1500-3000

 尺寸单位mm  
 All dimensions in mm

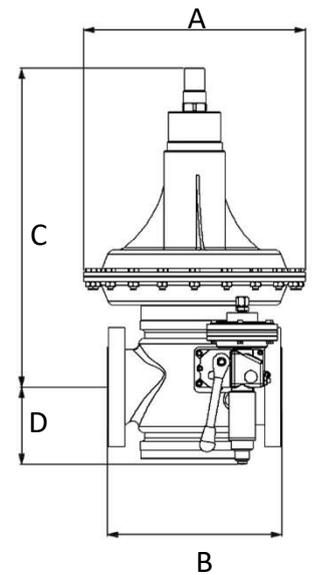
**尺寸和重量REGULATOR+SSV**  
**DIEMENSIONS AND WEIGHTS**

型号 Code	连接尺寸 Connec.	A	B	C	D	E	Kg
F65/S BP	DN65 PN or ANSI	520	298	580	130	510	90
F65/S MP	DN65 PN or ANSI	380	298	580	130	410	90
F65/S AP	DN65 PN or ANSI	380	298	580	130	410	90
F80/S BP	DN80 PN or ANSI	520	298	580	130	510	92
F80/S MP	DN80 PN or ANSI	380	298	580	130	410	92
F80/S AP	DN80 PN or ANSI	380	298	580	130	410	92
F100/S BP	DN100 PN or ANSI	520	352	580	130	510	114
F100/S MP	DN100 PN or ANSI	520	352	580	130	410	114
F100/S AP	DN100 PN or ANSI	380	352	580	130	410	108


 尺寸单位mm  
 All dimensions in mm

**尺寸和重量 REGULATOR**  
**DIEMENSIONS AND WEIGHTS**

型号 Code	连接尺寸 Connec.	A	B	C	D	imp	Kg
F65 BP	DN65 PN or ANSI	480	298	580	130	10	88
F65 MP	DN65 PN or ANSI	380	298	580	130	10	88
F65 AP	DN65 PN or ANSI	380	298	580	130	10	88
F80 BP	DN80 PN or ANSI	480	298	580	130	10	90
F80 MP	DN80 PN or ANSI	380	298	580	130	10	90
F80 AP	DN80 PN or ANSI	380	298	580	130	10	90
F100 BP	DN100 PN or ANSI	520	352	580	130	10	110
F100 MP	DN100 PN or ANSI	520	352	580	130	10	110
F100 AP	DN100 PN or ANSI	380	352	580	130	10	104


**包装尺寸和重量**
**PACKAGING WEIGHTS**

型号 Code	尺寸(cm) Diemensions	体积 (m <sup>3</sup> ) Volume	重量 (Kg) Weight
F65/S	75 x 51 x 51	0.2	95
F80/S	75 x 51 x 51	0.2	95
F100/S	100 x 55 x 55	0.3	122

## 标签 / LABELING



COMMERCIAL: - OFFICES:  
34830 ISTANBUL Turkey  
-Phone +90 216.465.14.75  
-Fax +90 216.465.14.77  
-E-mail: info@gastech.com.tr

