



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Balston Filtration Products for the Laboratory

Bulletin LABFILTER-A



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Corporate Headquarters
in Cleveland, Ohio.

Parker's Motion and Control Technologies

Aerospace	Hydraulics
Climate Control	Pneumatics
Electromechanical	Process Control
Filtration	Sealing & Shielding
Fluid & Gas Handling	

Legal Notifications



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Parker Filtration Products for the Laboratory

Compressed Air and Gas Filtration



The products in this catalog are carefully selected from Balston's broad range of filters because they can be specified and installed easily without engineering assistance, even if the user is not a filter expert. If engineering help is needed, it can be quickly obtained by calling our Technical Service Department 1-800-343-4048. All Balston catalog products are shipped complete and ready to install. In addition, each catalog product package contains detailed, easy-to-understand installation and operating instructions.

Balston Filter Products can be specified with confidence for a wide variety of filtration requirements frequently encountered in the laboratory. For special applications, or for filters with flow capacities larger than those shown in this catalog, please contact the Technical Services Department at 1-800-343-4048.

Vacuum Exhaust and Inlet Filtration



How to Order from This Catalog

Step 1

Choose the **FILTER ASSEMBLY** you need

Step 2

Choose the **FILTER CARTRIDGE** you need

Step 3

Obtain pricing from the enclosed price sheet

Step 4

Call the **CUSTOMER SERVICE DEPARTMENT** at **1-800-343-4048**

We accept purchase orders from established accounts



Liquid Filtration



Cylinder Gas and Specialty Gas Filtration



Compressed Air Filters

Produce Instrument Quality Air

Balston compressed air filters remove 99.99% of 0.01 micron particles of oil, water, and dirt from compressed air and other gases. The liquid releases from the filter cartridge to an automatic drain as rapidly as it enters the filter. This allows the compressed air filter to continue removing liquids without loss of efficiency or flow capacity. To order, simply match the line size and required flow rate to one of the five filter assembly choices below.

Models A914, A914A, A914D, A914P

The A914 is the standard model which utilizes a standard manual threaded drain. Every model has a transparent polycarbonate bowl with the exception of the A914A which has a zinc bowl. Models A914D and A914P include simple, reliable automatic drains designed for low flow applications with moderate levels of liquid contaminate. The A914D will drain liquid contaminate when the compressed air system pressure drops below 5 psig. The A914P is designed to empty condensate when there is a sudden pressure drop in the system.



A914D,
A914P, A914



A914A



2002N - 2004N
Series

Models 2002, 2003, 2004

Models 2002 and 2003 have increased liquid holding capacity and are equipped with high capacity float drains, differential pressure indicators, sightglass, pressure relief valve, and 1/4 turn bayonet bowl closures. They include 1/4" and 3/8" line size assemblies whereas the 2004 series is designed with 1/2" air line size with low flow rates.

Principal Specifications

Model #	A914	A914A	2002, 2003, 2004 (1)
Port Size	1/4" NPT	1/4" NPT	1/4", 3/8" 1/2" NPT
Flow Rate	8 scfm (225 l/min)	8 scfm (225 l/min)	25 scfm (700 l/min)
Materials of Construction			
Head	Anodized Aluminum	Anodized Aluminum	Anodized Aluminum
Bowl	Polycarbonate	Zinc	Anodized Aluminum
Internals	Nylon	Nylon	Nylon
Seals	Buna-N	Buna-N	Buna-N
Maximum Temperature	120°F (49°C)	220°F (104°C)	130°F (54°C) (2)
Maximum Pressure	150 psig (3)	250 psig (3)	250 psig (3)
Minimum Pressure	5 psig (4)	5 psig (4)	40 psig (4)
Shipping Weight	0.5 lbs. (0.2 kg)	0.5 lbs. (0.2 kg)	2.0 lbs. (0.9 kg)
Dimensions	1.5"W x 4.0"L (4 cm x 10 cm)	1.5"W x 4.0"L (4 cm x 10 cm)	3.3"W x 8.5"L (8 cm x 20 cm)

To order, simply select the matching pipe size to the filter port size, and match the temperature and pressure ratings to your application

