

# INTEGRAL FILTER/REGULATOR plus LUBRICATOR ASSEMBLIES (CFRLs)

The integration of a general purpose filter and a pressure regulator into a single module provides the compactness needed where space is limited. These integral filter/regulators are offered by Master Pneumatic in port sizes from 1/8 up to 3/4 along with **SENTRY** models equipped with quick-connect fittings for tubing from 1/4 up to 10 mm.

When an integral filter/regulator is paired with a lubricator, joined either by a modular connector or a pipe nipple, the assembly makes a complete **FRL** with nothing lost in performance, but with the advantage of compactness to fit in tight spaces.

All filter/regulators include an internal automatic filter drain and a pressure gauge as standard equipment, and regulators are either self-relieving or non-relieving. **SENTRY**, **GUARDSMAN**, **SERIES 350** and **SERIES 380** assemblies include a lockout valve for added safety.

Available options are the same as those for the corresponding individual filters, regulators, and lubricators. They include regulating springs for various pressure ranges, metal filter bowls, and sintered bronze filter elements in several  $\mu$ m ratings, as well as quick-fill caps for the lubricators. All assemblies, except Miniatures, now include a lockout valve for increased safety.



## GUIDE to INTEGRAL FILTER/REGULATORS plus LUBRICATORS

Series	Modular Construction	Port Sizes					Pages
		1/8	1/4	3/8	1/2	3/4	
SENTRY							
VCFDRL10, 11 models †	yes	X	X				300-301
MINIATURE							
CFDRL55, 56 models	no	X	X				302-303
GUARDSMAN							
MVCFDRL60D models	yes		X	X	X		304-305
GUARDSMAN II							
BMVCFDRL70D models	yes		X	X	X		306-307
SERIES 350							
BAGV3A0B6A13 models	yes		X	X	X		308-313
Full-Size VANGUARD							
MVCFDRL108D models	yes		X	X	X	X	314-315
MVCFDRL108W models	yes		X	X	X	X	316-317
Full-Size SERIES 380							
AAM3A0B1A1 models	yes			X	X	X	318-323

† Also available with quick-connect fittings for tubing up to 10 mm.

# FILTER-REGULATOR-LUBRICATOR ASSEMBLIES (FRLs)

**FRL** assemblies offer an enormous variety of combinations to fit the needs of almost every filtration, pressure regulation, and lubrication requirement. The **FRLs** shown in this catalog cover only a portion of these needs in port sizes from 1/8 to 1-1/2. Featured are the configurations most widely used, but FRLs in many other configurations are readily assembled.

All standard **SENTRY**, **GUARDSMAN**, **SERIES 350**, **Full-Size VANGUARD**, and **SERIES 380** assemblies now include a lockout valve for added safety.

General purpose filter-regulator-lubricator assemblies are the most widely used, but other combinations meet a variety of needs. For example, where air line lubrication is not needed, a filter-regulator combination may be sufficient. This can consist of an individual filter and regulator or a compact integral filter/regulator.



## GUIDE to FILTER-REGULATOR-LUBRICATOR COMBINATIONS

Series	Modular Construction	Port Sizes									Pages
		1/8	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2		
SENTRY											
VFDRL 10, 11 models †	yes	X	X								324-325
MINIATURE											
FDRL 55, 56	no	X	X								326-327
GUARDSMAN											
MVFDRL60D models	yes		X	X	X						328-329
GUARDSMAN II											
BMVFDRL70D models	yes		X	X	X						330-331
SERIES 350											
BAGV1A1B6A13 models	yes		X	X	X						332-337
Full-Size VANGUARD Series											
MVFDRL108D models	yes		X	X	X	X					338-339
MVFDRL108W models	yes		X	X	X	X					340-341
Full-Size SERIES 380											
AAMV1A1B1A1 models	yes			X	X	X					342-347
High-Flow VANGUARD											
FDRL180 models	no					X	X				348-349
FDRL189D models	no					X	X	X	X		350-351
BFDRL289D models	no							X	X		352-353

† Also available with quick-connect tube fittings up to 10 mm.

## SENTRY Modular FRLs Integral Filter/Regulators plus Lubricator

## VCFDRL10 and 11 Models Port Sizes: 1/8, 1/4 Tube Fittings



Model Shown: VCFDRL10-2

- ◆ Filter and regulator consolidated in a single assembly (**CFDR10M** or **CFDR11M**); wick-feed lubricator (**L10**); lockout valve (**V10**).
- ◆ Modular assembly and mounting.
- ◆ Threaded ports or quick-connect fittings for tubing up to 10 mm in diameter.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ High-strength polycarbonate plastic bowls or aluminum bowls.
- ◆ Internal automatic filter drain; optional manual drain.
- ◆ Piston-type regulator (**CFDRL10** models) or diaphragm-type (**CFDRL11** models).
- ◆ Self-relieving regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ NPTF port threads; optional **BSPP** threads.

### SPECIFICATIONS

#### Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

**Bowls:** 2-Ounce (60-ml) capacity polycarbonate plastic bowls or aluminum bowls.

#### Filter Drain:

Internal automatic drain; optional manual drain.

**Filter Element:** 5- $\mu$ m-rated polyethylene; optional 5- $\mu$ m, 20- $\mu$ m, or 40- $\mu$ m sintered bronze.

**Filter/Regulator & Lubricator Bodies:** Acetal.

**Fluid Media:** Compressed air.

#### Inlet Pressure:

15 psig (1 bar) minimum with automatic drain.  
150 psig (10 bar) maximum.

**Oil Adjustment:** External, no shutoff.

**Outlet Pressure:** Adjustable up to 100 psig (7 bar).

**Pressure Gauge:** 0 to 160 psig (11 bar); 1/8 NPT gauge ports front and rear.

**Panel Mounting:** 1-3/16 inch (30 mm) hole required.

**Regulator Dome and Knob:** Acetal.

**Seals:** Nitrile.

### AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

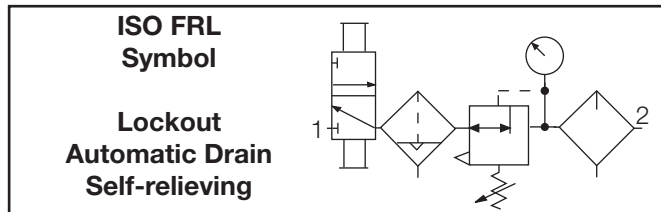
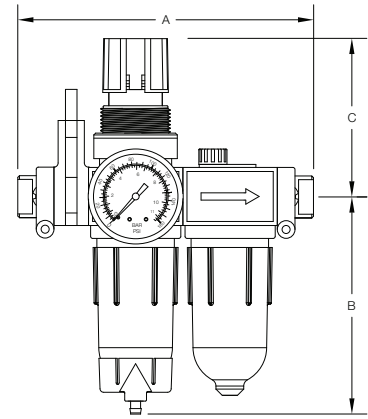
## DIMENSIONS inches (mm)

Ports	A *	B #	C	Depth †	Weight
					lb (kg)
1/8, 1/4	5.2 (132)	3.9 (99)	2.6 (67)	1.8 (45)	0.57 (0.32)
Models below have quick-connect fittings for tubing.					
1/4	5.6 (142)	3.9 (99)	2.6 (67)	1.8 (45)	0.55 (0.31)
3/8	6.2 (157)	3.9 (99)	2.6 (67)	1.8 (45)	0.55 (0.31)
4 mm	5.7 (145)	3.9 (99)	2.6 (67)	1.8 (45)	0.55 (0.31)
6 mm	5.7 (145)	3.9 (99)	2.6 (67)	1.8 (45)	0.55 (0.31)
8 mm	5.7 (145)	3.9 (99)	2.6 (67)	1.8 (45)	0.55 (0.31)
10 mm	6.2 (157)	3.9 (99)	2.6 (67)	1.8 (45)	0.55 (0.31)

\* Without V10 lockout valve deduct 0.6 (15) from dimension A.

† Less gauge.

# Dimension for plastic bowl; metal bowl is 4.3 (109).



## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm polyethylene (Std element).....	KA130-27PE5
5-µm bronze .....	KA130-27E5
20-µm bronze .....	KA130-27E4
40-µm bronze .....	KA130-27E3

## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.

**NOTE:** For model numbers longer than 15 characters, please consult Master Pneumatic.

**B V C F D R L 10 P - 2 X Y P W**

### BOWL TYPE

Plastic bowl.....Leave Blank  
Metal bowl.....B

### LOCKOUT VALVE

V10 Valve ..... V  
No valve ..... Leave Blank

### FILTER DRAIN

Internal automatic drain ..... CFD  
Manual drain..... CF

### REGULATOR TYPE

Piston type ..... 10  
Diaphragm type..... 11

### MOUNTING HOLE LOCATION

Bottom mount (Standard) .....Leave Blank  
Top mount .....P

### INLET PORT SIZE

No inlet and outlet ports ..... Leave Blank  
Threaded:

1/8 NPTF.....1  
1/4 NPTF.....2

Fittings for Tubing:

1/4.....04  
3/8.....06  
4 mm.....M4  
6 mm.....M6  
8 mm.....M8  
10 mm.....M10

### OUTLET PORT SIZE

Same as inlet port ... Leave Blank  
Threaded:

1/8 NPTF.....1  
1/4 NPTF.....2

Fittings for Tubing:

1/4.....04  
3/8.....06  
4 mm.....M4  
6 mm.....M6  
8 mm.....M8  
10 mm.....M10

### PORT TYPE

As specified in **INLET PORT** ..... Leave Blank  
BSPP threads on both ports ..... W

**OPTIONS** (More than one option can be chosen. Add in alphabetical order)

0-160 psig Gauge ..... Standard  
No Gauge ..... NG  
Plastic mounting nut ..... P  
Metal mounting nut ..... PN  
Hex plastic mounting nut ..... PE

**OPTIONS** (More than one option can be chosen. Add in alphabetical order)

None ..... Leave Blank  
Non-relieving regulator ..... A  
Sintered bronze filter element:  
5-µm rating ..... E5  
20-µm rating ..... E4  
40-µm rating ..... E3

Adjusting springs:

0-125 psig (0-8.6 bar) ..... H  
0-50 psig (0-3.4 bar) ..... L  
0-8 psig (0-0.6 bar) ..... L8  
0-15 psig (0-1.0 bar) ..... L15  
0-30 psig (0-2.1 bar) ..... L30

Tamper-resistant spinning

knob (psig preset) ..... MV(\*)

Quick-fill lubricator Q-cap ..... Q

Viton seals ..... V

\*Insert preset pressure.