**GAS PRESSURE REGULATOR**  
**Code : F50/3 MP**

S. No : 23259 - 25.07.2017

Ps : 25 bar      Connect. : DN50 PN25

Pin : 0.2 - 25 Lpa      Temp. : -20 ... +60°C

Pout : 80 - 250 mbar      Fail Safe : Fail Open

Wds : 310 mm

Fluid : Natural Gas

AC : 5 %

SG : 10 %

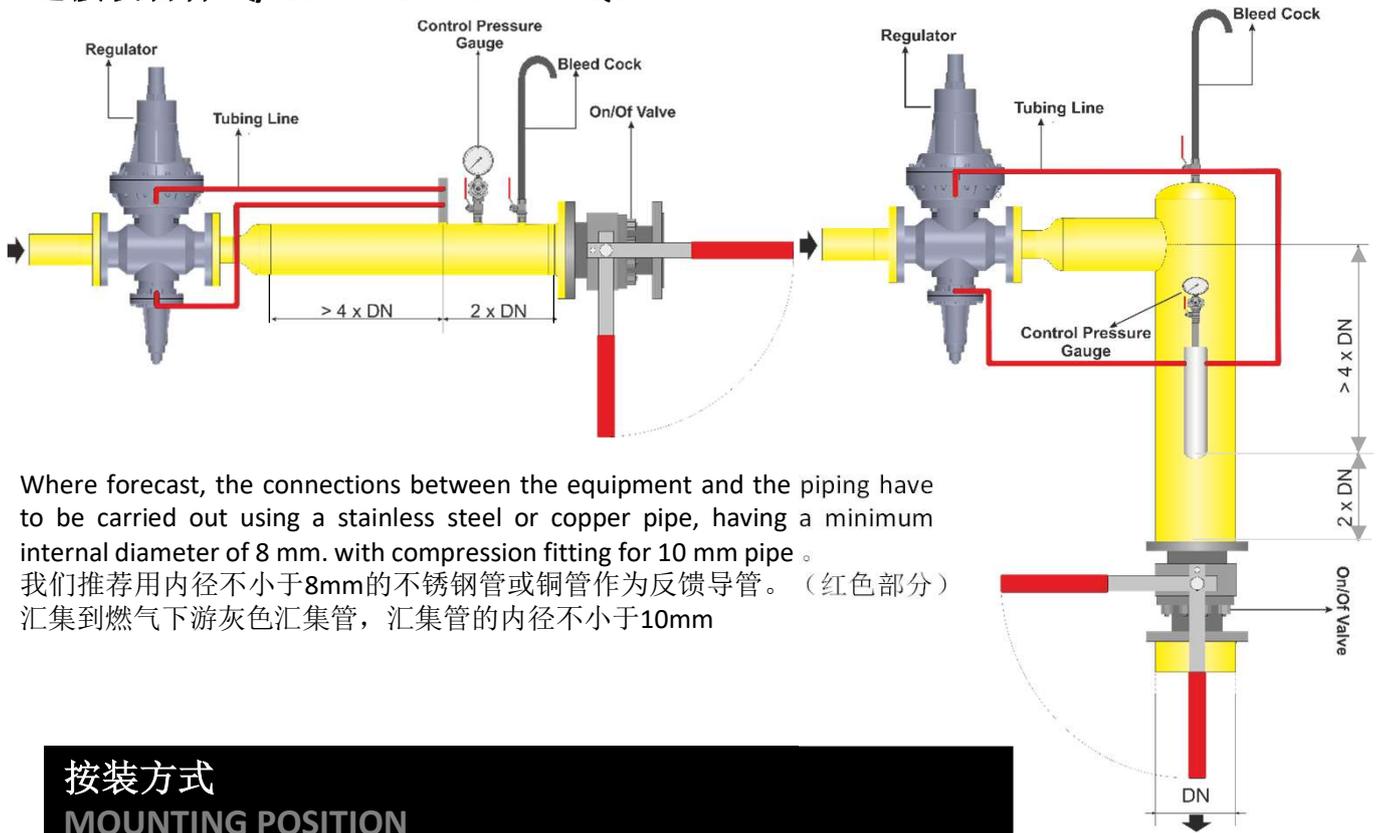



2413  
According to the  
PED 2014/68/EU

Made by Gastech LTD./ Istanbul TURKEY

- Ps :** 设计压力, Desing Pressure
- Pin:** 入口压力, Inlet Pressure Range
- Pout:** 出口压力, Outlet Pressure Range
- Wds:** 出口设定压力, Outlet Set Pressure
- AC:** 精度, Accuracy Class
- SG:** 关断精度, Lock up Class
- Temp:** 运行温度, Operation Temperature

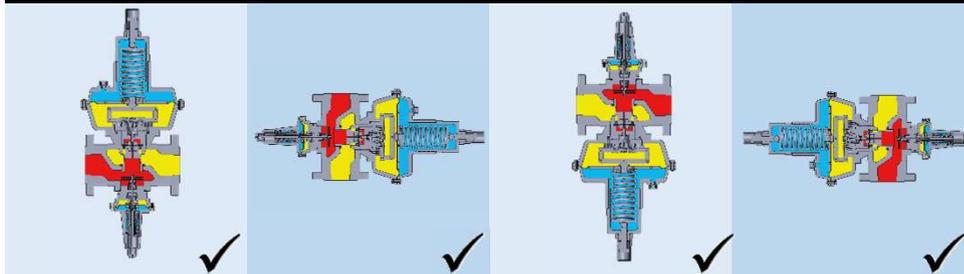
## 连接设备样式/ CONNECTING THE EQUIPMENT



Where forecast, the connections between the equipment and the piping have to be carried out using a stainless steel or copper pipe, having a minimum internal diameter of 8 mm. with compression fitting for 10 mm pipe。  
我们推荐用内径不小于8mm的不锈钢管或铜管作为反馈导管。（红色部分）汇集到燃气下游灰色汇集管，汇集管的内径不小于10mm

