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FILTERS, REGULATORS, AND LUBRICATORS (FRLs)



INGERSOLL-RAND FILTERS, REGULATORS, AND LUBRICATORS (FRLs)

With Ingersoll-Rand / ARO® brand filters, regulators, and lubricators (FRLs) in your operation, you get a cost-effective solution to increasing the life of your pneumatic equipment. You can save space, time, and piping costs. Our FRLS also give you greater mounting flexibility and convenience.

FILTERS, REGULATORS, AND LUBRICATORS (FRLs)

Air Preparation

The compact design of our FRLs saves space and provides more design flexibility than larger drying systems. Set-up time and piping costs are also reduced thanks to the use of common outlets.

Mounting Flexibility

Our FRLs offer greater mounting flexibility thanks to their convenient modular design. Modular clamps allow the lines on individual units to be removed without disturbing the inlet piping. Each FRL has threaded ports to allow use of pipe nipples, as well as modular configurations to meet various piping needs. T-type wall mounting brackets provide excellent wall-to-unit clearance for filter bowl removal and regulator adjustment.

Safety

Safety is a top priority and that's why we provide lock-out valves designed to attach to the inlet of the FRL system. These valves meet OSHA regulations, and protect the operator from injury caused by unexpected start-up of a machine during service or maintenance.

For more detailed information on the features or specifications of specific FRL types and models, please refer to the following section of the catalog.

FRL SERIES QUICK REFERENCE*

Ingersoll-Rand offers several FRL Series components with a range of flow rates, port sizes, and applications. Please note that this page only represents a portion of FRL products available.

Ingersoll-Rand ARO® Mini Series



NPT Port Size	Flow – cfm (dm³/s)					Pressure Range in Regulator psig (bar)
	Standard Filters	Coalescing Filters	Regulator	Piggyback	Lubricator	
Ingersoll-Rand ARO Mini Series						
1/8"	28 (13)	15 (6)	13 (6)	13 (6)	41 (19)	5 – 125 (0.4 – 8.6)
1/4"	38 (18)	17 (8)	13 (6)	13 (6)	60 (28)	5 – 125 (0.4 – 8.6)

Ingersoll-Rand ARO Compact Series



NPT Port Size	Flow – cfm (dm³/s)					Pressure Range in Regulator psig (bar)
	Standard Filters	Coalescing Filters	Regulator	Piggyback	Lubricator	
Ingersoll-Rand ARO Compact Series						
1/4"	54 (25)	40 (17)	100 (47)	93 (44)	75 (35)	5 – 125 (0.4 – 8.6)
3/8"	100 (47)	51 (24)	130 (61)	135 (64)	100 (47)	5 – 125 (0.4 – 8.6)
1/2"	122 (58)	53 (25)	150 (71)	140 (66)	110 (52)	5 – 125 (0.4 – 8.6)

Ingersoll-Rand ARO Heavy-duty Series



NPT Port Size	Flow – cfm (dm³/s)					Pressure Range in Regulator psig (bar)
	Standard Filters	Coalescing Filters	Regulator	Piggyback	Lubricator	
Ingersoll-Rand ARO Heavy-duty Series						
1/2"	82 (39)	N/A	256 (121)	N/A	65 (31)	5 – 125 (0.4 – 8.6)
3/4"	87 (41)	N/A	287 (135)	N/A	75 (35)	5 – 125 (0.4 – 8.6)
1"	88 (42)	N/A	293 (138)	N/A	75 (35)	5 – 125 (0.4 – 8.6)
Ingersoll-Rand Hi-Flow Heavy-duty Series						
3/4"	N/A	N/A	N/A	300	320	5 – 150 (0.5 – 10.4)
1"	N/A	N/A	N/A	300	320	5 – 150 (0.5 – 10.4)

Ingersoll-Rand Jumbo Series



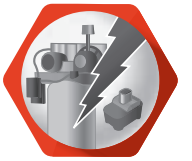
NPT Port Size	Flow – cfm (dm³/s)					Pressure Range in Regulator psig (bar)
	Standard Filters	Coalescing Filters	Regulator	Piggyback	Lubricator	
Ingersoll-Rand Jumbo Series						
3/4"	323 (152)	N/A	481 (227)	N/A	196 (92)	0 – 125 (0 – 8.6)
1"	316 (149)	N/A	500 (236)	N/A	374 (176)	0 – 125 (0 – 8.6)

Ingersoll-Rand Super-duty Series



NPT Port Size	Flow – cfm (dm³/s)					Pressure Range in Regulator psig (bar)
	Standard Filters	Coalescing Filters	Regulator	Piggyback	Lubricator	
Ingersoll-Rand Super-duty Series						
1-1/4"	N/A	N/A	800 (377)	N/A	927 (437)	0 – 180 (0 – 12.5)
1-1/2"	1,280 (604)	445 (210)	1,200 (566)	N/A	927 (437)	0 – 180 (0 – 12.5)
2"	1,628 (768)	860 (406)	1,200 (566)	N/A	1,186 (560)	0 – 180 (0 – 12.5)

**NOTE: This table only represents a portion of FRLs offered. Please continue through this section for complete product listings.*



INGERSOLL-RAND HAS THE RIGHT COMBINATION

Proper conditioning of compressed air is essential to ensure maximum performance and service life from pneumatic power tools and equipment. The small initial investment for installation of air preparation units in an air line system will pay long-term dividends in increased productivity, consistent quality, and decreased maintenance costs. Ingersoll-Rand offers an extensive line of air line filters, regulators, and lubricators, including individual units, piggybacks, and combos, to meet your exact air preparation requirements.

Filters



Filters

Ingersoll-Rand compressed air filters are designed to remove solid and liquid airborne contaminants that can plug small orifices and hinder performance, or cause excessive wear and premature equipment failure. Several filter elements are offered, including models with coalescing elements for removal of oil aerosols and particles down to .3 micron.

- Pipe sizes from 1/8" to 2" NPT
- Flows to 1,400 cfm (660 dm^3/s)
- Maximum inlet pressures to 250 psig (17 bar)

Regulators



Regulators

Ingersoll-Rand air line regulators provide controlled, consistent air pressure as required for specific pneumatic equipment connected to the air system. Standard relieving-type regulators are offered in a variety of adjustable pressure ranges, with convenient spring options for easy conversion should requirements change. Non-relieving models are also offered for applications where the venting of downstream overpressure is undesirable. A Mini Series regulator is available for fluid applications.

- Pipe sizes from 1/8" to 2" NPT
- Flows to 1,200 cfm (566 dm^3/s)
- Maximum inlet pressures to 300 psig (21 bar)

Lubricators



Lubricators

Ingersoll-Rand fog-type lubricators help ensure that pneumatic devices receive the required lubrication to maintain operating performance, reduce wear, and prolong service life. They are designed to provide the correct amount of oil required for most general applications in a pneumatic system, delivering a constant ratio of oil to cfm. Precise oil feed adjustment allows the proper oil delivery rate. Lubricators should be installed close to the downstream application to ensure effective distribution of oil to pneumatic components.

- Pipe sizes from 1/8" to 2" NPT
- Flows to 1,186 cfm (560 dm^3/s)
- Maximum inlet pressures to 250 psig (17 bar)

PRODUCT SELECTION

When selecting an FRL or individual filter, regulator, and lubricator units, the air consumption of the tools or equipment to be serviced should be correlated with the flow capacity of the FRL. Ingersoll-Rand ARO filters, regulators, and lubricators are designed to flow in excess of that indicated in the maximum recommended flow table shown below. This table gives recommended flows for pipe sizes at listed pressures and should be used as a guide in sizing piping and equipment for compressed air systems.

MAXIMUM RECOMMENDED AIRFLOW (CFM) THROUGH A.N.S.I. STANDARD WEIGHT SCHEDULE 40 PIPE.*

Applied Pressure psig	Nominal Standard Pipe Size										
	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
5	0.5	1.2	2.7	4.9	6.6	13	27	40	80	135	240
10	0.8	1.7	3.9	7.7	11	21	44	64	125	200	370
20	1.3	3	6.6	13	18.5	35	75	110	215	350	600
40	2.5	5.5	12	23	34	62	135	200	385	640	1100
60	3.5	8	18	34	50	93	195	290	560	900	1600
80	4.7	10.5	23	44	65	120	255	380	720	1200	2100
100	5.8	13	29	54	80	150	315	470	900	1450	2600
150	8.6	20	41	80	115	220	460	680	1350	2200	3900
200	11.5	26	58	108	155	290	620	910	1750	2800	5000
250	14.5	33	73	135	200	370	770	1150	2200	3500	6100

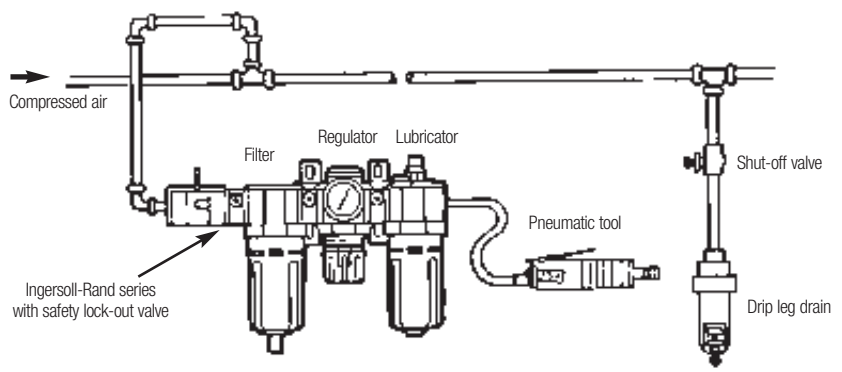
*The flow values in the chart above are based upon a pressure drop (▲P) as set forth in the following schedule:

Pressure (▲) per 100' of Pipe	Pipe Size
10% of applied pressure	1/8", 1/4", 3/8", 1/2"
5% of applied pressure	3/4", 1, 1-1/4", 1-1/2", 2, 2-1/2", 3"

INSTALLATION

The filter, regulator, and lubricator should be installed in the order shown in the illustration below. If a coalescing filter is required, it should be installed downstream from a standard filter. Individual take-off lines to the FRL and air tool or equipment should be from the top of the compressed air line. Make sure that airflow markings are followed for proper flow direction through the FRL units.

To trap and expel water, sludge, and other contaminants which may collect on the bottom of the air line, a drip leg drain should be used. Drip leg drains should be installed at low points in the piping system and at the far end of the distribution system.



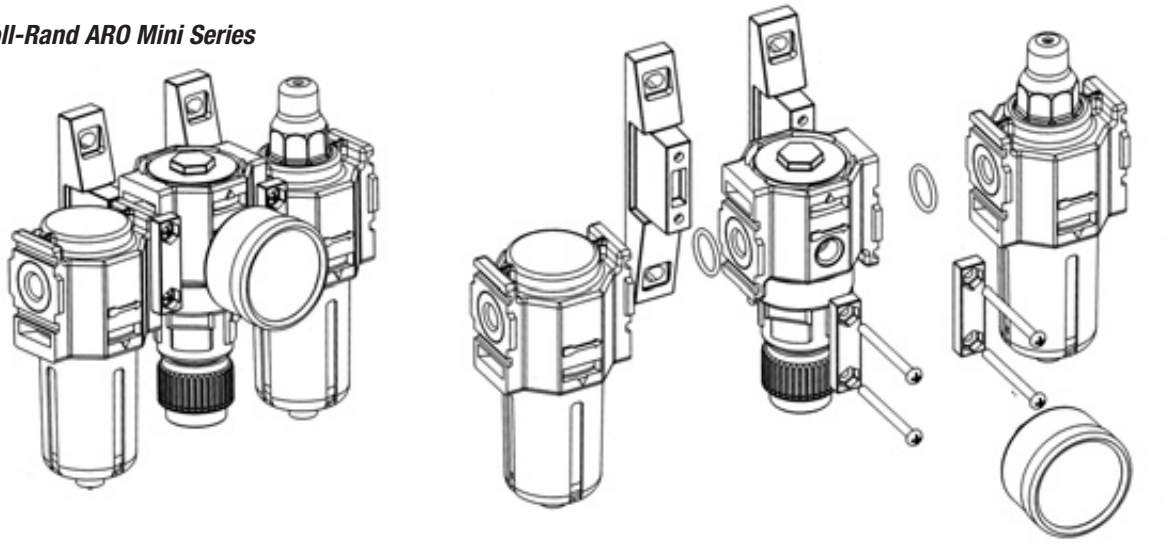
INGERSOLL-RAND ARO MINI AND COMPACT SERIES

MODULAR DESIGN

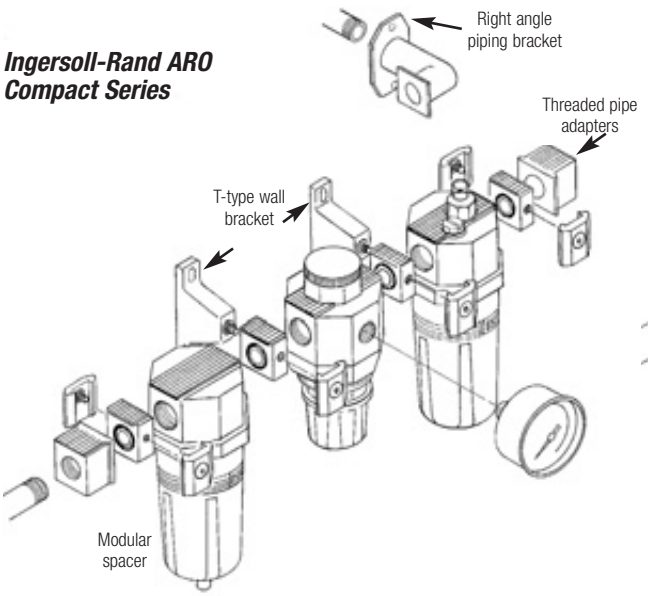
The Modular FRL with Pipe Nipple Capability

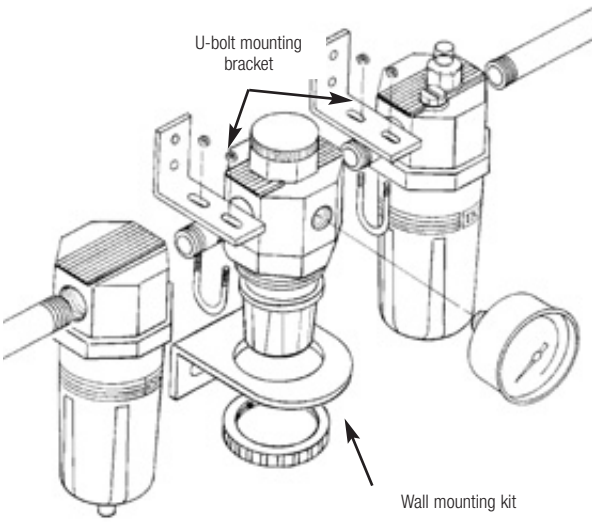
FRLs in the Mini and Compact Series have threaded ports, allowing either modular configurations or pipe nipple connections.

Ingersoll-Rand ARO Mini Series



Ingersoll-Rand ARO Compact Series







Pipe nipple connection



Modular connection

INGERSOLL-RAND ARO® MINI SERIES

SERIES FEATURES

1. **T-type wall mounting bracket** provides a rugged wall mount with excellent wall-to-unit clearance for installing connections.

2. Units have **threaded ports** in the housing allowing the user to mix pipe nipples and modular configurations to meet application requirements.

3. **Modular clamp** connects any two units together in a modular format. Screws are a combination of Phillips and slotted-head type.

4. **Self-locking, non-rising regulator knob** allows easy one-hand adjustment. Pull down to adjust, push up to lock.

5. **Quick change bowl** with 1/4 turn bayonet attachment. For safety, bowl cannot be removed when pressurized. Options provide the user with a bowl to fit any application.



Nylon composite | Poly bowl w/ bowl guard

6. **Lubricator / screwdriver adjustment slot** has an optional tamper-resistant cap which prevents unauthorized adjustment of oil delivery.

- **Safety lock-out valve** meets OSHA regulation 1910.147 which requires protection from unexpected start-up of a machine during service or maintenance.



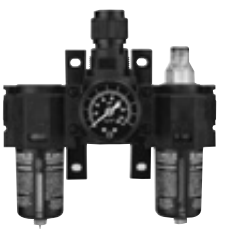
- **Standard filter and coalescing filter** provide 99.9% contaminant removal.



- **Modular design** permits removal of unit(s) from line. This allows for quick and easy repair and reduced downtime.



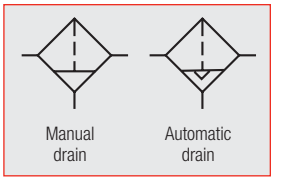
- **Regulator flexibility** allows the user to mount regulator up or down.







INGERSOLL-RAND ARO MINI SERIES FILTERS



1/8" AND 1/4" PORT SIZES



Ingersoll-Rand ARO® Mini Series Filters

PRODUCT FEATURES

Ingersoll-Rand ARO Mini Series filters are designed to separate condensed water, rust, scale, and other debris from air lines that can cause wear and premature failure of air tools, valves, cylinders, air motors, and other air-driven equipment. Filter units should be installed upstream of the regulator or lubricator to protect them from contamination. These filters are ideal for OEM and MRO applications.

- Glass-reinforced, composite bodies with threaded brass inserts are lightweight, corrosion-resistant, and have no paint to chip. Combination units can be pipe-nippled or clamped together in a modular configuration.
- Bowl guard has full-length slots for easy visual checking of liquid. A composite bowl is also available.
- Warning and technical information is printed in English, Spanish, French, and German on all bowl units.
- A quick-change bowl with bayonet attachment and line-up arrowheads provides easy bowl removal and filter element replacement.
- Air inlet arrow is molded into base.
- 20 micron filter element is standard. Five micron element available at no extra charge.
- Standard and automatic drain available.
- Bowl has external 1/8" NPT male thread, for piping away moisture.

PERFORMANCE SPECIFICATIONS

Materials of Construction

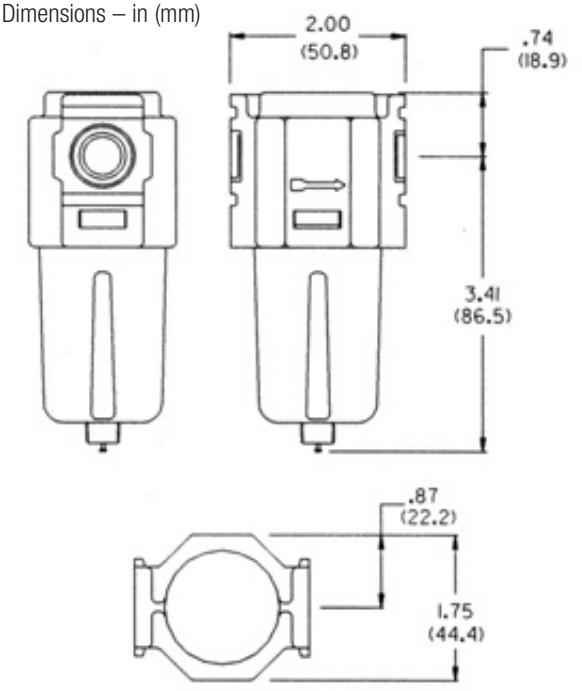
Body	Glass-reinforced, composite nylon
Bowl	Polycarbonate with bowl guard standard
Bowl Guard	Composite with sight windows
Seals	Buna-N
Drain	Push type
Filter Element	Porous polypropylene

Operating Conditions

Temp Range	0° – 125° F (-18° – 52° C)
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Composite bowl — 150 psig (10.4 bar)
Slump Capacity	.60 oz (18 ml)
Airflow	90 psig (6.2 bar) inlet and 5 psig (0.4 bar) pressure drop 1/8" — 28 cfm (13 dm^3/s) 1/4" — 38 cfm (18 dm^3/s)

DIMENSIONAL DATA

Dimensions – in (mm)



INGERSOLL-RAND ARO MINI SERIES FILTERS

ORDERING*

From the chart below, select the model number associated with the port size, bowl, and drain option required. If other options are needed, use the menu below the chart to select the proper model number. For BSP threads, consult our factory.

Note: Not all menu combinations are valid. See price book to verify.

Port Size NPT	Airflow cfm	Bowl Size oz (ml)	Filter Element micron	Weight lb (kg)	Manual Push Drain		Automatic Drain	
					Composite Bowl	Polycarbonate Bowl with Guard	Composite Bowl	Polycarbonate Bowl with Guard
Standard Filters								
1/8"	28	1.10 (33)	20	1.48 (.68)	F25111-220	F25111-200	F25111-221	F25111-201
1/4"	38	1.10 (33)	20	1.46 (.66)	F25121-220	F25121-200	F25121-221	F25121-201
Coalescing Filters								
1/8"	15	1.10 (33)	N/A	1.48 (.68)	F25111-320	F25111-300	F2511-321	F25111-301
1/4"	17	1.10 (33)	N/A	1.46 (.68)	F25121-320	F25121-300	F25121-321	F25121-301

**Tables do not represent the complete offering. Refer to the model number key for additional combinations.*

COALESCING FILTERS

These high efficiency filters are designed for applications where the delivered air must be free of oil and fine particles such as in paint spraying, instrumentation controls, and other compressed air applications. Use in conjunction with an upstream filter. (See example below.) Filter units should also be installed upstream of the regulator or lubricator to protect them from contamination. These filters are ideal for OEM and MRO applications.



Standard filter *Coalescing filter*

PORT SIZE NPT	BASIC MODEL	THREAD TYPE
1/8"	F25111- X X X	With Brass Insert
1/4"	F25121- X X X	With Brass Insert
1/8"	F25131- X X X	Molded Thread (no inserts)
1/4"	F25141- X X X	Molded Thread (no inserts)

Filter Element	Bowl Option	Drain Option
2 = 20 micron	**0** = Polycarbonate with guard	**0** = Manual push drain
3 = .01 micron coalescing	**2** = Composite nylon	**1** = Automatic drain
4 = 5 micron		

Clamp Kit



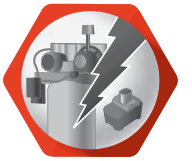
104263

T-type Wall Mount Bracket Kit



104262

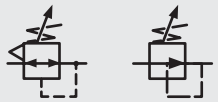
Part Number	Description
Filter Accessories	
104264	Automatic drain
29660-2	20 Micron filter element
29660-1	5 Micron filter element
29586	.01 Micron filter element (coalescing)
104259	Composite bayonet bowl
104258	Polycarbonate bowl with gaurd
104257	Service kit
104262	Kit includes screws & O-ring
104263	Kit includes T-bracket, clamp, screws, and O-ring



INGERSOLL-RAND ARO MINI SERIES REGULATORS



Ingersoll-Rand ARO®
Mini Series Regulators



1/8" AND 1/4" PORT SIZES

PRODUCT FEATURES

Ingersoll-Rand ARO Mini Series regulators are designed to provide quick response and accurate pressure regulation over a wide range of applications. Two gauge ports allow for more versatility in mounting and usage of the unit. Three spring options provide high-range / low-range pressure capabilities.

- Glass-reinforced, composite bodies with threaded brass inserts are lightweight, corrosion-resistant, and have no paint to chip. Combination units can be pipe-nippled or clamped together in a modular configuration.
- Non-rising, self-locking adjustment knob cannot be vibrated loose. Arrows on the knob allow for easy adjustment.
- Regulator can be mounted either up or down, increasing user flexibility.
- Regulator offers in-line repairability. Diaphragm can be replaced without removing unit from line.
- Regulator can be wall- or panel-mounted up to 3/16" thickness. Hole diameter is 1-3/16".
- A tamper-resistant knob is available.
- Order regulator with or without gauge.

