

# 5

## AIR PREPARATION & CONDENSATE MANAGEMENT

Air preparation removes water, oil, and particles from compressed air to protect downstream components.

Condensate management is essential for your pneumatic system's healthy running and maintenance.

### FRLs



			
<b>279</b> Miniature	<b>282</b> 350 Modular	<b>286</b> 380 Modular	<b>290</b> Vanguard Modular



			 <span>New Additions</span>
<b>294</b> Vanguard High Capacity	<b>297</b> Silencers / Reclassifiers	<b>298</b> Water Pressure Regulators	<b>299</b> FRL Accessories



 <span>New Additions</span>		 <span>New Additions</span>
<b>303</b> EA Series Filter, Regulator & Lubricator Ranges	<b>306</b> E Series Filter, Regulator & Lubricator Ranges	<b>309</b> FRL Accessories



 <span>New Additions</span>			
<b>311</b> Filter, Regulator & Lubricator Ranges	<b>320</b> Lockable Isolation 3-Way Valves	<b>321</b> Pressure Equipment	<b>322</b> FRL Accessories




<b>323</b> Filter, Regulator & Lubricator Ranges & Accessories




<b>327</b> Stainless Steel Filter Regulators




<b>328</b> Filenco Dryer / Filter Range

# AIR PREPARATION & CONDENSATE MANAGEMENT

## CONDENSATE MANAGEMENT



**330**  
Dropout® Water Drains & Separators



**332**  
Compressed Air Energy Savers



**332**  
Air Saver Light Switch



**332**  
Air-Saver Remote Control



**333**  
Magnetically Operated Zero Air Loss Drains



**333**  
Pneumatically Operated Level Sensed Condensate Drain



New Additions

**334**  
Electronic Zero Air Loss Drains



**334**  
Electronic Zero Air Loss Condensate Drains



New Additions

**335**  
Digital Timer Drains with Integrated Strainer



**335**  
Electronic Timer Drains



**336**  
Unblockable Motorised Ball Valve Drains



New Additions

**336**  
Oil / Water Separators



New Additions

**339**  
Service Kits, Service Units & Accessories



# Master Pneumatic FRLs

If you are looking for compressed air filtration solutions that provide clean air, look no further than Master Pneumatic filters. These filters effectively remove water, particulates, and oil from the air and come complete with an impressive 7-year warranty.

You can choose from general-purpose filters with micron ratings of 5 µm, 20 µm or 40 µm to remove water and particulate material. Coalescing filters are also available, which can effectively remove oil and solid contaminants using 0.3 to 0.01-micron elements. You can add an adsorbing filter to remove airline vapours. These filters produce air free of oil and hydrocarbon vapours, eliminating odours from alcohols, esters, and ketones.

Please select one of our Clean Air Packages to combine all three filters into one unit conveniently. Try our Filenco dryer filters, which utilise clay desiccant, activated carbon, or molecular sieves for point-of-use cleaning and drying.

## Available Ranges

- Miniature
- 350 Series Modular Range
- 380 Series Modular Range
- Vanguard Modular Range
- Vanguard High-Capacity Range
- Filenco Dryer / Filter Range

## Applications

- Transportation – vehicle assembly, trains, off-road / marine
- Food and Beverage – for precise CO<sub>2</sub> and nitrogen control, commonly used in soft drink and beer dispensing systems and ice manufacturing
- General Industry – applications requiring large volumes of air, such as in the glass, press, steel, and sandblasting equipment industries.

## Specifications

Ambient / media temperature: \*4°C to 52°C (40°F to 125°F)  
Fluid media: Compressed air  
Seals: Nitrile

\*Apart from the 380 Series Regulator which is 4°C to 79°C (40°F to 175°F)



GENERAL PURPOSE FILTERS

FEATURES

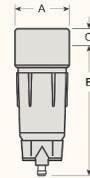
- In-line mounting
- BSPP threads, NPTF optional

SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 66°C (40°F to 150°F)
Head	Aluminium
Bowl	60 ml (2 oz) capacity polycarbonate plastic, optional aluminium bowl
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm or 40 µm sintered bronze
Inlet pressure	1 bar minimum with automatic drain. Plastic bowl: 10 bar maximum. Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 41 x 99 x 9.5 mm Metal bowl: 41 x 109 x 9.5 mm

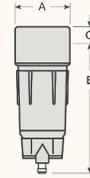


SERIES F50  
MANUAL DRAIN  
PLASTIC BOWL



3210

PART NUMBER	PORT SIZE	FILTRATION
M-F50-1W	G1/8"	5 micron
M-F50-2W	G1/4"	5 micron



3210

SERIES FD50  
AUTOMATIC DRAIN  
PLASTIC BOWL

PART NUMBER	PORT SIZE	FILTRATION
M-FD50-1W	G1/8"	5 micron
M-FD50-2W	G1/4"	5 micron

COALESCENT FILTERS

FEATURES

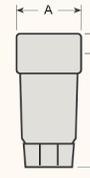
- In-line mounting
- BSPP threads, NPTF optional

SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 66°C (40°F to 150°F)
Head	Aluminium
Bowl	60 ml (2 oz) capacity polycarbonate plastic, optional aluminium bowl
Filter element	0.3 µm rated borosilicate glass-fibre coalescing element, optional 0.01 µm rated element
Inlet pressure	1 bar minimum with automatic drain. Plastic bowl: 10 bar maximum. Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 41 x 99 x 9.5 mm Metal bowl: 41 x 109 x 9.5 mm

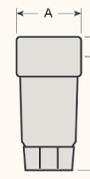


SERIES FC50  
MANUAL DRAIN  
PLASTIC BOWL



3210

PART NUMBER	PORT SIZE	FILTRATION
M-FC50-1W	G1/8"	0.3 micron
M-FC50-2W	G1/4"	0.3 micron



3210

SERIES FCD50  
AUTOMATIC DRAIN  
PLASTIC BOWL

PART NUMBER	PORT SIZE	FILTRATION
M-FCD50-2W	G1/4"	0.3 micron

For accessories,  
see pages  
299-302

## PRESSURE REGULATORS

### FEATURES

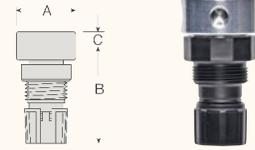
- In-line mounting
- Optional gauge
- BSPP threads, NPTF optional
- Self-relieving with non-relieving option

### SPECIFICATIONS

Ambient / media temperature	4°C to 52°C (40°F to 125°F)
Head	Aluminium
Dome & knob	Acetal & glass filled nylon
Inlet pressure	21 bar maximum
Outlet pressure	0 to 7 bar
Optional pressure gauge	0 to 11 bar, 1/8" BSPT gauge ports front & rear
Panel mounting	30 mm (1 3/16") hole required
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	41 x 68 x 10 mm



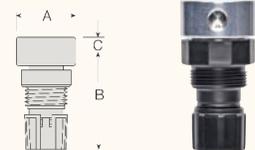
### SERIES R55M PISTON TYPE



3210

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R55M-1W	G1/8"	0 – 7 bar
M-R55M-2W	G1/4"	0 – 7 bar

### SERIES R56M DIAPHRAGM TYPE



3210

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R56M-1W	G1/8"	0 – 7 bar
M-R56M-2W	G1/4"	0 – 7 bar

## PRECISION PRESSURE REGULATORS

### FEATURES

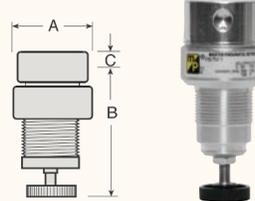
- In-line mounting
- Diaphragm type design
- Self-relieving, non-relieving optional
- Optional gauge
- Repeatability  $\pm 0.017$  bar with 7 bar inlet pressure
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	4°C to 52°C (40°F to 125°F)
Head	Aluminium
Dome	Aluminium
Inlet pressure	21 bar maximum
Outlet pressure	0 to 3.4 bar 0 to 4.14 bar with optional springs
Optional pressure gauge	0 to 11 bar, 1/8" BSPT gauge ports front & rear
Panel mounting	30 mm (1 3/16") hole required
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	44 x 86 x 10 mm



### SERIES R57 DIAPHRAGM TYPE



3210

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R57M-1W	G1/8"	0 – 3.4 bar
M-R57M-2W	G1/4"	0 – 3.4 bar

## AIR-LINE LUBRICATORS

### FEATURES

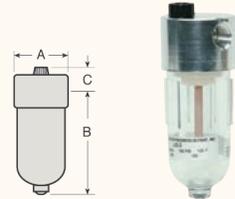
- In-line mounting
- Wick feed design
- Internal, tamperproof adjustment
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 66°C (40°F to 150°F)
Head	Aluminium
Bowl	60 ml (2 oz) capacity polycarbonate plastic; optional aluminium bowl
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Oil adjustment	Internal, tamperproof
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 41 x 91 x 17 mm Metal bowl: 41 x 97 x 17 mm



### SERIES L50 WICK FEED PLASTIC BOWL



3210

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L50-1W	G1/8"	60 ml
M-L50-2W	G1/4"	60 ml

## ADJUSTABLE RELIEF VALVES

### FEATURES

- In-line mounting
- Diaphragm type design
- Optional pressure gauge
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	4°C to 52°C (40°F to 125°F)
Head	Aluminium
Dome & knob	Nylon & acetal
Inlet pressure	20 bar maximum
Relieving range	0.07 to 6.9 bar
Maximum relief flow range	10 to 30 SCFM (4.7 to 14 l/s) with a pressure differential of 0.7 to 1 bar
Minimum relief flow	5 ml/min
Optional pressure gauge	0 to 11 bar, 1 1/2 inch dial face, 1/8" BSPT gauge ports front & rear
Panel mounting	30 mm (1 3/16") hole required
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	41 x 68 x 10 mm



### SERIES RV56 DIAPHRAGM TYPE

PART NUMBER	PORT SIZE	RELIEVING RANGE
M-RV56-1W	G1/8"	0.07 – 6.9 bar
M-RV56-2W	G1/4"	0.07 – 6.9 bar

## INTEGRAL FILTER / REGULATORS

### FEATURES

- Filter & regulator consolidated in a single assembly
- In-line mounting
- Piston type regulator (CFDR55M & CFR55M model)
- Diaphragm type regulator (CFDR56M & CFR56M model)
- Self-relieving regulator, non-relieving optional
- Pressure gauge included
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	4°C to 52°C (40°F to 125°F)
Head	Aluminium
Bowl	60 ml (2 oz) capacity polycarbonate plastic; optional aluminium bowl
Dome & knob	Nylon & acetal
Filter drain	Internal automatic drain, optional manual drain
Filter element	5 µm-rated polyethylene, optional 5 µm, 20 µm or 40 µm sintered bronze
Inlet pressure	1 bar minimum with automatic drain Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Outlet pressure	0 to 7 bar
Pressure gauge	0 to 11 bar, 1/8" BSPT gauge ports front & rear
Panel mounting	30 mm (1 3/16") hole required
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 41 x 99 x 67 mm Metal bowl: 41 x 109 x 67 mm

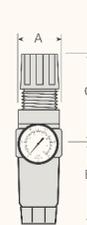


### SERIES CFDR55 PISTON TYPE WITH AUTOMATIC INTERNAL DRAIN, PLASTIC BOWL

PART NUMBER	PORT SIZE	PRESSURE RANGE	FILTRATION
M-CFDR55M-1W	G1/8"	0 – 7 bar	5 micron
M-CFDR55M-2W	G1/4"	0 – 7 bar	5 micron

### SERIES CFDR56 DIAPHRAGM TYPE WITH AUTOMATIC INTERNAL DRAIN

M-CFDR56M-1W	G1/8"	0 – 7 bar	5 micron
M-CFDR56M-2W	G1/4"	0 – 7 bar	5 micron



### SERIES CFR55M PISTON TYPE WITH MANUAL DRAIN PLASTIC BOWL

PART NUMBER	PORT SIZE	PRESSURE RANGE	FILTRATION
M-CFR55M-1W	G1/8"	0 – 7 bar	5 micron
M-CFR55M-2W	G1/4"	0 – 7 bar	5 micron

### SERIES CFR56 DIAPHRAGM TYPE WITH MANUAL DRAIN

M-CFR56M-1W	G1/8"	0 – 7 bar	5 micron
M-CFR56M-2W	G1/4"	0 – 7 bar	5 micron

For accessories,  
see pages  
299–302

## GENERAL PURPOSE FILTERS

### FEATURES

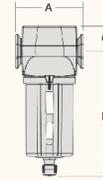
- Modular or in-line mounting
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, both drain types 4°C to 52°C (40°F to 125°F) Metal bowl, manual drain 4°C to 79°C (40°F to 175°F) Metal bowl, auto float drain 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Bowl	151 ml (5.1 oz) capacity polycarbonate plastic with nylon shatterguard. Metal bowl 177 ml (6 oz) aluminium with clear nylon sight glass.
Cap colour	Blue standard. Accent grey, yellow & red optional
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm & 40 µm rated sintered bronze element.
Inlet pressure	Plastic bowl & manual drain: 0 to 10 bar (0 to 150 psig) Plastic bowl & auto float drain: 2 to 10 bar (30 to 150 psig) Metal bowl & manual drain: 0 to 17 bar (0 to 250 psig) Metal bowl & auto float drain: 2 to 14 bar (30 to 200 psig)
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 76.2 x 140.6 x 28.3 mm Metal bowl: 76.2 x 163.1 x 28.3 mm



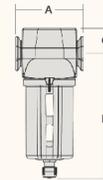
### SERIES F350 FILTER WITH PLASTIC BOWL MANUAL DRAIN



3210

PART NUMBER	PORT SIZE	FILTRATION
M-F350-2C3W	G1/4"	5 micron
M-F350-3C3W	G3/8"	5 micron
M-F350-4C3W	G1/2"	5 micron

### SERIES BF350 FILTER WITH METAL BOWL AUTOMATIC DRAIN



3210

PART NUMBER	PORT SIZE	FILTRATION
M-BF5A350-2C3W	G1/4"	5 micron
M-BF5A350-3C3W	G3/8"	5 micron
M-BF5A350-4C3W	G1/2"	5 micron

## COALESCENT FILTERS

### FEATURES

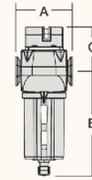
- In-line mounting
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, both drain types 4°C to 52°C (40°F to 125°F) Metal bowl, manual drain 4°C to 79°C (40°F to 175°F) Metal bowl, auto float drain 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Bowl	151 ml (5.1 oz) capacity polycarbonate plastic with nylon shatterguard. Metal bowl 177 ml (6 oz) aluminium with clear nylon sight glass. Optional 300 ml (10 oz) extended aluminium bowl with clear nylon sight glass & higher flow filter element.
Cap colour	Blue standard. Accent grey, yellow & red optional
Filter element	0.3 µm rated borosilicate glass-fibre, optional. 0.01 µm rated element (reduces flow by 20%)
Inlet pressure	Plastic bowl & manual drain: 0 to 10 bar (0 to 150 psig) Plastic bowl & auto float drain: 2 to 10 bar (30 to 150 psig) Metal bowl & manual drain: 0 to 17 bar (0 to 250 psig) Metal bowl & auto float drain: 2 to 14 bar (30 to 200 psig)
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 76.2 x 140.7 x 59.3 mm Metal bowl: 76.2 x 163.1 x 59.3 mm Metal extended bowl: 76.2 x 241.6 x 59.3 mm



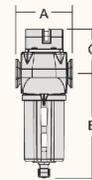
### SERIES FC350 COALESCING FILTER WITH PLASTIC BOWL & GAUGE MANUAL DRAIN



3210

PART NUMBER	PORT SIZE	FILTRATION
M-FC350S-2C3W	G1/4"	0.3 micron
M-FC350S-3C3W	G3/8"	0.3 micron
M-FC350S-4C3W	G1/2"	0.3 micron

### SERIES BFC350 COALESCING FILTER WITH METAL BOWL & GAUGE AUTOMATIC DRAIN



3210

PART NUMBER	PORT SIZE	FILTRATION
M-BFC5A350S-2C3W	G1/4"	0.3 micron
M-BFC5A350S-3C3W	G3/8"	0.3 micron
M-BFC5A350S-4C3W	G1/2"	0.3 micron

## ADSORBER FILTERS

### DESCRIPTION

Adsorbing filters are designed to remove vapours from the air line that cannot be removed by a coalescing filter. They produce air that is virtually free of oil & hydrocarbons as required by industries such as food processing, electronics, & instrumentation.

The filter cartridges contain activated carbon to adsorb hydrocarbon vapours & odours from alcohols, esters, & ketones.

An adsorbing filter should always be preceded by a particulate filter & a coalescing filter.

### FEATURES

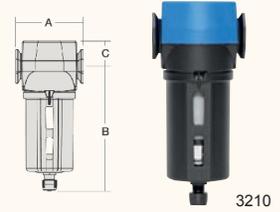
- Modular or in-line mounting
- BSPP port threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl manual drain: 4°C to 79°C (40°F to 175°F)
Bowl	151 ml (5 oz) capacity polycarbonate plastic with nylon shatterguard. Metal bowl 177 ml (6 oz) aluminium with clear nylon sight glass. Optional 300 ml (10 oz) extended aluminium bowl with clear nylon sight glass & extended flow filter element
Bowl ring	Nylon
Cap colour	Yellow standard. Accent grey, blue & red optional
Filter cartridge	Activated carbon with urethane seals
Inlet pressure	Plastic bowl & manual drain: 0 – 10 bar Metal bowl & manual drain: 0 – 17 bar
Seals	NBR
Dimensions A x B x C	Plastic bowl: 76 x 140 x 28 mm Metal bowl: 76 x 163 x 28 mm Extended metal bowl: 76 x 241 x 28 mm

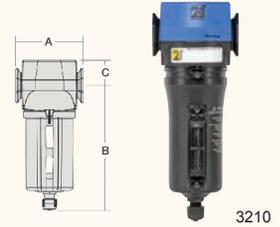


### SERIES FC350-E9 ADSORBER FILTER WITH PLASTIC BOWL MANUAL DRAIN



PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-FC350-2CE9W	G1/4"	151 ml
M-FC350-3CE9W	G3/8"	151 ml
M-FC350-4CE9W	G1/2"	151 ml

### SERIES BFC350-E9 ADSORBER FILTER WITH METAL BOWL MANUAL DRAIN



PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-BFC350-2C3E9W	G1/4"	151 ml
M-BFC350-3C3E9W	G3/8"	151 ml
M-BFC350-4C3E9W	G1/2"	151 ml

## REGULATORS

### FEATURES

- Modular or in-line mounting
- Self-relieving, diaphragm type regulator, non-relieving optional
- Optional, removable, pressure adjustment locking key, tamper resistant pressure setting
- BSPP threads, NPTF optional
- Pressure gauge optional

### SPECIFICATIONS

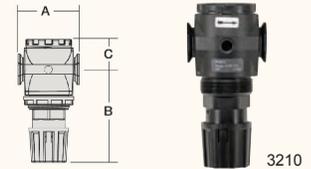
Ambient / media temperature	4°C to 79°C (40°F to 174°F)
Head	Die-cast zinc
Dome & valve cap	Nylon
Inlet pressure	300 psig (21 bar) maximum
Output pressure range	See table
Optional pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Panel mounting	52 mm (2.05") hole required
Fluid media	Compressed air
Seals	NBR
Valve	Brass
Dimensions A x B x C	76.2 x 114.9 x 37 mm

Gauge supplied separately

For accessories,  
see pages  
299–302

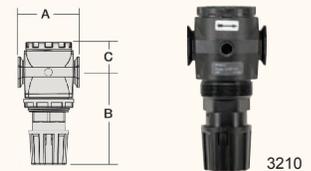


### SERIES R350 DIAPHRAGM TYPE



PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R350-2W	G1/4"	0 – 10 bar
M-R350-3W	G3/8"	0 – 10 bar
M-R350-4W	G1/2"	0 – 10 bar

### SERIES R350 DIAPHRAGM TYPE



PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R350-4LW	G1/2"	0 – 3.4 bar
M-R350-4L100W	G1/2"	0 – 7.0 bar
M-R350-4HW	G1/2"	0 – 14.0 bar
M-R350-4H250W	G1/2"	0 – 17.0 bar

## AIR-LINE LUBRICATORS

### FEATURES

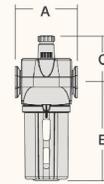
- Modular or in-line mounting
- Sight feed design, transparent dome shows how much oil is being dispensed
- External oil adjusting knob, removable for tamper resistance
- Polycarbonate plastic bowl with nylon shatterguard or aluminium bowl with clear nylon sight glass
- All working parts can be replaced with a single service cartridge
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 79°C (40°F to 175°F)
Head	Die-cast zinc
Bowl	151 ml (5.1 oz) capacity polycarbonate plastic with nylon shatterguard. Metal bowl 177 ml (6 oz) aluminium with clear nylon sight glass. Optional 300 ml (10 oz) extended aluminium bowl with clear nylon sight glass.
Cap colour	Blue standard. Accent grey, yellow & red optional
Sight dome	Nylon
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 17 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 76.2 x 119.9 x 56.1 mm Metal bowl: 76.2 x 152.9 x 56.1 mm Metal extended bowl: 76.2 x 238 x 56.1 mm

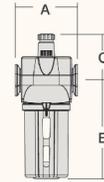


### SERIES L350 LUBRICATOR WITH PLASTIC BOWL



PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L350D-2C3W	G1/4"	151 ml
M-L350D-3C3W	G3/8"	151 ml
M-L350D-4C3W	G1/2"	151 ml

### SERIES BL350 LUBRICATOR WITH METAL BOWL



PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-BL350D-2C3W	G1/4"	177 ml
M-BL350D-3C3W	G3/8"	177 ml
M-BL350D-4C3W	G1/2"	177 ml

## COMBINED FILTER / REGULATOR

### FEATURES

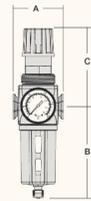
- Filter & regulator consolidated into a single, space saving assembly
- Modular or in-line mounting
- Self-relieving, diaphragm type regulator, non-relieving optional
- Optional, removable, pressure adjustment locking key, tamper resistant pressure setting
- BSPP threads, NPTF optional
- Pressure gauge optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, both drain types 4°C to 52°C (40°F to 125°F) Metal bowl, manual drain 4°C to 79°C (40°F to 175°F) Metal bowl, auto float drain 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Dome & valve cap	Nylon
Bowl	151 ml (5.1 oz) capacity polycarbonate plastic with nylon shatterguard. Metal bowl 177 ml (6 oz) aluminium with clear nylon sight glass
Filter bowl drain	Manual drain
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm & 40 µm rated sintered bronze element.
Inlet pressure	Plastic bowl & manual drain: 0 to 150 psig (0 to 10 bar) Plastic bowl & float drain: 30 to 150 psig (2 to 10 bar) Metal bowl & manual drain: 0 to 250 psig (0 to 17 bar) Metal bowl & float drain: 30 to 200 psig (2 to 14 bar)
Outlet pressure	0 to 10 bar (150 psig), optional adjusting springs
Optional pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Panel mounting	52 mm (2.05") hole required
Fluid media	Compressed air
Seals	NBR
Valve	Brass
Dimensions A x B x C	Plastic bowl: 76.2 x 140.6 x 119 mm Metal bowl: 76.2 x 161.8 x 119 mm



### SERIES CFR350 FILTER / REGULATOR WITH PLASTIC BOWL MANUAL DRAIN



PART NUMBER	PORT SIZE	FILTRATION
M-CFR350-2W	G1/4"	5 micron
M-CFR350-3W	G3/8"	5 micron
M-CFR350-4W	G1/2"	5 micron

### SERIES BCFR350 FILTER / REGULATOR WITH METAL BOWL AUTOMATIC DRAIN



PART NUMBER	PORT SIZE	FILTRATION
M-BCF5AR350-2W	G1/4"	5 micron
M-BCF5AR350-3W	G3/8"	5 micron
M-BCF5AR350-4W	G1/2"	5 micron