Notes:

- 1 Lifetime (20 year) Warranty included. Contact your local representative for details.
- 2 Auto drain and differential pressure indicator are temperature limiting factors. For temperature capabilities to 220°F (104°C), order assemblies without automatic drain and differential pressure indicator.
- 3 Max. pressure ratings are for temps to 130°F (54°C). Consult factory for max pressure ratings at elevated temperatures.
- 4 Required for proper operation of piston drain, overnight drain, or float drain.
- 5 Order A914D- _X for overnight drain installed in the assembly
Order A914P- _X for piston drain installed in the filter assembly
Order A914A- _X for aluminum bowl and 250 psig rating

Ordering Information

Model #	A914-BX(8)	A914A-BX(8)	2002N-1B1-BX, 2003N-1B1-BX 2004N-1B1-BX (1)
Replacement Filter Cartridges			
No. Required	1 (included)	1 (included)	1 (included)
Box of 5	5/050-05-BX	5/050-05-BX	5/100-12-BX
Box of 10	5/050-05-BX	5/050-05-BX	100-12-BX

Compressed Air Filter Regulators

Produce Instrument Quality Air

Filter Regulator Combinations

Balston Filter Regulators combine a high efficiency coalescing filter with a high quality pressure regulator. The filter is a Balston coalescing compressed air filter (grade BX) and will completely remove oil, water, and dirt from compressed air and other compressed gases.

Models AFR-940, AFR-940A

These filter models will completely remove oil, water, and dirt from compressed air and other gases. Models AFR-940 and AFR-940A include 1/4" line size assemblies. The flow direction of the filter models is inside to outside for optimum oil and water removal.



AFR-940,
AFR-940A



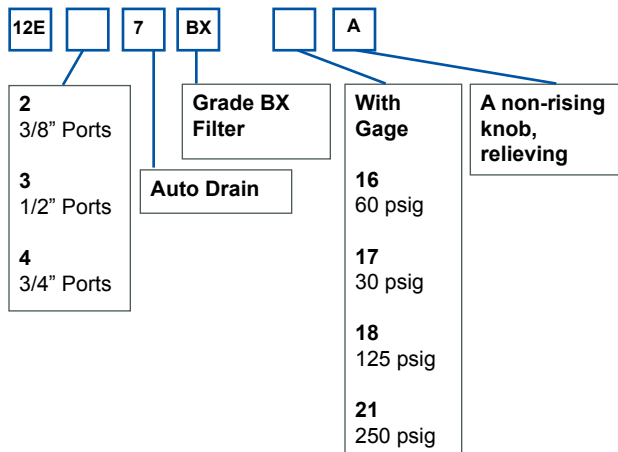
12E
Series

Models 12E27 and 12E37

Models 12E27 and 12E37 are Balston Filter Regulators that combine a high efficiency coalescing filter with a high quality pressure regulator. They include an automatic drain for 3/8" and 1/2" ports allowing a maintenance-free operation. Pressure gauges are standard and are available in up to 4 different ranges.

How to Order a FILTER REGULATOR:

To order product with desired port size and regulating pressure range, select the indicator digits from the matrix below. This will complete the entire model number needed to place an order.



Principal Specifications

Model #	AFR-940	AFR-940A	12E27	12E37
Port Size	1/4" NPT	1/4" NPT	3/8" NPT	1/2" NPT
Gauge Ports	1/8" NPT	1/8" NPT	1/4" NPT	1/4" NPT
Flow Rates	8 scfm (225 l/min)	8 scfm (225 l/min)	20 scfm (550 l/min)	8 scfm (550 l/min)
Mat'l. of Constr.				
Head	Anod. Alum.	Anod. Alum.	Zinc	Zinc
Bowl	Polycarb.	Anod. Alum.	Zinc	Zinc
Internals	Nylon	Polycarb.	Plastic	Plastic
Seals	Brass/Buna	Brass/Buna	Zinc/Nitrile	Zinc/Nitrile
Max. Temp.	220°F (104°C)	220°F (104°C)	125°F (52°C)	125°F (52°C)
Max. Pressure	150 psig (3)	250 psig (3)	250 psig	250 psig (3)
Min. Pressure	---	---	15 psig (4)	15 psig (4)
Shipping Wt.	0.5 lbs. (0.2 kg)	0.5 lbs. (0.2 kg)	2.5 lbs. (1.1 kg)	2.5 lbs. (1.1 kg)
Dimensions	1.2"W x 6"L (3 cm x 15 cm)	1.2"W x 6"L (3 cm x 15 cm)	3.25"W x 13"L (8 cm x 33 cm)	3.25"W x 13"L (8 cm x 33 cm)