PERFORMANCE SPECIFICATIONS

Materials of Construction

Body	Glass-reinforced composite
Seals	Buna-N
Diaphragm	Buna-N
Valve Spring	Stainless steel
Spring Housing	Glass-filled nylon
Cap & Knob	High impact ABS
Gauge Port	1/8" NPT

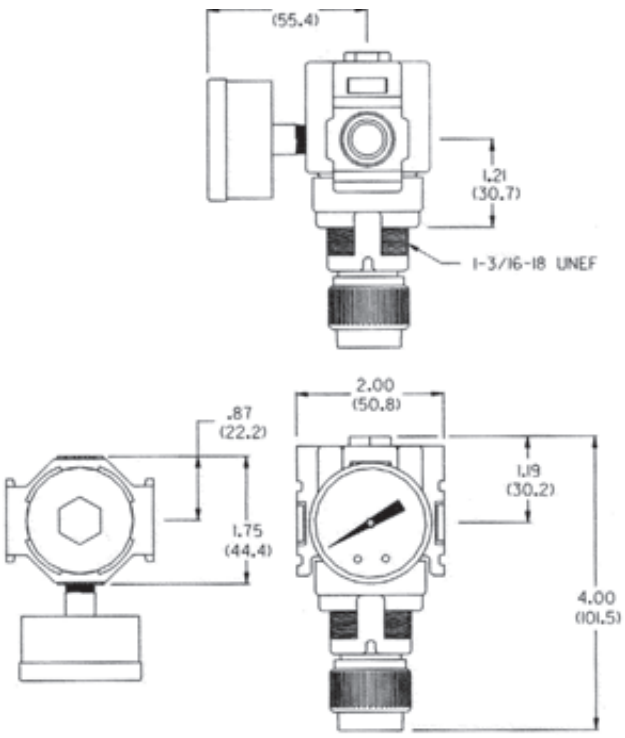
Operating Conditions

Temp Range	0° – 125° F (-18° – 52° C)
Max Inlet Pressure	250 psig (17 bar)
Airflow	100 psig (6.9 bar) inlet and 90 psig (6.2 bar) outlet 1/8" — 13 cfm (6 dm^3/s) 1/4" — 13 cfm (6 dm^3/s)

CAUTION: Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig secondary pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

DIMENSIONAL DATA

Dimensions – in (mm)



INGERSOLL-RAND ARO MINI SERIES REGULATORS

ORDERING*

From the chart below select the model number associated with the port size, pressure range, relieving, and control option required. If other options are needed, use the menu below the chart to select the proper model number. For BSP threads, consult our factory.

Note: Not all menu combinations are valid. See price book to verify.

Port Size NPT	Airflow cfm	Weight lb (kg)	Without Gauge		With Gauge	
			5 – 125 psig	0 – 50 psig	5 – 125 psig	0 – 50 psig
Relieving Type Regulators						
1/8"	13	1.38 (.63)	R27111-100	R27111-200	R27111-600	R27111-700
1/4"	13	1.34 (.61)	R27121-100	R27121-200	R27121-600	R27121-700

Tables do not represent the complete offering. Refer to the model number key for additional combinations.

PORT SIZE NPT	BASIC MODEL				THREAD TYPE
1/8"	R27111-	X	X	X	With Brass Insert
1/4"	R27121-	X	X	X	With Brass Insert
1/8"	R27131-	X	X	X	Molded Thread (no inserts)
1/4"	R27141-	X	X	X	Molded Thread (no inserts)

Pressure Range psig (bar)	Relieving Option	Control Option
1 = 5 – 125 (.4 – 8.6) No gauge	**0** = Relieving	**0** = Standard knob
2 = 0 – 50 (0 – 3.5) No gauge	**2** = Non-relieving	**3** = Tamper-resistant
4 = 0 – 15 (.0 – 1) No gauge		
6 = 5 – 125 (.4 – 8.6) with gauge 0 – 150 lb (#100095-160)		
7 = 0 – 50 (0 – .35) with gauge 0 – 60 lb (#29863)		

Clamp Kit



104263

Gauge



100095-160

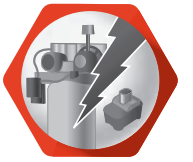
T-type Wall Mount Bracket Kit



104262

Part Number	Description
Regulator Accessories	
29668	Mounting bracket
104094	Panel mount nut
104039	Stub mount
104255	Service kit, relieving
104256	Service kit, non-relieving
104109	Tamper-resistant knob kit
29863	Gauge 0 – 60 psig
100095-160	Gauge 0 – 150 psig
29850	Gauge 0 – 160 psig
29846	Gauge 0 – 15 psig

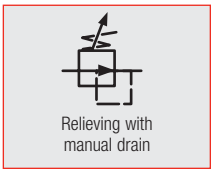
Part Number	Description
Regulator Accessories	
104265	Nut & bracket kit (includes 104094 nut & 29668 bracket)
29539	Spring 5 – 125 lb (gold)
29540	Spring 0 – 50 lb (green)
29754-1	Spring 0 – 25 lb (blue)
29622	Spring 0 – 15 lb (black)
104262	Kit includes screws and O-ring
104263	Kit includes T-bracket, clamp, screws and O-ring



INGERSOLL-RAND ARO MINI SERIES FILTER / REGULATOR PIGGYBACK



Ingersoll-Rand ARO® Mini Series Filter / Regulator Piggyback



1/8" AND 1/4" PORT SIZES

PRODUCT FEATURES

Ingersoll-Rand ARO Mini Series piggyback units are compact to save space, giving more design flexibility. These units have one common inlet / outlet for both the filter and regulator. This saves on space, set-up time, and piping costs.

- Glass-reinforced, composite bodies with threaded brass inserts are lightweight, corrosion-resistant, and have no paint to chip. Combination units can be pipe nippled or clamped together in a modular configuration.
- Non-rising, self-locking adjustment knob cannot be vibrated loose.
- Arrows on the knob allow for easy adjustment.
- Regulator offers in-line repairability. Diaphragm can be replaced without removing unit from line.
- Bayonet bowl attachment with line-up arrowheads provides easy filter element removal. Arrowheads assure user of locked position.
- Standard and automatic drains available.
- Bowl has external 1/8" NPT thread, for piping away moisture.
- Polycarbonate bowl with guard or composite corrosion-resistant bowl available.
- Air inlet arrow is molded into housing for easy air line hookup.

PERFORMANCE SPECIFICATIONS

Materials of Construction

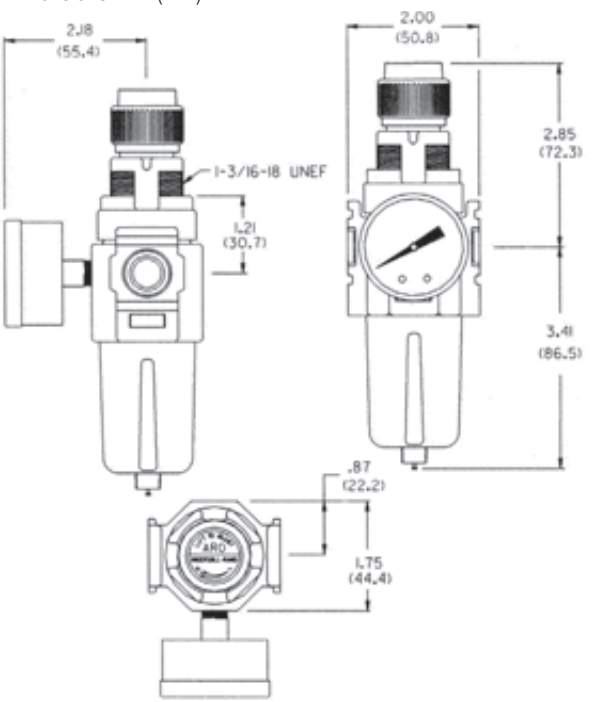
Body	Glass-reinforced bodies
Bowl	Polycarbonate with bowl guard standard
Bowl Guard	Composite with sight windows
Composite Bowl	Nylon
Seals	Buna-N
Drain	Push type
Filter Element	Porous polypropylene
Diaphragm	Buna-N
Spring Housing	Glass-filled nylon
Valve Spring	Stainless steel

Operating Conditions

Temp Range	0° – 125° F (-18° – 52° C)
Max Inlet Pressure	Poly bowl — 150 psig (10.4 bar) Composite bowl — 150 psig (10.4 bar)
Airflow	90 psig (6.2 bar) inlet 5 psig (0.4 bar) pressure drop 1/8" — 13 cfm (6 dm^3/s) 1/4" — 13 cfm (6 dm^3/s)

DIMENSIONAL DATA

Dimensions – in (mm)



CAUTION: Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig secondary pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

INGERSOLL-RAND ARO MINI SERIES FILTER / REGULATOR PIGGYBACK

ORDERING*

From the chart below, select the model number associated with the port size, pressure range, and drain option required. If other options are needed, use the menu below the chart to select the proper model number. For BSP threads, consult our factory.

Port Size NPT	Airflow cfm	Weight lb (kg)	Filter Element micron	Pressure Range psig (bar)	Composite Bowl		Poly Bowl with Bowl Guard	
					Push Drain	Automatic Drain	Push Drain	Automatic Drain
1/8"	13	2.05 (.93)	20	5 – 125 (.4 – 8.6)	P29112-120	P29112-124	P29112-100	P29112-104
1/4"	13	2.03 (.92)	20	5 – 125 (.4 – 8.6)	P29122-120	P29122-124	P29122-100	P29122-104

Note: Not all menu combinations are valid. See price book to verify.

**Tables do not represent the complete offering. Refer to the model number key for additional combinations.*

PORT SIZE NPT	BASIC MODEL	THREAD TYPE
1/8"	P2911 X - X X X	With Brass Insert
1/4"	P2912 X - X X X	With Brass Insert
1/8"	P2913 X - X X X	Molded Thread (no inserts)
1/4"	P2914 X - X X X	Molded Thread (no inserts)

Filter Element	Pressure Range psig (bar)	Relieving Bowl Option	Control Option
2 = 20 Micron	**1** = 5 – 125 (.4 – 8.6) No gauge	**0** = Relieving / poly with guard	**0** = Standard knob / manual drain
4 = 5 Micron	**2** = 0 – 50 (0 – 3.5) No gauge	**2** = Relieving / composite	**3** = Tamper-resistant knob / manual drain
	4 = 0 – 15 (.0 – 1) No gauge	**3** = Non-relieving / poly with guard	**4** = Standard knob / auto drain
	6 = 5 – 125 (.4 – 8.6) with gauge		
	7 = 0 – 50 (0 – .35) with gauge		

Clamp Kit



Kit includes screws and O-ring

104263

Gauge



100095-160

T-type Wall Mount Bracket Kit

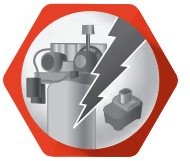


Kit includes T-bracket, clamp, screws, and O-ring

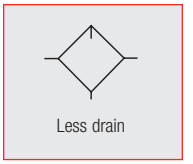
104262

Part Number	Description
Piggyback Accessories	
29668	Mounting bracket
104094	Panel mount nut
104039	Stub mount
104255	Service kit, relieving
104256	Service kit, non-relieving
104109	Tamper-resistant kit
104263	Clamp kit (includes screws and O-ring)
104262	T-type wall mount bracket kit (includes T-bracket, clamp, screws, and O-ring)
29863	Gauge 0 – 60 psig
100095-160	Gauge 0 – 150 psig
29846	Gauge 0 – 15 psig
29850	Gauge 0 – 160 psig

Part Number	Description
Piggyback Accessories	
104258	Poly bowl with guard
104259	Composite bowl
104265	Nut & bracket kit (includes 104094 nut & 29668 bracket)
29660-1	5 Micron element
29660-2	20 Micron element
104264	Pulse drain kit



INGERSOLL-RAND ARO MINI SERIES LUBRICATORS





Ingersoll-Rand ARO®
Mini Series Lubricators

1/8" AND 1/4" PORT SIZES

PRODUCT FEATURES

Ingersoll-Rand ARO Mini Series lubricators feature an adjustment needle on top of the transparent sight dome with finer threads and improved tolerances between the needle and seat. This allows for easy drip rate adjustment. The required amount of lubrication can be efficiently delivered for longer life of tools, cylinders, valves, pumps, air motors, and other air-operated equipment. Lightweight, non-detergent oils, like ARO pneumatic lubricating oil (part number 29665) is recommended.

- The oil adjustment feature has a tamper-resistant plug (part number 104027) which helps prevent unauthorized adjustment of oil.
- Transparent sight dome has 360° visibility.
- Bayonet bowl provides easy removal to allow quick oil refill.
- Glass-reinforced, composite bodies with threaded brass inserts are lightweight, corrosion-resistant, and have no paint to chip. Combination units can be pipe nippled or clamped together in a modular configuration.

PERFORMANCE SPECIFICATIONS

Materials of Construction

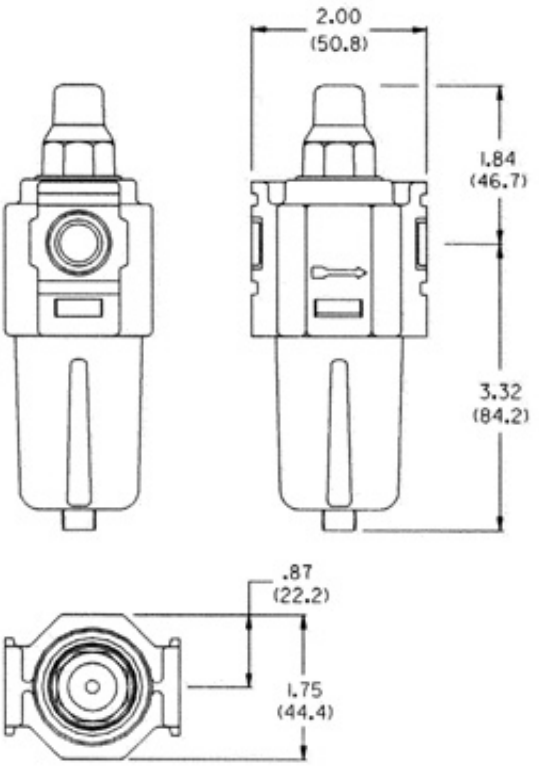
Body	Glass-reinforced bodies
Bowl	Polycarbonate with bowl guard standard
Bowl Guard	Composite with sight windows
Seals	Buna-N
Sight Dome	Nylon

Operating Conditions

Temp Range	0° – 125° F (-18° – 52° C)
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Composite bowl — 150 psig (10.4 bar)
Oil Capacity	1.10 oz (33 ml)
Airflow	90 psig (6.2 bar) inlet 5 psig (0.4 bar) pressure drop 1/8" — 41 cfm (91 dm^3/s) 1/4" — 60 cfm (28 dm^3/s)

DIMENSIONAL DATA

Dimensions – in (mm)



INGERSOLL-RAND ARO MINI SERIES LUBRICATORS

ORDERING*

From the chart below, select the model number associated with the port size and bowl option required. If other options are needed, use the menu below the chart to select the proper model number. For BSP threads, consult our factory.

Note: Not all menu combinations are valid. See price book to verify.

Port Size NPT	Airflow cfm	Bowl Size oz (ml)	Weight lb (kg)	Composite Bowl	Poly Bowl with Bowl Guard
1/8"	41	1.10 (33)	1.50 (.68)	L26111-120	L26111-100
1/4"	60	2.03 (.92)	1.44 (.65)	L26121-120	L26121-100

Tables do not represent the complete offering. Refer to the model number key for additional combinations.

PORT SIZE NPT	BASIC MODEL	THREAD TYPE
1/8"	L26111- X X X	With Brass Insert
1/4"	L26121- X X X	With Brass Insert
1/8"	L26131- X X X	Molded Thread (no inserts)
1/4"	L26141- X X X	Molded Thread (no inserts)

Adjustment Option	Bowl Option	Fill Option
1 = Standard	**0** = Polycarbonate with guard	**0** = Standard
	2 = Composite nylon	

Clamp Kit



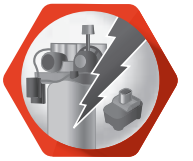
104263

T-type Wall Mount Bracket Kit

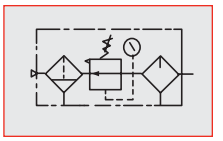


104262

Part Number	Description
Lubricator Accessories	
29665	Lubricating oil (1 qt)
104260	Polycarbonate bowl with guard
104261	Composite bowl
104027	Tamper-resistant plug
104226	Sign dome repair kit
104181	Service kit
104262	Kit includes screws and O-ring
104263	Kit includes T-bracket, clamp, screws, and O-ring



INGERSOLL-RAND ARO MINI SERIES COMBINATION UNITS





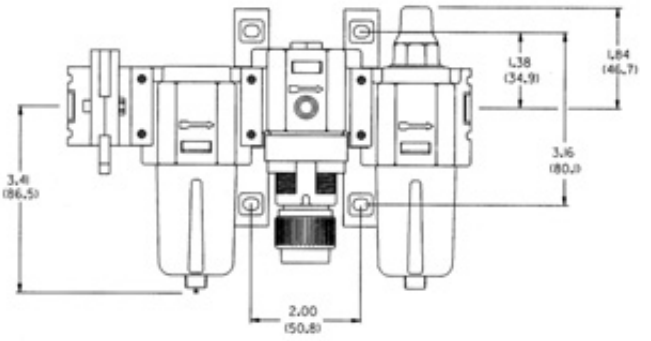
Lock-out Valve
104253-2

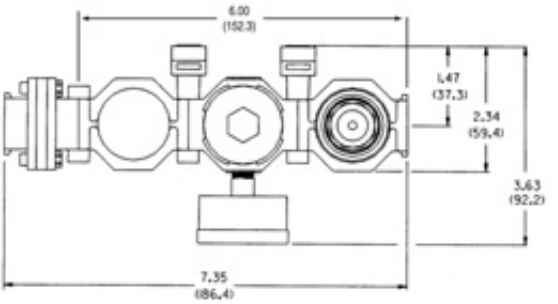
C28121-800

Ingersoll-Rand ARO Mini Series Combination Unit

DIMENSIONAL DATA

Dimensions – in (mm)





FILTER / REGULAOR / LUBRICATOR COMBO

PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	150 psig (10.4 bar)
Temp Range	0° – 125° F (-18° – 52° C)
Filter Element	20 micron
Pressure Range In Regulator	5 – 125 psig (.4 – 8.6 bar)
Gauge	0 – 150 psi
Gauge Port	1/8" NPT

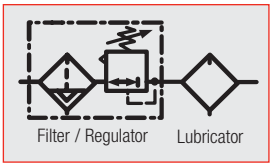
ORDERING

Select the basic model number which represents the port size and bowl option required. If other options are required, order each unit separately. Units are shipped assembled. For BSP threads, consult our factory.

Port Size NPT	Models		Weight lb (kg)	Components		
	with T-mounts	without T-mounts		Filter	Regulator	Lubricator
Push Drain – Polycarbonate Bowl with Bowl Guard						
1/8"	C28111-800	C28112-800	5.54 (1.88)	F25111-200	R27111-600	L26111-100
1/4"	C28121-800	C28122-800	5.42 (2.46)	F25121-200	R27121-600	L26121-100
Automatic Drain – Polycarbonate Bowl with Bowl Guard						
1/8"	C28111-801	C28112-801	5.54 (1.88)	F25111-201	R27111-600	L26111-100
1/4"	C28121-801	C28122-801	5.42 (2.46)	F25121-201	R27121-600	L26121-100

Notes: Order lock-out valve separately and attach to filter inlet with clamp kit (104263). To order modular model with pipe nipples, place a "3" in the sixth position of the model number. Example: C28XX3-XXX.

INGERSOLL-RAND ARO MINI SERIES COMBINATION UNITS

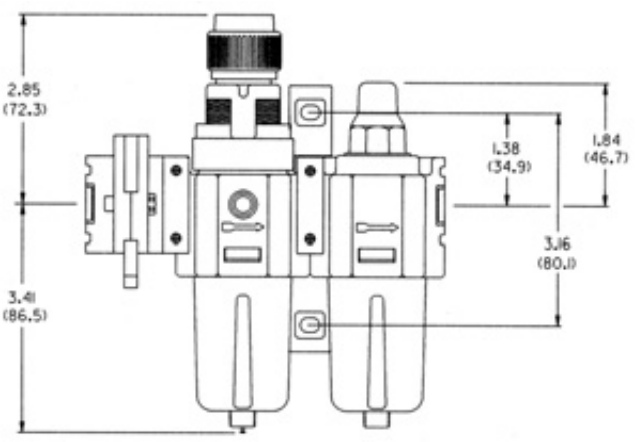


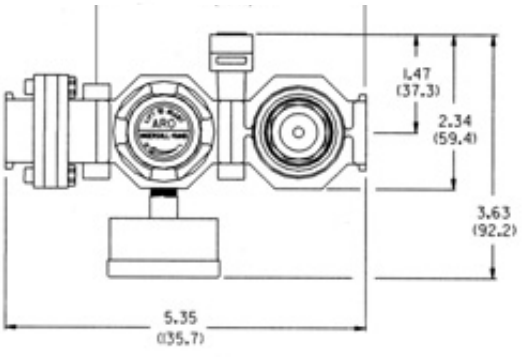


Ingersoll-Rand ARO Mini Series Piggyback / Lubricator Combination Unit

DIMENSIONAL DATA

Dimensions – in (mm)





PIGGYBACK LUBRICATOR

PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	150 psig (10.4 bar)
Temp Range	0° – 125° F (-18° – 52° C)
Filter Element	20 micron
Pressure Range in Regulator	5 – 125 psig (.4 – 8.6 bar)
Gauge	0 – 150 psi
Gauge Port	1/8" NPT

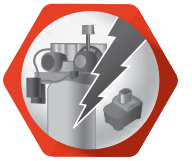
ORDERING*

Select the basic model number which represents the port size and bowl option required. If other options are required, order each unit separately. Units are shipped assembled. For BSP threads, consult our factory.

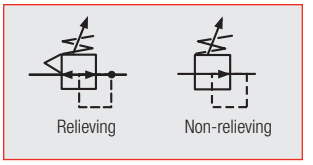
Port Size NPT	Models		Weight lb (kg)	Componenets	
	w/ T-Mounts	w/o T-Mounts		Filter / Regulator	Lubricator
Push Drain – Polycarbonate Bowl w/ Bowl Guard					
1/8"	C28111-600	C28112-600	4.14 (1.88)	P29112-600	L26111-100
1/4"	C28121-600	C28122-600	4.06 (1.84)	P29122-600	L26121-100
Automatic Drain – Polycarbonate Bowl w/ Bowl Guard					
1/8"	C28111-601	C28112-601	4.14 (1.88)	P29112-604	L26111-100
1/4"	C28121-601	C28122-601	4.06 (1.84)	P29122-604	L26121-100

Notes: Order lock-out valve separately and attach to filter inlet with clamp kit (104263). To order modular model with pipe nipples, place a "3" in the sixth position of the model number. Example: C28XX3-XXX.

**Tables do not represent the complete offering. Refer to the model number key for additional combinations.*



INGERSOLL-RAND ARO MINI SERIES COMPOSITE REGULATORS



1/8" AND 1/4" PORT SIZES



Ingersoll-Rand ARO® Mini Series Composite Regulators

127122-600 (shown with 29850 gauge)

PRODUCT FEATURES

Ingersoll-Rand ARO Mini Series composite regulators are the ideal choice where a small, compact unit is required to provide accurate control of either airflow or waterflow. Its diaphragm design provides a durable, no-leak seal especially effective in water and low-flow applications. Offering exceptional repetition, the ARO Mini regulator quickly returns to within 1% of its initial setting after any change in downstream pressure, when used in the mid-range of its rated regulatory capability. This regulator is constructed of materials approved by the National Sanitation Foundation (NSF).

