IN-LINE FLOW MICRO-REGULATOR SERIES RFL L

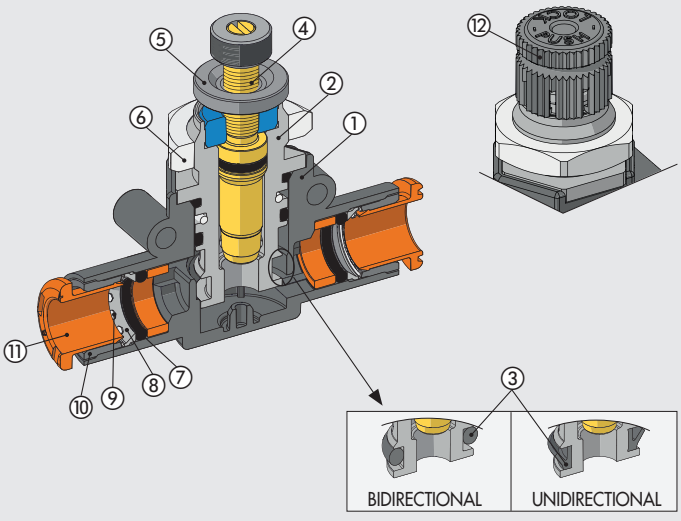
The RFL L flow micro-regulator belongs to the LINE ON LINE® family and can be connected in series or in parallel with all the other products.
The RFL L regulates the air input and thus the speed in pneumatic actuators.
Type U (unidirectional) regulates the flow only in one of the two directions of air flow and is available in the types with:
- 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 and is available in the types with:
- push-in input and output fitting;
- threaded port and push-in fitting.

TECHNICAL DATA		Ø 4 (Ø5/32")	Ø 6	Ø 1/4"	Ø 8 (Ø5/16")
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	Nl/min	155	450	450	850
Flow rate on exhaust at 6.3 bar	Nl/min	160	550	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 compressed air; if used, must be continuous			
Compatibility with oils		See **chapter Z1**			

COMPONENTS

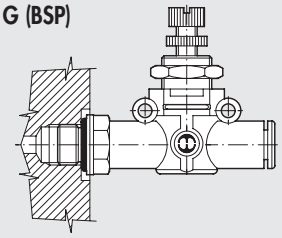
① Technopolymer body
② Nickel-plated brass seal support
③ NBR gasket
④ Brass adjusting needle
⑤ Nickel-plated brass needle ring nut
⑥ Wall fixing ring nut
⑦ NBR seal
⑧ Technopolymer spring ring
⑨ Stainless steel clip-on spring
⑩ Technopolymer stop bushing
⑪ Technopolymer release bushing
⑫ Technopolymer knob



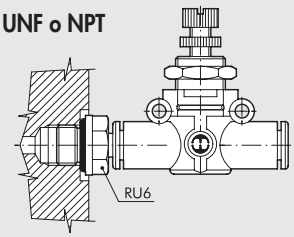
ASSEMBLY OPTIONS

Ⓐ

G (BSP)



UNF o NPT



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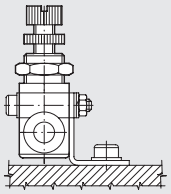

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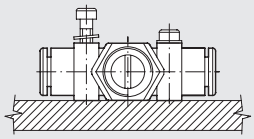

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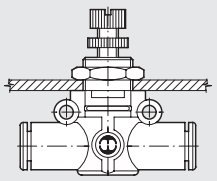
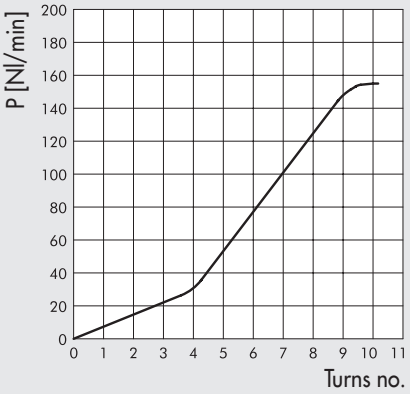


How to mount the RFL L:

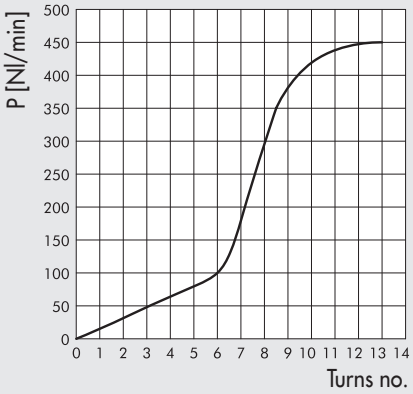
- Fig. Ⓐ **G (BSP)**: With the male threaded port it is possible to mount the RFL L straight onto the actuator or the control valve.
  UNF or NPT: Adding a RU6 fitting, with his male UNF or NPT thread, it is possible to mount the RFL L straight on to the actuator or the control valve.
- Fig. Ⓑ Fixing 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 DEPENDING ON THE TURNS EFFECTED BY THE REGULATION SCREW

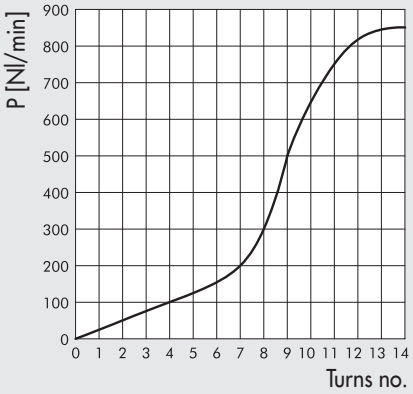
RFL L Ø 4 (Ø5/32")



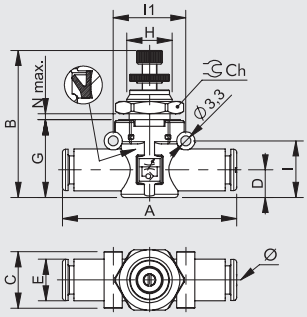
RFL L Ø 6 - RFL L Ø 1/4"



RFL L Ø 8 (Ø5/16")



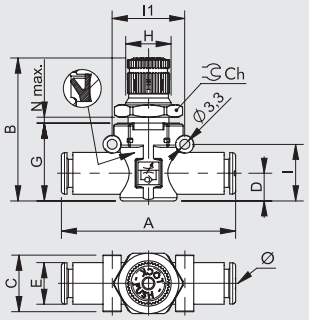
RFL L PIPE - PIPE UNIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041301	RFL L U Ø4-Ø4	4 ▲	42	35.5÷38.5	10.7	5.6	10	17.5	M9x0.75	12.8	16	11	4
9041316	RFL L U Ø6-Ø6	6	49.4	36÷41	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041316U	RFL L U Ø1/4-Ø1/4	1/4	49.4	36÷41	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041324	RFL L U Ø8-Ø8	8 ▲	57.3	44÷49	18.7	9.1	13.8	26	M15x1	18.7	24	20	4.5

▲ **Ø4** = Ø5/32"; **Ø8** = Ø5/16"

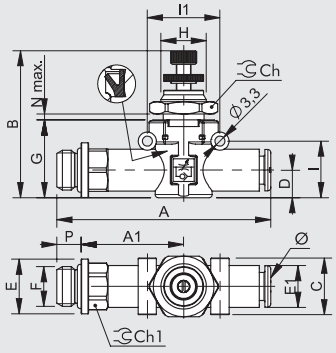
RFL L PIPE - PIPE UNIDIRECTIONAL PUSH-LOCK



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041366	RFL L U Ø6-Ø6 PL	6	49.4	42.3÷44.5	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041366U	RFL L U Ø1/4-Ø1/4 PL	1/4	49.4	42.3÷44.5	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041374	RFL L U Ø8-Ø8 PL	8 ▲	57.3	47.2÷49.4	18.7	9.1	13.8	26	M15x1	18.7	24	20	4.5

▲ **Ø8** = Ø5/16"

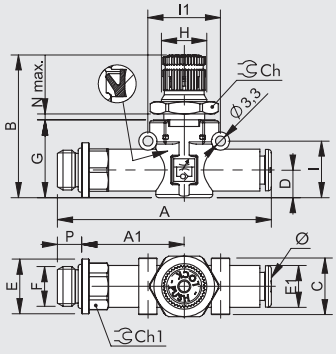
RFL L G (BSP) THREAD - PIPE UNIDIRECTIONAL CYLINDER VERSION



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041401	RFL L U M5-Ø4	M5	4 ▲	4	47.7	22.7	35.5÷38.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	4
9041402	RFL L U 1/8-Ø4	1/8	4 ▲	6	51.6	24.6	35.5÷38.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	4
9041408	RLF L U 1/8-Ø6	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-Ø6	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-Ø8	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-Ø8	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-Ø8	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

▲ **Ø4** = Ø5/32"; **Ø8** = Ø5/16"