Ordering Information

Model #	AFR-940	AFR-940A	12E27, 12E37
Control Gauge			
Pressure Range			
0-30 psig	AFR-940-30	AFR-940A-30	SEE MATRIX
5-60 psig	AFR-940-60	AFR-940A-60	SEE MATRIX
10-130 psig	AFR-940-130	AFR-940A-130	SEE MATRIX
Auto Drain	N/A	N/A	INCLUDED (1)
Replacement Filter			
Cartridges	# Required	1 (3)	1 (3) 1 (3)
Box of 5	5/050-05-BX	5/050-05-BX	5-130-14-BX
Box of 10	050-05-BX	050-05-BX	130-14-BX
Mounting Bracket	11536	11536	PS807P

Notes:

1 Minimum operating pressure for automatic drain is 15 psig.

2 Maximum pressure ratings are for temperatures to 130°F (54°C). Please consult the factory for maximum pressure ratings at elevated temperatures.

3 Filter regulators are shipped with one filter cartridge installed.

Gas and Liquid Sample Filters

Ideal for Low Flow Gas and Liquid Sample Systems

Balston Gas and Liquid Sample Analyzer Filters protect analyzers from sample impurities by removing solids and liquids from gases with 99.9999% efficiency at 0.01 micron. Balston Sample Filters offer liquid filtration to 0.3 micron or lower. They are inert to most any gas or liquid. These filters offer long life between filter element changes.

Models 9922-05, 9900-05, 9933-05, 4433-05

The 99XX-05 models are the smallest disposable filter (DFU) units with 11.7 ml internal volume. These models are used for low flow gas or liquid applications. The model 9900-05-BK has a color indicating feature that turns red when saturated with oil. The 4433-05 model has 1/4" and 3/8" barb connection molded into the inlet/outlet ports.



99XX-05

4433-05

Models 9922-11 and 9933-11

These models are used for applications similar to the smaller disposable filter units. The 9922-11 and 9933-11 are ideal for applications that require greater solids holding capacity and can tolerate the increased retention time.



8833-11

9922-11

Model 8833-11

These disposable filter units are used as continuous coalescing filters with a third port serving as the drain, slip-stream, or by-pass port.

Filter Cartridge Description

X-Type Cartridges Used for solids and relatively large amounts of suspended liquids in gases. Provide excellent chemical resistance, temperature resistance to 300°F (150°C), and good mechanical handling properties. These cartridges have thick walls for improved coalescing efficiency. Should be used whenever permitted by housing internal volume. Fluorocarbon Resin Binder.

Q-Type Cartridges Used for solids and trace amounts of liquid in gases. Similar to X-Type cartridges in chemical and temperature resistance. Fluorocarbon Resin Binder.

Retention Efficiency

Microfibre Filter Cartridges	Gas Filtration at 0.01 micron	Liquid Filtration (98% retention)
Grades DX, DQ	93%	25 micron
Grades BX, BQ	99.99%	2 micron
Grade AQ	99.9999+%	0.9 micron
Grade AAQ	99.9999+%	0.3 micron