## 按装方式

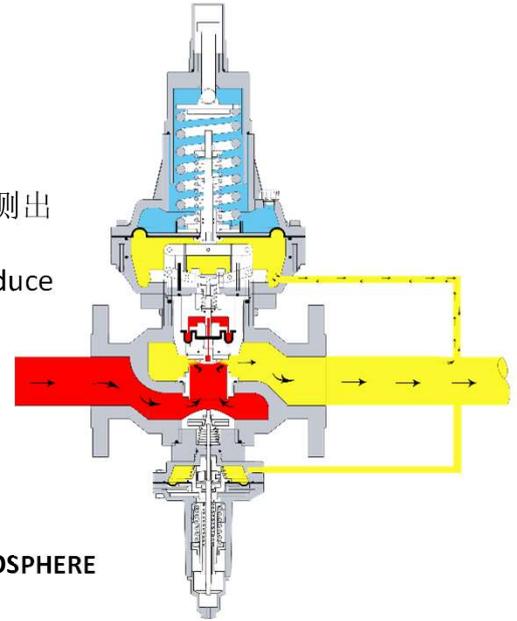
## MOUNTING POSITION



## 标准按装 STANDARD INSTALLATION

减压阀把高压的燃气减到系统所需要的使用压力并持续监测出口的压力，

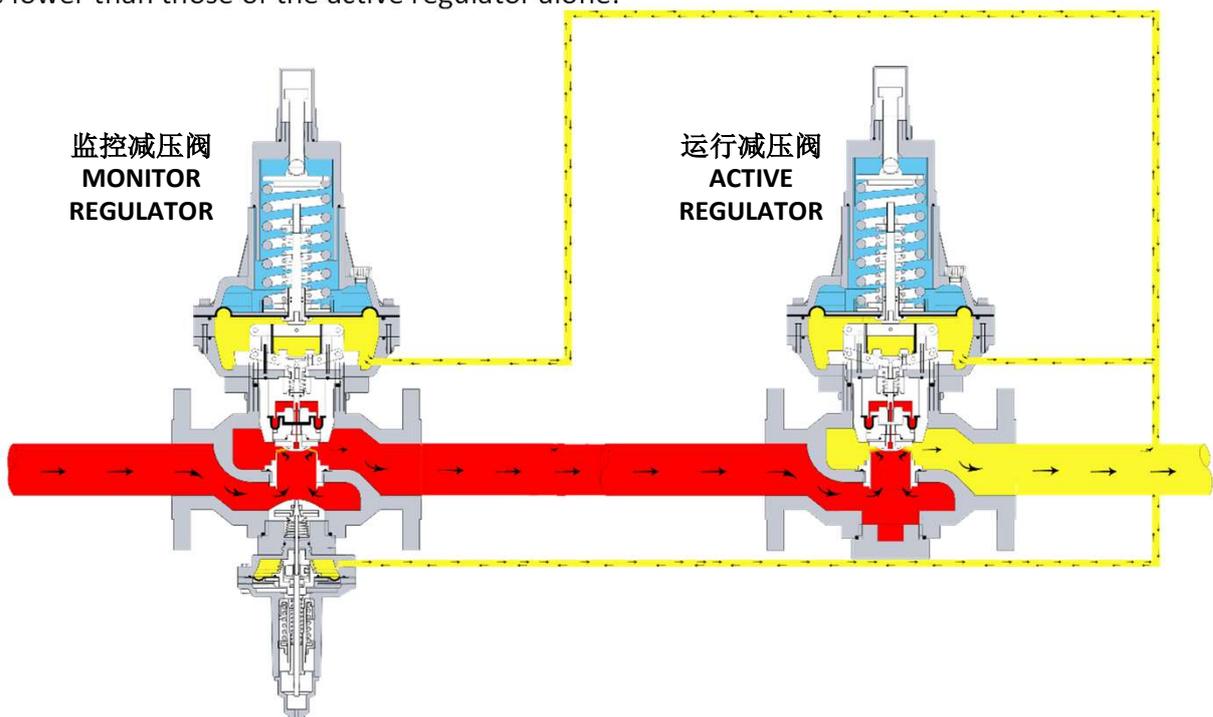
Regulator continuously monitors outlet pressure. Regulator reduce high and unstabil pressure.



