



# PRODUCT INFORMATION

## FILTER, REGULATOR AND LUBRICATOR

### COMBINATION UNITS



**ROSS CONTROLS**



# Modular Filter, Regulator and Lubricator Combinations

**BANTAM Series**

**Port Sizes: 1/8 & 1/4 – Flow to 22 scfm**

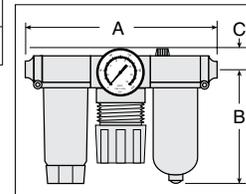
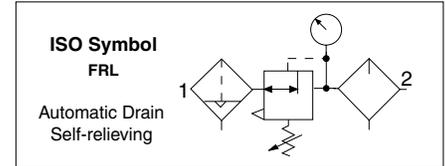
**Combination with PISTON Type Regulator - Fill Port Lubricator#**

Port Size	Automatic Drain		Manual Drain	
	Polycarbonate Bowl	Metal Bowl	Polycarbonate Bowl	Metal Bowl
	Model Number	Model Number	Model Number	Model Number
<b>With THREADED PORTS</b>				
1/8 NPTF	5B01C0115	5B01C0216	5B01C0315	5B01C0416
1/8 G	C5B01C0115	C5B01C0216	C5B01C0315	C5B01C0416
1/4 NPTF	5B02C0115	5B02C0216	5B02C0315	5B02C0416
1/4 G	CC5B02C0115	C5B02C0216	C5B02C0315	C5B02C0416
<b>With Quick Connect TUBE FITTINGS</b>				
1/4	5B03C0115	5B03C0216	5B03C0315	5B03C0416
3/8	5B04C0115	5B04C0216	5B04C0315	5B04C0416
4mm	5B05C0115	5B05C0216	5B05C0315	5B05C0416
6mm	5B06C0115	5B06C0216	5B06C0315	5B06C0416
8mm	5B07C0115	5B07C0216	5B07C0315	5B07C0416
10mm	5B08C0115	5B08C0216	5B08C0315	5B08C0416

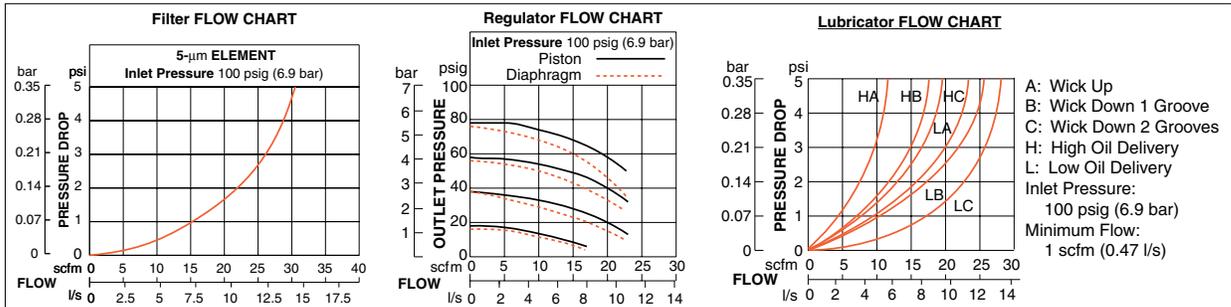
#Change the ninth digit to "7" for quick fill lubricator cap e.g., 5B01C0117.

Port Size	Dimensions inches (mm)				Weight † lb (kg)
	A	B**	C	Depth †	
1/8, 1/4 (NPTF or G)	6.3 (160)	3.6 (92)	1.7 (43)	3.6 (92)	0.53 (0.24)
<b>Models below have quick-connect tube fittings.</b>					
1/4	6.7 (170)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
3/8	7.2 (183)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
4, 6 mm	6.7 (170)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
8 mm	6.4 (163)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
10 mm	7.2 (183)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)

\*\* Dimension for polycarbonate filter bowl; metal bowl is 3.8 (97).  
† Less gauge.



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Model Number
5-µm - Standard	Polyethylene	933K77
5-µm - Optional	Sintered Bronze	R-KA130-27E5
20-µm - Optional	Sintered Bronze	R-KA130-27E4
40-µm - Optional	Sintered Bronze	R-KA130-27E3



Accessories ordered separately, refer to page G6.3-4.

**STANDARD SPECIFICATIONS** (for units on this page):

Construction Design	Filter – Fiber Regulator – Piston Lubricator - Wick-Feed	Outlet Pressure	Adjustable up to 100 psig (7 bar)
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Pressure Adjustment	Locking Key: Removable
Fluid Media	Compressed air	Filter Drain	Internal Automatic or Manual
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: Up to 150 psig (up to 10 bar) Metal Bowl: Up to 200 psig (up to 14 bar)	Pressure Gauge	0 to 60 psig (0 to 11 bar); 1/8 NPT gauge ports front and rear
	Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)	Oil Adjustment	External; no shutoff
		Panel Mounting	1-3/16 inch (30 mm) hole required
		Construction Material	Filter Element: 5-micron rated polyethylene Filter/Regulator & Lubricator Bodies: Acetal Bowls: 2-oz (60-ml) polycarbonate bowls or aluminum bowls Regulator Dome and Knob: Acetal Seals: Nitrile

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



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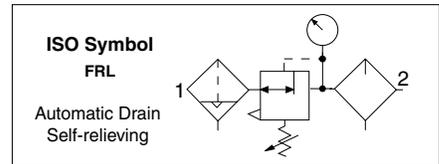
# Modular Filter, Regulator and Lubricator Combinations

**BANTAM Series**

**Port Sizes: 1/8 & 1/4 – Flow to 22 scfm**



Combination with DIAPHRAGM Type Regulator - Fill Port Lubricator#				
Port Size	Automatic Drain		Manual Drain	
	Polycarbonate Bowl	Metal Bowl	Polycarbonate Bowl	Metal Bowl
	Model Number	Model Number	Model Number	Model Number
<b>With THREADED PORTS*</b>				
1/8 NPTF	5B01C0125	5B01C0226	5B01C0325	5B01C0426
1/8 G	C5B01C0125	C5B01C0226	C5B01C0325	C5B01C0426
1/4 NPTF	5B02C0125	5B02C0226	5B02C0325	5B02C0426
1/4 G	C5B02C0125	C5B02C0226	C5B02C0325	C5B02C0426
<b>With Quick Connect TUBE FITTINGS</b>				
1/4	5B03C0125	5B03C0226	5B03C0325	5B03C0426
3/8	5B04C0125	5B04C0226	5B04C0325	5B04C0426
4mm	5B05C0125	5B05C0226	5B05C0325	5B05C0426
6mm	5B06C0125	5B06C0226	5B06C0325	5B06C0426
8mm	5B07C0125	5B07C0226	5B07C0325	5B07C0426
10mm	5B08C0125	5B08C0226	5B08C0325	5B08C0426



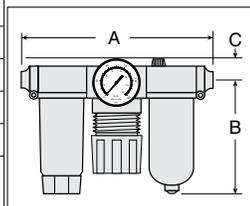
#Change the ninth digit to "7" for quick fill lubricator cap e.g., 5B01C0127.

Port Size	Dimensions inches (mm)				Weight † lb (kg)
	A	B**	C	Depth †	
1/8, 1/4	6.3 (160)	3.6 (92)	1.7 (43)	3.6 (92)	0.53 (0.24)

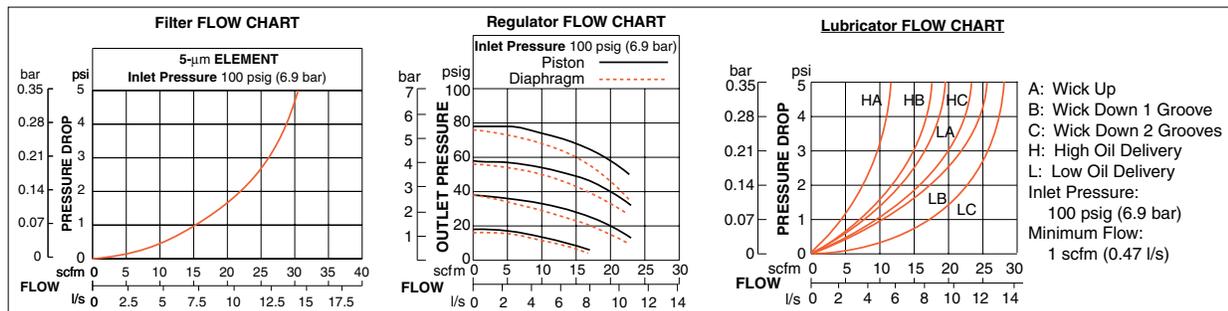
**Models below have quick-connect tube fittings.**

1/4	6.7 (170)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
3/8	7.2 (183)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
4, 6 mm	6.7 (170)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
8 mm	6.4 (163)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)
10 mm	7.2 (183)	3.6 (92)	1.7 (43)	3.6 (92)	0.50 (0.23)

\*\* Dimension for polycarbonate filter bowl; metal bowl is 3.8 (97).  
† Less gauge.



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Model Number
5-µm - Standard	Polyethylene	933K77
5-µm - Optional	Sintered Bronze	R-KA130-27E5
20-µm - Optional	Sintered Bronze	R-KA130-27E4
40-µm - Optional	Sintered Bronze	R-KA130-27E3



Accessories ordered separately, refer to page G6.3-4.

### STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber Regulator – Diaphragm Lubricator - Wick-Feed	Outlet Pressure	Adjustable up to 100 psig (7 bar)
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Filter Drain	Internal Automatic or Manual
Fluid Media	Compressed air	Pressure Gauge	0 to 60 psig (0 to 11 bar); 1/8 NPT gauge ports front and rear
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: Up to 150 psig (up to 10 bar) Metal Bowl: Up to 200 psig (up to 14 bar)	Oil Adjustment	External; no shutoff
	Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)	Panel Mounting	1-3/16 inch (30 mm) hole required
		Construction Material	Filter Element: 5-micron rated polyethylene Filter/Regulator & Lubricator Bodies: Acetal Bowls: 2-oz (60-ml) polycarbonate bowls or aluminum bowls Regulator Dome and Knob: Acetal Seals: Nitrile

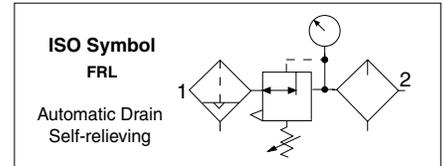
**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

# In-line Filter, Regulator and Lubricator Combinations

## MINIATURE Series

Port Sizes: 1/8 & 1/4 – Flow to 19 scfm

Port Size	Port Threads	Automatic Drain		Manual Drain	
		Polycarbonate Bowl	Metal Bowl	Polycarbonate Bowl	Metal Bowl
		Model Number	Model Number	Model Number	Model Number
<b>FILL Port Lubricator</b>					
1/8	NPTF	5331C1006	5332C1006	5331C1005	5332C1005
	G	C5331C1006	C5332C1006	C5331C1005	C5332C1005
1/4	NPTF	5331C2006	5332C2006	5331C2005	5332C2005
	G	C5331C2006	C5332C2006	C5331C2005	C5332C2005
<b>With QUICK-FILL CAP</b>					
1/8	NPTF	5331C1106	5332C1106	5331C1105	5332C1105
	G	C5331C1106	C5332C1106	C5331C1105	C5332C1105
1/4	NPTF	5331C2106	5332C2106	5331C2105	5332C2105
	G	C5331C2106	C5332C2106	C5331C2105	C5332C2105

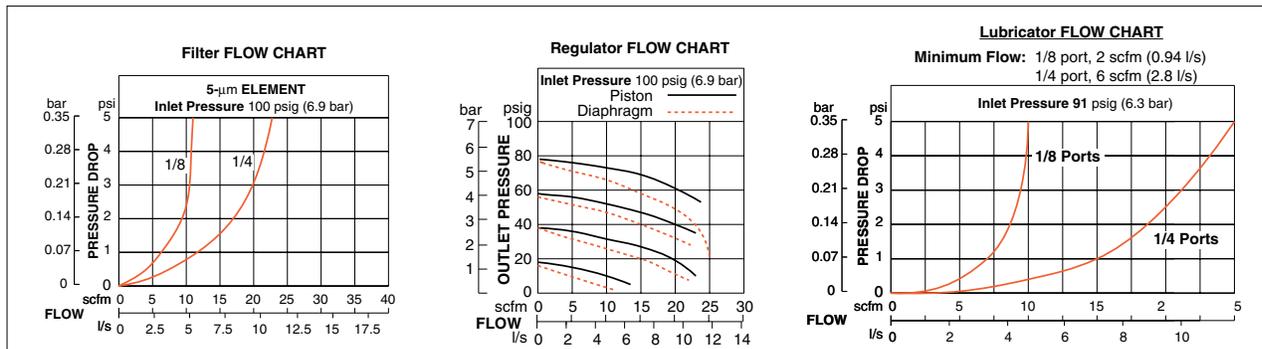
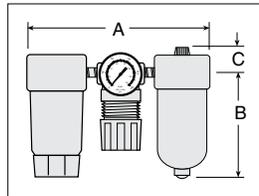


Port Size	Bowl Type	Bowl Capacity	Dimensions inches (mm)				Weight † lb (kg)
			A	B	C	Depth †	
1/8, 1/4	Polycarbonate	2-oz (60-ml)	5.5 (140)	3.6 (90)	0.7 (17)	1.6 (41)	0.76 (0.34)
	Aluminum	2-oz (60-ml)	5.5 (140)	4.3 (109)	0.7 (17)	1.6 (41)	0.76 (0.34)

† Less gauge.

### REPLACEMENT FILTER ELEMENTS

Element Rating	Element Material	Model Number
5-µm - Standard	Polyethylene	933K77
5-µm - Optional	Sintered Bronze	R-KA130-27E5
20-µm - Optional	Sintered Bronze	R-KA130-27E4
40-µm - Optional	Sintered Bronze	R-KA130-27E3



**Pressure Gauge included.**  
Accessories ordered separately, refer to page G6.3-4.

### STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber Regulator – Piston Lubricator - Wick-Feed	Outlet Pressure	Adjustable up to 100 psig (7 bar)
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Filter Drain	Internal Automatic or Manual
Fluid Media	Compressed air	Pressure Gauge	0 to 60 psig (0 to 11 bar); 1/8 NPT gauge ports front and rear
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: Up to 150 psig (up to 10 bar) Metal Bowl: Up to 200 psig (up to 14 bar)	Oil Adjustment	Internal; tamper-resistant
	Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)	Panel Mounting	1-3/16 inch (30 mm) hole required
		Construction Material	Filter Element: 5-micron rated polyethylene Heads: Aluminum Bowls: Polycarbonate, or Aluminum Regulator Dome and Knob: Acetal Seals: Nitrile

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



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# Modular Filter, Regulator and Lubricator Combinations

MID-SIZE Series

Port Sizes: 1/4, 3/8 & 1/2 – Flow to 100 scfm

Choose your options (in red) to configure your model number.

**5M**  **00**  **B**  **2**  **1**  **0**  **1**

PIPE THREAD	NPTF (Blank)
BSPB	<b>C</b>

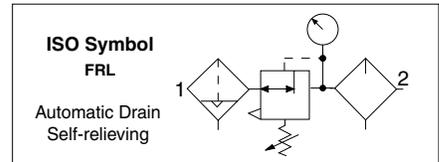
CONNECTIONS	
Pipe In, Out, Between	<b>00</b>
Pipe In & Out, Modular Between	<b>09</b>
Modular, Male Ports In & Out	<b>10</b>
Modular, Female Ports In & Out	<b>11</b>

PIPE SIZE	
1/4	<b>2</b>
3/8	<b>3</b>
1/2	<b>4</b>

ADJUSTMENT RANGE	
None	<b>0</b>
0-100 psig (0-6.9 bar)	<b>1</b>
0-50 psig (0-3.4 bar)	<b>3</b>
0-150 psig (0-10 bar)	<b>5</b>

LUBRICATOR BOWL & FILL TYPE	
None	<b>0</b>
Plastic Bowl, Fill Port	<b>1</b>
Metal Bowl, Fill Port	<b>2</b>
Plastic Bowl, Quick-Fill Cap	<b>3</b>
Metal Bowl, Quick-Fill Cap	<b>4</b>

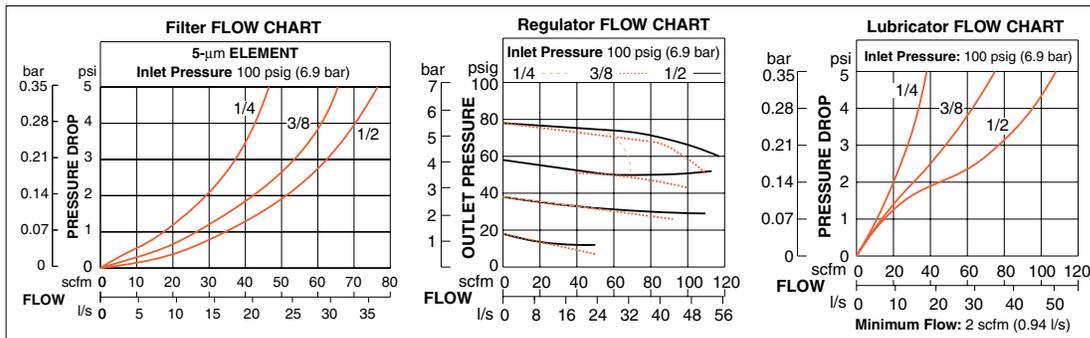
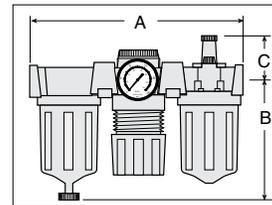
FILTER BOWL & DRAIN TYPE	
None	<b>0</b>
Plastic Bowl, Automatic Drain	<b>1</b>
Metal Bowl, Automatic Drain	<b>2</b>
Plastic Bowl, Manual Drain	<b>3</b>
Metal Bowl, Manual Drain	<b>4</b>



Port Size	Bowl Type	Bowl Capacity	Dimensions* inches (mm)				Weight † lb (kg)
			A	B	C	Depth †	
1/4, 3/8, 1/2	Polycarbonate	4-oz (120-ml)	8.5 (215)	4.6 (117)	1.8 (46)	2.8 (71)	3.75 (1.70)
	Zinc	4-oz (120-ml)	8.5 (215)	4.7 (119)	1.8 (46)	2.8 (71)	3.75 (1.70)

\* Dimensions for NPTF Pipe In & Out, Modular Between option; dimensions for other combinations consult ROSS.  
† Less gauge.

REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Model Number
5-µm - Standard	Polyethylene	936K77
5-µm - Optional	Sintered Bronze	R-KA60F-03E5
20-µm - Optional	Sintered Bronze	R-KA60F-03E4
40-µm - Optional	Sintered Bronze	R-KA60F-03E3



Pressure Gauge included. Includes 2 Female Port Blocks.  
Accessories ordered separately, refer to page G6.3-4.

## STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber Regulator – Piston Lubricator – Sight-Feed	Outlet Pressure	Adjustable up to 100 psig (7 bar)
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Filter Drain	Internal Automatic or Manual
Fluid Media	Compressed air	Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear.
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: Up to 150 psig (up to 10 bar) Metal bowl: Up to 200 psig (up to 14 bar)	Oil Adjustment	External; tamper-resistant
	Manual Drain Models Polycarbonate bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)	Panel Mounting	1-9/16 inch (40 mm) hole required
		Construction Material	Filter Element: 5-micron rated polyethylene Heads: Zinc Bowls: Polycarbonate bowls with zinc shatterguard, or zinc bowls Sight Dome: Clear Nylon Seals: Nitrile

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

# Modular Filter, Regulator and Lubricator Combinations

MD3™ Series

Port Sizes: 1/4, 3/8 & 1/2 – Flow to 110 scfm

Choose your options (in red) to configure your model number.

MD3 53P B A 6 C 2 2 Q 1

BOWLS MATERIAL/SIZE	
Polycarbonate Bowl 5.1-oz (151-ml) - on Filter and Lubricator	53P
Metal Bowls 6-oz (177-ml) - on Filter and Lubricator	53M
Metal Bowl 6-oz (177-ml) - on Filter	53E
Metal Bowl 10-oz (295-ml) - on Lubricator	53F
Plastic Bowl 6-oz (177-ml) - on Filter	53F
Metal Bowl 10-oz (295-ml) - on Lubricator	53F

ADJUSTMENT RANGE	
0-200 psig (0-14 bar)	A*
0-150 psig (0-10.3 bar)	B
0-100 psig (0-6.9 bar)	C
0-50 psig (0-3.4 bar)	D
No Regulator	E
Reverse Flow 0-200 psig (0-14 bar)	F*
Reverse Flow 0-150 psig (0-10.3 bar)	G
Reverse Flow 0-100 psig (0-6.9 bar)	H
Reverse Flow 0-50 psig (0-3.4 bar)	J

\*Must be ordered with metal bowl.