Principal Specifications

Model #	9922-05	9900-05	4433-05	9933-05	9922-11	9933-11	8833-11
Inlet & Outlet Ports	1/4" Tubing	1/4" Tubing	1st Tier Barb 1/4" Tube 2nd Tier Barb 3/8" Tube	1/4" Tubing	1/4" Tubing	1/4" Tubing	1/4" Tubing
Drain	None	None	None	None	None	None	1/4" Tubing
Material of Construction	PVDF	Nylon	Nylon	Nylon	PVDF	Nylon	Nylon
Filter Cartridge Length	1.25" (3.2 cm)	1.25" (3.2cm)	1.25 (3.2cm)	1.25" (3.2cm)	2.25" (5.7cm)	2.25" (5.7cm)	2.25" (5.7cm)
Max. Temperature (1)	275°F (135°C)	230°F (110°C)	230°F (110°C)	230°F (110°C)	275°F (135°C)	230°F (110°C)	230°F (110°C)
Max. Pressure (2)	125 psig	125 psig	125 psig	125 psig	125 psig	125 psig	125 psig
Dimensions	1.0"D x 3.25"L (2.5cm x 8cm)	1.0"D x 3.25"L (2.5cm x 8cm)	1.0"D x 3.43"L (2.5cm x 8.72cm)	1.0"D x 3.25"L (2.5cm x 8cm)	1.4"D x 4.6"L (3.6cm x 12cm)	1.4"D x 4.6"L (3.6cm x 12cm)	1.4"D x 4.6"L (3.6cm x 12cm)

Ordering Information To order, simply select the materials of construction most suitable for your application and filter grade.

Model #	9922-05 (3)	9900-05 (3)	4433-05 (3)	9933-05 (3)	9922-11 (4)	9933-11 (4)	8833-11 (5)
Box of 10 DFUs	9922-05-□	9905-05-□	4433-05-□	9933-05-□	9922-11-□	9933-11-□	8833-11-□

Notes:

1 At 0 psig

2 At 110°F (43°C)

3 Available in Q-type media only

4 Available in Q and X Type Media

5 Available in X-type media only

Gas and Liquid Filters

Ideal for Gas Cylinder Filtration



91S6, 95A, 95M,
95S6, 95T

Ideal for Chemical and Water Filtration



54/50, 53/50

Models 91S6, 95A, 95M, 95S6, 95T

These models are constructed of 316 stainless steel, Monel, PTFE, Aluminum and other specialty materials. These filters are ideal for sampling applications, gas cylinders, and chemical filtration.

Model 53

Model 53 housings are constructed of polypropylene which allows excellent resistance to non-oxidizing acids such as HCL, sulfuric up to 70% saturation, brines, hydrocarbon liquids, alcohols, and concentrated caustic. It is designed for a single LP-200 filter cartridge in 5" and 10" lengths.

Model 54

Model 54 housings are used for filtration of water or mildly acidic solutions at temperatures under 100°F. The housings have a polypropylene head and a transparent styreneacrylonitrile bowl.

Filter Cartridge Description
Designed to filter liquids with high solids contents. Have an integral prefilter and an external support structure (flow direction is inside - to - outside).

Retention Efficiency	
LP Cartridges (80% retention)	
Grade 10	75 micron
Grade 20	25 micron
Grade 30	10 micron
Grade 50	1 micron

Principal Specifications

Model #	91S6	95A	95M	95S6	95T	53/18	53/50	54/50
Inlet & Outlet Ports	1/8" NPT (1)	1/8" NPT (1)	1/8" NPT (1)	1/8" NPT (1)	1/8" NPT (1)	3/8" NPT (1)	3/4" NPT (1)	3/4" NPT (1)
Drain Port	1/8" NPT	1/8" NPT	1/8" NPT	1/8" NPT	1/8" NPT	---	---	---
Mat'l of Construction								
Head	316SS (2)	Aluminum	Monel	316SS (2)	Teflon (2)	Polypropylene	Polypropylene	Polypropylene
Bowl	316SS (2)	Aluminum	Monel	316SS (2)	Teflon (2)	Polypropylene	Polypropylene	SAN
Internals	316SS (2)	Aluminum	Teflon	316SS (2)	Teflon (2)	Polypropylene	Polypropylene	Polypropylene
Seals	Viton	Viton	Viton	Viton	Teflon/Viton	EPR	EPR	EPR
Max. Temperature	400°F (204°C)	200°F (93°C)	400°F (204°C)	400°F (204°C)	300°F (149°C)	125°F (52°C)	125°F (52°C)	125°F (52°C)
Max. Pressure	1500 psig (3)	2500 psig (3)	5000 psig (3)	5000 psig (3)	150 psig (3)	125 psig (4)	125 psig (4)	125 psig (4)
Shipping Weight	1 lb. (0.4 kg)	0.5 lb. (0.2 kg)	1 lb. (0.4 kg)	1 lb. (0.4 kg)	0.5 lb. (0.2 kg)	3 lb. (1.4 kg)	4 lb. (1.8 kg)	4 lb. (1.8 kg)
Dimensions	1.5"D x 3.7"L (3.8 cm x 9.4 cm)	1.8"D x 4"L (4 cm x 10 cm)	1.8"D x 4"L (4 cm x 10 cm)	1.8"D x 4"L (4.6 cm x 10.2 cm)	1.8"D x 4"L (4.6 cm x 10.2 cm)	5"D x 6.6"L (11 cm x 17 cm)	5"D x 12"L (13 cm x 30 cm)	5"D x 12"L (13 cm x 30 cm)