## MINIATURE FRLs

### Integral Filter/Regulators plus Lubricator

## CFDRL55 and 56 Models

### Port Sizes: 1/8, 1/4



- ◆ Filter and regulator consolidated in a single assembly (**CFDR55M** or **CFDR56M**); wick-feed lubricator (**L50**).
- ◆ Inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ High-strength polycarbonate plastic bowls or aluminum bowls.
- ◆ Internal automatic filter drain; optional manual drain.
- ◆ Piston-type regulator (**CFDRL55** models) or diaphragm-type (**CFDRL56** models).
- ◆ Self-relieving regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ **NPTF** port threads; optional **BSPP** threads or fittings for tubing up to 10 mm.

## SPECIFICATIONS

### Ambient/Media Temperature:

**Plastic bowls:** 40° to 125°F (4° to 52°C).

**Metal bowls:** 40° to 175°F (4° to 79°C).

**Bodies:** Aluminum for filter/regulator and lubricator.

**Bowls:** 2-Ounce (60-ml) capacity polycarbonate plastic bowls or aluminum bowls.

### Filter Drain:

Internal automatic drain; optional manual drain.

**Filter Element:** 5- $\mu$ m-rated polyethylene; optional 5- $\mu$ m, 20- $\mu$ m, or 40- $\mu$ m sintered bronze.

**Fluid Media:** Compressed air.

### Inlet Pressure:

15 psig (1 bar) minimum with automatic drain.

Plastic bowls: 150 psig (10 bar) maximum.

Metal bowls: 200 psig (13.7 bar) maximum.

**Oil Adjustment:** Internal; tamper-resistant.

**Outlet Pressure:** Adjustable up to 100 psig (7 bar).

**Pressure Gauge:** 0 to 160 psig (11 bar); 1/8 NPT gauge ports front and rear.

**Panel Mounting:** 1-3/16 inch (30 mm) hole required.

**Regulator Dome and Knob:** Glass Filled Nylon and Acetal.

**Seals:** Nitrile.

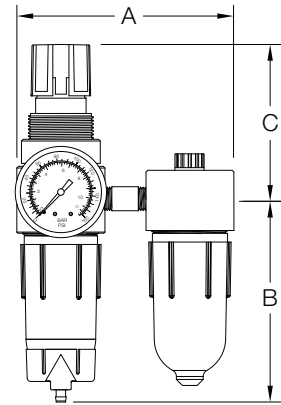
### AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

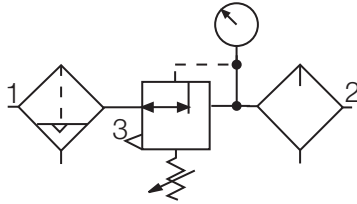
## DIMENSIONS inches (mm)

Bowl	A	B	C	Depth †	Weight
					lb (kg)
Plastic	3.7 (94)	3.9 (99)	2.6 (67)	1.6 (41)	0.66 (0.30)
Metal	4.0 (101)	4.3 (109)	2.6 (67)	1.6 (41)	0.66 (0.30)

† Less gauge.



**ISO FRL  
Symbol**  
  
**Automatic Drain  
Self-relieving**



## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm polyethylene (Std element).....	KA130-27PE5
5-µm bronze .....	KA130-27E5
20-µm bronze .....	KA130-27E4
40-µm bronze .....	KA130-27E3

## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.

**NOTE:** For model numbers longer than 15 characters, please consult Master Pneumatic.

**B CFD RL 55 - 2 Y X W**

### BOWL TYPE

Plastic bowl.....Leave Blank  
Metal bowl.....B

### FILTER DRAIN

Internal automatic drain .....CFD  
Manual drain.....CF

### REGULATOR TYPE

Piston type .....55  
Diaphragm type.....56

### PORT SIZE

1/8 NPTF.....1  
1/4 NPTF.....2

### PORT TYPE

NPTF threads .....Leave Blank  
BSPP threads .....W

**OPTIONS** (More than one option can be chosen. Add in alphabetical order)

0-160 psig Gauge .....Standard  
No Gauge .....NG  
No Gauge Ports on Head .....NP  
Plastic mounting nut .....P  
Metal mounting nut.....PN  
Hex plastic mounting nut .....PE

**OPTIONS** (More than one option can be chosen. Add in alphabetical order)

None .....Leave Blank  
Non-relieving regulator.....A  
Sintered bronze filter element:  
5-µm rating.....E5  
20-µm rating.....E4  
40-µm rating.....E3

Adjusting springs:

0-125 psig (0-8.6 bar).....H  
0-50 psig (0-3.4 bar).....L  
0-8 psig (0-0.6 bar).....L8  
0-15 psig (0-1.0 bar).....L15  
0-30 psig (0-2.1 bar).....L30

Tamper-resistant spinning

knob (psig preset) .....MV(\*)  
Quick-fill lubricator Q-cap .....Q  
Viton seals.....V

\*Insert preset pressure.



# GUARDSMAN Modular FRLs

## Integral Filter/Regulators plus Lubricator

# MVCFDRL60D Models

## Port Sizes: 1/4, 3/8, 1/2



Model Shown: MVCFDRL60D-2

- ◆ Filter and regulator consolidated in a single assembly (CFDR60); sight-feed lubricator (L60D); lockout valve (V35).
- ◆ Modular or inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ High-strength zinc bowl or polycarbonate plastic bowl with shatterguard.
- ◆ Internal automatic filter drain; optional manual drain.
- ◆ Self-relieving piston-type regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ NPTF port threads; optional BSPP threads.

## SPECIFICATIONS

### Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

**Bodies:** Zinc for filter/regulator and lubricator.

**Bowls:** 4-Ounce (120-ml) capacity zinc bowls or polycarbonate plastic bowls with zinc shatterguards.

### Filter Drain:

Internal automatic drain; optional manual drain.

**Filter Element:** 5- $\mu$ m-rated polyethylene; optional 5- $\mu$ m, 20- $\mu$ m, or 40- $\mu$ m sintered bronze.

**Fluid Media:** Compressed air.

### Inlet Pressure:

15 psig (1 bar) minimum with automatic drain.  
150 psig (10 bar) maximum. With metal bowls but no lockout valve: 200 psig (13.7 bar) maximum.

**Oil Adjustment:** External; tamper-resistant.

**Outlet Pressure:** Adjustable up to 100 psig (7 bar).

**Pressure Gauge:** 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.

**Panel Mounting:** 1-9/16 inch (40 mm) hole required.

**Regulator Dome and Knob:** Acetal.

**Seals:** Nitrile.

**Sight Dome:** Clear nylon.

## AIR FLOW DATA

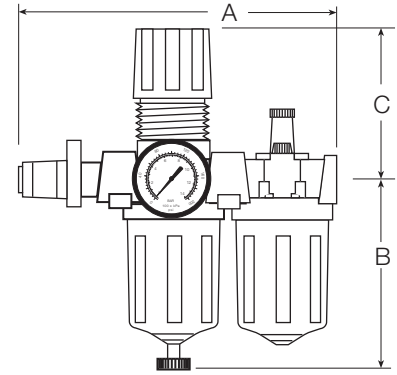
See Flow Charts for individual assembly components on preceding pages.

## DIMENSIONS inches (mm)

Bowl	A *	B	C	Depth †	Weight lb (kg)
Metal	8.7 (221)	4.6 (116)	3.3 (83)	2.4 (61)	2.94 (1.34)
Plastic	8.7 (221)	4.6 (116)	3.3 (83)	2.4 (61)	2.94 (1.34)

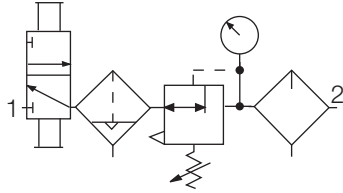
\* Without V35 lockout valve deduct 3.8 (97) from dimension A.

† Less gauge.



### ISO FRL Symbol

### Lockout Automatic Drain Self-relieving



## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm polyethylene (Std element).....	KA130-27PE5
5-µm bronze .....	KA130-27E5
20-µm bronze .....	KA130-27E4
40-µm bronze .....	KA130-27E3

## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.

**NOTE:** For model numbers longer than 15 characters, please consult Master Pneumatic.

## B M V CFD RL60D - 2 Y X W

### BOWL TYPE

Plastic bowl.....Leave Blank  
Metal bowl.....B

### ASSEMBLY

Modular.....M  
Pipe nipple.....Leave Blank

### LOCKOUT VALVE

V35 Valve.....V  
No valve.....Leave Blank

### FILTER DRAIN

Internal automatic drain.....CFD  
Manual drain.....CF

### PORT SIZE

1/4 NPTF.....2  
3/8 NPTF.....3  
1/2 NPTF.....4

### PORT TYPE

NPTF threads.....Leave Blank  
BSPP threads.....W

### OPTIONS (More than one option can be chosen. Add in alphabetical order)

0-200 psig Gauge.....Standard  
No Gauge.....NG  
Plastic Mounting nut.....P  
Metal Mounting nut.....PN

### OPTIONS (More than one option can be chosen. Add in alphabetical order)

None.....Leave Blank  
Non-relieving regulator.....A  
Sintered bronze filter element:  
5-µm rating.....E5  
20-µm rating.....E4  
40-µm rating.....E3  
Adjusting springs:  
0-150 psig (0-10 bar).....H  
0-50 psig (0-3.4 bar).....L  
Quick-fill lubricator Q-cap.....Q



## GUARDSMAN II Modular FRLs Integral Filter/Regulators plus Lubricator

## BMVCFDRL70D Models Port Sizes: 1/4, 3/8, 1/2



Model Shown: BMVCFDRL70D-2

- ◆ Filter and regulator consolidated in a single assembly (**BCFDR70**); sight-feed lubricator (**BL70D**); lockout valve (**V35**).
- ◆ Modular or inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Aluminum bowls with clear nylon sight glass. Bowls can be rotated for easy readability.
- ◆ Optional extended bowls provide greater filter sump and lubricator capacities.
- ◆ Internal automatic filter drain; optional manual drain and internal float drain.
- ◆ Self-relieving piston-type regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ NPTF port threads; optional **BSPP** threads.

### SPECIFICATIONS

#### Ambient/Media Temperature:

40° to 125°F (4° to 52°C).

**Bodies:** Zinc for filter/regulator and lubricator.

**Bowls:** 6-Ounce (180-ml) capacity aluminum bowls with clear nylon sight glass. Optional 10-ounce (300-ml) bowls. Bowls can be rotated for easy readability.