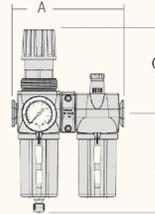
## FILTER / REGULATOR & LUBRICATOR

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, both drain types 4°C to 52°C (40°F to 125°F) Metal bowl, manual drain 4°C to 79°C (40°F to 175°F) Metal bowl, auto float drain 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Sight dome	Clear nylon
Regulator valve	Brass
Regulator dome & valve cap	Nylon
Cap colour	Filter / regulator, black only. Blue lubricator, red, yellow & grey optional.
Bowl	151 ml (5.1 oz) capacity polycarbonate plastic with nylon shatterguard, Optional 177 ml (6 oz) aluminium with clear nylon sight glass.
Filter drain	Internal automatic drain, optional manual drain
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm & 40 µm rated sintered bronze element.
Inlet pressure	Plastic bowl & manual drain: 0 to 10 bar (0 to 150 psig) Plastic bowl & auto float drain: 2 to 10 bar (30 to 150 psig) Metal bowl & manual drain: 0 to 17 bar (0 to 250 psig) Metal bowl & auto float drain: 2 to 14 bar (30 to 200 psig)
Outlet pressure	0 to 10 bar
Pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 164.5 x 140.7 x 118.9 mm Metal bowl: 164.5 x 163.1 x 118.9 mm Metal extended bowl: 164.5 x 237.1 x 118.9 mm

### FEATURES

- Filter & regulator consolidated in a single assembly, sight feed lubricator
- Modular or optional in-line mounting
- External tamper resistant oil adjustment
- Self-relieving, diaphragm type regulator, non-relieving optional
- Pressure gauge, two gauge ports
- BSPP threads, NPTF optional



**SERIES 350 INTEGRAL ASSEMBLY**  
**PLASTIC BOWLS AUTOMATIC**  
**FLOAT DRAIN WITH PRESSURE GAUGE**

3210

PART NUMBER	PORT SIZE	PRESSURE RANGE	FILTRATION
M-DAG3A0B6A1B	G1/4"	0 – 10 bar	5 micron
M-DAG3A0B6A1C	G3/8"	0 – 10 bar	5 micron
M-DAG3A0B6A1D	G1/2"	0 – 10 bar	5 micron

For wall mounting brackets use part number M-A118-103

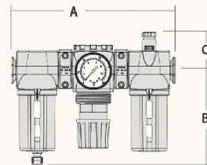
## FILTER / REGULATOR / LUBRICATOR

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, both drain types 4°C to 52°C (40°F to 125°F) Metal bowl, manual drain 4°C to 79°C (40°F to 175°F) Metal bowl, auto float drain 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Sight dome	Clear nylon
Regulator valve	Brass
Regulator dome & valve cap	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Bowl	151 ml (5.1 oz) capacity polycarbonate plastic with nylon shatterguard, optional 177 ml (6 oz) aluminium bowl with clear nylon sight glass. Lubricator bowl has an optional 300 ml (10 oz) extended aluminium bowl with clear nylon sight glass.
Filter drain	Internal automatic float drain, optional manual drain.
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm & 40 µm rated sintered bronze element.
Inlet pressure	Plastic bowl & manual drain: 0 to 10 bar (0 to 150 psig) Plastic bowl & auto float drain: 2 to 10 bar (30 to 150 psig) Metal bowl & manual drain: 0 to 17 bar (0 to 250 psig) Metal bowl & auto float drain: 2 to 14 bar (30 to 200 psig)
Outlet pressure	0 to 10 bar
Pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Seals	NBR
Dimensions A x B x C	Plastic bowl: 247.4 x 140.7 x 56.2 mm Metal bowl: 247.4 x 163.1 x 56.2 mm Metal extended bowl: 247.4 x 238 x 56.2 mm

### FEATURES

- Individual filter, regulator & sight feed lubricator
- Internal, automatic float drain included
- Modular or optional in-line mounting
- Self-relieving, diaphragm type regulator, non-relieving optional
- External oil adjustment, tamper resistant
- Optional removable, pressure adjustment locking key
- Pressure gauge; two gauge ports
- BSPP threads; NPTF optional



**SERIES 350 ASSEMBLY**  
**WITH GAUGE**  
**PLASTIC BOWLS**  
**AUTOMATIC FLOAT DRAIN**

3210

PART NUMBER	PORT SIZE	PRESSURE RANGE	FILTRATION
M-DAG1A1B6A1B	G1/4"	0 – 10 bar	5 micron
M-DAG1A1B6A1C	G3/8"	0 – 10 bar	5 micron
M-DAG1A1B6A1D	G1/2"	0 – 10 bar	5 micron

For wall mounting brackets use part number M-A118-103

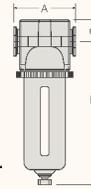
## GENERAL PURPOSE FILTERS

### FEATURES

- Modular or in-line mounting
- BSPP threads, NPTF optional

### SPECIFICATIONS

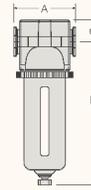
Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto drain: 4°C to 79°C (40°F to 175°F) Metal bowl, float drain: 4°C to 66°C (44° to 150°F)
Head	Die-cast zinc
Bowl	270 ml (9 oz) capacity polycarbonate plastic with steel shatterguard, or aluminium bowl with clear nylon sight glass
Bowl ring	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm sintered bronze & 40 µm polyethylene elements
Inlet pressure	Plastic bowl & manual drain: 0 to 10 bar (0 to 150 psig) Plastic bowl & auto float drain: 2 to 10 bar (30 to 150 psig) Metal bowl & manual drain: 0 to 17 bar (0 to 250 psig) Metal bowl & auto float drain: 2 to 14 bar (30 to 200 psig)
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 88 x 195 x 28 mm Metal bowl: 88 x 193 x 28 mm



3210

### SERIES F380 FILTER WITH PLASTIC BOWL MANUAL DRAIN

PART NUMBER	PORT SIZE	FILTRATION
M-F380-3C3W	G3/8"	5 micron
M-F380-4C3W	G1/2"	5 micron
M-F380-6C3W	G3/4"	5 micron



3210

### SERIES FD380 FILTER WITH METAL BOWL AUTOMATIC DRAIN

PART NUMBER	PORT SIZE	FILTRATION
M-BF5A380-3C3W	G3/8"	5 micron
M-BF5A380-4C3W	G1/2"	5 micron
M-BF5A380-6C3W	G3/4"	5 micron

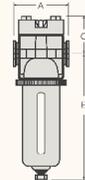
## COALESCENT FILTERS

### FEATURES

- Modular or in-line mounting
- Differential pressure gauge to indicate when filter element needs changing
- BSPP threads, NPTF optional

### SPECIFICATIONS

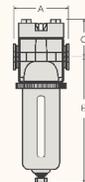
Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto: 4°C to 79°C (40°F to 175°F) Metal bowl, auto float drain: 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Bowl	270 ml (9 oz) capacity polycarbonate plastic with steel shatterguard, or aluminium bowl with clear nylon sight glass. Optional 450 ml (15 oz) extended aluminium bowl, with a clear nylon sight glass & higher flow filter element.
Bowl ring	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Filter element	0.3 µm rated borosilicate glass-fibre, optional 0.01 µm rated element (reduces flow by 20%)
Inlet pressure	1 bar minimum with automatic drain. 2 bar minimum with auto float drain. Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 88 x 195 x 55 mm Metal bowl: 88 x 193 x 55 mm Metal extended bowl: 88 x 284 x 55 mm
Gauge options	Small differential gauge, optional no gauge or large differential.



3210

### SERIES FC380 COALESCENT FILTER WITH PLASTIC BOWL & SMALL DIFFERENTIAL GAUGE MANUAL DRAIN

PART NUMBER	PORT SIZE	FILTRATION
M-FC380S-3C3W	G3/8"	0.3 micron
M-FC380S-4C3W	G1/2"	0.3 micron
M-FC380S-6C3W	G3/4"	0.3 micron



3210

### SERIES FCD380 COALESCENT FILTER WITH METAL BOWL & SMALL DIFFERENTIAL GAUGE AUTOMATIC DRAIN

PART NUMBER	PORT SIZE	FILTRATION
M-BFC5A380S-3C3W	G3/8"	0.3 micron
M-BFC5A380S-4C3W	G1/2"	0.3 micron
M-BFC5A380S-6C3W	G3/4"	0.3 micron

## ADSORBER FILTERS

### DESCRIPTION

Adsorbing filters are designed to remove vapours from the air line that cannot be removed by a coalescing filter. They produce air that is virtually free of oil & hydrocarbons as required by industries such as food processing, electronics, & instrumentation.

The filter cartridges contain activated carbon to adsorb hydrocarbon vapours & odours from alcohols, esters, & ketones.

An adsorbing filter should always be preceded by a particulate filter & a coalescing filter.

### FEATURES

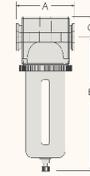
- Modular or in-line mounting
- BSPP port threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 79°C (40°F to 175°F)
Head	Die-cast zinc
Bowl	270 ml (9 oz) capacity polycarbonate plastic with steel shatterguard, or aluminium bowl. Optional 450 ml (15 oz) extended aluminium bowl includes a higher capacity adsorbing cartridge
Bowl ring	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Filter cartridge	Activated carbon
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Seals	NBR
Dimensions A x B x C	Plastic bowl: 88 x 195 x 28 mm Metal bowl: 88 x 193 x 28 mm Extended metal bowl: 88 x 284 x 28 mm



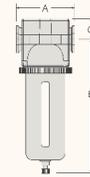
### SERIES FC380-E9 ADSORBER FILTER WITH PLASTIC BOWL MANUAL DRAIN



3210

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-FC380-3C3E9W	G3/8"	270 ml
M-FC380-4C3E9W	G1/2"	270 ml
M-FC380-6C3E9W	G3/4"	270 ml

### SERIES FC380-E9 ADSORBER FILTER WITH METAL BOWL MANUAL DRAIN



3210

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-BFC380-3C3E9W	G3/8"	270 ml
M-BFC380-4C3E9W	G1/2"	270 ml
M-BFC380-6C3E9W	G3/4"	270 ml

## PRESSURE REGULATORS

### FEATURES

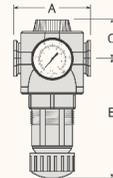
- Modular or in-line mounting. Modular mounting allows regulators to be positioned at increments of 45° for ease of adjustment
- Self-relieving diaphragm design, large diaphragm sensing ratio, non-relieving optional
- Pressure gauge included
- Pressure adjustment locking key, tamper resistant pressure setting
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	4°C to 79°C (40°F to 175°F)
Head	Die-cast zinc
Dome	Nylon & aluminium with optional 0 to 175 psig spring
Knob	Acetal
Inlet pressure	21 bar maximum
Cap colour	Blue standard. Accent grey, yellow & red optional
Output pressure range	See table
Pressure gauge	0 to 14 bar; 1/4" BSPT gauge ports front & rear
Panel mounting	52 mm (2 1/16") hole required
Fluid media	Compressed air
Seals	NBR
Valve	Brass
Valve cap	Nylon
Dimensions A x B x C	87 x 142 x 40 mm



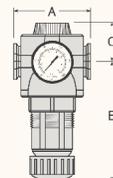
### SERIES R380 DIAPHRAGM TYPE



3210

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R380-3GW	G3/8"	0 – 8.6 bar
M-R380-4GW	G1/2"	0 – 8.6 bar
M-R380-6GW	G3/4"	0 – 8.6 bar

### SERIES R380 DIAPHRAGM TYPE



3210

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R380-6LGW	G3/4"	0 – 3.4 bar
M-R380-6HGW	G3/4"	0 – 12.0 bar

Supplied complete with locking key

For accessories,  
see pages  
299-302

## AIR-LINE LUBRICATORS

### SPECIFICATIONS

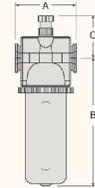
Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 79°C (40°F to 175°F)
Head	Die-cast zinc
Bowl	266 ml (9 oz) capacity polycarbonate plastic with steel shatterguard, or aluminium bowl with clear nylon sight glass Optional 444 ml (15 oz) extended aluminium bowl with two clear nylon sight glasses
Bowl ring	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Sight dome	Nylon
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Reservoir capacity	266 ml
Dimensions A x B x C	Plastic bowl: 88 x 179 x 56 mm Meta bowl I: 88 x 188 x 56 mm Extended metal bowl: 88 x 269 x 56 mm

### FEATURES

- Modular or in-line mounting
- Sight feed design, transparent dome shows how much oil is being dispensed
- External oil adjusting knob, removable for tamper resistance
- Polycarbonate plastic bowl with steel shatterguard or aluminium bowl with sight glass
- Optional extended metal bowl
- All working parts can be replaced with a single service cartridge
- BSPP threads, NPTF optional



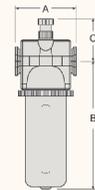
### SERIES L380D LUBRICATOR WITH PLASTIC BOWL SIGHT FEED



3210

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L380D-3C3W	G3/8"	266 ml
M-L380D-4C3W	G1/2"	266 ml
M-L380D-6C3W	G3/4"	266 ml

### SERIES L380D LUBRICATOR WITH METAL BOWL SIGHT FEED



3210

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-BL380D-3C3W	G3/8"	266 ml
M-BL380D-4C3W	G1/2"	266 ml
M-BL380D-6C3W	G3/4"	266 ml

For accessories,  
see pages  
299-302

## INTEGRAL FILTER / REGULATORS

### SPECIFICATIONS

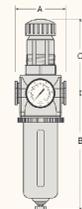
Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto drains: 4°C to 79°C (40°F to 175°F) Metal bowl, float drain: 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Dome	Nylon, aluminium wth optional 0 to 12 bar spring
Bowl	270 ml (9 oz) aluminum bowl with clear nylon sight glass
Filter bowl drain	Internal automatic drain, optional manual drain or internal float drain.
Cap colour	Black
Filter element	5 µm rated polyethylene, optional 40 µm polyethylene, 5 µm or 20 µm sintered bronze
Inlet pressure	1 bar minimum with automatic drain, 2 bar with float drain Plastic bowl: 10 bar Metal bowl: 14 bar
Outlet pressure	0 to 8.6 bar, optional adjusting springs
Pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Panel mounting	52 mm (2.05") hole required
Fluid media	Compressed air
Seals	NBR
Valve	Brass
Dimensions A x B x C	88 x 195 x 137 mm

### FEATURES

- Filter & regulator consolidated into a single, space saving assembly
- Modular or in-line mounting
- Self-relieving, diaphragm type regulator, non-relieving optional
- Removable pressure adjustment locking key, tamper resistant pressure setting
- Pressure gauge included
- BSPP threads, NPTF optional



### SERIES BCFDR380 INTEGRAL FILTER / REGULATOR WITH METAL BOWL AUTOMATIC DRAIN



3210

PART NUMBER	PORT SIZE	FILTRATION
M-BCFDR380-3GW	G3/8"	5 micron
M-BCFDR380-4GW	G1/2"	5 micron
M-BCFDR380-6GW	G3/4"	5 micron

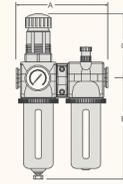
## INTEGRAL FILTER / REGULATOR & LUBRICATOR

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto drain: 4°C to 79°C (40°F to 175°F) Metal bowl, float drain: 4°C to 66°C (40°F to 150°F)
Head	Zinc
Sight dome	Clear nylon
Regulator valve	Brass
Cap colour	Filter / regulator, black only. Blue lubricator as standard, accent grey, yellow & red optional.
Bowl	270 ml (9 oz) polycarbonate plastic bowl, optional aluminium bowl
Filter drain	Internal automatic drain, optional manual drain or float drain
Filter element	5 µm rated polyethylene, optional 40 µm element
Inlet pressure	1 bar minimum with automatic drain, 2 bar minimum with float drain Metal bowls: 13.7 bar maximum Plastic bowls: 10 bar maximum
Outlet pressure	0 to 8.6 bar
Pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	182 x 195 x 137 mm

### FEATURES

- Filter & regulator consolidated in a single assembly, sight feed lubricator
- Modular or in-line mounting
- External oil adjustment, tamper resistant
- Self-relieving, diaphragm type regulator, non-relieving optional
- Pressure gauge included – two gauge ports
- BSPP threads, NPTF optional



3210

### SERIES 380 AUTOMATIC DRAIN PLASTIC BOWLS

PART NUMBER	PORT SIZE	PRESSURE RANGE	FILTRATION
M-DAM3A0B1A1C	G3/8"	0 – 8.6 bar	5 micron
M-DAM3A0B1A1D	G1/2"	0 – 8.6 bar	5 micron
M-DAM3A0B1A1E	G3/4"	0 – 8.6 bar	5 micron

For wall mounting brackets use part number M-A118-103

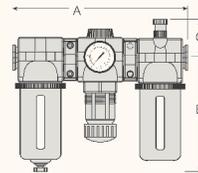
## FILTER / REGULATOR / LUBRICATOR ASSEMBLIES

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto drains: 4°C to 79°C (40°F to 175°F) Metal bowl, float drain: 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Sight dome	Clear nylon
Regulator valve	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Bowl	270 ml (9 oz) polycarbonate plastic bowl, optional aluminium bowl
Filter drain	Internal automatic drain, optional manual drain or float drain
Filter element	5 µm rated polyethylene, optional 40 µm element
Inlet pressure	1 bar minimum with automatic drain, 2 bar minimum with float drain Metal bowls: 13.7 bar maximum Plastic bowls: 10 bar maximum
Outlet pressure	0 to 8.6 bar
Pressure gauge	0 to 14 bar, 1/4" BSPT gauge ports front & rear
Seals	NBR
Fluid media	Compressed air
Dimensions A x B x C	276 x 195 x 56 mm

### FEATURES

- Individual filter, regulator & lubricator
- Modular or in-line mounting
- Self-relieving, diaphragm type regulator, non-relieving optional
- External oil adjustment, tamper resistant
- Removable, pressure adjustment locking key
- Pressure gauge
- BSPP threads, NPTF optional



3210

### SERIES 380 AUTOMATIC DRAIN PLASTIC BOWLS

PART NUMBER	PORT SIZE	PRESSURE RANGE	FILTRATION
M-DAM1A1B1A1C	G3/8"	0 – 14 bar	5 micron
M-DAM1A1B1A1D	G1/2"	0 – 14 bar	5 micron
M-DAM1A1B1A1E	G3/4"	0 – 14 bar	5 micron

For wall mounting brackets use part number M-A118-103

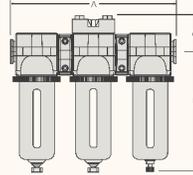
## ULTRA CLEAN FILTER ASSEMBLIES

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto drains: 4°C to 79°C (40°F to 175°F) Metal bowl, float drain: 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Bowl ring	Nylon
Cap colour	Blue standard. Accent grey, yellow & red optional
Bowl	270 ml (9 oz) polycarbonate plastic bowl, optional aluminum bowl with sight glass. Extended bowls available upon request
Filter drain	Internal automatic drains for general purpose & coalescing filters, manual drain for adsorbing filters
Filter element	General purpose: 5 µm rated polyethylene, Coalescing: 0.3 µm rated borosilicate glass-fibre, optional 0.01µm rated element, Adsorbing: Activated carbon with urethane seals
Inlet pressure	1 bar minimum 14 bar maximum with metal bowl 10 bar maximum with plastic bowl
Dimensions A x B x C	276 x 195 x 55 mm

### FEATURES

- Consists of general purpose filter, coalescent filter & adsorber filter
- Modular or in-line mounting
- Differential pressure gauge on coalescing filter to indicate when filter element needs changing
- BSPP threads, NPTF optional



3210

### SERIES 380 AUTOMATIC DRAINS PLASTIC BOWLS

PART NUMBER	PORT SIZE	FILTRATION
M-DAM1D0A1A9C	G3/8"	5, 0.3 & 0.01 micron
M-DAM1D0A1A9D	G1/2"	5, 0.3 & 0.01 micron
M-DAM1D0A1A9E	G3/4"	5, 0.3 & 0.01 micron

For wall mounting brackets use part number M-A118-103

## VANGUARD MODULAR RANGE

### GENERAL PURPOSE FILTERS

#### FEATURES

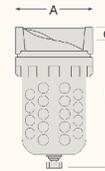
- Modular or in-line mounting
- BSPP threads, NPTF optional

#### SPECIFICATIONS

Ambient / media temperature	Plastic bowl, all drains: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto: 4°C to 79°C (40°F to 175°F) Metal bowl, float: 4°C to 66°C (40°F to 150°F)
Head	Die cast zinc
Bowl	240 ml (8 oz) capacity polycarbonate plastic with steel shatterguard, optional zinc bowl with clear nylon sight glass
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm or 40 µm sintered bronze
Inlet pressure	1 bar minimum with auto drain 2 bar minimum with float drain Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 89 x 146 x 16 mm Metal bowl: 89 x 163 x 16 mm
Bowl drain	Manual. Optional automatic, internal, float & brass float

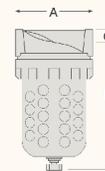


### SERIES F100 MANUAL DRAIN PLASTIC BOWL



3210

PART NUMBER	PORT SIZE	FILTRATION
M-F100-2W	G1/4"	5 micron
M-F100-3W	G3/8"	5 micron
M-F100-4W	G1/2"	5 micron
M-F100-6X	G3/4"	5 micron



3210

### SERIES FD100 AUTOMATIC DRAIN PLASTIC BOWL

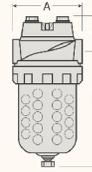
PART NUMBER	PORT SIZE	FILTRATION
M-FD100-2W	G1/4"	5 micron
M-FD100-3W	G3/8"	5 micron
M-FD100-4W	G1/2"	5 micron
M-FD100-6X	G3/4"	5 micron

**COALESCENT FILTERS**
**FEATURES**

- Modular or in-line mounting
- Differential pressure gauge
- BSPP threads, NPTF optional

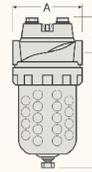
**SPECIFICATIONS**

Ambient / media temperature	Plastic bowl, all drains: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto: 4°C to 79°C (40°F to 175°F) Metal bowl, float: 4°C to 66°C (40°F to 150°F)
Head	Die cast zinc
Bowl	240 ml (8 oz) capacity polycarbonate plastic with steel shatterguard, optional zinc bowl with clear nylon sight glass. Optional 600 ml (20 oz) extended polycarbonate or zinc bowl has higher flow filter element.
Bowl ring	Aluminium
Filter element	0.3 µm rated borosilicate glass-fibre coalescing element, optional 0.01 µm rated element
Inlet pressure	1 bar minimum with auto drain 2 bar minimum with float drain Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 89 x 146 x 45 mm Extended bowl: 89 x 260 x 45 mm
Bowl drain	Manual. Optional automatic, internal, float & brass float


**SERIES FC101H  
MANUAL DRAIN  
EXTENDED PLASTIC BOWL**


3210

PART NUMBER	PORT SIZE	FILTRATION
M-FC101H-2W	G1/4"	0.3 micron
M-FC101H-3W	G3/8"	0.3 micron
M-FC101H-4W	G1/2"	0.3 micron

**SERIES FC101  
MANUAL DRAIN  
PLASTIC BOWL**


3210

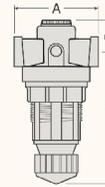
PART NUMBER	PORT SIZE	FILTRATION
M-FC101-2W	G1/4"	0.3 micron
M-FC101-3W	G3/8"	0.3 micron
M-FC101-4W	G1/2"	0.3 micron

**PRESSURE REGULATORS**
**FEATURES**

- Modular assembly & in-line mounting
- Diaphragm type design
- Optional gauge
- Removable, pressure adjustment locking key
- BSPP threads, NPTF optional
- Self-relieving with non-relieving option

**SPECIFICATIONS**

Ambient / media temperature	4°C to 79°C (40°F to 175°F)
Head	Die cast zinc
Dome	Nylon & aluminium with optional 0 to 175 psig spring
Knob	Acetal
Inlet pressure	21 bar maximum
Outlet pressure	0 to 8.6 bar
Optional pressure gauge	0 to 14 bar, 1/4" BSPP gauge ports front & rear
Panel mounting	52 mm (2 1/16") hole required
Fluid media	Compressed air
Seals	NBR
Valve	Brass
Valve cap	Nylon
Dimensions A x B x C	88.9 x 146 x 33.3 mm


**SERIES R100  
DIAPHRAGM TYPE**


3210

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R100-2W	G1/4"	0 – 8.6 bar
M-R100-3W	G3/8"	0 – 8.6 bar
M-R100-4W	G1/2"	0 – 8.6 bar
M-R100-6W	G3/4"	0 – 8.6 bar

For accessories,  
see pages  
299–302

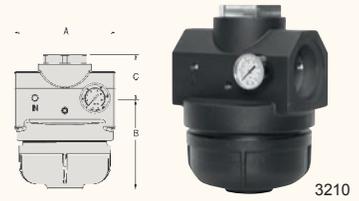
EXTERNALLY PILOTED REGULATORS

FEATURES

- In-line mounting
- Piston-type design
- Self-relieving
- Pressure gauge included
- Optional remote sensing
- Aluminium body & dome
- Flow rates exceeding 4000 SCFM
- BSPP port threads; optional NPTF threads

SPECIFICATIONS

Ambient / media temperature	4°C to 79°C (40°F to 175°F)
Body & dome	Aluminium
Valve & valve cap	Aluminium
Fluid media	Compressed air
Inlet pressure	21 bar (300 psi) maximum
Outlet pressure	0 to 14 bar (0 to 200 psi) NOTE: Outlet pressure depends on the selection of control regulator
Pilot ports	1/4" BSPP
Pressure gauge	0 to 14 bar (0 to 200 psi); 1/4" BSPP gauge ports front & rear
Seals	NBR, optional FKM
Dimensions A x B x C	214 x 187 x 95 mm



SERIES PR300  
PISTON TYPE

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-PR300-24GW	3" BSPP	0 – 14 bar

Do you also need?

