

AIR PREPARATION UNITS

FRL MODULAR Series FRLM1

Cat No FRLM1...W - 02 - C

FILTER - REGULATOR - LUBRICATOR, MODULAR - 1/8, 1/4, 3/8, 1/2, 3/4, 1"

Features

- ❑ Modular type for easy and fast maintenance.
- ❑ Suitable for wall mounting.
- ❑ Filter
 - Bronze filtering element.
 - Separator and shield for efficient moisture separation.
 - Press type manual drain for easy operation
- ❑ Regulator
 - Diaphragm operated, relieving type.
 - Pressure compensated by balanced poppet.
 - Flow compensated (with venturi) in models FRLM14, FRLM15 and FRLM17 for faster response.
 - Non raising ' Press to lock ' adjusting knob for locking at any set pressure.
- ❑ Lubricator
 - Fog / Mist type Lubricator.
 - Fine adjustment of lubrication.
 - Lubrication proportional to flow.
- ❑ Steel bowl guard, bayonet type on FRLM14, FRLM15 & FRLM17 models and threaded type on FRLM13 model.
- ❑ Good flow and regulating characteristics.

Model FRLM1.../W



Model FRLM1.../S



Technical Specifications

Model	FRLM13.../W	FRLM14.../W	FRLM15.../W	FRLM17.../W	FRLM17.../W	
	FRLM13.../S	FRLM14.../S	FRLM15.../S	FRLM17.../S	FRLM17.../S	
Medium	Compressed air					
Port size	NPT 1/4 (G1/4)	NPT 3/8 (G3/8)	NPT 1/2 (G1/2)	NPT 3/4 (G3/4)	NPT 1 (G1)	
Pressure gauge port size	NPT 1/8 (G1/8)			NPT 1/4 (G1/4)		
Flow rate in scfm (NI / min) @	17.7 (500)	70.6 (2000)	123.6 (3500)	123.6 (3500)	176.5 (5000)	
Max supply pressure in psi (bar)	140 (10)					
Regulating Pressure Range in psi (bar) #	3 - 30 (0.2 - 2), 3 - 60 (0.2 - 4), 7 - 100 (0.5 - 7), 7 - 140 (0.5 - 10) (Standard)					
Ambient / Medium temperature	41 ° - 120 ° F (5 ° - 50 ° C)					
Filteration in microns #	1, 5, 25, 40 (standard), 50, 100					
Min operating flow in scfm (NI / min)	0.424 (12)	1.41 (40)	1.6 (45)	1.77 (50)	1.77 (50)	
Bowl capacity Filter in ounce (ml) (at maximum condensate level)	0.30 (9)	1.08 (32)	1.48 (44)	5.58 (165)	5.58 (165)	
Bowl capacity Lubricator in ounce (ml) (at maximum condensate level)	0.68 (20)	1.98 (57)	5.13 (152)	6.8 (200)	6.8 (200)	
Recommended oil	ISO VG 32 (Servo System 32)					
Bowl material	Polycarbonate					
Installation	Any position for Regulator. Vertical for Filter and Lubricator					
Materials of construction	Aluminium, Bronze, Brass, Steel, Acetal, Polycarbonate, SS, Nitrile					
Optional accessories *	Pressure gauge					
Weight in lb (Kg)	FRLM1.../W	1.39 (0.63)	2.71 (1.23)	5.27 (2.39)	9.85 (4.47)	9.81 (4.45)
	FRLM1.../S	1.32 (0.60)	2.60 (1.18)	5.07 (2.30)	9.19 (4.17)	8.93 (4.05)

@ Supply pressure 100 psi (7 bar), Set pressure 85 psi (6 bar), Pressure drop $\Delta p = 14.5$ psi (1bar) (For standard models)

For details see " How to order "

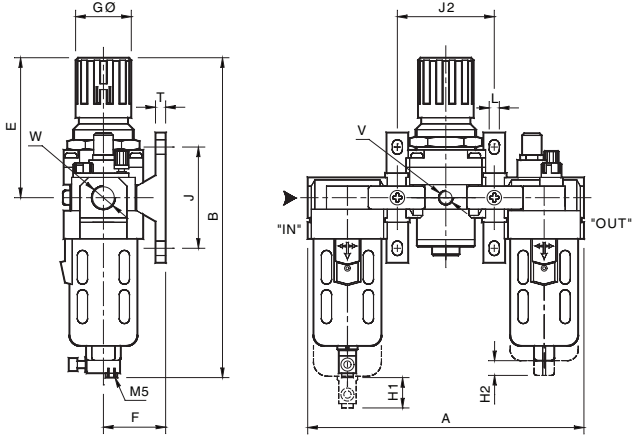
* For details refer optional accessories Cat No APA - 02 - C

