

High-Flow VANGUARD FRLs Filter-Regulator-Lubricators

BFDRL289D Models Port Sizes: 1-1/4, 1-1/2



Model Shown: BFDRL289D-12

- ◆ Individual filter (BFD200); piston-type regulator (R180); sight-feed lubricator (BL29D).
- ◆ Inline mounting.
- ◆ 40- μ m-rated sintered bronze filter element; optional 5- μ m sintered bronze element.
- ◆ Aluminum bowls with clear nylon sight glass. Optional extended lubricator bowl.
- ◆ 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.

SPECIFICATIONS

Ambient/Media Temperature:

Manual & automatic drains: 40° to 175°F (4° to 79°C).
Float drain: 40° to 150°F (4° to 66°C).

Bowls: 35-Ounce (1 liter) capacity aluminum bowls with clear nylon sight glass. Optional 62-ounce (1830-ml) capacity extended lubricator bowl with two sight glasses.

Bowl Rings: Aluminum.

Filter Drain:

Internal automatic drain. Optional manual drain, internal float drain, external Hydro-Jector drain, or Warrior electronic drain.

Filter Element: 40- μ m-rated sintered bronze; optional 5- μ 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.
Maximum: 200 psig (14 bar).

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.

Regulator: Nylon dome; acetal knob. Aluminum dome with optional 0-150 psig spring.

Seals: Nitrile.

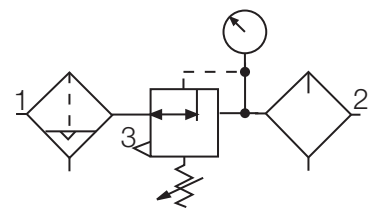
Sight Dome: Clear nylon.

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
40- μ m bronze (Std element)	A114-106E3
5- μ m bronze	A114-106E5

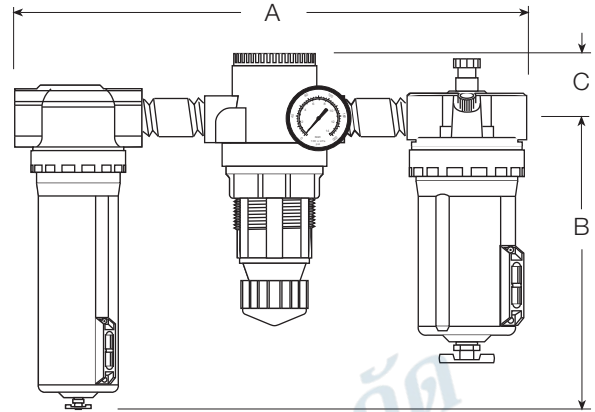


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DIMENSIONS inches (mm)

				Weight
A	B	C	Depth	lb (kg)
15.8 (401)	10.6 (268)	2.1 (54)	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 2 8 9D - 10 Y NG W

FILTER DRAIN

Internal automatic drain FD
 Manual drain..... F
 Internal float drain F6A
 (Brass stem).
 External Hydro-Jector drain FE
 Warrior electronic drain F2A

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 2

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 SIZE

1-1/4 NPTF 10
 1-1/2 NPTF 12

PORT TYPE

NPTF threads Leave Blank
 BSPP threads W

GAUGE

0-200 psig Gauge Leave Blank
 No gauge NG

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
 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*
 Regulator tee handle T
 Quick-fill lubricator Q-cap Q

* Insert maximum limited ressure.

** H option spring includes metal dome.



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Full-Size VANGUARD MODULAR with ADDITIONAL OPTIONS

Integral Filter-Regulator-Lubricator assemblies

MVCFDRL108 assemblies requiring modular external and internal ports.

ADDITIONAL PORT OPTIONS (Apply code in location needed between products. Example: need port between regulator and lubricator, place in second XA slot).