Pilot control regulators (sold separately)

General purpose applications, order:  
R56M-2, R60-2, R67-2, R100-2 or R380-3

Please contact your distributor for further information

Five

HIGH RELIEF EXTERNALLY PILOTED REGULATORS

FEATURES

- In-line mounting
- Diaphragm design
- Optional pressure gauges
- BSPP port threads: NPTF optional threads
- HPR100 series flow rates exceed 150 SCFM
- HPR180 flow rates exceed 400 SCFM
- High relief characteristics up to 200 SCFM

SPECIFICATIONS

Ambient / media temperature	-18°C to +70°C (0°F to 158°F)
Body & dome	Zinc
Valve cap	Glass filled nylon
Valve	Brass
Elastomers	Nylon
Fluid media	Compressed air
Inlet pressure	0.7 to 27.6 bar (10 to 400 psi)
Outlet pressure	0 to 17.3 bar (0 to 250 psi)
Dimensions A x B x C	HPR100: 106 x 89.3 x 39.1 mm HPR180: 106 x 101.3 x 47.5 mm



SERIES HPR100  
PISTON TYPE

PART NUMBER	PORT SIZE	GAUGE PORT SIZE
M-HPR100-2W	1/4" BSPP	1/4" BSPP
M-HPR100-3W	3/8" BSPP	3/8" BSPP
M-HPR100-4W	1/2" BSPP	1/2" BSPP

SERIES HPR180

M-HPR180-6W	3/4" BSPP	1/2" BSPP
M-HPR180-8W	1" BSPP	1/2" BSPP
M-HPR180-10W	1 1/4" BSPP	1/2" BSPP

Gauges supplied separately

Do you also need?



Safety lockout valves



Find it on page 427, section seven

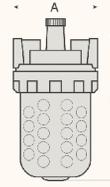
For accessories,  
see pages  
299–302

**AIR-LINE LUBRICATORS**
**FEATURES**

- Modular or in-line mounting
- L28D has a sight feed design, L28W has a wick feed design
- External oil adjusting knob, removable for tamper resistance
- BSPP threads, NPTF optional

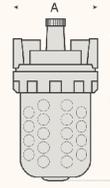
**SPECIFICATIONS**

Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 79°C (40°F to 175°F)
Head	Die cast zinc
Bowl	236 ml (8 oz) capacity polycarbonate plastic with steel shatterguard, optional zinc bowl with sight glass. Optional 592 ml (20 oz) extended polycarbonate or zinc bowl
Bowl ring	Aluminium
Sight dome	Nylon
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl L28D: 89 x 132 x 32 mm Metal bowl L28D: 89 x 135 x 32 mm Plastic Extended bowl L28D: 89 x 246 x 32 mm Metal Extended bowl L28D: 89 x 249 x 32 mm Plastic bowl L28W: 89 x 132 x 17 mm Metal bowl L28W: 89 x 135 x 17 mm


**SERIES L28D  
SIGHT FEED  
PLASTIC BOWL**


3210

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L28D-2W	G1/4"	236 ml
M-L28D-3W	G3/8"	236 ml
M-L28D-4W	G1/2"	236 ml
M-L28D-6W	G3/4"	236 ml



3210

**SERIES L28W  
WICK FEED  
PLASTIC BOWL**

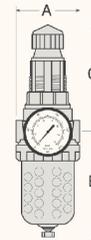
PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L28W-2W	G1/4"	236 ml
M-L28W-3W	G3/8"	236 ml
M-L28W-4W	G1/2"	236 ml
M-L28W-6W	G3/4"	236 ml

**INTEGRAL FILTER / REGULATORS**
**FEATURES**

- Filter & regulator consolidated in a single assembly
- Modular or in-line mounting
- Self-relieving diaphragm type regulator, non-relieving optional
- Removable pressure adjustment locking key
- Pressure gauge included
- BSPP threads, NPTF optional

**SPECIFICATIONS**

Ambient / media temperature	Plastic bowl, all drain types: 4°C to 52°C (40°F to 125°F) Metal bowl, manual & auto drains: 4°C to 79°C (40°F to 175°F) Metal bowl with float drain: 4°C to 66°C (40°F to 150°F)
Head	Die-cast zinc
Bowl	236 ml (8 oz) capacity polycarbonate plastic with steel shatterguard, optional zinc bowl with clear nylon sight glass
Dome	Nylon. Aluminium with heavy spring
Knob	Acetal
Filter drain	Internal automatic drain, optional manual drain or external Hydro-Jector drain, internal float drain
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm or 40 µm sintered bronze
Inlet pressure	1 bar minimum with automatic drain & 2 bar with float drain Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Outlet pressure	0 to 8.6 bar
Pressure gauge	0 to 14 bar, 1/4 BSPT gauge ports front & rear
Panel mounting	52 mm (2 1/16") hole required
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 89 x 146 x 146 mm Metal bowl: 89 x 163 x 146 mm


**SERIES CFDR100  
AUTOMATIC DRAIN  
PLASTIC BOWL**


3210

PART NUMBER	PORT SIZE	FILTRATION
M-CFDR100-2W	G1/4"	5 micron
M-CFDR100-3W	G3/8"	5 micron
M-CFDR100-4W	G1/2"	5 micron
M-CFDR100-6W	G3/4"	5 micron



3210

**SERIES CFR100  
MANUAL DRAIN  
PLASTIC BOWL**

PART NUMBER	PORT SIZE	FILTRATION
M-CFR100-2W	G1/4"	5 micron
M-CFR100-3W	G3/8"	5 micron
M-CFR100-4W	G1/2"	5 micron
M-CFR100-6W	G3/4"	5 micron

## GENERAL PURPOSE FILTERS

### FEATURES

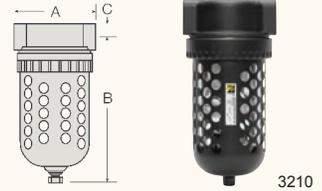
- In-line mounting • BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic, all drains: 4°C to 52°C (40°F to 125°F) Metal, manual & auto: 4°C to 79°C (40°F to 175°F) Metal, float drain: 4°C to 66°C (40°F to 150°F)
Head	Aluminium
Bowl	480 ml (16 oz) capacity polycarbonate plastic with steel shatterguard, optional aluminium bowl with clear nylon sight glass
Bowl drain	Manual, internal automatic drain, float & brass float drains available
Filter element	5 µm rated polyethylene, optional 5 µm, 20 µm or 40 µm sintered bronze
Inlet pressure	1 bar minimum with automatic drain 2 bar minimum with float drains Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 114 x 203 x 21 mm Metal bowl: 114 x 210 x 21 mm
Bowl drain	Brass float. Optional manual

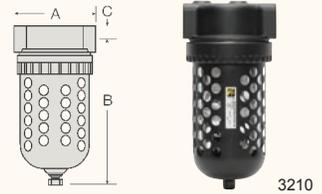


### SERIES F100 MANUAL DRAIN PLASTIC BOWL



PART NUMBER	PORT SIZE	FILTRATION
M-F100-6W	G3/4"	5 micron
M-F100-8W	G1"	5 micron

### SERIES FD100 AUTOMATIC DRAIN PLASTIC BOWL



PART NUMBER	PORT SIZE	FILTRATION
M-FD100-6W	G3/4"	5 micron
M-FD100-8W	G1"	5 micron

### FEATURES

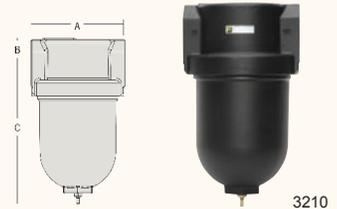
- In-line mounting • BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Metal bowl float drain: 4°C to 66°C (40°F to 150°F) Metal bowl manual drain: 4°C to 79°C (40°F to 175°F)
Head	Aluminium
Bowl	3548 ml (120 oz) capacity aluminium bowl
Options	External Hydro-Jector drain (ask for details)
Bowl ring	Aluminium
Filter element	40 µm rated sintered bronze, optional 5 µm sintered bronze
Inlet pressure	2 bar minimum with automatic internal float drain, 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	204.7 x 305 x 60.3 mm
Bowl drain	Brass float. Optional manual



### SERIES BFD400 AUTOMATIC INTERNAL BRASS FLOAT DRAIN



PART NUMBER	PORT SIZE	FILTRATION
M-BF6A400-10E3W	G1 1/4"	40 micron
M-BF6A400-12E3W	G1 1/2"	40 micron
M-BF6A400-16E3W	G2"	40 micron

## COALESCENT FILTERS

### FEATURES

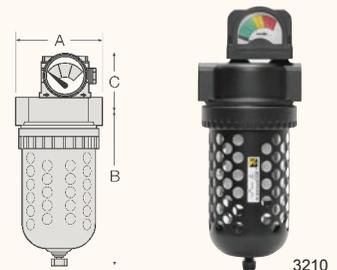
- In-line mounting • BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	Plastic, all drains: 4°C to 52°C (40°F to 125°F) Metal, manual & auto: 4°C to 79°C (40°F to 175°F). Metal, float drains: 4°C to 66°C (40°F to 150°F)
Head	Aluminium
Bowl	480 ml (16 oz) capacity polycarbonate plastic with steel shatterguard, optional 480 ml (16 oz) aluminium bowl with clear nylon sight glass
Bowl ring	Aluminium
Filter element	0.3 µm rated borosilicate glass fibre coalescing element, optional 0.01 µm rated element
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl: 114 x 203 x 78 mm Metal bowl: 114 x 210 x 78 mm
Bowl drain	Manual. Optional automatic internal, float & brass float



### SERIES FC101 MANUAL DRAIN PLASTIC BOWL



PART NUMBER	PORT SIZE	FILTRATION
M-FC101-6W	G3/4"	0.3 micron
M-FC101-8W	G1"	0.3 micron

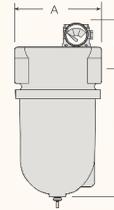
COALESCENT FILTERS

FEATURES

- In-line mounting
- BSPP threads, NPTF optional

SPECIFICATIONS

Ambient / media temperature	Metal, manual: 4°C to 79°C (40°F to 175°F) Metal, brass float: 4°C to 66°C (40°F to 150°F)
Head	Aluminium
Bowl	3548 ml (120 oz) capacity aluminium bowl. Optional 6802 ml (230 oz) extended aluminium bowl has higher flow filter element
Filter element	0.3 µm rated borosilicate glass-fibre coalescing element, optional 0.01 µm rated element
Inlet pressure	Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions	Metal standard bowl: 205 x 306 x 117 mm
A x B x C	Metal extended bowl & 2": 205 x 465 x 177 mm
Bowl drain	Manual. Optional brass float



3210

SERIES BFC401 (H)  
MANUAL DRAIN

PART NUMBER	PORT SIZE	FILTRATION
M-BFC401-10W	G1 1/4"	0.3 micron
M-BFC401-12W	G1 1/2"	0.3 micron
M-BFC401H-16W	G2"	0.3 micron

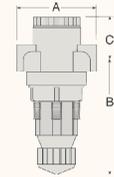
PRESSURE REGULATORS

FEATURES

- In-line mounting
- Piston type design
- Self-relieving, non-relieving optional
- Optional gauge
- Removable pressure adjustment locking key
- BSPP threads, NPTF optional

SPECIFICATIONS

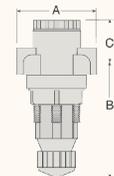
Ambient / media temperature	4°C to 79°C (40°F to 175°F)
Head	Zinc
Dome	Nylon, aluminium with optional 0 to 150 psig spring
Knob	Acetal
Inlet pressure	21 bar maximum
Outlet pressure	0 to 7 bar
Optional pressure gauge	0 to 14 bar, 1/4 BSPP gauge ports front & rear
Panel mounting	52 mm (2 1/16") hole required
Fluid media	Compressed air
Seals	NBR
Valve	Aluminium
Valve cap	Nylon
Dimensions A x B x C	R180M H series: 111.1 x 153.6 x 61.5 mm R180 H series: 123.8 x 161.5 x 53.5 mm



3210

SERIES R180M  
PISTON TYPE

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R180M-6W	G3/4"	0 – 7 bar
M-R180M-8W	G1"	0 – 7 bar



3210

SERIES R180  
PISTON TYPE

PART NUMBER	PORT SIZE	PRESSURE RANGE
M-R180-10W	G1 1/4"	0 – 7 bar
M-R180-12W	G1 1/2"	0 – 7 bar

For accessories,  
see pages  
299-302

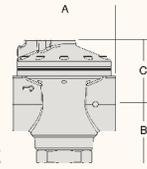
HIGH RELIEF EXTERNALLY PILOTED REGULATORS

FEATURES

- Diaphragm design. Excellent pressure regulation & stability
- High relief characteristics up to 200 SCFM
- Balanced valve minimises effect of pressure changes on inlet pressure
- In-line mounting
- 3/4" BSPP exhaust port
- Self-relieving
- BSPP port threads; NPTF optional
- Integral pilot regulator porting
- 1/4" BSPP auxiliary inlet pressure port

SPECIFICATIONS

Inlet pressure range	0.7 to 31 bar (10 psi to 450 psi)
Outlet pressure range	HPR251: 0 to 17.2 bar (0 to 250 psi) HPR250: 1.7 to 17.2 bar (25 to 250 psi)
Operating temperature	-18°C to +79°C (0°F to 175°F) Air moisture content must be dry
Flow rating	Flow rates exceed 2000 SCFM
Body & dome	Cast aluminium
Cap	Teflon coated aluminium
Valve	NBR bonded aluminium
Elastomers	NBR
Exhaust ports	3/4" BSPP
Dimensions A x B x C	HPR251: 152.4 x 88.9 x 94 mm HPR250: 167.6 x 88.9 x 157.4 mm

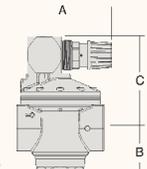


3210

SERIES HPR251  
DIAPHRAGM TYPE

PART NUMBER	PORT SIZE	GAUGE PORT SIZE
M-HPR251-12W	1 1/2" BSPP	1/4" BSPP
M-HPR251-16W	2" BSPP	1/4" BSPP

Gauges supplied separately



3210

SERIES HPR250  
DIAPHRAGM TYPE  
C/W INTEGRAL CONTROL REGULATOR

PART NUMBER	PORT SIZE	GAUGE PORT SIZE
M-HPR250-0B0A0A-B	1 1/2" BSPP	1/4" BSPP
M-HPR250-0B0A0A-D	2" BSPP	1/4" BSPP

Gauges supplied separately

Do you also need?

Pilot control regulators (sold separately)

General purpose applications, order:  
R56M-2, R350-2 or R67-2

Recommended for HPR251-12W & HPR251-16W

Please contact your distributor for further information

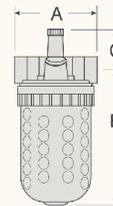
AIR-LINE LUBRICATORS

FEATURES

- In-line mounting
- L29D has a sight feed design & external, removable, oil adjustment knob
- L100 has a wick feed design & internal oil adjustment
- BSPP threads, NPTF optional

SPECIFICATIONS

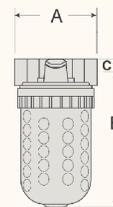
Ambient / media temperature	Plastic bowl: 4°C to 52°C (40°F to 125°F) Metal bowl: 4°C to 79°C (40°F to 175°F)
Head	Aluminium
Bowl	473 ml (16 oz) capacity polycarbonate plastic with steel shatterguard. Optional aluminium bowl with sight glass
Bowl ring	Aluminium
Sight dome	Nylon
Inlet pressure	Plastic bowl: 10 bar maximum Metal bowl: 14 bar maximum
Fluid media	Compressed air
Seals	NBR
Dimensions A x B x C	Plastic bowl L29D: 108 x 208 x 37 mm Metal bowl L29D: 108 x 185 x 37 mm Plastic bowl L100: 114 x 195 x 21 mm Metal bowl L100: 114 x 208 x 21 mm



3210

SERIES L29D  
SIGHT FEED  
PLASTIC BOWL

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L29D-6W	G3/4"	473 ml
M-L29D-8W	G1"	473 ml
M-L29D-10W	G1 1/4"	473 ml
M-L29D-12W	G1 1/2"	473 ml



3210

SERIES L100  
WICK FEED  
PLASTIC BOWL

PART NUMBER	PORT SIZE	RESERVOIR CAPACITY
M-L100-8W	G1"	473 ml

## SILENCERS / RECLASSIFIERS

### DESCRIPTION

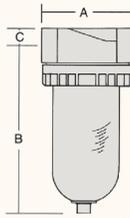
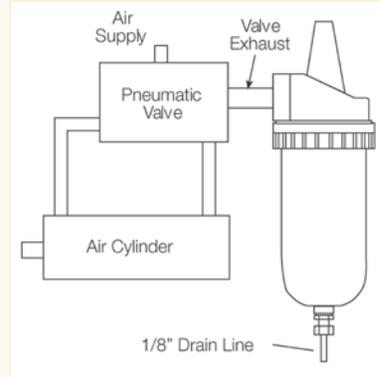
Silencers / reclassifiers are integral silencer & oil separation devices. When installed at the exhaust ports of pneumatic valves, they reduce exhaust noise & capture lubricants contained in the exhausting air. They are used on valve-cylinder applications & on air tools with piped exhausts.

### FEATURES

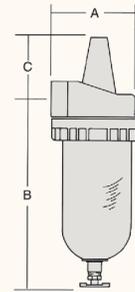
- Exhaust noise reduced to between 80 & 85 dBA under standard, steady-state test conditions
- Peak impact noise is reduced to between 106 & 108 dBA
- A drain cock is supplied for manual or automatic draining of accumulated liquids
- External oil adjustment, tamper resistant
- Optional 1/8 tube fitting (00142W) is available for automatic draining

### SPECIFICATIONS

Ambient / media temperature	Plastic bowl: 4°C to 51°C (40°F to 125°F) RS metal bowl: 4°C to 79°C (40°F to 175°F)
Bowl	240 ml polycarbonate plastic bowl for RS 480 ml polycarbonate plastic bowl for MRS Optional metal bowl
Element	Sintered bronze
Fluid media	Compressed air
Inlet pressure	5 to 150 wg (0.3 bar to 10 bar) maximum
Dimensions A x B x C	88.9 x 139.7 x 17.5 mm (RS100) 107 x 213 x 69 mm (MRS100)



3210



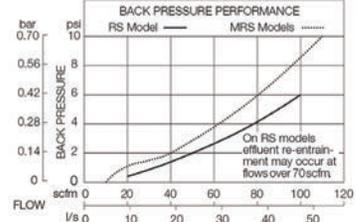
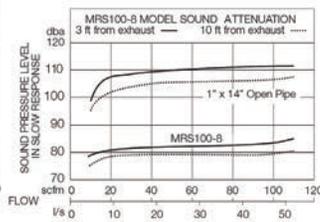
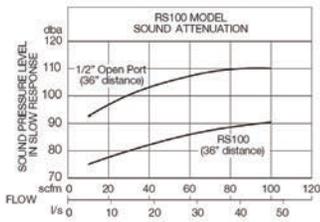
3210

### SERIES RS100

PART NUMBER	PORT SIZE	WEIGHT
M-RS100-4W	G1/2"	0.59 kg

### SERIES MRS100

PART NUMBER	PORT SIZE	WEIGHT
M-MRS100-6W	G3/4"	1.27 kg
M-MRS100-8W	G1"	1.27 kg



For accessories,  
see pages  
299-302

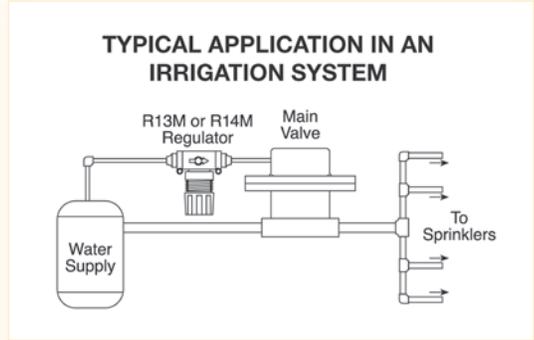
## SENTRY MODULAR RANGE

### FEATURES

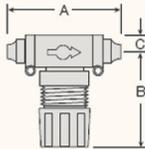
- Designed to set pilot pressure of the water for the main valve in a sprinkler system
- Diaphragm type design
- Non-relieving
- Corrosion resistant construction
- Optional large valve seat for water flows up to six gallons per minute
- Threaded ports or quick-connect fittings for tubing up to 10 mm in diameter
- BSPP threads, NPTF optional

### SPECIFICATIONS

Ambient / media temperature	1.7°C to 52°C (35°F to 125°F)
Head	Acetal
Dome & knob	Acetal
Main spring	Stainless steel
Fluid media	Water
Inlet pressure	10 bar maximum
Outlet pressure	0 to 7 bar locking adjustment cap
Panel mounting	30 mm (1 3/16") hole required
Pressure gauge	Optional (0 – 160 psig)
Seals	NBR



Five

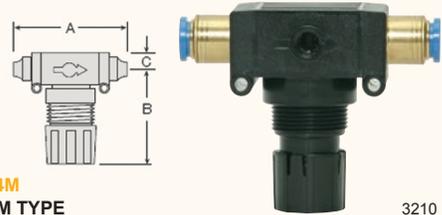


3210

### SERIES R14M

#### DIAPHRAGM TYPE

PART NUMBER	PORT SIZE	DIMENSIONS
M-R14M-1AW	G1/8"	76 x 67 x 13 mm
M-R14M-2AW	G1/4"	76 x 67 x 13 mm



### SERIES R14M

#### DIAPHRAGM TYPE

3210

PART NUMBER	PORT SIZE	DIMENSIONS
M-R14M-04A	1/4" OD	86 x 67 x 13 mm
M-R14M-06A	3/8" OD	99 x 67 x 13 mm
M-R14M-M4A	4 mm OD	86 x 67 x 13 mm
M-R14M-M6A	6 mm OD	86 x 67 x 13 mm
M-R14M-M8A	8 mm OD	86 x 67 x 13 mm
M-R14M-M10A	10 mm OD	99 x 67 x 13 mm

Models above have quick connect fittings for tubing

For accessories,  
see pages  
299-302



## MASTER PNEUMATIC SEVEN YEAR WARRANTY



The Company warrants to the Purchaser that the equipment described in this catalogue will be free from defects in material & quality for seven years. This warranty does not cover standard service parts (such as filter elements) or parts that fail due to chemical attack\*, abuse, improper service, or improper use. This warranty does not cover products not manufactured by Master Pneumatic, Inc. These products will be covered by the original manufacturer's warranty, if any. The preceding warranty is exclusive & instead of all other warranties, whether written, oral, express, or implied. There is **NO WARRANTY OF MERCHANTABILITY OR FITNESS OF PURPOSE**. If, within seven years from the date of shipment by the Company, the equipment has not met the warranties specified above & the purchaser notifies the Company promptly. In that case, the Company shall correct any defect, at its option, either by repairing any defective part or parts or making a replacement part available at the Company's plant. Unless the manufacturer specifies, these parts are designed for compressed air service.