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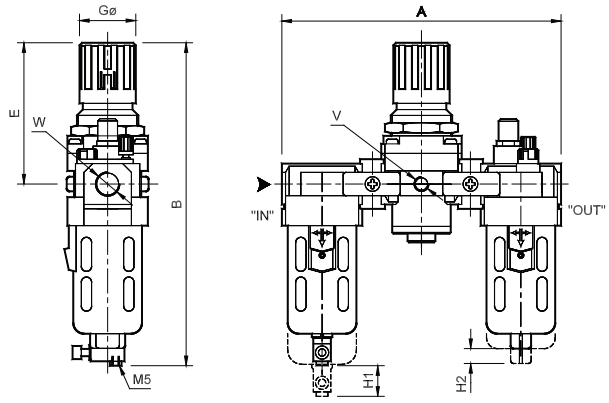
FRL MODULAR Series FRLM1

Cat No FRLM1...W - 02 - C

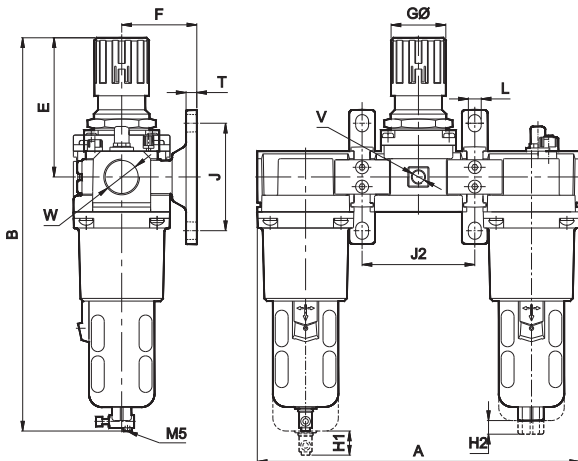
Model FRLM13, 14, 15.../ W



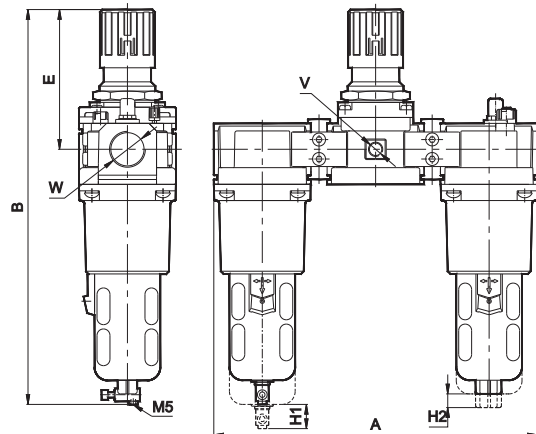
Model FRLM13, 14, 15.../S



Model FRLM17.../ W



Model FRLM17.../S



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2	J2
FRLM13.../W	NPT 1/8 (G1/8) NPT 1/4 (G1/4)	NPT 1/8 (G1/8)	5.75 (146)	6.69 (170)	2.677 (68)	1.378 (35)	1.102 (28)	1.968 (50)	0.275 (7)	0.275 (7)	1.968 (50)	1.378 (35)	2.047 (52)
FRLM14.../W	NPT 1/4 (G1/4) NPT 3/8 (G3/8)	NPT 1/8 (G1/8)	7.56 (192)	8.66 (220)	3.74 (95)	1.772 (45)	1.575 (40)	2.756 (70)	0.275 (7)	0.275 (7)	2.165 (55)	1.772 (45)	2.716 (69)
FRLM15.../W	NPT 1/4 (G1/4) NPT 3/8 (G3/8) NPT 1/2 (G1/2)	NPT 1/8 (G1/8)	9.49 (241)	11.02 (280)	4.921 (125)	2.165 (55)	2.008 (51)	3.543 (90)	0.354 (9)	0.354 (9)	3.150 (80)	1.772 (45)	3.386 (86)
FRLM17.../W	NPT 3/4 (G3/4)	NPT 1/4 (G1/4)	11.8 (300)	14.41 (366)	5.118 (130)	2.756 (70)	2.008 (51)	3.94 (100)	0.472 (12)	0.394 (10)	3.150 (80)	1.772 (45)	4.134 (105)
FRLM17.../W	NPT 1 (G1)	NPT 1/4 (G1/4)	11.8 (300)	14.41 (366)	5.118 (130)	2.756 (70)	2.008 (51)	3.94 (100)	0.472 (12)	0.394 (10)	3.150 (80)	1.772 (45)	4.134 (105)

Model	W	V	A	B	E	GØ	H1	H2
FRLM13.../S	NPT 1/8 (G1/8) NPT 1/4 (G1/4)	NPT 1/8 (G1/8)	5.75 (146)	6.69 (170)	2.677 (68)	1.102 (28)	1.968 (50)	1.378 (35)
FRLM14.../S	NPT 1/4 (G1/4) NPT 3/8 (G3/8)	NPT 1/8 (G1/8)	7.56 (192)	8.66 (220)	3.74 (95)	1.575 (40)	2.165 (55)	1.772 (45)
FRLM15.../S	NPT 1/4 (G1/4) NPT 3/8 (G3/8) NPT 1/2 (G1/2)	NPT 1/8 (G1/8)	9.49 (241)	11.02 (280)	4.921 (125)	2.008 (51)	3.150 (80)	1.772 (45)
FRLM17.../S	NPT 3/4 (G3/4)	NPT 1/4 (G1/4)	11.8 (300)	14.41 (366)	5.118 (130)	2.008 (51)	3.150 (80)	1.772 (45)
FRLM17.../S	NPT 1 (G1)	NPT 1/4 (G1/4)	11.8 (300)	14.41 (366)	5.118 (130)	2.008 (51)	3.150 (80)	1.772 (45)