## 监控和运行的按装方式 MONITOR and ACTIVE INSTALLATION

监控减压阀通常安装在运行减压阀的上游。尽管监控减压阀的功能不同，但从机械部件的角度来看，这两个减压阀实际上是相同的。唯一的区别是监控减压阀设置在比运行减压阀设定更高的压力。这样的系统的流量系数比单独的有源调节器低约15%

Monitor regulator is generally installed upstream of the active 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 active regulator. Flow coefficients of the regulator plus line monitor system are about 15% lower than those of the active regulator alone.



## 流量计算 / FLOW CALCULATIONS

出后压力 Outlet Pressure Type	BP / MP 设计 Desing			AP 设计 Desing		
公称直径 Nominal Diameter (mm)	DN25	DN40	DN50	DN25	DN40	DN50
口径 Size (inç)	1"	1 1/2"	2"	1"	1 1/2"	2"
Cg 流量系数 Flow Coefficient	270	650	780	314	690	772
KG 流量系数 Flow Coefficient	284	683	820	330	725	810
K1 形状值 Body Shape Factor		96			96	

减压阀根据Cg 和KG的流量系数进行设计，在减压阀全开位置和不同的运行条件下可以用以下公式计算流量。

*Sizing of regulators is usually made on the basis of Cg valve and KG flow rate coefficients. Flow rates at the fully open position and the various operating conditions are related by the following formula*

### 描述 / Descriptions

Q = 流量 / flow rate in Scm/h

Pe = 上游绝对压力 / Absolute Upstream Pressure in bar (abs)

Pa = 下游绝对压力 / Absolute Downstream Pressure in bar (abs)

A. 当得知减压阀的Cg和KG值时可根据Pe和Pa进行流量计算，

*When the Cg and KG values of the regulator are known, as well as Pe and Pa, the flow rate can be calculate as follows:*

#### A-1 非临界条件 / in non-critical conditions: (Pe < 2 x Pa)

$$Q = 0,52 \times C_g \times Pe \times \sin\left(K1 \times \sqrt{\frac{Pe - Pa}{Pe}}\right) \quad Q = K_G \times \sqrt{Pa \times (Pe - Pa)}$$

#### A-2 临界条件 / in critical conditions: (Pe ≥ 2 x Pa)

$$Q = \frac{K_G}{2} \times Pe$$

$$Q = 0,52 \times C_g \times Pe$$



**In order to limit the noise emission it is recommended not to exceed a gas velocity of 150 m/s at the regulator outlet flanged.**

**避免噪声我们推荐气体在减压阀出口法兰时流速小于150m/S**

**KAPASİTE TABLOLARI**  
**FLOW RATE TABLES**
**R10/S**

Çıkış Basıncı Outlet Pressure (mbar)	Giriş Basıncı Inlet Pressure (bar)												
	0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16	
MP	100	54	79	91	104	112	124	129	135	138	109	109	109
	150	57	88	104	120	131	151	163	175	208	218	218	218
	300	47	102	103	123	139	152	163	177	209	220	220	220
	350	41	84	103	123	139	152	163	177	209	220	220	220
AP	500	-	88	127	155	181	209	229	258	365	440	440	440
	1000	-	-	105	148	177	210	241	262	366	471	471	471
	1500	-	-	-	166	179	210	241	262	366	471	471	471
	2000	-	-	-	-	183	210	241	262	366	471	471	471
	2500	-	-	-	-	-	210	241	262	366	471	471	471
	3000	-	-	-	-	-	-	219	262	366	471	471	471

