

AIR PREPARATION UNITS

FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

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

Individual Filter- Regulator combination & 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 (with venturi) in models FRCLM14, FRCLM15 and FRCLM17 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 FRCLM14, FRCLM15 & FRCLM17 models and threaded type on FRCLM13 model
- Good flow and regulating characteristics

Technical Specifications

Model	FRCLM 13	FRCLM 14	FRCLM 15	FRCLM 17	FRCLM 17
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	1250	2800	3500	4000
Maximum supply pressure (bar)	10				
Regulating pressure range [#] (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)				
Ambient / Medium temperature	5° - 50° C				
Filtration [#] (µm)	1, 5, 25, 40 (standard), 50, 100				
Min operating flow (lts / min)	12	40	45	50	50
Bowl capacity FRC (ml) (at maximum condensate level)	9	32	44	165	165
Bowl capacity Lubricator (ml) (at maximum condensate level)	20	57	152	200	200
Recommended oil	ISO VG 32 (Servo System 32)				
Bowl material	Polycarbonate				
Installation	Vertical (as shown in the picture)				
Materials of construction	Aluminium, Bronze, Brass, Steel, Acetal, Polycarbonate, SS, Nitrile				
Optional accessories [*]	Pressure gauge				
Weight (Kg)	0.63	1.15	2.27	4.18	4.07

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

[#] For details see " How to order "

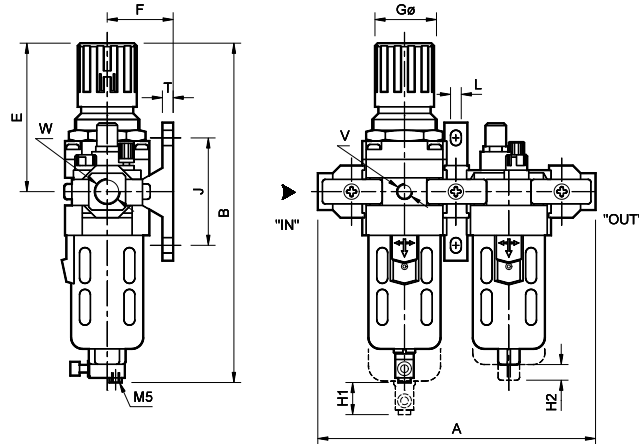
^{*} For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

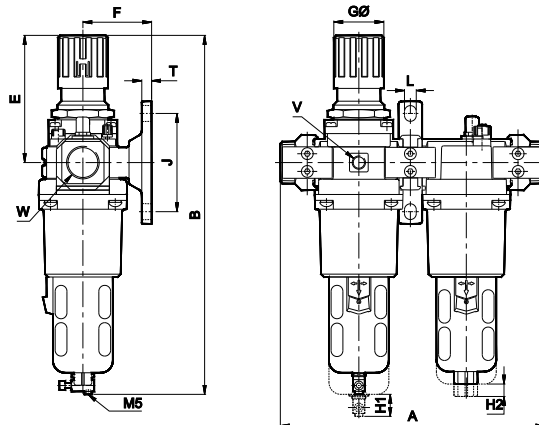
FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

Model FRCLM1361, FRCLM1462, FRCLM1563



Model FRCLM1764, FRCLM1765



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2
FRCLM13	G1/4	G1/8	146	170	68	35	28	50	7	7	50	35
FRCLM14	G3/8	G1/8	182	220	95	45	40	70	7	7	55	45
FRCLM15	G1/2	G1/8	220	280	125	55	51	90	9	9	80	45
FRCLM17	G3/4	G1/4	270	370	130	70	51	100	12	10	80	45
FRCLM17	G1	G1/4	270	370	130	70	51	100	12	10	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 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.