**Bowl Rings:** Nylon.

#### Filter Drain:

Internal automatic drain; optional manual drain and internal float drain.

**Filter Element:** 5- $\mu$ m-rated polyethylene; optional 5- $\mu$ m or 40- $\mu$ m sintered bronze.

**Fluid Media:** Compressed air.

#### Inlet Pressure:

Minimum: 15 psig (1 bar) with automatic drain, 30 psig (2 bar) with internal float drain.

Maximum: 150 psig (10 bar) .

Without lockout valve: 200 psig (13.7 bar) maximum.

**Oil Adjustment:** External; tamper-resistant.

**Outlet Pressure:** Adjustable up to 100 psig (7 bar).

Pressure Gauge: 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.

**Panel Mounting:** 1-9/16 inch (40 mm) hole required.

**Regulator Dome and Knob:** Acetal.

**Seals:** Nitrile.

**Sight Dome:** Clear nylon.

### AIR FLOW DATA

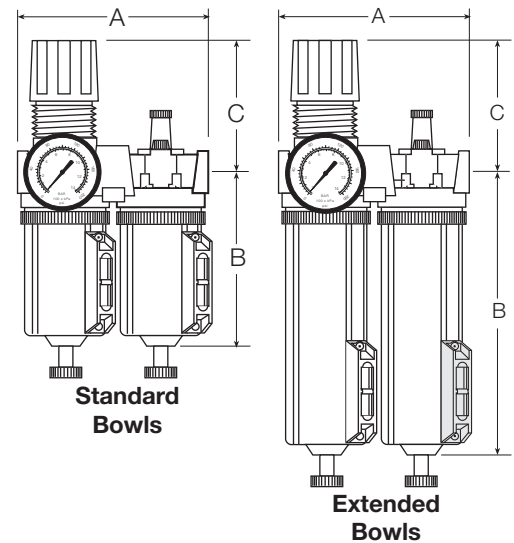
See Flow Charts for individual assembly components on preceding pages.

## DIMENSIONS inches (mm)

Bowl	A *	B	C	Depth †	Weight † lb (kg)
Standard	8.7 (221)	5.9 (151)	3.3 (83)	2.4 (60)	3.00 (1.36)
Extended	8.7 (221)	8.9 (227)	3.3 (83)	2.4 (60)	5.25 (2.39)

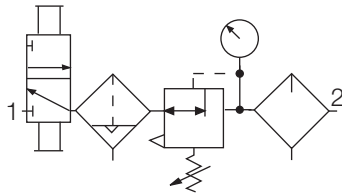
\* Without V35 lockout valve deduct 3.8 (97) from dimension A.

† Less gauge.



**ISO FRL  
Symbol**

**Lockout  
Automatic Drain  
Self-relieving**



## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm polyethylene (Std element).....	KA60F-03PE5
5-µm bronze .....	KA60F-03E5
40-µm bronze.....	KA60F-03E3

## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.

NOTE: For model numbers longer than 15 characters, please consult Master Pneumatic.

**B M V CFD RL 70D - 2 Y X W**

### LOCKOUT VALVE

V35 valve ..... V  
No valve .....Leave Blank

### FILTER DRAIN with METAL BOWLS

Internal automatic drain ..... CFD  
Manual drain..... CF  
Float drain (**Metal stem**) ..... CF6A

### BOWL SIZE

Standard 6-ounce bowls ..... 70D  
Extended 10-ounce bowls..... 70DH

### PORT SIZE

1/4 NPTF ..... 2  
3/8 NPTF..... 3  
1/2 NPTF..... 4

### PORT TYPE

NPTF threads ..... Leave Blank  
BSPP threads ..... W

**OPTIONS** (*More than one option can be chosen. Add in alphabetical order*)

0-200 psig Gauge ..... Standard  
No gauge ..... NG  
Plastic nut ..... P

**OPTIONS** (*More than one option can be chosen. Add in alphabetical order*)

None ..... Leave Blank  
Non-relieving regulator..... A  
Sintered bronze filter element:

5-µm rating..... E5  
20-µm rating..... E4  
40-µm rating..... E3

Adjusting springs:

0-150 psig (0-10 bar)..... H  
0-50 psig (0-3.4 bar)..... L  
Quick-fill lubricator Q-cap ..... Q

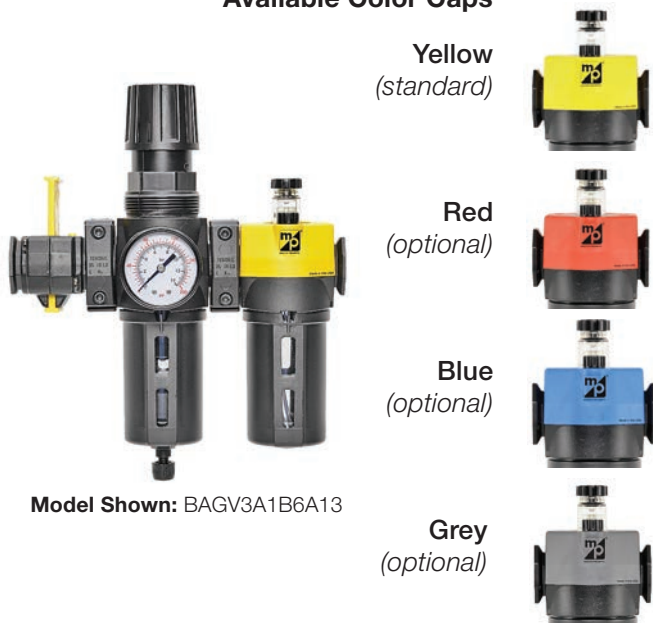
# SERIES 350 CFRLs

## Integral Filter/Regulator plus Lubricator

# BAGV3A0B6A13 Models

Port Sizes: 1/4, 3/8, 1/2

### Available Color Caps



Model Shown: BAGV3A1B6A13

## SPECIFICATIONS

**Ambient/Media Temperature:** (without lockout valve)

Plastic Bowl, all drain types: 40° to 125°F (4° to 52°C).

Metal Bowl, manual drains: 40° to 175°F (4° to 79°C).

Metal Bowl, float drains: 40° to 150°F (4° to 66°C).

**Body:** Zinc.

**Dome:** Nylon

**Bowl:** 5.1-Ounce (151-ml) polycarbonate plastic with nylon shatterguard; optional 6.0-Ounce (177-ml) aluminum bowl with clear nylon sight glass. Lubricator bowl only; optional 10-ounce (300-ml) extended aluminum bowl with clear nylon sight glass.

**Filter Bowl Drain:** Internal float drain; optional manual drain.

**Filter Element:** 5-µm-rated polyethylene; optional 5-µm, 20-µm, and 40-µm-rated bronze element.

**Fluid Media:** Compressed air.

**Filter Inlet Pressure:**

Plastic bowl & manual drain: 0-150 psig (0-10 bar).

Plastic bowl & Float drain: 30-150 psig (2-10 bar).

Metal bowl & manual drain: 0-250 psig (0-17 bar).

Metal bowl & Float drain: 30-200 psig (2-14 bar).

**Lubricator Inlet Pressure:**

Plastic bowl: 150 psig (10 bar) maximum.

Metal bowl: 250 psig (17 bar) maximum.

**Outlet Pressure:** Adjustable up to 150 psig (10 bar); optional adjusting springs.

**Optional Pressure Adjustment Locking Key:** Removable.

**Pressure Gauge:** Optional with 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.

**Panel Mounting:** 2-1/16-inch (52-mm) hole required.

**Seals:** Nitrile.

**Valve:** Brass.

**Lubricator Cap Color:** Yellow. Optional red, blue and grey.

**Oil Adjustment:** External; tamper resistant.

**Sight-Feed Dome:** Nylon.

## GENERAL

- ◆ Modular or inline mounting.
- ◆ Compatible with modular 380 series of products.
- ◆ NPTF port threads; optional BSPP threads.
- ◆ Front mounted modular clamping design with encapsulated screws.
- ◆ Polycarbonate bowl with shatterguard; optional metal bowl with nylon sight glass.
- ◆ Inlet pressure rated at 250 psig (17 bar) with metal bowls up to 175° F (79° C).

## INTEGRAL FILTER/REGULATOR

- ◆ Designed to remove particulate material down to 5 micron from the airstream to protect downstream equipment.
- ◆ Optional bronze 5-µm-rated, 20-µm-rated, and 40-µm-rated. 5-µm-rated polyethylene filter elements are standard.
- ◆ Superior water removal of free water up to 98% efficiency.
- ◆ Removal of effluents via manual or automatic float drains.
- ◆ Superior pressure regulation - diaphragm type regulator
- ◆ Self relieving design; large diaphragm sensing ratio; non-relieving optional.
- ◆ Optional pressure adjustment locking key; tamper resistant pressure setting.
- ◆ Optional pressure gauge.

## LUBRICATOR

- ◆ Sight feed design; transparent dome to show oil delivery.
- ◆ External oil delivery adjusting knob, removable for tamper resistance.
- ◆ Color caps available for visual management systems. (Blue, red, yellow and grey). Consult factory for custom colors.

## AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

## DIMENSIONS inches (mm)

Bowl	A	B †	C	Depth	Weight lb (kg)
Std plastic	8.76 (222.50)	5.54 (140.7)	4.68 (118.9)	2.90 (73.7)	4.7 (2.1)
Std metal	8.76 (222.50)	6.42 (163.1)	4.68 (118.9)	2.90 (73.7)	5.1 (2.3)

**Panel Mounting:** 2-1/16" (52mm) hole required.

**Lockout:** Without V380 lockout valve deduct 2.3 (58) from dimension A.

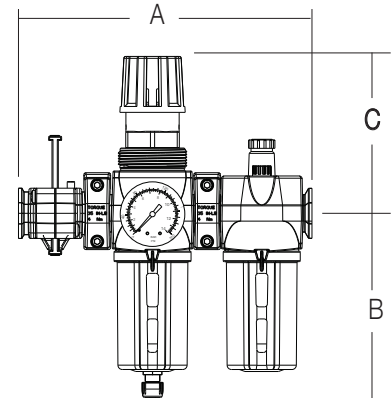
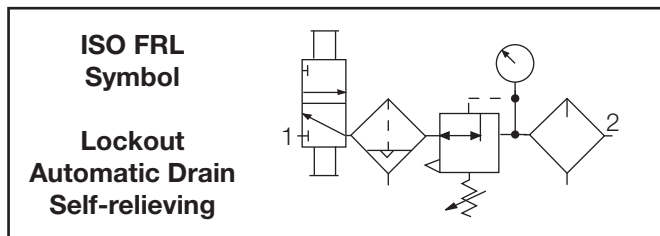
**† Bowl (standard) removal clearance:** add 3.1 (79)

**† Bowl (extended) removal clearance:** add 6.1 (155)

Dimensions above reflect less gauge.