None.....	Leave Blank
1/4-NPTF extra port block only	X
1/4-NPTF extra port block, PDA211-2	XA
1/4-NPTF extra port block, PDA212-2	XB
1/4-NPTF extra port block, PDA214-2	XC
1/4-NPTF extra port block, PDA215-2	XD
1/4-NPTF extra port block, PDA414-2	XG
1/4-NPTF extra port block, PDA411-2	XJ
1/4-NPTF extra port block, PDA413-2	XK

BOWL TYPE

Plastic	Leave Blank
Metal	B

B M V 0 XA 7 XA 2 XA - B B - 2 W

LOCKOUT VALVE

None.....	Leave Blank
V35 Valve	V

INTEGRAL FILTER/REGULATOR

CFR100	7
CFDR100	8

LUBRICATOR

None.....	0
L28D	2
L28W	3

EXTERNAL INLET PORT OPTIONS

MALE PORT	A
FEMALE PORT	B

EXTERNAL OUTLET PORT OPTIONS

MALE PORT	A
FEMALE PORT	B

PORT SIZE

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

PORT TYPE

NPTF	Leave blank
BSPP	W



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Full-Size VANGUARD MODULAR with ADDITIONAL OPTIONS Filter-Regulator-Lubricator assemblies

MVFDRL108 assemblies requiring modular external and internal ports.

ADDITIONAL PORT OPTIONS (Apply code in location needed between products. Example: need port between regulator and lubricator, place in second XA slot).

None.....	Leave Blank
1/4-NPTF extra port block only	X
1/4-NPTF extra port block, PDA211-2	XA
1/4-NPTF extra port block, PDA212-2	XB
1/4-NPTF extra port block, PDA214-2	XC
1/4-NPTF extra port block, PDA215-2	XD
1/4-NPTF extra port block, PDA414-2	XG
1/4-NPTF extra port block, PDA411-2	XJ
1/4-NPTF extra port block, PDA413-2	XK

BOWL TYPE

Plastic	Leave Blank
Metal	B

B M V 3 XA 3 XA 2 XA - B B - 2 W

LOCKOUT VALVE

None.....	Leave Blank
V35 Valve	V

FILTER and COALESCING FILTER

None.....	0
F100	3
FD100	4
FC100	5
FD100 and FC101	6

REGULATOR

None.....	0
R100	3
IR100	4

LUBRICATOR

None.....	0
L28D	2
L28W	3

EXTERNAL INLET PORT OPTIONS

MALE PORT	A
FEMALE PORT	B

EXTERNAL OUTLET PORT OPTIONS

MALE PORT	A
FEMALE PORT	B

PORT SIZE

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

PORT TYPE

NPTF	Leave blank
BSPP	W



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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- μ m-rated polyethylene; optional 5- μ m, 20- μ m, or 40- μ 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.

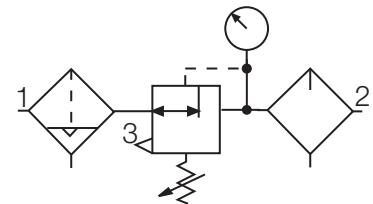
- ◆ Individual filter (**FD100**); piston-type regulator (**R180M**); wick-feed lubricator (**L100**)
- ◆ Inline mounting.
- ◆ 5- μ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Metal bowls with clear nylon sight glass or polycarbonate plastic bowls with steel shatterguard.
- ◆ 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- μ m polyethylene (Std element).....	KA109-3PE
5- μ m bronze	KA109-03E5
20- μ m bronze	KA109-03E4
40- μ m bronze	KA109-03E3

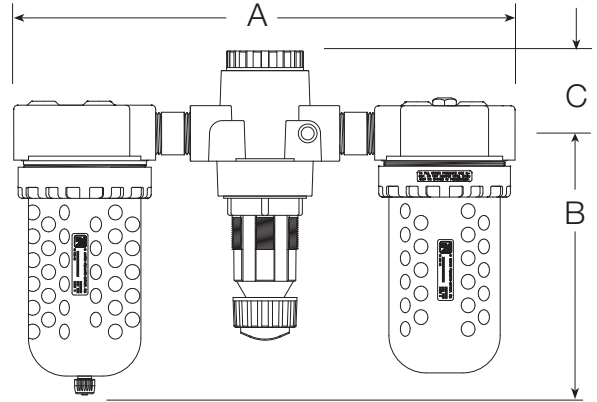


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DIMENSIONS inches (mm)

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 OPEN reed switch.	
Tapped ports on head, large gauge	E2
with normally CLOSED 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 (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).	

COALESCENT FILTER DRAIN

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

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-µm rating	Leave Blank
-------------------	-------------

Bronze filter element:

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

Coalescent filter element:

0.3-µm rating	Leave Blank
0.01-µm 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



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High-Flow VANGUARD FRLs Filter-Regulator-Lubricators

FDRL189D Models Port Sizes: 3/4, 1



Model Shown: FDRL189D-8

SPECIFICATIONS

Ambient/Media Temperature:

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-µm-rated polyethylene; optional 5-µm, 20-µm, or 40-µm 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.