Pressure Setting

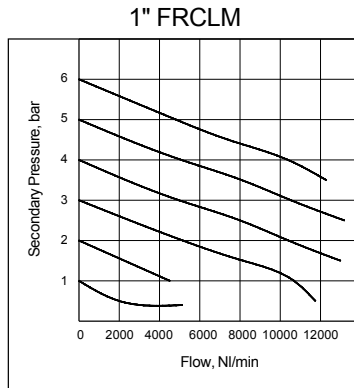
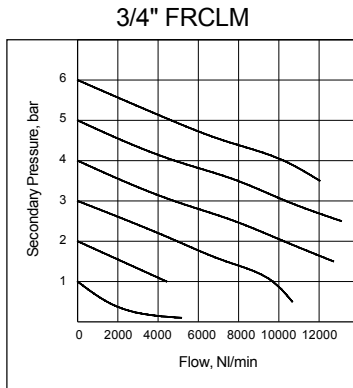
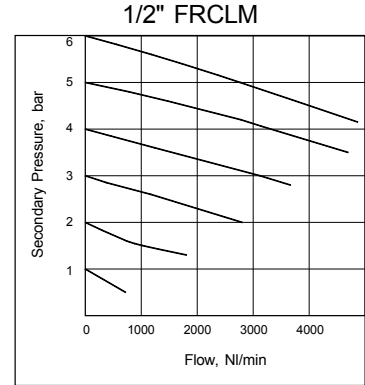
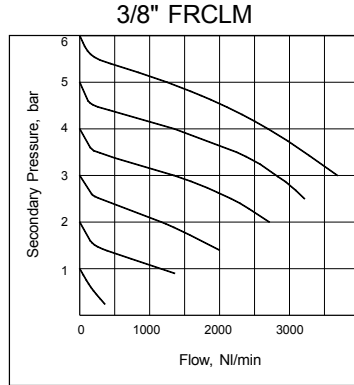
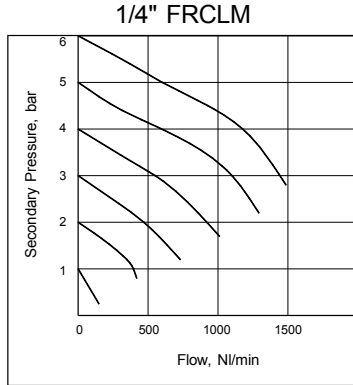
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

Flow Graphs



Flow graphs are for 40µm filtrations only

How To Order

FRCLM1

Body & Port size	
361	G1/4
462	G3/8
563	G1/2
764	G3/4
765	G1

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

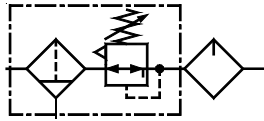
Pressure range	
1	0.2 - 2 bar
2	0.2 - 4 bar
3	0.5 - 7 bar
4	0.5 - 10 bar (Standard)

/ MB

Ordering example : Filter Regulator Combination and Lubricator Modular - 3/8 size (with G3/8 port) with 5µm Filter and pressure range 0.5 - 7 bar : Ordering No : FRCLM 146213/MB.

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

Subject to change



AIR PREPARATION UNITS

FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

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

Without piping adaptor and spacer

Model FRCLM1.../W

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 FRCLM14, FRCLM15 and FRCLM17 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 FRCLM14, FRCLM15 & FRCLM17 models and threaded type on FRCLM13 model
- ❑ Good flow and regulating characteristics

Model FRCLM1.../S

Technical Specifications

Model	FRCLM13.../W	FRCLM14.../W	FRCLM15.../W	FRCLM17.../W	FRCLM17.../W	
	FRCLM13.../S	FRCLM14.../S	FRCLM15.../W	FRCLM17.../W	FRCLM17.../W	
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	1250	2800	3500	4000	
Maximum supply pressure (bar)	10					
Regulating pressure range [#] (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)					
Ambient / Medium temperature	5° - 50° C					
Filtration [#] (µm)	1, 5, 25, 40 (standard), 50, 100					
Min operating flow (lts / min)	12	40	45	50	50	
Bowl capacity FRC (ml) (at maximum condensate level)	9	32	44	165	165	
Bowl capacity Lubricator (ml) (at maximum condensate level)	20	57	152	200	200	
Recommended oil	ISO VG 32 (Servo System 32)					
Bowl material	Polycarbonate					
Installation	Vertical (as shown in the picture)					
Materials of construction	Aluminium, Bronze, Brass, Steel, Acetal, Polycarbonate, SS, Nitrile					
Optional accessories [*]	Pressure gauge					
Weight (Kg)	FRCLM1.../W	0.54	1.00	2.01	3.69	3.64
	FRCLM1.../S	0.51	0.95	1.92	3.55	3.49