- A corrosion-resistant, glass-reinforced composite body can be ordered with either molded threads or corrosion-resistant, zinc-plated steel inserts.
- A stainless steel valve spring is the only metallic part to come in contact with the regulated medium.
- Buna-N diaphragm is fabric-reinforced for superior sealing in water and low-flow applications.
- Regulator can be panel-mounted up to a thickness of 3/16" and a 1-3/16" 18-spring housing thread allows easy panel mounting.
- A non-rising, locking adjustment knob cannot be vibrated loose. Simply pull and rotate the knob to adjust the downstream pressure setting. A tamper-resistant adjustment knob is also available.

PERFORMANCE SPECIFICATIONS

Materials of Construction

Body	Glass-reinforced composite
Seals	Buna-N
Diaphragm	Buna-N
Valve Seat	Acetal resin
Spring Housing	Glass-filled nylon
Knob	Acetal resin
Valve Spring	Stainless steel

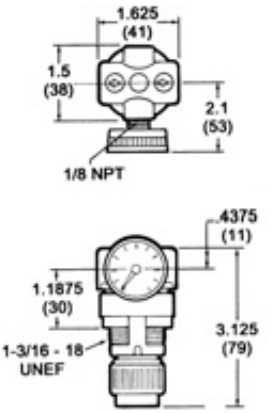
Performance Specifications

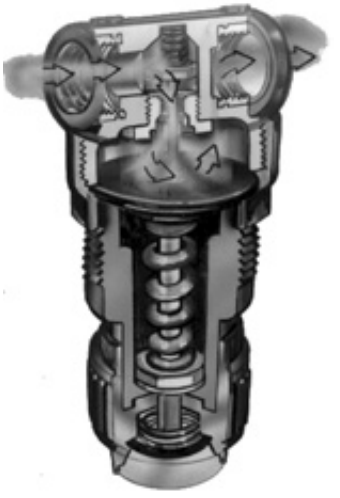
Max Inlet Pressure	250 psig (17 bar)
Pressure Range In Regulator	0 – 125 psig (0 – 8.6 bar)
Temp Range	0° – 150° F (-18° – 65° C)
Weight	1/8" — .25 lb (115 g) 1/4" — .22 lb (100 g)
***Airflow**	1/8" — 13 cfm (6 dm^3/s) 1/4" — 13 cfm (6 dm^3/s)
****Waterflow**	1/8" — 1.75 gpm (6.6 L/min) 1/4" — 2 gpm (7.6 L/min)
Gauge Port	1/8" NPT

**Airflow is at 125 psig (8.6 bar) inlet and 100 psig (6.9 bar) outlet.*
***Waterflow is at 60 psig (4.1 bar) inlet and 40 psig (2.8 bar) outlet.*

DIMENSIONAL DATA

Dimensions – in (mm)





CAUTION: Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig secondary pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

INGERSOLL-RAND ARO MINI SERIES COMPOSITE REGULATORS

ORDERING*

Regulators with 1/8" and 1/4" port sizes are ideal for water and low-flow applications. Select the basic model number associated with the thread type and port size (1/8" or 1/4") desired from the table below. For BSP threads, consult our factory.

Note: Not all menu combinations are valid. See price book to verify.

**Tables do not represent the complete offering. Refer to the model number key for additional combinations.*

PORT SIZE	BASIC MODEL	THREAD TYPE
1/8"	127112- X X X	With Insert (steel thread)
1/4"	127122- X X X	With Insert (steel thread)
1/8"	127142- X X X	Molded Thread (no insert) for Water Service
1/4"	127142- X X X	Molded Thread (no insert) for Water Service

Pressure Range psig (bar)	Relieving Option	Control Option
0 = 5 – 125 (.4 – 8.6 no gauge)	**0** = Relieving (for air servicing)	**0** = Standard knob
1 = 0 – 50 (.0 – 3.5 no gauge)	**2** = Non-relieving (for air servicing)	**3** = Tamper-resistant knob
2 = 0 – 25 (.0 – 1.7 no gauge)		
3 = 0 – 15 (.0 – 1 no gauge)		
6 = 5 – 125 (.4 – 8.6 with 0 – 160 lb gauge #29850)		
7 = 0 – 50 (.0 – 3.5 with 0 – 60 lb gauge #29863)		
8 = 0 – 15 (.0 – 1.0 with 0 – 15 lb gauge #29846)		

Red area indicates best-selling models.

ACCESSORY DIMENSIONAL DATA

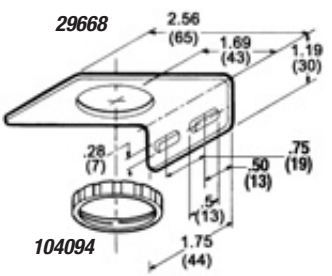
Dimensions – in (mm)

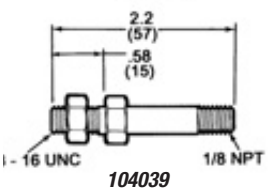


100095-160

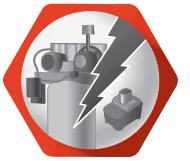








Model	Description
Regulator Accessories	
29846	Gauge 0 – 15 psig (0 – 1 bar)
29755-1	Gauge 0 – 30 psig (0 – 2 bar)
29863	Gauge 0 – 60 psig (0 – 4 bar)
29850	Gauge 0 – 160 psig (0 – 11 bar)
100095-160	Gauge 0 – 150 psig (0 – 10 bar)
29539	Spring 5 – 125 psig (gold)
29540	Spring 0 – 50 psig (green)
29754-1	Spring 0 – 25 psig (blue)
29622	Spring 0 – 15 psig (black)
29668	Mounting bracket
104094	Panel mounting nut
104039	Stud mount
104158	Service kit, relieving type
104159	Service kit, non-relieving type
104109	Tamper-resistant knob kit
104265	Nut & bracket kit (includes 104094 nut & 29668 bracket)



INGERSOLL-RAND ARO MINI SERIES ACCESSORY KITS

Kit Number	Description	Kit Contents
Filter Accessory Kits		
29586	Coalescing .01 micron element	(1) Element
29660-1	5 micron element	(1) Element
29660-2	20 micron element	(1) Element
104257	Service kit	(2) O-rings
104258	Polycarbonate bowl with guard	(1) Polycarbonate bowl with guard, (1) valve, (1) O-ring
104259	Composite bowl	(1) Composite bowl, (1) valve, (1) O-ring
104264	Automatic drain kit	(1) Pulse drain, (1) O-ring
Regulator Accessory Kits		
104039	Stud mount	(1) Stud and mounting nut
104109	Tamper-resistant knob kit	(1) Knob
104255	Service kit (relieving)	(1) Spring, (1) washer, (1) diaphragm, (1) O-ring
104256	Service kit (non-relieving)	(1) Spring, (1) washer, (1) diaphragm, (1) O-ring
104265	Mounting nut bracket kit	(1) Mounting nut, (1) wall bracket
Lubricator Accessory Kits		
104181	Service kit	(1) Compensating valve, (1) O-ring
104260	Polycarbonate bowl with guard	(1) Polycarbonate bowl with guard, (1) O-ring
104261	Composite bowl	(1) Composite bowl, (1) O-ring
Modular Components Accessory Kits		
104253-1	Safety lock-out / tag-out	1/8" NPT threads
104253-2	Safety lock-out / tag-out	1/4" NPT threads
104253-1-B	Safety lock-out / tag-out	1/8" BSP threads
104253-2-B	Safety lock-out / tag-out	1/4" BSP threads
104254-1	Manifold	1/8" NPT manifold, (1) Pipe plug
104254-2	Manifold	1/4" NPT manifold, (1) Pipe plug
104254-1-B	Manifold	1/8" BSP manifold, (1) Pipe plug
104254-2-B	Manifold	1/4" BSP manifold, (1) Pipe plug
104262	T-bracket mounting kit	(1) Bracket, (1) O-ring, (2) screws
104263	Clamp kit	(2) Clamps, (1) O-ring, (2) screws
Y237-2	Pipe nipple	1/8" NPT threads
Y27-2-C	Pipe nipple	1/4" NPT threads

INGERSOLL-RAND ARO MINI SERIES COMPONENTS AND ACCESSORIES



104263

MODULAR CLAMP KIT

One clamp kit is required to connect any two units or accessories together in the modular format. Kit includes two clamps, one O-ring, and screws. To assemble, simply put the O-ring and clamp between the units and tighten screws for a secure seal.

Part Number	Description
104263	Clamp kit (fits all port sizes)



104262

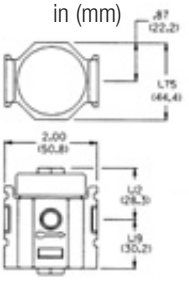
T-TYPE WALL MOUNTING BRACKETS

These brackets provide easy wall mounting. They are excellent for mounting a single unit or multiple units in the modular arrangement. T-type mount gives good wall-to-unit clearance for installing fittings and other connections. Kit includes a bracket, clamp, two screws, and O-ring.

Part Number	Description
104262	T-type wall mounting bracket kit (fits all port sizes)



Dimensions – in (mm)



104254-1

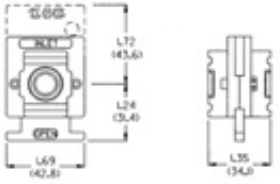
MODULAR MANIFOLD KIT

The manifold block is an excellent way to provide circuit design flexibility. The manifold has two 1/8" NPT ports which allow for clean, regulated air to be sent to signal or run other equipment. Kit includes manifold only. Order 104263 clamp kits as needed.

Part Number	Description
104254-1	1/8" Modular manifold kit
104254-2	1/4" Modular manifold kit



Dimensions – in (mm)

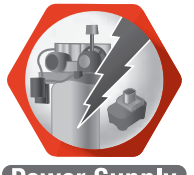


104253-1

LOCK-OUT, 3-WAY SHUT-OFF VALVE

Meets OSHA regulation 1910.147. This lock-out valve provides a safety lock-out to prevent accidental machine start-up. When slider valve is shifted into the lock-out position, inlet air is blocked and downstream air is exhausted to the atmosphere. Unit has threaded ports for plumbing directly to an air line or can be mounted in the modular arrangement. Order 104263 clamp kits as needed.

Part Number	Description
104253-1	1/8" NPT ports lock-out, 3-way shut-off valve
104253-2	1/4" NPT ports lock-out, 3-way shut-off valve



INGERSOLL-RAND ARO® COMPACT SERIES

SERIES FEATURES

1. Units have **threaded ports** in the housing which allow the user to mix pipe nipples and modular configurations to meet specific application needs.

2. **Modular spacer** has retained O-rings and screws to prevent loss during routine maintenance and to simplify assembly. Screws are 5/32" or 4 mm Allen head type.

3. **Durable black finish** with silkscreened graphics (no labels), enhances the overall look of any machine or fixture.

4. Patented **double seal push drain** is easy to operate and requires no tools for service. Optional automatic drain eliminates manual draining.

5. **Push / pull non-rising regulator knob** allows easy one-hand adjustment. Pull down to adjust, push up to lock.

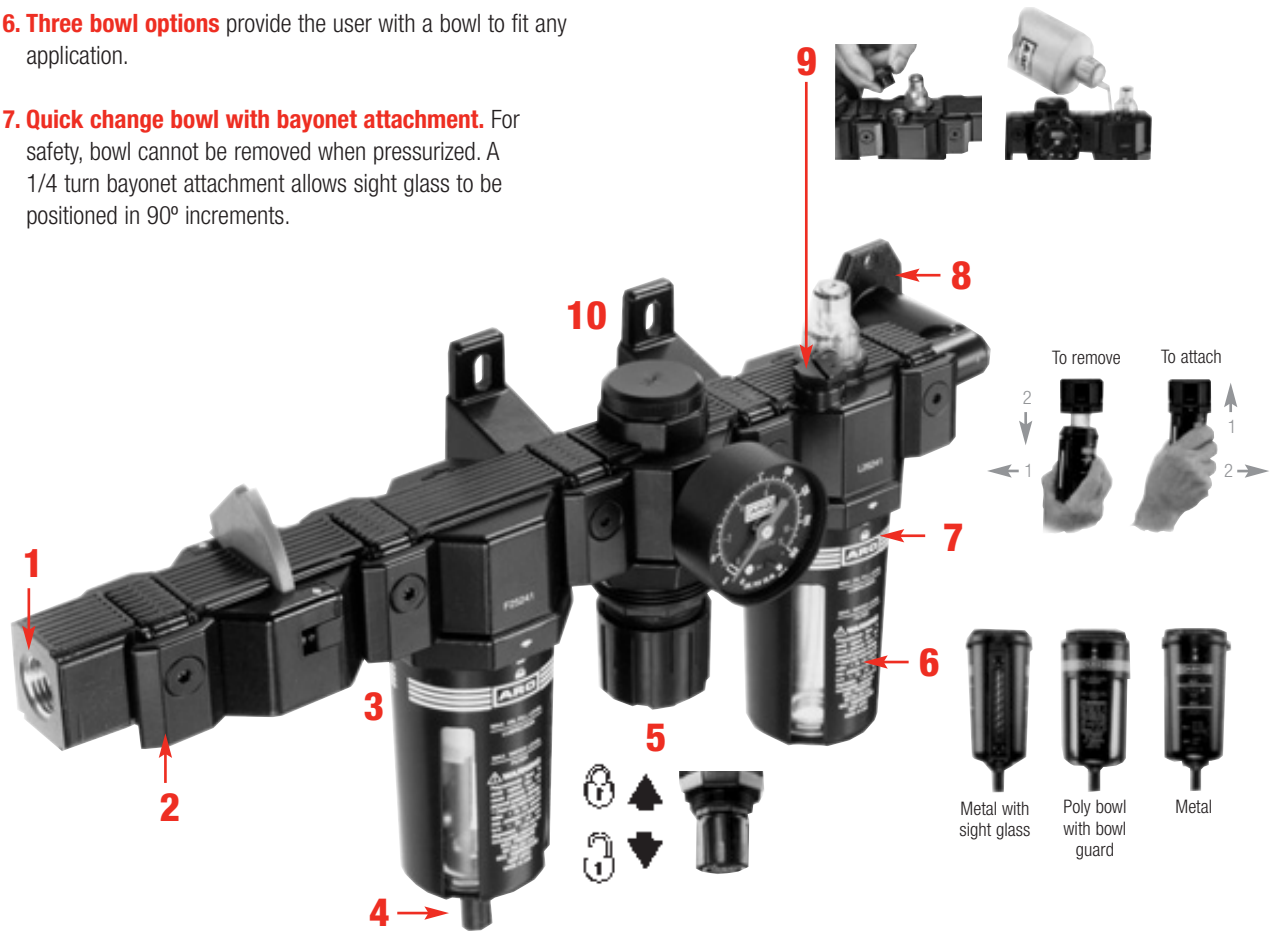
6. **Three bowl options** provide the user with a bowl to fit any application.

7. **Quick change bowl with bayonet attachment.** For safety, bowl cannot be removed when pressurized. A 1/4 turn bayonet attachment allows sight glass to be positioned in 90º increments.

8. **Right angle panel bracket** provides for a cleaner installation and doubles as a mounting bracket. Flow enters from behind the panel through the panel brackets.

9. **Lubricator has large fill port** which can be serviced under pressure, simplifying routine maintenance. Screwdriver adjustment slot has an optional tamper-resistant cap which prevents unauthorized adjustment of oil delivery.

10. **T-type wall mounting bracket** provides a rugged heavy-duty wall mount with excellent wall-to-unit clearance for installing connections.



INGERSOLL-RAND ARO COMPACT SERIES

SERIES FEATURES

- **Safety lock-out valve** meets OSHA regulation 1910.147 which requires protection from unexpected start-up during service or maintenance.



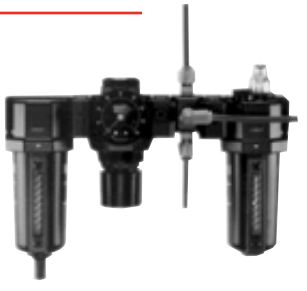
- **Filter / coalescing filter** provides 99.9% contaminant removal.



- Mount regulator up or down for increased mounting flexibility.



- Manifold block provides additional circuit design.



- Pipe adapters are available in 1/4", 3/8", 1/2", and 3/4" pipe sizes.



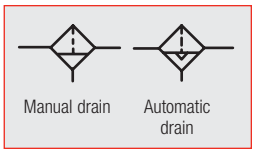
- Totally modular design permits removal of unit(s) from line without disturbing the hard piping. This allows for quick, easy repair and reduced downtime.



- Filter with optional service life indicator shows when element is clogged and needs service.



INGERSOLL-RAND ARO COMPACT SERIES FILTERS





Ingersoll-Rand ARO Compact Series Filters

1/4", 3/8", AND 1/2" PORTS

FEATURES

Ingersoll-Rand ARO Compact Series filters are designed to remove any rust, scale, condensed water, and other debris that can cause wear and premature failure of air tools, valves, cylinders, air motors, and other air-driven equipment. Filter units should be installed upstream of the regulator and lubricator to protect them from contamination. These filters are ideal for OEM and MRO applications.

- Units have threaded ports for direct connection to pipe plumbing or, when used with modular port adapter kits, a single unit or combination of units can be piped into the air system in a modular arrangement.
- Rugged zinc die-cast bowl guard has large, full-length slots for easy visual checking of liquid. Other bowl options include a metal bowl with sight glass and a plain metal bowl.
- Warning and technical information is printed in English, Spanish, French, and German on standard units.
- The quick change bowl with bayonet attachment provides easy bowl removal and filter element replacement. Bayonet attachment design allows sight gauge location at 90° increments.
- Optional filter service life indicator shows when element is clogged and needs changing.
- These compact units offer a 40-micron filter element with 12 percent more filter area.
- Automatic drain has 1/8" NPT connection for drain line; 10 psig minimum operating pressure.

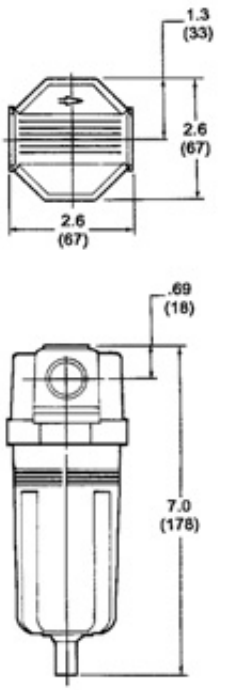
PERFORMANCE SPECIFICATIONS

Body	Zinc die-cast
Bowls	Polycarbonate or zinc die-cast
Bowl Guard	Zinc die-cast
Sight Glass	Polyimide-nylon 12
Seals	Buna-N
Drain	Brass and Buna-N
Filter Element	Porous polypropylene
Sump Capacity	2.87 oz (85 cc)
Filter Area	8.24 sq in (5318 mm^2)
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52° C) Metal Bowl — 0° – 175° F (-18° – 79° C)
***Airflow**	1/4" — 54 cfm (25 dm^3/s) 3/8" — 100 cfm (47 dm^3/s) 1/2" — 122 cfm (58 dm^3/s)

**Airflow is at 90 psig (6.2 bar) inlet and 5 psig (0.4 bar) pressure drop.*

DIMENSIONAL DATA

Dimensions – in (mm)





INGERSOLL-RAND ARO COMPACT SERIES FILTERS

ORDERING

From the chart below, select the model number associated with the port size, bowl, and drain option required. If other options are needed, use the menu at the bottom.

Port Size NPT in	Airflow cfm (dm³/s)	Model	Bowl Size oz (ml)	Filter Element micron	Weight lb (kg)
Flex Drain — Metal Bowl with Sight Glass					
1/4"	54 (25)	F25221-110	6.0 (177)	40	1.48 (.68)
3/8"	100 (47)	F25231-110	6.0 (177)	40	1.46 (.66)
1/2"	122 (58)	F25241-110	6.0 (177)	40	1.43 (.65)
Flex Drain — Polycarbonate Bowl with Bowl Guard					
1/4"	54 (25)	F25221-100	6.0 (177)	40	1.48 (.68)
3/8"	100 (47)	F25231-100	6.0 (177)	40	1.46 (.66)
1/2"	122 (58)	F25241-100	6.0 (177)	40	1.43 (.65)
Automatic Drain — Metal Bowl with Sight Glass					
1/4"	54 (25)	F25221-111	6.0 (177)	40	1.48 (.68)
3/8"	100 (47)	F25231-111	6.0 (177)	40	1.46 (.66)
1/2"	122 (58)	F25241-111	6.0 (177)	40	1.43 (.65)
Automatic Drain — Polycarbonate Bowl with Bowl Guard					
1/4"	54 (25)	F25221-101	6.0 (177)	40	1.48 (.68)
3/8"	100 (47)	F25231-101	6.0 (177)	40	1.46 (.66)
1/2"	122 (58)	F25241-101	6.0 (177)	40	1.43 (.65)

ADDITIONAL MODELS AVAILABLE

Select the basic model number associated with the port size desired. From the table below, select the numbers representing the filter options required. For BSP threads, add -B to end of model number.

PORT SIZE	BASE MODEL
1/4"	F2522 X - X X X
3/8"	F2523 X - X X X
1/2"	F2524 X - X X X

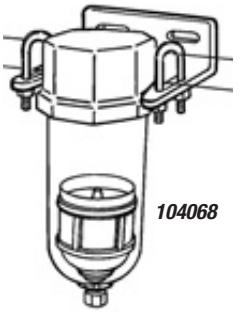
Red area indicates best-selling models

Filter Service Indicator	Filter Element	Bowl Option	Drain Option
1 = None	**1** = 40 micron #100031-1	**0** = Polycarbonate with guard	**0** = Manual push drain
2 = Mechanical	**3** = Coalescing #100032	**1** = Metal with sight glass	**1** = Automatic drain
	4 = 5 micron #100031-3	**2** = Metal	

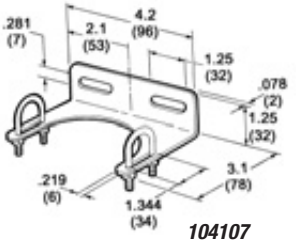
Part Number	Description
Filter Accessories	
104068	Automatic drain for filter bowl
104107	Mounting bracket for use with pipe nipples
104149	Push drain kit for filter bowl
104176	Filter service kit (includes O-ring and manual drain)
104182	Sight glass service kit (includes 2 O-rings and sight glass)
100031-1	40 micron filter element
100031-2	20 micron filter element
100031-3	5 micron filter element
100032	Coalescing filter element
104202	Polycarbonate bowl with guard
104204	Metal bowl with sight glass
104206	Metal bowl
104248	Activated charcoal element

ACCESSORY DIMENSIONAL DATA

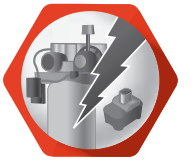
Dimensions – in (mm)



104068



104107

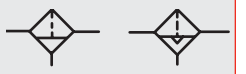


Power Supply

INGERSOLL-RAND ARO COMPACT SERIES COALESCING FILTERS



Ingersoll-Rand ARO Compact Series Coalescing Filters



Pre-filters are essential for long coalescing life.

1/4", 3/8", AND 1/2" PORTS

PRODUCT FEATURES

These high efficiency filters are designed for paint spraying, instrumentation controls, and other compressed air applications where the delivered air must be free of oil and fine particles. These filters are ideal for OEM and MRO applications.

- One-piece coalescing filter element removes 99.9 percent of oil aerosols and particles down to .3 micron.
- Units have threaded ports for direct connection to pipe plumbing.
- Warning and technical information is printed in English, Spanish, French, and German on standard units.
- Bayonet bowl attachment provides easy bowl removal and filter element replacement.
- Optional filter service life indicator shows when element needs changing.

