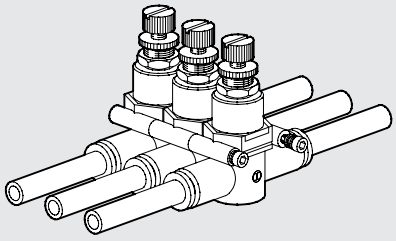
ACCESSORIES

LINE OF PRODUCTS ON LINE

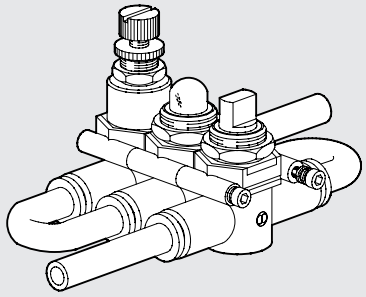
Line on Line is an exclusive range of products for mounting on pneumatic circuits. With these small, highly efficient components it is possible to perform all pneumatic functions at any point of the circuit.
Line on Line is ultra-modular - the components can be connected in parallel, in series or combined parallel/series.
All Line on Line products are available for pipe-pipe connection with two push in fittings. Adding an RU6 fitting, it is possible to have a pipe-NPT thread connection.
The body is made of technopolymer, giving a product that is extremely lightweight and compact.
One side of the body is marked with an indelible pneumatic symbol to facilitate identification and indicate the direction of flow.

CONNECTION FREE

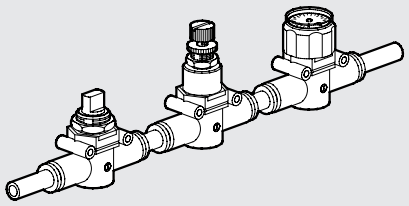
PARALLEL LINES



SERIAL LINE PARALLEL FITTING



SERIAL LINE IN-LINE FITTING



FIXING FREE

WALL FIXING

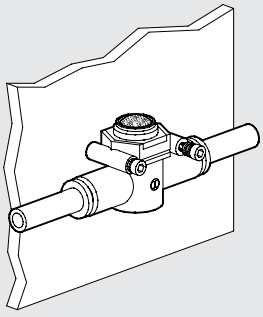
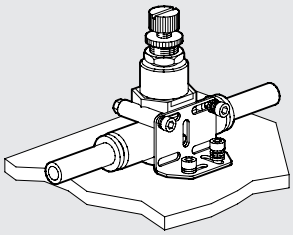
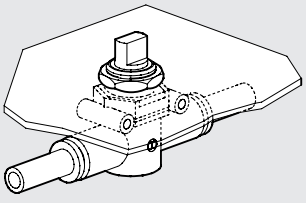


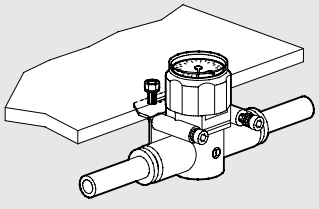
PLATE FIXING



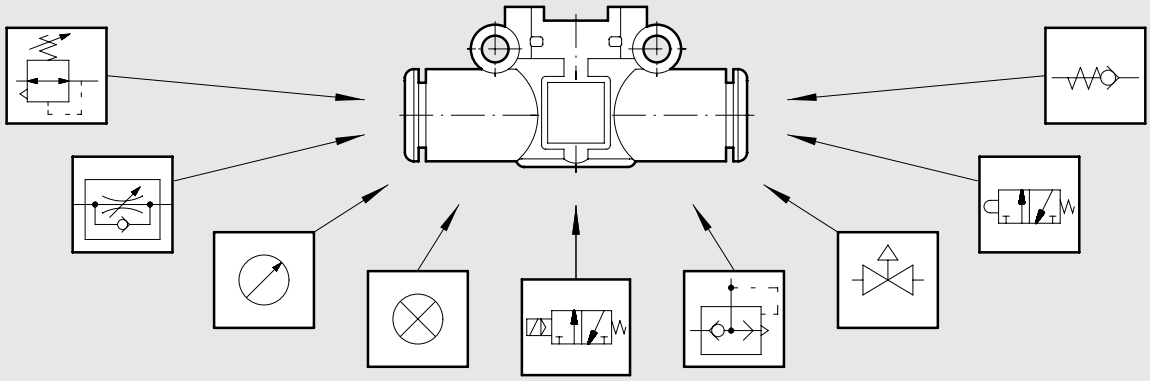
PANEL FIXING



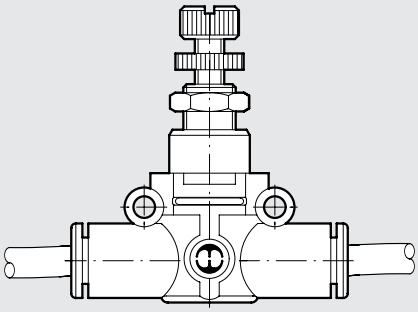
UNDER WALL FIXING



ALL THE PNEUMATIC FUNCTIONS WITH THE SAME EXTERNAL DIMENSIONS

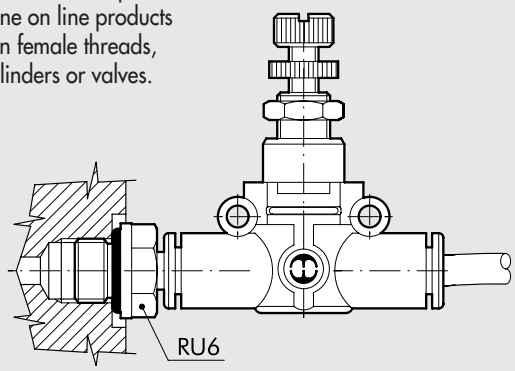


PIPE-PIPE

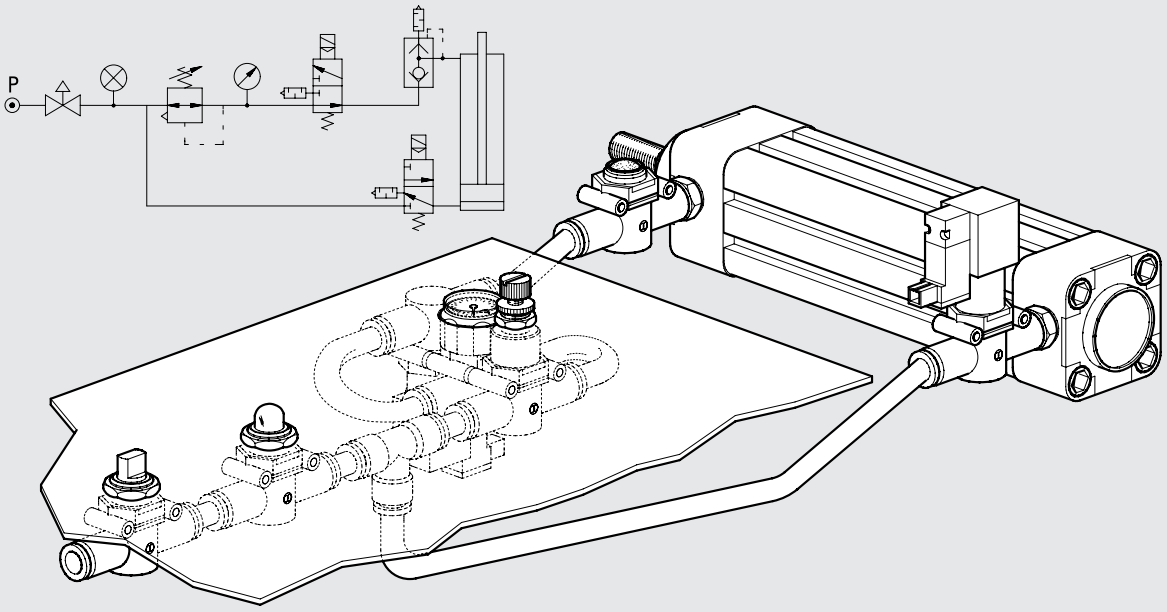


THREAD-PIPE

Thank to the RU6 fitting, with his male NPT thread, it is possible to fit all line on line products directly on female threads, i.e. on cylinders or valves.



APPLICATION EXAMPLE



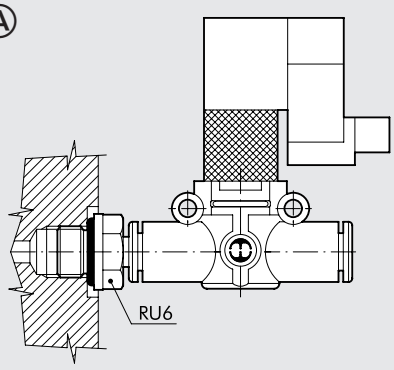
IN-LINE SOLENOID VALVE SERIES SOV L

SOV L solenoid valves belong to the LINE ON LINE® family, which means they can be connected to all the other components in series or in parallel. Available in the version for pipe-pipe connection with two push-in fittings. Though small in size, SOV L valves are solenoid-piloted and feature very high performance. The spool distributor is fitted with special polyurethane gaskets to ensure a very long working life.
Each valve comes complete with a monostable manual control and LED. Exhaust can be damped with an annular silencer.

TECHNICAL DATA		Ø 1/4	Ø 5/16
Operating pressure	MPa	0.25 - 0.7	
	bar	2.5 - 7	
	psi	36 - 101	
Temperature range	°C	–10 to +60	
	°F	+14 to +140	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.1 Mpa - 7.25 psi)	Nl/min	270	500
	scfm	9.5	17.7
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 Mpa - 14.5 psi)	Nl/min	380	700
	scfm	13.4	24.7
Conductance C	Nl/min·bar	95.8	178.1
Coefficient b	bar/bar	0.145	0.129
Voltage	VDC	24	
Power	W	0.9	
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered compressed air	

ASSEMBLY OPTIONS

Ⓐ



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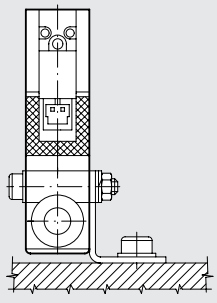

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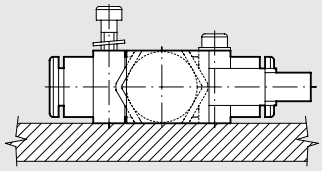
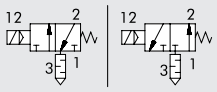
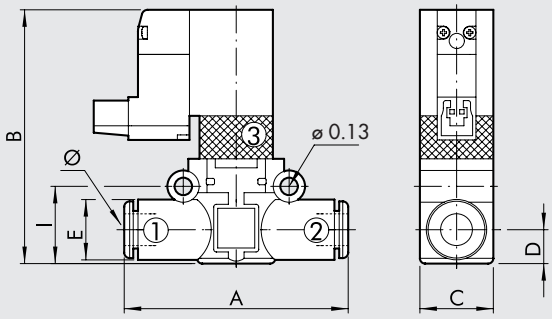


How to mount the SOV L:
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the SOV L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the SOV L straight onto the wall.

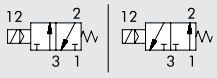
SOV L 3/2 NC-NO PIPE-PIPE SILENCED EXHAUST

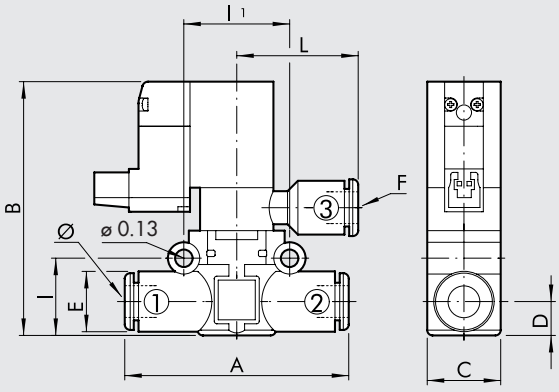




Code	Ref.	Ø	A	B	C	D	E	I	I1
9069016U	SOV L 3/2 NC 1/4-1/4	1/4	1.95	2.26	0.58	0.25	0.45	0.57	0.79
9069116U	SOV L 3/2 NO 1/4-1/4								
9069024	SOV L 3/2 NC 5/16-5/16	5/16	2.26	2.5	0.74	0.36	0.54	0.74	0.94
9069124	SOV L 3/2 NO 5/16-5/16								

SOV L 3/2 NC-NO PIPE-PIPE CONVEYED EXHAUST

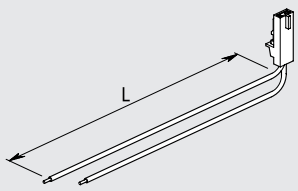




Code	Ref.	Ø	A	B	C	D	E	F	I	I1	L
9069216U	SOV L 3/2 NC 1/4-1/4-1/4	1/4	1.95	2.26	0.58	0.25	0.45	Ø 1/4	0.57	0.79	1.11
9069316U	SOV L 3/2 NO 1/4-1/4-1/4										
9069224	SOV L 3/2 NC 5/16-5/16-5/16	5/16	2.26	2.5	0.74	0.36	0.54	Ø 5/16	0.74	0.94	1.18
9069324	SOV L 3/2 NO 5/16-5/16-5/16										

