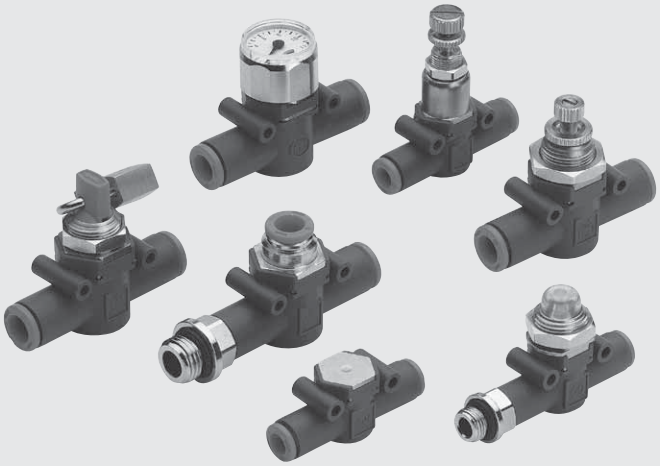
SUMMARY lineonline®

METAL WORK PNEUMATIC

lineonline®

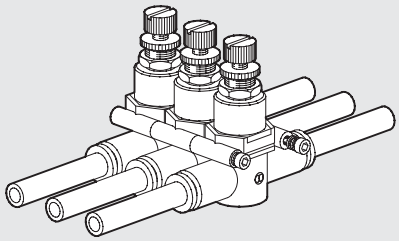
LINE OF PRODUCTS ON LINE

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, or for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
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.

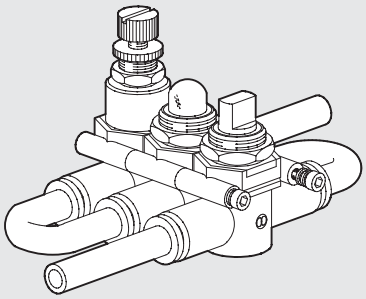


CONNECTION FREE

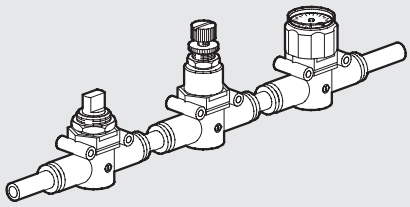
PARALLEL LINES



SERIAL LINE PARALLEL FITTING



SERIAL LINE IN-LINE FITTING



FIXING FREE

WALL FIXING

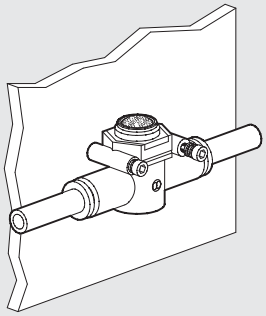
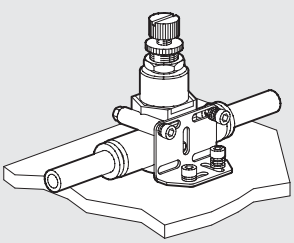
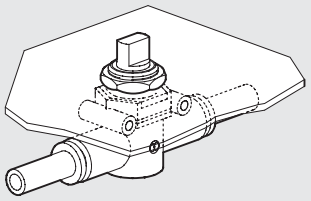


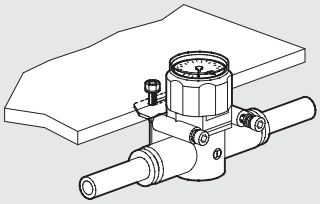
PLATE FIXING



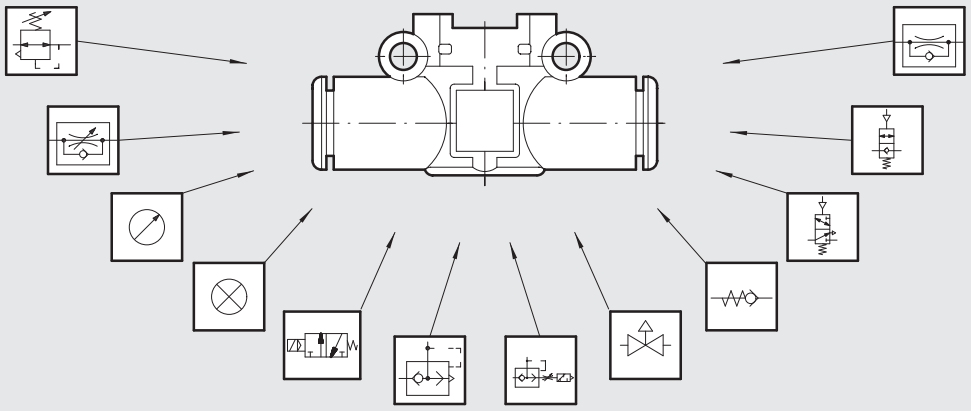
PANEL FIXING



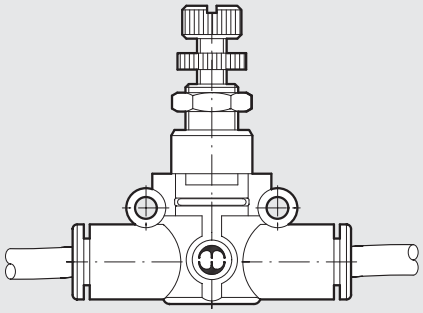
UNDER WALL FIXING



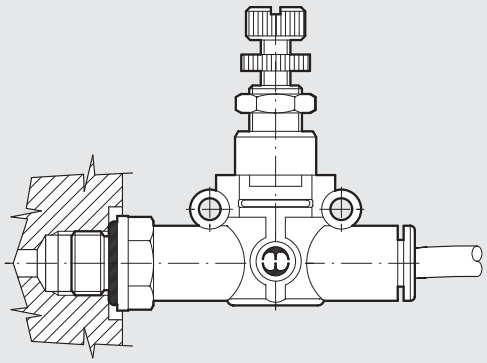
ALL THE PNEUMATIC FUNCTIONS WITH THE SAME EXTERNAL DIMENSIONS



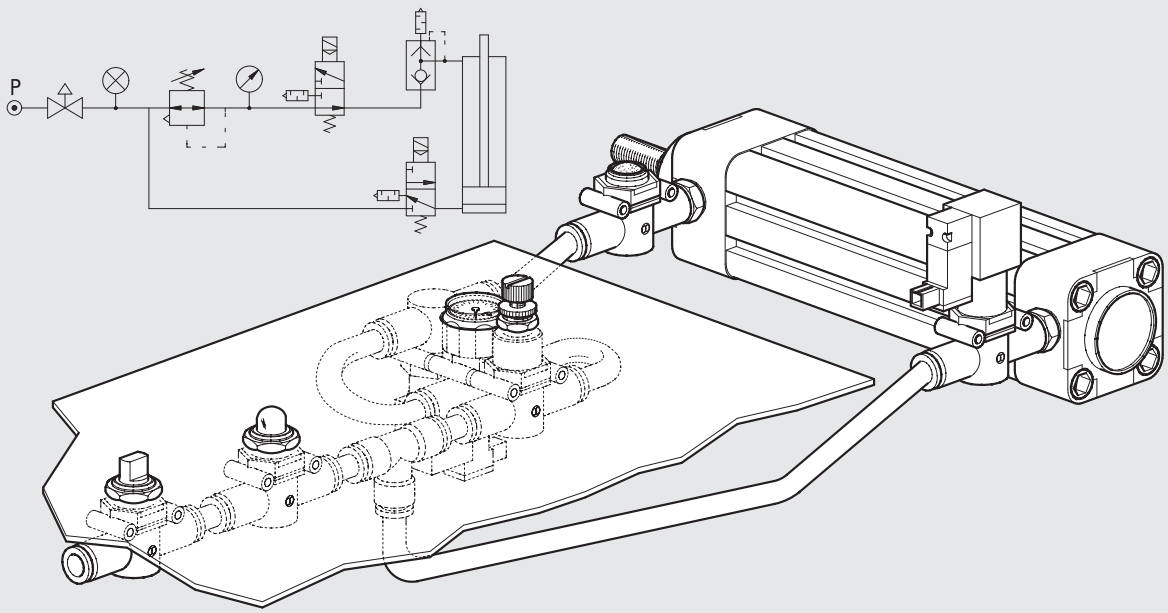
PIPE-PIPE



THREAD-PIPE

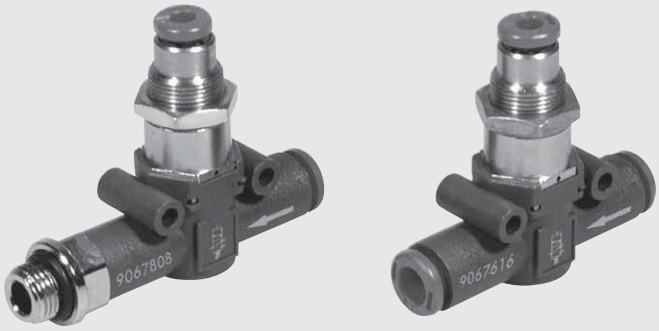


APPLICATION EXAMPLE



IN-LINE PNEUMATIC VALVE SERIES PNV L

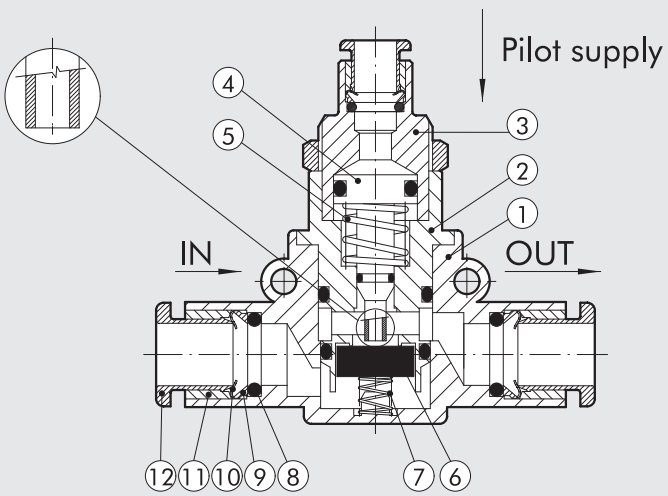
The PNV L in-line pneumatic valve belongs to the LINE ON LINE® family and can be connected in series or in parallel with the other products in the same family.
It is available in a version for pipe-pipe connection, which includes two push-in fittings, and a version for thread-pipe connection, which includes a nickel-plated brass male thread and a push-in fitting.
The compressed air port is a push-in fitting for Ø 4 pipe. The valve is the normally-closed 3/2 pipe. It is a unidirectional valve, meaning it only works properly if supplied from port 1.



TECHNICAL DATA		Ø 6	Ø 8
Max. operating pressure	MPa	1	
	bar	10	
	psi	145	
Temperature range	°C	– 20 to + 60	
	°F	– 4 to + 140	
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered air	
Compatibility with oils		See **chapter Z1**	

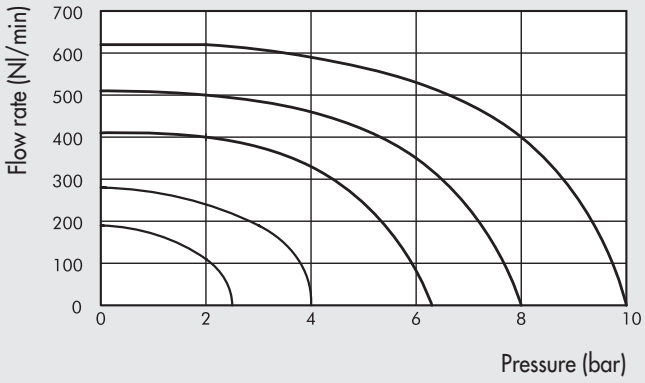
COMPONENTS

① Technopolymer body
② Nickel-plated brass insert
③ Nickel-plated brass pilot insert
④ Brass piston rod
⑤ Stainless steel clamping spring
⑥ NBR seal
⑦ Stainless steel poppet spring
⑧ NBR seal
⑨ Technopolymer spring ring
⑩ Stainless steel clamping spring
⑪ Technopolymer stop bushing
⑫ Technopolymer release bushing

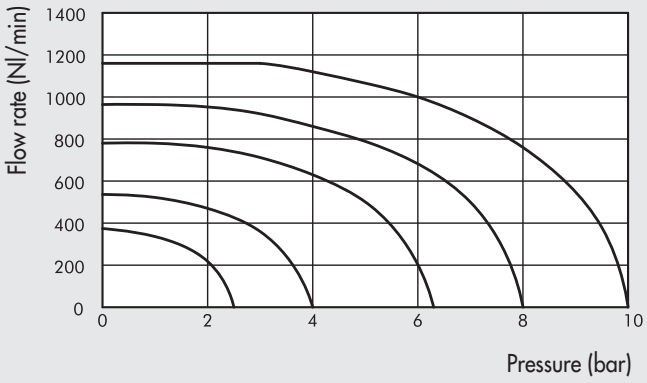


FLOW CHARTS

PNV L Ø 6

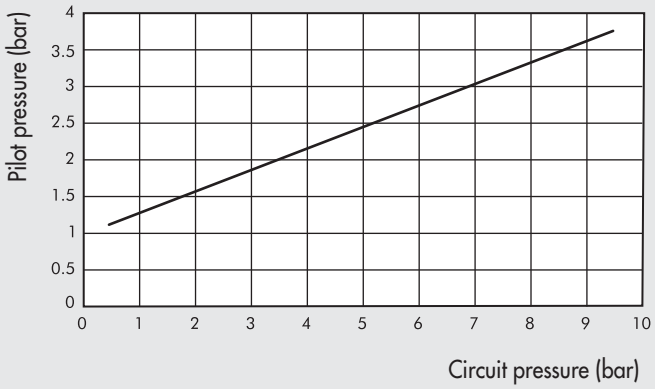


PNV L Ø 8

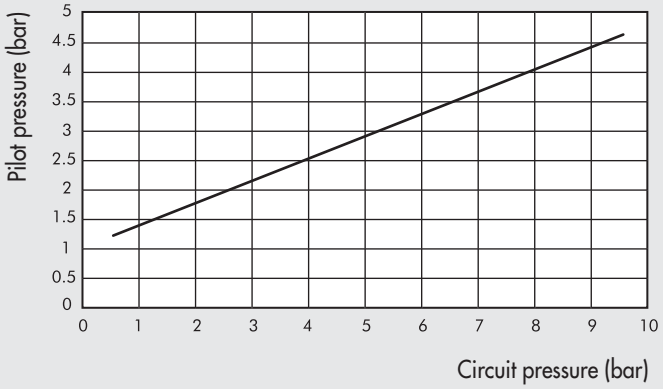


MINIMUM PILOT PRESSURE

PNV L Ø 6



PNV L Ø 8



ASSEMBLY OPTIONS

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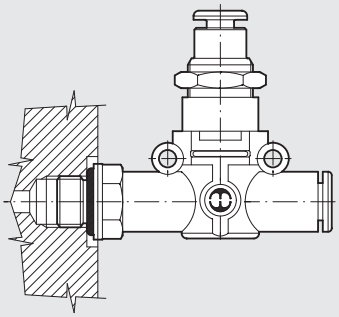

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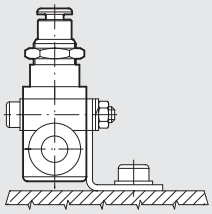