@ Supply pressure 7 bar , Set pressure 6 bar , Pressure drop Δp = 1bar (For standard models)

For details see " How to order "

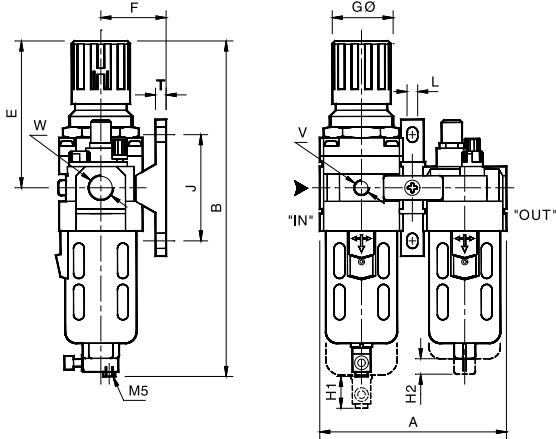
* For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

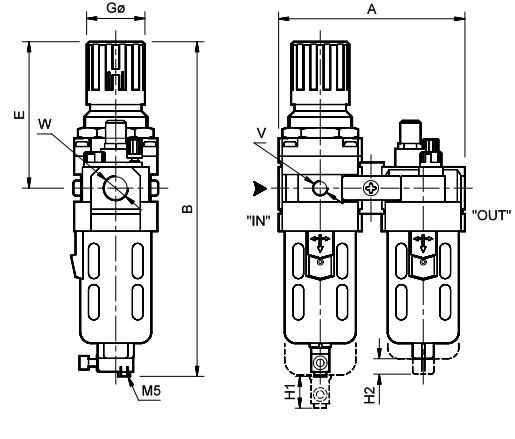
FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

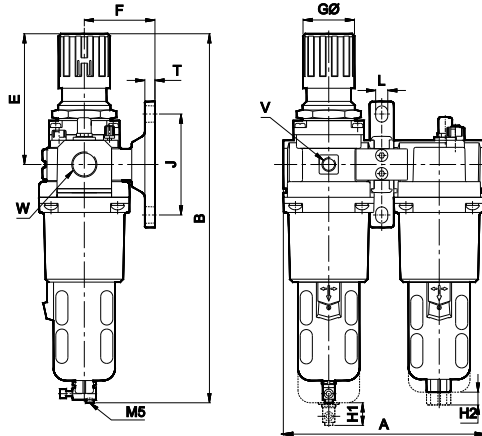
Model FRCLM1.../W



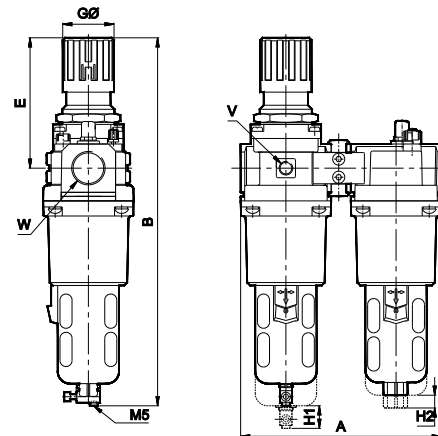
Model FRCLM1.../S



Model FRCLM17.../ W



Model FRCLM17.../S



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2
FRCLM13.../W	G1/4	G1/8	92	170	68	35	28	50	7	7	50	35
FRCLM14.../W	G3/8	G1/8	124	220	95	45	40	70	7	7	55	45
FRCLM15.../W	G1/2	G1/8	156	280	125	55	51	90	9	9	80	45
FRCLM17.../W	G3/4	G1/4	200	370	130	70	51	100	12	10	80	45
FRCLM17.../W	G1	G1/4	200	370	130	70	51	100	12	10	80	45

Model	W	V	A	B	E	GØ	H1	H2
FRCLM13.../S	G1/4	G1/8	92	170	68	28	50	35
FRCLM14.../S	G3/8	G1/8	124	220	95	40	55	45
FRCLM15.../S	G1/2	G1/8	156	280	125	51	80	45
FRCLM17.../S	G3/4	G1/4	200	370	130	51	80	45
FRCLM17.../S	G1	G1/4	200	370	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 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.

