

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.

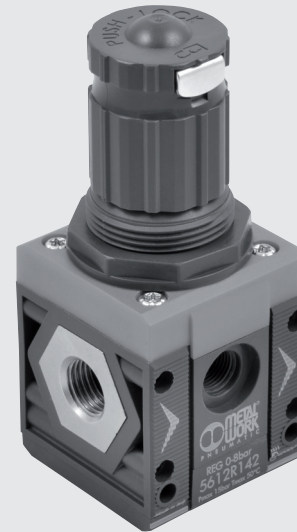
The regulator includes a compensation system that keeps the pressure setting virtually constant, even when the upstream pressure changes. This is achieved mainly by the design of the valve, which is pneumatically balanced.

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 one or two padlocks to prevent manipulation.

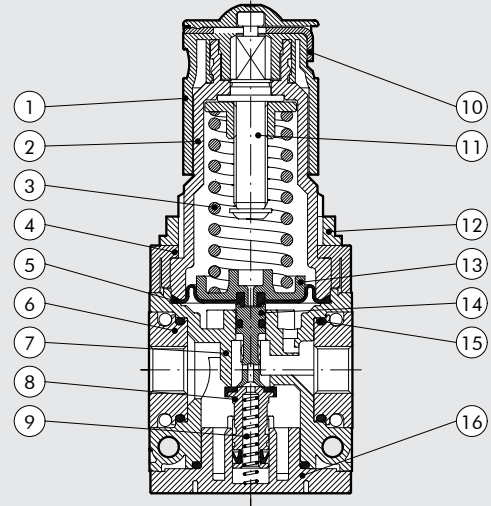
There are two 1/8" ports, one on the front and one on the back, for use with pressure gauges or pressure switches or, considering the high flow rate, as additional regulated air take-off.



TECHNICAL DATA				
		1/8"	1/4"	3/8"
Threaded port		1/8"	1/4"	3/8"
Max. inlet pressure	bar		15	
	MPa		1.5	
	psi		217	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.5 MPa; 7 psi)	Nl/min	570	1600	2900
	scfm	20	57	103
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	1200	2800	3350
	scfm	42	99	119
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min		70	
	scfm		2.5	
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C	From -20 to +50		
Full outflow with zero inlet pressure		Included		
Padlockable knob		Included		
Upstream pressure compensation		Included, via balanced valve		
Weight	g	193	188	179
Fluid		Compressed air or other inert gases		
Mounting position		In any position		
Additional air take-off, for pressure gauges or fittings		1/8", front and rear		
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14 psi)	Nl/min	500		
	scfm	18		
Wall fixing screws		No. 2 M4 screws		
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		

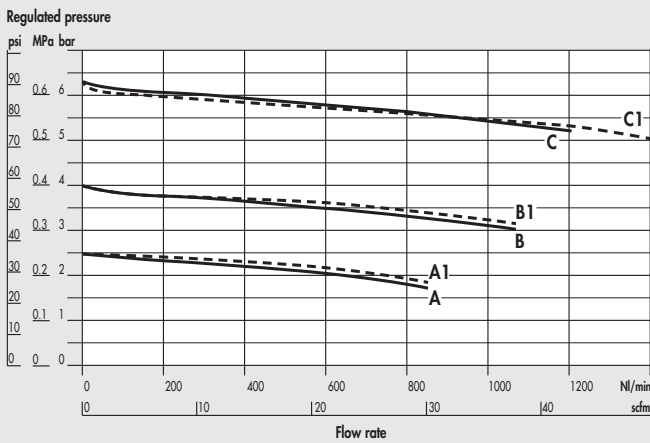
## COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ OT58 brass IN/OUT bushing
- ⑦ Technopolymer regulator body
- ⑧ OT58 brass valve, with NBR vulcanized gasket
- ⑨ Stainless steel valve spring
- ⑩ Plate for knob locking
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ NBR o-ring gasket
- ⑯ Technopolymer plug