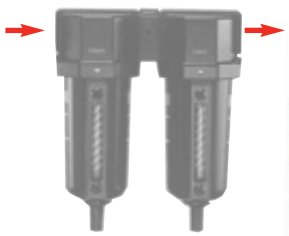
ORDERING

From the chart, select the model number associated with the port size, and bowl, and drain option required. If other options are needed, use the menu below.

Performance specifications (excluding Airflow), dimensions, and accessories are the same as standard filters.

RECOMMENDED INSTALLATION

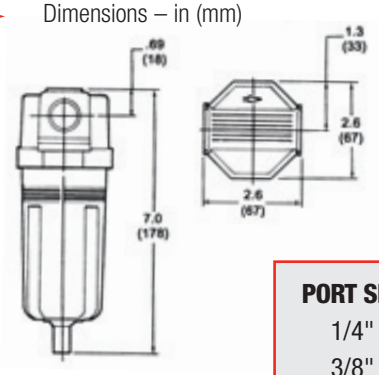
Use in conjunction with an upstream filter. Filter units should be installed upstream of the regulator or lubricator to protect them from contamination.



Standard Pre-filter — Coalescing filter

DIMENSIONAL DATA

Dimensions – in (mm)



Port Size NPT	Airflow cfm (dm³/s)	Model	Bowl Size oz (ml)	Weight lb (kg)
Push Drain — Metal Bowl with Sight Glass				
1/4"	40 (17)	F25221-310	6.0 (177)	1.48 (.68)
3/8"	51 (24)	F25231-310	6.0 (177)	1.46 (.66)
1/2"	53 (25)	F25241-310	6.0 (177)	1.43 (.65)
Flex Drain — Polycarbonate Bowl with Bowl Guard				
1/4"	40 (17)	F25221-300	6.0 (177)	1.48 (.68)
3/8"	51 (24)	F25231-300	6.0 (177)	1.46 (.66)
1/2"	53 (25)	F25241-300	6.0 (177)	1.43 (.65)
Automatic Drain — Metal Bowl with Sight Glass				
1/4"	54 (25)	F25221-311	6.0 (177)	1.48 (.68)
3/8"	100 (47)	F25231-311	6.0 (177)	1.46 (.66)
1/2"	122 (58)	F25241-311	6.0 (177)	1.43 (.65)
Automatic Drain — Polycarbonate Bowl with Bowl Guard				
1/4"	54 (25)	F25221-301	6.0 (177)	1.48 (.68)
3/8"	100 (47)	F25231-301	6.0 (177)	1.46 (.66)
1/2"	122 (58)	F25241-301	6.0 (177)	1.43 (.65)

ADDITIONAL MODELS AVAILABLE

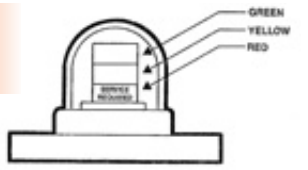
Select the basic model number associated with the port size desired. From the table at the right, select the number representing the filter options required. For BSP threads, add -B to the end of model number.

NOTE: Not all menu combinations are valid. See price book to verify.

PORT SIZE	BASE MODEL
1/4"	F2522 X - 3 X X
3/8"	F2523 X - 3 X X
1/2"	F2524 X - 3 X X

Filter Service Indicator	Bowl Option	Drain Option
1 = None	**0** = Polycarbonate with guard	**0** = Manual push drain
2 = With service indicator	**1** = Metal with sight glass	**1** = Automatic drain
	2 = Metal	

INGERSOLL-RAND ARO COMPACT SERIES FILTERS WITH SERVICE INDICATORS





Flex Drain — Polycarbonate bowl with bowl guard F25242-300

1/4", 3/8" AND 1/2" PORTS

PRODUCT FEATURES

Units equipped with the Filter Service Indicator are designed to indicate when the filter element is clogged and needs to be serviced. The highly visible rising collar can be seen from any angle. Pressure is monitored at two different points in a system (inlet and outlet) and acts on opposite sides of a diaphragm sensor. A change in pressure causes the collar to rise, indicating the element is clogged.

- Pop-up, three-color indicator provides visual monitoring of filter element efficiency.
- Service life indicator changes from green to red when element is clogged and needs changing.
- The rising collar is visible from 360 degrees.

ORDERING

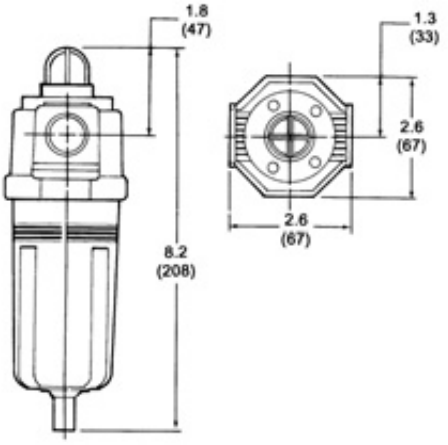
From the chart, select the model number associated with the port size, bowl, and drain option required. Specifications, options, and accessories are the same as standard filters.

Port Size NPT	Airflow cfm (dm³/s)	Model Cap with Standard Element	Airflow cfm (dm³/s)	Model Cap with Coalescing Element
Push Drain — Metal Bowl with Sight Glass				
1/4"	54 (25)	F25222-110	40 (17)	F25222-310
3/8"	100 (47)	F25232-110	51 (24)	F25232-310
1/2"	122 (58)	F25242-110	53 (25)	F25242-310
Flex Drain — Polycarbonate Bowl with Bowl Guard				
1/4"	54 (25)	F25222-100	40 (17)	F25222-300
3/8"	100 (47)	F25232-100	51 (24)	F25232-300
1/2"	122 (58)	F25242-100	53 (25)	F25242-300

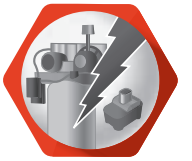
NOTE: All model combinations are listed.

DIMENSIONAL DATA

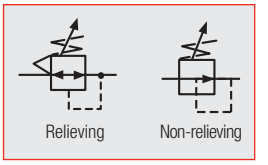
Dimensions – in (mm)



Part Number	Description
Coalescing Filter Accessories	
104068	Automatic drain for filter bowl
104107	Mounting bracket for use with pipe nipples
104149	Push drain kit for filter bowl
104176	Filter service kit (includes O-ring and manual drain)
104182	Sight glass service kit (includes 2 O-rings and sight glass)
100032	Coalescing filter element
104202	Polycarbonate bowl with guard
104204	Metal bowl with sight glass
104206	Metal bowl



INGERSOLL-RAND ARO COMPACT SERIES REGULATORS





Ingersoll-Rand ARO Compact Regulators
R27241-600

1/4", 3/8", AND 1/2" PORTS

FEATURES

Ingersoll-Rand ARO Compact Series regulators are designed to provide quick response and accurate pressure regulation over a wide range of applications. Two gauge ports allow for more versatility in mounting and usage of the unit. Three spring options allow for spring changes, instead of entire regulator changes, to meet most air pressure application requirements.

- Units have threaded ports for direct connection to pipe plumbing or, when used with modular port adapter kits, a single unit or combination of units can be piped into the air system in a modular arrangement.
- Push / pull, non-rising knob allows one-hand adjustment. Pull to adjust, push to lock. Arrows on the knob indicate direction of pressure increase / decrease.
- Regulator can be mounted either up or down, increasing user flexibility.
- Balanced valve-type diaphragm regulation assures positive pressure adjustment and rapid response to inlet pressure changes.
- Regulator offers in-line repairability. Valve and diaphragm can be replaced without removing unit from line.
- Regulator can be panel-mounted up to 1/4" thickness. Hole diameter is 1-7/8".
- Buna-N diaphragm and seals provide excellent elasticity and longer life.
- A tamper-resistant clamp is available. Units can be preset and locked to specific requirements.
- Order regulator with or without gauge.

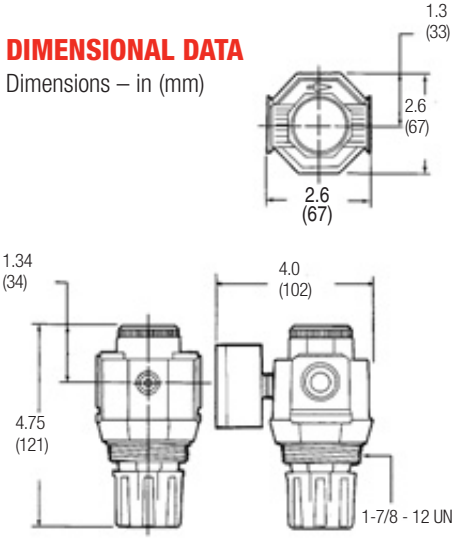
PERFORMANCE SPECIFICATIONS

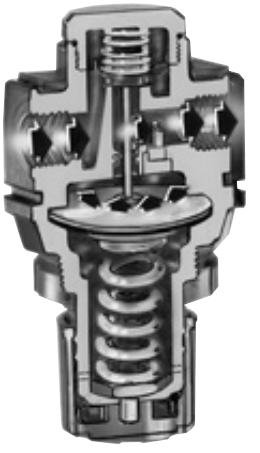
Body	Zinc die-cast
Seals	Buna-N
Diaphragm	Buna-N
Valve	Brass
Spring Housing	Glass-filled nylon
Cap and Knob	High impact ABS
Max Inlet Pressure	200 psig (13.8 bar)
Pressure Range In Regulator	0 – 200 psig (0 – 13.8 bar)
Operating Temp Range	0° – 180° F (-18° – 82° C)
Gauge Port	1/4" NPT
***Airflow**	1/4" — 100 cfm (47 dm³/s) 3/8" — 130 cfm (61 dm³/s) 1/2" — 150 cfm (71 dm³/s)

**Airflow is at 100 psig (6.9 bar) inlet and 90 psig (6.2 bar) outlet.*

DIMENSIONAL DATA

Dimensions – in (mm)





CAUTION: Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig secondary pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

INGERSOLL-RAND ARO COMPACT SERIES REGULATORS

ORDERING

From the chart below, select the model number associated with port size, bowl, and drain option required. If other options are needed, use menu at bottom.

ADDITIONAL MODELS AVAILABLE

Select the basic model number associated with the port size desired. From the table to the right, select the numbers representing the regulator options required. For BSP threads, add -B to end of model number.

Port Size NPT	Airflow cfm (dm³/s)	Model Spring Range		Weight lb (kg)
		0 – 50 psig (0 – 3.5 bar)	5 – 125 psig (.4 – 8.6 bar)	
Relieving-type without Gauge				
1/4"	100 (47)	R27221-200	R27221-100	1.38 (.36)
3/8"	130 (61)	R27231-200	R27231-100	1.34 (.61)
1/2"	150 (71)	R27241-200	R27241-100	1.30 (.59)
Relieving-type with Gauge				
1/4"	100 (47)	R27221-700	R27221-600	1.38 (.36)
3/8"	130 (61)	R27231-700	R27231-600	1.34 (.61)
1/2"	150 (71)	R27241-700	R27241-600	1.30 (.59)

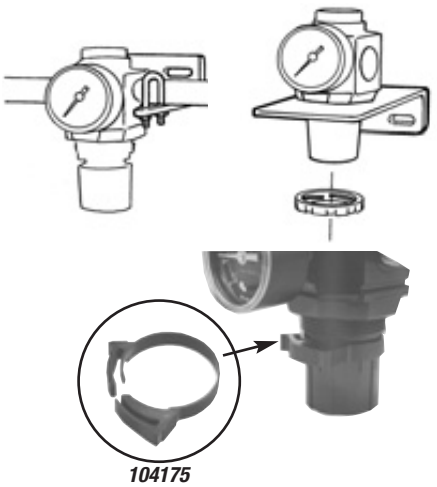
PORT SIZE
1/4"
3/8"
1/2"

BASE MODEL
R27221 - X X X
R27231 - X X X
R27241 - X X X

Red area indicates best-selling models

Pressure psig (bar)	Relieving Option	Control Option
1 = 5 – 125 (.4 – 8.6) no gauge	**0** = Relieving	**0** = Standard knob
2 = 0 – 50 (0 – 3.5) no gauge	**2** = Non-relieving	
3 = 10 – 200 (.7 – 13.8) no gauge		
6 = 5 – 125 (.4 – 8.6) with 0 – 160 lb gauge (#100067)		
7 = 0 – 50 (0 – 3.5) with 0 – 60 lb gauge (#100066)		
8 = 10 – 200 (.7 – 13.8) with 0 – 300 lb gauge (#100083)		

Notes: Not all menu combinations are valid. See price book to verify.

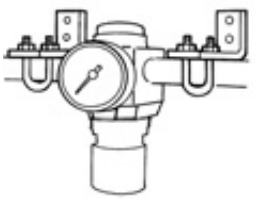


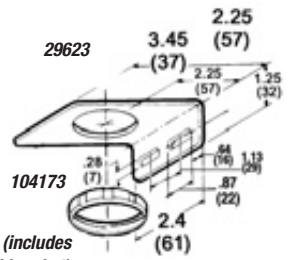
104175

Part Number	Description
Regulator Accessories	
100066	Gauge 0 – 60 psig
100067	Gauge 0 – 160 psig
100083	Gauge 0 – 300 psig
104107	Mounting bracket
104172	Wall mounting kit (includes panel nut & bracket)
104173	Panel mount nut
104175	Tamper-resistant kit
104177	Service kit, relieving type
104178	Service kit, non-relieving type
104209	Knob repair kit
29594	Spring, 5 – 125 lb (gold)
29595	Spring, 0 – 50 lb (green)
29596	Spring, 10 – 200 lb (silver)
29623	Wall mounting bracket
29999	U-bolt mounting bracket

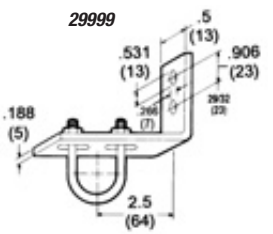
DIMENSIONAL DATA

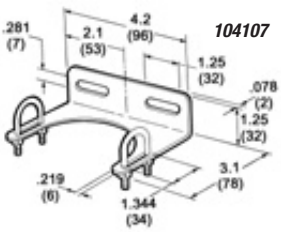
Dimensions – in (mm)





104172 (includes nut and bracket)





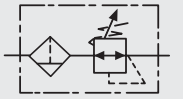
Power Supply

INGERSOLL-RAND ARO COMPACT SERIES FILTER / REGULATOR PIGGYBACK



Ingersoll-Rand ARO Compact Series Filter / Regulator Piggyback

P29221-600



Relieving with manual drain

1/4", 3/8", AND 1/2" PORTS

FEATURES

Ingersoll-Rand ARO Compact Series piggyback units are compact to save space, giving more design flexibility. The filter and regulator have a common inlet and a common outlet. This saves on space, set-up time, and piping costs.

- Units have threaded ports for direct connection to pipe plumbing or, when used with modular port adapter kits, a single unit or combination of units can be piped into the air system in a modular arrangement.
- Push / pull, non-rising knob allows one-hand adjustment. Pull to adjust, push to lock. Arrows on the knob indicate pressure increase and decrease.
- Balanced valve-type diaphragm regulation assures positive pressure adjustment and rapid response to inlet pressure changes.
- Regulator offers in-line repairability. Valve and diaphragm can be replaced without removing unit from line.
- Bayonet bowl attachment provides easy filter element removal.
- Inlet / outlet is stamped into housing for easy air line hookup.
- Automatic drain has 1/8" NPT connection for draining away contaminants.
- 10 psig minimum operating pressure.

NOTE: See cautions on the use of polycarbonate bowls.

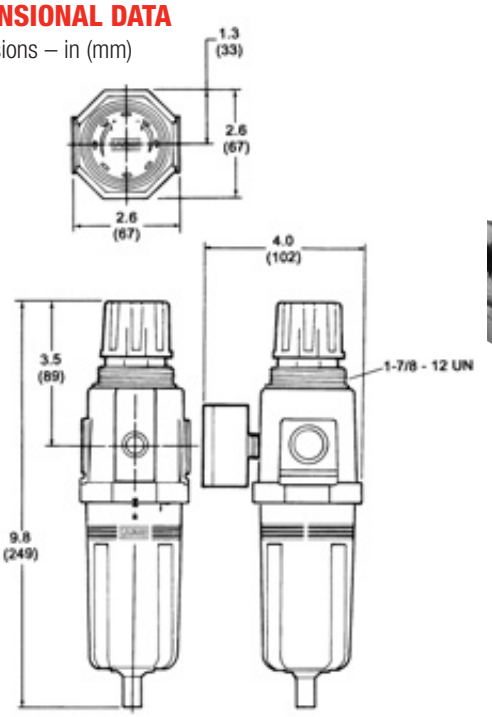
PERFORMANCE SPECIFICATIONS

Body	Zinc die-cast
Bowls	Polycarbonate or zinc die-cast
Bowl Guard	Zinc die-cast
Sight Glass	Polyamide-nylon 12
Seals	Buna-N
Drain	Brass and Buna-N
Filter Element	Porous polypropylene
Diaphragm	Buna-N
Valve	Brass
Spring Housing	Glass-filled nylon
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52°C) Metal bowl — 0° – 175° F (-18° – 79° C)
Gauge Port	1/4" NPT
***Airflow**	1/4" — 93 cfm (44 dm^3/s) 3/8" — 135 cfm (64 dm^3/s) 1/2" — 140 cfm (66 dm^3/s)

**Airflow is at 100 psig (6.9 bar) inlet and 90 psig (6.2 bar) outlet.*

DIMENSIONAL DATA

Dimensions – in (mm)





CAUTION: Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig secondary pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

INGERSOLL-RAND ARO COMPACT SERIES FILTER / REGULATOR PIGGYBACKS

ORDERING

From the chart to the right, select the model number associated with port size, bowl, and drain option required. If other options are needed, use menu below.

ADDITIONAL MODELS AVAILABLE

Select the basic model number associated with the port size desired. From the table, select the numbers representing the regulator options required. For BSP threads, add -B to the end of the model number.

Port Size NPT	Airflow cfm (dm³/s)	Model		Bowl Size oz (ml)	Filter Element (micron)	Weight lb (kg)
		without Gauge	with Gauge			
Push Drain — Metal Bowl with Sight Glass						
1/4"	93 (44)	P29221-110	P29221-610	6.0 (177)	40	2.05 (.93)
3/8"	135 (64)	P29231-110	P29231-610	6.0 (177)	40	2.03 (.92)
1/2"	140 (66)	P29241-110	P29241-610	6.0 (177)	40	2.00 (.91)
Push Drain — Polycarbonate Bowl with Bowl Guard						
1/4"	93 (44)	P29221-100	P29221-600	6.0 (177)	40	2.05 (.93)
3/8"	135 (64)	P29231-100	P29231-600	6.0 (177)	40	2.03 (.92)
1/2"	140 (66)	P29241-100	P29241-600	6.0 (177)	40	2.00 (.91)
Automatic Drain — Metal Bowl with Sight Glass						
1/4"	93 (44)	P29221-114	P29221-614	6.0 (177)	40	2.05 (.93)
3/8"	135 (64)	P29231-114	P29231-614	6.0 (177)	40	2.03 (.92)
1/2"	140 (66)	P29241-114	P29241-614	6.0 (177)	40	2.00 (.91)
Automatic Drain — Polycarbonate Bowl with Bowl Guard						
1/4"	93 (44)	P29221-104	P29221-604	6.0 (177)	40	2.05 (.93)
3/8"	135 (64)	P29231-104	P29231-604	6.0 (177)	40	2.03 (.92)
1/2"	140 (66)	P29241-104	P29241-604	6.0 (177)	40	2.00 (.91)

PORT SIZE

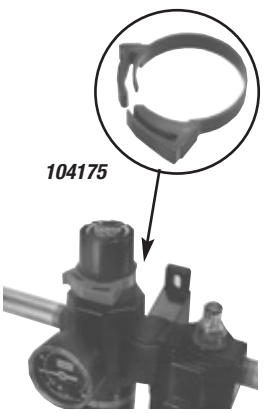
1/4"
3/8"
1/2"

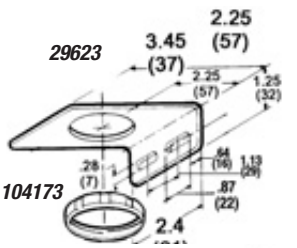
BASE MODEL

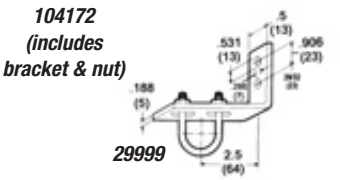
P2922 X - X X X
P2923 X - X X X
P2924 X - X X X

Red area indicates best-selling models

Filter Element	Pressure Range psig (bar)	Relieving / Bowl Option	Control Option / Drain
1 = 40 micron	**1** = 5 – 125 (.4-8.6) No gauge	**0** = Relieving / poly with guard	**0** = Standard knob / manual
4 = 5 micron	**2** = 0 – 50 (0 – 3.5) No gauge	**1** = Relieving / metal with sight glass	**4** = Standard / auto drain
	3 = 10 – 175 (.7 – 12.1) No gauge	**2** = Relieving / metal	
	6 = 5 – 125 (.4 – 8.6) with gauge		
	7 = 0 – 50 (0 – 3.5) with gauge		
	8 = 10 – 175 (.7 – 12.1) with gauge		

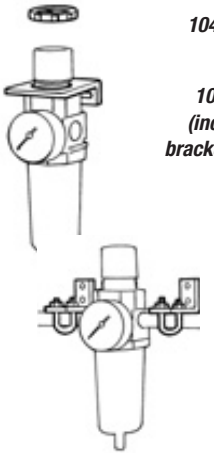


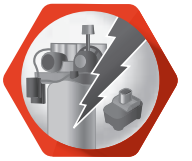




Part Number	Description
Piggyback Accessories	
100066	Gauge 0 – 60 psig
100067	Gauge 0 – 160 psig
100083	Gauge 0 – 300 psig
104107	Mounting bracket
104149	Push drain kit
104172	Wall mounting kit (includes panel nut & bracket)
104173	Panel mount nut
104175	Tamper-resistant kit
104179	Service kit, relieving type
104180	Service kit, non-relieving type

Part Number	Description
Piggyback Accessories	
104182	Sight glass service kit
104202	Polycarbonate bowl with guard
104204	Metal bowl with sight glass
104206	Metal bowl
29594	Spring, 5 – 125 lb (gold)
29595	Spring, 0 – 50 lb (green)
29596	Spring, 10 – 200 lb (silver)
29623	Mounting bracket
29999	U-bolt mounting bracket
104068	Automatic drain
104209	Knob repair kit





Power Supply

INGERSOLL-RAND ARO COMPACT SERIES PRECISION AIR REGULATORS



Ingersoll-Rand ARO Compact Series Precision Air Regulators

1/4" AND 3/8" PORTS

FEATURES

Precision Air Regulators are high precision, multi-stage pressure regulators. The highest degree of regulation and repeatability are achievable by reacting to downstream pressure fluctuations as small as 0.01 psig (0.07 kPa) above set pressure. Action occurs as downstream pressure is piloted to the control chamber to act on a finely tuned stainless-steel measuring capsule. A continuous bleed of less than 0.08 cfm (0.15 m/hr) works on the pilot diaphragm causing appropriate movement of the supply valve or the relief valve. Movements as small as 0.0001" (.0025 mm) will cause the main valve to correct to the proper position. Relief flows of up to 10 cfm can be achieved on the high relief model (-100 models). Exhaust is achieved through the exhaust vents located in the side of the body.

- The Precision Air Regulator controls output pressure with an accuracy of 0.1%, and has very low sensitivity to changes in supply pressure and flow.
- This regulator has been designed to eliminate the need for any readjustment of the regulated pressure after long downtime. At start-up, the regulated pressure will return to its output setting.
- The regulated pressure is held constant over substantial changes in flow due to the high-gain pneumatic servoamplifier. Particularly good from dead end to 203.4 m^3/hr (12 cfm).
- The unit may be installed in any position. It can be panel mounted or supported by in-line plumbing.

