

UNITS

● SYNTESI	PAGE	2-2
● BIT	PAGE	2-49
● SKILLAIR	PAGE	2-74
● NEW DEAL	PAGE	2-132
● ONE	PAGE	2-169

● INTRODUCTION

PAGE 2-4

● KEY TO CODES

PAGE 2-7

● FILTER

PAGE 2-8



● DEPURATOR

PAGE 2-11



● ACTIVE CARBON FILTER

PAGE 2-14



● REGULATOR

PAGE 2-17



● IN-SERIES REGULATOR

PAGE 2-20



● FILTER-REGULATOR

PAGE 2-23



● LUBRICATOR








PAGE 2-27



● SHUT-OFF VALVE

PAGE 2-30

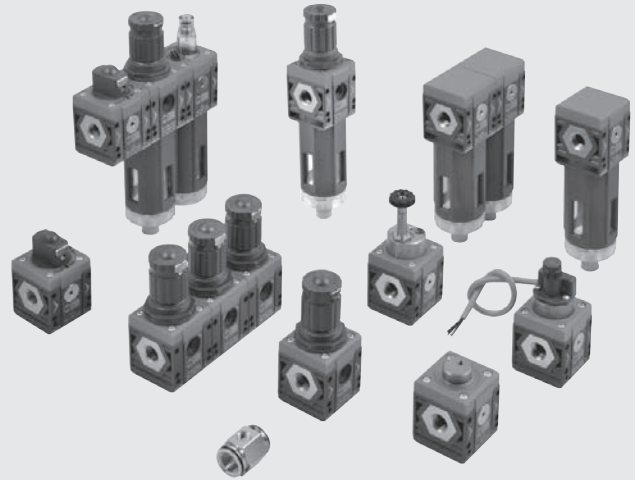


	● PROGRESSIVE STARTER	PAGE 2-33
	● PRESSURE SWITCHES	PAGE 2-35
	● AIR TAKE-OFF	PAGE 2-37
	● FR+LUB	PAGE 2-38
	● V3V+FR+LUB	PAGE 2-40
	● FIL+DEP	PAGE 2-42
	● FIL+LUB	PAGE 2-44
	● ACCESSORIES	PAGE 2-46
	● SPARE PARTS	PAGE 2-47

AIR TREATMENT UNIT SYNTESI®

Syntesi® is an important milestone achieved by Metal Work, the result of thirty years' experience producing air-treatment units. It has been studied in minute detail to obtain the best possible performance in a reduced space and with limited weight. The capacity is much higher than that of other units of the same size.

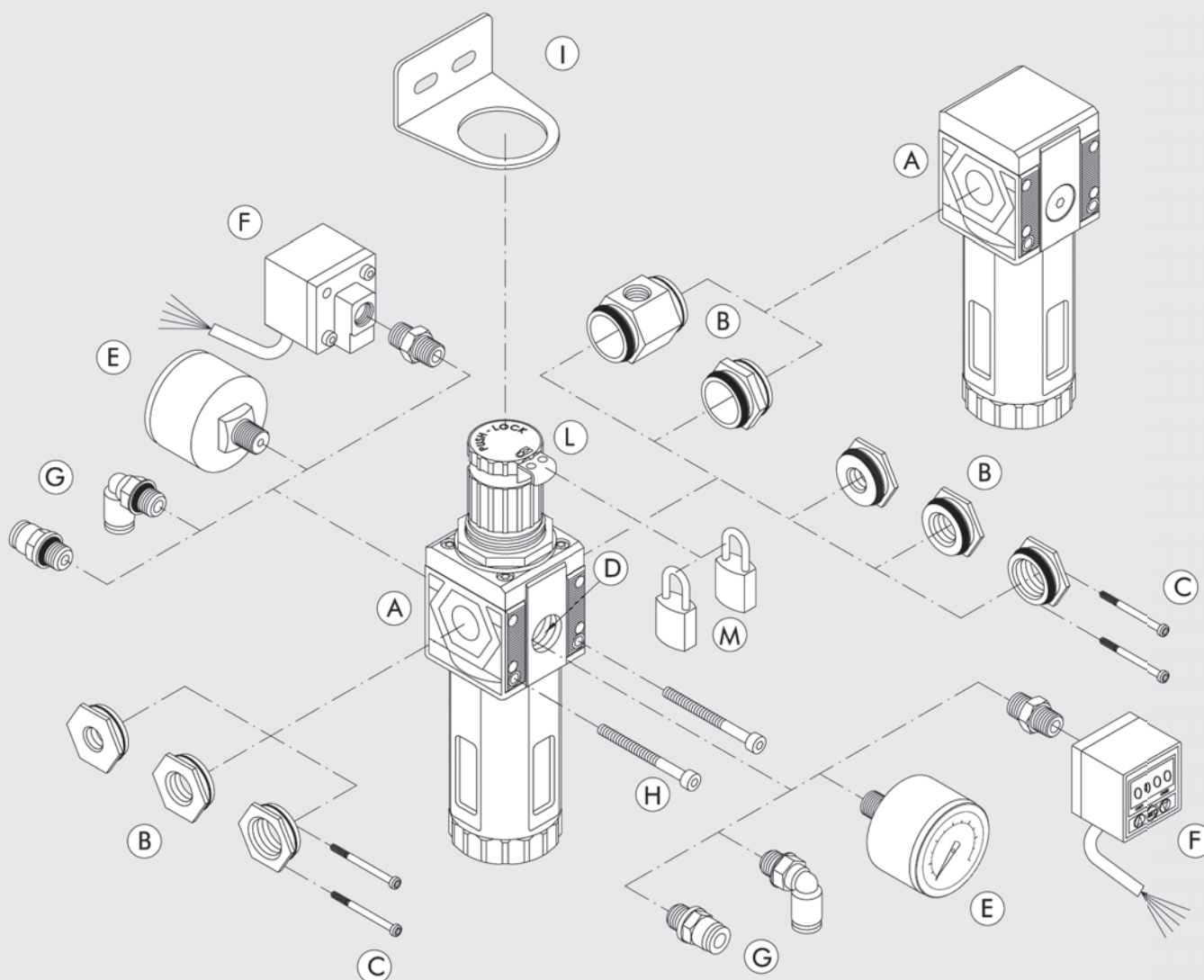
This modular unit features a very simple yet effective system that requires no brackets, stay bolts or yoke for assembling the elements. The basic version of Syntesi® incorporates numerous functions that are not provided or are only optional with traditional units. Examples are padlockable knobs, additional pneumatic ports on the front and back, flow options from left to right or vice versa, regulators with compensation system - which are accurate even when the upstream pressure changes, with rapid downstream pressure relief - full indelible marking, automatic condensate drain even in size 1, and 360° visual inspection of oil and condensate levels.



TECHNICAL DATA	SIZE 1			SIZE 2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Max. input pressure	bar		15	13			
	MPa		1.5	1.3			
	psi		217	188			
Flow rate	See catalogue of the various elements						
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			from -10 to +50			
	°F			from 14 to +122			
Padlockable knob	The knobs of the regulators, filter regulators and standard sectioning valves can all be padlocked						
Fluid	Compressed air or other inert gases						
Mounting position	See catalogue of the various elements						
Direction of flow	Flow options right to left or vice versa						
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear, on all modules			1/4" BSPP, front and rear, on all modules			
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			
Certification for potentially explosive atmosphere according to 94/9/CE	Ex II 3 GD c T5 T 100°C -20°C<Ta<50°C						

NOTES

MODULARITY AND FLEXIBILITY



The various elements **A** of Syntesi® can be fixed together and connected to the air feed and delivery circuit using nickel brass or passivated aluminium bushes **B**.

The bushes are easy to remove by unscrewing the two front screws **C**. This solution has numerous advantages:

- Reduced overall dimensions.
- Free composition of multiple elements, without the need for brackets, stay bolts or yoke.
- The metal threads of the fittings, including taper thread, allow high torques.
- Maximum flexibility, a unit can be transformed at any time by adding an element or replacing a port with another one, e.g. 1/4" NPT instead of 1/8" NPT.
- The pneumatic inlet port can be the same or different from the outlet port.

Standard ports Syntesi® are: 1/8" NPT, 1/4" NPT, 3/8" NPT for size 1; 3/8" NPT, 1/2" NPT, 3/4" NPT, 1" NPT for size 2; also an intermediate connection and an air intake are available.

For the insertion of the bushings on the size 2 it could be necessary to push with the assistance of a vice.

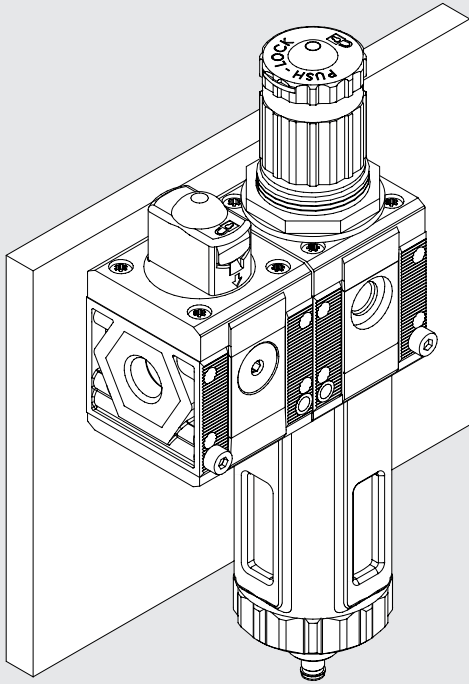
Additional ports **D**. On the front and back of all Syntesi® is an (1/8" BSPP for size 1, 1/4" BSPP for size 2) port for use with pressure gauges **E** or pressure switches **F** or, considering the high flow rate, as additional air take-off **G**. These ports are downstream of the element, so, for example, a regulator port can supply air at a set pressure or a filter port can supply filtered air (not valid for activated carbon filter and deurator).

Wall fixing. Only two through screws **H** are needed. No bulky brackets or additional flanges are required.

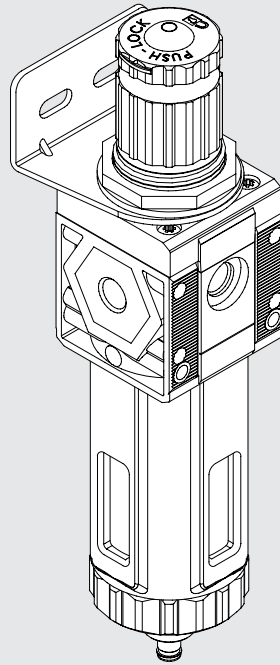
Regulator fixing bracket. The regulators and filter regulators can be fixed in position using a steel bracket **I**.

Padlockable knob **L**. The knobs on the regulators, filter regulator and sectioning valves can all be padlocked. The steel plate is included in the supply. You can insert up to two **M** padlocks on size 1, and up to three padlocks on size 2.

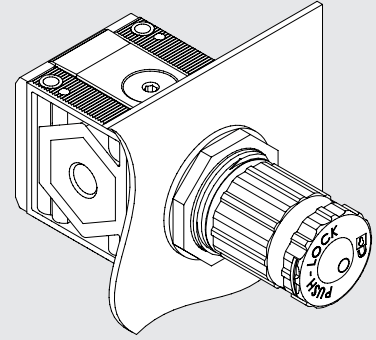
MOUNTING OPTIONS



On the wall, using two screws

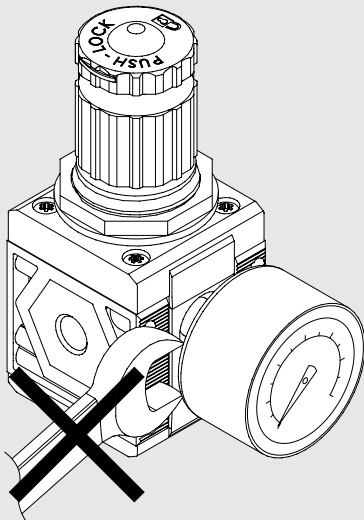


Using a bracket



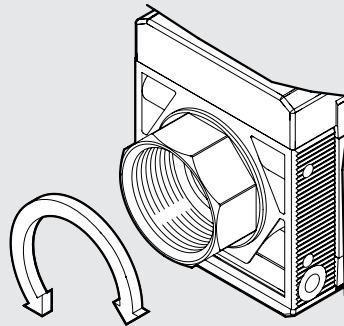
On a panel

FIXING TO FRONT PORTS



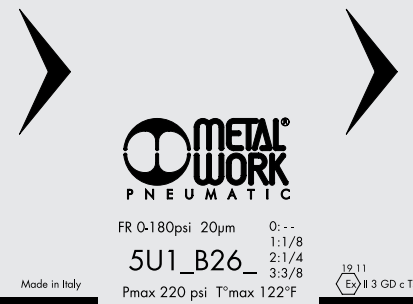
Do not use a spanner for fixing taper threaded elements to the front ports. Mount by hand and apply a liquid sealant (not teflon®).

ROTARY BUSHINGS



3/4" NPT and 1" NPT bushings in Size 2 rotate freely to facilitate assembly operations.

LASER MARKING



The following is marked indelibly on the body:

- Metal Work trademark
- Code
- Maximum pressure and temperature
- Degree of filtration or pressure range, where relevant
- Week and year of manufacture
- Atex category
- Made in Italy

KEY TO CODES SINGLE ELEMENT

5U	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	F Filter D Depurator C Active carbon filter R Pressure regulator	Varies from element to element	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port	B Filter-regulator L Lubricator V Shut off valve A Progressive starter S Pressure switches P Air take-off		

KEY TO CODES UNIT COMPOSED OF TWO OR THREE ELEMENTS

5U	1	1	V	10	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT 1	TYPE	ELEMENT 2	TYPE	ELEMENT 3	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	F Filter D Depurator C Active carbon filter	Varies from element to element	F Filter D Depurator C Active carbon filter	Varies from element to element	F Filter D Depurator C Active carbon filter	Varies from element to element	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port	R Pressure regulator B Filter-regulator L Lubricator V Shut off valve A Progressive starter S Pressure switches P Air Take-off		R Pressure regulator B Filter-regulator L Lubricator V Shut off valve A Progressive starter S Pressure switches P Air Take-off		R Pressure regulator B Filter-regulator L Lubricator V Shut off valve A Progressive starter S Pressure switches P Air Take-off		3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

The job of the filter is to retain liquid or solid impurities present in the compressed air.

The incoming air is moved by the centrifuge unit, so that liquid particles, which are heavier, are projected against the walls of the container and force to adhere to it. As they accumulate, they create drops that deposit on the bottom by gravity.

The remaining solid particles are held back by the porous filtering element. The condensate is maintained in a quiet state to prevent the deposited impurities from re-entering the circulation. The condensate drains out through the drain cock provided.

The RMSA drain discharges when the pressure in the filter drops to zero. Alternatively the condensate can be drained by hand by pressing the button.

The RA drain discharges condensate from the container automatically whenever necessary, regardless of the pressure level.

On the front and back there is a port (1/8" BSPP for size 1 and 1/4" BSPP for size 2) that can be used with pressure gauges, pressure switches or as an additional filtered air intake.



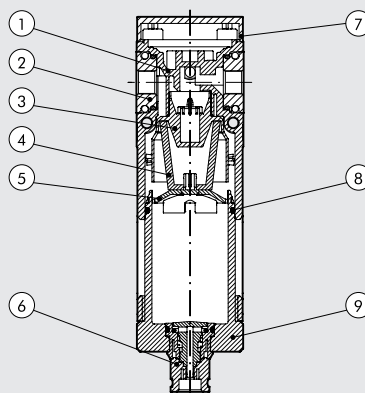
UNITS

Syntesi® FILTER

TECHNICAL DATA		FIL SY1			FIL SY2			
Threaded port		1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Degree of filtration	µm	yellow: 5 (200 microinch) - output air purity class ISO8573-1: 3.7.4 white: 20 (790 microinch) - output air purity class ISO8573-1: 4.7.4 blue: 50 (2000 microinch) - output air purity class ISO8573-1: 5.7.4						
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	900	1200	1300	3400	3800	3800	
	scfm	32	42	46	120	135	135	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	1300	1650	1750	4500	5200	5200	
	scfm	46	58	62	159	184	184	
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			
Weight	Pounds	0.40	0.38	0.36	1.08	1.02	1.01	0.98
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Note: the maximum input pressure for the RA version must not exceed 145 psi Compressed air or other inert gases						
Fluid		Compressed air or other inert gases						
Condensate bowl capacity	fluid ounce oz	1.02			2.37			
Mounting position		Vertical			Vertical			
Port for additional air take-off		1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	500			1500			
	scfm	18			53			
Wall fixing screws		N. 8-32 unc x 2			N. 10-24 unc x 2			

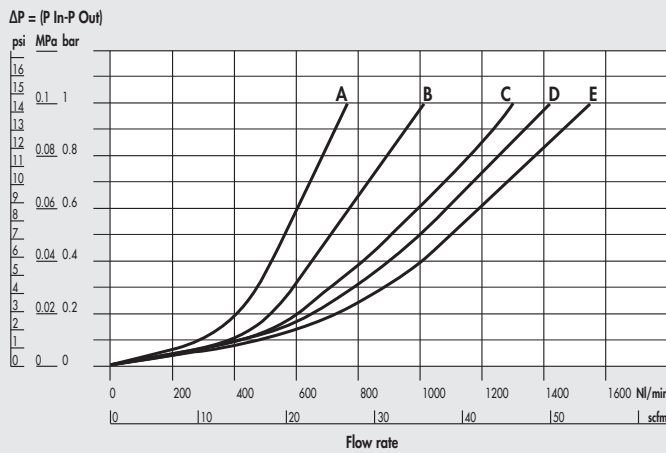
COMPONENTS

- ① Technopolymer filter body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ③ Technopolymer centrifuge
- ④ Sintered HDPE filter cartridge
- ⑤ Technopolymer screen
- ⑥ Drain (RMSA)
- ⑦ Technopolymer plate
- ⑧ NBR o-ring gaskets
- ⑨ Clear technopolymer bowl

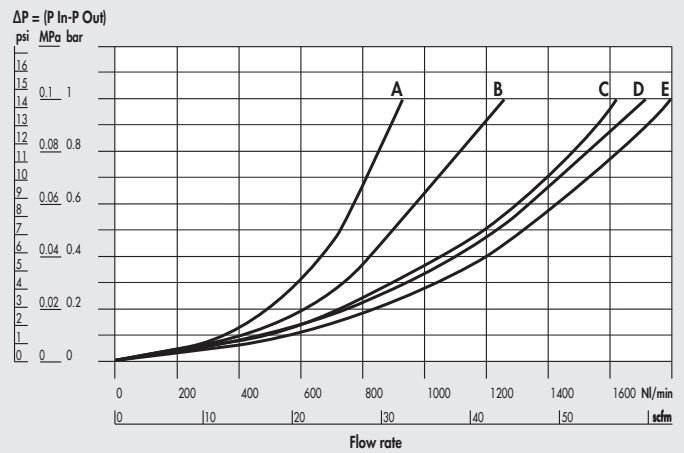


FLOW CHARTS

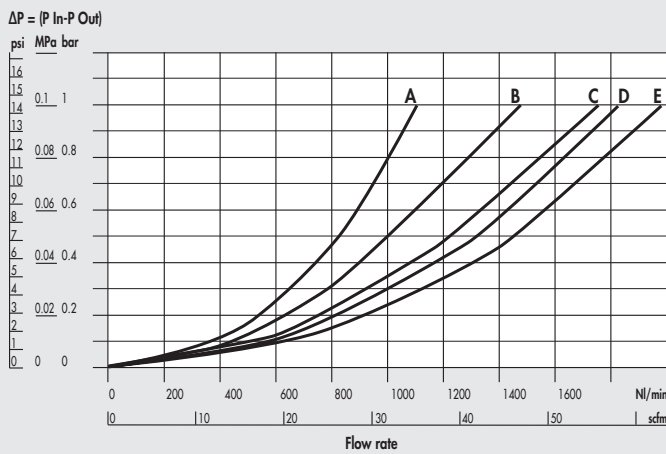
FIL Syntesi® SY1 1/8"



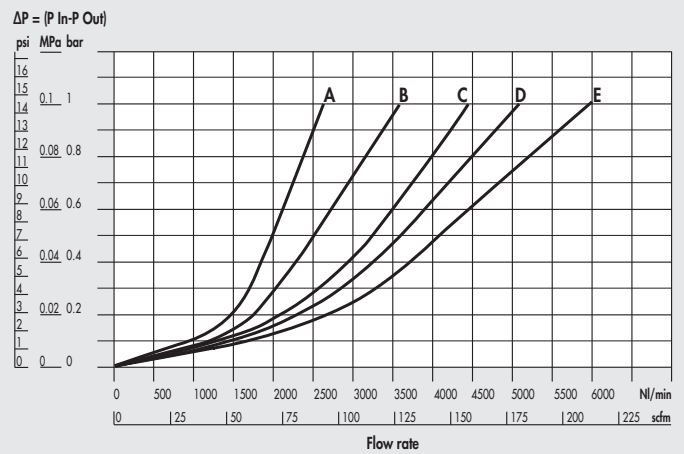
FIL Syntesi® SY1 1/4"



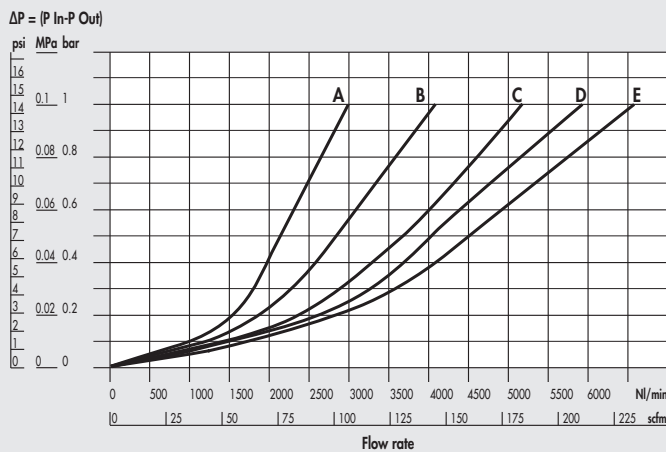
FIL Syntesi® SY1 3/8"



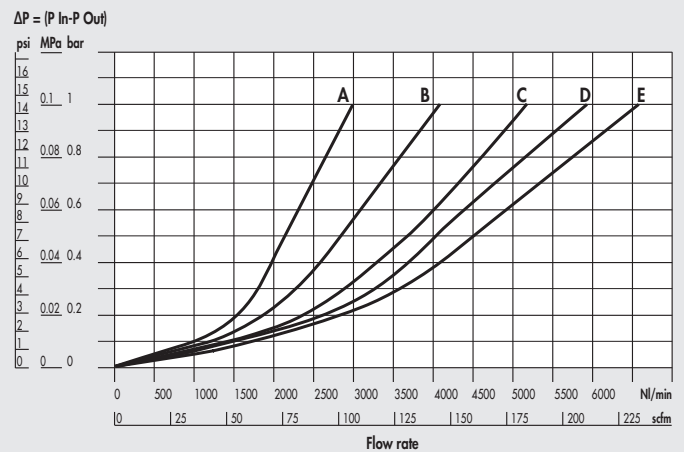
FIL Syntesi® SY2 3/8"



FIL Syntesi® SY2 1/2"



FIL Syntesi® SY2 3/4"-1"

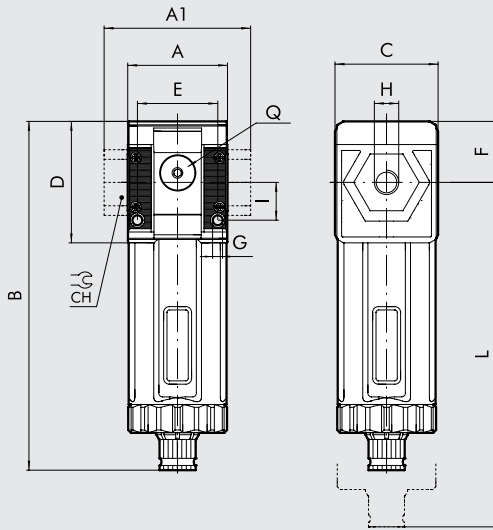


A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

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				2.4	
A1		-	-	1.73	-	-	3.74	3.74
B	RMSA		5.83				7	
	RA		5.99				7.16	
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	RMSA		7.95				9.65	
	RA		8.11				9.8	
Q (no. 2 additional air takes-off)			1/8" BSPP				1/4" BSPP	

KEY TO CODES

5U	1	1	F	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	F Filter	10 5 µm (200 microinch) RMSA 20 20 µm (790 microinch) RMSA 30 50 µm (2000 microinch) RMSA 40 5 µm (200 microinch) RA 50 20 µm (790 microinch) RA 60 50 µm (2000 microinch) RA	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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 FILTER		Syntesi® SY2 FILTER		Syntesi® SY2 FILTER	
5U10F100	FIL SY1 5 RMSA NPT without bushings	5U20F100	FIL SY2 5 RMSA NPT without bushings	5U26F106	FIL SY2 1 5 RMSA NPT
5U10F200	FIL SY1 20 RMSA NPT without bushings	5U20F200	FIL SY2 20 RMSA NPT without bushings	5U26F206	FIL SY2 1 20 RMSA NPT
5U10F400	FIL SY1 5 RA NPT without bushings	5U20F400	FIL SY2 5 RA NPT without bushings	5U26F406	FIL SY2 1 5 RA NPT
5U10F500	FIL SY1 20 RA NPT without bushings	5U20F500	FIL SY2 20 RA NPT without bushings	5U26F506	FIL SY2 1 20 RA NPT
5U11F101	FIL SY1 1/8 5 RMSA NPT	5U23F103	FIL SY2 3/8 5 RMSA NPT		
5U11F201	FIL SY1 1/8 20 RMSA NPT	5U23F203	FIL SY2 3/8 20 RMSA NPT		
5U11F401	FIL SY1 1/8 5 RA NPT	5U23F403	FIL SY2 3/8 5 RA NPT		
5U11F501	FIL SY1 1/8 20 RA NPT	5U23F503	FIL SY2 3/8 20 RA NPT		
5U12F102	FIL SY1 1/4 5 RMSA NPT	5U24F104	FIL SY2 1/2 5 RMSA NPT		
5U12F202	FIL SY1 1/4 20 RMSA NPT	5U24F204	FIL SY2 1/2 20 RMSA NPT		
5U12F402	FIL SY1 1/4 5 RA NPT	5U24F404	FIL SY2 1/2 5 RA NPT		
5U12F502	FIL SY1 1/4 20 RA NPT	5U24F504	FIL SY2 1/2 20 RA NPT		
5U13F103	FIL SY1 3/8 5 RMSA NPT	5U25F105	FIL SY2 3/4 5 RMSA NPT		
5U13F203	FIL SY1 3/8 20 RMSA NPT	5U25F205	FIL SY2 3/4 20 RMSA NPT		
5U13F403	FIL SY1 3/8 5 RA NPT	5U25F405	FIL SY2 3/4 5 RA NPT		
5U13F503	FIL SY1 3/8 20 RA NPT	5U25F505	FIL SY2 3/4 20 RA NPT		

The job of the filter purifier is to separate liquid and solid particles dispersed in the compressed air with a high degree of efficiency. This separation is achieved by means of a special filtering element called a "coalescence cartridge".

It is particularly indicated for eliminating traces of oil present in the compressed air. The air flow rate must remain below the maximum values to achieve the desired degree of purification. Beyond this value, there may be a decline in the quality of air from the purifier.

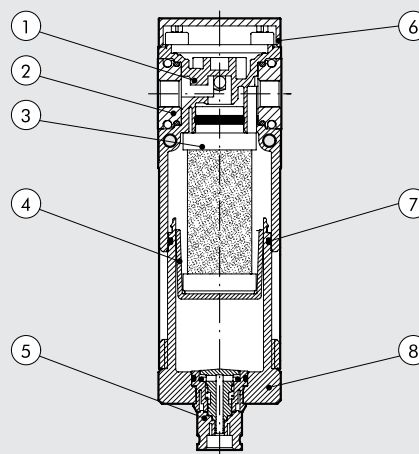
On the front and back there is a port (1/8" BSPP for size 1 and 1/4" BSPP for size 2) that can be used with pressure gauges, pressure switches or as an additional air intake. **The air taken from here is not purified.**



TECHNICAL DATA	DEP SY1			DEP SY2													
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT										
Threaded port	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT										
Degree of filtration	0.01 (0.4 microinch) - output air purity class ISO8573-1: 1.7.2																
Max. input pressure	bar			13													
	MPa			1.3													
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	psi			188													
	NL/min			620													
Maximun suggested flow rate	scfm			37													
	See graph on the next page																
Min/max temperature at 10 bar; 1 MPa; 145 psi	N.B.: flow rates higher than the recommended value reduces purification efficiency																
	°C			From -10 to +50													
Weight	°F			From 14 to +122													
	pounds			From 14 to +122													
Condensate drain	0.43			0.42				0.40		1.06		1		0.99		0.97	
Fluid	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure																
Cup capacity	Compressed air or other inert gases																
Mounting position	fluid ounce oz			0.51				1.35									
Port for additional air take-off (not purified air)	Vertical			Vertical				Vertical									
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	1/8" BSPP, front and rear			1/8" BSPP, front and rear				1/4" BSPP, front and rear									
Wall fixing screws	NL/min			500				1500									
Notes on use	scfm			18				53									
	N. 8-32 unc x 2			N. 10-24 unc x 2													
	It is advisable to mount a 5 μm (200 microinch) filter upstream of the purifier to retain solid particles																

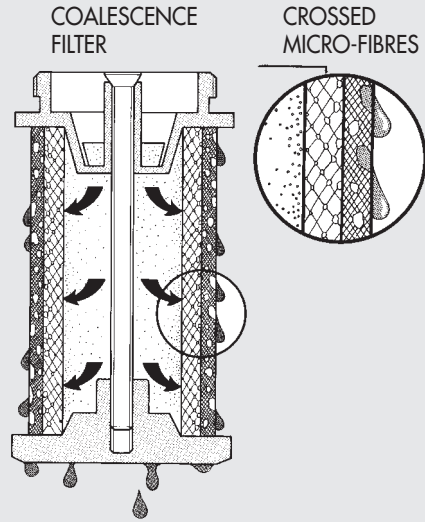
COMPONENTS

- ① Technopolymer depurator body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ③ Coalescence cartridge
- ④ Technopolymer cartridge support
- ⑤ Drain (RMSA)
- ⑥ Technopolymer plate
- ⑦ NBR o-ring gaskets
- ⑧ Clear technopolymer bowl



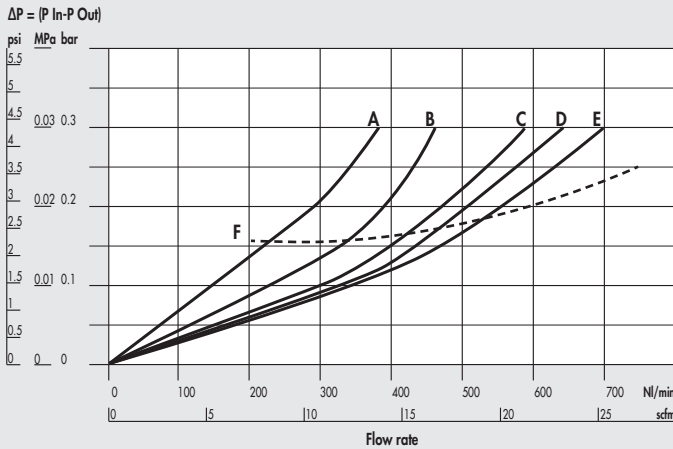
HOW THE COALESCENCE CARTRIDGE WORKS

Air from the mains – full of impurities – flows into the coalescence cartridge and then passes through the crossed micro-fibres that make up the cartridge. During this movement the liquid particles come into contact with the crossed micro-fibres and adhere to them. Due to the air pressure and gravity they join up with other micro-drops at each cross-over point and gradually increase in volume, leading to the physical phenomenon called coalescence. When they stop moving, the drops deposit on the outside of the cartridge, from which they detach and drop to the bottom. Since the volume of liquid leaving the cartridge is exactly the same as the drops arriving, the coalescence cartridge ought to work indefinitely. Solid particles are caught with the same efficiency but, unlike drops, they are not drained out and clog the cartridge. To get round this problem, it is necessary to mount a 5µm (200 microinch) prefilter before the fine oil filter to separate the solid particles first.

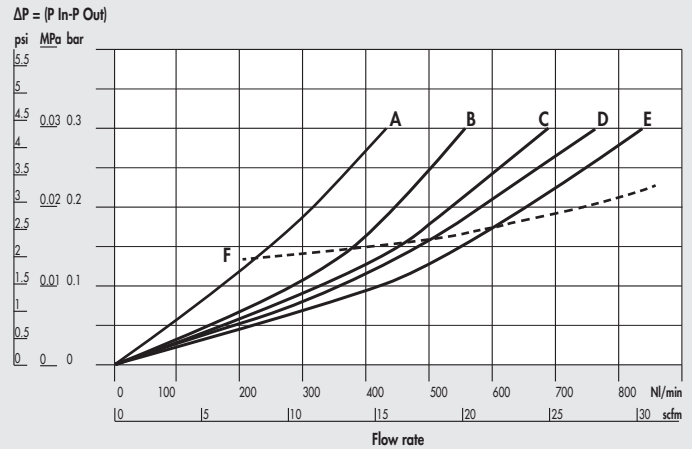


FLOW CHARTS

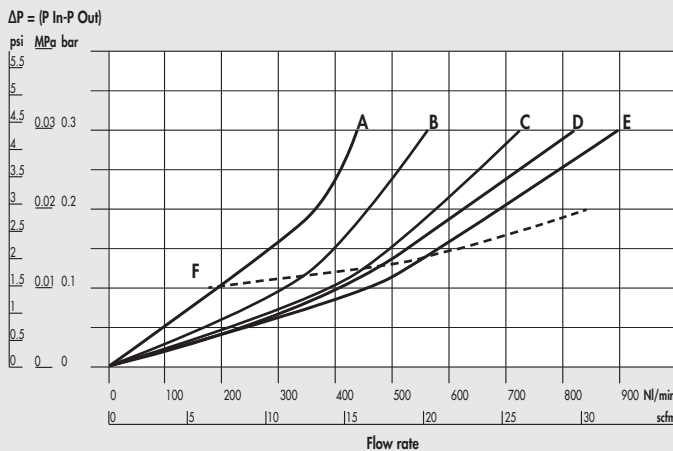
DEP Syntesi® SY1 1/8"



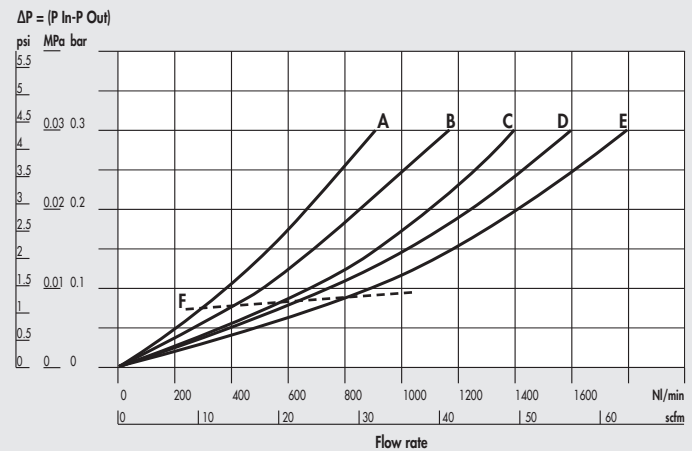
DEP Syntesi® SY1 1/4"



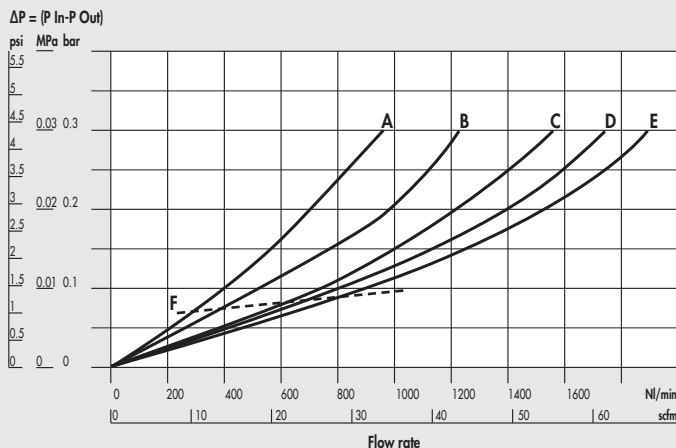
DEP Syntesi® SY1 3/8"



DEP Syntesi® SY2 3/8"

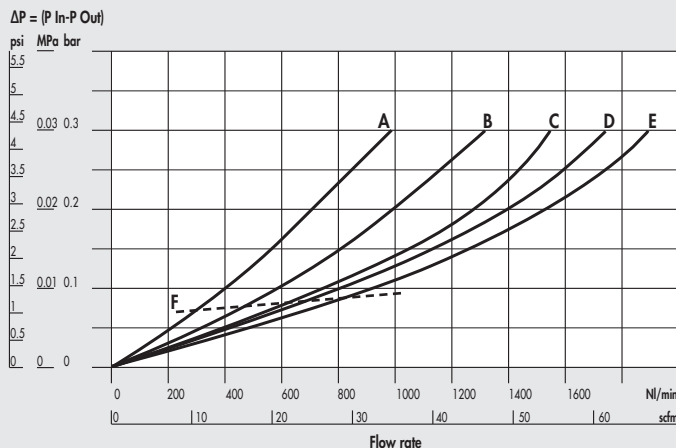


DEP Syntesi® SY2 1/2"



A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

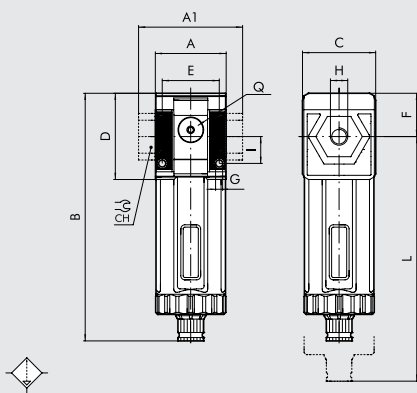
DEP Syntesi® SY2 3/4" - 1"



C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi
 F = max suggested flow

DIMENSIONS



		SIZE 1			SIZE 2		
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"
H (threaded port)	NPT						
A			1.65			2.4	
A1		-	-	1.73	-	-	3.74 3.74
B	RMSA		5.83			7	
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	RMSA		7.95			9.65	
Q (no. 2 additional air takes-off)			1/8" BSPP			1/4" BSPP	

KEY TO CODES

5U	1	1	D	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
56 Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	D Depurator	10 RMSA	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

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
Syntesi® SY1 DEPURATOR		Syntesi® SY2 DEPURATOR	
5U10D100	DEP SY1 RMSA NPT without bushings	5U20D100	DEP SY2 RMSA NPT without bushings
5U11D101	DEP SY1 1/8 RMSA NPT	5U23D103	DEP SY2 3/8 RMSA NPT
5U12D102	DEP SY1 1/4 RMSA NPT	5U24D104	DEP SY2 1/2 RMSA NPT
5U13D103	DEP SY1 3/8 RMSA NPT	5U25D105	DEP SY2 3/4 RMSA NPT
		5U26D106	DEP SY2 1 RMSA NPT

SYNTESI® ACTIVE CARBON FILTER

Activated-carbon filtering systems achieve the highest standard of purification possible in industrial applications. They eliminate all traces of oils, solvents and hydrocarbons, and remove unpleasant odours. The operating principle uses activated carbon, which absorbs most of the polluting particles in the air thanks to minute holes in the granules of carbon.

There are two 1/8" BSPP 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 air take-off. **The air taken from here is not filtered by the activated-carbon cartridge.**

Cartridge life and efficiency can be increased by using pre-filtered ($5\mu\text{m} = 200$ micinch) and purified ($0.01\mu\text{m} = 0.4$ micinch) air. The cartridge must be replaced at set intervals as there is no difference in load loss between an efficient cartridge and a saturated one.

N.B.: to ensure the performance and duration stated on the data sheet, the load loss (ΔP) must not exceed 1 psi.



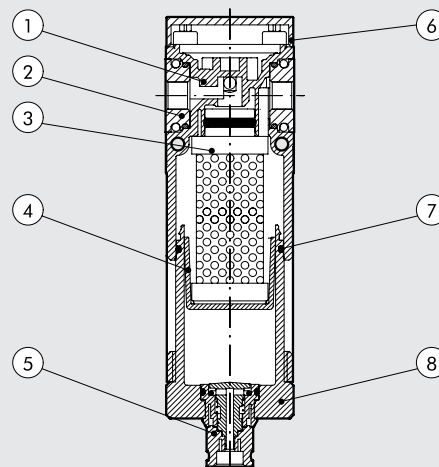
UNITS

Syntesi® ACTIVE CARBON FILTER

TECHNICAL DATA	FIL CA SY1			FIL CA SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port	0.003 - output air purity class ISO8573-1: 1.7.1						
Residual oil at 20°C *	mg/m ³						
Duration of cartridge *	4000			4000			
Max. inlet pressure	15 bar			13 bar			
	1.5 MPa			1.3 MPa			
	217 psi			188 psi			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	350 NL/min			800 NL/min			
	12 scfm			28 scfm			
	N.B.: flow rates higher than the recommended value reduces purification efficiency						
Min/max temperature at 10 bar; 1 MPa; 145 psi	From -10 to +50 °C			From -10 to +50 °C			
	From 14 to +122 °F			From 14 to +122 °F			
Weight	0.43	0.42	0.40	1.06	1	0.99	0.97
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure						
Fluid	0.01 μm filtered and deperurated air						
Mounting position	In any position			In any position			
Additional air take-off port (unfiltered air from cartridge CA)	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	500 NL/min			1500 NL/min			
	18 scfm			53 scfm			
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			
Notes on use	Upstream it's necessary to mount a coalescence filter deperurator of 0.01 μm (0.4 micinch)						
* if the load loss of 1 psi is not exceeded							

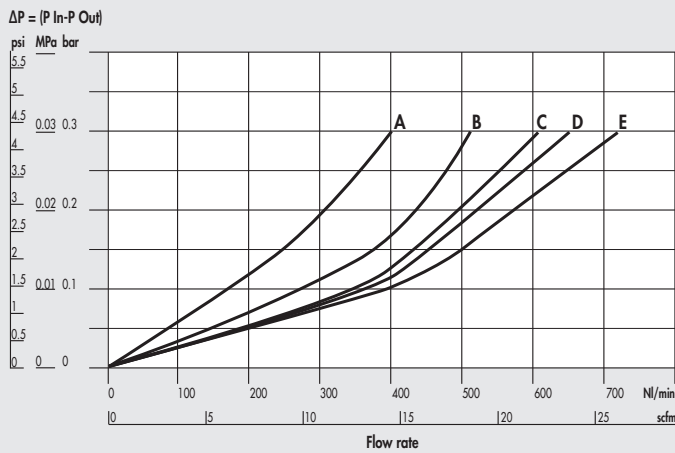
COMPONENTS

- ① Technopolymer deperurator body
- ② IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ③ Active carbon cartridge
- ④ Technopolymer cartridge support
- ⑤ Drain (RMSA)
- ⑥ Technopolymer plate
- ⑦ NBR o-ring gasket
- ⑧ Clear technopolymer bowl

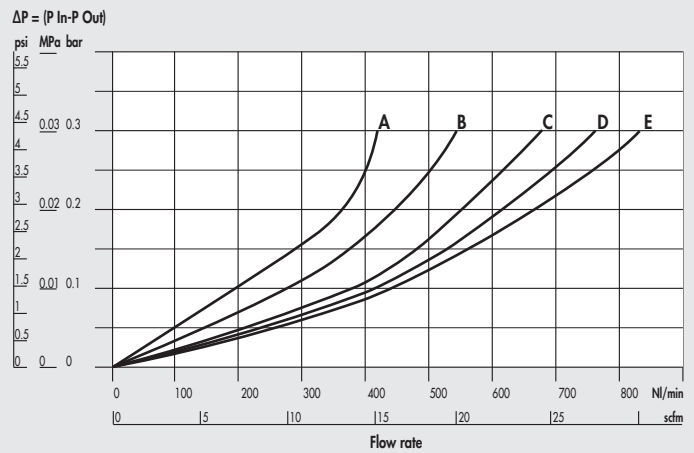


FLOW CHARTS

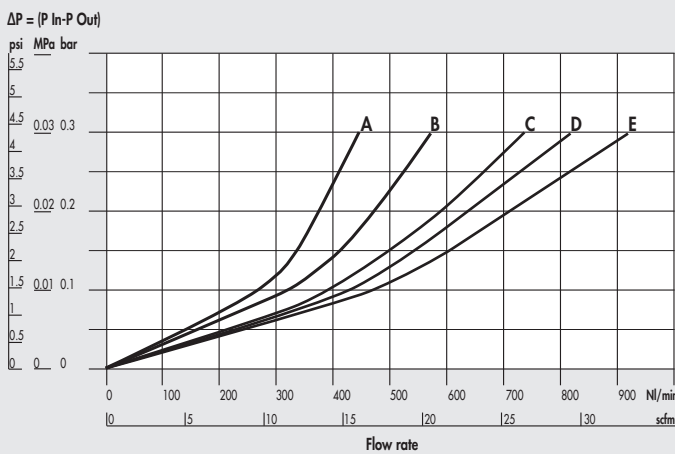
FIL CA Syntesi® SY1 1/8"



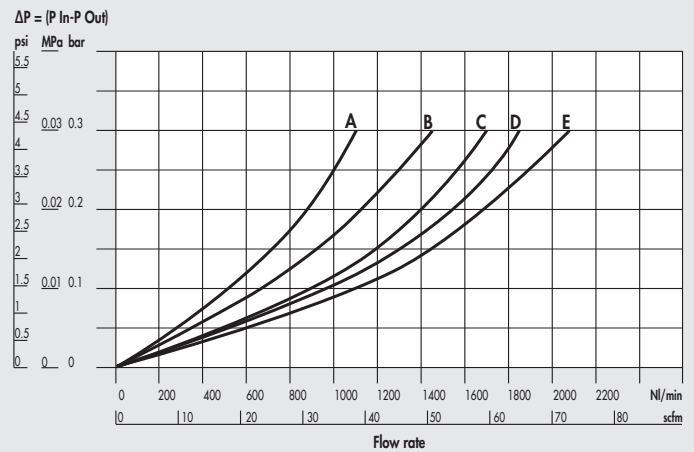
FIL CA Syntesi® SY1 1/4"



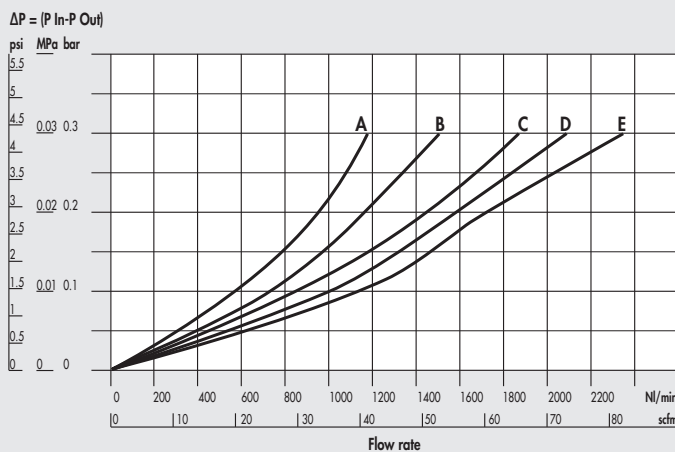
FIL CA Syntesi® SY1 3/8"



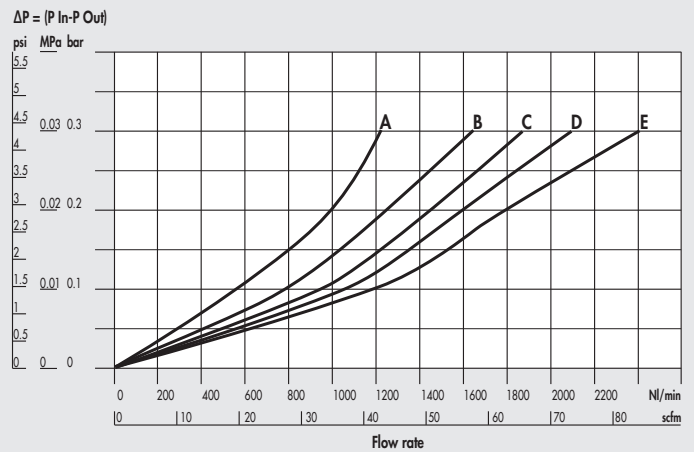
FIL CA Syntesi® SY2 3/8"



FIL CA Syntesi® SY2 1/2"



FIL CA Syntesi® SY2 3/4" - 1"

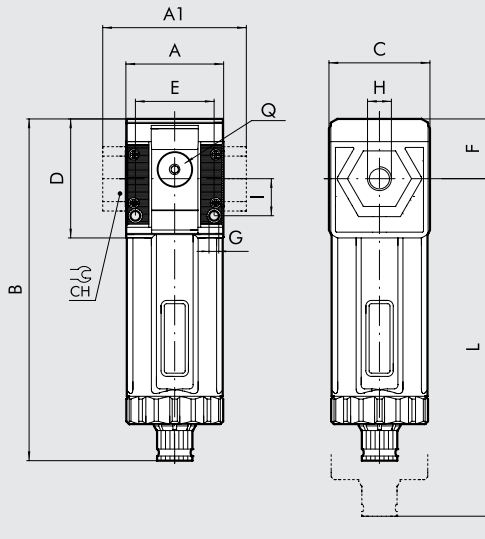


A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

DIMENSIONS



		SIZE 1			SIZE 2		
H (threaded port)	NPT	1/8"	1/4"	3/8"	3/8"	1/2"	3/4" 1"
A		1.65			2.4		
A1		-	-	1.73	-	-	3.74 3.74
B	RMSA	5.83			7		
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	RMSA	7.95			9.65		
Q (no. 2 additional air takes-off)		1/8" BSPP			1/4" BSPP		

KEY TO CODES

5U	1	1	C	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	C Active carbon filter	10 RMSA	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

RMSA: Drain with manual condensate discharge and automatic discharge at zero pressure.

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
Syntesi® SY1 ACTIVE CARBON FILTER		Syntesi® SY2 ACTIVE CARBON FILTER	
5U10C100	AC SY1 RMSA NPT without bushings	5U20C100	AC SY2 RMSA NPT without bushings
5U11C101	AC SY1 1/8 RMSA NPT	5U23C103	AC SY2 3/8 RMSA NPT
5U12C102	AC SY1 1/4 RMSA NPT	5U24C104	AC SY2 1/2 RMSA NPT
5U13C103	AC SY1 3/8 RMSA NPT	5U25C105	AC SY2 3/4 RMSA NPT
		5U26C106	AC SY2 1 RMSA NPT

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.

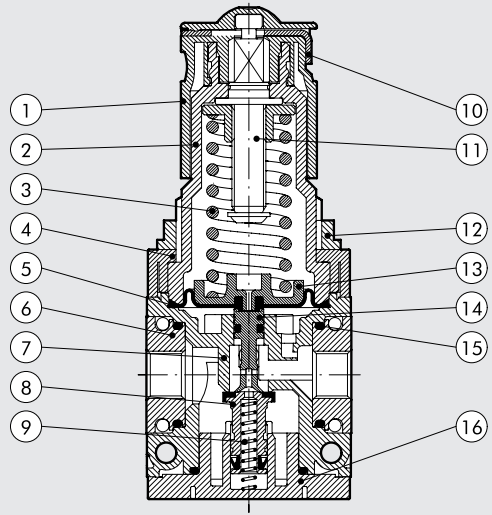
The knob is the push-lock type – once the pressure has been set, press it and it locks in position. In this position you can pull out the plate and attach two padlocks on size 1 or three padlocks on size 2 in order to avoid possible tampering. On the front and back there is a port (1/8" BSPP for size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



TECHNICAL DATA	REG SY1			REG SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port							
Max. inlet pressure							
	bar			13			
	MPa			1.3			
	psi			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.5 MPa; 7.25 psi)	Nl/min	570	1600	2900	3000	4300	4700
(inlet pressure 10 bar)	scfm	20	57	103	106	152	166
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	1200	2800	3350	5300	7400	7600
(inlet pressure 10 bar)	scfm	42	99	119	188	261	267
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	pounds	0.43	0.42	0.40	1.2	1.14	1.13
Fluid	Compressed air or other inert gases						
Mounting position	In any position						
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar	Nl/min	500			1400		
(0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	scfm	18			50		
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						

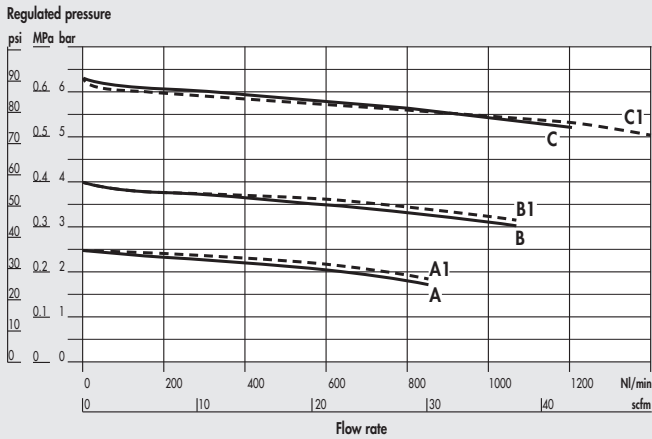
COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring
- ④ Technopolymer flange
- ⑤ Rolling diaphragm
- ⑥ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- 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

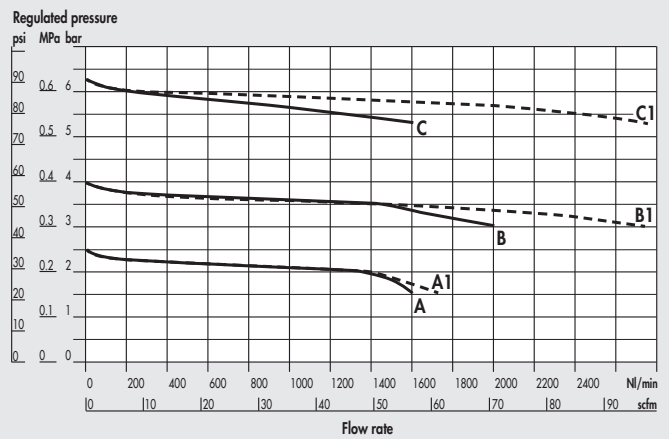


FLOW CHARTS

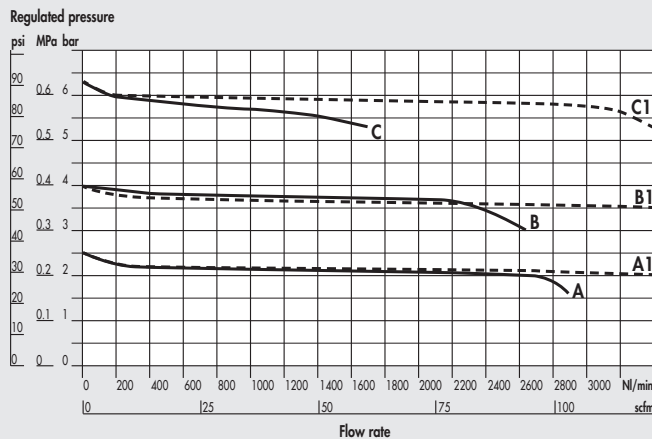
REG Syntesi® SY1 1/8"



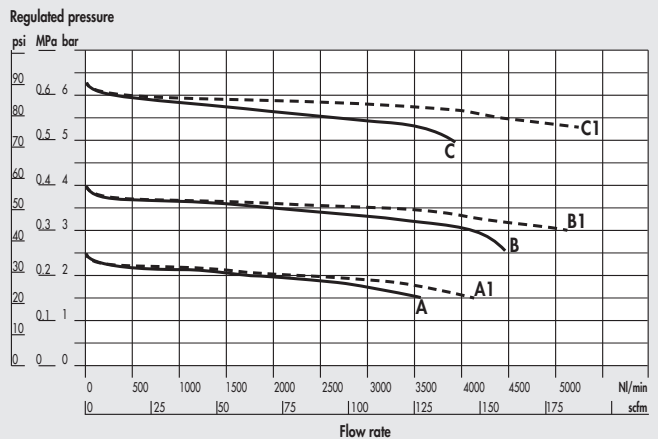
REG Syntesi® SY1 1/4"



REG Syntesi® SY1 3/8"



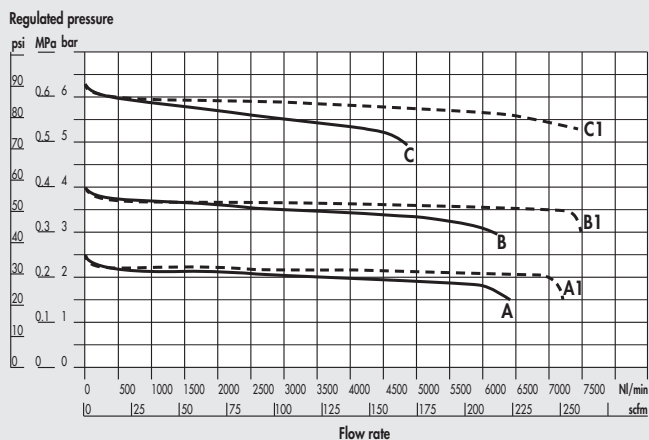
REG Syntesi® SY2 3/8"



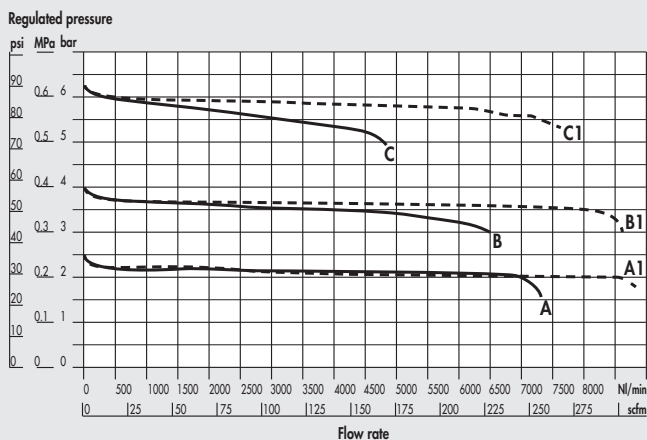
A = P In 7 bar (101.5 psi) - P Out 2.5 bar (36 psi)
 B = P In 7 bar (101.5 psi) - P Out 4 bar (58 psi)
 C = P In 7 bar (101.5 psi) - P Out 6.3 bar (91 psi)

A1 = P In 10 bar (145 psi) - P Out 2.5 bar (36 psi)
 B1 = P In 10 bar (145 psi) - P Out 4 bar (58 psi)
 C1 = P In 10 bar (145 psi) - P Out 6.3 bar (91 psi)

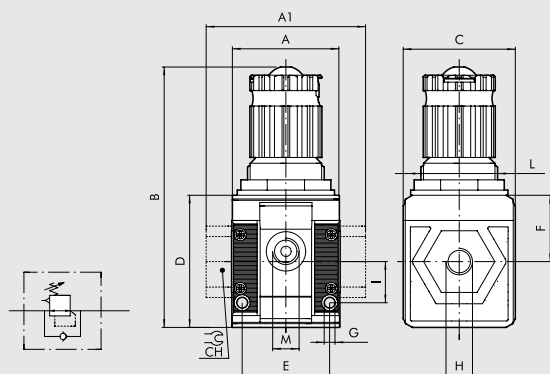
REG Syntesi® SY2 1/2"



REG Syntesi® SY2 3/4" - 1"



DIMENSIONS



	NPT	SIZE 1		SIZE 2		
		1/8"	3/8"	3/8"	1/2"	3/4"
H (threaded port)						
A			1.65			2.4
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 (pressure gauge port or air takes-off)			1/8" BSPP			1/4" BSPP

KEY TO CODES

5U	1	1	R	14	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	SETTING RANGE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	R Pressure regulator	10 0 - 30 psi 12 0 - 60 psi 14 0 - 120 psi 16 0 - 180 psi	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT 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	Code	Description	Code	Description
Syntesi® SY1 REGULATOR		Syntesi® SY1 REGULATOR		Syntesi® SY2 REGULATOR	
5U10R140	REG SY1 0-120 NPT without bushings	5U13R143	REG SY1 3/8 0-120 NPT	5U24R144	REG SY2 1/2 0-120 NPT
5U10R160	REG SY1 0-180 NPT without bushings	5U13R163	REG SY1 3/8 0-180 NPT	5U24R164	REG SY2 1/2 0-180 NPT
5U11R141	REG SY1 1/8 0-120 NPT	Syntesi® SY2 REGULATOR		5U25R145	REG SY2 3/4 0-120 NPT
5U11R161	REG SY1 1/8 0-180 NPT	5U20R140	REG SY2 0-120 NPT without bushings	5U25R165	REG SY2 3/4 0-180 NPT
		5U20R160	REG SY2 0-180 NPT without bushings		
5U12R142	REG SY1 1/4 0-120 NPT	5U23R143	REG SY2 3/8 0-120 NPT	5U26R146	REG SY2 1 0-120 NPT
5U12R162	REG SY1 1/4 0-180 NPT	5U23R163	REG SY2 3/8 0-180 NPT	5U26R166	REG SY2 1 0-180 NPT

SYNTESI® IN-SERIES REGULATOR

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.



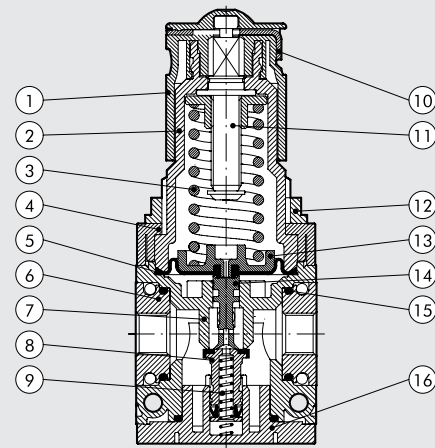
UNITS

Syntesi® IN-SERIES REGULATOR

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 Utility threaded port	1/8" BSPP			1/4" BSPP			
Max. input pressure	bar			bar			
	MPa			MPa			
	psi			psi			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	NI/min			NI/min			
	scfm			scfm			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	NI/min			NI/min			
	scfm			scfm			
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	NI/min			NI/min			
	scfm			scfm			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
	°F			°F			
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						

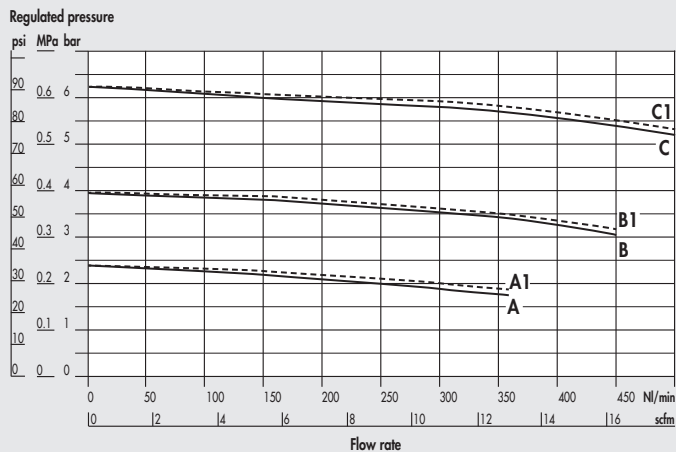
COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring
- 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
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ NBR o-ring gaskets
- ⑯ Technopolymer plug



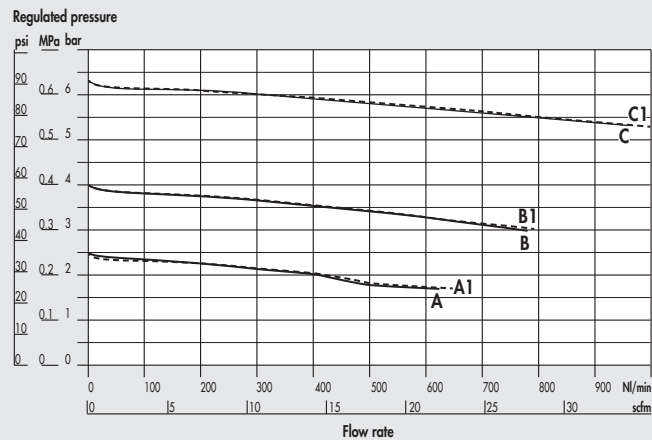
FLOW CHARTS

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



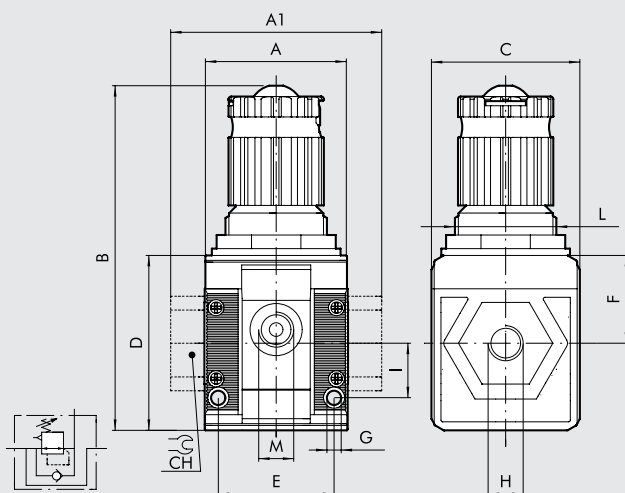
A = P In 7 bar (101.5 psi) - P Out 2.5 bar (36 psi)
 B = P In 7 bar (101.5 psi) - P Out 4 bar (58 psi)
 C = P In 7 bar (101.5 psi) - P Out 6.3 bar (91 psi)

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



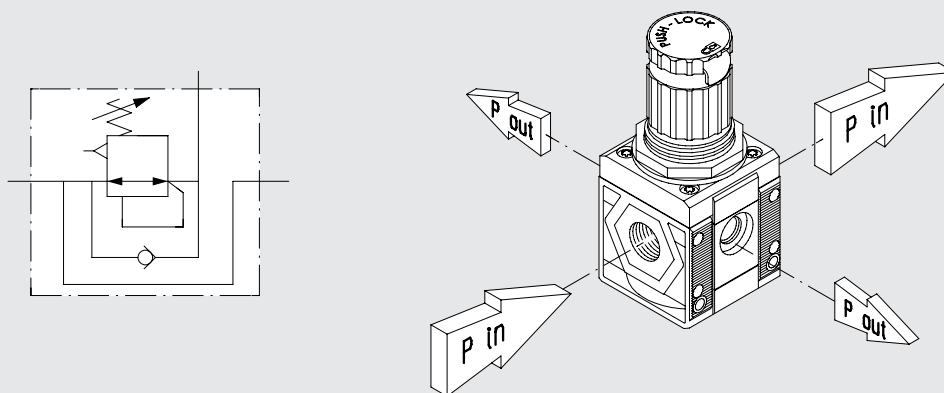
A1 = P In 10 bar (145 psi) - P Out 2.5 bar (36 psi)
 B1 = P In 10 bar (145 psi) - P Out 4 bar (58 psi)
 C1 = P In 10 bar (145 psi) - P Out 6.3 bar (91 psi)

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				2.4		
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

56	1	1	R	24	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	IN-SERIES REGULATOR SETTING RANGE	THREADED OUTPUT CONNECTION
56 Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" 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
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT 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	Code	Description
Syntesi® SY1 IN-SERIES REGULATOR		Syntesi® SY2 IN-SERIES REGULATOR	
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

This device combines in a single unit the functions of filtration, condensate separation and pressure regulation.