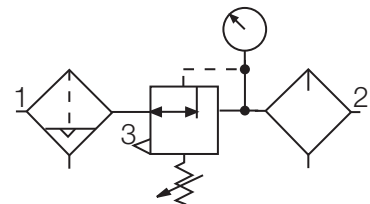
- ◆ Individual filter (**FD100**); piston-type regulator (**R180M**); sight feed design lubricator (**L29D**).
- ◆ Inline mounting.
- ◆ 5-µm-rated polyethylene filter element; optional sintered bronze elements.
- ◆ Metal bowls with clear nylon sight glass **or** polycarbonate plastic bowls with steel 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-µm polyethylene (Std element).....	KA109-3PE
5-µm bronze	KA109-03E5
20-µm bronze	KA109-03E4
40-µm bronze	KA109-03E3



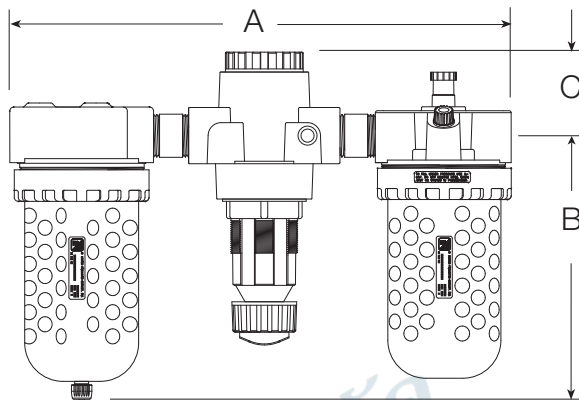
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DIMENSIONS inches (mm)

				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 bowl 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. Coalecent 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



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MINIATURE FRLs

Filter-Regulator-Lubricators

FDRL55 and 56 Models

Port Sizes: 1/8, 1/4



Model Shown: FDRL56-2

- ◆ Individual filter (**FD50**); piston-type regulator (**R55M**) or diaphragm-type (**R56M**); and wick-feed lubricator (**L50**).
- ◆ Inline mounting.
- ◆ 5- μ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ High-strength polycarbonate plastic bowls **or** aluminum bowls.
- ◆ Internal automatic filter drain; optional manual drain.
- ◆ Self-relieving regulator; non-relieving optional.
- ◆ Pressure gauge.
- ◆ NPTF port threads; optional BSPP threads.

SPECIFICATIONS

Ambient/Media Temperature:

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

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

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

Filter Drain:

Internal automatic drain; optional manual drain.

Filter Element: 5- μ m-rated polyethylene; optional 5- μ m, 20- μ m, or 40- μ m sintered bronze.

Fluid Media: Compressed air.

Heads: Aluminum.

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.



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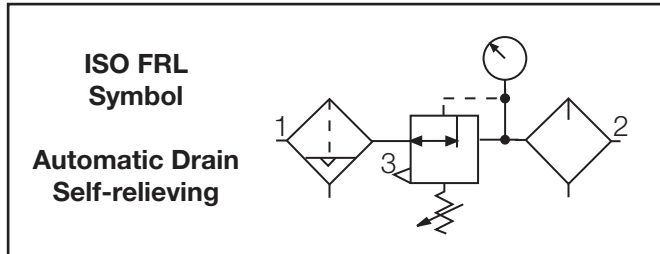
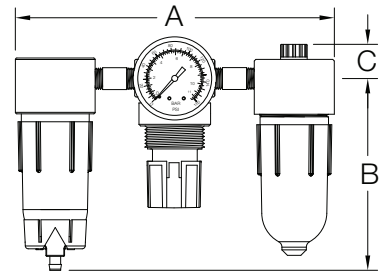
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DIMENSIONS inches (mm)

	A	B	C	Depth †	Weight lb (kg)
Plastic	5.5 (140)	3.9 (99)	0.7 (17)	1.6 (41)	0.76 (0.34)
Metal	5.5 (140)	4.3 (109)	0.7 (17)	1.6 (41)	

† Less gauge.



