

# High-Flow VANGUARD FRLs Filter-Regulator-Lubricators

# FDRL189D Models Port Sizes: 3/4, 1



Model Shown: FDRL189D-8

## 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:** 16-Ounce (480-ml) capacity aluminum bowls with sight glass or polycarbonate plastic bowls with steel shatterguard.

**Bowl Rings:** Aluminum.

**Filter Drain:**

Internal automatic drain; optional manual drain, internal float drain, external Hydro-Jector drain, or Warrior electronic 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:** Aluminum.

**Inlet Pressure:**

Minimum: 15 psig (1 bar) with automatic drain, 30 psig (2 bar) with internal float drain.  
Plastic bowls: 150 psig (10 bar) maximum.  
Metal bowls: 200 psig (14 bar) maximum.

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

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

**Pressure Adjustment Locking Key:** Removable.

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

**Seals:** Nitrile.

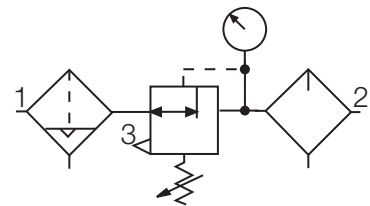
- ◆ Individual filter (FD100); piston-type regulator (R180M); sight feed design lubricator (L29D).
- ◆ Inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Metal bowls with clear nylon sight glass **or** polycarbonate plastic bowls with steel shatterguard.
- ◆ Internal automatic filter drain. Optional manual drain, internal float drain, external Hydro-Jector drain, or Warrior electronic drain.
- ◆ Self-relieving regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ NPTF port threads; optional BSPP threads.

### AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

### ISO FRL Symbol

Automatic Drain  
Self-relieving

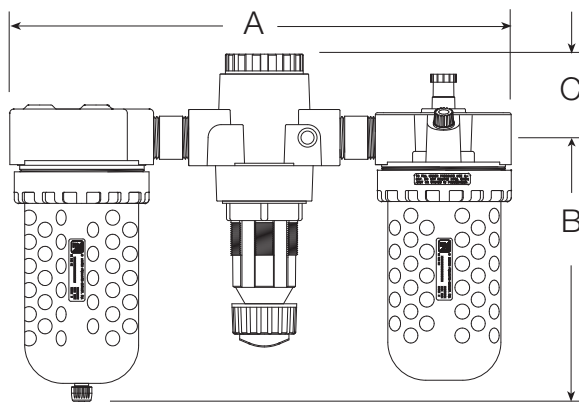


## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5- $\mu$ m polyethylene (Std element).....	KA109-3PE
5- $\mu$ m bronze .....	KA109-03E5
20- $\mu$ m bronze .....	KA109-03E4
40- $\mu$ m bronze .....	KA109-03E3

## DIMENSIONS inches (mm)

				Weight
A	B	C	Depth	lb (kg)
15.8 (401)	8.0 (204)	1.4 (37)	4.3 (108)	8.00 (3.64)



## ORDERING INFORMATION

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

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

**B FD R L 1 8 9D - 6 Y W**

### BOWL TYPE

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

### FILTER DRAIN

No filter ..... Leave blank  
Internal automatic drain ..... FD  
Manual drain ..... F  
Internal float drain (**plastic stem**) ..... F5A  
(Must be ordered with plastic bowl option under **BOWL TYPE**).  
Internal float drain (**brass stem**) ..... F6A  
(Must be ordered with metal bowl option under **BOWL TYPE**).  
External Hydro-Jector drain; ..... FE  
(Must be ordered with metal bowl option under **BOWL TYPE**).  
Warrior electronic drain; ..... F2A  
(Must be ordered with metal bowl option under **BOWL TYPE**).