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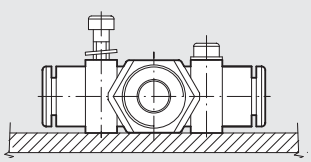

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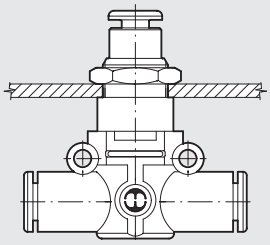
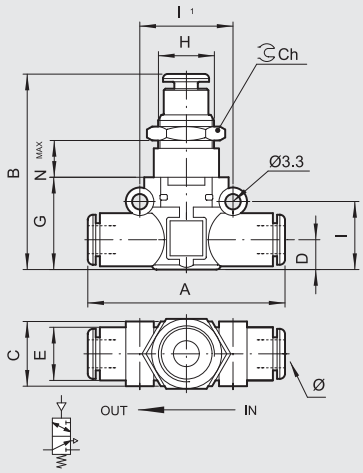


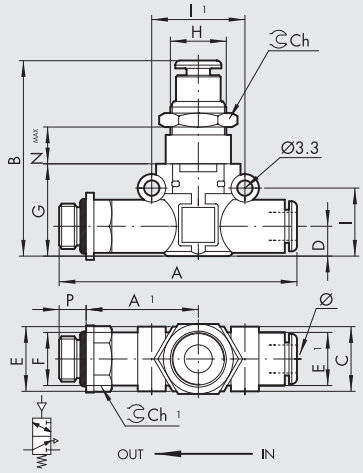
How to mount the PNV L:
- Fig. Ⓐ With the male threaded port it is possible to mount the PNV L straight onto the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the PNV L straight onto the wall.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

PNV L 3/2 NC PIPE - PIPE



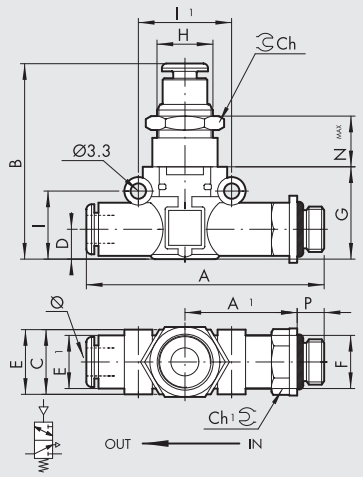
Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9067616	PNV L 3/2 NC Ø6 - Ø6	6	49.4	43.2	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4.7
9067624	PNV L 3/2 NC Ø8 - Ø8	8	57.3	49.7	18.7	9.1	13.8	26	M15x1	18.7	24	17	4

PNV L 3/2 NC PIPE - THREAD



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Nmax
9067808	PNV L 3/2 NC Ø6 - 1/8	1/8	6	6	58.5	27.8	43.2	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	4.7
9067809	PNV L 3/2 NC Ø6 - 1/4	1/4	6	8	61.5	28.8	43.2	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	4.7
9067810	PNV L 3/2 NC Ø8 - 1/8	1/8	8	6	66.2	31.8	49.7	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	4
9067811	PNV L 3/2 NC Ø8 - 1/4	1/4	8	8	70.6	34.2	49.7	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	4
9067812	PNV L 3/2 NC Ø8 - 3/8	3/8	8	9	72.2	34.8	49.7	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	4

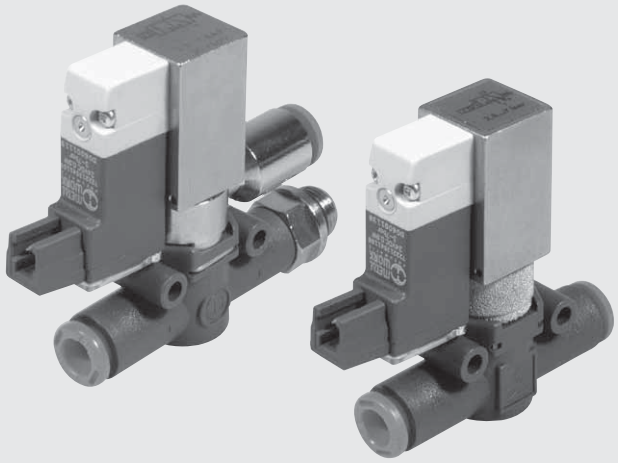
PNV L 3/2 NC THREAD - PIPE



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Nmax
9067708	PNV L 3/2 NC 1/8 - Ø6	6	1/8	6	58.5	27.8	43.2	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	4.7
9067709	PNV L 3/2 NC 1/4 - Ø6	6	1/4	8	61.5	28.8	43.2	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	4.7
9067710	PNV L 3/2 NC 1/8 - Ø8	8	1/8	6	66.2	31.8	49.7	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	4
9067711	PNV L 3/2 NC 1/4 - Ø8	8	1/4	8	70.6	34.2	49.7	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	4
9067712	PNV L 3/2 NC 3/8 - Ø8	8	3/8	9	72.2	34.8	49.7	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	4

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, and in the version for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
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 or conveyed via a pipe fitting. The fitting for conveyed exhaust can be oriented freely.



TECHNICAL DATA		Ø 6	Ø 8
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 ΔP 0.5bar	Nl/min	270	500
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	380	700
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	
Compatibility with oils		See **chapter Z1**	

ASSEMBLY OPTIONS

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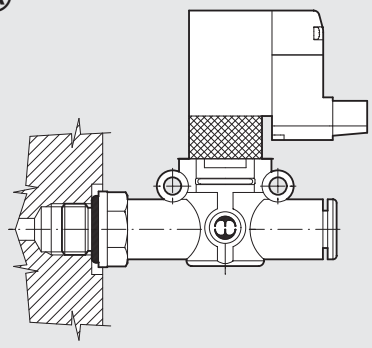

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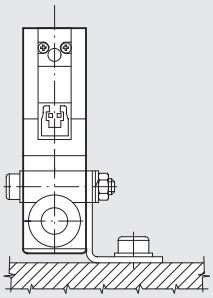

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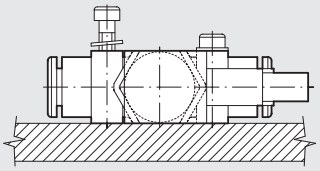
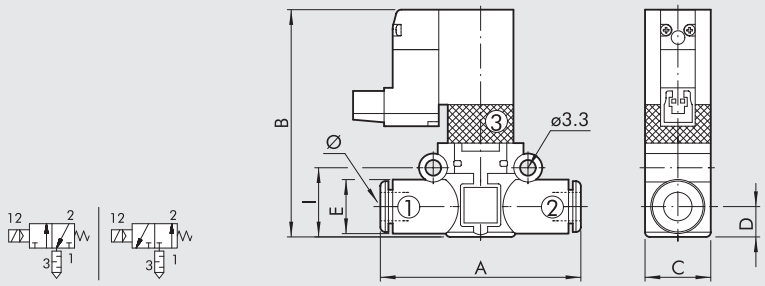


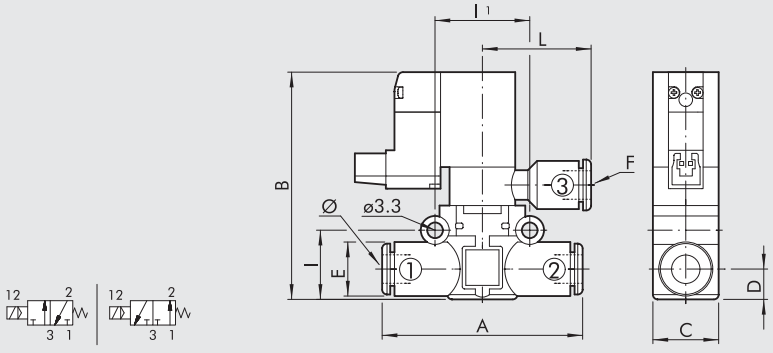
How to mount the SOV L:
- Fig. Ⓐ With the male threaded port it is possible to mount the SOV L straight onto the actuator.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the SOV L straight onto the wall.

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



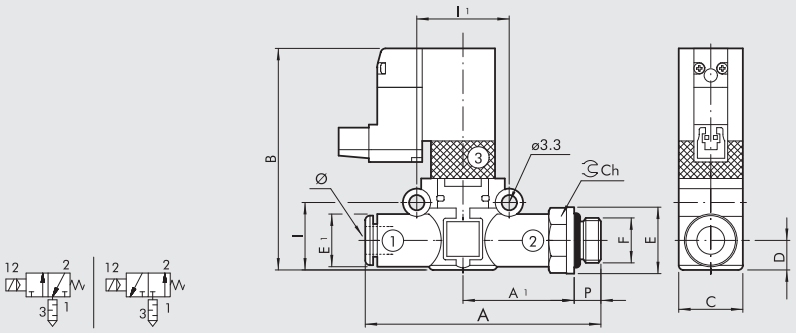
Code	Ref.	Ø	A	B	C	D	E	I	I1
9069016	SOV L 3/2 NC 6-6	6	49.4	57.5	14.7	6.4	11.4	14.6	20
9069116	SOV L 3/2 NO 6-6								
9069024	SOV L 3/2 NC 8-8	8	57.3	63.5	18.7	9.1	13.8	18.7	24
9069124	SOV L 3/2 NO 8-8								

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



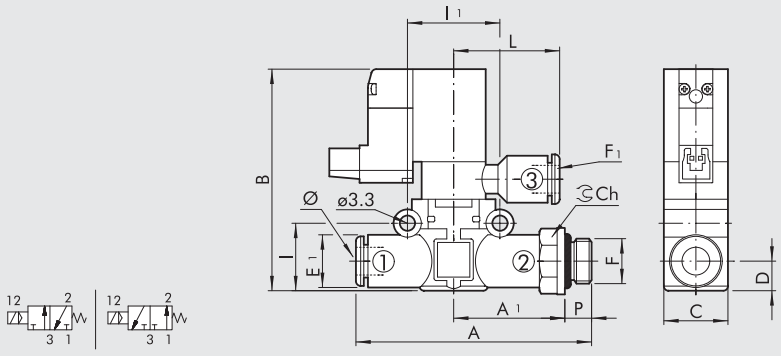
Code	Ref.	Ø	A	B	C	D	E	F	I	I1	L
9069216	SOV L 3/2 NC 6-6-6	6	49.4	57.5	14.7	6.4	11.4	Ø 6	14.6	20	28.3
9069316	SOV L 3/2 NO 6-6-6										
9069224	SOV L 3/2 NC 8-8-8	8	57.3	63.5	18.7	9.1	13.8	Ø 8	18.7	24	30
9069324	SOV L 3/2 NO 8-8-8										

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



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	I	I1	Ch
9069408	SOV L 3/2 NC 6-1/8	6	1/8	6	58.5	27.8	57.5	14.7	6.4	14	11.4	14.6	20	12
9069508	SOV L 3/2 NO 6-1/8													
9069409	SOV L 3/2 NC 6-1/4	6	1/4	8	61.5	28.8	57.5	14.7	6.4	18	11.4	14.6	20	14
9069509	SOV L 3/2 NO 6-1/4													
9069410	SOV L 3/2 NC 8-1/8	8	1/8	6	66.2	31.3	63.5	18.7	9.1	15	13.8	18.7	24	14
9069510	SOV L 3/2 NO 8-1/8													
9069411	SOV L 3/2 NC 8-1/4	8	1/4	8	70.6	34.2	63.5	18.7	9.1	18	13.8	18.7	24	14
9069511	SOV L 3/2 NO 8-1/4													
9069412	SOV L 3/2 NC 8-3/8	8	3/8	9	72.2	34.8	63.5	18.7	9.1	22	13.8	18.7	24	17
9069512	SOV L 3/2 NO 8-3/8													

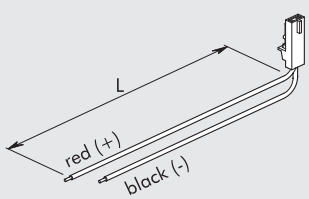
SOV L 3/2 NC-NO PIPE-THREAD CONVEYED EXHAUST



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	F1	I	I1	L	Ch
9069608	SOV L 3/2 NC 6-1/8-6	6	1/8	6	58.5	27.8	57.5	14.7	6.4	14	11.4	Ø 6	14.6	20	28.3	12
9069708	SOV L 3/2 NO 6-1/8-6															
9069609	SOV L 3/2 NC 6-1/4-6	6	1/4	8	61.5	28.8	57.5	14.7	6.4	18	11.4	Ø 6	14.6	20	28.3	14
9069709	SOV L 3/2 NO 6-1/4-6															
9069610	SOV L 3/2 NC 8-1/8-8	8	1/8	6	66.2	31.8	63.5	18.7	9.1	15	13.8	Ø 8	18.7	24	30	14
9069710	SOV L 3/2 NO 8-1/8-8															
9069611	SOV L 3/2 NC 8-1/4-8	8	1/4	8	70.6	34.2	63.5	18.7	9.1	18	13.8	Ø 8	18.7	24	30	14
9069711	SOV L 3/2 NO 8-1/4-8															
9069612	SOV L 3/2 NC 8-3/8-8	8	3/8	9	72.2	34.8	63.5	18.7	9.1	22	13.8	Ø 8	18.7	24	30	17
9069712	SOV L 3/2 NO 8-3/8-8															

ACCESSORIES

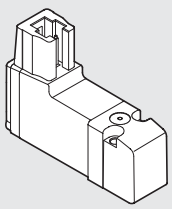
PLUG-IN CONNECTOR



Code	Description
W0970512000	Plug-in connector Mach 11 L = 300

SPARES

PLUG-IN PILOT



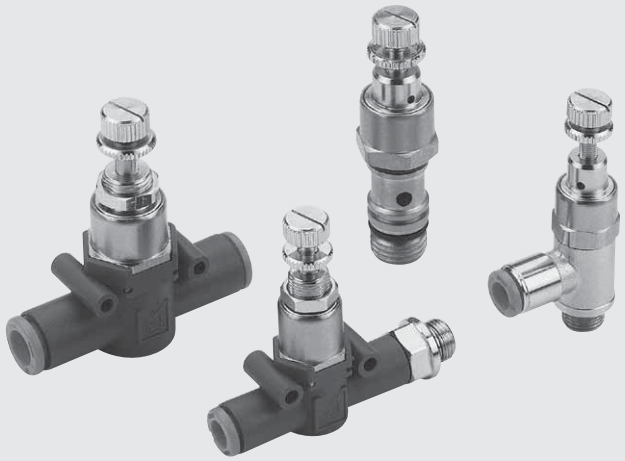
Code	Description
722213541100	PLT-10 722213541100

MINIATURE REDUCER/ECONOMIZER, SERIES RML, RMC AND RMS

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.

The data in brackets refer to the angle version.

