

AIR PREPARATION UNITS

FRL MODULAR WITH METALBOWL Series FRLM1-MM

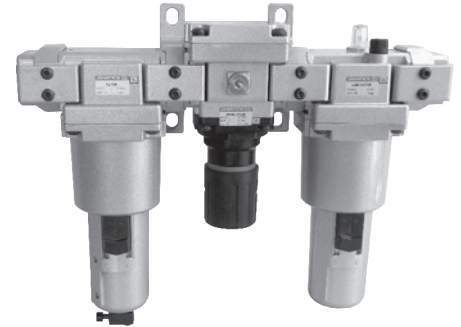
Cat No FRLM1-MM - 01 - 01 - A

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

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

Features

- For higher pressure range above 10 bar
- 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
- Metal bowl- Aluminium
 - Bayonet type on FRCLM17 models
 - Direct mounting type on FRLM13, FRLM14, FRLM15 models
- Good flow and regulating characteristics



Technical Specifications

| Model | FRLM13 - MM | FRLM14 - MM | FRLM15 - MM | FRLM17 - MM | FRLM17 - MM |
|--|--|-------------|-------------|-------------|-------------|
| Medium | Compressed air | | | | |
| Port size | G1/4 | G3/8 | G1/2 | G3/4 | G1 |
| Pressure gauge port size | G1/8 | | | G1/4 | |
| Flow rate in NI / min @ | 500 | 2000 | 3500 | 3500 | 5000 |
| Max supply pressure in bar | 20 | | | | |
| Regulating Pressure Range in bar # | 0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard) | | | | |
| Ambient temperature | -10° to +60° C | | | | |
| Medium temperature | +5° to +50° C | | | | |
| Filtration in microns # | 1, 5, 25, 40 (standard), 50, 100 | | | | |
| Min operating flow in NI / min | 12 | 40 | 45 | 50 | 50 |
| Bowl capacity Filter in ml (at maximum condensate level) | 9 | 64 | 90 | 165 | 165 |
| Bowl capacity Lubricator in ml (at maximum condensate level) | 20 | 100 | 200 | 200 | 200 |
| Recommended oil | ISO VG 32 (Servo System 32) | | | | |
| Bowl material | Aluminium | | | | |
| Installation | Any position for Regulator. Vertical for Filter and Lubricator | | | | |
| Materials of construction | Aluminium, Bronze, Brass, Steel, Acetal, SS, Nitrile | | | | |
| Optional accessories * | Pressure gauge | | | | |
| Weight in Kg | 0.73 | 1.50 | 2.94 | 5.03 | 4.97 |

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

For details see " How to order ".

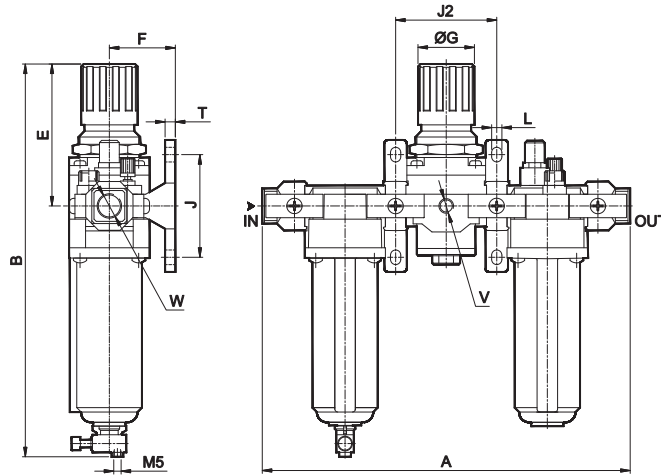
* For details refer optional accessories Cat No APA - 01 - C

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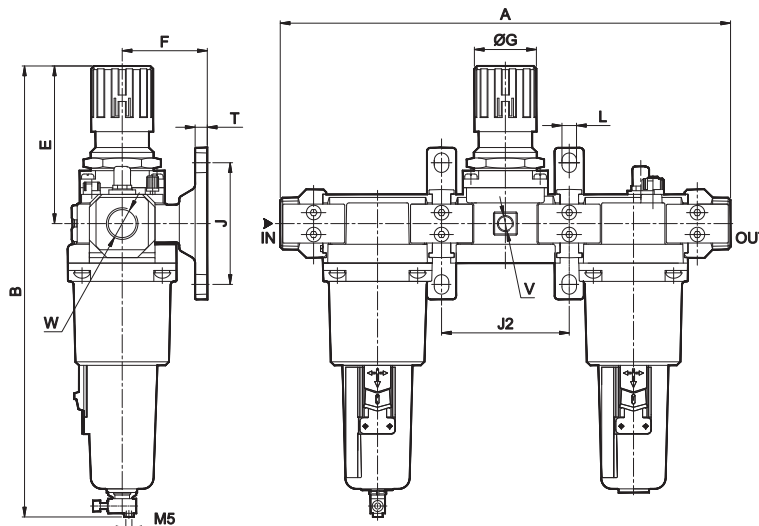
FRL MODULAR WITH METALBOWL Series FRLM1-MM

Cat No FRLM1-MM - 01 - 01 - A

Model FRLM13-MM, FRLM14-MM, FRLM15-MM



Model FRLM17-MM



| Model | W | V | A | B | E | F | ØG | J | L | T | J2 |
|-------------|------|------|-----|-----|-----|----|----|-----|----|----|-----|
| FRLM13 - MM | G1/4 | G1/8 | 200 | 170 | 68 | 35 | 28 | 50 | 7 | 7 | 52 |
| FRLM14 - MM | G3/8 | G1/8 | 250 | 270 | 95 | 45 | 40 | 70 | 7 | 7 | 69 |
| FRLM15 - MM | G1/2 | G1/8 | 305 | 328 | 125 | 55 | 51 | 90 | 9 | 9 | 86 |
| FRLM17 - MM | G3/4 | G1/4 | 370 | 366 | 130 | 70 | 51 | 100 | 12 | 10 | 105 |
| FRLM17 - MM | G1 | G1/4 | 370 | 366 | 130 | 70 | 51 | 100 | 12 | 10 | 105 |

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 doesn't enter the unit during tightening. Nipples of straight threads (G) to be used with sealing washer.