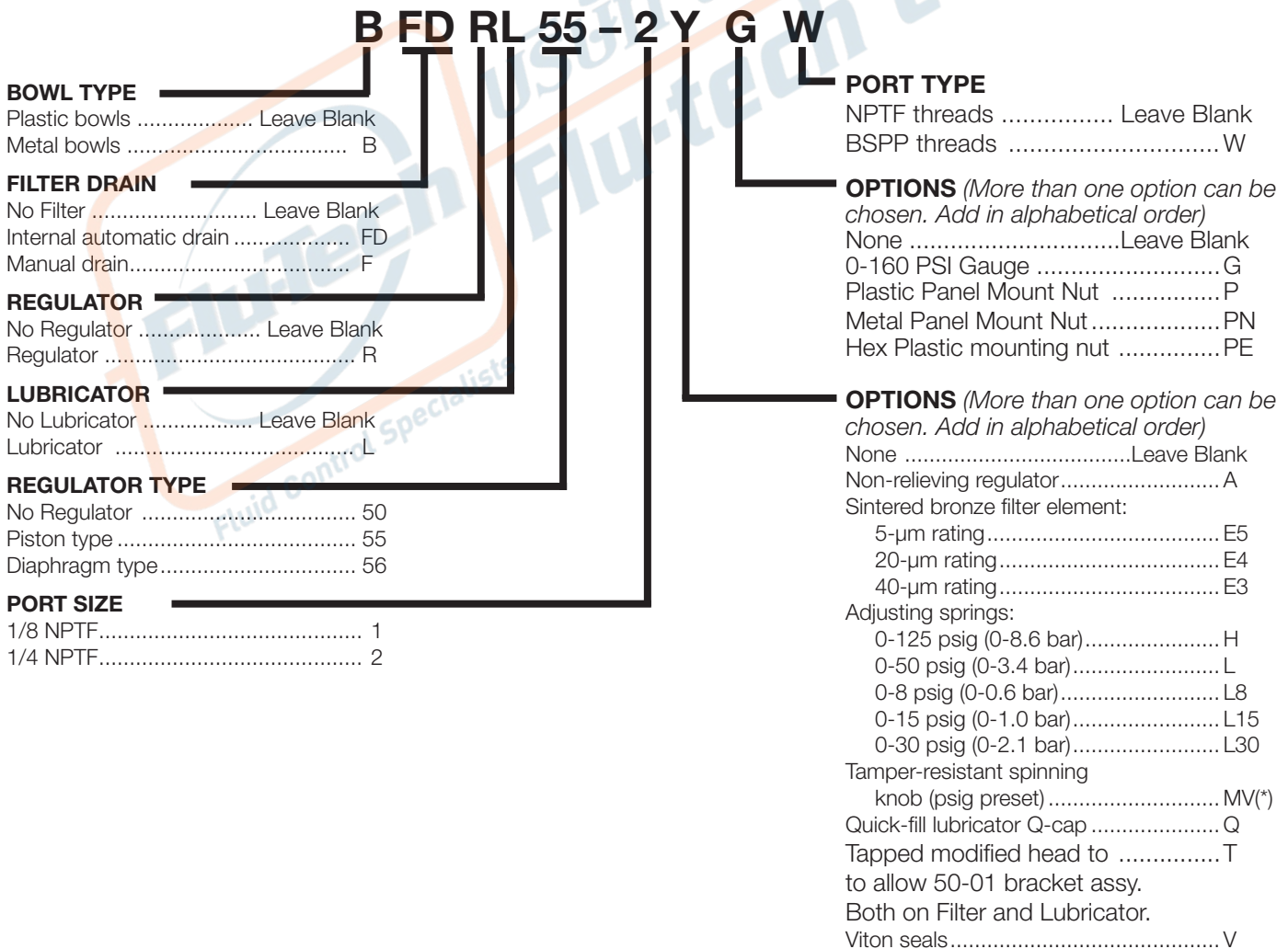
REPLACEMENT FILTER ELEMENT KITS

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 FRL you want.

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



*Insert preset pressure.



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SENTRY Modular FRLs Filter-Regulator-Lubricators

VFDRL10 and 11 Models Port Sizes: 1/8, 1/4 Tube Fittings



Model Shown: VFDRL10-2

- ◆ Individual filter (**FD10**); piston-type regulator (**R10M**) or diaphragm-type (**R11M**); 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- μ m-rated polyethylene filter element; optional sintered bronze elements.
- ◆ High-strength polycarbonate plastic bowls or aluminum bowls.
- ◆ Internal automatic filter drain; optional manual drain.
- ◆ 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).

Bodies: Acetal.

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

Filter Drain:

Internal automatic drain; optional manual drain.

Filter Element: 5- μ m-rated polyethylene; optional 5- μ m, 20- μ m, or 40- μ m sintered bronze.

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.