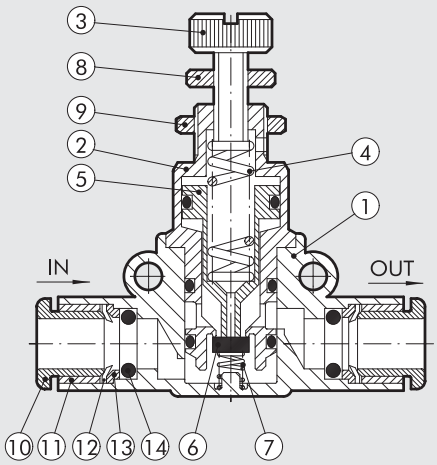


TECHNICAL DATA		RML Ø 6	RMC 1/8	RMS 1/8	RML Ø 8	RMC 1/4	RMS 1/4
Threaded ports		1/8"-1/4"	1/8"	1/8"	1/8"-1/4"-3/8"	1/4"	1/4"
Pipe coupling		Ø 6	Ø 4 - Ø 6 - Ø 8	–	Ø 8	Ø 6 - Ø 8 - Ø 10	–
Regulation range		1 to 8 bar - 0.1 to 0.8 MPa - 14.5 to 116 psi					
Inlet pressure	MPa	0.2 - 1					
	bar	2 - 10					
	psi	29 - 145					
Flow rate at 6.3 bar (0.63 MPa - 91 psi) ΔP 1 bar	Nl/min	150			260		
Flow rate on exhaust at 6.3 bar (0.63 MPa - 91 psi)		400			600		
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					
Compatibility with oils		See **chapter Z1**					

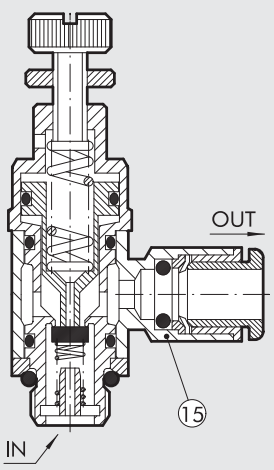
COMPONENTS

① Technopolymer body (brass for RMC)
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 (brass for RMC)
⑫ Stainless steel crimping spring
⑬ Technopolymer spring ring
⑭ NBR gasket
⑮ Nickel-plated brass rotating ring

RML



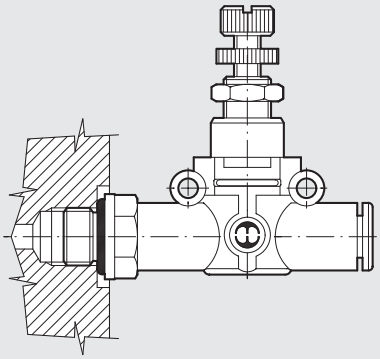
RMC



METAL WORK PNEUMATIC

ASSEMBLY OPTIONS

Ⓐ



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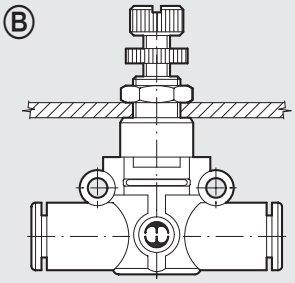

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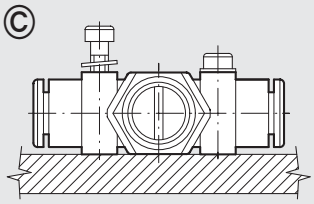

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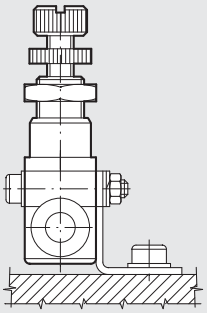

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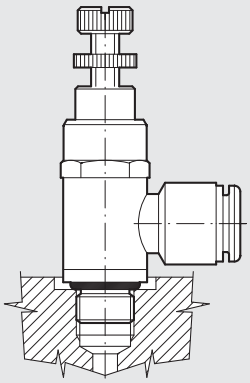
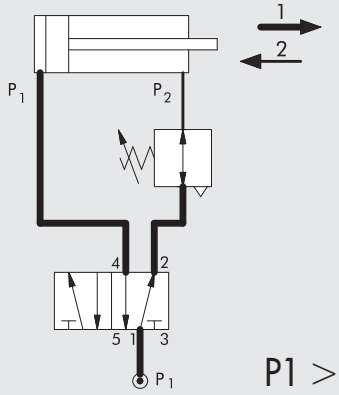


How to assembly RML/RMC:
- Fig. Ⓐ Thanks to the male threaded part it's possible to assembly directly on the actuator or on the valve.
- Fig. Ⓑ By using the ring nut screwed on the threaded body it's possible the assembling on panels.
- Fig. Ⓒ On the plastic body there are two strong ring for the direct wall assembly.
- Fig. Ⓓ Fixing on plate trought the proper small square SQU L.
- Fig. Ⓔ For maintaining the tube the most parallel possible to the system , had been designed a specific version (RMC) with inlet and outlet at 90°.

POSSIBLE APPLICATIONS

ECONOMIZER

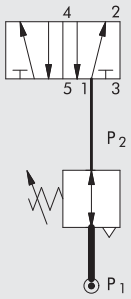


P1 > P2

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 oth er direction, you can save a lot of energy by mounting an economizer valve.

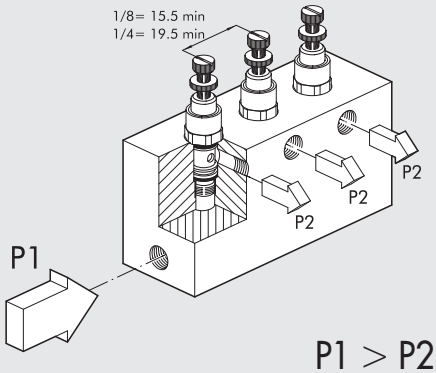
Example
Cylinder Ø 80 mm, stroke 200 mm, 6 bar, 12 cycles/min, 16 hours a day, 230 days a year. Consumption: 144 Nl/min => 3460 kWh/year => 880 litres of oil => 2428 kg of CO_2 => € 346/year. If you install an economizer that reduces the pressure from 6 to 2 bar, you SAVE: € 115/year.

REMOTE REDUCER



P1 > P2

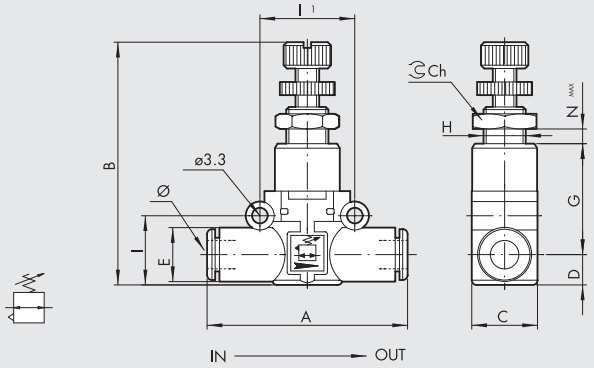
CARTRIDGE REDUCER, SERIE RMS



P1 > P2

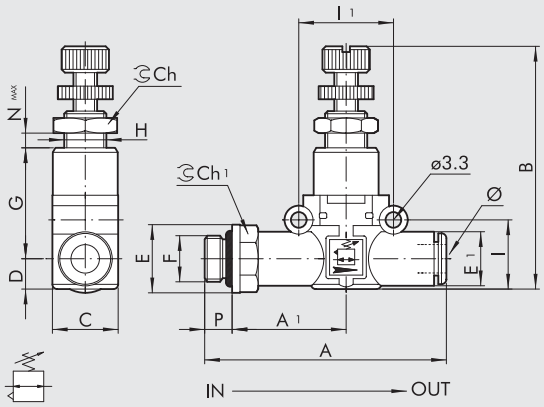
The cartridge regulator can be used:
- Fitted directly into the structure or along the air supply ducting.
- Package with common feed and separate regulated outlets.

LINE-MOUNTED MINIATURE REDUCER, SERIES RML



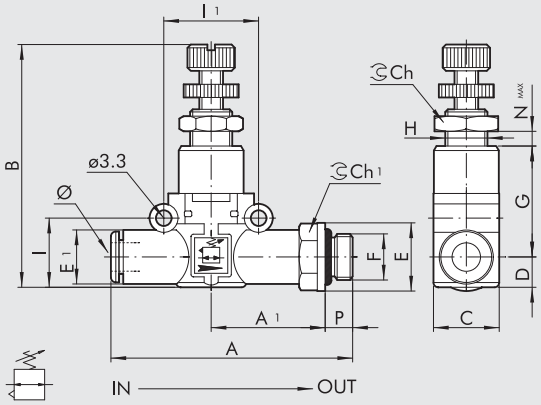
Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9061316	RML 6-6	6	49.4	46 - 52	14.7	6.4	11.4	24.8	M9x0.75	14.6	20	11	4.5
9061324	RML 8-8	8	57.3	52 - 58	18.7	9.1	13.8	27.4	M11x1	18.7	24	13	3.8

LINE-MOUNTED R/F MINIATURE REDUCER SERIES RML



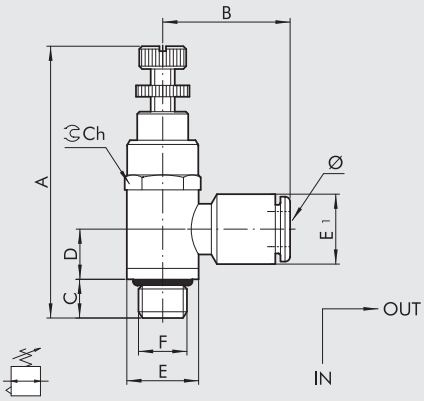
Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9061408	RML 1/8-6	1/8	6	6	58.5	27.8	46-52	14.7	6.4	14	11.4	24.8	M9x0.75	14.6	20	11	12	4.5
9061409	RML 1/4-6	1/4	6	8	61.5	28.8	46-52	14.7	6.4	18	11.4	24.8	M9x0.75	14.6	20	11	14	4.5
9061410	RML 1/8-8	1/8	8	6	66.2	31.8	52-58	18.7	9.1	15	13.8	27.4	M11x1	18.7	24	13	14	3.8
9061411	RML 1/4-8	1/4	8	8	70.6	34.2	52-58	18.7	9.1	18	13.8	27.4	M11x1	18.7	24	13	14	3.8
9061412	RML 3/8-8	3/8	8	9	72.2	34.8	52-58	18.7	9.1	22	13.8	27.4	M11x1	18.7	24	13	17	3.8

LINE-MOUNTED F/R MINIATURE REDUCER, SERIES RML



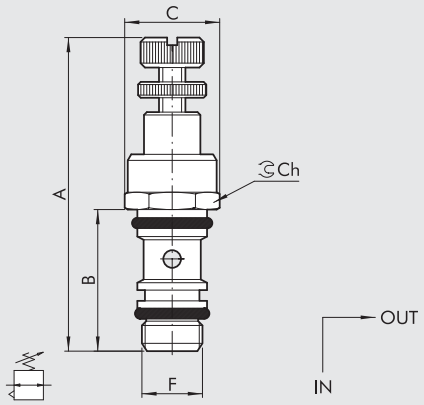
Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9061508	RML 6-1/8	6	1/8	6	58.5	27.8	46-52	14.7	6.4	14	11.4	24.8	M9x0.75	14.6	20	11	12	4.5
9061509	RML 6-1/4	6	1/4	8	61.5	28.8	46-52	14.7	6.4	18	11.4	24.8	M9x0.75	14.6	20	11	14	4.5
9061510	RML 8-1/8	8	1/8	6	66.2	31.8	52-58	18.7	9.1	15	13.8	27.4	M11x1	18.7	24	13	14	3.8
9061511	RML 8-1/4	8	1/4	8	70.6	34.2	52-58	18.7	9.1	18	13.8	27.4	M11x1	18.7	24	13	14	3.8
9061512	RML 8-3/8	8	3/8	9	72.2	34.8	52-58	18.7	9.1	22	13.8	27.4	M11x1	18.7	24	13	17	3.8

MINIATURE REDUCER, SERIES RMC



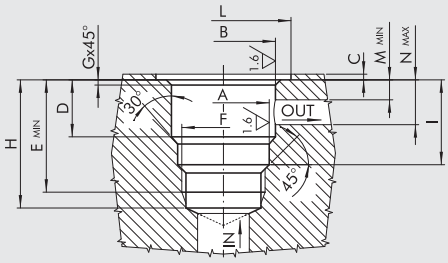
Code	Ref.	Ø	A	B	C	D	E	E1	Ch
9061102	RMC 1/8-4	4	51-57	20.4	7.1	12.7	14	9.5	14
9061108	RMC 1/8-6	6	51-57	23.7	7.1	12.7	14	11.3	14
9061110	RMC 1/8-8	8	51-57	25.6	7.1	12.7	14	13.8	14
9061109	RMC 1/4-6	6	57-63	25.1	9	11	18	11.3	17
9061111	RMC 1/4-8	8	57-63	27	9	11	18	13.8	17
9061112	RMC 1/4-10	10	57-63	32.2	9	11	18	16.5	17

CARTRIDGE REDUCER, SERIES RMS



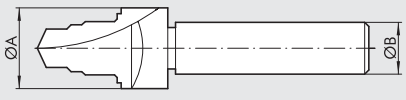
Code	Ref.	F	A	B	C	Ch
9061001	RMS 1/8	1/8	51-57	24.3	15	14
9061002	RMS 1/4	1/4	57-63	27.8	19	17

SEAT OF A MINIATURE CARTRIDGE REDUCER



	F	A	B	C	D	E	G	H	I	L	M	N
SE.RMS 1/8	1/8	9.8 $^{+0.1/-0}$	11.2 $^{\pm0.05}$	0.5 $^{\pm0.5}$	15.6 $^{\pm0.07}$	24.6	0.3	27	18.1 $^{\pm0.2}$	15.4	3.5	12
SE.RMS 1/4	1/4	13.5 $^{+0.1/-0}$	14.4 $^{\pm0.05}$	0.5 $^{\pm0.5}$	17.5 $^{\pm0.07}$	28	0.4	31.2	20.8 $^{\pm0.2}$	19.4	3.5	13.5

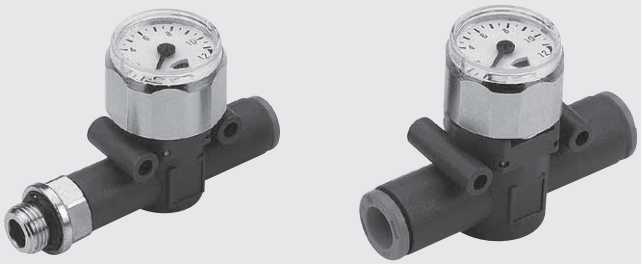
TOOL FOR RMS SEAT



Code	Ref.	Ø A	Ø B
9062001	UT.SE 1/8	16	12
9062002	UT.SE 1/4	20	15

IN-LINE PRESSURE GAUGE SERIES MAN L

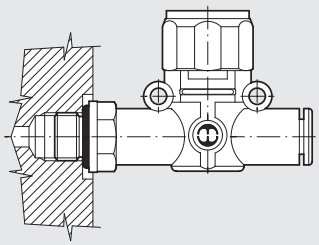
The MAN L pressure gauge belongs to the LINE ON LINE® family, which means it can be connected to all the other components in series or in parallel.
Available in the version for pipe-pipe connection with two push-in fittings, and in the version for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
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 4	Ø 6	Ø 8
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		
Compatibility with oils		See **chapter Z1**		

ASSEMBLY OPTIONS

Ⓐ



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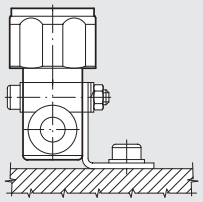

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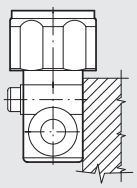