## REPLACEMENT FILTER ELEMENT KITS

Element Rating	Kit Number
5-µm Polyethylene (Std element) .....	A60F-03PE5
40-µm Bronze .....	A60F-03E3
5-µm Bronze .....	A60F-03E5
20-µm Bronze .....	A60F-03E4



## ORDERING INFORMATION

Change the letters in the sample model number below to specify the CFR + L you want.

To order with some of the other available options, see Ordering Information on the following pages.

# B A G V 3 A 0 B 6 A 1 3

### LUBRICATOR CAP COLOR

Yellow (standard) ..... B  
 Red ..... C  
 Blue ..... D  
 Grey ..... A

### BOWL TYPE

All standard plastic ..... A  
 All standard metal ..... B  
 All metal bowls. Standard CFR ..... D  
 Extended Lubricator.

### VALVE OPTION

No valve ..... Leave blank  
 V380 shutoff valve ..... V

### INTEGRAL FILTER/REGULATOR

CFR350 ..... 3  
 CFR350-E3 ..... 4  
 CFR350-A (non-relieving) ..... 5  
 CFR350-H (0-200 psig) ..... 6  
 CFR350-L (0-50 psig) ..... 8  
 CFR350-P (with panel mount nut) .. 9  
 CFR350-E4 ..... L

### PORT TYPE

1/4 NPTF ..... 2  
 3/8 NPTF ..... 3  
 1/2 NPTF ..... 4  
 1/4 BSPP ..... B  
 3/8 BSPP ..... C  
 1/2 BSPP ..... D

### REGULATOR GAUGE

None ..... 0  
 200-BDD (0-200 psi) ..... 1  
 60BDD (0-60 psi) ..... 2

### MOUNTING BRACKETS

None ..... A  
 Back brackets ..... J

### CFR350 DRAIN TYPE

Manual..... 0  
 Plastic bowl, Float drain ..... 6  
     (plastic stem).  
 Metal bowl, Float drain ..... 8  
     (Brass stem).

### LUBRICATOR

L350D ..... B  
 L350D-Q (with Q-Cap) ..... C

# SERIES 350 CFRL WITH ADDITIONAL OPTIONS

Change the letters in the sample model number below to specify the **CFRL** you want.

Product will be assembled in order of model number chosen.

**NOTE:** For model number longer than 15 characters please consult Master Pneumatic.

**B A G V 3 X A A X A 0 X A 1 X A V 0 1 6 A 1 3**

## CAP COLOR

Yellow (standard) ..... B  
Red ..... C  
Blue ..... D  
Grey ..... A

## BOWL TYPE

All Plastic ..... A  
All Metal ..... B  
Extended metal bowl on ..... D  
coalescent filter and  
Lubricator. Standard metal  
bowl on CFR.  
Extended metal bowl ..... E  
on lubricator. Standard  
Metal bowl on filter and  
coalescent filter.

## LOCKOUT VALVE

No V380 valve ..... Leave Blank  
V380 valve ..... V

**Note:** a V380 lockout valve is not necessary when ordering assembly with V382, V383 or V384 Valve but if needed, can be ordered. Consult factory for coding.

V382 and V383 Valves are coded later in model number.

## INTEGRAL FILTER / REGULATOR

(Drain options are coded later in model number.)

None ..... 0  
CFR350 ..... 3  
CFR350-E3 ..... 4  
CFR350-A ..... 5  
CFR350-H ..... 6  
CFR350-L ..... 8  
CFR350-P ..... 9  
V383-N6A4A and CFR350-QE .... B  
V383-N6A4B and CFR350-QE .... C  
V383-N6A0A and CFR350-QE .... D  
V383-N6A0B and CFR350-QE .... E  
V382-N6A4A and CFR350-QE .... F  
V382-N6A4B and CFR350-QE .... G  
V382-N6A0A and CFR350-QE .... H  
V382-N6A0B and CFR350-QE .... J  
CFR350-E4 ..... L

## ADDITIONAL PORT (optional location 2)

None ..... Leave Blank  
1/4-NPTF extra port only ..... X0  
1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ... XA  
1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ... XB  
1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ... XC  
1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ... XD  
3/8-NPTF extra port only ..... XE  
1/2-NPTF extra port only ..... XF  
1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ... XG  
1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ... XJ  
1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ... XK

## COALESCENT FILTER

None ..... A  
FC350 ..... B  
FC350-E8 ..... C  
FC350 and FC350-E9 ..... D  
FC350-E8 and FC350-E9 ..... E  
FC350 and FC350-E8 ..... H

## ADDITIONAL PORT (optional location 1)

None ..... Leave Blank  
1/4-NPTF extra port only ..... X0  
1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ... XA  
1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ... XB  
1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ... XC  
1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ... XD  
3/8-NPTF extra port only ..... XE  
1/2-NPTF extra port only ..... XF  
1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ... XG  
1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ... XJ  
1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ... XK

# SERIES 350 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

**B A G V 3 X A A X A 0 X A 1 X A V 0 1 6 A 1 3**

## ADDITIONAL PORT (optional location 3)

None ..... Leave Blank  
 1/4-NPTF extra port only ..... X0  
 1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ... XA  
 1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ... XB  
 1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ... XC  
 1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ... XD  
 3/8-NPTF extra port only ..... XE  
 1/2-NPTF extra port only ..... XF  
 1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ... XG  
 1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ....XJ  
 1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ... XK

## LUBRICATOR and LUBRICATION

None ..... A  
 L350D ..... B  
 L350D-Q ..... C  
 PA640\*1, 118-109-\* male port, and A-00942M prefilled tubing..... D  
 PA600\*1, 118-109-\* male port, and A-00942M prefilled tubing .... F  
 PA640\*5, 118-109-\* male port, and A-00942M prefilled tubing .... H  
 PA600\*5, 118-109-\* male port, and A-00942M prefilled tubing .... K

**NOTE:** Option D, F, H, and K can only be used with 1/2 inlet and outlet ports and modular connections).

## ADDITIONAL PORT (optional location 4)

None ..... Leave Blank  
 1/4-NPTF extra port only ..... X0  
 1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ... XA  
 1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ... XB  
 1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ... XC  
 1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ... XD  
 3/8-NPTF extra port only ..... XE  
 1/2-NPTF extra port only ..... XF  
 1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ... XG  
 1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ....XJ  
 1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ... XK

## V382, V383 and V384 LOCKOUT VALVE

None ..... Leave Blank  
 V383-N6A4A (with pressure sensor) ..... V01  
 V383-N6A4B (with pressure sensor and muffler)..... V02  
 V383-N6A0A ..... V03  
 V383-N6A0B (with muffler) ..... V04  
 V382-N6A4A (with pressure sensor) ..... V09  
 V382-N6A4B (with pressure sensor and muffler)..... V10  
 V382-N6A0A ..... V11  
 V382-N6A0B (with muffler) ..... V12  
 V382-N6A3A (with 0-160 psig gauge) ..... V17  
 V382-N6A3B (with 0-160 psig gauge and muffler)..... V18



# SERIES 350 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

**B A G V 3 X A A X A 0 X A 1 X A V 0 1 6 A 1 3**

## DRAIN TYPE FOR INTEGRAL FILTER / REGULATOR AND COALESCING FILTER

Manual drain on filter and coalescing filter .....	0
Float drain (plastic stem) on filter and coalescing filter .....	6
(used with plastic bowls type only)	
Float drain (plastic stem) on filter and manual drain on coalescing filter .....	7
(used with plastic bowls type only)	
Float drain (brass stem) on filter and coalescing filter .....	8
(used with metal bowl type only)	
Float drain (brass stem) on filter and manual drain on coalescing filter .....	9
(used with metal bowl type only)	

## INLET BLOCK PORT - and - OUTLET BLOCK PORT

None .....	None .....	A
Female .....	Female .....	B
Male .....	Male .....	C
Male .....	Female .....	D
Female .....	Male .....	E
None .....	Female .....	F
None .....	Male .....	G
Female .....	None .....	H
Male .....	None .....	I
None with back bracket .....	None with back bracket .....	J
Female with back bracket .....	Female with back bracket .....	K
None with back bracket .....	Female with back bracket .....	L
Female with back bracket .....	None with back bracket .....	M
Male with back bracket .....	Female with back bracket .....	N

## REGULATOR GAUGE - and - COALESCING FILTER GAUGE

None .....	None .....	0
200-BDD (0-200 PSIG) .....	None .....	1
60BDD (0-60 PSIG) .....	None .....	2
200-BDD (0-200 PSIG) .....	Differential pressure gauge .....	5

# SERIES 350 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

## B A G V 3 X A A X A 0 X A 1 X A V 0 1 6 A 1 3

### INLET PORT - and - OUTLET PORT

1/4-NPTF .....	1/4-NPTF .....	2
3/8-NPTF .....	3/8-NPTF .....	3
1/2-NPTF .....	1/2-NPTF .....	4
1/4-BSPP .....	1/4-BSPP .....	B
3/8-BSPP .....	3/8-BSPP .....	C
1/2-BSPP .....	1/2-BSPP .....	D

Consult factory for mixed inlet and outlet port sizes. Note: when mixed inlet and outlet port sizes are chosen, the largest port size will be used on each product. Example Inlet = 3/8" and outlet = 1/2" then each product, ie: filter, regulator etc. would be 1/2" ports.

### SERIES 350/380 CUSTOMIZED INTERFACE

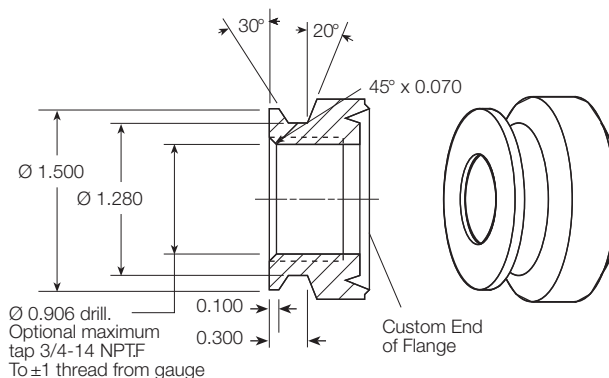
With this simple turned flange, users can easily customize their own products to interface directly with Series 350/380 modules using the clamp shown on page 345 (part number **A118-105**). See sketch below for dimensions.