Use with any other fluid must be approved by Master Pneumatic, Inc. In no event will Master Pneumatic, Inc. be liable for business interruptions, loss of profits, harm, injury, damage, personal injury, cost of delay, or any special, indirect, incidental, or consequential losses, costs, or damages.

\* It is crucial to use our products in an appropriate setting. Polycarbonate, acetal, nylon, ABS, and other plastics are particularly susceptible to damage caused by specific chemicals and their fumes, such as compressor oils, solvents, and cleaners. If you are uncertain, please consult your chemical provider to verify if their products may harm any components used in Master Pneumatic products.

## ACCESSORY GUIDE

A vast range of spares & accessories are available to suit all Master Pneumatic ranges. To select the correct product to suit the range you require, please see the colour markers on the individual pages, the corresponding colour markers are in the tables below. If you do not see the spare or accessory you require, please contact our technical sales team who will be happy to assist you.

### ACCESSORY SYMBOL KEY

	Miniature range
	350 modular range
	380 modular range
	Vanguard modular range

### ACCESSORY SYMBOL KEY

	Vanguard high capacity range
	Silencers / reclassifiers
	Water pressure regulators

## FILTER ELEMENTS



### FILTER ELEMENTS FOR GENERAL PURPOSE FILTERS

#### 5 MICRON

3210

PART NUMBER		DESCRIPTION
M-KA130-27PE5		5 micron polyethylene
M-KA130-27E5		5 micron bronze
M-A60F-03PE5		5 micron polyethylene
M-A60F-03E5		5 micron bronze
M-A115-106PE5		5 micron polyethylene
M-A115-106E5		5 micron bronze
M-KA103-03PE5		5 micron polyethylene
M-KA103-03E5		5 micron bronze
M-KA109-3PE		5 micron polyethylene
M-KA109-03E5		5 micron bronze
M-KA106-33E5		5 micron bronze

#### 20 MICRON

M-KA130-27E4		20 micron bronze
M-A60F-03E4		20 micron bronze
M-A115-106E4		20 micron bronze
M-KA103-03E4		20 micron bronze
M-KA109-03E4		20 micron bronze

#### 40 MICRON

M-KA130-27E3		40 micron bronze
M-A60F-03E3		40 micron bronze
M-A115-106PE3		40 micron polyethylene
M-KA103-03E3		40 micron bronze
M-KA109-03E3		40 micron bronze
M-K106-33		40 micron bronze

### FILTER ELEMENTS FOR USE WITH COALESCENT FILTERS

#### 0.3 MICRON

3210

PART NUMBER		DESCRIPTION
M-A10F-16		0.3 micron coalescent
M-A60F-23		0.3 micron coalescent plastic
M-A60F-29		0.3 micron coalescent metal bowl
M-A115-117		0.3 micron coalescent metal
M-A115-118		0.3 micron coalescent metal
M-A103-160S		0.3 micron coalescent
M-A103-160L		0.3 micron coalescent, extended 20 oz bowl
M-A109-106		0.3 micron coalescent plastic
M-A106-24		0.3 micron coalescent plastic
M-A106-24L		0.3 micron coalescent

#### 0.01 MICRON

PART NUMBER		DESCRIPTION
M-A10F-16E8		0.01 micron coalescent
M-A60F-23E8		0.01 micron coalescent plastic
M-A60F-29E8		0.01 micron coalescent metal bowl
M-A60F-32E8		0.01 micron coalescent metal extended 10 oz bowl
M-A115-117E8		0.01 micron coalescent
M-A115-118E8		0.01 micron coalescent extended 15 oz bowl
M-A103-160SE8		0.01 micron coalescent
M-A103-160LE8		0.01 micron coalescent, extended 20 oz bowl
M-A109-106E8		0.01 micron coalescent plastic
M-A106-24E8		0.01 micron coalescent plastic
M-106-24LE8		0.01 micron coalescent metal extended 23 oz bowl



### FILTER ELEMENTS FOR USE WITH ADSORBER FILTERS

#### STANDARD BOWL

3210

PART NUMBER		DESCRIPTION
M-A60F-29E9		Activated carbon element kit
M-A115-117E9		Activated carbon element kit

#### EXTENDED BOWL

M-A60F-32E9		Activated carbon element kit
M-A115-118E9		Activated carbon element kit



### REPLACEMENT ELEMENT KITS

3210

PART NUMBER		DESCRIPTION
M-KA103-03E4		RS replacement element kit
M-KA109-32		MRS replacement element kit

**MOUNTING BRACKETS & CONNECTORS**

**REGULATOR MOUNTING BRACKETS**



3210

PART NUMBER	DESCRIPTION
M-33-82	Regulator mounting bracket
M-37-71	Regulator mounting bracket

**REGULATOR PANEL MOUNTING NUT**



3210

PART NUMBER	DESCRIPTION
M-10R-26	Panel mounting nut
M-127-11	Panel mounting nut

**REGULATOR PANEL MOUNTING NUT & BRACKET**



3210

PART NUMBER	DESCRIPTION
M-A33-82	Regulator panel mounting nut & bracket
M-A-127-11	Regulator panel mounting nut & mounting bracket
M-K37-71M	Regulator panel mounting nut & mounting bracket

**MOUNTING BRACKET & SCREWS**



3210

PART NUMBER	DESCRIPTION
M-A118-103	Mounting bracket & screws

**U-BOLT BRACKET KITS**



3210

PART NUMBER	DESCRIPTION
M-UMB-2	1/4" U-bolt bracket kit
M-UMB-3	3/8" U-bolt bracket kit
M-UMB-4	1/2" U-bolt bracket kit
M-UMB-6	3/4" U-bolt bracket kit
M-UMB-8	1" U-bolt bracket kit

**TOP MOUNTING L BRACKET**



3210

PART NUMBER	DESCRIPTION
M-K30-08	Top mounting L bracket

**GAUGE PORT & MOUNTING BRACKET**



3210

PART NUMBER	DESCRIPTION
M-KA37-68	Gauge port & mounting bracket

**GAUGE PORT & EXTENDED MOUNTING BRACKETS**



3210

PART NUMBER	DESCRIPTION
M-KA37-68L	Gauge port & extended mounting bracket

**IN MOUNTING BRACKETS FOR EXTERNAL PILOT REGULATORS**



3210

PART NUMBER	DESCRIPTION
M-A37-381	HPR100 kit
M-37-364	HPR180 bracket

**MODULAR CONNECTOR KIT**



3210

PART NUMBER	DESCRIPTION
M-A118-105M	Modular connector kit
M-KA30-04	Modular connector kit

**MODULAR CONNECTOR**



3210

PART NUMBER	DESCRIPTION
M-A118-105	Modular connector

**GAUGES**

**REGULATOR PRESSURE GAUGE**



3210

PART NUMBER	DESCRIPTION
M-70MDD	0 to 160 psi gauge

**REGULATOR PRESSURE GAUGE**



3210

PART NUMBER	DESCRIPTION
M-200-BDD	0 to 200 psi gauge

**COALESCENT FILTER DIFFERENTIAL GAUGE**



3210

PART NUMBER	DESCRIPTION
M-103-151	Differential slide gauge

**COALESCENT FILTER DIFFERENTIAL GAUGE**



3210

PART NUMBER	DESCRIPTION
M-106-35	Large differential pressure gauge

BOWLS



PLASTIC FILTER BOWLS

3210

PART NUMBER	DESCRIPTION
M-AF125-02	● Plastic filter bowl, manual drain – 5.1 oz
M-AL125-02LDC	● Plastic lubricator bowl – 5.1 oz
M-AF115-109	● Plastic filter bowl, manual drain – 9 oz
M-AL115-109	● Plastic lubricator bowl – 9 oz



METAL FILTER BOWLS

3210

PART NUMBER	DESCRIPTION
M-ABF125-03	● Metal filter bowl, manual drain – 6 oz
M-ABL125-03	● Metal lubricator bowl – 6 oz
M-ABL125-03H	● Extended metal lubricator bowl – 10 oz
M-ABF115-100	● Metal filter bowl, manual drain – 9 oz
M-ABL115-100	● Metal lubricator bowl – 9 oz
M-ABL115-100H	● Extended metal lubricator bowl – 15 oz

DRAINS

AUTOMATIC FLOAT DRAIN  
PLASTIC STEM



3210

PART NUMBER	DESCRIPTION
M-A802-42	● ● Automatic float drain – plastic stem

AUTOMATIC INTERNAL DRAIN



3210

PART NUMBER	DESCRIPTION
M-D350	● Automatic internal drain
M-D380	● Automatic internal drain

AUTOMATIC FLOAT DRAIN  
BRASS STEM



3210

PART NUMBER	DESCRIPTION
M-A802-49	● ● Automatic float drain – brass stem

MANUAL DRAIN



3210

PART NUMBER	DESCRIPTION
M-A802-32	● ● Manual drain

SPRINGS

REPLACEMENT SPRINGS



3210

PART NUMBER	DESCRIPTION
M-33-113M	● 1 bar (15 psi)
M-33-114M	● 2 bar (30 psi)
M-33-104H	● 8.6 bar (125 psi)

ASSEMBLY KITS



DIAPHRAGM REGULATOR ASSEMBLY KITS

3210

PART NUMBER	DESCRIPTION
M-A33-544A	● Non-relieving piston with u-cup
M-A33-544	● Relieving piston with u-cup

## PORTS

### FEATURES

- An extra port block can be placed between modules to provide two auxiliary ports. Auxiliary ports are available in 1/4", 3/8" or 1/2" sizes
- Its mounting position can be rotated to obtain the most convenient operating orientation
- An extra port block can be ordered as part of an assembly or individually

NOTE: If only one auxiliary port is to be used the unused port must be closed with a pipe plug. The inlet & outlet of modular extra port is not threaded



3210

### MODULAR EXTRA PORTS

PART NUMBER		DESCRIPTION
M-118-106-2W		Modular extra port – 1/4"
M-118-106-3W		Modular extra port – 3/8"
M-118-106-4W		Modular extra port – 1/2"

### FEATURES

- End ports can be attached to threaded inlet & outlet lines. This allows all modules of an FRL assembly to be removed easily & quickly, simply by removing modular clamp instead of having to unthread.
- The end port is attached to product using a modular clamp. If ordering separately each port will require a clamp: part M-A118-105 or M-A118-105M.



3210

### MODULAR END PORTS

PART NUMBER		DESCRIPTION
M-118-100-3W		End ports – 3/8" female
M-118-100-4W		End ports – 1/2" female
M-118-100-6W		End ports – 3/4" female

## LOCK-OUT VALVES

### FEATURES

- Modular or inline mounting
- Provides positive lockout of supply air & exhausting of downstream air
- Provides delayed pressure buildup for safe starts
- 3/2 operation – non threaded exhaust
- Can be padlocked only in the closed position
- BSPP port threads; optional NPTF threads



3210

### MODULAR LOCK-OUT VALVES

PART NUMBER		DESCRIPTION
M-V380-2W		Shut-off valve – 1/4"
M-V380-3W		Shut-off valve – 3/8"
M-V380-4W		Shut-off valve – 1/2"
M-V380-6W		Shut-off valve – 3/4"

### FEATURES

- High flow threaded exhaust port to accommodate muffler or a line for remote exhausting
- Compact modular or inline
- Optional slow start (delayed-pressure-buildup) function
- 3 ported valve



3210

Please note: Padlock not supplied

### MODULAR LOCK-OUT VALVE WITH EXHAUST

PART NUMBER		DESCRIPTION
M-V382-2N6A0A		Lockout valve with exhaust – G1/4"
M-V382-3N6A0A		Lockout valve with exhaust – G3/8"
M-V382-4N6A0A		Lockout valve with exhaust – G1/2"
M-V382-6N6A0A		Lockout valve with exhaust – G3/4"

Accessory symbol key

- 350 modular
- 380 modular

**SAFETY**

Did you know?

Products with safety benefits are indicated by a chevron at the bottom of their table



# E.MC FRLs

E.MC's filter-regulator-lubricator assemblies are designed to be easy to assemble and durable, with high flow rates. These FRLs are built to be reliable and robust, with a modular construction. Recent advancements in the regulator mechanism have made it more sensitive, allowing better control and ensuring the system operates at optimum pressure.

FRLs can be purchased as fully assembled units, or users can assemble their modular units using connectors and wall mounting kits. All units have undergone rigorous pressure testing and inspection to ensure quality. The EA Series features a manual drain, while the E Series offers manual and auto drain options.

Our range of products includes various accessories such as brackets, gauges, filter elements, and spacers that are available to purchase separately.

## Benefits

- Higher flow rates
- Simple assembly and maintenance
- Reduced downtime

## Specifications

- Max. working pressure: 10 bar
- Working temperature: -5°C to +60°C \*(no freezing)
- Max. inlet pressure: 15 bar

\*EA Series

## Available Ranges

- EA Series
- E Series



**EAFM MIST SEPARATOR**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	0.3 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar



3650

New

**EAFM SERIES MIST SEPARATOR  
MANUAL DRAIN**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EAFM2000-02</b>	2000	1/4"	1300 l/min

**AUTO DRAIN**

<b>EM-EAFM3000-02C</b>	3000	1/4"	2750 l/min
<b>EM-EAFM3000-03C</b>	3000	3/8"	2750 l/min
<b>EM-EAFM4000-04C</b>	4000	1/2"	4200 l/min

**EAF FILTER**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	40 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar



3650

 New  
Additions

**EAF SERIES FILTER  
MANUAL DRAIN WITH BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EAF2000-02</b>	2000	1/4"	1300 l/min
<b>EM-EAF3000-03</b>	3000	3/8"	2750 l/min
<b>EM-EAF4000-04</b>	4000	1/2"	4200 l/min

**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	5 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar



3650

New

**EAF SERIES FILTER  
MANUAL DRAIN WITH BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EAF2000-02-5M</b>	2000	1/4"	1300 l/min
<b>EM-EAF3000-03-5M</b>	3000	3/8"	2750 l/min
<b>EM-EAF3000-04-5M</b>	4000	1/2"	4200 l/min

**EAR REGULATORS**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Working medium	Clean air (after 40 µm filtration)
Max. inlet pressure	15 bar
Adjustable pressure range	1.5 to 9 bar
Type	Relieving

**PANEL CUT OUT HOLE**

BODY SIZE	Ø	MAX. PLATE THICKNESS
2000	31.5 mm	3.5 mm
3000	36.5 mm	3.0 mm
4000	52.5 mm	3.0 mm



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**EAR SERIES REGULATOR  
INTEGRAL GAUGE & BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EAR2000-02</b>	2000	1/4"	1300 l/min
<b>EM-EAR3000-03</b>	3000	3/8"	2750 l/min
<b>EM-EAR4000-04</b>	4000	1/2"	4200 l/min

**EAL LUBRICATOR**
**SPECIFICATIONS**

Max. working pressure	0.5 to 10 bar
Working temperature	-5°C to +60°C (no freezing)
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet	15 bar



3650

 New  
Additions

**EAL SERIES LUBRICATOR  
WITH BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EAL2000-02</b>	2000	1/4"	2500 l/min
<b>EM-EAL3000-03</b>	3000	3/8"	4000 l/min
<b>EM-EAL4000-04</b>	4000	1/2"	5250 l/min

**EAW FILTER / REGULATORS**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	40 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar
Adjustable pressure range	1.5 to 9 bar
Type	Relieving

**PANEL CUT OUT HOLE**

BODY SIZE	Ø	MAX. PLATE THICKNESS
2000	31.5 mm	3.5 mm
3000	36.5 mm	3.0 mm
4000	52.5 mm	3.0 mm



3650

**EAW SERIES FILTER / REGULATOR  
MANUAL DRAIN WITH BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EAW2000-02	2000	1/4"	1300 l/min
EM-EAW3000-03	3000	3/8"	2750 l/min
EM-EAW4000-04	4000	1/2"	4100 l/min

**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	5 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar
Adjustable pressure range	1.5 to 9 bar
Type	Relieving

**PANEL CUT OUT HOLE**

BODY SIZE	Ø	MAX. PLATE THICKNESS
2000	31.5 mm	3.5 mm
3000	36.5 mm	3.0 mm
4000	52.5 mm	3.0 mm



3650

New

**EAW SERIES FILTER / REGULATOR  
MANUAL DRAIN WITH BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EAW2000-25M	2000	1/4"	1300 l/min
EM-EAW3000-35M	3000	3/8"	2750 l/min
EM-EAW4000-45M	4000	1/2"	4100 l/min

**RELIEVING TYPE – AUTO DRAIN WITH BRACKET**

EM-EAW3000-03D-5M	3000	3/8"	2750 l/min
EM-EAW4000-04D-5M	4000	1/2"	4100 l/min

**EAC FILTER / REGULATOR & LUBRICATOR**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	40 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar
Adjustable pressure range	1.5 to 9 bar
Type	Relieving



3650

**EAC SERIES FILTER / REGULATOR &  
LUBRICATOR  
MANUAL DRAIN WITH BRACKET &  
SQUARE GAUGE**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EAC2010-02	2000	1/4"	1200 l/min
EM-EAC3010-03	3000	3/8"	2400 l/min
EM-EAC4010-04	4000	1/2"	4100 l/min

**AUTO DRAIN WITH BRACKET & SQUARE GAUGE**

EM-EAC3010-03D	3000	3/8"	2400 l/min
EM-EAC4010-04D	4000	1/2"	4100 l/min

**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	5 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar
Adjustable pressure range	1.5 to 9 bar
Type	Relieving



3650

New

**EAC SERIES FILTER / REGULATOR &  
LUBRICATOR  
MANUAL DRAIN WITH BRACKET &  
SQUARE GAUGE**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EAC2010-02-5M	2000	1/4"	1200 l/min
EM-EAC3010-03-5M	3000	3/8"	2400 l/min
EM-EAC4010-04-5M	4000	1/2"	4100 l/min

**EAC FILTER & REGULATOR & LUBRICATOR**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	-5°C to +60°C (no freezing)
Filter precision	40 micron
Working medium	Clean air (after 40 µm filtration)
Bowl material	Polycarbonate
Max. inlet pressure	15 bar
Adjustable pressure range	1.5 to 9 bar

**EAC SERIES FILTER & REGULATOR & LUBRICATOR  
MANUAL DRAIN WITH BRACKET &  
SQUARE GAUGE**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EAC2000-02F2</b>	2000	1/4"	1200 l/min
<b>EM-EAC3000-03F2</b>	3000	3/8"	2400 l/min
<b>EM-EAC4000-04F2</b>	4000	1/2"	4100 l/min

**AUTO DRAIN WITH BRACKET & SQUARE GAUGE**

<b>EM-EAC3000-03DF2</b>	3000	3/8"	2400 l/min
<b>EM-EAC4000-04DF2</b>	4000	1/2"	4100 l/min

**FILTER, REGULATOR & LUBRICATOR ASSEMBLIES – E SERIES**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	5°C to 60°C
Filter precision	5 micron
Bowl material	Polycarbonate – metal bowl guard fitted on sizes 3000 & above
Inlet pressure	15 bar
Adjustable pressure range	0.5 to 8.5 bar
Drain type	Manual drain / auto drain
Type	Relieving

**PANEL CUT OUT HOLE**

BODY SIZE	Ø	MAX. PLATE THICKNESS
2000	33.5 mm	3.5 mm
3000	42.5 mm	3.5 mm
4000	52.5 mm	5.0 mm
5000	52.5 mm	5.0 mm

**EW & EC series products come complete with gauge & bracket**  
 Flow rates are based on an 8 bar supply pressure & 6.3 bar set pressure

**ER REGULATORS**


3650

**ER SERIES REGULATOR  
INCLUDES GAUGE & BRACKET**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-ER2000-01-5</b>	2000	1/8"	1178 l/min
<b>EM-ER2000-02-5</b>	2000	1/4"	1200 l/min
<b>EM-ER3000-02-5</b>	3000	1/4"	2112 l/min
<b>EM-ER3000-03-5</b>	3000	3/8"	2212 l/min
<b>EM-ER4000-03-5</b>	4000	3/8"	5020 l/min
<b>EM-ER4000-04-5</b>	4000	1/2"	5312 l/min
<b>EM-ER5000-06-5</b>	5000	3/4"	6400 l/min
<b>EM-ER5000-10-5</b>	5000	1"	6600 l/min

**EW FILTER / REGULATORS**


3650

**EW SERIES FILTER / REGULATOR  
MANUAL DRAIN**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EW2000-01-5</b>	2000	1/8"	1078 l/min
<b>EM-EW2000-02-5</b>	2000	1/4"	1165 l/min

**AUTO DRAIN**

<b>EM-EW2000-01D-5</b>	2000	1/8"	1078 l/min
<b>EM-EW2000-02D-5</b>	2000	1/4"	1165 l/min

**EC FILTER / REGULATOR / LUBRICATORS**


3650

**EC SERIES FILTER / REGULATOR,  
LUBRICATOR  
MANUAL DRAIN**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
<b>EM-EC2010-01-5</b>	2000	1/8"	945 l/min
<b>EM-EC2010-02-5</b>	2000	1/4"	960 l/min

**AUTO DRAIN**

<b>EM-EC2010-01D-5</b>	2000	1/8"	945 l/min
<b>EM-EC2010-02D-5</b>	2000	1/4"	960 l/min

**EC FILTER / REGULATOR / LUBRICATORS**
**SPECIFICATIONS**

Max. working pressure	10 bar
Working temperature	5°C to 60°C
Filter precision	25 micron
Bowl material	Polycarbonate – metal bowl guard fitted on sizes 3000 & above
Inlet pressure	15 bar
Adjustable pressure range	0.5 to 8.5 bar
Drain type	Manual drain / auto drain
Type	Relieving



3650

**EW SERIES FILTER / REGULATOR WITH METAL BOWL GUARD MANUAL DRAIN**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EW3000-02-5	3000	1/4"	1998 l/min
EM-EW3000-03-5	3000	3/8"	2177 l/min
EM-EW4000-03-5	4000	3/8"	5108 l/min
EM-EW4000-04-5	4000	1/2"	5211 l/min
EM-EW5000-06-5	5000	3/4"	6200 l/min
EM-EW5000-10-5	5000	1"	6400 l/min

**AUTO DRAIN**

EM-EW3000-02D-5	3000	1/4"	1998 l/min
EM-EW3000-03D-5	3000	3/8"	2177 l/min
EM-EW4000-03D-5	4000	3/8"	5108 l/min
EM-EW4000-04D-5	4000	1/2"	5211 l/min
EM-EW5000-06D-5	5000	3/4"	6200 l/min
EM-EW5000-10D-5	5000	1"	6400 l/min

**EC SERIES FILTER, REGULATOR, LUBRICATOR MANUAL DRAIN**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EC2000-01-5	2000	1/8"	1000 l/min
EM-EC2000-02-5	2000	1/4"	1100 l/min

**AUTO DRAIN**

EM-EC2000-01D-5	2000	1/8"	1000 l/min
EM-EC2000-02D-5	2000	1/4"	1100 l/min

EC series products come complete with gauge & bracket  
Flow rates are based on an 8 bar supply pressure & 6.3 bar set pressure

**PANEL CUT OUT HOLE**

BODY SIZE	Ø	MAX. PLATE THICKNESS
2000	33.5 mm	3.5 mm
3000	42.5 mm	3.5 mm
4000	52.5 mm	5.0 mm
5000	52.5 mm	5.0 mm