### REGULATOR

No Regulator ..... Leave Blank  
Regulator ..... R

### LUBRICATOR

No Lubricator ..... Leave Blank  
Lubricator..... L

### FILTER WITH DIFFERENTIAL GAUGE OPTION

*Only applies to standard filter option above. Coalescent options*

*are setup separately in another section.*  
No Filter ..... 1  
Standard filter no tapped head ..... 1

**Anyone requiring a filter and/or coalescing filter with a differential pressure gauge, contact factory for number.**

### REGULATOR

No Regulator ..... 0  
Regulator ..... 8

### LUBRICATOR

No Lubricator ..... 0  
Lubricator..... 9D

### 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:

0-150 psig (0-10 bar).....H \*\*

0-50 psig (0-3.4 bar).....L

Delete bowl drain: 1/4 NPT

female port instead .....LDC

Metal dome .....MD

Limit maximum psig setting .....M\*

Delete gauge .....NG

Regulator tee handle .....T

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

\* Insert maximum limited pressure.

\*\* H option spring includes metal dome.

### PORT SIZE

3/4 NPTF.....6

1 NPTF.....8

# High-Flow VANGUARD FRLs Filter-Regulator-Lubricators

# FDRL180 Models Port Sizes: 3/4, 1



Model Shown: FDRL180-6

## 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:** 16-Ounce (480-ml) capacity aluminum bowls with sight glass or polycarbonate plastic bowls with steel shatterguard.
- Bowl Rings:** Aluminum.
- Filter Drain:**  
Internal automatic drain; optional manual drain, internal float drain, external Hydro-Jector drain, or Warrior electronic 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:** Aluminum.
- Inlet Pressure:**  
Minimum: 15 psig (1 bar) with automatic drain, 30 psig (2 bar) with internal float drain.  
Plastic bowls: 150 psig (10 bar) maximum.  
Metal bowls: 200 psig (14 bar) maximum.
- Oil Adjustment:** External; tamper-resistant.
- Outlet Pressure:** Adjustable up to 100 psig (7 bar).
- Pressure Adjustment Locking Key:** Removable.
- Pressure Gauge:** 0 to 200 psig (14 bar); 1/4 NPT gauge ports front and rear.
- Seals:** Nitrile.

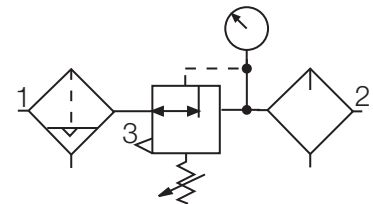
- ◆ Individual filter (**FD100**); piston-type regulator (**R180M**); wick-feed lubricator (**L100**)
- ◆ Inline mounting.
- ◆ 5- $\mu$ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Metal bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard.
- ◆ Internal automatic filter drain. Optional manual drain, internal float drain, external Hydro-Jector drain, or Warrior electronic drain.
- ◆ Self-relieving regulator; non-relieving optional.
- ◆ Pressure guage
- ◆ **NPTF** port threads; optional **BSPP** threads.

### AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

### ISO FRL Symbol

Automatic Drain  
Self-relieving

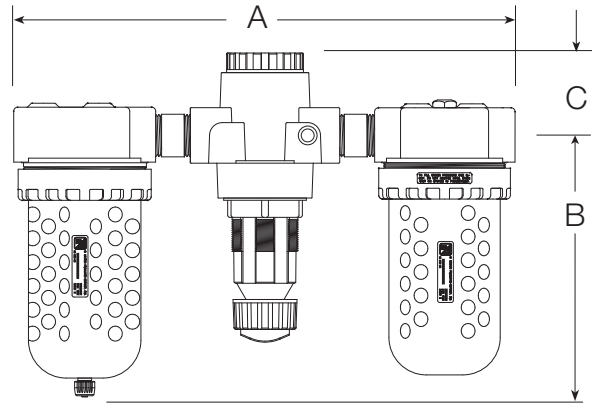


## REPLACEMENT FILTER ELEMENT KITS

Element Type	Kit Number
5- $\mu$ m polyethylene (Std element).....	KA109-3PE
5- $\mu$ m bronze .....	KA109-03E5
20- $\mu$ m bronze .....	KA109-03E4
40- $\mu$ m bronze .....	KA109-03E3

## DIMENSIONS inches (mm)

DIMENSIONS inches (mm)				Weight
A	B	C	Depth	lb (kg)
15.8 (401)	8.0 (204)	1.2 (31)	4.3 (108)	8.00 (3.64)



## ORDERING INFORMATION

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

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

### DIFFERENTIAL PRESSURE GAUGE for COALESCENT FILTER

Consult factory for differential pressure gauges on filters or no gauge on coalescing filters.

