

Air Preparation Units

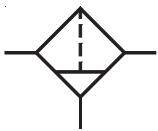
Series : FRL

Sizes : G1/4, G3/8, G1/2, G3/4, G1

- ☐ Air Filter
- ☐ Air Filter with Metal bowl
- ☐ Mist Separator
- ☐ Regulator
- ☐ Regulator with built in NRV
- ☐ Lubricator
- ☐ Lubricator with Metal bowl
- ☐ Filter Regulator Combination
- ☐ Filter Regulator Combination with Metal bowl
- ☐ Filter Regulator Combination - Lubricator, Modular unit
- ☐ Filter - Regulator - Lubricator, Modular unit
- ☐ Internal / External Auto drain valve
- ☐ Accessories

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AIR PREPARATION UNITS

FILTER Series F1

Cat No F1-01-C/MB

AIR FILTER - 1/4, 3/8, 1/2, 3/4, 1"

Features

- ☐ Conforms to ISO 5782 -1
- ☐ Suitable for Modular mounting
- ☐ Steel bowl guard, bayonet type on F14, F15 & F17 models and threaded type on F13 model.
- ☐ Press type Manual drain for easy operation.
- ☐ Bronze filtering element.
- ☐ Separator and shield for efficient moisture separation.

Technical Specifications

Model	F13.../MB	F14.../MB	F15.../MB	F17.../MB	F17.../MB
Medium	Compressed air				
Port size	G1/4	G3/8	G1/2	G3/4	G1
Flow rate (lts / min) @	800	2250	3500	5000	6500
Maximum supply pressure (bar)	10				
Ambient / Medium temperature	5° - 50° C				
Filtration # (µm)	1, 5, 25, 40 (standard), 50, 100				
Bowl capacity (ml) (at maximum condensate level)	9	32	44	165	165
Bowl material	Polycarbonate				
Installation	Vertical (as in the picture)				
Materials of construction	Aluminium, Bronze, Steel, Acetal, Polycarbonate, SS, Nitrile				
Optional accessories *	Clamp, Modular mounting kit, Pressure gauge				
Weight (Kg)	0.19	0.32	0.60	1.4	1.3

@ Supply pressure 6 bar , pressure drop $\Delta p = 0.3$ bar (For standard models).

For details see " How to order ".

* For details refer Optional accessories Cat No APA - 01 - C / MB

Precautions

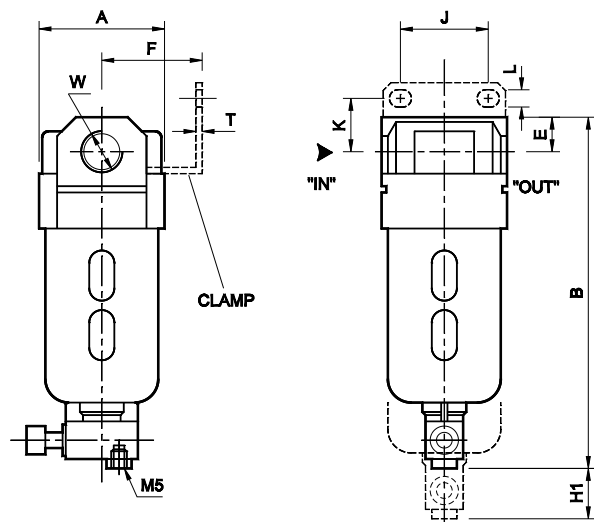
- Note the direction of flow before installation and connect piping accordingly.
- Flush pipings for dirt, dust, rust and other foreign particles.
- Install in clean atmosphere.
- Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples 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.

AIR PREPARATION UNITS

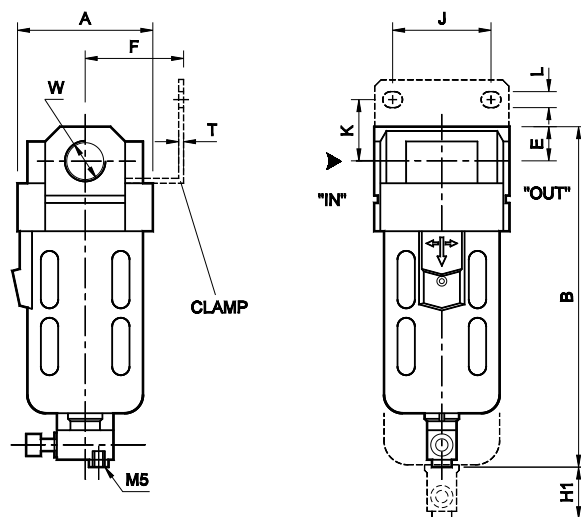
FILTER Series F1

Cat No F1-01-C/MB

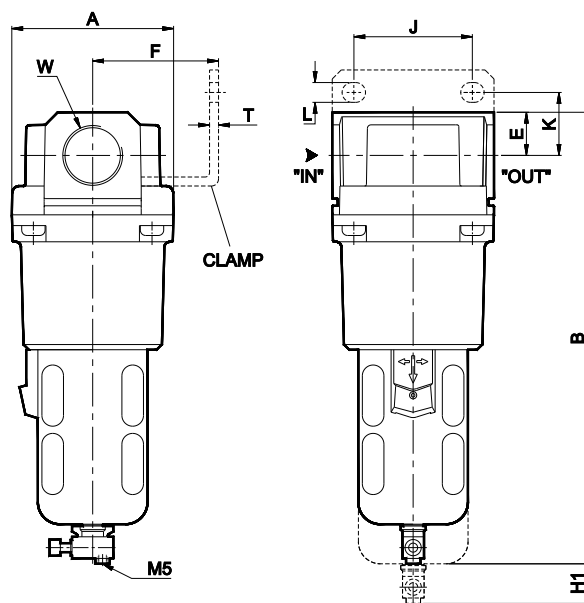
Model F13.../MB



Model F14.../MB & F15.../MB

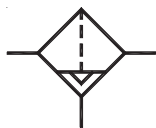


Model F17.../MB



Model	W	A	B	E	K	F	J	L	T	H1
F13.../MB	G1/4	SQ 40	113	11	15	30	28	5.5	2	50
F14.../MB	G3/8	SQ 55	140	14	25	40	40	6.5	2	55
F15.../MB	G1/2	SQ 70	172	18	25	50	55	8.5	2	80
F17.../MB	G3/4	SQ 90	260	24	35	70	66	11	5	80
F17.../MB	G1	SQ 90	260	24	35	70	66	11	5	80

For Details of Clamp see optional accessories Cat No APA - 01 - C / MB



AIR PREPARATION UNITS

FILTER WITH INTERNAL AUTODRAIN - Series F1A

Cat No F1A - 01 - C

AIR FILTER with Internal Autodrain - 3/8, 1/2, 3/4, 1"

Features

- ☐ Suitable for Modular mounting
- ☐ Steel bowl guard, bayonet type.
- ☐ Internal Autodrain
 - Float type, no electrical connections required
 - Provided with manual drain
 - Provision for drain tube connection, to take the condensate away from the unit, to keep the working area clean.
- ☐ Bronze filtering element.
- ☐ Separator and shield for efficient moisture separation.

Technical Specifications

Model	F14....A	F15....A	F17....A	F17....A
Medium	Compressed air			
Port size	G3/8	G1/2	G3/4	G1
Flow rate (lts / min) ®	2250	3500	5000	6500
Operating pressure (bar)	2 - 10		10	
Ambient / Medium temperature	5° - 50° C			
Filtration # (µm)	1, 5, 25, 40 (Standard), 50, 100			
Bowl capacity (ml) (at maximum condensate level)	35	65	165	165
Bowl material	Polycarbonate			
Installation	Vertical (as in the picture)			
Materials of construction	Aluminium, Bronze, Steel, Acetal, Polycarbonate, SS, Nitrile			
Optional accessories *	Clamp, Modular mounting kit, Pressure gauge			
Weight (Kg)	0.49	0.86	1.4	1.3

 @ Supply pressure 6 bar , Pressure drop $\Delta p = 0.3$ bar

For details see " How to order "

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

Precautions

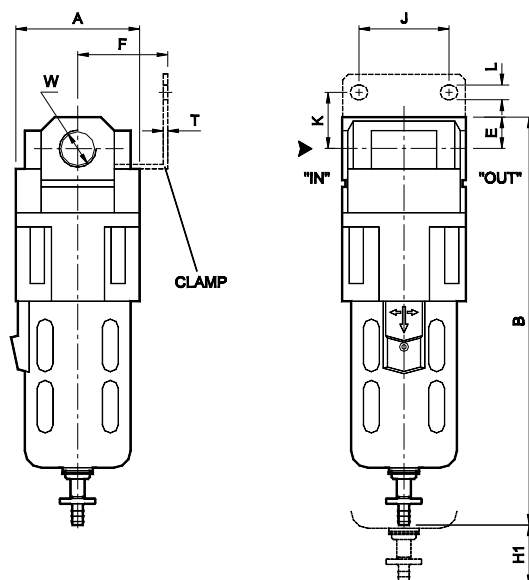
- Note the direction of flow before installation and connect piping accordingly.
- Flush pipings for dirt, dust, rust and other foreign particles.
- Install in clean atmosphere.
- Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples 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.

AIR PREPARATION UNITS

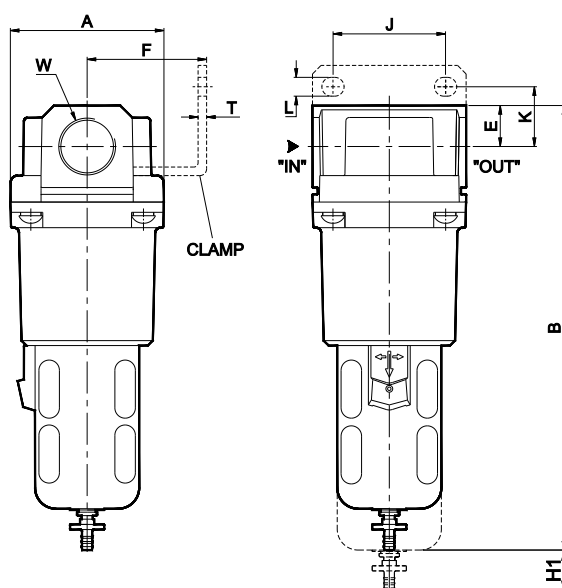
FILTER WITH INTERNAL AUTODRAIN - Series F1A

Cat No F1A - 01 - C

Model F14...A, F15...A



Model F17...A



Model	W	A	B	E	K	F	J	L	T	H1
F14...A	G3/8	SQ 55	193	14	25	40	40	6.5	2	55
F15...A	G1/2	SQ 70	230	18	25	50	55	8.5	2	80
F17...A	G3/4	SQ 90	260	24	35	70	66	11	5	80
F17...A	G1	SQ 90	260	24	35	70	66	11	5	80

For Details of Clamp see optional accessories Cat No APA - 01 - C

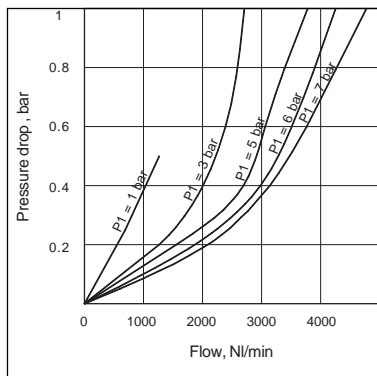
AIR PREPARATION UNITS

FILTER WITH INTERNAL AUTODRAIN - Series F1A

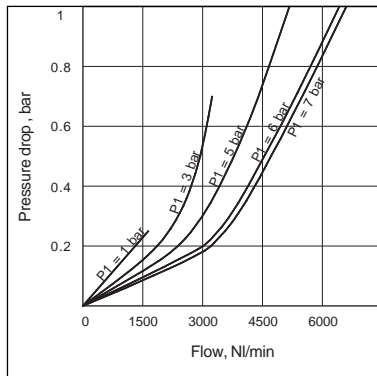
Cat No F1A - 01 - C

Flow Graphs

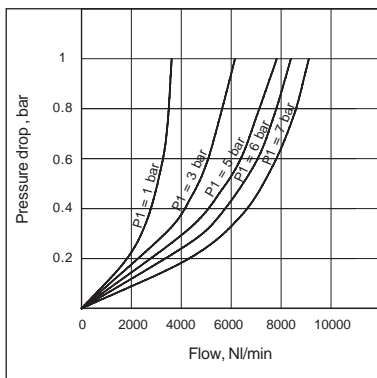
3/8" FILTER



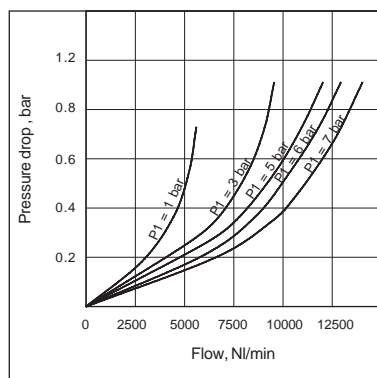
1/2" FILTER



3/4" FILTER

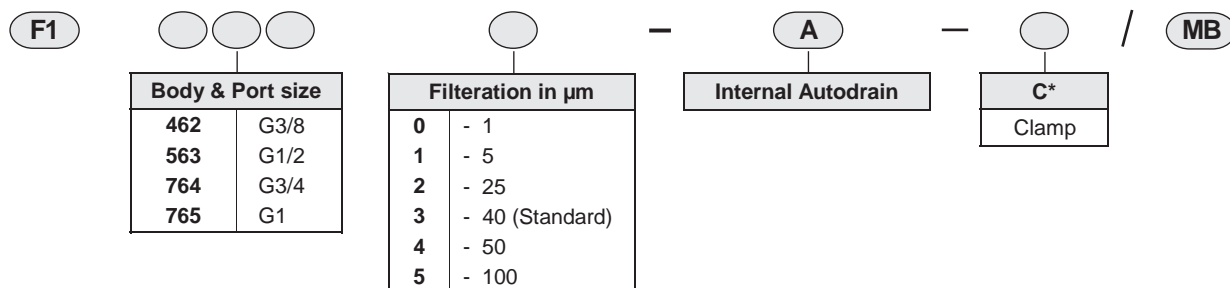


1" FILTER



Flow graphs are for 40 μ m filtrations only

How to order



Ordering example

* Filter with Internal Autodrain with Clamp :-

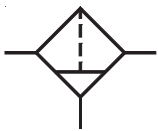
Filter with Internal Autodrain - 3/8 size (with G3/8 port), 50 μ m filter with clamp : Ordering No: **F14624-A-C/MB**

Filter with Internal Autodrain without Clamp :-

Filter with Internal Autodrain - 3/8 size (with G3/8 port), 50 μ m filter : Ordering No: **F14624-A/MB**

If ordered as 3/8 Filter with Internal Autodrain, our standard model F14623-A/MB, with 40 μ m filter will be supplied

Subject to change



AIR PREPARATION UNITS

FILTER WITH METAL BOWL Series F1M

Cat No F1M - 01 - C

FILTER WITH METAL BOWL - 1/4, 3/8, 1/2, 3/4, 1"

Features

- ☐ For higher pressure range above 10 bar
- ☐ Suitable for Modular mounting
- ☐ Aluminium bowl guard, bayonet type (3/4 and 1" only)
- ☐ Press type Manual drain for easy operation
- ☐ Suitable for Internal autodrain also
- ☐ Bronze filtering element
- ☐ Separator and shield for efficient moisture separation

Application

These type of filters are used for Chemical, Paintshops, Pharmaceutical, Foundry etc.

Technical Specifications

Model	F13...M	F14...M	F15...M	F17...M	F17...M
Medium	Compressed air				
Port size	G1/4	G3/8	G1/2	G3/4	G1
Flow rate (lts / min) @	800	2250	3500	5000	6500
Maximum supply pressure (bar)	20				
Ambient / Medium temperature	5° - 50° C				
Filtration # (µm)	1, 5, 25, 40 (standard), 50, 100				
Bowl capacity (ml) (at max. condensate level)	9	64	90	165	165
Bowl material	Aluminium				
Installation	Vertical (as in the picture)				
Materials of construction	Aluminium, Bronze, Steel, Acetal, SS, Nitrile				
Optional accessories *	Clamp, Modular mounting kit				
Weight (Kg)	0.20	0.45	0.85	1.47	1.43

@ Supply pressure 6 bar , pressure drop $\Delta p = 0.3$ bar (For standard models).