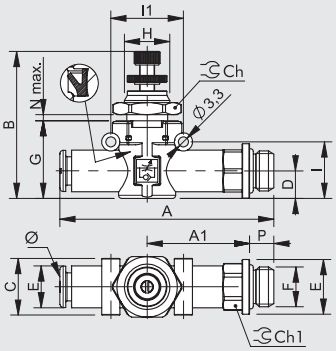
RFL L G (BSP) THREAD - PIPE UNIDIRECTIONAL CYLINDER VERSION PUSH-LOCK



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041458	RFL L U 1/8-Ø6 PL	1/8	6	6	58.5	27.8	42.3÷44.5	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4
9041459	RFL L U 1/4-Ø6 PL	1/4	6	8	61.5	28.8	42.3÷44.5	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4
9041460	RFL L U 1/8-Ø8 PL	1/8	8 ▲	6	66.2	31.8	47.2÷49.4	18.7	9.1	15	13.8	26	M15x1	18.7	24	20	14	4.5
9041461	RFL L U 1/4-Ø8 PL	1/4	8 ▲	8	70.6	34.2	47.2÷49.4	18.7	9.1	18	13.8	26	M15x1	18.7	24	20	14	4.5
9041462	RFL L U 3/8-Ø8 PL	3/8	8 ▲	9	72.2	34.8	47.2÷49.4	18.7	9.1	22	13.8	26	M15x1	18.7	24	20	17	4.5

▲ **Ø8** = Ø5/16"

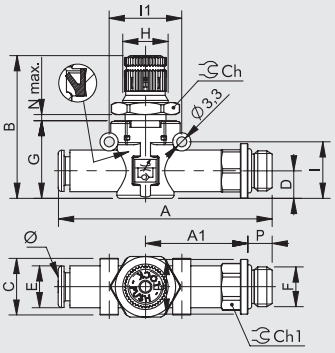
RFL L PIPE - G (BSP) THREAD UNIDIRECTIONAL VALVE VERSION



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041501	RFL L U Ø4-M5	4 ▲	M5	4	47.7	22.7	35.5÷38.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	4
9041502	RFL L U Ø4-1/8	4 ▲	1/8	6	51.6	24.6	35.5÷38.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	4
9041508	RFL L U Ø6-1/8	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 Ø6-1/4	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 Ø8-1/8	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 Ø8-1/4	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 Ø8-3/8	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

▲ **Ø4** = Ø5/32"; **Ø8** = Ø5/16"

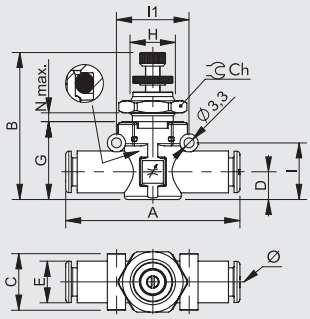
RFL L PIPE - G (BSP) THREAD UNIDIRECTIONAL VALVE VERSION PUSH-LOCK



Code	Ref.	Ø	F	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041558	RFL L U Ø6-1/8 PL	6	1/8	6	58.5	27.8	42.3÷44.5	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4
9041559	RFL L U Ø6-1/4 PL	6	1/4	8	61.5	28.8	42.3÷44.5	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4
9041560	RFL L U Ø8-1/8 PL	8 ▲	1/8	6	66.2	31.8	47.2÷49.4	18.7	9.1	15	13.8	26	M15x1	18.7	24	20	14	4.5
9041561	RFL L U Ø8-1/4 PL	8 ▲	1/4	8	70.6	34.2	47.2÷49.4	18.7	9.1	18	13.8	26	M15x1	18.7	24	20	14	4.5
9041562	RFL L U Ø8-3/8 PL	8 ▲	3/8	9	72.2	34.8	47.2÷49.4	18.7	9.1	22	13.8	26	M15x1	18.7	24	20	17	4.5

▲ **Ø8** = Ø5/16"

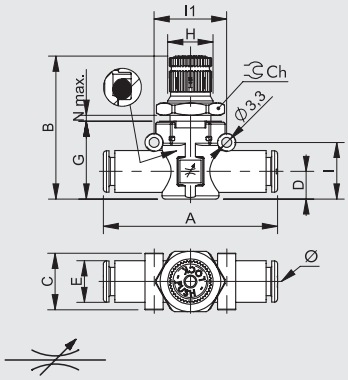
RFL L PIPE - PIPE BIDIRECTIONAL



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041601	RFL L B Ø4-Ø4	4 ▲	42	35.5÷38.5	10.7	5.6	10	17.5	M9x0.75	12.8	16	11	4
9041616	RFL L B Ø6-Ø6	6	49.4	36÷41	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041616U	RFL L B Ø1/4-Ø1/4	1/4	49.4	36÷41	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041624	RFL L B Ø8-Ø8	8 ▲	57.3	44÷49	18.7	9.1	13.8	26	M15x1	18.7	24	20	4.5