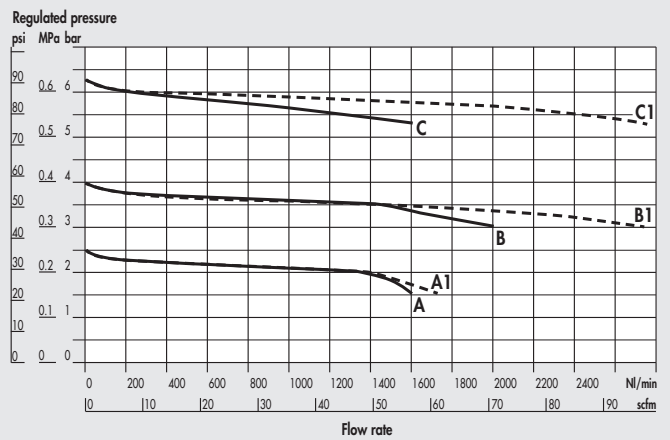


## CURVE DI PORTATA

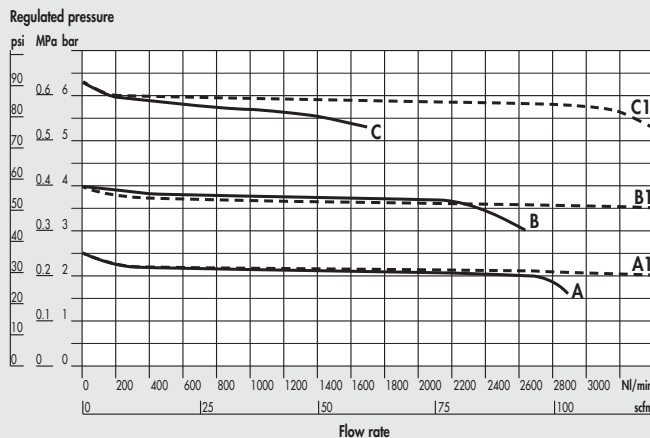
REG Syntesi® 1/8"



REG Syntesi® 1/4"

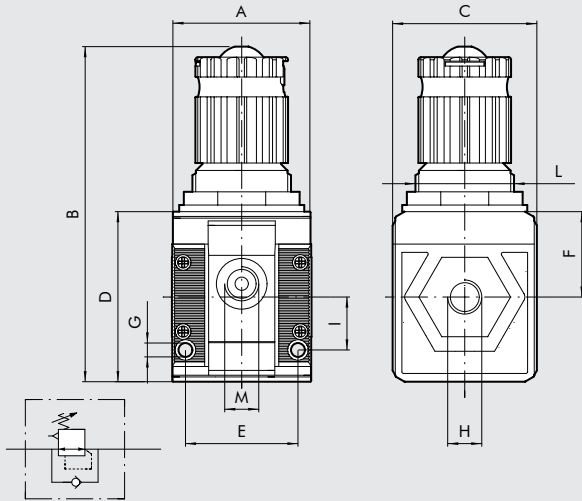


REG Syntesi® 3/8"



- 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

### DIMENSIONS



H (threaded port)	1/8"	1/4"	3/8"
A	42	42	44
B		102	
C		44	
D		51.5	
E		33.5	
F		25.8	
G		Hole for M4 screws	
I		16	
L		M30x1.5	
M (pressure gauge port)		1/8"	

56	1	1	R	14	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi	1 Size 1	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port	R Pressure regulator	10 0 ÷ 2 bar 12 0 ÷ 4 bar 14 0 ÷ 8 bar 16 0 ÷ 12 bar	0 Without bushing 1 1/8" port 2 1/4" port 3 3/8" port

### 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
5610R140	REG SY 08 without bushings
5610R160	REG SY 012 without bushings
5611R141	REG SY 1/8 08
5611R161	REG SY 1/8 012
5612R142	REG SY 1/4 08
5612R162	REG SY 1/4 012
5613R143	REG SY 3/8 08
5613R163	REG SY 3/8 012