For details see " How to order " .

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

Precautions

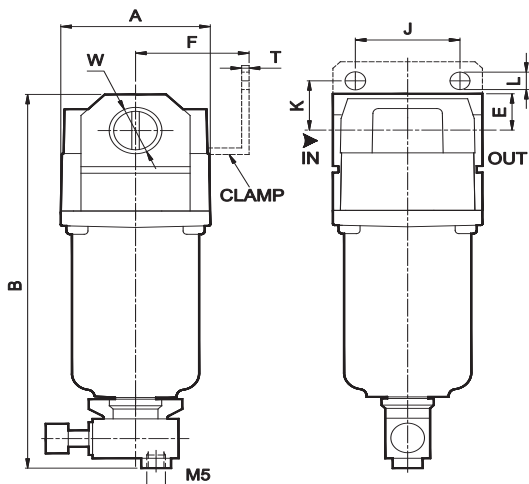
1. Note the direction of flow before installation and connect piping accordingly.
2. Flush pipings for dirt, dust, rust and other foreign particles.
3. Install in clean atmosphere.
4. Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples of straight threads (G) to be used with sealing washer.

AIR PREPARATION UNITS

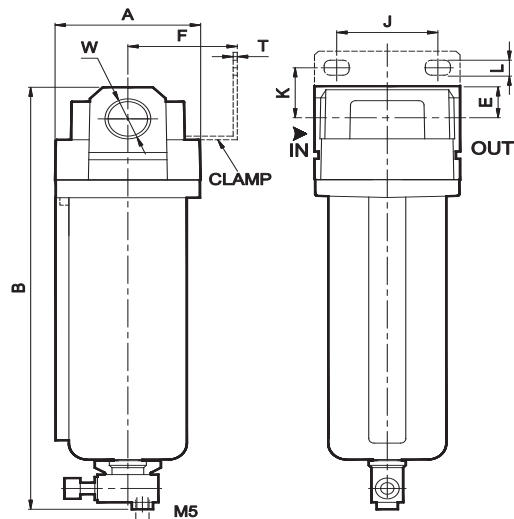
FILTER WITH METAL BOWL Series F1M

Cat No F1M - 01 - C

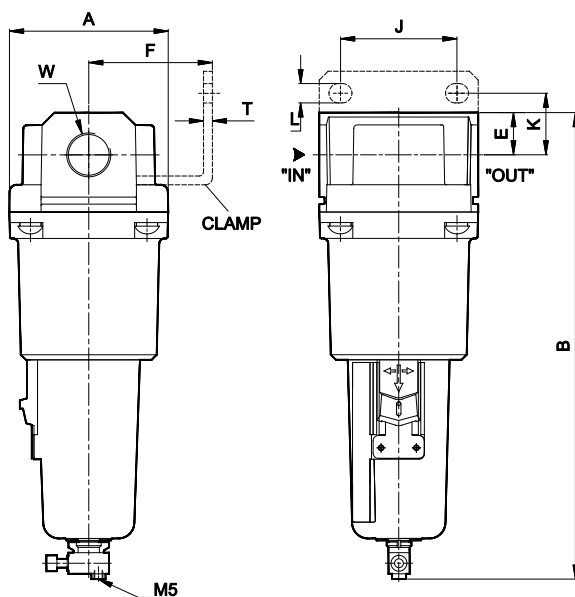
Model F13...M



Model F14...M & F15...M



Model F17...-MM



Model	W	A	B	E	K	F	J	L	T
F13...M	G1/4	SQ 40	115	11	15	30	28	5.5	2
F14...M	G3/8	SQ 55	188	14	25	40	40	6.5	2
F15...M	G1/2	SQ 70	224	18	25	50	55	8.5	2
F17...M	G3/4	SQ 90	265	24	35	70	66	11	5
F17...M	G1	SQ 90	265	24	35	70	66	11	5

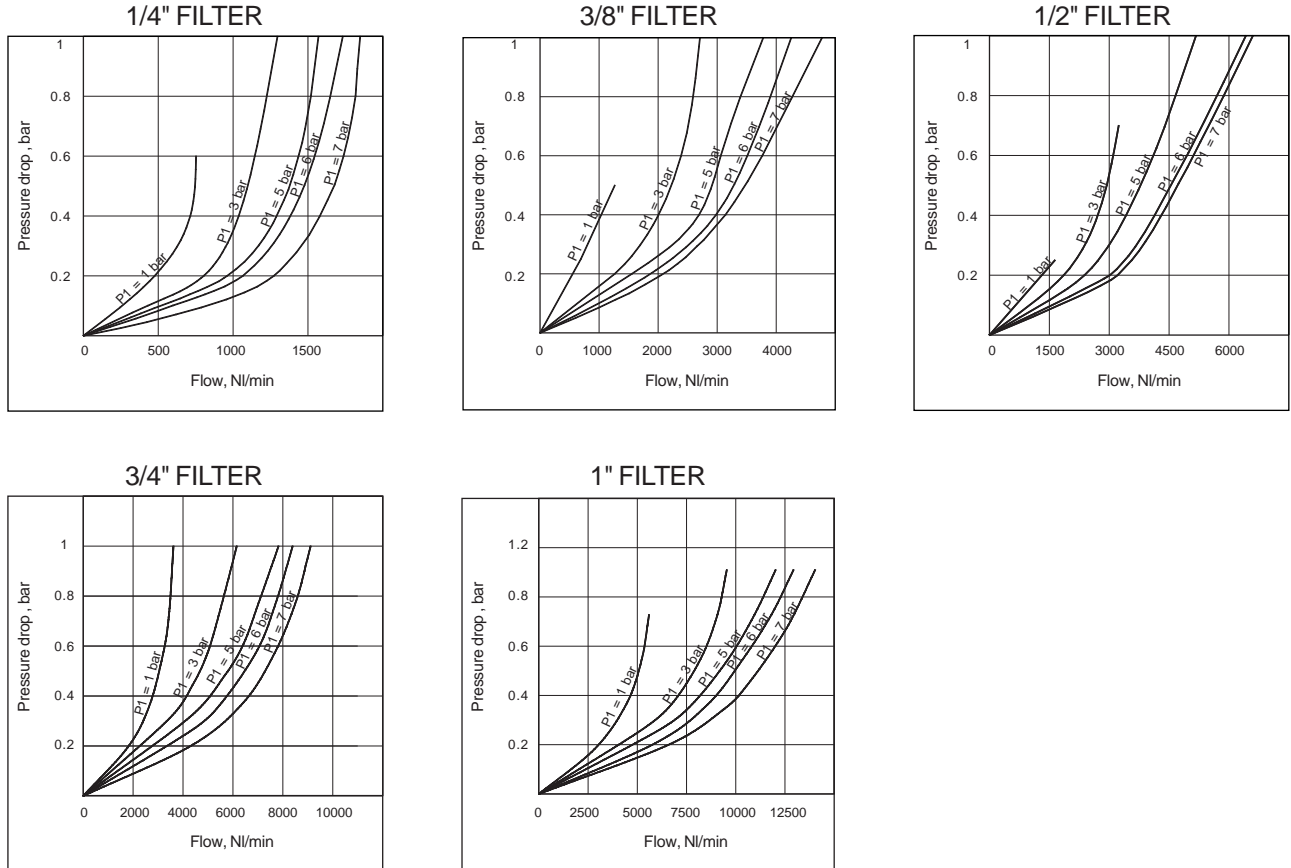
For Details of Clamp see optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

FILTER WITH METAL BOWL Series F1M

Cat No F1M - 01 - C

Flow Graphs



Flow graphs are for 40µm filtrations only

How to order

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* Auto Drain - G3/8, G1/2, G3/4 & G1 model only

Ordering example

* Filter with Clamp :- Filter - 3/8 size (with G3/8 port), 50µm filter and metal bowl with auto drain with clamp
Ordering No: **F14624-MA-C/MB**

Filter without Clamp :- Filter - 3/8 size (with G3/8 port), 50µm filter and metal bowl with auto drain: Ordering No: **F14624-MA/MB**
If ordered as 3/8 Filter with metal bowl, our standard model F14623-MM/MB, with 40µm filter will be supplied.

Subject to change

MIST SEPARATOR

Series FS1

Cat No FS1 - 01 - 01

MIST SEPARATOR - 1/4, 1/2

Features

- ☐ Borosilicate filtering element
- ☐ 99.99% compressed filtered air upto 0.01micron to 0.1 micron
- ☐ Suitable for Modular mounting
- ☐ Steel bowl guard, bayonet type on FS15 modles and threaded type on FS13 model
- ☐ Press type Manual drain for easy operation
- ☐ Separator for efficient moisture separation

Application

These type of mist separators are used in Chemical, Pharmaceutical, Food processing industry, Paintshops and for other precision pneumatic systems.

Function

- ☐ Removes submicronic oil, water droplets and solid contaminants from compressed air.
- ☐ Used for high efficient filtration of compressed air, removing fine oil particles and droplets of sizes upto 0.01 microns

Technical Specification

Model	FS13...		FS15...	
Medium	Compressed filtered air			
Port size	G1/4		G1/2	
Filtration # (µm)	0.01	0.1	0.01	0.1
Flow rate (lts / min) ®	250	275	1500	2000
Maximum supply pressure (bar)	10			
Ambient / Medium temperature	5° - 50° C			
Bowl capacity (ml) (at maximum condensate level)	9		44	
Bowl material	Polycarbonate			
Installation	Vertical (as in the picture)			
Materials of construction	Aluminium, Borosilicate, Steel, Acetal, Polycarbonate, SS, Nitrile			
Optional accessories *	Clamp, Modular mounting kit			
Weight (Kg)	0.19		0.60	

@ Supply pressure 6 bar , Pressure drop Δ p = 0.3 bar

For details see " How to order "

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

Precautions

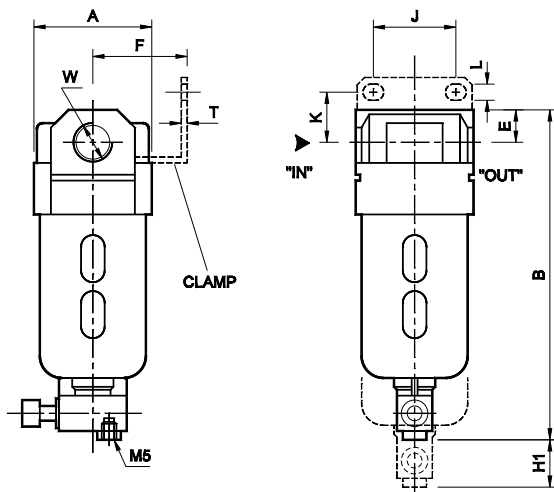
1. Mount the mist separator in line, next to a standard air filter series F1 with 5 micron filter element.
2. Note the direction of flow before installation and connect piping accordingly.
3. Flush pipings for dirt, dust, rust and other foreign particles.
4. Install in clean atmosphere
5. Nipples of taper threads (R) to be used with teflon tape. Ensure Teflon tape does not enter the unit during tightening.
Nipples of straight threads (G) to be used with sealing washer.
6. Polycarbonate bowls may get damaged and possibly fail if exposed to synthetic oils, thinner, solvents, trichloroethylene kerosene or other aromatic hydrocarbons.

MIST SEPARATOR

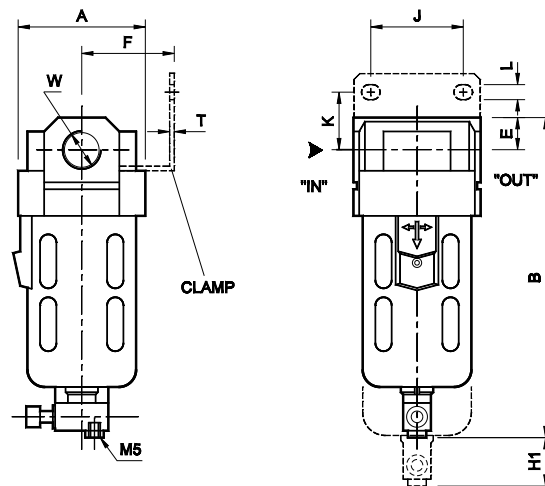
Series FS1

Cat No FS1 - 01 - 01

Model FS13



Model FS15

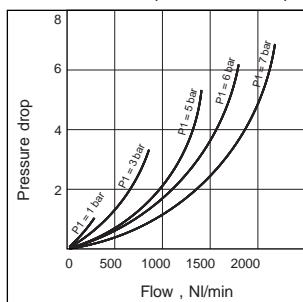


Model	W	A	B	E	K	F	J	L	T	H1
FS13...	G1/4	SQ 40	113	11	15	30	28	5.5	2	50
FS15...	G1/2	SQ 70	172	18	25	50	55	8.5	2	80

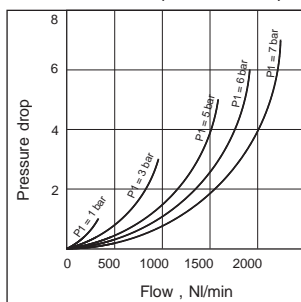
For Details of Clamp see optional accessories Cat No APA - 01 - C

Flow Graphs

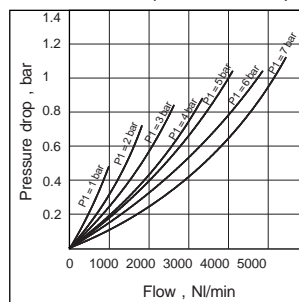
1/4 FILTER (0.01 micron)



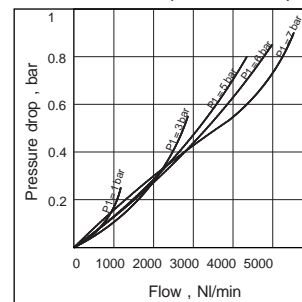
1/4 FILTER (0.1 micron)



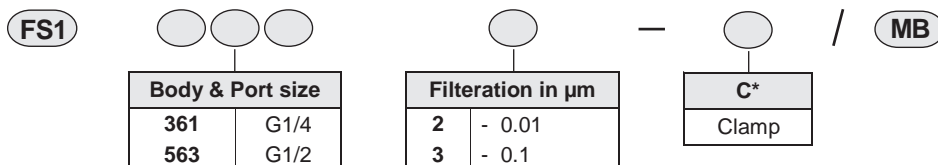
1/2 FILTER (0.01 micron)



1/2 FILTER (0.1 micron)



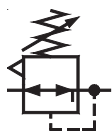
How to order



Ordering example

* Mist separator with Clamp :- Mist separator - 1/4 size (with G1/4 port), 0.1 μm filter with clamp : Ordering No: **FS13613-C/MB**

Mist separator without Clamp :- Mist separator - 1/4 size (with G1/4 port), 0.1 μm filter : Ordering No: **FS13613/MB**



AIR PREPARATION UNITS

REGULATOR Series R1

Cat No R1 - 01 - C

AIR REGULATOR - 1/4, 3/8, 1/2, 3/4, 1"

Features

- ☐ Conforms to ISO 6953 - 1
- ☐ Suitable for panel and modular mountings
- ☐ Non raising ' Press to Lock' adjusting knob for locking at any set pressure
- ☐ Diaphragm operated, relieving type
- ☐ Pressure compensated by Balanced poppet.
- ☐ Flow compensated in models R14, R15 and R17 (with venturi) for faster response
- ☐ Good flow and regulating characteristics.

Technical Specifications

Model	R13	R14	R15	R17	R17
Medium	Compressed air - Filtered				
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) [@]	600	2500	4000	5000	6000
Maximum supply pressure (bar)	15				
Regulating pressure range [#] (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)				
Ambient / Medium temperature	5° - 60° C				
Installation	Any position				
Materials of construction	Aluminium, Brass, Steel, Acetal, SS, Nitrile				
Optional accessories [*]	Clamp, Modular mounting kit, Pressure gauge				
Weight (Kg)	0.15	0.40	0.90	1.4	1.3

[@] 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

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 does not enter the unit during tightening.
Nipples of straight threads (G) to be used with sealing washer.