Ordering Information To order, simply match pipe size, pressure capacity, and materials of construction of one of the above filter housing options to your application. Final step: select filter grade based on required filtration efficiency and order a box of 10 filters.

Model #	91S6	95A	95M	95S6	95T	53/18	53/50	54/50
Support Core Required for Liquid Filtration	Included	Included	Included	Included	Included	N/A	N/A	N/A
Filter Cartridges (box of 10)	050-11-□	050-11-□	050-11-□	050-11-□	050-11-□	LP-200-18-□	LP-200-50-□	LP-200-50-□
Use only these filter types	Q	Q	Q	Q	Q	---	---	---
See page 6 for description of Q-type filter, in "Filter Cartridge Description" table								

Notes:

- Also available with 1/4" NPT ports. To order with 1/4" NPT ports, use designation Model 95S6-1/4, etc.
- Constructed of materials which comply with NACE Specification MR-01-75. Request certificate of compliance.
- Maximum pressure ratings are for temperatures to 200°F (93°C). Please consult factory for maximum pressure ratings at elevated temperatures.
- Maximum pressure ratings are for temperatures to 125°F (52°C). Please consult factory for maximum pressure ratings at elevated temperatures.

Vacuum Pump Exhaust Filters

Balston Vacuum Pump Exhaust Filters remove all visible oil mist and smoke from vacuum pump exhaust, even when it is saturated with oil. The high efficiency filter cartridge continuously drains the collected liquid, allowing the user to recover expensive lubricating fluid. The Balston filters are also extremely effective at reducing the noise levels of the vacuum pump outlets.

Models 9955-12, 9956-12, R-009, R-015, AR-0316

These models are used for pump flow rate of 3-20 CFM. The recommended filter is based upon the flow capacity equal to or less than the rated flow of the vacuum pump. The filter assemblies are shipped with filter cartridges and final filter pad.

Consult factory for larger pump applications.

For easy installation, pump-to-filter adaptors are available, see pages 10 and 11.



R-009



9955-12



AR-0316

Principal Specifications

Model #	9955-12-371H	9956-12-371H	AR-009-371H	AR-015-371H	AR-0316-371H
Port Size	1/2" NPT	KF-16	3/4" NPT	3/4" NPT	1" NPT
Max. Flow Rate	3 CFM	3 CFM	9 CFM	15 CFM	20 CFM
Mat'l of Construction					
Head	---	---	---	---	Steel
Bowl	Nylon	Nylon	Steel	Steel	Steel
Internals	Nylon	Nylon	Steel	Steel	Anodized Aluminum
Seals	None	None	Viton	Viton	Buna/Neo
Max. Temperature	250°F (121°C)	250°F (121°C)	300°F (149°C)	300°F (149°C)	300°F (149°C)
Max. Pressure	15 psig	15 psig	15 psig	15 psig	15 psig
Shipping Weight	.25 lb. (0.1 kg)	.25 lb. (0.1 kg)	1 lb. (.45 kg)	1.25 lb. (.57 kg)	8 lb. (4 kg)
Dimensions	2" Dia. x 3.7"H	2" Dia. x 3.7"H	4" Dia. x 5.5"H	4" Dia. x 8.5"H	7.4" Dia. x 8.8"H

Notes:

- 1 Filter cartridge is permanently sealed into the housing. The entire unit is disposable.
- 2 Pressure relief filter tube retainer not available in these models.

