

The in-series regulator is used to take air at a set pressure from the ports on the front and back of the body, while the pneumatic inlet and outlet ports are connected directly.

It is possible for instance to assemble several regulators side by side, all supplied at the same pressure, and obtain different regulated pressures, regardless of the pressure of the previous module.

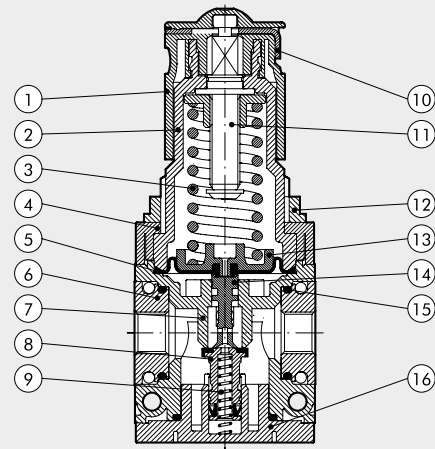
The in-series regulator uses the same construction principles as the standard regulator, so the advantages are the same, such as compensation for upstream pressure changes, relief valve, rapid relief of the downstream pressure and a padlockable push-lock knob.



TECHNICAL DATA	IN-SERIES REGULATOR SY1			IN-SERIES REGULATOR SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded inlet port, through	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Utility threaded port		1/8" BSPP				1/4" BSPP	
Max. input pressure		bar	15			13	
		MPa	1.5			1.3	
		psi	217			188	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)		Nl/min	330			540	
		scfm	12			19	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)		Nl/min	500			1000	
		scfm	18			35	
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)		Nl/min	70			100	
		scfm	2.5			3.5	
Min/max temperature at 10 bar; 1 MPa; 145 psi		°C	From -10 to +50			From -10 to +50	
		°F	From 14 to +122			From 14 to +122	
Full outflow with zero inlet pressure	Included						
Padlockable knob	Included						
Upstream pressure compensation	Included, via balanced valve						
Weight	0.43	0.42	0.40	1.2	1.14	1.13	1.11
Fluid	Compressed air or other inert gases						
Mounting position	In any position						
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			
Notes on use	The pressure must always be set upwards. For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value. On request version without overpressure exhaust						

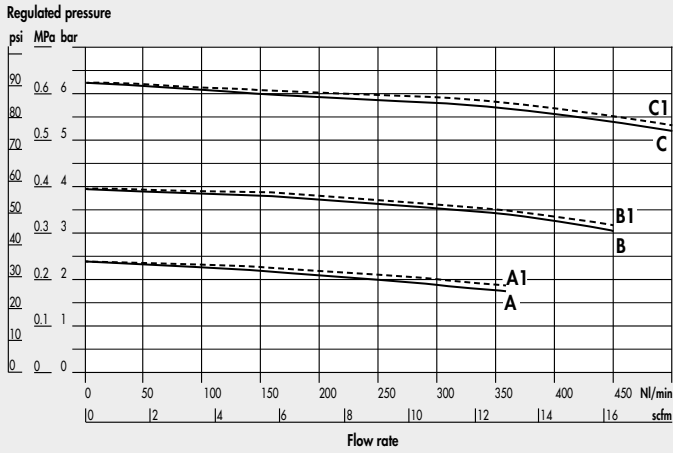
## COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring  
(with Geomet® treatment for anti-corrosion version)
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ⑦ Technopolymer body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Stainless steel valve spring
- ⑩ Plate for knob locking  
(stainless steel for anti-corrosion version)
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ NBR o-ring gaskets
- ⑯ Technopolymer plug