No coalescent filter .....	Leave Blank
Tapped ports on head, small gauge .....	S
Tapped ports on head, large gauge .....	Leave Blank
Tapped ports on head, large gauge .....	E
with normally <b>OPEN</b> reed switch.	
Tapped ports on head, large gauge .....	E2
with normally <b>CLOSED</b> reed switch.	

### REGULATOR

No Regulator .....	0
Regulator .....	8

### BOWL TYPE for FILTER, COALESCENT FILTER, and LUB

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

### FILTER DRAIN

No filter .....	Leave blank
Internal automatic drain .....	FD
Manual drain .....	F
Internal float drain ( <b>plastic stem</b> ) .....	F5A
(Must be ordered with plastic bowl option under <b>BOWL TYPE</b> ).	
Internal float drain ( <b>brass stem</b> ) .....	F6A
(Must be ordered with metal bowl option under <b>BOWL TYPE</b> ).	
External Hydro-Jector drain; .....	FE
(Must be ordered with metal bowl option under <b>BOWL TYPE</b> ).	
Warrior electronic drain; .....	F2A
(Must be ordered with metal bowl option under <b>BOWL TYPE</b> ).	

### COALESCENT FILTER DRAIN

No coalescing filter .....	Leave blank
Internal automatic drain .....	FCD
Manual drain .....	FC
Internal float drain ( <b>plastic stem</b> ) .....	FC5A
(Must be ordered with plastic bowl option under <b>BOWL TYPE</b> ).	
Internal float drain ( <b>brass stem</b> ) .....	FC6A
(Must be ordered with metal bowl option under <b>BOWL TYPE</b> ).	
External Hydro-Jector drain; .....	FCE
(Must be ordered with metal bowl option under <b>BOWL TYPE</b> ).	
Warrior electronic drain; .....	FC2A
(Must be ordered with metal bowl option under <b>BOWL TYPE</b> ).	

### PORT TYPE

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

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

None .....	Leave Blank
0-200 psig Gauge .....	Leave Blank
Mounting nut .....	P

### PORT TYPE

NPTF .....	Leave Blank
BSPF .....	W

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

None .....	Leave Blank
Non-relieving regulator .....	A

### Polyethylene filter element:

5- $\mu$ m rating .....	Leave Blank
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### Bronze filter element:

5- $\mu$ m rating .....	E5
20- $\mu$ m rating .....	E4
40- $\mu$ m rating .....	E3

### Coalescent Filter element:

0.3- $\mu$ m rating .....	Leave Blank
0.01- $\mu$ m rating .....	E8

### Springs - regulator: (0-100 psig standard)

For optimum performance operating pressure should fall approximately in the middle of the spring range.

0-150 psig (0-10 bar) .....	H**
0-50 psig (0-3.4 bar) .....	L
0-20 psig (0-1.4 bar) .....	L20

No bowl drain for filter and ..... LDC coalescent filter (1/4 NPT female port instead. Also use 'B' option under '**BOWL TYPE for FILTER, COALESCENT FILTER, and LUB**' section.)

Metal regulator dome .....	MD
No regulator gauge for .....	NG
Quick-fill Q-cap for lubricator .....	Q
Tee handle for regulator .....	T

\*\* H option spring includes metal dome.

### LUBRICATOR

No Lubricator .....	Leave Blank
Lubricator .....	L

### REGULATOR

No Regulator .....	Leave Blank
Regulator .....	R

**B FD FC R L 1 8 0 S - 6 A P W**