

ROSS CONTROLS®



LUBRICATORS



LUBRICATORS – KEY FEATURES

- Sight-feed and wick-feed design options
- Sight-feed Lubricators are easy to adjust, and an indicator on the sight dome measures the amount of oil dispensed
- The adjusting knob can be removed to make the lubricator “tamper-resistant”
- All working parts are in an easily replaceable cartridge
- Modular and inline mounting options
- Metal and High Strength polycarbonate bowl options
- External tamper resistant adjustment
- Quick-fill cap option for full size, MD3™, and MD4™ Series
- Extended bowls available for MD3™ and MD4™ Series

E

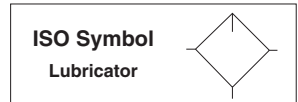
E4

LUBRICATOR TYPE/SERIES	AVAILABLE PORT SIZES								FLOW	DESIGN		BOWL TYPE		Page
	1/8	1/4	3/8	1/2	3/4	1	1¼	1½	MAX FLOW (scfm)	SIGHT FEED	WICK FEED	POLYCARBONATE	METAL	
BANTAM	■	■							27	■	■	■	■	E4.3
MINIATURE	■	■							25	■	■	■	■	E4.4
MID-SIZE		■	■	■					110	■	■	■	■	E4.5
MD3™		■	■	■					150	■	■	■	■	E4.6
FULL-SIZE		■	■	■	■				140	■	■	■	■	E4.7
MD4™			■	■	■	■	■		205	■	■	■	■	E4.8
HIGH-CAPACITY					■	■	■	■	500	■	■	■	■	E4.9

Port Sizes: 1/8 & 1/4, and Tube Fittings – Flow to 27 scfm

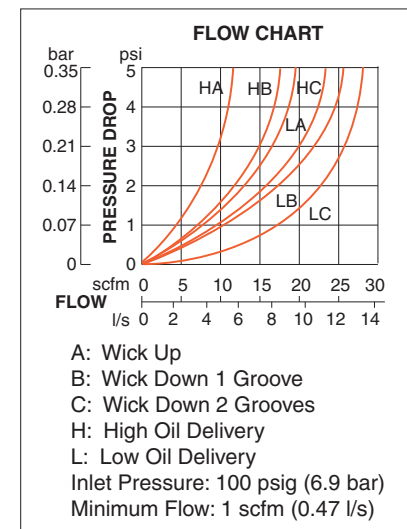
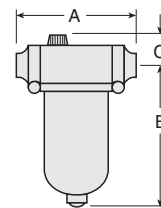
Port Size	Model Numbers			
	Threaded Ports*		Tube Fittings	
	Polycarbonate bowl	Metal Bowl	Polycarbonate bowl	Metal Bowl
FILL PORT				
1/8	5B01B0005	5B01B0006	–	–
1/4	5B02B0005	5B02B0006	5B03B0005	5B03B0006
3/8	–	–	5B04B0005	5B04B0006
4mm	–	–	5B05B0005	5B05B0006
6mm	–	–	5B06B0005	5B06B0006
8mm	–	–	5B07B0005	5B07B0006
10mm	–	–	5B08B0005	5B08B0006
QUICK-FILL CAP				
1/8	5B01B0007	5B01B0008	–	–
1/4	5B02B0007	5B02B0008	5B03B0007	5B03B0008
3/8	–	–	5B04B0007	5B04B0008
4mm	–	–	5B05B0007	5B05B0008
6mm	–	–	5B06B0007	5B06B0008
8mm	–	–	5B07B0007	5B07B0008
10mm	–	–	5B08B0007	5B08B0008

* NPT port threads. For BSPP threads add a "C" prefix to the model number e.g., C5B01B0005.



Port Size	Bowl Capacity	Dimensions inches (mm)				Weight lb (kg)
		A	B**	C	Depth	
No Port	2-oz (60-ml)	1.7 (43)	3.6 (91)	0.9 (22)	1.8 (45)	0.17 (0.08)
1/8, 1/4	2-oz (60-ml)	3.0 (76)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)
Models below have quick-connect tube fittings.						
1/4	2-oz (60-ml)	3.4 (86)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)
3/8	2-oz (60-ml)	3.9 (99)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)
4 mm	2-oz (60-ml)	3.4 (86)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)
6 mm	2-oz (60-ml)	3.4 (86)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)
8 mm	2-oz (60-ml)	3.4 (86)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)
10 mm	2-oz (60-ml)	3.9 (99)	3.6 (91)	0.9 (22)	1.8 (45)	0.37 (0.17)

** Dimension for polycarbonate bowl; metal bowl is 3.8 (97).



Accessories ordered separately, refer to page E6.3-4.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Wick-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 150°F (4° to 66°C).

Fluid Media: Compressed air.

Inlet Pressure:

Polycarbonate bowl: 150 psig (10 bar) maximum.

Metal bowl: 200 psig (14 bar) maximum.

Oil Adjustment: External, no shut-off.

Body: Acetal.

Bowl: Polycarbonate or aluminum.

Seals: Nitrile.