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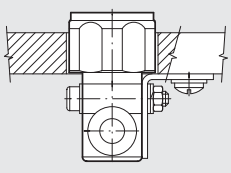
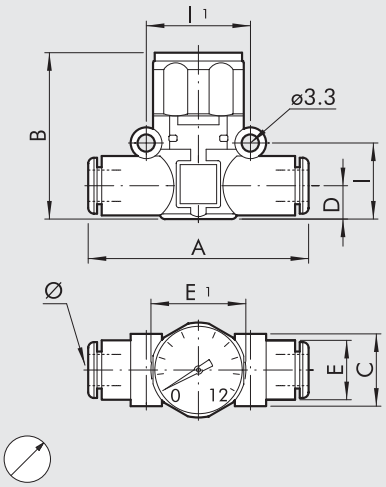


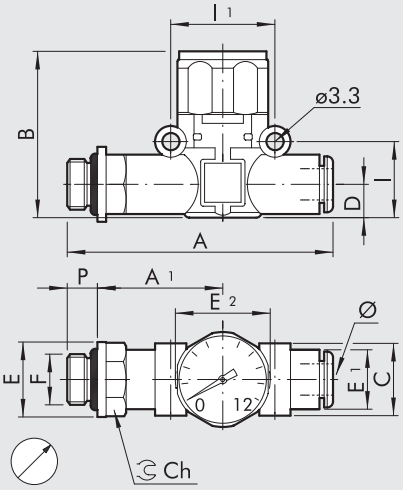
How to mount the MAN L:
- Fig. Ⓐ With the male threaded port it is possible to mount the MAN L straight onto the female thread.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the MAN L straight onto the wall.
- Fig. Ⓓ Use 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 4-4	4	41.8	36.1	10.7	5.6	10	23	12.8	16
9067016	MAN L 6-6	6	49.4	35	14.7	6.4	11.4	23	14.6	20
9067024	MAN L 8-8	8	57.3	41	18.7	9.1	13.8	23	18.7	24

MAN L THREAD-PIPE

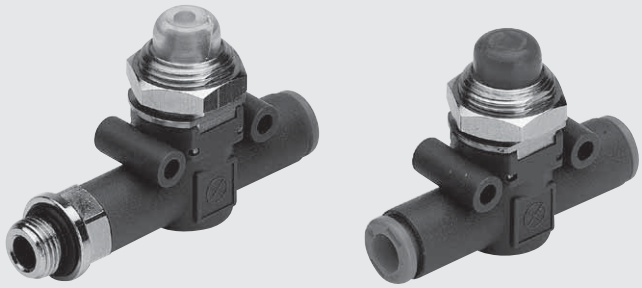


Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	E2	I	I1	Ch
9067101	MAN L M5-4	M5	4	4	47.7	26.7	36.1	10.7	5.6	9.9	10	23	12.8	16	9
9067102	MAN L 1/8-4	1/8	4	6	51.5	30.6	36.1	10.7	5.6	14	10	23	12.8	16	12
9067108	MAN L 1/8-6	1/8	6	6	58.5	27.8	35	14.7	6.4	14	11.4	23	14.6	20	12
9067109	MAN L 1/4-6	1/4	6	8	61.5	28.8	35	14.7	6.4	18	11.4	23	14.6	20	14
9067110	MAN L 1/8-8	1/8	8	6	66.2	31.8	41	18.7	9.1	15	13.8	23	18.7	24	14
9067111	MAN L 1/4-8	1/4	8	8	70.6	34.2	41	18.7	9.1	18	13.8	23	18.7	24	14
9067112	MAN L 3/8-8	3/8	8	9	72.2	34.8	41	18.7	9.1	22	13.8	23	18.7	24	17

NOTES

IN-LINE PRESSURE INDICATOR SERIES LAM L

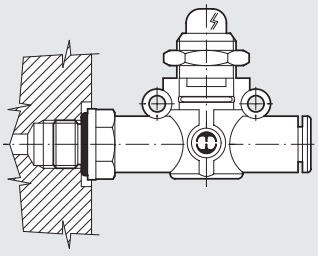
The LAM L pneumatic light indicator belongs to the LINE ON LINE® family, which means it can be connected to all the other components in series or in parallel.
Available in the version for pipe-pipe connection with two FOX push-in fittings, and in the version for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
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 6	Ø 8
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 ΔP 1 bar	Nl/min	420	800
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	
Compatibility with oils		See **chapter Z1**	

ASSEMBLY OPTIONS

Ⓐ



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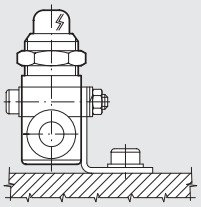

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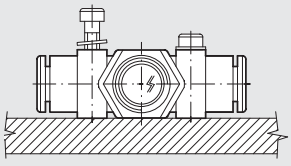

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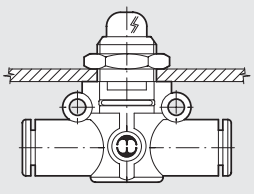
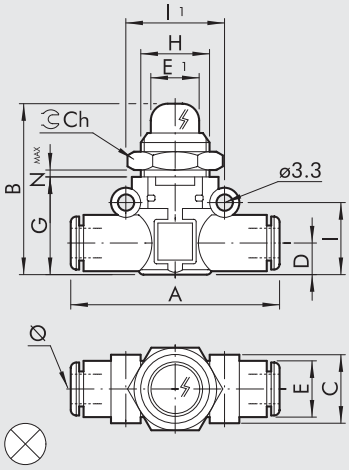


How to mount the LAM L:
- Fig. Ⓐ With the male threaded port it is possible to mount the LAM L straight onto the female thread.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the LAM L straight onto the wall.
- Fig. Ⓓ The ring nut is screwed onto the threaded metal part of the LAM L body for panel mounting.

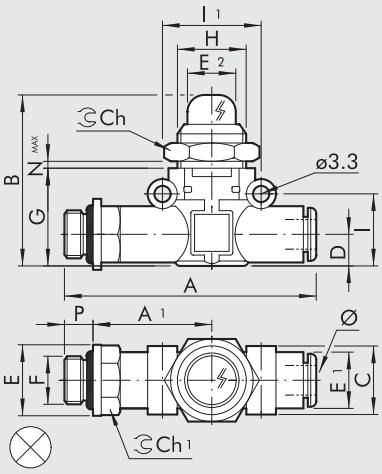
LAM L PIPE-PIPE



Code	Ref.	Ø	A	B	C	D	E	E1	G	H	I	I1	Ch	Nmax
9068016	LAM L 6-6-A	6	49.4	37	14.7	6.4	11.4	10.6	21	M15x1	14.6	20	17	4.5
9068216	LAM L 6-6-V													
9068024	LAM L 8-8-A	8	57.3	41	18.7	9.1	13.8	10.6	26	M15x1	18.7	24	17	4.5
9068224	LAM L 8-8-V													

A = Orange
V = Green

LAM L THREAD-PIPE

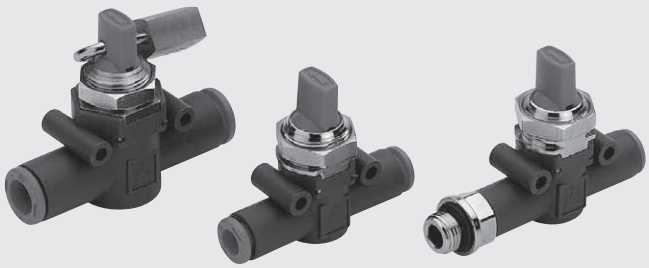


Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	E2	G	H	I	I1	Ch	Ch1	Nmax
9068108	LAM L 1/8-6-A	1/8	6	6	58.5	27.8	37	14.7	6.4	14	11.4	10.6	21	M15x1	14.6	20	17	12	4.5
9068308	LAM L 1/8-6-V																		
9068109	LAM L 1/4-6-A	1/4	6	8	61.5	28.8	37	14.7	6.4	18	11.4	10.6	21	M15x1	14.6	20	17	14	4.5
9068309	LAM L 1/4-6-V																		
9068110	LAM L 1/8-8-A	1/8	8	6	66.2	31.8	41	18.7	9.1	15	13.8	10.6	26	M15x1	18.7	24	17	14	4.5
9068310	LAM L 1/8-8-V																		
9068111	LAM L 1/4-8-A	1/4	8	8	70.6	34.2	41	18.7	9.1	18	13.8	10.6	26	M15x1	18.7	24	17	14	4.5
9068311	LAM L 1/4-8-V																		
9068112	LAM L 3/8-8-A	3/8	8	9	72.2	34.8	41	18.7	9.1	22	13.8	10.6	26	M15x1	18.7	24	17	17	4.5
9068312	LAM L 3/8-8-V																		

A = Orange
V = Green

IN-LINE SHUTOFF VALVE SERIES V2V L AND V3V L

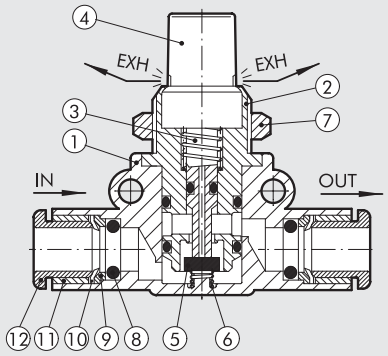
V2V L and V3V L shutoff valves belong to the LINE ON LINE® family which means they can be connected to all the other components in series or in parallel. Available in the version for pipe-pipe connection with two push-in fittings, and in the version for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
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 6	Ø 8
Operating pressure	MPa	1	
	bar	10	
	psi	145	
Temperature range	°C	– 20 to + 60	
	°F	– 4 to + 140	
Flow rate at 6.3 bar ΔP 1 bar	Nl/min	280	470
Exhaust flow rate at 6.3 bar	Nl/min	110	110
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered compressed air; if used, must be continuous	
Compatibility with oils		See **chapter Z1**	

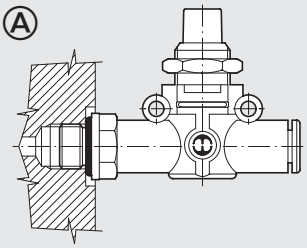
COMPONENTS

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

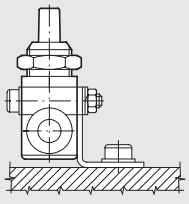


ASSEMBLY OPTIONS

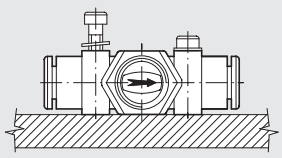
Ⓐ



Ⓑ



Ⓒ



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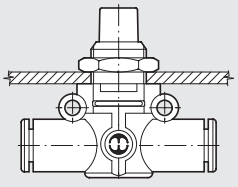
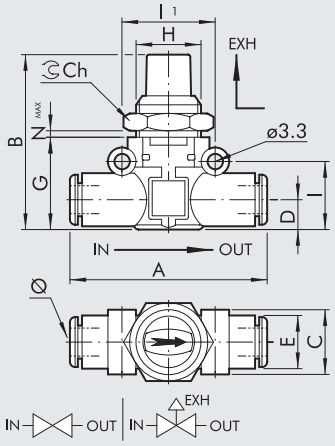


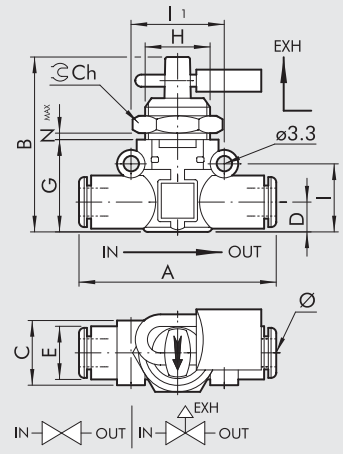
How to mount the V2V/V3V L:
- Fig. Ⓐ With the male threaded port it is possible to mount the V2V/V3V L straight onto the female thread.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the V2V/V3V L straight onto the wall.
- 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



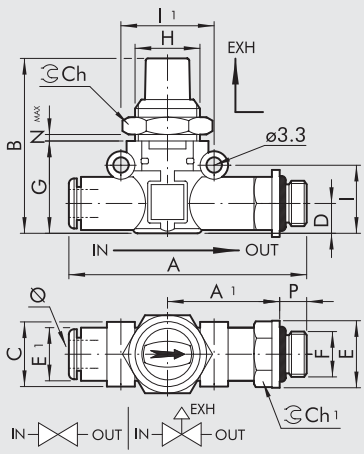
Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9065016	V2V L 6-6	6	49.4	41	14.7	6.4	11.4	21	M15x1	14.6	20	17	5.5
9066016	V3V L 6-6												
9065024	V2V L 8-8	8	57.3	46	18.7	9.1	13.8	26	M15x1	18.7	24	17	5.5
9066024	V3V L 8-8												

V2V/V3V L PIPE-PIPE PADLOCKED



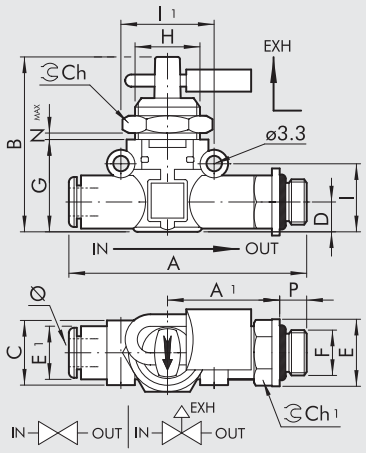
Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9065116	V2V L 6-6 KEY	6	49.4	41	14.7	6.4	11.4	21	M15x1	14.6	20	17	5.5
9066116	V3V L 6-6 KEY												
9065124	V2V L 8-8 KEY	8	57.3	46	18.7	9.1	13.8	26	M15x1	18.7	24	17	5.5
9066124	V3V L 8-8 KEY												

V2V/V3V L PIPE-THREAD



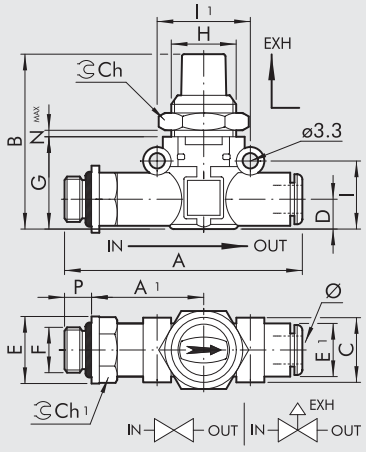
Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9065208	V2V L 6-1/8	6	1/8	6	58.5	27.8	41	14.7	6.4	14	11.4	21	M15x1	14.6	20	17	12	5.5
9066208	V3V L 6-1/8																	
9065209	V2V L 6-1/4	6	1/4	8	61.5	28.8	41	14.7	6.4	18	11.4	21	M15x1	14.6	20	17	14	5.5
9066209	V3V L 6-1/4																	
9065210	V2V L 8-1/8	8	1/8	6	66.2	31.8	46	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	14	5.5
9066210	V3V L 8-1/8																	
9065211	V2V L 8-1/4	8	1/4	8	70.6	34.2	46	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	14	5.5
9066211	V3V L 8-1/4																	
9065212	V2V L 8-3/8	8	3/8	9	72.2	34.8	46	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	17	5.5
9066212	V3V L 8-3/8																	