- SSV does not reduce capacity

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q \text{ (Scm/h Naturalgas)} \times Fc = Q \text{ (Scm/h Xgas)}$$

**举例 / Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**KAPASİTE TABLOLARI  
 FLOW RATE TABLES**
**R25/S**

Çıkış Basıncı Outlet Pressure (mbar)		Giriş Basıncı Inlet Pressure (bar)											
		0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16
BP	21	88	140	190	190	190	190	190	190	190	190	190	190
	50	88	140	190	190	190	190	190	190	190	190	190	190
	80	88	140	190	190	190	190	190	190	190	190	190	190
MP	100	91	144	190	190	190	190	190	190	190	190	190	190
	150	87	142	190	199	199	199	199	199	199	199	199	199
	200	82	140	188	207	207	207	207	207	207	207	207	207
	250	69	134	184	244	244	244	244	244	244	244	244	244
	300	68	131	182	256	256	256	256	256	256	256	256	256
	350	68	131	182	256	256	256	256	256	256	256	256	256
AP	500	-	89	171	171	201	247	321	321	321	321	321	321
	1000	-	-	166	166	187	221	257	287	363	452	452	452
	1500	-	-	-	164	199	256	293	342	517	517	517	517
	2000	-	-	-	-	199	256	293	342	517	517	517	517
	2500	-	-	-	-	-	256	293	342	517	517	517	517
	3000	-	-	-	-	-	-	293	342	517	517	517	517

- SSV does not reduce capacity

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q \text{ (Scm/h Naturalgas)} \times Fc = Q \text{ (Scm/h Xgas)}$$

**举例 / Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

Çıkış Basıncı Outlet Pressure (mbar)		Giriş Basıncı Inlet Pressure (bar)											
		0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16
BP	21	125	175	245	290	295	312	312	312	312	312	312	312
	50	125	175	245	290	295	312	312	312	312	312	312	312
	80	125	175	245	290	295	312	312	312	312	312	312	312
MP	100	125	188	296	296	312	312	312	312	312	312	312	312
	150	120	180	290	290	340	340	340	340	340	340	340	340
	200	98	176	289	289	365	365	365	365	365	365	365	365
	250		168	289	289	395	395	395	395	395	395	395	395
	300		165	285	285	398	398	398	398	398	398	398	398
	350	-	165	285	285	398	398	398	398	398	398	398	398
AP	500	65	168	240	289	340	395	395	395	395	395	395	395
	1000		-	140	187	255	343	343	343	343	343	343	343
	1500			170	215	255	343	343	343	343	343	343	343
	2000			140	187	255	343	343	343	343	343	343	343
	2500	-	-	-	-	-	255	343	343	343	343	343	343
	3000	-	-	-	-	-	-	343	343	343	343	343	343

• SSV does not reduce capacity

### 其他气体的流量/ Flow with Other Gases

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:

$$Q \text{ (Scm/h Naturalgas)} \times F_c = Q \text{ (Scm/h Xgas)}$$

举例 / **Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

### 换算值 Correction Factor Fc at 15°C

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**
**R50/S**

出口压力 Outlet Pressure (mbar)		入口压力 Inlet Pressure (bar)											
		0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16
BP	21	216	330	440	525	572	606	606	606	606	606	606	606
	50	211	328	440	523	568	600	600	600	600	600	600	600
	80	211	328	440	523	568	602	602	602	602	602	602	602
MP	100	218	330	440	529	580	606	606	606	606	606	606	606
	150	180	330	440	529	580	606	606	606	606	606	606	606
	200	150	310	430	518	575	706	706	706	706	706	706	706
	250	129	310	410	511	575	706	706	706	706	706	706	706
	300	113	310	410	511	575	706	706	706	706	706	706	706
	350	113	310	410	511	575	706	706	706	706	706	706	706
AP	500	-	312	420	500	620	706	706	706	706	706	706	706
	1000	-	280	395	455	620	707	707	707	707	707	707	707
	1500	-	-	380	401	620	707	707	707	707	707	707	707
	2000	-	-	-	401	620	707	707	707	707	707	707	707
	2500	-	-	-	-	-	-	-	707	707	707	707	707
	3000	-	-	-	-	-	-	-	707	707	707	707	707

• SSV does not reduce capacity

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q \text{ (Scm/h Naturalgas)} \times Fc = Q \text{ (Scm/h Xgas)}$$