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



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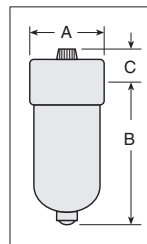
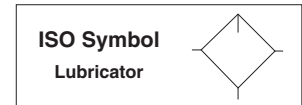
Port Sizes: 1/8 & 1/4 – Flow to 25 scfm

Port Size	Fill Type	Model Numbers*			
		Polycarbonate bowl		Metal Bowl	
		High-Flow	Low Flow	High-Flow	Low Flow
1/8	Fill Port	5111B1010	5111B1012	5112B1010	5112B1012
1/4	Fill Port	5111B2010	5111B2012	5112B2010	5112B2012
1/8	Quick-Fill Cap	5111B1110	5111B1112	5112B1110	5112B1112
1/4	Quick-Fill Cap	5111B2110	5111B2112	5112B2110	5112B2112

* NPT port threads. For BSPP threads add a "C" prefix to the model number e.g., C5111B1010.

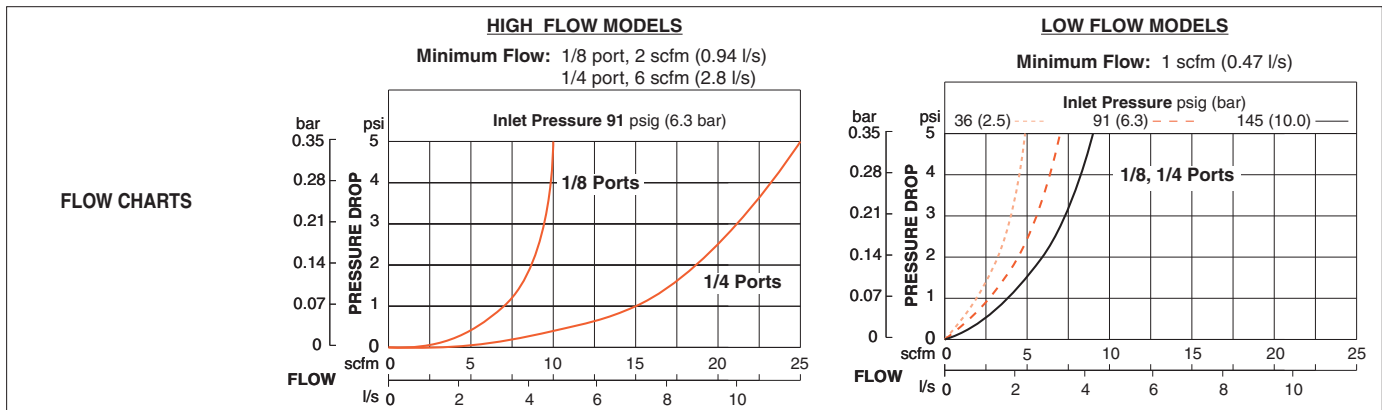


Port Size	Bowl Type	Bowl Capacity	Dimensions inches (mm)				Weight lb (kg)
			A	B	C	Depth	
1/8, 1/4	Polycarbonate	2-oz (60-ml)	1.6 (41)	3.6 (92)	0.7 (17)	1.6 (41)	0.21 (0.10)
1/8, 1/4	Aluminum	2-oz (60-ml)	1.6 (41)	3.8 (97)	0.7 (17)	1.6 (41)	0.21 (0.10)



E

E4



Accessories ordered separately, refer to page E6.3-4.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Wick-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 150°F (4° to 66°C).

Fluid Media: Compressed air.

Inlet Pressure:

Polycarbonate bowl: 150 psig (10 bar) maximum.

Metal bowl: 200 psig (14 bar) maximum.

Oil Adjustment: Internal, tamper-proof.

Body: Aluminum.

Bowl: Polycarbonate or aluminum.

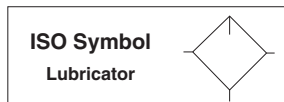
Seals: Nitrile.

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

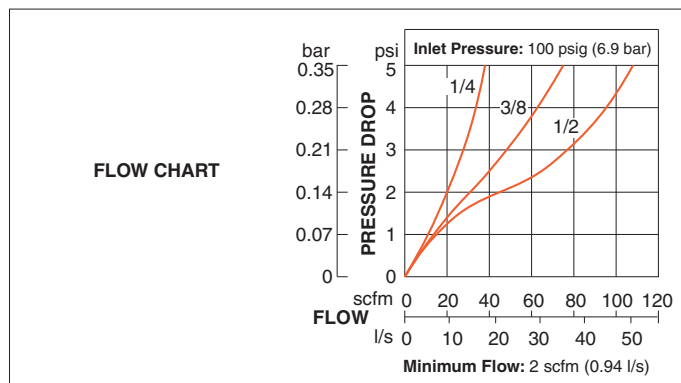
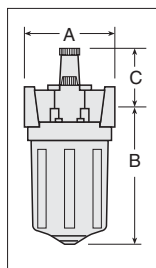
Port Sizes: 1/4, 3/8 & 1/2 – Flow to 110 scfm

Port Size	Fill Type	Model Numbers*	
		Sight-Feed	
		Polycarbonate Bowl	Metal Bowl
1/4	Fill Port	5111B2007	5112B2007
3/8	Fill Port	5111B3007	5112B3007
1/2	Fill Port	5111B4007	5112B4007
1/4	Quick-Fill Cap	5111B2107	5112B2107
3/8	Quick-Fill Cap	5111B3107	5112B3107
1/2	Quick-Fill Cap	5111B4107	5112B4107

* NPT port threads. For BSPP threads add a "C" prefix to the model number e.g., C5111B2007.