Pressure Setting

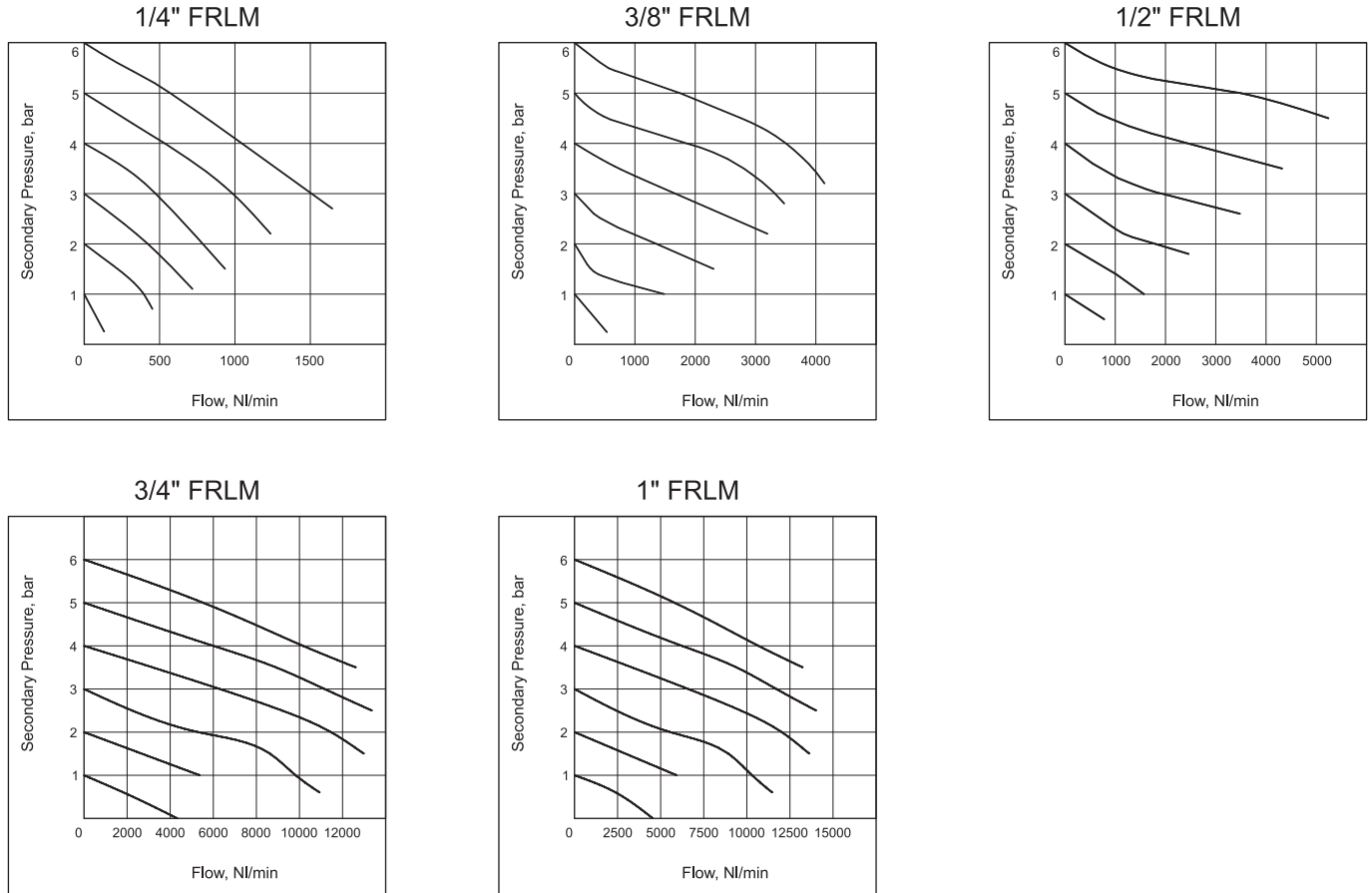
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position. (Turning the knob counter clockwise will reduce the pressure)

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Flow Graphs



Flow graphs are for 40µm filtrations only

How to order

| | | | | | |
|-----------------------------|-------------------------|---------------------------|---------------------------|---------------------------|----------|
| FRLM1 | 462 | 3 | 4 | M | M |
| Body & Port size | Filtration in µm | Pressure range | Metal bowl | Drain arrangement | |
| 361 G1/4 | 0 - 1 | 1 0.2 - 2 bar | M Without level indicator | M Manual drain (Standard) | |
| 462 G3/8 | 1 - 5 | 2 0.2 - 4 bar | L# With level indicator | | |
| 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 | | | | |

- Applicable for L14, L15, L17 models only.

Ordering example:

Filter Regulator Lubricator Modular - 3/8 size (with G3/8 port) with 5µm Filter and pressure range 0.5 - 7 bar, Metal bowl without level indicator and Manual drain : Ordering No : **FRLM 146213-MM**

If ordered as 3/8 FRLM, our standard model **FRLM 146234**, with 40µm Filter and pressure range 0.5 - 10 bar will be supplied.