APPLICATIONS

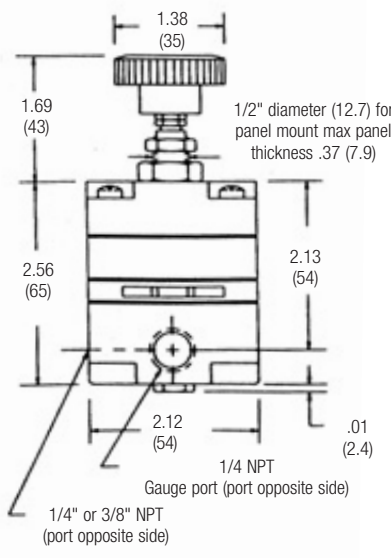
- Air gauging
- Gas mixing
- Web tensioning
- Roll loading
- Air hoists

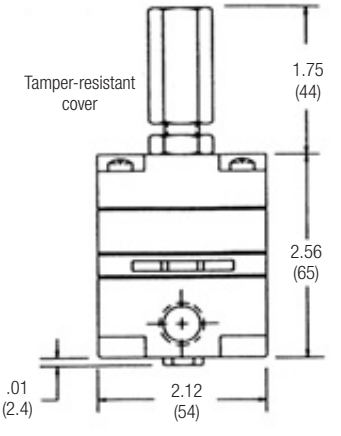
PERFORMANCE SPECIFICATIONS

Body	Zinc die-cast
Diaphragm	Buna-N
Metering Capsule	Stainless steel
Knob	Phenolic plastic
Flow Capacity	14 cfm (25 m^3/hr)
Exhaust Capacity	Up to 10 cfm
Sensitivity	.125" (3.2 mm) water column
Total Air Consumption	6 scfh (.17 m^3/hr)
Pilot Bleed Rate	0.08 cfm (0.15 m^3/hr)
Supply Pressure Variation	Less than .005 psig (.03 kPa) @ 25 psig variance
Max Supply Pressure	150 psig (1050 kPa) A filter with 5 micron element should be installed ahead of unit
Operating Temp Range	20° – 150° F (-7° – 66° C)

DIMENSIONAL DATA

Dimensions – in (mm)





INGERSOLL-RAND ARO COMPACT SERIES PRECISION AIR REGULATORS

ORDERING

From the chart to the right, select the model number associated with port size, bowl, and drain option required. If other options are needed, use menu below.

Port Size NPT in	Airflow 2 – 120 psig (.4 – 8.6 bar)	Model Spring Range		Weight lb (kg)
		2 – 60 psig (.4 – 4.1 bar)	2 – 25 psig (.4 – 1.7 bar)	
1/4"	PR4021-100	PR4021-200	PR4021-300	1.4 (.64)
3/8"	PR4031-100	PR4031-200	PR4031-300	1.4 (.64)

ADDITIONAL MODELS AVAILABLE

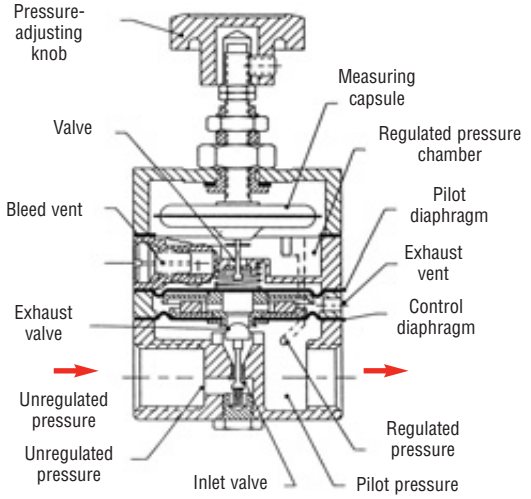
Select the basic model number associated with the port size desired. From the table, select the numbers representing the regulator options required. For BSP threads, add -B to the end of the model number.

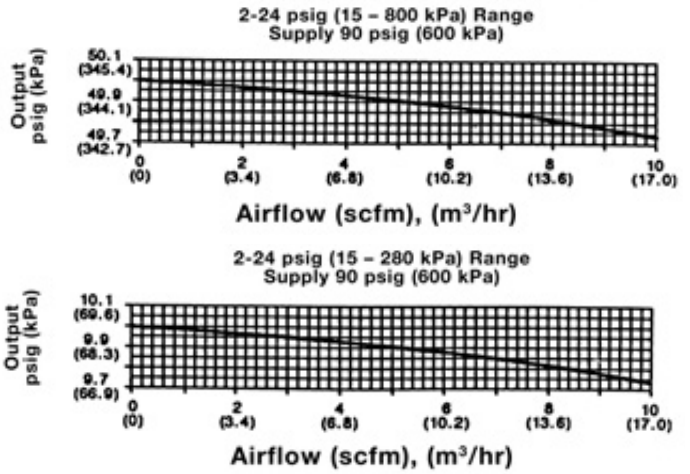
ADDITIONAL MODELS AVAILABLE

PORT SIZE	BASE MODEL
1/4"	PR4021 - X X X
3/8"	PR4031 - X X X

Pressure Range psig (bar)	Relieving Option	Control Option
1 = 2 – 120 (.1 – 8.3) No gauge	0 = Relieving	0 = Standard knob
2 = 2 – 60 (.1 – 4.1) No gauge		3 = Tamper-resistant cover
3 = 2 – 25 (.1 – 1.7) No gauge		

AIRFLOW CHARACTERISTICS



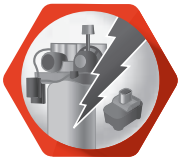


Wall Mount Bracket



29077

Part Number	Description
Precision Air Regulators Accessories	
29077	Wall mount bracket
Service Kits	
100207-1	2 – 25 lb or 2 – 60 lb spring range
100207-2	2 – 120 lb spring range



INGERSOLL-RAND ARO COMPACT SERIES STAINLESS STEEL PRECISION REGULATORS AND FILTER / REGULATORS

Regulator



Filter / Regulator



1/4" AND 3/8" PORTS

FEATURES

- Stainless-steel construction is ideal for corrosive environments and sour gas.
- Excellent repeatability.
- Tapped vent for exhaust gas capture.
- Once set to a desired pressure, the ARO 316 stainless steel regulator will permanently maintain its settings through the use of a convoluted diaphragm. This diaphragm provides constant adjustment to downstream pressure drop, and downstream pressure increase.
- 1/4" and 3/8" NPT.
- Panel-mount nut is standard.

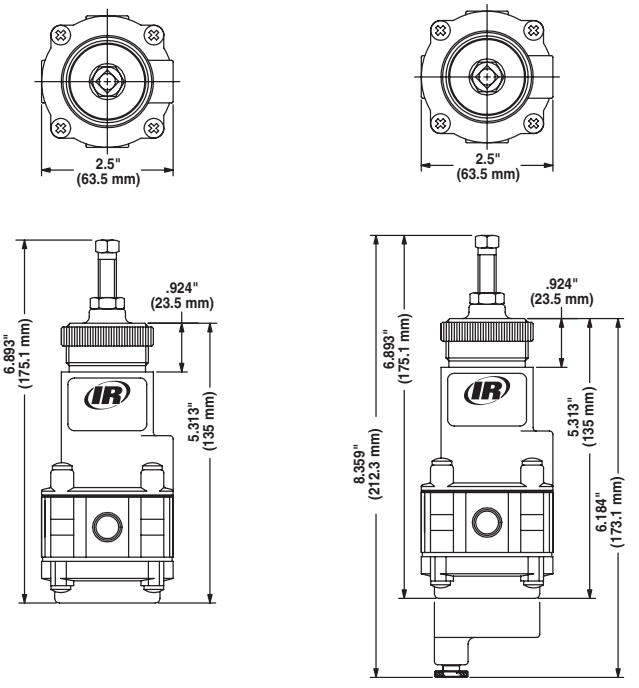
The Precision Regulator line is designed for service with a wide variety of corrosive gases and environments. Its corrosive-resistant materials are compatible with sour gas and for use in offshore environments. Applications include petrochemical processing, chemical plants, food processing and packaging, and paper / pulp mills. The regulator operates in pressure ranges up to 150 psig (10.3 bar). The filter on the filter / regulator unit has a built-in dripwell which traps water, oil, and other contaminants. The contaminants are easily flushed out via a convenient manual drain. The 5-micron filter element is made of 316 stainless steel and is easily removed for cleaning.

PERFORMANCE SPECIFICATIONS

Body	316 Stainless steel
Seals	Fluorocarbon
Filter Elements	5 Micron (for use with PFRSX1-X00 units only)
Temp Range	-20° – 180° F (-29° – 82° C)
Max Pressure	250 psig (17.2 bar)
Media	Compressed air
Gauge Ports	1/4" – 18" NPTF
	Airflow @ 100 psig (6.9 bar)
	Supply 20 psig (1.4 bar)
	Outlet 20 cfm (566 L/min)

DIMENSIONAL DATA

Dimensions – in (mm)



Regulator

Filter / Regulator

INGERSOLL-RAND ARO COMPACT SERIES STAINLESS STEEL PRECISION REGULATORS AND FILTER / REGULATORS

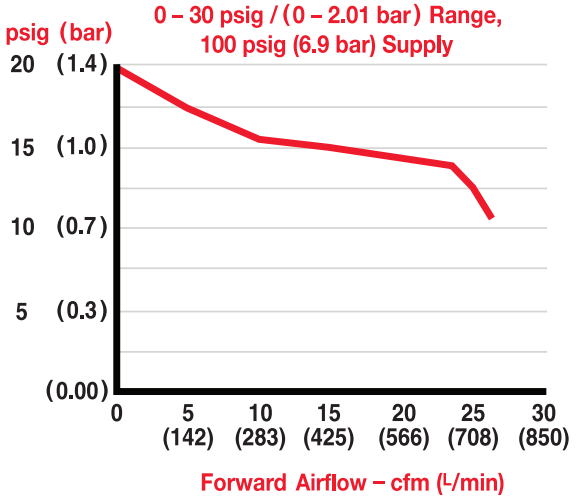
ORDERING

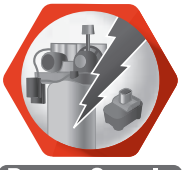
From the chart to the right, select the model number associated with port size, bowl, and drain option required.

Model	Description	Pressure Range
PRSS21-200	1/4" NPT Regulator	0 – 60 psig
PRSS21-400	1/4" NPT Regulator	0 – 30 psig
PRSS21-500	1/4" NPT Regulator	0 – 100 psig
PRSS21-600	1/4" NPT Regulator	2 – 150 psig
PRSS31-200	3/8" NPT Regulator	0 – 60 psig
PRSS31-400	3/8" NPT Regulator	0 – 30 psig
PRSS31-500	3/8" NPT Regulator	0 – 100 psig
PRSS31-600	3/8" NPT Regulator	2 – 150 psig
PFRS21-200	1/4" NPT Filter / Regulator	0 – 60 psig
PFRS21-400	1/4" NPT Filter / Regulator	0 – 30 psig
PFRS21-500	1/4" NPT Filter / Regulator	0 – 100 psig
PFRS21-600	1/4" NPT Filter / Regulator	2 – 150 psig
PFRS31-200	3/8" NPT Filter / Regulator	0 – 60 psig
PFRS31-400	3/8" NPT Filter / Regulator	0 – 30 psig
PFRS31-500	3/8" NPT Filter / Regulator	0 – 100 psig
PFRS31-600	3/8" NPT Filter / Regulator	2 – 150 psig

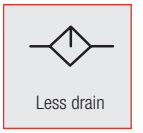
Part Number	Description
Stainless Steel Precision Accessories	
104267	316 stainless steel mounting bracket
104268	5 micron filter element
104269	40 micron filter element

Regulated Pressure vs. Airflow





INGERSOLL-RAND ARO COMPACT SERIES LUBRICATORS





Ingersoll-Rand ARO Compact Series Lubricators

L26241-100

1/4", 3/8", AND 1/2" PORTS

FEATURES

Ingersoll-Rand ARO Compact Series oil-fog lubricators feature an adjustment needle on top of the transparent sight dome. The adjustment needle features finer threads and improved tolerances between the needle and seat. Lubricator drip rate adjustment is easier to set. The required amount of lubrication can be efficiently delivered for longer life of tools, cylinders, valves, pumps, air motors, and other air-operated equipment.

- Lubricator can be filled while under pressure. This helps avoid system pressure shut-down and the resulting downtime.
- The oil adjustment screw has an optional tamper-resistant cap which helps prevent unauthorized adjustment of oil.
- Increase / decrease markings on castings show direction to turn adjustment screw for easy oil drip set-up.
- Warning and technical information is printed in English, Spanish, French, and German on standard units.
- Bayonet bowl attachment provides easy removal.
- Units have threaded ports for direct connection to pipe plumbing. Or, when used with modular port adapter kits, a single unit, or combination of units can be piped into the air system in a modular arrangement.

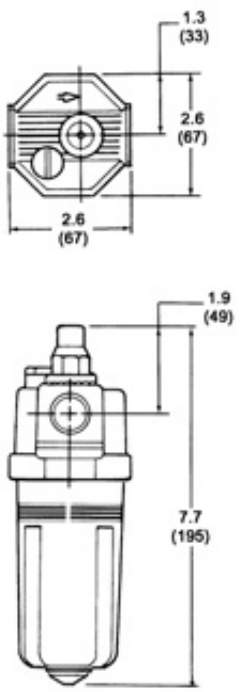
PERFORMANCE SPECIFICATIONS

Body	Zinc die-cast
Bowls	Polycarbonate or zinc die-cast
Bowl Guard	Zinc die-cast
Sight Glass	Polyamide-nylon 12
Seals	Buna-N
Sight Dome	Polycarbonate
Oil Capacity	6 oz (177 ml)
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125°F (-18° – 52° C) Metal bowl — 0° – 175° F (-18° – 79° C)
Airflow:	1/4" — 75 cfm (35 dm^3/s) 3/8" — 100 cfm (47 dm^3/s) 1/2" — 110 cfm (52 dm^3/s)

**Airflow is at 90 psig (6.2 bar) inlet and 10 psig (0.7 bar) pressure drop.*

DIMENSIONAL DATA

Dimensions – in (mm)





INGERSOLL-RAND ARO COMPACT SERIES LUBRICATORS

ORDERING

From the chart to the right, select the model number associated with the port size and bowl option required. If other options are preferred, use the menu below.

Port Size NPT	Airflow cfm (dm³/s)	Model	Bowl Size oz (ml)	Weight lb (kg)
Metal Bowl with Sight Glass				
1/4"	75 (35)	L26221-110	6.0 (177)	1.50 (.68)
3/8"	100 (47)	L26231-110	6.0 (177)	1.44 (.65)
1/2"	110 (52)	L26241-110	6.0 (177)	1.36 (.62)
Polycarbonate Bowl with Bowl Guard				
1/4"	75 (35)	L26221-100	6.0 (177)	1.50 (.68)
3/8"	100 (47)	L26231-100	6.0 (177)	1.44 (.65)
1/2"	110 (52)	L26241-100	6.0 (177)	1.36 (.62)

ADDITIONAL MODELS AVAILABLE

Select the basic model number associated with the port size desired. From the table, select the numbers representing the lubricator options required. For BSP threads, add -B to the end of the model number.

PORT SIZE	BASE MODEL
1/4"	L26221 - X X X
3/8"	L26231 - X X X
1/2"	L26241 - X X X

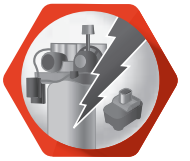
Red area indicates best-selling models

Adjustment Option	Bowl Option	Fill Option
1 = Standard	**0** = Polycarbonate with guard	**0** = Standard
	1 = Metal with sight glass	
	2 = Metal	

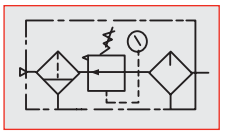


29665

Part Number	Description
Lubricator Accessories	
104027	Tamper-resistant plug
104107	Mounting bracket
104181	Service kit
104182	Sight glass service kit
104203	Polycarbonate bowl with guard
104205	Metal bowl with sight glass
104207	Metal bowl
104226	Sight dome service kit
29665	Lubrication (1 qt)



INGERSOLL-RAND ARO COMPACT SERIES COMBINATION UNITS





Ingersoll-Rand ARO Compact Series Combination Units

Port Size NPT	Models		Weight lb (kg)	Component		
	Modular	Nippled		Filter	Regulator	Lubricator
Push Drain — Metal Bowl with Sight Glass						
1/4"	C28221-810	C28223-810	5.5 (2.5)	F25221-110	R27221-600	L26221-110
3/8"	C28231-810	C28233-810	5.4 (2.4)	F25231-110	R27231-600	L26231-110
1/2"	C28241-810	C28243-810	5.3 (2.4)	F25241-110	R27241-600	L26241-110
Push Drain — Polycarbonate Bowl with Bowl Guard						
1/4"	C28221-800	C28223-800	5.5 (2.5)	F25221-100	R27221-600	L26221-100
3/8"	C28231-800	C28233-800	5.4 (2.4)	F25231-100	R27231-600	L26231-100
1/2"	C28241-800	C28243-800	5.3 (2.4)	F25241-100	R27241-600	L26241-100
Automatic Drain — Metal Bowl with Sight Glass						
1/4"	C28221-811	N/A	5.5 (2.5)	F25221-111	R27221-600	L26221-110
3/8"	C28231-811	N/A	5.4 (2.4)	F25231-111	R27231-600	L26231-110
1/2"	C28241-811	N/A	5.3 (2.4)	F25241-111	R27241-600	L26241-110
Automatic Drain — Polycarbonate Bowl with Bowl Guard						
1/4"	C28221-801	N/A	5.5 (2.5)	F25221-101	R27221-600	L26221-100
3/8"	C28231-801	N/A	5.4 (2.4)	F25231-101	R27231-600	L26231-100
1/2"	C28241-801	N/A	5.3 (2.4)	F25241-101	R27241-600	L26241-100

NOTE: Three-piece modular models include (2) 104171 "T" brackets and (1) 100067 gauge. Pipe-nippled models include (1) 100067 gauge and (2) appropriate-size pipe nipples.

For pipe-nippled FRL combo units with automatic drain, order individual filter, regulator, lubricator components, and pipe nipples.

To order modular models without "T" brackets, place a "2" in sixth position of model number. Example: CXXXX2-XXX.

Not all menu combinations are valid. See price book to verify.

1/4", 3/8", AND 1/2" PORTS

ORDERING

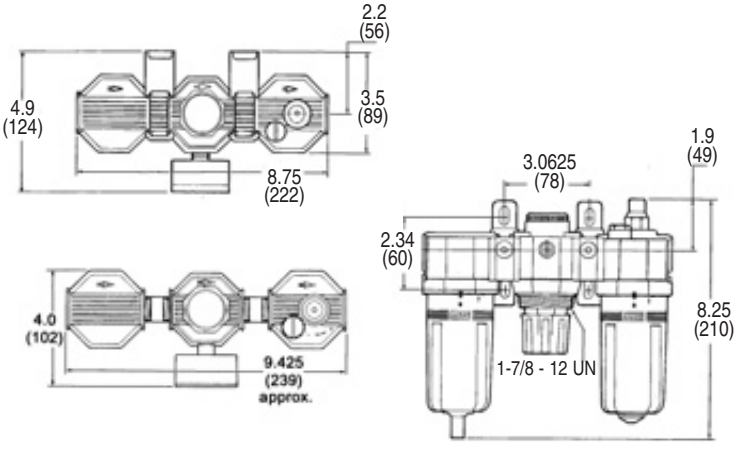
Select the basic model number that represents the port size and bowl option required. Modular models listed include gauge and "T" brackets, and are shipped assembled. Pipe-nippled models include gauge and nipples, and are shipped unassembled. If other options are required, order each unit separately. For BSP threads, add -B to the end of the model number.

PERFORMANCE SPECIFICATIONS

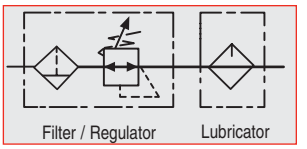
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52°C) Metal bowl — 0° – 175°F (-18° – 79°C)
Filter Element	40 micron
Pressure Range In Regulator	5 – 125 psig (.3 – 8.6 bar)
Gauge	0 – 160 psi
Gauge Port	1/4" NPT
Filter Drain	Manual (standard); Automatic (optional)

DIMENSIONAL DATA

Dimensions – inches (mm)



INGERSOLL-RAND ARO COMPACT SERIES PIGGYBACK LUBRICATORS





C28241-610
Piggyback / Lubricator

Port Size NPT	Models		Weight lb (kg)	Components	
	Modular	Nippled		Piggyback	Lubricator
Push Drain — Metal Bowl with Sight Glass					
1/4"	C28221-610	C28223-610	4.1 (1.9)	P29221-610	L26221-110
3/8"	C28231-610	C28233-610	4.0 (1.8)	P29231-610	L26231-110
1/2"	C28241-610	C28243-610	3.9 (1.8)	P29241-610	L26241-110
Push Drain — Polycarbonate Bowl with Bowl Guard					
1/4"	C28221-600	C28223-600	4.1 (1.9)	P29221-600	L26221-100
3/8"	C28231-600	C28233-600	4.0 (1.8)	P29231-600	L26231-100
1/2"	C28241-600	C28243-600	3.9 (1.8)	P29241-600	L26241-100
Automatic Drain — Metal Bowl with Sight Glass					
1/4"	C28221-611	N/A	4.1 (1.9)	P29221-614	L26221-110
3/8"	C28231-611	N/A	4.0 (1.8)	P29231-614	L26231-110
1/2"	C28241-611	N/A	3.9 (1.8)	P29241-614	L26241-110
Automatic Drain — Polycarbonate Bowl with Bowl Guard					
1/4"	C28221-601	N/A	4.1 (1.9)	P29221-604	L26221-100
3/8"	C28231-601	N/A	4.0 (1.8)	P29231-604	L26231-100
1/2"	C28241-601	N/A	3.9 (1.8)	P29241-604	L26241-100

NOTE: Two-piece modular models include (1) 104171 "T" brackets and (1) 100067 gauge. Pipe-nippled models include (1) 100067 gauge and (1) appropriate-sized pipe nipple.

For pipe-nippled FRL combo units with automatic drain, order individual filter, regulator, lubricator components, and pipe nipples.

To order modular models without "T" brackets, place a "2" in sixth position of model number. Example: CXXXX2-XXX.

Not all menu combinations are valid. See price book to verify.

1/4", 3/8", AND 1/2" PORTS

ORDERING

Select the basic model number that represents the port size and bowl option required. Modular models listed include gauges and "T" brackets, and are shipped assembled. Pipe-nippled models include gauge and nipple, and are shipped unassembled. If other options are required, order each unit separately.

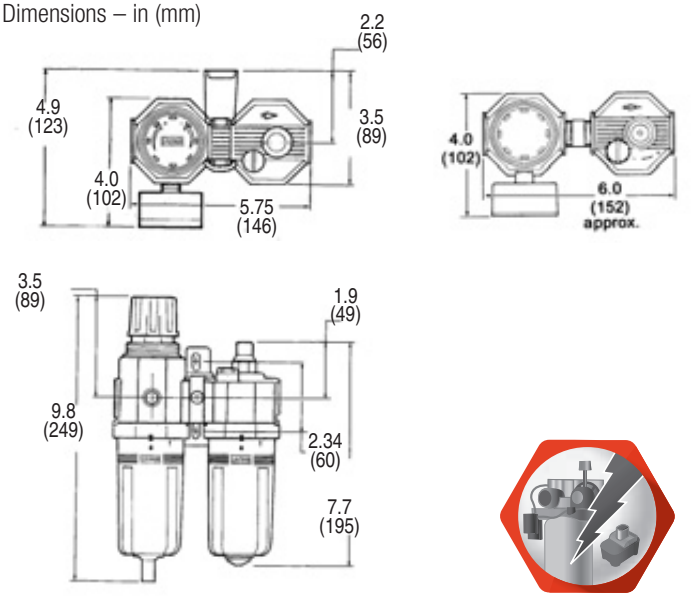
For BSP threads, add -B to the end of the model number.