FILTER ELEMENT TYPE	
40-µm Sintered Bronze	A
5-µm Polyethylene	B
5-µm Sintered Bronze	E
20-µm Sintered Bronze	F

BOWL DRAIN	
Manual Drain	6
Float Drain	9

PIPE SIZE	
1/4 NPTF	2
3/8 NPTF	3
1/2 NPTF	4
1/4 G	B
3/8 G	C
1/2 G	D

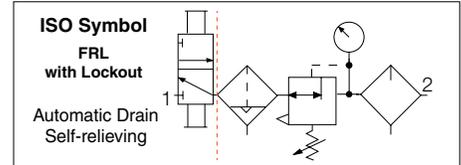
CAP COLOR	
Black	2
Yellow	Y

LUBRICATOR FILL TYPE	
No Lubricator	N
Quick Fill Cap	Q
Fill Port	S

LOCKOUT VALVE	
L-O-X® on outlet side	1
L-O-X® on the inlet side (must also choose Reverse Flow)	2
L-O-X® with EEZ-ON® on outlet side	3
L-O-X® with EEZ-ON® on inlet side (must also choose Reverse Flow)	4
Without Valve - Leave Blank	



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Model Number
5-µm	Polyethylene	R-A60F-03PE5
	Sintered Bronze	R-A60F-03E5
20-µm	Sintered Bronze	R-A60F-03E4
40-µm	Sintered Bronze	R-A60F-03E3



Options: Drains: For additional information, refer to page G6.7.  
Accessories ordered separately, refer to page G6.3-5.

## STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber or Sintered Bronze Regulator – Diaphragm Lubricator - Sight-Feed	Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Regulator Pressure	Self-relieving; Non-relieving optional
Fluid Media	Compressed air	Oil Adjustment	External; tamper-resistant
Operating Pressure Filter	Float Drain Models Polycarbonate Bowl: 30 to 150 psig (2 to 10 bar) Metal Bowl: 30 to 200 psig (2 to 14 bar) Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 250 psig (0 to 17 bar)	Panel Mounting	2-1/16 inch (52 mm) hole required
Operating Pressure Lubricator	Polycarbonate Bowl: Maximum 150 psig (10 bar) Metal Bowl: Maximum 200 psig (17 bar)	Construction Material	Filter Element: 5-micron rated polyethylene; 5-, 20- or 40-micron rated sintered bronze Filter/Regulator & Lubricator Bodies: Zinc Bowls: Polycarbonate with nylon shatterguard, or aluminum bowl with clear nylon sight glass. Lubricator bowl only: extended aluminum bowl with clear nylon sight glass Dome: Nylon Knob: Acetal Sight-Feed Dome: Nylon Seals: Nitrile Valve: Brass
Outlet Pressure	Adjustable up to 200 psig (14 bar); optional adjusting springs		
Optional Pressure Adjustment	Locking Key: Removable		
Filter Drain	Internal Automatic or Manual		

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



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# Modular Filter, Regulator and Lubricator Combinations

MD3™ Series

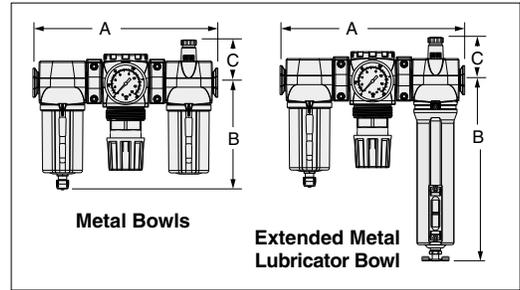
Port Size	Bowl Type	Dimensions inches (mm)				Weight lb (kg)
		A	B*	C	Depth	
1/2, 3/8, 1/2	Polycarbonate	9.72 (247.4)	5.54 (140.6)	2.21 (56.2)	2.90 (73.7)	6.1 (2.8)
	Aluminum	9.72 (247.4)	6.42 (163.1)	2.21 (56.2)	2.90 (73.7)	6.4 (2.9)
	Extended Aluminum	9.72 (247.4)	9.37 (238)	2.21 (56.2)	2.90 (73.7)	6.6 (3.0)

**Lockout:** With the lockout valve, add 2.3 (58) to dimension A.

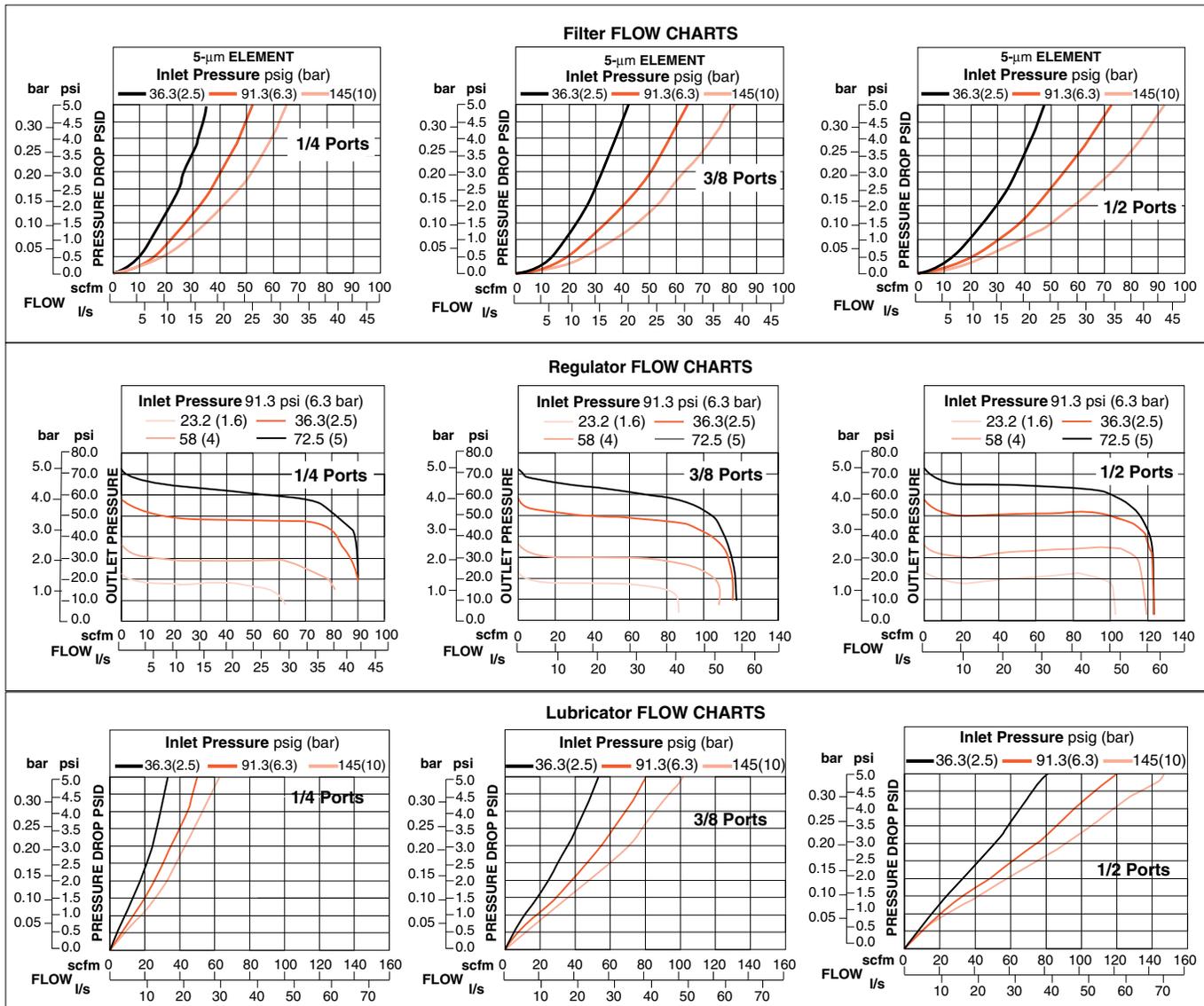
\* Bowl (standard) removal clearance: add 3.1 (79)

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

Dimensions above reflect less gauge.



## AIR FLOW and CONSTRUCTION DATA



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# Modular Filter, Regulator and Lubricator Combinations

FULL-SIZE Series

Port Sizes: 1/4, 3/8, 1/2 & 3/4 – Flow to 138 scfm

Choose your options (in red) to configure your model number.

 
5F
00
B
2
1
0
5

PIPE THREAD
NPTF (Blank)
G <span style="color: red;">C</span>

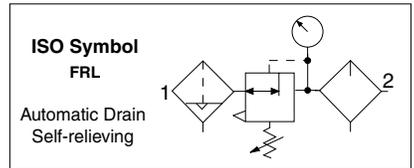
PIPE SIZE
1/4 <span style="color: red;">2</span>
3/8 <span style="color: red;">3</span>
1/2 <span style="color: red;">4</span>
3/4 <span style="color: red;">5</span>

REGULATOR TYPE ADJUSTMENT RANGE
None <span style="color: red;">0</span>
0-125 psig (0-8.6 bar) <span style="color: red;">2</span>
0-50 psig (0-3.4 bar) <span style="color: red;">4</span>
0-175 psig (0-12 bar) <span style="color: red;">6</span>

CONNECTIONS
Pipe In, Out, Between <span style="color: red;">00</span>
Pipe In & Out, Modular Between <span style="color: red;">09</span>
Modular, Male Ports In & Out <span style="color: red;">10</span>
Modular, Female Ports In & Out <span style="color: red;">11</span>

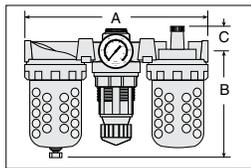
FILTER DRAIN & BOWL TYPE
None <span style="color: red;">0</span>
Automatic Drain, Plastic Bowl <span style="color: red;">1</span>
Automatic Drain, Metal Bowl <span style="color: red;">2</span>
Manual Drain, Plastic Bowl <span style="color: red;">3</span>
Manual Drain, Metal Bowl <span style="color: red;">4</span>