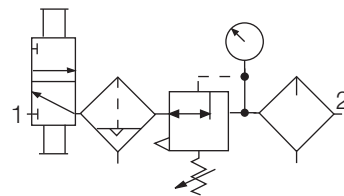
Seals: Nitrile.

AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.

ISO FRL Symbol

Lockout Automatic Drain Self-relieving



REPLACEMENT FILTER ELEMENT KITS

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



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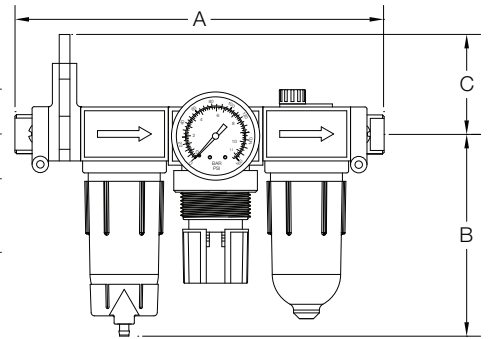
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DIMENSIONS inches (mm)

Ports	A **	B †	C	Depth	Weight lb (kg)
1/8, 1/4	6.9 (175)	3.9 (99)	1.7 (43)	3.6 (92)	0.53 (0.24)
Models below have quick-connect fittings for tubing.					
1/4	7.3 (185)	3.9 (99)	1.7 (43)	3.6 (92)	0.50 (0.23)
3/8	7.8 (198)	3.9 (99)	1.7 (43)	3.6 (92)	0.50 (0.23)
4 mm	7.3 (185)	3.9 (99)	1.7 (43)	3.6 (92)	0.50 (0.23)
6 mm	7.3 (185)	3.9 (99)	1.7 (43)	3.6 (92)	0.50 (0.23)
8 mm	7.3 (185)	3.9 (99)	1.7 (43)	3.6 (92)	0.50 (0.23)
10 mm	7.8 (198)	3.9 (99)	1.7 (43)	3.6 (92)	0.50 (0.23)



** Without V10 lockout valve deduct 0.6 (15) from dimension A.
 † Dimension for plastic bowl: metal bowl is 4.3 (109).

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 V FD RL 10 P - 2 X Y G W

BOWL TYPE

Plastic bowls Leave Blank
 Metal bowls B

LOCKOUT VALVE

V10 valve V
 None Leave Blank

FILTER DRAIN

Internal automatic drain FD
 Manual drain F

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)

None Leave Blank
 0-160 PSI Gauge G
 Plastic Panel Mount Nut P
 Metal Panel Mount 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.



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SERIES 350 FRLs

Filter-Regulator-Lubricators

BAGV1A1B6A13 Models

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



Model Shown: BAGV1A1B6A13

Available Color Caps



Yellow (Standard) Red (optional) Blue (optional) Grey (Optional)

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.

Filter and Lubricator Bowl: 5.1-Ounce (151-ml) capacity polycarbonate plastic with nylon shatterguard; optional 6.0 ounce (177-ml) aluminum bowl with clear nylon sight glass. Lubricator bowl has an optional 10-ounce (295-ml) extended aluminum bowl with clear nylon sight glass.

Filter Bowl Drain: Internal float drain; by removing the adjustment knob, a 3/16" (5mm) flexible tube can be connected to drain effluents. Optional manual drain.

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

Differential Pressure Gauge: Optional.

Filter Element: 5-µm-rated polyethylene; optional 5-µm-rated, 20-µm-rated or 40-µm-rated sintered bronze.

Fluid Media: Compressed air.

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).

Regulator Dome: Nylon.

Knob: Acetal

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

Optional Pressure Adjustment locking key: removable

Pressure Gauge: 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.

Self-relieving: Non-relieving optional.

Valve: Brass

Valve Cap: Nylon.

Oil Adjustment: External; tamper resistant.

Sight-Feed Dome: Nylon.

GENERAL

- ◆ Modular or inline mounting.
- ◆ Filter and lubricator; Polycarbonate plastic bowl with nylon shatterguard; optional metal bowl with sight glass.
- ◆ Inlet pressure rated at 250 psig (17 bar) with metal bowls up to 175° F (79° C)
- ◆ Filter and Lubricator; Color caps available for visual management systems. (Blue, red, yellow and grey). Consult factory for custom colors.
- ◆ Front mounted modular clamping design with encapsulated screws.
- ◆ Compatible with modular 380 series of products.
- ◆ NPTF port threads; optional BSPP threads.