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)	2.7 (68)	4.1 (103)	1.8 (46)	2.4 (60)	1.06 (0.48)
1/4, 3/8, 1/2	Zinc	4-oz (120-ml)	2.7 (68)	4.1 (103)	1.8 (46)	2.4 (60)	1.50 (0.68)



Accessories ordered separately, refer to page E6.3-4.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Sight-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 175°F (4° to 80°C).

Inlet Pressure:

Polycarbonate bowl: 150 psig (10 bar) maximum.

Metal bowl: 200 psig (14 bar) maximum.

Fluid Media: Compressed air.

Oil Adjustment: External, tamper-resistant.

Body: Zinc.

Bowl: Polycarbonate bowl with zinc shatterguard, or zinc bowl.

Sight Dome: Nylon.

Seals: Nitrile.

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



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Port Sizes: 1/4, 3/8 & 1/2 – Flow to 150 scfm

HOW TO ORDER

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

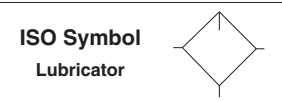
MD3 **51P** **Q** **C** **2** **2**

BOWL SIZE	
Polycarbonate Bowl 5.1-oz (151-ml)	51P
Metal Bowl 6-oz (177-ml)	51M
Extended Metal Bowl 10-oz (295-ml)	51E

LUBRICATOR FILL TYPE	
Quick Fill Cap	Q
Fill Port	S

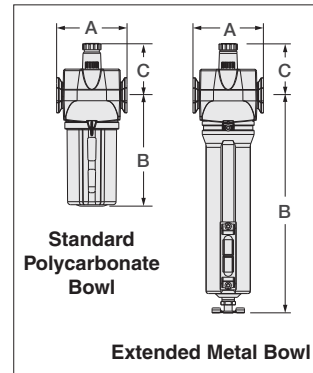
PIPE SIZE	
1/4 NPTF	2
3/8 NPTF	3
1/2 NPTF	4
1/4 BSPP	B
3/8 BSPP	C
1/2 BSPP	D

CAP COLOR	
Gold	2
Gray	G
Yellow	Y
Red	R
Blue	B



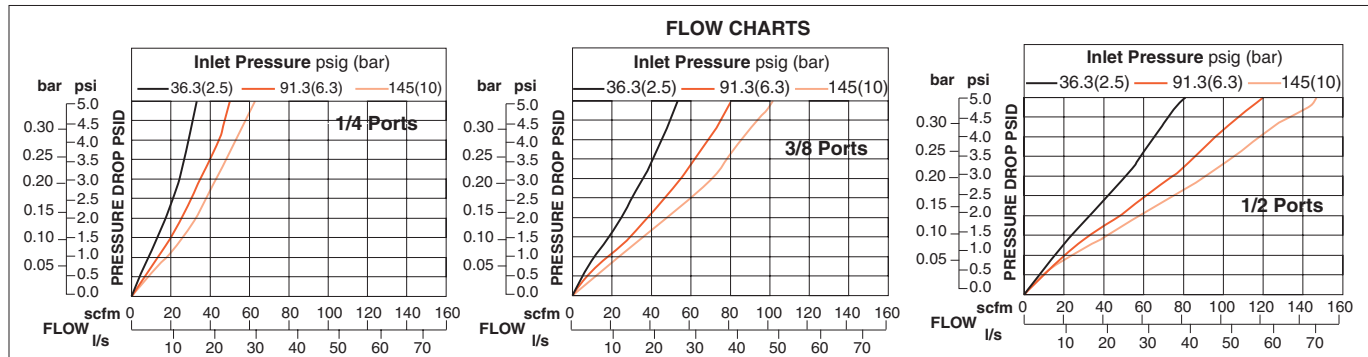
Bowl Type	Dimensions inches (mm)				Weight lb (kg)
	A	B**	C	Depth	
Polycarbonate	3.0 (76.2)	4.72 (119.9)	2.21 (56.1)	2.51 (63.8)	1.30 (0.59)
Aluminum	3.0 (76.2)	6.02 (152.9)	2.21 (56.1)	2.76 (70.1)	1.42 (0.64)
Extended Aluminum	3.0 (76.2)	9.37 (238)	2.21 (56.1)	2.76 (70.1)	1.54 (0.70)

** Bowl removal clearance: add 3.1 (79).
Extended Bowl removal clearance: add 6.1 (155).



E

E4



Accessories ordered separately, refer to page E6.3-5.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Sight-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 175°F (4° to 80°C).

Fluid Media: Compressed air.

Inlet Pressure:

Polycarbonate bowl: 150 psig (10 bar) maximum.

Metal bowl: 250 psig (17 bar) maximum.

Oil Adjustment: External; tamper resistant.

Body: Zinc.

Bowl: Polycarbonate with nylon shatterguard, or aluminum bowl with clear nylon sight glass.

Sight-Feed Dome: Nylon.

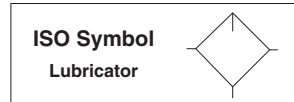
Seals: Nitrile.