Pressure Setting

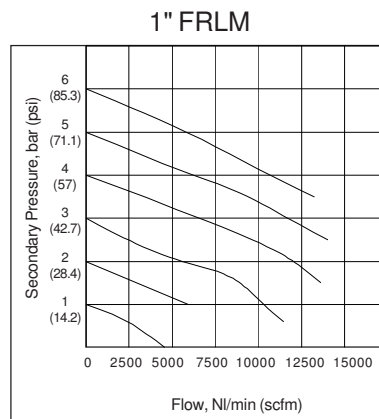
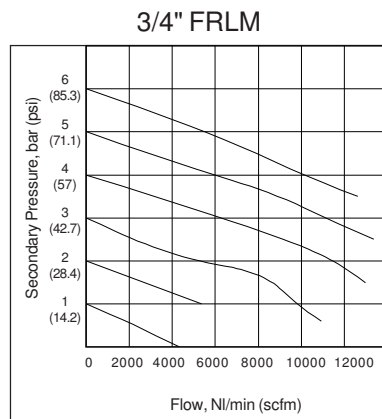
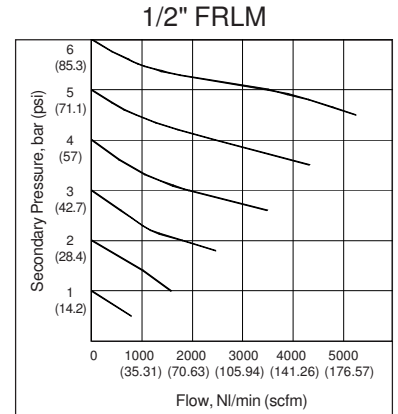
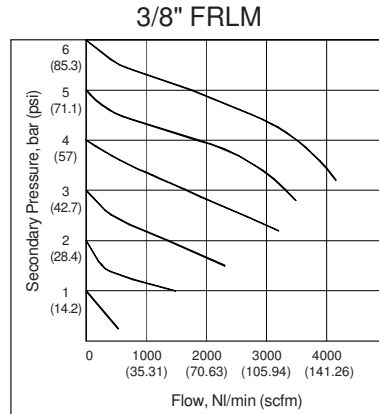
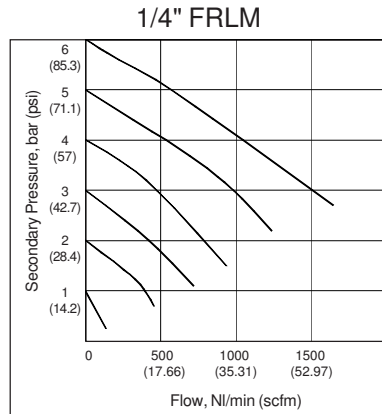
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

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FRL MODULAR Series FRLM1

Cat No FRLM1...W - 02 - C

Flow Graphs



Flow graphs are for 40µm filtrations only

Precautions

1. Note the direction of flow before installation and connect piping accordingly.
2. Flush pipings for dirt, dust, rust and other foreign particles.
3. Install in clean atmosphere.
4. Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape doesnot enter the unit during tightening.
Nipples of straight threads (G) to be used with sealing washer.
5. Polycarbonate bowls may get damaged and possibly fail if exposed to synthetic oils, thinner, solvents, trichloroethylene, kerosene or other aromatic hydrocarbons.

How to order

FRLM1 ○ ○ ○ / ○

Body & Port size	
390 (360)	NPT1/8 (G1/8)
391 (361)	NPT1/4 (G1/4)
491 (461)	NPT1/4 (G1/4)
492 (462)	NPT3/8 (G3/8)
591 (561)	NPT1/4 (G1/4)
592 (562)	NPT3/8 (G3/8)
593 (563)	NPT1/2 (G1/2)
794 (764)	NPT3/4 (G3/4)
795 (765)	NPT1 (G1)

Filtration in microns	
0	- 1
1	- 5
2	- 25
3	- 40 (Standard)
4	- 50
5	- 100

Pressure range in psi (bar)	
1	3 - 30 (0.2 - 2)
2	3 - 60 (0.2 - 4)
3	7 - 100 (0.5 - 7)
4	7 - 140 (0.5 - 10) Standard

Mounting	
W	Wall mounting bracket
S	Spacer

Ordering example : Filter Regulator Lubricator Modular - 3/8 (with NPT 3/8 (G3/8) port) and wall mounting bracket, with 5 microns Filter and pressure range 7 - 100 psi: Ordering No: FRLM1492 (1462) 13 / W.