V2V/V3V L PIPE-THREAD PADLOCKED



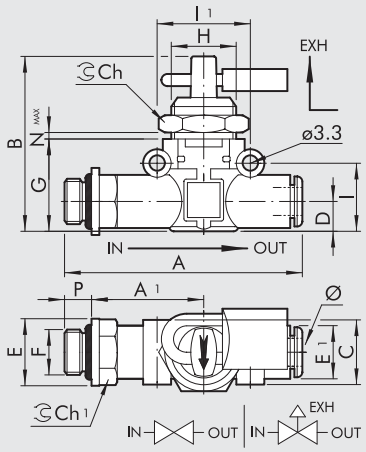
Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9065308	V2V L 6-1/8 KEY	6	1/8	6	58.5	27.8	41	14.7	6.4	14	11.4	21	M15x1	14.6	20	17	12	5.5
9066308	V3V L 6-1/8 KEY																	
9065309	V2V L 6-1/4 KEY	6	1/4	8	61.5	28.8	41	14.7	6.4	18	11.4	21	M15x1	14.6	20	17	14	5.5
9066309	V3V L 6-1/4 KEY																	
9065310	V2V L 8-1/8 KEY	8	1/8	6	66.2	31.8	46	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	14	5.5
9066310	V3V L 8-1/8 KEY																	
9065311	V2V L 8-1/4 KEY	8	1/4	8	70.6	34.2	46	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	14	5.5
9066311	V3V L 8-1/4 KEY																	
9065312	V2V L 8-3/8 KEY	8	3/8	9	72.2	34.8	46	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	17	5.5
9066312	V3V L 8-3/8 KEY																	

V2V/V3V L THREAD-PIPE



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9065408	V2V L 1/8-6	1/8	6	6	58.5	27.8	41	14.7	6.4	14	11.4	21	M15x1	14.6	20	17	12	5.5
9066408	V3V L 1/8-6																	
9065409	V2V L 1/4-6	1/4	6	8	61.5	28.8	41	14.7	6.4	18	11.4	21	M15x1	14.6	20	17	14	5.5
9066409	V3V L 1/4-6																	
9065410	V2V L 1/8-8	1/8	8	6	66.2	31.8	46	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	14	5.5
9066410	V3V L 1/8-8																	
9065411	V2V L 1/4-8	1/4	8	8	70.6	34.2	46	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	14	5.5
9066411	V3V L 1/4-8																	
9065412	V2V L 3/8-8	3/8	8	9	72.2	34.8	46	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	17	5.5
9066412	V3V L 3/8-8																	

V2V/V3V L THREAD-PIPE PADLOCKED



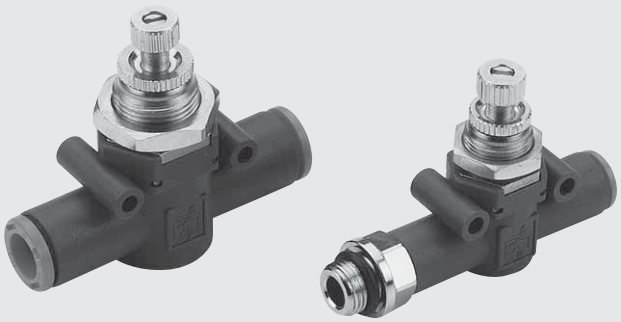
Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9065508	V2V L 1/8-6 KEY	1/8	6	6	58.5	27.8	41	14.7	6.4	14	11.4	21	M15x1	14.6	20	17	12	5.5
9066508	V3V L 1/8-6 KEY																	
9065509	V2V L 1/4-6 KEY	1/4	6	8	61.5	28.8	41	14.7	6.4	18	11.4	21	M15x1	14.6	20	17	14	5.5
9066509	V3V L 1/4-6 KEY																	
9065510	V2V L 1/8-8 KEY	1/8	8	6	66.2	31.8	46	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	14	5.5
9066510	V3V L 1/8-8 KEY																	
9065511	V2V L 1/4-8 KEY	1/4	8	8	70.6	34.2	46	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	14	5.5
9066511	V3V L 1/4-8 KEY																	
9065512	V2V L 3/8-8 KEY	3/8	8	9	72.2	34.8	46	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	17	5.5
9066512	V3V L 3/8-8 KEY																	

IN-LINE FLOW MICRO-REGULATOR SERIES 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
- Push-in input fitting and threaded port on the exhaust (cylinder type)
- Input threaded port and push-in fitting on the exhaust (valve type)

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

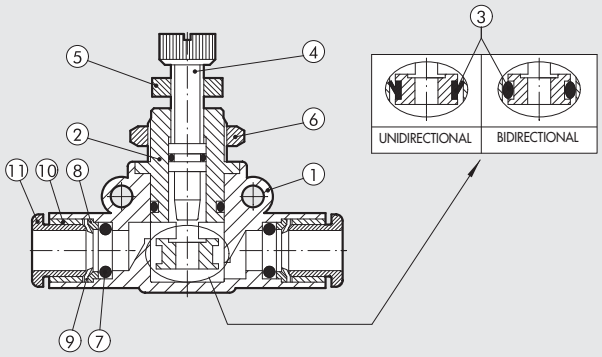
There are four possible types of assembly (see example below).



TECHNICAL DATA		Ø 4	Ø 6	Ø 8
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	Nl/min	155	450	850
Flow rate on exhaust at 6.3 bar	Nl/min	160	550	950
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			See **chapter Z1**	

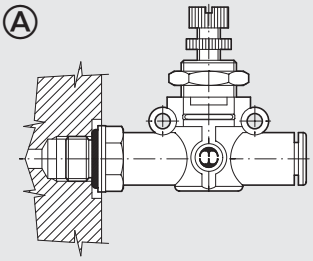
COMPONENTS

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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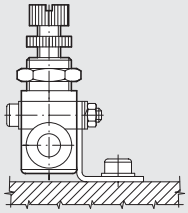

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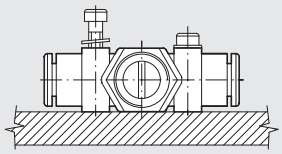
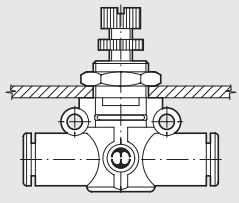


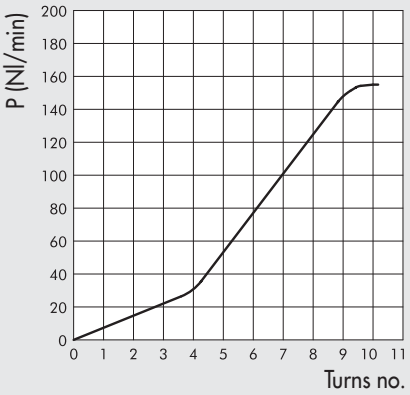
Ⓓ



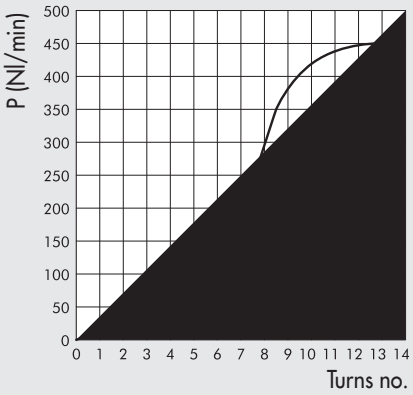
How to mount the RFL L:
- Fig. Ⓐ With the male threaded port it is possible to mount the RFL L straight onto the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the RFL L straight onto the wall.
- 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 DEPENDING ON THE TURNS EFFECTED BY THE REGULATION SCREW

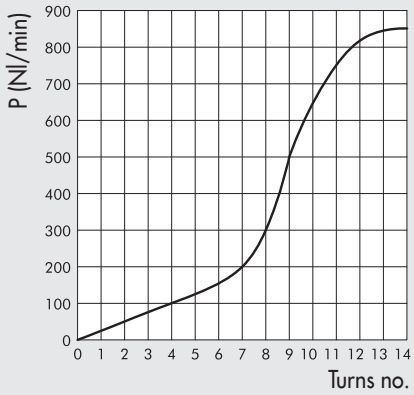
RFL L Ø 4



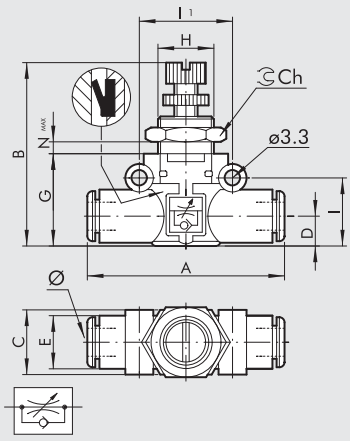
RFL L Ø 6



RFL L Ø 8

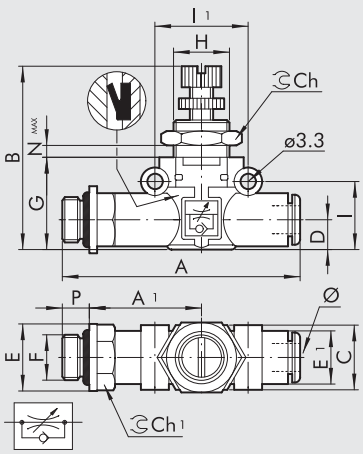


RFL L PIPE-PIPE UNIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041301	RFL L U 4-4	4	42	33.5-36.5	10.7	5.6	10	17.5	M9x0.75	12.8	16	11	4
9041316	RFL L U 6-6	6	49.4	36-41	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041324	RFL L U 8-8	8	57.3	44-49	18.7	9.1	13.8	26	M15x1	18.7	24	20	4.5

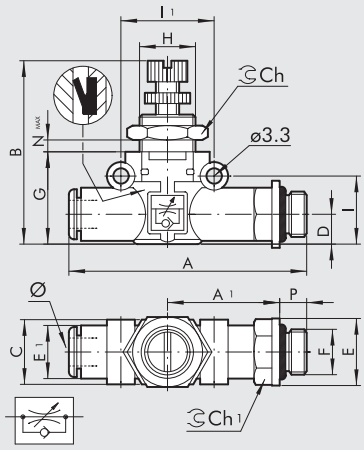
RFL L THREAD-PIPE UNIDIRECTIONAL CYLINDER VERSION



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041401	RFL L U M5-4	M5	4	4	47.7	22.7	33.5-36.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	4
9041402	RFL L U 1/8-4	1/8	4	6	51.6	24.6	33.5-36.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	4
9041408	RLF L U 1/8-6	1/8	6	6	58.5	27.8	36-41	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4
9041409	RFL L U 1/4-6	1/4	6	8	61.5	28.8	36-41	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4
9041410	RFL L U 1/8-8	1/8	8	6	66.2	31.8	44-49	18.7	9.1	15	13.8	26	M15x1	18.7	24	20	14	4.5
9041411	RFL L U 1/4-8	1/4	8	8	70.6	34.2	44-49	18.7	9.1	18	13.8	26	M15x1	18.7	24	20	14	4.5
9041412	RFL L U 3/8-8	3/8	8	9	72.2	34.8	44-49	18.7	9.1	22	13.8	26	M15x1	18.7	24	20	17	4.5

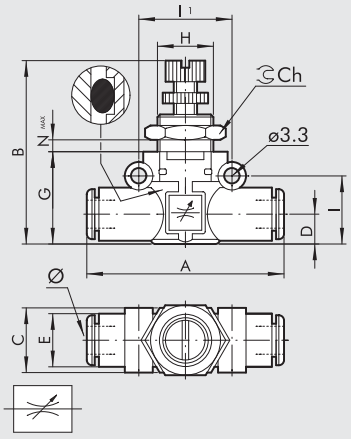
METAL WORK PNEUMATIC

RFL L PIPE-THREAD UNIDIRECTIONAL VALVE VERSION



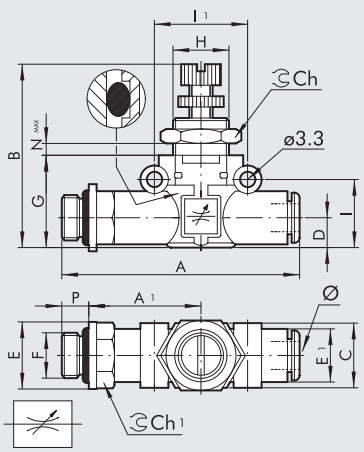
Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041501	RFL L U 4-M5	4	M5	4	47.7	22.7	33.5-36.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	4
9041502	RFL L U 4-1/8	4	1/8	6	51.6	24.6	33.5-36.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	4
9041508	RFL L U 6-1/8	6	1/8	6	58.5	27.8	36-41	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4
9041509	RFL L U 6-1/4	6	1/4	8	61.5	28.8	36-41	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4
9041510	RFL L U 8-1/8	8	1/8	6	66.2	31.8	44-49	18.7	9.1	15	13.8	26	M15x1	18.7	24	20	14	4.5
9041511	RFL L U 8-1/4	8	1/4	8	70.6	34.2	44-49	18.7	9.1	18	13.8	26	M15x1	18.7	24	20	14	4.5
9041512	RFL L U 8-3/8	8	3/8	9	72.2	34.8	44-49	18.7	9.1	22	13.8	26	M15x1	18.7	24	20	17	4.5

RFL L PIPE-PIPE BIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041601	RFL L B 4-4	4	42	33.5-36.5	10.7	5.6	10	17.5	M9x0.75	12.8	16	11	4
9041616	RFL L B 6-6	6	49.4	36-41	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041624	RFL L B 8-8	8	57.3	44-49	18.7	9.1	13.8	26	M15x1	18.7	24	20	4.5

RFL L THREAD-PIPE BIDIRECTIONAL



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041701	RFL L B M5-4	M5	4	4	47.7	22.7	33.5-36.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	4
9041702	RFL L B 1/8-4	1/8	4	6	51.6	24.6	33.5-36.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	4
9041708	RFL L B 1/8-6	1/8	6	6	58.5	27.8	36-41	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4
9041709	RFL L B 1/4-6	1/4	6	8	61.5	28.8	36-41	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4
9041710	RFL L B 1/8-8	1/8	8	6	66.2	31.8	44-49	18.7	9.1	15	13.8	26	M15x1	18.7	24	20	14	4.5
9041711	RFL L B 1/4-8	1/4	8	8	70.6	34.2	44-49	18.7	9.1	18	13.8	26	M15x1	18.7	24	20	14	4.5
9041712	RFL L B 3/8-8	3/8	8	9	72.2	34.8	44-49	18.7	9.1	22	13.8	26	M15x1	18.7	24	20	17	4.5

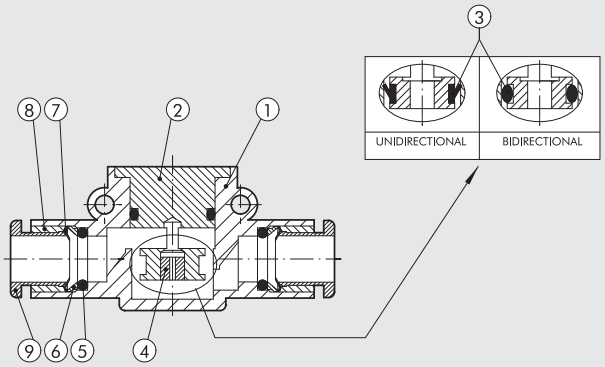
IN-LINE FIXED-REGULATION FLOW REGULATOR SERIES RFF L

The in-line fixed regulation flow regulator belongs to the LINE ON LINE® family and can be connected in series or in parallel with the other products in the same family. The RFF L regulates the flow of air, and hence the rate of operation of pneumatic actuators. Air flow is regulated by means of a choke with a calibrated diameter. A full range of diameters is available. The advantage of the RFF L over other adjustable versions is that there is no need for regulation during machine installation. Subsequent adjustments are not required either. Two versions are available. Version U (unidirectional) regulates the flow in one direction only. Version B (bidirectional) regulates the air flow in both directions. The flow regulator can be mounted in three different ways (see example below).