LUBRICATOR FILL & BOWL TYPE
None <span style="color: red;">0</span>
Sight-Feed, Plastic Bowl, Fill Port <span style="color: red;">1</span>
Sight-Feed, Metal Bowl, Fill Port <span style="color: red;">2</span>
Sight-Feed, Plastic Bowl, Quick-Fill Cap <span style="color: red;">3</span>
Sight-Feed, Metal Bowl, Quick-Fill Cap <span style="color: red;">4</span>
Wick-Feed, Plastic Bowl, Fill Port <span style="color: red;">5</span>
Wick-Feed, Metal Bowl, Fill Port <span style="color: red;">6</span>
Wick-Feed, Plastic Bowl, Quick-Fill Cap <span style="color: red;">7</span>
Wick-Feed, Metal Bowl, Quick-Fill Cap <span style="color: red;">8</span>

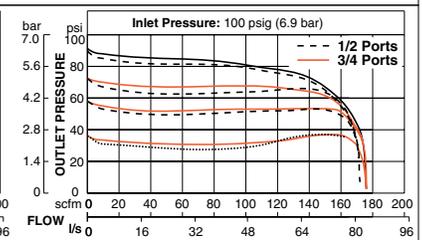
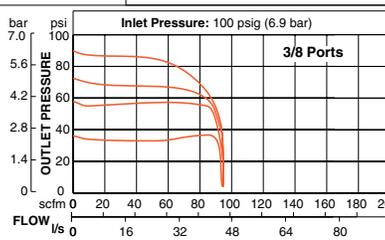
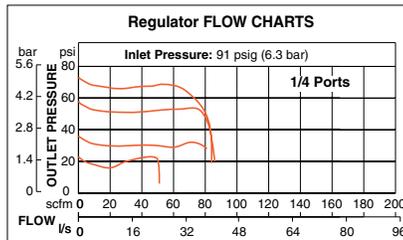
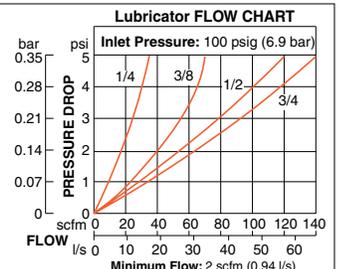
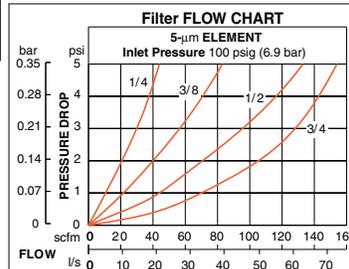


Port Size	Bowl Type	Bowl Capacity	Dimensions* inches (mm)				Weight † lb (kg)
			A	B	C	Depth †	
1/4, 3/8, 1/2, 3/4	Polycarbonate	8-oz (240-ml)	10.1 (256)	5.8 (147)	1.3 (33)	2.8 (71)	7.06 (3.20)
	Zinc	8-oz (240-ml)	10.1 (256)	6.4 (163)	1.3 (33)	2.8 (71)	7.06 (3.20)

\* Dimensions for NPTF Pipe In & Out, Modular Between option; dimensions for other combinations consult ROSS. † Less gauge.



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Model Number
5-µm - Standard	Polyethylene	939K77
5-µm - Optional	Sintered Bronze	R-KA103-03E5
20-µm - Optional	Sintered Bronze	R-KA103-03E4
40-µm - Optional	Sintered Bronze	R-KA103-03E3



Pressure Gauge included. Units with Threaded Ports Include 2 female port blocks.  
Options: Electronic Drain, refer to page G6.7.  
Accessories ordered separately, refer to page G6.3-4.

## STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber Regulator – Piston Lubricator - Sight-Feed	Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear.
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Pressure Adjustment	Locking Key: Removable
Fluid Media	Compressed air	Oil Adjustment	External; tamper-resistant
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: 15 to 150 psig (1 to 10 bar) Metal Bowl: 15 to 200 psig (1 to 14 bar)	Panel Mounting	1-9/16 inch (40 mm) hole required
	Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)	Construction Material	Filter Element: 5-micron rated polyethylene Bowls: Zinc bowl with clear nylon sight glass, or polycarbonate bowl with steel shatterguard Bowl Rings: Aluminum Regulator Dome: Nylon Regulator Knob: Acetal Sight Dome: Clear Nylon Seals: Nitrile
Outlet Pressure	Adjustable up to 125 psig (9 bar)		
Filter Drain	Internal Automatic or Manual		

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.



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# Modular Filter, Regulator and Lubricator Combinations

MD4™ Series

Port Sizes: 3/8, 1/2 & 3/4 – Flow to 205 scfm

Choose your options (in red) to configure your model number.

**MD4** **53P** **B** **A** **6** **B** **3** **2** **Q** **1**

BOWLS MATERIAL/SIZE	
Polycarbonate Bowls 9-oz (270-ml) - on Filter and Lubricator	<b>53P</b>
Metal Bowls 9-oz (270-ml) - on Filter and Lubricator	<b>53M</b>
Metal Bowl 9-oz (270-ml) - on Filter	<b>53E</b>
Extended Metal Bowl 15-oz (450-ml) - on Lubricator	<b>53F</b>
Plastic Bowl 9-oz (270-ml) - on Filter	
Extended Metal Bowl 15-oz (450-ml) - on Lubricator	

REGULATOR ADJUSTMENT RANGE	
0-175 psig (0-12 bar)	<b>A*</b>
<b>0-125 psig (0-8.6 bar)</b>	<b>B</b>
0-50 psig (0-3.4 bar)	<b>C</b>
0-20 psig (0-1.4 bar)	<b>D</b>
No Regulator	<b>E</b>
Reverse Flow 0-175 psig (0-12 bar)	<b>F*</b>
Reverse Flow 0-125 psig (0-8.6 bar)	<b>G</b>
Reverse Flow 0-50 psig (0-3.4 bar)	<b>H</b>
Reverse Flow 0-20 psig (0-1.4 bar)	<b>J</b>
*Must be ordered with metal bowl.	

PIPE SIZE	
3/8 NPTF	<b>3</b>
1/2 NPTF	<b>4</b>
3/4 NPTF	<b>5</b>
3/8 G	<b>C</b>
1/2 G	<b>D</b>
3/4 G	<b>E</b>

CAP COLOR	
Black	<b>2</b>
Yellow	<b>Y</b>

LUBRICATOR FILL TYPE	
No Lubricator	<b>N</b>
Quick Fill Cap	<b>Q</b>
Fill Port	<b>S</b>

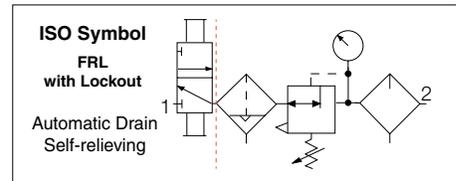
FILTER REGULATOR DRAIN TYPE	
Automatic Drain	<b>5</b>
Manual Drain	<b>6</b>

FILTER ELEMENT TYPE	
40-µm Sintered bronze	<b>A</b>
5-µm Polyethylene	<b>B</b>

LOCKOUT VALVE	
L-O-X® on outlet side	<b>1</b>
L-O-X® on the inlet side (must also choose Reverse Flow)	<b>2</b>
L-O-X® with EEZ-ON® on outlet side	<b>3</b>
L-O-X® with EEZ-ON® on inlet side (must also choose Reverse Flow)	<b>4</b>
Without Valve - Leave Blank	



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Element Number
5-µm - Standard	Polyethylene	R-A115-106PE5
40-µm - Standard	Sintered Bronze	R-A115-106E3
5-µm - Optional	Sintered Bronze	R-A115-106E5
20-µm - Optional	Sintered Bronze	R-A115-106E4



Options: External Bowl Drains, refer to page G6.7.  
Accessories ordered separately, refer to page G6.3-5.

## STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber, or Sintered Bronze Regulator – Piston Lubricator – Sight-Feed	Pressure Adjustment	Locking Key: Removable
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Oil Adjustment	External; tamper-resistant
Fluid Media	Compressed air	Construction Material	Filter Element: 5-micron rated polyethylene or 40-micron element Heads: Zinc Bowls: Aluminum bowl with clear nylon sight glass, polycarbonate bowl with steel shatterguard; extended aluminum lubricator bowl with two clear nylon sight glasses Bowl Rings: Nylon Regulator Dome: Nylon Regulator Knob: Acetal Sight Dome: Clear Nylon Seals: Nitrile
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: 15 to 150 psig (1 to 10 bar) Metal Bowl: 15 to 200 psig (1 to 14 bar) Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)		
Outlet Pressure	Adjustable up to 125 psig (9 bar)		
Filter Drain	Internal Automatic or Manual		
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear.		

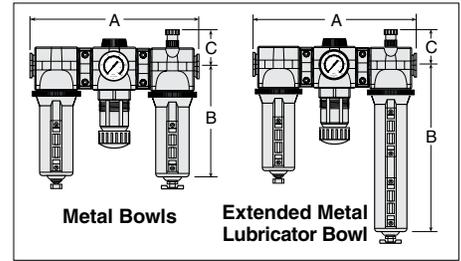
**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

