

Syntesi® pressure regulator is based on the rolling diaphragm principle, which offers numerous advantages compared to systems using a flat diaphragm:

- Increased stroke, allowing wider valve aperture and hence greater flow rate.
- Decreased dynamic and pick-up friction, and hence quicker response and enhanced sensitivity.
- Greater accuracy in maintaining the pressure setting, both with both variable flow rates and different supply pressures.

The regulator includes a compensation system that keeps the pressure setting virtually constant, even when the upstream pressure changes. This is achieved mainly by the design of the valve, which is pneumatically balanced.

If the downstream pressure rises above the threshold value, the air is discharged (relief valve) until it drops below the maximum value.

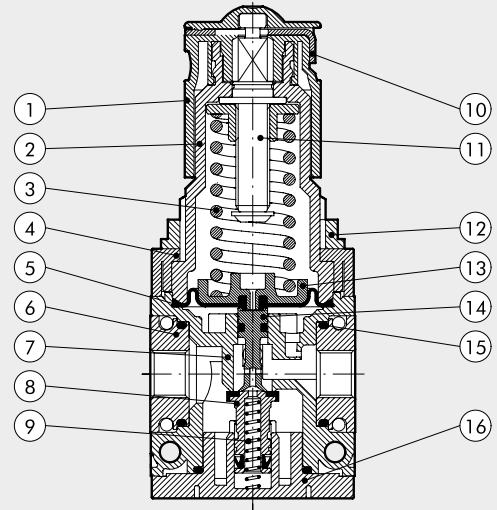
A special device relieves downstream pressure rapidly when the upstream pressure drops to zero. This means the regulator can be positioned between a valve and a cylinder because the air can flow in both directions, towards the cylinder with regulated pressure, or return towards the valve during relief.

The knob is the push-lock type – once the pressure has been set, press it and it locks in position. In this position you can pull out the plate and attach two padlocks on size 1 or three padlocks on size 2 in order to avoid possible tampering. On the front and back there is a port (1/8" for size 1 and 1/4" size 2) that can be used with pressure gauges, pressure switches or as an additional regulated air intake.

[illegible]

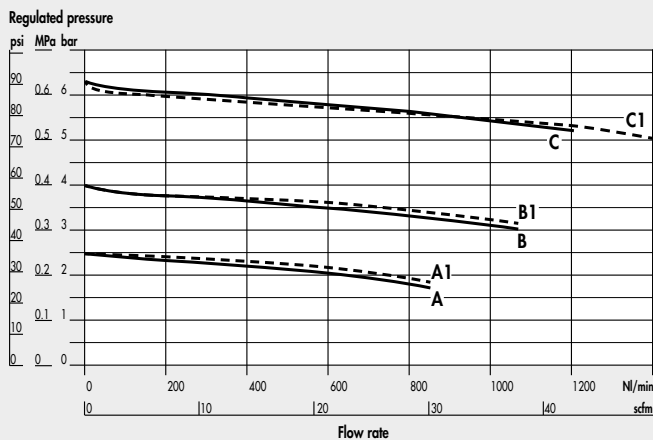
COMPONENTS

- 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 for 3/4" - 1"
- ⑦ Technopolymer regulator body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Stainless steel valve spring
- ⑩ Zinc-plated steel 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 gasket
- ⑯ Technopolymer plug

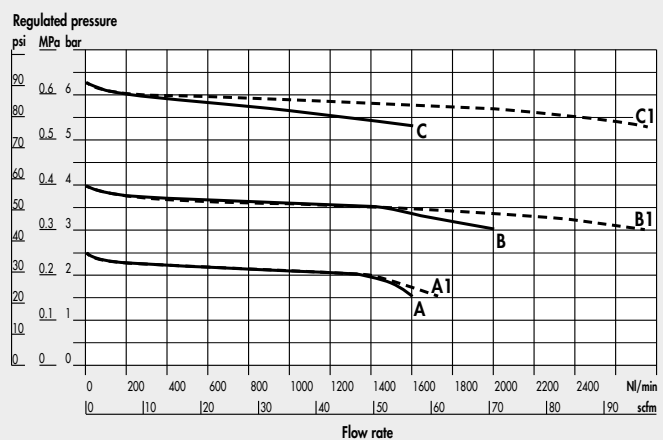


FLOW CHARTS

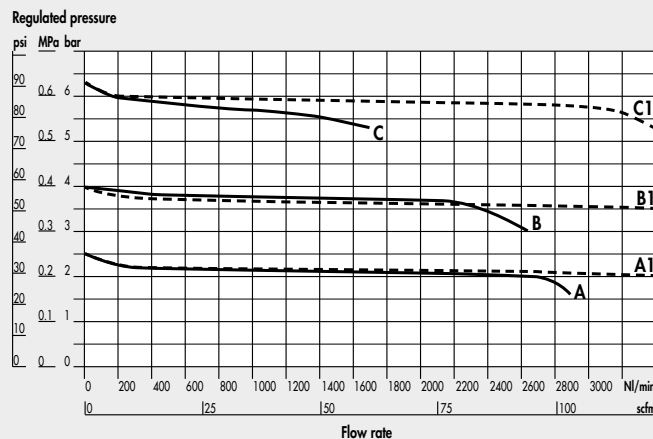
REG Syntesi® SY1 1/8"