It is made up of the same elements forming the filter and the regulator, so the performance and advantages are the same:

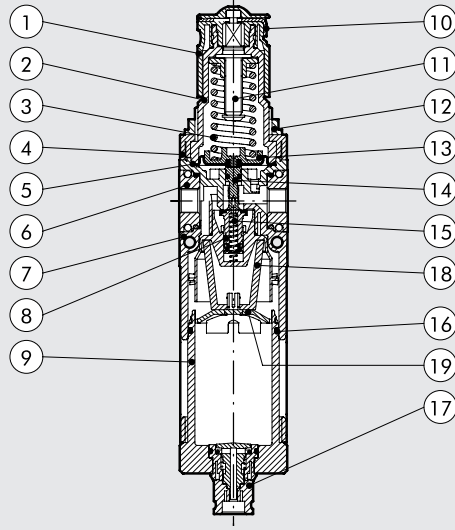
- Separation of condensate and larger liquid and solid particles by centrifugation.
- Two condensate drain options (RMSA and RA).
- 360° visually inspection of the condensate level, via transport spy-holes.
- Rolling diaphragm regulator, allowing maximum precision and flow rate, and minimal friction.
- Compensation for upstream pressure changes.
- Pressure relief valve.
- Quick downstream pressure relief.
- Padlockable push-lock knob.
- Front and rear ports for pressure gauges, pressure switches or, considering the high flow rate, for use as additional filtered and regulated air take-off.



TECHNICAL DATA	FR SY1			FR SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port							
Degree of filtration	yellow: 5 (200 microinch) - output air purity class ISO8573-1: 3.7.4 white: 20 (790 microinch) - output air purity class ISO8573-1: 4.7.4 blue: 50 (2000 microinch) - output air purity class ISO8573-1: 5.7.4						
Max. inlet pressure	bar			13			
	MPa			1.3			
	psi			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.5 MPa; 7.25 psi)	NI/min	500	800	2200	3200	4300	5200
	scfm	18	28	78	113	152	184
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	NI/min	1300	2000	3000	5800	7200	7400
	scfm	46	71	106	205	255	262
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	NI/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	0.54	0.53	0.51	1.37	1.32	1.30	1.28
Fluid	Compressed air or other inert gases						
Mounting position	Vertical						
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	NI/min	500			1400		
	scfm	18			50		
Cup capacity	fluid ounce oz			2.37			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Note: the maximum input pressure for the RA version must not exceed 145 psi N. 8-32 unc x 2 N. 2 10-24 unc x 2						
Wall fixing screws	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.						
Notes on use							

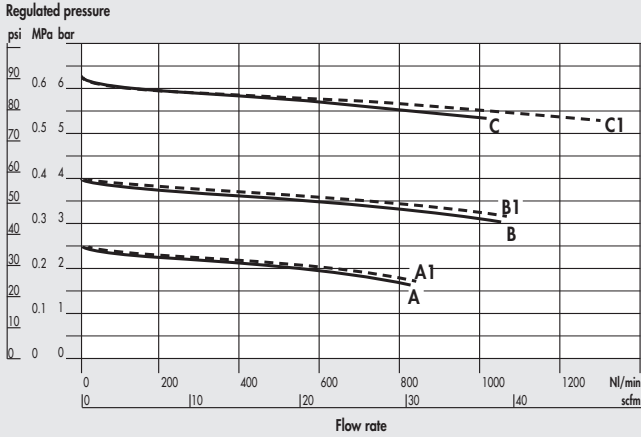
COMPONENTS

- ① Technopolymer adjusting knob
- ② Technopolymer bell
- ③ Steel adjusting spring
- 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 valve
- ⑨ Clear technopolymer bowl
- ⑩ Plate for knob locking
- ⑪ OT58 brass adjusting screw
- ⑫ Technopolymer ring nut
- ⑬ Technopolymer plate
- ⑭ Technopolymer rod
- ⑮ Stainless steel valve spring
- ⑯ O-ring NBR gaskets
- ⑰ Drain (RMSA)
- ⑱ Sintered HDPE filter cartridge
- ⑲ Technopolymer screen

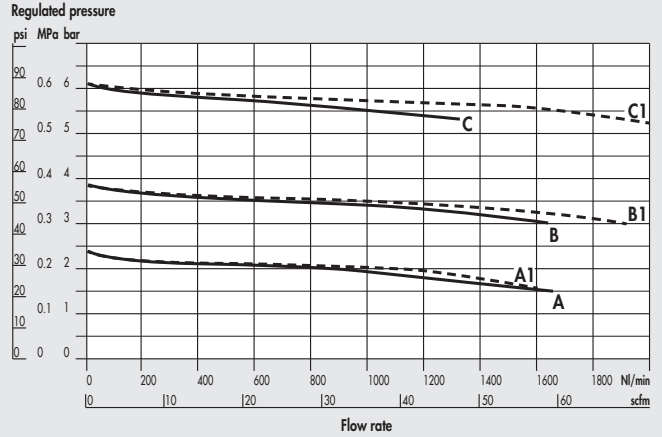


FLOW CHARTS

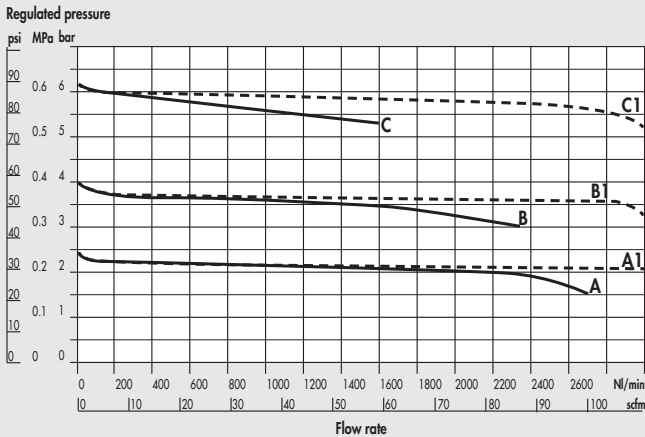
FR Syntesi® SY1 1/8"



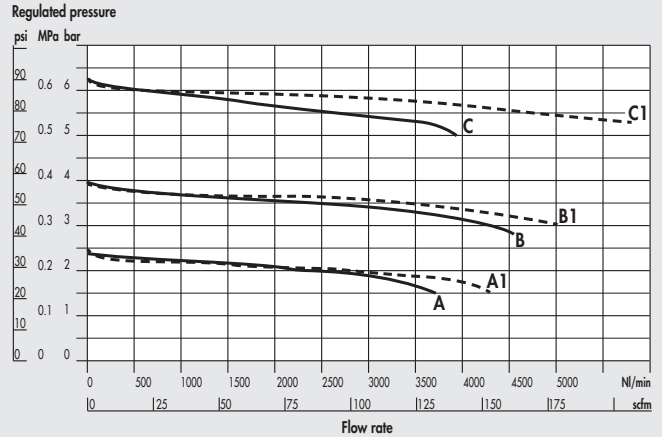
FR Syntesi® SY1 1/4"



FR Syntesi® SY1 3/8"



FR Syntesi® SY2 3/8"



KEY TO CODES

5U	1	1	B	24	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	B Filter-regulator	10 5 µm (200 microinch), RMSA, 0 - 30 psi 20 20 µm (790 microinch), RMSA, 0 - 30 psi 30 50 µm (2000 microinch), RMSA, 0 - 30 psi 40 5 µm (200 microinch), RA, 0 - 30 psi 50 20 µm (790 microinch), RA, 0 - 30 psi 60 50 µm (2000 microinch), RA, 0 - 30 psi 12 5 µm (200 microinch), RMSA, 0 - 60 psi 22 20 µm (790 microinch), RMSA, 0 - 60 psi 32 50 µm (2000 microinch), RMSA, 0 - 60 psi 42 5 µm (200 microinch), RA, 0 - 60 psi 52 20 µm (790 microinch), RA, 0 - 60 psi 62 50 µm (2000 microinch), RA, 0 - 60 psi 14 5 µm (200 microinch), RMSA, 0 - 120 psi 24 20 µm (790 microinch), RMSA, 0 - 120 psi 34 50 µm (2000 microinch), RMSA, 0 - 120 psi 44 5 µm (200 microinch), RA, 0 - 120 psi 54 20 µm (790 microinch), RA, 0 - 120 psi 64 50 µm (2000 microinch), RA, 0 - 120 psi 16 5 µm (200 microinch), RMSA, 0 - 180 psi 26 20 µm (790 microinch), RMSA, 0 - 180 psi 36 50 µm (2000 microinch), RMSA, 0 - 180 psi 46 5 µm (200 microinch), RA, 0 - 180 psi 56 20 µm (790 microinch), RA, 0 - 180 psi 66 50 µm (2000 microinch), RA, 0 - 180 psi	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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
FILTER-REGULATOR Syntesi® SY1		FILTER-REGULATOR Syntesi® SY1		FILTER-REGULATOR Syntesi® SY2	
5U10B140	FR SY1 5 0-120 RMSA NPT without bushings	5U13B143	FR SY1 3/8 5 0-120 RMSA NPT	5U24B144	FR SY2 1/2 5 0-120 RMSA NPT
5U10B240	FR SY1 20 0-120 RMSA NPT without bushings	5U13B243	FR SY1 3/8 20 0-120 RMSA NPT	5U24B244	FR SY2 1/2 20 0-120 RMSA NPT
5U10B440	FR SY1 5 0-120 RA NPT without bushings	5U13B443	FR SY1 3/8 5 0-120 RA NPT	5U24B444	FR SY2 1/2 5 0-120 RA NPT
5U10B540	FR SY1 20 0-120 RA NPT without bushings	5U13B543	FR SY1 3/8 20 0-120 RA NPT	5U24B544	FR SY2 1/2 20 0-120 RA NPT
5U10B160	FR SY1 5 0-180 RMSA NPT without bushings	5U13B163	FR SY1 3/8 5 0-180 RMSA NPT	5U24B164	FR SY2 1/2 5 0-180 RMSA NPT
5U10B260	FR SY1 20 0-180 RMSA NPT without bushings	5U13B263	FR SY1 3/8 20 0-180 RMSA NPT	5U24B264	FR SY2 1/2 20 0-180 RMSA NPT
5U10B460	FR SY1 5 0-180 RA NPT without bushings	5U13B463	FR SY1 3/8 5 0-180 RA NPT	5U24B464	FR SY2 1/2 5 0-180 RA NPT
5U10B560	FR SY1 20 0-180 RA NPT without bushings	5U13B563	FR SY1 3/8 20 0-180 RA NPT	5U24B564	FR SY2 1/2 20 0-180 RA NPT
FILTER-REGULATOR Syntesi® SY2		FILTER-REGULATOR Syntesi® SY2		FILTER-REGULATOR Syntesi® SY2	
5U11B141	FR SY1 1/8 5 0-120 RMSA NPT	5U20B140	FR SY2 5 0-120 RMSA NPT without bushings	5U25B145	FR SY2 3/4 5 0-120 RMSA NPT
5U11B241	FR SY1 1/8 20 0-120 RMSA NPT	5U20B240	FR SY2 20 0-120 RMSA NPT without bushings	5U25B245	FR SY2 3/4 20 0-120 RMSA NPT
5U11B441	FR SY1 1/8 5 0-120 RA NPT	5U20B440	FR SY2 5 0-120 RA NPT without bushings	5U25B445	FR SY2 3/4 5 0-120 RA NPT
5U11B541	FR SY1 1/8 20 0-120 RA NPT	5U20B540	FR SY2 20 0-120 RA NPT without bushings	5U25B545	FR SY2 3/4 20 0-120 RA NPT
5U11B161	FR SY1 1/8 5 0-180 RMSA NPT	5U20B160	FR SY2 5 0-180 RMSA NPT without bushings	5U25B165	FR SY2 3/4 5 0-180 RMSA NPT
5U11B261	FR SY1 1/8 20 0-180 RMSA NPT	5U20B260	FR SY2 20 0-180 RMSA NPT without bushings	5U25B265	FR SY2 3/4 20 0-180 RMSA NPT
5U11B461	FR SY1 1/8 5 0-180 RA NPT	5U20B460	FR SY2 5 0-180 RA NPT without bushings	5U25B465	FR SY2 3/4 5 0-180 RA NPT
5U11B561	FR SY1 1/8 20 0-180 RA NPT	5U20B560	FR SY2 20 0-180 RA NPT without bushings	5U25B565	FR SY2 3/4 20 0-180 RA NPT
5U12B142	FR SY1 1/4 5 0-120 RMSA NPT	5U23B143	FR SY2 3/8 5 0-120 RMSA NPT	5U26B146	FR SY2 1 5 0-120 RMSA NPT
5U12B242	FR SY1 1/4 20 0-120 RMSA NPT	5U23B243	FR SY2 3/8 20 0-120 RMSA NPT	5U26B246	FR SY2 1 20 0-120 RMSA NPT
5U12B442	FR SY1 1/4 5 0-120 RA NPT	5U23B443	FR SY2 3/8 5 0-120 RA NPT	5U26B446	FR SY2 1 5 0-120 RA NPT
5U12B542	FR SY1 1/4 20 0-120 RA NPT	5U23B543	FR SY2 3/8 20 0-120 RA NPT	5U26B546	FR SY2 1 20 0-120 RA NPT
5U12B162	FR SY1 1/4 5 0-180 RMSA NPT	5U23B163	FR SY2 3/8 5 0-180 RMSA NPT	5U26B166	FR SY2 1 5 0-180 RMSA NPT
5U12B262	FR SY1 1/4 20 0-180 RMSA NPT	5U23B263	FR SY2 3/8 20 0-180 RMSA NPT	5U26B266	FR SY2 1 20 0-180 RMSA NPT
5U12B462	FR SY1 1/4 5 0-180 RA NPT	5U23B463	FR SY2 3/8 5 0-180 RA NPT	5U26B466	FR SY2 1 5 0-180 RA NPT
5U12B562	FR SY1 1/4 20 0-180 RA NPT	5U23B563	FR SY2 3/8 20 0-180 RA NPT	5U26B566	FR SY2 1 20 0-180 RA NPT

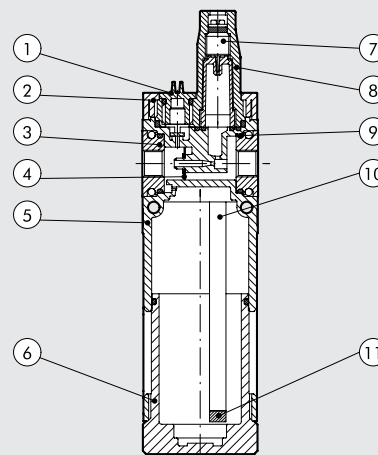
The pneumatic lubricator is the simplest way of efficiently lubricating the actuators linked to a circuit. As compressed air flows towards the lubricator, it encounters a flexible diaphragm which partially blocks the way, creating a small pressure difference between the inlet and outlet air. Being at the higher pressure, the oil in the cup is pumped through a tube with a filter towards the regulation pin. The quantity of oil can be metered accurately since the drops can be viewed through the transparent dome. Filling with oil must take place in the absence of pressure, unscrewing the plug next to the dome. On the front and back there is a port (1/8" BSPP for size 1 and 1/4" BSPP for size 2) that can be used with pressure gauges, pressure switches or as an additional air intake.



TECHNICAL DATA	LUB SY1			LUB SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port				Oil mist			
Type of lubrication	Manual filling from the top						
Version							
Max. input pressure	bar			bar			
	MPa			MPa			
	psi			psi			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	Nl/min	1300	1700	2200	2300	3900	3900
	scfm	46	60	78	81	138	138
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	1600	3000	3650	3650	6100	6100
	scfm	57	106	129	129	216	216
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
	°F			°F			
Weight	pounds			pounds			
Fluid	Compressed air or other inert gases						
Quantity of filled oil	fluid ounce oz			fluid ounce oz			
Mounting position	Vertical			Vertical			
Port for additional air take-off	1/8" BSPP, front and rear, lubricated air			1/4" BSPP, front and rear, lubricated air			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min			Nl/min			
	scfm			scfm			
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			
Recommended oils	ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Notes on use	Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general. For the best lubrication results, set the drip rate to one drop for 11-22 scfm						

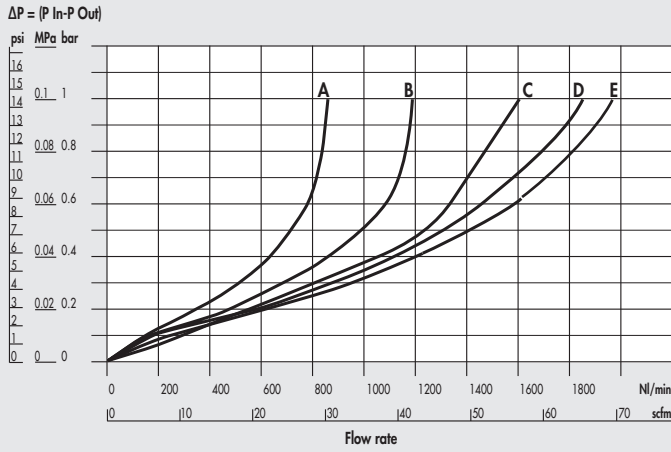
COMPONENTS

- ① Technopolymer oil filling plug
- ② Technopolymer flange
- ③ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ④ Venturi NBR diaphragm
- ⑤ Technopolymer body
- ⑥ Clear technopolymer bowl
- ⑦ OT 58 brass oil flow regulation needle
- ⑧ Clear technopolymer cover
- ⑨ NBR o-ring gasket
- ⑩ Rilsan[®] oil suction pipe
- ⑪ Oil filter

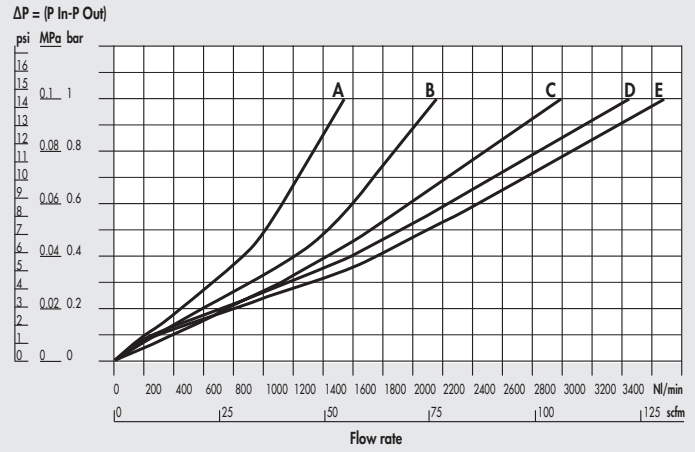


FLOW CHARTS

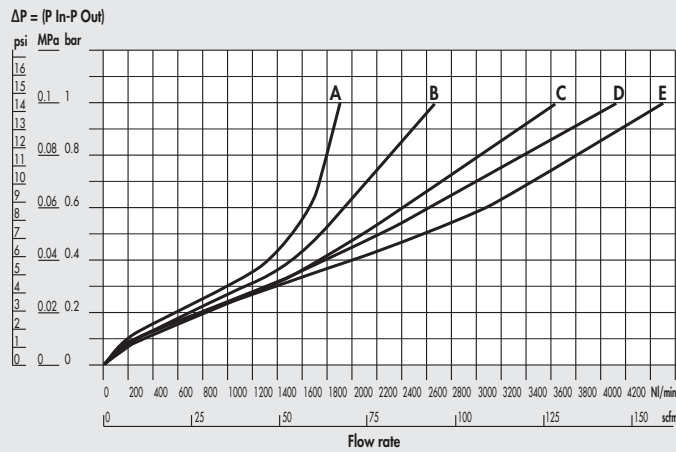
LUB Syntesi® SY1 1/8"



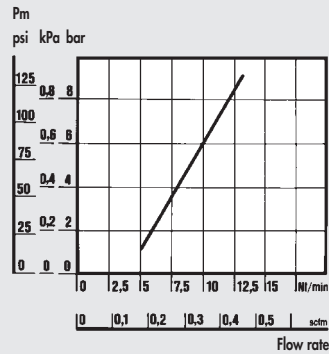
LUB Syntesi® SY1 1/4"



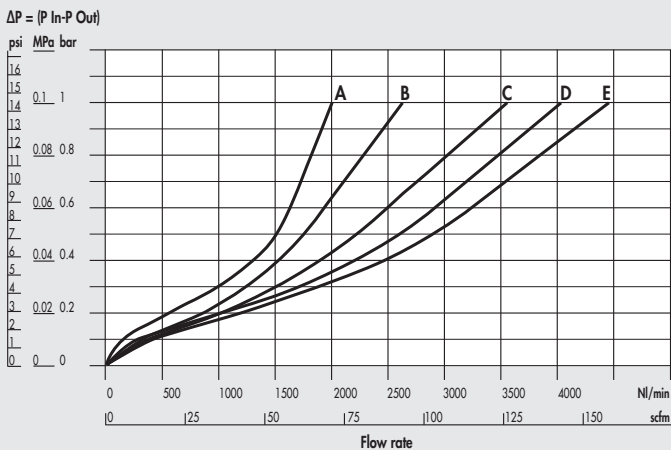
LUB Syntesi® SY1 3/8"



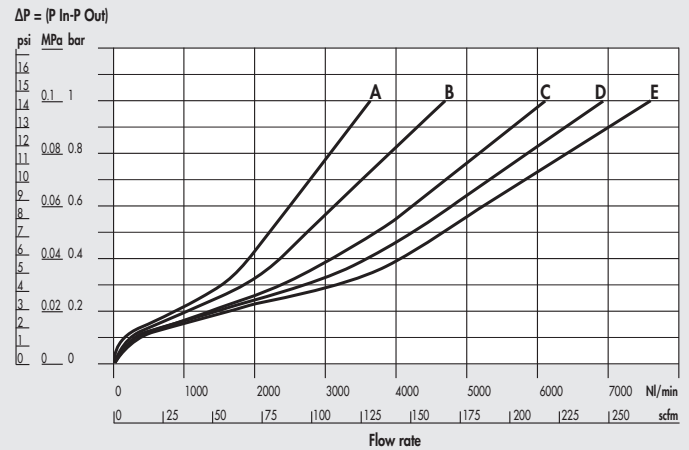
Minimum operating flow chart SY1



LUB Syntesi® SY2 3/8"



LUB Syntesi® SY2 1/2"



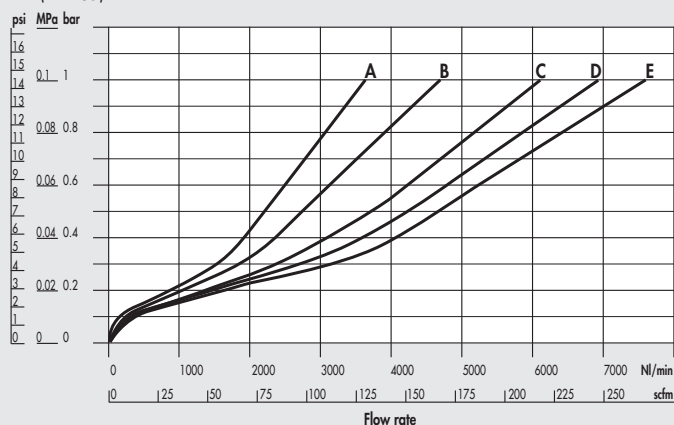
A = 2.5 bar - 0.25 MPa - 36 psi
 B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
 D = 8 bar - 0.8 MPa - 116 psi

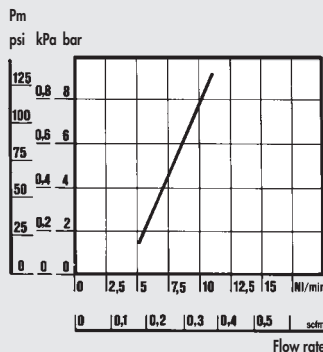
E = 10 bar - 1 MPa - 145 psi

LUB Syntesi® SY2 3/4" - 1"

ΔP = (P In-P Out)



Minimum operating flow chart SY2

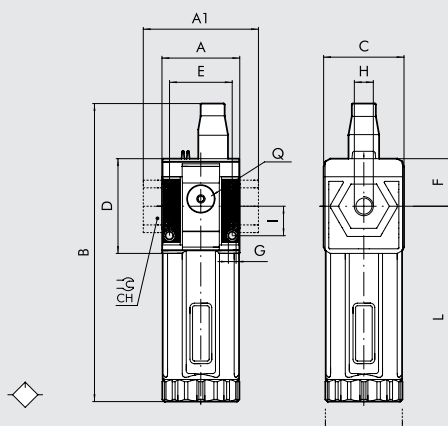


A = 2.5 bar - 0.25 MPa - 36 psi
B = 4 bar - 0.4 MPa - 58 psi

C = 6.3 bar - 0.63 MPa - 91 psi
D = 8 bar - 0.8 MPa - 116 psi

E = 10 bar - 1 MPa - 145 psi

DIMENSIONS



		SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
H (threaded port)	NPT	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A			1.65			2.4		
A1		-	-	1.73	-	-	3.74	3.74
B			6.38			7.89		
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			6.23			7.6		
Q (no. 2 additional air takes-off)			1/8" BSPP			1/4" BSPP		

KEY TO CODES

5U	1	1	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	L Lubricator	10 Manual filling from the top	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT 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	Code	Description	Code	Description
Syntesi® SY1 LUBRICATOR		Syntesi® SY2 LUBRICATOR		Syntesi® SY2 LUBRICATOR	
5U10L100	LUB SY1 NPT without bushings	5U20L100	LUB SY2 NPT without bushings	5U26L106	LUB SY2 1 NPT
5U11L101	LUB SY1 1/8 NPT	5U23L103	LUB SY2 3/8 NPT		
5U12L102	LUB SY1 1/4 NPT	5U24L104	LUB SY2 1/2 NPT		
5U13L103	LUB SY1 3/8 NPT	5U25L105	LUB SY2 3/4 NPT		

SYNTESI® SHUT-OFF VALVE

This device separates the compressed air circuit from the main air supply. It is a three-way valve that relieves the downstream system in the closed position. This makes it useful for maintenance operations or when the air supply to a machine or piece of equipment needs to be shut off.

Manual, pneumatic, electro-pneumatic and assisted electro-pneumatic control versions are available. The last version must be used if the inlet pressure is outside the electro-pneumatic valve operating range, so for particularly low or high pressures.

The manual version can be locked when the valve is in the closed position, using one or two padlocks.

On the front and back there is a port (1/8" BSPP for size 1 and 1/4" BSPP size 2) that can be used with pressure gauges, pressure switches or as an additional air intake.



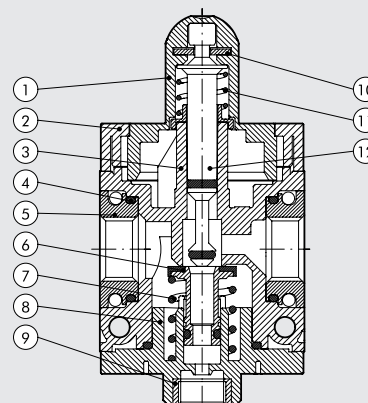
UNITS

Syntesi® SHUT-OFF VALVE

TECHNICAL DATA	V3V SY1			V3V SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded discharge port	1/8" NPT			1/4" NPT			
Type of control	Manual - pneumatic - solenoid - solenoid pilot - assisted			Manual - Pneumatic - Cnomo elpn - Cnomo elpn pilot-assisted			
Max inlet pressure for pneumatic and solenoid pilot-assisted versions	bar			bar			
	MPa			MPa			
	psi			psi			
Inlet pressure for solenoid version	bar			bar			
	MPa			MPa			
	psi			psi			
Pilot pressure for pneumatic and solenoid pilot-assisted versions	bar			bar			
	MPa			MPa			
	psi			psi			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	Nl/min	800	1000	1100	2800	3000	3000
	scfm	28	35	39	99	106	106
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	1100	1500	1600	3600	4000	4000
	scfm	39	53	57	127	141.5	141.5
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min	500			2000		
	scfm	18			71		
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		
Padlockable knob	Included						
Weight	pounds	0.44	0.43	0.41	1.04	0.94	0.98
Fluid	Compressed air or other inert gases						
Mounting position	In any position						
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, 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			1500		
	scfm	18			53		
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			
Bobbin capacity for electro-pneumatic version	W	12 VDC and 2VDC = 2W			24 VDC = 4W; 24 VAC, 110 VAC, 220 VAC = 4 VA		
Manual control of electro-pneumatic versions	Bistable: horizontal = OFF, vertical = ON						

COMPONENTS

- ① Technopolymer knob
- ② Technopolymer hinge
- ③ Technopolymer body
- ④ NBR o-ring gasket
- ⑤ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ⑥ OT58 brass valve with NBR vulcanized gasket
- ⑦ Stainless steel valve spring
- ⑧ Technopolymer plug
- ⑨ OT58 brass threaded insert
- ⑩ Plate for knob locking
- ⑪ Stainless steel spring stem recovery
- ⑫ OT58 brass stem



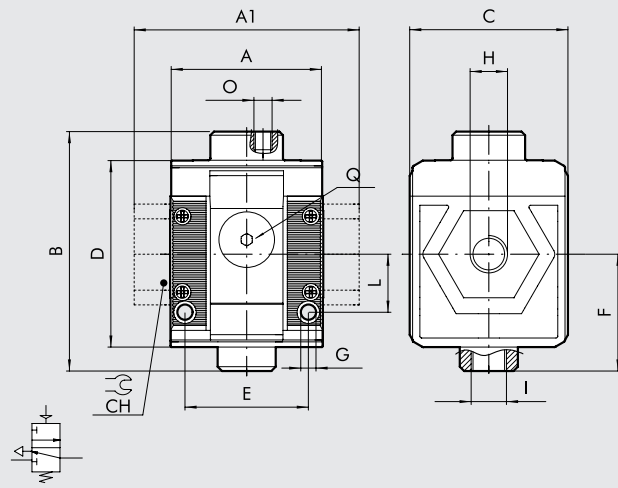
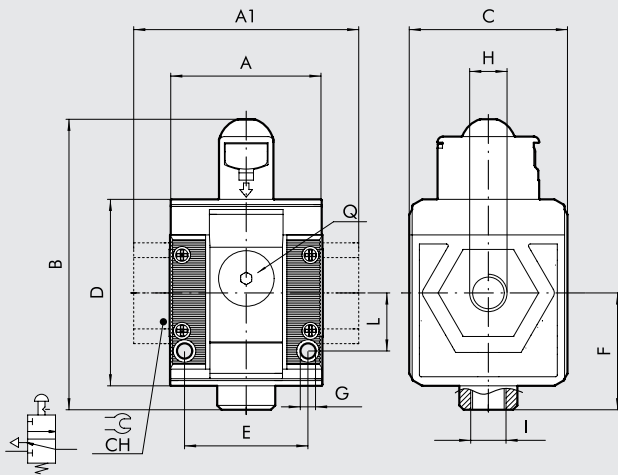
COMPONENTS

MANUAL

SY1-SY2

PNEUMATIC

SY1-SY2

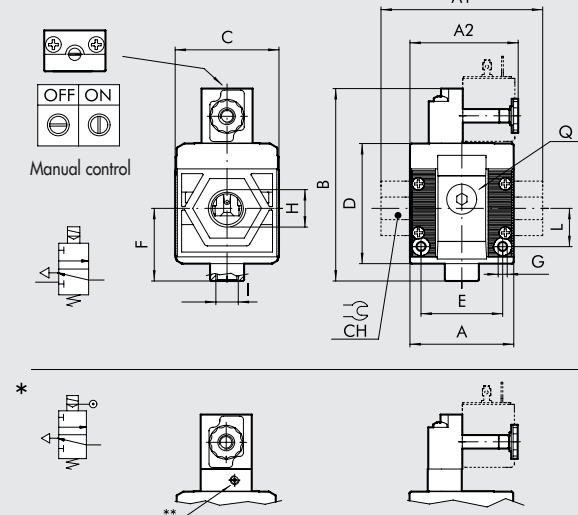
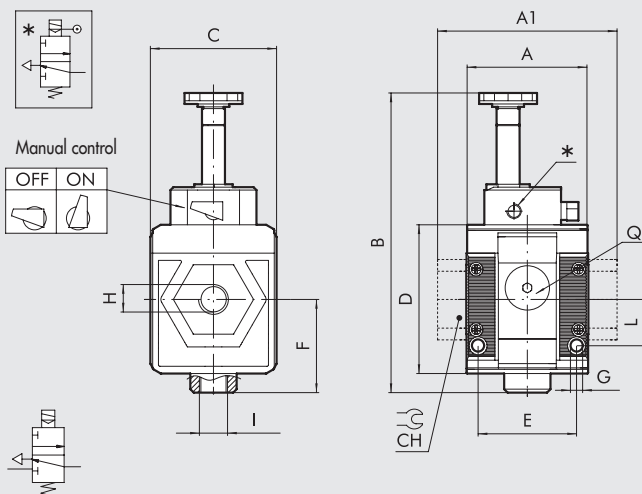


SOLENOID/SOLENOID PILOT-ASSISTED*

SY1

CNOMO SOLENOID / CNOMO SOLENOID PILOT-ASSISTED*

SY2



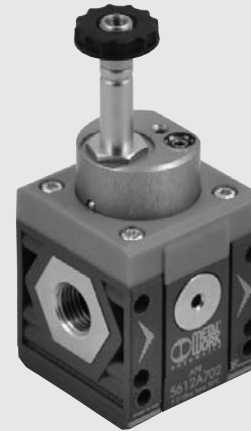
	MANUAL						PNEUMATIC						SOLENOID/SOLENOID PILOT-ASSISTED			CNOMO SOLENOID/CNOMO SOLENOID PILOT-ASSISTED					
	SIZE 1		SIZE 2				SIZE 1		SIZE 2				SIZE 1			SIZE 2					
H (threaded port) NPT	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A	1.65		2.4				1.65		2.4				1.65			2.4					
A1	-	-	1.73	-	-	3.74	3.74	-	-	1.73	-	-	3.74	3.74	-	-	1.73	-	-	3.74	3.74
A2	-		-				-		-				-			2.56					
B	3.15		4.29				2.60		3.7				4.10			-					
Cnomo	-		-				-		-				-			4.45					
Cnomo pilot ass.	-		-				-		-				-			4.26					
C	1.73		2.4				1.73		2.4				1.73			2.4					
CH	-		-				-		-				-			-					
D	2.03		2.77				2.03		2.77				2.03			2.77					
E	1.32		1.87				1.32		1.87				1.32			1.87					
F	1.23		1.68				1.23		1.68				1.23			1.68					
G	0.165		0.21				0.165		0.21				0.165			0.21					
I (exhaust)	1/8" NPT		1/4" NPT				1/8" NPT		1/4" NPT				1/8" NPT			1/4" NPT					
L	0.63		0.89				0.63		0.89				0.63			0.89					
O (pilot)	-		-				M5**		1/8" NPT				-			-					
Q (no. 2 additional air takes-off)	1/8" BSPP		1/4" BSPP				1/8" BSPP		1/4" BSPP				1/8" BSPP			1/4" BSPP					
* Pilot	-		-				-		-				M5**			M5**					

** AU 5/G M5 - 10/32 UNF adapter supplied

The progressive starter is a pneumatic component that allows air enter the circuit gradually, thereby avoiding excessive pressure bursts.

A sophisticated system of internal valves allows two separate stages of operation. During the first stage, a quantity of air that can be regulated via a pin flows from the APR. The second stage starts when the downstream pressure reached 40÷60% of the upstream pressure, during which full-port flow is achieved. When the mechanism is deactivated, the air flow is cut off and the downstream circuit is relieved.

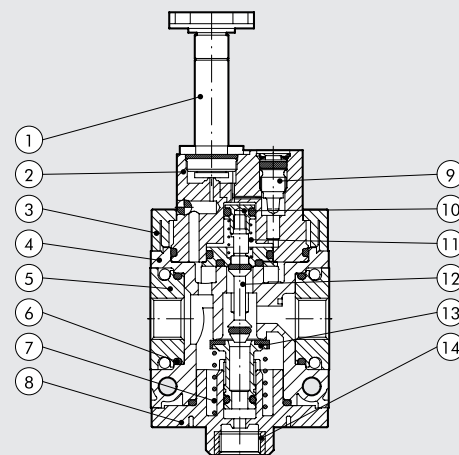
The progressive starter is particularly useful on machinery where it is important to prevent actuators from moving rapidly and out of control, or where, for safety reasons, the air in-feed needs to be gentle and gradual. It, however, there is a major leak in the downstream system, it may never be possible to achieve the pressure required to open the valve completely.



TECHNICAL DATA	APR SY1			APR SY2				
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	
Threaded port	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	
Threaded discharge port		1/8" NPT				1/4" NPT		
Type of control		Solenoid		Solenoid - Cnomo solenoid				
Inlet pressure	bar	3 - 10				3 - 10		
	MPa	0.3 - 1				0.3 - 1		
	psi	43 - 145				43 - 145		
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	Nl/min	900	1000	1100	2800	3600	3600	
	scfm	32	39	39	99	127	127	
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	1250	1500	1600	4400	4800	4800	
	scfm	44	53	57	156	170	170	
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	Nl/min		500			2700		
	scfm		18			96		
Maximum flow rate start-up, at 6.3 bar (0.63 MPa; 91 psi) with regulation pin completely unscrewed	Nl/min		170			700		
	scfm		6			25		
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		
Weight	pounds	0.45	0.44	0.42	1.1	1.09	1.04	1.01
Fluid		Compressed air or other inert gases						
Mounting position		In any position						
Additional air take-off, for pressure gauges or fittings		1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	500			1500			
	scfm	18			53			
Wall fixing screws		N. 8-32 unc x 2			N. 10-24 unc x 2			
Bobbin capacity	W	12 VDC and 24 VDC = 2W; 24 VAC, 110 VAC and 220 VAC = 3.5 VA for Cnomo versions: 24 VDC = 4W; 24 VAC, 110 VAC, 220 VAC = 4 VA						
Manual control		Bistable: horizontal = OFF, vertical = ON						

COMPONENTS

- ① Sleeve ø8 mm
- ② Anodized aluminium upper block
- ③ Technopolymer flange
- ④ Technopolymer body
- ⑤ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ⑥ O-ring NBR gasket
- ⑦ Stainless steel valve spring
- ⑧ Technopolymer bottom plug
- ⑨ OT58 brass progressive start regulation pin
- ⑩ OT58 brass internal valve
- ⑪ Stainless steel spring stem recoveryng
- ⑫ OT58 brass stem
- ⑬ OT58 brass main valve with vulcanized gasket
- ⑭ OT58 brass threaded insert



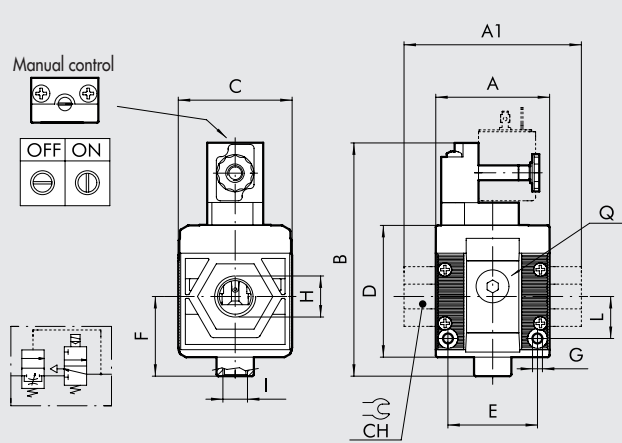
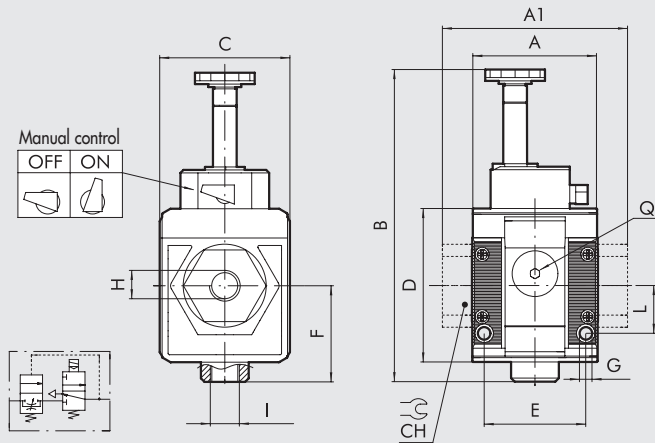
DIMENSIONS

SOLENOID

SY1-SY2

CNOMO SOLENOID

SY2



		SOLENOID SIZE 1			SOLENOID / CNOMO SOLENOID SIZE 2			
H (threaded port)	NPT	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A			1.65				2.4	
A1		-	-	1.73	-	-	3.74	3.74
B			4.14				5.16	
	Cnomo		-				4.92	
C			1.73				2.4	
CH			-		-	-	1.26	1.41
D			2.03				2.77	
E			1.32				1.87	
F			1.02				1.68	
G			0.165				0.21	
I (exhaust)			1/8" NPT				1/4" NPT	
L			0.63				0.89	
Q (no. 2 additional air takes-off)			1/8" BSPP				1/4" BSPP	

KEY TO CODES

5U	1	1	A	70	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	A Progressive starter APR	70 Solenoid *71 Cnomo solenoid	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

* Only for size 2

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 PROGRESSIVE STARTER							
5U10A700	APR SY1 solenoid NPT without bushings	Syntesi® SY2 PROGRESSIVE STARTER					
5U11A701	APR SY1 1/8 solenoid NPT	5U20A700	APR SY2 solenoid NPT without bushings	5U20A710	APR SY2 Cnomo solenoid NPT without bushings		
5U12A702	APR SY1 1/4 solenoid NPT	5U23A703	APR SY2 3/8 solenoid NPT	5U23A713	APR SY2 3/8 Cnomo solenoid NPT		
5U13A703	APR SY1 3/8 solenoid NPT	5U24A704	APR SY2 1/2 solenoid NPT	5U24A714	APR SY2 1/2 Cnomo solenoid NPT		
		5U25A705	APR SY2 3/4 solenoid NPT	5U25A715	APR SY2 3/4 Cnomo solenoid NPT		
		5U26A706	APR SY2 1 solenoid NPT	5U26A716	APR SY2 1 Cnomo solenoid NPT		

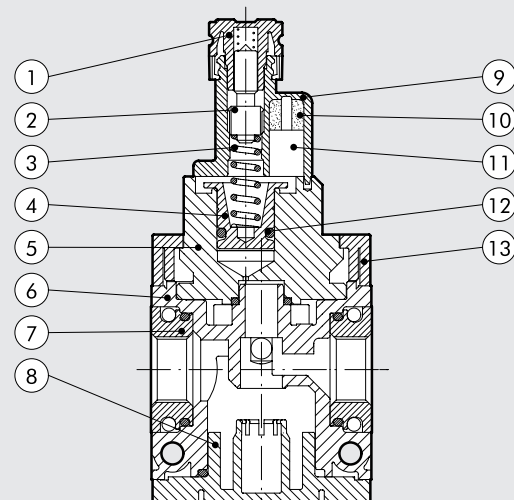
Syntesi® pressure switches feature a high degree of miniaturisation and a modern attractive design. As they are extremely modular, the Syntesi® series can be installed facing up or down. They come ready assembled with a 78.8 inch cable or an M8 connector with a 11.8 inch cable. The contact is the switching type, which means it can be normally open or normally closed. It can be regulated via a knurled push-lock handle. On the front and back there is a port (1/8" BSPP for size 1 and 1/4" BSPP size 2) that can be used with pressure gauges or as an additional air intake.



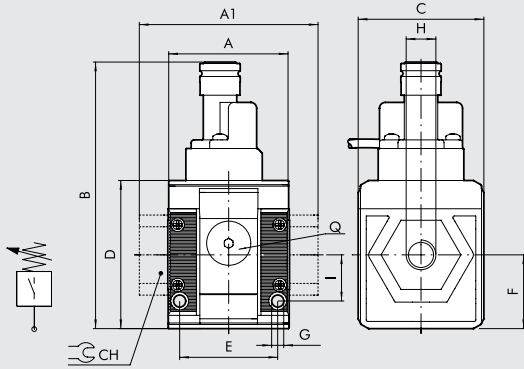
TECHNICAL DATA	SY1 PRESSURE SWITCHES			SY2 PRESSURE SWITCHES			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port	From 7 to 145			From 7 to 145			
Adjustable pressure interval	psi			psi			
Hysteresis (not adjustable)	psi			psi			
Maximum pressure	bar			bar			
	MPa			MPa			
	psi			psi			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			°C			
	°F			°F			
Maximum current	A			A			
Maximum voltage	V			V			
Outside diameter of cable	in			in			
Number of wires and cross section	3 x 0.5 mm ²			3 x 0.5 mm ²			
Contacts	Normally-Open (NO) and Normally-Closed (NC)						
Protection	IP65			IP65			
Number of switchings	5 x 10 ⁶			5 x 10 ⁶			
Fluid	Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous						
Mounting position	In any position						
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min			Nl/min			
	scfm			scfm			
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			
Weight	0.57	0.55	0.54	0.97	0.92	0.9	0.88

COMPONENTS

- ① Technopolymer adjusting "push lock" handle
- ② OT58 brass adjusting screw
- ③ Steel piston spring
- ④ OT58 brass piston
- ⑤ Aluminium top plug
- ⑥ Technopolymer body
- ⑦ IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium
- ⑧ Technopolymer bottom plug
- ⑨ Technopolymer pressure switch body
- ⑩ Resin finish for IP65
- ⑪ Electrical contact
- ⑫ O-ring NBR gasket
- ⑬ Technopolymer flange

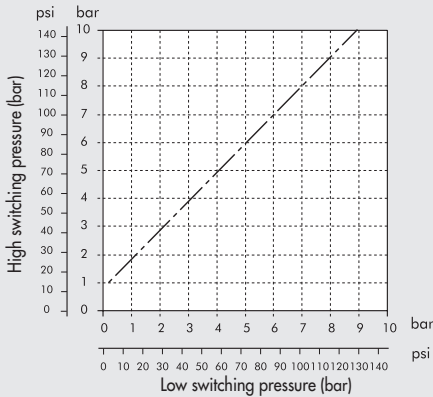


DIMENSIONS



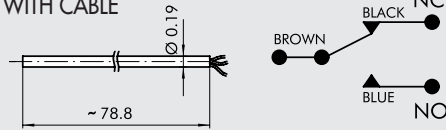
		SIZE 1			SIZE 2			
H (threaded port)	NPT	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A		1.65			2.4			
A1		-	-	1.73	-	-	3.74	3.74
B		3.67			3.98			
C		1.73			2.4			
CH		-	-	-	-	1.26	1.41	
D		2.03			2.77			
E		1.32			1.87			
F		1.02			1.28			
G		0.165			0.21			
I		0.63			0.89			
Q (no. 2 additional air takes-off)		1/8" BSPP			1/4" BSPP			

HYSTERESIS GRAPH

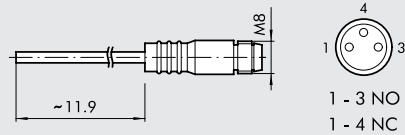


WIRING DIAGRAM

VERSION WITH CABLE



VERSION WITH M8 CONNECTOR



KEY TO CODES

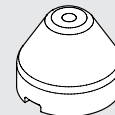
5U	1	1	5	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	S Pressure switches	10 78.8 inch cable 20 11.8 inch cable with M8 connector	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT 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	Descrizione	Code	Description
Syntesi® SY1 PRESSURE SWITCHES		Syntesi® SY2 PRESSURE SWITCHES	
5U10S100	Pressure switch 78.8 inch cable SY1 NPT without bushings	5U20S100	Pressure switch 78.8 inch cable SY2 NPT without bushings
5U11S101	Pressure switch 78.8 inch cable SY1 1/8 NPT	5U23S103	Pressure switch 78.8 inch cable SY2 3/8 NPT
5U12S102	Pressure switch 78.8 inch cable SY1 1/4 NPT	5U24S104	Pressure switch 78.8 inch cable SY2 1/2 NPT
5U13S103	Pressure switch 78.8 inch cable SY1 3/8 NPT	5U25S105	Pressure switch 78.8 inch cable SY2 3/4 NPT
		5U26S106	Pressure switch 78.8 inch cable SY2 1 NPT
5U10S200	Pressure switch M8 connector SY1 NPT without bushings	5U20S200	Pressure switch M8 connector SY2 NPT without bushings
5U11S201	Pressure switch M8 connector SY1 1/8 NPT	5U23S203	Pressure switch M8 connector SY2 3/8 NPT
5U12S202	Pressure switch M8 connector SY1 1/4 NPT	5U24S204	Pressure switch M8 connector SY2 1/2 NPT
5U13S203	Pressure switch M8 connector SY1 3/8 NPT	5U25S205	Pressure switch M8 connector SY2 3/4 NPT
		5U26S206	Pressure switch M8 connector SY2 1 NPT

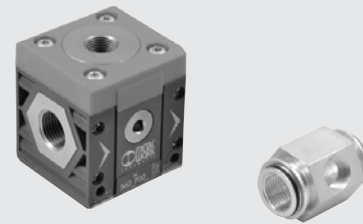
ACCESSOIRES: SECURITY KNOB



Code	Description
9200703	Security knob

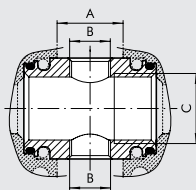
NOTE: Pull outwards to remove the knob from the pressure switch on the unit. Insert the security knob and regulate the pressure switch. Then press the handle firmly to lock it in position. If the pressure switch needs to be reset, remove the security knob by forcing it laterally with a screwdriver.

The air take-off is a connecting element that is mounted between two Syntesi® modules. The 2-way version, made of metal and having restrained dimensions, has a threaded port upwards and one downwards. The 4-way version, in technopolymer, has a threaded port on each side. This gives or four additional air outlets for use as required. All Syntesi® modules come with two threaded ports, one on the front and one on the back, for use as air take-off.



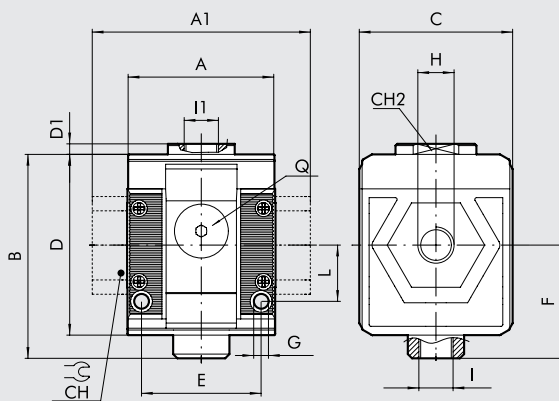
TECHNICAL DATA	AIR TAKE-OFF		AIR INTAKE, 4-WAY		
	SIZE 1	SIZE 2	SIZE 1	SIZE 2	
Flow rate of the air take-off at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	Nl/min	1550	7000	500 - 2000	1500 - 4500
	scfm	55	248	18 - 71	53 - 160
Usage temperature and pressure	Given by the Syntesi® modules it's connected to				
Weight	pounds	0.14	0.17	0.22	0.68
Fluid	Compressed air or other inert gases				

DIMENSIONS 2 WAY-VERSION



	SIZE 1	SIZE 2
A	0.62	1.06
B	1/8" NPT	3/8" NPT
C	3/8" NPT	1/2" NPT

DIMENSIONS 4 WAY-VERSION



		SIZE 1			SIZE 2			
H (threaded port)	NPT	1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A		1.65				2.4		
A1		-	-	1.73	-	-	3.74	3.74
B		2.28				3.19		
C		1.73				2.4		
CH		-			-	-	1.26	1.41
CH2		3/4				-		
D		2.03				2.77		
D1		0.19				-		
E		1.32				1.87		
F		1.02				1.68		
G		0.165				0.21		
I		1/8" NPT				1/4" NPT		
I1		1/4" NPT				3/8" NPT		
L		0.63				0.89		
Q (no. 2 add. air takes-off)		1/8" BSPP				1/4" BSPP		

KEY TO CODE FOR 4-WAY VERSION

5U	1	1	P	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	P Air take-off	20 4-way	0 Without bushing 1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port
	2 Size 2	0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port			0 Without bushing 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

PURCHASE ORDER CODES HAVING A MORE FREQUENT USE CODES

Code	Description
AIR INTAKE, 2-way version	
5U10P100	PA SY1 NPT
5U20P100	PA SY2 NPT
AIR INTAKE, 4-way version	
5U10P200	PA 4-way SY1 NPT without bushing
5U11P201	PA 4-way SY1 1/8 NPT
5U12P202	PA 4-way SY1 1/4 NPT
5U13P203	PA 4-way SY1 3/8 NPT
5U20P200	PA 4-way SY2 NPT without bushing
5U23P203	PA 4-way SY2 3/8 NPT
5U24P204	PA 4-way SY2 1/2 NPT
5U25P205	PA 4-way SY2 3/4 NPT
5U26P206	PA 4-way SY2 1 NPT

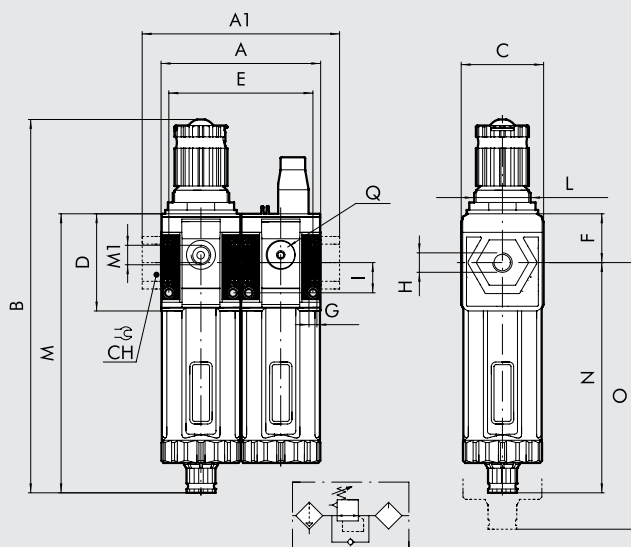
N.B. Besides the below mentioned codes, you can order elements composed at your will according to the key to codes.

For full details and list of components refer to the sections about filter-regulator and the lubricator.



TECHNICAL DATA	FR + LUB SY1			FR + LUB SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port							
Degree of filtration	yellow: 5 (200 microinch) - output air purity class ISO8573-1: 3.7- white: 20 (790 microinch) - output air purity class ISO8573-1: 4.7- blue: 50 (2000 microinch) - output air purity class ISO8573-1: 5.7-						
Max. inlet pressure	bar			13			
	MPa			1.3			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	psi			188			
	NL/min			1200			
(Inlet pressure 10 bar; 1 MPa; 145 psi)	scfm			42.5			
	NL/min			4000			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	scfm			141.5			
	NL/min			100			
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	scfm			3.5			
	°C			From -10 to +50			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°F			From 14 to +122			
	Included						
Padlockable knob	Included, via balanced valve						
Upstream pressure compensation	Compressed air or other inert gases						
Weight	0.92	0.91	0.89	2.37	2.31	2.30	2.27
Fluid	Compressed air or other inert gases						
Mounting position	Vertical			Vertical			
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	500 (FR) - 450 (LUB)			1400 (FR) - 800 (LUB)			
	18 (FR) - 16 (LUB)			49.5 (FR) - 28 (LUB)			
Filter cup capacity (condensate)	fluid ounce oz			2.37			
Quantity of filled oil	fluid ounce oz			4.40			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Note: the maximum input pressure for the RA version must not exceed 145 psi ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Recommended oils							
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			

DIMENSIONS



		SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
H (threaded port)	NPT			3.39			6.14	6.14
A			3.31			4.8		
A1		-	-	3.39	-	-	6.14	6.14
B	RMSA		7.60			9.68		
	RA		7.95			9.84		
C			1.73			2.4		
CH			-		-	-	1.26	1.41
D			2.03			2.77		
E			2.97			4.25		
F			1.08			1.5		
G			0.165			0.21		
I			0.63			0.89		
L			M30x1.5			M38x2		
M	RMSA		5.83			7		
	RA		5.99			7.16		
M1 (pressure gauge port)		1/8" BSPP				1/4" BSPP		
N	RMSA		4.82			5.5		
	RA		4.97			5.66		
O	RMSA		7.95			9.65		
	RA		8.11			9.8		
Q (no. 2 additional air takes-off)		1/8" BSPP				1/4" BSPP		

KEY TO CODES

5U	1	1	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	B Filter-regulator	10 5 µm (200 microinch), RMSA, 0 - 30 psi 20 20 µm (790 microinch), RMSA, 0 - 30 psi 30 50 µm (2000 microinch), RMSA, 0 - 30 psi 40 5 µm (200 microinch), RA, 0 - 30 psi 50 20 µm (790 microinch), RA, 0 - 30 psi 60 50 µm (2000 microinch), RA, 0 - 30 psi 12 5 µm (200 microinch), RMSA, 0 - 60 psi 22 20 µm (790 microinch), RMSA, 0 - 60 psi 32 50 µm (2000 microinch), RMSA, 0 - 60 psi 42 5 µm (200 microinch), RA, 0 - 60 psi 52 20 µm (790 microinch), RA, 0 - 60 psi 62 50 µm (2000 microinch), RA, 0 - 60 psi 14 5 µm (200 microinch), RMSA, 0 - 120 psi 24 20 µm (790 microinch), RMSA, 0 - 120 psi 34 50 µm (2000 microinch), RMSA, 0 - 120 psi 44 5 µm (200 microinch), RA, 0 - 120 psi 54 20 µm (790 microinch), RA, 0 - 120 psi 64 50 µm (2000 microinch), RA, 0 - 120 psi 16 5 µm (200 microinch), RMSA, 0 - 180 psi 26 20 µm (790 microinch), RMSA, 0 - 180 psi 36 50 µm (2000 microinch), RMSA, 0 - 180 psi 46 5 µm (200 microinch), RA, 0 - 180 psi 56 20 µm (790 microinch), RA, 0 - 180 psi 66 50 µm (2000 microinch), RA, 0 - 180 psi	L Lubricator	10 Manual filling from the top	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
 RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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
FR + LUB Syntesi [®] SY1		FR + LUB Syntesi [®] SY2		FR + LUB Syntesi [®] SY2	
5U11B24L101	FR+LUB SY1 1/8 20 0-120 RMSA NPT	5U23B24L103	FR+LUB SY2 3/8 20 0-120 RMSA NPT	5U26B24L106	FR+LUB SY2 1 20 0-120 RMSA NPT
5U11B54L101	FR+LUB SY1 1/8 20 0-120 RA NPT	5U23B54L103	FR+LUB SY2 3/8 20 0-120 RA NPT	5U26B54L106	FR+LUB SY2 1 20 0-120 RA NPT
5U12B24L102	FR+LUB SY1 1/4 20 0-120 RMSA NPT	5U24B24L104	FR+LUB SY2 1/2 20 0-120 RMSA NPT		
5U12B54L102	FR+LUB SY1 1/4 20 0-120 RA NPT	5U24B54L104	FR+LUB SY2 1/2 20 0-120 RA NPT		
5U13B24L103	FR+LUB SY1 3/8 20 0-120 RMSA NPT	5U25B24L105	FR+LUB SY2 3/4 20 0-120 RMSA NPT		
5U13B54L103	FR+LUB SY1 3/8 20 0-120 RA NPT	5U25B54L105	FR+LUB SY2 3/4 20 0-120 RA NPT		

V3V + FR + LUB SYNTESI®

For full details and list of components refer to the sections about shut-off valve, filter-regulator and lubricator.

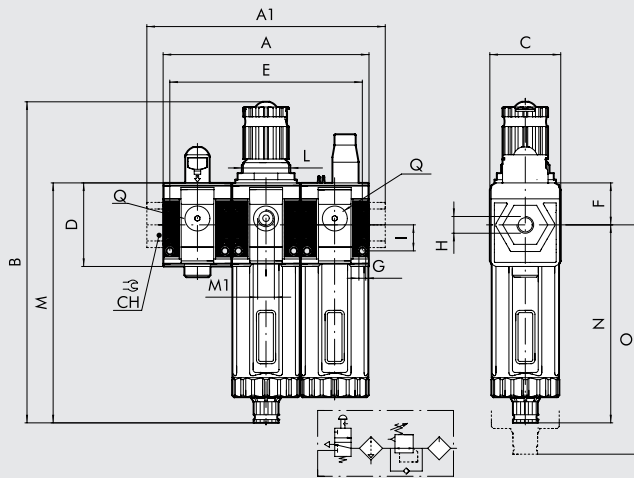


UNITS

V3V + FR + LUB Syntesi®

TECHNICAL DATA	V3V + FR + LUB SY1			V3V + FR + LUB SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port							
Degree of filtration	yellow: 5 (200 microinch) - output air purity class ISO8573-1: 3.7- white: 20 (790 microinch) - output air purity class ISO8573-1: 4.7- blue: 50 (2000 microinch) - output air purity class ISO8573-1: 5.7-						
Max. inlet pressure	15			13			
	1.5			1.3			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	217			188			
	250			1200			
(Inlet pressure 10 bar; 1 MPa; 145 psi)	9			42.5			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	1050			4000			
	37			141.5			
Relief valve flow rate at 6.3 bar (0.63 MPa; 91 psi)	70			100			
	2.5			3.5			
Min/max temperature at 10 bar; 1 MPa; 145 psi	From -10 to +50			From -10 to +50			
	From 14 to +122			From 14 to +122			
Full outflow with zero inlet pressure	Included			Included			
Drain flow rate at 6.3 bar (0.63 MPa; 91 psi)	500			2000			
	18			71			
Padlockable knob	Included with both V3V and regulator						
Upstream pressure compensation	Included, via balanced valve						
Weight	1.32	1.32	1.29	3.26	3.2	3.19	3.17
Fluid	Compressed air or other inert gases						
Mounting position	Vertical			Vertical			
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	500 (V3V) - 500 (FR) - 450 (LUB)			1500 (V3V) - 1400 (FR) - 800 (LUB)			
	18 (V3V) - 18 (FR) - 16 (LUB)			53 (V3V) - 49.5 (FR) - 28 (LUB)			
Filter cup capacity	1.02			2.37			
Quantity of filled oil	2.03			4.40			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Note: the maximum input pressure for the RA version must not exceed 145 psi ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Recommended oils	ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			

OVERALL DIMENSIONS



		SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
H (threaded port)	NPT							
A			4.97				5.04	
A1		-	-	5.04	-	-	8.54	8.54
B	RMSA		7.60				9.68	
	RA		7.95				9.84	
C			1.73				2.4	
CH			-		-	-	1.26	1.41
D			2.03				2.77	
E			4.61				6.63	
F			1.08				1.5	
G			0.165				0.21	
I			0.63				0.89	
L			M30x1.5				M38x2	
M	RMSA		5.83				7	
	RA		5.99				7.16	
M1 (pressure gauge port)			1/8" BSPP				1/4" BSPP	
N	RMSA		4.82				5.5	
	RA		4.97				5.66	
O	RMSA		7.95				9.65	
	RA		8.11				9.8	
Q (no. 2 additional air takes-off)			1/8" BSPP				1/4" BSPP	

KEY TO CODES

5U	1	1	V	10	B	24	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	TYPE	ELEMENT	DEGREE OF FILTRATION, TYPE OF CONDENSATE DRAIN AND SETTING RANGE	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1 2 Size 2	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port	V V3V	10 Manual	B Filter-regulator	10 5 µm (200 microinch), RMSA, 0 - 30 psi 20 20 µm (790 microinch), RMSA, 0 - 30 psi 30 50 µm (2000 microinch), RMSA, 0 - 30 psi 40 5 µm (200 microinch), RA, 0 - 30 psi 50 20 µm (790 microinch), RA, 0 - 30 psi 60 50 µm (2000 microinch), RA, 0 - 30 psi 12 5 µm (200 microinch), RMSA, 0 - 60 psi 22 20 µm (790 microinch), RMSA, 0 - 60 psi 32 50 µm (2000 microinch), RMSA, 0 - 60 psi 42 5 µm (200 microinch), RA, 0 - 60 psi 52 20 µm (790 microinch), RA, 0 - 60 psi 62 50 µm (2000 microinch), RA, 0 - 60 psi 14 5 µm (200 microinch), RMSA, 0 - 120 psi 24 20 µm (790 microinch), RMSA, 0 - 120 psi 34 50 µm (2000 microinch), RMSA, 0 - 120 psi 44 5 µm (200 microinch), RA, 0 - 120 psi 54 20 µm (790 microinch), RA, 0 - 120 psi 64 50 µm (2000 microinch), RA, 0 - 120 psi 16 5 µm (200 microinch), RMSA, 0 - 180 psi 26 20 µm (790 microinch), RMSA, 0 - 180 psi 36 50 µm (2000 microinch), RMSA, 0 - 180 psi 46 5 µm (200 microinch), RA, 0 - 180 psi 56 20 µm (790 microinch), RA, 0 - 180 psi 66 50 µm (2000 microinch), RA, 0 - 180 psi	L Lubricator	10 Manual filling from the top	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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.

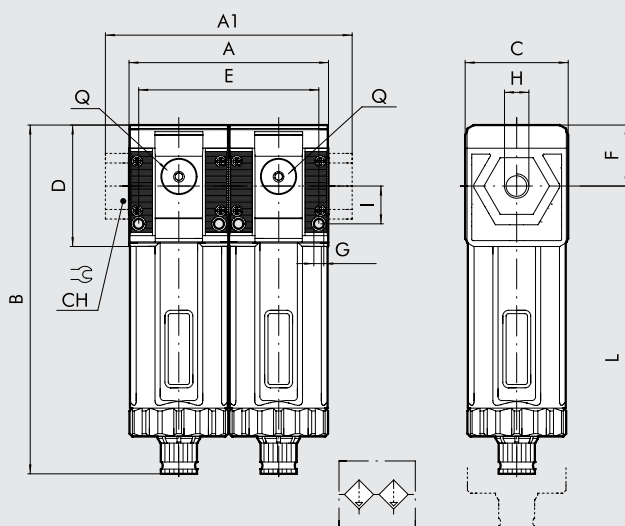
Code	Description	Code	Description	Code	Description
V3V + FR + LUB Syntesi [®] SY1		V3V + FR + LUB Syntesi [®] SY2		V3V + FR + LUB Syntesi [®] SY2	
5U11V10B24L101	V3V+FR+LUB SY1 1/8 20 0-120 RMSA NPT	5U23V10B24L103	V3V+FR+LUB SY2 3/8 20 0-120 RMSA NPT	5U26V10B24L106	V3V+FR+LUB SY2 1 20 0-120 RMSA NPT
5U11V10B54L101	V3V+FR+LUB SY1 1/8 20 0-120 RA NPT	5U23V10B54L103	V3V+FR+LUB SY2 3/8 20 0-120 RA NPT	5U26V10B54L106	V3V+FR+LUB SY2 1 20 0-120 RA NPT
5U12V10B24L102	V3V+FR+LUB SY1 1/4 20 0-120 RMSA NPT	5U24V10B24L104	V3V+FR+LUB SY2 1/2 20 0-120 RMSA NPT		
5U12V10B54L102	V3V+FR+LUB SY1 1/4 20 0-120 RA NPT	5U24V10B54L104	V3V+FR+LUB SY2 1/2 20 0-120 RA NPT		
5U13V10B24L103	V3V+FR+LUB SY1 3/8 20 0-120 RMSA NPT	5U25V10B24L105	V3V+FR+LUB SY2 3/4 20 0-120 RMSA NPT		
5U13V10B54L103	V3V+FR+LUB SY1 3/8 20 0-120 RA NPT	5U25V10B54L105	V3V+FR+LUB SY2 3/4 20 0-120 RA NPT		

For full details and list of components refer to the sections about filter and depurator.



TECHNICAL DATA	FIL + DEP SY1			FIL + DEP SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Purifier degree of filtration	0.01 - output air purity class ISO8573-1: 1.7.2						
Filter degree of filtration	yellow: 5 (200 microinch)						
Max. inlet pressure	15 bar 1.5 MPa			13 bar 1.3 MPa			
Suggested flow rate at 6.3 bar (0.63 MPa; 91 psi)	217 psi 550 NL/min 9 scfm			188 psi 1050 NL/min 37 scfm			
Maximun suggested flow rate	Look a the chart on the depurator page 2-12			Look a the chart on the depurator page 2-12 / 2-13			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C From -10 to +50			°C From -10 to +50			
	°F From 14 to +122			°F From 14 to +122			
Weight	0.79	0.78	0.76	2.1	2.02	2.01	1.98
Purifier condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure						
Filter condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure						
	RA: automatic drain with condensate discharge, independent of pressure and flow rate						
	Note: the maximum input pressure for the RA version must not exceed 145 psi						
Fluid	Compressed air or other inert gases						
Cup capacity filter/depurator	1.02/0.51 fluid ounce oz			2.37/1.35 fluid ounce oz			
Mounting position	Vertical			Vertical			
Port for additional air take-off	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate (not purified air)	500 NL/min			1500 NL/min			
at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	18 scfm			53 scfm			
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			

DIMENSIONS



H (threaded port)	NPT	SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A			3.31			4.8		
A1		-	-	3.39	-	-	6.14	6.14
B	RMSA		5.83			7		
	RA		5.99			7.16		
C			1.73			2.4		
CH			-		-	1.26	1.41	
D			2.03			2.77		
E			2.97			4.25		
F			1.08			1.5		
G			0.165			0.21		
I			0.63			0.89		
L	RMSA		7.95			9.65		
	RA		8.11			9.8		
Q (no. 2 additional air takes-off)			1/8" BSPP			1/4" BSPP		

KEY TO CODES

5U	1	1	F	10	D	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	ELEMENT	TYPE	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	F Filter	10 5 μm (200 microinch), RMSA 40 5 μm (200 microinch), RA	D Depurator	10 RMSA	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port
	2 Size 2	3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port					

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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.