ACCESSORIES

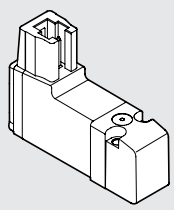
PLUG-IN CONNECTOR



Code	Description
W0970512000	Plug-in connector Mach 11 L = 11.8 inch

SPARES

PLUG-IN PILOT



Code	Description
722213541100	PLT-10 722213541100

MINIATURE REDUCER/ECONOMIZER, SERIES RML

The RML R miniature pressure regulator belongs to the LINE ON LINE® family and can be connected in series or in parallel with all the other products. The miniature pressure regulator is available in five different types:

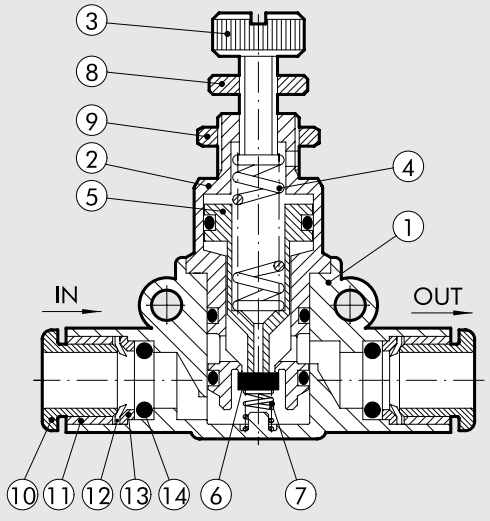
- In-line with push-in input and output fitting
- In-line with threaded input port and push-in output fitting
- In-line with push-in input fitting and threaded output port
- At an angle with threaded input port and push-in output fitting
- Cartridge type for direct assembly in suitably worked slot. The miniature pressure regulator is fitted with a relief valve for over-pressure exhaust.
- Particularly suitable for use between the valve and actuator and as a pressure regulator in secondary branches of the pneumatic system.

TECHNICAL DATA

		RML Ø 1/4	RML Ø 5/16
Regulation range		1 to 8 bar - 0.1 to 0.8 MPa - 14.5 to 116 psi	
Inlet pressure	MPa	0.2 - 1	
	bar	2 - 10	
	psi	29 - 145	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	150	260
	scfm	5.3	9.2
Flow rate on exhaust at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	400	600
	scfm	14	21.2
Fluid		Lubricated or unlubricated filtered air	
Max. temperature at 1 MPa; 10 bar; 145 psi	°C	– 20 to + 60	
	°F	– 4 to + 140	
Assembly position		Available	
Notes		In the miniature regulator the pressure must always be set upwards.	

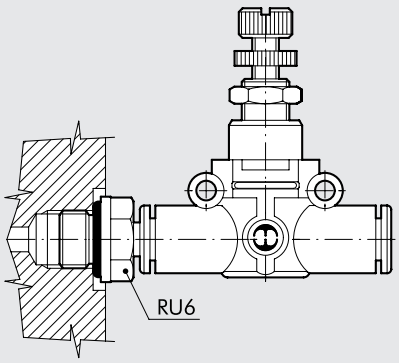
COMPONENTS

① Technopolymer body
② Nickel-plated brass insert
③ Nickel-plated brass adjusting screw
④ Steel adjusting spring
⑤ Brass piston rod
⑥ NBR shutter
⑦ Stainless steel shutter spring
⑧ Adjusting screw ring nut
⑨ Nickel-plated brass wall ring nut
⑩ Technopolymer release bushing
⑪ Technopolymer stop bushing
⑫ Stainless steel crimping spring
⑬ Technopolymer spring ring
⑭ NBR gasket



ASSEMBLY OPTIONS

Ⓐ



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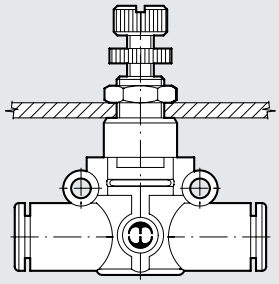

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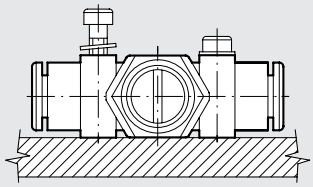

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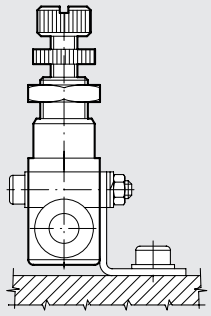
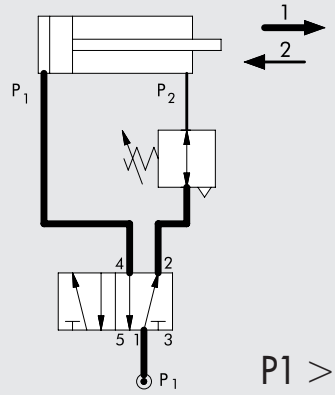


How to assembly RML:
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the RML straight on to the actuator or the control valve.
- Fig. Ⓑ By using the ring nut screwed on the threaded body it's possible the assembling on panels.
- Fig. Ⓒ On the plastic body there are two strong ring for the direct wall assembly.
- Fig. Ⓓ Fixing on plate trought the proper small square SQU L.

POSSIBLE APPLICATIONS

ECONOMIZER

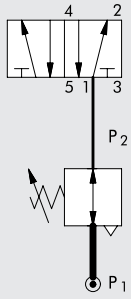


P1 > P2

If in a cylinder you require a thrust in one direction only, e.g. piston rod extension, and a lower thrust and pressure is sufficient in the other direction, you can save a lot of energy by mounting an economizer valve.

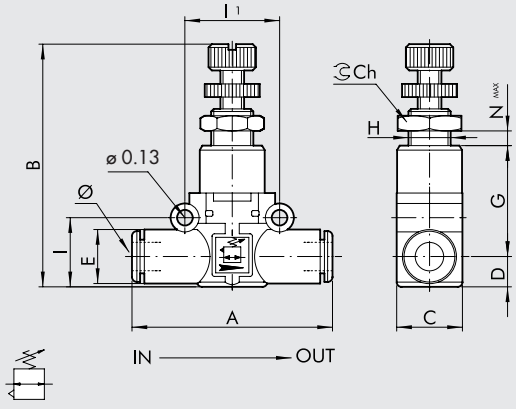
Example
Cylinder Ø 80 mm, stroke 200 mm, 6 bar, 12 cycles/min, 16 hours a day, 230 days a year. Consumption: 144 Nl/min => 3460 kWh/year => 880 litres of oil => 2428 kg of CO_2 => € 346/year.
If you install an economizer that reduces the pressure from 6 to 2 bar, you SAVE: € 115/year.

REMOTE REDUCER



P1 > P2

LINE-MOUNTED MINIATURE REDUCER, SERIES RML



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9061316U	RML 1/4-1/4	1/4	1.85	1.81-2.05	0.58	0.25	0.45	0.98	M9x0.75	0.57	0.79	0.43	0.18
9061324	RML 5/16-5/16	5/16	2.18	2.05-2.28	0.74	0.36	0.54	1.08	M11x1	0.74	0.94	0.51	0.15

IN-LINE PRESSURE GAUGE SERIES MAN L

The MAN L pressure gauge belongs to the LINE ON LINE® family, which means it can be connected to all the other components in series or in parallel.
Available in the version for pipe-pipe connection with two push-in fittings. Though small in size, this pressure gauge, which is supplied in a metal casing, ensures accurate reading. It can be angled in any direction simply by rotating manually.

TECHNICAL DATA		Ø 5/32	Ø 1/4	Ø 5/16
Operating pressure	MPa	1.2		
	bar	12		
	psi	174		
Temperature range	°C	– 20 to + 60		
	°F	– 4 to + 140		
Precision		± 4% full scale		
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered compressed air		

ASSEMBLY OPTIONS

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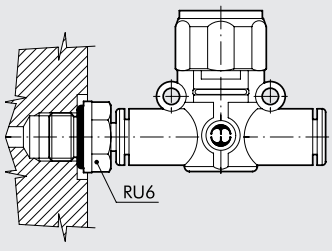

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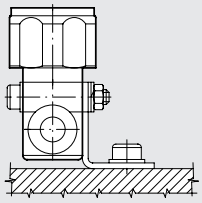

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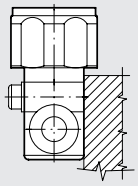

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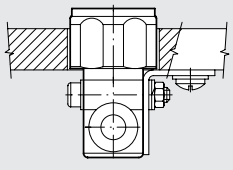
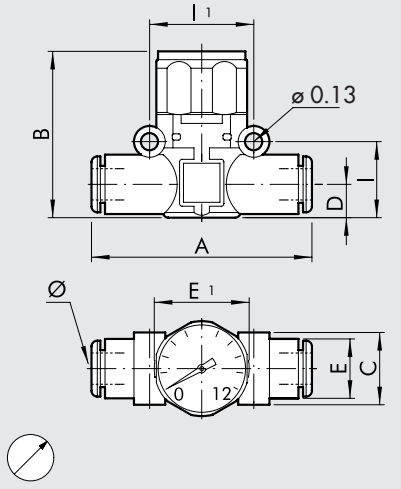


How to mount the MAN L:
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the MAL L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the MAN L straight onto the wall.
- Fig. Ⓓ Use the SQL L bracket for panel mounting the MAN L.

MAN L PIPE-PIPE



Code	Ref.	Ø	A	B	C	D	E	E1	I	I1
9067001	MAN L 5/32-5/32	5/32	1.65	1.42	0.42	0.22	0.39	0.9	0.5	0.63
9067016U	MAN L 1/4-1/4	1/4	1.95	1.38	0.58	0.25	0.45	0.9	0.57	0.79
9067024	MAN L 5/16-5/16	5/16	2.26	1.61	0.74	0.36	0.54	0.9	0.74	0.94

NOTES

IN-LINE PRESSURE INDICATOR SERIES LAM L

The LAM L pneumatic light indicator belongs to the LINE ON LINE® family, which means it can be connected to all the other components in series or in parallel.
Available in the version for pipe-pipe connection with two push-in fittings.
When there is no pressure, the clear technopolymer bell looks empty.
When there is pressure, a red signal appears.
The clear bell can be cleaned using normal detergents or ethyl alcohol, as the technopolymer used is fully compatible.

TECHNICAL DATA		Ø 1/4	Ø 5/16
Operating pressure	MPa	0.2 - 1	
	bar	2 - 10	
	psi	29 - 145	
Temperature range	°C	– 20 to + 60	
	°F	– 4 to + 140	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 Mpa - 14.5 psi)	Nl/min	420	800
	scfm	14.8	28.3
Colour with pressure		Orange - Green	
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous	

ASSEMBLY OPTIONS

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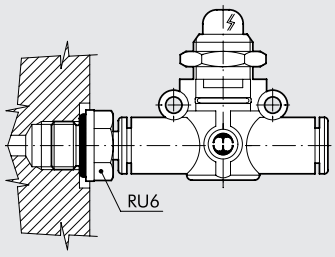

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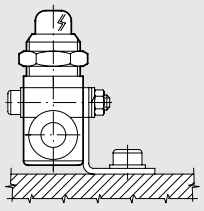

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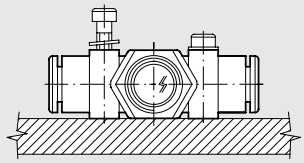

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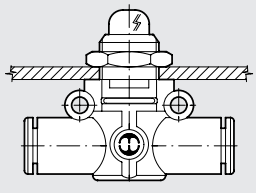
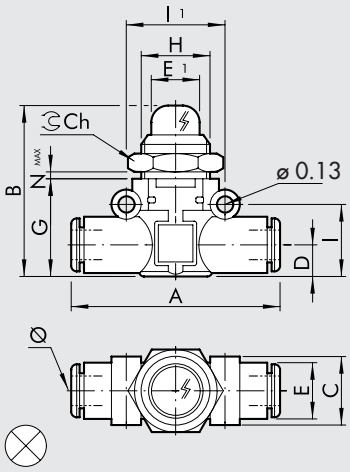


How to mount the LAM L:
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the LAM L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the LAM L straight onto the wall.
- Fig. Ⓓ The ring nut is screwed onto the threaded metal part of the LAM L body for panel mounting.