3650

**EC SERIES FILTER / REGULATOR, LUBRICATOR WITH METAL BOWL GUARD MANUAL DRAIN**

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EC3010-02-5	3000	1/4"	1874 l/min
EM-EC3010-03-5	3000	3/8"	1956 l/min
EM-EC4010-03-5	4000	3/8"	4923 l/min
EM-EC4010-04-5	4000	1/2"	5120 l/min
EM-EC5010-06-5	5000	3/4"	6000 l/min
EM-EC5010-10-5	5000	1"	6200 l/min

**AUTO DRAIN**

EM-EC3010-02D-5	3000	1/4"	1874 l/min
EM-EC3010-03D-5	3000	3/8"	1956 l/min
EM-EC4010-03D-5	4000	3/8"	4923 l/min
EM-EC4010-04D-5	4000	1/2"	5120 l/min
EM-EC5010-06D-5	5000	3/4"	6000 l/min
EM-EC5010-10D-5	5000	1"	6200 l/min

**EC SERIES FILTER, REGULATOR, LUBRICATOR WITH METAL BOWL GUARD MANUAL DRAIN**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EC3000-02-5	3000	1/4"	1950 l/min
EM-EC3000-03-5	3000	3/8"	2105 l/min
EM-EC4000-03-5	4000	3/8"	4950 l/min
EM-EC4000-04-5	4000	1/2"	5200 l/min
EM-EC5000-06-5	5000	3/4"	6200 l/min
EM-EC5000-10-5	5000	1"	6500 l/min

**AUTO DRAIN**

EM-EC3000-02D-5	3000	1/4"	1950 l/min
EM-EC3000-03D-5	3000	3/8"	2105 l/min
EM-EC4000-03D-5	4000	3/8"	4950 l/min
EM-EC4000-04D-5	4000	1/2"	5200 l/min
EM-EC5000-06D-5	5000	3/4"	6200 l/min
EM-EC5000-10D-5	5000	1"	6500 l/min

**EF FILTERS**
**EF SERIES FILTER  
MANUAL DRAIN**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EF2000-01J	2000	1/8"	1222 l/min
EM-EF2000-02J	2000	1/4"	1278 l/min

**AUTO DRAIN**

EM-EF2000-01DJ	2000	1/8"	1222 l/min
EM-EF2000-02DJ	2000	1/4"	1278 l/min

EF series products do not include a bracket  
Flow rates are based on an 8 bar supply pressure &  
6.3 bar set pressure

**EF SERIES FILTER  
WITH METAL BOWL GUARD  
MANUAL DRAIN**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EF3000-02J	3000	1/4"	2006 l/min
EM-EF3000-03J	3000	3/8"	2148 l/min
EM-EF4000-03J	4000	3/8"	5120 l/min
EM-EF4000-04J	4000	1/2"	5430 l/min
EM-EF5000-06J	5000	3/4"	8200 l/min
EM-EF5000-10J	5000	1"	8500 l/min

**AUTO DRAIN**

EM-EF3000-02DJ	3000	1/4"	2006 l/min
EM-EF3000-03DJ	3000	3/8"	2148 l/min
EM-EF4000-03DJ	4000	3/8"	5120 l/min
EM-EF4000-04DJ	4000	1/2"	5430 l/min
EM-EF5000-06DJ	5000	3/4"	8200 l/min
EM-EF5000-10DJ	5000	1"	8500 l/min

**EL LUBRICATORS**
**EL SERIES LUBRICATOR**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EL2000-01J	2000	1/8"	1300 l/min
EM-EL2000-02J	2000	1/4"	1345 l/min

EL series products do not include a bracket  
Flow rates are based on an 8 bar supply pressure &  
6.3 bar set pressure

**EL SERIES LUBRICATOR  
WITH METAL BOWL GUARD**


3650

PART NUMBER	BODY SIZE	PORT SIZE	FLOW RATE
EM-EL3000-02J	3000	1/4"	2310 l/min
EM-EL3000-03J	3000	3/8"	2375 l/min
EM-EL4000-03J	4000	3/8"	5321 l/min
EM-EL4000-04J	4000	1/2"	5532 l/min
EM-EL5000-06J	5000	3/4"	7700 l/min
EM-EL5000-10J	5000	1"	8000 l/min

**EPR PRECISION PRESSURE REGULATOR**
**SPECIFICATIONS**

Max. input pressure	10 bar
Working temperature	-20°C to +70°C
Working medium	Clean air
Adjustable pressure range	See table

**EPR SERIES PRECISION  
PRESSURE REGULATOR  
WITH PRESSURE GAUGE  
& MOUNTING BRACKET**


3650

PART NUMBER	BODY SIZE	PORT SIZE	PRESSURE RANGE
EM-EPR2000-01M	2000	1/8"	0.1 – 4 bar
EM-EPR2000-01H	2000	1/8"	0.1 – 8 bar
EM-EPR3000-02M	3000	1/4"	0.1 – 4 bar
EM-EPR3000-02H	3000	1/4"	0.1 – 8 bar
EM-EPR4000-02M	4000	1/4"	0.1 – 4 bar
EM-EPR4000-02H	4000	1/4"	0.1 – 8 bar
EM-EPR4000-03M	4000	3/8"	0.1 – 4 bar
EM-EPR4000-03H	4000	3/8"	0.1 – 8 bar
EM-EPR4000-04M	4000	1/2"	0.1 – 4 bar
EM-EPR4000-04H	4000	1/2"	0.1 – 8 bar

## FRL ACCESSORIES – EA SERIES

### 20 TYPE BRACKET



3650

PART NUMBER	FOR USE WITH
EM-EAC220	2000 Series
EM-EAC320	3000 Series
EM-EAC420	4000 Series

### 40 TYPE BRACKET



3650

PART NUMBER	FOR USE WITH
EM-EAC240	2000 Series
EM-EAC340	3000 Series
EM-EAC440	4000 Series

### T SERIES COMBINATION BRACKET



3650

PART NUMBER	FOR USE WITH
EM-EAC20T	2000 Series
EM-EAC30T	3000 Series
EM-EAC40T	4000 Series

### SPACER

#### 2 PORT



3650

PART NUMBER	FOR USE WITH	PORT SIZE
EM-EA2002-02	2000 Series	1/4"
EM-EA3002-02	3000 Series	1/4"
EM-EA3002-03	3000 Series	3/8"
EM-EA4002-04	4000 Series	1/2"

### REGULATOR NUT



3650

PART NUMBER	FOR USE WITH
EM-EAW2000-016	2000 Series
EM-EAW3000-016	3000 Series
EM-EAW4000-016	4000 Series

### SQUARE PRESSURE GAUGE



3650

PART NUMBER	FOR USE WITH
EM-EAC20-FB-010-02	2000 Series
EM-EAC-FB-010-2	3000 / 4000 Series

### ROUND PRESSURE GAUGE



3650

PART NUMBER	FOR USE WITH
EM-EAC-EYZ26	2000 Series
EM-EAC-EYZ40	3000 / 4000 Series

### FILTER ELEMENTS



3650

PART NUMBER	FILTRATION	FOR USE WITH
EM-EAW2000-033-2	5 micron	2000 Series
EM-EAW3000-033-2	5 micron	3000 Series
EM-EAW4000-033-2	5 micron	4000 Series
EM-EAW2000-033-1	40 micron	2000 Series
EM-EAW3000-033-1	40 micron	3000 Series
EM-EAW4000-033-1	40 micron	4000 Series

### DRAIN UNITS



3650

PART NUMBER	DRAIN TYPE	FOR USE WITH
EM-EAF2000-P01	Manual	2000 Series
EM-EAF3000-P01	Manual	3000 Series
EM-EAF4000-P01	Manual	4000 Series
EM-EAF3000-P02	Semi auto	3000 Series
EM-EAF4000-P02	Semi auto	4000 Series
EM-EAF3000-P03	Auto	3000 Series
EM-EAF4000-P03	Auto	4000 Series

### SHUT-OFF VALVES

New

#### MANUAL 3/2 SHUT-OFF VALVE LOCKABLE



3650

PART NUMBER	BODY SIZE	PORT SIZE
EM-EAS2000-02	2000	1/4"
EM-EAS3000-02	3000	1/4"
EM-EAS3000-03	3000	3/8"
EM-EAS4000-04	4000	1/2"

## FRL ACCESSORIES – E SERIES

### AUTO DRAIN FEATURES

- Drip leg / auto drain
- Fully automatic operation
- Auto drain discharges the condensate each time the maximum permissible level in the bowl is reached
- When total pressure is removed from the system, the drain will also open
- Collected liquids can be piped away

### SPECIFICATIONS

Working medium	Compressed air
Working temperature	5°C to 60°C
Working pressure	1.5 to 10 bar
Guaranteed pressure resistance	15 bar

### DRIP LEG AUTO DRAIN 150 ML BOWL CAPACITY



3650

PART NUMBER	PORT SIZE	OUTSIDE DIAMETER	LENGTH
EM-HED402-02	1/4"	72 mm	162 mm
EM-HED402-03	3/8"	72 mm	162 mm
EM-HED402-04	1/2"	72 mm	162 mm

## FRL ACCESSORIES – E SERIES

### PRESSURE GAUGE



3650

PART NUMBER	SERIES	DIA.	THREAD
EM-EYZ4001051B-06	2000 / 3000	40 mm	1/8"
EM-EYZ5001051B-08	4000 / 5000	50 mm	1/4"

### TYPE 20 MOUNTING BRACKET



3650

PART NUMBER	FOR USE WITH
EM-B220	ER, EW 2000
EM-B320	ER, EW 3000
EM-B420	ER, EW 4000/5000

### T-TYPE MOUNTING BRACKET



3650

PART NUMBER	FOR USE WITH
EM-Y20T	EC2010
EM-Y30T	EC3010
EM-Y40T	EC4010
EM-Y60T	EC5010

New Additions

### FILTER ELEMENT FOR MANUAL & AUTO DRAINS



3650

PART NUMBER	FILTRATION	FOR USE WITH
EM-EF2000-005-2	5 micron	E2000
EM-EF2000-005-1	25 micron	E2000
EM-EF3000-005-2	5 micron	E3000
EM-EF3000-005-1	25 micron	E3000
EM-EF5000-005-2	5 micron	E5000
EM-EF5000-005-1	25 micron	E5000

### FOR MANUAL DRAINS

EM-EF4000-005-2	5 micron	E4000
EM-EF4000-005-1	25 micron	E4000

### FOR AUTO DRAINS

EM-EFD4000-005-2	5 micron	EF4000-D
EM-EFD4000-005-1	25 micron	EF4000-D

### TYPE 40 MOUNTING BRACKET



3650

PART NUMBER	FOR USE WITH
EM-B240	EF, EL 2000
EM-B340	EF, EL 3000
EM-B440	EF, EL 4000
EM-B640	EF, EL 5000

New

### L BRACKET



3650

PART NUMBER	FOR USE WITH
EM-Y20L	EC2000
EM-Y30L	EC3000
EM-Y40L	EC4000
EM-Y50L	EC4000
EM-Y60L	EC5000

### AIR TAKE OFF SPACER



3650

PART NUMBER	FOR USE WITH	PORT SIZE
EM-Y21-01*	EIC, EC2000	1/8"
EM-Y21-02*	EIC, EC2000	1/4"
EM-Y31-01	EIC, EC3000	1/8"
EM-Y31-02	EIC, EC3000	1/4"
EM-Y41-02	EIC, EC4000	1/4"
EM-Y41-03	EIC, EC4000	3/8"
EM-Y61-03	EIC, EC5000	3/8"
EM-Y61-04	EIC, EC5000	1/2"

\* EM-Y21-01 & EM-Y21-02 can only be used with three unit combinations i.e. Filter + regulator + lubricator



3650

### AUTO DRAIN KIT

PART NUMBER	FOR USE WITH
EM-ZDFS-08	3000
EM-ZDFS-10	4000 / 5000

## SHUT-OFF VALVES

Autodrain Installation: Install drainer vertically with drain port facing down.



3650

### 3/2 SHUT-OFF VALVE LOCKABLE

PART NUMBER	BODY SIZE	PORT SIZE
EM-EVSH2000-01	2000	1/8"
EM-EVSH2000-02	2000	1/4"
EM-EVSH3000-02	3000	1/4"
EM-EVSH3000-03	3000	3/8"
EM-EVSH4000-03	4000	3/8"
EM-EVSH4000-04	4000	1/2"

New

### ELECTRONIC 3/2 SHUT-OFF VALVE LOCKABLE 24 V DC



3650

PART NUMBER	BODY SIZE	PORT SIZE
EM-EV2000-02	2000	1/4"
EM-EV3000-03	3000	3/8"
EM-EV4000-04	4000	1/2"



# Camozzi FRLs

A pneumatic system relies heavily on the air composition to function efficiently. It is crucial to incorporate modular FRL units comprising various filters with activated carbon and coalescing filters, regulators, lubricators, interception valves, soft start valves, and take-off blocks to enable movement.

Camozzi offers pre-assembled groups of FRL units equipped with all necessary accessories to ensure seamless operation.

The FRL MX Series can be easily assembled using rapid clamps, allowing unlimited compositions with single components.

- Compact design
- Dimensions optimisation
- Great reliability
- Easy and quick maintenance
- Reduced weight

Modularity is easily achieved with the FRL MC Series using modular tie rods to mount single elements without any composition limits.

- Clean design
- Easy maintenance
- Great modularity

## Available Ranges

- MC Series
- MD Series
- MX Series
- M Series
- T Series



## MC SERIES

### DESCRIPTION

The standard regulator has a relieving diaphragm.

### SPECIFICATIONS

Construction	Modular, compact, diaphragm type
Materials	Zama, brass, NBR, technopolymer
Mounting	In-line wall or console mounting (in any position)
Operating temperature	0°C to 50°C
Finishing	Enamelled
Inlet pressure	0 to 16 bar
Outlet pressure	0.5 to 10 bar or 0 to 4 bar



2505

### SERIES MC SELF RELIEVING

PART NUMBER	PORT SIZE	PRESSURE
ZMC104-R00	1/4"	0.5 to 10 bar
ZMC104-R10	1/4"	0 to 4 bar

## MD SERIES

### DESCRIPTION

Manifold, with bypass valve, calibrated, locked.

### SPECIFICATIONS

Construction	Modular, compact with pre-formed diaphragm
Materials	Polyamide, brass, zinc plated steel, NBR, stainless steel
Mounting	In-line; wall mounting; panel mounting
Operating temperature	-5°C to +50 °C up to 16 bar
Inlet pressure	0 to 16 bar
Outlet pressure	0.5 to 10 bar



2505

### SERIES MD SELF RELIEVING

PART NUMBER	PORT SIZE	PRESSURE
ZMD1-R000-1/8	1/8"	0.5 to 10 bar
ZMD1-R000-1/4	1/4"	0.5 to 10 bar
ZMD1-R000-3/8	3/8"	0.5 to 10 bar

### NON RELIEVING

ZMD1-R010-3/8	3/8"	0.5 to 10 bar
ZMD1-R010-1/4	1/4"	0.5 to 10 bar

## MX SERIES

### DESCRIPTION

Modular – available with built-in pressure gauges or ports for gauges. Tamperproof system (lockable regulator). Manifold version also available.

### SPECIFICATIONS

Construction	Modular, compact diaphragm type
Mounting	Vertical in-line or wall mounting (by clamps) or panel mounting
Operating temperature	-5°C to +60°C at 10 bar
Inlet pressure	0 to 16 bar
Outlet pressure	0.5 to 10 bar (standard) 0 to 4 bar 0.5 to 7 bar (MX2 only)
Overpressure exhaust	With relieving (standard)
Fluid	Compressed air
Pressure gauge	Built-in pressure gauge (standard) G1/4" ports for pressure gauge (MX3 only) G1/8" ports for pressure gauge (MX2 only)

### MATERIALS

Body	Aluminium with polyacetal covering
Valve holder plug	Polyacetal
Regulator knob	Polyamide
Upper spring	Zinc plated steel
Lower spring	Stainless steel
Seals & diaphragm	NBR



2505

### SERIES MX – 0.5 to 10 bar SELF RELIEVING

PART NUMBER	BODY SIZE	PORT SIZE	DESCRIPTION
ZMX2-3/8-R004	MX2	3/8"	With gauge
ZMX2-1/2-R004	MX2	1/2"	With gauge
ZMX2-3/4-R004	MX2	3/4"	With gauge
ZMX3-3/4-R004	MX3	3/4"	With gauge
ZMX3-1-R004	MX3	1"	With gauge

## M SERIES

### SPECIFICATIONS

Construction	Diaphragm type
Materials	Brass, NBR, technopolymer
Mounting	In-line or panel mounting (in any position)
Operating temperature	0°C to 50°C
Inlet pressure	0 to 16 bar
Outlet pressure	0.5 to 10 bar



2505

### SERIES M – MICRO NON RELIEVING

PART NUMBER	PORT SIZE	PRESSURE
ZM008-R01	1/8"	0.5 to 10 bar
ZM004-R01	1/4"	0.5 to 10 bar

## T SERIES

### DESCRIPTION

All models are equipped with a valve, enabling fast venting (VS), which is useful when a regulator should be inserted between the valve & cylinder (or capacity) without any negative influence on the exhaust.

### SPECIFICATIONS

Construction	Piston regulator
Materials	Brass, NBR, technopolymer
Operating temperature	-5°C to +50°C
Pressure gauge ports	G1/8
Inlet pressure	0 to 12 bar
Outlet pressure	0.5 to 10 bar
Secondary pressure relieving	Standard
Fluid type	Air & water



2505

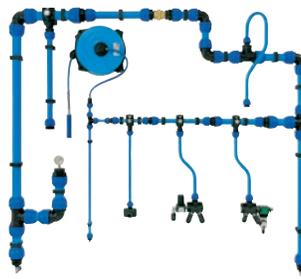
### SERIES T – MICRO NON RELIEVING

PART NUMBER	PORT SIZE	PRESSURE
ZT108-R01	1/8"	0.5 to 10 bar
ZT108-R11	1/8"	0 to 4 bar
ZT108-R21	1/8"	0 to 2 bar
ZT108-R71	1/8"	0 to 7 bar

Do you also need?

**Sicomat**

**Ringmain systems**



Find it on pages 764 – 777, section thirteen

**MC SERIES**
**DESCRIPTION**

The metal bowls of these filters come complete with a transparent sight glass & have a condensate drain valve.

**SPECIFICATIONS**

Construction	Modular, compact with filtering element in HDPE
Materials	Zama, NBR, technopolymer
Mounting	Vertical in-line or wall mounting
Operating temperature	0°C to 50°C at 10 bar
Porosity of filtering element	25 µm standard – 5 µm upon request
Draining of condensate	Manual – semi-automatic standard
Finishing	Enamelled
Operating pressure	Standard drain: 0.3 to 16 bar Protected depressurisation: 0.3 to 16 bar Depressurisation: 0.3 to 10 bar Automatic drain: 1.5 to 15 bar for G3/8 & G1/2



2505

**SERIES MC  
25 MICRON**

PART NUMBER	PORT SIZE	DRAIN TYPE
ZMC104-F00	1/4"	Semi-automatic
ZMC104-F04	1/4"	Depressurisation

**MD SERIES**
**DESCRIPTION**

Bowl with technopolymer cover & bayonet-type mounting.

**SPECIFICATIONS**

Construction	Modular, compact with filtering element in HDPE
Mounting	Vertical in-line or wall mounting (by clamps)
Operating temperature	-5°C to +50°C up to 16 bar
Porosity of filtering element	25 micron filtering element
Draining of condensate	Semi-automatic manual, automatic protected depressurisation
Fluid	Compressed air
Operating pressure	0.3 to 16 bar

**MATERIALS**

Body	Polyamide
Tank	Polycarbonate
Valve guide	Polyamide
Filtering element	Polyethylene
Separation deflector	Polyacetal
Seal	NBR



2505

**SERIES MD  
WITH INDICATOR**

PART NUMBER	PORT SIZE	DRAIN TYPE
ZMD1-F001-1/8	1/8"	Semi-automatic
ZMD1-F001-1/4	1/4"	Semi-automatic
ZMD1-F001-3/8	3/8"	Semi-automatic

**MX SERIES**
**DESCRIPTION**

Bowl with technopolymer cover & bayonet-type mounting.

**SPECIFICATIONS**

Construction	Modular, compact with filtering element in HDPE
Mounting	Vertical in-line or wall mounting (by clamps)
Operating temperature	-5°C to +60°C at 10 bar
Porosity of filtering element	25 µm standard – 5 µm upon request
Draining of condensate	Manual – semi-automatic standard MX2: automatic depressurisation
Condensate capacity	MX2: 55 cc MX3: 85 cc
Fluid	Compressed air
Operating pressure	Standard drain 0.3 to 16 bar

**MATERIALS**

Body	Aluminium with polyacetal covering
Bowl (technopolymer cover)	Polycarbonate / polyamide
Valve guide	Polyacetal
Filtering element	Polyethylene
Separation deflector	Polyacetal
Seals	NBR



2505

**SERIES MX  
25 MICRON**

PART NUMBER	BODY SIZE	PORT SIZE	DRAIN TYPE
ZMX2-3/8-F00	MX2	3/8"	Semi-automatic
ZMX2-1/2-F00	MX2	1/2"	Semi-automatic
ZMX2-3/4-F00	MX2	3/4"	Semi-automatic
ZMX3-3/4-F00	MX3	3/4"	Semi-automatic
ZMX3-1-F00	MX3	1"	Semi-automatic

## MC SERIES

### DESCRIPTION

With metal bowl & bayonet-type mounting. Bowls are also equipped with a transparent viewer. The oil flow can be monitored via the small transparent cap & regulated by means of the special adjusting screw.

### SPECIFICATIONS

Construction	Modular, compact
Materials	Zama, NBR, technopolymer
Mounting	Vertical in-line or wall mounting
Operating temperature	0°C to 50°C at 10 bar
Oil refilling	Without pressure (G1/4)
Oil for lubrication	Up to ISO VG32
Finishing	Enamelled
Operating pressure	0 to 16 bar



2505

### SERIES MC LUBRICATORS

PART NUMBER	PORT SIZE
ZMC104-L00	1/4"

## MD SERIES

### DESCRIPTION

Modular assembly. Bowl with technopolymer cover & bayonet-type mounting.

### SPECIFICATION

Construction	Modular, compact
Materials	Polyamide, polycarbonate, NBR
Mounting	In vertical position by means of through holes in the body
Operating temperature	-5°C to +50°C up to 16 bar
Oil for lubrication	Use ISO VG32 oils. Once applied, the lubrication should never be interrupted
Operating pressure	0 to 16 bar



2505

### SERIES MD LUBRICATORS

PART NUMBER	PORT SIZE
ZMD1-L00-1/8	1/8"
ZMD1-L00-1/4	1/4"
ZMD1-L00-3/8	3/8"

## MX SERIES

### DESCRIPTION

Bowl with technopolymer cover & bayonet-type mounting. Ability to refill the oil even with system under pressure.

### SPECIFICATIONS

Construction	Modular, compact
Mounting	Vertical in-line or wall mounting (by clamps)
Operating temperature	-5°C to +60°C at 10 bar
Oil capacity	MX2: 118 cc MX3: 170 cc
Oil refilling	Even during use
Oil for lubrication	Up to ISO VG32
Operating pressure	0 to 16 bar

### MATERIALS

Body	Aluminium with polyacetal covering
Bowl (technopolymer cover)	Polycarbonate / polyamide
Viewer	Polyamide
Seals & diaphragm	NBR



2505

### SERIES MX LUBRICATORS

PART NUMBER	BODY SIZE	PORT SIZE
ZMX2-3/8-L00	MX2	3/8"
ZMX2-1/2-L00	MX2	1/2"
ZMX2-3/4-L00	MX2	3/4"
ZMX3-3/4-L00	MX3	3/4"
ZMX3-1-L00	MX3	1"

## MC SERIES

### DESCRIPTION

Combines the features of the MC filters & regulators but has smaller overall dimensions than the two separate components.