▲ **Ø4** = Ø5/32"; **Ø8** = Ø5/16"

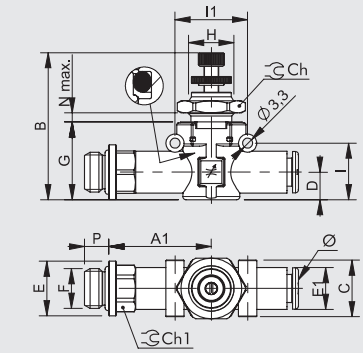
RFL L PIPE - PIPE BIDIRECTIONAL PUSH-LOCK



Code	Ref.	Ø	A	B	C	D	E	G	H	I	I1	Ch	Nmax
9041666	RFL L B Ø6-Ø6 PL	6	49.4	42.3÷44.5	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041666U	RFL L B Ø1/4-Ø1/4 PL	1/4	49.4	42.3÷44.5	14.7	6.4	11.4	20	M12x0.75	14.6	20	15	4
9041674	RFL L B Ø8-Ø8 PL	8 ▲	57.3	47.2÷49.4	18.7	9.1	13.8	26	M15x1	18.7	24	20	4.5

▲ **Ø8** = Ø5/16"

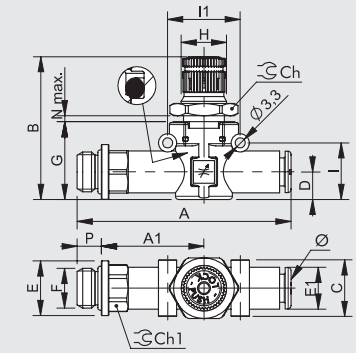
RFL L G (BSP) THREAD - PIPE BIDIRECTIONAL



Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041701	RFL L B M5-Ø4	M5	4 ▲	4	47.7	22.7	35.5÷38.5	10.7	5.6	9.9	10	17.5	M9x0.75	12.8	16	11	9	4
9041702	RFL L B 1/8-Ø4	1/8	4 ▲	6	51.6	24.6	35.5÷38.5	10.7	5.6	14	10	17.5	M9x0.75	12.8	16	11	12	4
9041708	RFL L B 1/8-Ø6	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-Ø6	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-Ø8	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-Ø8	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-Ø8	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

▲ **Ø4** = Ø5/32"; **Ø8** = Ø5/16"

RFL L G (BSP) THREAD - PIPE BIDIRECTIONAL PUSH-LOCK

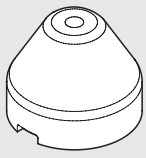


Code	Ref.	F	Ø	P	A	A1	B	C	D	E	E1	G	H	I	I1	Ch	Ch1	Nmax
9041758	RFL L B 1/8-Ø6 PL	1/8	6	6	58.5	27.8	42.3÷44.5	14.7	6.4	14	11.4	20	M12x0.75	14.6	20	15	12	4
9041759	RFL L B 1/4-Ø6 PL	1/4	6	8	61.5	28.8	42.3÷44.5	14.7	6.4	18	11.4	20	M12x0.75	14.6	20	15	14	4
9041760	RFL L B 1/8-Ø8 PL	1/8	8 ▲	6	66.2	31.8	47.2÷49.4	18.7	9.1	15	13.8	26	M15x1	18.7	24	20	14	4.5
9041761	RFL L B 1/4-Ø8 PL	1/4	8 ▲	8	70.6	34.2	47.2÷49.4	18.7	9.1	18	13.8	26	M15x1	18.7	24	20	14	4.5
9041762	RFL L B 3/8-Ø8 PL	3/8	8 ▲	9	72.2	34.8	47.2÷49.4	18.7	9.1	22	13.8	26	M15x1	18.7	24	20	17	4.5

▲ **Ø8** = Ø5/16"

ACCESSORIES RFL PUSH-LOCK

ANTI-TAMPERING KNOB



Code	Description
9200703	Anti-tampering knob

NOTE: Remove the knob on the Push-Lock RFL by pulling outwards. Fit on the anti-tampe ring knob and make the necessary settings. When the RFL has been set, press the knob firmly until it locks in position. If the RFL needs to be recalibrated, remove the anti-tampering knob and push laterally using a screwdriver.