LAM L PIPE-PIPE



Code	Ref.	Ø	A	B	C	D	E	E1	G	H	I	I1	Ch	Nmax
9068016U	LAM L 1/4-1/4-A	1/4	1.95	1.46	0.58	0.25	0.45	0.42	0.83	M15x1	0.57	0.79	0.67	0.18
9068216U	LAM L 1/4-1/4-V													
9068024	LAM L 5/16-5/16-A	5/16	2.26	1.61	0.74	0.36	0.54	0.42	1.02	M15x1	0.74	0.94	0.67	0.18
9068224	LAM L 5/16-5/16-V													

A = Orange
V = Green

NOTES

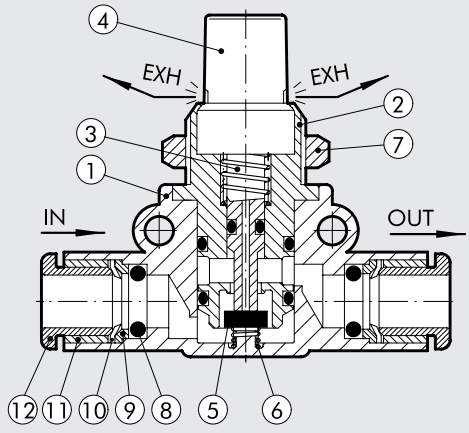
IN-LINE SHUTOFF VALVE SERIES V2V L AND V3V L

V2V L and V3V L shutoff valves belong to the LINE ON LINE® family which means they can be connected to all the other components in series or in parallel.
Available in the version for pipe-pipe connection with two push-in fittings.
V2V is a two-way unidirectional valve, while V3V is a three-way valve with free discharge in the area around the control knob.
The locked version is probably the smallest available on the market.
A lock is provided to ensure the valve is kept in the closed position during machine maintenance. The valve is supplied complete with a lock and two keys.

TECHNICAL DATA		Ø 1/4	Ø 5/16
Operating pressure	MPa	1	
	bar	10	
	psi	145	
Temperature range	°C	– 20 to + 60	
	°F	– 4 to + 140	
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	280	470
	scfm	10	16.6
Flow rate on exhaust at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	110	110
	scfm	3.8	3.8
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous	

COMPONENTS

① Technopolymer body
② Nickel-plated brass insert
③ Brass rod
④ Technopolymer knob
⑤ NBR valve
⑥ Stainless steel valve compression spring
⑦ Nickel-plated brass wall-mount ring nut
⑧ NBR gasket
⑨ Technopolymer spring ring
⑩ Stainless steel folding spring
⑪ Technopolymer locking bushing
⑫ Technopolymer release bushing



ASSEMBLY OPTIONS

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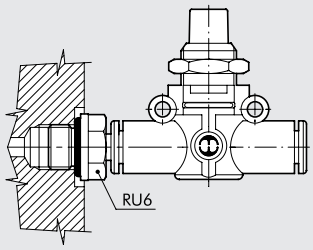

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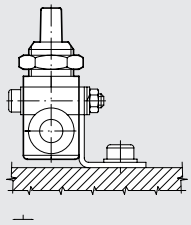

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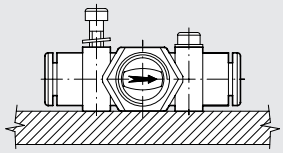

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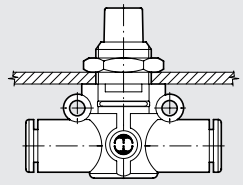
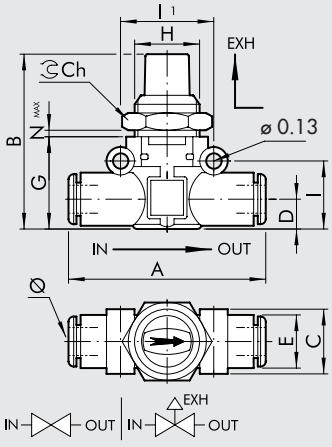


How to mount the V2V/V3V L:

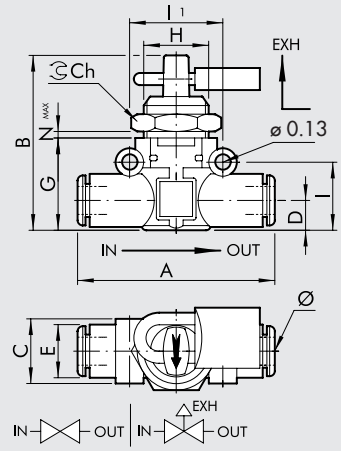
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the V2V/V3V L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the V2V/V3V L straight onto the wall.
- Fig. Ⓓ The rig nut is screwed onto the threaded metal part of the V2V/V3V L body for panel mounting.

V2V/V3V L PIPE-PIPE



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9065016U	V2V L 1/4-1/4	1/4	1.95	1.61	0.58	0.25	0.45	0.83	M15x1	0.57	0.79	0.67	0.22
9066016U	V3V L 1/4-1/4												
9065024	V2V L 5/16-5/16	5/16	2.26	1.81	0.74	0.36	0.54	1.02	M15x1	0.74	0.94	0.67	0.22
9066024	V3V L 5/16-5/16												

V2V/V3V L PIPE-PIPE PADLOCKED



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9065116U	V2V L 1/4-1/4 KEY	1/4	1.95	1.61	0.58	0.25	0.45	0.83	M15x1	0.57	0.79	0.67	0.22
9066116U	V3V L 1/4-1/4 KEY												
9065124	V2V L 5/16-5/16 KEY	5/16	2.26	1.81	0.74	0.36	0.54	1.02	M15x1	0.74	0.94	0.67	0.22
9066124	V3V L 5/16-5/16 KEY												

IN-LINE FLOW MICRO-REGULATOR SERIE RFL L

The RLF L flow micro-regulator belongs to the LINE ON LINE® family and can be connected in series or in parallel with all the other products. The RFL L regulates the air input and thus the speed in pneumatic actuators. Two versions are available:

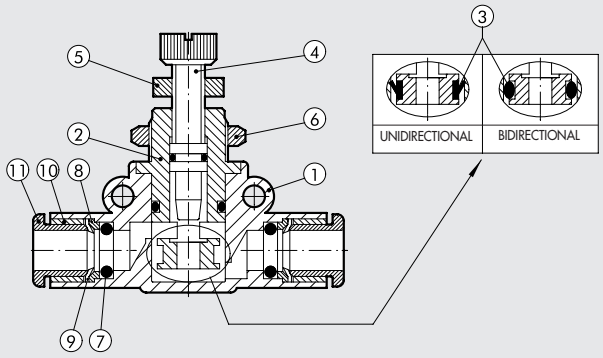
- **Type U (unidirectional)** regulates the flow only in one of the two directions of air flow. The following types of fitting can be mounted:
  - Push-in input and output fitting
- **Type B (bidirectional)** regulates the flow in both directions of air flow. The following types of fitting can be mounted:
  - Push-in input and output fitting
  - Threaded port and push-in fitting

There are four possible types of assembly (see example on the following page).

TECHNICAL DATA		Ø 5/32	Ø 1/4	Ø 5/16
Max. operating pressure	MPa		1	
	bar		10	
	psi		145	
Temperature range	°C		– 20 to + 60	
	°F		– 4 to + 140	
Max flow rate on regulation at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	155	450	850
	scfm	5.5	16	30
Flow rate on exhaust at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	160	550	950
	scfm	5.6	19.5	33.6
Adjustment			Manual or using a screwdriver	
Internal system			Tapered needle	
Recommended pipe			Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid			Lubricated or unlubricated filtered air	
Compatibility with oils			Please refer to page 5-4 of the tecnical documentation	

COMPONENTS

① Technopolymer body
② Nickel-plated brass seal support
③ NBR gasket
④ Brass adjusting needle
⑤ Nickel-plated brass needle ring nut
⑥ Wall fixing ring nut
⑦ NBR seal
⑧ Technopolymer spring ring
⑨ Stainless steel clip-on spring
⑩ Technopolymer stop bushing
⑪ Technopolymer release bushing



ASSEMBLY OPTIONS

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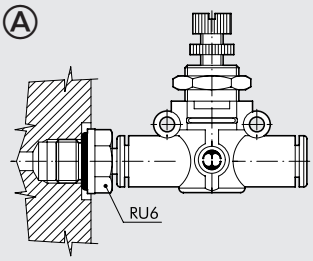

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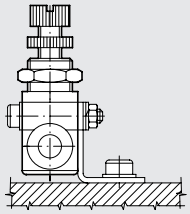

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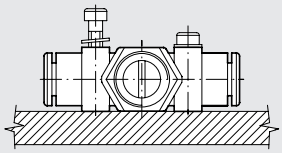

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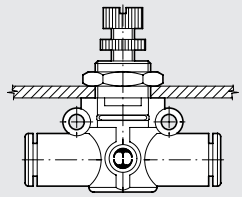
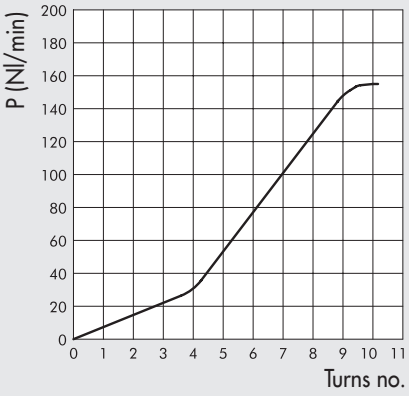


How to mount the RFL L:

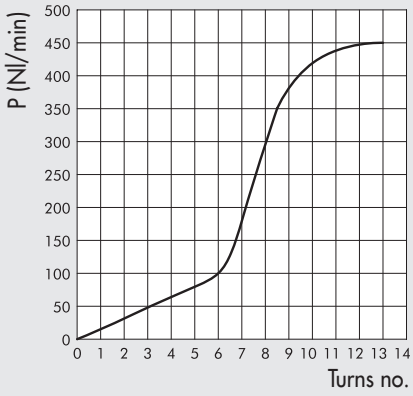
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the RFL L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the RFL L straight onto the wall.
- Fig. Ⓓ The ring nut is screwed onto the threaded metal part of the RFL L body for panel mounting.

FLOW RATE CHARTS AT 6.3 bar (0.63 MPa - 91 psi) DEPENDING ON THE TURNS EFFECTED BY THE REGULATION SCREW

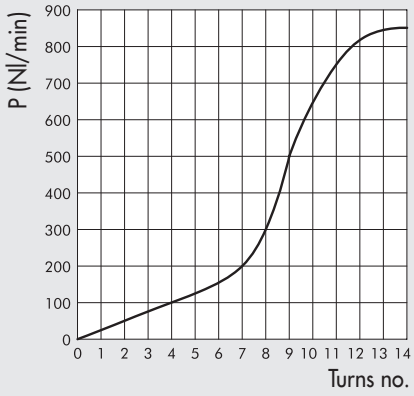
RFL L Ø 5/32



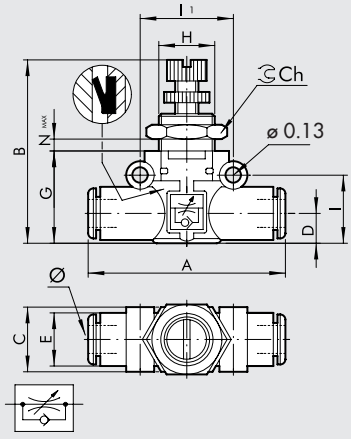
RFL L Ø 1/4



RFL L Ø 5/16

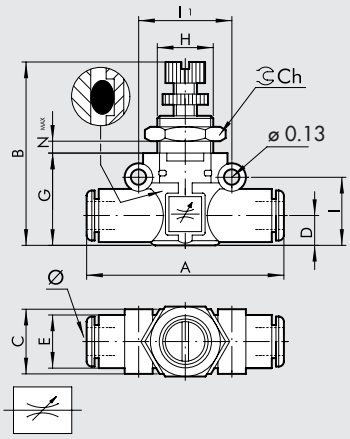


RFL L PIPE-PIPE UNIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041301	RFL L U 5/32-5/32	5/32	1.65	1.32-1.44	0.42	0.22	0.39	0.69	M9x0.75	0.5	0.63	0.43	0.16
9041316U	RFL L U 1/4-1/4	1/4	1.95	1.42-1.61	0.58	0.25	0.45	0.79	M12x0.75	0.57	0.79	0.59	0.16
9041324	RFL L U 5/16-5/16	5/16	2.26	1.73-1.93	0.74	0.36	0.54	1.02	M15x1	0.74	0.94	0.79	0.18

RFL L PIPE-PIPE BIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041601	RFL L B 5/32-5/32	5/32	1.65	1.32-1.44	0.42	0.22	0.39	0.69	M9x0.75	0.5	0.63	0.43	0.16
9041616U	RFL L B 1/4-1/4	1/4	1.95	1.42-1.61	0.58	0.25	0.45	0.79	M12x0.75	0.57	0.79	0.59	0.16
9041624	RFL L B 5/16-5/16	5/16	2.26	1.73-1.93	0.74	0.36	0.54	1.02	M15x1	0.74	0.94	0.79	0.18

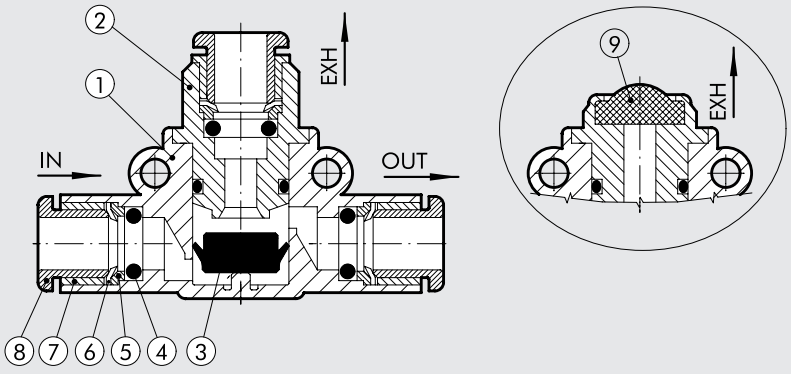
IN-LINE QUICK-EXHAUST VALVES SERIES VSR L

The VSR L quick-exhaust valve belongs to the LINE ON LINE® family, which means it can be connected to all the other components in series or in parallel. Available in the version for pipe-pipe connection with two push-in fittings.
Exhaust can be silenced using a STAINLESS steel wire silencer, or conveyed using a push-in fitting.