Pressure Setting

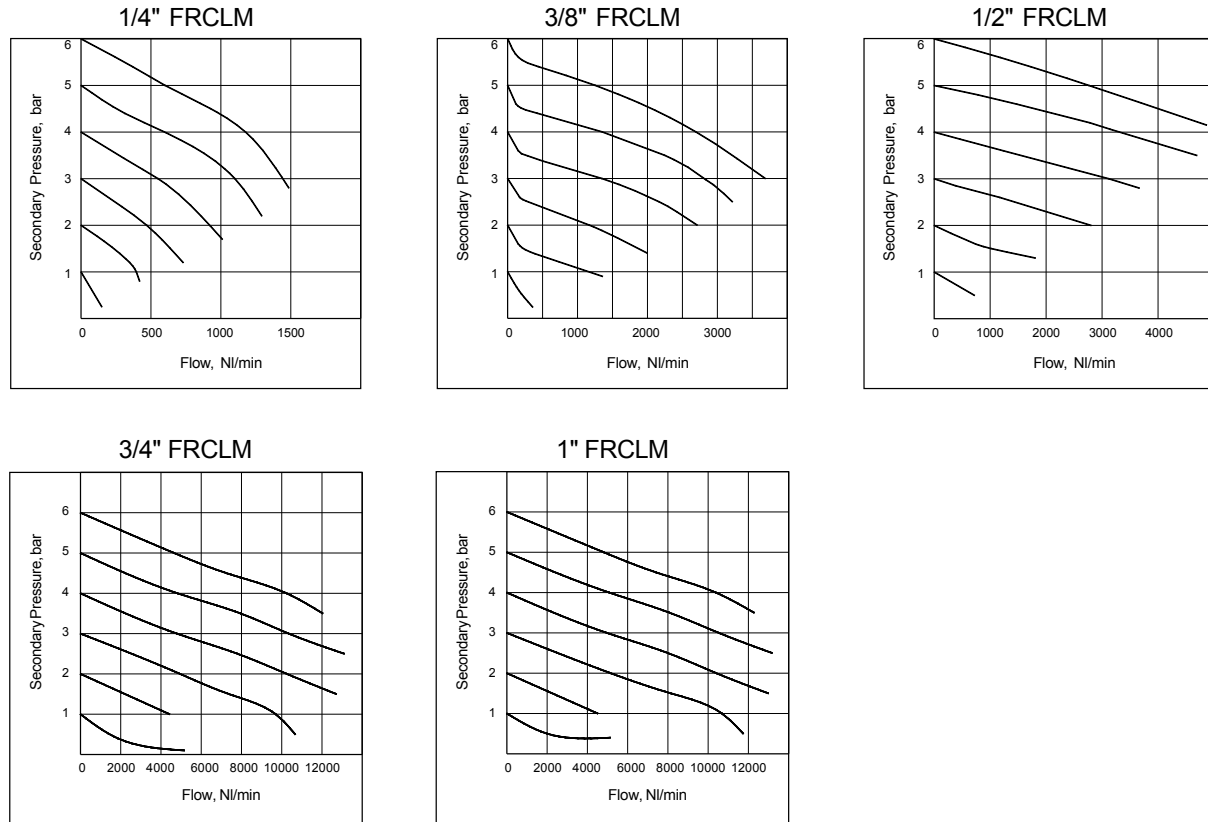
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

Flow Graphs

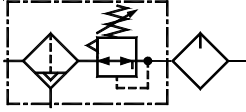


Flow graphs are for 40µm filtrations only

How to order

FRCLM1	○ ○ ○	○	○	/ ○ /	MB		
Body & Port size		Filtration in µm		Pressure range		Mounting	
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 Combination and Lubricator Modular - 3/8 size (with G3/8 port) and wall mounting bracket with 5µm Filter and pressure range 0.5 - 7 bar : Ordering No: FRCLM146213/W/MB.