PERFORMANCE SPECIFICATIONS

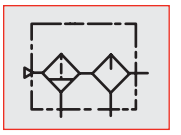
Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52° C) Metal bowl — 0° – 175° F (-18° – 79° C)
Filter Element	40 micron
Pressure Range In Regulator	5 – 125 psig (.3 – 8.6 bar)
Gauge	0 – 160 psi
Gauge Port	1/4" NPT
Filter Drain	Manual (standard); Automatic (optional)

DIMENSIONAL DATA

Dimensions – in (mm)



INGERSOLL-RAND ARO COMPACT SERIES FILTERS / LUBRICATORS





C28241-700 (modular)

Port Size NPT	Models		Weight lb (kg)	Components	
	Modular	Nippled		Piggyback	Lubricator
Push Drain — Metal Bowl with Sight Glass					
1/4"	C28221-710	C28223-710	3.6 (1.6)	F25221-110	L26221-110
3/8"	C28231-710	C28233-710	3.5 (1.6)	F25231-110	L26231-110
1/2"	C28241-710	C28243-710	3.3 (1.5)	F25241-110	L26241-110
Push Drain — Polycarbonate Bowl with Bowl Guard					
1/4"	C28221-700	C28223-700	3.6 (1.6)	F25221-100	L26221-100
3/8"	C28231-700	C28233-700	3.5 (1.6)	F25231-100	L26231-100
1/2"	C28241-700	C28243-700	3.3 (1.5)	F25241-100	L26241-100
Automatic Drain — Metal Bowl with Sight Glass					
1/4"	C28221-711	N/A	3.6 (1.6)	F25221-111	L26221-110
3/8"	C28231-711	N/A	3.5 (1.6)	F25231-111	L26231-110
1/2"	C28241-711	N/A	3.3 (1.5)	F25241-111	L26241-110
Automatic Drain — Polycarbonate Bowl with Bowl Guard					
1/4"	C28221-701	N/A	3.6 (1.6)	F25221-101	L26221-100
3/8"	C28231-701	N/A	3.5 (1.6)	F25231-101	L26231-100
1/2"	C28241-701	N/A	3.3 (1.5)	F25241-101	L26241-100

NOTE: Modular models include (1) 104171 "T" bracket. Pipe-nippled models include (1) appropriate-sized pipe nipple. For pipe-nippled FRL combo units with automatic drain, order individual filter, lubricator components, and pipe nipple.

To order modular models without "T" brackets, place a "2" in sixth position of model number. Example: CXXXX2-XXX.

Not all menu combinations are valid. See price book to verify.

1/4", 3/8", AND 1/2" PORTS

ORDERING

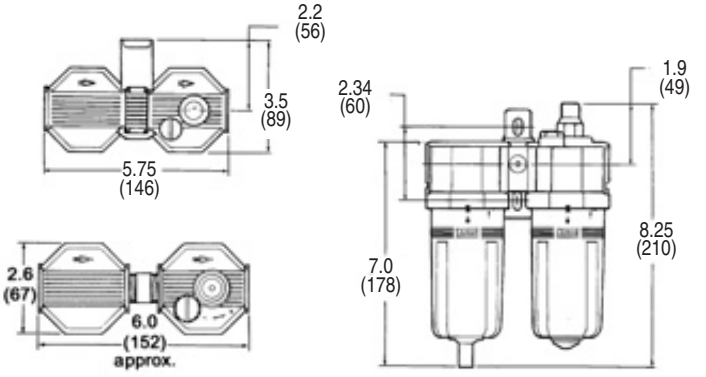
Select the basic model number that represents the port size and bowl option required. Modular models listed include gauge and "T" brackets, and are shipped assembled. Pipe-nippled models include gauge and nipple, and are shipped unassembled. If other options are required, order each unit separately. For BSP threads, add -B to the end of the model number.

PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52° C) Metal bowl — 0° – 175° F (-18° – 79° C)
Filter Element	40 micron
Filter Drain	Manual (standard); Automatic (optional)

DIMENSIONAL DATA

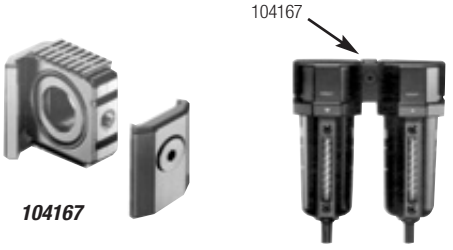
Dimensions – in (mm)



INGERSOLL-RAND ARO COMPACT SERIES MOUNTING COMPONENTS

Mounting components include on-pipe port adapters, manifold kits, 3-way shut-off valves, and piping bracket kit. Threads are NPT.

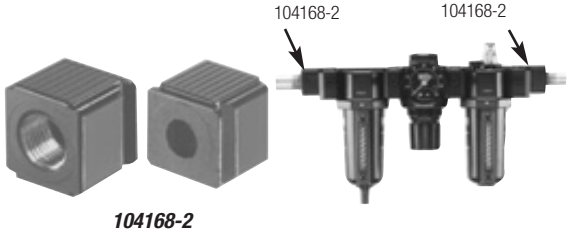
Modular Spacer Kit



Part Number	Description
Modular Spacer Kit	
104167	Modular spacer kit

Spacer has retained O-rings and Allen head screws for ease of assembly and disassembly. One spacer kit is required to connect any two units or accessories together in the modular format. Kit includes the spacer block, two clamps, and two O-rings. Screws take a size 4 mm or 5/32" Allen head wrench. To assemble, put the spacer between the units and tighten screws for a secure seal. Fits all port sizes.

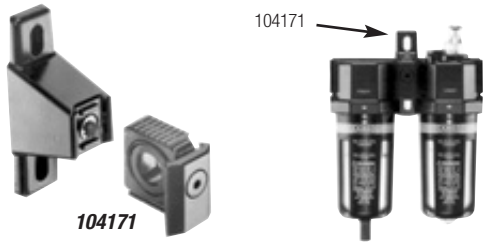
Threaded 1/4" – 3/4" NPT Pipe Adapters



Part Number	Description
Threaded 1/4" – 3/4" NPT Pipe Adapters	
104168-2	Threaded 1/4" NPT pipe adapter
104168-3	Threaded 3/8" NPT pipe adapter
104168-4	Threaded 1/2" NPT pipe adapter
104168-6	Threaded 3/4" NPT pipe adapter

Threaded pipe adapter blocks allow a single unit or multiple units to be plumbed into an air system in the modular arrangement. These pipe adapters allow for ease of service when removing a unit from the line. The adapters can also be used to pipe different diameters (in and out) in the plumbing set-up. Kit includes two adapters and two spacer kits (part number 104167).

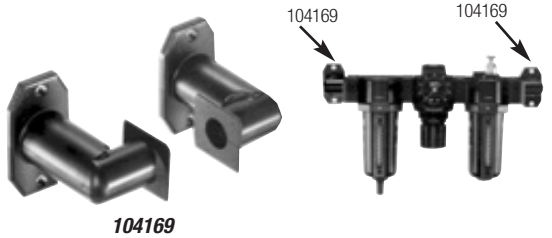
T-type Wall Mounting Bracket



Part Number	Description
T-Type Wall Mounting Bracket	
104171	T-type wall mounting bracket

These brackets provide heavy-duty wall mounting. They are excellent for mounting a single unit or multiple units in the modular arrangement. T-type mount gives good wall-to-unit clearance for installing fittings and other connections. Kit includes a spacer, bracket, and clamp.

Right Angle Piping Bracket Kit



Part Number	Description
Right Angle Piping Bracket Kit	
104169	Right angle piping bracket kit

These 90° elbow brackets provide for neater air installations by bringing air into the backside of units and hiding all pipe connections. Kit includes two 90° elbows and two spacer kits (part number 104167).

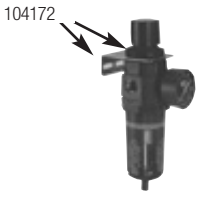


INGERSOLL-RAND ARO COMPACT SERIES ACCESSORIES

Wall Mounting Kit



104172



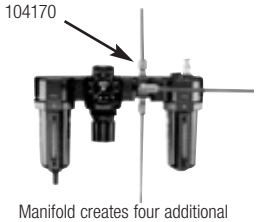
Part Number	Description
Wall Mounting Kit	
104172	Wall mounting kit

May be used to mount FRL combo units which include a regulator, Piggyback Filter / Regulator units, or individual regulators. Kit includes part number 29623 bracket and part number 104173 panel mounting nut. Bracket and nut may be ordered individually.

Modular Manifold Block Kit



104170

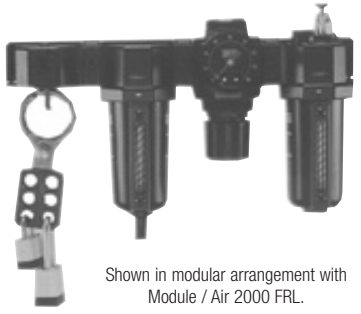


Manifold creates four additional 1/4" NPT outlet ports

Part Number	Description
Modular Manifold Block Kit	
104170	Modular manifold block kit

This manifold can be installed before or after any unit in the modular arrangement, providing four additional 1/4" NPT ports for greater circuit design flexibility. When installed between the regulator and lubricator, clean, regulated air can be used to signal other equipment. Kit includes manifold, two spacers, three pipe plugs, four clamps, and O-rings.

Safety Shut-off, Lock-out Valve



Shown in modular arrangement with Module / Air 2000 FRL.

Part Number	Description
Safety Shut-off, Lock-out Valves	
104174-2	Threaded 1/4" NPT
104174-3	Threaded 3/8" NPT
104174-4	Threaded 1/2" NPT
100085	Lock-out hasp

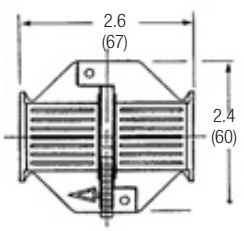
Valves meet OSHA Lock-out / Tag-out regulation 1910.147. Exhaust-type safety shut-off valves can be used in the modular arrangement or in-line, depending on application requirements. The safety shut-off valve should be installed upstream from the FRL unit. It is excellent for isolating and depressurizing a downstream unit requiring maintenance. The valve operates by pushing the lever down (closed position), exhausting downstream air. The valve may be locked in the exhausted position. When using the valve in the modular format, it is secured to the unit with a modular spacer or T-type modular bracket.

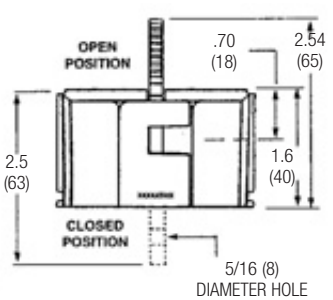
PERFORMANCE SPECIFICATIONS

Max Inlet	175 psig (12 bar)
Max Temp	0° – 125° F (-18° – 52° C)
Body	Zinc die-cast
Seals	Buna-N
Slide	Delrin

DIMENSIONAL DATA

Dimensions – in (mm)





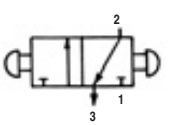


Part Number 100085
Lock-out hasp
(order separately)

Shown as individual unit.



104174-X
Shown in open position



3 Port - 2 Position

NOTE: ARO Safety Lock-out Valves meet OSHA Lock-out / Tag-out regulation 1910.147, which requires protection from unexpected start-up of a machine during service or maintenance.

INGERSOLL-RAND ARO COMPACT SERIES ACCESSORIES

Pressure Switches


104196


104196-CHW


104196-CDW


104196-CSN

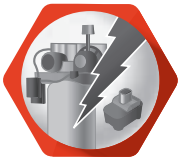
Part Number	Description
Pressure Switch Safety Shut-off, Lock-out Valve	
104196	Switch only (without connector)
Pressure Switch Coil Connectors	
104196-CHW	Switch with molded cable connector, 36" leads
104196-CSN	Switch with strain relief connector
104196-CDW	Switch with 1/2" conduit connector, 18" leads

PERFORMANCE SPECIFICATIONS

Medium	Compressed air
Max Operating Pressure	150 psi (10.4 bar)
Adjustable Pressure Range	20 – 100 psi (1.4 – 6.9 bar)
Differential Pressure	5 – 10 psi (0.3 – 0.9 bar)
Operating Temp Range	-40° – 300° F
Weight	11 oz
Contact Type	N.O. / N.C.
Contact Ratings	5 amps @ 125 VDC 5 amps @ 250 VAC
Contact	Silver alloy wiping contact with snap action
Accuracy	20% accuracy or better; Switch is ±2 or 5% of set point (whichever is greater)
Cycle Life	1,000,000 plus
Thread	1/4" – 18" NPT male

Pressure switch allows the sensing of high or low pressure thresholds. Use with part number 104170 manifold block. Features of the pressure switch include:

- Water-resistant
- External pressure adjustment with Allen screw
- Can be wired normally open or normally closed
- Computer-compatible — allows electrical current to flow or to be stopped
- Meets NEMA 4 and 13 specifications



INGERSOLL-RAND ARO COMPACT SERIES SOFT-START VALVES





1/4", 3/8", AND 1/2" PORTS

FEATURES

Machine system start-up and the related air surge it creates can both damage and reduce the operating efficiency of its pneumatic components. Over time, air surge component slamming takes an even heavier toll on the machine's overall productivity and on your maintenance schedule. With ARO's new Soft-start Valves, you can eliminate the surge at start-up. And with our quick-relief models, remove the hazard at shut-down ... all in one convenient, space-efficient package.

- **Big Space Savings —** The Compact Series Solenoid Soft-start with exhaust puts the two critical features into one compact, easy-to-install package. Saving you operating space, time, and money.
- **Three Distinct Styles —**
  1. **Pilot Soft-start:** When pressure is supplied to the inlet port, an internal pilot is actuated and slow pressurization of the system begins. Once downstream pressure reaches 60% of operating pressure, the valve opens to full-flow mode. An adjustable metering screw allows setting the time it takes to get up to full system pressure.
  2. **Solenoid Soft-start without relief exhaust:** Contains the same capabilities as the pilot version only using a current-actuated solenoid with a DIN-style coil. The solenoid version also features an override that permits manual initiation of the "soft-start" sequence.
  3. **Solenoid Soft-start with relief exhaust:** Solenoid actuation and manual override features are coupled with an exhaust capability that releases pressure to the atmosphere through the bottom of the valve permitting system shut-down.
- **Three Port Sizes —** Choose from 1/4", 3/8" or 1/2" ports
- **Compact Series —** The ARO Soft-start Valves are designed for quick and easy in-line installation with our Compact Series air prep units for a clean, consistent appearance and impeccable performance.

Port Size NPT	Operating Pressure Range psig	Pressure Gauge Port Size	Ambient and Fluid Temperature	Cv Factor		Weight lb (kg)
				P-A Output A	A-R Exhaust Valve Type 3	
SSV22						
1/4"	45 – 145	1/4"	0 – 180˚ F	2.5	2.3	2.4 (1.08)
SSV23						
3/8"	45 – 145	1/4"	0 – 180˚ F	4.0	2.3	2.4 (1.08)
SSV24						
1/2"	45 – 145	1/4"	0 – 180˚ F	5.0	2.3	2.4 (1.08)

ELECTRICAL PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	Polycarbonate bowl — 150 psig (10.4 bar) Metal bowl — 175 psig (12 bar)
Operating Coil Rated Voltage	24, 120, 240 volts AC (50 / 60 Hx) 12, 24 volts DC
Allowable Voltage Fluctuation	± 10% of rated voltage
Coil Insulation Type	Class F rated, 100% duty cycle 311˚ F (155˚ C)
Apparent Power (consumption) AC	Inrush 8.5 VA (50 Hz) / 6.9 VA (60 Hz) Holding 8.4 VA / 50 Hz / 6.5 VA (60 Hz)
Power Consumption	4.8 watts DC
Electrical Entry	Strain relief, DIN connector
Manual Override (solenoid only)	Screwdriver slot — rotate CW to actuate, CCW to return

PORT SIZE

1/4"
3/8"
1/2"

BASE MODEL | USE FOR SOLENOID TYPE ONLY |

SSV22 X - X X X - X
SSV23 X - X X X - X
SSV24 X - X X X - X

Valve Type	Voltage	Current
1 = Pilot*	**012** = 12 volts	**A** = AC
2 = Solenoid	**024** = 24 volts	**D** = DC
3 = Solenoid w/ exhaust	**120** = 120 volts	**N** = No coil
	240 = 240 volts	
	000 = No coil	

**Model number ends here on pilot model.*

INGERSOLL-RAND ARO® HEAVY-DUTY SERIES

SERIES FEATURES

HEAVY-DUTY SERIES

1. **Two bowl options** available: Polycarbonate with guard or metal bowl for harsh applications.

2. **Balanced valve** eliminates chatter and provides precise air pressure control for your air-powered equipment.

3. **Units can be converted** from drop-type to fog-type lubricators by rotating sight dome 180 degrees.



SERIES FEATURES

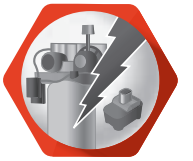
HI-FLOW HEAVY-DUTY SERIES

1. **Self-locking, non-rising regulator knob** allows easy one-hand adjustment. Pull up to adjust, push down to lock.

2. **Large 7 oz bowl capacity** on filter and 8 oz bowl capacity on lubricator provides greater time between service checks.

3. **Flow rates up to 300 cfm** make these units the perfect choice for large flow applications.





INGERSOLL-RAND ARO HEAVY-DUTY SERIES FILTERS

Manual drain | Automatic drain



Ingersoll-Rand ARO Heavy Duty Filter

1/2", 3/4", AND 1" PORTS

FEATURES

These ARO Heavy-duty Series filters extend the life of air-operated equipment while reducing maintenance costs. These units efficiently remove solid particles from compressed air lines — making them the perfect choice for large flow applications.

- The baffle and filter assembly is completely encased, leaving the entire bowl for sump.
- Polycarbonate bowl and metal guard standard.
- Tie-rod filter assembly permits quick, easy service.
- Twist drain is brass construction with large passage area for draining.
- Optional automatic drain has 1/8" pipe outlet for draining away contaminant's.

PERFORMANCE SPECIFICATIONS

Sump Capacity	10 oz (295 ml)
Filter Area	9.1 in (5871 mm)
Max Inlet Pressure	Polycarbonate bowl — 200 psig (13.8 bar) Metal bowl — 250 psig (17 bar)
Opererating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52° C) Metal bowl — 0° – 200° F (-18° – 93° C)
Weight	1/2" — 3.62 lb (1.65 kg) 3/4" — 3.48 lb (1.58 kg) 1" — 3.26 lb (1.48 kg)
***Airflow**	1/2" — 82 cfm (39 dm^3/s) 3/4" — 87 cfm (41 dm^3/s) 1" — 88 cfm (42 dm^3/s)
Body	Zinc die-cast
Bowls	Polycarbonate or steel
Bowl Guards	Steel with E-coat finish
Seals	Buna-N
Drain	Brass twist type
Element	Sintered bronze 5, 20, 40 micron

**Airflow is at 125 psig (8.6 bar) inlet and 100 psig (6.9 bar) outlet.*

ORDERING

Select the basic model representing the port size desired. Add number representing filter options required.

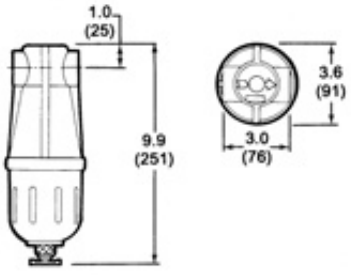
PORT SIZE	BASE MODEL
1/2"	25341 - X X X
3/4"	25351 - X X X
1"	25361 - X X X

Red area indicates best-selling models

Filter Element	Bowl Option	Drain Option
0 = 40 micron #29392	**2** = Polycarbonate with guard #29397	**0** = Manual
1 = 20 micron #29391	**1** = Metal bowl #29967	**1** = Auto drain #29969-2
2 = 5 micron #29390		

DIMENSIONAL DATA

Dimensions – in (mm)



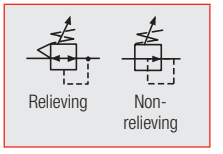
Part Number	Description
Filter Accessories	
29397	Bowl guard
29967	Metal bowl
29969-2	Automatic drain
29390	5 micron element
29391	20 micron element

Part Number	Description
Filter Accessories	
29392	40-micron element
104020	Service kit
104069	Polycarbonate bowl
Y57-1	Twist drain



29397 *29967* *29969-2*

INGERSOLL-RAND ARO HEAVY-DUTY SERIES REGULATORS



1/2", 3/4", AND 1" PORTS



Ingersoll-Rand ARO Heavy-Duty Series Regulator

FEATURES

The Ingersoll-Rand ARO Heavy-duty Series regulators provide accurate and quick response to flow demands and line pressure changes, giving air-powered equipment the precise air pressure control needed.

- Zinc die-cast bodies are corrosion-resistant.
- Units can be panel-mounted.
- Balanced valve eliminates chatter and increases accuracy.
- Diaphragms and seals are nylon-reinforced for enhanced elasticity and seal life.
- Easy-turn adjustment knob provides precise regulation under any pressure.

PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	250 psig (17 bar)
Pressure Range In Reg Water	0 – 250 psig (0 – 17 bar)
Operating Temp Range	0° – 200° F (-18° – 93° C)
Gauge Port	1/4" NPT
Weight	1/2" — 3.30 lb (1.5 kg) 3/4" — 3.21 lb (1.45 kg) 1" — 2.82 lb (1.28 kg)
***Airflow**	1/2" — 256 cfm (121 dm³/s) 3/4" — 287 cfm (135 dm³/s) 1" — 293 cfm (138 dm³/s)
Spring Housing	Zinc die-cast
Body	Zinc die-cast
Seals	Buna-N
Diaphragm	Buna-N
Valve	Brass
Knob	High impact ABS

**Airflow is at 125 psig (8.6 bar) inlet and 100 psig (6.9 bar) outlet.*

ORDERING

Select the basic model number that represents the port size desired. From the table below, select the number representing regulator options required. Order accessories separately.