# Modular Filter, Regulator and Lubricator Combinations

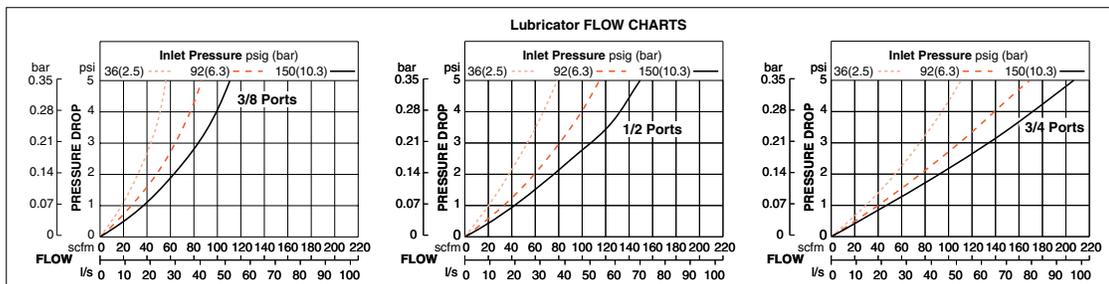
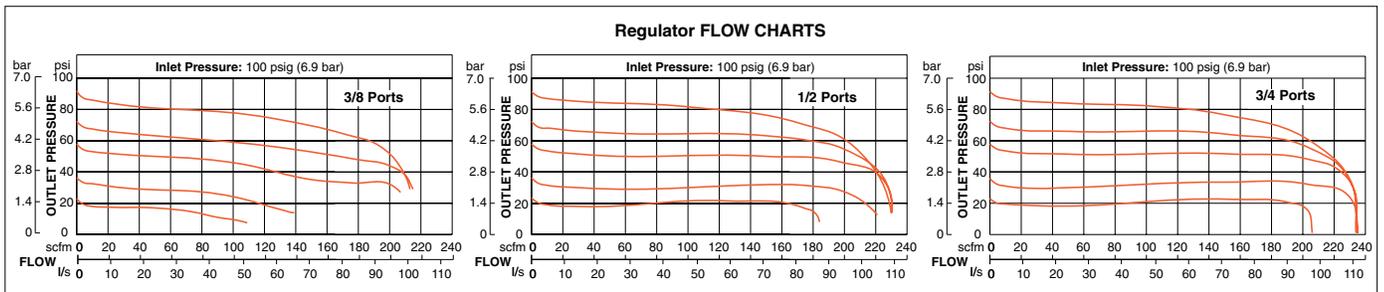
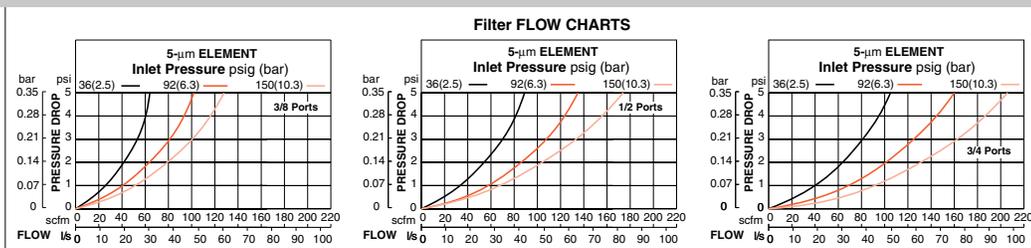
MD4™ Series

Port Size	Bowl Type	Dimensions inches (mm)				Weight † lb (kg)
		A	B*	C	Depth †	
3/8, 1/2, 3/4	Polycarbonate	10.9 (276)	7.7 (195)	2.2 (56)	2.9 (73)	6.94 (3.15)
	Aluminum	10.9 (276)	7.6 (193)	2.2 (56)	3.1 (79)	6.94 (3.15)
	Extended Metal	10.9 (276)	10.6 (269)	2.2 (56)	3.1 (79)	7.13 (3.24)

**Lockout:** With the lockout valve, add 2.3 (58) to dimension A.  
 \* Bowl (standard) removal clearance: add 4.2 (107).  
 \* Bowl (extended) removal clearance: add 6.1 (155)  
 † Less gauge.



## AIR FLOW and CONSTRUCTION DATA



G5

G



# In-line Filter, Regulator and Lubricator Combinations

## HIGH-CAPACITY Series

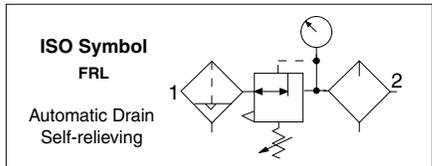
### Port Sizes: 3/4 & 1 – Flow to 270 scfm

Port Size	Port Threads	Automatic Drain		Manual Drain	
		Polycarbonate Bowl	Metal Bowl	Polycarbonate Bowl	Metal Bowl
		Model Number	Model Number	Model Number	Model Number
3/4	NPTF	5H00C5111	5H00C5212	5H00C5311	5H00C5412
	G	C5H00C5111	C5H00C5212	C5H00C5311	C5H00C5412
1	NPTF	5H00C6111	5H00C6212	5H00C6311	5H00C6412
	G	C5H00C6111	C5H00C6212	C5H00C6311	C5H00C6412

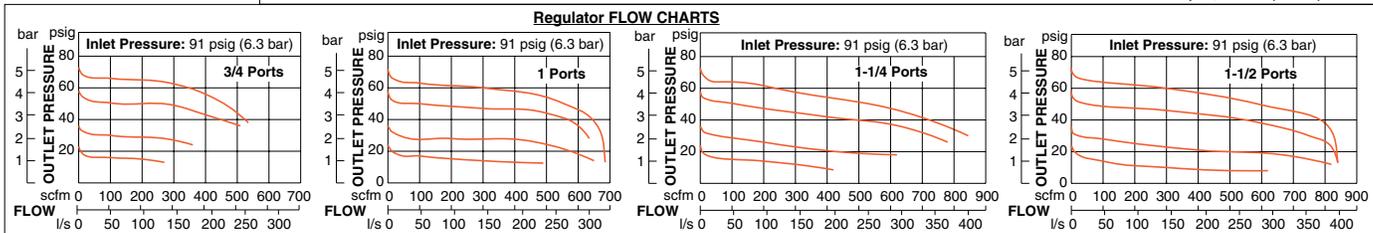
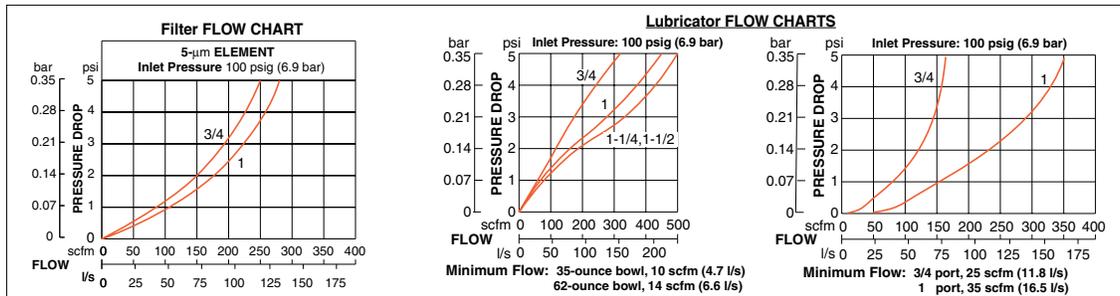
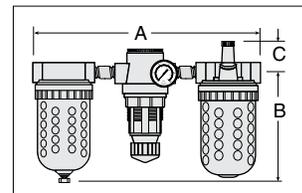


Port Size	Bowl Type	Bowl Capacity	Dimensions inches (mm)				Weight † lb (kg)
			A	B	C	Depth †	
3/4, 1	Polycarbonate	16-oz (480-ml)	15.8 (401)	8.0 (204)	1.2 (31)	4.3 (108)	8.00 (3.64)
	Aluminum	16-oz (480-ml)	15.8 (401)	8.3 (210)	1.2 (31)	4.3 (108)	8.9 (4.03)

† Less gauge.



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Model Number
5-µm - Standard	Polyethylene	1010K77
5-µm - Optional	Sintered Bronze	R-KA109-03E5
20-µm - Optional	Sintered Bronze	R-KA109-03E4
40-µm - Optional	Sintered Bronze	R-KA109-03E3



G5

G

Pressure Gauge included.  
Accessories ordered separately, refer to page G6.3-4.

### STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber Regulator – Piston Lubricator - Wick-Feed	Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear.
Temperature	Ambient/Media: Polycarbonate Bowl: 40° to 125°F (4° to 52°C) Metal Bowl: 40° to 175°F (4° to 80°C)	Pressure Adjustment	Locking Key: Removable
Fluid Media	Compressed air	Oil Adjustment	External; tamper-resistant
Operating Pressure	Automatic Drain Models Polycarbonate Bowl: 15 to 150 psig (1 to 10 bar) Metal Bowl: 15 to 200 psig (1 to 14 bar) Manual Drain Models Polycarbonate Bowl: 0 to 150 psig (0 to 10 bar) Metal Bowl: 0 to 200 psig (0 to 14 bar)	Construction Material	Filter Element: 5-micron rated polyethylene Heads: Aluminum Bowls: Aluminum bowls with sight glass, or polycarbonate bowls with steel shatterguard Bowl Rings: Aluminum Regulator Dome: Nylon Regulator Knob: Acetal Sight Dome: Clear Nylon Seals: Nitrile
Outlet Pressure	Adjustable up to 125 psig (9 bar)		
Filter Drain	Internal Automatic or Manual		

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

# In-line Filter, Regulator and Lubricator Combinations

## HIGH-CAPACITY Series

Port Sizes: 1¼ & 1½ – Flow to 495 scfm

Choose your options (in red) to configure your model number.

<input type="checkbox"/>	<b>5H</b>	<b>00C</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>2</b>
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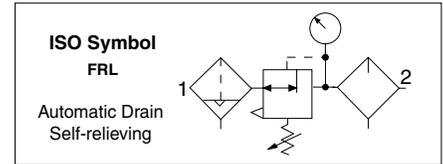
PIPE THREAD	NPTF (Blank) G <b>C</b>
-------------	----------------------------

PIPE SIZE	1¼ <b>7</b> 1½ <b>8</b>
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LUBRICATOR TYPE	None <b>0</b> Sight-feed, Fill port <b>2</b> Sight-feed, Quick-fill cap <b>4</b>
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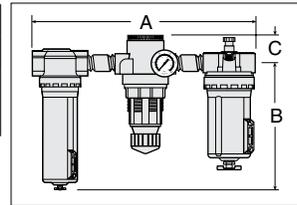
FILTER DRAIN & ELEMENT TYPE	None <b>0</b> Automatic drain, 40-µm <b>1</b> Automatic drain, 5-µm <b>2</b> Manual drain, 40-µm <b>3</b> Manual drain, 5-µm <b>4</b>
-----------------------------	---

REGULATOR TYPE	None <b>0</b> Piston, 0-100 psig (0-6.9 bar) <b>1</b> Internal pilot, 15-200 psig (1.0-14 bar) <b>8</b>
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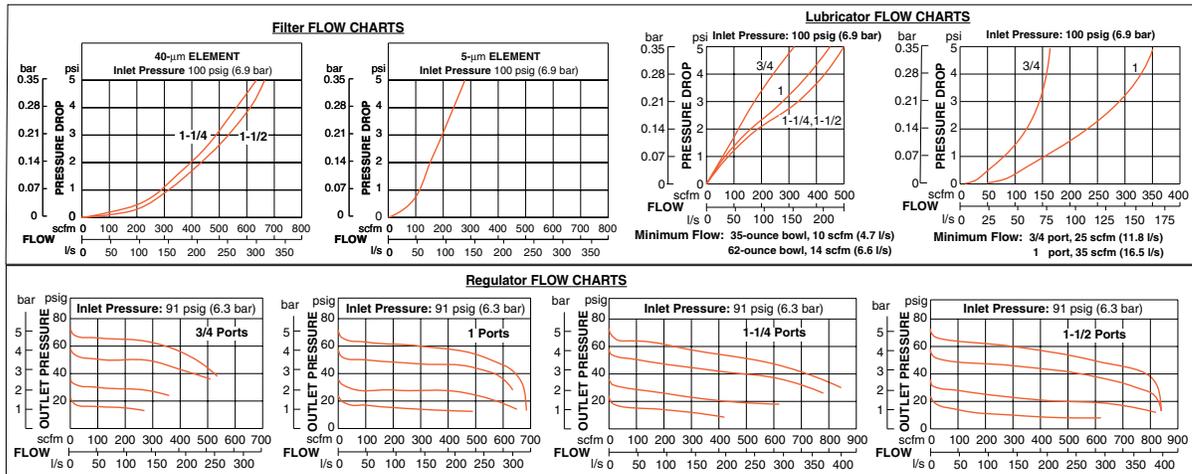


Port Size	Bowl Capacity	Dimensions inches (mm)				Weight† lb (kg)
		A	B	C	Depth†	
1¼, 1½	35-oz (1000-ml)	15.8 (401)	10.6 (268)	2.1 (54)	4.3 (108)	8.00 (3.64)

† Less gauge.



