

# AIR PREPARATION UNITS

## FRL MODULAR Series FRLM1

Cat No FRLM1...W - 01 - D

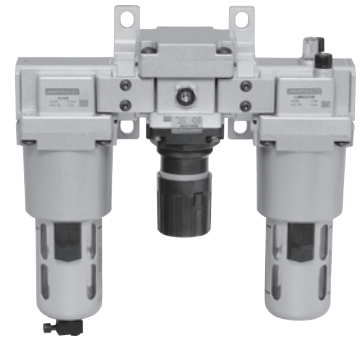
### FILTER - REGULATOR - LUBRICATOR, MODULAR - 1/4, 3/8, 1/2, 3/4, 1"

Without piping adaptor and spacer

#### 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	G1/4	G3/8	G1/2	G3/4	G1	
Pressure gauge port size	G1/8	G1/8	G1/8	G1/4	G1/4	
Flow rate @ (lts / min)	500	2000	3500	3500	5000	
Maximum supply pressure (bar)	10					
Regulating pressure range # (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)					
Ambient temperature	-10° to +50° C					
Medium temperature	+5° to +50° C					
Filtration # (µm)	1, 5, 25, 40 (standard), 50, 100					
Min operating flow (lts / min)	12	40	45	50	50	
Bowl capacity Filter (ml) (at maximum condensate level)	9	32	44	165	165	
Bowl capacity Lubricator (ml) (at maximum oil level)	20	57	152	200	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 (Kg)	FRLM1.../W	0.63	1.23	2.39	4.47	4.45
	FRLM1.../S	0.60	1.18	2.30	4.17	4.05

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

# For details see " How to order ".

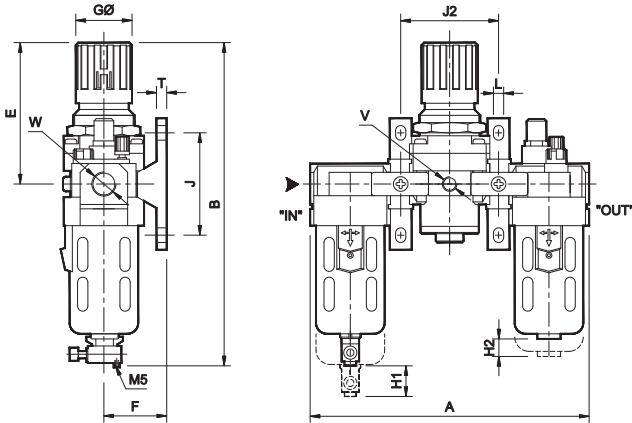
\* For details refer optional accessories Cat No APA - 01 - C

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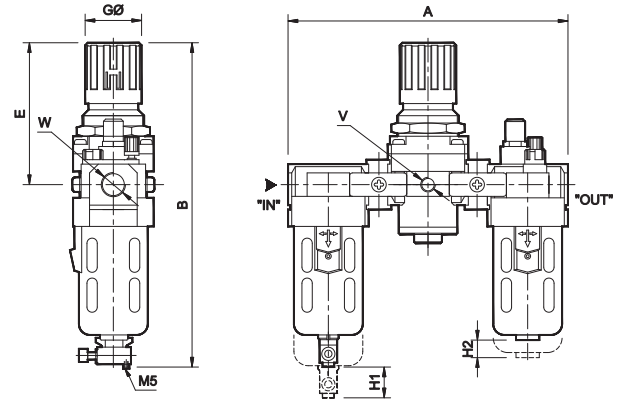
## FRL MODULAR Series FRLM1

Cat No FRLM1...W - 01 - D

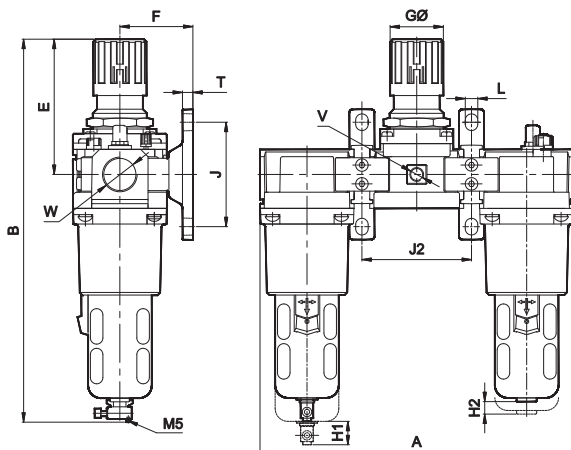
**Model FRLM13, 14, 15.../W**



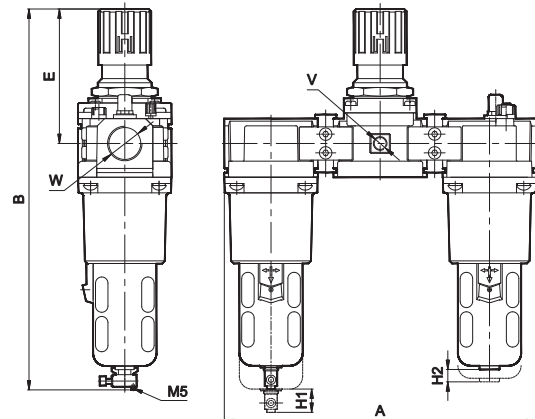
**Model FRLM13, 14, 15.../S**



**Model FRLM17.../W**



**Model FRLM17.../S**



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2	J2
FRLM13.../W	G1/4	G1/8	146	170	68	35	28	50	7	7	50	35	52
FRLM14.../W	G3/8	G1/8	192	220	95	45	40	70	7	7	55	45	69
FRLM15.../W	G1/2	G1/8	241	280	125	55	51	90	9	9	80	45	86
FRLM17.../W	G3/4	G1/4	300	366	130	70	51	100	12	10	80	45	105
FRLM17.../W	G1	G1/4	300	366	130	70	51	100	12	10	80	45	105