PORT SIZE	BASE MODEL
1/2"	2734 X - X 0 X
3/4"	2735 X - X 0 X
1"	2736 X - X 0 X

Red area indicates best-selling models

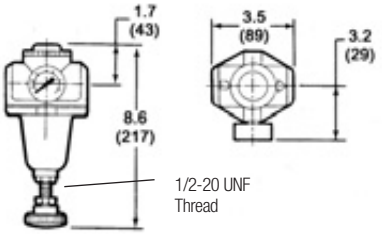
Relieving Option	Pressure Range psig (bar)	Control Option
4 = Relieving	**0** = 5 – 125 (.4-8.6)	**0** = Standard knob or panel mount
7 = Non-relieving	**6** = 5 – 125 with 0 – 160 gauge	**3** = Tamper-resistant
	1 = 0 – 50 (.0 – 3.5)	
	2 = 10-250 (.7 – 17)	

Part Number	Description
Regulator Accessories	
100066	Gauge 0 – 60 psig (0 – 4 bar)
100067	Gauge 0 – 160 psig (0 – 11 bar)
100083	Gauge 0 – 300 psig (0 – 21 bar)
29077	Mounting bracket, L-type
29999	Mounting bracket (U-bolt type), 1/4", 3/8", and 1/2" pipe

Part Number	Description
Regulator Accessories	
29970	Mounting bracket (U-bolt type), 3/4" and 1" pipe
29960	Service kit, relieving type
29995	Service kit, non-relieving type
29002	Spring, 5 – 125 lb (gold)
29119	Spring, 0 – 50 lb (green)
29120	Spring, 10 – 250 lb (silver)

DIMENSIONAL DATA

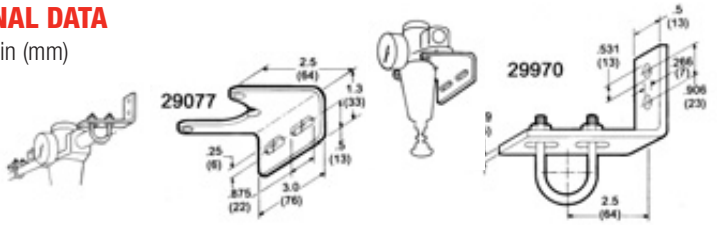
Dimensions – in (mm)

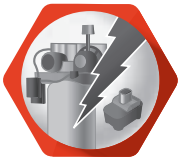


CAUTION: Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig secondary pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

DIMENSIONAL DATA

Dimensions – in (mm)





INGERSOLL-RAND ARO HEAVY-DUTY SERIES LUBRICATORS

Manual drain



Ingersoll-Rand ARO Heavy-duty Series Lubricator (26361-020 with tamper-resistant cap)

1/2", 3/4", AND 1" PORTS

FEATURES

The rugged Ingersoll-Rand ARO Heavy-duty Series lubricators deliver the reliable lubrication needed for long service life of air line systems and equipment. Units are convertible from drop-type to fog-type by rotating sight dome 180 degrees. For best results, lubricator should be located as close as possible to equipment being lubricated.

- Zinc die-cast bodies are corrosion-resistant.
- Tie-rod construction simplifies unit disassembly for quick and easy servicing.
- Two separate fill plugs allow unit to be filled from front or back. Lubricators can be filled under pressure. A quick-fill adapter is available for fast, easy filling.
- Polycarbonate bowl allows visual monitoring. Metallic bowl available for applications involving the use of harsh chemicals. Standard bowl guard protects polycarbonate bowl.

PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	Polycarbonate bowl — 200 psig (13.8 bar) Metal bowl — 250 psig (17 bar)
Operating Temp Range	Polycarbonate bowl — 0° – 125° F (-18° – 52° C) Metal bowl — 0° – 200° F (-18° – 93° C)
Oil Capacity	10 oz (295 ml)
Weight	1/2" — 2.98 lb (1.35 kg) 3/4" — 2.83 lb (1.28 kg) 1" — 2.70 lb (1.22 kg)
***Airflow**	1/2" — 65 cfm (31 dm^3/s) 3/4" — 75 cfm (35 dm^3/s) 1" — 75 cfm (35 dm^3/s)
Body	Zinc die-cast
Bowls	Polycarbonate or steel
Bowl Guards	Steel with E-coat finish
Sight Glass	Polyamide nylon
Seals	Buna-N

**Airflow is at 90 psig (6.2 bar) inlet and 5 psig (0.4 bar) pressure drop.*

ORDERING

Select the basic model number that represents the port size desired. From the table below, select the number representing regulator options required. Order accessories separately.

PORT SIZE	BASE MODEL
1/2"	26341 - X X X
3/4"	26351 - X X X
1"	26361 - X X X

Red area indicates best-selling models

Adjustment	Bowl Option	Fill Option
0 = Standard knob	**2** = Polycarbonate with guard #29397	**0** = Standard
1 = 1/8" Allen wrench	**1** = Metal bowl #29967	
2 = Tamper-resistant		

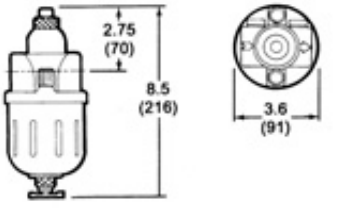
Part Number	Description
Lubricator Accessories	
104069	Polycarbonate bowl
29967	Metal bowl
29397	Bowl guard
29665	1 qt ARO lubricating oil
104023	Service kit
Y57-1	Twist drain



29967

DIMENSIONAL DATA

Dimensions – in (mm)

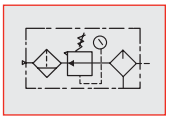


INGERSOLL-RAND ARO HEAVY-DUTY SERIES FILTER / REGULATOR / LUBRICATOR COMBINATIONS UNITS



28368

1/2", 3/4", AND 1" PORTS



FILTER / REGULATOR / LUBRICATOR

Performance Specifications

Max Inlet Pressure	200 psig (13.8 bar)
Operating Temp Range	0° – 125° F (-18° – 52° C)
Filter Element	40 micron
Bowl	Polycarbonate with bowl guard
Pressure Range In Regulator	5 – 125 psi (.4 – 8.6 bar)
Gauge	0 – 160 psi

ORDERING

Select the basic model that represents the port size desired. If other options are desired, order each component separately.

Port Size NPT	Model	Weight lb (kg)	Components				
			Filter	Regulator	Lubricator	Gauge	Pipe Nipple
Filter / Regulator / Lubricator Combinations							
1/2"	28343	10.16 (4.61)	25341-020	27344-000	26341-020	100067	Y27-54-C
3/4"	28353	10.12 (4.59)	25351-020	27354-000	26351-020	100067	Y27-55-C
1"	28363	9.37 (4.25)	25361-020	27364-000	26361-020	100067	Y27-56-C

NOTE: Shipped unassembled. For assembled unit, change the last digit from 3 to 7. Example: 28347.

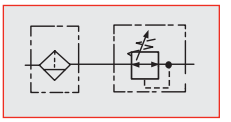
Dimensional data on following page.

INGERSOLL-RAND ARO HEAVY-DUTY SERIES FILTER / REGULATOR COMBINATION UNITS



28369

1/2", 3/4", AND 1" PORTS



FILTER / REGULATOR

Performance Specifications

Max Inlet Pressure	200 psig (13.8 bar)
Operating Temp Range	0° – 125° F (-18° – 52° C)
Filter Element	40-micron
Bowl	Polycarbonate with bowl guard
Pressure Range In Regulator	5 – 125 psi (.4 – 8.6 bar)
Gauge	0 – 160 psi

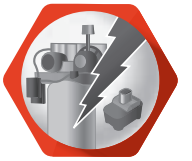
ORDERING

Select the basic model that represents the port size desired. If other options are desired, order each component separately.

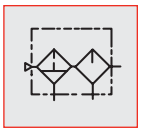
Port Size NPT	Model	Weight lb (kg)	Components			
			Regulator	Lubricator	Gauge	Pipe Nipple
Filter / Regulator Combinations						
1/2"	28344	7.11 (3.22)	25341-020	27344-000	100067	Y27-54-C
3/4"	28354	7.06 (3.20)	25351-020	27354-000	100067	Y27-55-C
1"	28364	6.46 (2.93)	25361-020	27364-000	100067	Y27-56-C

NOTE: Shipped unassembled. For assembled unit, change the last digit from 4 to 7. Example: 28347.

Dimensional data on following page.



INGERSOLL-RAND ARO HEAVY-DUTY SERIES FILTER / LUBRICATOR COMBINATION





Ingersoll-Rand ARO Heavy-duty Series Filter / Lubricator Combination

1/2", 3/4", AND 1" PORTS

PERFORMANCE SPECIFICATIONS

Max Inlet Pressure	200 psig (13.8 bar)
Operating Temp Range	0° – 125° F (-18° – 52° C)
Filter Element	40 micron
Bowl	Polycarbonate with metal guard
Lubricator	Combination fog-type / drop-type

ORDERING

Select the basic model that represents the port size desired. If other options are desired, order each component separately.

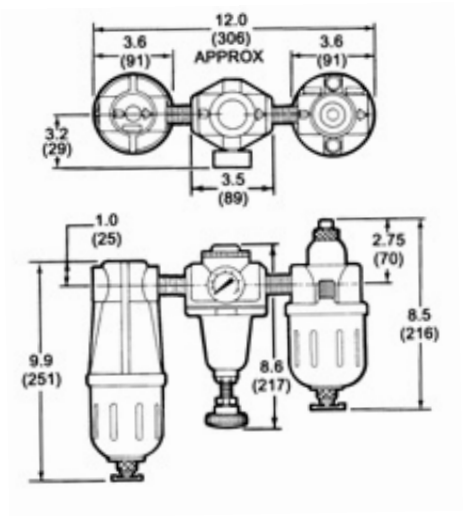
Port Size NPT	Part Number	Weight lb (kg)	Components		
			Filter	Lubricator	Pipe Nipple
Filter / Lubricator Combination					
1/2"	28342	6.61 (3)	25341-020	26341-020	Y27-54-C
3/4"	28352	6.52 (2.96)	25351-020	26351-020	Y27-55-C
1"	28362	6.13 (2.78)	25361-020	26361-020	Y27-56-C

NOTE: Shipped unassembled. For assembled unit, change the last digit from 2 to 7. Example: 28347.

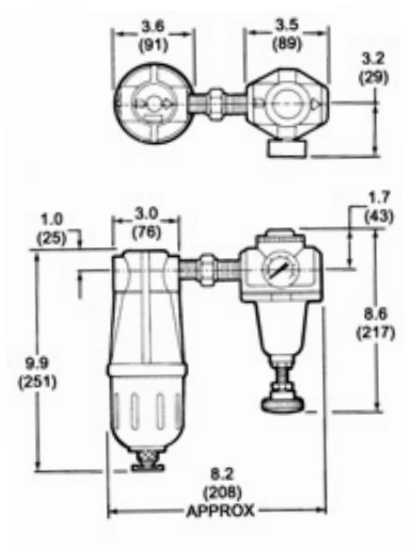
DIMENSIONAL DATA

Dimensions – in (mm)

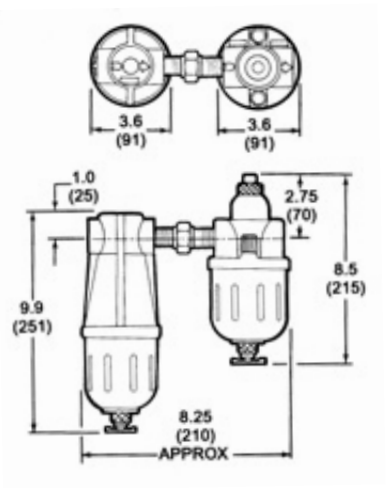
Filter / Regulator / Lubricator



Filter / Regulator



Filter / Lubricator



INGERSOLL-RAND ARO HI-FLOW HEAVY-DUTY SERIES PIGGYBACK AND PIGGYBACK / LUBRICATOR COMBINATION



Ingersoll-Rand ARO Hi-Flow Heavy-duty Series Filter / Regulator Piggyback



Ingersoll-Rand ARO Hi-Flow Heavy-duty Series Piggyback / Lubricator Combination

3/4" AND 1" PORTS

FEATURES

- The Ingersoll-Rand ARO Hi-Flow Heavy-duty Series units extend the life of air operated equipment while reducing operating costs. These units efficiently remove solid particles from compressed air lines, making them the perfect choice for large flow applications.
- Polycarbonate bowl with metal guard is standard.
- Automatic drain has pipe connection for draining away contaminants.
- Push-pull, non-rising adjustment knob.
- Bracket and gauge come standard with all units.

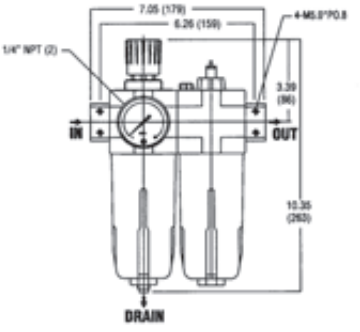
ORDERING

Port Size NPT	Model	Weight lb (g)
Filter / Regulator Piggyback		
3/4"	P29351-600	3 (1360)
1"	P29361-600	3 (1360)
Filter / Regulator Piggyback with Auto Drain		
3/4"	P29351-604	3 (1360)
1"	P29361-604	3 (1360)
Piggyback / Lubricator Combination		
3/4"	C28351-600	4.6 (2105)
1"	C28361-600	4.6 (2105)

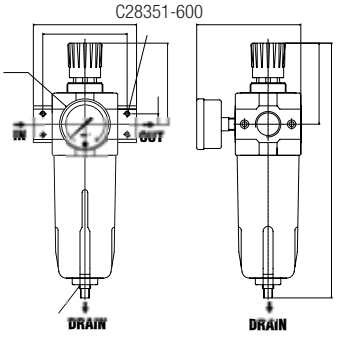
**All models come with gauge and bracket.*

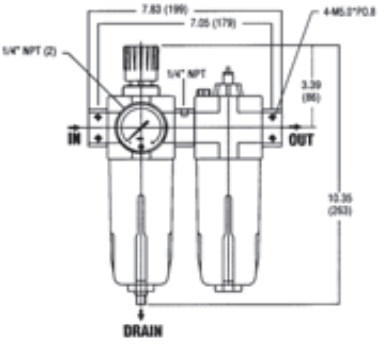
DIMENSIONAL DATA

Dimensions – in (mm)



C28351-600



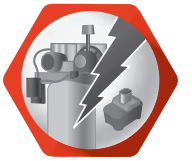


C28361-600

PERFORMANCE SPECIFICATIONS

Construction	Piston-type regulation
Material	Body / aluminum die-cast Bowl / polycarbonate
Filter Element	40 micron (standard)
Temp Range	14º – 140º F (-10º – 60º C)
Pressure Range	5 – 150 psi (.4 – 10.4 bar)
Max Pressure	150 psi (10.4 bar)
Max Flow Rate	Piggyback, 300 cfm Lubricator, 320 cfm
Media	Compressed air
Bowl Capacity	Filter, 7 oz Lubricator, 8 oz
Seals	Buna-N
Weight	Piggyback lube, 4.6 lb (2105 g) Piggyback, 3 lb (1360 g)

Part Number	Description
Piggyback / Regulator Piggyback Accessories	
100067	Gauge, 0 – 160 psi
104282	Bracket
104283	Auto drain
104284	Filter element, 40 micron (standard)
104285	Filter element, 5 micron
104286	Filter bowl
104287	Lubricator bowl



INGERSOLL-RAND JUMBO SERIES

SERIES FEATURES

FILTERS

1. Flow rates up to 323 cfm for large flow applications.

2. Quick-disconnect clamp ring for easy bowl removal.

3. Three bowl options provide design flexibility for a variety of applications: Polycarbonate bowl with guard, metal bowl, and metal bowl with sight glass.

REGULATORS

4. Balanced valve design for accurate pressure control.

5. Flow rates up to 500 cfm for high flow applications.

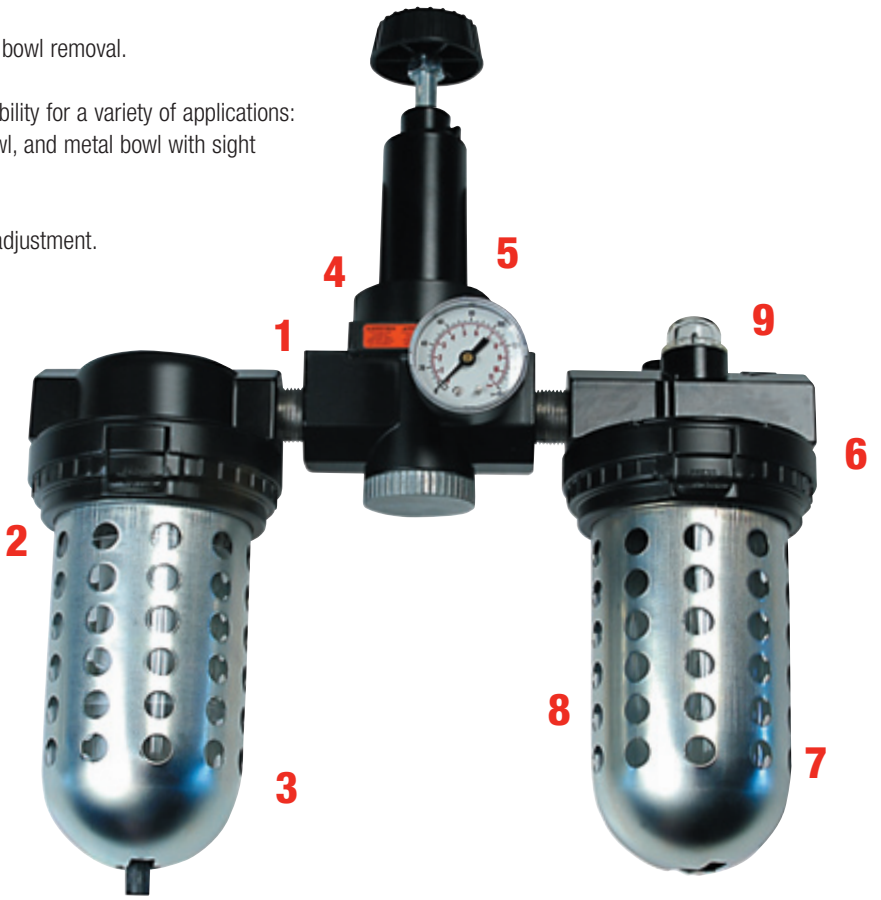
LUBRICATORS

6. Flow rates up to 374 cfm for large flow applications.

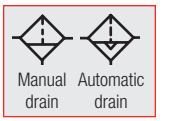
7. Quick-disconnect clamp ring for easy bowl removal.

8. Three bowl options provide design flexibility for a variety of applications: Polycarbonate bowl with guard, metal bowl, and metal bowl with sight glass.

9. Full view sight dome for easy oil feed adjustment.



INGERSOLL-RAND JUMBO SERIES FILTERS





Ingersoll-Rand Jumbo Series Filter

3/4" AND 1" PORTS

FEATURES

- Standard manual drain.
- Standard 5 micron rated element.
- Quick-disconnect clamp ring for easy bowl removal.
- Bowl guard.

ORDERING*

Port Size NPT	Airflow cfm	Bowl Size oz	Filter Element micron	Weight lb	Poly Bowl with Bowl Guard	Metal Bowl with Sight Gauge
Filters						
3/4"	316	2.0	5	5.5	F30-06-000	F30-06-G00
1"	323	2.0	5	5.5	F30-08-000	N/A

**All available models are in this table.*

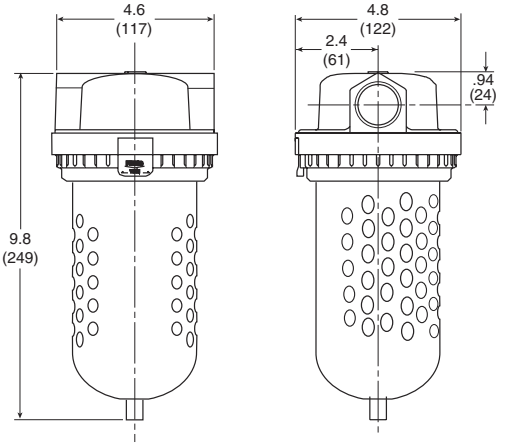
PERFORMANCE SPECIFICATIONS

Flow Capacity*	3/4" — 316 cfm (149,1 dm^3/s) 1" — 323 cfm (152,4 dm^3/s)
Operating Temp	Plastic bowl — 32° – 125° F (0° – 52° C) Metal bowl — 32° to 150° F (0° – 65.5° C)
Max Supply Pressure	Plastic bowl —150 psig (10.3 bar) Metal bowl — 200 psig (13.8 bar)
Standard Filtration	5 Micron
Useful Retention**	2.0 oz (59.8 cm^3)
Port Size	NPT / BSPP-G — 3/4", 1"
Weight	5.5 lb (2.5 kg)

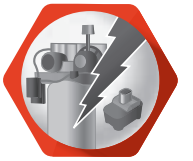
**Inlet pressure 150 psig (10.3 bar). Pressure drop 5 psid (0.3 bar).*
***Useful retention refers to volume below the quiet zone baffle.*

DIMENSIONAL DATA

Dimensions – in (mm)



Part Number	Description
Filter Accessories	
GRP-95-734	Wall mount pipe clamp
FRP-95-593	Metal bowl with brass petcock drain
GRP-95-676	Metal bowl with sight gauge & manual drain
FRP-95-832	Polycarbonate bowl with bowl guard & manual drain
GRP-95-182	Brass petcock manual drain replacement kit
GRP-96-000-28	Manual override drain for autofloat drains with 1/8" NPT port
FRP-95-209	Filter element, 5 micron



INGERSOLL-RAND JUMBO SERIES COALESCING FILTER

Coalescing drain | Automatic drain



Ingersoll-Rand Jumbo Series Coalescing Filter

1" PORTS

FEATURES

- Manual drain.
- 0.01 micron rated filter element.
- Quick-disconnect bowl guard with integral plastic bowl and safety latch.
- Differential pressure indicator.

ORDERING*

Port Size NPT	Airflow cfm	Bowl Size oz	Filter Element micron	Weight lb	Poly Bowl	Metal Bowl with Sight Gauge
Coalescing Filter						
1"	203	2.0	0.5	5.4	M30-08-FS0	N/A

**All available models are in this table.*

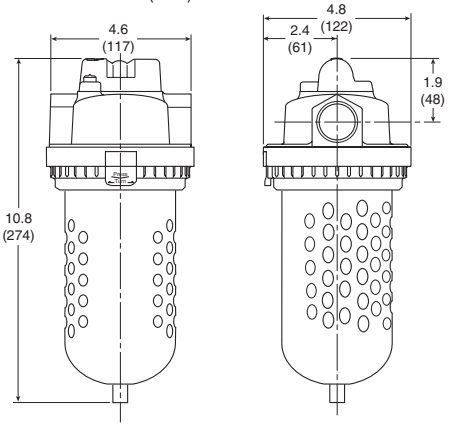
PERFORMANCE SPECIFICATIONS

Flow Capacity*	1" — 203 cfm (96.0 dm^3/s)
Operating Temp	Plastic bowl — 32° – 125° F (0° – 52° C)
	Metal bowl — 32° – 150° F (0° – 65.5° C)
Max Supply Pressure	Plastic bowl — 150 psig (10.3 bar)
	Metal bowl — 200 psig (13.8 bar)
Standard Filtration	Micron (B) 0.5, (C) 0.01, (D) 0.003 ppm / wt**
Useful Retention†	2.0 oz (59.8 cm^3)
Port Size	NPT / BSPP-G 1/2, 3/4, 1
Weight	5.4 lb (2.4 kg)

**Inlet pressure 150 psig (10.3 bar). Pressure drop of 3 PSID (0.2 bar).*
***Filtration temperature of 70° F (21° C) @100 psig (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.*
†Useful retention refers to volume below the quiet zone baffle.

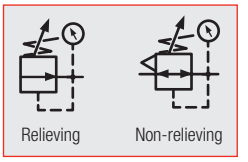
DIMENSIONAL DATA

Dimensions – in (mm)



Part Number	Description
Coalescing Filter Accessories	
GRP-95-734	Wall mount pipe clamp
FRP-95-593	Metal bowl with brass petcock drain
DP2-01-000-28	Differential pressure indicator
GRP-95-182	Brass petcock manual drain replacement kit
GRP-96-000-28	Manual override drain for autofloat drains with 1/8" NPT port
MTP-95-551-28	Type C 0.01 micron coalescing element

INGERSOLL-RAND JUMBO SERIES REGULATORS





Ingersoll-Rand Jumbo Series Regulator

3/4" AND 1" PORTS

FEATURES

- Balanced valve design.
- Standard self-relieving.
- Two 1/4" NPT / BSPT-Rc gauge ports standard — can be used for additional outlet ports.
- Piston-operated.
- High-flow capacity.