FILTER

- ◆ Designed to remove particulate material 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 removal of free water up to 98% efficiency
- ◆ Removal of effluents via manual or automatic float drains.

REGULATOR

- ◆ Modular mounting allows regulators to be positioned at 45° increments for ease in adjustment.
- ◆ Superior pressure regulation - diaphragm type regulator
- ◆ Self relieving design; large diaphragm sensing area; non-relieving optional.
- ◆ Optional Pressure adjustment locking key; tamper resistant pressure setting.
- ◆ Inlet rated to 300 psig (21 bar)
- ◆ Reverse flow option.
- ◆ Optional pressure gauge.

LUBRICATOR

- ◆ Sight feed design; transparent dome to show oil delivery.
- ◆ External oil delivery adjusting knob, removable for tamper resistance.

AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.



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DIMENSIONS inches (mm)

Bowl	A	B †	C	Depth	Weight lb (kg)
Std plastic	12.02 (305.4)	5.54 (140.7)	2.21 (56.2)	2.90 (73.7)	6.1 (2.8)
Std metal	12.02 (305.4)	6.42 (163.1)	2.21 (56.2)	2.90 (73.7)	6.4 (2.9)

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

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

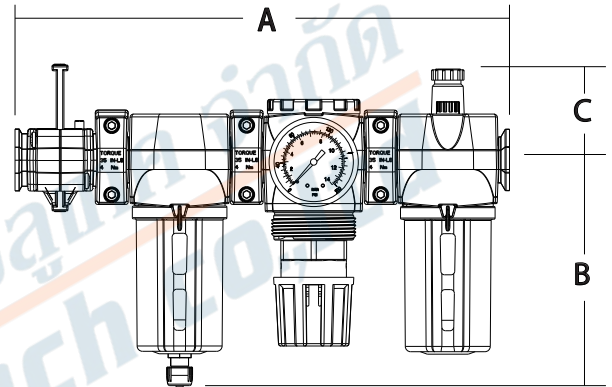
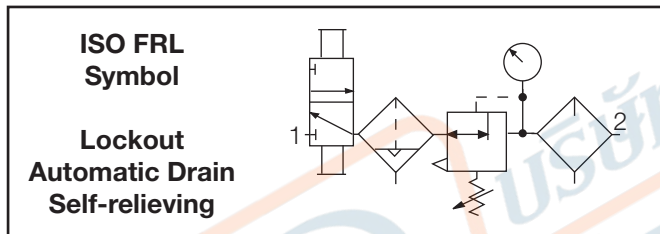
† **Bowl (standard) removal clearance:** add 3.1 (79)

† **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

Shown below is a basic series 350 ordering chart. If non standard options are needed then use the complete numbering chart shown on the next couple of pages, (pgs 322-325)

B A G V 1 A 1 B 6 A 1 3

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 D
- filter and regulator, Extended Lubricator.

VALVE OPTION

- No valve Leave blank
- V380 shutoff valve V

FILTER

- F350 1
- F350-E3 2
- F350-E4 K

REGULATOR

- R350 1
- R350-A 4
- R350-H 5
- R350-L 7
- R350-P A
- R350-E D

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

FILTER 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



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SERIES 350 FRL WITH ADDITIONAL OPTIONS

Change the letters in the sample model number below to specify the **FRL** 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 1 X A B 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 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.

FILTER

(Drain options are coded later in model number.)

None 0
 F350 1
 F350-E3 2
 F350-E4 K

REGULATOR

None 0
 R350 1
 R350-A 4
 R350-H 5
 R350-L 7
 R350-P A
 R350-E D
 V382-*N6A4A with R350-E (valve pressure sensor) K
 V382-*N6A4B with R350-E (valve with pressure sensor L
 and muffler).
 V382-*N6A0A with R350-E M
 V382-*N6A0B with R350-E (valve with muffler) N

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



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SERIES 350 FRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

B A G V 3 X A A X A 1 X A B 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



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SERIES 350 FRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

B A G V 3 X A A X A 1 X A B 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. No gauge ports	0
200-BDD (0-200 PSIG)	None. No gauge ports	1
60BDD (0-60 PSIG)	None. No gauge ports	2
200-BDD (0-200 PSIG)	Differential pressure gauge	5



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SERIES 350 CFRL WITH ADDITIONAL OPTIONS

Continued from preceding page.