Some potential usage examples are:

Turned Series 350/380 flange on a valve body.

Special auxiliary manifold blocks having Series 350/380 flange configuration.

Suitable materials for a custom port include aluminum, brass, steel, stainless steel, and zinc.



# VANGUARD Modular FRLs Integral Filter/Regulators plus Lubricator

# MVCFDRL108D Models Port Sizes: 1/4, 3/8, 1/2, 3/4



**Model Shown:**  
MVCFDRL108D-6

- ◆ Filter and regulator consolidated in a single assembly (**CFDR100**); sight-feed lubricator (**L28D**); lockout valve (**V35**).
- ◆ Modular or inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Zinc bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard.
- ◆ Internal automatic filter drain; optional manual drain, internal float drain, or external Hydro-Jector drain.
- ◆ Self-relieving diaphragm-type regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ NPTF port threads; optional **BSPP** threads.

## SPECIFICATIONS

**Ambient/Media Temperature:** (without lockout valve)  
Plastic Bowl, all drain types: 40° to 125°F (4° to 52°C).  
Metal Bowl, manual & automatic drains: 40° to 175°F (4° to 79°C).  
Metal Bowl, float drains: 40° to 150°F (4° to 66°C).

**Bodies:** Zinc for filter/regulator and lubricator.

**Bowls:** 8-Ounce (240-ml) capacity zinc bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard. Optional 20-ounce (600-ml) extended lubricator bowl.

**Bowl Rings:** Nylon.

### Filter Drain:

Internal automatic drain; optional manual drain, internal float drain, or external Hydro-Jector drain.

**Filter Element:** 5- $\mu$ m-rated polyethylene; optional 5- $\mu$ m, 20- $\mu$ m, or 40- $\mu$ m sintered bronze.

**Fluid Media:** Compressed air.

### Inlet Pressure:

Minimum: 15 psig (1 bar) with automatic drain, 30 psig (2 bar) with internal float drain.  
Maximum: 150 psig (10 bar) . With metal bowls but no lockout valve: 200 psig (13.7 bar) maximum.

**Oil Adjustment:** External; tamper-resistant.

**Outlet Pressure:** Adjustable up to 125 psig (8.6 bar).

**Pressure Adjustment Locking Key:** Removable.

**Pressure Gauge:** 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.

**Regulator:** Nylon dome; acetal knob.

**Seals:** Nitrile.

**Sight Dome:** Clear nylon.

## AIR FLOW DATA

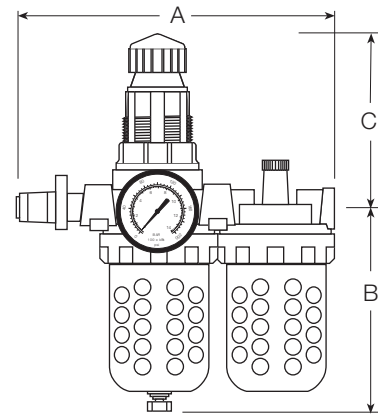
See Flow Charts for individual assembly components on preceding pages.

## DIMENSIONS inches (mm)

Bowls	A *	B	C	Depth †	Weight †
					lb (kg)
Std. Plastic	10.5 (267)	5.8 (147)	3.3 (84)	3.5 (89)	5.94 (2.69)
Std. Metal	10.5 (267)	6.4 (163)	3.3 (84)	3.5 (89)	7.74 (3.51)
Extended Metal	10.5 (267)	9.8 (249)	3.3 (84)	3.5 (89)	9.63 (4.37)

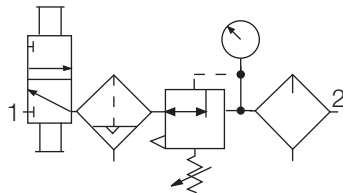
\*Without V35 lockout valve deduct 3.8 (97) from dimension A.

† Less gauge.



### ISO FRL Symbol

Lockout  
Automatic Drain  
Self-relieving



## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm polyethylene (Std element).....	KA103-03PE5
5-µm bronze .....	KA103-03E5
20-µm bronze.....	KA103-03E4
40-µm bronze.....	KA103-03E3

## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.

**NOTE:** For model numbers longer than 15 characters, please consult Master Pneumatic.

**B M V CFD RL 108D - 2 Y W**

### BOWL TYPE

Metal bowls ..... B  
Plastic bowls ... leave Blank

### ASSEMBLY

Modular.....M  
Pipe nipple ..... Leave Blank

### LOCKOUT VALVE

V35 Valve ..... V  
No valve ..... Leave Blank

### FILTER DRAIN

Internal automatic drain ..... CFD  
Manual drain ..... CF  
Internal float drain (**plastic stem**) ..... CF5A  
(Must be ordered with plastic bowl option under **BOWL TYPE**).  
Internal float drain (**brass stem**) ..... CF6A  
(Must be ordered with metal bowl option under **BOWL TYPE**).  
External Hydro-Jector drain; ..... CFE  
(Must be ordered with metal bowl option under **BOWL TYPE**).

### BOWL SIZE

Standard 8-ounce bowls ..... 108D  
8-Ounce filter bowl &  
20-ounce lubricator bowl  
(metal bowls only) ..... 108DH

### PORT TYPE

NPTF threads ..... Leave Blank  
BSPP threads ..... W

### OPTIONS (More than one option can be chosen. Add in alphabetical order)

None ..... Leave Blank  
Non-relieving regulator..... A  
Sintered bronze filter element:  
5-µm rating ..... E5  
20-µm rating ..... E4  
40-µm rating ..... E3  
Adjusting springs:  
0-175 psig (0-12 bar) ..... H\*\*  
0-50 psig (0-3.4 bar) ..... L  
Metal Dome ..... MD  
Limit maximum psig setting ..... M\*  
0-200 psig Gauge ..... Standard  
No gauge ..... NG  
Regulator tee handle ..... T  
Quick-fill lubricator Q-cap ..... Q

### PORT SIZE

1/4 NPTF..... 2  
3/8 NPTF..... 3  
1/2 NPTF..... 4  
3/4 NPTF..... 6

\* Insert maximum limited pressure.

\*\* H option spring includes metal dome

For external and additional modular port options see numbering chart on 354 page.

# VANGUARD Modular FRLs Integral Filter/Regulators plus Lubricator



**Model Shown:**  
MVCFDRL108W-4

## MVCFDRL108W Models Port Sizes: 1/4, 3/8, 1/2, 3/4

- ◆ Filter and regulator consolidated in a single assembly (**CFDR100**); wick-feed lubricator (**L28W**); lockout valve (**V35**).
- ◆ Modular or inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Zinc bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard.
- ◆ Internal automatic filter drain; optional manual drain, internal float drain, or external Hydro-Jector drain.
- ◆ Self-relieving diaphragm-type regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ **NPTF** port threads; optional **BSPP** threads.

### SPECIFICATIONS

**Ambient/Media Temperature:** (without lockout valve)

Plastic Bowl, all drain types: 40° to 125°F (4° to 52°C).

Metal Bowl, manual & automatic drains: 40° to 175°F (4° to 79°C).

Metal Bowl, float drains: 40° to 150°F (4° to 66°C).

**Bowls:** 8-Ounce (240-ml) capacity zinc bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard.

**Bowl Rings:** Aluminum.

**Filter Drain:**

Internal automatic drain; optional manual drain, internal float drain, or external Hydro-Jector drain.

**Filter Element:** 5- $\mu$ m-rated polyethylene; optional 5- $\mu$ m, 20- $\mu$ m, or 40- $\mu$ m sintered bronze.

**Fluid Media:** Compressed air.

**Heads:** Zinc.

**Inlet Pressure:**

Minimum: 15 psig (1 bar) with automatic drain, 30 psig (2 bar) with internal float drain.

150 psig (10 bar) maximum. With metal bowls but no **lockout valve**: 200 psig (13.7 bar) maximum.

**Oil Adjustment:** External; tamper-resistant.

**Outlet Pressure:** Adjustable up to 125 psig (8.6 bar).

**Pressure Adjustment Locking Key:** Removable.

**Pressure Gauge:** 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.

**Regulator:** Nylon dome; acetal knob.

**Seals:** Nitrile.

### AIR FLOW DATA

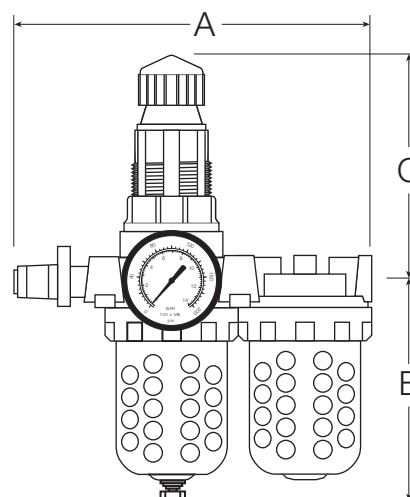
See Flow Charts for individual assembly components on preceding pages.

## DIMENSIONS inches (mm)

Bowls	A *	B	C	Depth †	Weight †
					lb (kg)
Plastic	10.5 (267)	5.8 (147)	3.3 (84)	3.5 (89)	5.94 (2.69)
Metal	10.5 (267)	6.4 (163)	3.3 (84)	3.5 (89)	7.74 (3.51)

\*Without V35 lockout valve deduct 3.8 (97) from dimension A.

† Less gauge.

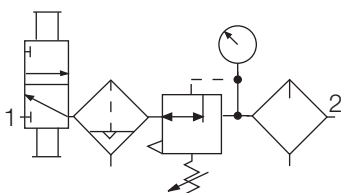


## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm polyethylene (Std element).....	KA103-03PE5
5-µm bronze .....	KA103-03E5
20-µm bronze.....	KA103-03E4
40-µm bronze.....	KA103-03E3

### ISO FRL Symbol

### Lockout Automatic Drain Self-relieving



## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.

**NOTE:** For model numbers longer than 15 characters, please consult Master Pneumatic.

**B M V CFD RL 108W - 2 Y W**

### BOWL TYPE

Metal bowls..... B  
Plastic bowls ... Leave Blank

### ASSEMBLY

Modular.....M  
Pipe nipple .....Leave Blank

### LOCKOUT VALVE

V35 Valve .....V  
None .. .....Leave Blank

### FILTER DRAIN

Internal automatic drain ..... CFD  
Manual drain ..... CF  
Internal float drain (**plastic stem**) ..... CF5A  
(Must be ordered with plastic bowl option under **BOWL TYPE**).  
Internal float drain (**brass stem**) ..... CF6A  
(Must be ordered with metal bowl option under **BOWL TYPE**).  
External Hydro-Jector drain; ..... CFE  
(Must be ordered with metal bowl option under **BOWL TYPE**).