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

Port Sizes: 1/4, 3/8, 1/2 & 3/4 – Flow to 140 scfm

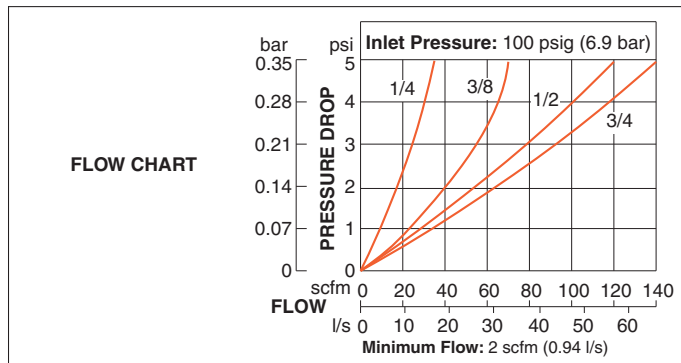
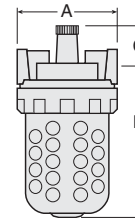
Port Size	Fill Type	Model Numbers*			
		Sight-Feed		Wick-Feed	
		Polycarbonate Bowl	Metal Bowl	Polycarbonate Bowl	Metal Bowl
1/4	Fill Port	5111B2008	5112B2008	5111B2014	5112B2014
3/8	Fill Port	5111B3008	5112B3008	5111B3014	5112B3014
1/2	Fill Port	5111B4008	5112B4008	5111B4014	5112B4014
3/4	Fill Port	5111B5008	5112B5008	5111B5014	5112B5014
1/4	Quick-Fill Cap	5111B2108	5112B2108	5111B2114	5112B2114
3/8	Quick-Fill Cap	5111B3108	5112B3108	5111B3114	5112B3114
1/2	Quick-Fill Cap	5111B4108	5112B4108	5111B4114	5112B4114
3/4	Quick-Fill Cap	5111B5108	5112B5108	5111B5114	5112B5114

* NPT port threads. For BSPP threads add a "C" prefix to the model number e.g., C5111B2008.



Port Size	Bowl Type	Bowl Capacity	Dimensions inches (mm)				Weight lb (kg)
			A	B**	C	Depth	
With Sight-Feed							
1/4, 3/8, 1/2, 3/4	Polycarbonate	8-oz (240-ml)	3.5 (88)	5.2 (132)	1.3 (32)	3.5 (89)	2.06 (0.94)
1/4, 3/8, 1/2, 3/4	Zinc	8-oz (240-ml)	3.5 (88)	5.3 (135)	1.3 (32)	3.5 (89)	2.90 (1.32)
With Wick-Feed							
1/4, 3/8, 1/2, 3/4	Polycarbonate	8-oz (240-ml)	3.5 (88)	5.2 (132)	0.7 (17)	3.5 (89)	2.25 (1.02)
1/4, 3/8, 1/2, 3/4	Zinc	8-oz (240-ml)	3.5 (88)	5.3 (135)	0.7 (17)	3.5 (89)	2.85 (1.30)

** Bowl removal clearance: add 3.1 (79).



Accessories ordered separately, refer to page E6.3-4.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Sight-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 175°F (4° to 80°C).

Fluid Media: Compressed air.

Inlet Pressure:

Polycarbonate bowl: 150 psig (10 bar) maximum.

Metal bowl: 200 psig (14 bar) maximum.

Oil Adjustment: External, tamper-resistant.

Adjusting Knob: Acetal.

Body: Zinc.

Bowl: Polycarbonate with steel shatterguard, or zinc bowl with sight glass.

Bowl Ring: Aluminum.

Seals: Nitrile.

Sight Dome: Nylon. External, tamper-proof.

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



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

HOW TO ORDER

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

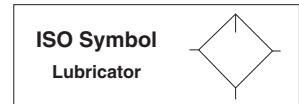
MD4 **51P** **S** **B** **3** **2**

BOWL SIZE	
Polycarbonate Bowl 9-oz (266-ml)	51P
Metal Bowl 9-oz (266-ml)	51M
Extended Metal Bowl 15-oz (443-ml)	51E

LUBRICATOR FILL TYPE	
Quick Fill Cap	Q
Fill Port	S

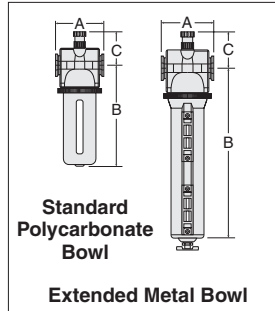
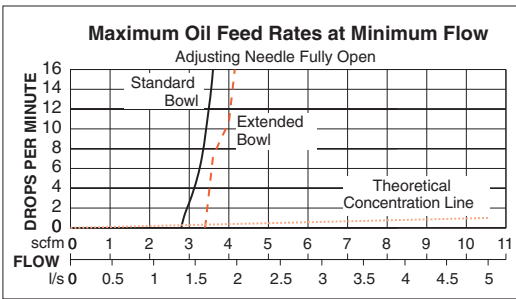
PIPE SIZE	
3/8 NPTF	3
1/2 NPTF	4
3/4 NPTF	5
3/8 BSPP	C
1/2 BSPP	D
3/4 BSPP	E