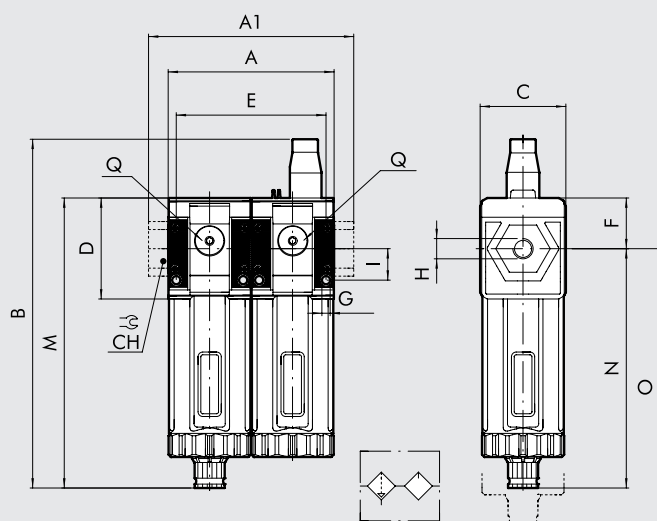
Code	Description	Code	Description
FIL + DEP Syntesi [®] SY1		FIL + DEP Syntesi [®] SY2	
5U11F10D101	FIL+DEP SY1 1/8 5 RMSA NPT	5U23F10D103	FIL+DEP SY2 3/8 5 RMSA NPT
5U11F40D101	FIL+DEP SY1 1/8 5 RA NPT	5U23F40D103	FIL+DEP SY2 3/8 5 RA NPT
5U12F10D102	FIL+DEP SY1 1/4 5 RMSA NPT	5U24F10D104	FIL+DEP SY2 1/2 5 RMSA NPT
5U12F40D102	FIL+DEP SY1 1/4 5 RA NPT	5U24F40D104	FIL+DEP SY2 1/2 5 RA NPT
5U13F10D103	FIL+DEP SY1 3/8 5 RMSA NPT	5U25F10D105	FIL+DEP SY2 3/4 5 RMSA NPT
5U13F40D103	FIL+DEP SY1 3/8 5 RA NPT	5U25F40D105	FIL+DEP SY2 3/4 5 RA NPT
		5U26F10D106	FIL+DEP SY2 1 5 RMSA NPT
		5U26F40D106	FIL+DEP SY2 1 5 RA NPT

For full details and list of components refer to the sections about filter and lubricator.



TECHNICAL DATA	FIL + LUB SY1			FIL + LUB SY2			
	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Threaded port	1/8" NPT	1/4" NPT	3/8" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT
Degree of filtration	yellow: 5 (200 microinch) - output air purity class ISO8573-1: 3.7.- white: 20 (790 microinch) - output air purity class ISO8573-1: 4.7.- blue: 50 (2000 microinch) - output air purity class ISO8573-1: 5.7.-						
Max. inlet pressure	bar			13			
	MPa			1.3			
	psi			188			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	NI/min			2900			
	scfm			102.5			
Flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	NI/min			4400			
	scfm			156			
Min/max temperature at 10 bar; 1 MPa; 145 psi	°C			From -10 to +50			
	°F			From 14 to +122			
Weight	0.77	0.76	0.78	1.85	1.79	1.78	1.75
Fluid	Compressed air or other inert gases						
Mounting position	Vertical			Vertical			
Additional air take-off, for pressure gauges or fittings	1/8" BSPP, front and rear			1/4" BSPP, front and rear			
Additional air take-off flow rate at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	NI/min			1500 - 800			
	scfm			53 - 28			
Filter cup capacity (condensate)	fluid ounce oz			2.37			
Quantity of filled oil	fluid ounce oz			4.40			
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate Note: the maximum input pressure for the RA version must not exceed 145 psi						
Recommended oils	ISO and UNI FD22 (Energol HPL; Spinesso; Mobil DTE; Tellus oil)						
Wall fixing screws	N. 8-32 unc x 2			N. 10-24 unc x 2			

DIMENSIONS



H (threaded port)	NPT	SIZE 1			SIZE 2			
		1/8"	1/4"	3/8"	3/8"	1/2"	3/4"	1"
A			3.31			4.8		
A1		-	-	3.39	-	-	6.14	6.14
B			6.38			7.9		
C			1.73			2.4		
CH			-		-	1.26	1.41	
D			2.03			2.77		
E			2.97			4.25		
F			1.08			1.5		
G			0.165			0.21		
I			0.63			0.89		
M	RMSA		5.83			7		
	RA		5.99			7.16		
N	RMSA		4.82			5.5		
	RA		4.97			5.66		
O	RMSA		7.95			9.65		
	RA		8.11			9.8		
Q (no. 2 additional air takes-off)			1/8" BSPP			1/4" BSPP		

KEY TO CODES

5U	1	1	F	10	L	10	1
SYNTESI	SIZE	THREADED INPUT CONNECTION	ELEMENT	DEGREE OF FILTRATION AND TYPE OF CONDENSATE DRAIN	ELEMENT	OIL FILLING	THREADED OUTPUT CONNECTION
5U Syntesi NPT	1 Size 1	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port	F Filter	10 5 µm (200 microinch), RMSA 20 20 µm (790 microinch), RMSA 30 50 µm (2000 microinch), RMSA 40 5 µm (200 microinch), RA 50 20 µm (790 microinch), RA 60 50 µm (2000 microinch), RA	L Lubricator	10 Manual filling from the top	1 1/8" NPT port 2 1/4" NPT port 3 3/8" NPT port 3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port
	2 Size 2	3 3/8" NPT port 4 1/2" NPT port 5 3/4" NPT port 6 1" NPT port					

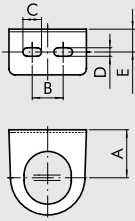
RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
RA: automatic drain with condensate discharge, independent of pressure and flow rate.

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
FIL + LUB Syntesi[®] SY1		FIL + LUB Syntesi[®] SY2	
5U11F20L101	FIL+LUB SY1 1/8 20 RMSA NPT	5U23F20L103	FIL+LUB SY2 3/8 20 RMSA NPT
5U11F50L101	FIL+LUB SY1 1/8 20 RA NPT	5U23F50L103	FIL+LUB SY2 3/8 20 RA NPT
5U12F20L102	FIL+LUB SY1 1/4 20 RMSA NPT	5U24F20L104	FIL+LUB SY2 1/2 20 RMSA NPT
5U12F50L102	FIL+LUB SY1 1/4 20 RA NPT	5U24F50L104	FIL+LUB SY2 1/2 20 RA NPT
5U13F20L103	FIL+LUB SY1 3/8 20 RMSA NPT	5U25F20L105	FIL+LUB SY2 3/4 20 RMSA NPT
5U13F50L103	FIL+LUB SY1 3/8 20 RA NPT	5U25F50L105	FIL+LUB SY2 3/4 20 RA NPT
		5U26F20L106	FIL+LUB SY2 1 20 RMSA NPT
		5U26F50L106	FIL+LUB SY2 1 20 RA NPT

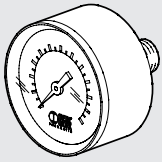
MOUNTING BRACKET FOR REG. AND FR



Code	Description
9200701	SF100-BIT-ND 1/4 - SY 1
9400701	SF200-ND-3/8 1/2 - SY2

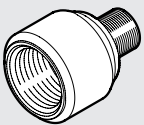
Code	A	B	C	D	E
9200701	1.22	0.79	0.48	0.22	0.58
9400701	1.66	1.59	0.47	0.22	0.59

PRESSURE GAUGES



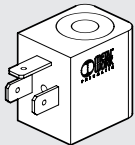
Code	Description
9700101	M 40 1/8 12 (0-180)
9700102	M 40 1/8 04 (0-60)
9800101	M 50 1/8 12 (0-180)
9800102	M 50 1/8 04 (0-60)
9900101	M 63 1/4 12 (0-180)

ADAPTERS FOR PRESSURE GAUGES (SY2)



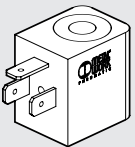
Code	Description
9210005	1/4 adapter for 1/8 pressure gauge

COIL FOR APR AND V3V ELPN



Code	Description
W0215000101	Coil 22 Ø 8 BA 2W-24VDC
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC

"UL" AND "CSA" COILS 22 mm FOR APR AND V3V ELPN

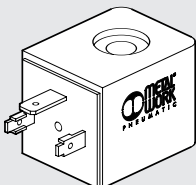


Code	Description
W0215000251	Coil 22 Ø 8 BA 2W-12VDC UR
W0215000201	Coil 22 Ø 8 BA 2W-24VDC UR
W0215000211	Coil 22 Ø 8 BA 3.5VA-24VAC UR
W0215000221	Coil 22 Ø 8 BA 3.5VA-110VAC UR
W0215000231	Coil 22 Ø 8 BA 3.5VA-220VAC UR

For the standards description look at page 5-4

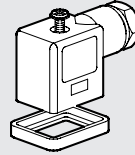


COIL 30 mm FOR APR AND V3V ELPN



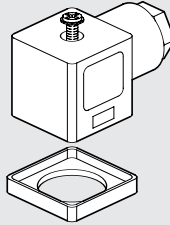
Code	Description
W0210010100	Coil 30 Ø 8 4W-24VDC
W0210011100	Coil 30 Ø 8 4VA-24VAC 50/60 HZ
W0210012100	Coil 30 Ø 8 4VA-110VAC 50/60 HZ
W0210013100	Coil 30 Ø 8 4VA-220VAC 50/60 HZ

ELECTRIC CONNECTOR 22 mm FOR APR AND V3V ELPN



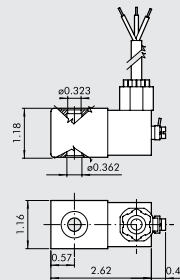
Code	Description
W0970510011	Connector standard
W0970510012	Connector 22 LED 24V
W0970510013	Connector 22 LED 110V
W0970510014	Connector 22 LED 220V
W0970510015	Connector 22 LED VDR 24V
W0970510016	Connector 22 LED VDR 110V
W0970510017	Connector 22 LED VDR 220V
W0970510070	Connector 22 standard ATEX

ELECTRIC CONNECTOR 30 mm FOR APR AND V3V ELPN



Code	Description
W0970520033	Connector 30 STD
W0970520034	Connector 30 LED 24V
W0970520035	Connector 30 LED 110V
W0970520036	Connector 30 LED 220V
W0970520037	Connector 30 LED VDR 24V
W0970520038	Connector 30 LED VDR 110V
W0970520039	Connector 30 LED VDR 220V

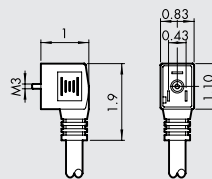
KIT FOR COIL EEXM



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 118 inch
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 197 inch
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 118 inch
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 197 inch
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 118 inch
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 197 inch
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 118 inch
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 197 inch

According to ATEX 94/9 CE rule,
 II 2G Ex mb IIC T4/T5 Gb
 II 2D Ex tb IIIC T130/T95 °C IP66 Db

PRE WIRED DIN CONNECTORS 6 FEET CABLE 22 mm



Code	Description
888776	DIN connector 110VAC led
888777	DIN connector standard black
888778	DIN connector 24VDC

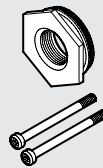
KIT COIL SIDE 22 IP65



Code	Description
0222100100	Kit for coils 22 - IP65

Improved IP65 protection, even after prolonged exposure to atmospheric agents.

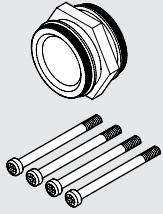
THREADED PORT



Code	Description
9210001U	Kit IN OUT 1/8 SY1 NPT
9210002U	Kit IN OUT 1/4 SY1 NPT
9210003U	Kit IN OUT 3/8 SY1 NPT
9210011U	Kit IN OUT 3/8 SY2 NPT
9210012U	Kit IN OUT 1/2 SY2 NPT
9210013U	Kit IN OUT 3/4 SY2 NPT
9210014U	Kit IN OUT 1 SY2 NPT

Max torque 0.3 lbf ft
 Max torque 1.84 lbf ft

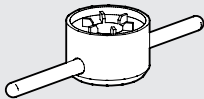
CONNECTING NIPPLE KIT



Code	Description
9210000	Connecting nipple kit SY1
9210010	Connecting nipple kit SY2

Max torque 0.3 lbf ft
Max torque 1.84 lbf ft

BOWL DISASSEMBLY SPANNER



Code	Description
9170601	CS TF - TL BIT/SY1
9210050	CS TF - TL SY2

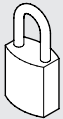
WALL-FIXING SCREW



Code	Description
9210030	M4x55 fixing screws SY1
9210031	M5x75 fixing screws SY2

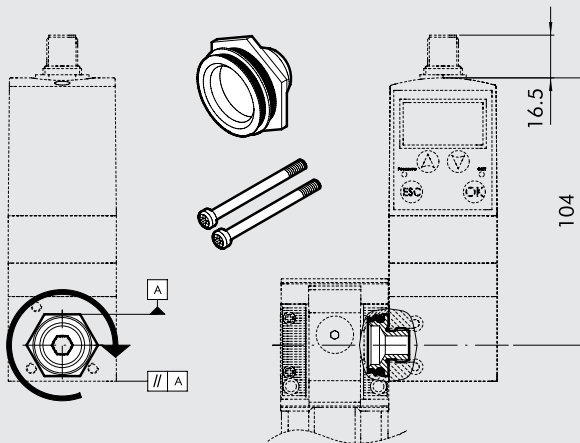
Max torque 0.59 lbf ft
Max torque 1.47 lbf ft

PADLOCK



Code	Description
9062401	Padlock

REGTRONIC CONNECTING KIT



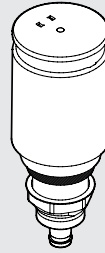
Code	Description
9210004	Adaptor for REGTRONIC 1/4 SY1

Max torque for screw, 0.3 lbf ft

Instructions:

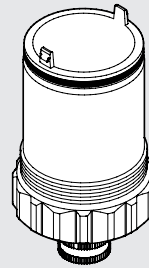
- 1) Screw the connecting bushing onto the REGTRONIC 1/4 as far as it will go. Use sealant on the G1/4 thread to provide a further seal.
- 2) Unscrew the bushing slightly until two surfaces of the hexagon are parallel to the body of REGTRONIC 1/4 (see diagram).
- 3) Insert the bushing into the Syntesi® unit.
- 4) Tighten the two self-tapping screws in the Syntesi® unit to a torque of 0.3 lbf ft max.

AUTOMATIC DRAIN (RA)



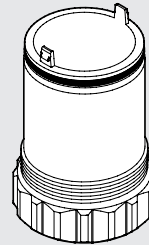
Code	Description
9000802	Spares RA automatic drain

BOWL RMSA/RA



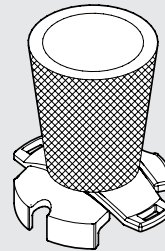
Code	Description
9210100	Bowl FIL FR DEP RMSA SY1
9210101	Bowl FIL FR RA SY1
9210105	Bowl FIL FR DEP RMSA SY2
9210106	Bowl FIL FR RA SY2

LUBRICATOR BOWL



Code	Description
9210110	Bowl LUB SY1
9210115	Bowl LUB SY2

FILTERING ELEMENT



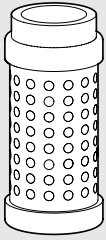
Code	Description
9210150	Filtering element 5 (yellow) μm SY1
9210151	Filtering element 20 (white) μm SY1
9210152	Filtering element 50 (blue) μm SY1
9210155	Filtering element 5 (yellow) μm SY2
9210156	Filtering element 20 (white) μm SY2
9210157	Filtering element 50 (blue) μm SY2

PURIFIER FILTERING ELEMENT



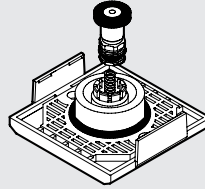
Code	Description
9210160	Cartridge DEP SY1
9210165	Cartridge DEP SY2

AC FILTERING ELEMENT



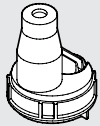
Code	Description
9210161	Cartridge AC SY1
9210166	Cartridge AC SY2

POPPET FOR REG



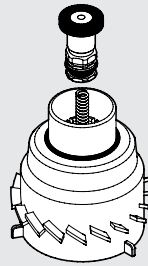
Code	Description
9210210	Poppet REG SY1
9210230	Poppet REG SY2

TRANSPARENT LUBRICATOR COVER



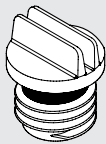
Code	Description
9210180	Transparent cover LUB SY1
9210185	Transparent cover LUB SY2

POPPET FOR FR



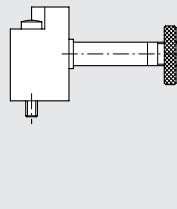
Code	Description
9210211	Poppet FR 5 µm SY1
9210212	Poppet FR 20 µm SY1
9210213	Poppet FR 50 µm SY1
9210231	Poppet FR 5 µm SY2
9210232	Poppet FR 20 µm SY2
9210233	Poppet FR 50 µm SY2

LUBRICATOR OIL-FILLING CAP



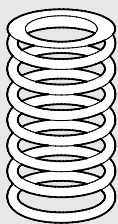
Code	Description
9210181	Oil-filling cap LUB SY1
9210186	Oil-filling cap LUB SY2

CNOMO CONTROL FOR V3V AND APR SY2



Code	Description
9453922	Elprn Cnomo control kit, manual bistable

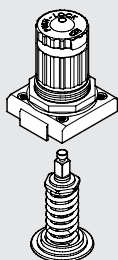
SPRINGS FOR REGULATORS AND FR



Code	Description
9210190	MO 02 (0-30 psi) SY1
9210191	MO 04 (0-60 psi) SY1
9210192	MO 08 (0-120 psi) SY1
9210193	MO 012 (0-180 psi) SY1
9210195	MO 02 (0-30 psi) SY2
9210196	MO 04 (0-60 psi) SY2
9210197	MO 08 (0-120 psi) SY2
9210198	MO 012 (0-180 psi) SY2

NOTES

BELL FOR REG AND FR



Code	Description
9210200	Bell 02 (0-30 psi) SY1
9210201	Bell 04 (0-60 psi) SY1
9210202	Bell 08 (0-120 psi) SY1
9210203	Bell 012 (0-180 psi) SY1
9210220	Bell 02 (0-30 psi) SY2
9210221	Bell 04 (0-60 psi) SY2
9210222	Bell 08 (0-120 psi) SY2
9210223	Bell 012 (0-180 psi) SY2

● GENERAL TECHNICAL DATA bit

PAGE 2-50



● bit FILTER

PAGE 2-52



● bit DEPURATOR

PAGE 2-54



● bit MICRO-REGULATOR

PAGE 2-56



● bit FILTER REGULATOR

PAGE 2-58



● bit LUBRICATOR

PAGE 2-60



● bit TAKE-OFF

PAGE 2-63



● FIL+REG+LUB bit

PAGE 2-64



● FR+LUB bit

PAGE 2-66



● FIL+DEP bit

PAGE 2-68



● FIL+LUB bit

PAGE 2-69

● bit ACCESSORIES

PAGE 2-70

● bit SPARE PARTS

PAGE 2-71

GENERAL TECHNICAL DATA **bit**

The units in the BIT range feature:

- reduced dimensions
- negligible load loss
- long life
- excellent quality-to-price ratio

Thanks to its technical features the BIT air treatment range is particularly suitable for de-centralized use near the final actuators.



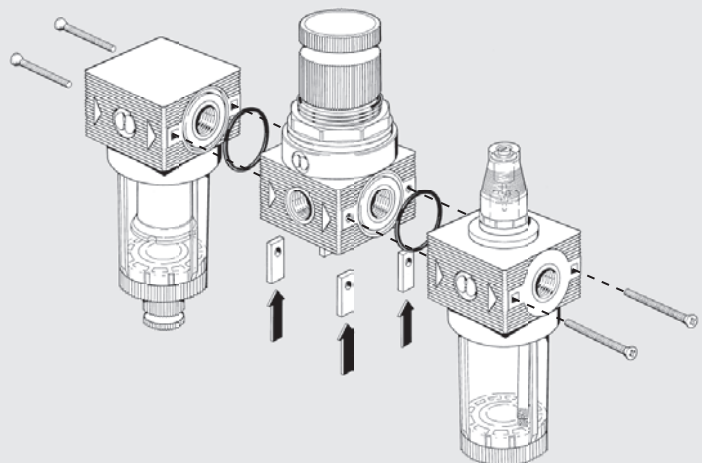
TECHNICAL DATA	BIT 1/8"		BIT 1/4"	
	1/8" NPT		1/4" NPT	
Threaded port	1/8" NPT			
Degree of filtration	μm yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)			
Degree of purification	99.97% @ 0.01 μm			
Setting range	psi 0 to 30 - 0 to 60 - 0 to 120 - 0 to 180			
Max. inlet pressure	MPa 1.3			
	bar 13			
	psi 188			
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	NI/min 350			
	scfm 12			
Max temperature at 1 MPa; 10 bar; 145 psi	°C - 10° to + 50°			
	°F 14° to 122°			
Elements	Filter - Regulator - Lubricator - Filter-regulator - Depurator Units: FRL, FR+L, F+L, F+D			
Mounting	By means of the bracket provided			
Fluid	Compressed air			
Compatibility with oils	Please refer to page 5-4 of the technical documentation			

ASSEMBLY

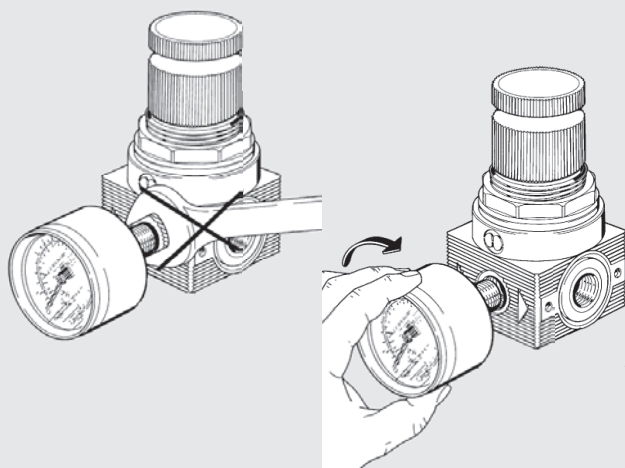
Use ASSEMBLY PLATES (code 9170201) to assemble the Bit elements correctly.

Assembly procedure:

- Fit the plates right into the slots under the body of the Bit element
- Check that there O-rings round the threaded outlet
- Assemble the elements, making sure that the flow run in the direction of the arrows marked on the body.

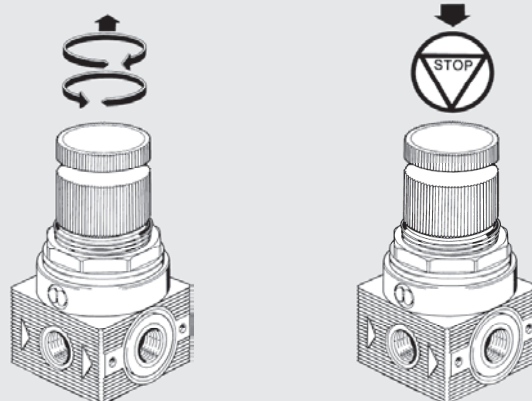


GENERAL RULES - USE AND MAINTENANCE



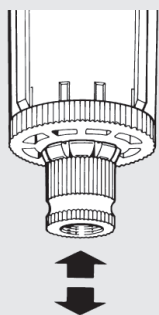
MOUNTING THE GAUGE

The gauge must be mounted by hand without using a spanner. Use fluid sealants to provide a good seal. N.B. Do not use Teflon.

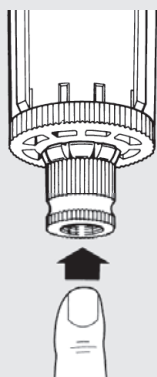


SETTING THE PRESSURE

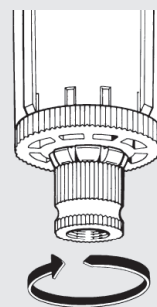
The air pressure must always be set upwards. The knob can be locked so that the set pressure cannot be altered.



With the knob in the centre position, the drain is semi-automatic. The drain operates when the bowl is not pressurized and closes when it is.



Press the button to drain condensate when the bowl is pressurized.



Turn the knob anticlockwise to close the valve with bowl pressurized or not pressurized.



To clean or replace the filter element unscrew the screen of the centrifuge assembly. Use a no. 3 compass spanner to unscrew the bowl.

bit FILTER

The units in the BIT range feature:

- reduced dimensions
- negligible load loss
- long life
- excellent quality-to-price ratio

Thanks to its technical features the BIT air treatment range is particularly suitable for de-centralized use near the final actuators.



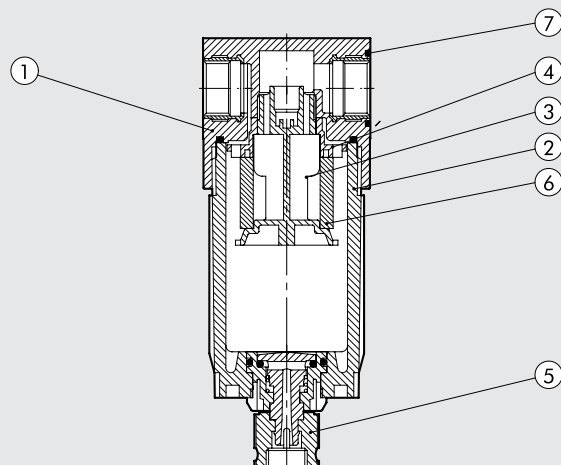
UNITS

bit FILTER

TECHNICAL DATA		BIT 1/8"	BIT 1/4"
Threaded port		1/8" NPT	1/4" NPT
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)	
Max. inlet pressure	MPa	1.3	
	bar	13	
	psi	188	
Flow rate at 6.3 bar (0.6 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	Nl/min	860	
	scfm	30.5	
Flow rate at 6.3 bar (0.6 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	Nl/min	1200	
	scfm	42.5	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	
	°F	122	
Weight	pounds	0.9	
Wall fixing screws		N. 8-32 unc, by means of the bracket provided	
Bowl capacity	fluid ounce oz	0.54	
Mounting position		Vertical	
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge.	
		Operates by depression – requires variable air take-offs.	
Fluid		Compressed air	

COMPONENTS

- ① Technopolymer body with OT58 threaded element
- ② Clear technopolymer bowl
- ③ Technopolymer baffle plug
- ④ Technopolymer centrifuge
- ⑤ Condensate drain (RMSA)
- ⑥ HDPE sintered filter cartridge
- ⑦ NBR gaskets



FLOW CHARTS

FIL

$\Delta P = (P_m - P_v)$

psi kPa bar

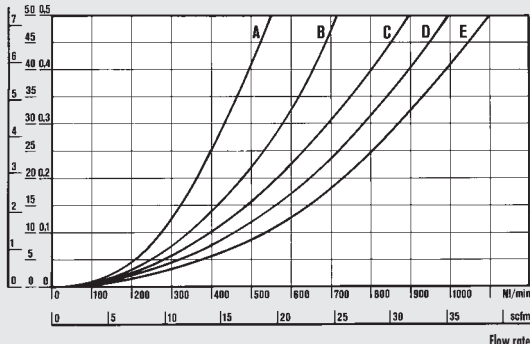
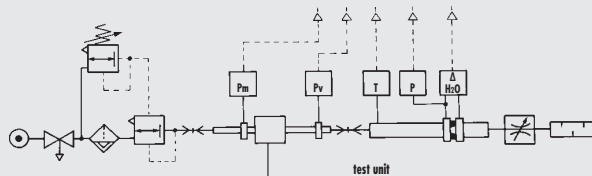


Chart referring to a filter with 1/4 ports



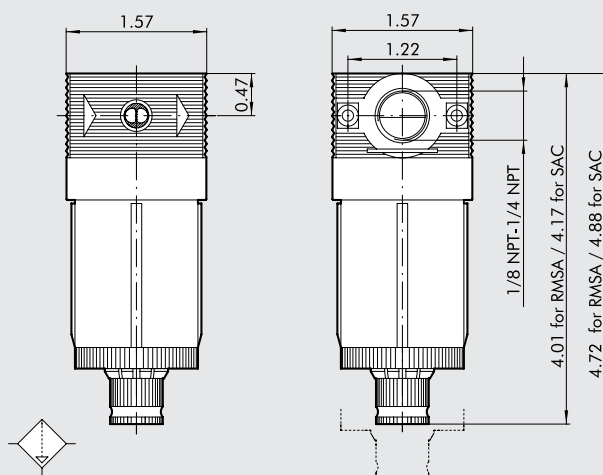
Department
of Mechanics
Turin Polytechnic



• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

DIMENSIONS



ORDERING CODES

Code	Description
5101001U	FIL BIT 1/8 5 RMSA NPT
5101004U	FIL BIT 1/8 5 SAC NPT
5101002U	FIL BIT 1/8 20 RMSA NPT
5101005U	FIL BIT 1/8 20 SAC NPT
5101003U	FIL BIT 1/8 50 RMSA NPT
5101006U	FIL BIT 1/8 50 SAC NPT
5201001U	FIL BIT 1/4 5 RMSA NPT
5201004U	FIL BIT 1/4 5 SAC NPT
5201002U	FIL BIT 1/4 20 RMSA NPT
5201005U	FIL BIT 1/4 20 SAC NPT
5201003U	FIL BIT 1/4 50 RMSA NPT
5201006U	FIL BIT 1/4 50 SAC NPT

KEY TO CODES

FIL ELEMENT	BIT SIZE	1/8 THREADED PORT	5 DEGREE OF FILTRATION	RMSA CONDENSATE DRAIN
FIL	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	5 = 5 μm (200 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	RMSA SAC

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

SAC: automatic drain with condensate discharge.

Operates by depression – requires variable air take-offs.

bit DEPURATOR

Coalescing mini-depurator

- Space saving
- Minimum load loss as the flow rate varies
- All-round condensate level viewing



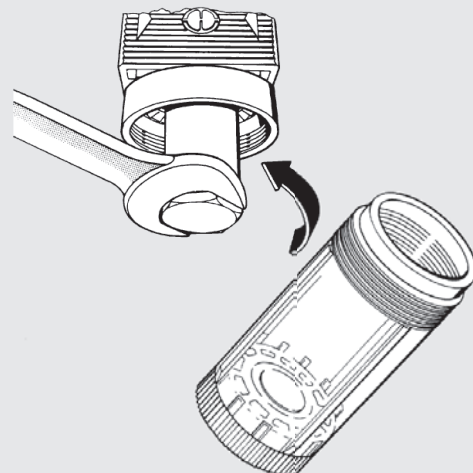
UNITS

bit DEPURATOR

TECHNICAL DATA		DEP BIT 1/8"	DEP BIT 1/4"
Threaded port		1/8" NPT	1/4" NPT
Degree of purification		99.97% 0.01 μm	
Max. inlet pressure	MPa	1.3	
	bar	13	
	psi	188	
Suggested flow at 87 psi	NI/min	200	
	scfm	7	
Maximum suggested flow rate		Please look at the flow rate curves at page 2-55	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	
	°F	122	
Weight	pounds	1.43	
Wall fixing screws		N. 8-32 unc, by means of the bracket provided	
Bowl capacity	fluid ounce oz	0.54	
Mounting position		Vertical	
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.	
Fluid		Filtered 5 μm (2000 microinch) compressed air	
Notes		A It is advisable to mount a 5 μm (2000 microinch) filter upstream the depurator acting as a rough filter.	

USE AND MAINTENANCE

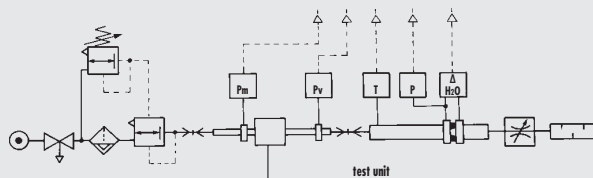
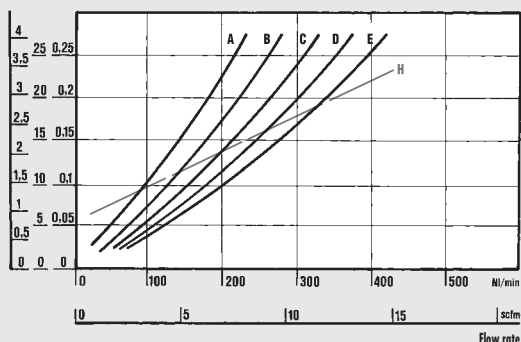
When replacing the coalescing cartridge, unscrew the bowl and then unscrew the screen of the cartridge assembly. Then replace the cartridge. Use a no. 3 compass spanner to unscrew the bowl.



FLOW CHARTS

DEP

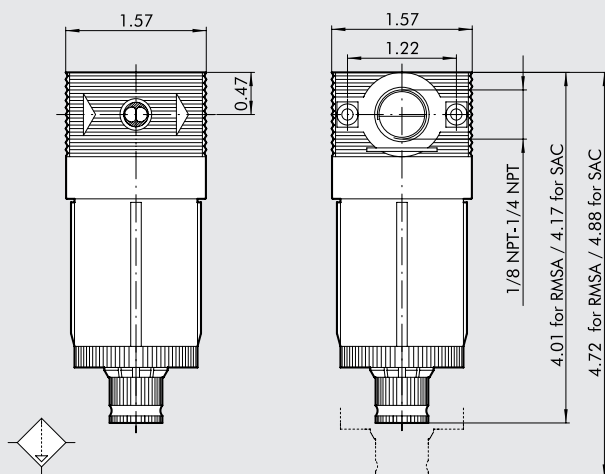
$\Delta P = (P_m - P_v)$
psi kPa bar



• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi
- (H) = maximum flow rate recommended for optimal operation

DIMENSIONS



ORDERING CODES

Code	Description
5112001U	DEP BIT 1/8 RMSA NPT
5212001U	DEP BIT 1/4 RMSA NPT

KEY TO CODES

DEP ELEMENT	BIT SIZE	1/8 THREADED PORT 1/4 = 1/4 NPT	RMSA CONDENSATE DRAIN
DEP	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	RMSA

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

bit MICRO-REGULATOR

Micro-regulator with rolling diaphragm.

- Preset pressure stability as the upstream pressure varies.
- High flow rates with reduced pressure drops
- Quick overpressure exhaust

Versions available

Bit FC: controlled relief to allow greater accuracy in regulation by means of slight continuous air relief.

Bit for water: used to regulate the pressure in water circuits; without blowoff valve

Bit SR: for use when the downstream circuit needs to be relieved quickly as the upstream pressure drops. Mount the SR regulator between the power supply valve and the point of use.



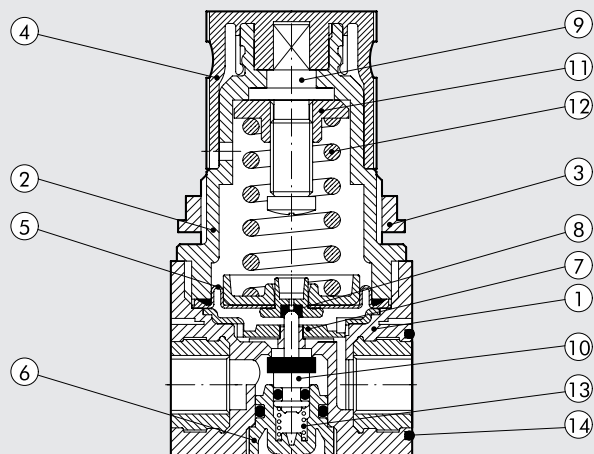
UNITS

bit MICRO-REGULATOR

TECHNICAL DATA	MR BIT 1/8"	MR BIT 1/4"
	Threaded port	1/8" NPT
Setting range	psi 0 to 30 - 0 to 60 - 0 to 120 - 0 to 180	
Max. inlet pressure	MPa	1.3
	bar	13
	psi	188
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	Nl/min	340
	scfm	12
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	600
	scfm	21
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50
	°F	122
Weight	pounds	0.17
Wall fixing screws	N. 8-32 unc, by means of the bracket provided	
Gauge port	BSPP 1/8"	
Mounting position	In any position	
Fluid	Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.	
Notes	The regulator 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.	

COMPONENTS

- ① Technopolymer body with OT58 threaded element
- ② Technopolymer bell
- ③ Technopolymer fixing ring nut
- ④ Technopolymer knob
- ⑤ Rolling diaphragm
- ⑥ Technopolymer plug
- ⑦ Technopolymer anti-vibration screen
- ⑧ NBR relieving gasket
- ⑨ OT58 brass adjusting screws
- ⑩ OT58 valve with NBR vulcanized gasket
- ⑪ OT58 brass nut
- ⑫ Steel adjusting spring
- ⑬ Stainless steel valve compression spring
- ⑭ NBR gaskets



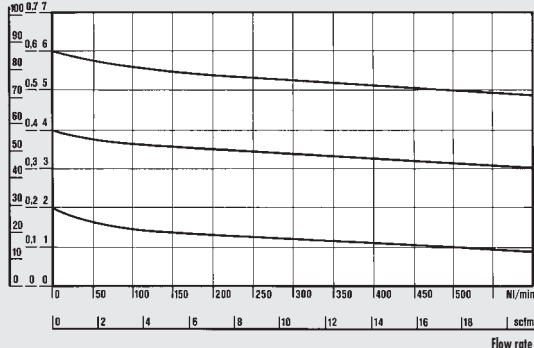
FLOW CHARTS

MR

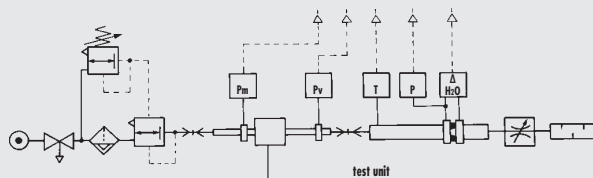
$P_m = 0,7 \text{ MPa}; 7 \text{ bar}; 102 \text{ psi}$

Inlet pressure

psi kPa bar

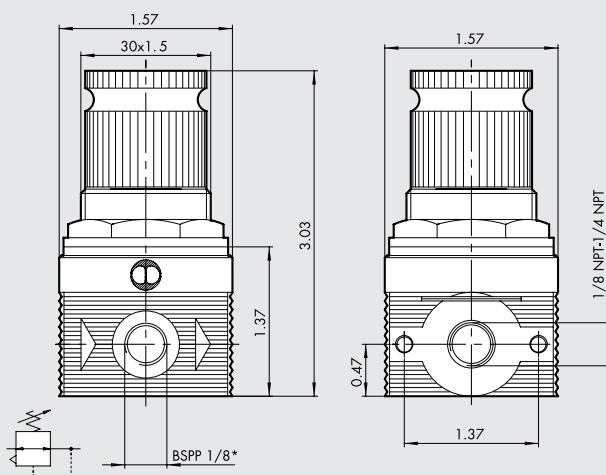


Department of Mechanics
Turin Polytechnic



- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

DIMENSIONS



* Pressure gauge port

KEY TO CODES

MR	BIT	FC	1/8	0-30
ELEMENT	SIZE	VERSION	THREADED PORT	CONDENSATE DRAIN
MR	BIT	FC	1/8 = 1/8 NPT	0-30 = 0 to 30 psi
	BIT	SR	1/4 = 1/4 NPT	0-60 = 0 to 60 psi
	BIT			0-120 = 0 to 120 psi
MRA	BIT	(for WATER)		0-180 = 0 to 180 psi

FC: Controlled relief
SR: Quickly relieved
MRA: Without relief (for water)

ORDERING CODES

Code	Description
MICROREGULATOR (MR)	
5107001U	MR BIT 1/8 0-30 NPT
5107002U	MR BIT 1/8 0-60 NPT
5107003U	MR BIT 1/8 0-120 NPT
5107004U	MR BIT 1/8 0-180 NPT
5207001U	MR BIT 1/4 0-30 NPT
5207002U	MR BIT 1/4 0-60 NPT
5207003U	MR BIT 1/4 0-120 NPT
5107003U	MR BIT 1/4 0-180 NPT
MICROREGULATOR WITH CONTROLLED RELIEF	
5111001U	MR BIT FC 1/8 0-30 NPT
5111002U	MR BIT FC 1/8 0-60 NPT
5211001U	MR BIT FC 1/4 0-30 NPT
5211002U	MR BIT FC 1/4 0-60 NPT
MICROREGULATOR WITH QUICK RELIEF	
5102001U	MR BIT SR 1/8 0-30 NPT
5102002U	MR BIT SR 1/8 0-60 NPT
5102003U	MR BIT SR 1/8 0-120 NPT
5102004U	MR BIT SR 1/8 0-180 NPT
5202001U	MR BIT SR 1/4 0-30 NPT
5202002U	MR BIT SR 1/4 0-60 NPT
5202003U	MR BIT SR 1/4 0-120 NPT
5202004U	MR BIT SR 1/4 0-180 NPT
WATER MICROREGULATOR	
5108001U	MRA BIT 1/8 0-30 NPT
5108002U	MRA BIT 1/8 0-60 NPT
5108003U	MRA BIT 1/8 0-120 NPT
5108004U	MRA BIT 1/8 0-180 NPT
5208001U	MRA BIT 1/4 0-30 NPT
5208002U	MRA BIT 1/4 0-60 NPT
5208003U	MRA BIT 1/4 0-120 NPT
5208004U	MRA BIT 1/4 0-180 NPT

bit FILTER REGULATOR

Filter regulator with rolling diaphragm.

- High flow rate with reduced pressure drop
- Excellent degree of condensate separation
- Semi-automatic or automatic drain
- All-round condensate level viewing

The degree of filtration is shown by the colour of the cartridge:
yellow = 5 μm , white = 20 μm , blue = 50 μm .



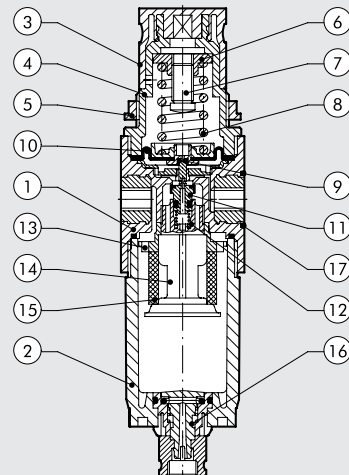
UNITS

bit FILTER REGULATOR

TECHNICAL DATA	FR BIT 1/8"	FR BIT 1/4"
	Threaded port	1/8" NPT
Setting range	0 to 30 - 0 to 60 - 0 to 120 - 0 to 180	
Degree of filtration	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)	
Max. inlet pressure	1.3	
	bar	
	13	
	psi	
	188	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	290	
	NL/min	
	10	
	scfm	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	600	
	NL/min	
	21	
	scfm	
Max temperature at 1 MPa; 10 bar; 145 psi	50	
	$^{\circ}\text{C}$	
	122	
	$^{\circ}\text{F}$	
Weight	0.22	
Weight	pounds	
Wall fixing screws	N. 8-32 unc, by means of the bracket provided	
Bowl capacity	0.54	
Mounting position	Vertical	
Gauge port	BSPP 1/8"	
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge . Operates by depression - requires variable air take-offs. Compressed air	
Fluid	The regulator pressure must always be set upwards.	
Notes	For increased sensitivity, use a pressure regulator with a rated pressure as close as possible to the required value.	

COMPONENTS

- ① Technopolymer body with OT58 threaded element
- ② Clear technopolymer bowl
- ③ Technopolymer knob
- ④ Technopolymer bell
- ⑤ Technopolymer fixing ring nut
- ⑥ OT58 brass nut
- ⑦ OT58 brass adjusting screw
- ⑧ Steel adjusting spring
- ⑨ NBR relieving gasket
- ⑩ Rolling diaphragm
- ⑪ OT58 valve with NBR vulcanized gasket
- ⑫ Stainless steel valve compression spring
- ⑬ Technopolymer centrifuge
- ⑭ Technopolymer baffle plug
- ⑮ HDPE sintered filter cartridge
- ⑯ Condensate drain (RMSA)
- ⑰ NBR gaskets



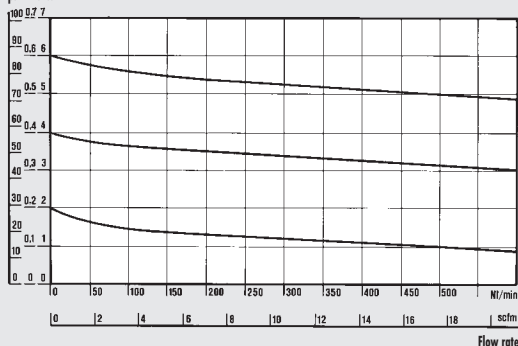
FLOW CHARTS

FR

$P_m = 0,7 \text{ MPa}; 7 \text{ bar}; 102 \text{ psi}$

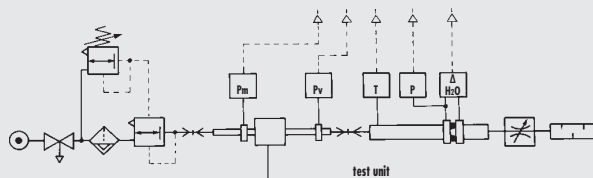
Inlet pressure

psi kPa bar



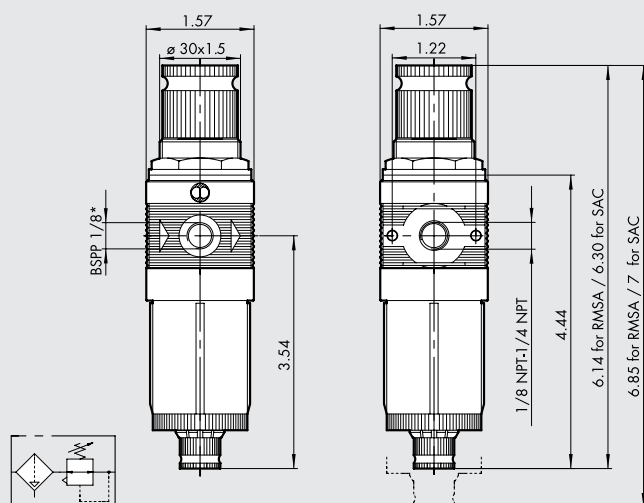
Department of Mechanics

Turin Polytechnic



- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

DIMENSIONS



* Pressure gauge port

KEY TO CODES

FR	BIT	1/8	5	0-30	RMSA
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	SETTING RANGE	CONDENSATE DRAIN
FR	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	5 = 5 µm (200 microinch) 20 = 20 µm (790 microinch) 50 = 50 µm (2000 microinch)	0-30 = 0 to 30 psi 0-60 = 0 to 60 psi 0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure

SAC: automatic drain with condensate discharge .

Operates by depression – requires variable air take-offs.

ORDERING CODES

Code	Description
5105001U	FR BIT 1/8 5 0-30 RMSA NPT
5105013U	FR BIT 1/8 5 0-30 SAC NPT
5105002U	FR BIT 1/8 20 0-30 RMSA NPT
5105014U	FR BIT 1/8 20 0-30 SAC NPT
5105003U	FR BIT 1/8 50 0-30 RMSA NPT
5105015U	FR BIT 1/8 50 0-30 SAC NPT
5105004U	FR BIT 1/8 5 0-60 RMSA NPT
5105016U	FR BIT 1/8 5 0-60 SAC NPT
5105005U	FR BIT 1/8 20 0-60 RMSA NPT
5105017U	FR BIT 1/8 20 0-60 SAC NPT
5105006U	FR BIT 1/8 50 0-60 RMSA NPT
5105018U	FR BIT 1/8 50 0-60 SAC NPT
5105007U	FR BIT 1/8 5 0-120 RMSA NPT
5105019U	FR BIT 1/8 5 0-120 SAC NPT
5105008U	FR BIT 1/8 20 0-120 RMSA NPT
5105020U	FR BIT 1/8 20 0-120 SAC NPT
5105009U	FR BIT 1/8 50 0-120 RMSA NPT
5105021U	FR BIT 1/8 50 0-120 SAC NPT
5105010U	FR BIT 1/8 5 0-180 RMSA NPT
5105022U	FR BIT 1/8 5 0-180 SAC NPT
5105011U	FR BIT 1/8 20 0-180 RMSA NPT
5105023U	FR BIT 1/8 20 0-180 SAC NPT
5105012U	FR BIT 1/8 50 0-180 RMSA NPT
5105024U	FR BIT 1/8 50 0-180 SAC NPT
5205001U	FR BIT 1/4 5 0-30 RMSA NPT
5205013U	FR BIT 1/4 5 0-30 SAC NPT
5205002U	FR BIT 1/4 20 0-30 RMSA NPT
5205014U	FR BIT 1/4 20 0-30 SAC NPT
5205003U	FR BIT 1/4 50 0-30 RMSA NPT
5205015U	FR BIT 1/4 50 0-30 SAC NPT
5205004U	FR BIT 1/4 5 0-60 RMSA NPT
5205016U	FR BIT 1/4 5 0-60 SAC NPT
5205005U	FR BIT 1/4 20 0-60 RMSA NPT
5205017U	FR BIT 1/4 20 0-60 SAC NPT
5205006U	FR BIT 1/4 50 0-60 RMSA NPT
5205018U	FR BIT 1/4 50 0-60 SAC NPT
5205007U	FR BIT 1/4 5 0-120 RMSA NPT
5205019U	FR BIT 1/4 5 0-120 SAC NPT
5205008U	FR BIT 1/4 20 0-120 RMSA NPT
5205020U	FR BIT 1/4 20 0-120 SAC NPT
5205009U	FR BIT 1/4 50 0-120 RMSA NPT
5205021U	FR BIT 1/4 50 0-120 SAC NPT
5205010U	FR BIT 1/4 5 0-180 RMSA NPT
5205022U	FR BIT 1/4 5 0-180 SAC NPT
5205011U	FR BIT 1/4 20 0-180 RMSA NPT
5205023U	FR BIT 1/4 20 0-180 SAC NPT
5205012U	FR BIT 1/4 50 0-180 RMSA NPT
5205024U	FR BIT 1/4 50 0-180 SAC NPT

bit LUBRICATOR

Mini-lubricator with high lubrication stability.

- Quantity of lubricant proportioned to air flow
- Activates at low flow rates
- Micrometric regulation of lubricant flow
- All-round oil level viewing



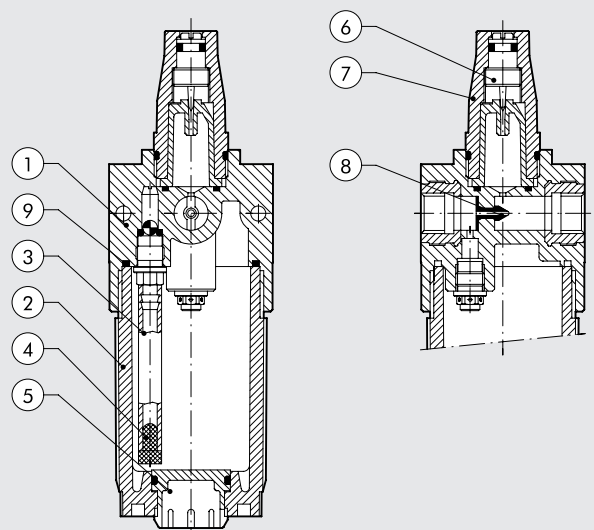
UNITS

bit LUBRICATOR

TECHNICAL DATA	LUB BIT 1/8"		LUB BIT 1/4"	
	1/8" NPT		1/4" NPT	
Threaded port			Oil mist	
Type of lubrication			0.90	
Bowl capacity	fluid ounce oz		Manual filling with the bowl disassembled	
Lubricator version			1.3	
Max. inlet pressure	MPa		13	
	bar		188	
	psi		400	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	NI/min		14	
	scfm		710	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	NI/min		25	
	scfm		50	
Max temperature at 1 MPa; 10 bar; 145 psi	°C		122	
	°F		0.9	
Weight	pounds		N. 8-32 unc, by means of the bracket provided	
Wall fixing screws			Vertical	
Mounting position			Filtered compressed air	
Fluid				

COMPONENTS

- ① Technopolymer body with OT58 threaded elements
- ② Clear technopolymer bowl
- ③ Rilsan oil suction pipe
- ④ Filter
- ⑤ Technopolymer plug
- ⑥ Oil flow adjustment regulation needle made of OT58 brass
- ⑦ Clear technopolymer cover
- ⑧ NBR Venturi diaphragm
- ⑨ NBR gaskets

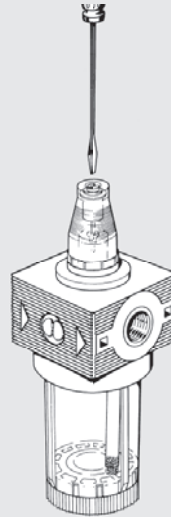


GENERAL RULES - USE AND MAINTENANCE

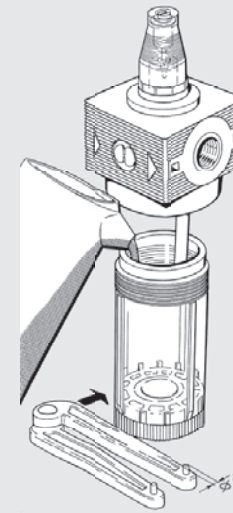
Use a no. 3 compass spanner to unscrew the bowl.

- Fit the lubricator as close as possible to the point of use
- Fill the bowl with oil before pressurizing the system
- Do not use cleaning oil, brake fluid or solvents in general
- For correct lubrication, set the drip rate to approximately 1 drop every 300-600 NI via the adjusting screw.
- Recommended lubricants:
ISO and UNI FD22
E.g. Energol HLP 22 (BP) – Spinesso 22 (Esso)
- Mobil DTE 22 (Mobil) – Tellus Oil 22 (Shell).

REGULATING LUBRICATION



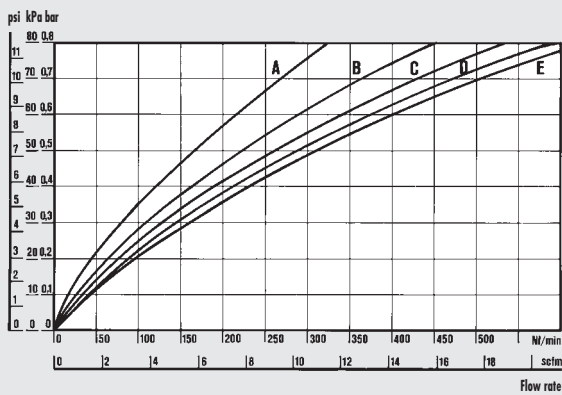
FILLING THE BOWL WITH OIL



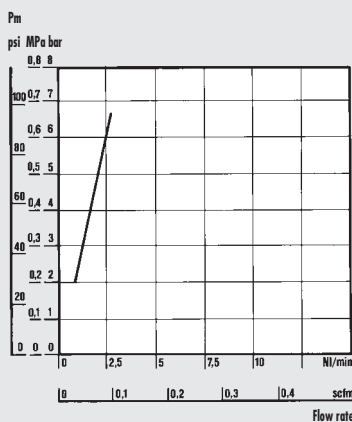
FLOW CHARTS

LUB

$$\Delta P = (P_m - P_v)$$



LUB 1/8-1/4

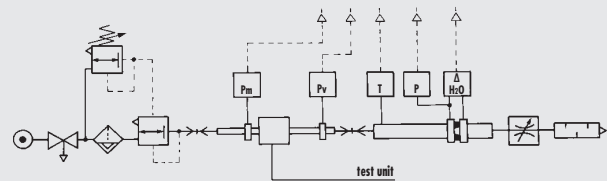


MINIMUM OPERATION FLOW CHARTS

Minimum flow tests were performed in compliance with ISO/DP 6301/2.



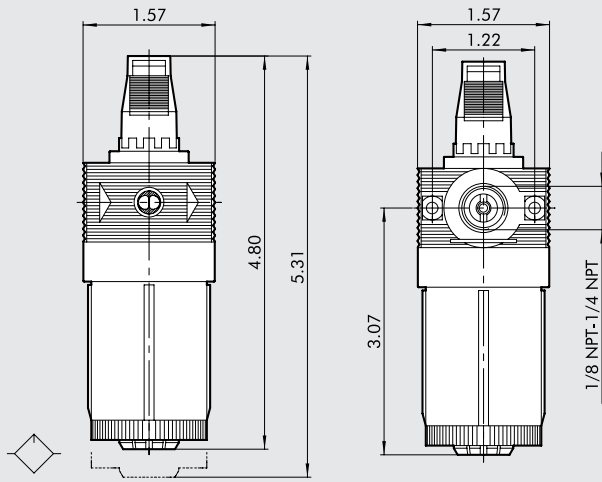
Department of Mechanics
Turin Polytechnic



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- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

DIMENSIONS



ORDERING CODES

Code	Description
5103001U	LUB BIT 1/8 NPT
5203001U	LUB BIT 1/4 NPT

NOTES

- The air take-off takes air from the FRL unit irrespective of the assembly position.
- It is necessary when air needs to be taken from the FRL unit at any stage of the treatment (normal, filtered, regulated, lubricated, etc.).



TECHNICAL DATA

Maximum operating pressure	MPa	1.3
	bar	13
	psi	188
Maximum working temperature at 1 MPa; 10 bar; 145 psi	°C	50
	°F	122

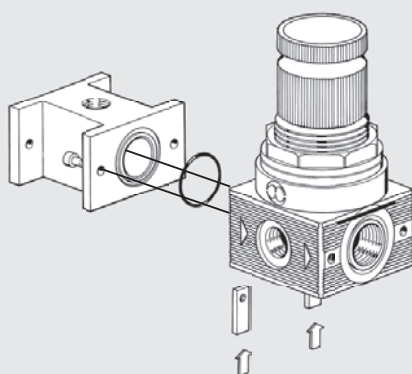
PA

UNITS

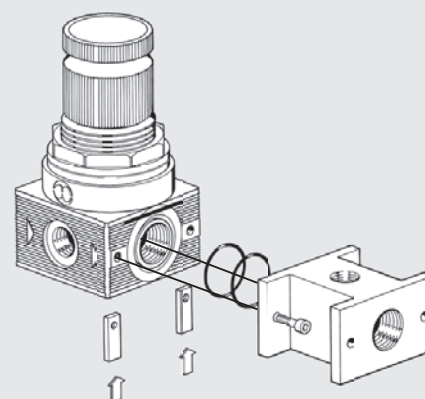
bit TAKE-OFF

CONNECTION DIAGRAMS AND APPLICATION

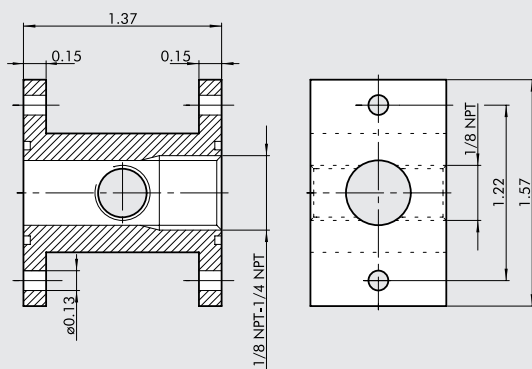
Mounting the air take-off at the inlet: only use two screws and the O-rings supplied in the PA kit.



Mounting the air take-off at the outlet: only use two screws and the O-rings supplied in the PA kit. Seal is provided by the contact between O-rings.



DIMENSIONS



ORDERING CODES

Code	Description
9100401U	PAB 1/8 - 1/4 BIT

FIL+REG+LUB bit

Complete mini-FRL unit with rolling diaphragm.

- High flow rates with reduced pressure drop
- Excellent degree of condensate separation
- Quantity of lubricant proportioned to air flow
- Activates at low flow rates

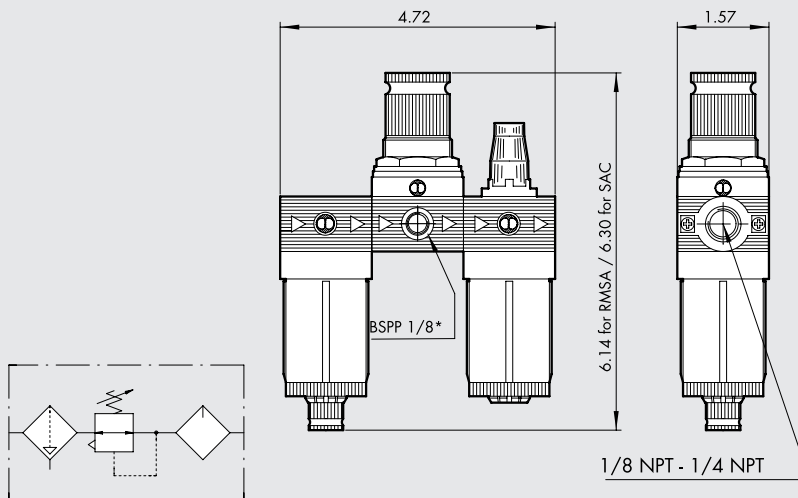


UNITS

FIL+REG+LUB bit

TECHNICAL DATA	F+R+L BIT 1/8"		F+R+L BIT 1/4"	
	1/8" NPT		1/4" NPT	
Threaded port	0 to 30 - 0 to 60 - 0 to 120 - 0 to 180			
Setting range	psi			
Degree of filtration	μm			
Type of lubrication	Oil mist			
Max. inlet pressure	MPa			
	bar			
	psi			
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	NI/min			
	scfm			
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	NI/min			
	scfm			
Max temperature at 1 MPa; 10 bar; 145 psi	°C			
	°F			
Weight	pounds			
Wall fixing screws	N. 8-32 unc, by means of the bracket provided			
Gauge port	BSPP 1/8"			
Mounting position	Vertical			
Fluid	Compressed air			
Notes	See chapters regarding individual elements			

DIMENSIONS



* Pressure gauge port

KEY TO CODES

FRL ELEMENT	BIT SIZE	1/8 THREADED PORT	5 DEGREE OF FILTRATION	0-30 SETTING RANGE	RMSA CONDENSATE DRAIN
FRL	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	5 = 5 μm (200 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	0-30 = 0 to 30 psi 0-60 = 0 to 60 psi 0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure
SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

ORDERING CODES

Code	Description
5104008U	FRL BIT 1/8 20 0-120 RMSA NPT
5104011U	FRL BIT 1/8 20 0-180 RMSA NPT
5204008U	FRL BIT 1/4 20 0-120 RMSA NPT
5204011U	FRL BIT 1/4 20 0-180 RMSA NPT

The following versions are available on request:
- with 5 μm or 50 μm degree of filtration
- with 0-30 psi or 0-60 psi setting range
- with SAC condensate discharge

NOTES

[Large area for handwritten notes]

FR+LUB bit

Compact FR+L unit with rolling diaphragm.

- High flow rates with reduced pressure drop
- Excellent degree of condensate separation
- Quantity of lubricant proportioned to air flow
- Activates at low flow rates

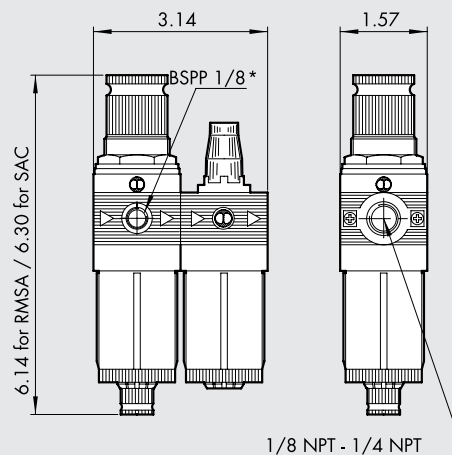


UNITS

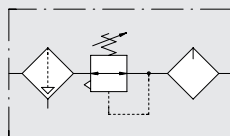
FR+LUB bit

TECHNICAL DATA	FR+L BIT 1/8"	FR+L BIT 1/4"
Threaded port	1/8" NPT	1/4" NPT
Setting range	psi 0 to 30 - 0 to 60 - 0 to 120 - 0 to 180	
Degree of filtration	µm yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)	
Type of lubrication	Oil mist	
Max. inlet pressure	MPa 1.3	
	bar 13	
	psi 188	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	NI/min 140	
	scfm 5	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	NI/min 260	
	scfm 9.2	
Max temperature at 1 MPa; 10 bar; 145 psi	°C 50	
	°F 122	
Weight	pounds 6.00	
Wall fixing screws	N. 8-32 unc, by means of the bracket provided	
Gauge port	BSPP 1/8"	
Mounting position	Vertical	
Condensate drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge.	
Fluid	Operates by depression - requires variable air take-offs. Compressed air	
Notes	See chapters regarding individual elements	

DIMENSIONS



* Pressure gauge port



KEY TO CODES

FR+L	BIT	1/8	5	0-30	RMSA
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	SETTING RANGE	CONDENSATE DRAIN
FR+L	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	5 = 5 μ m (200 microinch) 20 = 20 μ m (790 microinch) 50 = 50 μ m (2000 microinch)	0-30 = 0 to 30 psi 0-60 = 0 to 60 psi 0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC

ORDERING CODES

Code	Description
5106008U	FR+L BIT 1/8 20 0-120 RMSA NPT
5106011U	FR+L BIT 1/8 20 0-180 RMSA NPT
5206008U	FR+L BIT 1/4 20 0-120 RMSA NPT
5206011U	FR+L BIT 1/4 20 0-180 RMSA NPT

The following versions are available on request:

- with 5 μ m or 50 μ m degree of filtration
- with 0-30 psi or 0-60 psi setting range
- with SAC condensate discharge

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure

SAC: automatic drain with condensate discharge.

Operates by depression – requires variable air take-offs.

NOTES

[This section contains multiple blank horizontal lines for user notes.]

FIL+DEP bit

Compact filter + depurator unit for fine filtering followed by purification by coalescence.

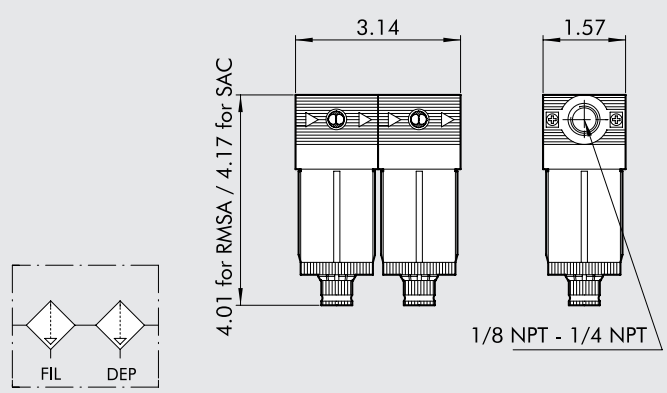
- All-round condensate level viewing
- Condensate drainage - manual/semi-auto (RMSA) or automatic (SAC) on the filter
- 5 µm filter element.



UNITS
FIL+DEP bit

TECHNICAL DATA		F+D BIT 1/8"	F+D BIT 1/4"
Threaded port		1/8" NPT	1/4" NPT
Degree of purification		5 µm filter – 99.97% depurator at 0.01 µm	
Max. inlet pressure	MPa		1.3
	bar		13
	psi		188
Maximum suggested flow rate		Please look at the flow rate curves at page 2-55	
Fluid		Compressed air	
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50
	°F		122
Weight	pounds		3.88
Wall fixing screws		M 8-32 unc, by means of the bracket provided	
Mounting position		Vertical	
Condensate drain		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. See chapters regarding individual elements	
Notes			

DIMENSIONS



KEY TO CODES

F+D ELEMENT	BIT SIZE	1/4 THREADED PORT	5 DEGREE OF FILTRATION	RMSA CONDENSATE DRAIN
F+D	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	5 µm	RMSA SAC

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure
SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

ORDERING CODES

Code	Description
5114001U	F+D BIT 1/8 5 RMSA - RMSA NPT
5114002U	F+D BIT 1/8 5 SAC - RMSA NPT
5214001U	F+D BIT 1/4 5 RMSA - RMSA NPT
5214002U	F+D BIT 1/4 5 SAC - RMSA NPT

Compact filter + lubricator unit with different degrees of filtration and high lubrication stability.