Pressure Setting

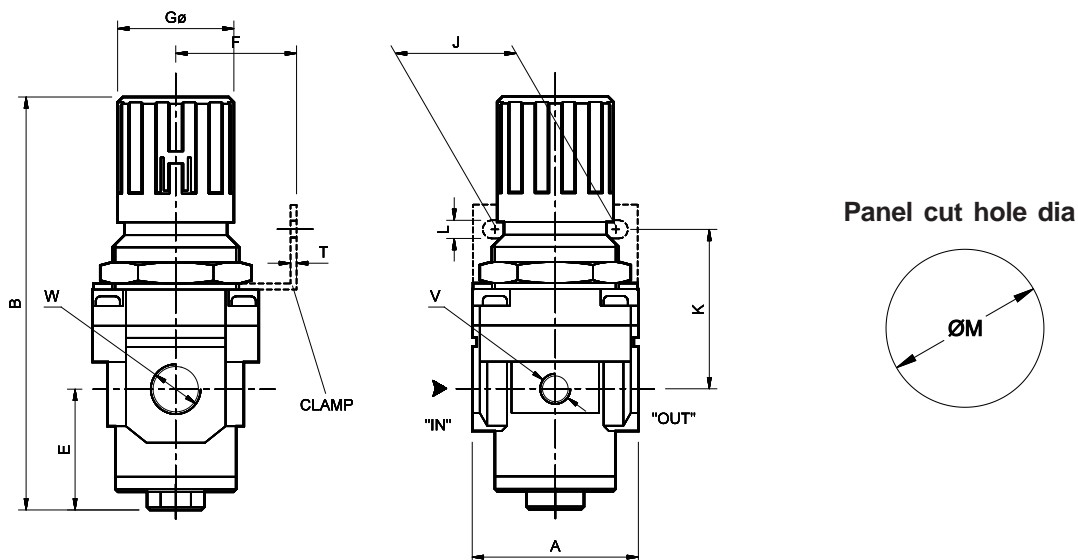
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

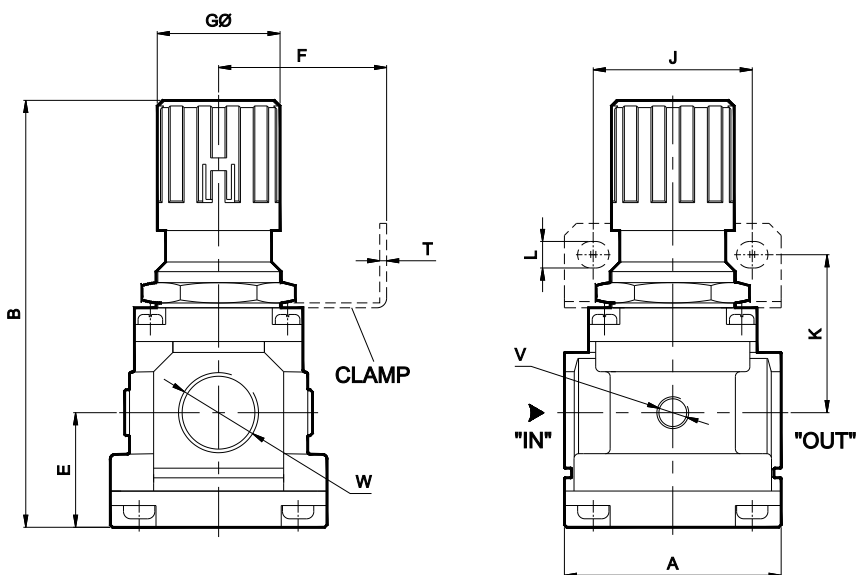
REGULATOR Series R1

Cat No R1 - 01 - C

Model R13, R14, R15

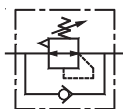


Model R17



Model	W	V	A	B	E	F	GØ	J	K	L	T	ØM
R13	G1/4	G1/8	SQ 40	81	13	30	28	28	45	5.5	2	31
R14	G3/8	G1/8	SQ 55	135	40	40	40	40	53	6.5	2	43
R15	G1/2	G1/8	SQ 70	165	40	50	51	55	62	8.5	2	53
R17	G3/4	G1/4	SQ 90	177	47.5	70	51	66	65	11	5	53
R17	G1	G1/4	SQ 90	177	47.5	70	51	66	65	11	5	53

For Details of Clamp see optional accessories Cat No APA - 01 - C



AIR PREPARATION UNITS

REGULATOR Series R1N
(with built in Non Return Valve)

Cat No R1N - 01 - 01

AIR REGULATOR (with built in Non Return Valve) - 1/4 3/8 1/2

Features

- ☐ Conforms to ISO 6953 - 1
- ☐ Suitable for panel and modular mountings
- ☐ Non raising ' Press to Lock ' adjusting knob for locking at any set pressure
- ☐ Diaphragm operated, relieving type
- ☐ Pressure compensated by Balanced poppet.
- ☐ Flow compensated in models R14 and R15 (with venturi) for faster response
- ☐ Good flow and regulating characteristics.
- ☐ Built in non return valve allows free air flow in reverse direction. When the inlet air is reduced by and below the setup pressure.

Application

Apart from its basic regulating characteristics in forward direction, this regulator with a built in non return valve allows free air flow in reverse direction, thus enabling to be used in applications requiring cylinders to exert two different force during extending and retracting strokes.

Technical Specification

Model	R13...N	R14...N	R15...N
Medium	Compressed air - Filtered		
Port size	G1/4	G3/8	G1/2
Pressure gauge port size	G1/8	G1/8	G1/8
Flow rate (lts / min) [@]	600	2500	4000
Maximum supply pressure (bar)	15		
Regulating pressure range [#] (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)		
Ambient / Medium temperature	5° - 60° C		
Installation	Any position		
Materials of construction	Aluminium, Brass, Steel, Acetal, SS, Nitrile		
Optional accessories [*]	Clamp, Modular mounting kit, Pressure gauge		
Weight (Kg)	0.15	0.40	0.90

[@] 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

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 with taper threads (R) to be used with teflon tape. Ensure Teflon tape doesnot enter the unit during tightening. Nipples with straight threads (G) to be used with sealing washer.

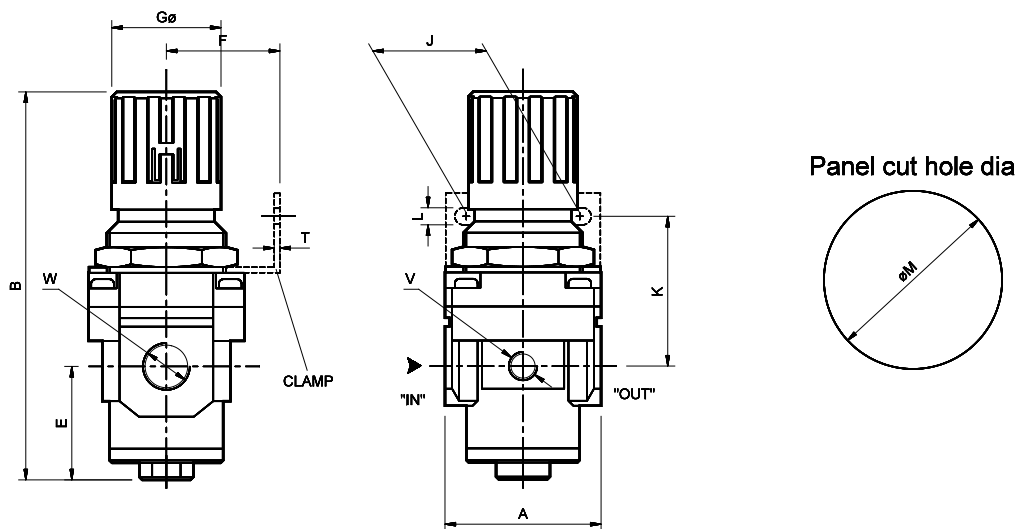
Pressure Setting

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)

AIR PREPARATION UNITS

REGULATOR Series R1N (with built in Non Return Valve)

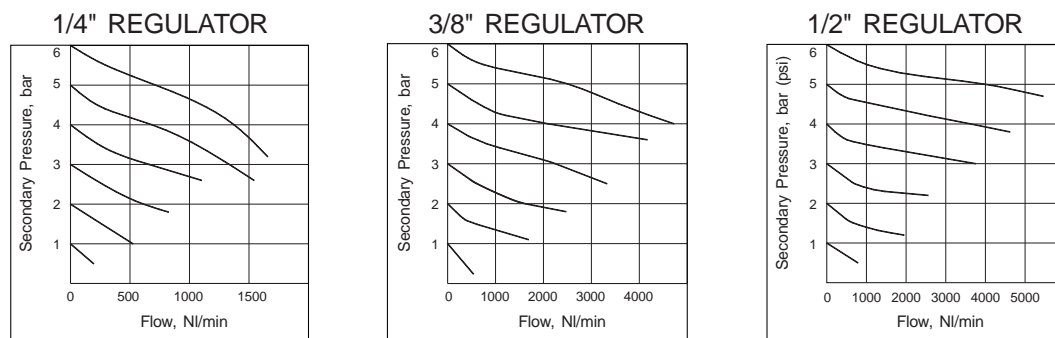
Cat No R1N - 01 - 01



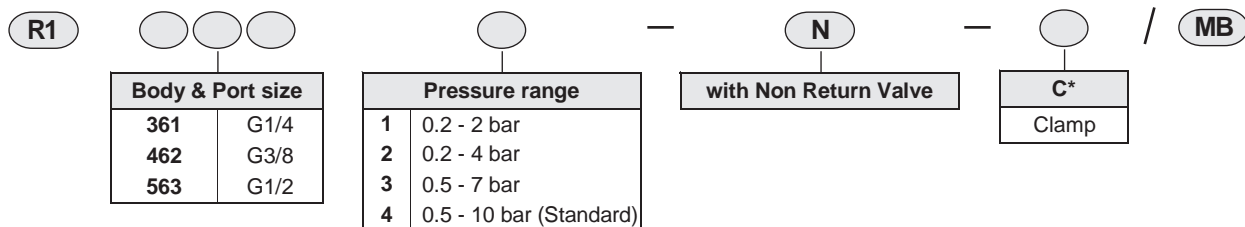
Model	W	V	A	B	E	F	GØ	J	K	L	T	ØM
R13	G1/4	G1/8	SQ 40	81	13	30	28	28	45	5.5	2	31
R14	G3/8	G1/8	SQ 55	135	40	40	40	40	53	6.5	2	43
R15	G1/2	G1/8	SQ 70	165	40	50	51	55	62	8.5	2	53

For Details of Clamp see optional accessories Cat No APA - 01 - C

Flow Graphs



How to order



Ordering example

* Regulator with Clamp :- Regulator - 3/8 size (with G3/8 port), with pressure range 0.5 - 7 bar, Non Return Valve with clamp
Ordering No: **R14623-N-C/MB**

Regulator without Clamp :- Regulator - 3/8 size (with G3/8 port), with pressure range 0.5 - 7 bar with Non Return Valve
Ordering No: **R14623-N/MB**

If ordered as 3/8 Regulator, our standard model R14624/MB, G3/8 with pressure range 0.5 -10 bar will be supplied.

Subject to change



AIR PREPARATION UNITS

LUBRICATOR Series L1

Cat No L1 - 01 - C

LUBRICATOR - 1/4, 3/8, 1/2, 3/4, 1"

Features

- ☐ Conforms to ISO 6301 - 1
- ☐ Suitable for Modular mounting
- ☐ Fog / Mist type
- ☐ Fine adjustment of lubrication
- ☐ Steel bowl guard, bayonet type on L14, L15 & L17 models and threaded type on L13 mode
- ☐ Lubrication proportional to flow

Technical Specifications

Model	L13	L14	L15	L17	L17
Medium	Compressed air - Filtered				
Port size	G1/4	G3/8	G1/2	G3/4	G1
Flow rate (lts / min) @	1350	3000	5650	7200	9000
Maximum supply pressure (bar)	10				
Ambient / Medium temperature	5° - 50° C				
Min operating flow (lts / min)	12	40	45	50	50
Bowl capacity (ml) (at maximum condensate level)	20	57	152	200	200
Recommended oil	ISO VG 32 (Servo System 32)				
Bowl material	Polycarbonate				
Installation	Vertical (as in the picture)				
Materials of construction	Aluminium, Bronze, Steel, Acetal, Polycarbonate, SS, Nitrile				
Optional accessories *	Clamp, Modular mounting kit				
Weight (Kg)	0.19	0.30	0.56	1.3	1.2

@ Supply pressure 6 bar , pressure drop $\Delta p = 0.5$ bar (For standard models)

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

Precautions

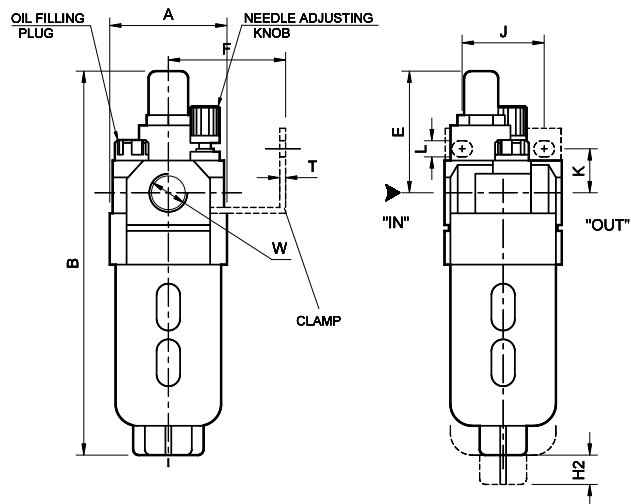
1. Note the direction of flow before installation and connect piping accordingly.
2. Flush pipings for dirt, dust, rust and other foreign particles.
3. Install in clean atmosphere.
4. Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
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.
6. Oil may be filled when under pressure. However it is recommended to vent the air completely before filling the oil.

AIR PREPARATION UNITS

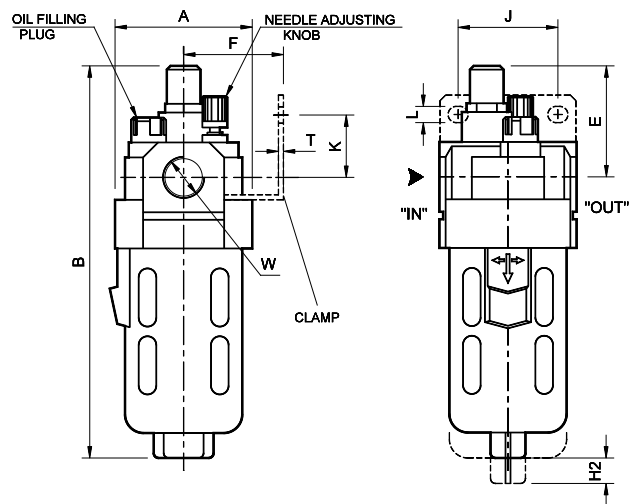
LUBRICATOR Series L1

Cat No L1 - 01 - C

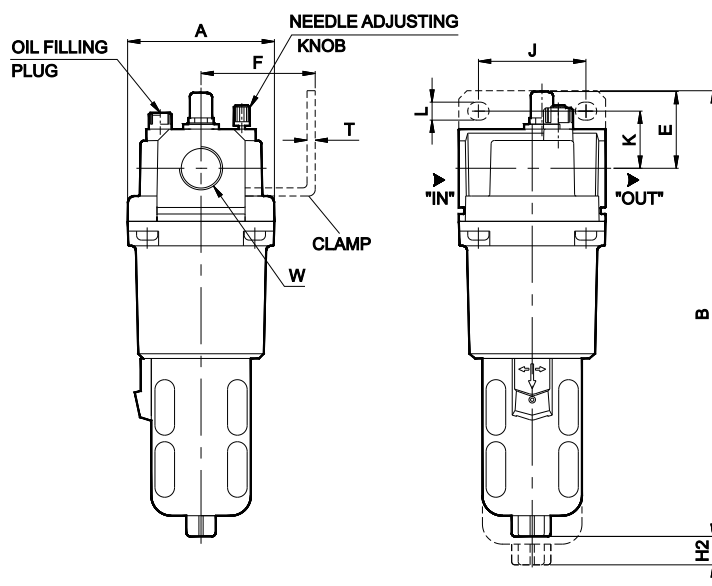
Model L13



Model L14 & L15



Model L17



Model	W	A	B	E	K	F	J	L	T	H2
L13	G1/4	SQ 40	135	42	15	30	28	5.5	2	35
L14	G3/8	SQ 55	157	44	25	40	40	6.5	2	45
L15	G1/2	SQ 70	190	46	25	50	55	8.5	2	45
L17	G3/4	SQ 90	273	47	35	70	66	11	5	45
L17	G1	SQ 90	273	47	35	70	66	11	5	45