AIR PREPARATION UNITS

FRCLM with Internal Autodrain Series FRCLM1A

Cat No FRCLM1A - 01 - A

FRCL MODULAR WITH INTERNAL AUTODRAIN - 3/8, 1/2, 3/4, 1"

Individual Filter - Regulator Combination & 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
- Internal Autodrain
 - Float type, no electrical connections required.
 - Manual drain is also provided / possible.
 - Provision for drain tube connection, to take the condensate away from the unit, to keep the working area clean.
- Regulator
 - Diaphragm operated, relieving type
 - Pressure compensated by balanced poppet
 - Flow compensated (with venturi) 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 FRCLM14, FRCLM15 & FRCLM17 models
- Good flow and regulating characteristics

Technical Specifications

Model	FRCLM14...A	FRCLM15...A	FRCLM17...A	FRCLM17...A
Medium	Compressed air			
Port size	G3/8	G1/2	G3/4	G1
Pressure gauge port size	G1/8	G1/8	G1/4	G1/4
Flow rate [®] (lts / min)	1250	2800	3500	4000
Operating pressure (bar)	2 - 10			
Regulating pressure range [#] (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)			
Ambient / Medium temperature	5° - 50° C			
Filtration [#] (µm)	1, 5, 25, 40 (standard), 50, 100			
Min operating flow (lts / min)	40	45	50	50
Bowl capacity FRC (ml) (at maximum condensate level)	32	44	165	165
Bowl capacity Lubricator (ml) (at maximum condensate level)	57	152	200	200
Recommended oil	ISO VG 32 (Servo System 32)			
Bowl material	Polycarbonate			
Installation	Vertical (as shown in the picture)			
Materials of construction	Aluminium, Bronze, Brass, Steel, Acetal, Polycarbonate, SS, Nitrile			
Optional accessories [*]	Pressure gauge			
Weight (Kg)	1.31	2.49	4.23	4.12

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

[#] For details see " How to order "

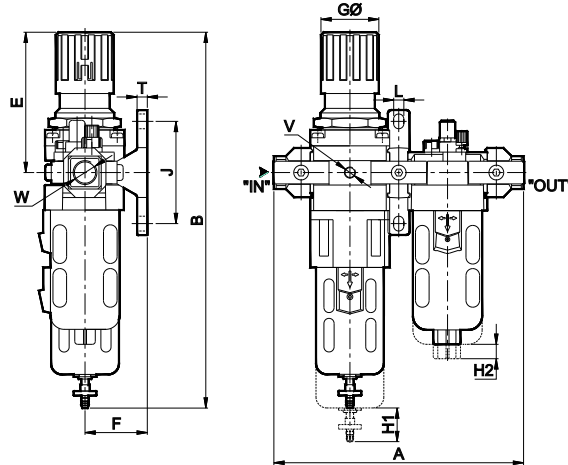
^{*} For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

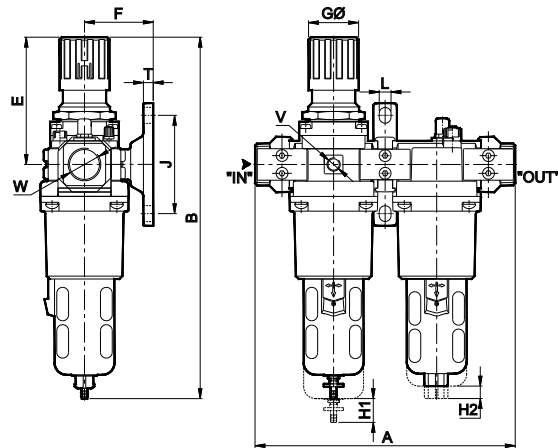
FRCLM with Internal Autodrain Series FRCLM1A

Cat No FRCLM1A - 01 - A

Model FRCLM14...A, FRCLM15...A



Model FRCLM17...A



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2
FRCLM14...A	G3/8	G1/8	182	272	95	45	40	70	7	7	55	45
FRCLM15...A	G1/2	G1/8	220	335	125	55	51	90	9	9	80	45
FRCLM17...A	G3/4	G1/4	270	370	130	70	51	100	12	10	80	45
FRCLM17...A	G1	G1/4	270	370	130	70	51	100	12	10	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 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.