TECHNICAL DATA		Ø 4	Ø 6	Ø 8
Max. operating pressure	MPa		1	
	bar		10	
	psi		145	
Temperature range	°C		– 20 to + 60	
	°F		– 4 to + 140	
Choke flow rate	Nl/min		See table below	
Recommended pipe			Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid			Lubricated or unlubricated filtered air	
Compatibility with oils			See **chapter Z1**	

COMPONENTS

① Technopolymer body
② Nickel-plated brass gasket holding insert
③ NBR gasket
④ Brass choke cartridge
⑤ NBR seal
⑥ Technopolymer spring ring
⑦ Stainless steel clip-on spring
⑧ Technopolymer stop bushing
⑨ Technopolymer release bushing



EXHAUST FLOW RATE AT 6.3 bar FOR VERSIONS C-U-V (Nl/min)

Choke (mm)	Ø 4	Ø 6	Ø 8
Ø 0.2	142	552	912
Ø 0.3	144	554	914
Ø 0.4	147	557	917
Ø 0.5	153	563	923
Ø 0.6	155	565	925
Ø 0.8	172	582	942
Ø 1.0	190	600	960
Ø 1.3	225	635	995
Ø 1.5	250	660	1020

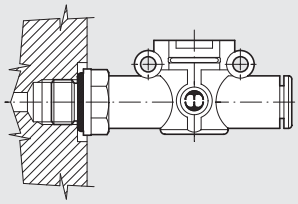
CHOKE FLOW-RATE AT 6 bar WITH RELIEF VALVE OPEN

Choke (mm)	Flow rate (Nl/min)
Ø 0.2	2
Ø 0.3	4
Ø 0.4	7
Ø 0.5	13
Ø 0.6	15
Ø 0.8	32
Ø 1.0	50
Ø 1.3	85
Ø 1.5	110

METAL WORK PNEUMATIC

ASSEMBLY OPTIONS

Ⓐ



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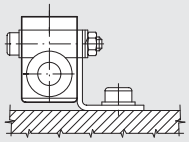

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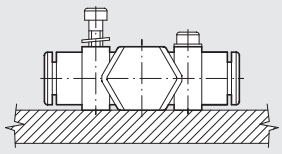
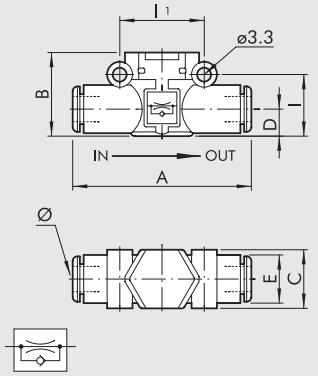


How to mount the RFF L:
- Fig. Ⓐ With the male threaded port it is possible to mount the RFF L straight onto the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the RFF L straight onto the wall.

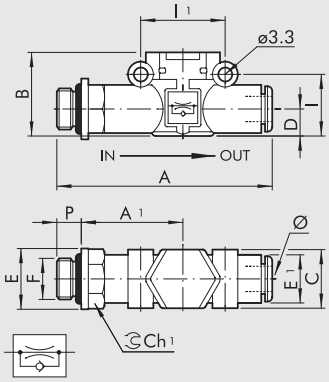
RFF L PIPE - PIPE UNIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	I	I1
9070U11_ _*	RFF-U L 4-4	4	42	17.5	10.7	5.6	10	12.8	16
9070U22_ _*	RFF-U L 6-6	6	49.4	20	14.7	6.4	11.4	14.6	20
9070U33_ _*	RFF-U L 8-8	8	57.3	25.5	18.7	9.1	13.8	18.7	24

* The last two digits indicate the narrowing Ø. To complete the code please look at the key to codes.

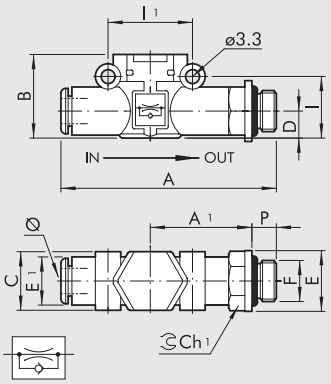
RFF L THREAD - PIPE UNIDIRECTIONAL CYLINDER VERSION



Code	Ref.	F	Ø	P	A	A1	B	C	E	E1	I	I1	Ch1
9070C51_ _*	RFF-C L M5 - Ø4	M5	4	4	47.7	22.7	17.5	10.7	9.9	10	12.8	16	9
9070C61_ _*	RFF-C L 1/8" - Ø4	1/8	4	6	51.6	24.6	17.5	10.7	14	10	12.8	16	12
9070C62_ _*	RFF-C L 1/8" - Ø6	1/8	6	6	58.5	27.8	20	14.7	14	11.4	14.6	20	12
9070C72_ _*	RFF-C L 1/4" - Ø6	1/4	6	8	61.5	28.8	20	14.7	18	11.4	14.6	20	14
9070C63_ _*	RFF-C L 1/8" - Ø8	1/8	8	6	66.2	31.8	25.5	18.7	15	13.8	18.7	24	14
9070C73_ _*	RFF-C L 1/4" - Ø8	1/4	8	8	70.6	34.2	25.5	18.7	18	13.8	18.7	24	14
9070C83_ _*	RFF-C L 3/8" - Ø8	3/8	8	9	72.2	34.8	25.5	18.7	22	13.8	18.7	24	17

* The last two digits indicate the narrowing Ø. To complete the code please look at the key to codes.

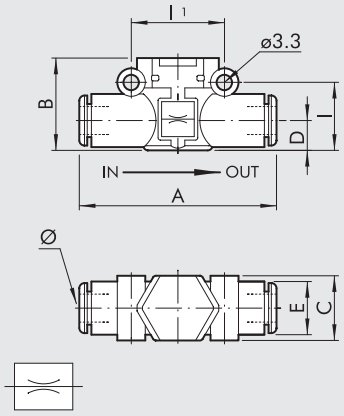
RFF L PIPE - THREAD UNIDIRECTIONAL VALVE VERSION



Code	Ref.	Ø	F	P	A	A1	B	C	E	E1	I	I1	Ch1
9070V15_ _*	RFF-V L Ø4 - M5	4	M5	4	47.7	22.7	17.5	10.7	9.9	10	12.8	16	9
9070V16_ _*	RFF-V L Ø4 - 1/8"	4	1/8	6	51.6	24.6	17.5	10.7	14	10	12.8	16	12
9070V26_ _*	RFF-V L Ø6 - 1/8"	6	1/8	6	58.5	27.8	20	14.7	14	11.4	14.6	20	12
9070V27_ _*	RFF-V L Ø6 - 1/4"	6	1/4	8	61.5	28.8	20	14.7	18	11.4	14.6	20	14
9070V36_ _*	RFF-V L Ø8 - 1/8"	8	1/8	6	66.2	31.8	25.5	18.7	15	13.8	18.7	24	14
9070V37_ _*	RFF-V L Ø8 - 1/4"	8	1/4	8	70.6	34.2	25.5	18.7	18	13.8	18.7	24	14
9070V38_ _*	RFF-V L Ø8 - 3/8"	8	3/8	9	72.2	34.8	25.5	18.7	22	13.8	18.7	24	17

* The last two digits indicate the narrowing Ø. To complete the code please look at the key to codes.

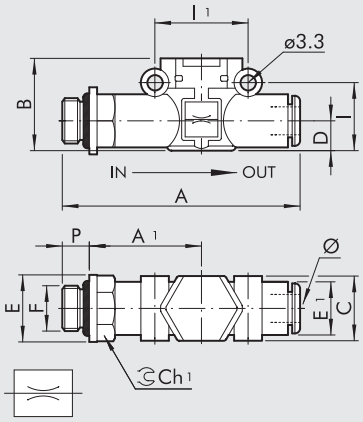
RFF L PIPE - PIPE BIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	I	I1
9070B11_ _*	RFF-B L 4-4	4	42	17.5	10.7	5.6	10	12.8	16
9070B22_ _*	RFF-B L 6-6	6	49.4	20	14.7	6.4	11.4	14.6	20
9070B33_ _*	RFF-B L 8-8	8	57.3	25.5	18.7	9.1	13.8	18.7	24

* The last two digits indicate the narrowing Ø. To complete the code please look at the key to codes.

RFF L THREAD - PIPE BIDIRECTIONAL



Code	Ref.	F	Ø	P	A	A1	B	C	E	E1	I	I1	Ch1
9070B51_ _*	RFF-B L M5 - Ø 4	M5	4	4	47.7	22.7	17.5	10.7	9.9	10	12.8	16	9
9070B61_ _*	RFF-B L 1/8" - Ø 4	1/8	4	6	51.6	24.6	17.5	10.7	14	10	12.8	16	12
9070B62_ _*	RFF-B L 1/8" - Ø 6	1/8	6	6	58.5	27.8	20	14.7	14	11.4	14.6	20	12
9070B72_ _*	RFF-B L 1/4" - Ø 6	1/4	6	8	61.5	28.8	20	14.7	18	11.4	14.6	20	14
9070B63_ _*	RFF-B L 1/8" - Ø 8	1/8	8	6	66.2	31.8	25.5	18.7	15	13.8	18.7	24	14
9070B73_ _*	RFF-B L 1/4" - Ø 8	1/4	8	8	70.6	34.2	25.5	18.7	18	13.8	18.7	24	14
9070B83_ _*	RFF-B L 3/8" - Ø 8	3/8	8	9	72.2	34.8	25.5	18.7	22	13.8	18.7	24	17

* The last two digits indicate the narrowing Ø. To complete the code please look at the key to codes.

KEY TO CODES

9070	B	11	02
TYPE	**FUNCTION**	**Ø IN - Ø OUT**	**Ø CHOKE**
9070 RFF L	**B** Bidirectional	■ **11** = Ø 4 - Ø 4	**02** = Ø 0.2
	C For cylinder	✱ **15** = Ø 4 - M5	**03** = Ø 0.3
	U Unidirectional	✱ **16** = Ø 4 - 1/8"	**04** = Ø 0.4
	V For valve	■ **22** = Ø 6 - Ø 6	**05** = Ø 0.5
		✱ **26** = Ø 6 - 1/8"	**06** = Ø 0.6
		✱ **27** = Ø 6 - 1/4"	**08** = Ø 0.8
		■ **33** = Ø 8 - Ø 8	**10** = Ø 1.0
		✱ **36** = Ø 8 - 1/8"	**13** = Ø 1.3
		✱ **37** = Ø 8 - 1/4"	**15** = Ø 1.5
		✱ **38** = Ø 8 - 3/8"	
		● **51** = M5 - Ø 4	
		● **61** = 1/8" - Ø 4	
		● **62** = 1/8" - Ø 6	
		● **63** = 1/8" - Ø 8	
		● **72** = 1/4" - Ø 6	
		● **73** = 1/4" - Ø 8	
		● **83** = 3/8" - Ø 8	

■ Only for **B** (bidirectional) and **U** (unidirectional) versions
✱ Only for **V** (valve) versions
● Only for **C** (cylinder) and **B** (bidirectional) versions

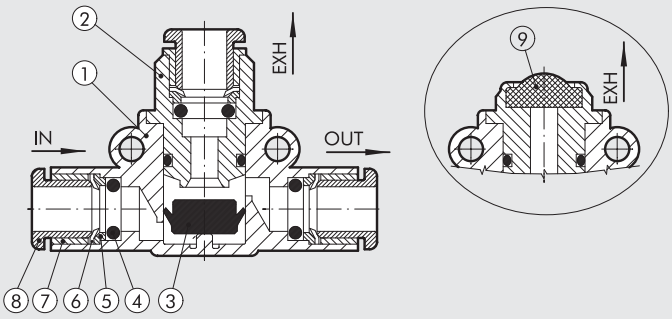
IN-LINE QUICK-EXHAUST VALVES SERIES VSR L

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, and in the version for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
Exhaust can be silenced using a STAINLESS steel wire silencer, or conveyed using a push-in fitting.

TECHNICAL DATA		Ø 4	Ø 6	Ø 8
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 ΔP 1 bar	Nl/min	50	270	400
Exhaust flow rate at 6.3 bar	Nl/min	100	700	1000
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		See **chapter Z1**		

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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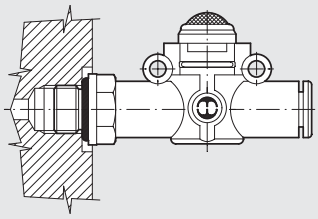

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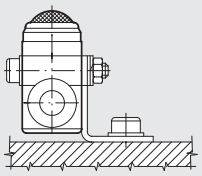

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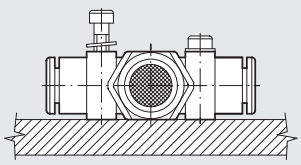
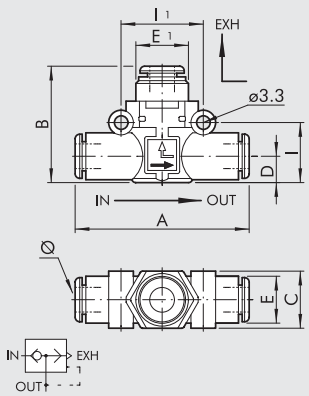


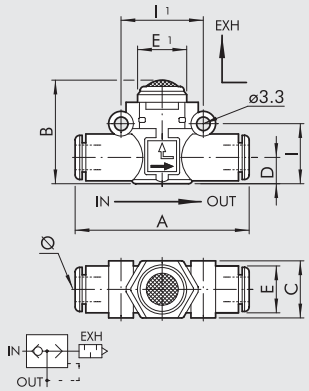
How to mount the VSR L:
• Fig. Ⓐ With the male threaded port it is possible to mount the VSR L straight onto the actuator.
• Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
• Fig. Ⓒ There are two robust rings on the plastic body for fixing the VSR L straight onto the wall.