TECHNICAL DATA		Ø 5/32	Ø 1/4	Ø 5/16
Inlet pressure	MPa		0.1 - 1	
	bar		1 - 10	
	psi		14.5 - 145	
Temperature range	°C		–20 to +60	
	°F		–4 to +140	
Inlet flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	50	270	400
	scfm	1.8	9.5	14
Exhaust flow rate at 6.3 bar (0.63 MPa - 91 psi)	Nl/min	100	700	1000
	scfm	3.5	24.7	35.3
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous		
Compatibility with oils		Please refer to page 5-4 of the tecnical documentation		

COMPONENTS

① Technopolymer body
② Nickel-plated brass insert
③ NBR valve
④ NBR gasket
⑤ Technopolymer spring ring
⑥ Stainless steel folding spring
⑦ Brass or technopolymer locking bushing
⑧ Technopolymer release bushing
⑨ Stainless steel wire silencer



ASSEMBLY OPTIONS

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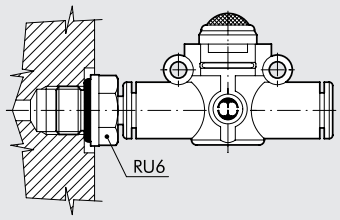

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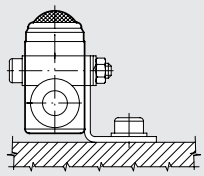

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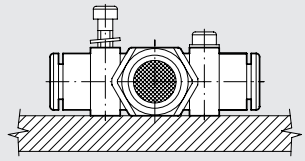
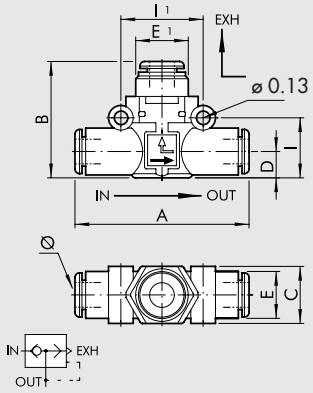


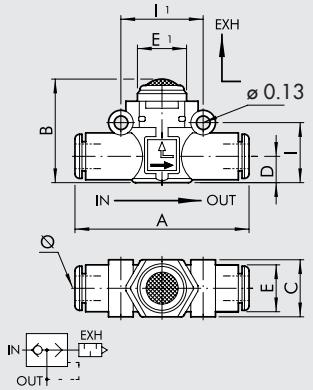
How to mount the VSR L:
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the VSR L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the VSR L straight onto the wall.

VSR L PIPE-PIPE, CONVEYED EXHAUST



Code	Ref.	Ø	A	B	C	D	E	E1	I	I1
9063001	VSR L 5/32-5/32-5/32	5/32	1.65	1.02	0.42	0.22	0.39	0.38	0.5	0.63
9063016U	VSR L 1/4-1/4-1/4	1/4	1.95	1.18	0.58	0.25	0.45	0.51	0.57	0.79
9063024	VSR L 5/16-5/16-5/16	5/16	2.26	1.41	0.74	0.36	0.54	0.59	0.74	0.94

VSR L PIPE-PIPE, SILENCED EXHAUST



Code	Ref.	Ø	A	B	C	D	E	E1	I	I1
9063101	VSR L 5/32-5/32-SIL	5/32	1.65	0.78	0.42	0.22	0.39	0.39	0.5	0.63
9063116U	VSR L 1/4-1/4-SIL	1/4	1.95	1	0.58	0.25	0.45	0.51	0.57	0.79
9063124	VSR L 5/16-5/16-SIL	5/16	2.26	1.24	0.74	0.36	0.54	0.71	0.74	0.94

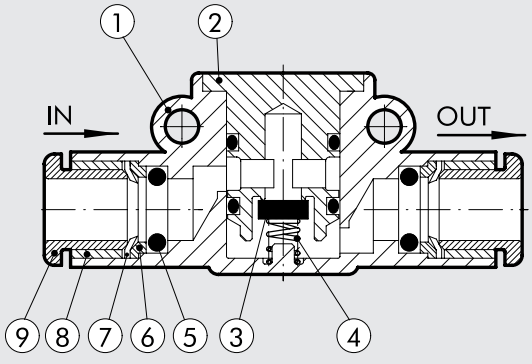
IN-LINE CHECK VALVE SERIES VNR L

The VNR L check valve belongs to the LINE ON LINE® family, which means it can be connected to all the other components in series or in parallel. Available in the version for pipe-pipe connection with two push-in fittings. It is still the only check valve with holes for wall mounting.

TECHNICAL DATA		Ø 5/32	Ø 1/4	Ø 5/16
Operating pressure	MPa	0.05 - 1.2		
	bar	0.5 - 12		
	psi	7.2 - 174		
Temperature range	°C	–20 to +60		
	°F	–4 to +140		
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	80	320	480
	scfm	2.8	11.3	17
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered compressed air		

COMPONENTS

① Technopolymer body
② Nickel-plated brass insert
③ NBR valve
④ Stainless steel valve compression spring
⑤ NBR gasket
⑥ Technopolymer spring ring
⑦ Stainless steel folding spring
⑧ Technopolymer locking bushing
⑨ Technopolymer release bushing



ASSEMBLY OPTIONS

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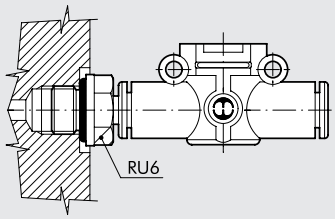

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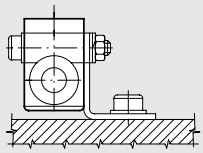

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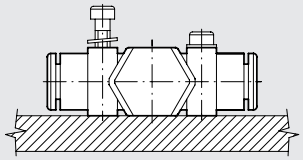
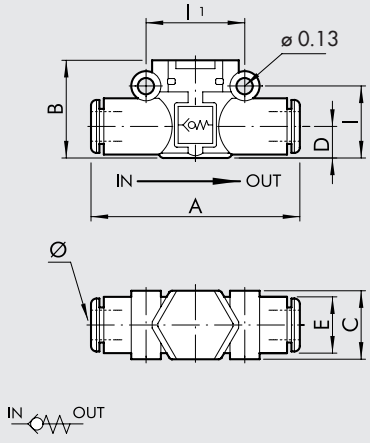


How to mount the VNR L:
- Fig. Ⓐ Adding a RU6 fitting, with his male NPT thread, it is possible to mount the VNR L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the VNR L straight onto the wall.

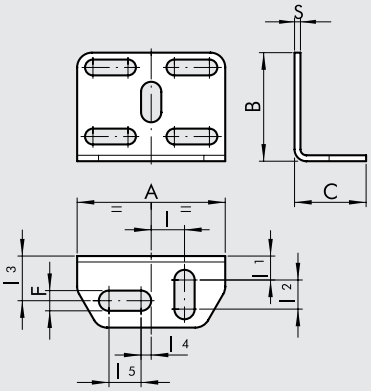
VNR L PIPE-PIPE



Code	Ref.	Ø	A	B	C	D	E	I	I1
9064001	VNR L 5/32-5/32	5/32	1.65	0.69	0.42	5.6	0.39	0.5	0.63
9064016U	VNR L 1/4-1/4	1/4	1.95	0.79	0.58	0.25	0.45	0.57	0.79
9064024	VNR L 5/16-5/16	5/16	2.26	1	0.74	0.36	0.54	0.73	0.94

NOTES

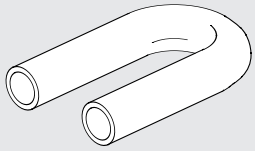
FIXING SQUARE KIT



Code	Description	A	B	C	F	I	I1	I2	I3	I4	I5	S
9062110	SQU L	1.18	0.87	0.57	0.16	0.27	0.19	0.23	0.36	0.08	0.25	0.05

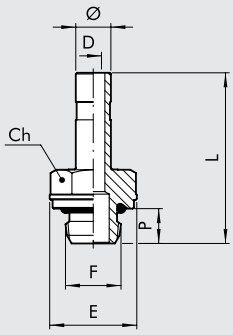
NOTE: comes with two M3x16 screws (for L.O.L. Ø 1/4 - 5/16), two M3 hexagonal nuts, 2 groovers, 4 washers.

U-BOLT



Code	Description
9062216U	TUB L 1/4-1/4
9062224	TUB L 5/16-5/16

RU6 - STEM ADAPTORS



Code	Ref	Ø	F	Ch		P	L	D	E
				Inc	mm				
2U06001	RU6	5/32	10/32 UNF	5/16	8	0.16	0.99	0.08	0.35
2U06002	RU6	5/32	1/8 NPT	0.472	12	0.24	1.09	0.10	0.51
2U06003	RU6	5/32	1/4 NPT	0.551	14	0.31	1.19	0.10	0.65
2U06000	RU6	1/4	10/32 UNF	5/16	8	0.16	1.01	0.08	0.35
2U06007	RU6	1/4	1/8 NPT	0.472	12	0.24	1.11	0.16	0.51
2U06008	RU6	1/4	1/4 NPT	0.551	14	0.31	1.20	0.16	0.65
2U06020	RU6	1/4	3/8 NPT	0.669	17	0.35	1.31	0.16	0.79
2U06009	RU6	5/16	1/8 NPT	0.472	12	0.24	1.15	0.22	0.51
2U06010	RU6	5/16	1/4 NPT	0.551	14	0.31	1.24	0.24	0.65
2U06011	RU6	5/16	3/8 NPT	0.669	17	0.35	1.35	0.24	0.79

SUMMARY FLOW MICRO-REGULATOR

- **FLOW MICRO-REGULATOR** PAGE 4-24

FLOW MICRO-REGULATOR

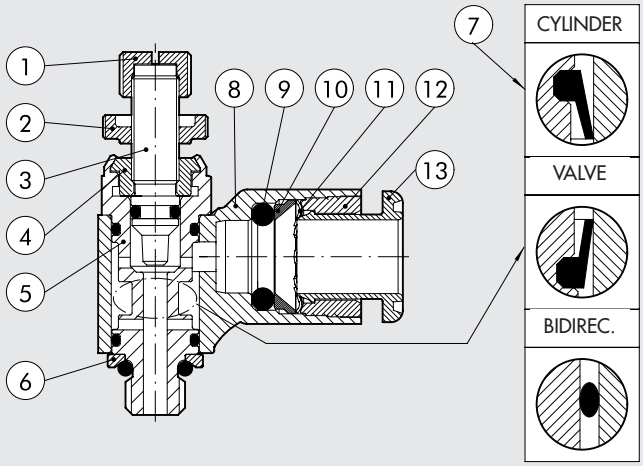
The job of flow microregulators is to regulate speed in the pneumatic cylinders. The configuration of both type C (to be mounted on the cylinder inlet) and type V (to be mounted on the valve port) is such as to ensure full flow on feed and regulated flow on discharge. Type B (bidirectional) can be used to regulate the flow both on feed and discharge.
Flow microregulators have reduced dimensions and fine adjustment in the first turns; they can be adjusted using the knob and/or screwdriver; adjustment can be prevented by tightening the ring nut.

Main features:
- reduced dimensions
- excellent regulation
- regulation with either a screwdriver and/or a knob, can be fixed with a ring nut (COMPACT N)
- available in all sizes (from 10-32 UNF to 1/2" NPT) with a brass ring
- can be mounted with an automatic screwdriver
- comes with a ring that can rotate even with the MRF mounted in position.