Ordering Information To order, simply select a filter assembly above with a flow rate capacity equal to or greater than the maximum flow capacity of your vacuum pump. For high flow rates, call Tech Support at 1-800-343-4048.

Model #	9955-12-371H	9956-12-371H	AR-009-371H	AR-015-371H	AR-0316-371H
Number of Filter Cartridges Required	1	1	1	1	3
Replacement Filter Cartridges					
Box of 2	---	---	2/100-163-371H	2/100-235-371H	---
Box of 3	3/9955-12-371H	3/9956-12-371H	---	---	3/200-16-371H
Box of 10	9955-12-371H	9956-12-371H	100-163-371H	100-235-371H	---
Cover, Optional	---	---	---	---	19158 (1)
No. Pressure Relief Retainers #20222	(2)	(2)	(2)	(2)	1 required

Vacuum Pump Inlet Filters

Ideal for Vacuum Service to 2 Torr

Models R-009-30 and R-015-30 are high efficiency inlet filters designed to remove 90% of all solid and liquid contaminants down to 0.1 micron in size.

The powder coated aluminum housings will provide many years of trouble-free service. The filters are easily maintained by simply turning the cover 1/4 turn to remove the spent cartridge and replace it with a fresh cartridge.

The Parker Balston Vacuum Pump Inlet Filters provide a low cost solution to problems such as pump corrosion, excessive maintenance and costly downtime.



R-009 and R-015

Principal Specifications

Model	R-009-30	R-015-30
Recommended Vacuum Service	2 Torr	2 Torr
Max. Flow Rating of Vacuum Pump	9 CFM	15 CFM
Inlet and Outlet Ports	3/4" NPT	3/4" NPT
Drain Port	1/8" NPT	1/8" NPT
Materials of Construction		
Head	Aluminum	Aluminum
Bowl	Aluminum	Aluminum
Internals	Aluminum/SS/Nylon	Aluminum/SS/Nylon
Seals	Viton	Viton
Maximum Temperature	180°F (82°C)	180°F (82°C)
Shipping Weight	1.0 lbs.	1.25 lbs.
Dimensions	3.95"W x 5.132"L	3.95"W x 8.13"L

Filter Selection Chart

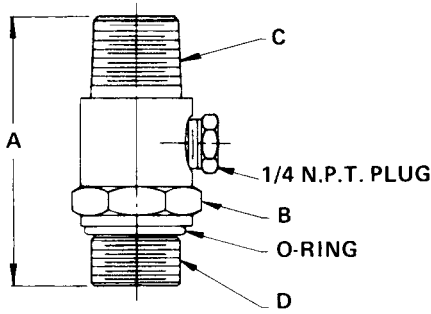
Grade 30 Cartridges	For removal of relatively high concentrations of solids and liquids
Efficiency	90% at 0.1 micron
Loss in pumping speed	9% at maximum flow rate

Ordering Information For assistance, call toll-free at 1-800-343-4048 8AM to 5PM Eastern Time

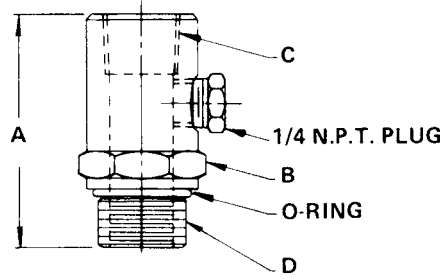
Assembly with Grade 30 Particulate Filter	Number of Filter Cartridges Required	Replacement Filter Cartridges	
		Box of 2	Box of 10
R-009-30	1	2/100-163-30	100-163-30
R-015-30	1	2/100-235-30	100-235-30