Pressure Setting

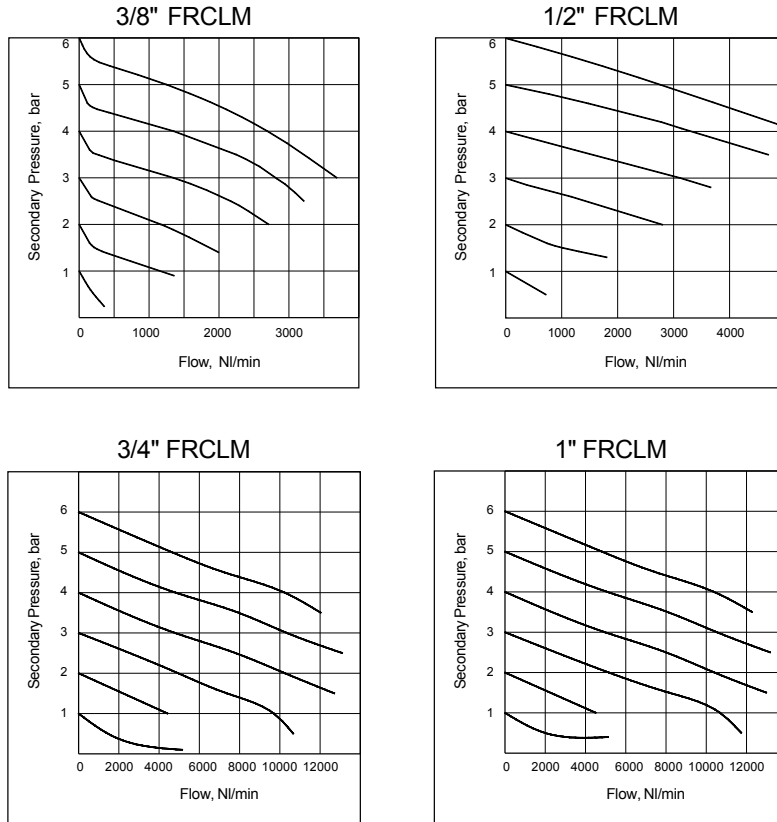
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FRCLM with Internal Autodrain Series FRCLM1A

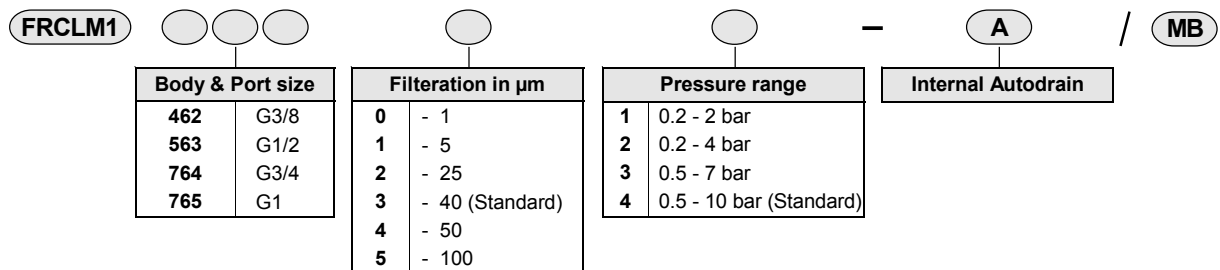
Cat No FRCLM1A - 01 - A

Flow Graphs



Flow graphs are for 40µm filtrations only

How To Order



Ordering example : Filter Regulator Combination and Lubricator Modular - 3/8 size (with G3/8 port) with 5µm Filter and pressure range 0.5 - 7 bar with Internal Autodrain : Ordering No : FRCLM146213-A/MB.
If ordered as 3/8 FRCLM with Internal Autodrain, our standard model FRCLM146234-A/MB, with 40µm Filter and pressure range 0.5 - 10 bar with Internal Autodrain will be supplied.