TECHNICAL DATA		10-32 UNF		1/8" NPT				1/4" NPT				3/8" NPT		1/2" NPT
Pipe		Ø 5/32	Ø 1/4	Ø 5/32	Ø 1/4	Ø 5/16	Ø 3/8	Ø 1/4	Ø 5/16	Ø 3/8	Ø 1/2	Ø 3/8	Ø 1/2	Ø 1/2
Max input pressure	MPa	1												
	bar	10												
	psi	145												
Temperature range: Brass ring	°C	– 10 to + 70												
	°F	+ 14 to + 158												
Max flow rate in regulation at 90 psi	Nl/min	150	155	350	380	400	400	750	850	950	1000	1300	1400	2000
Max flow rate full port at 90 psi with closed pin	Nl/min	140	150	300	350	390	390	450	275	500	550	1050	1250	1750
Max flow rate full port at 90 psi with open pin	Nl/min	240	245	450	600	650	650	850	1050	1150	1250	1700	2100	2700
Regulation		Manual or using a screwdriver												
Internal system		Tapered pin												
Fluid		Filtered, lubricated or unlubricated compressed air												

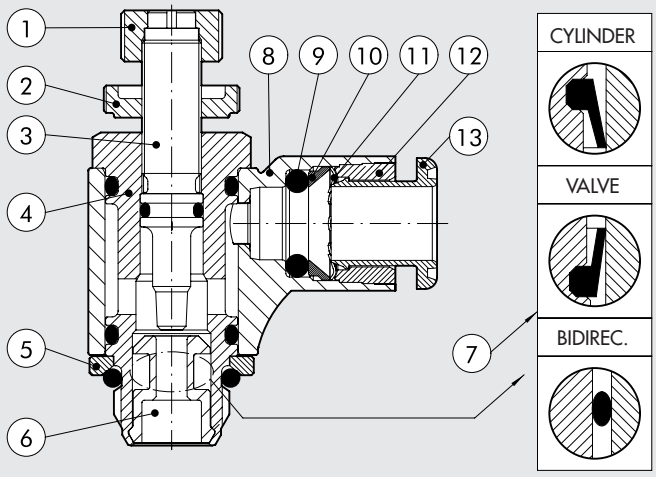
TYPE N COMPONENTS - 10-32 UNF THREAD

① Nichel-plated brass knob
② Nickel-plated brass securing ring nut
③ Brass pin
④ Nickel-plated brass bush
⑤ Nickel-plated brass body
⑥ Nickel-plated brass retaining ring
⑦ NBR gasket
⑧ Nickel-plated brass revolving ring
⑨ NBR gasket
⑩ Technopolymer spring supporting ring
⑪ Stainless steel grabbing spring
⑫ Technopolymer retaining bush
⑬ Technopolymer release bush

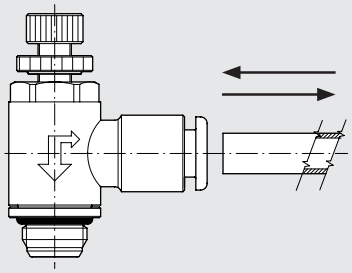


TYPE N COMPONENTS - THREAD 1/8" TO 1/2"

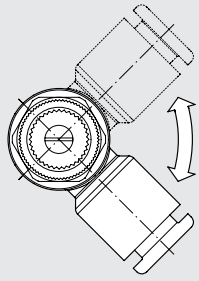
① Nickel-plated brass knob
② Nickel-plated brass securing ring nut
③ Brass pin
④ Nickel-plated brass body
⑤ Nickel-plated brass retaining ring
⑥ Brass gasket holding insert
⑦ NBR gasket
⑧ Nickel-plated brass revolving ring
⑨ NBR gasket
⑩ Technopolymer spring supporting ring
⑪ Stainless steel grabbing spring
⑫ Technopolymer retaining bush
⑬ Technopolymer release bush



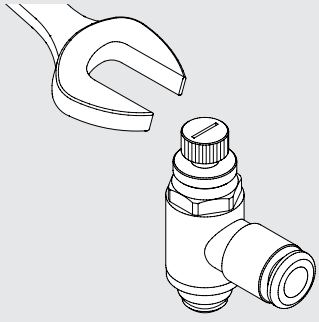
All the MRF with a pipe engage-release system of the latest generation that facilitates detachment of the pipe even under difficult operating conditions.



The rings can be rotated even with the MRF installed, which means that they can be mounted with the pipe facing towards any direction.



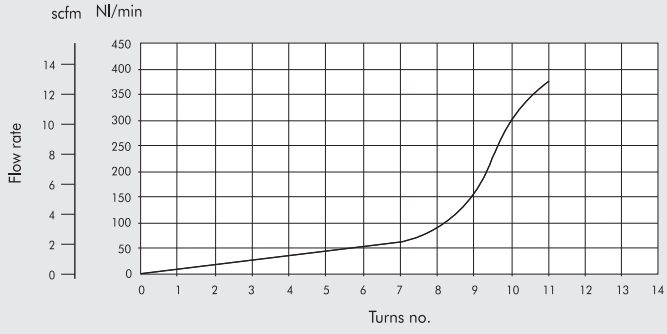
All the new MRF can be fixed from the top using a universal wrench, a pipe wrench or an automatic screwer.



Thread	MAX. TORQUE (lb *f* ft)*
10/32	1.33
1/8" NPT	4.33
1/4" NPT	5.90
3/8" NPT	7.38
1/2" NPT	11.06

* measured on a metal female thread

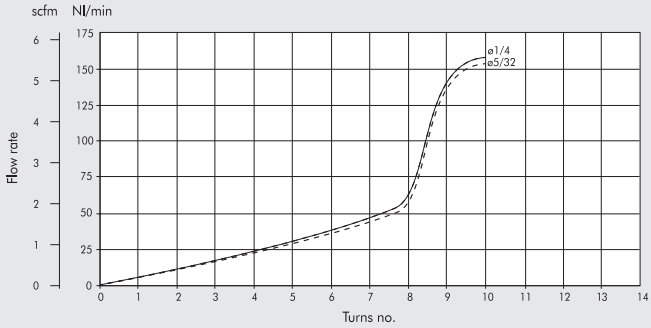
FLOW CHARTS



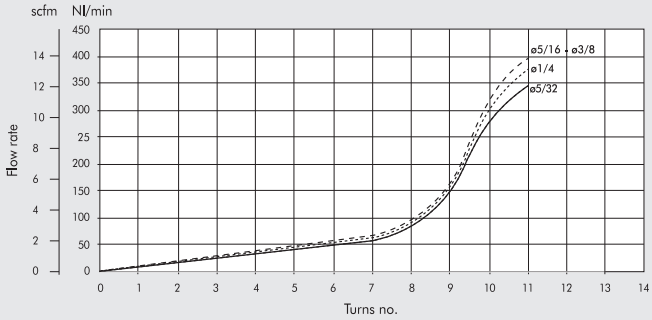
The regulation curve in the MRF COMPACT N, takes place in two sections: in the first half of the flash pin stroke for very fine regulation and relatively low flow rates; in the second half, the flash pin quickly opens the passage so as to reach the maximum flow rate quickly.

FLOW CHARTS

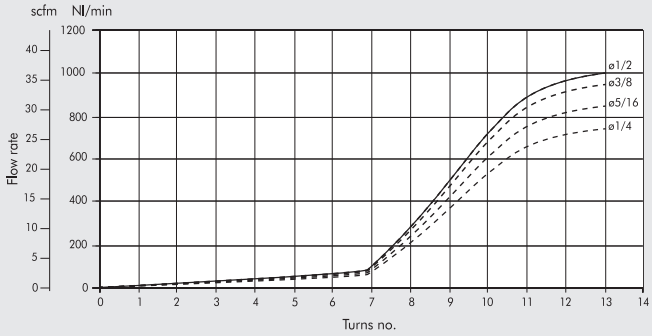
MRF 10-32 UNF - PIPE Ø5-32 - Ø1/4



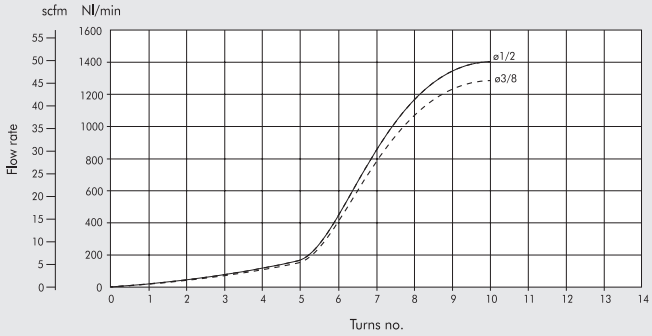
MRF 1/8" NPT - PIPE Ø5/32 - Ø1/4 - Ø5/16 - Ø3/8



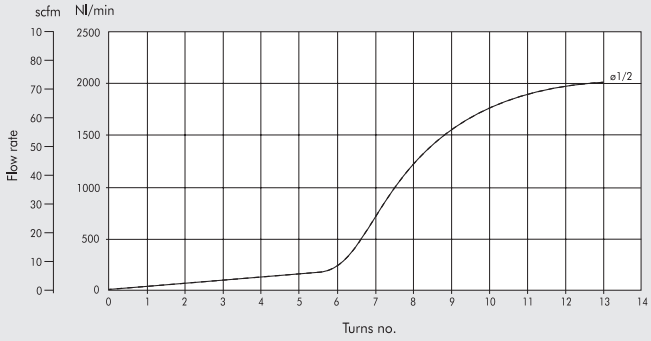
MRF 1/4" NPT - PIPE Ø1/4 - Ø5/16 - Ø3/8 - Ø1/2



MRF 3/8" NPT - PIPE Ø3/8 - Ø1/2



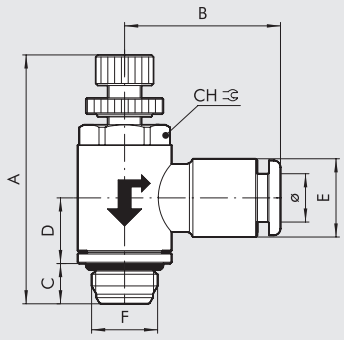
MRF 1/2" NPT - PIPE Ø1/2

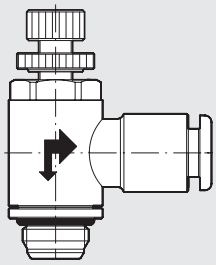


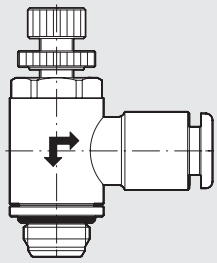
KEY TO CODES

M R F	N	M	C	1/4	1/8 NPT
ELEMENT	**TYPE**	**RING**	**FUNCTION**	**Ø PIPE**	**THREAD**
	N With knob and ring nut	**M** Nickel-plated brass with push-in fitting	**C** For cylinder **V** For valve **B** Bidirectional	**5/32** Ø 5/32 **1/4** Ø 1/4 **5/16** Ø 5/16 **3/8** Ø 3/8 **1/2** Ø 1/2	**10/32 UNF** 10-32 UNF **1/8 NPT** 1/8" NPT **1/4 NPT** 1/4" NPT **3/8 NPT** 3/8" NPT **1/2 NPT** 1/2" NPT