Model	W	V	A	B	E	GØ	H1	H2
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FRLM14.../S	G3/8	G1/8	192	220	95	40	55	45
FRLM15.../S	G1/2	G1/8	241	280	125	51	80	45
FRLM17.../S	G3/4	G1/4	300	366	130	51	80	45
FRLM17.../S	G1	G1/4	300	366	130	51	80	45

### Precautions

- Note the direction of flow before installation and connect piping accordingly.
- Flush pipings for dirt, dust, rust and other foreign particles.
- Install in clean atmosphere.
- Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape doesn't enter the unit during tightening. Nipples of straight threads (G) to be used with sealing washer.
- Polycarbonate bowls may get damaged and possibly fail if exposed to synthetic oils, thinner, solvents, trichloroethylene, kerosene or other aromatic hydrocarbons.

### 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 )

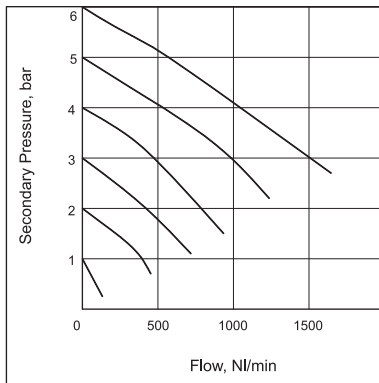
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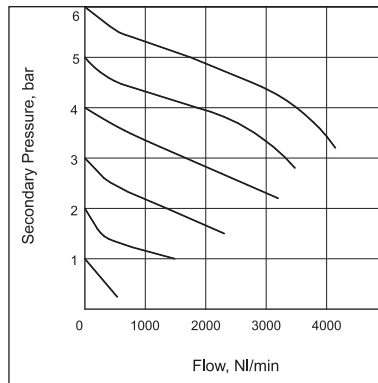
Cat No FRLM1...W - 01 - D

### Flow Graphs

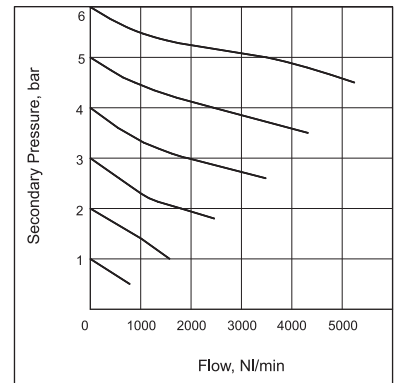
1/4" FRLM



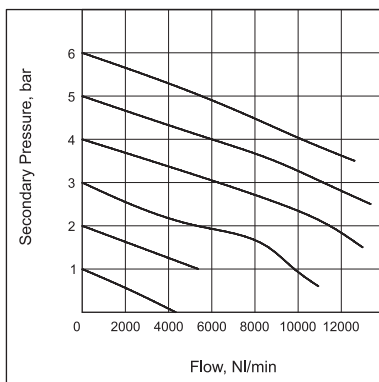
3/8" FRLM



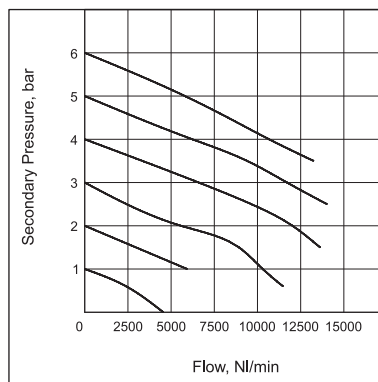
1/2" FRLM



3/4" FRLM



1" FRLM



Flow graphs are for 40µm filtrations only

### How to order

<b>FRLM1</b>	<b>462</b>	<b>3</b>	<b>4</b>	<b>W</b>			
<b>Body &amp; Port size</b>		<b>Filteration in µm</b>		<b>Pressure range</b>		<b>Mounting</b>	
361	G1/4	0	- 1	1	0.2 - 2 bar	W	Wall mounting bracket
462	G3/8	1	- 5	2	0.2 - 4 bar	S	Spacer
563	G1/2	2	- 25	3	0.5 - 7 bar		
764	G3/4	3	- 40 (Standard)	4	0.5 - 10 bar (Standard)		
765	G1	4	- 50				
		5	- 100				

### Ordering example:

Filter Regulator Lubricator Modular - 3/8 ( with G3/8 port size ) and wall mounting bracket, with 5µm Filter and pressure range 0.5 - 7 bar: Ordering No : **FRLM146213 / W**