B A G V 3 X A A X A 1 X A B 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

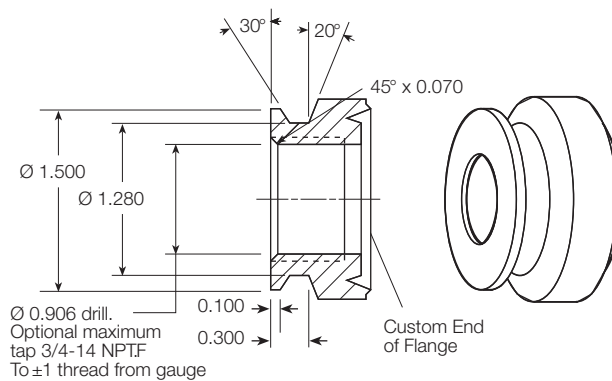
With this simple turned flange, users can easily customize their own products to interface directly with Series 350/380 modules using the clamp shown on page 345 (part number **A118-105**). See sketch below for dimensions.

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.



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Full-Size VANGUARD Modular FRLs Filter-Regulator-Lubricators

MVFDRL108D Models Port Sizes: 1/4, 3/8, 1/2, 3/4



Model Shown: MVFDRL108D-4

- ◆ Individual filter (**FD100**); diaphragm-type regulator (**R100**); sight-feed lubricator (**L28D**); lockout valve (**V35**).
- ◆ Modular or inline mounting.
- ◆ 5- μ 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 Warrior electronic drain.
- ◆ Self-relieving 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. Optional 20-ounce (600-ml) extended metal lubricator bowl.

Bowl Rings: Aluminum.

Filter Drain:

Internal automatic drain; optional manual drain, internal float drain or Warrior electronic drain.

Filter Element: 5- μ m-rated polyethylene; optional 5- μ m, 20- μ m, or 40- μ 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.

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.



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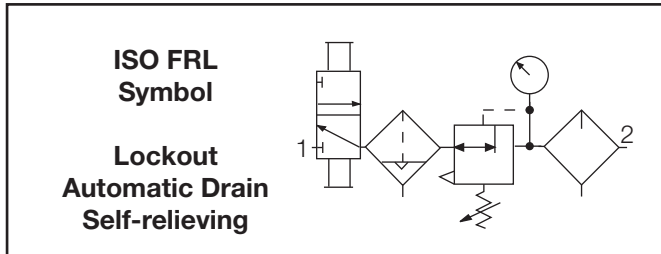
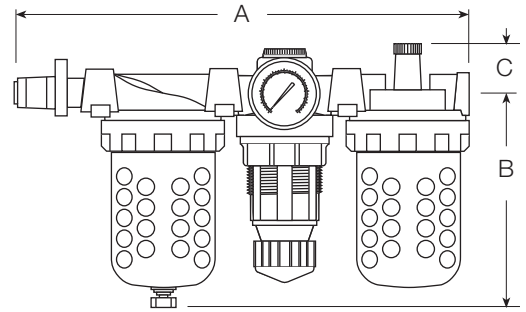
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DIMENSIONS inches (mm)

Bowl	A **	B	C	Depth †	Weight †
					lb (kg)
8-Oz Metal	13.9 (353)	6.4 (163)	1.3 (33)	2.8 (71)	7.06 (3.20)
8-Oz Plastic	13.9 (353)	5.8 (147)	1.3 (33)	2.8 (71)	7.06 (3.20)
20-Oz Metal	13.9 (353)	9.8 (249)	1.3 (33)	2.8 (71)	7.45 (3.39)

** 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

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 M V FD R L 10 8D - 2 Y W

BOWL TYPE

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

LOCKOUT VALVE

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

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.

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*
 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

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

BOWL SIZE

Standard 8-ounce bowls.....8D
 (with lubricator)
 Standard 8-ounce bowls.....0
 (No lubricator)
 8-Ounce filter bowl &.....8DH
 20-ounce lubricator bowl
 (metal bowls only).

For external and additional modular port options see numbering chart on 355 page.



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Full-Size VANGUARD Modular FRLs Filter-Regulator-Lubricators

MVFDRL108W Models Port Sizes: 1/4, 3/8, 1/2, 3/4



Model Shown: MVFDRL108W-4

- ◆ Individual filter (**FD100**); diaphragm-type regulator (**R100**); wick-feed lubricator (**L28W**); lockout valve (**V35**).
- ◆ Modular or inline mounting.
- ◆ 5- μm -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 Warrior electronic drain.
- ◆ Self-relieving 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. Optional 20-ounce (600-ml) extended lubricator bowl.