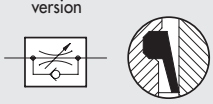
MRF COMPACT "N" BRASS RING



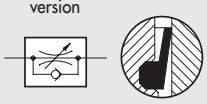




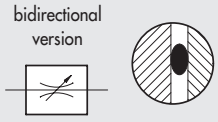
cylinder version



valve version



bidirectional version



Code	Description	F	Ø	Ch Inc	Ch mm	A min	A max	B	C	D	E
9U31001C	MRF N M C 5/32 10/32 UNF	10/32" UNF	5/32"	0.354	9	1.091	1.220	0.795	0.157	0.362	0.374
9U31101V	MRF N M V 5/32 10/32 UNF	10/32" UNF	5/32"	0.354	9	1.091	1.220	0.795	0.157	0.362	0.374
9U31201B	MRF N M B 5/32 10/32 UNF	10/32" UNF	5/32"	0.354	9	1.091	1.220	0.795	0.157	0.362	0.374
9U31005C	MRF N M C 1/4 10/32 UNF	10/32" UNF	1/4"	0.354	9	1.091	1.220	0.839	0.157	0.362	0.465
9U31105V	MRF N M V 1/4 10/32 UNF	10/32" UNF	1/4"	0.354	9	1.091	1.220	0.839	0.157	0.362	0.465
9U31205B	MRF N M B 1/4 10/32 UNF	10/32" UNF	1/4"	0.354	9	1.091	1.220	0.839	0.157	0.362	0.465
9U31002C	MRF N M C 5/32 1/8 UNF	1/8" NPT	5/32"	0.472	12	1.319	1.480	0.839	0.236	0.386	0.374
9U31102V	MRF N M V 5/32 1/8 UNF	1/8" NPT	5/32"	0.472	12	1.319	1.480	0.839	0.236	0.386	0.374
9U31202B	MRF N M B 5/32 1/8 UNF	1/8" NPT	5/32"	0.472	12	1.319	1.480	0.839	0.236	0.386	0.374
9U31006C	MRF N M C 1/4 1/8 NPT	1/8" NPT	1/4"	0.472	12	1.319	1.480	0.839	0.236	0.386	0.465
9U31106V	MRF N M V 1/4 1/8 NPT	1/8" NPT	1/4"	0.472	12	1.319	1.480	0.839	0.236	0.386	0.465
9U31206B	MRF N M B 1/4 1/8 NPT	1/8" NPT	1/4"	0.472	12	1.319	1.480	0.839	0.236	0.386	0.465
9U31008C	MRF N M C 5/16 1/8 NPT	1/8" NPT	5/16"	0.472	12	1.319	1.480	0.976	0.236	0.386	0.543
9U31108V	MRF N M V 5/16 1/8 NPT	1/8" NPT	5/16"	0.472	12	1.319	1.480	0.976	0.236	0.386	0.543
9U31208B	MRF N M B 5/16 1/8 NPT	1/8" NPT	5/16"	0.472	12	1.319	1.480	0.976	0.236	0.386	0.543
9U31010C	MRF N M C 3/8 1/8 NPT	1/8" NPT	3/8"	0.472	12	1.319	1.480	1.094	0.236	0.386	0.650
9U31110V	MRF N M V 3/8 1/8 NPT	1/8" NPT	3/8"	0.472	12	1.319	1.480	1.094	0.236	0.386	0.650
9U31210B	MRF N M B 3/8 1/8 NPT	1/8" NPT	3/8"	0.472	12	1.319	1.480	1.094	0.236	0.386	0.650
9U31007C	MRF N M C 1/4 1/4 NPT	1/4" NPT	1/4"	0.591	15	1.528	1.720	0.906	0.315	0.437	0.465
9U31107V	MRF N M V 1/4 1/4 NPT	1/4" NPT	1/4"	0.591	15	1.528	1.720	0.906	0.315	0.437	0.465
9U31207B	MRF N M B 1/4 1/4 NPT	1/4" NPT	1/4"	0.591	15	1.528	1.720	0.906	0.315	0.437	0.465
9U31009C	MRF N M C 5/16 1/4 NPT	1/4" NPT	5/16"	0.591	15	1.528	1.720	1.043	0.315	0.437	0.543
9U31109V	MRF N M V 5/16 1/4 NPT	1/4" NPT	5/16"	0.591	15	1.528	1.720	1.043	0.315	0.437	0.543
9U31209B	MRF N M B 5/16 1/4 NPT	1/4" NPT	5/16"	0.591	15	1.528	1.720	1.043	0.315	0.437	0.543
9U31011C	MRF N M C 3/8 1/4 NPT	1/4" NPT	3/8"	0.591	15	1.528	1.720	1.173	0.315	0.437	0.650
9U31111V	MRF N M V 3/8 1/4 NPT	1/4" NPT	3/8"	0.591	15	1.528	1.720	1.173	0.315	0.437	0.650
9U31211B	MRF N M B 3/8 1/4 NPT	1/4" NPT	3/8"	0.591	15	1.528	1.720	1.173	0.315	0.437	0.650
9U31014C	MRF N M C 1/2 1/4 NPT	1/4" NPT	1/2"	0.591	15	1.528	1.720	1.350	0.315	0.437	0.827
9U31114V	MRF N M V 1/2 1/4 NPT	1/4" NPT	1/2"	0.591	15	1.528	1.720	1.350	0.315	0.437	0.827
9U31214B	MRF N M B 1/2 1/4 NPT	1/4" NPT	1/2"	0.591	15	1.528	1.720	1.350	0.315	0.437	0.827
9U31012C	MRF N M C 3/8 3/8 NPT	3/8" NPT	3/8"	3/4	19	1.858	2.047	1.205	0.354	0.528	0.630
9U31112V	MRF N M V 3/8 3/8 NPT	3/8" NPT	3/8"	3/4	19	1.858	2.047	1.205	0.354	0.528	0.630
9U31212B	MRF N M B 3/8 3/8 NPT	3/8" NPT	3/8"	3/4	19	1.858	2.047	1.205	0.354	0.528	0.630
9U31015C	MRF N M C 1/2 3/8 NPT	3/8" NPT	1/2"	3/4	19	1.858	2.047	1.437	0.354	0.528	0.795
9U31115V	MRF N M V 1/2 3/8 NPT	3/8" NPT	1/2"	3/4	19	1.858	2.047	1.437	0.354	0.528	0.795
9U31215B	MRF N M B 1/2 3/8 NPT	3/8" NPT	1/2"	3/4	19	1.858	2.047	1.437	0.354	0.528	0.795
9U31016C	MRF N M C 1/2 1/2 NPT	1/2" NPT	1/2"	7/8	22	2.087	2.354	1.496	0.433	0.626	0.795
9U31116V	MRF N M V 1/2 1/2 NPT	1/2" NPT	1/2"	7/8	22	2.087	2.354	1.496	0.433	0.626	0.795
9U31216B	MRF N M B 1/2 1/2 NPT	1/2" NPT	1/2"	7/8	22	2.087	2.354	1.496	0.433	0.626	0.795

NOTES

SUMMARY AUXILIARY VALVES

QUICK EXHAUST VALVES SERIES VSR

New, more compact and lighter version.
Used to evacuate air in the cylinder quickly, which increases cylinder speed.

- Temperature 0-80°C (32°-176°F)
- Max. pressure 12 bar (1200 kPa - 203 psi)
- Min. pressure 0.5 bar (50 kPa - 7.25 psi)

Nominal flow rate (P → A) ΔP = 1 bar (14.5 psi) [scfm]:

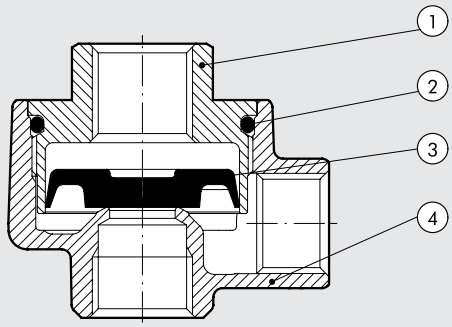
Pm [psi]	1/8	1/4	1/2
36	19.5	28.3	85
58	24.7	42.4	99
91	31.8	49.5	127

Empty flow rate (A → R) [scfm]:

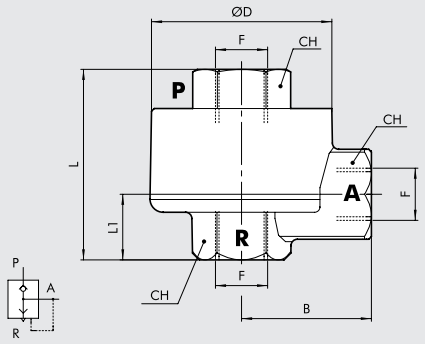
Pm [psi]	1/8	1/4	1/2
36	28.3	53	155.6
58	42.4	86.6	222.9
91	63.6	123.8	283

COMPONENTS

① Cap: nickel-plated brass for 1/8-1/4
anodised aluminium for 1/2
② O-ring: NBR
③ Lip-seal: Polyurethane
④ Body: nickel-plated brass

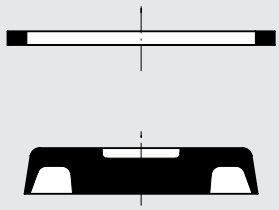


OVERALL DIMENSIONS AND ORDERING CODES



Code	Ref.	F	B	D	CH	L1	Weight [lb]
9101201U	VSR 1/8	1/8	0.73	1.16	0.55 (14 mm)	0.52	0.17
9201201U	VSR 1/4	1/4	0.92	1.34	0.67 (17 mm)	0.66	0.25
9401201U	VSR 1/2	1/2	1.34	1.85	1.06 (27 mm)	0.63	0.50

SPARE GASKETS



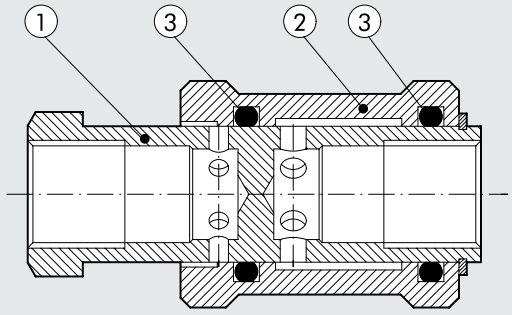
Code	Ref.
9151501	Spare gaskets VSR 1/8
9251501	Spare gaskets VSR 1/4
9451501	Spare gaskets VSR 1/2

The 3/2 slide valve is normally used as a circuit on-off valve. When the ring nut is moved back, the system downstream is relieved; when the ring nut is moved forward, the system is supplied with compressed air.

TECHNICAL DATA		1/8"	1/4"	3/8"	1/2"
Operating pressure		0 to 10 bar (0 to 1 MPa - 0 to 145 psi)			
Operating temperature range	°F	14 to + 176			
Fluid		Lubricated or unlubricated filtered air			
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 0.5 bar (0.05 MPa - 7.25 psi)	Nl/min	430	680	1400	2200
	scfm	15.2	24	49.5	77.8
Flow rate at 6.3 bar (0.63 MPa - 91psi) ΔP 1 bar (0.1 MPa - 14.5 psi)	Nl/min	630	1040	2070	3330
	scfm	22.3	36.8	73.2	117.8
Conductance C	scfm/psi	170	247	537	833
Critical ratio b	psi/psi	0.2	0.3	0.1	0.2

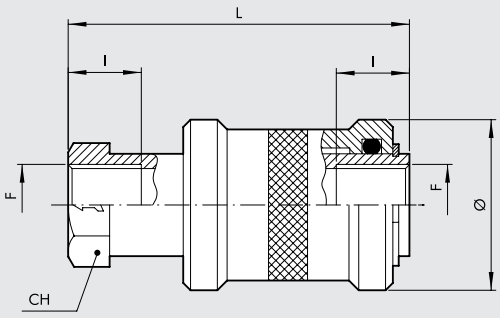
COMPONENTS

① Body: chromium-plated brass
② Ring nut: anodized aluminium
③ Seals: NBR



DIMENSIONS AND ORDERING CODES

Code	Description	F	Ø	I	L	CH
W0970050001U	Slide valves 3/2	1/8" NPT	0.98	0.39	1.89	0.43 (11 mm)
W0970050002U	Slide valves 3/2	1/4" NPT	1.18	0.47	1.89	0.75 (19 mm)
W0970050003U	Slide valves 3/2	3/8" NPT	1.38	0.47	2.67	0.85 (22 mm)
W0970050004U	Slide valves 3/2	1/2" NPT	1.57	0.59	3.15	1.06 (27 mm)



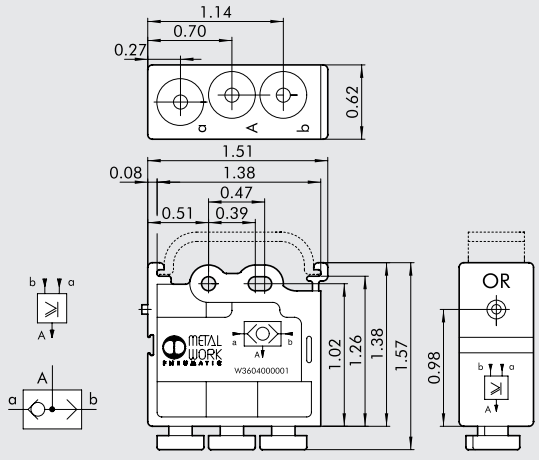
Metal Work logic elements are available with 5 different functions:
OR, AND, NOT, YES, MEMORY.
Main features common to all elements:

- Adaptor for Ω bar (DIN EN 50022) integral with the body.
- Built-in pressure indicator.
- Pipe locking system using Ø 4 (Ø 5/32) built-in fittings.