### BOWL SIZE

Standard 8-ounce bowls ..... 108W

### PORT TYPE

NPTF threads ..... Leave Blank  
BSPP threads ..... W

### OPTIONS (More than one option can be chosen. Add in alphabetical order)

None ..... Leave Blank  
Non-relieving regulator..... A  
Sintered bronze filter element:  
5-µm rating..... E5  
20-µm rating..... E4  
40-µm rating..... E3  
Adjusting springs:  
0-175 psig (0-12 bar)..... H\*\*  
0-50 psig (0-3.4 bar)..... L  
Metal Dome ..... MD  
Limit maximum psig setting ..... M\*  
0-200 psig Gauge ..... Standard  
No gauge ..... NG  
Regulator tee handle ..... T  
Quick-fill lubricator Q-cap ..... Q

\* Insert maximum limited pressure.

\*\* H option spring includes metal dome

### PORT SIZE

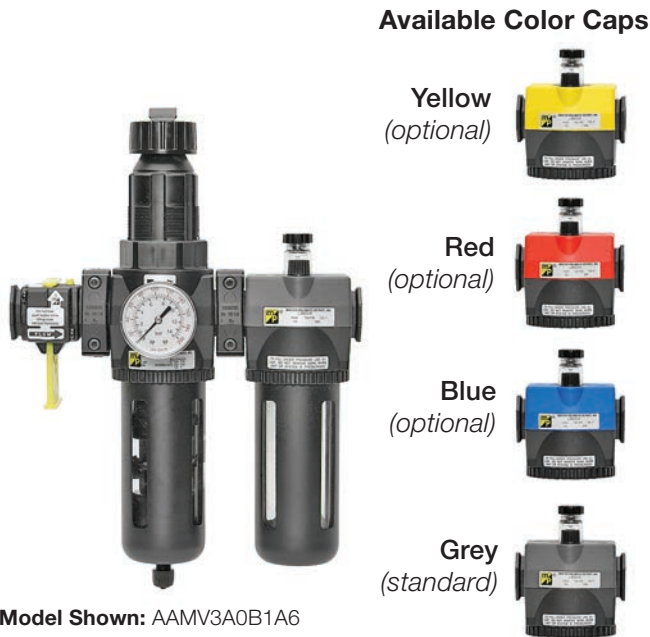
1/4 NPTF.....2  
3/8 NPTF.....3  
1/2 NPTF.....4  
3/4 NPTF.....6

For external and additional modular port options see numbering chart on 354 page.



# Full-Size SERIES 380 FRLs Integral Filter/Regulators plus Lubricator

## AAMV3A0B1A1 Models Port Sizes: 3/8, 1/2, 3/4



Model Shown: AAMV3A0B1A6

### SPECIFICATIONS

**Ambient/Media Temperature:** (without lockout valve)

Plastic Bowl, all drain types: 40° to 125°F (4° to 52°C).

Metal Bowl, manual & automatic drains: 40° to 175°F (4° to 79°C).

Metal Bowl, float drains: 40° to 150°F (4° to 66°C).

**Bowls:** 9-Ounce (270-ml) capacity aluminum bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard. Optional 15-ounce (450-ml) extended aluminum lubricator bowl with two clear nylon sight glasses.

**Cap Colors:** Filter/regulator, black only. Lubricator, grey; yellow, red, and blue optional.

**Filter Drain:** Internal automatic drain; optional manual drain, internal float drain, or Warrior electronic drain.

**Filter Element:** 5-µm-rated polyethylene; optional 40-µm element.

**Fluid Media:** Compressed air.

Heads: Zinc.

**Inlet Pressure:**

Minimum: 15 psig (1 bar) with automatic drain, 30 psig (2 bar) with internal float drain.

Metal bowls: 200 psig (13.7 bar) maximum.

Plastic bowls: 150 psig (10 bar) maximum.

**Oil Adjustment:** External; tamper-resistant.

**Outlet Pressure:** Adjustable up to 125 psig (8.6 bar).

**Pressure Adjustment Locking Key:** Removable.

**Pressure Gauge:** 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.

**Regulator Valve:** Brass.

**Seals:** Nitrile.

**Sight Dome:** Clear nylon.

- ◆ Filter and regulator consolidated in a single assembly (**CFDR380**); sight-feed lubricator (**L380D**); lockout valve (**V380**).
- ◆ Modular or inline mounting.
- ◆ 5-µm-rated polyethylene filter element; optional 40-µm element.
- ◆ Aluminum bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard.
- ◆ Internal automatic filter drain; optional manual drain, internal float drain, or Warrior electronic drain.
- ◆ Optional extended aluminum lubricator bowl with sight glasses.
- ◆ Self-relieving diaphragm-type regulator; non-relieving optional.
- ◆ Pressure gauge; two gauge ports.
- ◆ **NPTF** port threads; optional **BSPP** threads.

### AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

## DIMENSIONS inches (mm)

Bowl	A *	B **	C	Depth †	Weight † lb (kg)
Standard	9.6 (244)	7.7 (195)	5.4 (137)	2.9 (73)	5.81 (2.64)
Extended	9.5 (241)	10.6 (269)	5.4 (137)	2.9 (73)	6.00 (2.73)

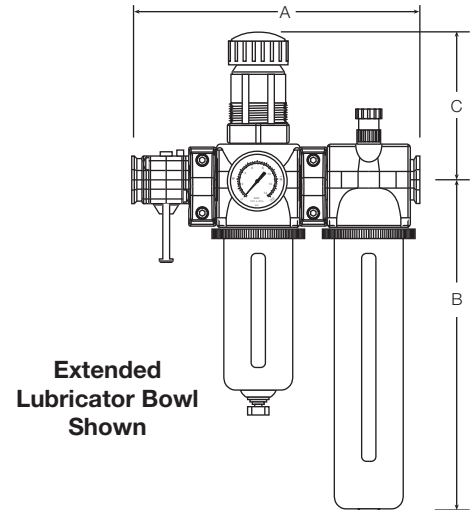
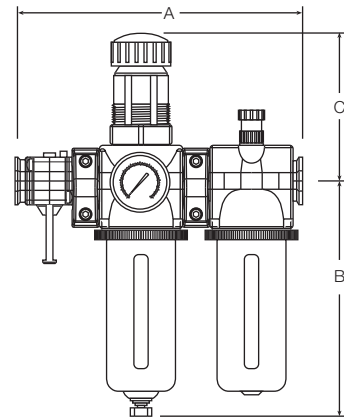
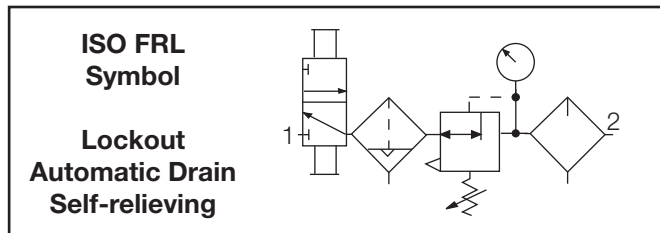
\* Without V380 lockout valve deduct 2.3 (58) from dimension A.

\*\* Bowl removal clearance: For 9-ounce plastic bowl add 4.2 (107).  
For 9-ounce metal bowl add 4.1 (104).  
For extended bowl add 6.1 (155).

† Less gauge.

## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5-µm (Std element) .....	A115-106PE5
40-µm bronze .....	A115-106PE3



## ORDERING INFORMATION

Change the letters in the sample model number below to specify the F/R + L you want.  
To order with some of the other available options, see Ordering Information on page 296.

**A A M V 3 A 0 B 1 A 1 3**

### LUBRICATOR CAP COLOR

Grey (Std) ..... A  
Yellow ..... B  
Red ..... C  
Blue ..... D

### BOWL TYPE

Two 9-ounce plastic ..... A  
Two 9-ounce metal ..... B  
9-Ounce metal on F/R and  
15-ounce on lubricator ..... D

### LOCKOUT VALVE

None ..... Leave Blank  
V380 Valve ..... V

### FILTER/REGULATOR MODEL

CFR380 (0-125 psig and ..... 3  
5-µm element)  
CFR380-E3 (0-125 psig and ..... 4  
40-µm element)  
CFR380-H (0-175 psig and ..... 6 \*  
5-µm element)  
CFR380-L (0-50 psig and ..... 8  
5-µm element)

\* H option spring includes metal dome

### PORT SIZE

3/8 NPTF ..... 3  
1/2 NPTF ..... 4  
3/4 NPTF ..... 6  
3/8 BSPP ..... C  
1/2 BSPP ..... D  
3/4 BSPP ..... E

### GAUGES

None ..... 0  
200-BDD (0-200 psig) ..... 1  
60BDD (0-60 psig) ..... 2

### MOUNTING OPTIONS

No end ports ..... A  
Mounting brackets only ..... J  
Female ports and  
mounting brackets ..... K

### FILTER DRAIN

Manual ..... 0  
Internal automatic ..... 1  
Warrior electronic ..... 2  
Internal float drain ..... 6

### LUBRICATOR

L380D ..... B  
L380D-Q (with quick-fill cap) ..... C

# SERIES 380 CFRL WITH ADDITIONAL OPTIONS

Change the letters in the sample model number below to specify the **CFRL** you want.

Product will be assembled in order of model number chosen.

**NOTE:** For model number longer than 15 characters please consult Master Pneumatic.

**A B M V 3 XA 1 XA 0 XA 1 XA V01 0 0 A 3**

## CAP COLOR

Grey (Std) .....A  
Yellow .....B  
Red .....C  
Blue .....D

## BOWL TYPE

All Plastic .....A  
All Metal .....B  
Extended metal bowl on ..... D  
coalescent filter and  
Lubricator. Standard metal  
bowl on filter  
Extended metal bowl .....E  
on lubricator. Standard  
Metal bowl on filter and  
coalescent filter.

## LOCKOUT VALVE

No V380 valve ..... Leave Blank  
V380 valve ..... V

**Note:** a V380 lockout valve is not necessary when ordering assembly with V382, V383 or V384 Valve but if needed, can be ordered. Consult factory for coding.

V382 and V383 Valves are coded later in model number.

## INTEGRAL FILTER / REGULATOR

(Drain options are coded later in model number.)