VSR L PIPE-PIPE, CONVEYED EXHAUST



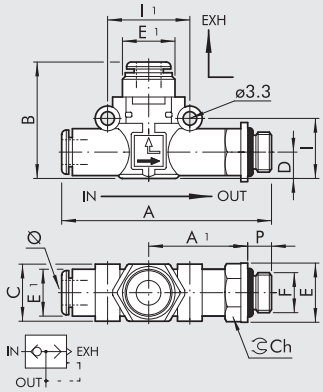
Code	Ref.	Ø	A	B	C	D	E	E1	I	I1
9063001	VSR L 4-4-4	4	41.8	25.8	10.7	5.6	10	9.7	12.8	16
9063016	VSR L 6-6-6	6	49.4	30.2	14.7	6.4	11.4	13	14.6	20
9063024	VSR L 8-8-8	8	57.3	35.9	18.7	9.1	13.8	15	18.7	24

VSR L PIPE-PIPE, SILENCED EXHAUST



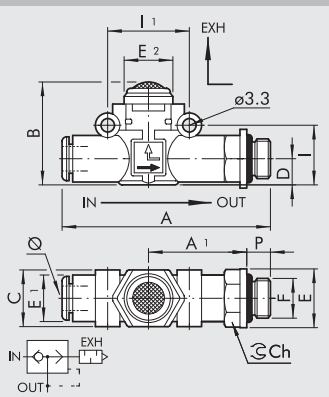
Code	Ref.	Ø	A	B	C	D	E	E1	I	I1
9063101	VSR L 4-4-SIL	4	41.8	19.8	10.7	5.6	10	10	12.8	16
9063116	VSR L 6-6-SIL	6	49.4	25.5	14.7	6.4	11.4	14	14.6	20
9063124	VSR L 8-8-SIL	8	57.3	31.5	18.7	9.1	13.8	18	18.7	24

VSR L PIPE-THREAD, CONVEYED EXHAUST



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	E2	I	I1	Ch
9063201	VSR L 4-M5-4	4	M5	4	47.7	22.7	25.8	10.7	5.6	9.9	10	9.7	12.8	16	9
9063202	VSR L 4-1/8-4	4	1/8	6	50.6	24.6	25.8	10.7	5.6	14	10	9.7	12.8	16	12
9063208	VSR L 6-1/8-6	6	1/8	6	58.5	27.8	30.2	14.7	6.4	14	11.4	13	14.6	20	12
9063209	VSR L 6-1/4-6	6	1/4	8	61.5	28.8	30.2	14.7	6.4	18	11.4	13	14.6	20	14
9063210	VSR L 8-1/8-8	8	1/8	6	66.2	31.8	35.9	18.7	9.1	15	13.8	15	18.7	24	14
9063211	VSR L 8-1/4-8	8	1/4	8	70.6	34.2	35.9	18.7	9.1	18	13.8	15	18.7	24	14
9063212	VSR L 8-3/8-8	8	3/8	9	72.2	34.8	35.9	18.7	9.1	22	13.8	15	18.7	24	17

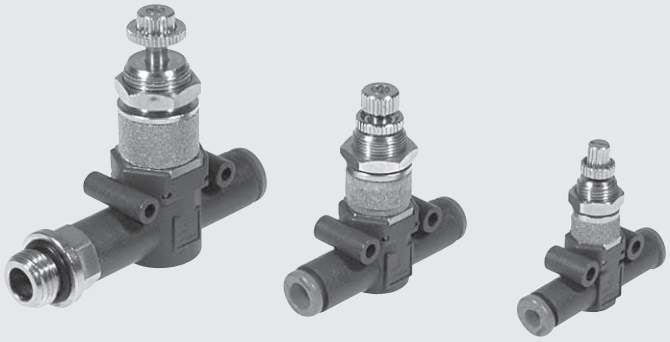
VSR L PIPE-THREAD, SILENCED EXHAUST



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	E2	I	I1	Ch
9063301	VSR L 4-M5-SIL	4	M5	4	46.7	22.7	19.8	10.7	5.6	9.9	10	10	12.8	16	9
9063302	VSR L 4-1/8-SIL	4	1/8	6	50.6	24.6	19.8	10.7	5.6	14	10	10	12.8	16	12
9063308	VSR L 6-1/8-SIL	6	1/8	6	58.5	27.8	25.5	14.7	6.4	14	11.4	14	14.6	20	12
9063309	VSR L 6-1/4-SIL	6	1/4	8	61.5	28.8	25.5	14.7	6.4	18	11.4	14	14.6	20	14
9063310	VSR L 8-1/8-SIL	8	1/8	6	66.2	31.8	31.5	18.7	9.1	15	13.8	18	18.7	24	14
9063311	VSR L 8-1/4-SIL	8	1/4	8	70.6	34.2	31.5	18.7	9.1	18	13.8	18	18.7	24	14
9063312	VSR L 8-3/8-SIL	8	3/8	9	72.2	34.8	31.5	18.7	9.1	22	13.8	18	18.7	24	17

IN-LINE QUICK-EXHAUST VALVE WITH REGULATED EXHAUST SERIES VSRR L

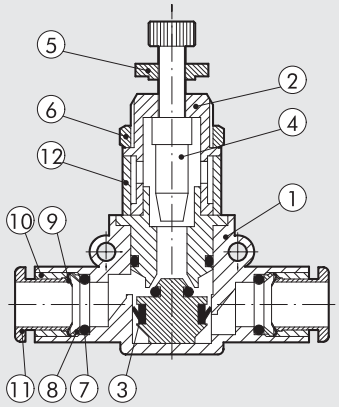
The VSRR L quick-exhaust valve with regulated exhaust belongs to the LINE ON LINE® family of products and can be linked in series or in parallel to all the other products.
It comes in a version for pipe-pipe connection, which includes two push-in fittings, and a version for thread-pipe connection, which includes a nickel-plated brass taper thread and push-in fitting.
The main feature of these valves is that the discharge flow can be adjusted via a pin regulator. This allows you to control the speed of the actuator connected to the valve, giving a higher speed than with an MRF regulator.



TECHNICAL DATA		Ø 4	Ø 6	Ø 8
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 ΔP 1 bar	Nl/min	50	270	400
Flow rate on exhaust at 6.3 bar	Nl/min	170	460	960
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			See **chapter Z1**	

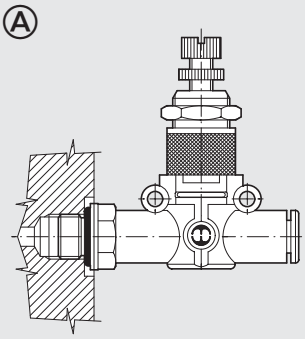
COMPONENTS

① Technopolymer body
② Nickel-plated brass seal support
③ NBR gasket
④ Brass adjusting needle
⑤ Nickel-plated brass needle ring nut
⑥ Nickel-plated brass 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
⑫ Sintered bronze silencer



ASSEMBLY OPTIONS

Ⓐ



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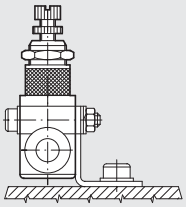

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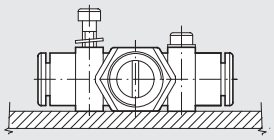

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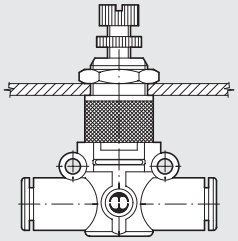
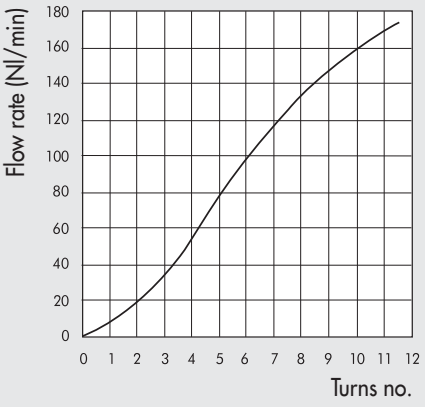


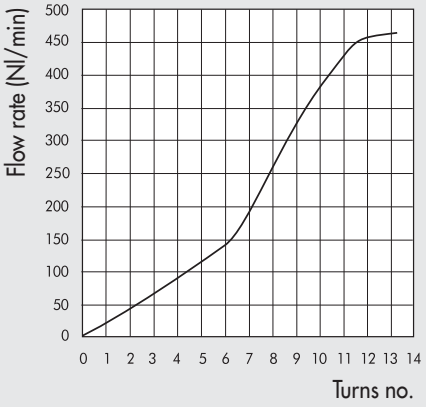
How to mount the VSRR L:
- Fig. Ⓐ With the male threaded port it is possible to mount the VSRR L straight onto the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the VSRR L straight onto the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

EXHAUST FLOW CHARTS VSRR L

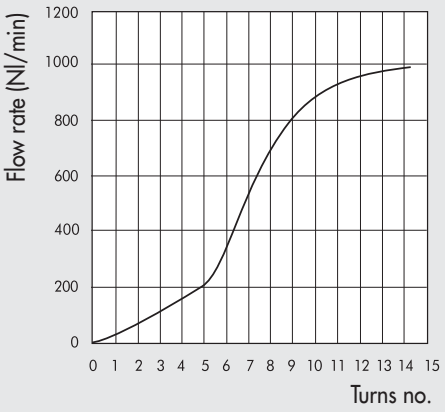
VSRR L Ø 4



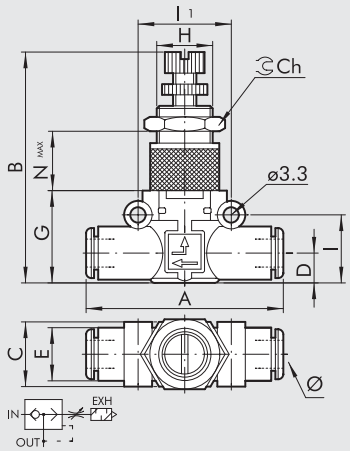
VSRR L Ø 6



VSRR L Ø 8

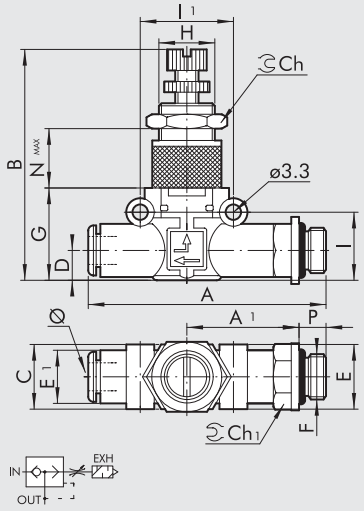


VSRR L PIPE-PIPE



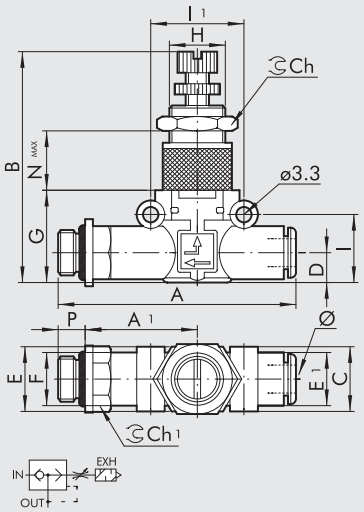
Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9063501	VSRR L 4-4	4	42	39.5-43.5	10.7	5.6	10	17.5	M9x0.75	12.8	16	11	11.5
9063516	VSRR L 6-6	6	49.4	47-52	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	15.5
9063524	VSRR L 8-8	8	57.3	56-61.2	18.7	9.1	13.8	26	M15x1	18.7	24	17	18.5

VSRR L THREAD-PIPE



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9063601	VSRR L M5-4	M5	4	4	47.7	22.7	39.5-43.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	11.5
9063602	VSRR L 1/8-4	1/8	4	6	51.6	24.6	39.5-43.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	11.5
9063608	VSRR L 1/8-6	1/8	6	6	58.5	27.8	47-52	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	15.5
9063609	VSRR L 1/4-6	1/4	6	8	61.5	28.8	47-52	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	15.5
9063610	VSRR L 1/8-8	1/8	8	6	66.2	31.8	56-61.2	18.7	9.1	15	13.8	26	M15x1	18.7	26	17	14	18.5
9063611	VSRR L 1/4-8	1/4	8	8	70.6	34.2	56-61.2	18.7	9.1	18	13.8	26	M15x1	18.7	26	17	14	18.5
9063612	VSRR L 3/8-8	3/8	8	9	72.2	34.8	56-61.2	18.7	9.1	22	13.8	26	M15x1	18.7	26	17	17	18.5

VSRR L PIPE-THREAD

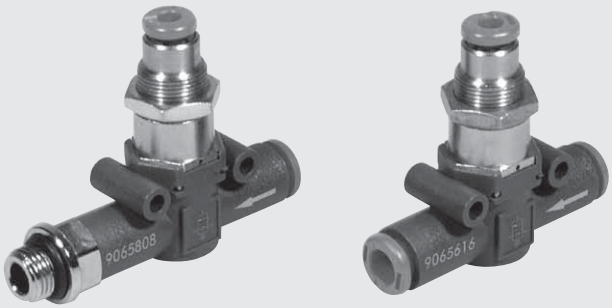


Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9063701	VSRR L 4-M5	4	M5	4	47.7	22.7	39.5-43.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	11.5
9063702	VSRR L 4-1/8	4	1/8	6	51.6	24.6	39.5-43.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	11.5
9063708	VSRR L 6-1/8	6	1/8	6	58.5	27.8	47-52	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	15.5
9063709	VSRR L 6-1/4	6	1/4	8	61.5	28.8	47-52	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	15.5
9063710	VSRR L 8-1/8	8	1/8	6	66.2	31.8	56-61.2	18.7	9.1	15	13.8	26	M15x1	18.7	26	17	14	18.5
9063711	VSRR L 8-1/4	8	1/4	8	70.6	34.2	56-61.2	18.7	9.1	18	13.8	26	M15x1	18.7	26	17	14	18.5
9063712	VSRR L 8-3/8	8	3/8	9	72.2	34.8	56-61.2	18.7	9.1	22	13.8	26	M15x1	18.7	26	17	17	18.5

NOTES

IN-LINE STOP VALVE SERIES STP L

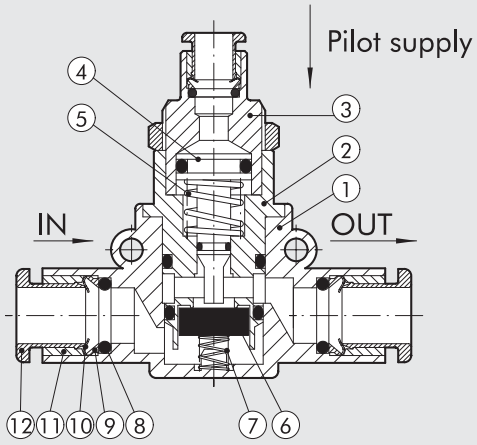
The STP L stop valve belongs to the LINE ON LINE® family and can be connected in series or in parallel with the other products in the same family. It is available in a version for pipe-pipe connection, which includes two push-in fittings, and a version for thread-pipe connection, which includes a nickel-plated brass male thread and a push-in fitting. The stop valve is normally mounted on the inlet port of cylinders and allows the flow of air only in the presence of a pneumatic pilot.
Cylinder movement ceases if there is a drop in pneumatic pilot pressure. The compressed air port is a push-in fitting for Ø 4 pipe. This stop valve is available in a unidirectional version, so the flow can be interrupted in one direction, but remains free in the other direction.
This valve can also be used as a unidirectional normally-closed 2/2 pneumatic control valve.