TECHNICAL DATA

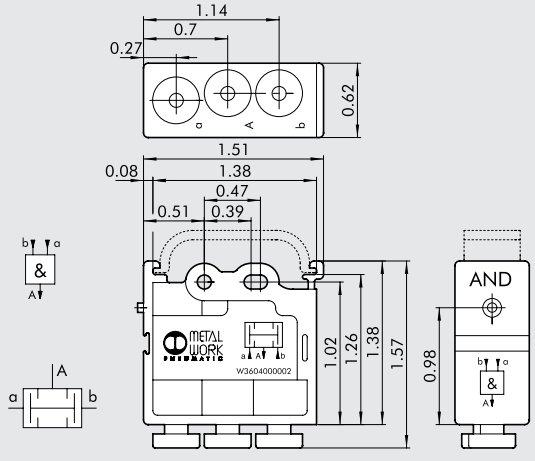
Operating temperature	°F	14 to + 140
Valve fitting		Push-in fitting for Ø 4 pipe (Ø 5/32)
Pressure range	psi	OR - AND: from 218 to 116
		YES-NOT -MEMORY: from 0 to 116, pilot pressure from 21.8 to 116
		NOT: 87 switching thereshold = 5.8
Nominal diameter	in	0.106
Flow rate at 6 bar (0.6 MPa-87 psi) ΔP 1 bar (0.1 MPa-14.5 psi)	Nl/min	100
	scfm	3.53
Fluid		Lubricated or unlubricated filtered compressed air; must be uninterrupted when lubricated
Recommended lubricant		ISO e UNI FD22
Actionament		Via compressed air
Reset		AND-OR: via compressed air
		YES-NOT via mechanical spring
		MEMORY: via compressed air
Installation		In any position
Mounted		On Omega bar (DIN EN 50022) size 35 x 7 or 35 x 15 mm
		Wall-mounted with Ø 0.165 holes
MATERIALS		
Body		Technopolymer
Spool		Aluminium

LOGIC ELEMENT: OR



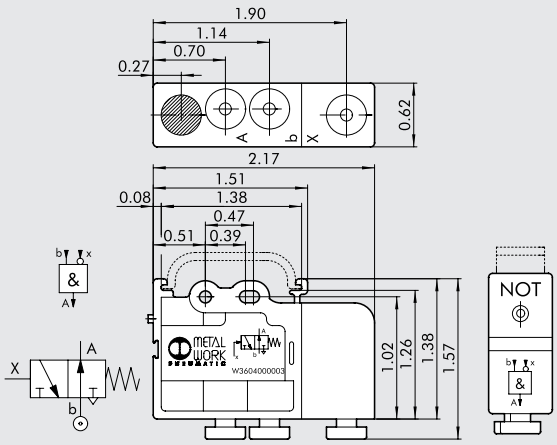
Code	Description
W3604000001	OR - logic sum

LOGIC ELEMENT: AND



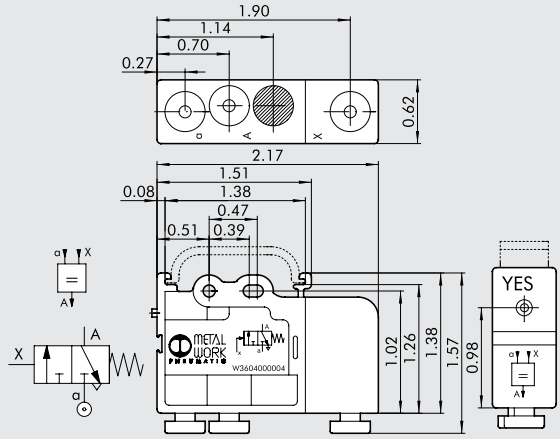
Code	Description
W3604000002	AND - logic product

LOGIC ELEMENT: NOT



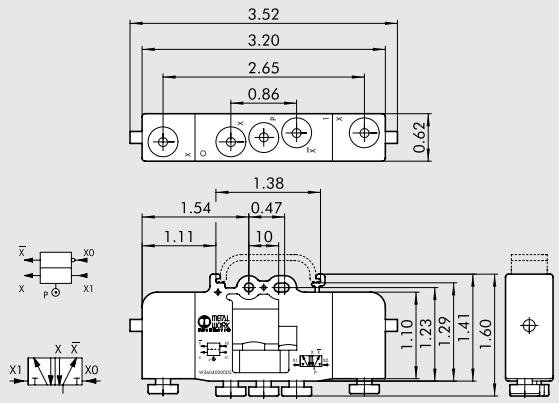
Code	Description
W3604000003	NOT - Negation

LOGIC ELEMENT: YES



Code	Description
W3604000004	YES - Affirmation

LOGIC ELEMENT: MEMORY



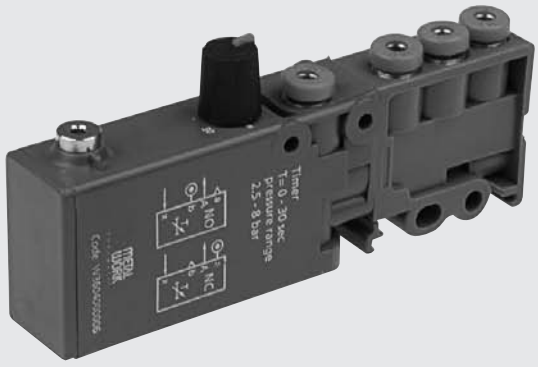
Code	Description
W3604000005	Memory

NOTES

TIMER

The Timer is part of Metal Work range of logic elements, which also includes OR, AND, NOT, YES, MEMORY.
The value of the signal output delay is set by rotating a knob. It can work both as 3/2 NC and 3/2 NO, depending on whether feeding is through port "a" or port "b".
The maximum delay time can be increased by unscrewing a plug and connecting the port to an external auxiliary tank.

- Adaptor for Ω bar (DIN EN 50022) integrated in the body.
- Pressure indicator via an orange pin
- Pipe clamping system using Ø 4 (Ø 5/32) built-in push-on fittings.

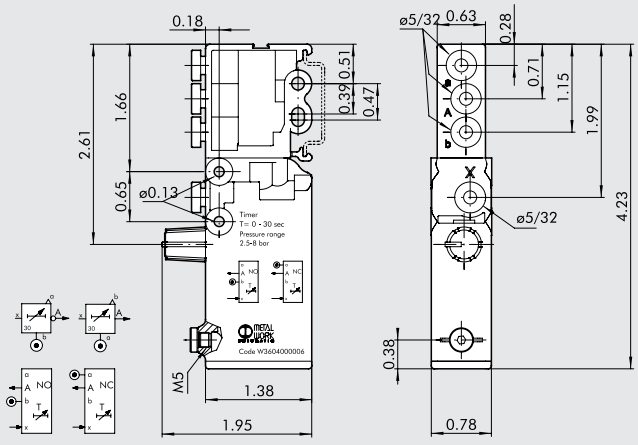


TECHNICAL DATA

Temperature range	°F	14 to + 140
Valve coupling	mm	Push-in fitting for Ø 4 pipe (Ø 5/32)
Pressure range	psi	36.3 to 116
Nominal diameter	in	0.106
Flow rate at 6 bar (0.6 MPa, 87 psi) ΔP 1 bar (0.1 MPa, 14.5 psi)	Nl/min	100
	scfm	3.53
Delay setting range	s	From 0 to 30, at 87 psi
Signal shutoff time	s	< 0.1
Repeatability	s	± 0.4
Fluid		Filtered, lubricated or unlubricated compressed air. If used, must be continuous
Operating		By compressed air
Repositioning		By mechanical spring
Installation		In any direction
Assembly		On Ω bar (DIN EN 50022) size 35 x 7 o 35 x 15 mm - Wall mounting using Ø 0.165 holes
MATERIALS		
Body		Anodised aluminium / Technopolymer
Internal parts		Brass / Technopolymer
Gaskets		NBR
Spring		Spring steel

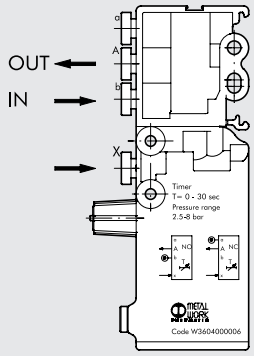
DIMENSIONS AND ORDERING CODES

Code	Description
W3604000006	Timer

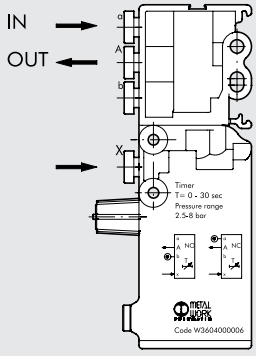


NORMALLY OPEN AND NORMALLY CLOSED OPERATION

NO

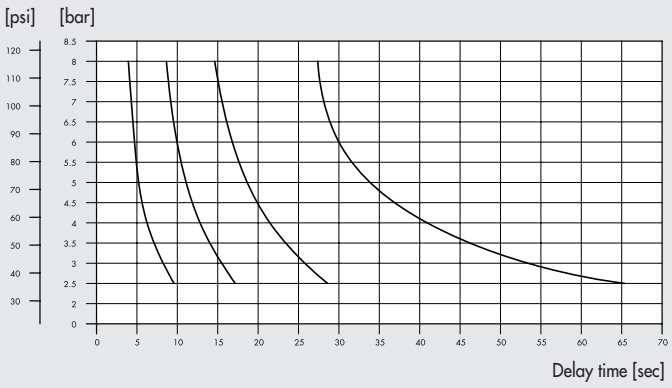


NC



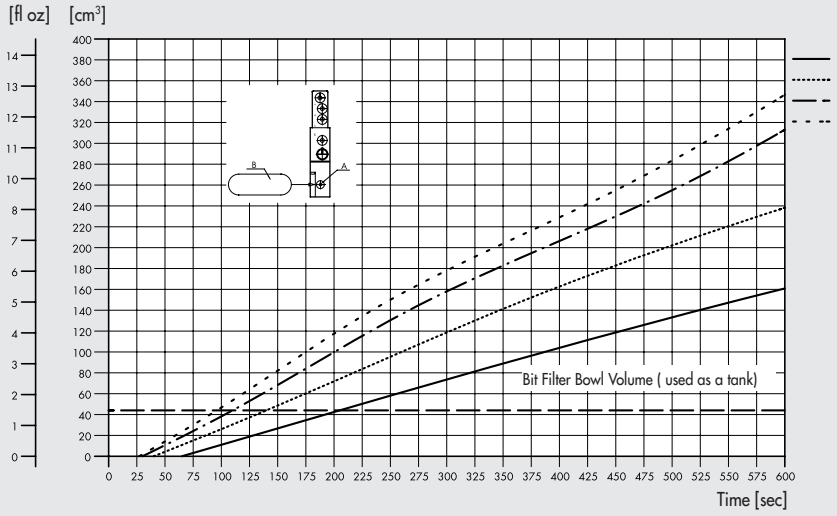
CHANGE IN THE DELAY WITH CHANGE IN PRESSURE

Pressure at X



HOW TO INCREASE THE DELAY

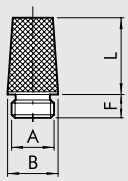
Tank volume



A = coupling (plugged) for external additional tanks
B = external tank

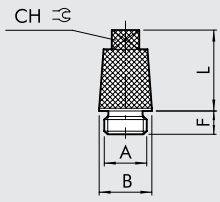
NOTES

SILENCER MW SC



	Code	A	B	F	L
Materials:	**W0970530001**	M5	0.23	0.18	0.39
Nickel-plated brass	**W0970530002**	BSPP 1/8	0.47	0.23	0.59
Sintered nickel-plated bronze	**W0970530003**	BSPP 1/4	0.60	0.26	0.75
	W0970530004	BSPP 3/8	0.75	0.33	1.12
	W0970530005	BSPP 1/2	0.90	0.34	1.30
Features:	**W0970530006**	BSPP 3/4	1.14	0.43	1.60
Pmax: 174 psi	**W0970530007**	BSPP 1	1.42	0.45	1.99
Temp.: from 14° to 176 °F					

SILENCER MW SCQ

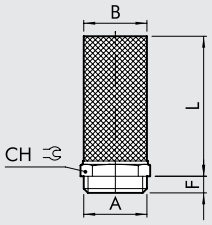


	Code	A	B	F	L	CH
Materials:	**W0970530012**	BSPP 1/8	0.47	0.23	0.59	0.28 (7 mm)
Nickel-plated brass	**W0970530013**	BSPP 1/4	0.60	0.29	0.75	0.31 (8 mm)
Sintered nickel-plated bronze	**W0970530014**	BSPP 3/8	0.75	0.33	1.15	0.39 (10 mm)
	W0970530015	BSPP 1/2	0.90	0.35	1.24	0.55 (14 mm)
	W0970530016	BSPP 3/4	1.14	0.39	1.63	0.67 (17 mm)
Features:	**W0970530017**	BSPP 1	1.42	0.47	2.01	0.90 (23 mm)
Pmax: 174 psi						
Temp.: from 14° to 176 °F						

SILENCER MW SE

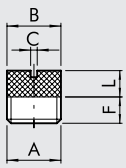
	Code	A
	W0970530021U	M5
	W0970530020U	M7
	W0970530022U	1/8 NPT
	W0970530023U	1/4 NPT
	W0970530024U	3/8 NPT
	W0970530025U	1/2 NPT
	W0970530026U	3/4 NPT
	W0970530027U	1 NPT

HIGH-CAPACITY SILENCER MW SL



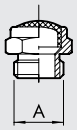
	Code	A	B	F	L	CH
Materials:	**W0970530036**	BSPP 3/4	1.45	0.47	8.46	1.97 (50 mm)
Nickel-plated brass	**W0970530037**	BSPP 1	1.45	0.47	8.46	1.97 (50 mm)
Sintered nickel-plated bronze	**W0970530038**	BSPP 1 1/4	1.45	0.60	8.46	1.97 (50 mm)
	W0970530039	BSPP 1 1/2	1.45	0.60	8.46	1.97 (50 mm)
	W0970530040	BSPP 2	1.45	0.67	8.66	2.56 (60 mm)
Features:						
Pmax: 174 psi						
Temp.: from 14° to 176 °F						