None ..... 0  
CFR380 ..... 3  
CFR380-E3 ..... 4  
CFR380-A ..... 5  
CFR380-H ..... 6  
CFR380-L ..... 8  
CFR380-P ..... 9  
V383-N6A4A and CFR380-QE .... B  
V383-N6A4B and CFR380-QE .... C  
V383-N6A0A and CFR380-QE .... D  
V383-N6A0B and CFR380-QE .... E  
V382-N6A4A and CFR380-QE .... F  
V382-N6A4B and CFR380-QE .... G  
V382-N6A0A and CFR380-QE .... H  
V382-N6A0B and CFR380-QE .... J  
CFR380-E4 ..... L

## ADDITIONAL PORT (optional location 2)

None ..... Leave Blank  
1/4-NPTF extra port only ..... X0  
1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ... XA  
1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ... XB  
1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ... XC  
1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ... XD  
3/8-NPTF extra port only ..... XE  
1/2-NPTF extra port only ..... XF  
1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ... XG  
1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ... XJ  
1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ... XK

## COALESCENT FILTER

None ..... A  
FC380 ..... B  
FC380-E8 ..... C  
FC380 and FC380-E9 ..... D  
FC380-E8 and FC380-E9 ..... E  
BFC380-LDC (used with metal bowl type only) ..... F  
BFC380-LDC and BFC380-E9LDC (used with metal bowl type only) ..... G  
FC380 and FC380-E8 ..... H

## ADDITIONAL PORT (optional location 1)

None ..... Leave Blank  
1/4-NPTF extra port only ..... X0  
1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ... XA  
1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ... XB  
1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ... XC  
1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ... XD  
3/8-NPTF extra port only ..... XE  
1/2-NPTF extra port only ..... XF  
1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ... XG  
1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ... XJ  
1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ... XK

# SERIES 380 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

**A B M V 3 XA 1 XA 0 XA 1 XA V01 0 0 A 3**

## ADDITIONAL PORT (optional location 3)

None ..... Leave Blank  
 1/4-NPTF extra port only ..... X0  
 1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ..... XA  
 1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ..... XB  
 1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ..... XC  
 1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ..... XD  
 3/8-NPTF extra port only ..... XE  
 1/2-NPTF extra port only ..... XF  
 1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ..... XG  
 1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ..... XJ  
 1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ..... XK

## LUBRICATOR and LUBRICATION

None ..... A  
 L380D ..... B  
 L380D-Q ..... C  
 PA640\*1, 118-109-\* male port, and A-00942M prefilled ..... D  
 tubing.  
 PA600\*1, 118-109-\* male port, and A-00942M prefilled ..... F  
 tubing.  
 PA640\*5, 118-109-\* male port, and A-00942M prefilled ..... H  
 tubing.  
 PA600\*5, 118-109-\* male port, and A-00942M prefilled ..... K  
 tubing.

**NOTE:** Option D, F, H, and K can only be used with 1/2 and 3/4 inlet and outlet ports and modular connections).

## ADDITIONAL PORT (optional location 4)

None ..... Leave Blank  
 1/4-NPTF extra port only ..... X0  
 1/4-NPTF extra port, PDA211-2, qty (2) 1/4-NPTF plugs ..... XA  
 1/4-NPTF extra port, PDA212-2, qty (2) 1/4-NPTF plugs ..... XB  
 1/4-NPTF extra port, PDA214-2, qty (2) 1/4-NPTF plugs ..... XC  
 1/4-NPTF extra port, PDA215-2, qty (2) 1/4-NPTF plugs ..... XD  
 3/8-NPTF extra port only ..... XE  
 1/2-NPTF extra port only ..... XF  
 1/4-NPTF extra port, PDA414-2, qty (2) 1/4-NPTF plugs ..... XG  
 1/4-NPTF extra port, PDA411-2, qty (2) 1/4-NPTF plugs ..... XJ  
 1/4-NPTF extra port, PDA413-2, qty (2) 1/4-NPTF plugs ..... XK

## V382, V383 and V384 LOCKOUT VALVE

None ..... Leave Blank  
 V383-N6A4A (with pressure sensor) ..... V01  
 V383-N6A4B (with pressure sensor and muffler) ..... V02  
 V383-N6A0A ..... V03  
 V383-N6A0B (with muffler) ..... V04  
 V382-N6A4A (with pressure sensor) ..... V09  
 V382-N6A4B (with pressure sensor and muffler) ..... V10  
 V382-N6A0A ..... V11  
 V382-N6A0B (with muffler) ..... V12  
 V382-N6A3A (with 0-160 psig gauge) ..... V17  
 V382-N6A3B (with 0-160 psig gauge and muffler) ..... V18

# SERIES 380 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

## A B M V 3 XA 1 XA 0 XA 1 XA V01 0 0 A 3

### DRAIN TYPE FOR INTEGRAL FILTER / REGULATOR AND COALESCING FILTER

Manual drain on filter and coalescing filter .....	0
Automatic drain on filter and coalescing filter .....	1
Warior drain on filter and coalescing filter (used with metal bowl type only) .....	2
Metal bowl hydro-jecton in filter, auto drain on coalescing filter .....	4
(used with metal bowl type only)	
Automatic drain on filter. Manual drain on coalescing filter .....	5
Float drain (plastic stem) on filter and coalescing filter .....	6
(used with plastic bowls type only)	
Float drain (plastic stem) on filter and manual drain on coalescing filter .....	7
(used with plastic bowls type only)	
Float drain (brass stem) on filter and coalescing filter .....	8
(used with metal bowl type only).	
Float drain (brass stem) on filter and manual drain on coalescing filter .....	9
(used with metal bowl type only)	

### INLET BLOCK PORT - and - OUTLET BLOCK PORT

None .....	None .....	A
Female .....	Female .....	B
Male .....	Male .....	C
Male .....	Female .....	D
Female .....	Male .....	E
None .....	Female .....	F
None .....	Male .....	G
Female .....	None .....	H
Male .....	None .....	I
None with back bracket .....	None with back bracket .....	J
Female with back bracket .....	Female with back bracket .....	K
None with back bracket .....	Female with back bracket .....	L
Female with back bracket .....	None with back bracket .....	M
Male with back bracket .....	Female with back bracket .....	N

### REGULATOR GAUGE - and -

None .....
200-BDD (0-200 PSIG) .....
60BDD (0-60 PSIG) .....
200-BDD (0-200 PSIG) .....
200-BDD (0-200 PSIG) .....
None .....
None .....
200-BDD (0-200 PSIG) .....
None .....
200-BDD (0-200 PSIG) .....
None .....

### COALESCING FILTER GAUGE

None .....	0
None .....	1
None .....	2
<b>Small</b> Differential pressure gauge .....	5
<b>Large</b> Differential pressure gauge .....	6
<b>Small</b> Differential pressure gauge .....	9
<b>Large</b> Differential pressure gauge .....	A
<b>Large</b> Differential pressure gauge .....	C
with normally <b>open</b> reed switch	
<b>Large</b> Differential pressure gauge .....	E
with normally <b>open</b> reed switch	
<b>Large</b> Differential pressure gauge .....	J
with normally <b>closed</b> reed switch	
<b>Large</b> Differential pressure gauge .....	L
with normally <b>closed</b> reed switch	

# SERIES 380 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

**A B M V 3 X A 1 X A 0 X A 1 X A V 0 1 0 0 A 3**

## INLET PORT - and - OUTLET PORT

3/8-NPTF .....	3/8-NPTF .....	3
1/2-NPTF .....	1/2-NPTF .....	4
3/4-NPTF .....	3/4-NPTF .....	6
3/8-BSPP .....	3/8-BSPP .....	C
1/2-BSPP .....	1/2-BSPP .....	D
3/4-BSPP .....	3/4-BSPP .....	E

Consult factory for mixed inlet and outlet port sizes. Note: when mixed inlet and outlet port sizes are chosen, the largest port size will be used on each product. Example Inlet = 3/8" and outlet = 1/2" then each product, ie: filter, regulator etc. would be 1/2" ports.

## SERIES 380 CUSTOMIZED INTERFACE

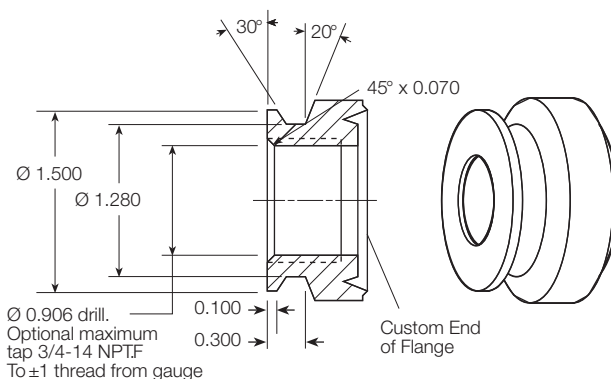
With this simple turned flange, users can easily customize their own products to interface directly with Series 380 modules using the clamp shown on page 275 (part number **A118-105**). See sketch below for dimensions.

Some potential usage examples are:

Turned Series 380 flange on a valve body.

Special auxiliary manifold blocks having Series 380 flange configuration.

Suitable materials for a custom port include aluminum, brass, steel, stainless steel, and zinc.





## SENTRY Modular Accessories

Sentry modular units use end plates secured with screws to hold the ports in place, and also to serve as mounting brackets. Short screws secure the end plates when a single module is used; long screws when two or more modules are used. Parts required for assembly are as follows:



**Sentry  
End Plate**

Item	Part Number	Quantity Required		
		1 Unit	2 Units	3 Units
End Plate	10R-10	2	2	2
Short Screw	10R-18	4	2	0
Long Screw	10R-19	0	2	4
Small O-ring	103-95	1	1	1
Large O-ring	33-53	1	2	3
Ports		See Chart at Right		

Sentry assemblies can be fitted with either threaded pipe ports or ports for tubing. The sizes available are shown below. Two ports required for each assembly.

PIPE PORTS		TUBING PORTS	
Pipe Size	Port Number	Tubing Size	Port Number
G 1/8	10R-21-1/8W	1/4	A10R-21-04
G 1/4	10R-21-1/4W	3/8	A10R-21-06
1/8 NPT	10R-21-1/8	4 mm	A10R-21-M4
1/4 NPT	10R-21-1/4	6 mm	A10R-21-M6
		8 mm	A10R-21-M8
		10 mm	A10R-21-M10

## GUARDSMAN and VANGUARD Modular Accessories

### MODULAR CONNECTORS



**GUARDSMAN** and **VANGUARD** modular components can be joined or removed quickly with these specially designed connectors. Each connector includes an O-ring assembly which forms an air-tight seal between modules. **FRL** and other assemblies include the required modular connectors between components, unless the assembly has been specifically ordered for connection with pipe nipples.