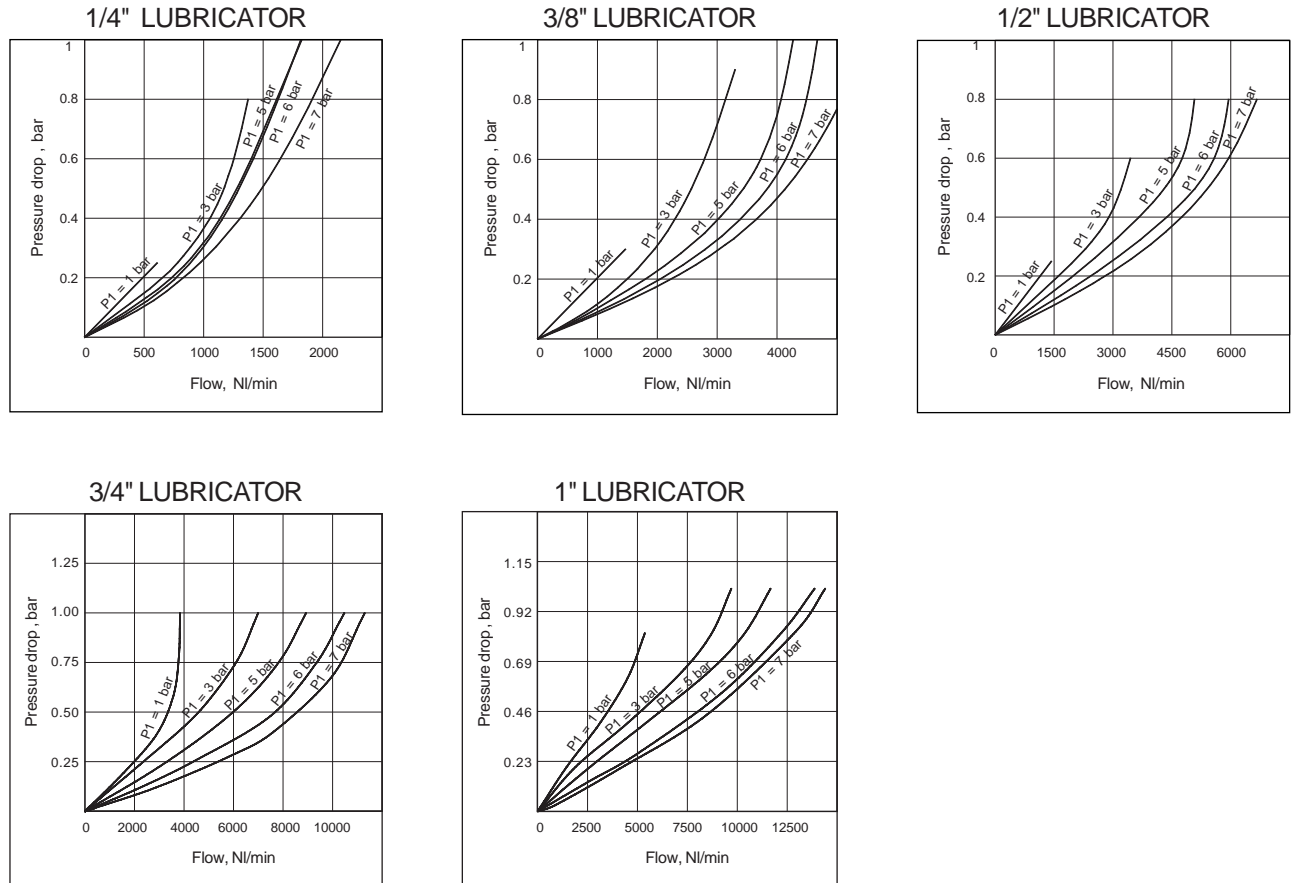
For Details of Clamp see optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

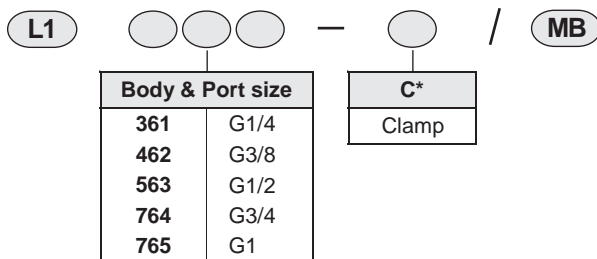
LUBRICATOR Series L1

Cat No L1 - 01 - C

Flow Graphs



How to order



Principle of Operation

A part of the air entering the Lubricator through " IN " pressurises the bowl chamber.

Flow of full air goes through " OUT " deflecting the " Deflector " and creating pressure drop below the sight dome.

The pressure in the Bowl presses the oil through the suction tube and the oil flows through the sight dome. All the oil drops seen through the sight dome mixes with the main - stream air and comes through " OUT ". The required oil drops can be adjusted by the adjusting needle.

Ordering example

* Lubricator with Clamp :- Lubricator - 3/8 size (with G3/8 port) with clamp : Ordering No: **F1462-C/MB**

Lubricator without Clamp :- Lubricator - 3/8 size (with G3/8 port) : Ordering No: **F1462/MB**

Subject to change



AIR PREPARATION UNITS

LUBRICATOR WITH METAL BOWL Series L1M

Cat No L1M - 01 - C

LUBRICATOR WITH METAL BOWL - 1/4, 3/8, 1/2, 3/4, 1"

Features

- ☐ For higher pressure range above 10 bar
- ☐ Suitable for Modular mounting
- ☐ Fog / Mist type
- ☐ Fine adjustment of lubrication
- ☐ Aluminium bowl guard, bayonet type (3/4 and 1" only)
- ☐ Lubrication proportional to flow

Technical Specification

Model	L13...M	L14...M	L15...M	L17...M	L17...M
Medium	Compressed air - Filtered				
Port size	G1/4	G3/8	G1/2	G3/4	G1
Flow rate (lts / min) @	1350	3000	5650	7200	9000
Maximum supply pressure (bar)	20				
Ambient / Medium temperature	5° - 60° C				
Min operating flow (lts / min)	12	40	45	50	50
Bowl capacity (ml) (at maximum condensate level)	20	100	200	200	200
Recommended oil	ISO VG 32 (Servo System 32)				
Bowl material	Aluminium				
Installation	Vertical (as in the picture)				
Materials of construction	Aluminium, Bronze, Steel, SS, Nitrile				
Optional accessories *	Clamp, Modular mounting kit				
Weight (Kg)	0.20	0.55	0.85	1.38	1.37

@ Supply pressure 6 bar , pressure drop $\Delta p = 0.5$ bar (For standard models)

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

Precautions

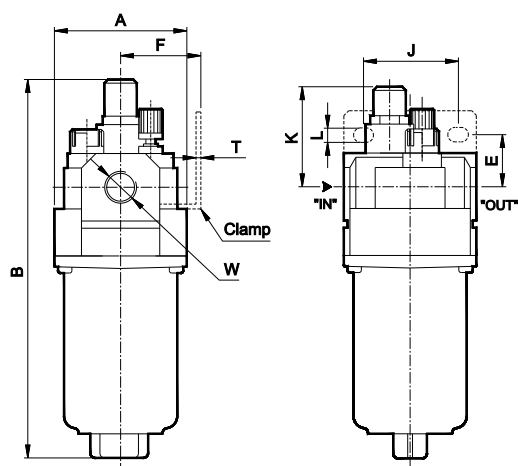
1. Note the direction of flow before installation and connect piping accordingly.
2. Flush pipings for dirt, dust, rust and other foreign particles.
3. Install in clean atmosphere.
4. Nipples with taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples with straight threads (G) to be used with sealing washer.
5. Oil may be filled when under pressure. However it is recommended to vent the air completely before filling the oil.

AIR PREPARATION UNITS

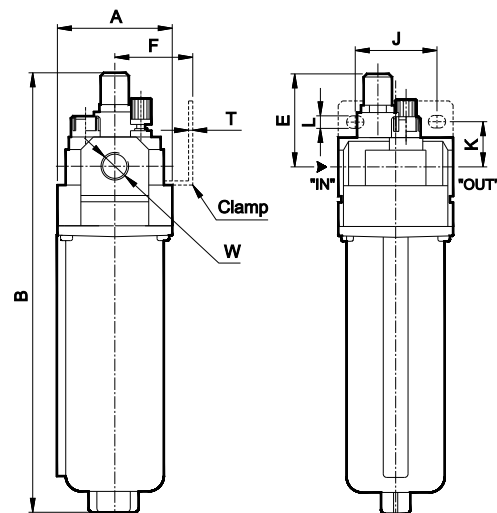
LUBRICATOR WITH METAL BOWL Series L1M

Cat No L1M - 01 - C

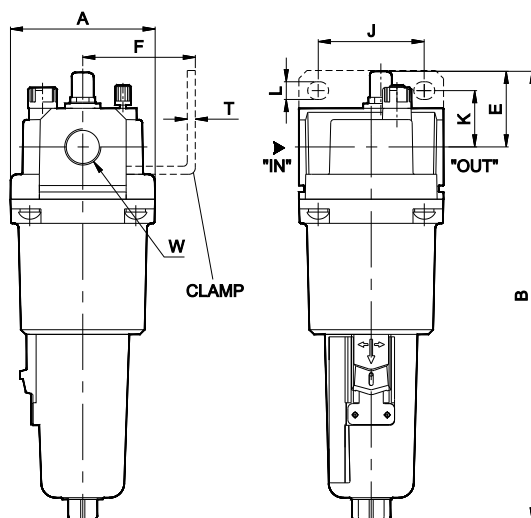
Model L13



Model L14 & L15



Model L17...M



Model	W	A	B	E	K	F	J	L	T
L13...M	G1/4	SQ 40	135	42	15	30	28	5.5	2
L14...M	G3/8	SQ 55	205	44	25	40	40	6.5	2
L15...M	G1/2	SQ 70	240	46	25	50	55	8.5	2
L17...M	G3/4	SQ 90	279	47	35	70	66	11	5
L17...M	G1	SQ 90	279	47	35	70	66	11	5

For Details of Clamp see optional accessories Cat No APA - 01 - C

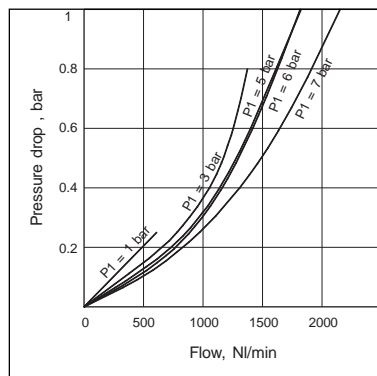
AIR PREPARATION UNITS

LUBRICATOR WITH METAL BOWL Series L1M

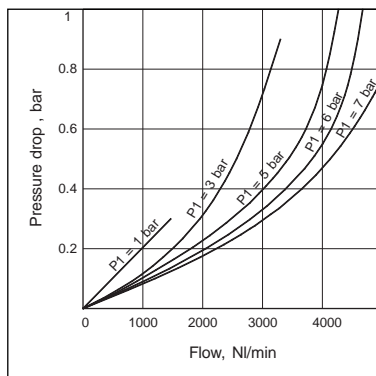
Cat No L1M - 01 - C

Flow Graphs

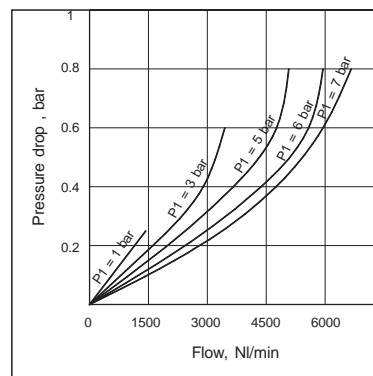
1/4" LUBRICATOR



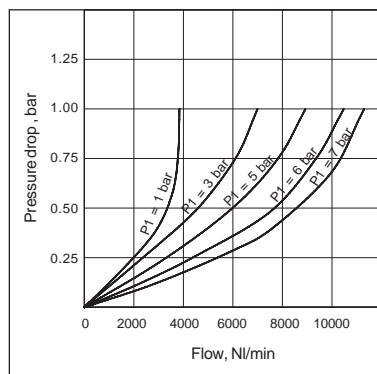
3/8" LUBRICATOR



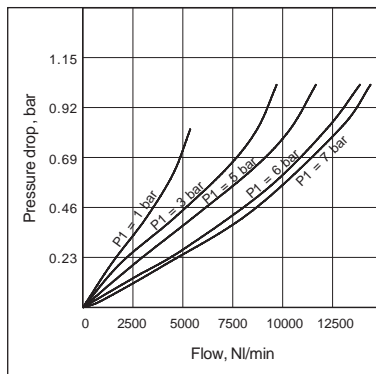
1/2" LUBRICATOR



3/4" LUBRICATOR



1" LUBRICATOR



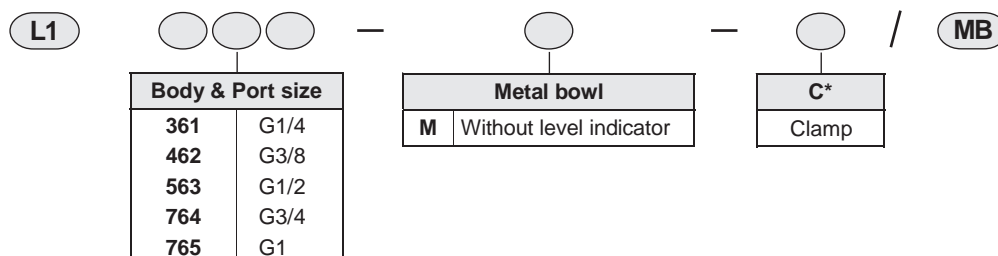
Principle of Operation

A part of the air entering the Lubricator through "IN" pressurises the bowl chamber.

Flow of full air goes through "OUT" deflecting the "Deflector" and creating pressure drop below the sight dome.

The pressure in the Bowl presses the oil through the suction tube and the oil flows through the sight dome. All the oil drops seen through the sight dome mixes with the main stream air and comes through "OUT". The required oil drops can be adjusted by the adjusting needle.

How to order

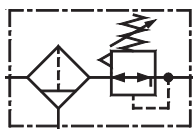


Ordering example

* Lubricator with Clamp :- Lubricator with Metal bowl - 3/8 size (with G3/8 port) with clamp : Ordering No: **F1462-M-C/MB**

Lubricator without Clamp :- Lubricator with Metal bowl - 3/8 size (with G3/8 port) : Ordering No: **F1462-M/MB**

Subject to change



AIR PREPARATION UNITS

FILTER REGULATOR COMBINATION Series FRC1

Cat No FRC1 - 01 - C

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

Features

- ☐ Modular type
- ☐ Suitable for panel mounting
- ☐ Filter
 - Bronze filtering element.
 - Separator and shield for efficient moisture separation.
- ☐ Regulator
 - Diaphragm operated, relieving type.
 - Pressure compensated by balanced poppet.
 - Flow compensated in models FRC14, FRC15 & FRC17 (with venturi) for faster response.
 - Non raising ' Press to lock ' adjusting knob for locking at any set pressure.
- ☐ Steel bowl guard, bayonet type on FRC14, FRC15 & FRC17 models and threaded type on FRC13 model.
- ☐ Good flow and regulating characteristics.

Technical Specifications

Model	FRC 13	FRC 14	FRC 15	FRC 17	FRC 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) [@]	550	1800	3000	4250	5500
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				
Bowl capacity (ml) (at maximum condensate level)	9	32	44	165	165
Bowl material	Polycarbonate				
Installation	Vertical (as shown in the picture)				
Materials of construction	Aluminium, Bronze, Brass, Steel, Acetal, Polycarbonate, SS, Nitrile				
Optional accessories [*]	Clamp, Modular mounting kit, Pressure gauge				
Weight (Kg)	0.30	0.58	1.27	2.09	2.05

[@] 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

Precautions

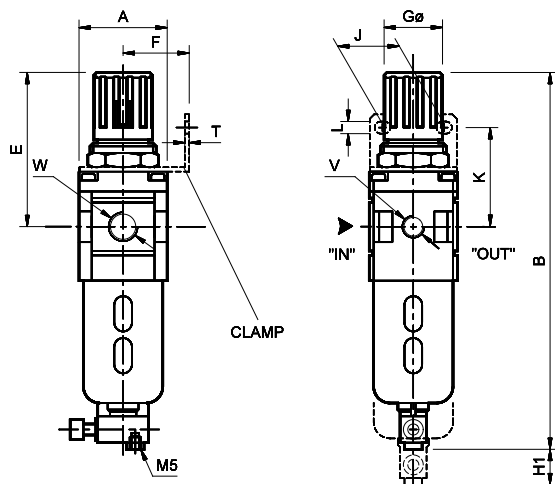
- Note the direction of flow before installation and connect piping accordingly.
- Flush pipings for dirt, dust, rust and other foreign particles.
- Install in clean atmosphere.
- Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples 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.