### SPECIFICATIONS

Construction	Modular, compact with filtering element in HDPE – diaphragm type
Materials	Zama, NBR, technopolymer
Pressure gauge ports	G1/8
Mounting	Vertical in-line or wall mounting
Operating temperature	0°C to 50°C at 10 bar
Porosity of filtering element	25 µm standard – 5 µm upon request
Draining of condensate	Manual – semi-automatic standard
Finishing	Enamelled
Inlet pressure	Standard drain: 0.3 to 16 bar Protected depressurisation: 0.3 to 16 bar Depressurisation: 0.3 to 10 bar



2505

### SERIES MC 25 MICRON

PART NUMBER	PORT SIZE	DRAIN TYPE
ZMC104-D00	1/4"	Semi-automatic
ZMC104-D04	1/4"	Depressurisation

## MD SERIES

### DESCRIPTION

Modular assembly. Bowl with technopolymer cover & bayonet-type mounting.

### SPECIFICATION

Construction	Modular, compact with filtering element in HDPE
Materials	Polyamide, polycarbonate, brass, polyacetal, polyethylene, zinc plated steel, NBR, stainless steel
Pressure gauge ports	G1/8
Mounting	In-line: wall mounting by means of through holes in the body or with a support bracket; panel mounting
Operating temperature	-5°C to +50°C up to 16 bar
Porosity of filtering element	Between 25 µm or 5 µm
Draining of condensate	Semi-automatic manual, automatic protected depressurisation, direct G1/8 exhaust
Fluid	Compressed air



2505



### SERIES MD 25 MICRON NON RELIEVING

PART NUMBER	PORT SIZE	DRAIN TYPE
ZMD1-FR2000-1/8	1/8"	Semi-automatic
ZMD1-FR2000-1/4	1/4"	Semi-automatic
ZMD1-FR2000-3/8	3/8"	Semi-automatic

### 25 MICRON RELIEVING

ZMD1-FR0000-1/8	1/8"	Semi-automatic
ZMD1-FR0000-1/4	1/4"	Semi-automatic
ZMD1-FR0000-3/8	3/8"	Semi-automatic

## MX SERIES

### DESCRIPTION

Bowl with technopolymer cover & bayonet-type mounting. Lockable knob with closure. Bowl locking system reduces the risk of accidents.

### SPECIFICATIONS

Construction	Modular, compact with filtering element in HDPE
Mounting	Vertical in-line, wall mounting (by clamps) or panel mounting
Operating temperature	0°C to 60°C at 10 bar
Porosity of filtering element	25 µm standard – 5 µm upon request
Draining of condensate	Manual: semi-automatic standard MX2: automatic
Condensate capacity	MX2: 55 cc MX3: 85 cc
Fluid	Compressed air
Operating pressure	Standard drain 0.3 to 16 bar
Pressure gauge	Built-in pressure gauge (standard) G1/4" ports for pressure gauge (MX3 only) G1/8" ports for pressure gauge (MX2 only)

### MATERIALS

Body	Aluminium with polyacetal covering
Bowl (technopolymer cover)	Polycarbonate / polyamide
Valve guide	Polyacetal
Filtering element	Polyethylene
Separation deflector	Polyacetal
Knob	Polyamide
Upper spring	Zinc plated steel
Lower spring	Stainless steel
Seals & diaphragm	NBR



2505

### SERIES MX 25 MICRON – WITH PRESSURE GAUGE

PART NUMBER	BODY SIZE	PORT SIZE	DRAIN TYPE
ZMX2-3/8-FR0004	MX2	3/8"	Semi-automatic
ZMX2-1/2-FR0004	MX2	1/2"	Semi-automatic
ZMX2-3/4-FR0004	MX2	3/4"	Semi-automatic
ZMX3-3/4-FR0004	MX3	3/4"	Semi-automatic
ZMX3-1-FR0004	MX3	1"	Semi-automatic

### 25 MICRON – WITHOUT PRESSURE GAUGE

ZMX2-3/8-FR0000	MX2	3/8"	Semi-automatic
ZMX2-1/2-FR0000	MX2	1/2"	Semi-automatic
ZMX2-3/4-FR0000	MX2	3/4"	Semi-automatic
ZMX3-3/4-FR0000	MX3	3/4"	Semi-automatic
ZMX3-1-FR0000	MX3	1"	Semi-automatic

## MC SERIES

### DESCRIPTION

Filter / regulators combine the features of the MC filters & regulators but with smaller overall dimensions than the two separate components. The oil flow of the lubricator can be monitored via the small transparent cap & regulated by means of the special adjusting screw.

### SPECIFICATIONS

Construction	Compact modular with filtering element in HDPE – diaphragm type
Materials	Zama, NBR, technopolymer
Mounting	Vertical in-line or wall mounting
Operating temperature	0°C to 50°C at 10 bar
Porosity of filtering element	25 µm standard – 5 µm upon request
Draining of condensate	Manual to semi-automatic standard
Finishing	Enamelled
Oil refilling	Without pressure (G1/4)
Oil for lubrication	Up to ISO VG32
Inlet pressure	Standard drain: 0.3 to 16 bar Protected depressurisation: 0.3 to 16 bar Depressurisation: 0.3 to 10 bar
Lubricator operating pressure	0 to 16 bar



**SERIES MC**  
**INCLUDES GAUGE & BRACKET**

2505

PART NUMBER	PORT SIZE
ZMC104-C25	1/4"

## MD SERIES

### DESCRIPTION

Offers multi-sector solutions that ensure saving in terms of installation time, space & costs. Easy & quick maintenance. Reduced weight, quick fixing with a wide range of functions & additional air intakes.

### SPECIFICATION

Construction	Modular, compact
Ports	Threaded or integrated with super-rapid fitting for tube with diameter 6, 8 & 10 mm
Mounting	Vertical in-line, wall mounting via support bracket, panel mounting
Operating temperature	-5°C to +50°C up to 16 bar



**SERIES MD**  
**5 MICRON WITH GAUGE & BRACKET**

2505

PART NUMBER	PORT SIZE
ZMD1-000026-1/8	1/8"
ZMD1-000026-1/4	1/4"
ZMD1-000026-3/8	3/8"

### 25 MICRON WITH GAUGE & BRACKET

ZMD1-000015-1/8	1/8"
ZMD1-000015-1/4	1/4"
ZMD1-000015-3/8	3/8"

## MX SERIES

### DESCRIPTION

Filter / regulator & lubricator assembly through rapid clamps. Compact design. Easy & quick maintenance. Reduced weight.

### SPECIFICATIONS

Construction	Modular, compact
Mounting	Vertical in-line or wall mounting (by clamps) or panel mounting
Operating temperature	0°C to 60°C at 10 bar

Also available with port for external pressure gauge  
Please ask for details



**SERIES MX**  
**WITH INTEGRATED GAUGE**

2505

PART NUMBER	BODY SIZE	PORT SIZE
ZMX2-3/8-000015	MX2	3/8"
ZMX2-1/2-000015	MX2	1/2"
ZMX2-3/4-000015	MX2	3/4"
ZMX3-3/4-000015	MX3	3/4"
ZMX3-1-000015	MX3	1"

## FILTER / REGULATOR & ISOLATION VALVE ASSEMBLY

### MD SERIES

#### DESCRIPTION

Offers multi-sector solutions that ensure saving in terms of installation time, space & costs. Quick & easy maintenance. Reduced weight, quick fixing with a wide range of functions & additional air intakes.

#### SPECIFICATION

Construction	Modular, compact
Ports	Threaded or integrated with super-rapid fitting for tube with diameter 6, 8 & 10 mm
Mounting	Vertical in-line, wall mounting via support bracket, panel mounting
Operating temperature	-5°C to +50°C up to 16 bar



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#### SERIES MD

##### 5 MICRON GAUGE & BRACKET

PART NUMBER	PORT SIZE
ZMD1-000028-1/8	1/8"
ZMD1-000028-1/4	1/4"
ZMD1-000028-3/8	3/8"

##### 25 MICRON GAUGE & BRACKET

ZMD1-000017-1/8	1/8"
ZMD1-000017-1/4	1/4"
ZMD1-000017-3/8	3/8"

## FILTER / REGULATOR, LUBRICATOR & ISOLATION VALVE ASSEMBLY

### MD SERIES

#### DESCRIPTION

Offers multi-sector solutions that ensure saving in terms of installation time, space & costs. Quick & easy maintenance. Reduced weight, quick fixing with a wide range of functions & additional air intakes.

#### SPECIFICATION

Construction	Modular, compact
Ports	Threaded or integrated with super-rapid fitting for tube with diameter 6, 8 & 10 mm
Mounting	Vertical in-line, wall mounting via support bracket, panel mounting
Operating temperature	-5°C to +50°C up to 16 bar



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#### SERIES MD

##### 5 MICRON GAUGE & BRACKET

PART NUMBER	PORT SIZE
ZMD1-000027-1/8	1/8"
ZMD1-000027-1/4	1/4"
ZMD1-000027-3/8	3/8"

##### 25 MICRON GAUGE & BRACKET

ZMD1-000016-1/8	1/8"
ZMD1-000016-1/4	1/4"
ZMD1-000016-3/8	3/8"

#### Do you also need?

**PARKAIR®**

**Brass adaptors**

**AIGNEP**

**CAMOZZI**  
Automation



Find it on pages 548 – 568, section nine

## MC SERIES

### DESCRIPTION

The metal bowls of these filters come complete with a transparent sight glass & have a condensate drain valve. The standard regulator has a relieving diaphragm. The oil flow of the lubricator can be monitored via the small transparent cap & regulated by means of the special adjusting screw.

### SPECIFICATIONS

Construction	Modular, compact with filtering element in HDPE
Materials	Zama, NBR, technopolymer
Operating temperature	0°C to 50°C at 10 bar
Porosity of filtering element	25 µm standard – 5 µm upon request
Draining of condensate	Manual – Semi-automatic standard
Finishing	Enamelled
Oil refilling	Without pressure (G1/4)
Oil for lubrication	Up to ISO VG32
Inlet pressure	Standard drain: 0.3 to 16 bar Protected depressurisation: 0.3 to 16 bar Depressurisation: 0.3 to 10 bar
Regulator inlet pressure	0 to 16 bar
Regulator outlet pressure	0.5 to 10 bar or 0 to 4 bar
Lubricator operating pressure	0 to 16 bar



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### SERIES MC INCLUDES GAUGE & BRACKET

PART NUMBER	PORT SIZE
ZMC104FRL25	1/4"

## MX SERIES

### DESCRIPTION

Filter, regulator & lubricator assembly through rapid clamps. Compact design. Quick & easy maintenance. Reduced weight.

### SPECIFICATIONS

Construction	Modular, compact
Mounting	Vertical in-line or wall mounting (by clamps) or panel mounting
Operating temperature	0°C to 60°C at 10 bar



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### SERIES MX WITH INTEGRATED GAUGE

PART NUMBER	BODY SIZE	PORT SIZE
ZMX2-3/8-000014	MX2	3/8"
ZMX2-1/2-000014	MX2	1/2"
ZMX2-3/4-000014	MX2	3/4"
ZMX3-3/4-000014	MX3	3/4"
ZMX3-1-000014	MX3	1"

Also available with port for external pressure gauge. Please ask for details.

## MC SERIES

### DESCRIPTION

Designed to block the air inlet of the FRL group & to pressurise & depressurise the equipment.

### SPECIFICATIONS

Construction	Modular, compact, poppet type
Materials	Zama, NBR, technopolymer
Mounting	In-line, wall or panel mounting (in any position)
Operating temperature	0°C to 50°C
Finishing	Enamelled
Inlet pressure	2 to 10 bar
Nominal exhaust flow	G1/4 1080 NI/min



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### SERIES MC

PART NUMBER	PORT SIZE
ZMC104-V01	1/4"

Flow determined at 6 bar with  $\Delta P = 1$  bar

## MD SERIES

### DESCRIPTION

Offers multi-sector solutions that ensure saving in terms of installation time, space & costs. Allow the inlet & exhaust of compressed air from the plant & can meet several application requirements. Manual, electro-pneumatic, servo-pilot & pneumatic control.

### SPECIFICATION

Construction	Modular, compact, spool type
Mounting	In-line or wall mounting (by brackets)
Operating temperature	-5°C to +50°C up to 16 bar
Operating pressure	-0.8 to 10 bar
Nominal exhaust flow	850 NI/min
Fluid	Compressed air

### MATERIALS

Body	Polyamide
Covering	Polyamide
Plug	Polyamide
Spool	Anodised aluminium
End cover	Polyamide
Lower spring	Stainless steel
Seals	NBR



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### SERIES MD

#### PNEUMATIC CONTROL

PART NUMBER	PORT SIZE
ZMD1-V36-1/8	1/8"
ZMD1-V36-1/4	1/4"
ZMD1-V36-3/8	3/8"

#### MANUAL CONTROL

ZMD1-V01-1/8	1/8"
ZMD1-V01-1/4	1/4"
ZMD1-V01-3/8	3/8"

#### ELECTRO-PNEUMATIC CONTROL

ZMD1-V16-1/8	1/8"
ZMD1-V16-1/4	1/4"
ZMD1-V16-3/8	3/8"

### Do you also need?



### Coils

Find it on page 395, section six

## MX SERIES

### DESCRIPTION

Manual isolation valves: ideal to allow an easy access to the FRL group. The system is depressurised with the deactivation of the valve. Standard tamperproof lock-out. One / more locks for the lock-out feature. It exhausts to the atmosphere. Silencers available upon request.

### SPECIFICATIONS

Construction	Modular, compact spool type
Mounting	Vertical in-line or wall mounting (by clamps)
Operating temperature	-5°C to +60°C at 10 bar
Operating pressure	-0.8 to 10 bar
Nominal exhaust flow	MX2: 6000 NI/min MX3: 9200 NI/min
Fluid	Compressed air

### MATERIALS

Body	Aluminium with polyacetal covering
Valve holder plug	Polyacetal
Lower spring	Zinc plated steel
Spool	Aluminium
Seals	NBR



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### SERIES MX

PART NUMBER	BODY SIZE	PORT SIZE
ZMX2-3/8-V01	MX2	3/8"
ZMX2-1/2-V01	MX2	1/2"
ZMX2-3/4-V01	MX2	3/4"
ZMX3-3/4-V01	MX3	3/4"
ZMX3-1-V01	MX3	1"

Flow determined at 6 bar with  $\Delta P = 1$  bar

## PRECISION REGULATORS

### FEATURES

- High precision adjustment
- Multi-diaphragm construction to reach the highest stability
- Adjustment lock
- Compact dimensions
- Removable adjustment knob



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### SERIES PR SELF RELIEVING

PART NUMBER	PORT SIZE	OUTLET PRESSURE
ZPR104-M02	1/4"	0.05 to 2 bar
ZPR104-M04	1/4"	0.05 to 4 bar
ZPR104-M07	1/4"	0.05 to 7 bar

## PRESSURE SWITCHES

### FEATURES

- With hysteresis adjustable, IP40 for air, non-corrosive & non-flammable gas



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### SERIES GPB5 1/8" PORT

PART NUMBER	PRESSURE RANGE	OUTPUT
ZGPB5C2CC02	0 to 1.0 MPa	2 x PNP x 2m
ZGPB5C2CM08	0 to 1.0 MPa	2 x PNP x M8
ZGPB5C3CC02	0 to 1.0 MPa	1 x PNP, 1 x 1-5 V x 2m
ZGPB5C4CC02	0 to 1.0 MPa	1 x PNP, 1 x 4-20 mA x 2m
ZGPB5B2CM08	0 to -101.3 KPa	2 x PNP x M8

## DIGITAL GAUGES

### FEATURES

- Pressure display unit
- Easy & fast read out with digital display
- 4 user programmable pressure units available
- Power saving mode
- Back light
- Dust proof & splash proof
- Battery powered digital gauges



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### SERIES PG BATTERY POWERED

PART NUMBER	TYPE	THREAD	PRESSURE
ZPG010-PB-1/8	Pressure gauge	1/8" BSPP	15 bar
ZPG001-VB-1/8	Vacuum gauge	1/8" BSPP	3 bar
ZPG010-PB-1/4	Pressure gauge	1/4" BSPP	15 bar
ZPG001-VB-1/4	Vacuum gauge	1/4" BSPP	3 bar

### FEATURES

- Pressure display unit
- Easy & fast read out with digital display
- 4 user programmable pressure units available
- Power saving mode
- Back light
- Dust proof & splash proof
- 2 m cable with unshielded 2 pole



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### SERIES PG WITH CABLE

PART NUMBER	TYPE	THREAD	PRESSURE
ZPG010-PB-1/8-2	Pressure gauge	1/8" BSPP	15 bar
ZPG001-VB-1/8-2	Vacuum gauge	1/8" BSPP	-30 Hg

## PG PRESSURE GAUGE ACCESSORIES



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### MOUNTING BRACKET

PART NUMBER	DESCRIPTION
ZPG-B	Mounting bracket



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### PANEL MOUNT ADAPTOR

PART NUMBER	DESCRIPTION
ZPG-F	Panel mount adaptor

## FRL ACCESSORIES – SERIES MC



**TERMINAL FLANGES – KIT A**  
SERIES MC

2505

PART NUMBER	SIZE
ZMC104FL	1/4"



**2 MOUNTING BRACKETS – KIT B**  
SERIES MC

2505

PART NUMBER	SIZE
ZMC104ST	1/4"

## FRL ACCESSORIES – SERIES MD



**MOUNTING BRACKET**  
SERIES MC, M & MD

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PART NUMBER	FOR USE WITH
ZC114-ST	MC, M & MD



**THREADED CARTRIDGE KIT**  
SERIES MD

2505

PART NUMBER	SIZE
ZMD1-A-1/8	1/8"
ZMD1-A-1/4	1/4"
ZMD1-A-3/8	3/8"



**MOUNTING BRACKET**  
SERIES MD

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PART NUMBER	FOR USE WITH
ZMD1-ST	MD



**SUPER RAPID FITTING KIT**  
SERIES MD

2505

PART NUMBER	SIZE
ZMD1-A-6	6 mm
ZMD1-A-8	8 mm
ZMD1-A-10	10 mm



**SCREWS FOR WALL MOUNTING**  
SERIES MD

2505

PART NUMBER	SUPPLIED WITH
ZMD1-D	2 x white zinc plated screws M4 x 50



**JOINING CARTRIDGE KIT**  
SERIES MD

2505

PART NUMBER	SUPPLIED WITH
ZMD1-C	4 x special white zinc plated screws

## FRL ACCESSORIES – SERIES MX



**FIXING BRACKET**  
SERIES MX

2505

PART NUMBER	FOR USE WITH
ZMX2-S	MX2
ZMX3-S	MX3



**TERMINAL FLANGES**  
SERIES MX

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PART NUMBER	SIZE
ZMX2-3/8-FL	3/8"
ZMX2-1/2-FL	1/2"
ZMX2-3/4-FL	3/4"
ZMX3-3/4-FL	3/4"
ZMX3-1-FL	1"



**RAPID CLAMP KIT**  
SERIES MX2

2505

PART NUMBER	SUPPLIED WITH
ZMX2-X	1 rapid clamp, 1 O-ring, 2 hexagonal nuts M5, 2 screws M5 x 69
ZMX2-Z	1 rapid clamp, 1 O-ring, 1 hexagonal nut M5, 1 screw M5 x 69, 1 screw M5 x 85 for wall fixing

### SERIES MX3

ZMX3-X	1 rapid clamp, 1 O-ring, 2 square nuts M6, 2 screws M6 x 75
ZMX3-Z	1 rapid clamp, 1 O-ring, 1 square nut M6, 1 screw M6 x 75, 1 screw M6 x 90 for wall fitting

**RAPID CLAMP KIT**  
**WITH WALL FIXING BRACKETS**  
SERIES MX2



2505

PART NUMBER	SUPPLIED WITH
ZMX2-Y	1 wall rapid clamp, 1 O-ring, 2 hexagonal nuts, 2 screws M5 x 69

### SERIES MX3

ZMX3-Y	1 wall rapid clamp, 1 O-ring, 2 square nuts M6, 2 screws M6 x 75
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# Festo Compressed Air Preparation Units

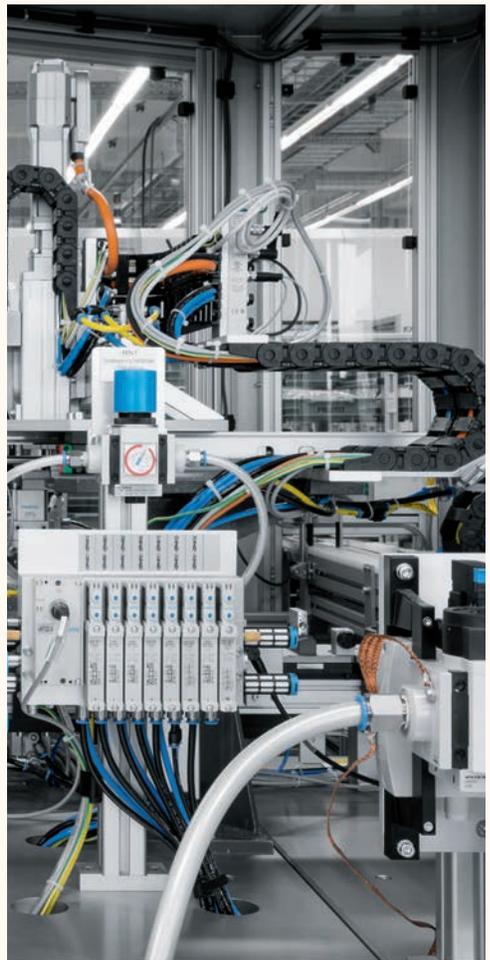
When compressed air requires cleaning and oiling, a filter, regulator, and lubricator unit are used. The filter regulator removes compressor condensate and coarse dirt, while the lubricator supplies a precisely measured amount of pneumatic lubricating oil.

The order of the individual unit components used in combination is essential for safety and functionality in simple standard applications and application-specific solutions.

## MS Series Service Units

The device is light, compact, and efficient, with essential components focused on critical technical functions. It comes in a polymer housing and regulates and filters compressed air.