Bowl Rings: Aluminum.

Filter Drain:

Internal automatic drain; optional manual drain, internal float drain, or Warrior electronic drain.

Filter Element: 5- μm -rated polyethylene; optional 5- μm , 20- μm , or 40- μm 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.

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.

AIR FLOW DATA

See Flow Charts for individual assembly components on preceding pages.



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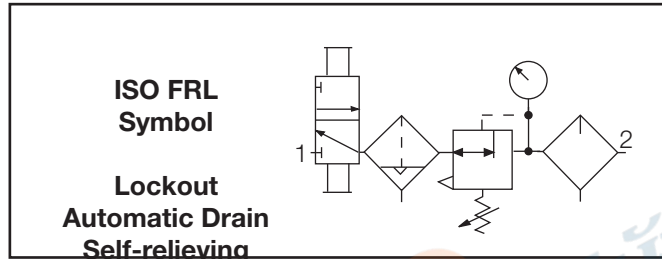
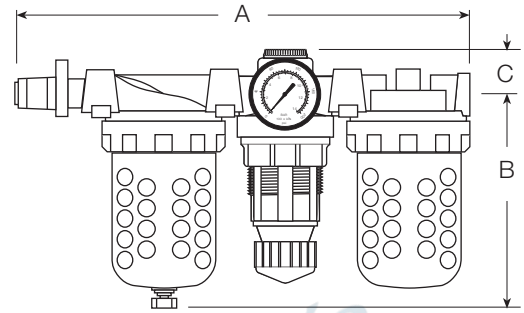
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DIMENSIONS inches (mm)

Bowl	A **	B	C	Depth †	Weight † lb (kg)
8-Oz Metal	13.9 (353)	6.4 (163)	1.3 (33)	2.8 (71)	7.06 (3.20)
8-Oz Plastic	13.9 (353)	5.8 (147)	1.3 (33)	2.8 (71)	7.06 (3.20)
20-Oz Metal	13.9 (353)	9.8 (249)	1.3 (33)	2.8 (71)	7.45 (3.39)

** 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

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 M V FD R L 10 8W - 2 Y W

For external and additional modular port options see numbering chart on 355 page.

BOWL TYPE

Metal bowlsB
Plastic bowlsLeave Blank

LOCKOUT VALVE

No valveLeave Blank
V35 valveV

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 RegulatorLeave Blank
RegulatorR

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

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*
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

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

FILTER AND LUBRICATOR BOWL SIZE

Standard 8-ounce bowls8W
(with lubricator).
Standard 8-ounce bowls0
(without lubricator).
8-Ounce filter bowl &8WH
20-ounce lubricator bowl
(metal bowls only)

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



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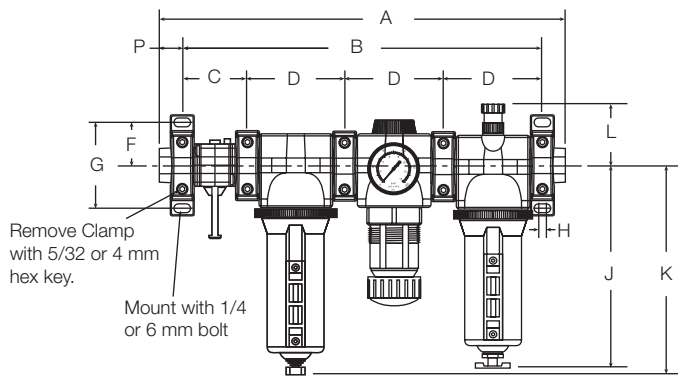
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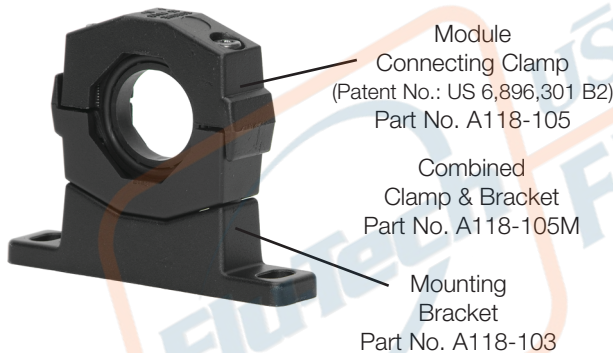
SERIES 350 and 380 Modular Accessories

Dimensions: inches (mm)



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

MALE and FEMALE END PORTS



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.



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



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