AIR PREPARATION UNITS

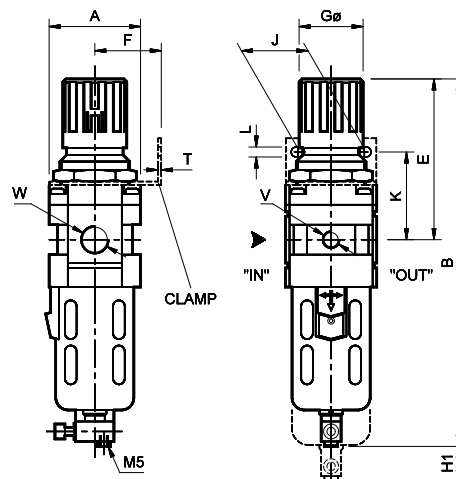
FILTER REGULATOR COMBINATION Series FRC1

Cat No FRC1 - 01 - C

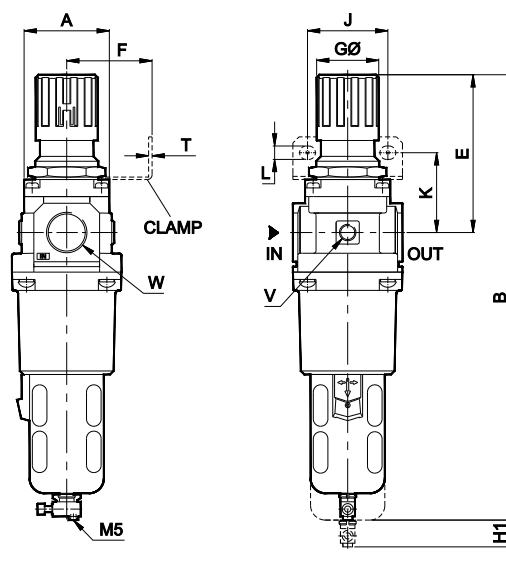
Model FRC13



Model FRC14 & FRC15



Model FRC17

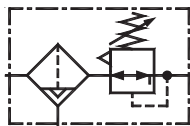


Model	W	V	A	B	E	K	F	GØ	J	L	T	H1
FRC13	G1/4	G1/8	SQ 40	170	68	45	30	28	28	5.5	2	50
FRC14	G3/8	G1/8	SQ 55	220	95	53	40	40	40	6.5	2	55
FRC15	G1/2	G1/8	SQ 70	280	125	62	50	51	55	8.5	2	80
FRC17	G3/4	G1/4	SQ 90	370	130	65	70	51	66	11	5	80
FRC17	G1	G1/4	SQ 90	370	130	65	70	51	66	11	5	80

For Details of Clamp see optional accessories Cat No APA - 01 - C

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

FILTER REGULATOR COMBINATION WITH INTERNAL AUTODRAIN - Series FRC1A

Cat No FRC1A - 01 - C

FILTER REGULATOR COMBINATION with Internal Autodrain - 3/8, 1/2, 3/4, 1"

Features

- ☐ Modular type
- ☐ Suitable for panel mounting
- ☐ Filter
 - Bronze filtering element.
 - Separator and shield for efficient moisture separation.
 - Bayonet type steel bowl guard
- Internal Autodrain
 - Float type, no electrical connections required.
 - Provided with manual drain.
 - 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.
- ☐ Good flow and regulating characteristics.

Technical Specifications

Model	FRC14....A	FRC15....A	FRC17....A	FRC17....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) [@]	1800	3000	4250	5500
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			
Bowl capacity (ml) (at maximum condensate level)	35	65	165	165
Bowl material	Polycarbonate			
Installation	Vertical (as in the picture)			
Materials of construction	Aluminium, Bronze, Steel, Acetal, Polycarbonate, SS, Nitrile			
Optional accessories [*]	Clamp, Modular mounting kit, Pressure Gauge			
Weight (Kg)	0.74	1.50	2.1	2.07

@ 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

Precautions

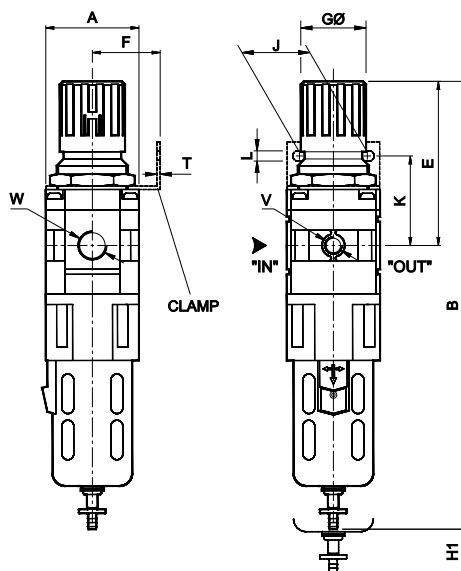
- Note the direction of flow before installation and connect piping accordingly.
- Flush pipings for dirt, dust, rust and other foreign particles.
- Install in clean atmosphere.
- Nipples of taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples 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.

AIR PREPARATION UNITS

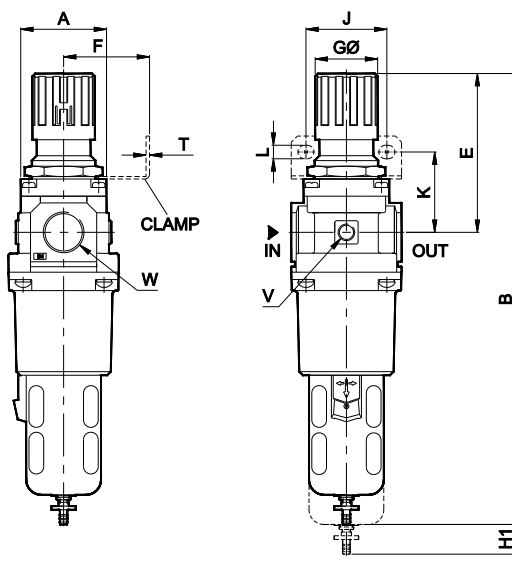
FILTER REGULATOR COMBINATION WITH INTERNAL AUTODRAIN - Series FRC1A

Cat No FRC1A - 01 - C

Model FRC14...-A, FRC15...-A



Model FRC17...-A



Model	W	V	A	B	E	K	F	GØ	J	L	T	H1
FRC14...A	G3/8	G1/8	SQ 55	272	95	53	40	40	40	6.5	2	60
FRC15...A	G1/2	G1/8	SQ 70	335	125	62	50	51	55	8.5	2	85
FRC17...A	G3/4	G1/4	SQ 90	368	130	65	70	51	66	11	5	85
FRC17...A	G1	G1/4	SQ 90	368	130	65	70	51	66	11	5	85

For Details of Clamp see optional accessories Cat No APA - 01 - C

Pressure Setting

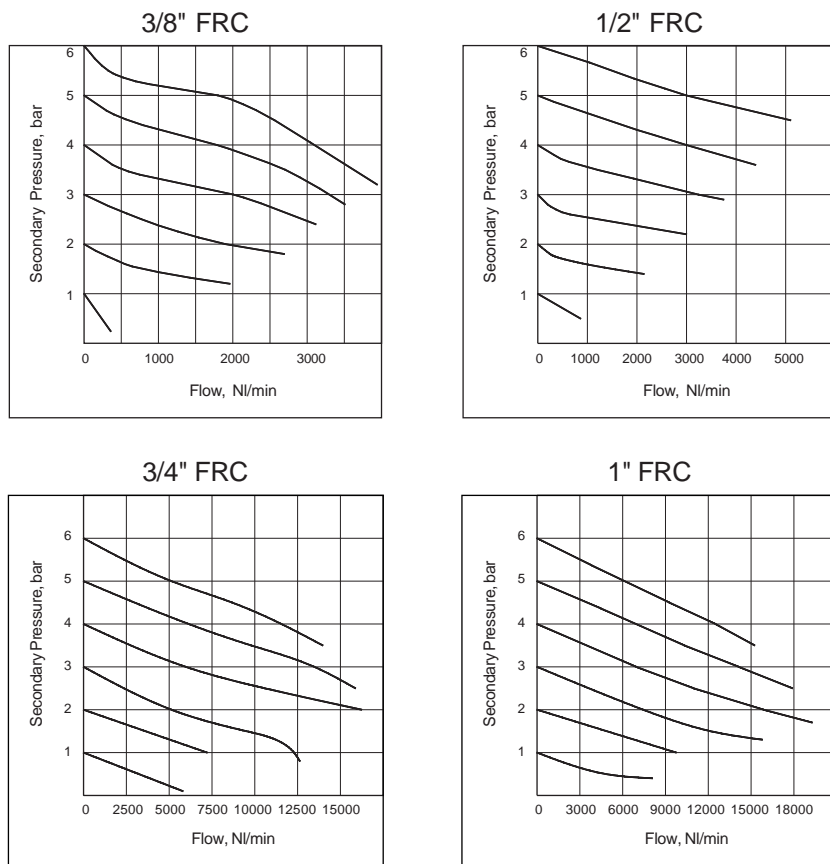
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FILTER REGULATOR COMBINATION WITH INTERNAL AUTODRAIN - Series FRC1A

Cat No FRC1A - 01 - C

Flow Graphs



Flow graphs are for 40µm filtrations only

How to order

FRC1						A		MB
Body & Port size		Filtration in µm		Pressure range		Internal Autodrain	C*	
462	G3/8	0	- 1	1	0.2 - 2 bar		Clamp	
563	G1/2	1	- 5	2	0.2 - 4 bar			
764	G3/4	2	- 25	3	0.5 - 7 bar			
765	G1	3	- 40 (Standard)	4	0.5 - 10 bar (Standard)			
		4	- 50					
		5	- 100					

Ordering example

* Filter Regulator Combination Internal Autodrain with Clamp :-

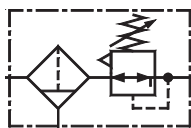
FRC Internal Autodrain - 3/8 size (with G3/8 port), 50µm filter and pressure range 0.5 - 7 bar with clamp

Ordering No: **FRC146243-A-C/MB**

* Filter Regulator Combination Internal Autodrain without Clamp :-

FRC Internal Autodrain - 3/8 size (with G3/8 port), 50µm filter and pressure range 0.5 - 7 bar : Ordering No: **FRC146243-A/MB**

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



AIR PREPARATION UNITS

FILTER REGULATOR COMBINATION WITH METAL BOWL - Series FRC1M

Cat No FRC1M - 01 - C

FILTER REGULATOR COMBINATION with Metal Bowl - 1/4, 3/8, 1/2, 3/4, 1"

Features

- ☐ Modular type
- ☐ Suitable for panel mounting
- ☐ Filter
 - Bronze filtering element.
 - Separator and shield for efficient moisture separation.
 - Press type manual drain for easy operation
 - Suitable for automatic drain
- ☐ Regulator
 - Diaphragm operated, relieving type.
 - Pressure compensated by balanced poppet.
 - Flow compensated
 - Non raising ' Press to lock ' adjusting knob
- ☐ Aluminium bowl guard, bayonet type (3/4 and 1" only)
- ☐ Good flow and regulating characteristics.

Application

These type of filters are used for Chemical, Paintshops, Pharmaceutical, Foundry etc.

Technical Specifications

Model	FRC13...M	FRC14...M	FRC15...M	FRC17...M	FRC17...M
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)	550	1800	3000	6000	6500
Maximum supply pressure (bar)	20				
Regulating pressure range [#] (bar)	0.2 - 2, 0.2 - 4, 0.5 - 7, 0.5 - 10 (Standard)				
Ambient / Medium temperature	5° - 60° C				
Filtration [#] (µm)	1, 5, 25, 40 (standard), 50, 100				
Bowl capacity (ml) (At max. condensate level)	9	64	90	165	165
Bowl material	Aluminium				
Installation	Vertical (as shown in the picture)				
Materials of construction	Aluminium, Bronze, Brass, Steel, Acetal, SS, Nitrile				
Optional accessories *	Clamp, Modular mounting kit, Pressure gauge				
Weight (Kg)	0.30	0.70	1.50	2.16	2.12

@ 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 AP1A - 01 - C

Precautions

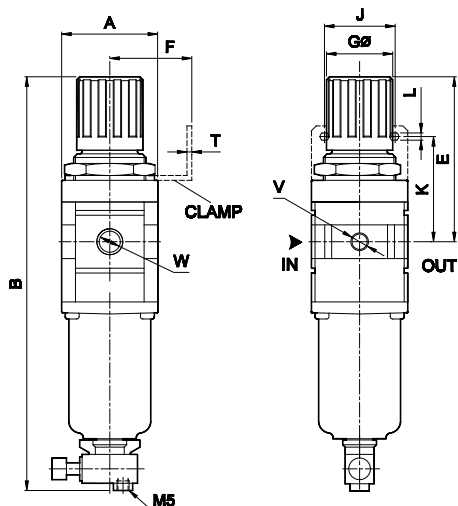
- Note the direction of flow before installation and connect piping accordingly.
- Flush pipings for dirt, dust, rust and other foreign particles.
- Install in clean atmosphere.
- Nipples with taper threads (R) to be used with teflon tape. Ensure teflon tape does not enter the unit during tightening.
Nipples with straight threads (G) to be used with sealing washer.

AIR PREPARATION UNITS

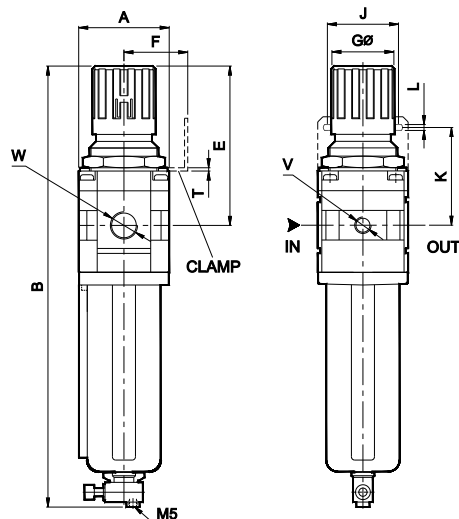
FILTER REGULATOR COMBINATION WITH METAL BOWL - Series FRC1M

Cat No FRC1M - 01 - C

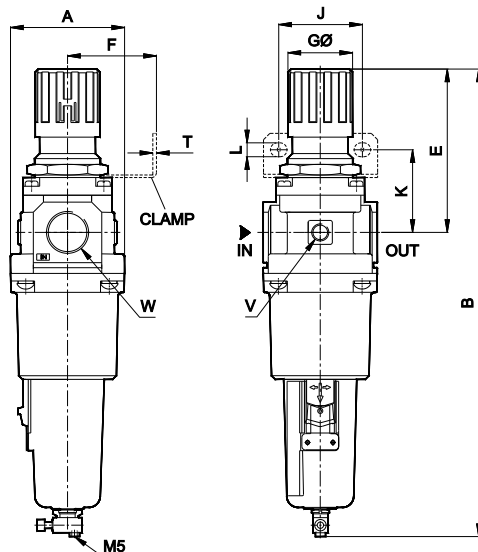
Model FRC13...M



Model FRC14...M & FRC15...M



Model FRC17...-MM

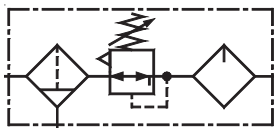


Model	W	V	A	B	E	K	F	GØ	J	L	T
FRC13...M	G1/4	G1/8	SQ 40	172	68	45	30	28	28	5.5	2
FRC14...M	G3/8	G1/8	SQ 55	265	95	53	40	40	40	6.5	2
FRC15...M	G1/2	G1/8	SQ 70	330	125	62	50	51	55	8.5	2
FRC17...M	G3/4	G1/4	SQ 90	371	130	65	70	51	66	11	5
FRC17...M	G1	G1/4	SQ 90	371	130	65	70	51	66	11	5

For Details of Clamp see 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)



AIR PREPARATION UNITS

FRL MODULAR Series FRLM1

Cat No FRLM1 - 01 - C

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

- ❑ 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.