CAP COLOR	
Gold	2
Gray	G
Yellow	Y
Red	R
Blue	B

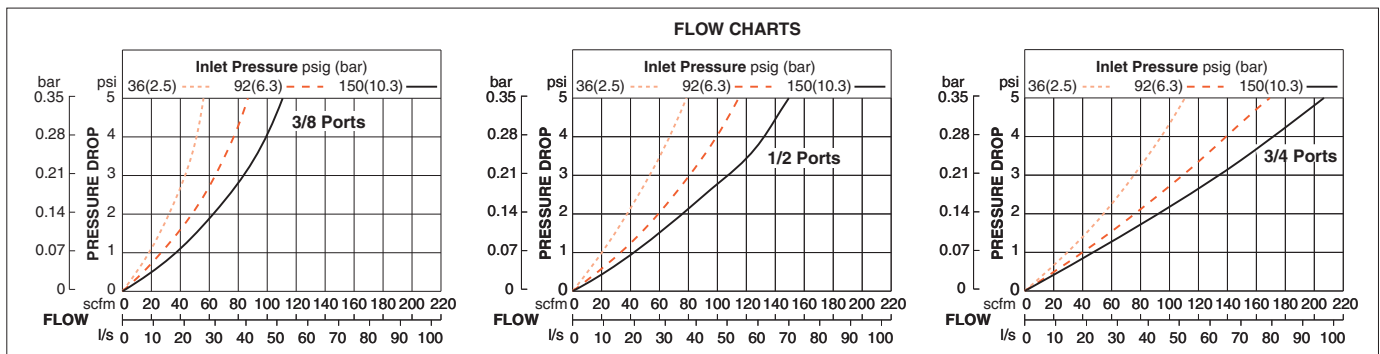


Bowl Size	Bowl Type	Dimensions inches (mm)				Weight lb (kg)
		A	B**	C	Depth	
3/8, 1/2, 3/4	Polycarbonate	3.5 (88)	7.1 (179)	2.2 (56)	2.9 (73)	2.0 (0.91)
	Aluminum	3.5 (88)	7.4 (188)	2.2 (56)	3.1 (79)	2.0 (0.91)

** Bowl removal clearance: add 3.1 (79).
Extended Bowl removal clearance: add 6.1 (155).



E
E4



Accessories ordered separately, refer to page E6.3-4.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Sight-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 175°F (4° to 80°C).

Fluid Media: Compressed air.

Inlet Pressure:

Polycarbonate bowl: 150 psig (10 bar).

Metal bowl: 200 psig (14 bar).

Oil Adjustment: External; tamper resistant.

Body: Zinc.

Bowl: Polycarbonate with steel shatterguard, aluminum bowl with clear nylon sight glass, or extended aluminum bowl with two clear nylon sight glass.

Bowl Ring: Nylon.

Sight-Feed Dome: Nylon.

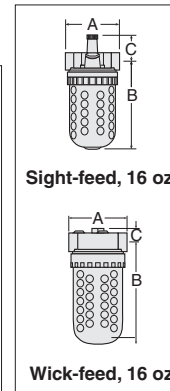
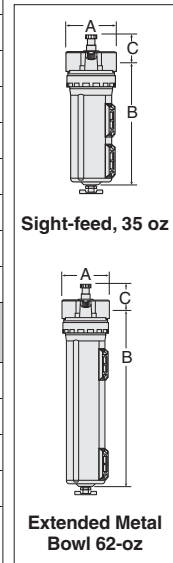
Seals: Nitrile.

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

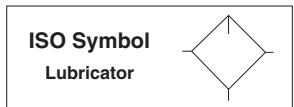
Port Sizes: 3/4, 1, 1 1/4 & 1 1/2 – Flow to 500 scfm

Port Size	Bowl Size oz (ml)	Model Numbers*			
		Metal Bowl			
		FILL-PORT		QUICK-FILL CAP	
		Sight-Feed	Wick-Feed	Sight-Feed	Wick-Feed
3/4	16 (473.2)	5112B5009	—	5112B5109	—
	35 (1035.1)	5112B5019	—	5112B5119	—
	62 (1833.6)	5112B5029	—	5112B5129	—
1	16 (473.2)	5112B6009	5112B6011	5112B6109	5112B6111
	35 (1035.1)	5112B6019	—	5112B6119	—
	62 (1833.6)	5112B6029	—	5112B6129	—
1 1/4	16 (473.2)	5112B7009	—	5112B7109	—
	35 (1035.1)	5112B7019	—	5112B7119	—
	62 (1833.6)	5112B7029	—	5112B7129	—
1 1/2	16 (473.2)	5112B8009	—	5112B8109	—
	35 (1035.1)	5112B8019	—	5112B8119	—
	62 (1833.6)	5112B8029	—	5112B8129	—
Port Size	Bowl Size oz (ml)	Polycarbonate Bowl			
3/4	16 (473.2)	5111B5009	—	5111B5109	—
1	16 (473.2)	5111B6009	5111B6011	5111B6109	5111B6111
1 1/4	16 (473.2)	5111B7009	—	5111B7109	—
1 1/2	16 (473.2)	5111B8009	—	5111B8109	—

* NPT port threads. For BSP threads add a "C" prefix to the model number e.g., C5111B5009.