REPLACEMENT FILTER ELEMENTS		
Element Rating	Element Material	Element Number
5-µm	Polyethylene	1656K77
40-µm	Sintered Bronze	R-A114-106E3



Options: Drains: For additional information, refer to page G6.7.  
Accessories ordered separately, refer to page G6.3-4.

### STANDARD SPECIFICATIONS (for units on this page):

Construction Design	Filter – Fiber Regulator – Piston Lubricator - Sight-Feed	Construction Material	Filter Element: 5, or 40-micron rated polyethylene
Temperature	Ambient/Media: 40° to 175°F (4° to 79°C)		Heads: Aluminum
Fluid Media	Compressed air		Bowls: Aluminum bowls with sight glass
Operating Pressure	Automatic Drain Models: 15 to 200 psig (1 to 14 bar) Manual Drain Models: 0 to 200 psig (0 to 14 bar)		Bowl Rings: Aluminum
Outlet Pressure	Adjustable up to 100 psig (7 bar)		Regulator Dome: Nylon
Filter Drain	Internal Automatic or Manual		Regulator Knob: Acetal
Pressure Gauge	0 to 200 psig (0 to 14 bar); 1/4 NPT gauge ports front and rear.		Sight Dome: Clear Nylon
Pressure Adjustment	Locking Key: Removable		Seals: Nitrile
Oil Adjustment	External; tamper-resistant		

**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.



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### Mounting Screws for BANTAM Models

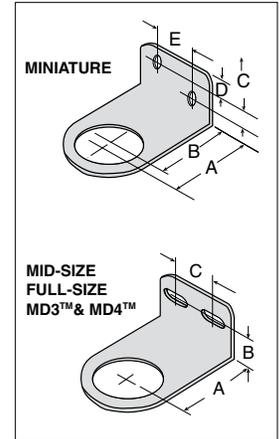
Usage Models	Kit Number
BANTAM	859K77

BANTAM models mounts with long screws that extend through end plates.

### Mounting Brackets for Regulators and Integrated Filter/Regulators

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

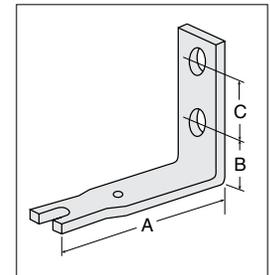
Usage Models	Model Number			Dimensions inches (mm)					Panel Mounting Hole Diameter
	Kit	Bracket	Panel Nut	A	B	C	D	E	
MINIATURE	873K77	872K77	874K77	1.375 (35)	1.125 (29)	0.31 (8)	0.31 (8)	0.69 (17)	1.19 (30)
MID-SIZE	876K77	875K77	877K77	2.38 (60)	1.00 (25)	1.50 (38)	-	-	1.56 (40)
MD3™	R-A127-11	-	R-127-11	2.38 (60)	1.00 (25)	1.50 (38)	-	-	2.06 (52)
FULL-SIZE, MD4™	879K77	878K77	880K77						



### Modular Mounting Brackets for Filters, Regulators, Lubricators, FRL's, or Clean Air Packages

Two L-shaped metal brackets as shown at the right 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.

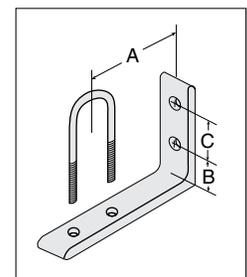
Usage Models	Kit Number	Dimensions inches (mm)			
		A	B	C	D
MID-SIZE & FULL-SIZE	915K77	3.0 (76)	0.88 (22)	1.00 (25)	1.20 (31)



### FRLs In-line Mounting Pipe Brackets

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

Nipple Size	Kit Number	Dimensions inches (mm)		
		A	B	C
1/4	887K77	2.72 (28)	0.50 (13)	1.00 (25)
3/8	888K77			
1/2	889K77			
3/4	890K77	3.69 (94)	1.13 (29)	1.25 (32)
1	891K77			



### Bracket Assembly Kit for HIGH-RELIEF Pilot Operated Regulator

High-Relief Pilot Operated Regulator with 1/4- thru 1 1/4 inch ports can be mounted to a vertical surface using a bracket assembly kit.

Kit Number	R-A37-381
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**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

### MID-SIZE and FULL-SIZE Units

The modular designs of the MID-SIZE and FULL-SIZE series offer maximum flexibility in customizing FRLs assemblies. As shown at the right, connector kits are required to interconnect units. Various port kits (shown below) can be used to connect the assemblies to the inlet and outlet piping. Note that all FRLs components have threaded ports so that conventional pipe fittings may be used where desired.

#### Female Port Block

Used to connect to piping at inlet or outlet.

Port Size	Model Number	
	NPTF Threads	G Threads
1/4	897K77	D897K77
3/8	898K77	D898K77
1/2	899K77	D899K77
3/4	900K77	D900K77



#### Male Port Block

Used to connect modular to non-modular units.

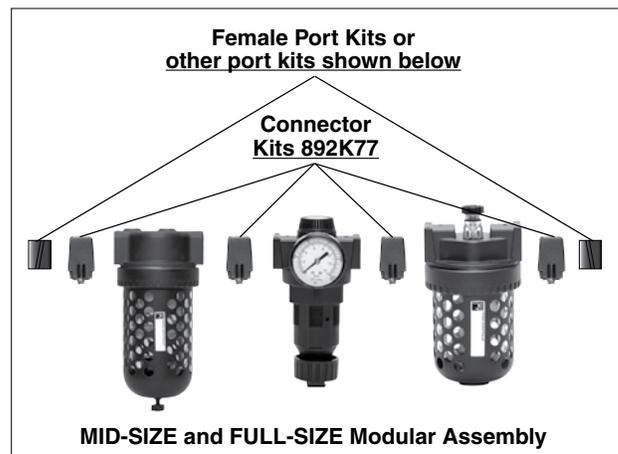
Port Size	Model Number	
	NPTF Threads	G Threads
1/4	893K77	D893K77
3/8	894K77	D894K77
1/2	895K77	D895K77
3/4	896K77	D896K77



#### Connector Kit

Used to connect units to one another as well as to any of the ports shown on this page.

Kit Number	892K77
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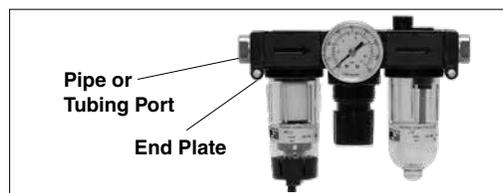


### BANTAM Units

BANTAM modular units use end plates secured with screws to hold the pipe or tubing ports (see below), and also to serve as mounting brackets. Short screws are used to secure the end plates when a single BANTAM unit is used. If two or more units are combined, long screws extend through an end plate and thread into the next unit.

Screw kits required are as follows:

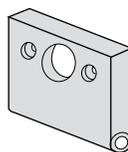
- Single Unit: Two short screw kits.
- Two-Unit Combination: One each short screw kit and long screw kit.
- Three-Unit Combination: Two long screw kits.



Pipe Ports	
Port Size	Model Number
1/8 NPTF	862K77
1/4 NPTF	863K77
1/8 BSPP	D864K77
1/4 BSPP	D865K77



Pipe Ports	
Kit Description	Model Number
END PLATE (1)	857K77
Short Screw (2)	858K77
Long Screw (2)	859K77
Small O-Ring (for inlet or mating ports)	860K77
Large O-Ring (for outlet or mating ports)	861K77



Tube Ports	
Port Size	Model Number
1/4	866K77
3/8	867K77
4 mm	868K77
6 mm	869K77
8 mm	870K77
10 mm	871K77



**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

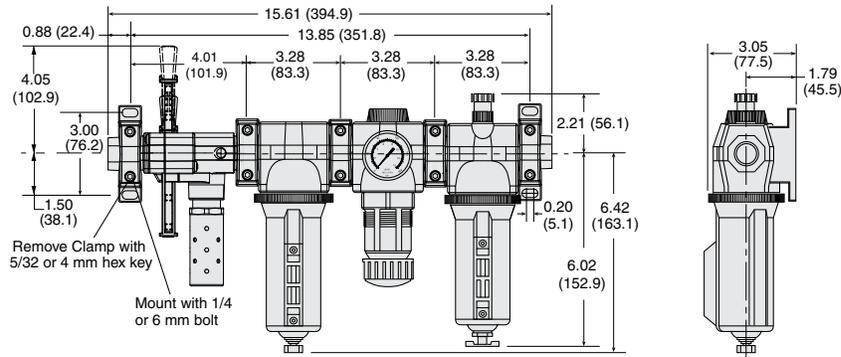
# Modular Assemblies

## Accessories: Clamp, Brackets, End Ports & Port Blocks

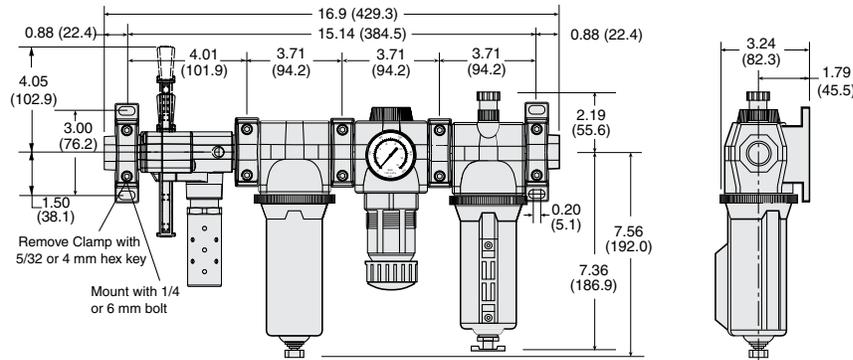
## MD Series

Dimensions: inches (mm)

### MD3™ Series



### MD4™ Series



### Mounting Brackets & Clamp for Module Connections

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. Specially designed clamps provide a quick and easy assembly or disassembly of MD3™ 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.