Technical Specifications

Model	FRLM 13	FRLM 14	FRLM 15	FRLM 17	FRLM 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	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 / 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 Filter (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	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)	0.72	1.38	2.65	4.93	4.87

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

For details see " How to order "

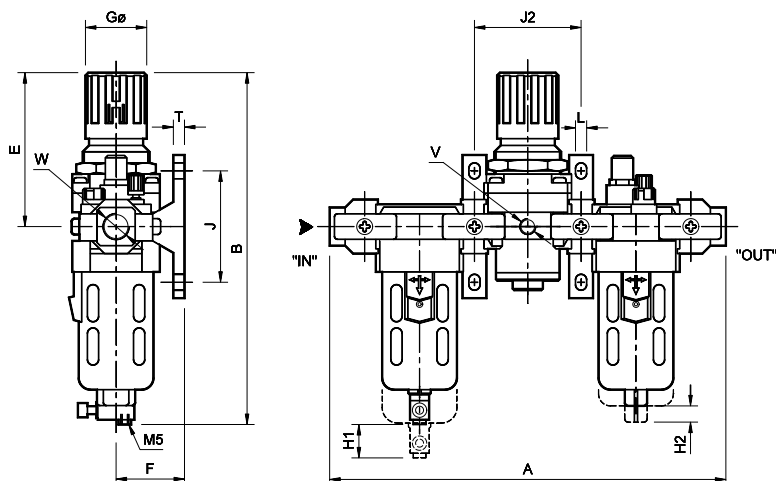
* For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

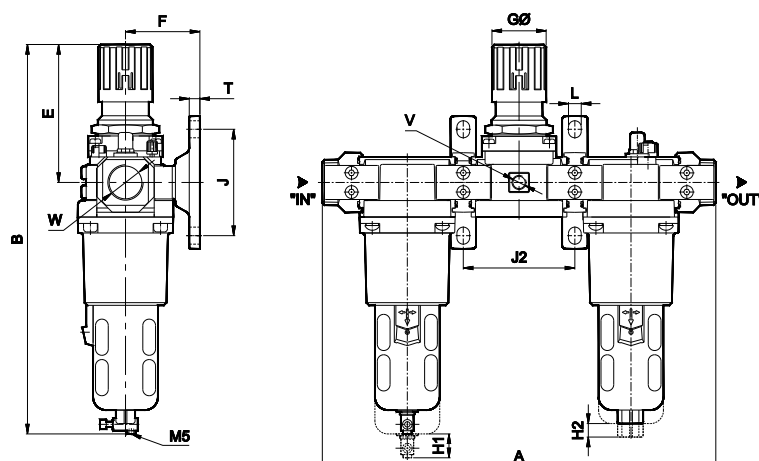
FRL MODULAR Series FRLM 1

Cat No FRLM1 - 01 - C

Model FRLM1361, FRLM1462, FRLM1563



Model FRLM1764, FRLM1765



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
FRLM 17	G3/4	G1/4	370	366	130	70	51	100	12	10	80	45	105
FRLM 17	G1	G1/4	370	366	130	70	51	100	12	10	80	45	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 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.

Pressure Setting

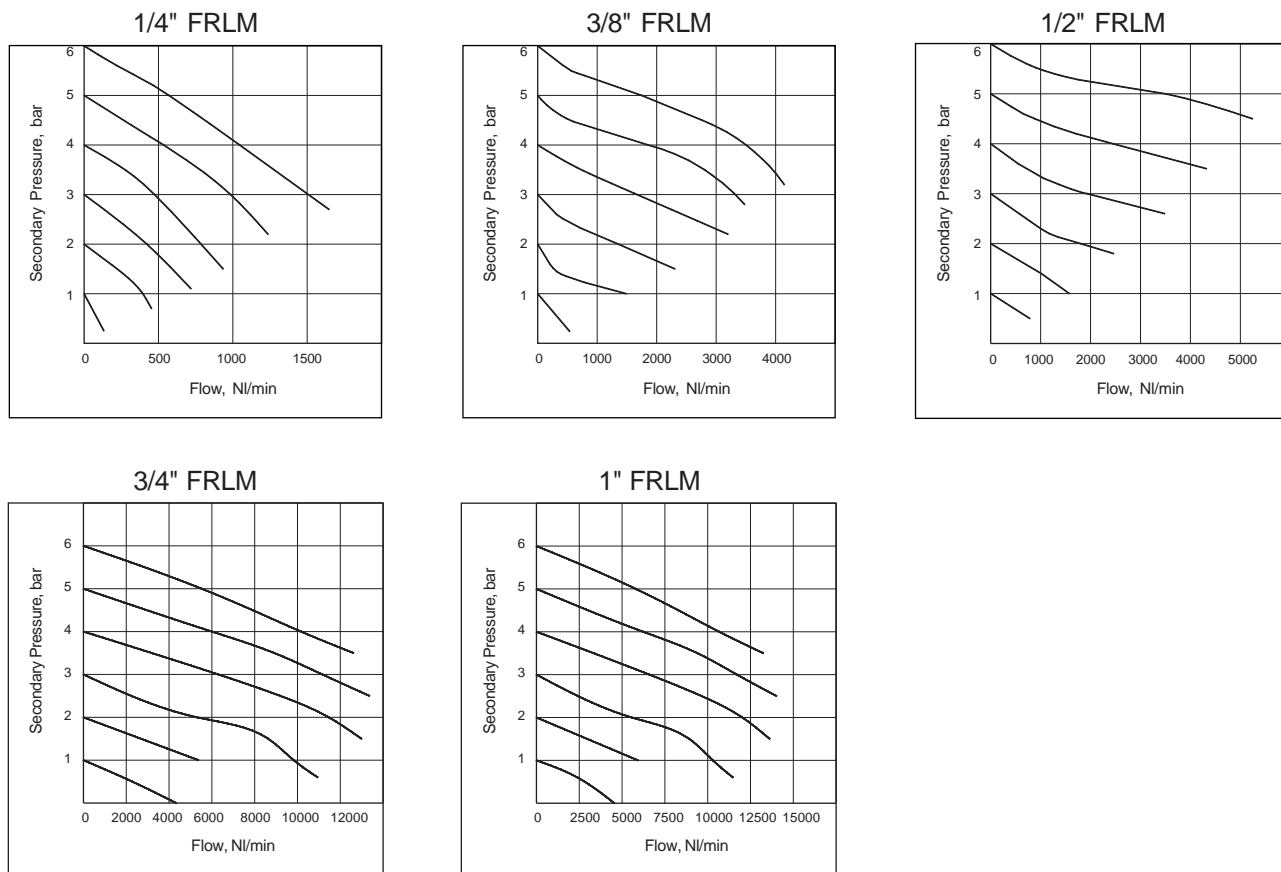
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FRL MODULAR Series FRLM 1

Cat No FRLM1 - 01 - C

Flow Graphs



Flow graphs are for 40µm filtrations only

How to order

FRLM1



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

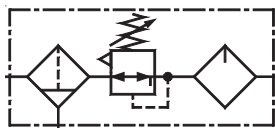


Pressure range	
1	0.2 - 2 bar
2	0.2 - 4 bar
3	0.5 - 7 bar
4	0.5 - 10 bar (Standard)

/ **MB**

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

Subject to change



AIR PREPARATION UNITS

FRL MODULAR Series FRLM1

Cat No FRLM1...W - 01 - C

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

Without piping adaptor and spacer

Model FRLM1.../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 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.../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 / 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 Filter (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	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 Kg	1.23 Kg	2.39 Kg	4.47
	FRLM1.../S	0.60 Kg	1.18 Kg	2.30 Kg	4.17

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

For details see " How to order "

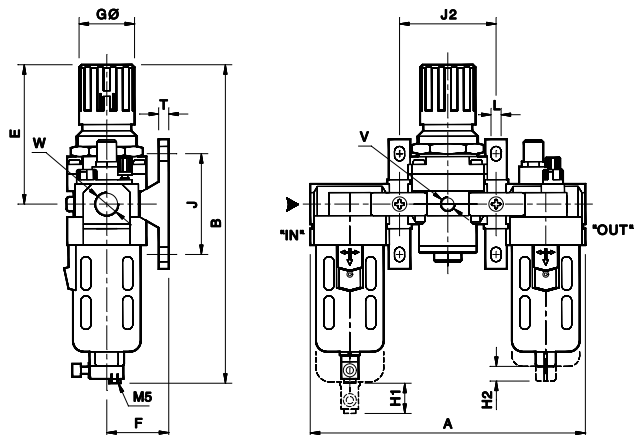
* For details refer optional accessories Cat No. APA - 01

AIR PREPARATION UNITS

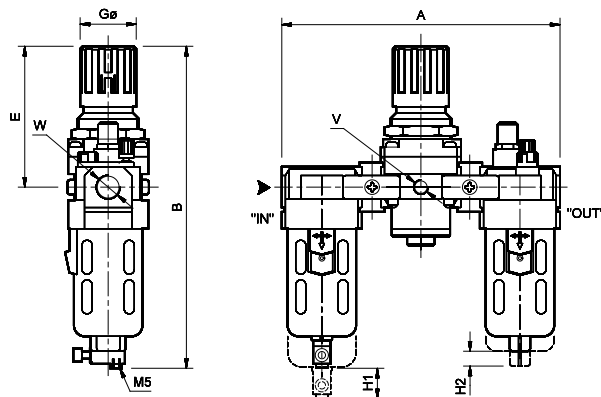
FRL MODULAR Series FRLM1

Cat No FRLM1...W - 01 - C

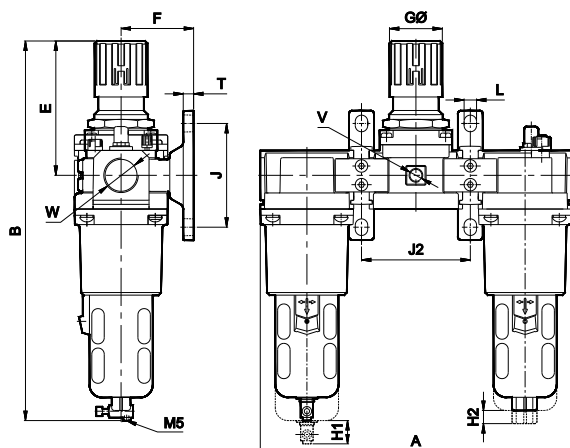
Model FRLM13, 14, 15.../ W



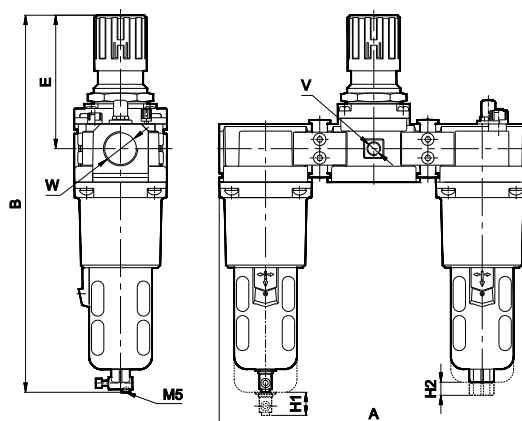
Model FRLM13, 14, 15.../S



Model FRLM17.../ W



Model FRLM17.../S



Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2	J2
FRLM13.../W	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
FRLM13.../S	G1/4	G1/8	146	170	68	28	50	35
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 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

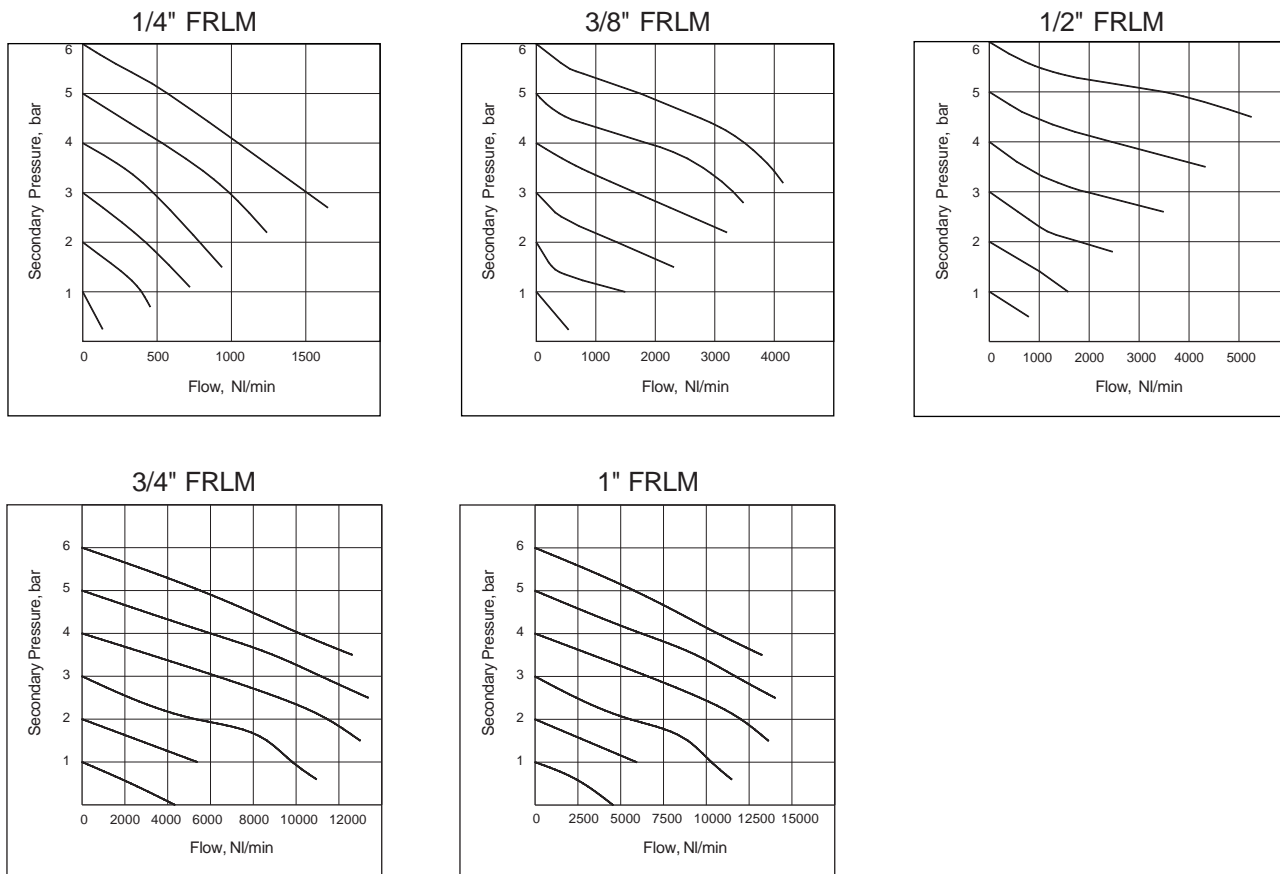
Pull the knob and adjust by turning the knob clockwise to increase the pressure.Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FRL MODULAR Series FRLM1

Cat No FRLM1...W - 01 - C

Flow Graphs



Flow graphs are for 40µm filtrations only

How to order

FRLM1

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)

/

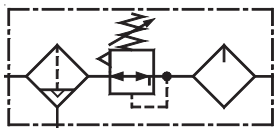
Mounting

W	Wall mounting bracket
S	Spacer

/

MB

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/MB



AIR PREPARATION UNITS

FRL MODULAR Series FRLM1A

Cat No FRLM1A - 01 - A

FRL 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 FRLM14, FRLM15 & FRLM17 models
- ☐ Good flow and regulating characteristics

Technical Specifications

Model	FRLM14...A	FRLM15...A	FRLM17...A	FRLM17...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)	2000	3500	3500	5000
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 Filter (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	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)	1.58	2.84	4.93	4.87

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

For details see "How to order"