- Excellent degree of condensate separation
- Semi-automatic and automatic condensate drainage
- Lubrication activates at low flow rates
- All-round oil and condensate level viewing

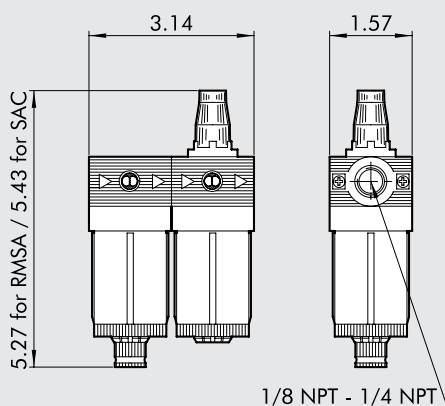


UNITS

FIL+LUB bit

TECHNICAL DATA	F+L BIT 1/8"		F+L BIT 1/4"	
	Threaded port	1/8" NPT		1/4" NPT
Degree of filtration	µm yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)			
Max. inlet pressure	MPa		1.3	
	bar		13	
	psi		188	
Flow rate at 6 bar (0.6 MPa - 87 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	Nl/min		300	
	scfm		10.6	
Flow rate at 6 bar (0.6 MPa - 87 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min		600	
	scfm		21.2	
Fluid	Compressed air			
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50	
	°F		122	
Weight	pounds		3.18	
Wall fixing screws	M 8-32 unc, by means of the bracket provided			
Mounting position	Vertical			
Condensed drain	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. See chapters regarding individual elements			
Notes				

DIMENSIONS



KEY TO CODES

F+L ELEMENT	BIT SIZE	1/4 THREADED PORT	5 DEGREE OF FILTRATION	RMSA CONDENSATE DRAIN
F+L	BIT	1/8 = 1/8 NPT 1/4 = 1/4 NPT	5 = 5 µm (200 microinch) 20 = 20 µm (790 microinch) 50 = 50 µm (2000 microinch)	RMSA SAC

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure

SAC: automatic drain with condensate discharge.

Operates by depression – requires variable air take-offs.

ORDERING CODES

Code	Description
5113002U	F+L BIT 1/8 20 RMSA NPT
5213002U	F+L BIT 1/4 20 RMSA NPT

The following versions are available on request:

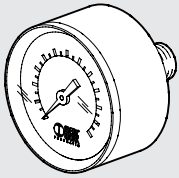
- with 5 µm or 50 µm degree of filtration
- with SAC condensate discharge

bit ACCESSORIES

UNITS

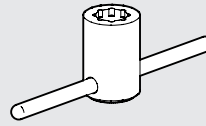
bit ACCESSORIES

PRESSURE GAUGE



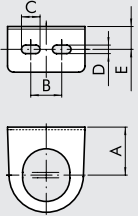
Code	Description
9700102	M 40 1/8 04 (0-60)
9700101	M 40 1/8 12 (0-180)

DOME DISASSEMBLY SPANNER



Code	Description
9220701	Cover LUB spanner

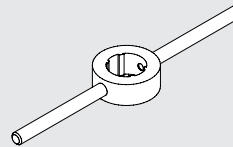
R/FR FIXING BRACKET



Code	Description
9200701	SF100 - BIT - ND 1/4 - SY1

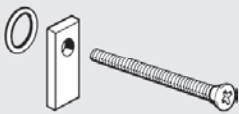
A	B	C	D	E
1.26	0.79	0.47	0.22	0.56

COVER DISASSEMBLY SPANNER



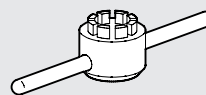
Code	Description
9170401	CS CS BIT

ASSEMBLY PLATE (PAIR)



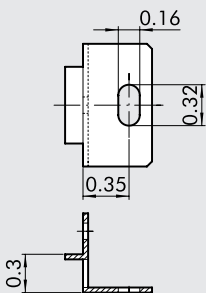
Code	Description
9170201	PAB 1/8 - 1/4 BIT

REDUCER PLUG DISASSEMBLY SPANNER



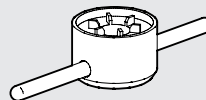
Code	Description
9170501	CS OTR BIT

WALL MOUNTING BRACKET (PAIR)



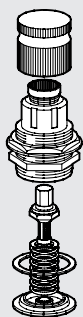
Code	Description
9170301	SFB 1/8 - 1/4 BIT

BOWL DISASSEMBLY SPANNER



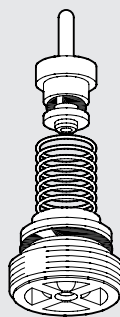
Code	Description
9170601	CS TF - TL BIT - SY1

UPPER COVER FOR MR



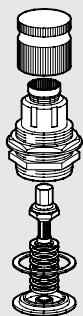
Code	Description
9250805U	Spares CS 1/8 1/4 BIT 0-30
9250806U	Spares CS 1/8 1/4 BIT 0-60
9250807U	Spares CS 1/8 1/4 BIT 0-120
9250808U	Spares CS 1/8 1/4 BIT 0-180

COMPLETE POPPET FOR MR AND MRA



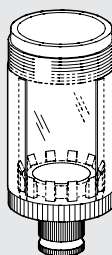
Code	Description
9250705	Spares poppet for MR
9250706	Spares poppet for MR-SR (rapid drain)
9250708	Spares poppet for MRA

UPPER COVER FOR MR FC



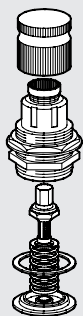
Code	Description
9250817U	Spares CS FC 1/8 1/4 BIT 0-30
9250818U	Spares CS FC 1/8 1/4 BIT 0-60

FILTER AND FILTER-REGULATOR BOWL



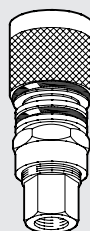
Code	Description
9255001	Spares TF 1/8 1/4 BIT RMSA
9255101	Spares TF 1/8 1/4 BIT SAC

UPPER COVER FOR MRA



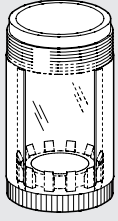
Code	Description
9250809U	CSA 1/8 - 1/4 BIT 0-30
9250814U	CSA 1/8 - 1/4 BIT 0-60
9250815U	CSA 1/8 - 1/4 BIT 0-120
9250816U	CSA 1/8 - 1/4 BIT 0-180

AUTOMATIC DRAIN (SAC)



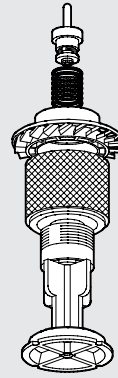
Code	Description
9000803U	Spares SAC automatic drain

LUBRICATOR BOWL



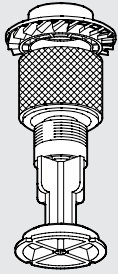
Code	Description
9251402	Spares TL 1/8 1/4 BIT

COMPLETE POPPET FOR FR



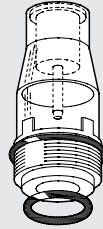
Code	Description
9250905	Spares OTFR 1/8 1/4 BIT 5
9250906	Spares OTFR 1/8 1/4 BIT 20
9250907	Spares OTFR 1/8 1/4 BIT 50

FILTER ELEMENT



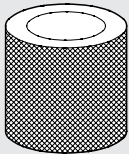
Code	Description
9251708	Spares FP 1/8-1/4 BIT 5 (yellow)
9251709	Spares FP 1/8-1/4 BIT 20 (white)
9251710	Spares FP 1/8-1/4 BIT 50 (blue)

TRANSPARENT LUBRICATOR COVER



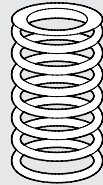
Code	Description
9251302	Spares CVL 100-200-300-400 BIT

DEPURATOR FILTER ELEMENT



Code	Description
9251712	Spares FP DEP. 1/8 1/4 BIT

SPRING FOR MR AND FR



Code	Description
9250610	Spares MO 02 (0-30) BIT
9250611	Spares MO 04 (0-60) BIT
9250612	Spares MO 08 (0-120) BIT
9250613	Spares MO 012 (0-180) BIT

NOTES

A large area of horizontal lines for taking notes, consisting of alternating light and dark gray bands.

UNITS

SUMMARY Skillair®

● GENERAL TECHNICAL DATA Skillair®

PAGE 2-76



● Skillair® FILTER

PAGE 2-79



● Skillair® DEPURATOR

PAGE 2-83



● Skillair® REGULATORS

PAGE 2-86



● Skillair® 100 IN-SERIES REGULATOR

PAGE 2-90



● Skillair® PILOT REGULATOR

PAGE 2-91



● Skillair® 300 PILOT OPERATED REGULATOR

PAGE 2-93



● Skillair® FILTER REGULATOR

PAGE 2-94



● Skillair® LUBRICATOR

PAGE 2-97



● Skillair® SHUT-OFF VALVE

PAGE 2-101



● Skillair® PROGRESSIVE START VALVE

PAGE 2-106



● Skillair® PROGRESSIVE STARTER

PAGE 2-108



● Skillair® AIR TAKE-OFF

PAGE 2-112



● Skillair® PRESSURE SWITCHES

PAGE 2-113



● Skillair® SUB-BASE AND ADAPTER BASE

PAGE 2-115



● FIL+REG+LUB Skillair®

PAGE 2-117



● FR+LUB Skillair®

PAGE 2-119



● V3V+FR+LUB Skillair®

PAGE 2-121



● FIL+LUB Skillair®

PAGE 2-123



● FIL+DEP Skillair®

PAGE 2-125

● Skillair® ACCESSORIES

PAGE 2-127

● Skillair® SPARES PARTS

PAGE 2-128

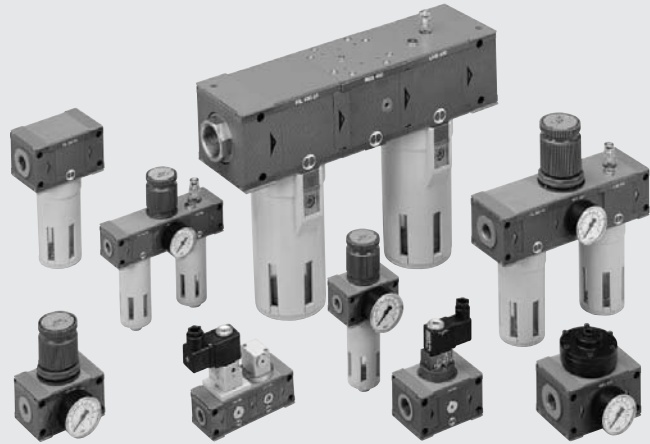
GENERAL TECHNICAL DATA Skillair®

The superior technology of Skillair® FRL units is the expression of Metal Work innovation. The FRL system is the brainchild of a joint study by Metal Work engineers and researchers from the Department of Mechanics in Turin. The integration of metal alloys and super-resistant techno-polymers is the result of co-operation between CESAP (European Centre for the Development of Plastic Applications) and leading international companies such as Du Pont, EMS Chemie and Hoechst. The installation of advanced processing and quality control systems guarantees the reliability of Skillair® FRLs.

Technical features

The Skillair® units incorporate very interesting technological features:

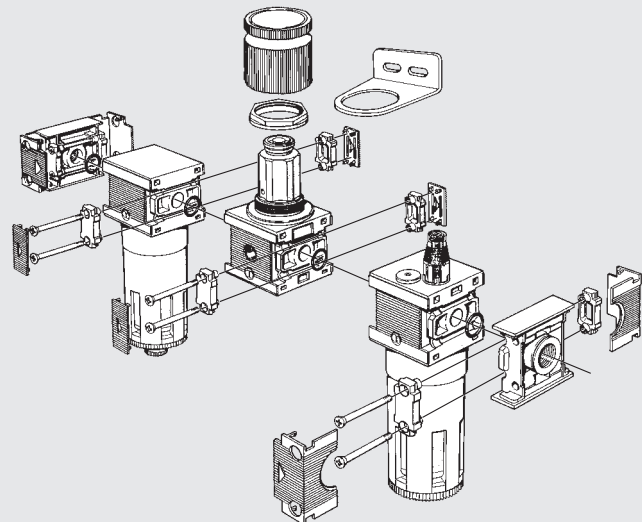
- **Compactness:** with the same flow capacity our unit is one of the smallest on the market.
- **Modularity:** various elements such as filters, reducers, lubricators, 3-way valves, progressive actuators and air take-offs can be combined at will. With the modular system the FRL units can be removed without disturbing the pipes.
- **Easy maintenance:** Any of the elements or the entire unit can be removed without disturbing the remaining part or pipes.



TECHNICAL DATA		SK 100		SK 200			SK 300			SK 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)											
Degree of purification	µm	99.97% at 0.4 microinch											
Setting range	bar	0 to 30 - 0 to 60 - 0 to 120 - 0 to 180											
Max. input pressure	MPa	1.5		1.3			1.3			1.3			
	bar	15		13			13			13			
	psi	217		188			188			188			
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	From 1100 to 20000											
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	From 39 to 700											
Fluid		Lubricated or unlubricated compressed air											
Temperature range at 1 MPa; 10 bar; 145 psi	°C	-10 to +50											
	°F	14 to 122											
Elements comprising the range		Filter, Depurator, Regulator, Pilot operated regulator, In-series Regulator, Filter-regulator, Lubricator with various lubricant filling systems, Circuit Shut-off Valve, Progressive Actuator.											
Compatibility with oils		Please refer to page 5-4 of the technical documentation											

Skillair® MODULARITY

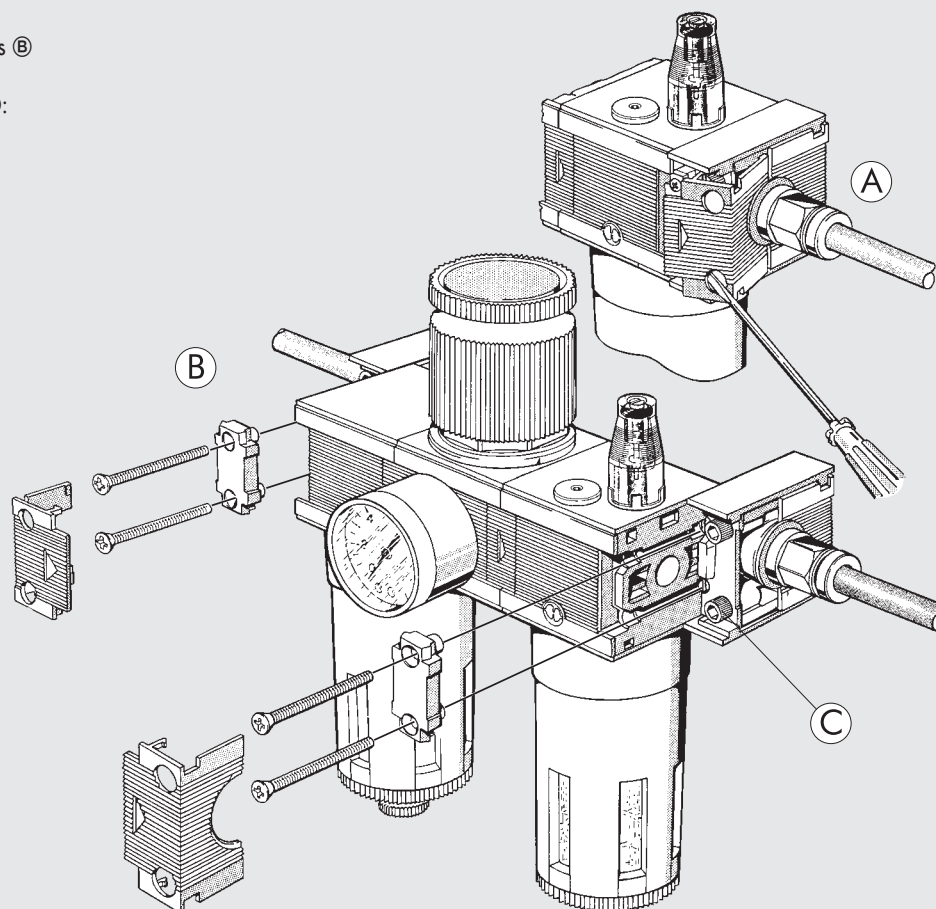
The FRL units can be removed from the system without disturbing the pipes. This can be done with a single element or with the entire system. Assemble the unit so that the air flows in the direction marked by the arrows.



DISASSEMBLING THE UNIT – WALL FIXING

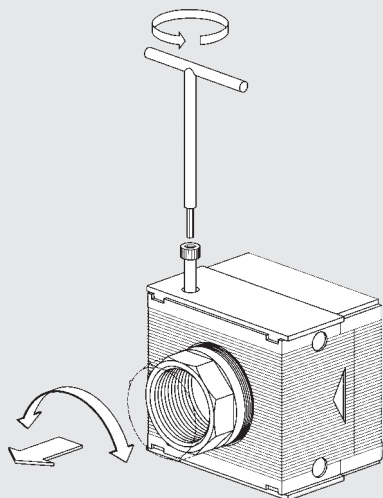
How to disassemble Skillair® end plates:

- Remove the plate (A).
- Unscrew the screws and remove the cams (B) to disassemble the unit.
- Screws to fix the end plates to the wall (C):
 Series 100: N. 8-32 unc x 2
 Series 200: N. 10-24 unc x 2.36
 Series 300: N. 10-24 unc x 2.75
 Series 400: N. 1/4-20 unc x 4.33



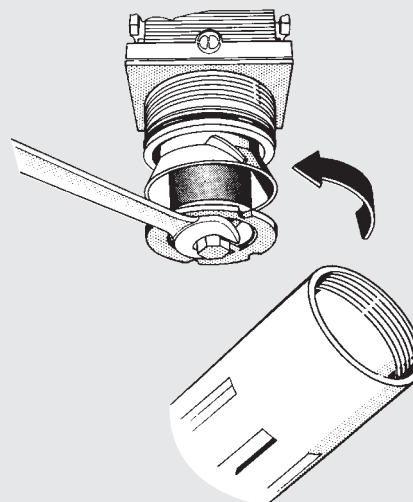
Skillair® 400 - ROTARY SLIDING JOINT

The series 400 comes with a patented system with a rotary sliding end joint to allow the unit to be adapted to the pipe cutting distance. For correct assembly and disassembly, loosen the screw in the end plate before screwing in or unscrewing the bush.



CLEANING AND/OR REPLACING THE FILTER ELEMENTS

Before unscrewing the bowl to replace the filter elements, check that the line is no longer pressurized.
 Replace as shown in the diagram.

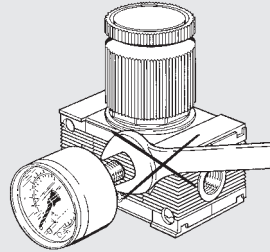


GENERAL RULES FOR USE AND MAINTENANCE

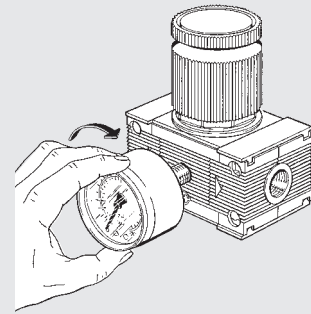
MOUNTING THE PRESSURE GAUGE

- ① Do not use a spanner.
- ② The gauge must be mounted by hand. Use liquid sealants only. Do not use Teflon.

①



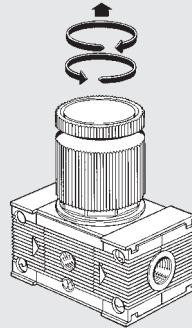
②



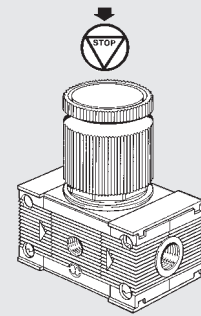
SETTING THE PRESSURE

- ③ **N.B.: the pressure in standard regulators must always be set upwards.** Before setting the pressure, check that the knob is raised.
- ④ When the required pressure has been reached, press the knob downwards.

③



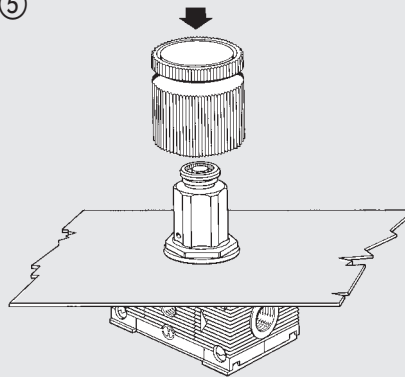
④



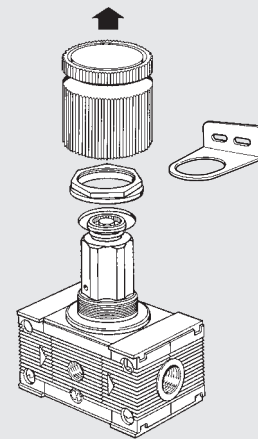
MOUNTING THE REGULATOR AND FILTER-REGULATOR

- ⑤ Panel mounting: remove the knob and lock the regulator with the ring nut.
- ⑥ Wall mounting: use a suitable bracket (see Skillair® accessories).

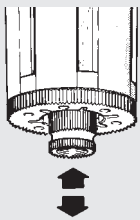
⑤



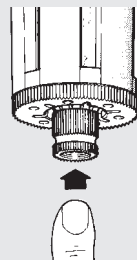
⑥



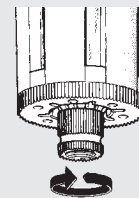
SEMI-AUTO CONDENSATE DRAIN FOR FILTER, FILTER-REGULATOR AND DEPURATOR



The semi-auto condensate drain is the normally open type. When there is pressure in the bowl, the drain closes. When there is no pressure in the bowl, it opens and the condensate drains out.



If necessary, it is possible to drain the condensate whilst the bowl is pressurised. The simple manual operation of "pushing up the valve" will allow the condensate to drain.



When rotating the button clockwise, the valve becomes in locked position, and can only work when the button is returned to the central position.

The Job of the filter is to remove any solid or liquid impurities from the air generated by the compressor.

Incoming air is rotated by the centrifuge unit. The heaviest liquid and solid particles are projected against the walls of the container and forced to adhere to it. As they accumulate they form drops that deposit on the bottom by gravity. The remaining solid particles are held back by the porous element depending on the filtering threshold.

The condensate accumulation area is kept still to prevent previously deposited impurities from being re-circulated.

The accumulated condensate is drained out through the drain - automatically when there is no pressure in the filter, or by hand pressing the button.

An automatic drain is available. It automatically eliminates condensate from the container whenever necessary, whatever the pressure.



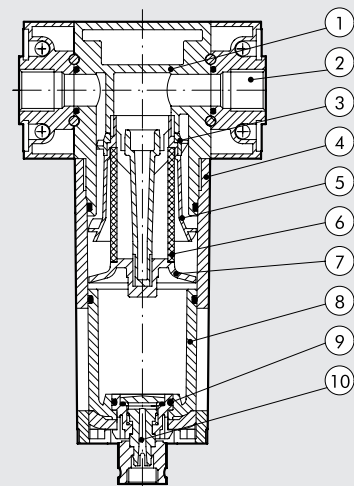
UNITS

Skillair® FILTER

TECHNICAL DATA		FIL 100		FIL 200			FIL 300			FIL 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)											
Max. input pressure	MPa	1.5		1.3			1.3			1.3			1.3
	bar	15		13			13			13			13
	psi	217		188			188			188			188
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	1400		2400			3800			16500			20000
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	50		85			135			590			710
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	2000		3100			5300			-			-
ΔP 1 bar (0.1 MPa - 14.5 psi)	scfm	71		110			188			-			-
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		50			50			50			50
	°F	122		122			122			122			122
Weight	pounds	0.9		1.5			3			11.5			13.2
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4 - 20 unc x 4.33			
Bowl capacity	fluid ounce oz	0.74		1.52			2.54			9.13		9.13	
Mounting position		Vertical		Vertical			Vertical			Vertical		Vertical	
Drain		RMSA - SAC		RMSA - SAC - RA			RMSA - RA			RMSA - RA		RMSA - RA	
RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate SAC: automatic drain with condensate discharge. Operates by depression - requires variable air take-offs. Compressed air.													
Fluid		Compressed air.											
Notes on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.											

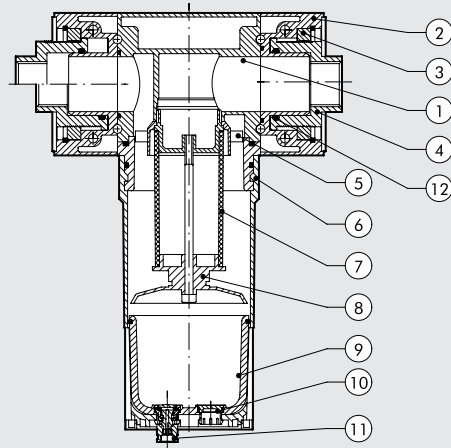
COMPONENTS FIL 100 - 200 - 300

- ① Technopolymer body
- ② Zamak end plate
- ③ Technopolymer centrifuge
- ④ Bowl: technopolymer for FIL 100 and FIL 200, metal for FIL 300
- ⑤ Technopolymer baffle
- ⑥ Sintered HDPE filter cartridge
- ⑦ Technopolymer screen
- ⑧ Clear technopolymer glass
- ⑨ NBR gaskets
- ⑩ Drain (RMSA)



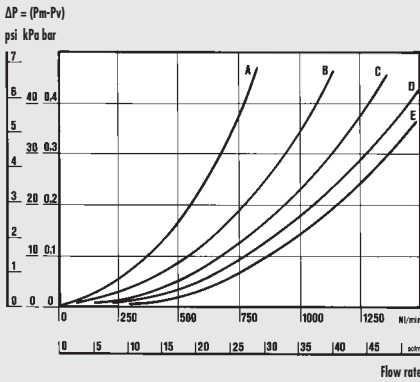
COMPONENTS FIL 400

- ① Aluminium body
- ② Aluminium end plate
- ③ OT58 brass retaining ring
- ④ OT58 threaded bush, axial adjustment
- ⑤ Technopolymer centrifuge
- ⑥ Aluminium bowl
- ⑦ Sintered bronze filter cartridge
- ⑧ Aluminium screen
- ⑨ Clear technopolymer glass
- ⑩ Technopolymer plug
- ⑪ Drain (RMSA)
- ⑫ NBR gaskets

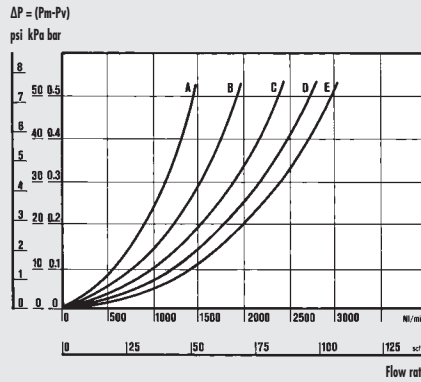


FLOW CHARTS

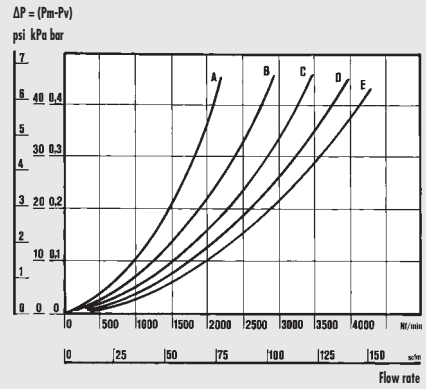
FIL 100 1/4 - 3/8



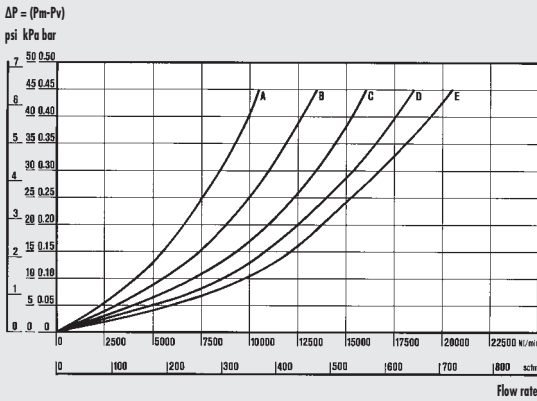
FIL 200 1/4 - 3/8 - 1/2



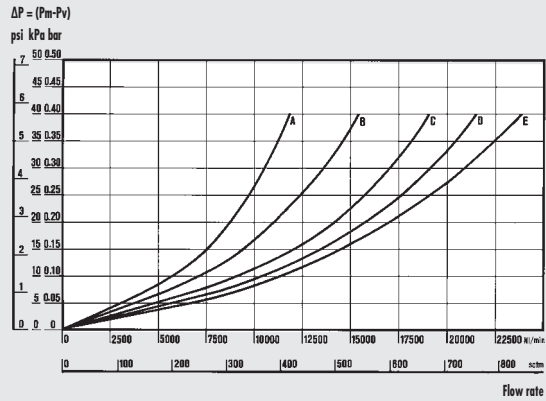
FIL 300 1/2 - 3/4 - 1



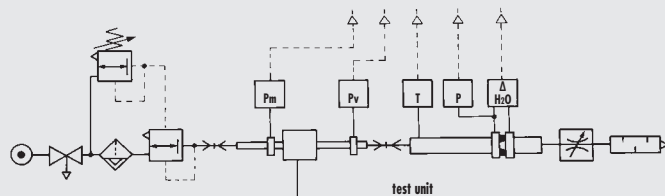
FIL 400 1"



FIL 400 2"



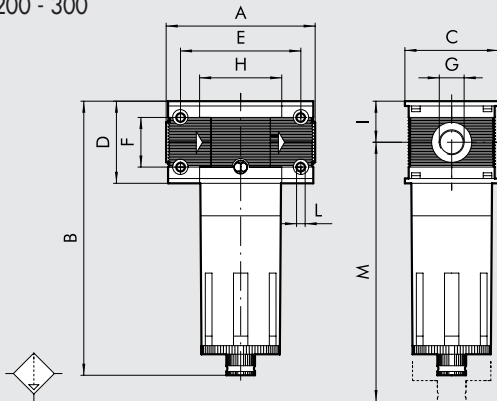
• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.



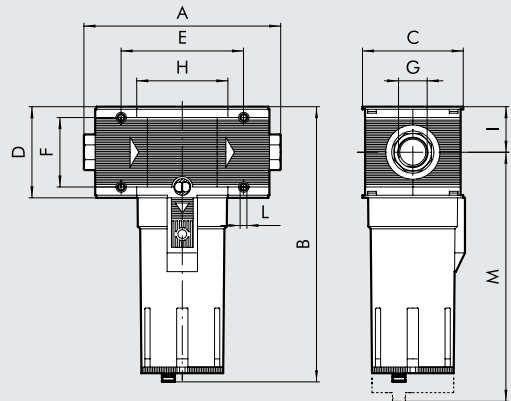
- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

DIMENSIONS

100 - 200 - 300



400



		FIL 100		FIL 200			FIL 300			FIL 400			
Threaded port G	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A		3.07		3.68			4.33		4.40	8.85 to 10.03			
B	RMSA	5.66		6.88					7.67	12.59			
	RA	-		7					7.83	12.75			
	SAC	5.82		7					-	-			
C		1.96		2.48					2.83	4.56			
D		1.69		2.16					2.55	4.13			
E		2.48		3.09					3.62	5.56			
F		1.02		9.49					1.65	3.14			
H		1.69		2.18					2.55	4.14			
I		0.84		1.08					1.27	2.06			
L		0.17		0.21					0.21	0.29			
	RMSA	5.39		7.71					8.46	14.88			
	RA	-		7.87					8.62	15			
M	SAC	5.55		7.87					-	-			

NOTES

Blank area for notes.

UNITS

Skilair® FILTER

KEY TO CODES

FIL	100	1/4	20	RMSA
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	TYPE OF DRAIN
FIL.	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	5 = 5 µm (200 microinch) 20 = 20 µm (790 microinch)	RMSA SAC
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	50 = 50 µm (2000 microinch)	RMSA SAC RA*
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT		RMSA RA
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT		

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure

RA: automatic drain with condensate discharge, independent of pressure and flow rate. (for size 300 and 400)

SAC: automatic drain with condensate discharge.

Operates by depression – requires variable air take-offs. (for size 100 and 200)

* For Skillair® 200 with RA, please contact our sales assistance department.

ORDERING CODES

Code	Description	Code	Description	Code	Description
Skillair® 100 FILTER		Skillair® 300 FILTER		Skillair® 400 FILTER	
3280001UA	FIL 100 5 RMSA NPT without end plates	4480001UA	FIL 300 5 RMSA NPT without end plates	6180001UA	FIL 400 5 RMSA NPT without end plates
3280007UA	FIL 100 5 SAC NPT without end plates	4480002UA	FIL 300 20 RMSA NPT without end plates	6180002UA	FIL 400 20 RMSA NPT without end plates
3280002UA	FIL 100 20 RMSA NPT without end plates	4480003UA	FIL 300 50 RMSA NPT without end plates	6180003UA	FIL 400 50 RMSA NPT without end plates
3280008UA	FIL 100 20 SAC NPT without end plates	4480004UA	FIL 300 5 RA NPT without end plates	6180004UA	FIL 400 5 RA NPT without end plates
3280003UA	FIL 100 50 RMSA NPT without end plates	4480005UA	FIL 300 20 RA NPT without end plates	6180005UA	FIL 400 20 RA NPT without end plates
3280009UA	FIL 100 50 SAC NPT without end plates	4480006UA	FIL 300 50 RA NPT without end plates	6180006UA	FIL 400 50 RA NPT without end plates
3280001U	FIL 100 1/4 5 RMSA NPT	4480001U	FIL 300 1/2 5 RMSA NPT	6180001U	FIL 400 1 5 RMSA NPT
3280007U	FIL 100 1/4 5 SAC NPT	4480002U	FIL 300 1/2 20 RMSA NPT	6180002U	FIL 400 1 20 RMSA NPT
3280002U	FIL 100 1/4 20 RMSA NPT	4480003U	FIL 300 1/2 50 RMSA NPT	6180003U	FIL 400 1 50 RMSA NPT
3280008U	FIL 100 1/4 20 SAC NPT	4480004U	FIL 300 1/2 5 RA NPT	6180004U	FIL 400 1 5 RA NPT
3280003U	FIL 100 1/4 50 RMSA NPT	4480005U	FIL 300 1/2 20 RA NPT	6180005U	FIL 400 1 20 RA NPT
3280009U	FIL 100 1/4 50 SAC NPT	4480006U	FIL 300 1/2 50 RA NPT	6180006U	FIL 400 1 50 RA NPT
3380001U	FIL 100 3/8 5 RMSA NPT	4580001U	FIL 300 3/4 5 RMSA NPT	6280001U	FIL 400 1 1/4 5 RMSA NPT
3380007U	FIL 100 3/8 5 SAC NPT	4580002U	FIL 300 3/4 20 RMSA NPT	6280002U	FIL 400 1 1/4 20 RMSA NPT
3380002U	FIL 100 3/8 20 RMSA NPT	4580003U	FIL 300 3/4 50 RMSA NPT	6280003U	FIL 400 1 1/4 50 RMSA NPT
3380008U	FIL 100 3/8 20 SAC NPT	4580004U	FIL 300 3/4 5 RA NPT	6280004U	FIL 400 1 1/4 5 RA NPT
3380003U	FIL 100 3/8 50 RMSA NPT	4580005U	FIL 300 3/4 20 RA NPT	6280005U	FIL 400 1 1/4 20 RA NPT
3380009U	FIL 100 3/8 50 SAC NPT	4580006U	FIL 300 3/4 50 RA NPT	6280006U	FIL 400 1 1/4 50 RA NPT
Skillair® 200 FILTER		4680001U	FIL 300 1 5 RMSA NPT	6380001U	FIL 400 1 1/2 5 RMSA NPT
3480001UA	FIL 200 5 RMSA NPT without end plates	4680002U	FIL 300 1 20 RMSA NPT	6380002U	FIL 400 1 1/2 20 RMSA NPT
3480007UA	FIL 200 5 SAC NPT without end plates	4680003U	FIL 300 1 50 RMSA NPT	6380003U	FIL 400 1 1/2 50 RMSA NPT
3480002UA	FIL 200 20 RMSA NPT without end plates	4680004U	FIL 300 1 5 RA NPT	6380004U	FIL 400 1 1/2 5 RA NPT
3480008UA	FIL 200 20 SAC NPT without end plates	4680005U	FIL 300 1 20 RMSA NPT	6380005U	FIL 400 1 1/2 20 RA NPT
3480003UA	FIL 200 50 RMSA NPT without end plates	4680006U	FIL 300 1 50 RA NPT	6380006U	FIL 400 1 1/2 50 RA NPT
3480009UA	FIL 200 50 SAC NPT without end plates			6480001U	FIL 400 2 5 RMSA NPT
3480001U	FIL 200 1/4 5 RMSA NPT			6480002U	FIL 400 2 20 RMSA NPT
3480007U	FIL 200 1/4 5 SAC NPT			6480003U	FIL 400 2 50 RMSA NPT
3480002U	FIL 200 1/4 20 RMSA NPT			6480004U	FIL 400 2 5 RA NPT
3480008U	FIL 200 1/4 20 SAC NPT			6480005U	FIL 400 2 20 RA NPT
3480003U	FIL 200 1/4 50 RMSA NPT			6480006U	FIL 400 2 50 RA NPT
3480009U	FIL 200 1/4 50 SAC NPT				
3580001U	FIL 200 3/8 5 RMSA NPT				
3580007U	FIL 200 3/8 5 SAC NPT				
3580002U	FIL 200 3/8 20 RMSA NPT				
3580008U	FIL 200 3/8 20 SAC NPT				
3580003U	FIL 200 3/8 50 RMSA NPT				
3580009U	FIL 200 3/8 50 SAC NPT				
3680001U	FIL 200 1/2 5 RMSA NPT				
3680007U	FIL 200 1/2 5 SAC NPT				
3680002U	FIL 200 1/2 20 RMSA NPT				
3680008U	FIL 200 1/2 20 SAC NPT				
3680003U	FIL 200 1/2 50 RMSA NPT				
3680009U	FIL 200 1/2 50 SAC NPT				

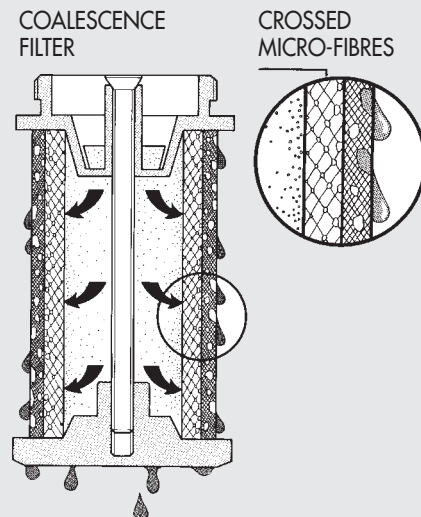
The role of the depurator is to separate the liquid and solid particles contained in the compressed air with a high degree of efficiency. This separation is carried out using a special filtering element called a "coalescence cartridge".



TECHNICAL DATA		DEP 100		DEP 200			DEP 300			DEP 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of purification	µm	99.97% at 0.01		99.97% at 0.01			99.97% at 0.01			99.97% at 0.01			
Max. inlet pressure	MPa	1.5		1.3			1.3			1.3		1.3	
	bar	15		13			13			13		13	
Suggested flow at 87 psi	psi	217		188			188			188		188	
	scfm	8		13			18			81		80	
Maximum suggested flow rate		Please look at the flow rate curves at page 2-84											
Max temperature at: 1 MPa; 10 bar; 145 psi	°C	50		50			50			50		50	
	°F	122		122			122			122		122	
Weight	pounds	0.9		2			3			9.26		11	
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4 - 20 unc x 4.33			
Bowl capacity	fluid ounce oz	0.74		1.52			2.54			9.13		9.13	
Mounting position		Vertical		Vertical			Vertical			Vertical		Vertical	
Drain		RMSA		RMSA			RMSA - RA			RMSA - RA		RMSA - RA	
		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate											
Fluid		5 µm filtered air											
Notes on use		It is advisable to mount a 5 µm pre-filter in order to separate the solid particles first. The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.											

HOW THE COALESCENCE CARTRIDGE WORKS

Air from the mains – full of impurities – flows into the coalescence cartridge and then passes through the crossed micro-fibres that make up the cartridge. During this movement the liquid particles come into contact with the crossed micro-fibres and adhere to them. Due to the air pressure and gravity they join up with other micro-drops at each cross-over point and gradually increase in volume, leading to the physical phenomenon called coalescence. When they stop moving, the drops deposit on the outside of the cartridge, from which they detach and drop to the bottom. Since the volume of liquid leaving the cartridge is exactly the same as the drops arriving, the coalescence cartridge ought to work indefinitely. Solid particles are caught with the same efficiency but, unlike drops, they are not drained out and clog the cartridge. To get round this problem, it is necessary to mount a 5 µm pre-filter before the fine oil filter to separate the solid particles first.

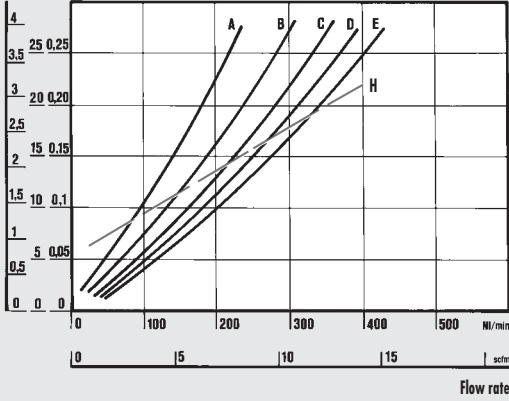


FLOW CHARTS

DEP 100 1/4 - 3/8

$\Delta P = (P_m - P_v)$

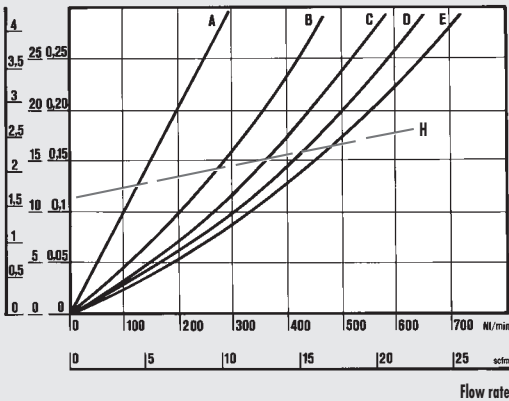
psi kPa bar



DEP 200 1/4 - 3/8 - 1/2

$\Delta P = (P_m - P_v)$

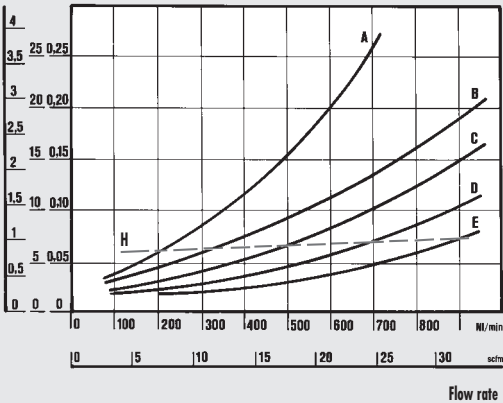
psi kPa bar



DEP 300 1/2 - 3/4 - 1

$\Delta P = (P_m - P_v)$

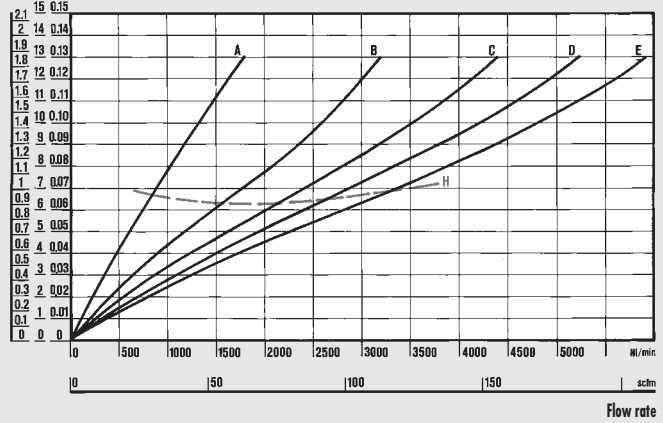
psi kPa bar



DEP 400 1"

$\Delta P = (P_m - P_v)$

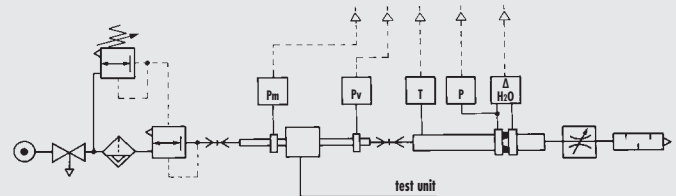
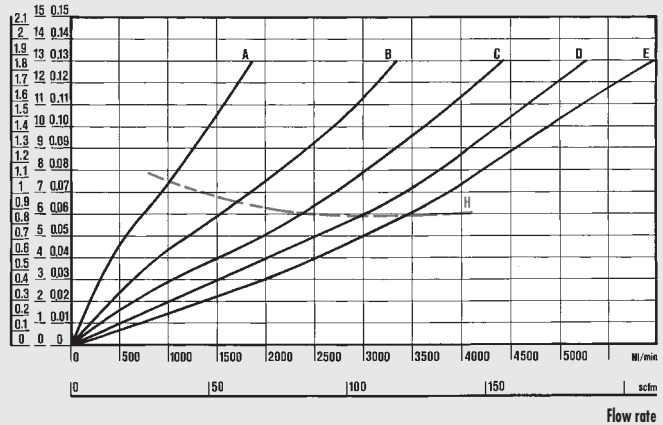
psi kPa bar



DEP 400 2"

$\Delta P = (P_m - P_v)$

psi kPa bar



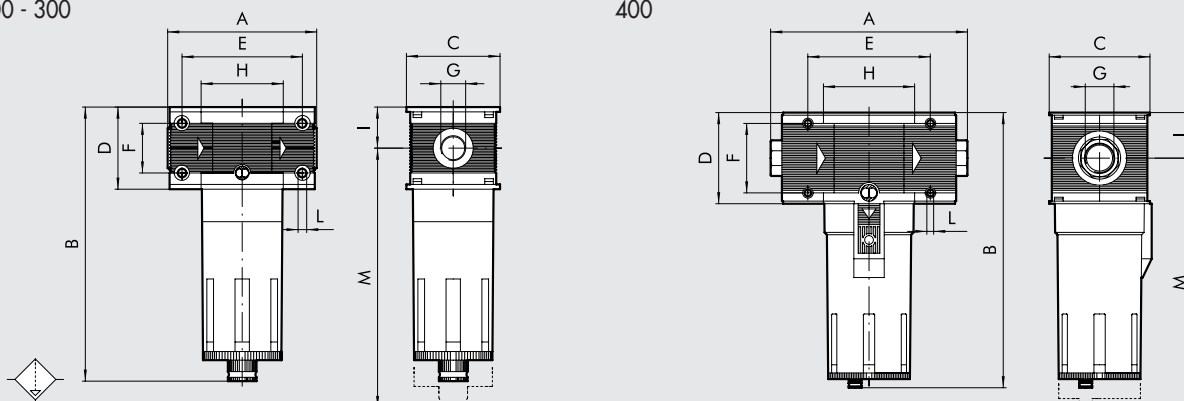
• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi
- (H) = maximum flow rate recommended for optimal operation

DIMENSIONS

100 - 200 - 300

400



	DEP 100		DEP 200			DEP 300			DEP 400			
Threaded port G NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A	3.07		3.68			4.33		4.40	8.85 to 10.03			
B	5.66		6.88			7.67			12.59			
	RA		7			7.83			12.75			
C	1.96		2.48			2.83			4.56			
D	1.69		2.16			2.55			4.13			
E	2.48		3.09			3.62			5.56			
F	1.02		1.41			1.65			3.14			
H	1.69		2.18			2.55			4.14			
I	0.84		1.08			1.27			2.06			
L	0.17		0.21			0.21			0.29			
M	RMSA		7.71			8.46			14.88			
	RA		7.87			8.62			15			

KEY TO CODES

DEP	100	1/4	RMSA	
ELEMENT	SIZE	THREADED PORT	TYPE OF DRAIN	
DEP	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	RMSA	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. (for size 300 and 400)
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT		
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT	RMSA RA	
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT		

ORDERING CODES

Code	Description	Code	Description	Code	Description
Skillair® 100 DEPURATOR		Skillair® 300 DEPURATOR		Skillair® 400 DEPURATOR	
3288001UA	D 100 RMSA NPT without end plates	4488001UA	D 300 RMSA NPT without end plates	6188001UA	D 400 RMSA NPT without end plates
3288001U	D 100 1/4 RMSA NPT	4488002UA	D 300 RA NPT without end plates	6188002UA	D 400 RA NPT without end plates
3388001U	D 100 3/8 RMSA NPT	4488001U	D 300 1/2 RMSA NPT	6188001U	D 400 1 RMSA NPT
		4488002U	D 300 1/2 RA NPT	6188002U	D 400 1 RA NPT
		4588001U	D 300 3/4 RMSA NPT	6288001U	D 400 1 1/4 RMSA NPT
		4588002U	D 300 3/4 RA NPT	6288002U	D 400 1 1/4 RA NPT
		4688001U	D 300 1 RMSA NPT	6388001U	D 400 1 1/2 RMSA NPT
		4688002U	D 300 1 RA NPT	6388002U	D 400 1 1/2 RA NPT
				6488001U	D 400 2 RMSA NPT
				6488002U	D 400 2 RA NPT

Skillair® REGULATORS

Each system served by the air supply mains (e.g. actuators and general appliances) requires its own constant operating pressure. It is necessary to use a regulator to regulate the pressure within a set range by means of regulating springs, with the pressure never exceeding the mains pressure.

The new Skillair® regulator uses a rolling diaphragm which gives a much better performance than the flat version.

Advantages of this system:

- Increased stroke, increased valve opening and hence higher flow rate.
- Decreased dynamic and inrush friction; prompt, more sensitive operation.
- Reduced working stress and hence longer life allowing the use of thinner diaphragms (0.017 inch versus 0.03±0.05 inch for a flat one) which increases regulator sensitivity and prompt action.
- Increased accuracy in maintaining the set pressure with both variable flow rates and different feed pressures.
- Downstream overpressures relieved quickly.



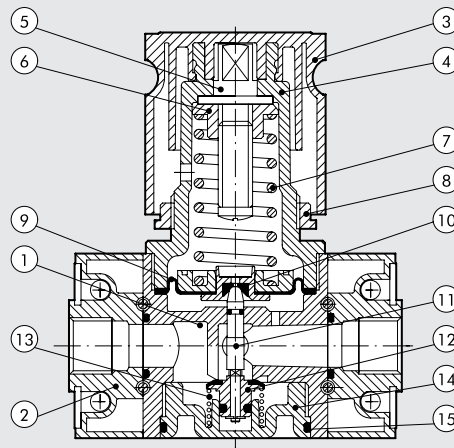
UNITS

Skillair® REGULATORS

TECHNICAL DATA		REG 100		REG 200			REG 300			REG 400 PILOT OPERATOR*			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Setting range	psi	0 to 30 - 0 to 60 - 0 to 120 - 0 to 180										Depending on the pilot operated regulator	
Max. input pressure	MPa	1.5		1.5			1.3			1.3			1.3
	bar	15		15			13			13			13
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	217		217			188			188			188
	Nl/min	1100		2500			3500			18000			20000
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	39		88			124			363			707
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	scfm	57		124			247			-			-
	Nl/min	1600		3500			7000			-			-
ΔP 1 bar (0.1 MPa - 14.5 psi)	°C	50		80			80			50			50
Max temperature at 1 MPa; 10 bar; 145 psi	°F	122		122			122			122			122
Weight	pounds	0.9		1.5			3			10.5			12
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4-20 unc 4.33			
Pressure gauge port	BSPF	1/8"		1/8"			1/8"			1/4"			
Mounting position		In any position											
Fluid		Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.											
Notes on use		The regulator 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. Do not take air from pressure gauge ports. *Supplied without a pilot regulator.											

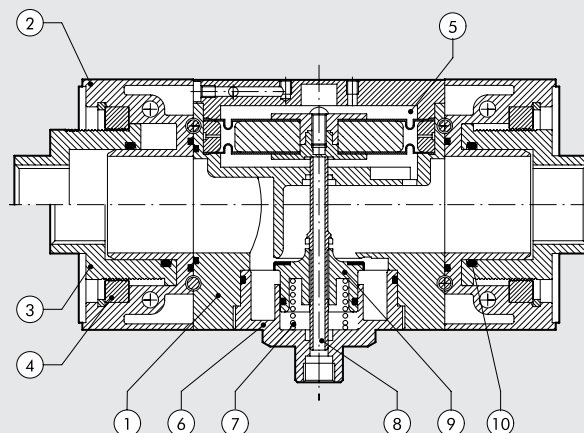
COMPONENTS REG 100 - 200 - 300

- ① Technopolymer body
- ② Zamak end plate
- ③ Technopolymer knob
- ④ Technopolymer bell
- ⑤ OT58 brass adjusting screw
- ⑥ OT58 brass scroll
- ⑦ Steel adjusting spring
- ⑧ Technopolymer ring nut
- ⑨ Rolling diaphragm
- ⑩ NBR relieving gaskets
- ⑪ OT58 brass stem
- ⑫ Valve with NBR vulcanized gasket
- ⑬ Stainless steel valve spring
- ⑭ Technopolymer plug
- ⑮ NBR gaskets



COMPONENTS REG 400 PILOT OPERATED

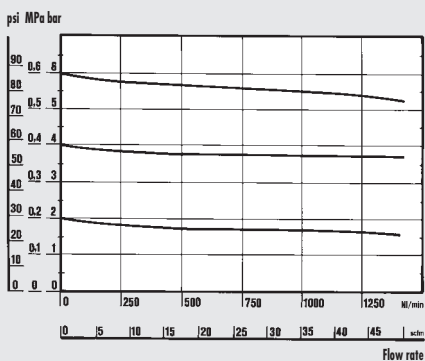
- ① Aluminium body
- ② Aluminium end plate
- ③ OT58 brass threaded bush, axial adjustment
- ④ OT58 brass retaining ring
- ⑤ Rolling diaphragm
- ⑥ OT58 brass plug
- ⑦ Stainless steel valve spring
- ⑧ OT58 brass stem with air relief hole
- ⑨ Valve with NBR vulcanized gasket
- ⑩ NBR gaskets



FLOW CHARTS

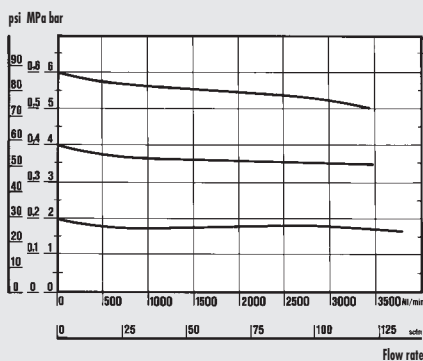
REG 100 1/4 - 3/8

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi



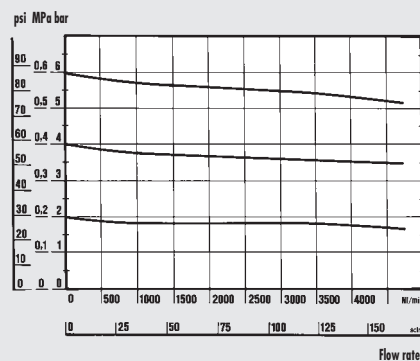
REG 200 1/4 - 3/8 - 1/2

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi



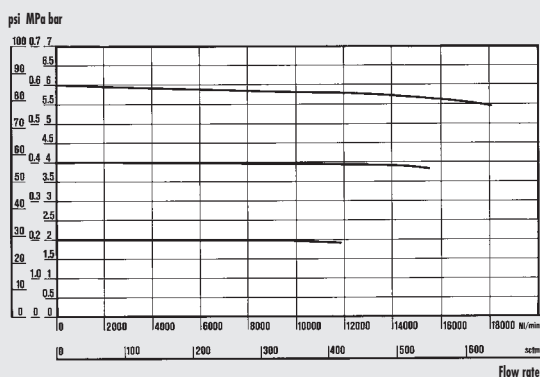
REG 300 1/2 - 3/4 - 1

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi



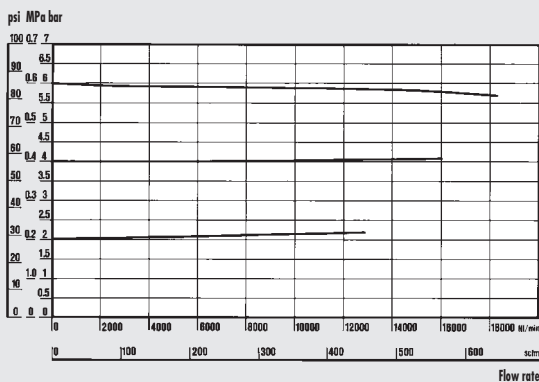
REG 400 1"

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi

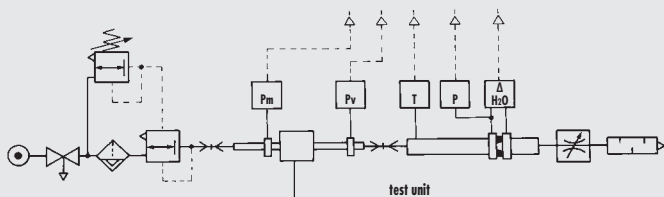


REG 400 2"

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi



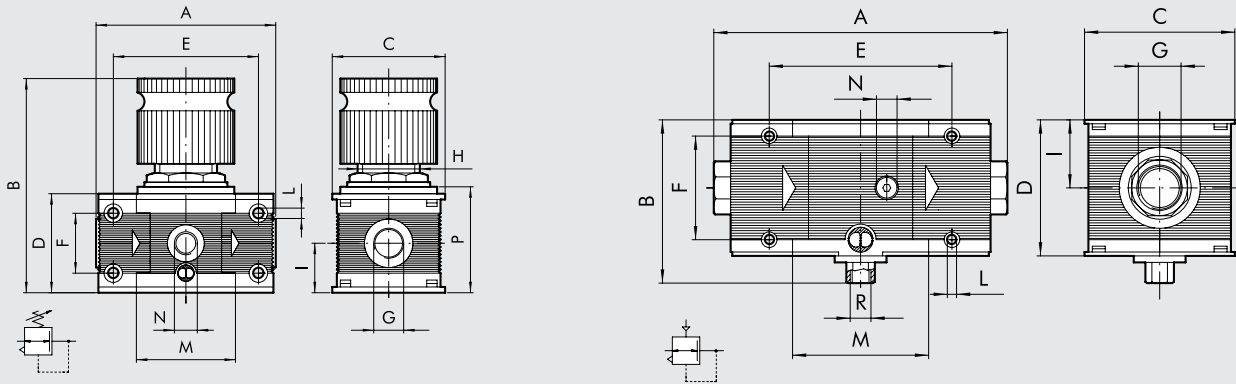
- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.



DIMENSIONS

100 - 200 - 300

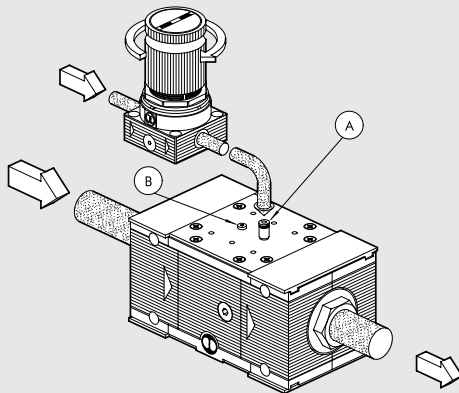
400



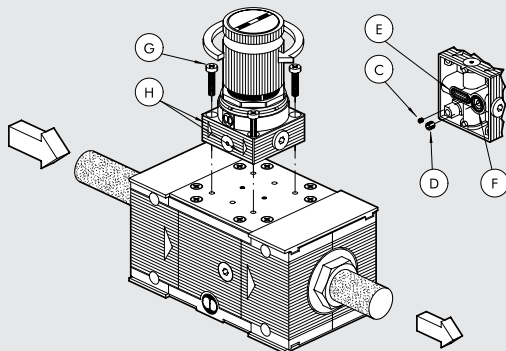
	REG 100		REG 200			REG 300			REG 400					
	Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A			3.07		3.68			4.33		4.40		8.85 to 10.03		11.14 to 12.32
B			3.85		4.92				5.82				4.99	
C			1.96		2.48				2.83				4.56	
D			1.69		2.16				2.55				4.13	
E			2.48		3.09				3.62				5.56	
F			1.02		1.41				1.65				3.14	
H			30 x 1.5		40 x 1.5				48 x 1.5				-	
I			0.84		1.08				1.27				2.06	
L			0.97		0.21				0.21				0.29	
M			1.69		2.18				2.55				4.14	
N (pressure gauge port)			BSPP 1/8"		BSPP 1/8"				BSPP 1/8"				1/4" NPT	
P			1.81		2.28				2.71				-	
R (relief)			-		-				-				1/4" NPT	

INSTRUCTIONS FOR USE REG 400

①



②



REMOTE PILOT

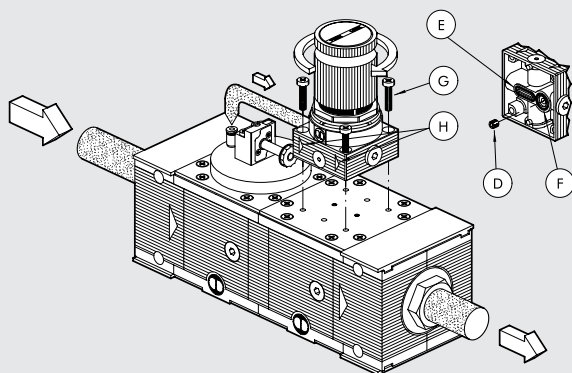
- Fit the A7 M5 plug into the threaded hole ② (close to the entrance).
- Fit the M5 fitting into the threaded hole ① as close to the entrance as possible.
- Connect the downstream circuit of the selected pilot operated regulator to the input ① (R1 fitting).
- Set the required pressure on the pilot operated regulator.

DIRECT PILOT WITH Skillair® PILOT OPERATED REGULATOR

- Remove the pins ③ and ④ under the pilot operated regulator.
- Check that the two gaskets ⑤ and ⑥ under the pilot are in place.
- Fix the pilot operated regulator to the base of the regulator using the self-threading screws ⑦. Make sure the arrows ⑧ point in the same direction as the arrows in relief under the base of the regulator.

INSTRUCTIONS FOR USE REG 400

③



PILOT REGULATOR FOLLOW-UP LINK

This is used when the regulator is mounted downstream of a V3V valve or an APR.

The air can be bled from the V3V or APR valves instead of from the regulator relieving system.

- Remove only the stud pin marked with a letter Ⓓ under the pilot regulator.
- Check the two gaskets under the pilot marked Ⓔ and Ⓕ.
- Secure the pilot regulator to the regulator base with the self-tapping screws marked with a letter Ⓕ. Making sure the arrows marked Ⓗ point in the same direction as the arrows in relief under the regulator base.
- Remove the A7 M5 plug from the V3V or APR plate and remount the fitting.
- Connect the pilot regulator supply to the fitting.

KEY TO CODES

REG ELEMENT	100 SIZE	1/4 THREADED PORT	0-30 SETTING RANGE
REG	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	0-30 = 0 to 30 psi 0-60 = 0 to 60 psi
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	0-120 = 0 to 120 psi 0-180 = 0 to 180 psi
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT	Depending on the pilot used
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT	

The pilot operated regulator is necessary for size 400. See pag. 2-91

ORDERING CODES

Code	Description	Code	Description	Code	Description
Skillair® 100 REGULATOR		Skillair® 200 REGULATOR		Skillair® 300 REGULATOR	
3202001UA	REG 100 0-30 NPT without end plates	3402001UA	REG 200 0-30 NPT without end plates	4402000UA	REG 300 0-30 NPT without end plates
3202002UA	REG 100 0-60 NPT without end plates	3402002UA	REG 200 0-60 NPT without end plates	4402001UA	REG 300 0-60 NPT without end plates
3202003UA	REG 100 0-120 NPT without end plates	3402003UA	REG 200 0-120 NPT without end plates	4402002UA	REG 300 0-120 NPT without end plates
3202004UA	REG 100 0-180 NPT without end plates	3402004UA	REG 200 0-180 NPT without end plates	4402003UA	REG 300 0-180 NPT without end plates
3202001U	REG 100 1/4 0-30 NPT	3402001U	REG 200 1/4 0-30 NPT	4402000U	REG 300 1/2 0-30 NPT
3202002U	REG 100 1/4 0-60 NPT	3402002U	REG 200 1/4 0-60 NPT	4402001U	REG 300 1/2 0-60 NPT
3202003U	REG 100 1/4 0-120 NPT	3402003U	REG 200 1/4 0-120 NPT	4402002U	REG 300 1/2 0-120 NPT
3202004U	REG 100 1/4 0-180 NPT	3402004U	REG 200 1/4 0-180 NPT	4402003U	REG 300 1/2 0-180 NPT
3302001U	REG 100 3/8 0-30 NPT	3502001U	REG 200 3/8 0-30 NPT	4502000U	REG 300 3/4 0-30 NPT
3302002U	REG 100 3/8 0-60 NPT	3502002U	REG 200 3/8 0-60 NPT	4502001U	REG 300 3/4 0-60 NPT
3302003U	REG 100 3/8 0-120 NPT	3502003U	REG 200 3/8 0-120 NPT	4502002U	REG 300 3/4 0-120 NPT
3302004U	REG 100 3/8 0-180 NPT	3502004U	REG 200 3/8 0-180 NPT	4502003U	REG 300 3/4 0-180 NPT
		3602001U	REG 200 1/2 0-30 NPT	4602000U	REG 300 1 0-30 NPT
		3602002U	REG 200 1/2 0-60 NPT	4602001U	REG 300 1 0-60 NPT
		3602003U	REG 200 1/2 0-120 NPT	4602002U	REG 300 1 0-120 NPT
		3602004U	REG 200 1/2 0-180 NPT	4602003U	REG 300 1 0-180 NPT
				Skillair® 400 REGULATOR	
				6102001UA	REG 400 NPT without end plates
				6102001U	REG 400 1 NPT
				6202001U	REG 400 1 1/4 NPT
				6302001U	REG 400 1 1/2 NPT
				6402001U	REG 400 2 NPT

Skillair® 100 IN-SERIES REGULATOR

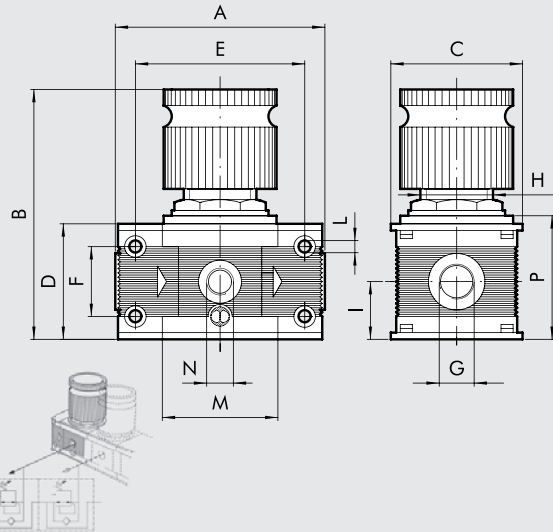
TECHNICAL DATA

Threaded inlet port	NPT	1/4"
Threaded user port	NPT	G 1/8"
Degree of purification	psi	0 to 30 - 0 to 60 - 0 to 120 - 0 to 180
Max. input pressure		1.5 MPa - 15 bar - 217 psi
Flow rate at 6.3 bar (0.63 MPa - 91 psi)		500 NL/min
ΔP 0.5 bar (0.05 MPa - 7 psi)		18 scfm
Flow rate at 6.3 bar (0.63 MPa - 91 psi)		950 NL/min
ΔP 1 bar (0.1 MPa - 14 psi)		34 scfm
Fluid	Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous	
Max temperature	°C	50
at 1 MPa; 10 bar; 145 psi	°F	122
Weight	pounds	0.9
Wall fixing screws		N. 8-32 unc x 2
Mounting position		In any position
Pressure gauge port		BSP 1/8"
Notes on use	The regulator 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.	