Bracket, Screw, and Clamp



Module Connecting Clamp



Mounting Bracket

#### Mounting Brackets & Clamp for Module Connections

Description	Model Number
Bracket and Screw	R-A118-103
Module Connecting Clamp	R-A118-105
Bracket, Screw, and Clamp	R-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 model numbers:

End Ports				
Type	Port Size	Model Number		
		NPTF Threads	G Threads	
Female	1/4	R-118-100-2	R-118-100-2W	
	3/8	R-118-100-3	R-118-100-3W	
	1/2	R-118-100-4	R-118-100-4W	
	3/4	R-118-100-6	R-118-100-6W	
Male	1/4	R-118-109-2F	R-118-109-2FW	
	3/8	R-118-109-3F	R-118-109-3FW	
	1/2	R-118-109-4F	R-118-109-4FW	
	3/4	R-118-109-6F	R-118-109-6FW	

### Extra Port Blocks

An extra port block can be placed between modules to provide two auxiliary 1/4 NPTF 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.)

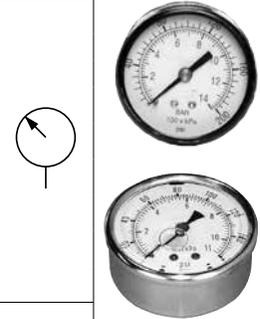
Port Size	Model Number	
	NPTF Threads	G Threads
1/4	R-118-106-2	R-118-106-2W
3/8	R-118-106-3	R-118-106-3W
1/2	R-118-106-4	R-118-106-4W



Analog Pressure Gauges

Pressure Gauges (Center Back Mounting)	Type/Material	Port Size	Model Number		Pressure Range psig (bar)	Case Diameter inches (mm)
			Thread			
			NPT	G		
Standard Aluminum		1/8	5400A1002	D5400A1002	0-160 (0-11)	1.7 (43)
		1/4	5400A2010	D5400A2010	0-60 (0-4)	2.0 (51)
		1/4	5400A2011	D5400A2011	0-200 (0-14)	2.0 (51)
		1/4	5400A2012	D5400A2012	0-300 (0-20)	2.0 (51)
Liquid Filled Stainless Steel		1/4	5400A2014	D5400A2014	0-160 (0-11)	2.5 (64)
		1/4	5400A2015*	D5400A2015*	0-160 (0-11)	2.0 (51)

\*Green shade between 40-70 psi (2.7-4.8 bar).



Differential Pressure Gauges

DIFFERENTIAL PRESSURE GAUGE TYPE/SERIES	Small Slide Gauge	Small Slide Gauge	Large Dual Face Gauge	Large Dual Face Gauge with Reed Switch (Normally Open)	Large Dual Face Gauge with Reed Switch (Normally Closed)
	R-A60F-28	R-K103-151	R-106-35	R-106-35E	R-106-35EC
<b>FILTERS</b>					
BANTAM	-	-	-	-	-
MINIATURE	-	-	-	-	-
MID-SIZE	-	-	-	-	-
MD3™		-	-	-	-
FULL-SIZE	-	-	-	-	-
MD4™	-				
HIGH-CAPACITY	-	-	-	-	-
<b>COALESCING FILTERS</b>					
BANTAM	-	-	-	-	-
MINIATURE	-	-	-	-	-
MID-SIZE		-	-	-	-
FULL-SIZE	-				
MD3™		-	-	-	-
MD4™	-				
HIGH-CAPACITY	-				
<b>OIL VAPOR REMOVAL (ADSORBING) FILTERS</b>					
MD3™	-	-	-	-	-
MD4™	-	-	-	-	-
<b>CLEAN AIR PACKAGES</b>					
MD3™		-	-	-	-
MD4™	-				

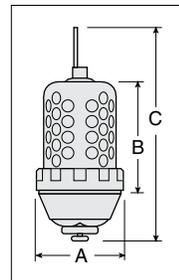
**IMPORTANT NOTE:** Please read carefully and thoroughly all of the **CAUTIONS, WARNINGS** on the inside back cover.

### External Automatic Drains

Pipe Size	Model Number*	
	Polycarbonate Bowl**	Metal Bowl
1/8	5057B1001	5058B1001
1/4*	5057B2001	5058B2001

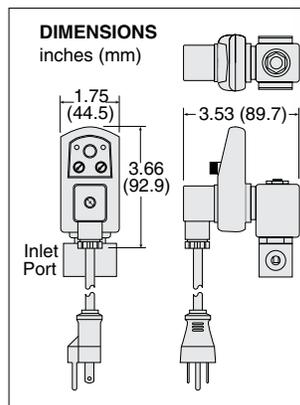
\*Use 1/4 size with FULL-SIZE, HIGH-CAPACITY, MD3™ & MD4™ filters.  
Use kit 1076K77 to convert standard bowl to accept auto drain unit.  
\*\*Available for FULL-SIZE filters only. Polycarbonate bowl includes metal bowl guard.

Port Size	Dimensions inches (mm)			Weight lb (kg)
	A	B	C	
1/8, 1/4	3.5 (89)	4.2 (107)	8.3 (211)	2.6 (1.2)



### Electronically Controlled Drain

Pipe Size	Voltage	Model Number	
		NPTF Threads	G Threads
1/4	24 volts DC	R-DED-24V-2	R-DED-24V-2W
3/8	24 volts DC	R-DED-24V-3	R-DED-24V-3W
1/2	24 volts DC	R-DED-24V-4	R-DED-24V-4W
1/4	110-120 volts AC, 50/60 Hz	R-DED-115V-2	R-DED-115V-2W
3/8	110-120 volts AC, 50/60 Hz	R-DED-115V-3	R-DED-115V-3W
1/2	110-120 volts AC, 50/60 Hz	R-DED-115V-4	R-DED-115V-4W



### STANDARD SPECIFICATIONS (for electronically controlled drain):

Drain Time	Adjustable 0.5 to 10 seconds	Electrical Connection	DIN 43650A, ISO 440/6952
Drain Interval	0.5 to 45 minutes	Valve Type	2/2 direct acting, normally closed
Current Consumption	Maximum 4 ma	Valve Body	Forged brass; 3/16-inch (4.8 mm) orifice
Temperature	Ambient: 35° to 130°F (2° to 54°C)	Maximum Pressure	230 psig (15.8 bar)
	Media: 35° to 190°F (2° to 88°C)		

### Silencers

Port Size	Thread Type	Model Number*		Avg. C <sub>v</sub>	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	R/Rp Threads		Width	Length	
3/8	Male	5500A3003	D5500A3003	4.3	1.3 (32)	3.5 (88)	0.2 (0.1)
3/4	Male	5500A5013	D5500A5013	5.1	1.3 (32)	3.6 (92)	0.2 (0.1)
3/4	Male	5500A5003	D5500A5003	11.5	2.0 (51)	5.3 (135)	0.6 (0.3)