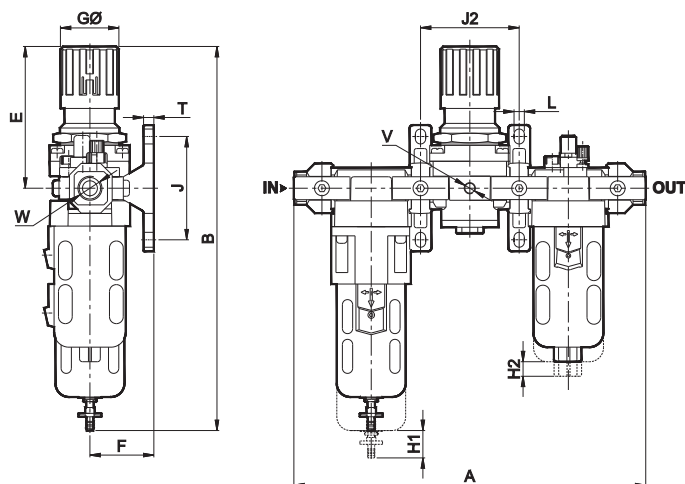
* For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

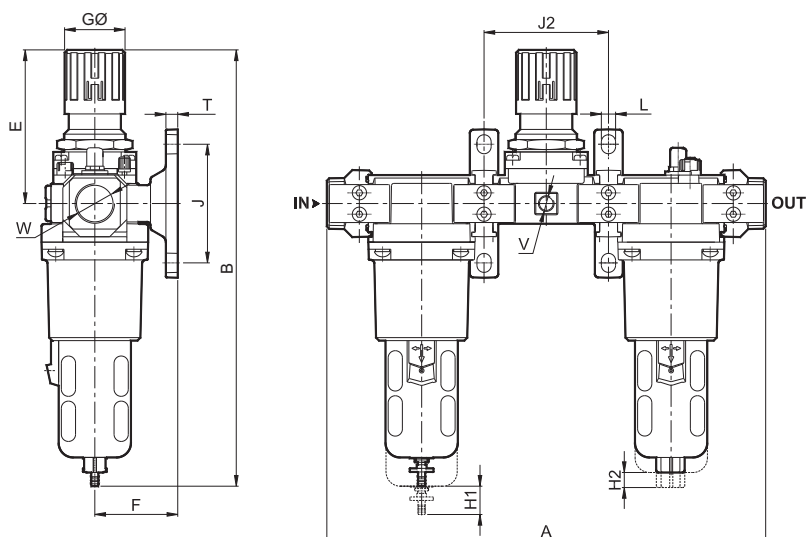
FRL MODULAR Series FRLM1A

Cat No FRLM1A - 01 - A

Model FRLM14...A, FRLM15...A



Model FRLM17...A



Model	W	V	A	B	E	F	GØ	J	L	T	J2	H1	H2
FRLM14...A	G3/8	G1/8	250	272	95	45	40	70	7	7	69	55	45
FRLM15...A	G1/2	G1/8	305	335	125	55	51	90	9	9	86	80	45
FRLM17...A	G3/4	G1/4	370	368	130	70	51	100	12	10	105	80	45
FRLM17...A	G1	G1/4	370	368	130	70	51	100	12	10	105	80	45

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.

Pressure Setting

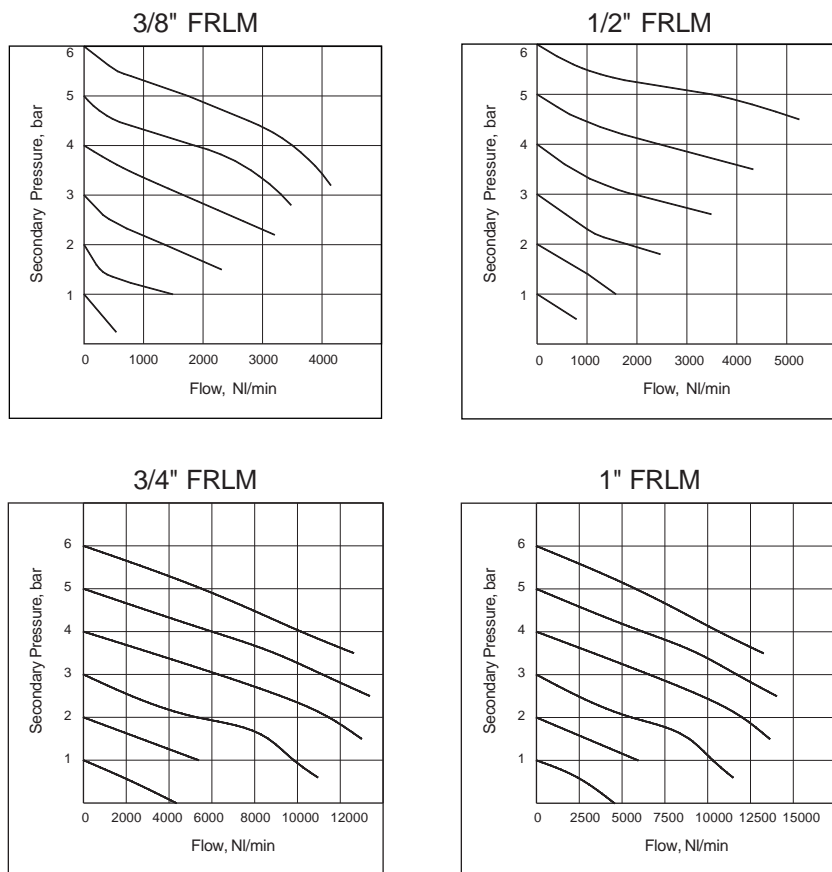
Pull the knob and adjust by turning the knob clockwise to increase the pressure. Push the knob back to its locked position.
(Turning the knob counter clockwise will reduce the pressure)

AIR PREPARATION UNITS

FRL MODULAR Series FRLM1A

Cat No FRLM1A - 01 - A

Flow Graphs



Flow graphs are for 40µm filtrations only

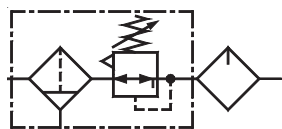
How to order

FRLM1

</

Ordering example : Filter Regulator Lubricator Modular - 3/8 (with G3/8 port size) with 5µm Filter and pressure range 0.5 - 7 bar with Internal Autodrain: Ordering No: FRLM146213-A/MB

If ordered as 3/8 FRLM with Internal Autodrain, our standard model FRLM146234-A/MB, with 40µm Filter and pressure range 0.5 - 10 with Internal Autodrain will be supplied.



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 Δp = 1bar (For standard models)

For details see " How to order "

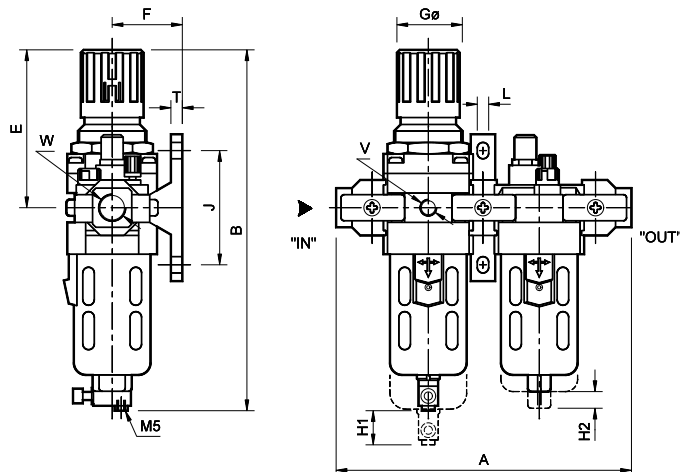
* For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

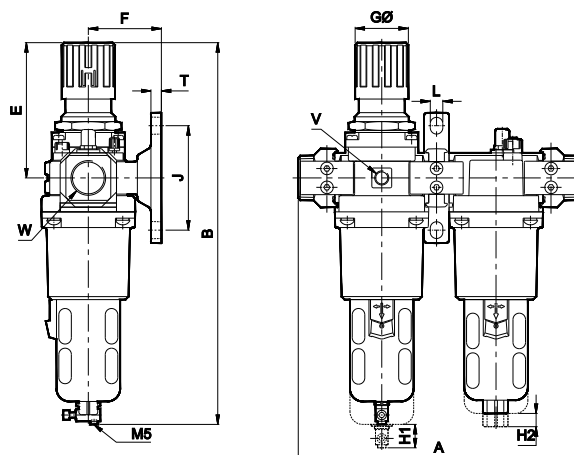
FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

Model FRCLM1361, FRCLM1462, FRCLM1563



Model FRCLM1764, FRCLM1765



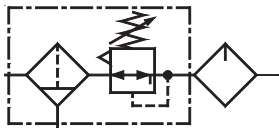
Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2
FRCLM13	G1/4	G1/8	146	170	68	35	28	50	7	7	50	35
FRCLM14	G3/8	G1/8	182	220	95	45	40	70	7	7	55	45
FRCLM15	G1/2	G1/8	220	280	125	55	51	90	9	9	80	45
FRCLM17	G3/4	G1/4	270	370	130	70	51	100	12	10	80	45
FRCLM17	G1	G1/4	270	370	130	70	51	100	12	10	80	45

Precautions

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.

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

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
	FRCLM1.../S	0.51	0.95	1.92	3.55

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

[#] For details see " How to order "

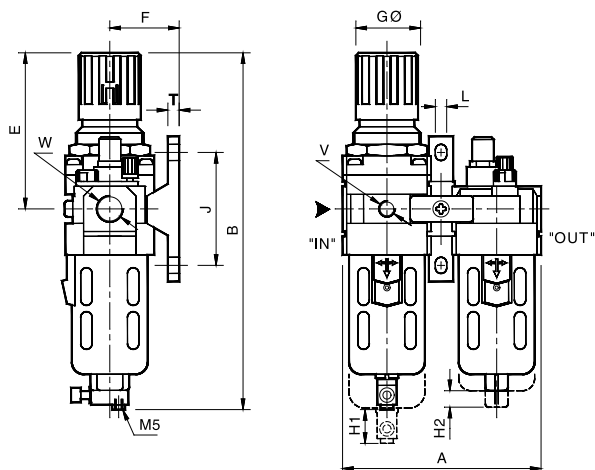
^{*} For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

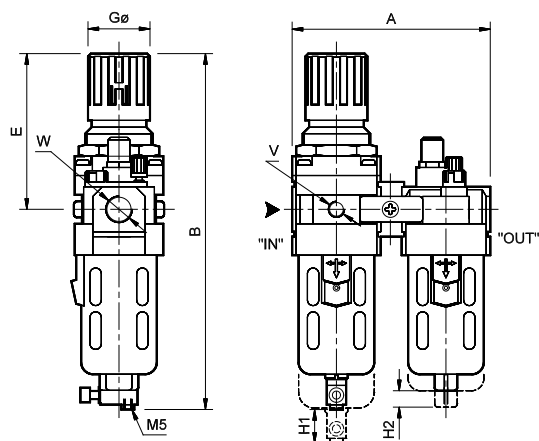
FRCL MODULAR Series FRCLM1

Cat No FRCLM1 - 01 - C

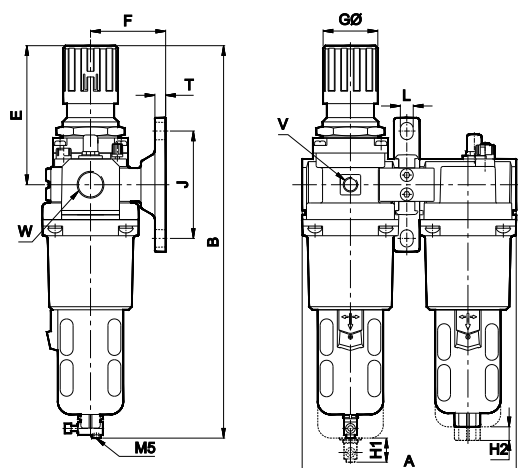
Model FRCLM1.../W



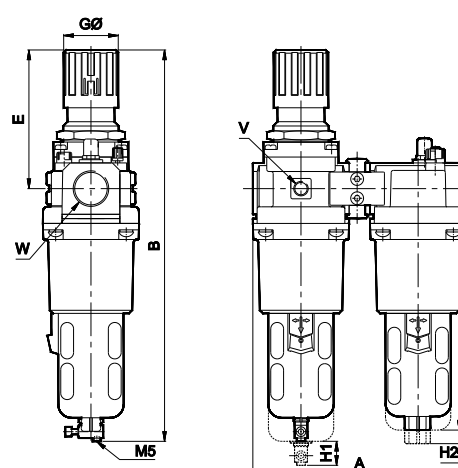
Model FRCLM1.../S



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

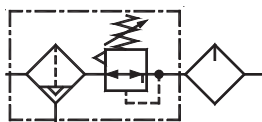
Model	W	V	A	B	E	GØ	H1	H2
FRCLM13.../S	G1/4	G1/8	92	170	68	28	50	35
FRCLM14.../S	G3/8	G1/8	124	220	95	40	55	45
FRCLM15.../S	G1/2	G1/8	156	280	125	51	80	45
FRCLM17.../S	G3/4	G1/4	200	370	130	51	80	45
FRCLM17.../S	G1	G1/4	200	370	130	51	80	45

Precautions

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.

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

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 Δp = 1bar (For standard models)

For details see " How to order "

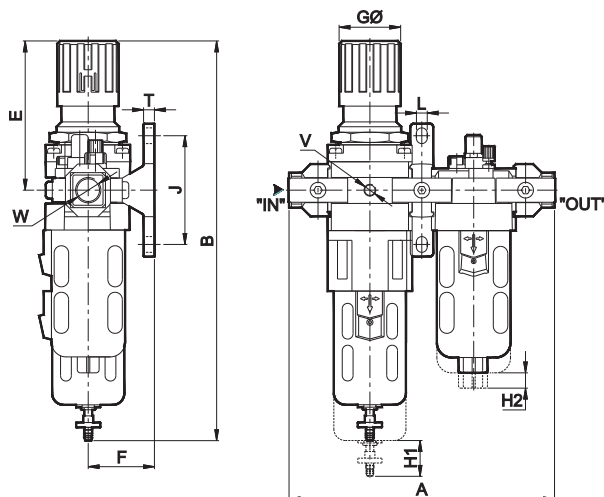
* For details refer optional accessories Cat No APA - 01 - C

AIR PREPARATION UNITS

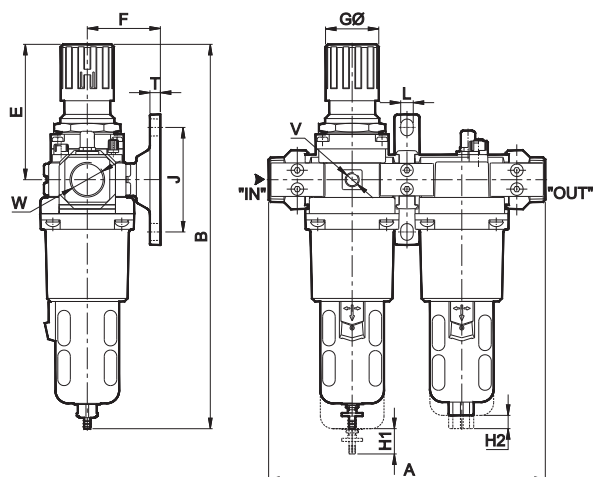
FRCLM with Internal Autodrain Series FRCLM1A

Cat No FRCLM1A - 01 - A

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



Model FRCLM17...A



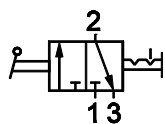
Model	W	V	A	B	E	F	GØ	J	L	T	H1	H2
FRCLM14...A	G3/8	G1/8	182	272	95	45	40	70	7	7	55	45
FRCLM15...A	G1/2	G1/8	220	335	125	55	51	90	9	9	80	45
FRCLM17...A	G3/4	G1/4	270	370	130	70	51	100	12	10	80	45
FRCLM17...A	G1	G1/4	270	370	130	70	51	100	12	10	80	45

Precautions

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.

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)



SHUT OFF VALVE

Series GS2

Cat No GS2 - 01 - 01

SHUT OFF VALVE - G1/4, G3/8, G1/2

Features

- ☐ Connecting thread at both ends
- ☐ Connection - G1/4, G3/8, G1/2
- ☐ Modular mounting with FRL

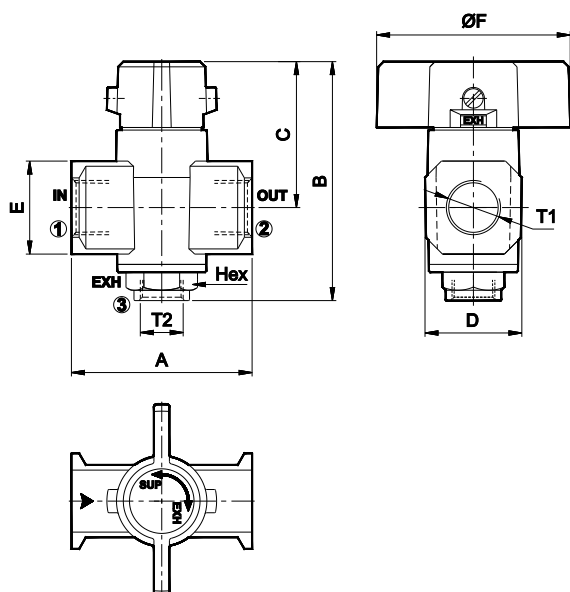
Function

- a. Opening and closing of airline with relieving of the down stream pressure.
- b. A window display to show the valve position when the valve is On condition (or) Exhaust condition.