TECHNICAL DATA		Ø 6	Ø 8
Max. operating pressure	MPa	1	
	bar	10	
	psi	145	
Temperature range	°C	–20 to +60	
	°F	–4 to +140	
Recommended pipe		Rilsan PA 11 - Nylon 6 - Polyamide 12 - Polypropylene	
Fluid		Lubricated or unlubricated filtered air	
Compatibility with oils		See **chapter Z1**	

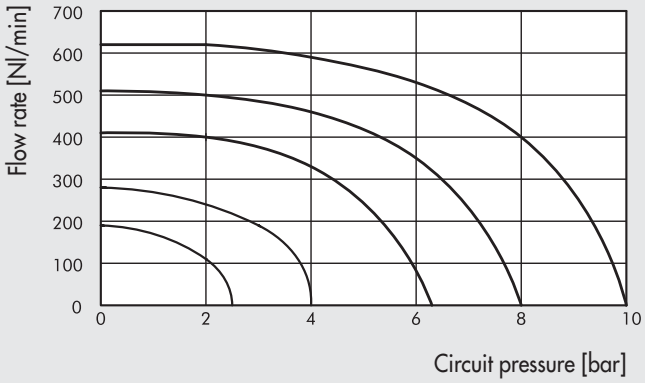
COMPONENTS

① Technopolymer body
② Nickel-plated brass insert
③ Nickel-plated brass pilot insert
④ Brass piston rod
⑤ Stainless steel clamping spring
⑥ NBR seal
⑦ Stainless steel poppet spring
⑧ NBR seal
⑨ Technopolymer spring ring
⑩ Stainless steel clip-on spring
⑪ Technopolymer stop bushing
⑫ Technopolymer release bushing

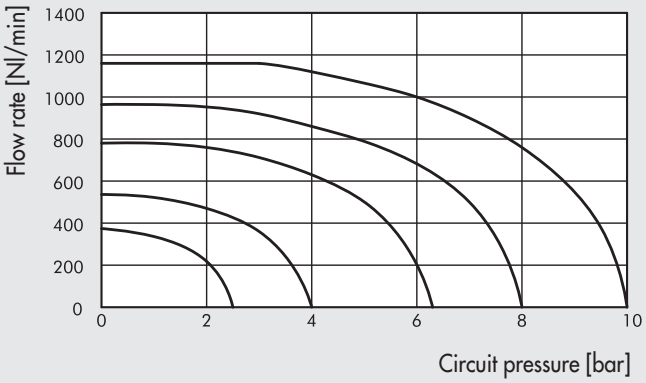


FLOW CHARTS

STP L Ø 6

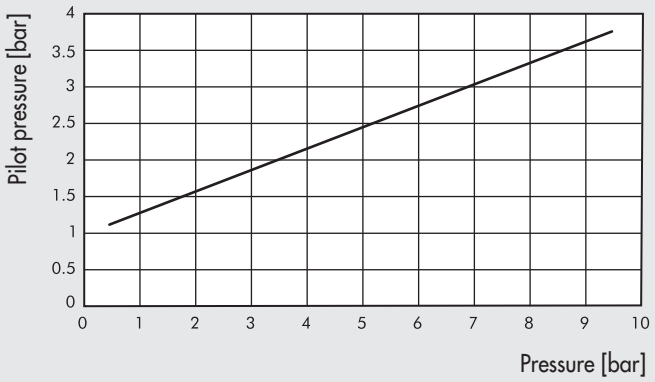


STP L Ø 8

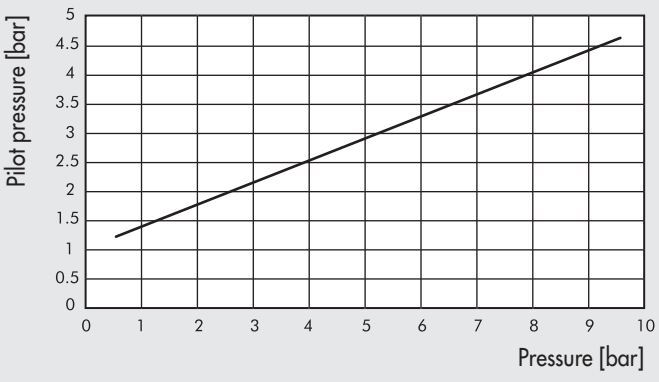


MINIMUM PILOT PRESSURE

STP L Ø 6



STP L Ø 8



ASSEMBLY OPTIONS

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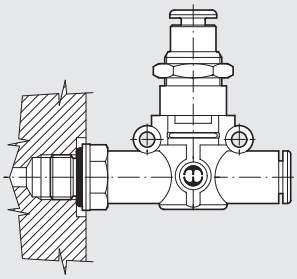

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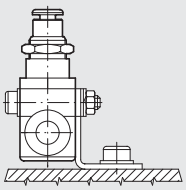

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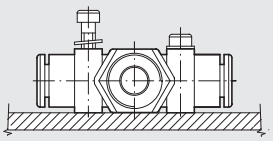

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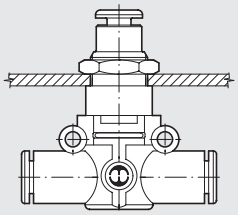
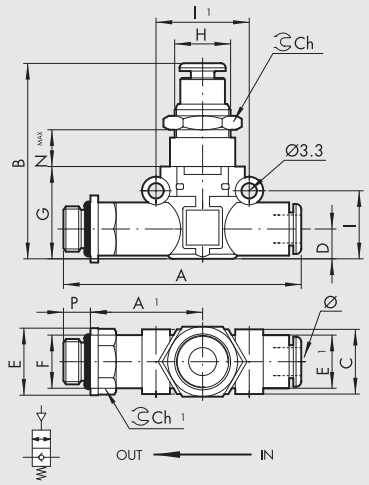


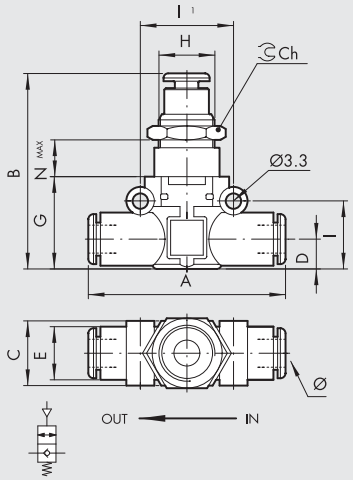
How to mount the STP L:
- Fig. Ⓐ With the male threaded port it is possible to mount the STP L straight onto the actuator or the control valve.
- Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
- Fig. Ⓒ There are two robust rings on the plastic body for fixing the STP L straight onto the wall.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

STP L 2/2 PIPE - PIPE



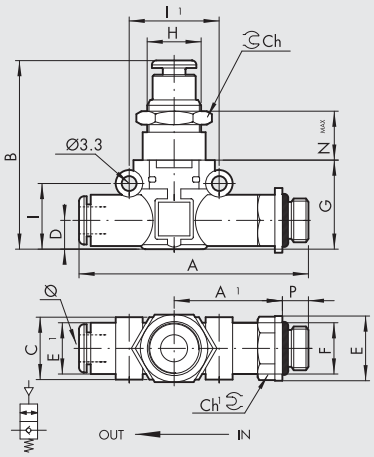
Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9065616	STP L 2/2 Ø6 - Ø6	6	49.4	43.2	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4.7
9065624	STP L 2/2 Ø8 - Ø8	8	57.3	49.7	18.7	9.1	13.8	26	M15x1	18.7	24	17	4

STP L 2/2 PIPE - THREAD



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9065808	STP L 2/2 Ø6 - 1/8	6	1/8	6	58.5	27.8	43.2	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4.7
9065809	STP L 2/2 Ø6 - 1/4	6	1/4	8	61.5	28.8	43.2	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4.7
9065810	STP L 2/2 Ø8 - 1/8	8	1/8	6	66.2	31.8	49.7	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	14	4
9065811	STP L 2/2 Ø8 - 1/4	8	1/4	8	70.6	34.2	49.7	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	14	4
9065812	STP L 2/2 Ø8 - 3/8	8	3/8	9	72.2	34.8	49.7	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	17	4

STP L 2/2 THREAD - PIPE



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9065708	STP L 2/2 1/8 - Ø6	1/8	6	6	58.5	27.8	43.2	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4.7
9065709	STP L 2/2 1/4 - Ø6	1/4	6	8	61.5	28.8	43.2	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4.7
9065710	STP L 2/2 1/8 - Ø8	1/8	8	6	66.2	31.8	49.7	18.7	9.1	15	13.8	26	M15x1	18.7	24	17	14	4
9065711	STP L 2/2 1/4 - Ø8	1/4	8	8	70.6	34.2	49.7	18.7	9.1	18	13.8	26	M15x1	18.7	24	17	14	4
9065712	STP L 2/2 3/8 - Ø8	3/8	8	9	72.2	34.8	49.7	18.7	9.1	22	13.8	26	M15x1	18.7	24	17	17	4

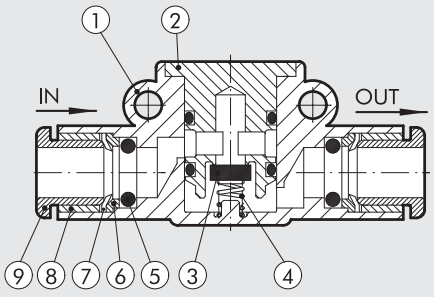
IN-LINE CHECK VALVE SERIES VNR L

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, and in the version for thread-pipe connection with a brass nickel-plated male thread and a push-in fitting.
It is still the only check valve with holes for wall mounting.

TECHNICAL DATA		Ø 4	Ø 6	Ø 8
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 ΔP 1 bar	Nl/min	80	320	480
Recommended pipe		Rilsan PA11 - Nylon 6 - Polyamide 12 - Polypropylene		
Fluid		Lubricated or unlubricated filtered compressed air		

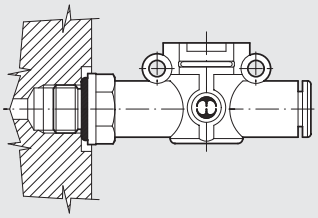
COMPONENTS

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

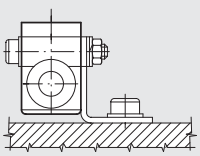


ASSEMBLY OPTIONS

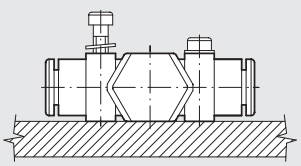
Ⓐ



Ⓑ

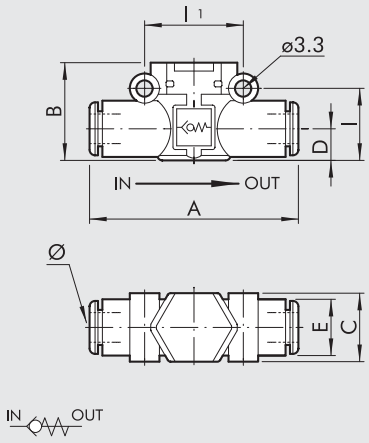


Ⓒ



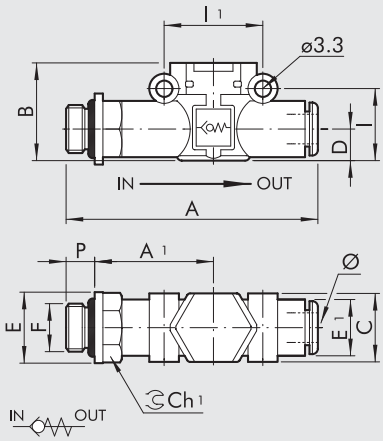
How to mount the VNR L:
• Fig. Ⓐ With the male threaded port it is possible to mount the VNR L straight onto the female thread.
• Fig. Ⓑ Fixing to the plate with the special SQU L bracket.
• Fig. Ⓒ There are two robust rings on the plastic body for fixing the VNR L straight onto the wall.

VNR L PIPE-PIPE



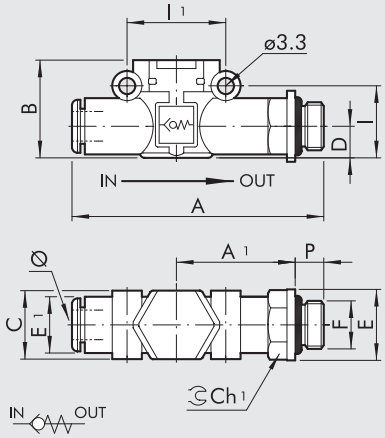
Code	Ref.	Ø	A	B	C	D	E	I	I1
9064001	VNR L 4-4	4	41.8	17.5	10.7	5.6	10	12.8	16
9064016	VNR L 6-6	6	49.4	20	14.7	6.4	11.4	14.6	20
9064024	VNR L 8-8	8	57.3	25.5	18.7	9.1	13.8	18.7	24

VNR L THREAD-PIPE



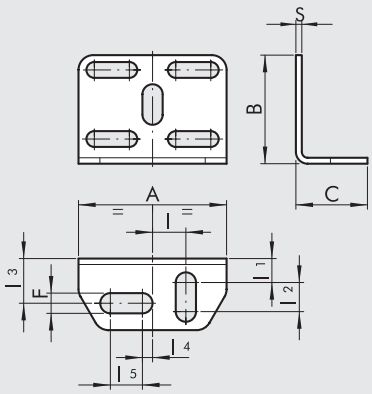
Code	Ref.	F	Ø	P	A	A1	B	C	E	E1	I	I1	Ch1
9064101	VNR L M5-4	M5	4	4	47.7	22.7	17.5	10.7	9.9	10	12.8	16	9
9064102	VNR L 1/8-4	1/8	4	6	50.6	24.6	17.5	10.7	14	10	12.8	16	12
9064108	VNR L 1/8-6	1/8	6	6	58.5	27.8	20	14.7	14	11.4	14.6	20	12
9064109	VNR L 1/4-6	1/4	6	8	61.5	28.8	20	14.7	18	11.4	14.6	20	14
9064110	VNR L 1/8-8	1/8	8	6	66.2	31.8	25.5	18.7	15	13.8	18.7	24	14
9064111	VNR L 1/4-8	1/4	8	8	70.6	34.2	25.5	18.7	18	13.8	18.7	24	14
9064112	VNR L 3/8-8	3/8	8	9	72.2	34.8	25.5	18.7	22	13.8	18.7	24	17

VNR L PIPE-THREAD



Code	Ref.	Ø	F	P	A	A1	B	C	E	E1	I	I1	Ch1
9064201	VNR L 4-M5	4	M5	4	47.7	22.7	17.5	10.7	9.9	10	12.8	16	9
9064202	VNR L 4-1/8	4	1/8	6	50.6	24.6	17.5	10.7	14	10	12.8	16	12
9064208	VNR L 6-1/8	6	1/8	6	58.5	27.8	20	14.7	14	11.4	14.6	20	12
9064209	VNR L 6-1/4	6	1/4	8	61.5	28.8	20	14.7	18	11.4	14.6	20	14
9064210	VNR L 8-1/8	8	1/8	6	66.2	31.8	25.5	18.7	15	13.8	18.7	24	14
9064211	VNR L 8-1/4	8	1/4	8	70.6	34.2	25.5	18.7	18	13.8	18.7	24	14
9064212	VNR L 8-3/8	8	3/8	9	72.2	34.8	25.5	18.7	22	13.8	18.7	24	17

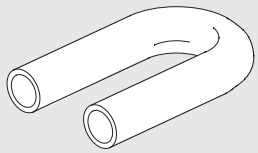
FIXING SQUARE KIT



Code	Description	A	B	C	F	I	I1	I2	I3	I4	I5	S
9062110	SQU L	30	22	14.5	4.2	6.8	4.8	5.9	9.1	2	6.5	1.2

NOTE: comes with two m3x16 screws (for L.O.L. Ø 6 - 8), two m3 hexagonal nuts, 2 groovers, 4 washers.

U-BOLT



Code	Description
9062216	TUB L 6-6
9062224	TUB L 8-8

NOTES