DIMENSIONS

		REG 100	REG 100
Threaded port G	NPT	1/4"	3/8"
A		3.07	
B		3.85	
C		1.96	
D		1.69	
E		2.48	
F		1.02	
H		30 x 1.5	
I		0.84	
L		0.17	
M		1.69	
N (use)		BSP 1/8"	
P		1.81	

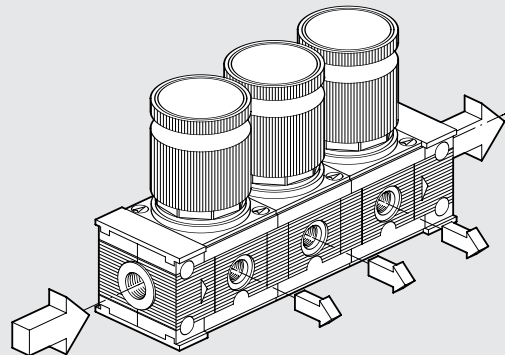


ORDERING CODES

Code	Description
100 IN-SERIES REGULATOR	
3202101UA	100 IN-SERIES REG. 0-30 without end plates
3202102UA	100 IN-SERIES REG. 0-60 without end plates
3202103UA	100 IN-SERIES REG. 0-120 without end plates
3202104UA	100 IN-SERIES REG. 0-180 without end plates
3202101U	100 IN-SERIES REG. 1/4 0-30
3202102U	100 IN-SERIES REG. 1/4 0-60
3202103U	100 IN-SERIES REG. 1/4 0-120
3202104U	100 IN-SERIES REG. 1/4 0-180
3302101U	100 IN-SERIES REG. 3/8 0-30
3302102U	100 IN-SERIES REG. 3/8 0-60
3302103U	100 IN-SERIES REG. 3/8 0-120
3302104U	100 IN-SERIES REG. 3/8 0-180

Several of these Skillair® regulators can be mounted in series, all fed by the same pressure. They can give different set pressures, each independent of the previous regulator.

Operating compressed air can be taken from the pressure gauge ports (G 1/8").



The pilot regulator is used when great accuracy is required in maintaining the set pressure under changing operating conditions.

It is ideal for use as:

- a precision regulator for flow rates < 3.5 scfm.
- a pilot in general - typically for large size regulators (see REG 400).

The system's high operating accuracy and low hysteresis are determined by the virtually total lack of friction.

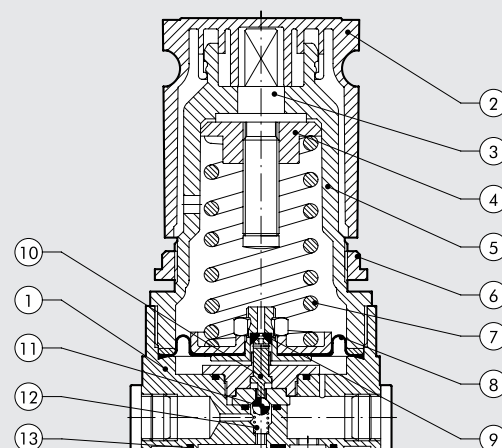
The presence of a slight air leak is necessary for the regulator to operate properly - it is not a malfunction. It is advisable to use filtered air.



TECHNICAL DATA		PILOT REGULATOR	
Threaded port	NPT		1/4"
Setting range	psi		0 to 30 - 0 to 60 - 0 to 120 - 0 to 180
Max. input pressure	MPa		1.3
	bar		13
	psi		188
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)			120 NI/min - 4.3 scfm
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)			140 NI/min - 5 scfm
Fluid			Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50
	°F		122
Weight	pounds		1.3
Mounting position			In any position
Pressure gauge port			BSP 1/8"
Notes on use			The regulator 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. Do not take air from the pressure gauge ports. Mount directly on REG 400.

COMPONENTS

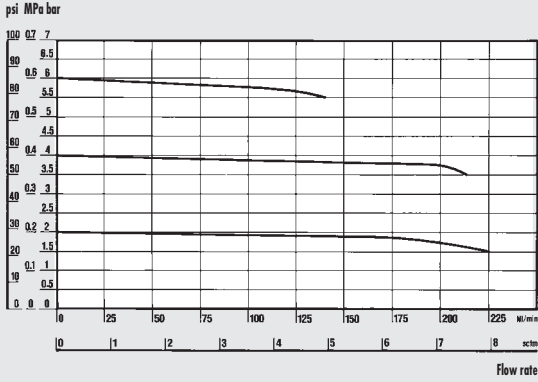
- ① Aluminium body
- ② Technopolymer knob
- ③ OT58 brass adjusting screw
- ④ OT58 brass scroll
- ⑤ Technopolymer bell
- ⑥ Technopolymer ring nut
- ⑦ Steel adjusting spring
- ⑧ Rolling diaphragm
- ⑨ NBR relieving gaskets
- ⑩ OT58 brass stem
- ⑪ Stainless steel ball valve
- ⑫ Stainless steel valve spring
- ⑬ NBR gaskets



FLOW CHARTS

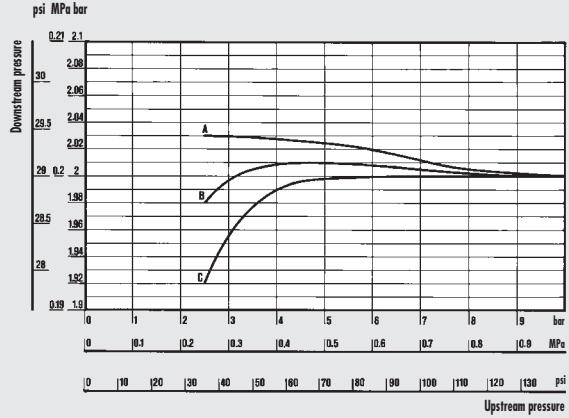
FLOW FEATURES REG. P 1/4"

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi



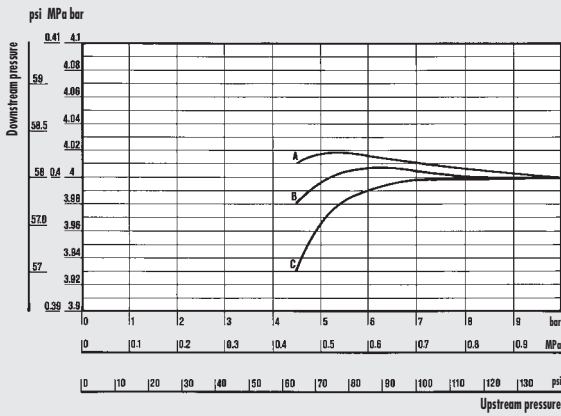
REGULATION FEATURES REG. P 1/4" *

Flow rate: A = 0 NI/min = 0 scfm -
B = 25 NI/min = 0.88 scfm - C = 50 NI/min = 1.76 scfm



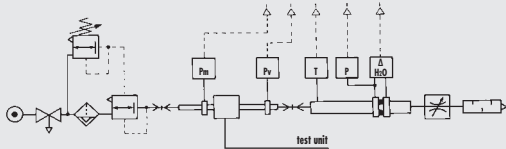
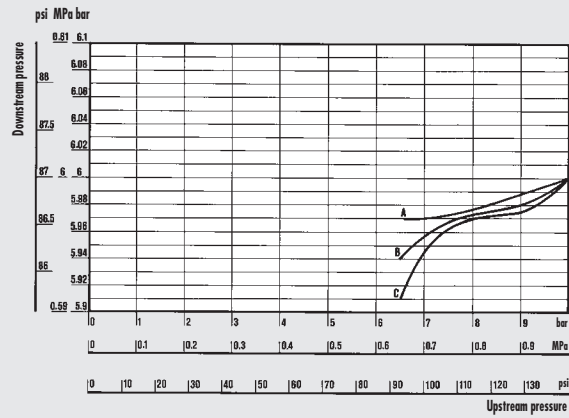
REGULATION FEATURES REG. P 1/4" *

Flow rate: A = 0 NI/min = 0 scfm
B = 25 NI/min = 0.88 scfm - C = 50 NI/min = 1.76 scfm



REGULATION FEATURES REG. P 1/4" *

Flow rate: A = 0 NI/min = 0 scfm
B = 25 NI/min = 0.88 scfm - C = 50 NI/min = 1.76 scfm

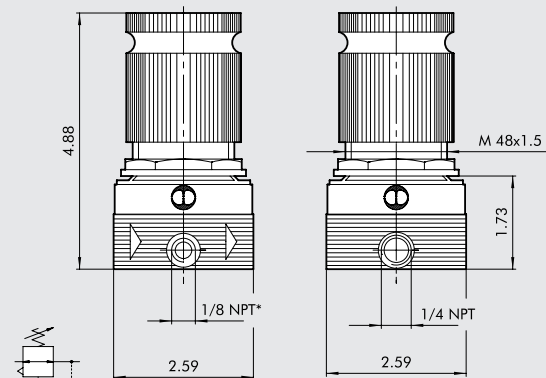


• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

* Pressure stability adjusted according to changes in upstream pressure.

DIMENSIONS

Code	Description
3206001U	REG. P 1/4" 0-30 NPT
3206002U	REG. P 1/4" 0-60 NPT
3206003U	REG. P 1/4" 0-120 NPT
3206004U	REG. P 1/4" 0-180 NPT



*Pressure gauge port

Skillair® 300 PILOT OPERATED REGULATOR



- Pilot-operated or servo-piloted regulator.
- Twin rolling diaphragm to ensure improved opening and hence greater flow rate.
- Low load losses
- Excellent precision in pressure setting.
- Excellent sensitivity during relieving.



TECHNICAL DATA

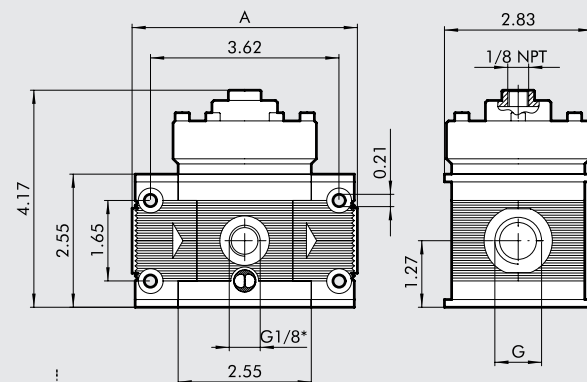
		300 PILOT OPERATED REG		
		1/2"	3/4"	1"
Threaded port	NPT	1/2"	3/4"	1"
Setting range		Depending on the pilot regulator		
Max. input pressure	MPa		1.3	
	bar		13	
	psi		188	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	Nl/min		4500	
	scfm		160	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min		7000	
	scfm		247	
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.		
Max temperature at 1 MPa; 10 bar; 145 psi	°C		50	
	°F		122	
Weight	pounds		2.8	
Wall fixing screws		N. 10-24 unc x 2.75		
Mounting position		In any position		
Pressure gauge port		BSP 1/8"		
Notes on use		The regulator pressure must always be set upwards. Do not take air from the pressure gauge ports.		

DIMENSIONS

		REG 300		
Threaded port G	NPT	1/2"	3/4"	1"
A		4.33	4.33	4.40

ORDERING CODES

Code	Description
4403003UA	300 PILOT OPERATED REG NPT without end plates
4403003U	300 1/2" PILOT OPERATED REG NPT
4503003U	300 3/4" PILOT OPERATED REG NPT
4603003U	300 1" PILOT OPERATED REG NPT



*Pressure gauge port

Skillair® FILTER REGULATOR

This device combines a filter and a pressure regulator in a single unit. It has the dual function of filtering and regulating air from the compressor. As the filter regulator is made up of the same elements as the regulator and the filter, the performance is the same.

- High flow rates with low load loss.
- Special rolling diaphragm - higher flow rate, greater stability, improved sensitivity.
- Rapid relief of downstream overpressures.
- Stability of the regulated pressure as the mains pressure fluctuates.
- Maximum degree of condensate separation.
- 360° condensate level display.
- Condensate drain with manual/semi-automatic or automatic function.



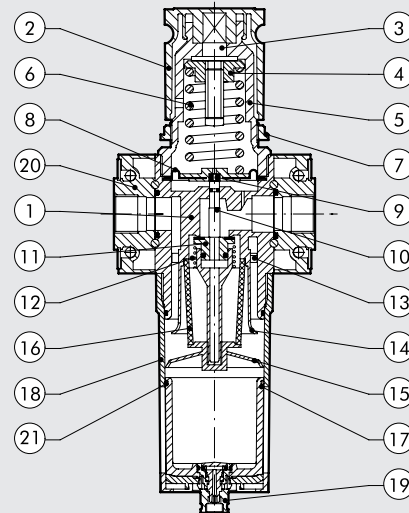
UNITS

Skillair® FILTER REGULATOR

TECHNICAL DATA		FR 100		FR 200			FR 300		
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Setting range	psi	0 to 30 - 0 to 60 - 0 to 120 - 0 to 180							
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)							
Max. input pressure		1.5 MPa - 15 bar - 217 psi		1.3 MPa - 13 bar - 188 psi			1.3 MPa - 13 bar - 188 psi		
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	NI/min	1100		1600			3500		
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	39		57			125		
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	NI/min	1600		3000			5600		
ΔP 1 bar (0.1 MPa - 14.5 psi)	scfm	57		71			200		
Max temperature	°C	50		50			50		
at: 1 MPa; 10 bar; 145 psi	°F	122		122			122		
Weight	pounds	1.1		2.2			4		
Wall fixing screws		N. 8-32 unc x 2"		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75		
Mounting position		Vertical		Vertical			Vertical		
Pressure gauge port	BSPP	1/8"		1/8"			1/8"		
Bowl capacity	fluid ounce oz	0.74		1.52			2.54		
Drain		RMSA - SAC		RMSA - SAC - RA			RMSA - RA		
		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure							
		RA: automatic drain with condensate discharge, independent of pressure and flow rate							
		SAC: automatic drain with condensate discharge. Operates by depression - requires variable air take-offs.							
		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.							
Fluid		The regulator 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. Do not take air from pressure gauge ports.							
Notes on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.							

COMPONENTS

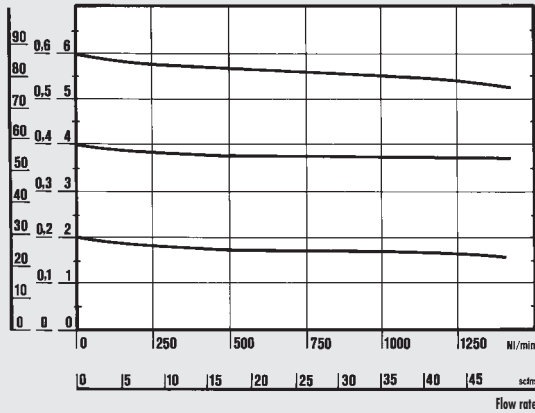
- ① Technopolymer body
- ② Technopolymer knob
- ③ OT58 brass adjusting screw
- ④ OT58 brass scroll
- ⑤ Technopolymer bell
- ⑥ Steel adjusting spring
- ⑦ Technopolymer ring nut
- ⑧ Rolling diaphragm
- ⑨ NBR relieving gaskets
- ⑩ OT58 brass stem
- ⑪ Valve with NBR vulcanized gasket
- ⑫ Stainless steel valve spring
- ⑬ Technopolymer centrifuge
- ⑭ Technopolymer baffle plug
- ⑮ Technopolymer screen
- ⑯ Sintered HDPE filter cartridge
- ⑰ Clear technopolymer glass
- ⑱ Bowl: technopolymer for FR100 and FR200, metal for FR 300
- ⑲ Drain (RMSA)
- ⑳ Zamak end plate
- ㉑ NBR gaskets



FLOW CHARTS

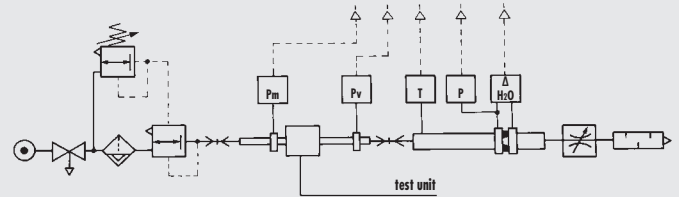
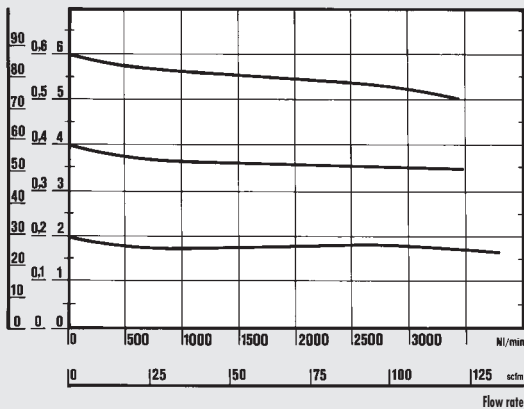
FR 100 1/4 - 3/8

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi
psi MPa bar



FR 200 1/4 - 3/8 - 1/2

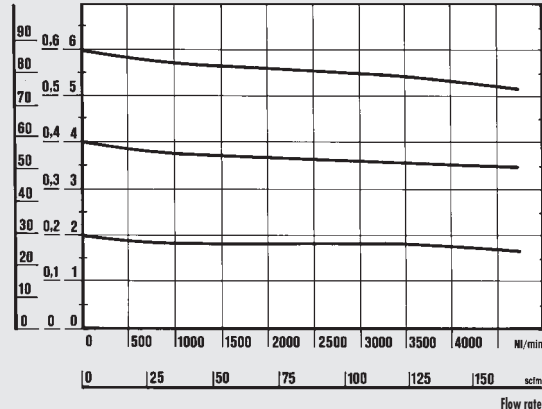
Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi
psi MPa bar



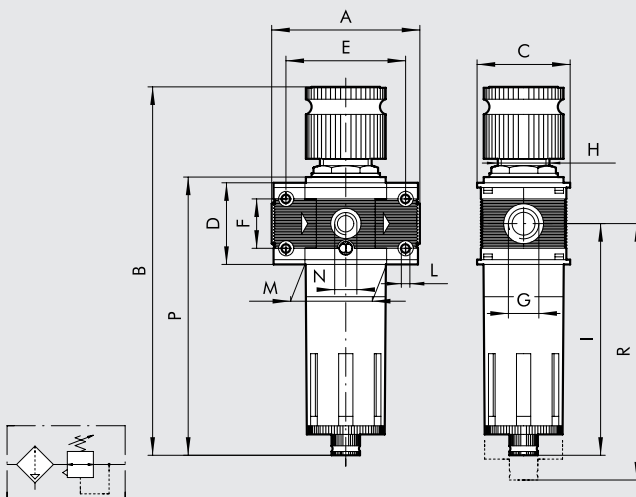
- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

FR 300 1/2 - 3/4 - 1

Preset pressure
Pm = 7 bar - 0.7 MPa - 100 psi
psi MPa bar



DIMENSIONS



		FR 100		FR 200			FR 300		
Threaded port G	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
A		3.07		3.68		4.33		4.33	4.40
B		7.84		9.65		4.33			
C		1.97		2.48		4.41			
D		1.70		2.17		10.95			
E		2.48		3.09		2.84			
F		1.02		1.42		3.62			
H		M30x1.5		M40x1.5		M48x1.5			
I		4.82		5.80		6.40			
L		0.157		0.197		0.197			
M		1.69		2.19		2.56			
N (pressure gauge port)		BSP 1/8"		BSP 1/8"		BSP 1/8"			
P	RMSA	5.78		7		7.87			
	SAC	-		7.16		8			
	SAC	6		7.16		8			
R	RMSA	5.39		7.71		8.46			
	RA	-		7.87		8.62			
	SAC	5.55		7.87		8.62			

KEY TO CODES

FR ELEMENT	100 SIZE	1/4 THREADED PORT	5 DEGREE OF FILTRATION	0-30 SETTING RANGE	RMSA TYPE OF DRAIN
FR	100	1/4	5 = 5 µm (200 microinch)	0-30 = 0 to 30 psi	RMSA
	200	3/8	20 = 20 µm (790 microinch)	0-60 = 0 to 60 psi	SAC
		1/4	50 = 50 µm (2000 microinch)	0-120 = 0 to 120 psi	RMSA
		3/8		0-180 = 0 to 180 psi	SAC
	300	1/2			RA*
		1/2			RMSA
		3/4			RA
		1			

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate. (for size 300 and 400)

SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs. (for size 100 and 200)

* For Skillair® 200 with RA, please contact our sales assistance department.

ORDERING CODES

Code	Description	Code	Description	Code	Description
Skillair® 100 FILTER REGULATOR					
3283007UA	FR 100 5 0-120 RMSA NPT without end plates	3483007UA	FR 200 5 0-120 RMSA NPT without end plates	4483004UA	FR 300 5 0-120 RMSA NPT without end plates
3283008UA	FR 100 20 0-120 RMSA NPT without end plates	3483008UA	FR 200 20 0-120 RMSA NPT without end plates	4483005UA	FR 300 20 0-120 RMSA NPT without end plates
3283009UA	FR 100 50 0-120 RMSA NPT without end plates	3483009UA	FR 200 50 0-120 RMSA NPT without end plates	4483006UA	FR 300 50 0-120 RMSA NPT without end plates
3283010UA	FR 100 5 0-180 RMSA NPT without end plates	3483010UA	FR 200 5 0-180 RMSA NPT without end plates	4483007UA	FR 300 5 0-180 RMSA NPT without end plates
3283011UA	FR 100 20 0-180 RMSA NPT without end plates	3483011UA	FR 200 20 0-180 RMSA NPT without end plates	4483008UA	FR 300 20 0-180 RMSA NPT without end plates
3283012UA	FR 100 50 0-180 RMSA NPT without end plates	3483012UA	FR 200 50 0-180 RMSA NPT without end plates	4483009UA	FR 300 50 0-180 RMSA NPT without end plates
3283031UA	FR 100 5 0-120 SAC NPT without end plates	3483031UA	FR 200 5 0-120 SAC NPT without end plates	4483013UA	FR 300 5 0-120 RA NPT without end plates
3283032UA	FR 100 20 0-120 SAC NPT without end plates	3483032UA	FR 200 20 0-120 SAC NPT without end plates	4483014UA	FR 300 20 0-120 RA NPT without end plates
3283033UA	FR 100 50 0-120 SAC NPT without end plates	3483033UA	FR 200 50 0-120 SAC NPT without end plates	4483015UA	FR 300 50 0-120 RA NPT without end plates
3283034UA	FR 100 5 0-180 SAC NPT without end plates	3483034UA	FR 200 5 0-180 SAC NPT without end plates	4483016UA	FR 300 5 0-180 RA NPT without end plates
3283035UA	FR 100 20 0-180 SAC NPT without end plates	3483035UA	FR 200 20 0-180 SAC NPT without end plates	4483017UA	FR 300 20 0-180 RA NPT without end plates
3283036UA	FR 100 50 0-180 SAC NPT without end plates	3483036UA	FR 200 50 0-180 SAC NPT without end plates	4483018UA	FR 300 50 0-180 RA NPT without end plates
3283007U	FR 100 1/4 5 0-120 RMSA NPT	3483007U	FR 200 1/4 5 0-120 RMSA NPT	4483004U	FR 300 1/2 5 0-120 RMSA NPT
3283008U	FR 100 1/4 20 0-120 RMSA NPT	3483008U	FR 200 1/4 20 0-120 RMSA NPT	4483005U	FR 300 1/2 20 0-120 RMSA NPT
3283009U	FR 100 1/4 50 0-120 RMSA NPT	3483009U	FR 200 1/4 50 0-120 RMSA NPT	4483006U	FR 300 1/2 50 0-120 RMSA NPT
3283010U	FR 100 1/4 5 0-180 RMSA NPT	3483010U	FR 200 1/4 5 0-180 RMSA NPT	4483007U	FR 300 1/2 5 0-180 RMSA NPT
3283011U	FR 100 1/4 20 0-180 RMSA NPT	3483011U	FR 200 1/4 20 0-180 RMSA NPT	4483008U	FR 300 1/2 20 0-180 RMSA NPT
3283012U	FR 100 1/4 50 0-180 RMSA NPT	3483012U	FR 200 1/4 50 0-180 RMSA NPT	4483009U	FR 300 1/2 50 0-180 RMSA NPT
3283031U	FR 100 1/4 5 0-120 SAC NPT	3483031U	FR 200 1/4 5 0-120 SAC NPT	4483013U	FR 300 1/2 5 0-120 RA NPT
3283032U	FR 100 1/4 20 0-120 SAC NPT	3483032U	FR 200 1/4 20 0-120 SAC NPT	4483014U	FR 300 1/2 20 0-120 RA NPT
3283033U	FR 100 1/4 50 0-120 SAC NPT	3483033U	FR 200 1/4 50 0-120 SAC NPT	4483015U	FR 300 1/2 50 0-120 RA NPT
3283034U	FR 100 1/4 5 0-180 SAC NPT	3483034U	FR 200 1/4 5 0-180 SAC NPT	4483016U	FR 300 1/2 5 0-180 RA NPT
3283035U	FR 100 1/4 20 0-180 SAC NPT	3483035U	FR 200 1/4 20 0-180 SAC NPT	4483017U	FR 300 1/2 20 0-180 RA NPT
3283036U	FR 100 1/4 50 0-180 SAC NPT	3483036U	FR 200 1/4 50 0-180 SAC NPT	4483018U	FR 300 1/2 50 0-180 RA NPT
3383007U	FR 100 3/8 5 0-120 RMSA NPT	3583007U	FR 200 3/8 5 0-120 RMSA NPT	4583004U	FR 300 3/4 5 0-120 RMSA NPT
3383008U	FR 100 3/8 20 0-120 RMSA NPT	3583008U	FR 200 3/8 20 0-120 RMSA NPT	4583005U	FR 300 3/4 20 0-120 RMSA NPT
3383009U	FR 100 3/8 50 0-120 RMSA NPT	3583009U	FR 200 3/8 50 0-120 RMSA NPT	4583006U	FR 300 3/4 50 0-120 RMSA NPT
3383010U	FR 100 3/8 5 0-180 RMSA NPT	3583010U	FR 200 3/8 5 0-180 RMSA NPT	4583007U	FR 300 3/4 5 0-180 RMSA NPT
3383011U	FR 100 3/8 20 0-180 RMSA NPT	3583011U	FR 200 3/8 20 0-180 RMSA NPT	4583008U	FR 300 3/4 20 0-180 RMSA NPT
3383012U	FR 100 3/8 50 0-180 RMSA NPT	3583012U	FR 200 3/8 50 0-180 RMSA NPT	4583009U	FR 300 3/4 50 0-180 RMSA NPT
3383031U	FR 100 3/8 5 0-120 SAC NPT	3583031U	FR 200 3/8 5 0-120 SAC NPT	4583013U	FR 300 3/4 5 0-120 RA NPT
3383032U	FR 100 3/8 20 0-120 SAC NPT	3583032U	FR 200 3/8 20 0-120 SAC NPT	4583014U	FR 300 3/4 20 0-120 RA NPT
3383033U	FR 100 3/8 50 0-120 SAC NPT	3583033U	FR 200 3/8 50 0-120 SAC NPT	4583015U	FR 300 3/4 50 0-120 RA NPT
3383034U	FR 100 3/8 5 0-180 SAC NPT	3583034U	FR 200 3/8 5 0-180 SAC NPT	4583016U	FR 300 3/4 5 0-180 RA NPT
3383035U	FR 100 3/8 20 0-180 SAC NPT	3583035U	FR 200 3/8 20 0-180 SAC NPT	4583017U	FR 300 3/4 20 0-180 RA NPT
3383036U	FR 100 3/8 50 0-180 SAC NPT	3583036U	FR 200 3/8 50 0-180 SAC NPT	4583018U	FR 300 3/4 50 0-180 RA NPT
		3683007U	FR 200 1/2 5 0-120 RMSA NPT	4683004U	FR 300 1 5 0-120 RMSA NPT
		3683008U	FR 200 1/2 20 0-120 RMSA NPT	4683005U	FR 300 1 20 0-120 RMSA NPT
		3683009U	FR 200 1/2 50 0-120 RMSA NPT	4683006U	FR 300 1 50 0-120 RMSA NPT
		3683010U	FR 200 1/2 5 0-180 RMSA NPT	4683007U	FR 300 1 5 0-180 RMSA NPT
		3683011U	FR 200 1/2 20 0-180 RMSA NPT	4683008U	FR 300 1 20 0-180 RMSA NPT
		3683012U	FR 200 1/2 50 0-180 RMSA NPT	4683009U	FR 300 1 50 0-180 RMSA NPT
		3683031U	FR 200 1/2 5 0-120 SAC NPT	4683013U	FR 300 1 5 0-120 RA NPT
		3683032U	FR 200 1/2 20 0-120 SAC NPT	4683014U	FR 300 1 20 0-120 RA NPT
		3683033U	FR 200 1/2 50 0-120 SAC NPT	4683015U	FR 300 1 50 0-120 RA NPT
		3683034U	FR 200 1/2 5 0-180 SAC NPT	4683016U	FR 300 1 5 0-180 RA NPT
		3683035U	FR 200 1/2 20 0-180 SAC NPT	4683017U	FR 300 1 20 0-180 RA NPT
		3683036U	FR 200 1/2 50 0-180 SAC NPT	4683018U	FR 300 1 50 0-180 RA NPT

The pneumatic lubricator is the simplest way of properly lubricating actuators connected to a circuit.

As air flows from the mains through the lubricator, it encounters the diaphragm which obstructs the flow and the air is forced through the Venturi tube.

The inside of the Venturi tube is connected to the inspection dome, which connects with the bowl via a tube with a regulating needle in between.

The drop in pressure caused by the Venturi tube sucks up air through the dome, the tube and lastly into the bowl containing oil.

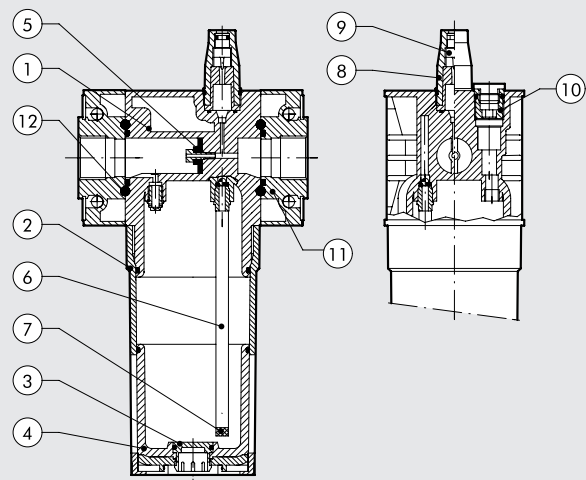
The quantity of oil controlled by the regulating needle then flows back from the bowl to the circuit.



TECHNICAL DATA		LUB 100		LUB 200			LUB 300			LUB 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Type of lubrication		Mist		Mist			Mist			Mist			
Bowl capacity	fluid ounce oz	1.69		3.21			5.41			27.00			
Versions		Standard - CD		Standard - CD			Standard - CD - ML CD			Standard - CD - ML CD			
Max. inlet pressure	Mpa	1.5		1.3			1.3			1.3			
	bar	15		13			13			13			
	psi	217		188			188			188			
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	1100		2200			3500			18000			
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	39		71			125			640			
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	1500		3700			5500			-			
ΔP 1 bar (0.1 MPa - 14.5 psi)	scfm	53		131			196			-			
Max temperature at: 1 MPa; 10 bar; 145 psi	°C	50		50			50			50			
	°F	122		122			122			122			
Weight	pounds	0.9		1.5			3			10.8			
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4 - 20 unc x 4.33			
Mounting position		Vertical											
Fluid		Filtered compressed air											
Recommended oils		ISO and UNI FD22 (Energol HPL to Spinesso to Mobil DTE to Tellus Oil).											
Notes on use		Install the lubricator as close as possible to the point of use. Fill the lubricator bowl with oil before pressurizing the system. Do not use cleaning oils, brake fluid oils or solvents in general. For the best lubrication results, set the drip rate to one drop per 10.6-21.2 scfm.											

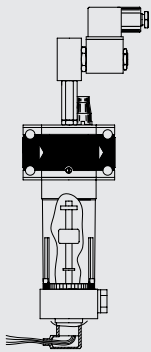
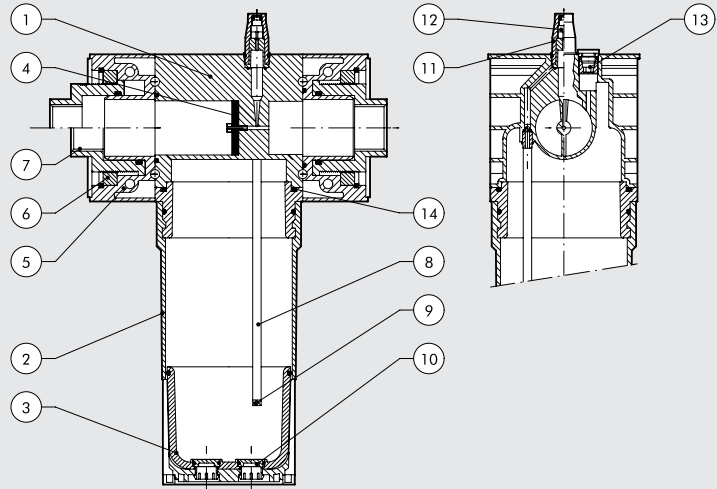
COMPONENTS LUB 100 - LUB 200 - LUB 300

- ① Technopolymer body
- ② Bowl: technopolymer for LUB 100 and 200, metal for LUB 300
- ③ Technopolymer plug
- ④ Clear technopolymer glass
- ⑤ NBR Venturi tube diaphragm
- ⑥ Rilsan® oil suction tube
- ⑦ Filter
- ⑧ Clear technopolymer inspection dome
- ⑨ OT58 brass oil flow regulating needle
- ⑩ OT58 brass oil filling plug
- ⑪ Zamak end plate
- ⑫ NBR gaskets



COMPONENTS LUB 400

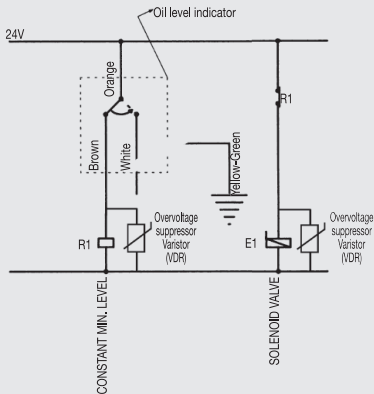
- ① Aluminium body
- ② Aluminium bowl
- ③ Clear technopolymer glass
- ④ NBR Venturi tube diaphragm
- ⑤ Aluminium end plate
- ⑥ OT58 brass retaining ring
- ⑦ OT48 brass threaded bush with axial adjustment
- ⑧ Rilsan® oil suction pipe
- ⑨ Filter
- ⑩ Technopolymer plug
- ⑪ Clear technopolymer inspection dome
- ⑫ OT58 brass oil flow regulating needle
- ⑬ OT58 brass oil filling plug
- ⑭ NBR gaskets



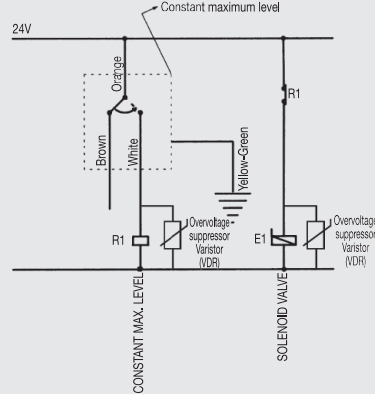
DEPRESSION FILLING WITH MINIMUM LEVEL (ML CD AUTOMATIC)

Available in sizes 300 and 400, this lubricator is controlled by a solenoid valve (2/2 NC minimum bore 3) situated on the lubricator body. It reduces pressure inside the bowl allow it to be filled with oil taken from a tank at ambient pressure, which can be located in a lower position than the lubricator (max. difference in height 78.8 inch). The electric indicator inside the bowl sends an electric signal used to activate the valve. When the oil reaches the maximum level, another signal disactivates the valve. In this case, the lubricator system operates with the oil level between minimum and maximum. If it is necessary to keep the oil level in the bowl constant, only one of the two signals can be used. Pressure range 43.5 to 145 psi. Connect the oil tank to the BSPP 1/4 fitting on the bowl.

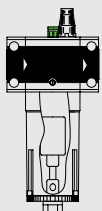
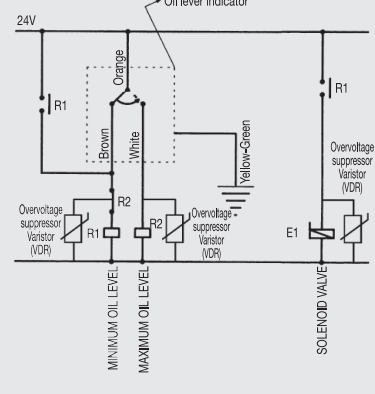
Constant minimum level



Constant maximum level



Oil level between maximum and minimum



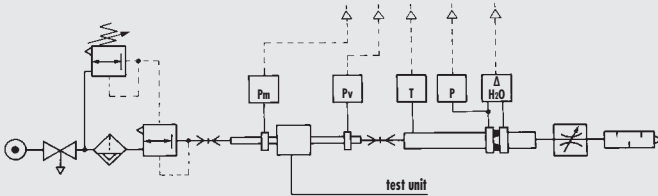
FILLING BY DEPRESSION (CD MANUAL)

Available in all sizes. It is operated by means of a button on the lubricator body. The pressure inside the bowl drops to allow it to be filled with oil taken from a tank at ambient pressure, which can be located in a lower position than the lubricator (max. difference in height 78.8 inch). Oil filling stops when the level of oil raises the float and shuts off a specific valve. Important - The SK4 lubricator is filled with oil by hand. Filling must stop when the oil level is visible through the spy-hole in the bowl release lever. Pressure range 43.5 to 145 psi.. Lubrication is discontinued during filling. Connect the oil tank to the BSPP 1/4 fitting below the bowl.

FLOW CHARTS



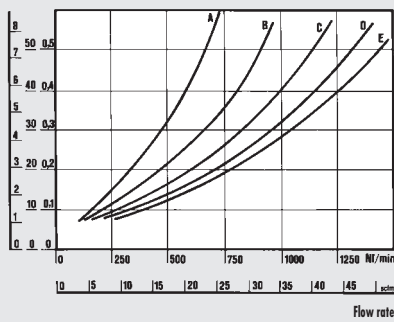
• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.



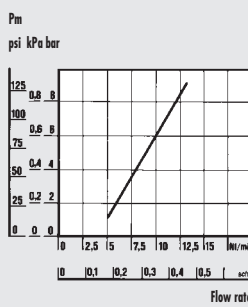
- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

LUB 100 1/4 - 3/8

$\Delta P = (P_m - P_v)$
psi kPa bar

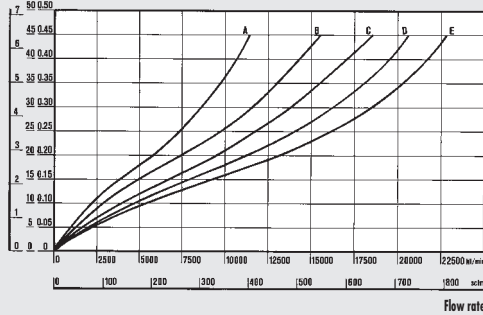


MINIMUM OPERATING FLOW CHART



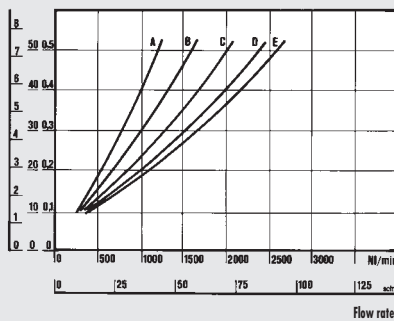
LUB 400 1"

$\Delta P = (P_m - P_v)$
psi kPa bar

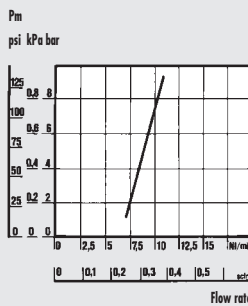


LUB 200 1/4 - 3/8 - 1/2

$\Delta P = (P_m - P_v)$
psi kPa bar

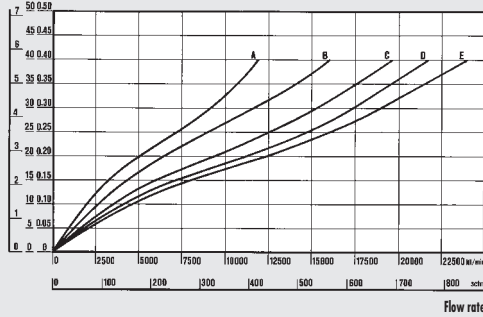


MINIMUM OPERATING FLOW CHART



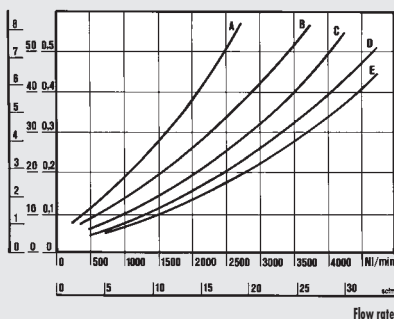
LUB 400 2"

$\Delta P = (P_m - P_v)$
psi kPa bar

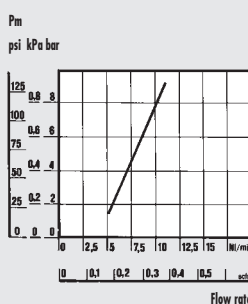


LUB 300 1/2 - 3/4 - 1

$\Delta P = (P_m - P_v)$
psi kPa bar



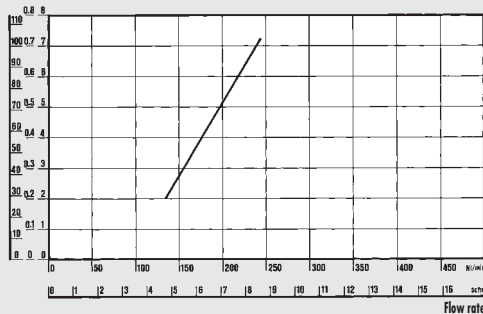
MINIMUM OPERATING FLOW CHART



MINIMUM OPERATING FLOW CHART LUB 400 1" AND 2"

PRESSURE

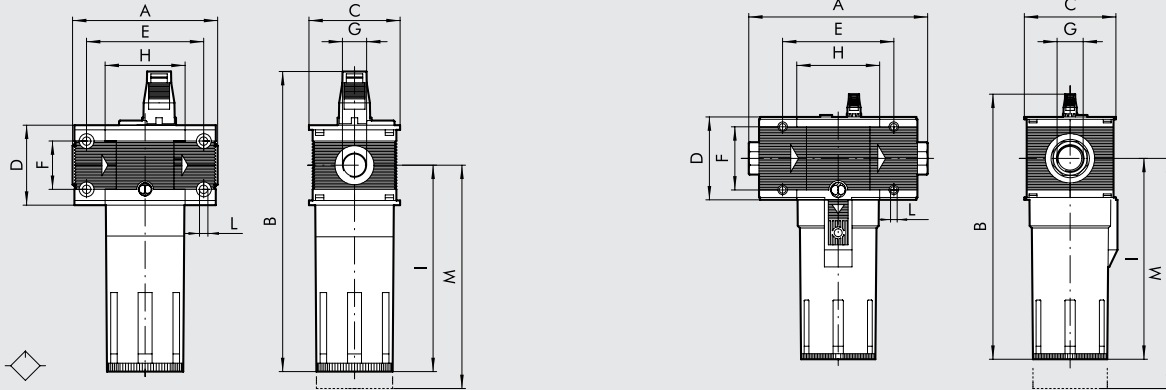
psi kPa bar



DIMENSIONS

100 - 200 - 300

400



Threaded port G NPT	LUB 100		LUB 200			LUB 300			LUB 400				
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"	
A	3.07		3.68			4.33		4.40	8.85 to 10.03				11.14 to 12.32
B	6.37		7.59			8.42			13.30				
C	1.96		2.48			2.83			4.56				
D	1.69		2.16			2.55			4.13				
E	2.48		3.09			3.62			5.56				
F	1.02		1.41			4.65			3.15				
H	1.69		2.18			2.55			4.15				
I	4.40		5.41			6.02			10.08				
L	0.17		0.21			0.21			0.24				
M	5.11		5.9			6.3			11.22				

KEY TO CODES

LUB ELEMENT	100 SIZE	1/4 THREADED PORT	- TYPE OF OIL FILLING
LUB	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	- = STD ML-CD = AUTOMATIC CD = MANUAL
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT	
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT	

STD: Standard version filled with oil by removing the bowl or through the top cap. Requires circuit relieving.
ML CD: Depression filling with minimum level and valve
CD MANUAL: Filling by depression.

ORDERING CODES

Code	Description	Code	Description	Code	Description		
Skillair® 100 LUBRICATOR							
3281001UA	LUB 100 NPT without end plates	Skillair® 300 LUBRICATOR					
3281005UA	LUB 100 CD manual NPT without end plates	4481001UA	LUB 300 NPT without end plates	6181001UA	LUB 400 NPT without end plates		
3281001U	LUB 100 1/4 NPT	4481005UA	LUB 300 CD manual NPT without end plates	6181004UA	LUB 400 CD manual NPT without end plates		
3281005U	LUB 100 1/4 CD manual NPT	4481006UA	LUB 300 ML-CD automatic NPT without end plates	6181006UA	LUB 400 ML-CD automatic NPT without end plates		
3381001U	LUB 100 3/8 NPT	4481001U	LUB 300 1/2 NPT	6181001U	LUB 400 1 NPT		
3381005U	LUB 100 3/8 CD manual NPT	4481005U	LUB 300 1/2 CD manual NPT	6181004U	LUB 400 1 CD manual NPT		
Skillair® 200 LUBRICATOR							
3481001UA	LUB 200 NPT without end plates	4481006U	LUB 300 1/2 ML-CD automatic NPT	6181006U	LUB 400 1 ML-CD automatic NPT		
3481005UA	LUB 200 CD manual NPT without end plates	4581001U	LUB 300 3/4 NPT	6281001U	LUB 400 1 1/4 NPT		
3481001U	LUB 200 1/4 NPT	4581005U	LUB 300 3/4 CD manual NPT	6281004U	LUB 400 1 1/4 CD manual NPT		
3481005U	LUB 200 1/4 CD manual NPT	4581006U	LUB 300 3/4 ML-CD automatic NPT	6281006U	LUB 400 1 1/4 ML-CD automatic NPT		
3581001U	LUB 200 3/8 NPT	4681001U	LUB 300 1 NPT	6381001U	LUB 400 1 1/2 NPT		
3581005U	LUB 200 3/8 CD manual NPT	4681005U	LUB 300 1 CD manual NPT	6381004U	LUB 400 1 1/2 CD manual NPT		
3681001U	LUB 200 1/2 NPT	4681006U	LUB 300 1 ML-CD automatic NPT	6381006U	LUB 400 1 1/2 ML-CD automatic NPT		
3681005U	LUB 200 1/2 CD manual NPT			6481001U	LUB 400 2 NPT		
				6481004U	LUB 400 2 CD manual NPT		
				6481006U	LUB 400 2 ML-CD automatic NPT		

The job of this valve is to make the circuit independent from the air supply. It is basically a three-way valve. In the closed position, it cuts off the air supply and discharges the downstream circuit at the same time, which means it is particularly useful during servicing operations. The hand-operated version can be padlocked to lock the knob in a closed position so that it can only be opened by someone with the right key. An interlocked version is available for low pressure operation.

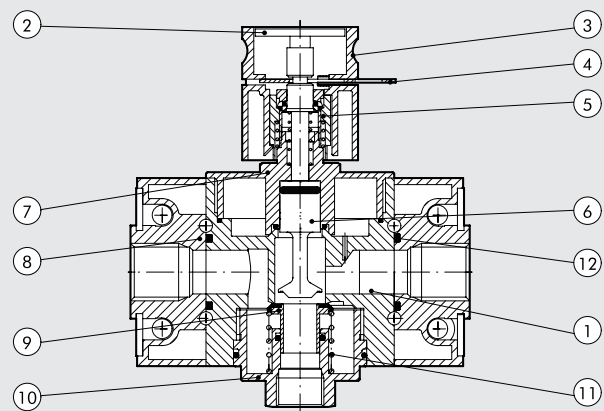
N.B.: With size 400, when the V3V is mounted upstream of the regulator, the pilot regulator must be piloted at a pressure taken upstream of the V3V, otherwise when the system is relieved, most of the air downstream will be relieved by the regulator and not the V3V relief port. For connecting instruction see page 2-89.



TECHNICAL DATA		V3V 100		V3V 200			V3V 300			V3V 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Min. inlet pressure for solenoid version **	MPa	0.3		0.3			0.2			0.3			0.3
	bar	3		3			2			3			3
	psi	43.5		43.5			29			43.5			43.5
Max. input pressure*	MPa	1.5		1.3			1.3			1.3			1.3
	bar	15		13			13			13			13
	psi	217		188			188			188			188
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	1300		2400			3200			13000			14000
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	46		85			113			460			494
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	1650		3000			4700			-			-
ΔP 1 bar (0.1 MPa - 14.5 psi)	scfm	58		106			166			-			-
Max temperature	°C	50		50			50			50			50
	°F	122		122			122			122			122
Weight	pounds	1.1		1.8			2.6			10.5			12.3
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4 - 20 unc x 4.33			
Type of control		Manual - Pneumatic - Solenoid						Manual - Pneumatic - Solenoid					
		Solenoid pilot-assisted						Solenoid pilot-assisted - Key-operated					
Mounting position		In any position.											
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.											
Note		The end plates in the 400 series have a patented system with a rotary and sliding end joint to adapt the unit perfectly to the pipe cutting distance.											
		* 1 MPa - 10 bar - 145 psi for solenoid version											
		** 0.01 MPa - 0.1 bar - 1.45 psi for manual, pneumatic and pilot-assisted versions with controls min. 0.3 MPa 3 bar 43.5 psi.											

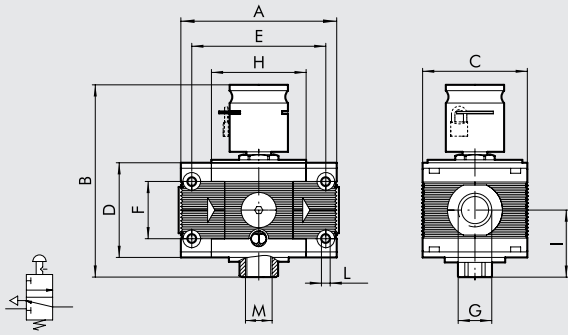
COMPONENTS

- ① Technopolymer body
- ② Operating button
- ③ Technopolymer knob
- ④ Stainless steel safety lamination
- ⑤ Locking unit
- ⑥ OT58 brass piston rod
- ⑦ OT58 brass top plug
- ⑧ Zamak end plate
- ⑨ Valve with vulcanized NBR gasket
- ⑩ OT58 brass bottom plug
- ⑪ Stainless steel valve spring
- ⑫ NBR gaskets

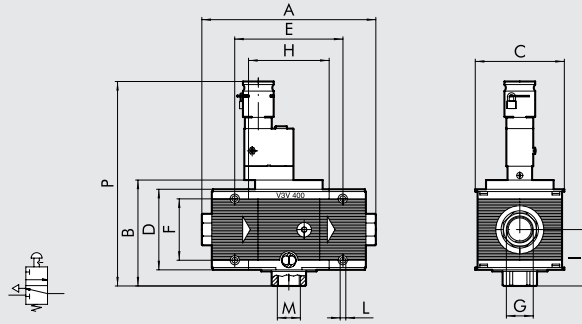


DIMENSIONS OF V3V MANUAL VERSION

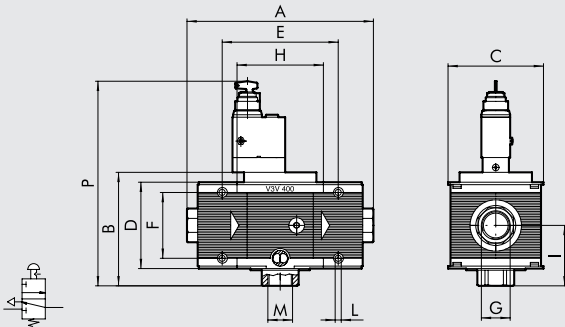
100 - 200 - 300 LOCKABLE



400 LOCKABLE



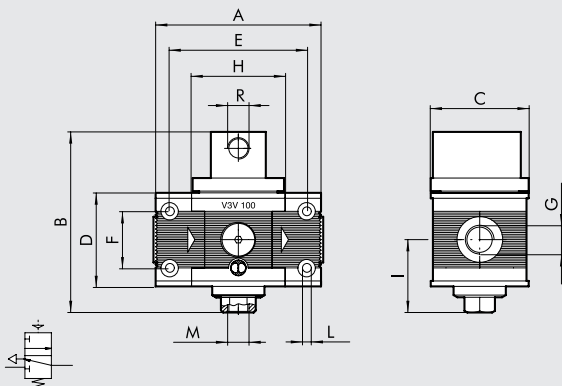
400 KEY-OPERATED



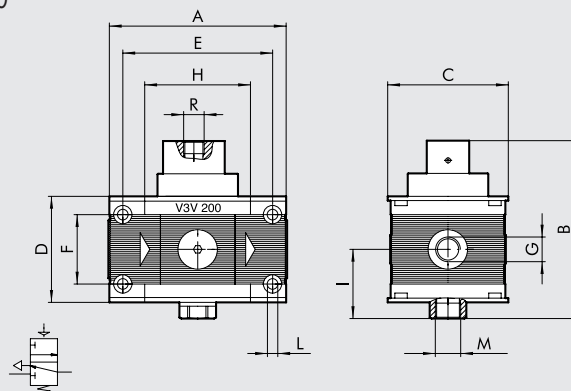
	V3V 100		V3V 200			V3V 300			V3V 400			
Threaded port G NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A	3.07		3.68			4.33		4.40	8.85 to 10.03			
B	4.17		4.68			5.20		5.39				
C	1.97		2.48			2.83		4.56				
D	1.69		2.16			2.55		4.13				
E	2.48		3.09			3.62		5.56				
F	1.02		1.41			1.65		3.15				
H	1.69		2.18			2.55		4.15				
I	1.31		1.57			1.83		2.85				
L	0.17		0.21			0.21		0.236				
M (relief)	1/8" NPT		1/4" NPT			3/8" NPT			1" NPT			
P manual	-		-			-			10.47			
key-operated	-		-			-			9.80			

DIMENSIONS OF V3V PNEUMATIC VERSION

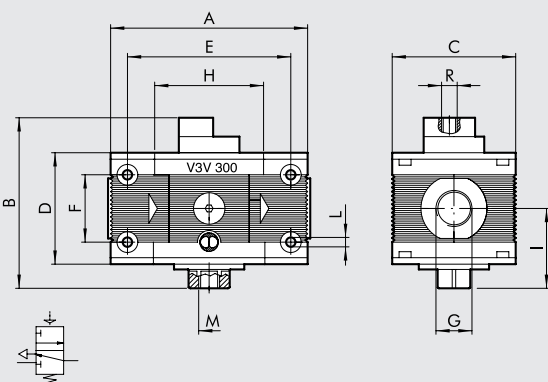
100



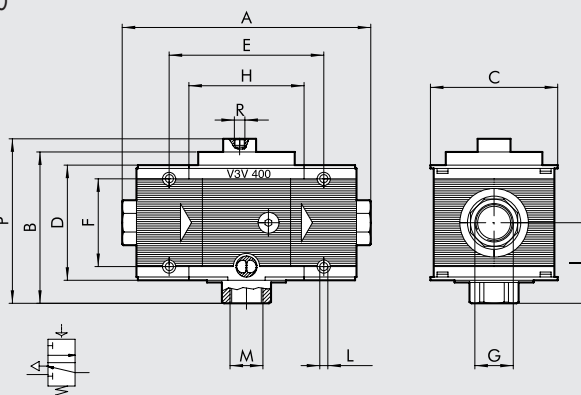
200



300



400



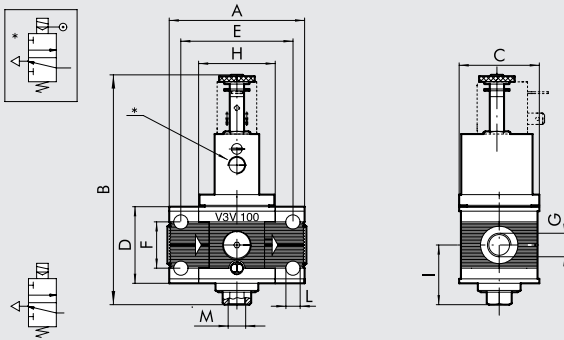
UNITS

Skilair® SHUT-OFF VALVE

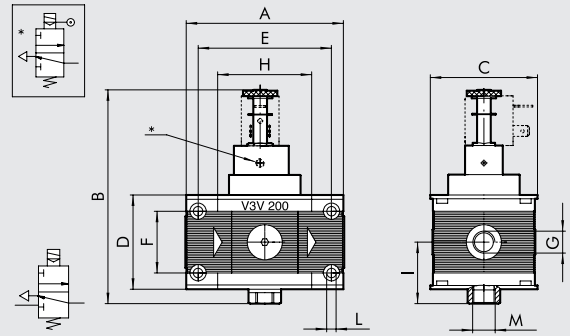
	V3V 100		V3V 200			V3V 300			V3V 400			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Threaded port G NPT												
A	3.07		3.68			4.33		4.40	8.85 to 10.03			11.14 to 12.32
B	3.26		3.78				4.17		5.39			
C	1.96		2.48				2.83		4.56			
D	1.69		2.16				2.56		4.13			
E	2.48		3.09				3.62		5.56			
F	1.02		1.41				1.65		3.15			
H	1.69		2.18				1.83		4.15			
I	1.31		1.57				2.91		2.85			
L	0.17		0.21				0.21		0.236			
M (relief)	1/8" NPT		1/4" NPT			3/8" NPT			1" NPT			
R (pilot)	1/8" NPT		1/8" NPT			1/8" NPT			1/8" NPT			
P	-		-			-			5.90			

DIMENSIONS OF V3V SOLENOID/SOLENOID PILOT-ASSISTED VALVE

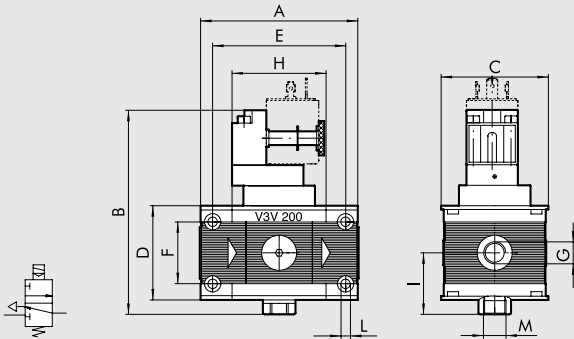
100 SOLENOID/SOLENOID PILOT-ASSISTED VALVE



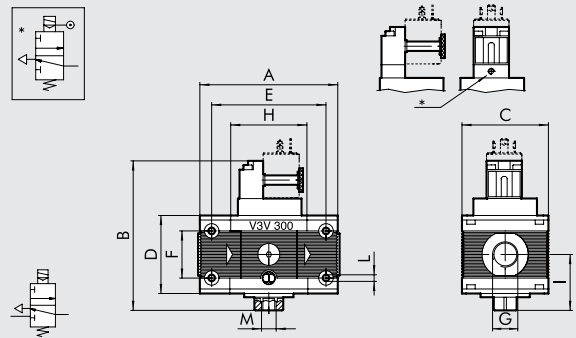
200 SOLENOID/SOLENOID PILOT-ASSISTED VALVE



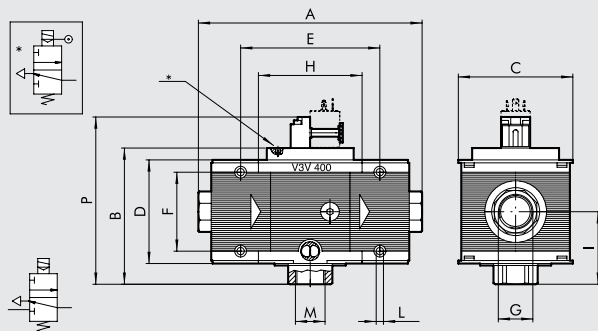
200 CNOMO



300 CNOMO SOLENOID/CNOMO SOLENOID PILOT-ASSISTED VALVE



400 CNOMO SOLENOID/CNOMO SOLENOID PILOT-ASSISTED VALVE



	V3V 100		V3V 200			V3V 300			V3V 400			
Threaded port G NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A	3.07		3.68			4.33		4.40	8.85 to 10.03			
B Solenoid	5.03		5.07			5.98			5.39			
B Solenoid pilot-ass.	5.07		5.07			-			4.56			
CNOMO control	-		4.84			4.92			4.13			
CNOMO pilot-ass.	-		-			5.43			5.56			
C	1.96		2.48			2.83			3.15			
D	1.69		2.16			2.55			-			
E	2.48		3.09			3.62			-			
F	1.02		1.41			1.65			-			
H	1.69		2.18			2.55			4.15			
I	1.31		1.57			1.83			2.85			
L	0.17		0.21			0.21			0.236			
M (relief)	1/8" NPT		1/4" NPT			3/8" NPT			1" NPT			
* (pilot)	1/8" NPT		10/32 UNF			10/32 UNF			10/32 UNF			
P	-		-			-			6.65			

KEY TO CODES

V3V ELEMENT	100 SIZE	1/4 THREADED PORT	MANUAL TYPE OF COMMAND
V3V	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	Manual (lockable)
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	Pneumatic
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT	Solenoid pilot assisted
	400	1 = 1 NPT 1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT	Solenoid Key-operated (400)

ORDERING CODES

Code	Description	Code	Description	Code	Description
Skillair® 100 3-WAY VALVE		Skillair® 300 3-WAY VALVE		Skillair® 400 3-WAY VALVE	
3270001UA	V3V 100 lockable NPT without end plates	4470001UA	V3V 300 lockable NPT without end plates	6169010UA	V3V 400 key-operated NPT without end plates
3269000UA	V3V 100 pneumatic NPT without end plates	4469000UA	V3V 300 pneumatic NPT without end plates	6169000UA	V3V 400 pneumatic NPT without end plates
3269001UA	V3V 100 solenoid NPT without end plates	4469004UA	V3V 300 solenoid cnomo NPT without end plates	6169004UA	V3V 400 solenoid cnomo NPT without end plates
3269002UA	V3V 100 solenoid pilot assisted NPT without end plates	4469005UA	V3V 300 solenoid cnomo pilot-assisted NPT w/end plates	6169005UA	V3V 400 solenoid cnomo pilot-assisted NPT w/end plates
3270001U	V3V 100 1/4 lockable NPT	4470001U	V3V 300 1/2 lockable NPT	6170002UA	V3V 400 lockable NPT without end plates
3269000U	V3V 100 1/4 pneumatic NPT	4469000U	V3V 300 1/2 pneumatic NPT	6169010U	V3V 400 1 key-operated NPT
3269001U	V3V 100 1/4 solenoid NPT	4469004U	V3V 300 1/2 solenoid cnomo NPT	6169000U	V3V 400 1 pneumatic NPT
3269002U	V3V 100 1/4 solenoid pilot assisted NPT	4469005U	V3V 300 1/2 solenoid cnomo assisted NPT	6169004U	V3V 400 1 solenoid cnomo NPT
3370001U	V3V 100 3/8 lockable NPT	4570001U	V3V 300 3/4 lockable NPT	6169005U	V3V 400 1 solenoid cnomo assisted NPT
3369000U	V3V 100 3/8 pneumatic NPT	4569000U	V3V 300 3/4 pneumatic NPT	6269010U	V3V 400 1 1/4 key-operated NPT
3369001U	V3V 100 3/8 solenoid NPT	4569004U	V3V 300 3/4 solenoid cnomo NPT	6269000U	V3V 400 1 1/4 pneumatic NPT
3369002U	V3V 100 3/8 solenoid pilot assisted NPT	4569005U	V3V 300 3/4 solenoid cnomo assisted NPT	6269004U	V3V 400 1 1/4 solenoid cnomo NPT
Skillair® 200 3-WAY VALVE		4669000U	V3V 300 1 pneumatic NPT	6269005U	V3V 400 1 1/4 solenoid cnomo assisted NPT
3470001UA	V3V 200 lockable NPT without end plates	4669004U	V3V 300 1 solenoid cnomo NPT	6369010U	V3V 400 1 1/2 key-operated NPT
3469000UA	V3V 200 pneumatic NPT without end plates	4669005U	V3V 300 1 solenoid cnomo assisted NPT	6369000U	V3V 400 1 1/2 pneumatic NPT
3469001UA	V3V 200 solenoid NPT without end plates	4670001U	V3V 300 1 lockable NPT	6369004U	V3V 400 1 1/2 solenoid cnomo NPT
3469002UA	V3V 200 solenoid pilot assisted NPT without end plates			6369005U	V3V 400 1 1/2 solenoid cnomo assisted NPT
3469004UA	V3V 200 solenoid cnomo comm. NPT w/end plate			6469010U	V3V 400 2 key-operated NPT
3469005UA	V3V 200 solenoid cnomo ass. comm. NPT w/end plate			6469000U	V3V 400 2 pneumatic NPT
3470001U	V3V 200 1/4 lockable NPT			6469004U	V3V 400 2 solenoid cnomo NPT
3469000U	V3V 200 1/4 pneumatic NPT			6469005U	V3V 400 2 solenoid cnomo assisted NPT
3469001U	V3V 200 1/4 solenoid NPT			6170002U	V3V 400 1 lockable NPT
3469002U	V3V 200 1/4 solenoid pilot assisted NPT			6270002U	V3V 400 1 1/4 lockable NPT
3469004U	V3V 200 1/4 solenoid cnomo comm. NPT			6370002U	V3V 400 1 1/2 lockable NPT
3469005U	V3V 200 1/4 solenoid cnomo pilot-assisted NPT			6470002U	V3V 400 2 lockable NPT
3570001U	V3V 200 3/8 lockable NPT				
3569000U	V3V 200 3/8 pneumatic NPT				
3569001U	V3V 200 3/8 solenoid NPT				
3569002U	V3V 200 3/8 solenoid pilot assisted NPT				
3569004U	V3V 200 3/8 solenoid cnomo comm. NPT				
3569005U	V3V 200 3/8 solenoid cnomo pilot-assisted NPT				
3670001U	V3V 200 1/2 lockable NPT				
3669000U	V3V 200 1/2 pneumatic NPT				
3669001U	V3V 200 1/2 solenoid NPT				
3669002U	V3V 200 1/2 solenoid pilot assisted NPT				
3669004U	V3V 200 1/2 solenoid cnomo comm. NPT				
3669005U	V3V 200 1/2 solenoid cnomo pilot-assisted NPT				

Skillair® PROGRESSIVE START VALVE

The 2/2 progressive valve comes in two versions, with solenoid or pneumatic actuation.

STD progressive start valve: a differential balanced valve automatically opens the air port fully when the downstream pressure is about 50% of the upstream pressure.

Progressive start valve with pneumatic or solenoid actuation: without a pilot, the upstream air flows downstream through the regulation needle.

When an external or pneumatic solenoid signal is generated, the valve opens the main port to create full flow. It does not relieve the downstream circuit.