Technical Specifications

Model		GS245H61/MB	GS246H62/MB	GS247H63/MB
Port size		G1/4	G3/8	G1/2
Type		3/2		
Operating pressure range		0 - 10 bar		
Ambient Temperature		5° - 60° C		
Flow ® (lpm)	1 ➔2	1000	2200	3250
	2 ➔3	450	1100	1600
Materials of construction		Aluminium, Brass, Nitrile		

@ Inlet pressure 6 bar, and pressure drop 1 bar

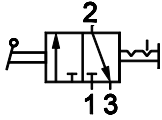


Sl. No	Ordering No.	T1	T2	Hex	A	B	C	D	E	ØF
1	GS245H61/MB	G1/4	G1/8	17	45	73	43	28.5	22	40
2	GS246H62/MB	G3/8	G1/4	19	55	85	52	32.5	28	55
3	GS247H63/MB	G1/2	G3/8	24	70	94	56.5	37.5	36	75

How to Order

While ordering Shut off valve, mention the ordering number given in the corresponding tables.

Subject to change



SHUT OFF VALVE LOCKABLE

Series GS2

Cat No GS2 - 01 - 02

SHUT OFF VALVE LOCKABLE - G1/4, G3/8, G1/2

Features

- ❑ Modular mounting with FRL
- ❑ Port thread at both ends
- ❑ Sizes - G1/4, G3/8 & G1/2
- ❑ Window display to show the valve position
(i.e.) the valve is in On condition or Off condition

Function

1. Opening and closing of airline with relieving of down stream pressure at closed condition.
2. The valve can be locked at the closing condition (Exhaust 2 → 3)

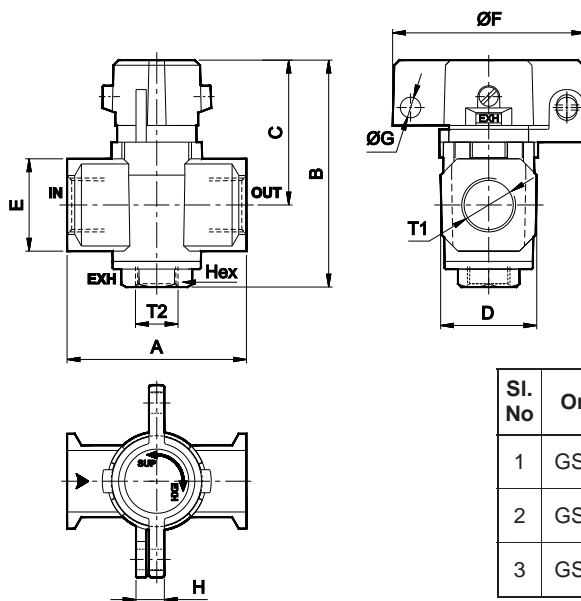
Technical Specifications

Model		GS245L61/MB	GS246L62/MB	GS247L63/MB
Port size		G1/4	G3/8	G1/2
Type		3/2		
Operating pressure range		0 - 10 bar		
Ambient Temperature		5° - 60° C		
Flow ® (lpm)	1 ➔2	1000	2200	3250
	2 ➔3	450	1100	1600
Materials of construction		Aluminium, Brass, Nitrile		

* Inlet pressure 6 bar, and pressure drop 1 bar

Note : 1. While connecting the valve check the direction of the air flow as per ►

2. 'Lock' - Not in the scope of supply.



Sl. No	Ordering No.	T1	T2	Hex	A	B	C	D	E	ØF	ØG	H
1	GS245L61/MB	G1/4	G1/8	17	45	73	43	28.5	22	40	3.5	8
2	GS246L62/MB	G3/8	G1/4	19	55	85	52	32.5	28	55	6	11
3	GS247L63/MB	G1/2	G3/8	24	70	94	56.5	37.5	36	75	8	11.5

How to Order

While ordering Shut off valve lockable, mention the ordering number given in the corresponding tables.

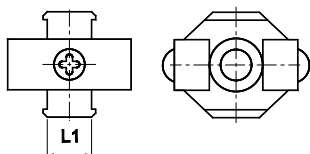
Subject to change

AIR PREPARATION UNITS - ACCESSORIES

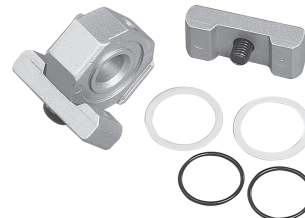
Accessories - for Modular construction

Cat No APA - 01 - C

SPACER



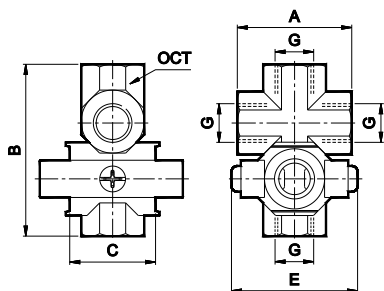
Adoptable to Model series	L1	Ordering No.
F13, L13, R13, FRC13	12	A2S01/MB
F14, L14, R14, FRC14	14	A2S02/MB
F15, L15, R15, FRC15	16	A2S03/MB
F17, R17, L17, FRC17	15	A2S04/MB



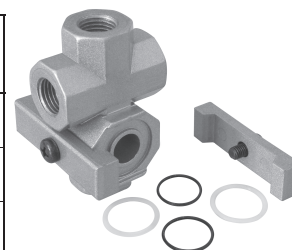
How to order :- Mention the ordering number required

Example :- Spacer for 3/8 Filter, Regulator, Lubricator series F14, R14, L14 - Ordering no : A2S02/MB

X SPACER ASSEMBLY - Mountable between FRL, FRC modular units - 4 way connector



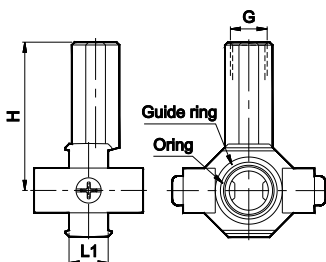
Adoptable to Model series	G	A	B	C	E	OCT	Ordering No.
FRLM13, FRCLM13	1/4	40	60	30	45	22	A2M01/MB
FRLM14, FRCLM14	3/8	45	66.5	35	55	27	A2M02/MB
FRLM15, FRCLM15	1/2	56	83	40	70	30	A2M03/MB



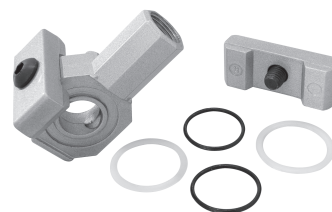
How to order :- Mention the ordering number required

Example :- X Spacer assembly for 3/8 FRLM, FRCLM Series : Ordering no : A2M02/MB

T SPACER



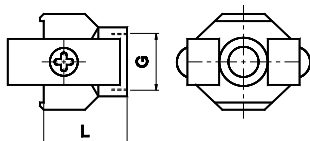
Adoptable to Model series	Size	G	L1	H	Ordering No.
F13, R13, L13, FRC13	1/4	1/8	12	50	A2T01/MB
F14, R14, L14, FRC14	3/8	1/4	14	53	A2T02/MB
F15, R15, L15, FRC15	1/2	3/8	16	52	A2T03/MB



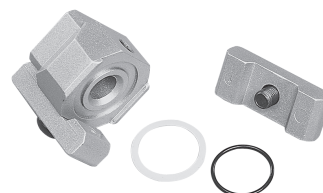
How to order :- Mention the ordering number required

Example :- T Spacer for 3/8 Filter, Regulator, Lubricator, FRC Series F14, R14, L14, FRC14 : Ordering no : A2T02/MB

PIPING ADAPTOR



Adoptable to Model series	G	L	Ordering No.
F13, L13, R13, FRC13	1/4	27	A2P01/MB
F14, L14, R14, FRC14	3/8	29	A2P02/MB
F15, L15, R15, FRC15	1/2	32	A2P03/MB
F17, R17, L17, FRC17	G3/4	35	A2P07/MB
	G1	35	A2P08/MB



How to order :- Mention the ordering number required

Example :- Piping Adaptor for 3/8 Filter, Regulator, Lubricator series F14, R14, L14 - Ordering no : A2P02/MB

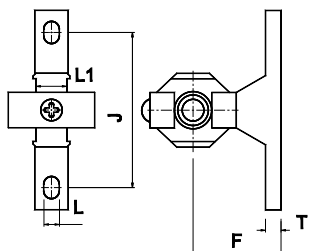
Subject to change

AIR PREPARATION UNITS - ACCESSORIES

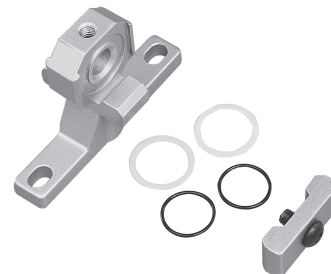
Accessories - for Modular construction

Cat No APA - 01 - C

WALL MOUNTING BRACKET



Adoptable to Model series	L1	J	L	F	T	Ordering No.
F13, L13, R13, FRC13	12	50	7	35	7	A2W01/MB
F14, L14, R14, FRC14	14	70	7	45	7	A2W02/MB
F15, L15, R15, FRC15	16	90	9	55	9	A2W03/MB
F17, R17, L17, FRC17	15	100	12	70	10	A2W04/MB



How to order :- Mention the ordering number required

Example :- Wall mounting Bracket for 3/8 Filter, Regulator, Lubricator series F14, R14, L14 : Ordering no : A2W02/MB

KIT FOR MODULAR CONSTRUCTION

For Modular construction, order accessories as given below

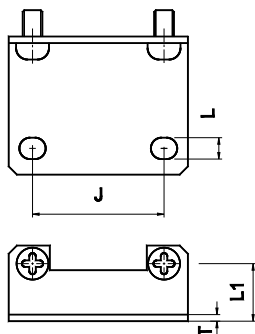
	Wall mounting bracket	Piping Adaptor
FRCLM	1	2
FRLM	2	2

AIR PREPARATION UNITS - ACCESSORIES

Accessories - CLAMPS

Cat No APA - 01 - C

CLAMP for FILTER, LUBRICATOR



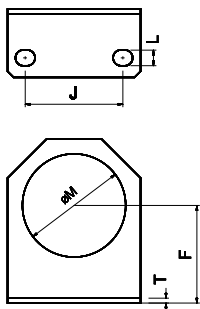
Adoptable to Model series	J	L	L1	T	Ordering No.
F13, L13	28	5.5	14	2	A2C31/MB
F14, L14	40	6.5	17.5	2	A2C32/MB
F15, L15	55	8.5	22	2	A2C33/MB
F17, L17	66	11	33	5	A2C34/MB



How to order :- Mention the ordering number required

Example :- Clamp for 3/8 Filter, Lubricator series F14, L14 - Ordering no : A2C32/MB

CLAMP for REGULATOR



Adoptable to Model series	ØM	F	L	J	T	Ordering No.
R13, FRC13	30.5	30	5.5	28	2	A2C01/MB
R14, FRC14	42.5	40	6.5	40	2	A2C02/MB
R15, FRC15	52.5	50	8.5	55	2	A2C03/MB
R17, FRC17	52.5	70	11	66	5	A2C04/MB



How to order :- Mention the ordering number required

Example :- Clamp for 3/8 Regulator series R14, FRC 14 - Ordering no : A2C02/MB

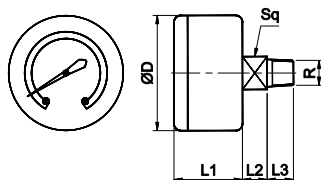
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AIR PREPARATION UNITS - ACCESSORIES

Accessories - Pressure Gauge

Cat No APA - 01 - C

PRESSURE GAUGE

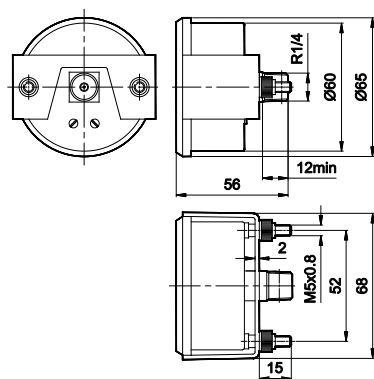


Thread R	Pressure range bar	Adoptable to Model series	ØD	L1	L2	L3	Sq	Ordering No.
R1/8	0 - 4	R13, R14, R15, FRC13, FRC14, FRC15	42	24 ⁺¹	9 ⁺²	8 ⁺²	11/12	A2G01/MB
	0 - 10							A2G02/MB
	0 - 16							A2G03/MB
R1/4	0 - 4	R17, FRC17	50	28	9 ⁺²	13 ⁺¹	14	A2G07/MB
	0 - 10							A2G08/MB
	0 - 16							A2G09/MB

How to order :- Mention the ordering number required

Example :- Pressure Gauge for Regulator with Pressure range 0 - 10 bar : Ordering no : A2G02/MB

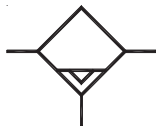
PANEL MOUNTING PRESSURE GAUGE



Thread	Pressure range bar	Adoptable to Model series	Ordering No.
R1/4	0 - 10	R17, FRC17	A2GP08/MB

How to order :- Mention the ordering number required

Example :- 1/4 Pressure Gauge for Regulator with Pressure range 0 - 10 bar : Ordering no : A2GP08/MB



AUTO DRAIN VALVE

Series NA1

Cat No APA - 01

**AUTO DRAIN VALVE suitable for Filter Series F13, F14, F15 and F17
Filter Regulator combination series FRC13, FRC14, FRC15 and FRC17**

Features

- ☐ Individual unit (Externally mountable)
- ☐ Low operating pressure
- ☐ Compact size
- ☐ Elegant design and finish
- ☐ Long life

Function

These Auto drain units are externally mountable on G1/4, 3/8 and 1/2, 3/4, 1 size Filters and FRC units.

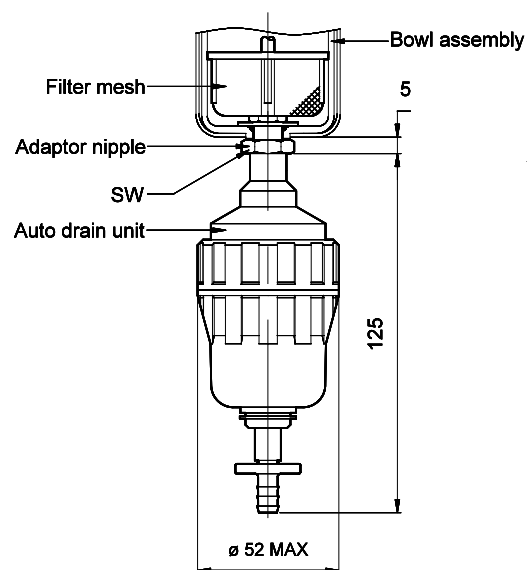
As the condensed water collects in the drain unit, the float moves up and drains the water.

The condensate water can also be drained manually.

A plastic tube can be fitted at the bottom of the auto drain unit to take the drained water away from the unit.

Technical Specifications

Ordering No.	A2D01/MB	A2D02/MB	A2D03/MB
Size	1 / 4	3 / 8	1 / 2, 3 / 4, 1
Medium	Compressed air		
Operating pressure (bar)	2 - 10 bar		
Ambient Temperature	0 - 60° C		
Installation	Vertical (as in the picture)		
Materials of construction	Aluminium, Brass, Acetal, Stainless steel, Nitrile		



Size	SW	Ordering no.
G1/4	19	A2D01/MB
G3/8	19	A2D02/MB
G1/2, G3/4, G1	22	A2D03/MB

Note

When ordered as A2D01/MB, auto drain unit with a adaptor kit and a filter mesh for G1/4 Filter or FRC will be supplied.

Subject to change