**举例 / Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**

 AC5 for natural gas,  $\rho_n=0,83 \text{ kg/m}^3$ 
**F25/S**

出口压力 Outlet Pressure (mbar)	入口压力 Inlet Pressure (bar)														
	0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16	19	25	
BP	21	185	205	221	232	245	269	297	305	344	344	-	-	-	-
	50	215	295	319	341	365	392	420	442	505	505	-	-	-	-
	80	227	342	428	502	560	628	690	740	863	863	-	-	-	-
MP	100	232	357	455	528	580	655	702	745	870	870	-	-	-	-
	150	189	271	368	440	505	560	592	628	707	707	-	-	-	-
	200	183	302	375	438	507	580	651	718	870	870	-	-	-	-
	250	171	305	394	436	578	680	772	864	1109	1109	-	-	-	-
	300	158	322	368	435	592	691	785	866	1155	1155	-	-	-	-
	350	-	310	378	435	602	735	845	955	1276	1276	-	-	-	-
AP	500	-	260	355	410	515	620	755	865	1190	1240	1540	1540	1540	1540
	1000	-	-	390	445	554	638	789	935	1306	1320	1580	1580	1580	1580
	2000	-	-	-	-	554	638	789	935	1306	1510	1640	1640	1640	1640
	3000	-	-	-	-	-	-	789	935	1306	1940	1680	1680	1680	1680
	4000	-	-	-	-	-	-	-	-	1306	1788	1730	1730	1730	1730

- 出口流速小于150m/s以减少噪声， Order to limit the noise emission it is recommended not to exceed a gas velocity of 150 m/s at the regulator outlet.
- 没有噪声时流量会下降10%左右。 With noise silencer approximately 10 % loss of capacity
- SSV不会影响流量， SSV does not reduce capacity

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q (\text{Scm/h Naturalgas}) \times F_c = Q (\text{Scm/h Xgas})$$

**举例 / Example:**

$$Q (\text{Scm/h Naturalgas}) \times 0.78 = Q (\text{Scm/h Air})$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**

 AC5 for natural gas,  $\rho_n=0,83 \text{ kg/m}^3$ 
**F40/S**

出口压 Outlet Pressure (mbar)	入口压力 Inlet Pressure (bar)														
	0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16	19	25	
BP	21	310	465	630	742	865	990	1045	1109	1109	1109	-	-	-	-
	50	306	460	625	736	859	986	1040	1103	1103	1103	-	-	-	-
	80	304	459	623	734	857	985	1039	1101	1101	1101	-	-	-	-
MP	100	302	457	620	730	855	983	1035	1100	1100	1100	-	-	-	-
	150	300	455	615	728	850	981	1033	1096	1096	1096	-	-	-	-
	200	295	450	612	724	843	978	1028	1094	1094	1094	-	-	-	-
	250	280	435	608	719	838	976	1022	1092	1092	1092	-	-	-	-
	300	278	425	575	717	830	975	1018	1089	1089	1089	-	-	-	-
	350	275	422	572	715	826	972	1015	1088	1088	1088	-	-	-	-
AP	500	-	340	490	630	763	985	1120	1245	1760	1760	1760	1760	1760	1760
	1000	-	-	420	620	751	985	1110	1235	1810	1810	1810	1810	1810	1810
	2000	-	-	-	-	680	910	975	1085	1655	1655	2680	2680	2680	2680
	3000	-	-	-	-	-	-	748	925	2210	2590	2750	2750	2750	2750
	4000	-	-	-	-	-	-	-	-	2260	2260	2910	2910	2910	2910

- 出口流速小于150m/s以减少噪声， Order to limit the noise emission it is recommended not to exceed a gas velocity of 150 m/s at the regulator outlet.
- 没有噪声时流量会下降10%左右。 With noise silencer approximately 10 % loss of capacity
- SSV不会影响流量， SSV does not reduce capacity

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q (\text{Scm/h Naturalgas}) \times F_c = Q (\text{Scm/h Xgas})$$

**举例 / Example:**

$$Q (\text{Scm/h Naturalgas}) \times 0.78 = Q (\text{Scm/h Air})$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**