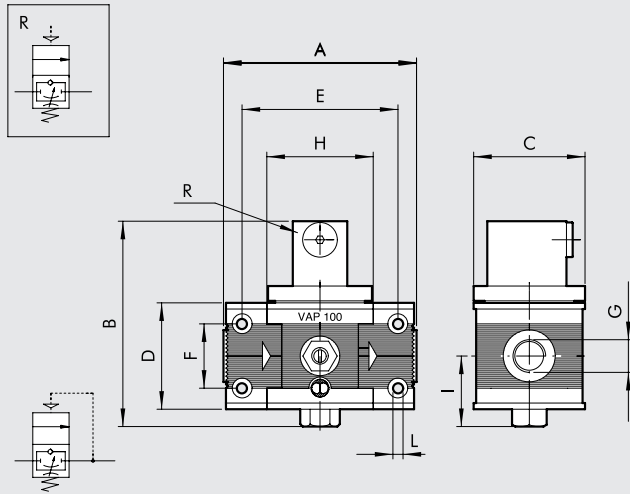


UNITS

Skillair® PROGRESSIVE START VALVE

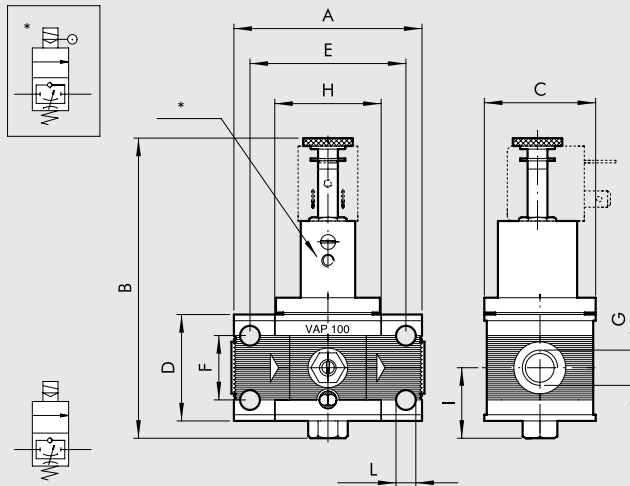
TECHNICAL DATA		VAP 100	
Threaded port	NPT	1/4"	3/8"
Min. inlet pressure **	MPa	0.3	
	bar	3	
	psi	43.5	
Max. inlet pressure*	MPa	1.5	
	bar	15	
	psi	217	
Flow rate at 6 bar (0.6 MPa - 87 psi) ΔP 0.5 bar (0.05 MPa - 7.5 psi)	Nl/min	1300	
	scfm	46	
Flow rate at 6 bar (0.6 MPa - 87 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	2000	
	scfm	71	
Max temperature	°C	50	
	°F	122	
Weight	pounds	1.1	
Wall fixing screws		N. 8-32 unc x 2	
Mounting position		In any position	
Type of control		Automatic - Pneumatic - Solenoid - Solenoid pilot-assisted	
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous	
** 0.01 MPa - 0.1 bar - 1.45 psi for pneumatic and pilot-assisted versions with controls at min. 0.3 MPa 3 bar 43.5 psi.			
* 1 MPa - 10 bar - 1.45 psi			

DIMENSIONS OF VAP 100 STD/PNEUMATIC VALVE



Threaded port G	NPT	VAP 100	
		1/4"	3/8"
A		3.07	
B		3.50	
C		1.96	
D		1.69	
E		2.48	
F		1.02	
H		1.69	
I		1.35	
L		0.17	
R (pilot - pneumatic version)		1/8" NPT	

DIMENSIONS OF VAP 100 SOLENOID/SOLENOID PILOT-ASSISTED VALVE



Threaded port G	NPT	VAP 100	
		1/4"	3/8"
A		3.07	
B		5.03	
C		1.96	
D		1.69	
E		2.48	
F		1.02	
H		1.69	
I		1.35	
L		0.17	
O		3.50	
* (pilot assisted)		10/32 UNF	

ORDERING CODES

Code	Description
3271000UA	VAP 100 NPT without end plates
3271500UA	VAP 100 pneumatic NPT without end plates
3271600UA	VAP 100 solenoid NPT without end plates
3271700UA	VAP 100 solenoid pilot-assisted NPT without end plates
3271000U	VAP 100 1/4 NPT
3271500U	VAP 100 1/4 pneumatic NPT
3271600U	VAP 100 1/4 solenoid NPT
3271700U	VAP 100 1/4 solenoid pilot-assisted NPT
3371000U	VAP 100 3/8 NPT
3371500U	VAP 100 3/8 pneumatic NPT
3371600U	VAP 100 3/8 solenoid NPT
3371700U	VAP 100 3/8 solenoid pilot-assisted NPT

NOTES

Skillair® PROGRESSIVE STARTER

The job of the progressive starter is to feed air into the circuit gradually with controlled flow. It comes in two versions with solenoid or pneumatic actuation. Both control signals cause the valve to open, which allows the air controlled by the flow regulator to flow slowly towards the downstream circuit. In the APR, when the pressure in the downstream circuit reaches 50%-60% of the upstream pressure, the valve opens the main inlet duct connecting. The time elapsing between starting and opening the valve can be adjusted via the built-in flow regulator. If it is necessary to relieve the downstream circuit quickly, merely operate the control valve which cuts off air flow in the pipe. This closes the valve and starts relieving the downstream circuit. The progressive starter acts both as an actuator positioner, which eliminates the risk of sudden kickback, and as a valve.

N.B. With size 400, when the APR is mounted upstream of the regulator, the pilot regulator must be piloted at a pressure taken upstream of the APR, otherwise when the system is relieved, most of the air downstream will be relieved by the regulator and not the APR relief port. For connecting instruction see page 2-89.



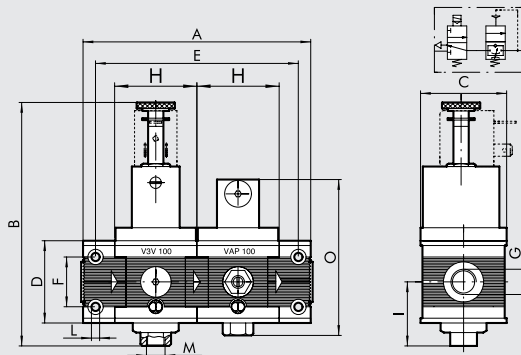
UNITS

Skillair® PROGRESSIVE STARTER

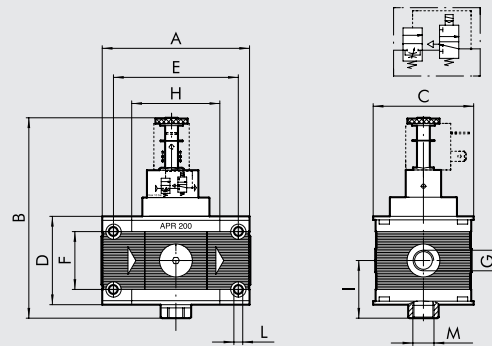
TECHNICAL DATA		APR 100		APR 200			APR 300			APR 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Min. inlet pressure	MPa	0.3		0.3			0.4			0.3			0.3
	bar	3		3			4			3			3
	psi	43.5		43.5			58			43.5			43.5
Max. inlet pressure*	MPa	1.5		1.3			1.3			1.3			1.3
	bar	15		13			13			13			13
	psi	217		188.5			188.5			188.5			188.5
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	1300		2000			2400			13000			14000
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	46		71			85			460			494
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	2000		3200			3600			-			-
ΔP 1 bar (0.1 MPa - 14.5 psi)	scfm	71		113			127			-			-
Max temperature	°C	50		50			50			50			50
	°F	122		122			122			122			122
Weight	pounds	1.8		1.9			3.3			5.6			6.4
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			M6 x 110		M6 x 110	
Type of control		Pneumatic		Pneumatic			Pneumatic			Pneumatic			
		Solenoid		Solenoid			Microsol Solenoid			Solenoid			
				CNOMO Solenoid			CNOMO Solenoid						
Mounting position		In any position											
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.											
Notes on use		For the pneumatic version 200 the pilot pressure must range between the inlet P and the inlet P + 2 bar (29 psi).											
		For pneumatic version 300, the pilot pressure must be greater or equal to the input pressure. * 1 MPa - 10 bar - 145 psi for solenoid version											

DIMENSIONS APR SOLENOID

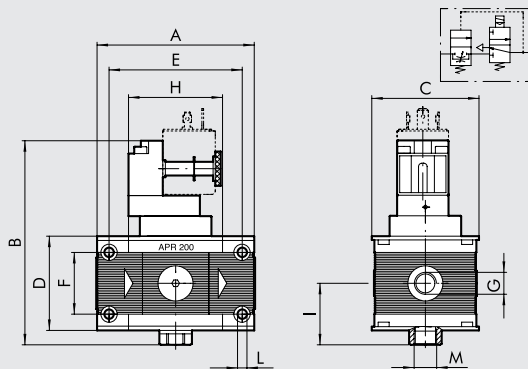
APR 100 SOLENOID



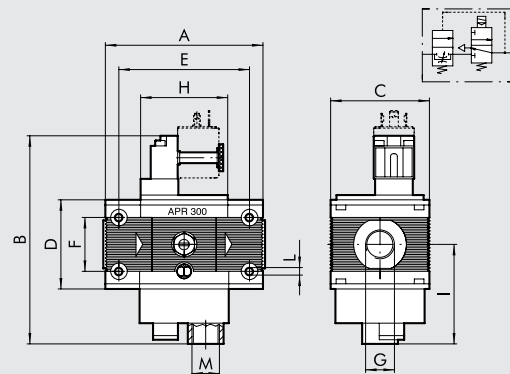
APR 200 SOLENOID



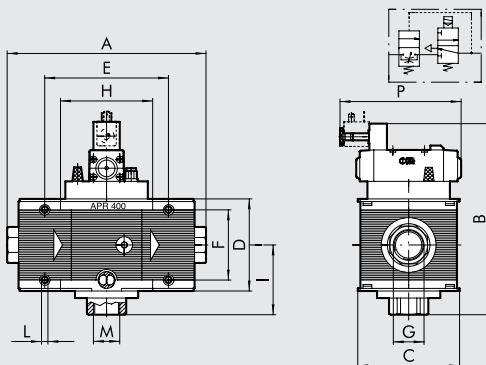
APR 200 CNOMO SOLENOID



APR 300 CNOMO SOLENOID



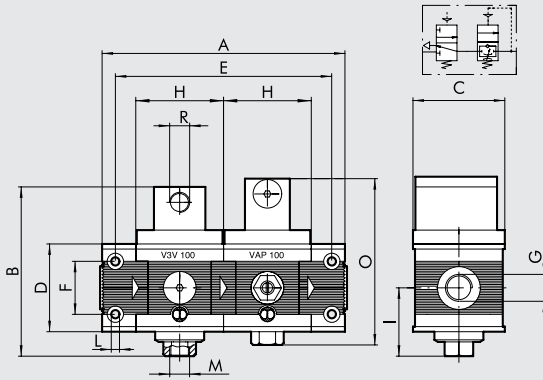
APR 400 SOLENOID



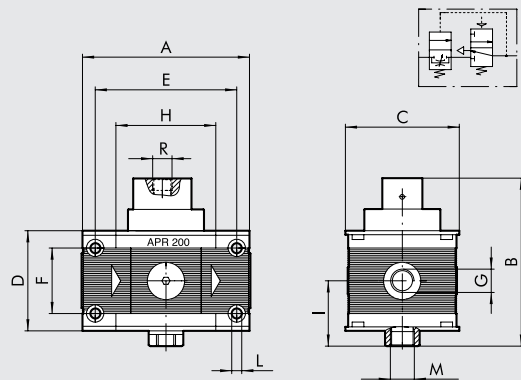
Threaded port G NPT	APR 100 ELPN		APR 200 ELPN			APR 200 ELPN CNOMO			APR 300 ELPN CNOMO			APR 400 ELPN			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A	4.76		3.68			3.68			4.33	4.40		8.85 to 10.03			11.14 to 12.32
B	5.03		4.92			4.72			5.98			8.58			
C	1.96		2.48			2.48			2.83			4.56			
D	1.69		2.16			2.16			2.55			4.13			
E	4.17		3.09			3.09			3.62			5.56			
F	1.02		1.41			1.41			1.65			3.14			
H	1.69		2.18			2.18			2.55			4.14			
I	1.35		1.41			1.41			2.91			3.14			
L	0.17		0.21			0.21			0.21			0.29			
M (relief)	1/8" NPT		1/4" NPT			1/4" NPT			1/2" NPT			1" NPT			
O	3.50		-			-			-			-			
P	-		-			-			-			5.43			

DIMENSIONS APR PNEUMATIC

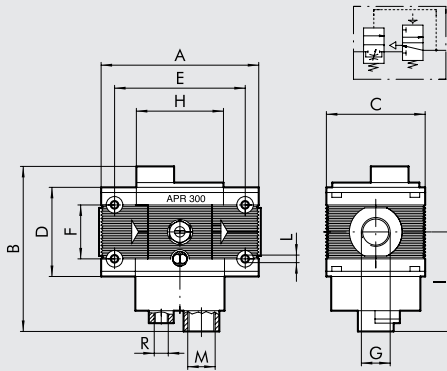
APR 100 PNEUMATIC



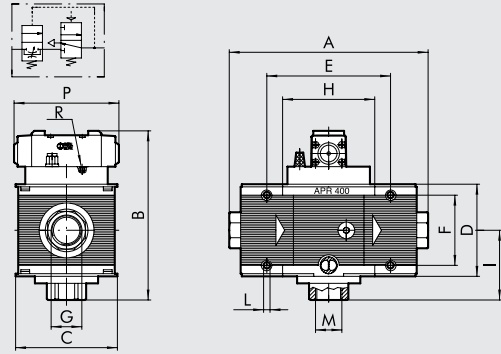
APR 200 PNEUMATIC



APR 300 PNEUMATIC



APR 400 PNEUMATIC



Threaded port G	APR 100 PN		APR 200 PN			APR 300 PN			APR 400 PN			
	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A	4.76			3.68		4.33		4.40	8.85 to 10.03			11.14 to 12.32
B	3.26			3.62			4.80		7.59			
C	1.96			2.48			2.83		4.56			
D	1.69			2.16			2.55		4.13			
E	4.17			3.09			3.62		5.56			
F	1.02			1.41			1.65		3.14			
H	1.69			2.18			2.55		4.14			
I	1.35			1.41			2.91		3.14			
L	0.17			0.21			0.21		0.29			
M (relief)	1/8" NPT			1/4" NPT			1/2" NPT		1" NPT			
O	3.5			-			-		-			
R (pilot)	1/8" NPT			1/8" NPT			1/4" NPT		10/32 UNF			
P	-			-			-		4.68			

KEY TO CODES

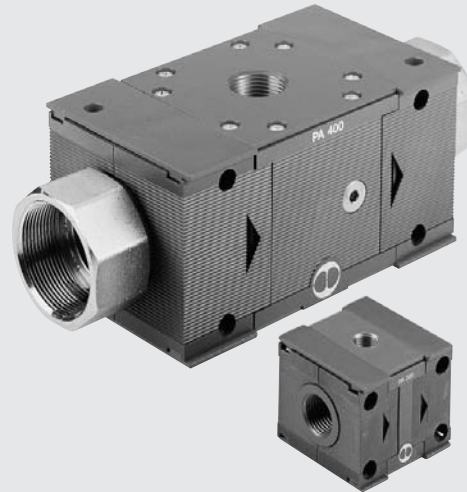
APR ELEMENT	100 SIZE	1/4 THREADED PORT	PNEUMATIC TYPE OF CONTROL
APR	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	Pneumatic Solenoid
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT	
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT	

ORDERING CODES

Code	Description	Code	Description
Skillair® 100 PROGRESSIVE STARTER		Skillair® 300 PROGRESSIVE STARTER	
3267001UA	APR 100 pneumatic NPT without end plates	4471900UA	APR 300 pneumatic NPT without end plates
3267051UA	APR 100 solenoid NPT without end plates	4471901UA	APR 300 solenoid Cnomo NPT without end plates
3267001U	APR 100 1/4 pneumatic NPT	4471900U	APR 300 1/2 pneumatic NPT
3267051U	APR 100 1/4 solenoid NPT	4471901U	APR 300 1/2 solenoid Cnomo control NPT
3367001U	APR 100 3/8 pneumatic NPT	4571900U	APR 300 3/4 pneumatic NPT
3367051U	APR 100 3/8 solenoid NPT	4571901U	APR 300 3/4 solenoid Cnomo control NPT
Skillair® 200 PROGRESSIVE STARTER		4671900U	APR 300 1 pneumatic NPT
3471000UA	APR 200 pneumatic NPT without end plates	4671901U	APR 300 1 solenoid Cnomo control NPT
3471001UA	APR 200 solenoid NPT without end plates	Skillair® 400 PROGRESSIVE STARTER	
3471004UA	APR 200 solenoid Cnomo NPT without end plates	6171002UA	APR 400 pneumatic NPT without end plates
3471000U	APR 200 1/4 pneumatic NPT	6171003UA	APR 400 solenoid NPT without end plates
3471001U	APR 200 1/4 solenoid NPT	6171002U	APR 400 1 pneumatic NPT
3471004U	APR 200 1/4 solenoid Cnomo control NPT	6171003U	APR 400 1 solenoid NPT
3571000U	APR 200 3/8 pneumatic NPT	6271002U	APR 400 1 1/4 pneumatic NPT
3571001U	APR 200 3/8 solenoid NPT	6271003U	APR 400 1 1/4 solenoid NPT
3571004U	APR 200 3/8 solenoid Cnomo control NPT	6371002U	APR 400 1 1/2 pneumatic NPT
3671000U	APR 200 1/2 pneumatic NPT	6371003U	APR 400 1 1/2 solenoid NPT
3671001U	APR 200 1/2 solenoid NPT	6471002U	APR 400 2 pneumatic NPT
3671004U	APR 200 1/2 solenoid Cnomo control NPT	6471003U	APR 400 2 solenoid NPT

Skillair® AIR TAKE-OFF

The air take-off takes air from the Skillair® FRL unit irrespective of the assembly position. It is necessary when air needs to be taken from the FRL unit at any stage of the treatment (normal, filtered and regulated, lubricated, etc.). If used separately from the FRL unit, which is infinitely modular, it acts as a distributor allowing air take-off through the threaded ports.



UNITS

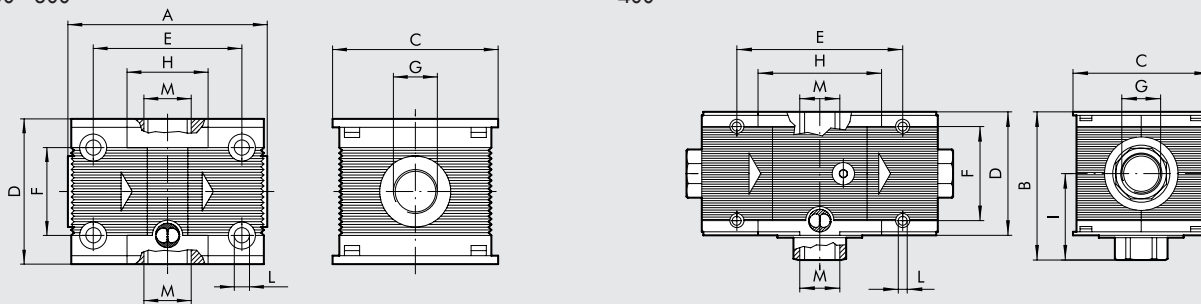
Skillair® AIR TAKE-OFF

TECHNICAL DATA		PA 100		PA 200			PA 300			PA 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Max. working temperature	°C	50		50			50			50			
at: 1 MPa; 10 bar; 145 psi	°F	122		122			122			122			
Max. operating pressure	MPa	1.5		1.3			1.3			1.3			
	bar	15		13			13			13			
	psi	217		188			188			188			
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4-20 unc x 4.33			
Threaded port	NPT	1/4"		1/4"			3/8"			1"			
Weight	pounds	0.66		1.1			1.7			9.48		11.24	

DIMENSIONS AND ORDERING CODES

100 - 200 - 300

400

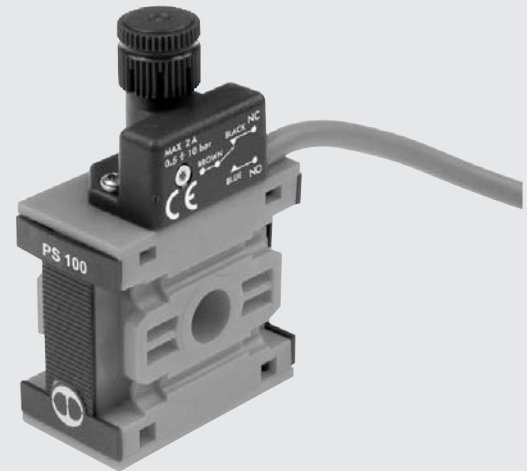


	PA 100		PA 200			PA 300			PA 400				Code	Description	
Threaded port G	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"	9200402UA	PA 100 NPT without end plates
A		2.32		2.48		6.96	7.04	8.85 to 10.03		11.14 to 12.32				9200402U	PA 100 1/4 NPT
B		-		-		-		-		4.72				9300401U	PA 100 3/8 NPT
C		1.96		2.48		2.83		4.56		4.56				9300402UA	PA 200 NPT without end plates
D		1.69		2.16		2.55		4.13		4.13				9300404U	PA 200 1/2 NPT
E		1.73		1.88		2.32		5.56		5.56				9300402U	PA 200 1/4 NPT
F		1.02		1.41		1.65		3.14		3.14				9300403U	PA 200 3/8 NPT
H		0.98		0.98		1.25		4.14		4.14				9400402UA	PA 300 NPT without end plates
I		-		-		-		2.65		2.65				9500402U	PA 300 1 NPT
L		0.17		0.21		0.21		0.29		0.29				9400402U	PA 300 1/2 NPT
M		1/4" NPT		1/4" NPT		3/8" NPT		1" NPT		1" NPT				9500401U	PA 300 3/4 NPT
														9700401UA	PA 400 NPT without end plates
														9700401U	PA 400 1 NPT
														9700403U	PA 400 1 1/2 NPT
														9700402U	PA 400 1 1/4 NPT
														9700404U	PA 400 2 NPT

Skillair® pressure switches feature a high degree of miniaturisation and a modern attractive design. As they are extremely modular, the Skillair® series can be installed facing up or down.

They come ready assembled with a 78.8 inch cable or an M8 connector with a 11.8 inch cable.

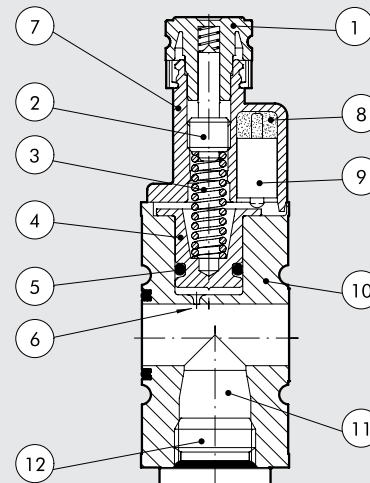
The contact is the switching type, which means it can be normally open or normally closed. It can be regulated via a knurled push-lock handle. On the side opposite the regulation handle is a threaded air inlet port that can be used by removing the threaded plug.



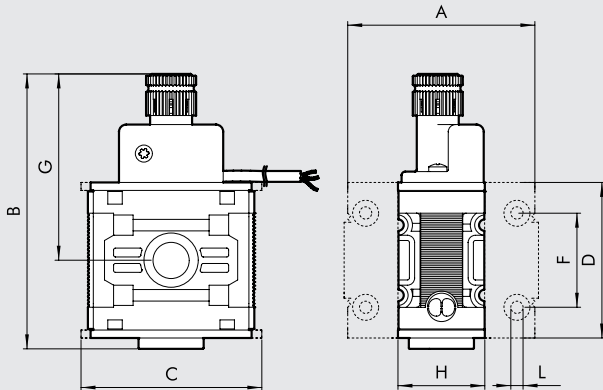
TECHNICAL DATA		PS 100	PS 200	PS 300
Adjustable pressure interval	psi		7.25 to 145	
Hysteresis (not adjustable)	psi		5.8 to 11.6 (See diagram)	
Maximum pressure	bar	15	13	13
	MPa	1.5	1.3	1.3
Operating temperature range at: 1 MPa; 10 bar; 145 psi	psi	217	188	188
	°C		50	
	°F		122	
Lower threaded port	NPT	1/4"	1/4"	3/8"
Maximum current	A		2	
Maximum voltage	V		250	
Outside diameter of cable	in		0.19	
Number of wires and cross section			3 x 0.5 mm ²	
Contacts			Normally-Open (NO) and Normally-Closed (NC)	
Protection			IP65	
Number of switchings			5 x 10 ⁶	
Fluid			Filtered lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.	
Mounting position			In any position.	
Weight	pounds	0.35	0.40	0.55

COMPONENTS

- ① Technopolymer adjusting push-lock handle
- ② Brass adjusting screw
- ③ Steel piston spring
- ④ Brass piston
- ⑤ NBR gasket
- ⑥ Choke to reduce peaks in pressure
- ⑦ Technopolymer pressure switch body
- ⑧ Resin finish for IP65
- ⑨ Electrical contact
- ⑩ Technopolymer body
- ⑪ Supplementary air inlet port
- ⑫ A7 plug



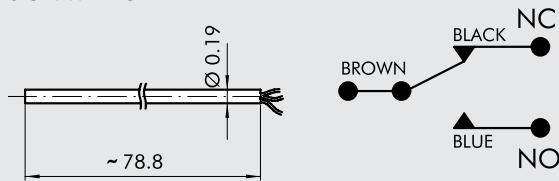
DIMENSIONS



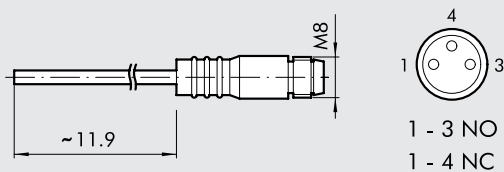
	PS 100	PS 200	PS 300
A	2.32	2.48	6.96 - 7.04
B	2.99	3.34	3.9
C	1.96	2.48	2.83
D	1.69	2.16	2.55
F	1.02	1.41	1.65
G	2	2.28	2.48
H	0.98	0.98	1.25
L	0.17	0.21	0.21

WIRING DIAGRAM

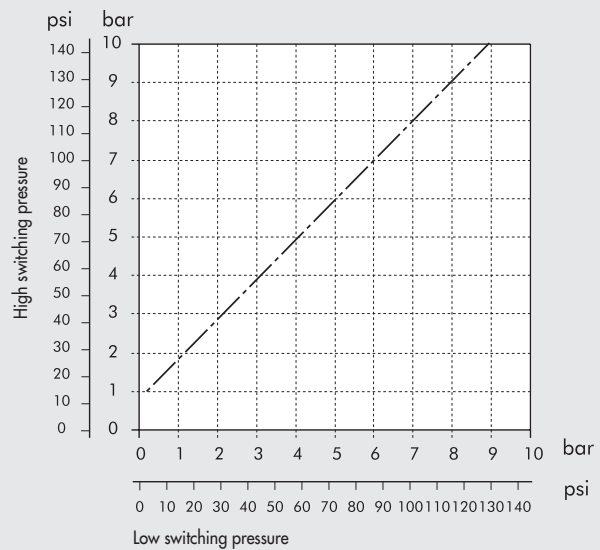
VERSION WITH CABLE



VERSION WITH M8 CONNECTOR



HYSTERESIS GRAPH



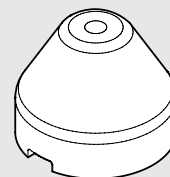
ORDERING CODES

Code	Description
Skilair® 100 PRESSURE SWITCHES	
3240000UA	PS 100 2A NO/NC 78.8 inch cable without end plates
3240001UA	PS 100 2A NO/NC M8 connector without end plates

Skilair® 200 PRESSURE SWITCHES	
3440000UA	PS 200 2A NO/NC 78.8 inch cable without end plates
3440001UA	PS 200 2A NO/NC M8 connector without end plates

Skilair® 300 PRESSURE SWITCHES	
4440000UA	PS 300 2A NO/NC 78.8 inch cable without end plates
4440001UA	PS 300 2A NO/NC M8 connector without end plates

SECURITY KNOB



Code	Description
9200703	Acc. security knob

NOTE: Pull outwards to remove the knob from the pressure switch on the unit. Insert the security knob and regulate the pressure switch. Then press the handle firmly to lock it in position. If the pressure switch needs to be reset, remove the security knob by forcing it laterally with a screwdriver.

Skillair® SUB-BASE AND ADAPTER BASE

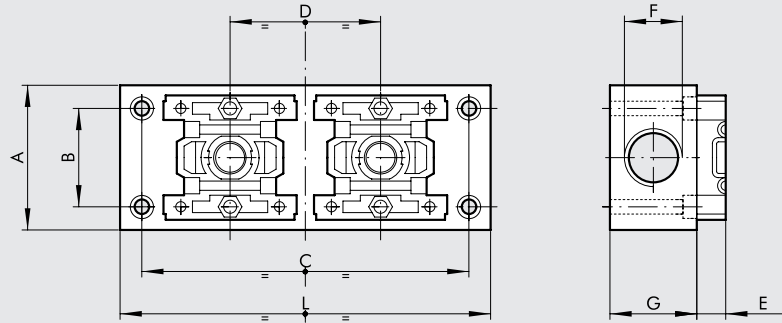


The adapter base is used to adapt the Skillair® FRL system to various assemblies without affecting modularity or servicing.
If you use the universal adapter base plus the intermediate plate, you can assemble several elements of different sizes.

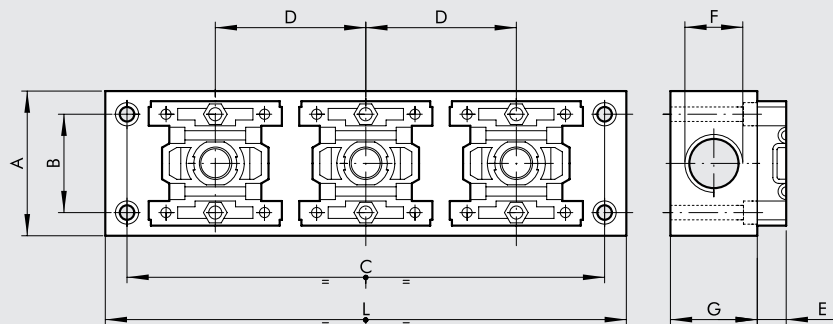


DIMENSIONS

2-POSITION SUB-BASE

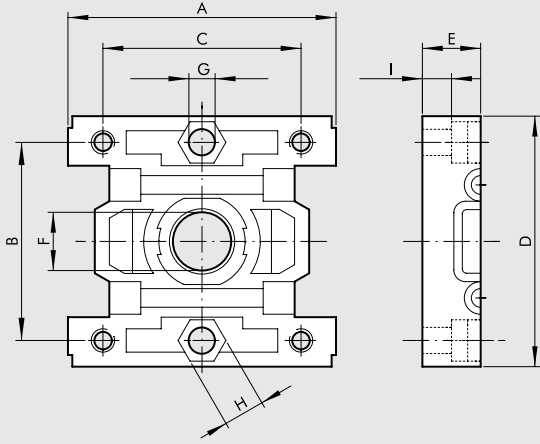


3-POSITION SUB-BASE



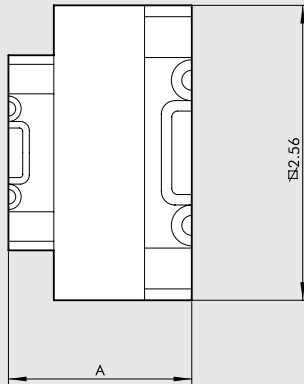
	100 - 2 POS.	100 - 3 POS.	200 - 2 POS.	200 - 3 POS.	300 - 2 POS.	300 - 3 POS.
A	1.96	1.96	2.16	2.16	2.36	2.36
B	1.33	1.33	1.73	1.73	1.92	1.92
C	4.44	6.49	5.31	7.87	5.90	8.66
D	2.04	2.04	2.55	2.55	2.75	2.75
E	0.39	0.39	0.33	0.33	0.41	0.41
F	1/2" NPT	1/2" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
G	1.18	1.18	1.57	1.57	1.57	1.57
L	5.03	7.08	8.46	8.46	6.49	9.25

DIMENSIONS OF ADAPTER BASE



	BA 100	BA 200	BA 300
A	1.81	2.32	2.71
B	1.33	1.73	1.92
C	1.33	1.73	1.92
D	1.69	2.16	2.55
E	0.39	0.33	0.41
F	0.39	0.59	0.70
G	0.17	0.17	0.21
H	Es. 0.27	Es. 0.27	Es. 0.31
I	0.19	0.07	0.19

DIMENSIONS OF SIZE ADAPTERS



	BA 100 - 200	BA 100 - 300	BA 200 - 300
A	1.51	1.59	1.53

ORDERING CODES

Code	Description
MULTIPLE SUB-BASES FOR REGULATORS	
9200202U	SB 2 100 NPT
9300202U	SB 2 200 NPT
9400202U	SB 2 300 NPT
9200302U	SB 3 100 NPT
9300302U	SB 3 200 NPT
9400302U	SB 3 300 NPT
ADAPTER BASE	
9201801U	BA 100 NPT
9321801U	BA 200 NPT
9401801U	BA 300 NPT
SIZE ADAPTER	
9301801U	BA 100 - 200 NPT
9301802U	BA 100 - 300 NPT
9301803U	BA 200 - 300 NPT

NOTES

Refer to the sections on the single modules for a further description, components and other technical data.



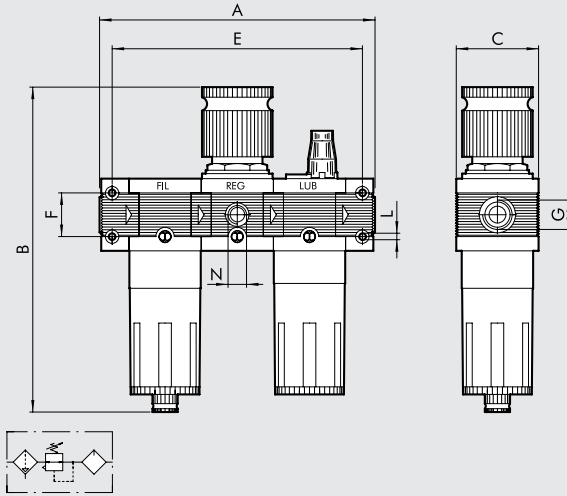
TECHNICAL DATA		FRL 100		FRL 200			FRL 300			FRL 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Setting range	psi	0 to 120 - 0 to 180		0 to 120 - 0 to 180			0 to 120 - 0 to 180			Depending on pilot regulator			
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)											
Max. inlet pressure	MPa	1.5		1.3			1.3			1.3			
	bar	15		13			13			13			
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	217		188			188			188			
	Nl/min	300		1300			2500			9000			
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	11		46			89			320			
	Nl/min	800		3000			4500			-			
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	scfm	28		106			160			-			
	Nl/min	50		50			50			50			
Max temperature at 10 bar (1 MPa - 145 psi)	°C	122		122			122			122			
	°F	122		122			122			122			
Weight	pounds	1.65		3.3			6.4			22			
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4-20 unc x 4.33			
Fluid		Compressed air											
Notes on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take air from pressure gauge ports.											

KEY TO CODES

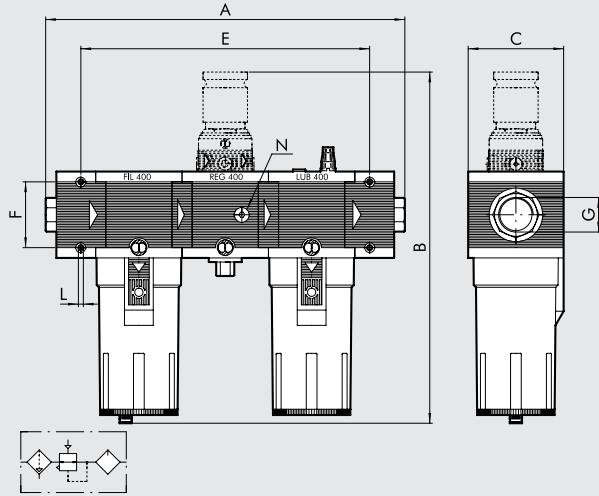
FRL	100	1/4	20	0-120	RMSA	
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	SETTING RANGE	TYPE OF CONDENSATION DRAIN	
FRL	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	5 = 5 µm (200 microinch) 20 = 20 µm (790 microinch) 50 = 50 µm (2000 microinch)	0-120 = 0 to 120 psi	RMSA SAC	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. (for size 100 and 200)
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT		0-180 = 0 to 180 psi	RMSA SAC RA	
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT			RMSA RA	
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT				

DIMENSIONS FIL+REG+LUB

100 - 200 - 300



400



		FIL+REG+LUB 100		FIL+REG+LUB 200			FIL+REG+LUB 300			FIL+REG+LUB 400			
Threaded port G	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A		6.45		8.05			9.44	9.44	9.52	17.1 to 18.34			
B	RMSA	7.83		9.64			10.94			17.5			
	RA	-		9.81			11.11			17.65			
	SAC	8		9.81			11.11			17.65			
C		1.96		2.48			2.83			4.56			
E		5.86		7.46			8.74			13.85			
F		1.02		4.41			1.65			3.14			
L		0.17		0.21			0.21			0.29			
N (pressure gauge port)		BSPP 1/8"		BSPP 1/8"			BSPP 1/8"			BSPP 1/4"			

ORDERING CODES

Code	Description			
FIL+REG+LUB Skillair® 100				
3282008U	FRL 100 1/4 20 0-120 RMSA NPT			
3282011U	FRL 100 1/4 20 0-180 RMSA NPT			
3382008U	FRL 100 3/8 20 0-120 RMSA NPT			
3382011U	FRL 100 3/8 20 0-180 RMSA NPT			
FIL+REG+LUB Skillair® 200				
3482008U	FRL 200 1/4 20 0-120 RMSA NPT			
3482011U	FRL 200 1/4 20 0-180 RMSA NPT			
3582008U	FRL 200 3/8 20 0-120 RMSA NPT			
3582011U	FRL 200 3/8 20 0-180 RMSA NPT			
3682008U	FRL 200 1/2 20 0-120 RMSA NPT			
3682011U	FRL 200 1/2 20 0-180 RMSA NPT			
FIL+REG+LUB Skillair® 300				
4482005U	FRL 300 1/2 20 0-120 RMSA NPT			
4482008U	FRL 300 1/2 20 0-180 RMSA NPT			
4582005U	FRL 300 3/4 20 0-120 RMSA NPT			
4582008U	FRL 300 3/4 20 0-180 RMSA NPT			
4682005U	FRL 300 1 20 0-120 RMSA NPT			
4682008U	FRL 300 1 20 0-180 RMSA NPT			
FIL+REG+LUB Skillair® 400				
6182002U	FRL 400 1 20 RMSA NPT			
6182005U	FRL 400 1 20 RA NPT			
6282002U	FRL 400 1 1/4 20 RMSA NPT			
6382002U	FRL 400 1 1/2 20 RMSA NPT			
6482002U	FRL 400 2 20 RMSA NPT			

The following versions are available on request:

- with 5 µm or 50 µm degree of filtration
- with SAC or RA condensate discharge

Refer to the sections on the single modules for a further description, components and other technical data.

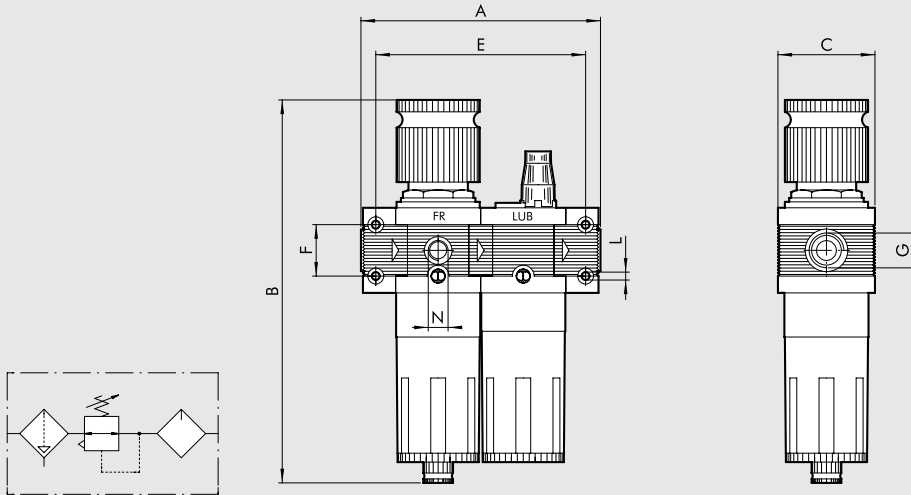


TECHNICAL DATA		FR+LUB 100		FR+LUB 200			FR+LUB 300		
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Setting range	psi	0 to 120 - 0 to 180		0 to 120 - 0 to 180			0 to 120 - 0 to 180		
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)							
Max. inlet pressure	MPa	1.5		1.3			1.3		
	bar	15		13			13		
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	217		188			188		
	NI/min	300		1200			2300		
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	11		43			82		
	NI/min	800		2400			4000		
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	28		85			142		
	scfm	50		50			50		
Max temperature at 10 bar (1 MPa - 145 psi)	°C	122		122			122		
	°F	1.5		3			5.9		
Weight	pounds	N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75		
Wall fixing screws									
Fluid		Compressed air							
Notes on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take air from pressure gauge ports.							

KEY TO CODES

FR+L	100	1/4	20	0-120	RMSA	
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	SETTING RANGE	TYPE OF CONDENSATION RANGE	
FR+L	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	5 = 5 µm (200 microinch) 20 = 20 µm (790 microinch) 50 = 50 µm (2000 microinch)	0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. (for size 100 and 200)
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT			RMSA SAC RA	
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT			RMSA RA	

DIMENSIONS FR+L



Threaded port G	NPT	FR+LUB 100		FR+LUB 200			FR+LUB 300		
		1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
A		4.76		5.86			6.88		
B	RMSA	7.83		9.64			10.94		
	RA	-		9.81			11.11		
	SAC	8		9.81			11.11		
C		1.96		2.48			2.83		
E		4.17		5.27			6.18		
F		1.02		1.41			1.65		
L		0.17		0.21			0.21		
N (pressure gauge port)		BSPP 1/8"		BSPP 1/8"			BSPP 1/8"		

ORDERING CODES

Codie	Description
FR+L Skillair® 100	
3284008U	FR+L 100 1/4 20 0-120 RMSA NPT
3284011U	FR+L 100 1/4 20 0-180 RMSA NPT
3384008U	FR+L 100 3/8 20 0-120 RMSA NPT
3384011U	FR+L 100 3/8 20 0-180 RMSA NPT
FR+L Skillair® 200	
3484008U	FR+L 200 1/4 20 0-120 RMSA NPT
3484011U	FR+L 200 1/4 20 0-180 RMSA NPT
3584008U	FR+L 200 3/8 20 0-120 RMSA NPT
3584011U	FR+L 200 3/8 20 0-180 RMSA NPT
3684008U	FR+L 200 1/2 20 0-120 RMSA NPT
3684011U	FR+L 200 1/2 20 0-180 RMSA NPT
FR+L Skillair® 300	
4484005U	FR+L 300 1/2 20 0-120 RMSA NPT
4484008U	FR+L 300 1/2 20 0-180 RMSA NPT
4584005U	FR+L 300 3/4 20 0-120 RMSA NPT
4584008U	FR+L 300 3/4 20 0-180 RMSA NPT
4684005U	FR+L 300 1 20 0-120 RMSA NPT
4684008U	FR+L 300 1 20 0-180 RMSA NPT

The following versions are available on request:

- with 5 µm or 50 µm degree of filtration
- with SAC or RA condensate discharge

Refer to the sections on the single modules for a further description, components and other technical data.

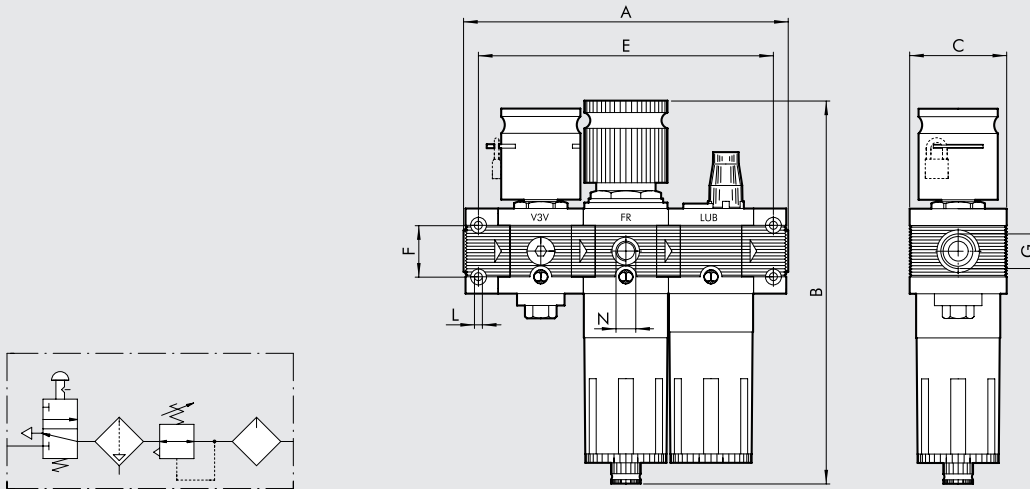


TECHNICAL DATA		V+FR+L 100		V+FR+L 200			V+FR+L 300		
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
Setting range	psi	0 to 120 - 0 to 180		0 to 120 - 0 to 180			0 to 120 - 0 to 180		
Degree of filtration	μm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)							
Max. inlet pressure	MPa	1.5		1.3			1.3		
	bar	15		13			13		
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	217		188			188		
	NI/min	300		1200			2300		
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	11		43			82		
	NI/min	800		2400			4000		
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	28		85			142		
	scfm	50		50			50		
Max temperature at 10 bar (1 MPa - 145 psi)	°C	122		122			122		
	°F	2.2		4			7		
Weight	pounds	N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75		
Wall fixing screws		Compressed air.							
Fluid		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take air from pressure gauge ports.							
Notes on use									

KEY TO CODES

VFR+L	100	1/4	20	0-120	RMSA	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. (for size 100 and 200)
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	SETTING RANGE	TYPE OF CONDENSATE DRAIN	
VFRL+L	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	5 = 5 μm (200 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	0-120 = 0 to 120 bar	RMSA SAC	
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT		0-180 = 0 to 180 bar	RMSA SAC RA	
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT			RMSA RA	

DIMENSIONS V3V+FR+L



		V3V+FR+LUB 100		V3V+FR+LUB 200			V3V+FR+LUB 300		
Threaded port G	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"
A		6.45		8.05			9.44		
B	RMSA	7.83		9.64			10.94		
	RA	-		9.81			11.11		
	SAC	8		9.81			11.11		
C		1.96		2.48			2.83		
E		5.86		7.46			8.74		
F		1.02		1.41			1.65		
L		0.17		0.21			0.21		
N (pressure gauge port)		BSPP 1/8"		BSPP 1/8"			BSPP 1/8"		

ORDERING CODES

Code	Description			
VFR+L Skillair® 100				
3272008U	VFR+L 100 1/4 20 0-120 RMSA NPT			
3272011U	VFR+L 100 1/4 20 0-180 RMSA NPT			
3372008U	VFR+L 100 3/8 20 0-120 RMSA NPT			
3372011U	VFR+L 100 3/8 20 0-180 RMSA NPT			
VFR+L Skillair® 200				
3472008U	VFR+L 200 1/4 20 0-120 RMSA NPT			
3472011U	VFR+L 200 1/4 20 0-180 RMSA NPT			
3572008U	VFR+L 200 3/8 20 0-120 RMSA NPT			
3572011U	VFR+L 200 3/8 20 0-180 RMSA NPT			
3672008U	VFR+L 200 1/2 20 0-120 RMSA NPT			
3672011U	VFR+L 200 1/2 20 0-180 RMSA NPT			
VFR+L Skillair® 300				
4472005U	VFR+L 300 1/2 20 0-120 RMSA NPT			
4472008U	VFR+L 300 1/2 20 0-180 RMSA NPT			
4572005U	VFR+L 300 3/4 20 0-120 RMSA NPT			
4572008U	VFR+L 300 3/4 20 0-180 RMSA NPT			
4672005U	VFR+L 300 1 20 0-120 RMSA NPT			
4672008U	VFR+L 300 1 20 0-180 RMSA NPT			

The following versions are available on request:
 - with 5 µm or 50 µm degree of filtration
 - with SAC or RA condensate discharge

Refer to the sections on the single modules for a further description, components and other technical data.



TECHNICAL DATA		F+L 100		F+L 200			F+L 300			F+L 400			
Threaded port	NPT	1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of filtration	µm	yellow: 5 (200 microinch); white: 20 (790 microinch); blue: 50 (2000 microinch)											
Max. inlet pressure	MPa	1.5		1.3			1.3			1.3			
	bar	15		13			13			13			
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	psi	217		188			188			188			
	Nl/min	600		1800			3200			9000		14000	
ΔP 0.5 bar (0.05 MPa - 7.25 psi)	scfm	21		64			113			320		500	
	Nl/min	1200		3200			4500			-		-	
Flow rate at 6.3 bar (0.63 MPa - 91 psi)	scfm	42		113			160			-		-	
	Nl/min	1200		3200			4500			-		-	
ΔP 1 bar (0.1 MPa - 14.5 psi)	°C	50		50			50			50			
	°F	122		122			122			122			
Weight	pounds	1.1		2.4			4.8			17.6			
Wall fixing screws		N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4-20 unc x 4.33			
Fluid		Compressed air.											
Notes on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.											

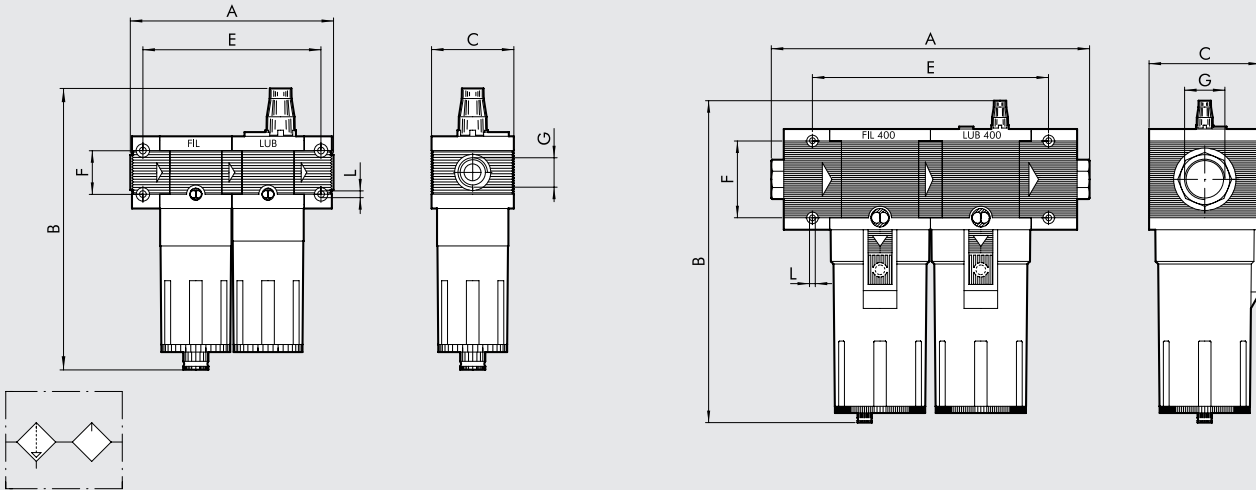
KEY TO CODES

F+L	100	1/4	20	RMSA	
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	TYPE OF CONDENSATE DRAIN	
F+L	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	5 = 5 µm (200 microinch) 20 = 20 µm (790 microinch) 50 = 50 µm (2000 microinch)	RMSA SAC RMSA RA	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate. (for size 200, 300 and 400) SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. (for size 100 and 200)
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT			
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT			
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT			

DIMENSIONS FIL+LUB

100 - 200 - 300

400



Threaded port G	NPT	FIL+LUB 100		FIL+LUB 200			FIL+LUB 300			FIL+LUB 400			
		1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
A		4.76		5.86			6.88		6.96	12.99 to 14.17		15.27 to 16.45	
B	RMSA	6.79		8			8.80		13.75				
	RA	-		8.17			8.96		13.92				
	SAC	6.95		8.17			8.96		13.92				
C		1.96		2.48			2.83		4.56				
E		4.17		5.27			6.18		9.72				
F		1.02		1.41			1.65		3.94				
L		0.17		0.21			0.21		0.29				

ORDERING CODES

Code Description

F+L Skillair® 100

3285002U F+L 100 1/4 20 RMSA NPT

3385002U F+L 100 3/8 20 RMSA NPT

F+L Skillair® 200

3485002U F+L 200 1/4 20 RMSA NPT

3585002U F+L 200 3/8 20 RMSA NPT

3685002U F+L 200 1/2 20 RMSA NPT

F+L Skillair® 300

4485002U F+L 300 1/2 20 RMSA NPT

4585002U F+L 300 3/4 20 RMSA NPT

4585005U F+L 300 3/4 20 RA NPT

4685002U F+L 300 1 20 RMSA NPT

F+L Skillair® 400

6185002U F+L 400 1 20 RMSA NPT

6185005U F+L 400 1 20 RA NPT

6285002U F+L 400 1 1/4 20 RMSA NPT

6385002U F+L 400 1 1/2 20 RMSA NPT

6485002U F+L 400 2 20 RMSA NPT

The following versions are available on request:

- with 5 µm or 50 µm degree of filtration
- with SAC or RA condensate discharge

Refer to the sections on the single modules for a further description, components and other technical data.



UNITS

FIL+DEP Skillair®

TECHNICAL DATA			F+D 100		F+D 200			F+D 300			F+D 400			
Threaded port	NPT		1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	2"
Degree of filtration	Filter	µm	yellow: 5 (200 microinch)											
	Depurator	µm	0.01		0.01				0.01				0.01	
Max. inlet pressure		MPa	1.5		1.3				1.3				1.3	
		bar	15		13				13				13	
Max temperature at 10 bar (1 MPa - 145 psi)		psi	217		188				188				188	
		°C	50		50				50				50	
		°F	122		122				122				122	
Weight		pounds	1.32		2.86				4.8				15.4	
Wall fixing screws			N. 8-32 unc x 2		N. 10-24 unc x 2.36			N. 10-24 unc x 2.75			1/4-20 unc x 4.33			
Maximum suggested flow rate			Please look at the flow rate curves at page 2-84											
Fluid			Compressed air.											
Notes on use			The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.											

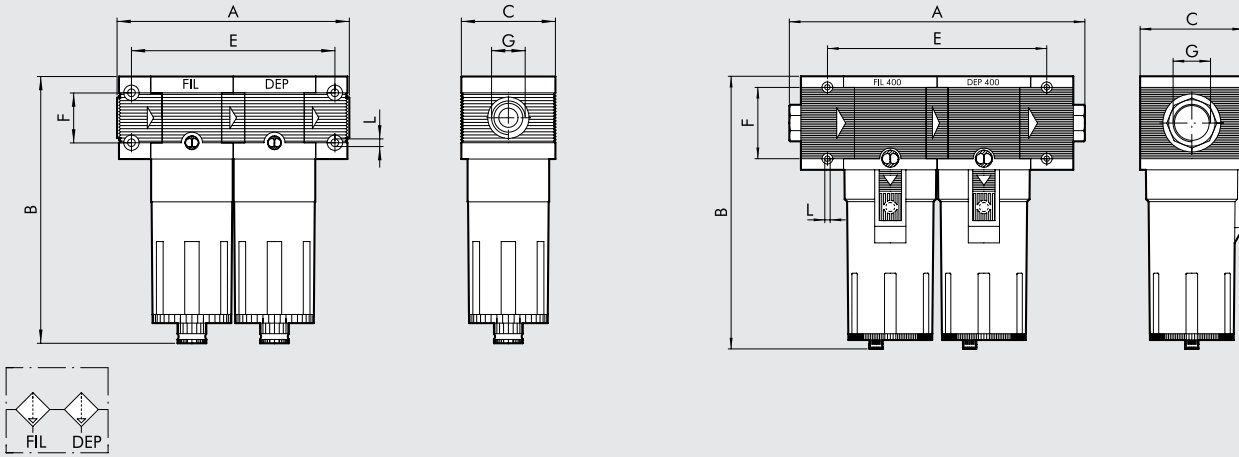
KEY TO CODES

F+D	100	1/4	5	RMSA	
ELEMENT	SIZE	THREADED PORT	DEGREE OF FILTRATION	TYPE OF CONDENSATE DRAIN	
F+D	100	1/4 = 1/4 NPT 3/8 = 3/8 NPT	5 = 5 µm (200 microinch)	RMSA SAC RMSA RA	RMSA: drain with manual condensate discharge and automatic discharge at zero pressure
	200	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT			RA: automatic drain with condensate discharge, independent of pressure and flow rate. (for size 300 and 400)
	300	1/2 = 1/2 NPT 3/4 = 3/4 NPT			SAC: automatic drain with condensate discharge.
	400	1 = 1 NPT 1 1/4 = 1 1/4 NPT 1 1/2 = 1 1/2 NPT 2 = 2 NPT			Operates by depression – requires variable air take-offs. (for size 100 and 200)

DIMENSIONS FIL+DEP

100 - 200 - 300

400

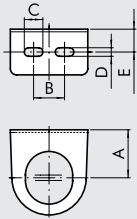


Threaded port G	NPT	FIL+DEP 100		FIL+DEP 200			FIL+DEP 300			FIL+DEP 400			
		1/4"	3/8"	1/4"	3/8"	1/2"	1/2"	3/4"	1"	1"	1" 1/4"	1" 1/2"	2"
A		4.26		5.86			6.88			6.96			
B	RMSA	5.66		6.88			7.67			12.59			
	RA	-		7			7.83			12.75			
	SAC	5.82		7			-			-			
C		1.96		2.48			2.83			4.56			
E		4.17		5.27			6.18			9.72			
F		1.02		1.41			1.65			3.14			
L		0.17		0.21			0.21			0.29			

ORDERING CODES

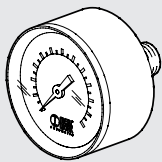
Code	Description	Code	Description
F+D Skillair® 100			
3289001U	F+D 100 1/4 5 RMSA-RMSA NPT	4489001U	F+D 300 1/2 5 RMSA-RMSA NPT
3289005U	F+D 100 1/4 5 SAC-RMSA NPT	4489002U	F+D 300 1/2 5 RA-RA NPT
3289006U	F+D 100 1/4 5 SAC-SAC NPT	4589001U	F+D 300 3/4 5 RMSA-RMSA NPT
3389001U	F+D 100 3/8 5 RMSA-RMSA NPT	4589002U	F+D 300 3/4 5 RA-RA NPT
3389005U	F+D 100 3/8 5 SAC-RMSA NPT	4689001U	F+D 300 1 5 RMSA-RMSA NPT
3389006U	F+D 100 3/8 5 SAC-SAC NPT	4689002U	F+D 300 1 5 RA-RA NPT
F+D Skillair® 200			
3489001U	F+D 200 1/4 5 RMSA-RMSA NPT	6189001U	F+D 400 1 5 RMSA-RMSA NPT
3489005U	F+D 200 1/4 5 SAC-RMSA NPT	6189002U	F+D 400 1 5 RA-RA NPT
3489006U	F+D 200 1/4 5 SAC-SAC NPT	6289001U	F+D 400 1 1/4 5 RMSA-RMSA NPT
3589001U	F+D 200 3/8 5 RMSA-RMSA NPT	6289002U	F+D 400 1 1/4 5 RA-RA NPT
3589005U	F+D 200 3/8 5 SAC-RMSA NPT	6389001U	F+D 400 1 1/2 5 RMSA-RMSA NPT
3589006U	F+D 200 3/8 5 SAC-SAC NPT	6389002U	F+D 400 1 1/2 5 RA-RA NPT
3689001U	F+D 200 1/2 5 RMSA-RMSA NPT	6489001U	F+D 400 2 5 RMSA-RMSA NPT
3689005U	F+D 200 1/2 5 SAC-RMSA NPT	6489002U	F+D 400 2 5 RA-RA NPT
3689006U	F+D 200 1/2 5 SAC-SAC NPT		

MOUNTING BRACKET FOR REG.



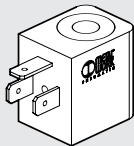
Code	Description				
9200701	SF100- BIT-ND1/4				
9400701	SF200-ND-3/8 1/2				
9400702	SF300				
Code	A	B	C	D	E
9200701	1.26	0.79	0.47	0.22	0.56
9400701	1.66	1.59	0.47	0.22	0.59
9400702	1.89	1.93	0.47	0.22	0.67

PRESSURE GAUGES



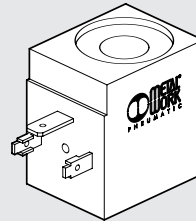
Code	Description
9700101	M 40 1/8 12 (0-180)
9700102	M 40 1/8 04 (0-60)
9800101	M 50 1/8 12 (0-180)
9800102	M 50 1/8 04 (0-60)
9900101	M 63 1/4 12 (0-180)

COIL 22 mm FOR APR AND V3V ELPN



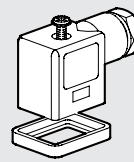
Code	Description
W0215000101	Coil 22 Ø 8 BA 2W-24VDC
W0215000111	Coil 22 Ø 8 BA 3.5VA-24VAC
W0215000121	Coil 22 Ø 8 BA 3.5VA-110VAC
W0215000131	Coil 22 Ø 8 BA 3.5VA-220VAC

COIL FOR CDV CDML LUBRICATOR



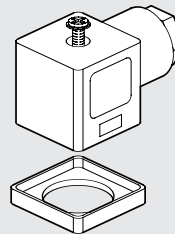
Code	Description
W0216001001	Coil 24 V CC
W0216001011	Coil 24V 50/60HZ
W0216001021	Coil 110V 50/60HZ
W0216001031	Coil 220V 50/60HZ

ELECTRIC CONNECTOR 22 mm FOR APR AND V3V ELPN



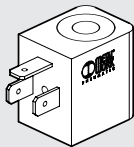
Code	Description
W0970510011	Connector standard
W0970510012	Connector 22 LED 24V
W0970510013	Connector 22 LED 110V
W0970510014	Connector 22 LED 220V
W0970510015	Connector 22 LED VDR 24V
W0970510016	Connector 22 LED VDR 110V
W0970510017	Connector 22 LED VDR 220V
W0970510070	Connector 22 ATEX II 3 GD

ELECTRIC CONNECTOR 22 mm FOR APR AND V3V ELPN



Code	Description
W0970520033	Connector 30 STD
W0970520034	Connector 30 LED 24V
W0970520035	Connector 30 LED 110V
W0970520036	Connector 30 LED 220V
W0970520037	Connector 30 LED VDR 24V
W0970520038	Connector 30 LED VDR 110V
W0970520039	Connector 30 LED VDR 220V

"UL" AND "CSA" COIL 22 mm FOR APR AND V3V ELPN

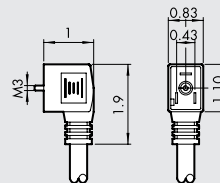


Code	Description
W0215000251	Coil 22 Ø 8 BA 2W-12VDC UR
W0215000201	Coil 22 Ø 8 BA 2W-24VDC UR
W0215000211	Coil 22 Ø 8 BA 3.5VA-24VAC UR
W0215000221	Coil 22 Ø 8 BA 3.5VA-110VAC UR
W0215000231	Coil 22 Ø 8 BA 3.5VA-220VAC UR

For the standards description look at page 5-4

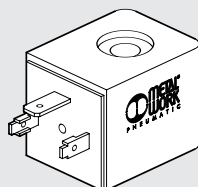


PRE WIRED DIN CONNECTORS 6 FEET CABLE 22 mm



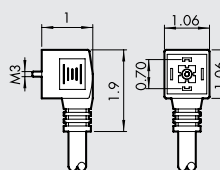
Code	Description
888776	DIN connector 110VAC led
888777	DIN connector standard black
888778	DIN connector 24VDC

COIL 30 mm FOR APR AND V3V ELPN



Code	Description
W0210010100	Coil 30 D8 4W-24VDC
W0210011100	Coil 30 D8 4VA-24VAC 50/60 HZ
W0210012100	Coil 30 D8 4VA-110VAC 50/60 HZ
W0210013100	Coil 30 D8 4VA-220VAC 50/60 HZ

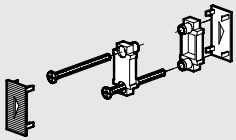
PRE WIRED DIN CONNECTORS 6 FEET CABLE 30 mm



Code	Description
888779	DIN connector standard black
888780	DIN connector led 24VDC
888781	DIN connector led 110VAC

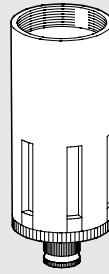
Skillair® SPARES PARTS

CONNECTOR KIT FOR SKILLAIR CODE A



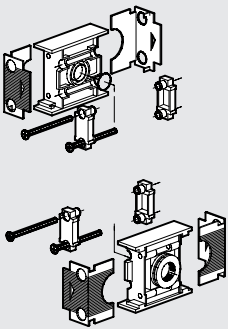
Code	Description
9230301	Connector kit 100
9330301	Connector kit 200
9430301	Connector kit 300
9630301	Connector kit 400

FILTER BOWL



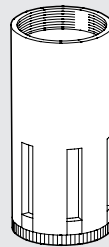
Code	Description
9253301	Spares TF 100 RMSA
9255301	Spares TF 100 SAC
9353301	Spares TF 200 RMSA
9355301	Spares TF 200 SAC
9453401	Spares TF 300 RMSA
9453301	Spares TF 300 RA
9653401	Spares TF 400 RMSA
9653301	Spares TF 400 RA

INPUT/OUTPUT END PLATE KIT



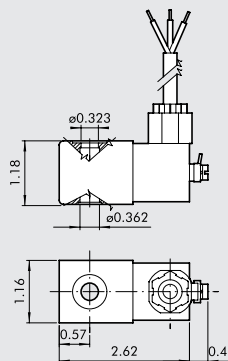
Code	Description
9230401U	IN/OUT end plate kit 100 1/4
9330501U	IN/OUT end plate kit 100 3/8
9330601U	IN/OUT end plate kit 200 1/4
9330701U	IN/OUT end plate kit 200 3/8
9330801U	IN/OUT end plate kit 200 1/2
9430701U	IN/OUT end plate kit 300 1/2
9530901U	IN/OUT end plate kit 300 3/4
9531001U	IN/OUT end plate kit 300 1
9631001U	IN/OUT end plate kit 400 1
9631101U	IN/OUT end plate kit 400 1 1/4
9631201U	IN/OUT end plate kit 400 1 1/2
9631301U	IN/OUT end plate kit 400 2

LUBRICATOR BOWL



Code	Description
9253501	Spares TL 100
9202503	Spares TL 100 CA
9202502	Spares TL 100 CD
9202501	Spares TL 100 ML
9353501	Spares TL 200
9302501	Spares TL 200 CA
9302503	Spares TL 200 CD
9302502	Spares TL 200 ML
9453501	Spares TL 300
9202403	Spares TL 300 CA
9202401	Spares TL 300 CD
9202402	Spares TL 300 ML
9653501	Spares TL 400
9653502	Spares TL 400 CA
9653504	Spares TL 400 CD
9653503	Spares TL 400 ML

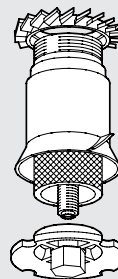
KIT FOR COIL EEXM (FOR V3V-APR-LUB)



Code	Description
0227606913	Kit for coil 30 24 VDC EEXMT5 cable 118 inch
0227606915	Kit for coil 30 24 VDC EEXMT5 cable 197 inch
0227608013	Kit for coil 30 24 VAC EEXMT5 cable 118 inch
0227608015	Kit for coil 30 24 VAC EEXMT5 cable 197 inch
0227608023	Kit for coil 30 110 VAC EEXMT5 cable 118 inch
0227608025	Kit for coil 30 110 VAC EEXMT5 cable 197 inch
0227608033	Kit for coil 30 230 VAC EEXMT5 cable 118 inch
0227608035	Kit for coil 30 230 VAC EEXMT5 cable 197 inch

According to Atex 94/9 CE rule,
 II 2G Ex mb IIC T4/T5 Gb
 II 2D Ex tb IIIC T130/T95 °C IP66 Db

FILTERING ELEMENTS



Code	Description
9251705	Spares FP 100 5
9251706	Spares FP 100 20
9251707	Spares FP 100 50
9351705	Spares FP 200 5
9351706	Spares FP 200 20
9351707	Spares FP 200 50
9451705	Spares FP 300 5
9451706	Spares FP 300 20
9451707	Spares FP 300 50
9651706	Spares FP 400 5
9651707	Spares FP 400 20
9651705	Spares FP 400 50

KIT COIL SIDE 22 IP65 (FOR V3V-APR-LUB)



Code	Description
0222100100	Kit for coils 22 - IP65

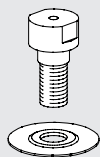
Improved IP65 protection, even after prolonged exposure to atmospheric agents. Applicable to valves with a technopolymer control.