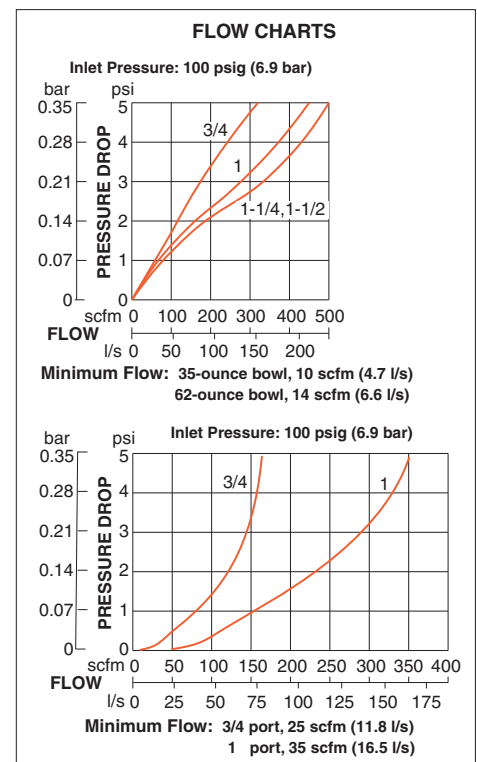
Polycarbonate Bowl Metal Bowl



ISO Symbol
Lubricator

Port Size	Bowl Type	Dimensions inches (mm)				Weight lb (kg)
		A	B**	C	Depth	
With Sight-Feed, 16 oz (473.2 ml)						
3/4, 1, 1 1/4, 1 1/2	Polycarbonate	4.3 (108)	8.2 (208)	1.4 (37)	4.2 (106)	2.63 (1.21)
3/4, 1, 1 1/4, 1 1/2	Aluminum	4.3 (108)	7.3 (185)	1.4 (37)	4.2 (106)	2.85 (1.30)
With Wick-Feed, 16 oz (473.2 ml)						
1/4, 3/8, 1/2, 3/4	Polycarbonate	4.5 (114)	7.7 (195)	0.8 (21)	4.3 (108)	2.88 (1.31)
1/4, 3/8, 1/2, 3/4	Aluminum	4.5 (114)	8.2 (208)	0.8 (21)	4.3 (108)	3.00 (1.36)
With Sight-Feed, 35 oz (1035.1 ml)						
3/4, 1	Aluminum	4.3 (108)	10.2 (259)	2.0 (51)	4.2 (106)	2.56 (1.16)
1 1/4, 1 1/2	Aluminum	4.3 (108)	10.6 (268)	1.6 (41)	4.2 (106)	2.53 (1.16)
Extended Bowls, 35oz (1035ml)						
3/4, 1	Aluminum	4.3 (108)	15.8 (400)	2.0 (51)	4.2 (106)	3.38 (1.64)
1 1/4, 1 1/2	Aluminum	4.3 (108)	16.1 (410)	1.6 (41)	4.2 (106)	3.38 (1.64)

** Bowl removal clearance: add 3.1 (79).



Accessories ordered separately, refer to page E6.3-4.

STANDARD SPECIFICATIONS (for products on this page):

Construction: Sight-Feed, or Wick-Feed.

Ambient/Media Temperature:

Polycarbonate bowl: 40° to 125°F (4° to 52°C).

Metal bowl: 40° to 175°F (4° to 80°C).

Fluid Media: Compressed air.

Inlet Pressure: Polycarbonate bowl: 150 psig (10 bar) maximum.

Metal bowl: 200 psig (14 bar) maximum.

Oil Adjustment: External, tamper-resistant or internal.

Body: Aluminum.

Bowl: Polycarbonate with steel shatterguard; aluminum bowl with sight glass, or extended aluminum bowl with sight glass.

Bowl Ring: Aluminum.

Sight Dome: Nylon.

Seals: Nitrile.

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



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E

ROSS CONTROLS®



**FILTER, REGULATOR, AND LUBRICATOR
ACCESSORIES**



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Mounting Accessories	E6.3
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Clamp, Brackets, End Ports & Port Blocks	E6.5
Pressure Gauges	E6.6
External Drains, Silencers	E6.7

Mounting Screws for BANTAM Models

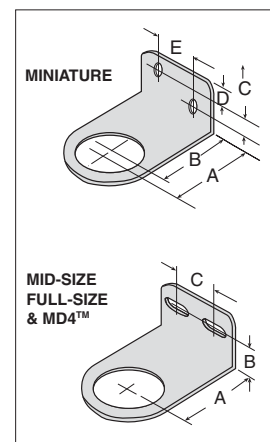
Usage Models	Kit Number
BANTAM	859K77

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.

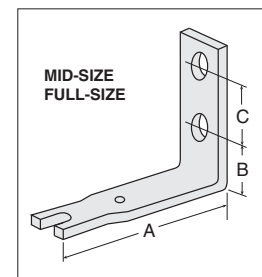
Usage Models	Model Number			Dimensions inches (mm)					Panel Mounting Hole Diameter
	Kit	Bracket	Panel Nut	A	B	C	D	E	
MINIATURE	873K77	872K77	874K77	1.375 (35)	1.125 (29)	0.31 (8)	0.31 (8)	0.69 (17)	1.19 (30)
MID-SIZE	876K77	875K77	877K77	2.38 (60)	1.00 (25)	1.50 (38)	–	–	1.56 (40)
MD3™	R-A127-11	–	R-127-11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



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.