- The MS series achieves maximum flow rates with minimum space requirements
- Extremely high flow rates of up to 20,000 l/min
- Maximum flow rates combined with minimum space requirements
- 40 µm filtration to suit all Festo's pneumatic range – save money on filtration
- Three featured sizes with port sizes from 1/4" to 1 1/2"
- Fast and reliable exhaust function
- Integrated pressure gauge



## FRL SERVICE UNITS – FRL TYPE CODES

Series		Type		Pneumatic connection		Pressure gauge		Pressure gauge scale	
Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
MSB4	MS series basic (40 mm grid)	LFR	Filter regulator	1/4	1/4"		Without		None
MSB6	MS series basic (62 mm grid)	LR	Pressure regulator	1/2	1/2"		Pressure gauge	BAR	Scale used
MS4	MS series standard (40 mm grid)	LOE	Lubricator	G	Without connecting thread				
MS6	MS series standard (62 mm grid)	EM1	Electrical on/off valve						
MS9	MS series standard (90 mm grid)	EE	Electrical on/off valve						
		DL	Electrical soft-start valve						

**MS9 - LFR - G - D7 - EUM - AG - BAR - AS**

Description	
Code	Description
C3	On-off valve
J1	Filter regulator
FRC5:J1M1	0.5 to 12 bar pressure regulation 40 micron filtration Manual rotary condensate drain Plastic bowl guard

Pressure regulation	
Code	Description
D5	0.3 to 5 bar
D6	0.3 to 7 bar (MS4 & MS6) 0.5 to 7 bar manually operated (MS9)
D7	0.5 to 12 bar (MS4 & MS6) 0.5 to 12 bar manually operated (MS9)

Electrical supply voltage	
Code	Description
N/A	
10V24	24 V DC

Grade of filtration	
Code	Description
C	5 micron filtration
E	40 micron filtration

Bowl guard	
Code	Description
R	Plastic bowl guard
U	Integrated metal bowl

Condensate drain	
Code	Description
M	Manually rotary condensate drain
V	Fully automatic condensate drain

Accessories	
Code	Description
	None
WP	Mounting bracket
AS	Standard rotary knob with detent, locked using accessories
S	Silencer

Five

## MS SERIES

### FEATURES

- Extremely high flow rates of up to 20,000 l/min
- Maximum flow rates combined with minimum space requirements
- 40 µm filtration to suit all of Festo's pneumatic range – save money on filtration
- 3 featured sizes with port sizes from 1/4" to 1 1/2"
- Fast & reliable exhaust function
- Integrated pressure gauge

### SPECIFICATIONS

Flow rate	900 to 20,000 l/min
Temperature range	-10°C to +60°C
Pressure regulator range	0.5 to 12 bar
Filtration grade	40 µm
Bowl guard	MS4 & MS6 – polymer MS9 – metal
Pressure gauge	As standard
Lockable	As standard, using padlock



3140

### LR PRESSURE REGULATOR

PART NUMBER	TYPE	PNEUMATIC CONNECTION
FES529415	MS4-LR-1/4-D5-AS	1/4"
FES529419	MS4-LR-1/4-D7-AS	1/4"
FES529989	MS6-LR-1/2-D5-AS	1/2"
FES529993	MS6-LR-1/2-D7-AS	1/2"
FES564136*	MS9-LR-G-D6-AG-BAR-AS	3/4", 1" 1 1/4", 1 1/2"

### Do you also need?

### Sub-base set

- \* Products must be purchased with MS series sub-base set to determine port size



Find it on page 326, section five

New Additions

### ON / OFF VALVES STANDARD

PART NUMBER	TYPE	SHUT-OFF TYPE
FES541258	MS4-EM1-1/4	Manual
FES542598	MS4-EE-1/4-10V24-S	Electrical
FES541267	MS6-EM1-1/2	Manual
FES542602	MS6-EE-1/2-10V24-S	Electrical
FES562178*	MS9-EM-NG-VS	Manual
FES562940*	MS9EE-G-V24-S-VS	Electrical

### SOFT START

FES529531	MS4-DL-1/4
FES529817	MS6-DL-1/2



3140

LUBRICATOR – MS SERIES



FEATURES

- Extremely high flow rates of up to 20,000 l/min
- Maximum flow rates combined with minimum space requirements
- 40 µm filtration to suit all of Festo's pneumatic range – save money on filtration
- 3 featured sizes with port sizes from 1/4" to 1 1/2"
- Fast & reliable exhaust function
- Integrated pressure gauge

SPECIFICATIONS

Flow rate	900 to 20,000 l/min
Temperature range	-10°C to +60°C
Pressure regulator range	0.5 to 12 bar
Filtration grade	40 µm
Bowl guard	MS4 & MS6 – polymer MS9 – metal
Pressure gauge	As standard
Lockable	As standard, using padlock



3140

New

LUBRICATOR

PART NUMBER	TYPE
FES527701	MS4-LOE
FES527674	MS6-LOE
FES562533	MS9-LOE

FRL SERVICE UNITS – MS SERIES



FEATURES

- Extremely high flow rates of up to 20,000 l/min
- Maximum flow rates combined with minimum space requirements
- 40 µm filtration to suit all of Festo's pneumatic range – save money on filtration
- 3 featured sizes with port sizes from 1/4" to 1 1/2"
- Fast & reliable exhaust function
- Integrated pressure gauge

SPECIFICATIONS

Flow rate	900 to 20,000 l/min
Temperature range	-10°C to +60°C
Pressure regulator range	0.5 to 12 bar
Filtration grade	40 µm
Bowl guard	MS4 & MS6 – polymer MS9 – metal
Pressure gauge	As standard
Lockable	As standard using padlock



3140

LFR FILTER REGULATOR  
MANUAL DRAIN

PART NUMBER	TYPE	PNEUMATIC CONNECTION
FES529144	MS4-LFR-1/4-D6-CRM-AS	1/4"
FES529148	MS4-LFR-1/4-D6-ERM-AS	1/4"
FES529152	MS4-LFR-1/4-D7-CRM-AS	1/4"
FES529156	MS4-LFR-1/4-D7-ERM-AS	1/4"
FES529176	MS6-LFR-1/2-D6-CRM-AS	1/2"
FES529180	MS6-LFR-1/2-D6-ERM-AS	1/2"
FES529184	MS6-LFR-1/2-D7-CRM-AS	1/2"
FES529188	MS6-LFR-1/2-D7-ERM-AS	1/2"
FES564118	MS9-LFR-G-D7-EUM-AG-BAR-AS	3/4", 1", 1 1/4", 1 1/2"

FULLY AUTOMATIC DRAIN

FES529146	MS4-LFR-1/4-D6-CRV-AS	1/4"
FES529150	MS4-LFR-1/4-D6-ERV-AS	1/4"
FES529154	MS4-LFR-1/4-D7-CRV-AS	1/4"
FES529158	MS4-LFR-1/4-D7-ERV-AS	1/4"
FES535722	MS4-LFR-1/4-D7-EUV-AS	1/4"
FES529178	MS6-LFR-1/2-D6-CRV-AS	1/2"
FES529182	MS6-LFR-1/2-D6-ERV-AS	1/2"
FES529186	MS6-LFR-1/2-D7-CRV-AS	1/2"
FES529190	MS6-LFR-1/2-D7-ERV-AS	1/2"
FES564119	MS9-LFR-G-D7-EUV-AG-BAR-AS	3/4", 1", 1 1/4", 1 1/2"

FILTER, REGULATOR  
& LUBRICATOR  
MANUAL DRAIN



3140

PART NUMBER	TYPE	PNEUMATIC CONNECTION
FES8025354	MSB4-1/4-C3-J1-WP	1/4"
FES8025358	MSB4-1/4-C3-J1-D14-WP	1/4"
FES531117	MSB4-1/4-FRC5.J1M1	1/4"
FES8025355	MSB6-1/2-C3-J1-WP	1/2"
FES8025359	MSB6-1/2-C3-J1-D14-WP	1/2"
FES530244	MSB6-1/2-FRC5.J1M1	1/2"



MS SERIES ACCESSORIES

Five

**SUB-BASE SETS\***  
FOR USE WITH  
MS9 LFR & LR SERVICE UNITS



PART NUMBER	TYPE	PNEUMATIC CONNECTION
FES552955	MS9-AGE	3/4"
FES552956	MS9-AGF	1"
FES552957	MS9-AGG	1 1/4"
FES552958	MS9-AGH	1 1/2"

**MSx-WR MOUNTING BRACKET**  
FOR MOUNTING USING THE  
ROTARY KNOB



PART NUMBER	TYPE
FES526064	MS4-WR
FES526075	MS6-WR

**CONNECTOR**  
LOE TO LR/LFR



PART NUMBER	TYPE
FES8119201	MS4-MV1
FES8119204	MS6-MV1
FES552950	MS9-MV

**BRANCHING MODULE**



PART NUMBER	TYPE
FES529853	MS6-FRM-1/2
FES529857	MS6-FRM-1/4

**PADLOCK**



PART NUMBER	TYPE
FES193786	LRVS-D

**DISTRIBUTOR BLOCK**



PART NUMBER	TYPE
FES549336	MS4-FRM-FRZ
FES549337	MS6-FRM-FRZ

**MSx-WP**  
BASIC MOUNTING BRACKET



PART NUMBER	TYPE
FES532184	MS4-WP
FES532195	MS6-WP
FES526073	MS6-WPM-D
FES552947	MS9-WP

Sub-base sets\*  
For use with  
MS4, MS6 & MS9  
FRL service units  
MS Series

## STAINLESS STEEL FILTER REGULATORS

### FEATURES

- Suitable for high pressure use, corrosion & chemical resistance
- Good performance in chemically working environments & outdoor facility
- Large flow rate & effectively removes water & particles
- Accurate & sensitive pressure setting
- Mini series is lightweight & compact sized for space saving

SPECIFICATIONS	Mini	Standard
Media	Compressed air	
Max. inlet pressure	30 bar	45 bar
Pressure range	0.5 to 20 bar	0.5 to 12 bar (see table) 12 to 28 bar (see table)
Media temperature	-10°C to +60°C	-10°C to +70°C
Ambient temperature	-10°C to +60°C	-10°C to +70°C
Filtration	5 micron (optional 30 micron)	
Drain	Semi automatic (optional manual drain)	Semi automatic (optional manual or auto drain)
Thread	BSP (optional NPT)	

### MATERIALS

Body, bowl, filter element	316 stainless steel	316 stainless steel
Pressure gauge	Case – 304 stainless steel Thread – 316 stainless steel	
Seal	FKM	



1720

### MINI STAINLESS STEEL FILTER REGULATOR

0.5 – 20 BAR

PART NUMBER	PORT SIZE	MAX. FLOW RATE @ 6 BAR	DRAIN TYPE
SSFR500-02	1/4"	1850 l/min	Semi-auto

### STANDARD STAINLESS STEEL FILTER REGULATOR

0.5 – 12 BAR

USFRB02	1/4"	2200 l/min	Semi auto
USFRB03	3/8"	2500 l/min	Semi auto
USFRB04	1/2"	3800 l/min	Semi auto
USFRB06H	3/4"	8500 l/min	Manual
USFRB08H	1"	8900 l/min	Manual

12 – 28 BAR

USFR02	1/4"	2200 l/min	Semi auto
USFR03	3/8"	2500 l/min	Semi auto
USFR04	1"	3800 l/min	Semi auto
USFR06H	3/4"	17000 l/min	Manual
USFR08H	1"	21000 l/min	Manual

## STAINLESS STEEL REGULATORS

### FEATURES

- Suitable for high pressure use, corrosion & chemical resistance
- Good performance in chemically working environments & outdoor facility
- Large flow rate & effectively removes water & particles
- Accurate & sensitive pressure setting
- Mini series is lightweight & compact sized for space saving

SPECIFICATIONS	Mini	Standard
Media	Compressed air	Air
Max. inlet pressure	30 bar	45 bar
Test pressure	60 bar	60 bar
Pressure range	0.5 to 20 bar	0.5 to 12 bar (see table) 12 to 28 bar (see table)
Ambient temperature	-10°C to +60°C	-10°C to +70°C
Thread	BSP (optional NPT)	

### MATERIALS

Body	316 stainless steel	
Pressure gauge	Case – 304 stainless steel Thread – 316 stainless steel	
Seal	FKM	



1720

### MINI STAINLESS STEEL REGULATOR

0.5 – 20 BAR

PART NUMBER	PORT SIZE	MAX. FLOW RATE @ 6 BAR
SSR200	1/4"	1850 l/min

### STANDARD STAINLESS STEEL REGULATOR

0.5 – 12 BAR

USRB02	1/4"	1950 l/min
USRB03	3/8"	2250 l/min
USRB04	1/2"	2520 l/min
USRB06	3/4"	9000 l/min
USRB08	1"	9400 l/min

12 – 28 BAR

USR02	1/4"	1950 l/min
USR03	3/8"	2250 l/min
USR04	1/2"	2520 l/min
USR06	3/4"	18000 l/min
USR08	1"	22000 l/min



# Master Pneumatic Filenco Dryer / Filter Range

Many compressed air systems need to be further cleaned and dried at the point of use. Master Pneumatic provides clean air products, such as the Filenco Dryer / Filter units, that are more effective than regular dryers and filters. They filter the air, reduce the dew point, and eliminate oil mist through their triple-action cleaning process, making them perfect for critical applications and variable temperatures.

## Desiccant Materials

Master Pneumatic Filenco Dryer / Filters add the ability to drop the pressure dew point, preventing the recurrence of water in the air system and systematically adsorbing sulphuric acid compounds that form into abrasive, gummy varnish or shellac.

Three choices of desiccant are available:

### CD – clay desiccant

- General-purpose desiccant
- Effective water and oil removal
- Requires no coalescing or air preparation
- Initial pressure dew points of 20°F to 25°F
- Up to 3 month's lifecycle dependent on humidity, flow rate and frequency of use

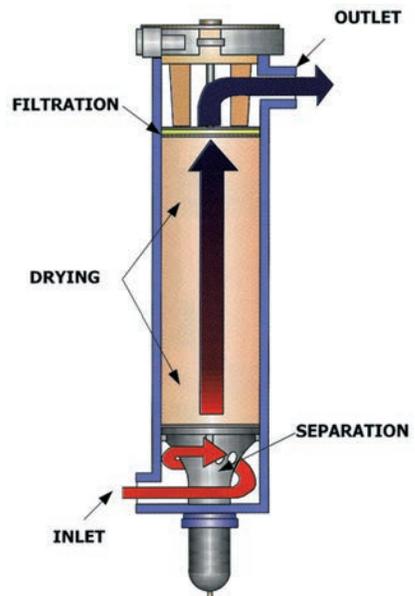
### MS – molecular sieve desiccants with highly porous alumina-silicate complexes

- Low-pressure dew point depression up to 80°F
- Generally used with oilless compressors
- If the application contains oil, install a coalescing filter before the MS model
- The addition of a general-purpose filter will also extend the life of the coalescing filter

### CDC – clay desiccant with layer of activated carbon

- Use where a higher degree of purification is required
- Produces slightly lower initial dew points than clay alone
- Provides a better removal of toxic gases and oil aerosols
- Dryers require element disk replacements to function correctly.

Please get in touch with your distributor for further details.





**SERIES 25**  
MBA FLOAT DRAIN METAL BOWL  
MOISTURE INDICATOR

3220

PART NUMBER	PORT SIZE	FLOW	DESICCANT
M-CD25-2D4MW	G1/4"	7 SCFM (3.3 l/s)	CD
M-MS25-2D4MW	G1/4"	7 SCFM (3.3 l/s)	MS
M-CDC25-2D4MW	G1/4"	7 SCFM (3.3 l/s)	CDC



**SERIES 418**  
MBA FLOAT DRAIN METAL BOWL  
MOISTURE INDICATOR

3220

PART NUMBER	PORT SIZE	FLOW	DESICCANT
M-CD418-8D4MW	G1"	70 SCFM (34 l/s)	CD
M-MS418-8D4MW	G1"	70 SCFM (34 l/s)	MS
M-CDC418-8D4MW	G1"	70 SCFM (34 l/s)	CDC



**SERIES 36**  
MBA FLOAT DRAIN METAL BOWL  
MOISTURE INDICATOR

3220

PART NUMBER	PORT SIZE	FLOW	DESICCANT
M-CD36-3D4MW	G3/8"	18 SCFM (8.5 l/s)	CD
M-MS36-3D4MW	G3/8"	18 SCFM (8.5 l/s)	MS
M-CDC36-3D4MW	G3/8"	18 SCFM (8.5 l/s)	CDC



**SERIES 625**  
MBA FLOAT DRAIN METAL BOWL  
MOISTURE INDICATOR

3220

PART NUMBER	PORT SIZE	FLOW	DESICCANT
M-CD625-12D4MW	G1 1/2"	150 SCFM (70 l/s)	CD
M-MS625-12D4MW	G1 1/2"	150 SCFM (70 l/s)	MS
M-CDC625-12D4MW	G1 1/2"	150 SCFM (70 l/s)	CDC



**SERIES 38**  
MBA FLOAT DRAIN METAL BOWL  
MOISTURE INDICATOR

3220

PART NUMBER	PORT SIZE	FLOW	DESICCANT
M-CD38-3D4MW	G1/2"	30 SCFM (14 l/s)	CD
M-MS38-3D4MW	G1/2"	30 SCFM (14 l/s)	MS
M-CDC38-3D4MW	G1/2"	30 SCFM (14 l/s)	CDC



**SERIES 832**  
MBA FLOAT DRAIN METAL BOWL  
MOISTURE INDICATOR

3220

PART NUMBER	PORT SIZE	FLOW	DESICCANT
M-CD832-16D4MW	G2"	300 SCFM (142 l/s)	CD
M-MS832-16D4MW	G2"	300 SCFM (142 l/s)	MS
M-CDC832-16D4MW	G2"	300 SCFM (142 l/s)	CDC

**DROPOUT® AUTO-DRAIN**

**DESCRIPTION**

The Dropout® Auto-drain is designed to remove all contaminants from dropout units automatically. It has two 1/2" inlet connections, enabling flexible installation. It is supplied with a metal blanking plug.

**FEATURES / BENEFITS**

- Drains all contaminants (water, oil & solid particles) automatically
- Maintenance free
- No mains power or batteries required
- Easy to install

**SPECIFICATIONS**

Water storage	350 cc
Max. flow rate	5760 l/min
Max. inlet pressure	16 bar
Operating temperature	0°C to 80°C (32°C to 176°C)

dropout®



8230

**AUTO-DRAIN**

PART NUMBER	INLET / OUTLET
PDOAD128	1/2"

**DROPOUT® WATER SEPARATOR WITH AUTO-DRAIN**

**DESCRIPTION**

The unique design of this product enables it to efficiently remove 99.9999% of liquid (water and oil) and 99% of solid particulates as small as 1 micron. It guarantees exceptional compressed air quality. The 'Compact' Dropout® unit is an inline point-of-use liquid (water and oil) separator and contaminant remover. It is utilised in a broad range of applications and flow rates. Unlike traditional cyclonic separators, which rely on constant and stable flows, Dropout® can maintain its performance levels even during start-up and reaches optimum performance in just a fraction of a second.

You don't need to buy and maintain various products for protection anymore. This device gives you all the protection you need in one place. This compressed air filter has multiple stages and doesn't require any replacement filters. Once installed, there are also no ongoing servicing costs.

Save money. Save energy. Save time.

**FEATURES**

- Superior protection for your compressed air equipment at point of use
- Stand-alone replacement for water separators and / or coalescing filters
- Protection upstream of refrigerant & desiccant dryers
- Easy to install, no mains power & no consumables
- No increase in pressure drop caused by blocked filters
- Significantly lower life cycle costs
- Instantaneous recovery from pulsed flows or stop start
- Maintenance free with built-in auto-drain

**SPECIFICATIONS**

Optimum flow rate	283 l/min / 10 CFM
Water storage	50 cc
Max. inlet pressure	16 bar
Working pressure	1 to 15 bar

dropout®



8230

**WATER SEPARATOR WITH AUTO DRAIN NYLON**

PART NUMBER	INLET / OUTLET
PDO300PA	1/2"

**STAINLESS STEEL DROPOUT® WATER SEPARATOR**

**DESCRIPTION**

Dropout® is a unique, scientifically engineered, patent protected, multi-stage compressed air filter that removes 99.9999% of liquid (water & oil) & 99% solid particulated down to 1 micron. This unique, multi-stage, compressed air filter requires no replacement filters & once fitted, the ongoing servicing costs are zero.

**FEATURES / BENEFITS**

- Guaranteed 99.9999% water removal
- Particulate removal to 1 micron
- Low cost of ownership & maintenance free
- Complete with wall bracket & drain valve
- Minimal inlet / outlet pressure drop
- Performance does not depend on the compressed air having a stable flow rate or high velocity
- Modular, scalable design delivers a wide flow rate product range, without compromising the efficiency of removal of water & solid particles
- Unique, patent protected, multiple impact design, operates far more efficiently than conventional filter designs
- No drop in water or particle removal efficiency, regardless of flow rate or duration of time installed
- Certified to ISO 12500 parts 3 & 4
- ATEX Mark – Ex II 2G IIC T6 Gb

**SPECIFICATIONS**

Max. inlet pressure	15 bar
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dropout®



8230

**WATER SEPARATOR STAINLESS STEEL**

PART NUMBER	INLET / OUTLET	MAX. FLOW RATE
PDO60S	1/4"	90 l/min
PDO300S	1/2"	450 l/min
PDO600S	3/4"	900 l/min
PDO900S	3/4"	1350 l/min
PDO1500S	1"	2314 l/min
PDO2000S	1"	3085 l/min



# Jorc Condensate Management Products

JORC is a global expert in managing condensate, offering various solutions, including condensate drains, oil water separators, and air-saving equipment. Condensate management is essential for removing impurities from compressed air systems, ensuring they function efficiently.

Compressed air is widely used in various industries, and virtually every industrial plant, from small machine shops to large pulp and paper mills, has some compressed air system.

Air compressors consume more electricity in many industrial facilities than other equipment. A well-managed compressed air system incorporating condensate management can help save energy, reduce maintenance costs, minimise downtime, increase production, and improve product quality.

## Products

- Timer drains
- Oil / water separators
- Air saving products
- Level sensed drains
- Timers

## Available ranges

- Air Saver
- Magy
- Nufors-CR
- Kaptiv-MD
- Combo-D-Lux
- Tec-44
- EZ-1
- Sepremium



## COMPRESSED AIR ENERGY SAVERS

### DESCRIPTION

The AIR-SAVER tool has been helping end-users save valuable compressed air for years. It does this by preventing air from escaping unnecessarily, reducing compressor running hours, extending its lifetime, saving energy, and cutting operating costs. Typically, the AIR-SAVER is installed on the air outlet of the air receiver. In some giant factories, it can also close off certain parts of the compressed air system where no compressed air is required during certain parts of the day. Air loss occurs 24 hours daily through pipe works connections and leaking float-type drains in a typical compressed air system. By installing an AIR-SAVER, the end-user can limit these air losses to only operating hours. At the end of the working day, the AIR-SAVER will automatically close off the airflow and prevent any further loss of valuable compressed air.

### FEATURES / BENEFITS

- No unnecessary compressor start-up during periods when compressed air is not required
- Compressor, dryer & filter activities are reduced during factory closing hours
- At least one air receiver's worth of compressed air savings per day
- Possibility to shut off parts of the pipe line system where compressed air is not needed continuously
- Battery saves the installation set-up during power failure
- Up to 16 bar
- Slow valve opening to avoid hammer strike in pipe line system
- Time programmed or remote controlled
- Fully automatic: maintenance free
- JORC7005 & JORC7007 models are micro-processor controlled (multi-cycle 7 day programme)
- JORC7005 & JORC7007 models have a large LCD display showing programme cycle & current time
- Compact design: easy to install
- The AIR-SAVER-LS is typical connected to a light switch. By switching on the lights in the production area, the AIR-SAVER-LS will subsequently open

### SPECIFICATIONS

	AIR-SAVER	AIR-SAVER-LS
Pressure range	0 to 16 bar (0 to 230 psi)	
Supply voltage options	115 V AC or 230 V AC 50/60 Hz (please state)	
Medium temperature	1°C to 100°C	
Ambient temperature	1°C to 50°C	
Illuminated LCD display	Indicating day, time, valve status, battery life	-
Programmable options	Week planner, max. 100 switching points, to be distributed over 1 to 7 days	-
Valve housing material	Brass nickel plated	
Serviceable valve	Yes	
Manual override	Yes	
Remote controllable	Yes	No
Environmental protection	IP54 (NEMA13)	

### AIR-SAVER G1 COMPRESSED AIR ENERGY SAVER



7720

PART NUMBER	INLET / OUTLET	OPENING / CLOSING DURATION
JORC7005	1" BSP	30 sec. / 90°

### AIR-SAVER G2 COMPRESSED AIR ENERGY SAVER



7720

PART NUMBER	INLET / OUTLET	OPENING / CLOSING DURATION
JORC7007	2" BSP	105 sec./90°

### AIR-SAVER-LS G1 COMPRESSED AIR ENERGY SAVER FOR LIGHT SWITCH INSTALLATION



7720

PART NUMBER	INLET / OUTLET	OPENING / CLOSING DURATION
JORC7005LS	1" BSP	30 sec. / 90°

### AIR-SAVER-LS G2 COMPRESSED AIR ENERGY SAVER FOR LIGHT SWITCH INSTALLATION



7720

PART NUMBER	INLET / OUTLET	OPENING / CLOSING DURATION
JORC7007LS	2" BSP	105 sec./90°

## AIR-SAVER REMOTE CONTROL

### DESCRIPTION

A typical compressed air system has air loss through pipe work connections, leaking float type drains, etc. At the end of the working shift, the AIR-SAVER will shut the air tank off from the rest of the system. The content of the compressed air tank will be saved, rather than lost through pipe work leakages. The REMOTE SWITCHING KIT allows you to control the AIR-SAVER remotely. This is useful when the AIR-SAVER is installed high off the ground.