FILTERING/PURIFICATION ELEMENTS



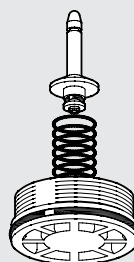
Code	Description
9251711	Spares FP DEP. 100
9351711	Spares FP DEP. 200
9451711	Spares FP DEP. 300
9651711	Spares FP DEP. 400

VENTURI LUBRICATOR DIAPHRAGM



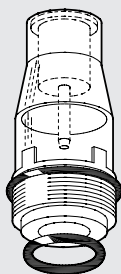
Code	Description
9252001	Spares MB 100 ND 1/4
9352001	Spares MB 200 ND 3/8-1/2
9452001	Spares MB 300 ND 1/2-3/4
9652601	Spares MB 400

COMPLETE POPPET FOR REGULATORS



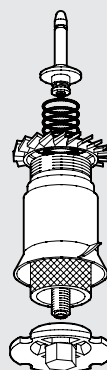
Code	Description
9250704	Spares OTR 100
9350704	Spares OTR 200
9450704	Spares OTR 300
9650704	Spares OTR 400

TRANSPARENT LUBRICATOR COVER



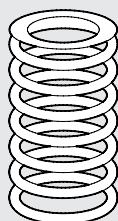
Code	Description
9251302	Spares CVL 100-200-300-400 BIT

COMPLETE POPPET FOR FR



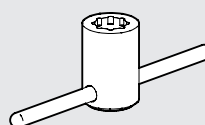
Code	Description
9250902	Spares OTFR 100 5
9250903	Spares OTFR 100 20
9250904	Spares OTFR 100 50
9350902	Spares OTFR 200 5
9350903	Spares OTFR 200 20
9350904	Spares OTFR 200 50
9450902	Spares OTFR 300 5
9450903	Spares OTFR 300 20
9450904	Spares OTFR 300 50

SPRINGS FOR REDUCERS AND FRs



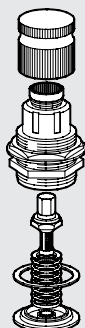
Code	Description
9250605	Spares MO 100 02 (0-30)
9250606	Spares MO 100 04 (0-60)
9250607	Spares MO 100 08 (0-120)
9250608	Spares MO 100 012 (0-180)
9350605	Spares MO 200 02 (0-30)
9350606	Spares MO 200 04 (0-60)
9350607	Spares MO 200 08 (0-120)
9350608	Spares MO 200 012 (0-180)
9450605	Spares MO 300 04 (0-60)
9450606	Spares MO 300 08 (0-120)
9450607	Spares MO 300 012 (0-180)
9450608	Spares MO 300 02 (0-30)

UPPER COVER DISASSEMBLY SPANNER



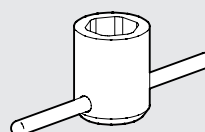
Code	Description
9220701	Spares cover spanner

UPPER COVER FOR REGULATOR AND FR



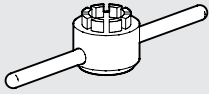
Code	Description
9250800U	Spares CS 100 02 (0-30)
9250810U	Spares CS 100 04 (0-60)
9250811U	Spares CS 100 08 (0-120)
9250812U	Spares CS 100 012 (0-180)
9350800U	Spares CS 200 02 (0-30)
9350810U	Spares CS 200 04 (0-60)
9350811U	Spares CS 200 08 (0-120)
9350812U	Spares CS 200 012 (0-180)
9450805U	Spares CS 300 04 (0-60)
9450806U	Spares CS 300 08 (0-120)
9450807U	Spares CS 300 012 (0-180)
9450808U	Spares CS 300 02 (0-30)

REG AND FR VISUAL DOME DISASSEMBLY SPANNER



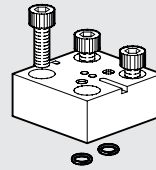
Code	Description
9220401	Spares dome dis. spanner 100
9323401	Spares dome dis. spanner 200
9420401	Spares dome dis. spanner 300

POPPET DISASSEMBLY SPANNER (FOR REG.)



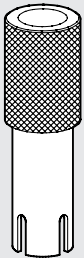
Code	Description
9220501	Spares R cap disass. WR. 100
9323501	Spares R cap disass. WR. 200
9420501	Spares R cap disass. WR. 300

PROVISION FOR MICRO SOLENOID CONTROL FOR APR-300



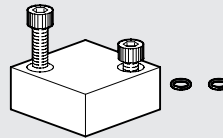
Code	Description
9453601	Spares PCE MICRO

POPPET DISASSEMBLY SPANNER (FOR FR)



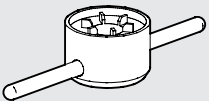
Code	Description
9220801	Spares FR cap disass. WR. 100
9320801	Spares FR cap disass. WR. 200
9420801	Spares FR cap disass. WR. 300

PROVISION FOR PNEUMATIC CONTROL FOR APR-300



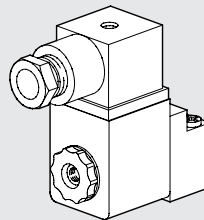
Code	Description
9453701	Spares PCP pneumatic

CAP DISASSEMBLY SPANNER



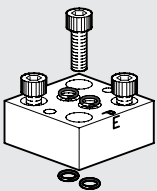
Code	Description
9220601	Spares cap disass. 100
9323601	Spares cap disass. 200
9420601	Spares cap disass. 300

CNOMO SOLENOID CONTROL FOR APR-300 and V3V 300



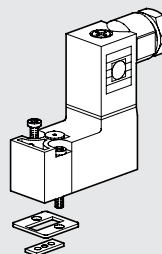
Code	Description
9453901	Spares CEC CNOMO 24CC
9453902	Spares CEC CNOMO 24V
9453903	Spares CEC CNOMO 110V
9453904	Spares CEC CNOMO 220V

PROVISION FOR SOLENOID CONTROL TO CNOMO FOR APR-300



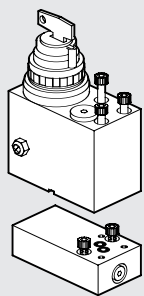
Code	Description
9454001	Spares PCE to CNOMO

MICRO SOLENOID CONTROL FOR APR-300 and V3V 300 (NO MORE IN THE CATALOGUE)



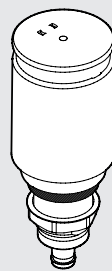
Code	Description
9453801	Spares CEM MICRO 24CC
9453802	Spares CEM MICRO 24V
9453803	Spares CEM MICRO 110V
9453804	Spares CEM MICRO 220V

KEY-OPERATED V3V 400



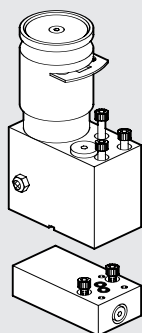
Code	Description
9455401	Spares kit C.C. 400

AUTOMATIC DRAIN (RA)



Code	Description
9000802	Spares automatic drain (RA)

MANUAL LOCKABLE V3V 400



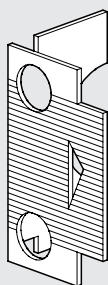
Code	Description
9455601	Spares kit lockable 400

AUTOMATIC DRAIN (SAC)



Code	Description
9000803U	Spares automatic drain (SAC)

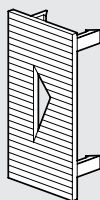
INPUT/OUTPUT COVER PLATE



Code	Description
9152103	Spares OUTPUT cover plate 100
9152105	Spares INPUT cover plate 100
9152115	Spares OUTPUT cover plate 200
9152116	Spares INPUT cover plate 200
9152104	Spares OUTPUT cover plate 300
9152106	Spares INPUT cover plate 300
9152118	Spares OUTPUT cover plate 400
9152119	Spares INPUT cover plate 400

NOTES

INTERMEDIATE COVER PLATE



Code	Description
9152107	Spares intermediate cover plate 100
9152114	Spares intermediate cover plate 200
9152108	Spares intermediate cover plate 300
9152117	Spares intermediate cover plate 400

SUMMARY Newdeal

● GENERAL TECHNICAL DATA New deal

PAGE 2-134



● New deal FILTER

PAGE 2-136



● New deal DEPURATOR

PAGE 2-139



● New deal REGULATOR

PAGE 2-141



● New deal PILOT-ASSISTED REGULATOR

PAGE 2-144



● New deal FILTER REGULATOR

PAGE 2-145



● New deal LUBRICATOR

PAGE 2-148



● New deal SHUT-OFF VALVE

PAGE 2-151



● New deal AIR TAKE-OFF

PAGE 2-153



● New deal SUB-BASE

PAGE 2-154



● **New deal AUTOMATIC CONDENSATE DRAIN**

PAGE 2-155



● **FIL+REG+LUB New deal**

PAGE 2-156



● **FR+LUB New deal**

PAGE 2-158



● **V3V+FR+LUB New deal**

PAGE 2-160



● **FIL+DEP New deal**

PAGE 2-162



● **FIL+LUB New deal**

PAGE 2-164

● **New deal ACCESSORIES**

PAGE 2-166

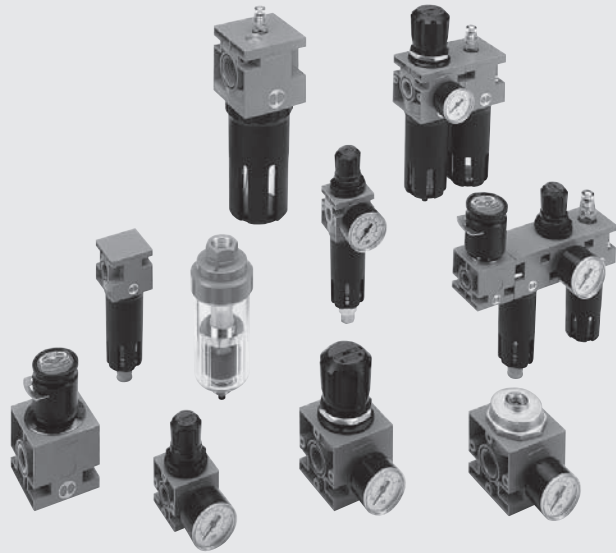
● **New deal SPARE PARTS**

PAGE 2-167

GENERAL TECHNICAL DATA **Newdeal**

Newdeal is the forerunner of all air treatment units by Metal Work. The entire range is top quality, heavy-duty and reliable. These units are designed for use at high pressures* and in applications where the temperature and quality of the ambient area are critical.

*For further details, refer to the Specification for the item in question.

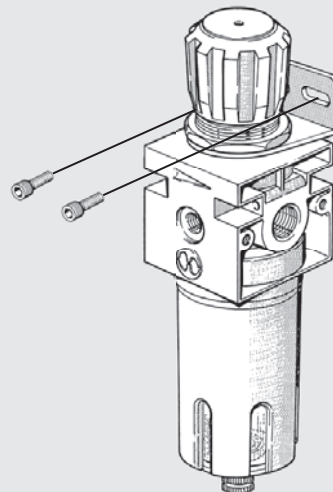
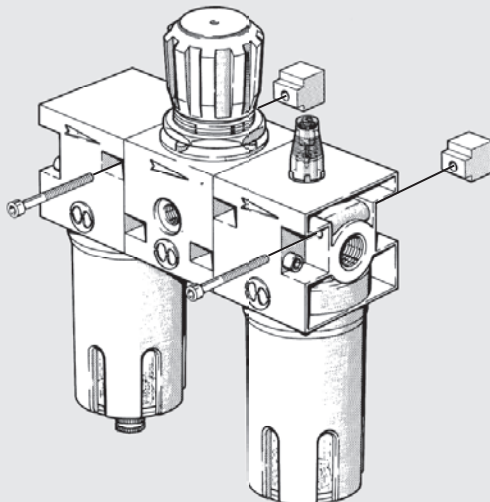


UNITS

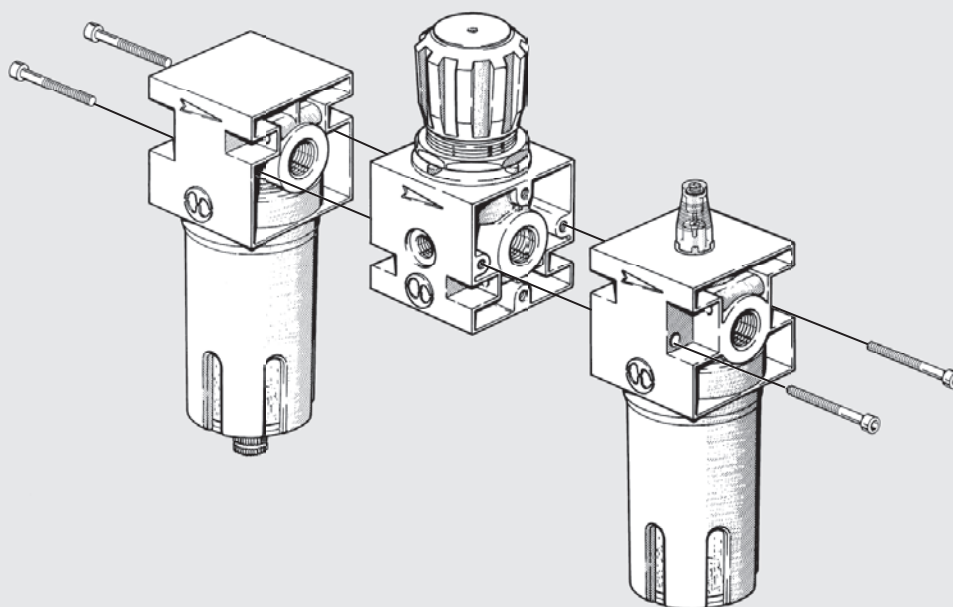
GENERAL TECHNICAL DATA New deal

TECHNICAL DATA		ND 1/4"	ND 3/8"	ND 1/2"	ND 3/4"	ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
Degree of filtration	µm	4 - 20 - 50				
Degree of purification	µm	99.97% at 0.01				
Setting range	bar	0 to 2 - 0 to 4 - 0 to 8 - 0 to 12				
Max. input pressure	MPa	1.8				
	bar	18				
	psi	261				
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	Nl/min	from 200 to 12000				
	scfm	from 7 to 423				
Fluid		Lubricated or unlubricated compressed air				
Temperature range at 1 MPa; 10 bar; 145 psi	°C	-10 to +50				
	°F	14 to 122				
Elements comprising the range		Filter, Depurator, Regulator, Pilot operated Regulator, In-series Regulator, Filter-regulator, Lubricator, Circuit Shut-off Valve				
Compatibility with oils		Please refer to page 5-4 of the technical documentation				

WALL MOUNTING



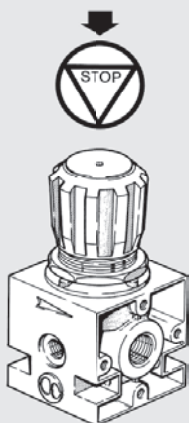
ASSEMBLY DIAGRAM



ASSEMBLY TIE RODS

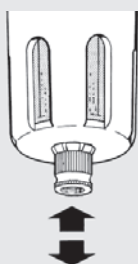
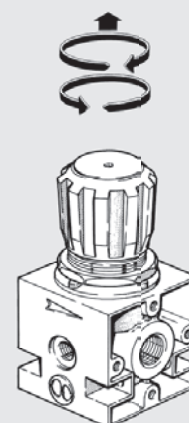
	Elements that can be assembled	NPT 1/4			NPT 3/8 - 1/2			NPT 3/4 - 1		
		Type	Code	Ref.	Type	Code	Ref.	Type	Code	Ref.
A										
B		A	9250001	CVA 1/4 M4x40	A	9450001	CVA 1/2 M5x55	A	9650001	CVA 1 M6x70
		A	9250001	CVA 1/4 M4x40	A	9450002	CVA 1/2 M5x60	-	-	-
C		A	9250002	CVA 1/4 M4x82	A	9450003	CVA 1/2 M5x120	-	-	-
		B	9200901	F+L T 1/4	B	9400901	F+L T 3/8-1/2	B	9600901	F+L T 3/4-1

GENERAL RULES - USE AND MAINTENANCE

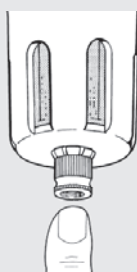


The knob can be locked so that the set pressure cannot be altered.

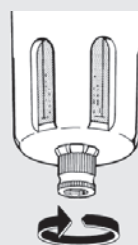
The air pressure must always be set upwards.



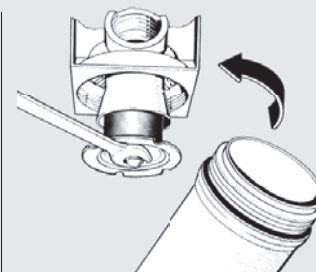
With the knob in the centre position, the drain is semi-automatic. The drain operates when the bowl is not pressurized and closes when it is.



Press the button to drain condensate when the bowl is pressurized.



Turn the knob anticlockwise to close the valve with bowl pressurized or not pressurized.



To clean or replace the filter element unscrew the screen of the centrifuge assembly. Use a no. 3 compass spanner to unscrew the bowl.

Newdeal FILTER

Filter with different impurity filtration degrees.

- Metal bowl with external viewing
- Semi-automatic and condensate drainage



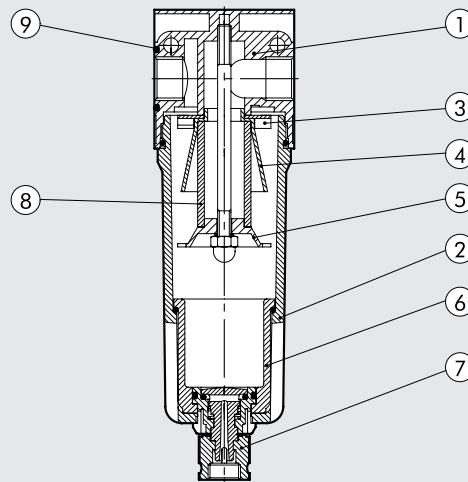
UNITS

New deal FILTER

TECHNICAL DATA		FIL ND 1/4"	FIL ND 3/8"	FIL ND 1/2"	FIL ND 3/4"	FIL ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
Degree of filtration	μm	4 - 20 - 50	4 - 20 - 50	4 - 20 - 50	4 - 20 - 50	4 - 20 - 50
Max. inlet pressure	MPa	1.8	1.8	1.8	1.8	1.8
	bar	18	18	18	18	18
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	psi	261	261	261	261	261
	Nl/min	1300	3100	9100	9100	9100
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	scfm	46	110	324	324	324
	Nl/min	1720	4100	11000	11000	11000
Max temperature at 1 MPa; 10 bar; 145 psi	scfm	61	146	391	391	391
	°C	50	50	50	50	50
Weight	°F	122	122	122	122	122
	pounds	0.9	2	4.2	4.2	4.2
Wall fixing screws		N. 8-32 unc x 1.57	N. 8-32 unc x 2.16	1/4-20 unc x 2.95	1/4-20 unc x 2.95	1/4-20 unc x 2.95
Bowl capacity	fluid ounce oz	0.34	1.52	5.75	5.75	5.75
Mounting position		Vertical	Vertical	Vertical	Vertical	Vertical
Drain		RMSA - SAC	RMSA - SAC - RA	RMSA - RA	RMSA - RA	RMSA - RA
RMSA: drain with manual condensate discharge and automatic discharge at zero pressure. RA: automatic drain with condensate discharge, independent of pressure and flow rate. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs. Compressed air						
Fluid		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.				
Note on use						

COMPONENTS

- ① Zamak body
- ② Aluminium bowl
- ③ Technopolymer centrifuge
- ④ Technopolymer baffle plug
- ⑤ Technopolymer screen
- ⑥ Clear technopolymer bowl
- ⑦ Drain (RMSA)
- ⑧ HDPE bronze filter cartridge (1/4 - 3/8 - 1/2), sintered bronze (1")
- ⑨ NBR gaskets

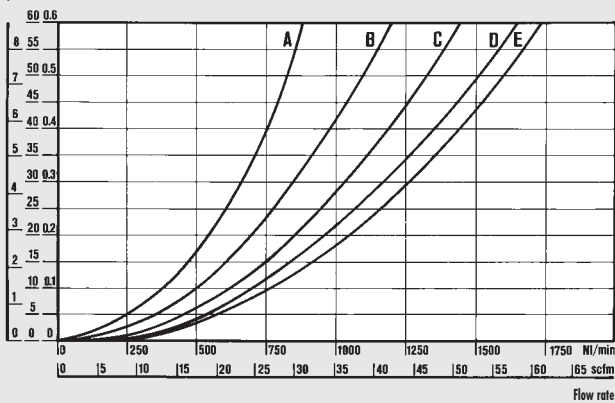


FLOW CHARTS

FIL 1/4

$\Delta P = (P_m - P_v)$

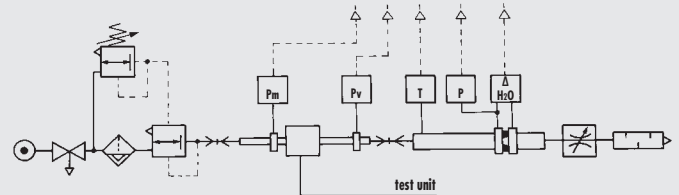
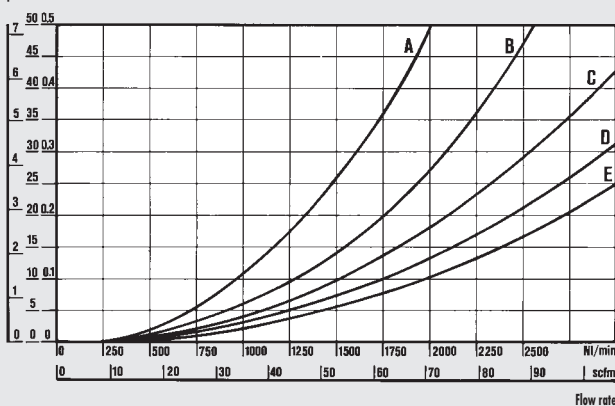
psi kPa bar



FIL 3/8 - 1/2

$\Delta P = (P_m - P_v)$

psi kPa bar



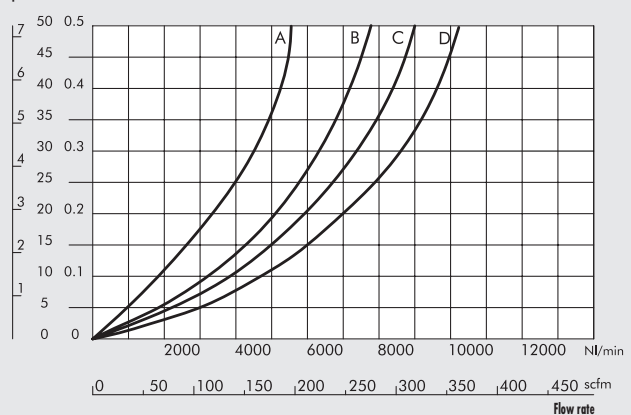
• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

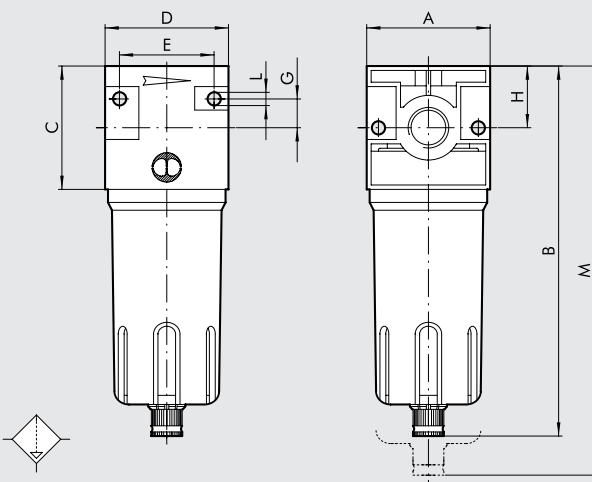
FIL 3/4 - 1"

$\Delta P = (P_m - P_v)$

psi kPa bar



DIMENSIONS



		FIL ND 1/4"	FIL ND 3/8"	FIL ND 1/2"	FIL ND 3/4"	FIL ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
A		1.65	2.36		3.14	
B	RMSA	5.59	7.08		9.25	
	RA	-	7.25		9.40	
	SAC	5.75	7.25		9.40	
C		1.65	2.36		3.14	
D		1.65	2.36		3.14	
E		1.25	1.81		2.59	
G		0.39	0.55		0.86	
H		0.82	1.18		1.57	
L		0.17	0.17		0.29	
M	RMSA	7.28	9.05		12.79	
	RA	-	9.22		12.96	
	SAC	7.45	9.22		12.96	

Newdeal DEPURATOR

- Oil-proof depurator with coalescing cartridge
- Metal bowl with external viewing
- Manual/semi-auto or automatic condensate drain



TECHNICAL DATA		DEP ND 3/8"	DEP ND 1/2"
Threaded port	NPT	3/8"	1/2"
Degree of depuration	μm	99.97% at 0.01	
Max. inlet pressure	MPa	1.8	
	bar	18	
	psi	261	
Maximum suggested flow rate		please look at the flow rate curves	
Suggested flow rate at 87 psi	Nl/min	230	
	scfm	8	
Fluid		Filtered air 4 μm	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	
	°F	122	
Weight	pounds	2	
Wall fixing screws		N. 8-32 unc x 2.16	
Bowl capacity	fluid ounce oz	1.52	
Mounting position		Vertical	
Drain		RMSA - SAC - RA	
		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure. RA: automatic drain with condensate discharge, independent of pressure and flow rate. SAC: automatic drain with condensate discharge. Operates by depression – requires variable air take-offs.	
Note on use		It is advisable to mount a 4 μm filter upstream the depurator acting as a rough filter. The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.	

UNITS

New deal DEPURATOR

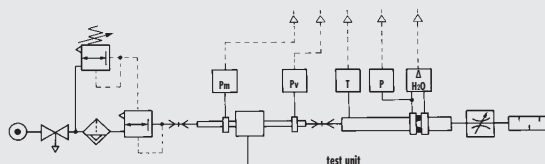
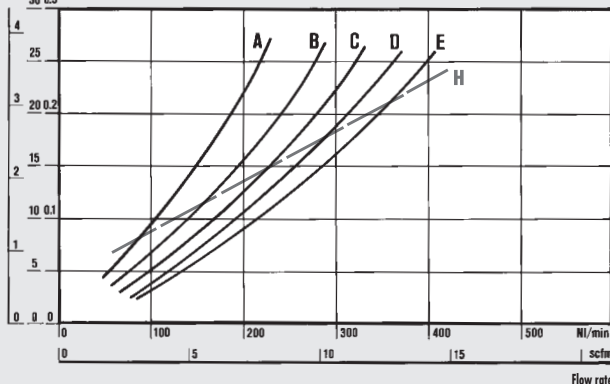
FLOW CHARTS

D 3/8 - 1/2

$$\Delta P = (P_m - P_v)$$

psi KPa bar

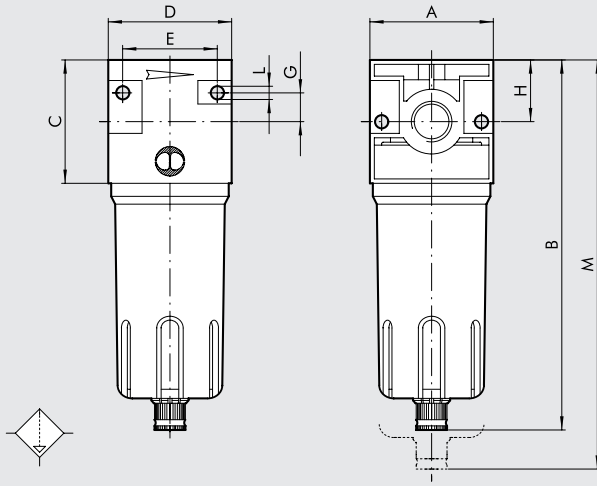
30 0.3



• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi
- (H) = maximum flow rate recommended for optimal operation

DIMENSIONS



Threaded port	NPT	DEP ND 3/8"	DEP ND 1/2"
		3/8"	1/2"
A			2.36
B	RMSA		7.08
	RA		7.25
	SAC		7.25
C			2.36
D			2.36
E			1.81
G			0.55
H			1.18
L			0.17
M	RMSA		9.05
	RA		9.22
	SAC		9.22

KEY TO CODES

DEP ELEMENT	3/8 THREADED PORT	RMSA CONDENSATE DRAIN
DEP	3/8 = 3/8 NPT 1/2 = 1/2 NPT	RMSA RA SAC

RMSA: Manual/semi-auto drain
 RA: Automatic drain. Float-type operation irrespective of the pressure and flow rate.
 SAC: Automatic drain. Operates by depression - requires variable air take-offs.

ORDERING CODES

Code	Description
DEPURATOR 3/8"	
1322002U	DEP 3/8 RMSA NPT
1322003U	DEP 3/8 RA NPT
1322004U	DEP 3/8 SAC NPT
DEPURATOR 1/2"	
1422002U	DEP 1/2 RMSA NPT
1422003U	DEP 1/2 RA NPT
1422004U	DEP 1/2 SAC NPT

NOTES

Newdeal REGULATOR

Highly reliable, heavy-duty piston-operated regulator.

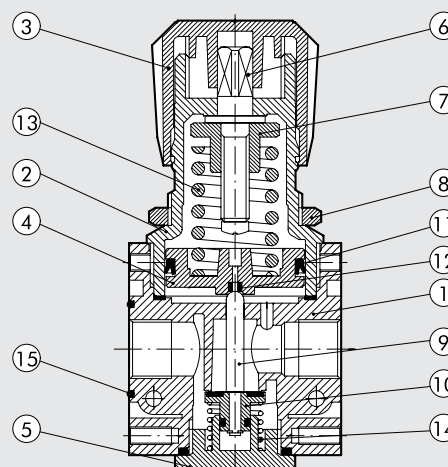
- Stability of the set pressure as the upstream pressure varies
- Standard overpressure blowoff valve
- Can be fixed to the wall using the holes in the sides of the body.



TECHNICAL DATA		REG ND 1/4"	REG ND 3/8"	REG ND 1/2"	REG ND 3/4"	REG ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
Setting range	bar	0 to 60 - 0 to 120 - 0 to 180	0 to 60 - 0 to 120 - 0 to 180	0 to 60 - 0 to 120 - 0 to 180	0 to 60 - 0 to 120 - 0 to 180	0 to 60 - 0 to 120 - 0 to 180
Max. inlet pressure	MPa	1.8	1.8	1.8	1.8	1.8
	bar	18	18	18	18	18
	psi	261	261	261	261	261
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	Nl/min	200	1100	2500	4500	2500
	scfm	7	39	89	160	89
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	Nl/min	650	2500	4500	2500	4500
	scfm	23	89	160	89	160
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	50	50	50	50
	°F	122	122	122	122	122
Weight	pounds	0.7	1.8	4.8	4.8	4.8
Wall fixing screws		N. 8-32 unc x 1.57	N. 8-32 unc x 2.16	1/4-20 unc 2.95		
Gauge port		1/8" NPT	1/8" NPT	1/4" NPT		
Mounting position		In any position				
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.				
Note on use		The regulator 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. Do not take off air from gauge ports.				

COMPONENTS

- ① Zamak body
- ② Technopolymer bell
- ③ Technopolymer knob
- ④ Technopolymer piston rod
- ⑤ Technopolymer plug
- ⑥ OT58 brass adjusting screw
- ⑦ OT58 brass nut
- ⑧ Ring nut : technopolymer (ND 1/4-3/8-1/2) brass (ND 3/4-1)
- ⑨ OT brass rod
- ⑩ Valve with NBR vulcanized gasket
- ⑪ NBR lip seal
- ⑫ NBR relieving seal
- ⑬ Steel adjusting spring
- ⑭ Steel valve compression spring
- ⑮ NBR gaskets

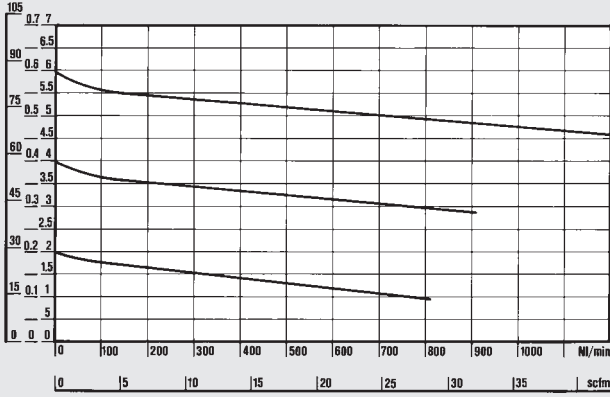


FLOW CHARTS

REG 1/4

$P_m = 0.7 \text{ MPa} - 7 \text{ bar} - 100 \text{ psi}$
Inlet pressure

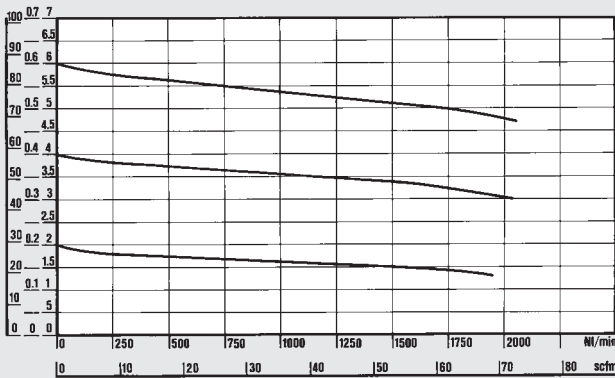
psi MPa bar



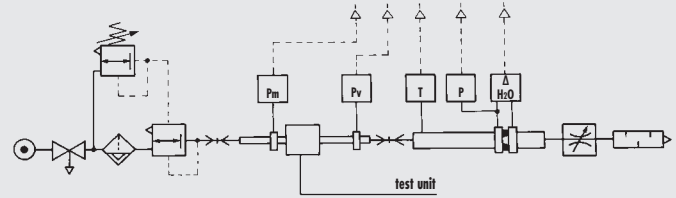
REG 3/8 - 1/2

$P_m = 0.7 \text{ MPa} - 7 \text{ bar} - 100 \text{ psi}$
Inlet pressure

psi MPa bar



**Department
of Mechanics**
Turin Polytechnic

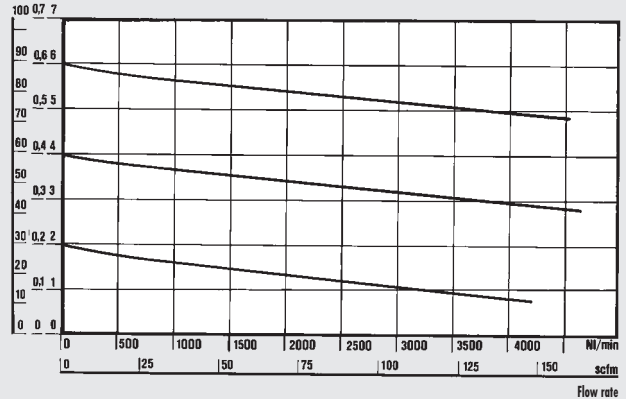


- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

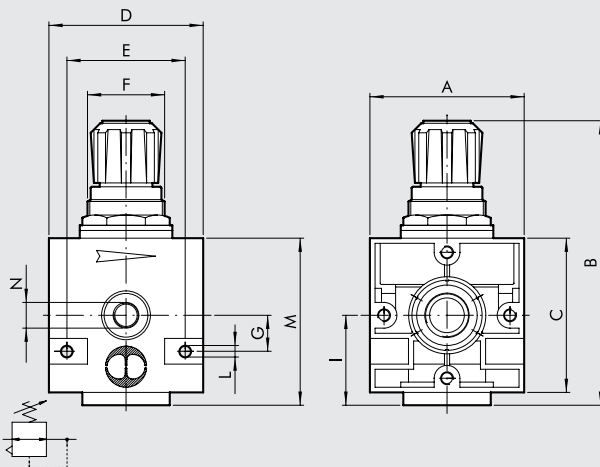
REG 3/4 - 1"

$P_m = 0.7 \text{ MPa} - 7 \text{ bar} - 100 \text{ psi}$
Inlet pressure

psi MPa bar



DIMENSIONS

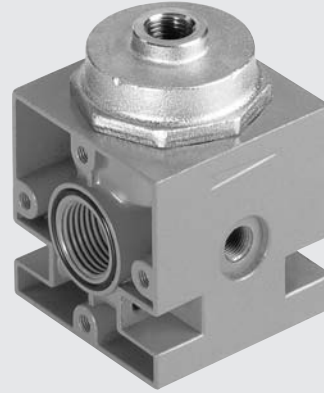


	REG ND 1/4"	REG ND 3/8"	REG ND 1/2"	REG ND 3/4"	REG ND 1"
Threaded port NPT	1/4"	3/8"	1/2"	3/4"	1"
A	1.65	2.36		3.14	
B	3.70	5.11		7.24	
C	1.65	2.36		3.14	
D	1.65	2.36		3.14	
E	1.25	1.81		2.59	
F	M30 x 1.5	M38 x 2		M55 x 2	
G	0.39	0.55		0.86	
I	0.98	1.37		1.85	
L	0.17	0.17		0.29	
M	1.92	2.75		3.70	
N (pressure gauge port)	1/8" NPT	1/8" NPT		1/4" NPT	

New deal PILOT-ASSISTED REGULATOR

Remote pilot-assisted piston regulator for heavy-duty use.

- Stability of the set pressure as the upstream pressure varies;
- Can be fixed to the wall using the holes in the sides of the body.

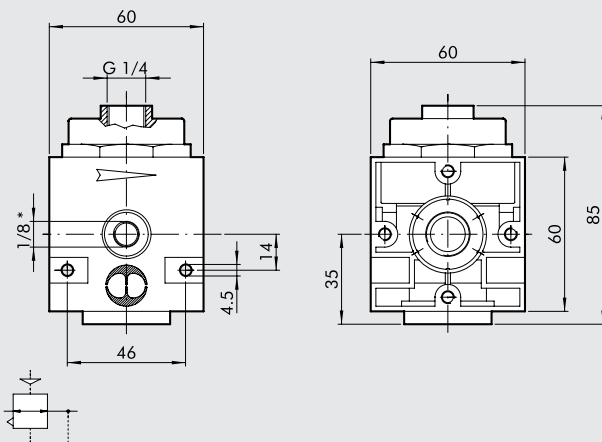


UNITS

New deal PILOT-ASSISTED REGULATOR

TECHNICAL DATA		REG PIL 3/8"	REG PIL 1/2"
Threaded port	NPT	3/8"	1/2"
Setting range	bar	Depending on pilot	
Max. inlet pressure	MPa	1.8	
	bar	18	
	psi	261	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	l/min	3500	
	scfm	124	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	l/min	4500	
	scfm	160	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	
	°F	122	
Weight	pounds	1.76	
Wall fixing screws		N. 8-32 unc x 2.16	
Gauge port		1/8" NPT	
Mounting position		In any position	
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.	
Note on use		The regulator pressure must always be set upwards. Overpressure relieving from the pilot. Do not take off air from gauge ports.	

DIMENSIONS



*Pressure gauge port

ORDERING CODES

Code	Description
1302004U	RP 3/8 pilot-assisted regulator NPT
1402004U	RP 1/2 pilot-assisted regulator NPT

Newdeal FILTER REGULATOR

Highly reliable piston-operated filter regulator.

- Stability of the set pressure as the upstream pressure varies
- Standard overpressure blow-off valve
- Can be fixed to the wall using the holes in the sides of the body
- Metal bowl with external viewing
- Manual/semi-auto or automatic condensate drainage



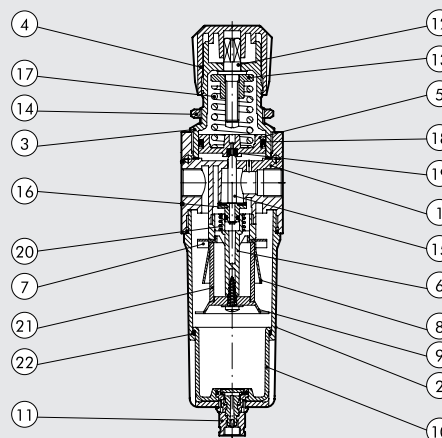
TECHNICAL DATA		FR ND 1/4"	FR ND 3/8"	FR ND 1/2"
Threaded port	NPT	1/4"	3/8"	1/2"
Setting range	bar	0 to 120 - 0 to 180	0 to 120 - 0 to 180	
Degree of filtration	µm	4 - 20 - 50	4 - 20 - 50	
Max. inlet pressure	MPa	1.8	1.8	
	bar	18	18	
	psi	261	261	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	Nl/min	260	1000	
	scfm	9.2	35.5	
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	Nl/min	700	2500	
	scfm	25	88.5	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	50	
	°F	122	122	
Weight	pounds	1.1	2.20	
Wall fixing screws		N. 8-32 unc x 1.57	N. 8-32 unc x 2.16	
Gauge port		1/8" NPT	1/8" NPT	
Bowl capacity	fluid ounce oz	0.34	1.52	
Mounting position		Vertical	Vertical	
Drain		RMSA	RMSA - SAC - RA	
Fluid		RMSA: drain with manual condensate discharge and automatic discharge at zero pressure RA: automatic drain with condensate discharge, independent of pressure and flow rate SAC: automatic drain with condensate discharge.		
Note on use		Operates by depression – requires variable air take-offs. Compressed air The regulator pressure must always be set upwards. The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take off air from gauge ports.		

UNITS

New deal FILTER REGULATOR

COMPONENTS

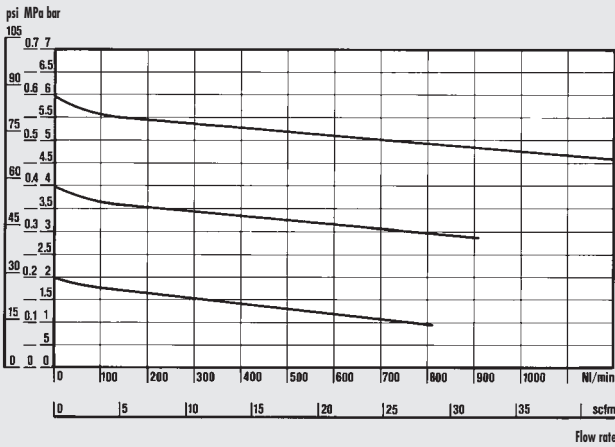
- | | |
|------------------------------|------------------------------------|
| ① Zamak body | ⑯ Valve with NBR vulcanized gasket |
| ② Aluminium bowl | ⑰ Steel adjusting spring |
| ③ Technopolymer bell | ⑱ NBR lip seal |
| ④ Technopolymer knob | ⑲ NBR relieving seal |
| ⑤ Technopolymer piston rod | ⑳ Steel valve compression spring |
| ⑥ Technopolymer plug | ㉑ Sintered HDPE filter cartridge |
| ⑦ Technopolymer centrifuge | ㉒ NBR gaskets |
| ⑧ Technopolymer baffle plug | |
| ⑨ Technopolymer screen | |
| ⑩ Technopolymer bowl | |
| ⑪ Drain (RMSA) | |
| ⑫ OT58 brass adjusting screw | |
| ⑬ OT58 brass nut | |
| ⑭ Technopolymer ring nut | |
| ⑮ OT58 brass rod | |



FLOW CHARTS

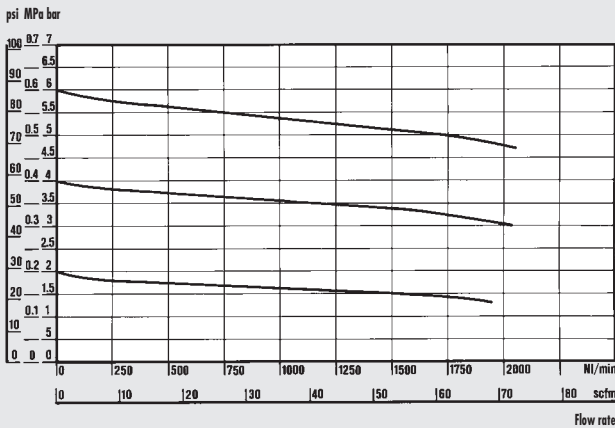
FR 1/4

$P_{in} = 0.7 \text{ MPa} - 7 \text{ bar} - 100 \text{ psi}$
Inlet pressure

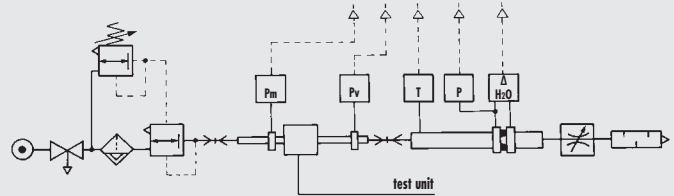


FR 3/8 - 1/2

$P_{in} = 0.7 \text{ MPa} - 7 \text{ bar} - 100 \text{ psi}$
Inlet pressure



Department of Mechanics
Turin Polytechnic

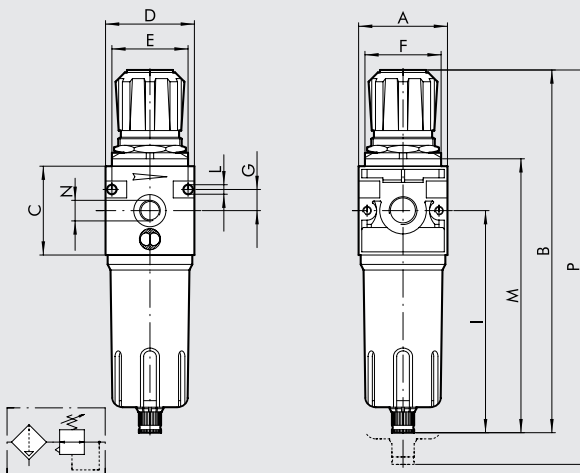


- Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

UNITS

New deal FILTER REGULATOR

DIMENSIONS



		FR ND 1/4"	FR ND 3/8"	FR ND 1/2"
Threaded port	NPT	1/4"	3/8"	1/2"
A		1.65		2.36
B	RMSA	7.48		9.64
	RA	-		9.8
	SAC	7.64		9.8
C		1.65		2.36
D		1.65		2.39
E		1.41		2.04
F		M30 x 1.5		M38 x 2
G		0.39		0.55
I		4.76		5.90
L		0.17		0.17
M	RMSA	5.70		7.28
	RA	-		7.45
	SAC	5.87		7.45
N (Pressure gauge port)		1/8" NPT		1/8" NPT
P	RMSA	9.17		11.6
	RA	-		11.78
	SAC	9.34		11.78

KEY TO CODES

FR	1/4	4	0-120	RMSA
ELEMENT	THREADED PORT	DEGREE OF FILTRATION	SETTING RANGE	CONDENSATE DRAIN
FR	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	4 = 4 μm (200 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC RA*

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate.

SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

* For ND 3/8 and 1/2 with RA, please contact our sales assistance department

ORDERING CODES

Code	Description
NEW DEAL FILTER REGULATOR 1/4"	
1225029U	FR 1/4 4 0-120 RMSA NPT
1225053U	FR 1/4 4 0-180 RMSA NPT
1225509U	FR 1/4 4 0-120 SAC NPT
1225513U	FR 1/4 4 0-180 SAC NPT
1225030U	FR 1/4 20 0-120 RMSA NPT
1225510U	FR 1/4 20 0-120 SAC NPT
1225054U	FR 1/4 20 0-180 RMSA NPT
1225514U	FR 1/4 20 0-180 SAC NPT
1225032U	FR 1/4 50 0-120 RMSA NPT
1225511U	FR 1/4 50 0-120 SAC NPT
1225056U	FR 1/4 50 0-180 RMSA NPT
1225516U	FR 1/4 50 0-180 SAC NPT
NEW DEAL FILTER REGULATOR 3/8"	
1325029U	FR 3/8 4 0-120 RMSA NPT
1325509U	FR 3/8 4 0-120 SAC NPT
1325053U	FR 3/8 4 0-180 RMSA NPT
1325513U	FR 3/8 4 0-180 SAC NPT
1325030U	FR 3/8 20 0-120 RMSA NPT
1325510U	FR 3/8 20 0-120 SAC NPT
1325054U	FR 3/8 20 0-180 RMSA NPT
1325514U	FR 3/8 20 0-180 SAC NPT
1325032U	FR 3/8 50 0-120 RMSA NPT
1325512U	FR 3/8 50 0-120 SAC NPT
1325056U	FR 3/8 50 0-180 RMSA NPT
1325516U	FR 3/8 50 0-180 SAC NPT
NEW DEAL FILTER REGULATOR 1/2"	
1425029U	FR 1/2 4 0-120 RMSA NPT
1425509U	FR 1/2 4 0-120 SAC NPT
1425053U	FR 1/2 4 0-180 RMSA NPT
1425513U	FR 1/2 4 0-180 SAC NPT
1425030U	FR 1/2 20 0-120 RMSA NPT
1425510U	FR 1/2 20 0-120 SAC NPT
1425054U	FR 1/2 20 0-180 RMSA NPT
1425514U	FR 1/2 20 0-180 SAC NPT
1425032U	FR 1/2 50 0-120 RMSA NPT
1425512U	FR 1/2 50 0-120 SAC NPT
1425056U	FR 1/2 50 0-180 RMSA NPT
1425516U	FR 1/2 50 0-180 SAC NPT

NOTES

New deal LUBRICATOR

Lubricator with high lubrication stability.

- Quantity of lubricant proportioned to air flow
- Micrometric regulation of lubricant flow
- Activates at low flow rates
- All-round oil level viewing



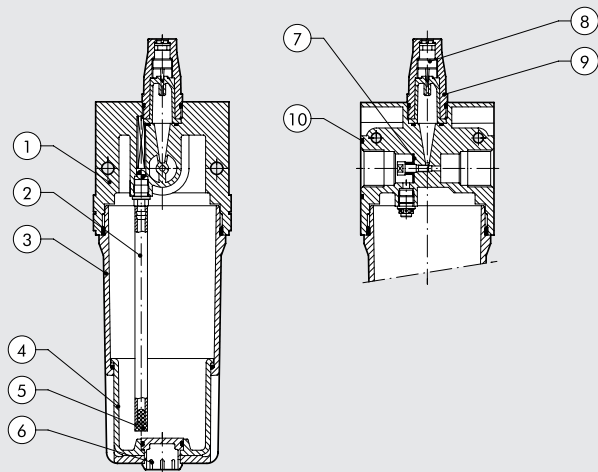
UNITS

New deal LUBRICATOR

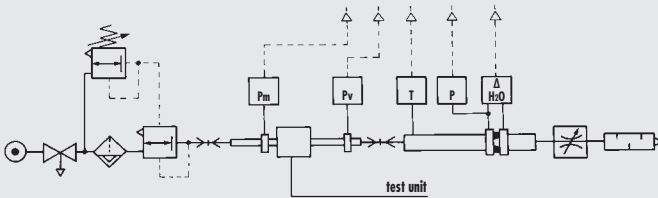
TECHNICAL DATA		LUB ND 1/4"	LUB ND 3/8"	LUB ND 1/2"	LUB ND 3/4"	LUB ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
Type of lubrication		Mist		Mist		Mist
Bowl capacity	fluid ounce oz	3.05		9.15		23.18
Max. inlet pressure	MPa	1.8		1.8		1.8
	bar	18		18		18
	psi	261		261		261
Flow rate at 6 bar (0.6 MPa to 87 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	Nl/min	700		3000		12800
	scfm	25		107		452
Flow rate at 6 bar (0.6 MPa to 87 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	Nl/min	1100		4300		16000
	scfm	39		153		565
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		50		50
	°F	122		122		122
Weight	pounds	0.8		2.2		2.2
Wall fixing screws		N. 8-32 unc x 1.57		N. 8-32 unc x 2.16		1/4-20 unc x 2.95
Mounting position		Vertical				
Fluid		Filtered compressed air				
Note on use		<ul style="list-style-type: none"> • Use the screw provided to set the drip rate to drop every 300-600 Nl. <ul style="list-style-type: none"> • Fit the lubricator as close as possible to the point of use • Fill the bowl with oil before pressurizing the system • Do not use cleaning oil, brake fluid or solvents in general • Recommended lubricants: ISO and UNI FD22 - E.g. Energol HLP 22 (BP) - Spinesso 22 (Esso) - Mobil DTE 22 (Mobil) - Tellus Oil 22 (Shell) 				

COMPONENTS

- ① Zamak body
- ② Rilsan® oil suction pipe
- ③ Aluminium bowl
- ④ Clear technopolymer bowl
- ⑤ Filter
- ⑥ Technopolymer plug
- ⑦ Venturi NBR diaphragm
- ⑧ OT 58 brass oil flow regulation needle
- ⑨ Clear technopolymer cover
- ⑩ NBR gaskets



FLOW CHARTS

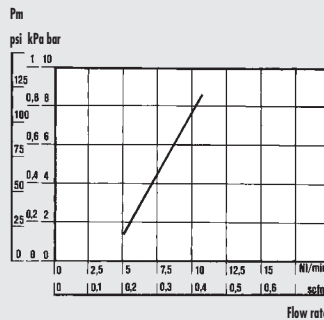
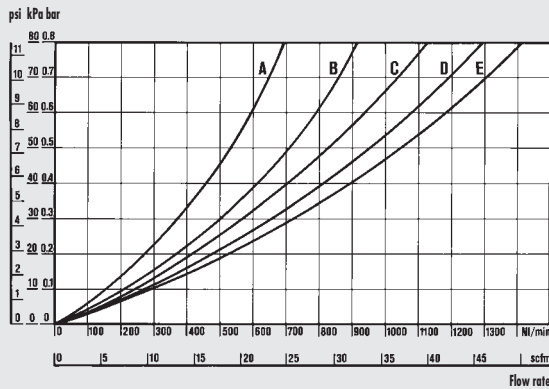


• Flow tests carried out at the Department of Mechanics, Turin Polytechnic, using the computerized test bench following CETOP RP50R recommendations (ISO DIS 6358-2-approved) with ISO 5167 diaphragm gauge.

- (A) = 2 bar - 0.2 MPa - 29 psi
- (B) = 4 bar - 0.4 MPa - 58 psi
- (C) = 6 bar - 0.6 MPa - 87 psi
- (D) = 8 bar - 0.8 MPa - 116 psi
- (E) = 10 bar - 1 MPa - 145 psi

LUB 1/4

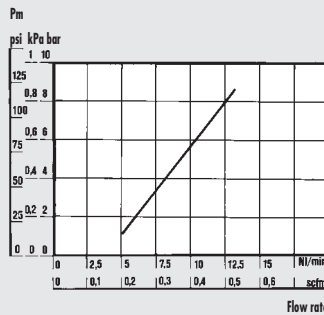
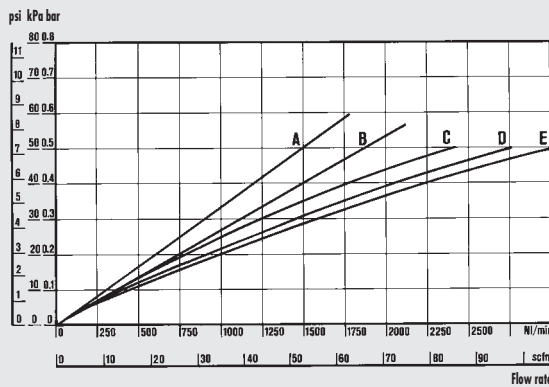
$\Delta P = (P_m - P_v)$



MINIMUM ACTIVATION FLOW CHARTS
The minimum activation flow charts were carried out in compliance with ISO/DP 6301/2

LUB 3/8 - 1/2

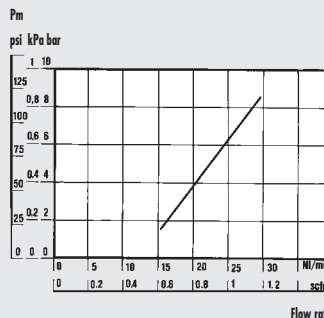
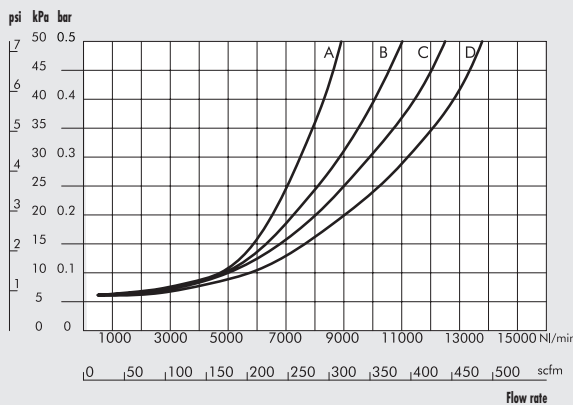
$\Delta P = (P_m - P_v)$



MINIMUM ACTIVATION FLOW CHARTS
The minimum activation flow charts were carried out in compliance with ISO/DP 6301/2

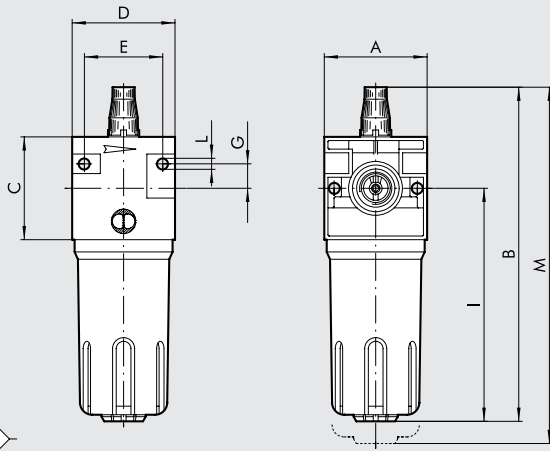
LUB 3/4 - 1"

$\Delta P = (P_m - P_v)$



MINIMUM ACTIVATION FLOW CHARTS
The minimum activation flow charts were carried out in compliance with ISO/DP 6301/2

DIMENSIONS



	LUB ND 1/4"	LUB ND 3/8"	LUB ND 1/2"	LUB ND 3/4"	LUB ND 1"
Threaded port NPT	1/4"	3/8"	1/2"	3/4"	1"
A	1.65	2.36		3.14	
B	6.14	7.67		10.23	
C	1.65	2.36		3.14	
D	1.65	2.36		3.14	
E	1.25	1.81		2.59	
G	0.39	0.55		0.86	
I	4.21	5.35		7.16	
L	0.17	0.17		0.29	
M	6.92	8.66		11.41	

ORDERING CODES

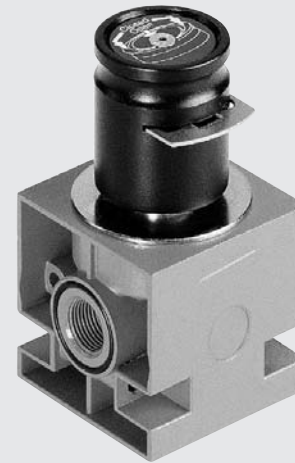
Code	Description
1223001U	LUB 1/4 NPT
1323001U	LUB 3/8 NPT
1423001U	LUB 1/2 NPT
1523001U	LUB 3/4 NPT
1623001U	LUB 1 NPT

NOTES

Newdeal SHUT-OFF VALVE

Manually-operated circuit shut-off valve.

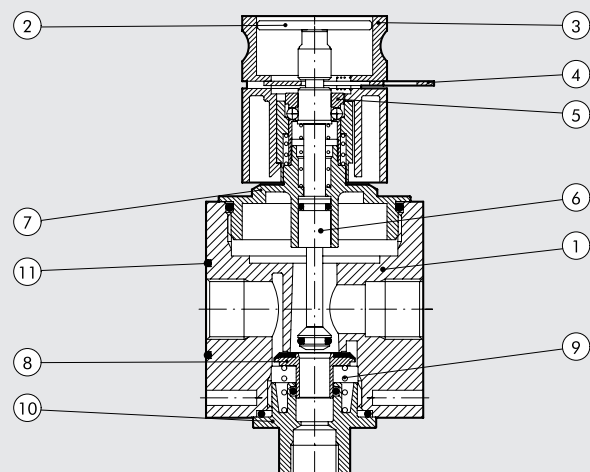
- Poppet seat system to ensure high flow rate
- Quick-actuation knob
- Possible triple locking
- The valve is actuated by pressing the actuation disk until it clicks. Press the knob downwards to relieve pressure. In this position you can extract the shim and fit a lock to avoid accidental operation.



TECHNICAL DATA		V3V ND 1/4"	V3V ND 3/8"	V3V ND 1/2"
Threaded port	NPT	1/4"	3/8"	1/2"
Max. inlet pressure	MPa	1.8		1.8
	bar	18		18
	psi	261		261
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 0.5 bar (0.05 MPa to 7.25 psi)	Nl/min	1100		2200
	scfm	38.8		78
Flow rate at 6.3 bar (0.63 MPa to 91 psi) ΔP 1 bar (0.1 MPa to 14.5 psi)	Nl/min	1500		2900
	scfm	53		103
Flow rate on relieving at 6 bar (0.6 Mpa to 87 psi) with direct relieving into the atmosphere	Nl/min	1600		2900
	scfm	56.5		103
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		50
	°F	122		122
Weight	pounds	0.77		1.76
Wall fixing screws		N. 8-32 unc x 1.57		N. 8-32 unc x 2.16
Mounting position		In any position		
Fluid		Filtered, lubricated or unlubricated compressed air. Lubrication, if used, must be continuous.		
Type of control		Manual		

COMPONENTS

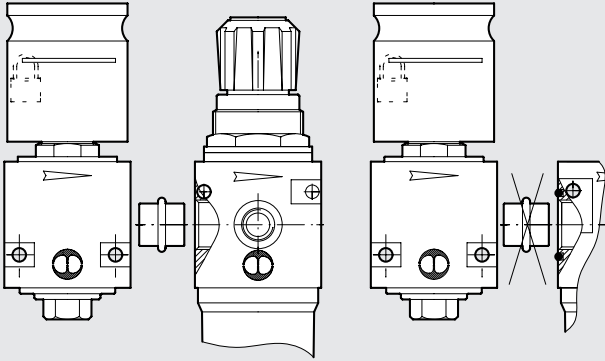
- ① Zamak body
- ② Actuation disk
- ③ Technopolymer knob
- ④ Stainless steel safety shim
- ⑤ Clutching unit
- ⑥ OT 58 brass rod
- ⑦ Upper OT 58 brass plug
- ⑧ V3V valve with NBR vulcanized gasket
- ⑨ Stainless steel valve compression spring
- ⑩ Lower OT58 brass plug
- ⑪ NBR gaskets



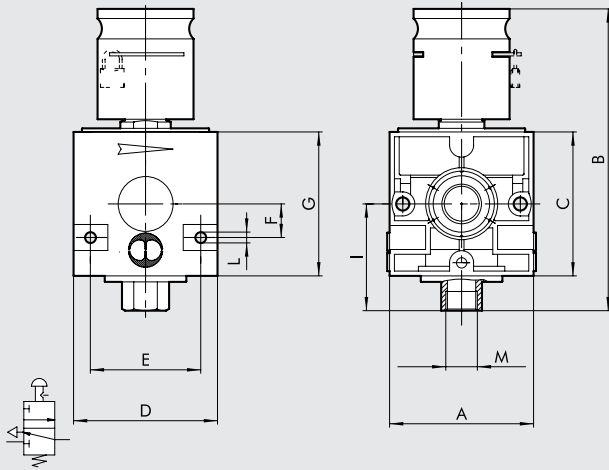
ASSEMBLY DIAGRAM

To assemble the V3V to the regulator filter 1/4", or depurator 3/8-1/2, use the adaptor provided (see the assembly diagram at the left).

- Adaptor V3V + FR 1/4" - code 9201001
- Adaptor V3V + D 3/8" - code 9401001
- Adaptor V3V + D 1/2" - code 9401002



DIMENSIONS



	V3V ND 1/4"	V3V ND 3/8"	V3V ND 1/2"
Threaded port NPT	1/4"	3/8"	1/2"
A	1.65		2.36
B	4.13		4.96
C	1.65		2.36
D	1.65		2.36
E	1.25		1.81
F	0.39		0.55
G	1.65		2.36
I	1.25		1.69
L	0.17		0.17
M	1/8" NPT		1/4" NPT

ORDERING CODES

Code	Description
1270001U	V3V ND 1/4 NPT
1370001U	V3V ND 3/8 NPT
1470001U	V3V ND 1/2 NPT

NOTES

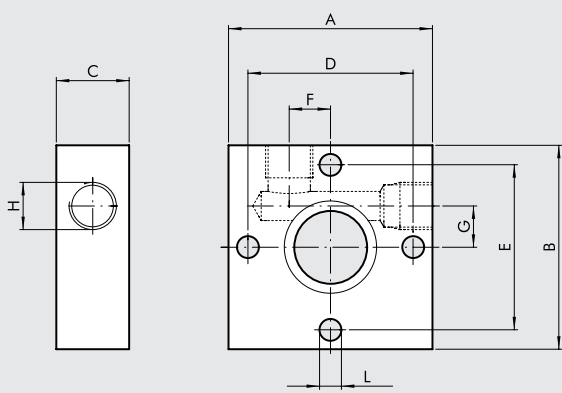
Newdeal AIR TAKE-OFF

The air take-off has the job to take off the air from the Newdeal FRL unit irrespective of the position where it is assembled. It is required whenever you need to take off air from the FRL unit at different stages of the treatment (normal, filtered, filtered regulated, lubricated, etc.)



TECHNICAL DATA		PA ND 1/4"	PA ND 3/8"	PA ND 1/2"	PA ND 3/4"	PA ND 1"
Threaded port	NPT	1/8"		1/4"		1/2"
Maximum working temperature at: 1 MPa; 10 bar; 145 psi	°C	50		50		50
	°F	122		122		122
Maximum admissible pressure	MPa	1.8		1.8		1.8
	bar	18		18		18
	psi	261		261		261
Weight	pounds	0.13		0.39		0.90

DIMENSIONS



	PA ND 1/4"	PA ND 3/8"	PA ND 1/2"	PA ND 3/4"	PA ND 1"
A	1.65		2.36		3.14
B	1.65		2.36		3.14
C	0.59		0.78		1.18
D	1.33		1.92		2.51
E	1.33		1.92		2.51
F	0.33		0.55		0.62
G	0.33		0.55		0.62
H (n° 2 pos.)	1/8" NPT		1/4" NPT		1/2" NPT
L	0.17		0.21		0.29

ORDERING CODES

Code	Description
9200401U	PA 1/4 take-off NPT
9400401U	PA 1/2 take-off NPT
9600401U	PA 3/4 take-off NPT

Comes with 2 screws for F/L and R/FR fixing.

UNITS
New deal AIR TAKE-OFF

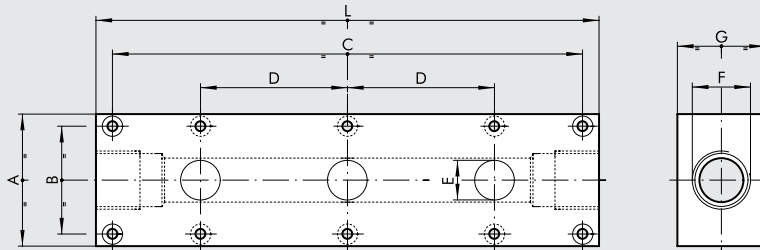
Newdeal SUB-BASE

With the New deal sub-base, more than one regulators can be mounted in parallel using a single pressure supply source.