Pump to Filter Adaptors

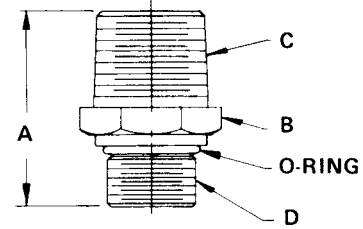
Straight Thread to NPT Thread



Style 1

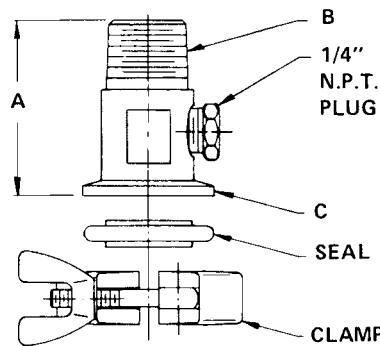


Style 2

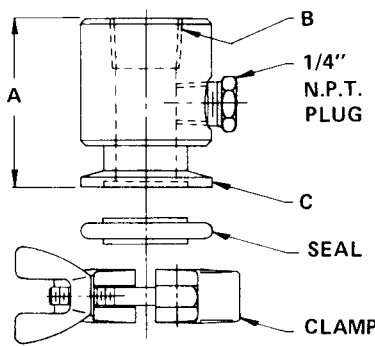


Style 3

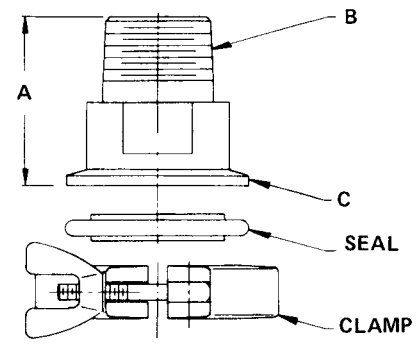
Flange to NPT Thread



Style 4



Style 5



Style 6

Principal Specifications

Type	14168	14166	14165	14164	14163	14162	14160	14159	14158	14157
Adaptor Style	1	2	2	3	3	1	3	1	2	2
Materials of Construction										
Adaptor	---	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Seals	---	Buna-N	Buna-N	Buna-N	Buna-N	Buna-N	Buna-N	---	---	---
Dimensions (inches)										
A - Height	3.0	2.6	2.44	2.88	2.19	3.0	2.3	3.15	2.80	2.56
B - Hex Size	1.25	1.25	1.25	2.0	1.38	1.25	2.0	1.25	1.25	1.25
C - NPT Thread	3/4	1/2 F (1)	1/2 F (1)	1 1/2	1	3/4	1	3/4	1/2 F (1)	1/2 F (1)
D - Thread	M24 x 1	1-20	3/4-20	1 3/4-20	1-20	1-20	1 3/4-20	3/4 BSPT	3/4 BSPT	3/8 BSPT

Type	14184	14183	14182	14181	14180	14179	14178	14177	14176	14175	14174	14173	14172
Adaptor Style	6	6	4	4	6	6	6	6	6	5	6	4	4
Materials of Construction													
Adaptor	Stain. St.	Alum.	Stain. St.	Stain. St.	Alum.	Stain. St.	Stain. St.	Stain. St.	Stain. St.	Alum.	Alum.	Alum.	Alum.
Clamp	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.	Alum.
Seals	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton
Dimensions (inches)													
A - Height	2.0	2.38	2.06	2.12	2.0	2.62	2.38	2.0	2.0	2.0	2.0	2.06	2.12
B - NPT Thread	1	1 1/2	1/2	1/2	1	1 1/2	1 1/2	1	1	1/2 F (1)	1	3/4	1/2
C - KF Flange	KF-40	KF-25	KF-25	KF-16	KF-16	KF-50	KF-40	KF-25	KF-16	KF-25	KF-40	KF-25	KF-16
D - Thread	3/4"x1/2"										1 1/2"x1"	1"x3/4"	1/2" coupling and 3/4"x1/2"
Other Fittings Included	Reducing Bushing										Reducing Bushing	Reducing Bushing	Reducing Bushing

Notes:

1 Female NPT - all others male.

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