 AC5 for natural gas,  $\rho_n=0,83 \text{ kg/m}^3$  **F50/S**

出口压力 Outlet Pressure (mbar)	入口压力 Inlet Pressure (bar)														
	0.5	1.0	1.5	2	2.5	3	3.5	4	6	10	12	16	19	25	
BP	21	375	665	794	940	1075	1110	1110	1110	1110	1110	-	-	-	-
	50	362	574	788	932	1069	1101	1101	1101	1101	1101	-	-	-	-
	80	357	568	787	931	1067	1098	1098	1098	1098	1098	-	-	-	-
MP	100	298	623	778	1075	1251	1441	1615	1804	1804	1804	-	-	-	-
	150	291	619	781	1078	1252	1444	1618	1807	1807	1807	-	-	-	-
	200	288	615	784	1081	1257	1448	1622	1809	1809	1809	-	-	-	-
	250	284	608	788	1084	1260	1452	1628	1812	1812	1812	-	-	-	-
	300	280	602	790	1090	1263	1455	1631	1816	1816	1816	-	-	-	-
	350	276	599	796	1096	1268	1461	1637	1821	1821	1821	-	-	-	-
AP	500	-	556	720	968	1190	1340	1610	1815	1940	1790	1790	1790	1790	
	1000	-	-	540	890	1190	1452	1614	1815	2190	2355	2355	2355	2355	
	2000	-	-	-	-	881	899	1260	1480	2014	3415	3415	3415	3415	
	3000	-	-	-	-	-	-	880	1079	1918	4680	4680	4680	4680	
	4000	-	-	-	-	-	-	-	-	2467	3840	4480	5540	5540	

- 出口流速小于150m/s以减少噪声， Order to limit the noise emission it is recommended not to exceed a gas velocity of 150 m/s at the regulator outlet.
- 没有噪声时流量会下降10%左右。 With noise silencer approximately 10 % loss of capacity
- SSV不会影响流量， SSV does not reduce capacity

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q (\text{Scm/h Naturalgas}) \times Fc = Q (\text{Scm/h Xgas})$$

**举例 / Example:**

$$Q (\text{Scm/h Naturalgas}) \times 0.78 = Q (\text{Scm/h Air})$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**
**F65/S**

出口压力 Outlet Pressure (mbar)	入口压力 Inlet Pressure (bar)																
	0.2	0.3	0.5	0.7	1	1.5	2	3	4	6	8	10	12	16	19	25	
BP	21	1107	1394	1804	2050	2378	3034	4100	4100	4100	4100	4100	4100	-	-	-	-
	50	984	1312	1804	2296	2706	3526	4182	4182	4920	5330	5330	5330	-	-	-	-
	80	943	1230	1763	2214	2460	3280	4212	4212	4510	4674	4674	4674	-	-	-	-
MP	100	902	1230	1763	2214	2460	3280	3768	3768	4476	4606	4224	4346	4346	4346	4346	4346
	300	-	-	1312	1968	2542	3362	4264	5658	6068	6724	7708	7708	7708	7708	7708	7708
AP	500	-	-	-	1394	2378	3280	4100	5330	6560	8200	8446	8446	8446	8446	8446	8446
	750	-	-	-	-	2214	3239	4100	5658	7134	9020	9020	9020	9020	9020	9020	9020
	1000	-	-	-	-	-	2460	3268	4674	5755	6970	8282	9840	9840	13120	13120	13120
	1500	-	-	-	-	-	-	2952	5084	6724	9840	11480	11480	13120	13120	13120	13120
	2000	-	-	-	-	-	-	-	4510	6560	9840	12300	15580	15580	16400	16400	16400
	3000	-	-	-	-	-	-	-	-	5904	7872	11480	13120	13120	20500	20500	20500
	4000	-	-	-	-	-	-	-	-	-	5904	11890	15580	18040	20500	20500	20500

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q \text{ (Scm/h Naturalgas)} \times Fc = Q \text{ (Scm/h Xgas)}$$