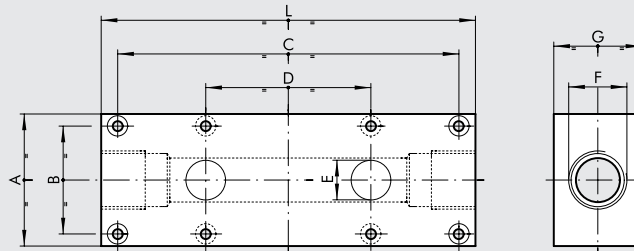


DIMENSIONS

3 POSITION



2 POSITION



	ND 1/4"		ND 3/8" - 1/2"		ND 3/4" - 1"	
	2 positions	3 positions	2 positions	3 positions	2 positions	3 positions
A	1.96	1.96	2.36	2.36	3.14	3.14
B	1.33	1.33	1.92	1.92	2.51	2.51
C	4.44	6.49	6.10	9.05	7.48	11.02
D	2.04	2.04	2.95	2.95	3.54	3.54
E	1/4" NPT	1/4" NPT	0.70	0.70	1.22	1.22
F	NPT	1/2"	3/4"	3/4"	1 1/4"	1 1/4"
G	1.18	1.18	1.57	1.57	1.96	1.96
L	5.03	7.08	9.64	9.64	8.26	11.81
Weight [pounds]	0.99	1.36	2.07	3.01	3.30	3.74

ORDERING CODES

Code	Description
9200201U	SB 1/4 sub-base 2 pos. NPT
9400201U	SB 1/2 sub-base 2 pos. NPT
9600201U	SB 3/4 sub-base 2 pos. NPT
9200301U	SB 1/4 sub-base 3 pos. NPT
9400301U	SB 1/2 sub-base 3 pos. NPT
9600301U	SB 3/4 sub-base 3 pos. NPT

Newdeal AUTOMATIC CONDENSATE DRAIN



System supply condensate drain:

- All-round condensate level viewing
- Automatic drain from inside the bowl
- Axial coupling



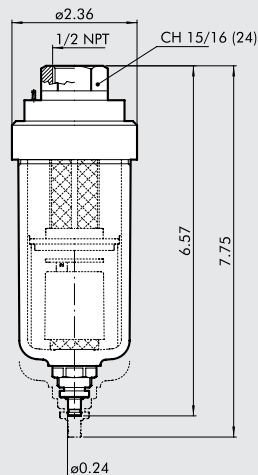
TECHNICAL DATA

Threaded port	NPT
Maximum working temperature at: 1 MPa; 10 bar; 145 psi	°C
	°F
Maximum admissible pressure	MPa
	bar
	psi
Weight	pounds

SCAL ND 1/2"

1/2"
50
122
1
10
145
1.1

DIMENSIONS



ORDERING CODES

Code	Description
4589003U	Autom. cond. drain 1/2 in line NPT

UNITS

New deal AUTOMATIC CONDENSATE DRAIN

FIL+REG+LUB New deal

Highly reliable heavy-duty piston-operated FRL unit.

- Stability of the set pressure as the upstream pressure varies
- Metal bowl with external sight glass
- Semi-automatic and automatic condensate drain
- Lubrication proportional to flow rate
- Micrometric lubrication regulation
- Activation guaranteed with low flow rates

Refer to the sections on the single modules for a further description, components and other technical data.

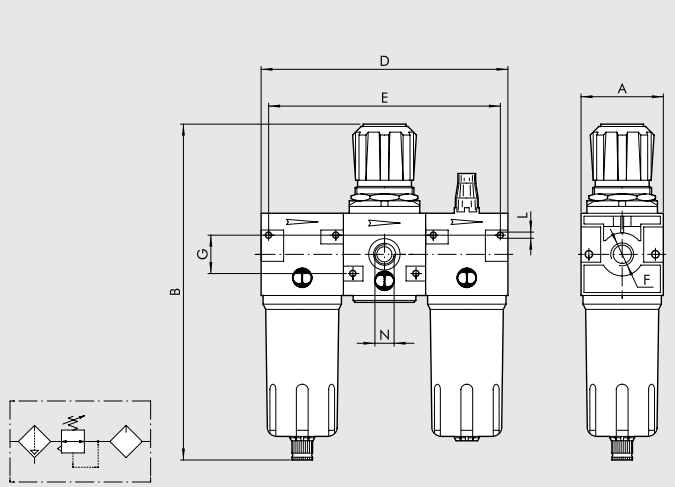


UNITS

FIL+REG+LUB New deal

TECHNICAL DATA		FRL ND 1/4"	FRL ND 3/8"	FRL ND 1/2"	FRL ND 3/4"	FRL ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
Setting range	psi	0 to 120 - 0 to 180		0 to 120 - 0 to 180		
Degree of filtration	µm	4 - 20 - 50		4 - 20 - 50		
Max. inlet pressure	MPa	1.8		1.8		
	bar	18		18		
	psi	261		261		
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	Nl/min	140	1300	1900	2000	
	scfm	5	46	68	71	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	400	2000	3600	3700	
	scfm	14.2	71	128	132	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		50		
	°F	122		122		
Weight	pounds	2.2	5.5	12.76		
Wall fixing screws		N. 8-32 unc x 1.57		N. 8-32 unc x 2.16		
Fluid		Compressed air				
Note on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take air from pressure gauge ports.				

DIMENSIONS



	FRL ND 1/4"	FRL ND 3/8"	FRL ND 1/2"	FRL ND 3/4"	FRL ND 1"
Threaded port F NPT	1/4"	3/8"	1/2"	3/4"	1"
A	1.65	2.36		3.14	
B	RMSA 7.48	9.64		13.1	
	RA	9.8		13.23	
	SAC 7.64	9.8		13.23	
D	4.96	7.08		9.44	
E	4.56	6.53		8.89	
G	0.78	1.10		1.73	
L	0.17	0.17		0.29	
N (pressure gauge port)	1/8" NPT	1/8" NPT		1/4" NPT	

KEY TO CODES

FRL ELEMENT	1/4 THREADED PORT	4 μm DEGREE OF FILTRATION	0-120 SETTING RANGE	RMSA CONDENSATE DRAIN
FRL	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT 3/4 = 3/4 NPT 1 = 1 NPT	4 = 4 μm (160 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC RMSA SAC RA RMSA RA

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate.

SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

ORDERING CODES

Code	Description	Code	Description	Code	Description
FRL 1/4"					
1224029U	FRL 1/4 4 0-120 RMSA NPT	1324029U	FRL 3/8 4 0-120 RMSA NPT	1524017U	FRL 3/4 4 0-120 RMSA NPT
1224409U	FRL 1/4 4 0-120 SAC NPT	1324033U	FRL 3/8 4 0-120 RA NPT	1524021U	FRL 3/4 4 0-120 RA NPT
1224030U	FRL 1/4 20 0-120 RMSA NPT	1324409U	FRL 3/8 4 0-120 SAC NPT	1524018U	FRL 3/4 20 0-120 RMSA NPT
1224410U	FRL 1/4 20 0-120 SAC NPT	1324030U	FRL 3/8 20 0-120 RMSA NPT	1524022U	FRL 3/4 20 0-120 RA NPT
1224032U	FRL 1/4 50 0-120 RMSA NPT	1324034U	FRL 3/8 20 0-120 RA NPT	1524020U	FRL 3/4 50 0-120 RMSA NPT
1224412U	FRL 1/4 50 0-120 SAC NPT	1324410U	FRL 3/8 20 0-120 SAC NPT	1524024U	FRL 3/4 50 0-120 RA NPT
1224053U	FRL 1/4 4 0-180 RMSA NPT	1324032U	FRL 3/8 50 0-120 RMSA NPT	1524029U	FRL 3/4 4 0-180 RMSA NPT
1224413U	FRL 1/4 4 0-180 SAC NPT	1324036U	FRL 3/8 50 0-120 RA NPT	1524033U	FRL 3/4 4 0-180 RA NPT
1224054U	FRL 1/4 20 0-180 RMSA NPT	1324412U	FRL 3/8 50 0-120 SAC NPT	1524030U	FRL 3/4 20 0-180 RMSA NPT
1224414U	FRL 1/4 20 0-180 SAC NPT	1324053U	FRL 3/8 4 0-180 RMSA NPT	1524034U	FRL 3/4 20 0-180 RA NPT
1224056U	FRL 1/4 50 0-180 RMSA NPT	1324057U	FRL 3/8 4 0-180 RA NPT	1524032U	FRL 3/4 50 0-180 RMSA NPT
1224416U	FRL 1/4 50 0-180 SAC NPT	1324413U	FRL 3/8 4 0-180 SAC NPT	1524036U	FRL 3/4 50 0-180 RA NPT
FRL 3/8"					
FRL 1/2"					
FRL 1"					

FR+LUB Newdeal

Heavy duty and reliable piston-operated FR+L unit.

- Stability of the set pressure as the upstream pressure varies
- Metal bowl with external sight glass
- Semi-automatic and automatic condensate drain
- Quantity of lubricant proportioned to air flow
- Micrometric lubrication regulation
- Activation guaranteed with low flow rates

Refer to the sections on the single modules for a further description, components and other technical data.

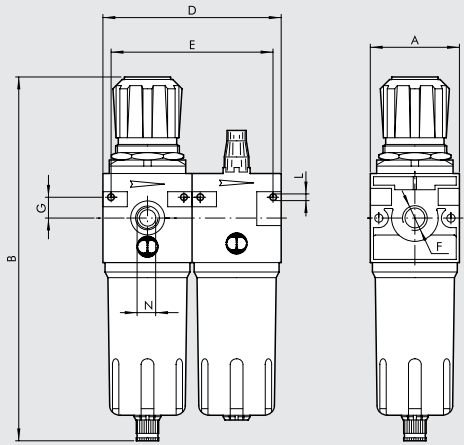


UNITS

FR+LUB New deal

TECHNICAL DATA		FR+L ND 1/4"	FR+L ND 3/8"	FR+L ND 1/2"
Threaded port	NPT	1/4"	3/8"	1/2"
Setting range	bar	0 to 120 - 0 to 180		
Degree of filtration	µm	4 - 20 - 50		
Max. inlet pressure	MPa	1.8		
	bar	18		
	psi	261		
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	NI/min	150	1300	
	scfm	5.3	46	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	NI/min	500	2200	
	scfm	18	78	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		
	°F	122		
Weight	pounds	2	4.4	
Wall fixing screws		N. 8-32 unc x 1.57		N. 8-32 unc x 2.16
Fluid		Compressed air		
Note on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take air from pressure gauge ports.		

DIMENSIONS		FR+L ND 1/4"	FR+L ND 3/8"	FR+L ND 1/2"
Threaded port F	NPT	1/4"	3/8"	1/2"
A		1.65	2.36	
B	RMSA	7.48		
	RA	9.8		
	SAC	7.64	9.8	
D		3.30	4.72	
E		2.99	4.29	
G		0.39	0.55	
L		0.17	0.17	
N (pressure gauge port)		1/8" NPT	1/8" NPT	



KEY TO CODES

FR+L ELEMENT	1/4 THREADED PORT	4 DEGREE OF FILTERING	0-120 SETTING RANGE	RMSA CONDENSATE DRAIN
FR+L	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	4 = 4 μm (160 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC RMSA SAC RA*

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate.

SAC: automatic drain with condensate discharge.

Operates by depression – requires variable air take-offs.

* For ND 3/8 and 1/2 with RA, please contact our sales assistance department.

ORDERING CODES

Code	Description	Code	Description
FR+L 1/4"		FR+L 3/8"	
1226029U	FR+L 1/4 4 0-120 RMSA NPT	1326029U	FR+L 3/8 4 0-120 RMSA NPT
1226409U	FR+L 1/4 4 0-120 SAC NPT	1326409U	FR+L 3/8 4 0-120 SAC NPT
1226053U	FR+L 1/4 4 0-180 RMSA NPT	1326053U	FR+L 3/8 4 0-180 RMSA NPT
1226413U	FR+L 1/4 4 0-180 SAC NPT	1326413U	FR+L 3/8 4 0-180 SAC NPT
1226030U	FR+L 1/4 20 0-120 RMSA NPT	1326030U	FR+L 3/8 20 0-120 RMSA NPT
1226410U	FR+L 1/4 20 0-120 SAC NPT	1326034U	FR+L 3/8 20 0-120 RA NPT
1226054U	FR+L 1/4 20 0-180 RMSA NPT	1326410U	FR+L 3/8 20 0-120 SAC NPT
1226414U	FR+L 1/4 20 0-180 SAC NPT	1326054U	FR+L 3/8 20 0-180 RMSA NPT
1226032U	FR+L 1/4 50 0-120 RMSA NPT	1326058U	FR+L 3/8 20 0-180 RA NPT
1226412U	FR+L 1/4 50 0-120 SAC NPT	1326414U	FR+L 3/8 20 0-180 SAC NPT
1226056U	FR+L 1/4 50 0-180 RMSA NPT	1326032U	FR+L 3/8 50 0-120 RMSA NPT
1226416U	FR+L 1/4 50 0-180 SAC NPT	1326412U	FR+L 3/8 50 0-120 SAC NPT
		1326056U	FR+L 3/8 50 0-180 RMSA NPT
		1326416U	FR+L 3/8 50 0-180 SAC NPT
		FR+L 1/2"	
		1426029U	FR+L 1/2 4 0-120 RMSA NPT
		1426409U	FR+L 1/2 4 0-120 SAC NPT
		1426053U	FR+L 1/2 4 0-180 RMSA NPT
		1426413U	FR+L 1/2 4 0-180 SAC NPT
		1426030U	FR+L 1/2 20 0-120 RMSA NPT
		1426034U	FR+L 1/2 20 0-120 RA NPT
		1426410U	FR+L 1/2 20 0-120 SAC NPT
		1426054U	FR+L 1/2 20 0-180 RMSA NPT
		1426058U	FR+L 1/2 20 0-180 RA NPT
		1426414U	FR+L 1/2 20 0-180 SAC NPT
		1426032U	FR+L 1/2 50 0-120 RMSA NPT
		1426412U	FR+L 1/2 50 0-120 SAC NPT
		1426056U	FR+L 1/2 50 0-180 RMSA NPT
		1426416U	FR+L 1/2 50 0-180 SAC NPT

V3V+FR+LUB New deal

Highly reliable heavy-duty piston-operated FRFL unit.

- Stability of the set pressure as the upstream pressure varies
- Metal bowl with external sight glass
- Semi-automatic and automatic condensate drain
- Quantity of lubricant proportionate to the air flow
- Micrometric lubrication regulation
- Activation guaranteed at low air flows
- Quick filling and drainage of the downstream circuit with the V3V element

Refer to the sections on the single modules for a further description, components and other technical data.

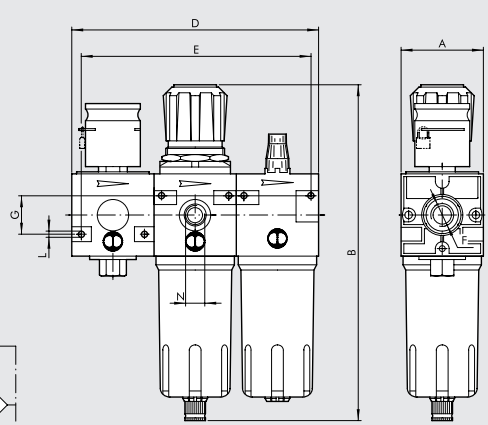


UNITS

V3V+FR+LUB New deal

TECHNICAL DATA		VFR+L ND 1/4"	VFR+L ND 3/8"	VFR+L ND 1/2"
Threaded port	NPT	1/4"	3/8"	1/2"
Setting range	bar	0 to 120 - 0 to 180		
Degree of filtration	µm	4 - 20 - 50		
Max. inlet pressure	MPa	1.8		
	bar	18		
	psi	261		
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	NI/min	140	1000	
	scfm	5	35.5	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	NI/min	480	1900	
	scfm	17	67.5	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50		
	°F	122		
Weight	pounds	2.42	3.96	
Wall fixing screws		N. 8-32 unc x 1.57		N. 8-32 unc x 2.16
Fluid		Compressed air		
Note on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi. Do not take air from pressure gauge ports.		

DIMENSIONS		VFR+L ND 1/4"	VFR+L ND 3/8"	VFR+L ND 1/2"
Threaded port F	NPT	1/4"	3/8"	1/2"
A		1.65	2.36	
B	RMSA	7.48	9.64	
	RA	-	9.8	
	SAC	7.64	9.8	
D		4.96	7.08	
E		4.56	6.53	
G		0.78	1.10	
L		0.17	0.17	
N (pressure gauge port)		1/8" NPT	1/8" NPT	



KEY TO CODES

VFR+L ELEMENT	1/4 THREADED PORT	20 DEGREE OF FILTERING	0-120 SETTING RANGE	RMSA CONDENSATE DRAIN
VFR+L	1/4 = 1/4 NPT 3/8 = 3/8 NPT 1/2 = 1/2 NPT	4 = 4 μm (160 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	0-120 = 0 to 120 psi 0-180 = 0 to 180 psi	RMSA SAC RMSA SAC RA

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.
 RA: automatic drain with condensate discharge, independent of pressure and flow rate.
 SAC: automatic drain with condensate discharge.
 Operates by depression – requires variable air take-offs.

ORDERING CODES

Code	Description
1272030U	VFR+L 1/4 20 RMSA 0-120 NPT
1272054U	VFR+L 1/4 20 RMSA 0-180 NPT
1372030U	VFR+L 3/8 20 RMSA 0-120 NPT
1372054U	VFR+L 3/8 20 RMSA 0-180 NPT
1472030U	VFR+L 1/2 20 RMSA 0-120 NPT
1472054U	VFR+L 1/2 20 RMSA 0-180 NPT
1472032U	VFR+L 1/2 50 RMSA 0-120 NPT
1472056U	VFR+L 1/2 50 RMSA 0-180 NPT

The following versions are available on request:
 - with 4 μm or 50 μm degree of filtration
 - with SAC or RA condensate discharge

FIL+DEP Newdeal

Filter + depurator unit for fine filtering followed by purification by coalescence

- Metal bowl with external sight glass
- Semi-automatic condensate drain

Refer to the sections on the single modules for a further description, components and other technical data.

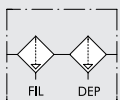
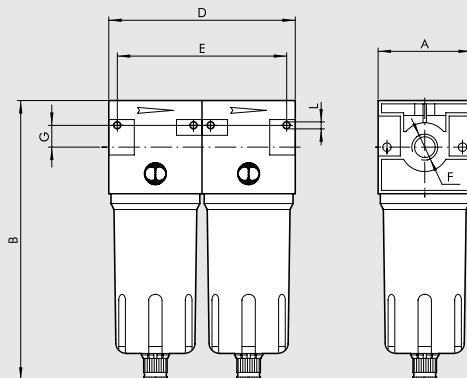


UNITS

FIL+DEP New deal

TECHNICAL DATA		F+D ND 3/8"	F+D ND -1/2"
Threaded port	NPT	3/8"	1/2"
Degree of filtration	μm	4	
Degree of depuration	μm	99.97% 0.01	
Max. inlet pressure	MPa	1.8	
	bar	18	
	psi	261	
Maximum suggested flow rate		Please look at the flow rate curves at page 2-139	
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	
	°F	122	
Weight	pounds	3.96	
Wall fixing screws		N. 8-32 unc x 2.16	
Fluid		Compressed air	
Note on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.	

DIMENSIONS		F+D ND 3/8"	F+D ND -1/2"
Threaded port F	NPT	3/8"	1/2"
A			2.36
B	RMSA		7.08
	RA		7.25
D			4.72
E			4.17
G			0.55
L			0.17



FIL+LUB Newdeal

Filter + lubricator unit offering various degrees of filtration and high lubrication stability.

- Metal bowl with external sight glass
- Semi-automatic and automatic condensate drain
- Micrometric lubrication regulation
- Activation guaranteed at low air flows

Refer to the sections on the single modules for a further description, components and other technical data.

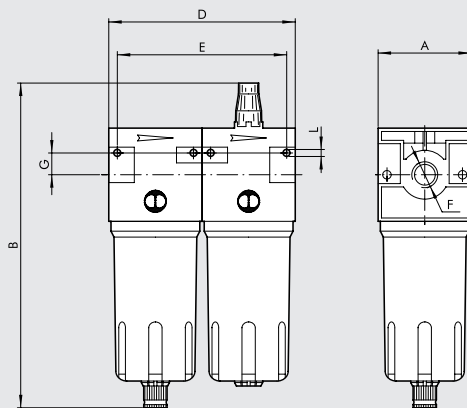


UNITS

FIL+LUB New deal

TECHNICAL DATA		F+L ND 1/4"	F+L ND 3/8"	F+L ND 1/2"	F+L ND 3/4"	F+L ND 1"
Threaded port	NPT	1/4"	3/8"	1/2"	3/4"	1"
Lubrication		mist	mist	mist	mist	mist
Degree of filtration	µm	4 - 20 - 50	4 - 20 - 50	4 - 20 - 50	4 - 20 - 50	4 - 20 - 50
Max. inlet pressure	MPa	1.8	1.8	1.8	1.8	1.8
	bar	18	18	18	18	18
	psi	261	261	261	261	261
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	Nl/min	600	2500	8000		
	scfm	21	89	282		
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	1000	3500	9500		
	scfm	35.5	124	335		
Max temperature at 1 MPa; 10 bar; 145 psi	°C	50	50	50	50	50
	°F	122	122	122	122	122
Weight	pounds	1.76	3.96	8.14		
Wall fixing screws		N. 8-32 unc x 1.57	N. 8-32 unc x 2.16	1/4-20 unc x 2.95		
Fluid		Compressed air				
Note on use		The maximum inlet pressure for the version with RA automatic condensate drainage must not exceed 145 psi.				

DIMENSIONS



		F+L ND 1/4"	F+L ND 3/8"	F+L ND 1/2"	F+L ND 3/4"	F+L ND 1"
Threaded port	F NPT	1/4"	3/8"	1/2"	3/4"	1"
A		1.65	2.36	3.14		
B	RMSA	6.69	8.22	10.7		
	RA	-	8.39	11		
	SAC	6.85	8.39	11		
D		3.30	4.72	6.29		
E		2.91	4.17	5.74		
G		0.39	0.55	0.86		
L		0.17	0.17	0.29		

KEY TO CODES

F+L ELEMENT	1/4 THREADED PORT	4 DEGREE OF FILTERING	RMSA CONDENSATE DRAIN
F+L	1/4 = 1/4 NPT <hr/> 3/8 = 3/8 NPT 1/2 = 1/2 NPT <hr/> 3/4 = 3/4 NPT 1 = 1 NPT	4 = 4 μm (160 microinch) 20 = 20 μm (790 microinch) 50 = 50 μm (2000 microinch)	RMSA <hr/> SAC <hr/> RMSA SAC <hr/> RA <hr/> RMSA RA

RMSA: drain with manual condensate discharge and automatic discharge at zero pressure.

RA: automatic drain with condensate discharge, independent of pressure and flow rate.

SAC: automatic drain with condensate discharge.
Operates by depression – requires variable air take-offs.

ORDERING CODES

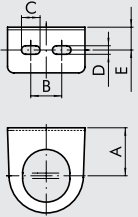
Code	Description
1233006U	F+L 1/4 20 RMSA NPT
1333006U	F+L 3/8 20 RMSA NPT
1433006U	F+L 1/2 20 RMSA NPT
1533006U	F+L 3/4 20 RMSA NPT
1633006U	F+L 1 20 RMSA NPT

The following versions are available on request:

- with 4 μm or 50 μm degree of filtration
- with SAC or RA condensate discharge

New deal ACCESSORIES

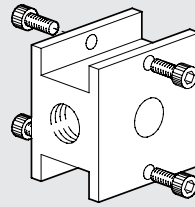
MOUNTING BRACKET FOR REG.



Code	Description
9200701	SF 1/4
9400701	SF 1/2

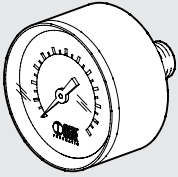
Code	A	B	C	D	E
9200701	1.26	0.79	0.47	0.22	0.56
9400701	1.66	1.59	0.47	0.22	0.59

REGULATOR CONNECTION BLOCK



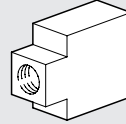
Code	Description	Weight [g]
9200501U	BC 1/4 block	90
9400501U	BC 1/2 block	244
9600501U	BC 3/4 block	428

PRESSURE GAUGE



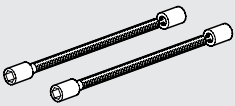
Code	Description
9700102	M 40 1/8 04 (0-60)
9700101	M 40 1/8 12 (0-180)
9800102	M 50 1/8 04 (0-60)
9800101	M 50 1/8 12 (0-180)
9900101	M 63 1/4 12 (0-180)

SPACERS FOR FRL WALL MOUNTING



Code	Description
9200601	DF 1/4 spacer
9400601	DF 1/2 spacer
9600601	DF 3/4 spacer

TIE RODS



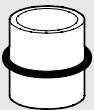
Code	Description
9200901	T 1/4 F+L tie rods
9400901	T 1/2 F+L tie rods
9600901	T 3/4 F+L tie rods

DISASSEMBLY TOOL FOR BOWL



Code	Description
9601501	Disassembly key

ADAPTER FOR V3V



Code	Description
9201001	Adapt. X V3V+FR/D 1/4
9401001	Adapt. X V3V+D 3/8
9401002	Adapt. X V3V+D 1/2
9601001	Adapt. X V3V+F 1

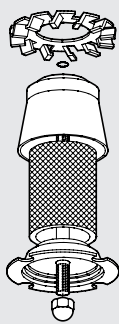
ASSEMBLY SCREWS (2 PIECES)



Code	Description
9250001	CVA 1/4 screw M4x40
9250002	CVA 1/4 screw M4x82 V3V+F+R
9450001	CVA 1/2 screw M5x55
9450002	CVA 3/8 1/2 screw M5x60 V3V+R
9450003	CVA 3/8 1/2 screw M5x120 V3V+F+R
9650001	CVA 3/4 screw M6x70

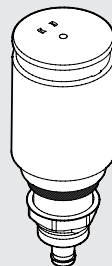
New deal SPARE PARTS

FILTER AND FILTER REGULATOR FILTERING ELEMENT



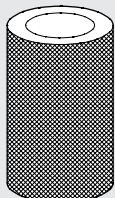
Code	Description
9450102	Spares FP 1/2 20
9450103	Spares FP 1/2 4
9450101	Spares FP 1/2 50
9250102	Spares FP 1/4 20
9250103	Spares FP 1/4 4
9250101	Spares FP 1/4 50
9650103	Spares FP 3/4 4
9650102	Spares FP 3/4 20
9650101	Spares FP 3/4 50

AUTOMATIC DRAIN (RA)



Code	Description
9000802	Spares automatic drain (RA)

FILTERING ELEMENT FOR DEPURATOR



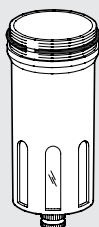
Code	Description
9450105	Spares kit FP DEP. 3/8 1/2

AUTOMATIC DRAIN (SAC)



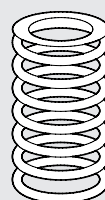
Code	Description
9000803	Spares automatic drain (SAC)

METAL FILTER BOWL



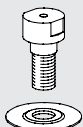
Code	Description
9450301	Spares TMVF 1/2 RMSA
9455201	Spares TMVF 1/2 SAC
9250301	Spares TMVF 1/4 RMSA
9255201	Spares TMVF 1/4 SAC
9650301	Spares TMVF 3/4 1 RMSA

SPRINGS FOR REGULATORS AND FILTER REGULATOR



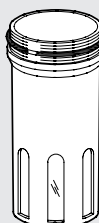
Code	Description
9250601	Spares MO 02 1/4 (0-30)
9250602	Spares MO 04 1/4 (0-60)
9250603	Spares MO 08 1/4 (0-120)
9250604	Spares MO 12 1/4 (0-180)
9450601	Spares MO 04 1/2 (0-60)
9450602	Spares MO 08 1/2 (0-120)
9450603	Spares MO 12 1/2 (0-180)
9650601	Spares MO 04 3/4 (0-60)
9650602	Spares MO 08 3/4 (0-120)
9650603	Spares MO 12 3/4 (0-180)

VENTURI LUBRICATOR DIAPHRAGM



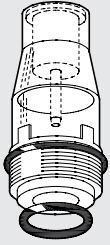
Code	Description
9252001	Spares MB 100 1/4
9352001	Spares MB 200 1/4 3/8 1/2
9652002	Spares MB 3/4-1

METAL LUBRICATOR BOWL



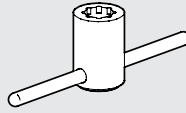
Code	Description
9251201	Spares TMVL 1/4
9451201	Spares TMVL 1/2
9651201	Spares TMVL 3/4

TRANSPARENT LUBRICATOR COVER



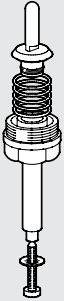
Code	Description
9251302	Spares CVL 100-200-300-400 BIT

DOME DISASSEMBLY SPANNER



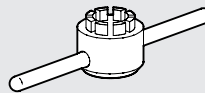
Code	Description
9220701	Cover LUB spanner

COMPLETE POPPET FOR FILTER REGULATOR



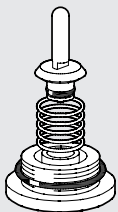
Code	Description
9250901	Spares OTR 1/4
9450901	Spares OTR 1/2

POPPET DISASSEMBLY SPANNER (FOR REG)



Code	Description
9220501	R cap disass. wr. 100

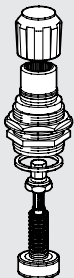
COMPLETE POPPER FOR REGULATOR



Code	Description
9250701	Spares OTR 1/4
9450701	Spares OTR 1/2
9650701	Spares OTR 3/4

NOTES

UPPER COVER FOR REGULATOR AND FILTER REGULATOR



Code	Description
9250801U	Spares CS 1/4 02 (0-30)
9250802U	Spares CS 1/4 04 (0-60)
9250803U	Spares CS 1/4 08 (0-120)
9250804U	Spares CS 1/4 12 (0-180)
9450801U	Spares CS 1/2 04 (0-60)
9450802U	Spares CS 1/2 08 (0-120)
9450803U	Spares CS 1/2 12 (0-180)
9650801U	Spares CS 3/4 04 (0-60)
9650802U	Spares CS 3/4 08 (0-120)
9650803U	Spares CS 3/4 12 (0-180)

● **LEARNING ABOUT ONE**

PAGE 2-170

● **SPECIFICATIONS**

PAGE 2-174

● **HOW TO ORDER ONE**

PAGE 2-178

● **ACCESSORIES**

PAGE 2-180

● **SPARE PARTS**

PAGE 2-181

LEARNING ABOUT

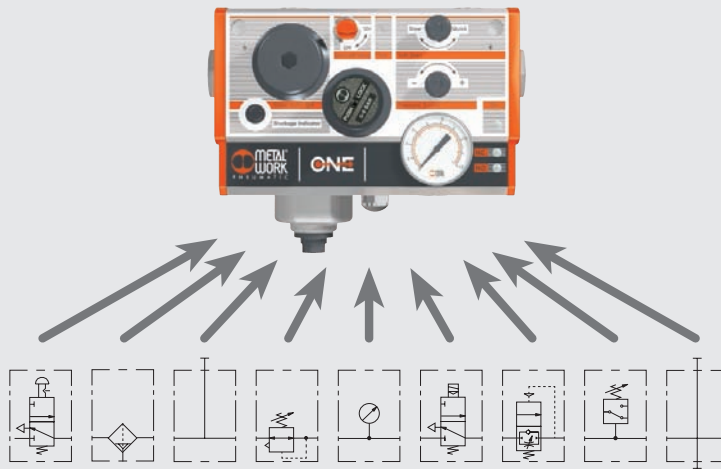
In the world of pneumatics, which is considered mature, it is rare to encounter completely new and different products. ONE a compressed air treatment unit with a high degree of integration, that encompassed numerous pneumatic functions. In fact, it contains so many innovations that a single patent is not enough to safeguard it against imitation – three separate patent applications have been registered with a total of 39 claims. This unit is so innovative that it won the international novelty award at Fluidtrans Compomac. ONE has a single high-performance valve on the main flow that handles all the functions from regulation to relief. It is controlled by a high-precision pilot regulator with controlled relief, in series with the manual on-off valve, the electric valve and the progressive actuator. Unification of the valve has led to a significant reduction in overall dimensions, enhanced capacity, precision and response speed.



UNITS

INTEGRATION

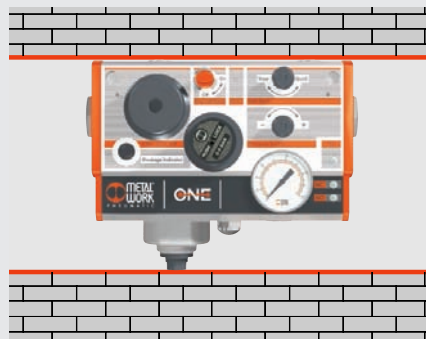
One single unit houses the threaded ports, filter, condensate drain, pressure regulator, shut-off valve, soft start valve, pressure switch and three supplementary air intakes.



MINIATURISATION



Extremely reduced dimensions, considering the extra-high performance and flow rate reachable.



No clearance is required above and below it to make adjustments or change the filter or other components. The actual space occupied is thus further reduced.

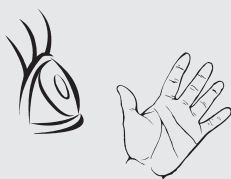


It weighs slightly more than one kilo instead of the 8.8 to 17.6 pounds of conventional units.

ONE: LEARNING ABOUT

EASY ADJUSTMENTS AND LITTLE MAINTENANCE

The entire user interface is at the front, which means that everything is visible and easy to reach. All the adjustments are made using the push-lock knobs (no need for wrenches or screwdrivers), thus preventing accidental operations or manoeuvres.

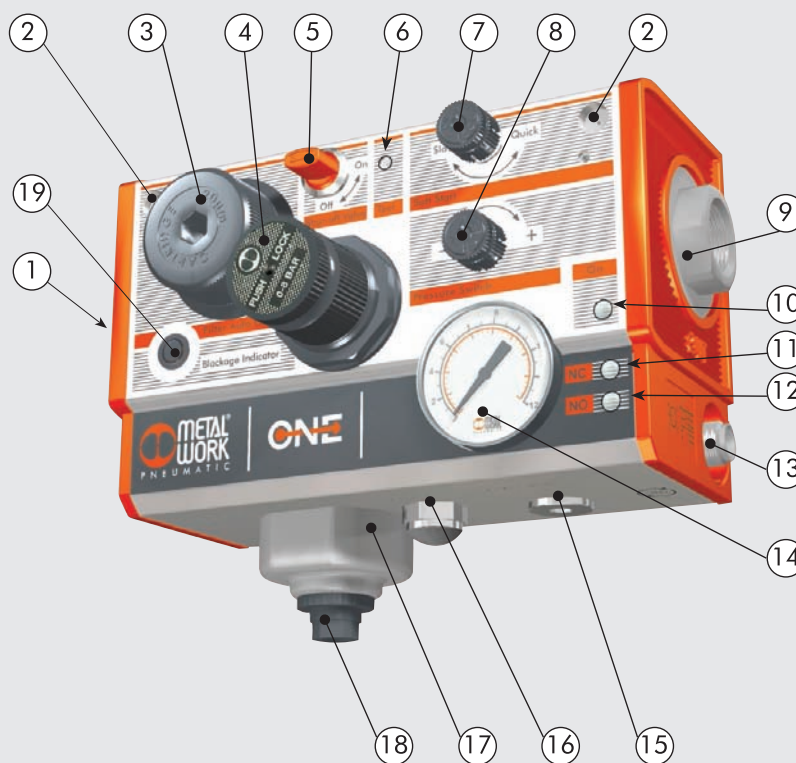


CONFIGURABILITY

Considering that ONE is reduced in size but highly performing, and it can integrate tenths of functions, a single unit can cover the entire range of applications, with cut-clear advantages in terms of standardisation and reduction of the number of codes handled and goods in stock. With a single size there are thousands of different configurations. For example, there is choice between 1/4", 3/8", 1/2", 3/4" or 1" threaded ports, manual and/or electric on-off or progressive valves, etc. The customer decides the configuration he wants and creates the code, using the key-to-coding table shown below in this catalogue. He will receive the unit he wants marked with its code and the correct pneumatic diagram.

WHAT YOU CAN SEE FROM THE OUTSIDE

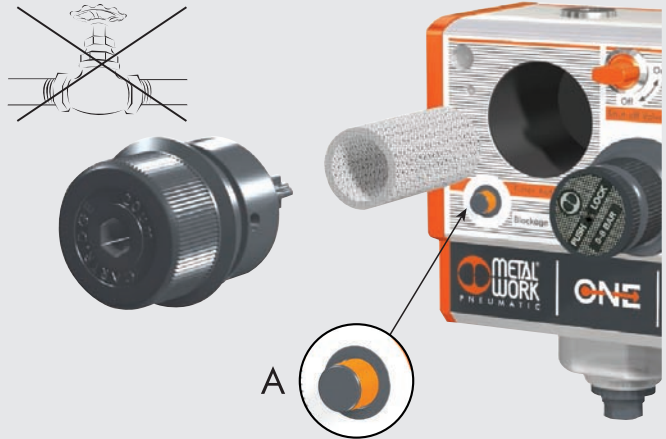
- ① Air intake, with swivel threaded port
- ② Fixing hole
- ③ Access to filter cartridge
- ④ Pressure regulation
- ⑥ Manual override (shut-off valve electrical)
- ⑦ Soft start valve regulation
- ⑧ Switching pressure regulation
- ⑨ Air outlet, with swivel threaded port
- ⑩ LED signalling unit ON
- ⑪ LED signalling pressure below the value set on pressure switch
- ⑫ LED signalling pressure over the value set on pressure switch
- ⑬ 5-pin M12x1 electrical connector
- ⑭ Pressure gauge
- ⑮ BSPP 1/4" air intake. Another regulated air intake and a filtered non-regulated air intake are situated on the top
- ⑯ Air exhaust with a BSPP 1/4" silencer
- ⑰ Condensate tank
- ⑱ Condensate drain
- ⑲ Clogged filter signal



THREADED PORTS

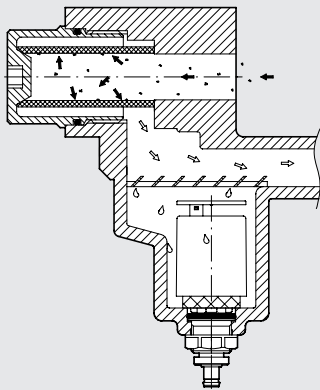


- The threaded ports at the air intake and outlet are the swivel type to facilitate coupling with the supply and delivery pipes. In this way, the unit can be mounted or removed without dismantling the pipes.
- A range of 5 different threads, 1/4", 3/8", 1/2", 3/4" and 1" is also available.
- The thread for the supply pipe may differ from that of the delivery one.



- If the filter gets so clogged up that it causes an excessive drop in pressure as the air passes through, the optical filter blockage indicator will project (see detail A) to indicate that the filter cartridge must be replaced.
- The cartridge can be replaced by unscrewing a plug at the front. This system is functional and, unlike conventional filters, does not require manoeuvring space below the unit.
- An automatic stop on-off valve is incorporated in the unit: when the filter plug is unscrewed, the valve closes automatically. This means there is not need to a tap upstream and there is no risk of the plug being ejected violently.

CONDENSATE DRAIN



- The condensate drain is located downstream of the filter and thus uses cleaner air. This prevents the known problem of air leaks due to the deposit of dirt on the condensate discharge valve.
- You can request ONE with two types of condensate drain:
 - semi-automatic, type RMSA
 - automatic, of the floating type RA

SINGLE AIR EXHAUST



The air in the circuit is relieved via one outlet situated below the unit and fitted with silencer. If you want to convey air relief to prevent the emission of polluted air into the atmosphere, you can replace the silencer and install a fitting. (a pipe with a diameter of at least 6 mm is recommended)
 Next to the air outlet there is the condensate drain, which in the RA version conveys the draining by inserting the pipe having internal diameter 6 mm in the lower port.

SUPPLEMENTARY PORTS



In addition to the main outlet, there are three supplementary air ports with a BSPP 1/4" thread.

- one for filtered non-regulated air (A) for use, for example, with a compressed air gun.
- two for filtered regulated air (B).

The unit comes complete with supplementary plugged ports for use with A7 fittings.

PANEL MOUNTING



ONE can be mounted inside the guard of the machine leaving only the front visible. This is a considerable advantage in terms of functionality and aesthetics as the user interface is entirely at the front. Among the accessories to be ordered separately, there is the kit of brackets for panel mounting.

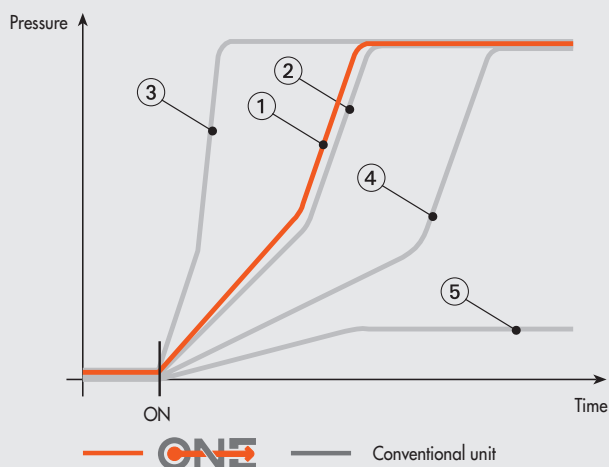
ELECTRICAL CONNECTION



A standard five-pin M12x1 connector, with IP67 protection is used for the opening solenoid valve and the pressure switch.

One cable only is required, thus improving reliability and reducing wiring times.

SOFT START VALVE



- ① Regulation for: **ONE** does not change with flow rate!
- ② Initial regulation of conventional unit
- ③ Low flow rate: activation too abrupt
- ④ High flow rate: activation too slow
- ⑤ Even higher flow rate: never cuts in!

The soft start valve is an absolutely innovative feature among the functions provided by ONE. Soft start valve available from the trade are generally based on the principle of leaving the passage of a small amount of air until the downstream pressure reaches a set value, and then opening the passage fully. In this way, the rate at which the pressure increases depends on the flow rate of the utilities, which often feature a continuous flow rate, for example a blow, and thus the starter can hardly activate. The solution offered by One is such that the pressure increases gradually and it is independent of the flow rate of the utilities. Pressure increase can be regulated precisely via the knob at the front. Another piece of news, among the several possible configurations you can have the soft start valve operated by the manual V3V

SPECIFICATIONS

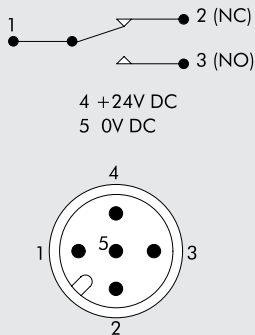
UNITS

ONE: SPECIFICATIONS

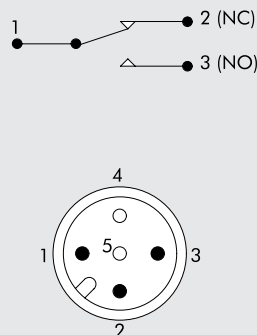
TECHNICAL DATA		NPT 1/4"	NPT 3/8"	NPT 1/2"	NPT 3/4"	NPT 1"
Flow rate at 6.3 bar (0.6 MPa; 91 psi) ΔP 0.5 bar (0.05 MPa; 7.25 psi)	l/min	2200	2900		3600	
	scfm	78	102		127	
Flow rate at 6.3 bar (0.6 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	l/min	2400	3300		4000	
	scfm	85	116		141	
Flow rate on discharge at 6 bar (0.1 MPa; 14.5 psi)	l/min			1600		
	scfm			56		
1/4" port flow rate of non-regulated filtered air at 6.3 bar (0.6 MPa; 91 psi) Δp 1 bar	l/min			1800		
	scfm			64		
* Flow rate of each supplementary 1/4" filtered and regulated air port at 6.3 bar (0.63 MPa; 91 psi) ΔP 1 bar (0.1 MPa; 14.5 psi)	l/min			2400		
	scfm			85		
Fluid		Compressed air				
Setting range	bar	0,5 to 2 (7 to 30 psi)	0,5 to 4 (7 to 60 psi)		0,5 to 8 (7 to 120 psi)	
Degree of filtration	μm	5 (yellow) or 20 (white)				
Operating temperature range	bar	10				
	MPa	1				
	psi	145				
Operating temperature range	$^{\circ}C$	-10 to 50				
	$^{\circ}F$	14 to 122				
Class of protection		IP 65 with connector				
Insulation class of the solenoid valve		F155				
Switching time		100% ED				
Electrical connector		M12 x 1.5-pin to CEI IEC 60947-5-2				
Solenoid valve power	W	3/0.3				
Solenoid valve voltage	V	24 VDC \pm 10%				
Pressure interval settable on the pressure switch	bar	0.5 to 10				
Pressure switch hysteresis (not adjustable)	bar	bar 0.4 to 0.8 (see diagram)				
Maximum pressure switch current	A	0.5				
Maximum pressure switch voltage	V	3 to 30 AC/DC				
Pressure switch contacts		Normally open (NO) and normally closed (NC)				
Number of switching		5 x 10 ⁶				
Weight	pounds	From 2.53 to 2.75 according to configurations				
Wall fixing (max. panel thickness 0.4 inch):		Front, with M5 x 75 screws or back, with M6 x 70 screws The screws are included in the supply				
Mounting position		Vertical				
Direction of flow		From left to right				
* Total flow rate from two supplementary outlets and the main one cannot exceed 141 scfm at 91 psi with ΔP 14.5 psi						
Compatibility with oils		Please refer to page 5-4 of the technical documentation				

WIRING DIAGRAM

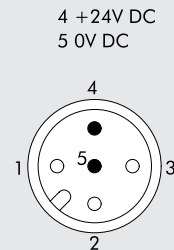
Version with solenoid valve and pressure switch



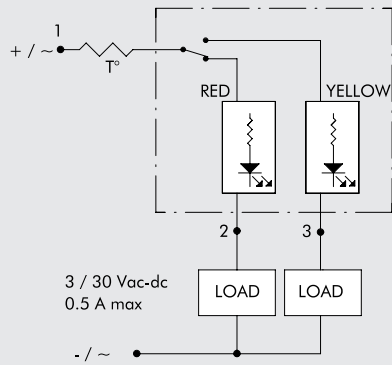
Version with pressure switch



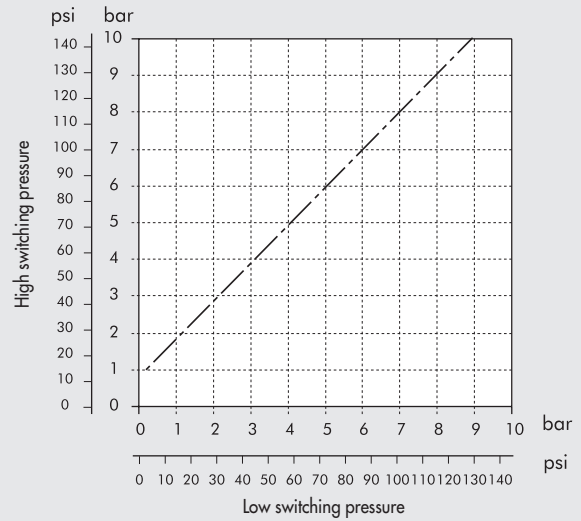
Version with solenoid valve



PRESSURE SWITCH WIRING DIAGRAM



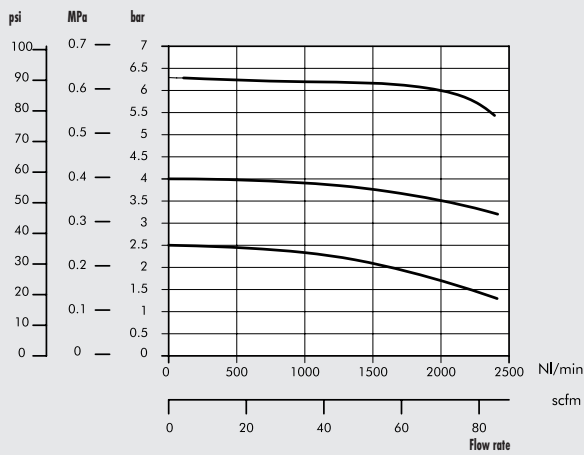
PRESSURE SWITCH HYSTERESIS CHART



FLOW CHARTS

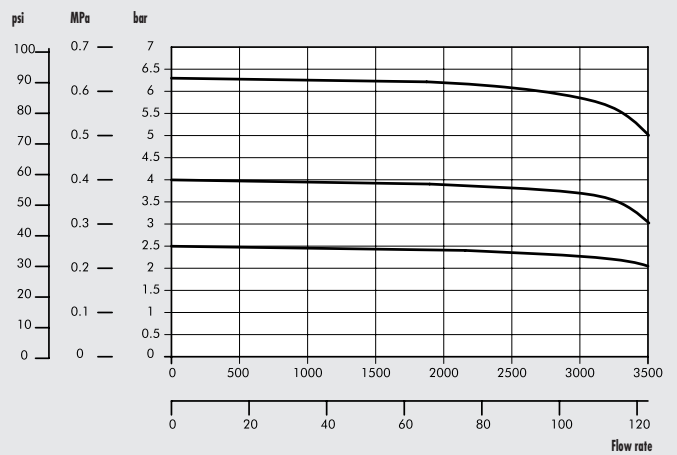
1/4"

$P_m = 8 \text{ bar} - 0.8 \text{ MPa} - 116 \text{ psi}$
Preset pressure



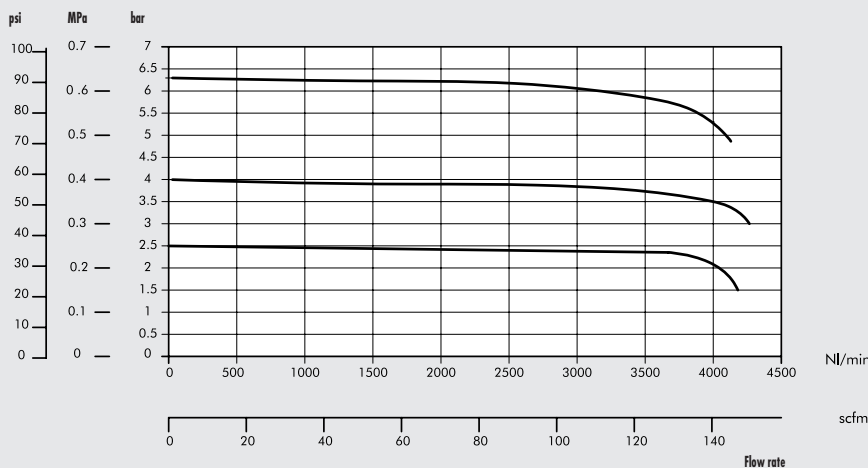
3/8"

$P_m = 8 \text{ bar} - 0.8 \text{ MPa} - 116 \text{ psi}$
Preset pressure



1/2" - 3/4" - 1"

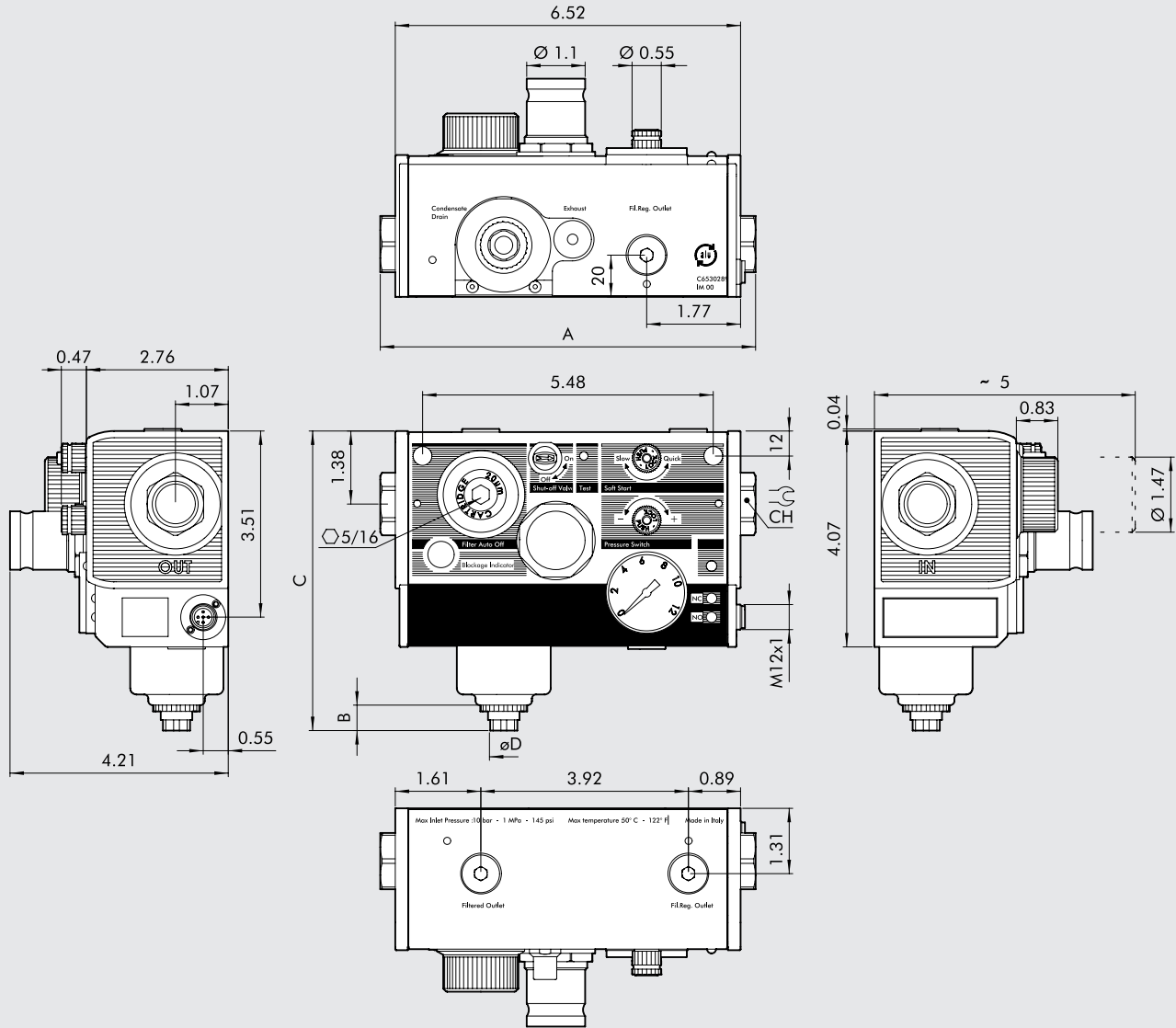
$P_m = 8 \text{ bar} - 0.8 \text{ MPa} - 116 \text{ psi}$
Preset pressure



DIMENSIONS

UNITS

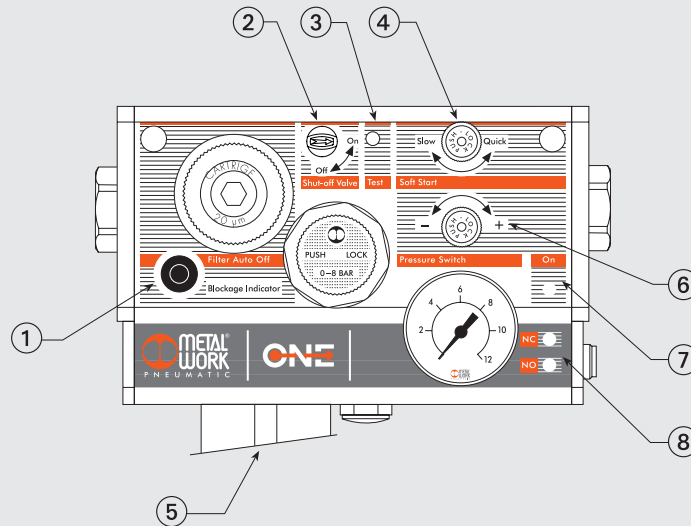
ONE: SPECIFICATIONS



	1/4"	3/8"	1/2"	3/4"	1"		RA	RMSA	
A		180			195	B	0.8	0.64	
CH	3/4 (19 mm)	7/8 (22 mm)	1" 1/16 (27 mm)	32 mm	36 mm	C	5.67	5.83	
						Ø D	For pipe internal diameter 6 mm	0.6	

EXTERNAL DESIGN

You can get thousands of different configurations. The external design differs according on the versions chosen.



<p>CLOGGED FILTER SIGNAL ①</p> <p>PRESENT</p> <p>NOT PRESENT</p>	<p>V3V MANUAL ②</p> <p>STANDARD</p> <p>LOCKABLE</p> <p>NOT PRESENT</p>	<p>V3V ELECTRICAL</p> <p>PRESENT</p> <p>NOT PRESENT</p> <p>in some versions holes are present</p> <p>in other configurations the cover has no holes</p>	<p>SOFT START VALVE ④</p> <p>PRESENT</p> <p>NOT PRESENT</p>
<p>CONDENSATE DRAIN ⑤</p> <p>AUTOMATIC (RA)</p> <p>RMSA</p>	<p>PRESSURE SWITCH</p> <p>PRESENT</p> <p>NOT PRESENT</p> <p>in some versions holes are present</p> <p>in other configurations the cover has no holes</p>	<p>ONE NON-ELECTRICAL</p>	

HOW TO ORDER

ORDERING CODES

You can choose among numerous variants and options. The product code so personalised is made up by compiling the diagram below. The code so compiled must be specified on the order. A label showing the code and its pneumatic diagram is affixed onto the product.

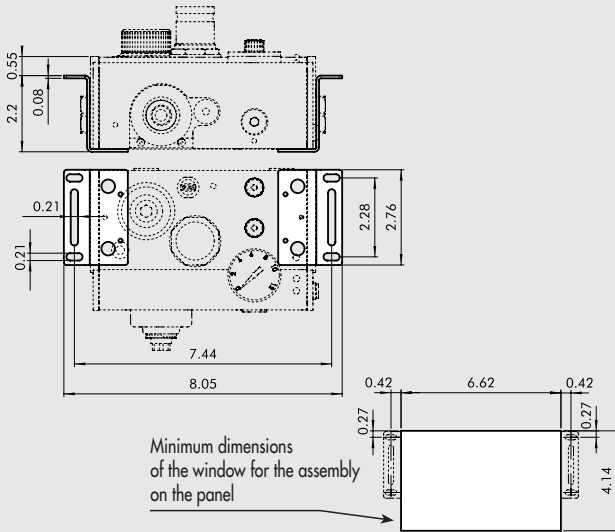
	A	B	C	D	E	F	G	H	I	L
	ONE electrical or ONE non-electrical	Air intake	Degree of filtration	Clogged filter signal	Condensate drain	Pressure regulation	Valves	Pressure switch	Air outlet	Miscellaneous, special version
EXAMPLE	54	A	2	1	1	2	7	1	A	0 0
53	ONE non-electric	A 1/4" NPT	2 20µm (790 microinch)	0 NO	0 RMSA	2 0,5 to 2 bar (7 to 30 psi)	0 None	0 NO	A 1/4" NPT	00 Standard
54	ONE electric*	B 3/8" NPT	5 5µm (2000 microinch)	1 YES	1 automatic (RA)	4 0,5 to 4 bar (7 to 60 psi)	1 V3V manual	1 YES	B 3/8" NPT	
		C 1/2" NPT				8 0,5 to 8 bar (7 to 120 psi)	2 V3V manual with padlock		C 1/2" NPT	
		D 3/4" NPT					3 V3V manual and soft start valve		D 3/4" NPT	
		E 1" NPT					4 V3V manual with padlock and soft start valve		E 1" NPT	
							5 V3V manual and V3V electric			
							6 V3V manual with padlock and V3V electric			
							7 V3V manual and APR electric			
							8 V3V manual with padlock and APR electric			
							9 only V3V electric			
							A only APR electric			

* a pressure switch version and/or electric V3V and/or electric progressive actuator.

● NB: versions valid only for the electric ONE (code 54...)

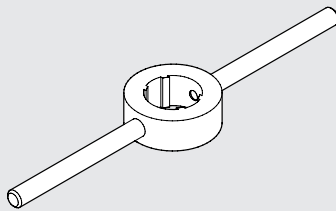
- A ONE electric or non-electric**
ONE non-electric: there is no component actuated electrically: select code 53. In this case, the unit comes without any M12x1 connector, LED, pressure switch, or electric V3V.
ONE electric: there is at least one component actuated electrically, and thus the pressure switch and/or electric V3V (and/or the electrical soft start valve) select code 54. In this case, the unit comes with the M12x1 connector and 3 LEDs. Only the LEDs associated with the functions installed will be active.
- B Air intake**
 There are 5 different threads: 1/4", 3/8", 1/2", 3/4" and 1".
- C Degree of filtration**
 A cartridge with a degree of filtering of 5 µm (790 microinch) yellow or 20 µm (2000 microinch) white is available. This value is marked on the plug.
- D Clogged filter signal**
 If the filter gets so clogged up that it causes an excessive drop in pressure as the air passes through, the orange indicator will project from the body by a few millimetres.
- E Condensate drain**
RMSA: the condensate is drained out automatically only by relieving the air pull the knurled knob for having the same result.
Automatic (RA): a floating system that automatically drains the condensate out whenever the level of water in the bowl reaches the set value.
- F Pressure regulation**
 There are three possible regulation fields.
 The value is marked on the regulation knob..
- G Valves**
 There are 11 different combinations. The electric valves are clearly selectable only if the initial code is 54, i.e. ONE electric.
- 0 - No valves present
 - 1 - V3V manual: is a 3/2 valve that in a set position allows the air to flow and in the other it closes the passage and discharges the pressure downstream.
 - 2 - V3V manual with padlock: like the previous one, with the possibility of inserting a padlock (included in the supply with 2 keys) in the valve closed position.
 - 3 - V3V manual and soft start valve: when the manual V3V valve is operated, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
 - 4 - V3V manual with padlock and soft start valve: like the previous, with the padlock device on the manual V3V in "OFF" position.
 - 5 - V3V manual and V3V electric: two V3V in series are present, one is manual the other electrical. By operating both the valve the air flow is allowed. If one or two are switched OFF, the air downstream is relieved. The electrical one can also be operated manually by reefing pushed the "TEST" button
 - 6 - V3V manual with padlock and V3V electric: like the previous, with the padlock device in "OFF" position.
 - 7 - V3V manual and APR electric: One manual V3V and one soft start valve are present. When both are operated, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
 - 8 - V3V manual with padlock and APR electric: like the previous, with the padlock device on the manual V3V in "OFF" position.
 - 9 - V3V electric: It's present only the electrical V3V. The valve will open if it is powered on. When the power supply is switched off, the valve closes and air downstream is relieved. The valve can also be operated manually by keeping pushed the test button.
 - A - APR electric: It's present only the electric soft start valve. When it is powered ON, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
- H Pressure switch**
 The pressure switch has a switching contact, which means you can have a normally-open signal or a normally-close signal. It is also connected to the NC and NO LEDs which come on if the actual pressure is less or greater than the set pressure, respectively. The LEDs only come on if an electric charge is connected to them.
- I Air outlet**
 Five different threads are available: 1/4", 3/8", 1/2", 3/4" and 1". It is possible to choose a thread other than the one on the inlet port.
- L Free positions for special executions.**

PANEL MOUNTING BRACKETS



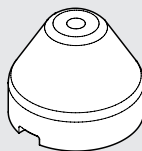
Code	Description
9200702	Kit – panel mounting brackets NB: fixing screws included

COVER DISASSEMBLY WRENCH



Code	Description
9170401	Cover disassembly wrench

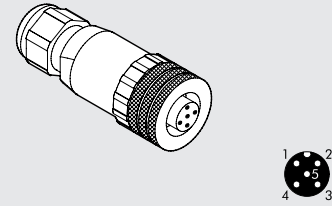
SECURITY KNOB



Code	Description
9200703	Security knob apr/pressure switch

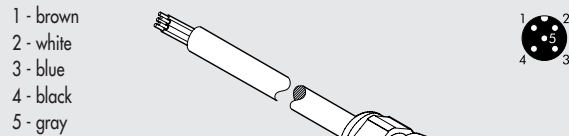
NOTE: Pull outwards to remove the knob from the APR/pressure switch on the unit. Insert the security knob and regulate the APR/ pressure switch. Then press the handle firmly to lock it in position. If the APR/pressure switch needs to be reset, remove the security knob by forcing it laterally with a screwdriver.

STRAIGHT CONNECTOR



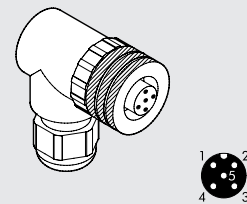
Code	Description
W0970513001	5-PIN M12X1 straight connector

STRAIGHT CONNECTOR WITH WIRE



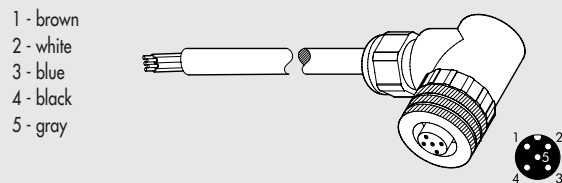
Code	Description
W0970513002	5-PIN M12X1 straight connector with wire L = 197 inch

90° CONNECTOR



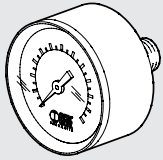
Code	Description
W0970513003	M12X1 5-PIN 90° connector

90° CONNECTOR WITH WIRE



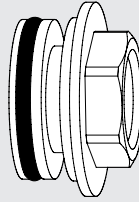
Code	Description
W0970513004	M12X1 5-PIN 90° connector with wire L = 197 inch

PRESSURE GAUGE



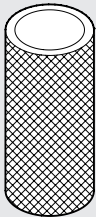
Code	Description
9700106	M 39 1/8 0-4 (0 to 60 psi)
9700107	M 39 1/8 0-12 (0 to 180 psi)

THREADED PORT



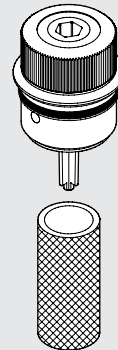
Code	Description
9232001U	1/4" spare thr. port for ONE
9232002U	3/8" spare thr. port for ONE
9232003U	1/2" spare thr. port for ONE
9232004U	3/4" spare thr. port for ONE
9232005U	1" spare thr. port for ONE

FILTER ELEMENT



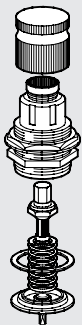
Code	Description
9251720	Spare filter element 5 µm for ONE
9251721	Spare filter element 20 µm for ONE

FILTER PLUG WITH FILTER ELEMENT



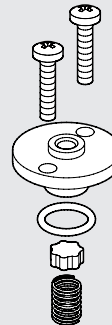
Code	Description
9251723	Spare plug + filter element 5 µm (790 microinch) for ONE
9251724	Spare plug + filter element 20 µm (2000 microinch) for ONE

PILOT REGULATOR



Code	Description
9250820U	Spare pilot reg. 7 to 30 psi for ONE
9250821U	Spare pilot reg. 7 to 60 psi for ONE
9250822U	Spare pilot reg. 7 to 120 psi for ONE

POPPET



Code	Description
9250707	Spare poppet for ONE

SOLENOID VALVE

OLD



Code	Description
W4005001150	Spare sol. valv. for ONE

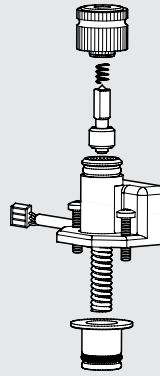
NEW



722123840101	PLT-10 7221233840101
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To order the correct spare part of the solenoid valve, we beg you to compare the pictures appearing above with the one you have and then order the related code.

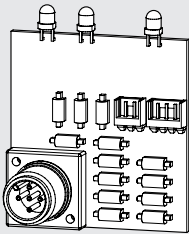
PRESSURE SWITCH



Code	Description
9000500	Spare press. switch for ONE

Note: with this kit we suggest you should order also the gauge, as it could get damaged during the disassembly.

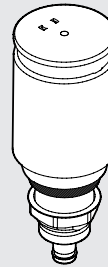
ELECTRIC BOARD



Code	Description
9232010	Spare electric board for ONE

Note: with this kit we suggest you should order also the gauge, as it could get damaged during the disassembly.

AUTOMATIC DRAIN (RA)



Code	Description
9000802	Spare automatic drain (RA)

NOTES