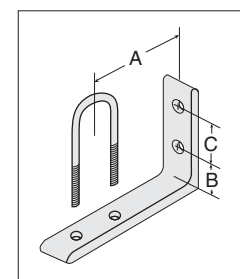
Usage Models	Kit Number	Dimensions inches (mm)			
		A	B	C	D
MID-SIZE & FULL-SIZE	915K77	3.0 (76)	0.88 (22)	1.00 (25)	1.20 (31)



FRLs Inline 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	2.72 (28)	0.50 (13)	1.00 (25)
1/2	889K77	2.72 (28)	0.50 (13)	1.00 (25)
3/4	890K77	3.69 (94)	1.13 (29)	1.25 (32)
1	891K77	3.69 (94)	1.13 (29)	1.25 (32)



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
------------	-----------



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	
	NPT Threads	BSPP 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.

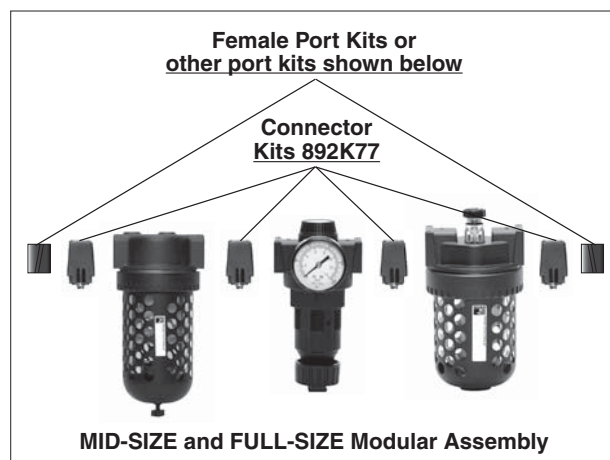
Port Size	Model Number	
	NPT Threads	BSPP Threads
1/4	893K77	D893K77
3/8	894K77	D894K77
1/2	895K77	D895K77
3/4	896K77	D896K77



Connector Kit

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

Kit Number 892K77



E

BANTAM Units

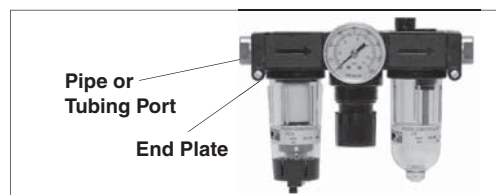
BANTAM modular units use end plates secured with screws to hold the pipe or tubing ports (see below), and also to serve as mounting brackets. Short screws are used to secure the end plates when a single BANTAM unit is used. If two or more units are combined, long screws extend through an end plate and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

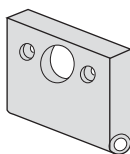


Pipe Ports	
Port Size	Model Number
1/8 NPT	862K77
1/4 NPT	863K77
1/8 BSPP	D864K77
1/4 BSPP	D865K77

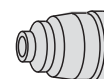


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Pipe Ports	
Kit Description	Model Number
END PLATE (1)	857K77
Short Screw (2)	858K77
Long Screw (2)	859K77
Small O-Ring (for inlet or mating ports)	860K77
Large O-Ring (for outlet or mating ports)	861K77



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.

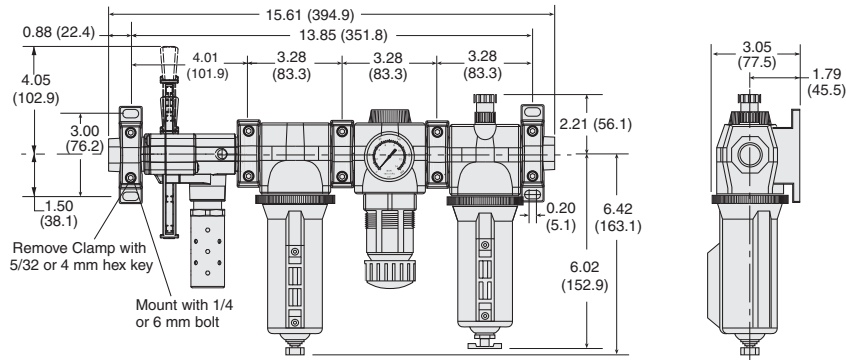
Modular Assemblies

Accessories: Clamp, Brackets, End Ports & Port Blocks

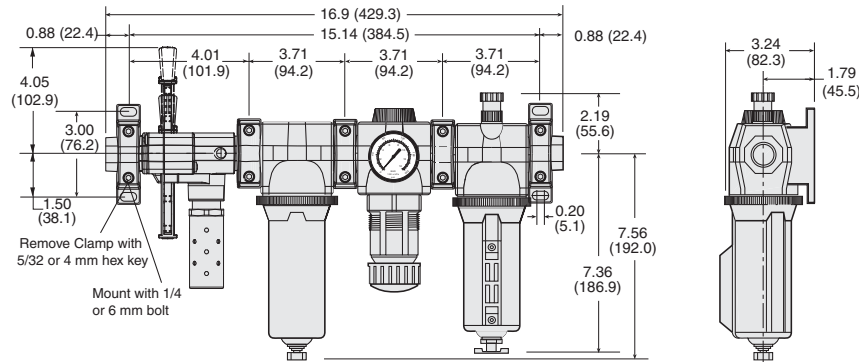
MD Series

Dimensions: inches (mm)

MD3™ Series



MD4™ Series



Clamp for Module Connections

Specially designed clamps provide a quick and easy assembly or disassembly of MD 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 model number **R-A118-105**.