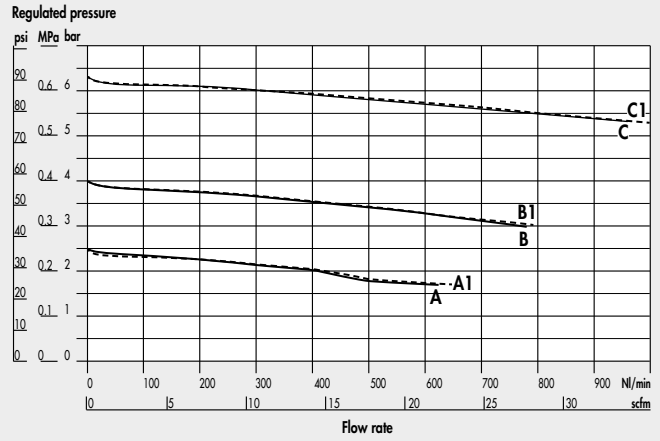


### FLOW CHARTS

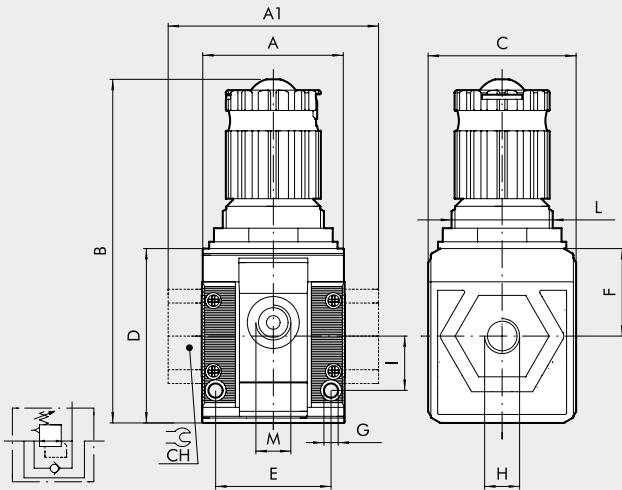
REG BATTERY Syntesi® SY1 1/4"-1/8"-3/8"



REG BATTERY Syntesi® SY2 3/8" - 1/2" - 3/4" - 1"

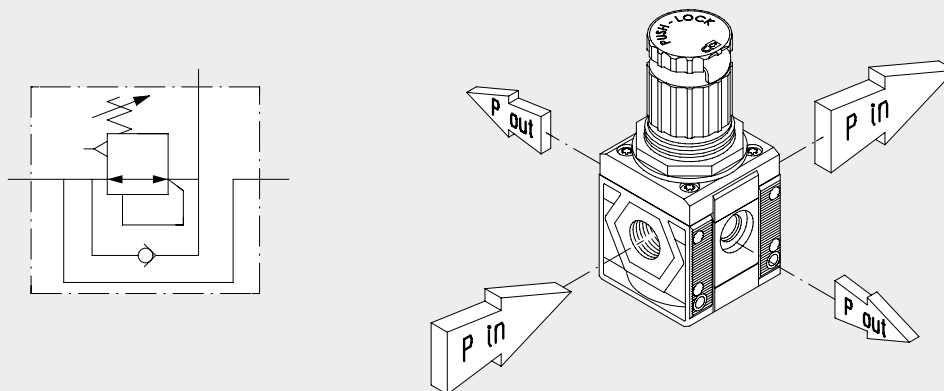


### DIMENSIONS



H (threaded port)	NPT	SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A			1.65				2.38	
A1		-	-	1.73	-	-	3.74	3.74
B			4.02				5.59	
C			1.73				2.4	
CH			-		-	-	1.26	1.41
D			2.03				2.77	
E			1.32				1.87	
F			1.02				1.5	
G			0.165				0.21	
I			0.63				0.89	
L			M30x1.5				M38x2	
M (use)			1/8" BSPP				1/4" BSPP	

### FUNCTION DIAGRAM



## KEY TO CODES

5U SYNTESI	1 SIZE	1 THREADED INPUT CONNECTION	R ELEMENT	24 IN-SERIES REGULATOR SETTING RANGE	1 THREADED OUTPUT CONNECTION
5U Syntesi NPT 5Z Syntesi anti-corrosion NPT	1 Size 1 <hr/> 2 Size 2	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port <hr/> 0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port	R Pressure regulator	● 20 0 - 30 psi + 22 0 - 60 psi 24 0 - 120 psi 26 0 - 180 psi	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port <hr/> 0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

- Not available in the anti-corrosion version.    + Anti-corrosion version available only in size 1.

## PURCHASE ORDER CODES HAVING A MORE FREQUENT USE

N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

Code	Description	Code	Description	NOTE
<b>Syntesi® SY1 IN-SERIES REGULATOR</b>				<b>Anti-corrosion version</b> <b>5Z</b> _____ <b>Example</b> <b>5Z11R241</b> In-series REG SY1 1/8 08 NPT anti-corrosion
5U10R240	In-series REG SY1 0-120 NPT without bushings	5U20R240	In-series REG SY2 0-120 NPT without bushings	
5U10R260	In-series REG SY1 0-180 NPT without bushings	5U20R260	In-series REG SY2 0-180 NPT without bushings	
5U11R241	In-series REG SY1 1/8 0-120 NPT	5U23R243	In-series REG SY2 3/8 0-120 NPT	
5U11R261	In-series REG SY1 1/8 0-180 NPT	5U23R263	In-series REG SY2 3/8 0-180 NPT	
5U12R242	In-series REG SY1 1/4 0-120 NPT	5U24R244	In-series REG SY2 1/2 0-120 NPT	
5U12R262	In-series REG SY1 1/4 0-180 NPT	5U24R264	In-series REG SY2 1/2 0-180 NPT	
5U13R243	In-series REG SY1 3/8 0-120 NPT	5U25R245	In-series REG SY2 3/4 0-120 NPT	
5U13R263	In-series REG SY1 3/8 0-180 NPT	5U25R265	In-series REG SY2 3/4 0-180 NPT	
		5U26R246	In-series REG SY2 1 0-120 NPT	
		5U26R266	In-series REG SY2 1 0-180 NPT	

## NOTES