举例 / **Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**
**F80/S**

出口压力 Outlet Pressure (mbar)	入口压力 Inlet Pressure (bar)																
	0.2	0.3	0.5	0.7	1	1.5	2	3	4	6	8	10	12	16	19	25	
BP	21	1310	1649	2134	2425	2813	3589	4850	4850	4850	4850	4850	4850	-	-	-	-
	50	1164	1552	2134	2716	3201	4171	4947	4947	5820	6305	6305	6305	-	-	-	-
	80	1116	1455	2086	2619	2910	3880	4982	4982	5335	5529	5529	5529	-	-	-	-
MP	100	1067	1455	2086	2619	2910	3880	4457	4457	5295	5448	4996	5141	5141	5141	5141	5141
	300	-	-	1552	2328	3007	3977	5044	6693	7178	7954	9118	9118	9118	9118	9118	9118
AP	500	-	-	-	1649	2813	3880	4850	6305	7760	9700	9991	9991	9991	9991	9991	9991
	750	-	-	-	-	2619	3832	4850	6693	8439	10670	10670	10670	10670	10670	10670	10670
	1000	-	-	-	-	-	2910	3865	5529	6807	8245	9797	11640	11640	15520	15520	15520
	1500	-	-	-	-	-	-	3492	6014	7954	11640	13580	13580	15520	15520	15520	15520
	2000	-	-	-	-	-	-	-	5335	7760	11640	14550	18430	18430	19400	19400	19400
	3000	-	-	-	-	-	-	-	-	6984	9312	13580	15520	15520	24250	24250	24250
	4000	-	-	-	-	-	-	-	-	-	6984	14065	18430	21340	24250	24250	24250

**其他气体的流量/ Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
 using the following formula:*

$$Q \text{ (Scm/h Naturalgas)} \times Fc = Q \text{ (Scm/h Xgas)}$$

举例 / **Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
Nitrogen	0.81
Biogas	0.85
Towngas	1.23
Hydrogen	3.04

**流量表**
**FLOW RATE TABLES**
**F100/S**

出口压力 Outlet Pressure (mbar)		入口压力 Inlet Pressure (bar)															
		0.2	0.3	0.5	0.7	1	1.5	2	3	4	6	8	10	12	16	19	25
BP	21	2010	2420	3200	3650	4200	5620	6640	6640	6640	6640	6640	6640	-	-	-	-
	50	1760	2320	3280	3910	4960	6380	7425	8200	8870	8870	8870	8870	-	-	-	-
	80	1570	2110	2970	3770	4450	6470	6980	7400	7815	8100	8900	8900	-	-	-	-
MP	100	1550	2100	3050	4080	4900	6400	6870	7800	8800	8800	8800	8800	-	-	-	-
	300	-	-	2350	3680	4400	6430	7450	8100	8800	10450	10450	10450	10450	10450	10450	10450
AP	500	-	-	-	3900	4800	6400	7600	9200	11400	15700	16600	16600	16600	16600	16600	16600
	750	-	-	-	-	4410	6300	7600	9000	10500	14200	15500	15500	15500	15500	15500	15500
	1000	-	-	-	-	-	6300	7400	9000	11000	14000	17200	17200	17200	17200	17200	17200
	1500	-	-	-	-	-	-	7400	9000	11000	17000	19000	19000	19000	19000	19000	19000
	2000	-	-	-	-	-	-	-	9000	11000	17000	20000	20000	20000	20000	20000	20000
	3000	-	-	-	-	-	-	-	9000	12000	17000	21000	21000	21000	21000	21000	21000
	4000	-	-	-	-	-	-	-	-	-	17000	23000	28000	31800	31800	31800	31800

**其他气体的流量 / Flow with Other Gases**

以上表格是基于天然气的标况流量在密度0.61和温度15°C时  
 换算其他气体的流量见一下公式。

*In the tables above, the flow is in (n)m<sup>3</sup>/h natural gas  
 with a density 0.61 and temperature 15°C. To convert to other  
 gas flow,  
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$$Q \text{ (Scm/h Naturalgas)} \times Fc = Q \text{ (Scm/h Xgas)}$$

**举例 / Example:**

$$Q \text{ (Scm/h Naturalgas)} \times 0.78 = Q \text{ (Scm/h Air)}$$

$$1 \text{ Scm/h Naturalgas} = 0.78 \text{ Scm/h Air}$$

**换算值 Correction Factor Fc at 15°C**

Propane	0.64
Butane	0.55
Oxygen	0.76
Air	0.78
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Biogas	0.85
Towngas	1.23
Hydrogen	3.04