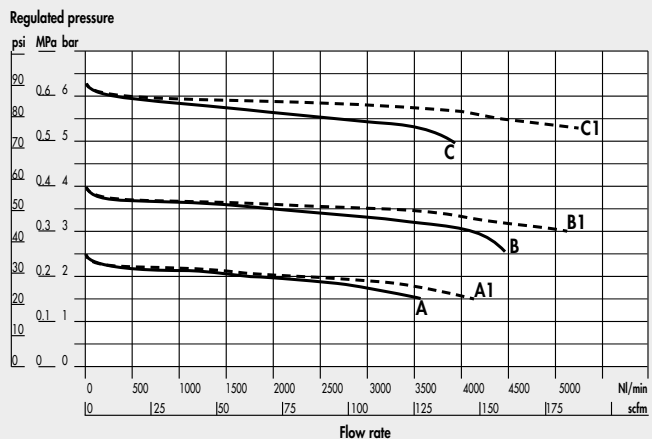
REG Syntesi® SY1 1/4"



REG Syntesi® SY1 3/8"



REG Syntesi® SY2 3/8"



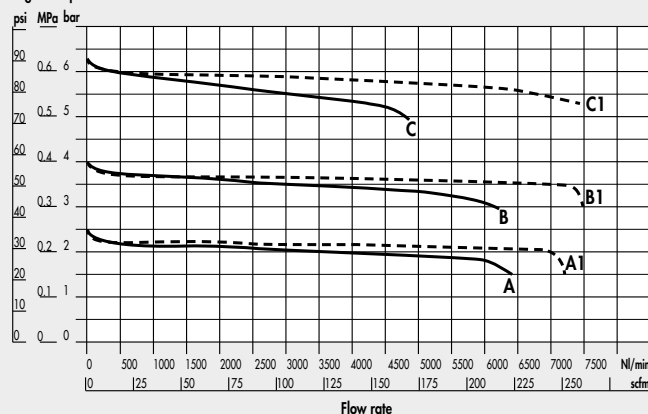
A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar

C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar

B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

REG Syntesi® SY2 1/2"

Regulated pressure

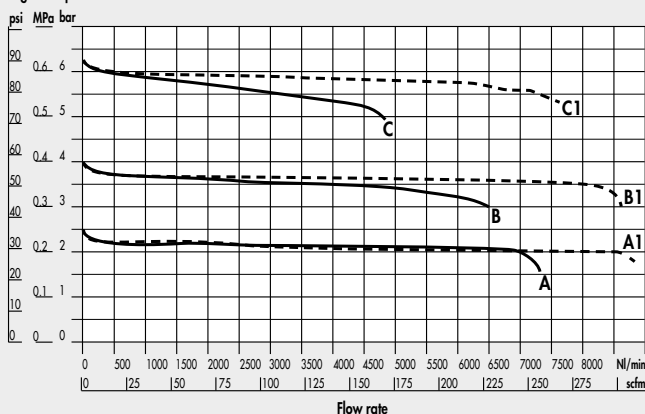


A = P In 7 bar - P Out 2.5 bar
B = P In 7 bar - P Out 4 bar

C = P In 7 bar - P Out 6.3 bar
A1 = P In 10 bar - P Out 2.5 bar

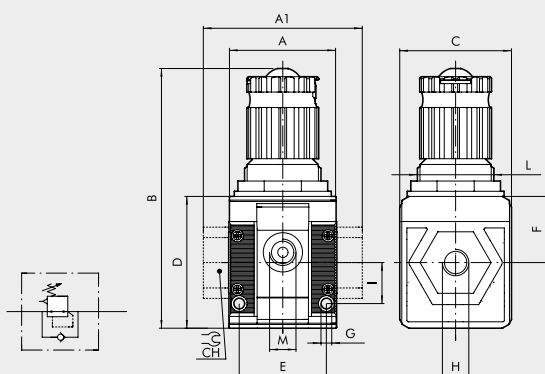
REG Syntesi® SY2 3/4" - 1"

Regulated pressure



B1 = P In 10 bar - P Out 4 bar
C1 = P In 10 bar - P Out 6.3 bar

DIMENSIONS



	SIZE 1			SIZE 2			
H (threaded port)	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	42			60.5			
A1	-	-	44	-	-	95	95
B	102			139			
C	44			61			
CH	-			-	-	32	36
D	51.5			70.5			
E	33.5			47.5			
F	25.8			38.2			
G	Hole for M4 screws			Hole for M5 screws			
I	16			22.5			
L	M30x1.5			M38x2			
M (pressure gauge port or air takes-off)	1/8"			1/4"			

KEY TO CODES

56	1	1	R	14	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi 5X Syntesi anti-corrosion	1 Size 1 2 Size 2	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" port	R Pressure regulator	● 10 0 to 2 bar + 12 0 to 4 bar 14 0 to 8 bar 16 0 to 12 bar	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port 0 Without bushing 3 3/8" port 4 1/2" port 5 3/4" port 6 1" 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	Code	Description
Syntesi® SY1 REGULATOR		Syntesi® SY2 REGULATOR		Syntesi® SY2 REGULATOR	
5610R140	REG SY1 08 without bushings	5620R140	REG SY2 08 without bushings	5626R146	REG SY2 1 08
5610R160	REG SY1 012 without bushings	5620R160	REG SY2 012 without bushings	5626R166	REG SY2 1 012
5611R141	REG SY1 1/8 08	5623R143	REG SY2 3/8 08	NOTE Anti-corrosion version 5X----- Example 5X11R141 REG SY1 1/8 08 anti-corrosion	
5611R161	REG SY1 1/8 012	5623R163	REG SY2 3/8 012		
5612R142	REG SY1 1/4 08	5624R144	REG SY2 1/2 08		
5612R162	REG SY1 1/4 012	5624R164	REG SY2 1/2 012		
5613R143	REG SY1 3/8 08	5625R145	REG SY2 3/4 08		
5613R163	REG SY1 3/8 012	5625R165	REG SY2 3/4 012		