### FEATURES / BENEFITS

- Rugged industrial design

### SPECIFICATIONS

Supply voltage	230 V AC max.
Switch type	3-Way (open / close or auto)
Cable length	5 m
Environmental protection	IP65 (NEMA4)

### AIR-SAVER REMOTE CONTROL



7720

PART NUMBER	FOR USE WITH
JORC709105	Air-Saver G1 & G2

## MAGNETICALLY OPERATED ZERO AIR LOSS & PNEUMATICALLY OPERATED LEVEL SENSED CONDENSATE DRAINS

### DESCRIPTION

The MAGY and MAGY-UL are magnetic drains that discharge condensate from compressed air systems. They use magnetic force technology, with specially selected magnets that operate the 2/2-way direct-acting valve assembly. During the condensate discharge cycle, there is no loss of compressed air, and the discharge process is automatic. The MAGY and MAGY-UL are highly consistent and have a long operational life. The MAGY is typically used in refrigerated dryers and under piston compressors, where power is either unavailable, too expensive, or unreliable. The MAGY-UL is easy to install and service and can remain connected to the filter during maintenance.

The NUFORS-CR is a condensate drain that operates without electricity. It uses a newly developed 3/2-way level-controlled valve principle to operate a piston-type direct-acting valve. The advantage of this valve principle is that the NUFORS-CR's orifice can be 6 mm, which leads to increased reliability. It is ideally suited for applications where power is unavailable, too expensive, or unreliable. The NUFORS-CR is also suitable for applications requiring higher IP ratings (International Protection Rating). It has an IP 68/NEMA 6 rating. The discharge process is automatic, and the NUFORS-CR is highly reliable.

### FEATURES / BENEFITS

- Extremely compact with top & side inlet options
- Level sensed magnetic technology saves air, energy & money
- No operating cost once installed
- Service kits available
- Direct acting valve, for a reliable discharge
- Operating pressure 0 to 16 bar (0 to 230 psi)
- Robust, corrosion resistant aluminium housing, finished with an ElectroPhoretic coating
- The direct acting valve is serviceable
- The MAGY & MAGY-UL bottom (outlet) can be rotated 360° for installation simplicity
- The NUFORS-CR has a built-in TEST feature

### SPECIFICATIONS

	MAGY & MAGY-UL	NUFORS-CR
Maximum drainage capacity	200 litres condensate per hour	1062 l/hr @ 16 bar
Pressure range	0 to 16 bar (0 to 230 psi)	
Valve type	2/2 way, direct acting	Direct acting
Valve seals	FPM	
Inlet connections	1/2" (BSPP or NPT, 2 inlet options)	1/2" (BSPP or NPT, 3 inlet options)
Outlet connection	1/8" BSPP	1/4" BSPP with hose pipe connector
Inlet height	MAGY: 10.3 cm (top) & 9 cm (side) MAGY-UL: 10 cm (top)	12 cm (top), 9.7 cm & 1.5 cm (side)
Temperature range	1°C to 50°C	
Serviceable valve	Yes	
Test feature	JORC3904 & JORC3902: No JORC3914 & JORC3912: Yes	Yes
Housing material	Corrosion resistant aluminium, EP coating	
Environmental protection	MAGY-UL & NUFORS-CR: IP68 (NEMA6)	

### MAGY – DUAL INLET NO LOSS FILTER DRAIN



7720

PART NUMBER	NO. OF INLETS	MAXIMUM FILTER CAPACITY
JORC3904	2	Unlimited

### MAGY-UL NO LOSS FILTER DRAIN



7720

PART NUMBER	NO. OF INLETS	MAXIMUM FILTER CAPACITY
JORC3902	1	Unlimited

### MAGY – DUAL INLET C/W TEST BUTTON NO LOSS FILTER DRAIN



7720

PART NUMBER	NO. OF INLETS	MAXIMUM FILTER CAPACITY
JORC3914	2	Unlimited

### MAGY-UL C/W TEST BUTTON NO LOSS FILTER DRAIN



7720

PART NUMBER	NO. OF INLETS	MAXIMUM FILTER CAPACITY
JORC3912	1	Unlimited

### NUFORS-CR NO LOSS DRAIN



7720

PART NUMBER	OPERATION
JORC3805	Pneumatically operated

## ELECTRONIC ZERO AIR LOSS DRAINS

### DESCRIPTION

The KAPTIV-CS (Compact Solution) removes all types of condensate from compressed air systems up to 3500 CFM (100 m<sup>3</sup>/min) without the loss of compressed air. The compact robust industrial housing, 2/2 way direct acting valve with a large orifice, alarm NC or NO, & the integrated mesh strainer make the KAPTIV-CS a highly reliable draining solution.

### FEATURES / BENEFITS

- Robust aluminium housing with three inlet options
- Integrated mesh strainer
- Extremely easy to disassemble
- Can be connected to any alarm device; alarm function (NO or NC) standard incorporated
- Successful draining of all types of condensate due to large orifice
- Easy installation & visual display of operating status
- Direct acting valve assembly, ensuring reliable discharge operation
- Including digital sight port / level indicator



7720

### KAPTIV-CS NO LOSS DRAIN A3 N/O

PART NUMBER	VOLTAGE	DRAIN CAPACITY
JORC3403A3	230 V AC	3500 CFM
JORC3423A3	115 V AC	3500 CFM
JORC3463A3	24 V AC	3500 CFM
JORC3483A3	24 V DC	3500 CFM

### A4 N/C

JORC3403A4	230 V AC	3500 CFM
JORC3423A4	115 V AC	3500 CFM
JORC3463A4	24 V AC	3500 CFM
JORC3483A4	24 V DC	3500 CFM

### SPECIFICATIONS

Max. compressor capacity	3500 CFM (100 m <sup>3</sup> /min)
Maximum drainage capacity	665 litres condensate per hour at 16 bar
Pressure range	0 to 16 bar
Valve type	2/2 way, direct acting
Valve orifice	4 mm
Valve seals	FPM
Inlet connections	1/2" (BSP or NPT), 3 inlet options
Inlet height	11 cm (top) & 7.5 & 1.5 cm (side)
Outlet connection	1/4" BSP
Temperature range	1°C to 50°C
Supply voltage options	230 V AC / 115 V AC / 24 V AC / 24 V DC
Power & alarm connectors	DIN 43650-B
Serviceable valve	Yes
Test feature	Yes
Environmental protection	IP65 (NEMA4)
Integrated mesh strainer	Yes
Alarm feature type	A3: Normally open contacts, closed when in alarm phase. LED on the drain is OFF when in operation & ON when in alarm mode.
Contact output switch (voltage free)	A4: Normally closed contacts, open when in alarm phase. LED on the drain is OFF when in operation & ON when in alarm mode.
Housing material	Corrosion resistant aluminium

For high pressure models, please contact your distributor

## ELECTRONIC ZERO AIR LOSS CONDENSATE DRAINS

### DESCRIPTION

The KAPTIV-MD is a zero air-loss drain, designed for smaller compressed air applications. The KAPTIV-MD incorporates the reliable JORC direct acting valve assembly with FPM seals, offering a pressure range of 0 to 16 bar (up to 230 psi). The solid & robust aluminium housing design has also been incorporated into this model, following suit with the larger KAPTIV models. With an inlet connection height of only 74 mm, this is an incredibly compact solution with unrivalled installation versatility & reliability.

The weight of the KAPTIV-MD is only 0.5 kg. The maximum compressor capacity of this drain is 350 CFM (10 m<sup>3</sup>/min) & typical draining applications include fridge dryers & filters – mainly due to its incredible compact size.

### FEATURES / BENEFITS

- Extremely compact & lightweight unit
- True zero air-loss solution
- One model covers all compressor capacities up to 350 CFM (10 m<sup>3</sup>/min)
- No sizing chart required
- The serviceable valve offers maintenance opportunities
- Zero air-loss during the condensate discharge
- Easy to install due to its low inlet height
- External valve position allows for fast & easy maintenance
- Direct acting valve with FPM seal
- Robust, corrosion resistant aluminium housing
- Integrated mesh strainer



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New Additions

### KAPTIV-MD NO LOSS DRAIN

PART NUMBER	VOLTAGE	DRAIN CAPACITY	NO. OF PORTS
JORC3401	230 V AC	350 CFM	2
JORC3402	230 V AC	350 CFM	1
JORC3422	115 V AC	350 CFM	1
JORC3462	24 V AC	350 CFM	1
JORC3482	24 V DC	350 CFM	1

### SPECIFICATIONS

Max. compressor capacity	350 CFM (10 m <sup>3</sup> /min)
Maximum drainage capacity	45 litres condensate per hour at 16 bar
Pressure range	0 to 16 bar (0 to 230 psi)
Valve type	2/2 way, direct acting
Valve orifice	2 mm
Valve seals	FPM
Inlet connections	1/2" (BSP or NPT)
Inlet height	7.4 cm
Outlet connection	1/4" BSP
Temperature range	1°C to 50°C
Supply voltage options	230 V AC / 115 V AC / 24 V AC / 24 V DC
Power connector	DIN 43650-B
Serviceable valve	Yes
Test feature	Yes
Environmental protection	IP65 (NEMA4)
Housing material	Corrosion resistant aluminium, EP coating

New Additions

### KAPTIV-MD-AL C/W OPEN ALARM CONTACT NO LOSS DRAIN



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PART NUMBER	VOLTAGE	DRAIN CAPACITY	CONTACT POSITION	NO. OF PORTS
JORC3401A1	230 V AC	350 CFM	N/O	2
JORC3402A1	230 V AC	350 CFM	N/O	1
JORC3402A2	230 V AC	350 CFM	N/C	1

## DIGITAL TIMER DRAIN WITH INTEGRATED STRAINERS

### DESCRIPTION

The COMBO-D-LUX feature is a digital timer setting applied on time controlled condensate drains designed to automatically remove condensate from compressed air systems. The COMBO-D-LUX is designed to remove condensate from compressors, compressed air dryers & receivers up to any size, type or manufacturer. The COMBO-D-LUX is an all in one digital timer drain with an integrated ball valve & strainer. The unit offers true digital time cycle programming luxury ranging from milliseconds to 99 hours.

### FEATURES / BENEFITS

- Does not air-lock during operation
- Suitable for all types of compressed air systems
- TEST (micro-switch) feature
- Bright digital illuminated cycle display



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### COMBO-D-LUX DIGITAL TIMER DRAIN WITH INTEGRATED STRAINER

PART NUMBER	VOLTAGE	THREAD
JORC2507	230 V AC	1/2"
JORC2527	115 V AC	1/2"
JORC2567	24 V AC	1/2"
JORC2587	24 V DC	1/2"

### SPECIFICATIONS

Maximum compressor capacity	Any size
Pressure range	0 to 16 bar (0 to 230 psi)
Supply voltage options	12 – 230 V AC / DC 50/60 Hz (please state)
Temperature range	1°C to 55°C
Timer cycle range (on/off)	0.01 second to 99 hours (ON & OFF)
Timer PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination, clear LED display
Test feature	Yes
Valve type	2/2 way, direct acting
Valve orifice	4 mm
Valve seals	FPM
Inlet / outlet connections	1/4" & 1/2" (BSP or NPT) 1/2" (BSP or NPT)
Inlet connection height	1 cm
Serviceable valve	Yes
Valve housing material	Brass
Power connection	DIN 43650-A
Environmental protection	IP65 (NEMA4)

## ELECTRONIC TIMER DRAINS

### DESCRIPTION

The EZ-1 will be supplied including a ball valve strainer. The incorporated shut-off valve supports maintenance activity on the drain & the integrated stainless steel mesh will protect the valve construction against large particles.

### FEATURES / BENEFITS

- Does not air-lock during operation
- Any type of compressed air systems & up to 16 bar (230 psi)
- TEST (micro-switch) feature
- Accurate time cycles
- Large (4 mm) valve orifice
- Various connection sizes available
- Quick servicing advantage

For high pressure models, please contact your distributor



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### EZ-1 TIMER DRAIN INC. BALL VALVE STRAINER

PART NUMBER	VOLTAGE	THREAD
JORC2301MD	230 V AC	1/4"
JORC2303MC	230 V AC	1/2"
JORC2321MD	115 V AC	1/4"
JORC2361MD	24 V AC	1/4"
JORC2381MD	24 V DC	1/4"
JORC2302BL	230 V AC	3/8"
JORC2322BA	115 V AC	3/8"
JORC2362BL	24 V AC	3/8"
JORC2382BL	24 V DC	3/8"

### SPECIFICATIONS

Max. compressor capacity	Any size
Pressure range	0 to 16 bar (0 to 230 psi)
Supply voltage options	24 – 230 V AC / DC 50/60 Hz (please state)
Temperature range	1°C to 55°C
Timer cycle range (on/off)	0.5 to 10 seconds / 0.5 to 45 minutes
Timer PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination
Test feature	Yes
Valve type	2/2 way, direct acting
Valve orifice	4 mm
Valve seals	FPM
Inlet/outlet connections	1/4", 3/8", 1/2" (BSP or NPT)
Inlet connection height	1 cm
Serviceable valve	Yes
Valve housing material	Brass
Power connection	DIN 43650-A
Environmental protection	IP65 (NEMA4)

### COMBO-EZ-1 BALL VALVE / STRAINER INTEGRATED

PART NUMBER	VOLTAGE	THREAD
JORC2505	230 V AC	1/2"
JORC2525	115 V AC	1/2"



7720

New  
Additions

## UNBLOCKABLE MOTORISED BALL VALVE DRAINS

### DESCRIPTION

The TEC-44 is a microprocessor operated ball valve, designed to remove condensate from deliquescent dryers, rusty old tanks, vessels & refrigerated dryers. The TEC-44 is a powerful, timer controlled, motorised ball valve, up to pressure ratings of 40 bar. This condensate drain cannot be blocked & is applied where all else fails. Draining applications with a high level of contamination (rust, scale, etc.) require the TEC-44. The TEC-44 is impossible to block due to its powerful ball valve rotation & large orifice.

### FEATURES / BENEFITS

- Stainless steel ball valve, offering you crushing power
- Digital cycle display, offering you a visual display of drain status
- Large (full bore) 12 mm orifice, offering you a drain that cannot block
- Does not air-lock during operation
- For compressed air applications up to 40 bar
- Suitable for all types of compressed air systems with a high contamination of its condensate (rust, scale)
- TEST (micro-switch) feature
- Micro-processor controlled (high level of time cycle accuracy)
- Medium pressure up to 40 bar
- Remote control – optional



TEC-44

### UNBLOCKABLE MOTORISED BALL VALVE DRAIN 7720

PART NUMBER	VOLTAGE	THREAD
JORC4008	230 V AC	1/2" BSPP
JORC4028	115 V AC	1/2" BSPP

### SPECIFICATIONS

Max. compressor capacity	Any size
Pressure range	0 to 40 bar (0 to 600 psi)
Supply voltage options	24 V DC, 115 V AC & 230 V AC 50/60 Hz (please state)
Medium temperature	1°C to 60°C
Ambient temperature	1°C to 55°C
Timer cycle range (on/off)	7 seconds to 15 minutes ON 4 minutes to 24 hours OFF
Actuator PCB	SMD technology, ensuring consistency in production
Timer cycle indication	Bright LED illumination, LED programme indicator
Test feature	Yes
Valve type	2/2 way, motorised ball valve
Valve orifice	12 mm
Valve seals	FPM & Teflon™
Inlet / outlet connections	1/2" (BSP or NPT)
Inlet connection height	1 cm
Serviceable valve	Yes
Valve housing material	Brass nickel plated, ball valve stainless steel
Power connection	Cable & plug
Environmental protection	IP65 (NEMA4)
Remote switch option	Yes

## OIL / WATER SEPARATORS – SERVICEABLE

### DESCRIPTION

As condensate flows in to the SEPREMIUM 2 Serviceable, the oil is filtered out through various filtration stages.

The SEPREMIUM 2 Serviceable is developed according to the latest ecological standard & convinces with its possible <5 ppm residual oil content.

High-performance elements ensure that the best environmentally compatible results are achieved, in addition to easy handling.

Our SEPREMIUM 2 Serviceable is installed with the mounting bracket (included in delivery). Replacing the SEPREMIUM 2 Serviceable elements is easy to do.

As soon as the condensate enters the SEPREMIUM 2 Serviceable, it is filtered through the various filter elements. The oil absorbing elements combine different types of adsorption technologies, assuring a result of less than 5 ppm residual oil content at the exit can be achieved.

### FEATURES / BENEFITS

- Application of high-quality filtration material
- Simple, quick & clean installation & replacement process
- Successful separation of mineral oil, synthetic oil & stable condensate emulsions
- Bracket for wall mounting included
- Brass hose connectors ensure quick & stable installation
- Easy installation & maintenance
- Any type & design of condensate drain can be used
- Special designs are available to treat the condensates from 'stable condensate emulsions' & polyglycol powered compressed air systems
- First class value for money
- Compact dimensions ensure easy handling & installation



### SEPREMIUM 2 SERVICEABLE OIL / WATER SEPARATOR 7720

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9802	70 CFM (2 m³/min)	2 litres

### SPECIFICATIONS

Max. compressor capacity	70 CFM (2 m³/min)
Max. oil adsorption in the elements	2 litres
High performance white element	1
Activated carbon element	1
Inlet connection	1/2" with 10 mm hose
Outlet connection	1/2" with 13 mm hose
Test valve	Yes
Housing material	PP
Housing colour	Black
Lid colour	Grey
Test kit included	Yes
Target oil residue output value	<5 ppm
Inlet & outlet hose pipe connectors	Included
DIBt certificate	Yes

### SEPARATION OF:

Mineral lubricants	Yes
Synthetic lubricants	Yes
Stable emulsions	Yes
Polyglycol	Yes

New

## OIL / WATER SEPARATORS

### FEATURES / BENEFITS

- Separation of all types of compressor lubricants
- Compact design & small footprint, offering easy handling & flexible installation benefits
- Successful separation of mineral oil, synthetic lubricants & stable emulsions
- Clothing kit included



**SEPREMIUM 3.5**  
OIL / WATER SEPARATOR

7720

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9603	125 CFM (3.5 m <sup>3</sup> /min)	4 litres

### SPECIFICATIONS

Max. compressor capacity	125 CFM (3.5 m <sup>3</sup> /min)
Max. oil adsorption in the elements	4 litres
Brass inlet connection	1/2" (hose barb included)
Brass outlet connection	1/2" (hose barb included)
Test kit	Yes
Target output value	<10 ppm
Housing material	PE
Total recyclable	Yes
Housing colour	Black
Lid colour	Grey
DIBt certificate	Yes

### FEATURES / BENEFITS

- Lighter & easier replacement of elements
- Successful separation of mineral oil, synthetic lubricants & stable emulsions
- Multiple condensate inlets
- Alarm indicator
- Sample bottle & test drain for output testing / measuring the ppm value (indication)
- Operates with all JORC type drains (both timer controlled & zero air loss)

\*Please contact your distributor for special elements and / or 24/7 applications. Roto-Inject & Sigma Mol are registered trade names of producers of compressor lubricants.

### SPECIFICATIONS

High performance white element	2
Activated carbon element	
SEPREMIUM 5, 10, 20, 30	1
SEPREMIUM 60	2
Inlet connection	1/2" (2 off)
Outlet connection	1"
Test valve	Yes
Housing material	PE
Housing colour	Black
Lid colour	Grey
Alarm indicator	Yes
Element life indicator	Yes
Service drain for sectional draining	
SEPREMIUM 5	No
SEPREMIUM 10, 20, 30, 60	Yes (2 off)
Test kit included	Yes
Target oil residue output value	<10 ppm
Inlet & outlet hose pipe connectors	Included
DIBt certificate	Yes

### SEPARATION OF:

Mineral lubricants	Yes
Synthetic lubricants	Yes
Stable condensate emulsions	Yes
Polyglycol, Roto-Inject, Sigma Mol*	Yes



**SEPREMIUM 5**  
OIL / WATER SEPARATOR

7720

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9605	175 CFM (5 m <sup>3</sup> /min)	5 litres



**SEPREMIUM 10**  
OIL / WATER SEPARATOR

7720

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9610	350 CFM (10 m <sup>3</sup> /min)	10 litres

## OIL / WATER SEPARATORS

### FEATURES / BENEFITS

- Lighter & easier replacement of elements
- Successful separation of mineral oil, synthetic lubricants & stable emulsions
- Multiple condensate inlets
- Alarm indicator
- Sample bottle & test drain for output testing / measuring the ppm value (indication)
- Operates with all JORC type drains (both timer controlled & zero air loss)

**\*Please contact your distributor for special elements and / or 24/7 applications. Roto-Inject & Sigma Mol are registered trade names of producers of compressor lubricants.**

### SPECIFICATIONS

High performance white element	2
Activated carbon element	
SEPREMIUM 5, 10, 20, 30	1
SEPREMIUM 60	2
Inlet connection	1/2" (2 off)
Outlet connection	1"
Test valve	Yes
Housing material	PE
Housing colour	Black
Lid colour	Grey
Alarm indicator	Yes
Element life indicator	Yes
Service drain for sectional draining	
SEPREMIUM 5	No
SEPREMIUM 10, 20, 30, 60	Yes (2 off)
Test kit included	Yes
Target oil residue output value	<10 ppm
Inlet & outlet hose pipe connectors	Included
DIBt certificate	Yes

### SEPARATION OF:

Mineral lubricants	Yes
Synthetic lubricants	Yes
Stable condensate emulsions	Yes
Polyglycol, Roto-Inject, Sigma Mol*	Yes



**SEPREMIUM 20**  
OIL / WATER SEPARATOR

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9620	750 CFM (20 m <sup>3</sup> /min)	15 litres



**SEPREMIUM 30**  
OIL / WATER SEPARATOR

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9630	1250 CFM (30 m <sup>3</sup> /min)	25 litres



**SEPREMIUM 60**  
OIL / WATER SEPARATOR

PART NUMBER	COMPRESSOR CAPACITY	ELEMENT OIL ADSORPTION
JORC9660	2500 CFM (60 m <sup>3</sup> /min)	50 litres

## SERVICE KITS

### DESCRIPTION

Great care is taken to ensure long lasting components are selected & applied in our products. JORC products are designed in a way that makes servicing simple, quick & error free. Servicing JORC products is a cost effective way to recondition the products for many more years of draining service.

### FEATURES / BENEFITS

- High quality seals are applied, offering you long product life.
- Stainless steel inner parts, offering long life resistance against aggressive medium
- Service manuals are available, offering useful information & guidelines during routine maintenance activities
- All JORC products are designed for quick & easy servicing
- The service kits include all components that wear & tear in our products



**MAGY VALVE SERVICE KIT** 7720

PART NUMBER	KIT CONTENTS
JORC39000	1 x Valve assembly kit & valve body 1 x Complete float assembly 1 x Seal 1 x NBR gasket 1 x Allen key for Xtender kit 6 mm



**NUFORS-CR VALVE SERVICE KIT** 7720

PART NUMBER	KIT CONTENTS
JORC38000	1 x Complete float assembly 1 x Valve plunger set for NUFORS-CR 1 x Testknob set for NUFORS-CR 1 x 3/2-way valve set for NUFORS-CR 1 x Preformed gasket 1 x Valve O-ring for NUFORS-DC top air inlet 1 x Manual NUFORS-CR SERVICE 5 languages

## SERVICE UNITS FOR OIL / WATER SEPARATORS



**SERVICE PACKS** 7720

PART NUMBER	FOR USE WITH
JORC98029	SEPREMIUM 2
JORC96039	SEPREMIUM 3.5
JORC96059	SEPREMIUM 5
JORC96109	SEPREMIUM 10
JORC96209	SEPREMIUM 20
JORC96309	SEPREMIUM 30
JORC96609	SEPREMIUM 60

**New Additions**

## KAPTIV-MD VALVE SERVICE KIT



PART NUMBER	KIT CONTENTS
JORC34001	1 x Stainless steel mesh 1 x Valve incl. IP set 1 x Preformed gasket 1 x O-ring 1 x Manual KAPTIV-MD Service 5 languages

## KAPTIV-CS VALVE SERVICE KIT



PART NUMBER	KIT CONTENTS
JORC34000	1 x Mesh strainer 1 x Valve 1 x O-rings 1 x Manual KAPTIV-CS Service 5 languages

## EZ-1 / COMBO-EZ-1 SERVICE KIT



PART NUMBER	KIT CONTENTS
JORC298114	1 x Valve inc. seals

## ACCESSORIES FOR ZERO AIR LOSS TYPE DRAIN



**IN-LINE STRAINER** 7720

PART NUMBER	FEMALE THREAD	MALE THREAD
JORC9008	1/2" BSPP	1/4" BSPP