SILENCER MW STT



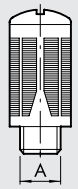
	Code	A	B	F	L	C
Materials:	**W0970530042**	BSPP 1/8	0.37	0.25	0.23	0.08
Nickel-plated brass	**W0970530043**	BSPP 1/4	0.49	0.23	0.27	0.06
Sintered nickel-plated bronze	**W0970530044**	BSPP 3/8	0.63	0.29	0.33	0.06
	W0970530045	BSPP 1/2	0.80	0.39	0.38	0.10
	W0970530046	BSPP 3/4	1.02	0.43	0.47	0.06
Features:	**W0970530047**	BSPP 1	1.30	0.51	0.43	–
Pmax: 174 psi						
Temp.: from 14° to 176 °F						

SILENCER MW SFE



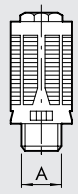
	Code	A
	W0970530051U	M5
	W0970530052U	1/8 NPT
	W0970530053U	1/4 NPT
	W0970530054U	3/8 NPT
	W0970530055U	1/2 NPT
	W0970530056U	3/4 NPT
	W0970530057U	1 NPT

DYNAMIC SILENCER MW SPL



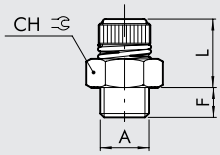
Code	A
W0970530062U	1/8 NPT
W0970530063U	1/4 NPT
W0970530064U	3/8 NPT
W0970530065U	1/2 NPT
W0970530066U	3/4 NPT
W0970530067U	1 NPT

SILENCER MW SPL-F



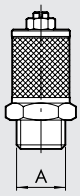
Code	A
W0970530072U	1/8 NPT
W0970530073U	1/4 NPT
W0970530074U	3/8 NPT
W0970530075U	1/2 NPT

SILENCED EXHAUST REGULATOR MW SVE



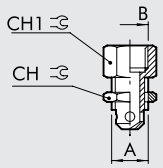
	Code	A	F	L	CH
Materials:	W0970520001	BSPP 1/8	0.26	0.75 - 0.90	0.81 (13 mm)
Nickel-plated brass	W0970520002	BSPP 1/4	0.30	0.82 - 0.96	0.59 (15 mm)
Sintered nickel-plated bronze	W0970520003	BSPP 3/8	0.38	0.92 - 1.16	7/8 (22 mm)
Stainless steel spring	W0970520004	BSPP 1/2	0.41	0.90 - 1.10	7/8 (22 mm)
	W0970520005	BSPP 3/4	0.47	1.14 - 1.38	1.18 (30 mm)
Features:	W0970520006	BSPP 1	0.54	1.06 - 1.34	1.41 (36 mm)
Pmax: 174 psi					
Temp.: from 14° to 176 °F					

SILENCED EXHAUST REGULATOR MW SVL



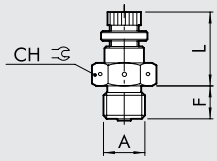
Code	A
W0970520010U	M5
W0970520011U	BSPP 1/8
W0970520012U	BSPP 1/4
W0970520013U	BSPP 3/8
W0970520014U	BSPP 1/2
W0970520015U	BSPP 3/4
W0970520016U	BSPP 1

EXHAUST REGULATOR MW DSN



	Code	A	B	CH	CH1
Materials:	W0970520021	BSPP 1/8	BSPP 1/8	0.47 (12 mm)	0.47 (12 mm)
Nickel-plated brass	W0970520022	BSPP 1/4	BSPP 1/8	0.55 (14 mm)	5/8 (16 mm)
	W0970520023	BSPP 3/8	BSPP 1/4	3/4 (19 mm)	0.67 (17 mm)
	W0970520024	BSPP 1/2	BSPP 1/4	0.94 (24 mm)	7/8 (22 mm)
Features:					
Pmax: 174 psi					
Temp.: from 14° to 176 °F					

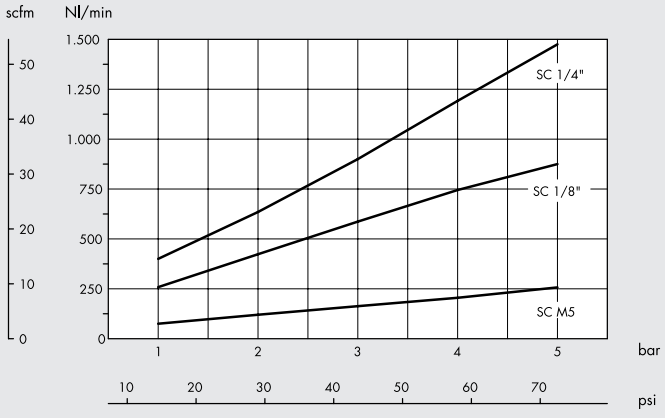
EXHAUST REGULATOR MW DSE

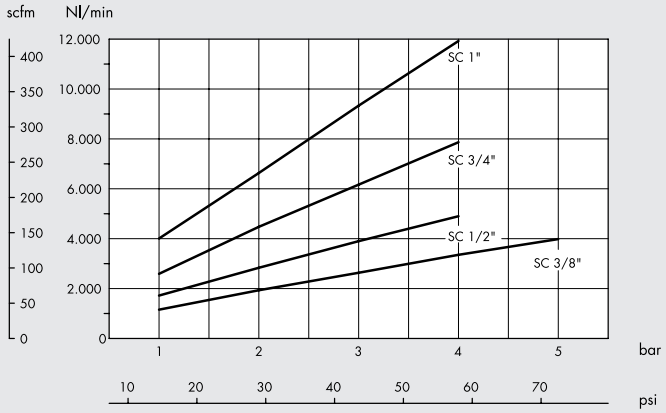


	Code	A	F	L	CH
Materials:	W0970520031	BSPP 1/8	0.29	0.66 - 0.79	0.55 (14 mm)
Nickel-plated brass	W0970520032	BSPP 1/4	0.39	0.85 - 1.14	3/4 (17 mm)
Features:					
Pmax: 174 psi					
Temp.: from 14° to 176 °F					

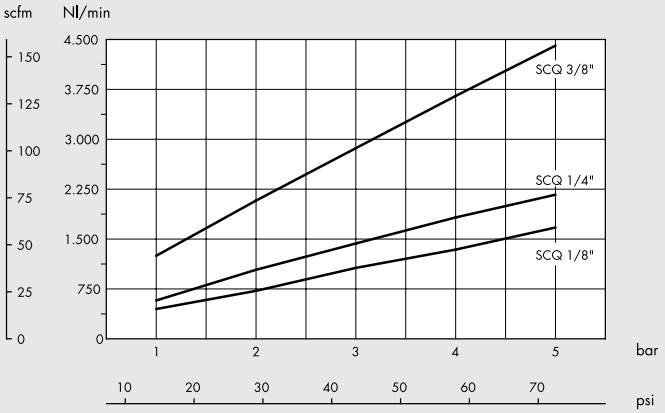
FLOW CHARTS

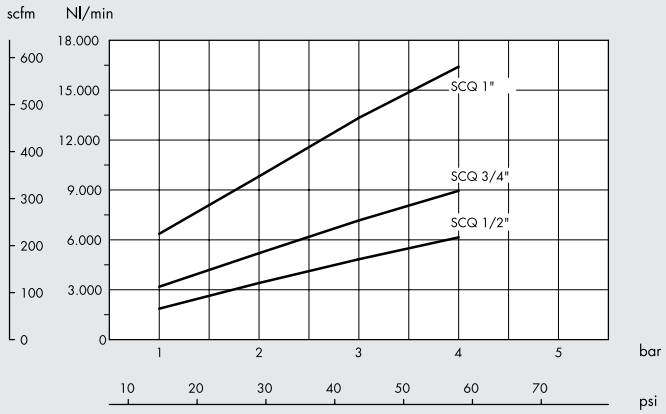
SILENCER MW SC



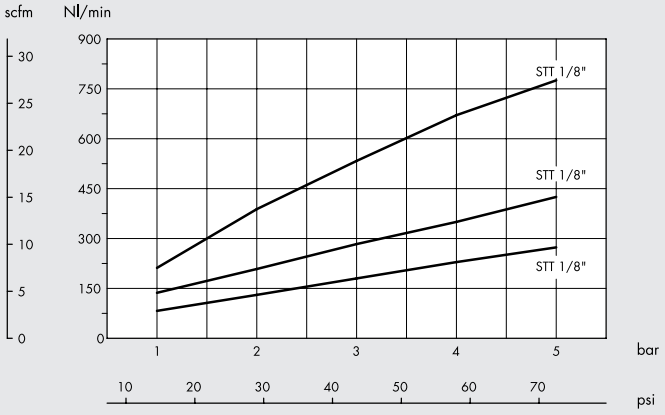


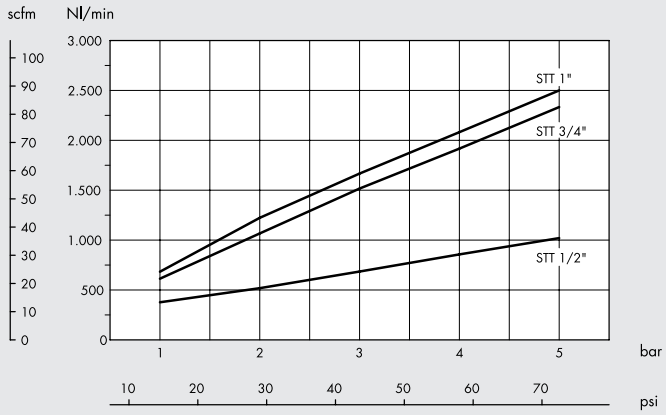
SILENCER MW SCQ





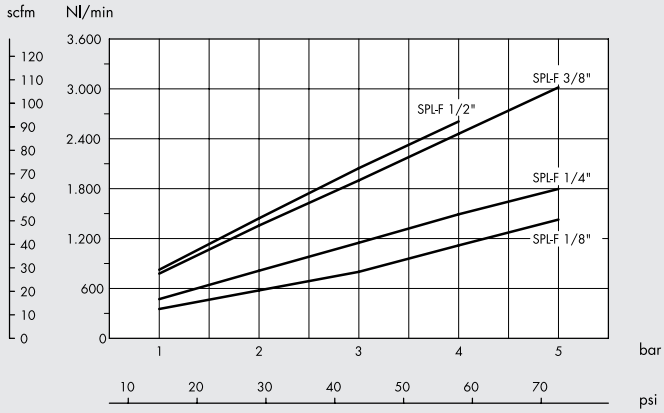
SILENCER MW STT



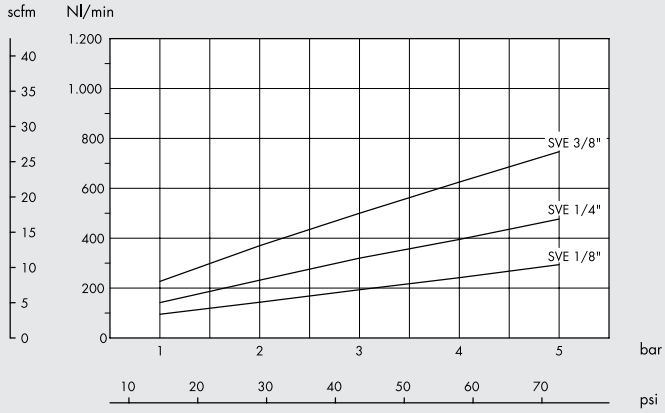


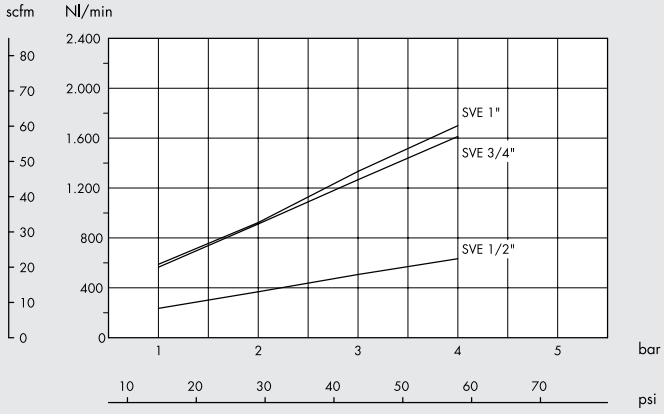
FLOW CHARTS

SILENCER MW SPL-F



SILENCER MW SVE





NOISE ABATEMENT

Reduction of the noise that you obtain mounting a silencer on a compressed air exhaust, measured by feeding at 72.5 psi, at a distance of 39.4 inch with 45° angle to the axis of the silencer (for SFE model at 90° in order to avoid the direct jet).

Middle values in the sizes.

MW SC - 35 Db
MW SCQ - 35 Db
MW SE - 28 Db
MW STT - 32 Db
MW SFE - 30 Db
MW SPL - 30 Db
MW SPL-F - 35 Db
MW SVE - 25 Db
MW SVL - 25 Db