

## AIR PREPARATION UNITS

### FRL MODULAR Series FRLM1

Cat No FRLM1-02

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

Individual Filter, Regulator & Lubricator units easily removable / mountable without disturbing the pipe line

#### 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 in models FRLM14 and FRLM15 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 models and threaded type on FRLM13 model.
- Good flow and regulating characteristics.



#### Technical Specifications

Model	FRLM 13	FRLM 14	FRLM 15
Medium	Compressed air		
Port size	G 1 / 4	G 3 / 8	G 1 / 2
Pressure gauge port size	G 1 / 8	G 1 / 8	G 1 / 8
Flow rate lts / min @	500	2000	3500
Max Supply pressure	10 bar		
Regulating Pressure Range #	0.2 - 2 bar, 0.2 - 4 bar, 0.5 - 7 bar, 0.5 - 10 bar (Standard)		
Ambient / Medium temperature	5° - 60° C		
Filtration #	5 µm, 25 µm, 40 µm (standard), 50 µm, 100 µm		
Min operating flow lts / min	12	40	45
Bowl capacity Filter (at maximum condensate level)	9 ml	32 ml	44 ml
Bowl capacity Lubricator (at maximum condensate level)	20 ml	57 ml	152 ml
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		
Weight	0.72 Kg	1.38 Kg	2.65 Kg
Optional accessories *	Pressure gauge		

© Supply pressure 7 bar , Set pressure 6 bar , Pressure drop  $\Delta p = 1\text{bar}$  ( For standard models )

# For details see " How to order "

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

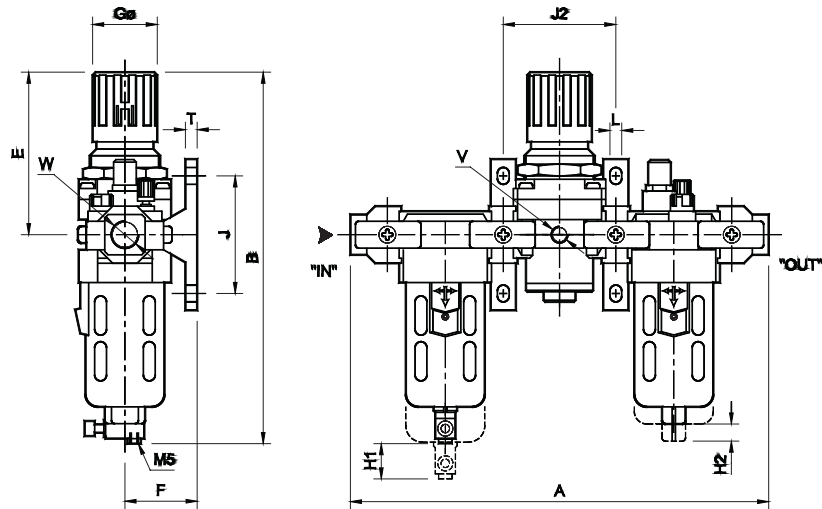
#### Pressure Setting

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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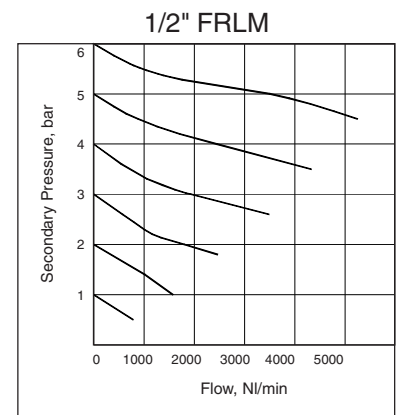
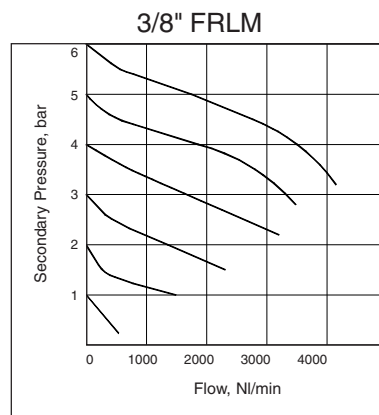
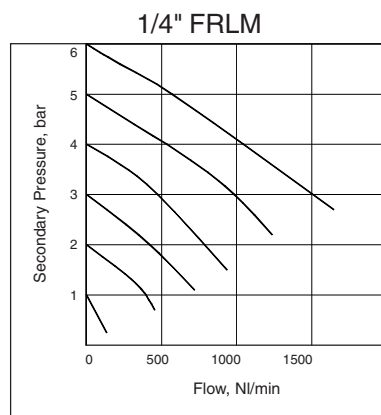
## FRL MODULAR Series FRLM 1

Cat No FRLM1-02



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2	J2
FRLM 13	G1/4	G1/8	200	170	68	35	28	50	7	7	50	35	52
FRLM 14	G3/8	G1/8	250	220	95	45	40	70	7	7	55	45	69
FRLM 15	G1/2	G1/8	305	280	125	55	51	90	9	9	80	45	86

### Flow Graphs



### How to order

#### FRLM 1



#### Body & Port size

3 6 1 -- G 1 / 4  
4 6 2 -- G 3 / 8  
5 6 3 -- G 1 / 2



#### Filtration in µm

1 --- 5 µm  
2 --- 25 µm  
3 --- 40 µm (Standard)  
4 --- 50 µm  
5 --- 100 µm



#### Pressure Range

1 -- 0.2 - 2 bar  
2 -- 0.2 - 4 bar  
3 -- 0.5 - 7 bar  
4 -- 0.5 - 10 bar (Standard)

**Ordering example :** Filter Regulator Lubricator Modular - 3/8 ( with G3/8 port size ) with 5µm Filter and pressure range 0.5 - 7 bar: Ordering No: FRLM 146213.  
If ordered as 3/8 FRLM, our standard model FRLM 146234, with 40µm Filter and pressure range 0.5 - 10 bar will be supplied.

### 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 doesnot 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.

Subject to change