Connectors can be ordered as part number KA30-04.

### MODULAR MALE PORT

Used to connect modular units to non-modular units. Also allows right-angle connections by using the side ports or extra ports shown at the right.



Port Size	Male Port Part Number
1/4-NPTF .....	30-11-1/4
1/4-BSPT .....	30-11-1/4W
3/8-NPTF .....	30-11-3/8
3/8-BSPT .....	30-11-3/8W
1/2-NPTF .....	30-11-1/2
1/2-BSPT .....	30-11-1/2W
3/4-NPTF .....	30-11-3/4
3/4-BSPT .....	30-11-3/4W

### MODULAR FEMALE PORT

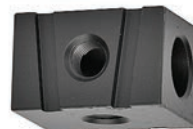
Used to connect modular units to piping at inlet or outlet.



Port Size	Female Port Part Number
1/4-NPTF .....	30-12-1/4
1/4-BSPP .....	30-12-1/4W
3/8-NPTF .....	30-12-3/8
3/8-BSPP .....	30-12-3/8W
1/2-NPTF .....	30-12-1/2
1/2-BSPP .....	30-12-1/2W
3/4-NPTF .....	30-12-3/4
3/4-BSPP ... ..	30-12-3/4W

### MODULAR EXTRA PORTS

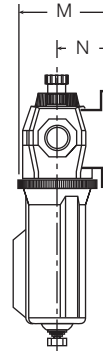
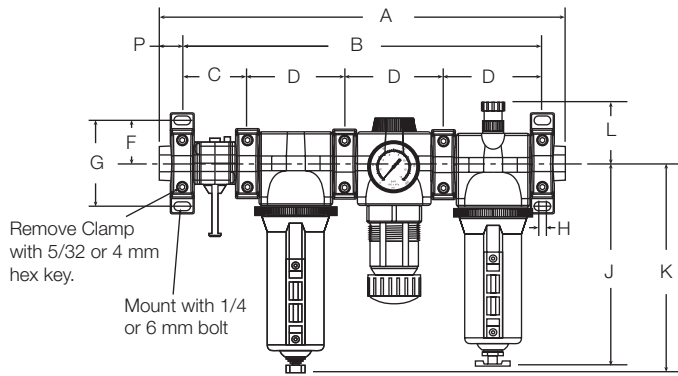
Used before or after a modular unit to supply three auxiliary 1/4 ports.



Port Size	Female Port Part Number
1/4-NPTF .....	30-13
1/4-BSPP .....	30-13W

# SERIES 350 and 380 Modular Accessories

Dimensions: inches (mm)



	350	380
<b>A</b>	13.78 (350.1)	15.35 (389.9)
<b>B</b>	12.02 (305.4)	13.59 (345.2)
<b>C</b>	2.5 (63.5)	2.5 (63.5)
<b>D</b>	3.28 (83.3)	3.71 (94.2)
<b>F</b>	1.50 (38.1)	1.50 (38.1)
<b>G</b>	3.00 (76.2)	3.00 (76.2)
<b>H</b>	0.20 (5.1)	0.20 (5.1)
<b>J</b>	6.02 (152.9)	7.36 (186.9)
<b>K</b>	6.42 (163.1)	7.56 (192.0)
<b>L</b>	2.21 (56.1)	2.19 (55.6)
<b>M</b>	3.05 (77.5)	3.24 (82.3)
<b>N</b>	1.79 (45.5)	1.79 (45.5)
<b>P</b>	0.88 (22.4)	0.88 (22.4)



Module Connecting Clamp  
(Patent No.: US 6,896,301 B2)  
Part No. A118-105

Combined Clamp & Bracket  
Part No. A118-105M

Mounting Bracket  
Part No. A118-103

## CLAMP for MODULE CONNECTIONS

Specially designed clamps provide a quick and easy assembly or disassembly of Series 350 and 380 modules. Two allen-head bolts quickly tighten or loosen the clamp using a 5/32 or 4mm hex key. The clamp contains a plate carrying two O-rings to provide positive sealing between modules. Order clamp by part number A118-105. Combined clamp and bracket (below) can be ordered by part number A118-105M.

## MOUNTING BRACKET

Two brackets are normally used to mount an FRL to a vertical surface. The mounting bracket attaches to the module-connecting clamp (see above) with a single screw. Each bracket then employs two bolts (1/4" or 6mm) to connect the assembly to the mounting surface. Order bracket and screw by part number A118-103. Combined bracket and clamp (above) can be ordered by part number A118-105M.

## MALE and FEMALE END PORTS



Either male or female end ports can be attached to threaded inlet and outlet lines. This allows all modules of an FRL assembly to be removed easily and quickly without having to unthread the end modules. The end ports are attached to the modules with clamps (see at left). End ports can be included in an assembled FRL or ordered separately by the following part numbers:

Port Size	Male Number	Female Number
1/4 NPTF	118-109-2F	118-100-2
1/4 BSP*	118-109-2FW	118-100-2W
3/8 NPTF	118-109-3F	118-100-3
3/8 BSP*	118-109-3FW	118-100-3W
1/2 NPTF	118-109-4F	118-100-4
1/2 BSP*	118-109-4FW	118-100-4W
3/4 NPTF	118-109-6F	118-100-6
3/4 BSP*	118-109-6FW	118-100-6W

**Note:** \* = add T for male threads P for female threads.

## EXTRA PORT BLOCK

An extra port block can be placed between modules to provide two auxiliary ports. Its mounting position can be rotated to obtain the most convenient operating orientation. If only one auxiliary port is to be used, the unused port must be closed with a pipe plug. (The inlet and outlet are not threaded.) Order with FRLs or order by the following part numbers:

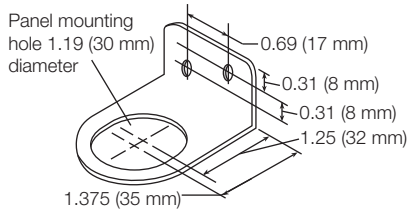
Auxiliary Port Size	Part Number
1/4 NPTF.....	118-106-2
1/4-BSP.....	118-106-2W
3/8 NPTF.....	118-106-3
3/8-BSP.....	118-106-3W
1/2 NPTF.....	118-106-4
1/2-BSP.....	118-106-4W



# Mounting Accessories

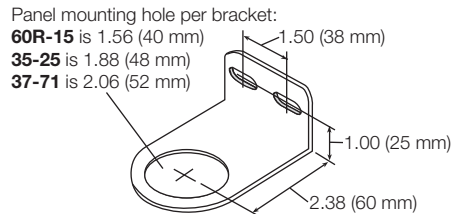
## REGULATOR MOUNTING BRACKETS

Regulators and integral filter/regulators can be mounted to a surface with a bracket that attaches to the regulator. Brackets and mounting nuts can be ordered separately or in a kit which includes both bracket and mounting nut.



### SENTRY and MINIATURE

Kit: A33-82, Bracket: 33-82, Nut: 10R-26



### GUARDSMAN and GUARDSMAN II

Kit: K60R-15, Bracket: 60R-15, Nut: 60R-14P

#### R75 SERIES

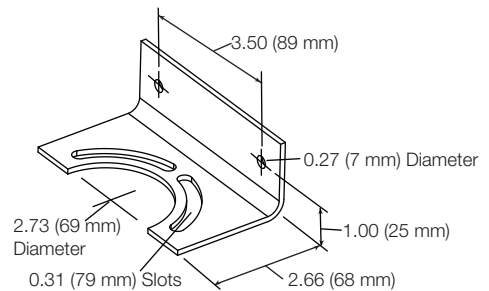
Kit: None, Bracket: 35-25, Nut: None

#### R350 SERIES

Kit: A127-11, Bracket: 37-71, Nut: 127-11

#### SERIES 380 and VANGUARD

Kit: K37-71, Bracket: 37-71, Nut: 37-345F

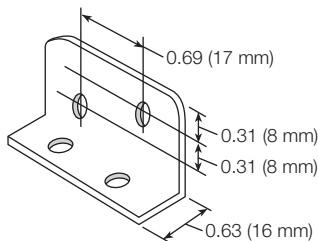


### HPR100 and HPR180

Kit: A37-381, Bracket: 37-.364, Nut: None

## MODULAR MOUNTING BRACKETS

Two L-shaped metal brackets as shown below can be used for wall mounting of modular FRLs or Clean Air Packages. A single bracket can be used to mount individual filters or lubricators. Kits include two brackets and four screws for attaching the brackets to the modules.



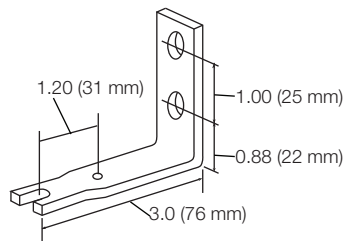
### SENTRY

Screws: 10R-19 (2 required), Bracket: None

### MINIATURE

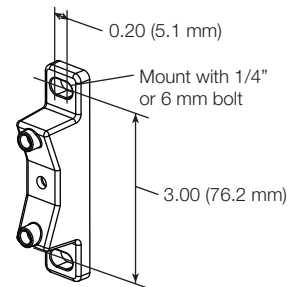
Kit: K50-01, Bracket: 50-01

Note: miniature can only be used in conjunction with 'T' suffix option on FD50, FCD50, and L50 products.



### GUARDSMAN and Modular VANGUARD

Kit: K30-08, Bracket: 30-08

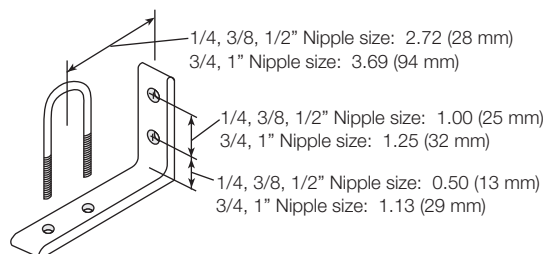


### 380 SERIES

Kit: A118-103, Bracket: None

## FRL INLINE MOUNTING PIPE BRACKETS

Two pipe brackets can be used for wall mounting of FRL assemblies that use pipe nipples to join the components. The bracket kits listed below include two sets of brackets.



### ALL PIPED ASSEMBLIES

Nipple size: 1/4" Kit: UMB-2

Nipple size: 3/8" Kit: UMB-3

Nipple size: 1/2" Kit: UMB-4

Nipple size: 3/4" Kit: UMB-6

Nipple size: 1" Kit: UMB-8

Note: No mounting brackets available for PR180M, PRH180M, 1-1/4" or 1-1/2".