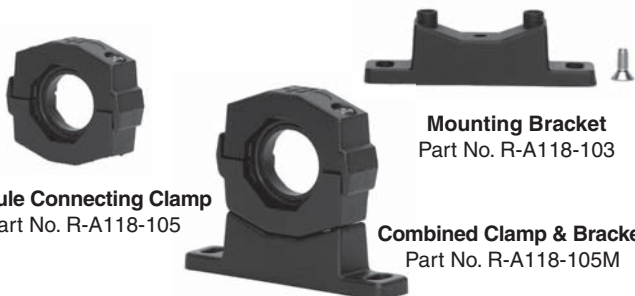
Combined clamp and bracket (below) can be ordered by model number **R-A118-105M**.

Mounting Brackets

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 model number **R-A118-103**.

Combined bracket and clamp (above) can be ordered by model number **R-A118-105M**.



Module Connecting Clamp
Part No. R-A118-105

Mounting Bracket
Part No. R-A118-103

Combined Clamp & Bracket
Part No. 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:

Port Size	Male Part Number*	Image	Port Size	Female Part Number*	Image
1/4	R-118-109-2F		1/4	R-118-100-2	
3/8	R-118-109-3F		3/8	R-118-100-3	
1/2	R-118-109-4F		1/2	R-118-100-4	
3/4	R-118-109-6F		3/4	R-118-100-6	

* For BSPP threads, add a "W" suffix to the model number, e.g., R-118-109-2FW.

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*	Image
1/4	R-118-106-2	
3/8	R-118-106-3	
1/2	R-118-106-4	

* For BSPP threads, add a "W" suffix to the model number, e.g., R-118-106-2W.

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



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Pressure Gauges

Port Size	Model Number*	Pressure Range psig (bar)	Case Diameter inches (mm)
1/8	5400A1002	0-160 (0-11)	1.5 (38)
1/4	5400A2010	0-60 (0-4)	2.0 (51)
1/4	5400A2011	0-200 (0-14)	2.0 (51)
1/4	5400A2012	0-300 (0-20)	2.0 (51)
1/4	5400A2014**	0-160 (0-11)	2.5 (64)
1/4	5400A2015***	0-160 (0-11)	2.0 (51)



* Center back mounting; male pipe threads.

** 5400A2014 - Stainless steel case liquid filled.

*** 5400A2015 - 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-106-35C
FILTERS					
BANTAM	-	-	-	-	-
MINIATURE	-	-	-	-	-
MID-SIZE	-	-	-	-	-
MD3™		-	-	-	-
FULL-SIZE	-	-	-	-	-
MD4™	-				
HIGH-CAPACITY	-	-	-	-	-
COALESCING FILTERS					
BANTAM	-	-	-	-	-
MINIATURE	-	-	-	-	-
MID-SIZE		-	-	-	-
FULL-SIZE	-				
MD3™		-	-	-	-
MD4™	-				
HIGH-CAPACITY	-				
OIL VAPOR REMOVAL (ADSORBING) FILTERS					
MD3™	-	-	-	-	-
MD4™	-	-	-	-	-
CLEAN AIR PACKAGES					
MD3™		-	-	-	-
MD4™	-				

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

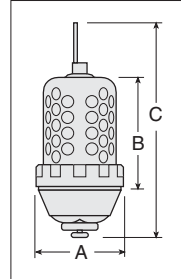
External Automatic Drains

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.

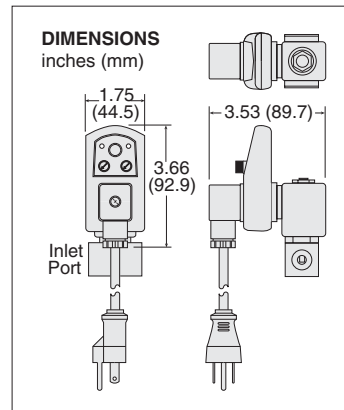
Port Size	Dimensions inches (mm)			Weight lb (kg)
	A	B	C	
1/8, 1/4	3.5 (89)	4.2 (107)	8.3 (211)	2.6 (1.2)



Electronically Controlled Drain

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

** NPT port threads. For BSPP threads, add a "W" suffix to the model number, e.g., R-DED-115V-2W.



E

STANDARD SPECIFICATIONS (for electronically controlled drain):

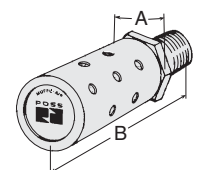
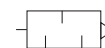
Drain Time: Adjustable 0.5 to 10 seconds.
Drain Interval: Adjustable 0.5 to 45 minutes.
Current Consumption: 4 ma maximum.
Ambient Temperature: 35° to 130°F (2° to 54°C).
Media Temperature: 35° to 190°F (2° to 88°C).

Electrical Connection: DIN 43650A, ISO 440/6952.
Valve Type: 2/2 direct acting, normally closed.
Valve Body: Forged brass; 3/16-inch (4.8 mm) orifice.
Maximum Pressure: 230 psig (15.8 bar).

Silencers



Port Size	Thread Type	Model Number*		Avg. C _v	Dimensions inches (mm)		Weight lb (kg)
		NPT Threads	BSPT Threads		A	B	
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)



E6

Flow Media: Filtered air.
Pressure Range: 0 to 300 psig (0 to 20.7 bar) maximum.

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



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

E

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





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