**Flow Media:** Filtered air.  
**Pressure Range:** 0 to 290 psig (0 to 20 bar) maximum.



**G**

**G6**

# Replacements Filter Elements

## FRL's Series

Category	Series	Bowl Type	Element Rating	Element Material	Model Number
Filters	Bantam & Miniature	Standard	5-µm	Polyethylene	933K77
			5-µm	Sintered Bronze	R-KA130-27E5
			20-µm	Sintered Bronze	R-KA130-27E4
			40-µm	Sintered Bronze	R-KA130-27E3
	MID-SIZE	Standard	5-µm	Polyethylene	936K77
	MD3™	Standard	5-µm	Polyethylene	R-A60F-03PE5
			5-µm	Sintered Bronze	R-A60F-03E5
			20-µm	Sintered Bronze	R-A60F-03E4
			40-µm	Sintered Bronze	R-A60F-03E3
	FULL-SIZE	Standard	5-µm	Polyethylene	939K77
			5-µm	Sintered Bronze	R-KA103-03E5
			20-µm	Sintered Bronze	R-KA103-03E4
			40-µm	Sintered Bronze	R-KA103-03E3
	MD4™	Standard	5-µm	Polyethylene	R-A115-106PE5
			5-µm	Sintered Bronze	R-A115-106E5
			20-µm	Sintered Bronze	R-A115-106E4
			40-µm	Polyethylene	R-A115-106PE3
	HIGH-CAPACITY Flow to 275 scfm	Standard	5-µm	Polyethylene	1010K77
			5-µm	Sintered Bronze	R-KA109-03E5
			20-µm	Sintered Bronze	R-KA109-03E4
40-µm			Sintered Bronze	R-KA109-03E3	
HIGH-CAPACITY Flow to 660 scfm	Standard	5-µm	Sintered Bronze	1656K77	
		40-µm	Sintered Bronze	R-A114-106E3	
HIGH-CAPACITY Flow to 1000 scfm	Standard	5-µm	Sintered Bronze	942K77	
		40-µm	Sintered Bronze	944K77	
Coalescing Filters	Bantam & Miniature	Standard	0.3-µm	Borosilicate-glass-fiber	945K77
			0.01-µm	Borosilicate-glass-fiber	R-A-10F-16E8
	MID-SIZE	Standard	0.3-µm	Borosilicate-glass-fiber	R-A60F-29
			0.01-µm	Borosilicate-glass-fiber	R-A60F-32
		Extended	0.01-µm	Borosilicate-glass-fiber	R-A60F-29E8
			0.01-µm	Borosilicate-glass-fiber	R-A60F-32E8
	MD3™	Polycarbonate	0.3-µm	Borosilicate-glass-fiber	R-A60F-23
			0.3-µm	Borosilicate-glass-fiber	R-A60F-29
		Extended Metal	0.3-µm	Borosilicate-glass-fiber	R-A60F-32
			0.01-µm	Borosilicate-glass-fiber	R-A60F-23E8
		Metal	0.01-µm	Borosilicate-glass-fiber	R-A60F-29E8
			0.01-µm	Borosilicate-glass-fiber	R-A60F-32E8
	FULL-SIZE	Standard	0.3-µm	Borosilicate-glass-fiber	947K77
			0.3-µm	Borosilicate-glass-fiber	R-A103-160L
		Extended	0.01-µm	Borosilicate-glass-fiber	948K77
			0.01-µm	Borosilicate-glass-fiber	R-A103-160LE8
	MD4™	Standard	0.3-µm	Borosilicate-glass-fiber	R-A115-117
			0.3-µm	Borosilicate-glass-fiber	R-A115-118
		Extended	0.01-µm	Borosilicate-glass-fiber	R-A115-117E8
			0.01-µm	Borosilicate-glass-fiber	R-A115-118E8
	HIGH-CAPACITY Flow to 220 scfm	Standard	0.3-µm	Borosilicate-glass-fiber	949K77
			0.01-µm	Borosilicate-glass-fiber	R-A109-106E8
		Extended	0.3-µm	Borosilicate-glass-fiber	R-A114-112
			0.3-µm	Borosilicate-glass-fiber	R-A114-113
	HIGH-CAPACITY Flow to 295 & 450 scfm	Standard	0.01-µm	Borosilicate-glass-fiber	R-A114-112E8
			0.01-µm	Borosilicate-glass-fiber	R-A114-113E8
		Extended	0.3-µm	Borosilicate-glass-fiber	952K77
			0.3-µm	Borosilicate-glass-fiber	953K77
	HIGH-CAPACITY Flow to 465 scfm	Standard	0.01-µm	Borosilicate-glass-fiber	R-A106-24E8
			0.01-µm	Borosilicate-glass-fiber	R-A106-24LE8
Extended		0.3-µm	Borosilicate-glass-fiber	953K77	
		0.01-µm	Borosilicate-glass-fiber	R-A106-24E8	
HIGH-CAPACITY Flow to 840 scfm	Extended	0.3-µm	Borosilicate-glass-fiber	953K77	
		0.01-µm	Borosilicate-glass-fiber	R-A106-24E8	
Oil Vapor Removal Filters	MD3™	Standard	–	Borosilicate-glass-fiber	R-A60F-29E9
		Extended	–	Borosilicate-glass-fiber	R-A60F-32E9
	MD4™	Standard	–	Borosilicate-glass-fiber	R-A115-117E9
		Extended	–	Borosilicate-glass-fiber	R-A115-118E9
Silencers Reclassifiers	Port Size 1/2	Standard	20-µm	Sintered Bronze	940K77
	Port Size 3/4, 1		100-µm	Sintered Bronze	981K77

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# Lubricants, Polycarbonate Bowl Cautions

## Compatible Lubricants

Although air line lubrication is not required for most ROSS valves, other mechanisms in the system may need such lubrication. When a lubricator is used, it should be supplied only with oils which are compatible with the materials used in the valves for seals and poppets. Generally speaking, these are petroleum base oils with oxidation inhibitors, and aniline point between 180°F (82°C) and 220°F (104°C) and an ISO 32, or lighter, viscosity. Oils with phosphate type additives, such as zinc dithiophosphate, must be avoided because they can harm polyurethane valve components. The best oils to use in pneumatic systems are those specifically compounded for air line lubricator service.

## Cautions on the Use of Polycarbonate Bowls

**Use Only with Compressed Air.** Filters and lubricators with polycarbonate bowls are specifically designed for compressed air service, and their use with any other fluid (liquid or gas) is a misapplication. The use with or injection of certain hazardous fluids in the system (e.g., alcohol or liquefied petroleum gas) could be harmful to the polycarbonate bowl or result in a combustible condition or hazardous leakage. Before using with a fluid other than air, or for nonindustrial applications, or for life support systems, consult ROSS.

**Use Metal Bowl Guard When Supplied.** A metal bowl guard is supplied with all but the smallest bowls, and must always be used to minimize danger from fragmentation in the event of failure of a polycarbonate bowl.

**Avoid Harmful Substances.** Some compressor oils, chemical cleaners, solvents, paints, and fumes will attack polycarbonate bowls and can cause bowl failure. Do not use with or near these materials. When a bowl becomes dirty, replace the bowl or wipe it with a clean dry cloth. Immediately replace any polycarbonate bowl which is crazed, cracked, or deteriorated.

## Substances HARMFUL to Polycarbonate Bowls

Acetaldehyde	Carbon disulfide	Ethylene dichloride	Phosphorous trichloride
Acetic acid	Carbon tetrachloride	Ethylene glycol	Propionic acid
Acetone	Caustic potash solution	Formic acid	Pyridine
Acrylonitrile	Caustic soda solution	Freon (refrigerant & propellant)	Sodium hydroxide
Ammonia	Chlorobenzene	Gasoline (high aromatic)	Sodium sulfide
Ammonium fluoride	Chloroform	Hydrazine	Styrene
Ammonium hydroxide	Cresol	Hydrochloric acid	Sulfuric acid
Ammonium sulfide	Cyclohexanol	Lacquer thinner	Sulfural chloride
Anaerobic adhesives & sealants	Cyclohexanone	Methyl alcohol	Tetrahydronaphthalene
Antifreeze	Cyclohexene	Methylene chloride	Thiophene
Benzene	Dimethyl formamide	Methylene salicylate	Toluene
Benzoic acid	Dioxane	Milk of lime (CaOH)	Turpentine
Benzyl alcohol	Ethane tetrachloride	Nitric acid	Xylene
Brake fluids	Ethyl acetate	Nitrobenzene	Perchloroethylene
Bromobenzene	Ethyl ether	Nitrocellulose lacquer	
Butyric acid	Ethylamine	Phenol	
Carbolic acid	Ethylene chlorohydrin	Phosphorous hydroxyl chloride	

## Trade Names of Substances HARMFUL to Polycarbonate Bowls

- Atlas Perma-Guard • Buna N • Cellulube #150 & #220 • Crylex #5 cement • Eastman 910 • Garlock 98403 (polyurethane)
- Haskel 568-023 • Hilgard Company's hil phene • Houghton & Co. oil 1120, 1130, 1055 • Houtosafe 1000 • Kano Kroil
- Keystone penetrating oil #2 • Loctite 271, 290, 601 • Loctite Teflon sealant • Marvel Mystery Oil • Minn. Rubber 366Y
- National Compound N11 • Nylock VC-3 • Parco 1306 Neoprene • Permabond 910 • Petron PD287 • Prestone • Pydraul AC
- Sears Regular Motor Oil • Sinclair oil "Lily White" • Stauffer Chemical FYRQUEL 150 • Stillman SR 269-75 (polyurethane)
- Stillman SR 513-70 (neoprene) • Tannergas • Telar • Tenneco anderol 495 & 500 oils • Titon • Vibra-tite • Zerex





# CAUTIONS, WARNINGS And STANDARD WARRANTY

ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the “ROSS Group”.

## PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure all sources of energy are turned off, the entire pneumatic system is shut down and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).
2. All ROSS Group Products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any product can be tampered with and/or need servicing after installation, persons responsible for the safety of others or the care of equipment must check ROSS Group Products on a regular basis and perform all necessary maintenance to ensure safe operating conditions.
3. All applicable instructions should be read and complied with before using any fluid power system to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS Group location.
4. Each ROSS Group Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Group Products.

**WARNINGS:** *Failure to follow these instructions can result in personal injury and/or property damage.*

## FILTRATION and LUBRICATION

1. Dirt, scale, moisture, etc., are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. The ROSS Group recommends a filter with a 5-micron rating for normal applications.
2. All standard ROSS Group filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition and hazardous leakage. Immediately replace crazed, cracked, or deteriorated bowls.
3. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum base oils with oxidation inhibitors, an aniline

point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks personal injury, and/or damage to property.

**WARNINGS:** *Failure to follow these instructions can result in personal injury and/or property damage.*

## AVOID INTAKE/EXHAUST RESTRICTION

1. Do not restrict air flow in the supply line. To do so could reduce the pressure of the supply air below minimum requirements for the valve and thereby causing erratic action.
2. Do not restrict a valve's exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

**WARNINGS:** *Failure to follow these instructions can result in personal injury and/or property damage.*

## SAFETY APPLICATIONS

1. Mechanical Power Presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.
2. Safety exhaust (dump) valves without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All safety exhaust valve installations should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.
3. Per specifications and regulations, the ROSS L-O-X® and L-O-X® with EEZ-ON®, N06 and N16 Series operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

**WARNINGS:** *Failure to follow these instructions can result in personal injury and/or property damage.*

## STANDARD WARRANTY

All products sold by the ROSS Group are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators (“FRLs”) which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods, warranted to be free of defects in material and workmanship. The ROSS Group’s obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Group freight prepaid.

THE WARRANTY EXPRESSED ABOVE IS IN LIEU OF AND EXCLUSIVE OF ALL OTHER WARRANTIES AND THE ROSS GROUP EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ROSS GROUP MAKES NO WARRANTY WITH RESPECT TO ITS PRODUCTS MEETING THE PROVISIONS OF ANY GOVERNMENTAL OCCUPATIONAL SAFETY AND/OR HEALTH LAWS OR REGULATIONS. IN NO EVENT IS THE ROSS GROUP LIABLE TO PURCHASER, USER, THEIR EMPLOYEES OR OTHERS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM A BREACH OF THE WARRANTY DESCRIBED ABOVE OR THE USE OR MISUSE OF THE PRODUCTS. NO STATEMENT OF ANY REPRESENTATIVE OR EMPLOYEE OF THE ROSS GROUP MAY EXTEND THE LIABILITY OF THE ROSS GROUP AS SET FORTH HEREIN.





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*To meet your requirements across the globe, ROSS distributors are located throughout the world. Through ROSS or its distributors, guidance is available for the selection of ROSS products, both for those using pneumatic components for the first time and those designing complex systems.*

*Other literature is available for engineering, maintenance, and service requirements.*

*If you need products or specifications not shown in this catalog, please visit ROSS' website, contact ROSS or your ROSS distributor. The ROSS Support Team will be happy to assist you in selecting the best product for your application.*

*For a current list of countries and local distributors, visit ROSS' at [rosscontrols.com](http://rosscontrols.com).*