ORDERING**

Port Size NPT	Airflow cfm	Weight lb	Relieving Type 0 – 125 psig
Regulators			
3/4"	481	6	R30-06-000*
1"	500	6	R30-08-000*

**Order gauge 100067 separately.*
***All available models are in this table.*

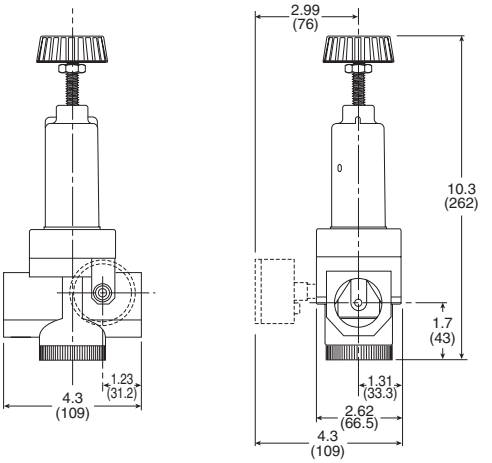
PERFORMANCE SPECIFICATIONS

Flow Capacity*	3/4" — 481 cfm (227 dm^3/s) 1" — 500 cfm (236 dm^3/s)
Operating Temp	32° to 150° F (0° to 65.5° C)
Max Supply Pressure	300 psig (20.7 bar)
Adjusting Range Pressure	0 – 125 psig (0 – 8.6 bar) 0 – 180 psig (0 – 12.4 bar)
Port Size	NPT / BSPP-G 3/4", 1", 1-1/4"
Gauge Port (2 ea.)	NPT / BSPT-Rc 1/4"
Weight	6 lb (2.7 kg)

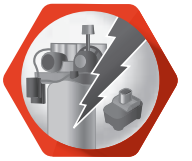
**Inlet pressure 100 psig (6.9 bar). Secondary pressure 80 psig (5.5 bar).*

DIMENSIONAL DATA

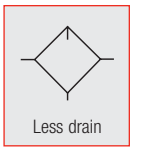
Dimensions – in (mm)



Part Number	Description
Regulator Accessories	
29846	Gauge 0 – 15 psig
29863	Gauge 0 – 60 psig
29850	Gauge 0 – 160 psig
GRP-95-734	Wall mount pipe clamp



INGERSOLL-RAND JUMBO SERIES LUBRICATORS





Ingersoll-Rand Jumbo Series Lubricator

3/4" AND 1" PORTS

FEATURES

- Full view sight dome.
- Siphon tube filter provides clean lubricant downstream.
- Quick-disconnect clamp ring for easy bowl removal.
- Adjustable oil feed.
- Standard transparent bowl with metal bowl guard.
- Optional petcock in polycarbonate bowl.
- Can be filled while under pressure.

ORDERING*

Port Size NPT	Airflow cfm	Bowl Size oz	Weight lb	Poly Bowl with Bowl Guard	Metal Bowl with Sight Gauge
Lubricators					
3/4"	196	26.0	5.6	L30-06-000	L30-06-G00
1"	374	26.0	5.6	L30-08-000	N/A

**All available models are in this table.*

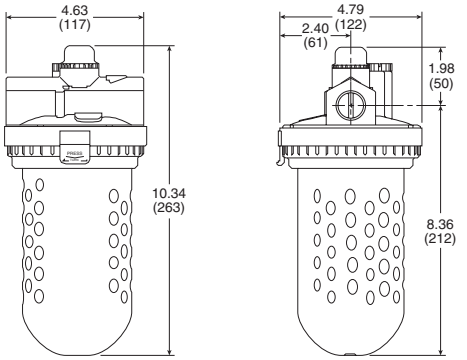
PERFORMANCE SPECIFICATIONS

Flow Capacity*	3/4" — 196 cfm (92.4 dm^3/s) 1" — 374 cfm (176.4 dm^3/s)
Operating Temp	Plastic bowl — 32° – 125° F (0° – 52° C) Metal bowl — 32° – 150° F (0° – 65.5° C)
Max Supply Pressure	Plastic bowl — 150 psig (10.3 bar) Metal bowl — 200 psig (13.8 bar)
Useful Retention**	26 oz (769 cm^3)
Port Size	NPT / BSPP-G 3/4", 1"
Weight	5.6 lb (2.54 kg)

**Inlet pressure 120 psig (8.3 bar). Pressure drop 5 psid (0.3 bar).*
***Useful retention refers to usable volume.*

DIMENSIONAL DATA

Dimensions – in (mm)



Part Number	Description
Lubricator Accessories	
GRP-95-734	Wall mount pipe clamp
FRP-95-593	Metal bowl with brass petcock drain
GRP-95-676	Metal bowl with sight gauge & manual drain
FRP-95-832	Polycarbonate bowl with bowl guard & manual drain
GRP-95-182	Brass petcock manual drain replacement kit
GRP-96-000-28	Manual override drain for autofloat drains with 1/8" NPT port
LRP-95-058	Repair kit

INGERSOLL-RAND JUMBO SERIES COMBINATION UNITS



Ingersoll-Rand Jumbo Series
Filter / Regulator / Lubricator Combo Unit

3/4" AND 1" PORTS

ORDERING*

Port Size NPT	Airflow cfm	Poly Bowl with Bowl Guard	Components		
			Filter	Regulator	Lubricator
Filter / Regulator / Lubricator (regulator includes gauge)					
3/4"	170	C31-06-G00	F30-06-000	R30-06-000	F30-06-000
1"	331	C31-08-G00	F30-08-000	R30-08-000	F30-08-000
Filter / Lubricator					
3/4"	170	C36-06-000	F30-06-G00	N/A	L30-06-G00
1"	331	C36-06-000	F30-08-G00	N/A	L30-08-G00

**All available models combinations are in this table.*

3/4" PORT*

PERFORMANCE SPECIFICATIONS

Filter / Regulator / Lubricator

Part Number	C31-06-G00
Flow Capacity	170 cfm
Pressure Range	0 – 125 psig
Useful Retention	2.0 oz filter 26 oz lubricator
Dimensions	Height 11.2" Width 15.3" Depth 5.7"

Filter / Lubricator

Part Number	C36-06-000
Flow Capacity	170 cfm
Pressure Range	N/A
Useful Retention	2.0 oz filter 26 oz lubricator
Dimensions	Height 11.2" Width 10.1" Depth 4.9"

**NPT female pipe sizes.*

1" PORT*

PERFORMANCE SPECIFICATIONS

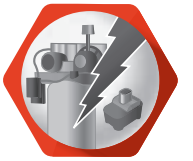
Filter / Regulator / Lubricator

Part Number	C31-08-G00
Flow Capacity	331 cfm
Pressure Range	0 – 125 psig
Useful Retention	2.0 oz filter 26 oz lubricator
Dimensions	Height 11.2" Width 15.3" Depth 5.7"

Filter / Lubricator

Part Number	C36-08-000
Flow Capacity	331 cfm
Pressure Range	N/A
Useful Retention	2.0 oz filter 26 oz lubricator
Dimensions	Height 11.2" Width 10.1" Depth 4.9"

**NPT female pipe sizes.*



INGERSOLL-RAND SUPER-DUTY SERIES

SERIES FEATURES

FILTERS

1. Differential pressure indicator eliminates the guesswork of element replacement

2. Flow rates from 1,280 cfm to 1,400 cfm

3. Heavy-duty housings for operating pressures up to 300 psi

REGULATORS

4. Balanced valve design for accurate pressure control

5. Flow rates up to 1,200 cfm

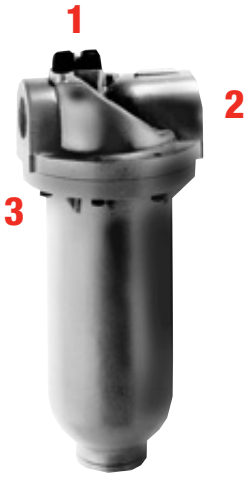
LUBRICATORS

6. Flow rates up to 1,186 cfm

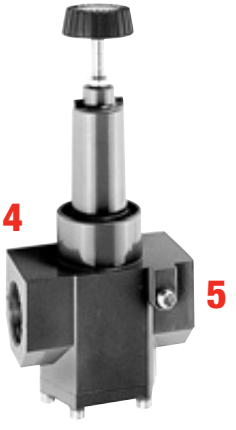
7. Quick disconnect clamp ring for easy bowl removal

8. Full view sight dome for easy oil feed adjustment

FILTERS



REGULATORS



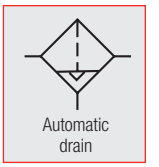
LUBRICATORS



INGERSOLL-RAND SUPER-DUTY SERIES FILTERS



F35-0B-000



1-1/2" AND 2" PORTS

FEATURES

- Heavy-duty cast aluminum housings to withstand operating pressures up to 300 psig
- Differential pressure indicator to eliminate the guesswork of element replacement
- Unique drain mounting plate design offers a troublefree method for interchanging and installing external drains

ORDERING

Port Size NPT	Airflow cfm	Bowl Size oz	Filter Element micron	Weight lb	Poly Bowl with Bowl Guard	Metal Bowl with Sight Gauge
Filters						
1-1/2"	1,280	12.5	5	19.3	N/A	F35-0B-C28
2"	1,400	12.5	5	31.0	N/A	F37-0C-A28

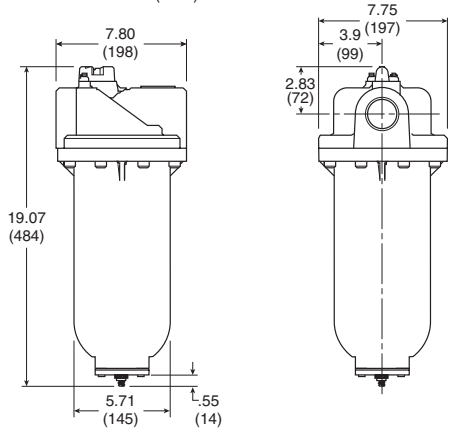
PERFORMANCE SPECIFICATIONS

Flow Capacity*	1-1/2" — 1,280 cfm (604 dm^3/s) 2" — 1,400 cfm (660 dm^3/s)
Operating Temp	32° – 150° F (0° – 65.5° C)
Max Supply Pressure	Without DP2 — 300 psig (20.7 bar)** With DP2 — 150 psig (10.3 bar)
Standard Filtration	5 micron
Useful Retention†	12.5 oz (370 cm^3)
Port Size	NPT / BSPP-G — 1-1/4", 1-1/2", 2"
Weight	19.3 lb (8.7 kg)

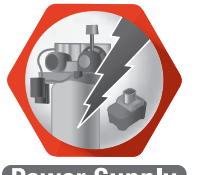
**Inlet pressure of 150 psig (10.3 bar). Pressure drop of 5 psig (0.3 bar).*
***Without pressure indicator – Maximum supply pressure is 300 psig (20.7 bar).*
†Useful retention refers to volume below the quiet zone baffle.

DIMENSIONAL DATA

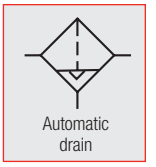
Dimensions – in (mm)



Part Number	Description
Filter Accessories	
GRP-95-734	Wall mount pipe clamp
FRP-95-593	Metal bowl with brass petcock drain
GRP-95-182	Brass petcock manual drain replacement kit
GRP-96-000-28	Manual override drain for autofloat drains with 1/8" NPT port



INGERSOLL-RAND SUPER-DUTY SERIES COALESCING FILTERS





M35-0B-000

1-1/2" AND 2" PORTS

FEATURES

- Heavy-duty cast aluminum housings to withstand operating pressures up to 300 psig††
- Differential pressure indicator to eliminate the guesswork of element replacement
- Unique drain mounting plate design offers trouble-free method for interchanging and installing external drains
- High-flow filter elements: coalescing, 1 micron and 0.01 micron

ORDERING

Port Size NPT	Airflow cfm	Bowl Size oz	Filter Element micron	Weight lb	Poly Bowl with Bowl Guard	Metal Bowl with Sight Gauge
Coalescing Filters						
1-1/2"	710	13.9	1.0	19.3	N/A	M35-0B-C28
2"	860	13.9	1.0	31.0	N/A	M37-0C-A28

PERFORMANCE SPECIFICATIONS

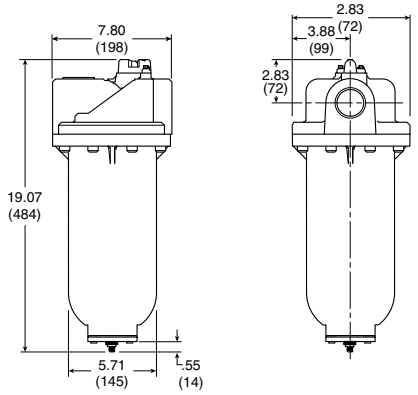
Flow Capacity*	1-1/2" — 710 cfm (335 dm^3/s) 2" — 860 cfm (335 dm^3/s)
Operating Temp	32° – 150° F (0° – 65.5° C)
Maximum Supply Pressure	Without DP2 — 300 psig (20.7 bar)†† With DP2 — 150 psig (10.3 bar)
Standard Filtration	(B1) 1.0 micron, (C) 0.01 micron (D) 0.003 micron ppm / wt**
Useful Retention	(cm^3) 13.9 oz (411 cm^3)
Port Size	NPT / BSPP-G — 1-1/2", 2"
Weight	19.3 lb (8.7 kg)

**Inlet pressure 150 psig (10.3 bar). Pressure drop of 3 psig (0.2 bar).*
***Filtration temperature of 70° F (21° C) @ 100 psig (6.9 bar) with typical compressor lubricating oil and protected by Type "C" filter.*
†Useful retention refers to volume below the quiet zone baffle.
††Without Differential Pressure Indicator – Maximum supply pressure is 300 psig (20.7 bar).

DIMENSIONAL DATA

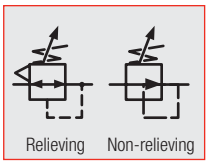
Dimensions – in (mm)

M35-0B-000



Part Number	Description
Coalescing Filter Accessories	
GRP-95-734	Wall mount pipe clamp
FRP-95-593	Metal bowl with brass petcock drain
GRP-95-182	Brass petcock manual drain replacement kit
GRP-96-000-28	Manual override drain for autofloat drains with 1/8" NPT port
MTP-95-504-28	Type "C" 0.01 micron coalescing element

INGERSOLL-RAND SUPER-DUTY SERIES REGULATORS





R40-0B-000

1-1/4", 1-1/2", AND 2" PORTS

FEATURES

- Balanced valve design
- Standard self-relieving
- Two 1/4" NPT / BSPT-Rc gauge ports standard — can be used for additional outlet ports
- Piston operated
- High flow capacity

ORDERING

Port Size NPT	Airflow cfm	Weight lb	Relieving Type 0 – 125 psig
Regulators			
1-1/4"	800	6	R30-0A-000*
1-1/2"	1,200	10.8	R40-0B-000
2"	1,200	10.8	R40-0C-000

**Order gauge 100067 separately.*

PERFORMANCE SPECIFICATIONS

Flow Capacity R30*	1-1/4" — 800 cfm (377 dm^3/s)
Flow Capacity R40**	1-1/2", 2" – 1,200 cfm (566 dm^3/s)
Operating Temp	32° – 150° F (0° – 65.5° C)
Max Supply Pressure	300 psig (20.7 bar)
Adjusting Range Pressure	0 – 125 psig (0 – 8.6 bar) 0 – 180 psig (0 – 12.4 bar)
Port Size R30	NPT / BSPP-G — 3/4", 1", 1-1/4"
Port Size R40	NPT / BSPP-G — 1-1/2", 2"
Gauge Port (2 each)	NPT / BSPT-Rc — 1/4"
Weight R30	6 lb (2.7 kg)
Weight R40	10.8 lb (4.9 kg)

**Inlet pressure of 100 psig (6.9 bar). Secondary pressure of 80 psig (5.5 bar).*
***Inlet pressure of 100 psig (6.9 bar). Secondary pressure of 85 psig (5.9 bar).*

CAUTION

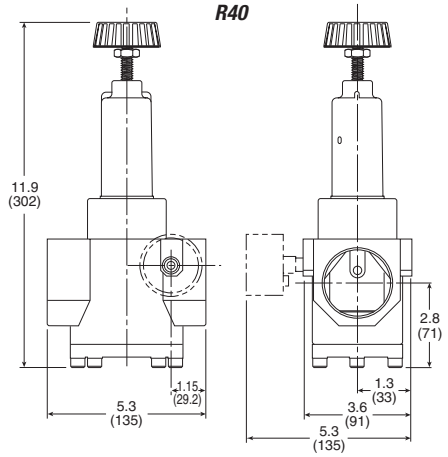
Regulator Pressure Adjustment — The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.

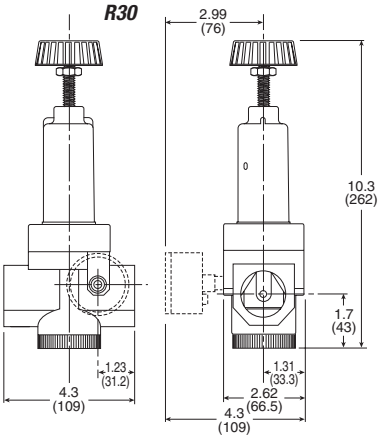
For best performance, regulated pressure should always be set by increasing the pressure to the desired setting.

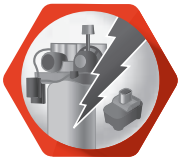
Part Number	Description
Regulator Accessories	
29846	Gauge 0 – 15 psig
29863	Gauge 0 – 60 psig
29850	Gauge 0 – 160 psig
GRP-95-734	Wall mount pipe clamp

DIMENSIONAL DATA

Dimensions – in (mm)







INGERSOLL-RAND SUPER-DUTY SERIES LUBRICATORS



L40-0A-000

1-1/4", 1-1/2" AND 2" PORTS

FEATURES

- Full view sight dome
- Siphon tube filter provides clean lubricant downstream
- Quick-disconnect clamp ring for easy bowl removal
- Adjustable oil feed
- Standard transparent bowl with metal bowl guard
- Can be filled while under pressure

ORDERING

Port Size NPT	Airflow cfm	Bowl Size oz	Weight lb	Poly Bowl with Bowl Guard	Metal Bowl with Sight Gauge
Lubricators					
1-1/4"	927	26.0	9.4	L40-0A-000	L40-0A-G00
1-1/2"	927	26.0	9.4	L40-0B-000	L40-0B-G00
2"	1186	26.0	10.2	L50-0C-000	L50-0C-G00

PERFORMANCE SPECIFICATIONS

Flow Capacity L40*	1-1/4", 1-1/2" — 927 cfm (437 dm^3/s)
Flow Capacity L50*	2" — 1,186 cfm (560 dm^3/s)
Operating Temp	Plastic bowl — 32° – 125° F (0° – 52° C) Metal bowl (L50) — 32° – 150° F (0° – 65.5° C)
Initial Drip Flow L40	.95 cfm
Max Supply Pressure	Plastic bowl — 150 psig (10.3 bar) Metal bowl (L50) — 200 psig (13.8 bar)
Min Flow for Lubrication	1 cfm @ 100 psig
Useful Retention**	26 oz (769 cm^3)
Port Size L40	NPT / BSPP-G 1-1/4", 1-1/2"
Port Size L50	NPT / BSPP-G — 2"
Weight	9.4 lb (4.3 kg)

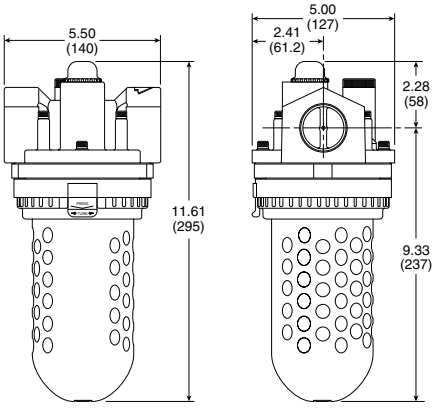
**Inlet pressure of 120 psig (8.3 bar). Pressure drop of 5 psid (0.3 bar).*
***Useful retention refers to usable volume.*

Part Number	Description
Lubricator Accessories	
GRP-95-734	Wall mount pipe clamp
FRP-95-593	Metal bowl with brass petcock drain
GRP-95-676	Metal bowl with sight gauge & manual drain
LRP-95-830	Polycarbonate bowl with bowl guard & manual drain
FRP-95-832	Polycarbonate bowl with bowl guard & manual drain
GRP-95-182	Brass petcock manual drain replacement kit
GRP-96-000-28	Manual override drain for autofloat drains with 1/8" NPT port
LRP-96-420	Force fill adapter
LRP-95-060	Repair kit

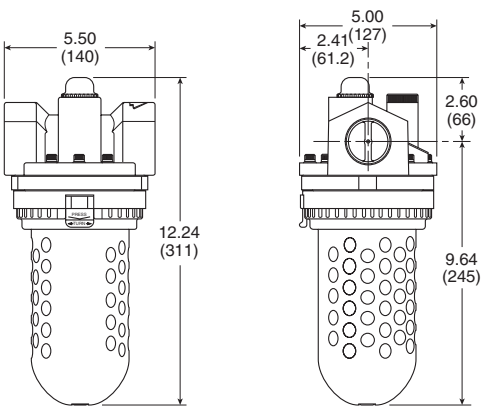
DIMENSIONAL DATA

Dimensions – in (mm)

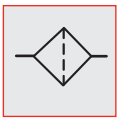
L40-0A-000



L50-0C-000



INGERSOLL-RAND INLINE SERIES FILTERS



1/4" PORTS



F01-02-000

FEATURES

This small, aluminum inline filter is designed to provide protection for portable pneumatic hand tools. It weighs only 2 ounces with a throw-away filter element rated at 5 microns. Either port may be used as the inline port. Flow is 22.0 cfm (10.3 dm^3/s) at 150 psig (10.3 bar) inlet pressure with 5 psig (0.3 bar) pressure drop.

PERFORMANCE SPECIFICATIONS

Flow Capacity*	22.0 cfm (10.3 dm^3/s)
Operating Temp	32° – 150° F (0° – 65.5° C)
Max Supply Pressure	200 psig (13.8 bar)
Standard Filtration	5 micron
Port Size	NPT / BSPT-Rc — 1/4"
Weight	0.13 lb (6 kg)

**Inlet pressure of 150 psig (10.3 bar). Pressure drop of 5 psid (0.3 bar).*

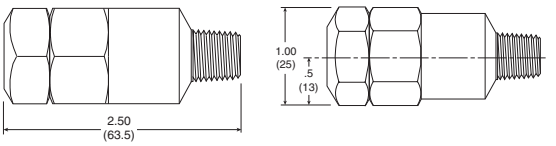
ORDERING

Port Size NPT	Airflow cfm	Filter Element micron	Weight lb	Model
Filters				
1/4"	22	5	0.1	F01-02-000

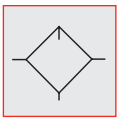
DIMENSIONAL DATA

Dimensions – in (mm)

F01-02-000



INGERSOLL-RAND INLINE SERIES LUBRICATORS



1/4" AND 3/8" PORTS



L01-02-000

FEATURES

Inline lubricators assure proper lubrication for small pneumatic hand tools. These inline lubricators put the oil source right at the tool. Oil capacity is 1/4 oz. (1 ml) enough to last through an average 8-hour shift. This lubricator requires cyclical or intermittent airflow for proper operation, and consequently works best when installed at the tool inlet or on a short hose near the tool. **The L01 cannot be filled under pressure.**

PERFORMANCE SPECIFICATIONS

Flow Capacity*	1/4" — 36.0 cfm (17.0 dm^3/s) 3/8" — 38.1 cfm (18.0 dm^3/s)
Operating Temp	32° – 150° F (0° – 65.5° C)
Max Supply Pressure	200 psig (13.8 bar)
Useful Retention**	0.25 oz (7.4 cm^3)
Port Size	NPT / BSPT-Rc — 1/4", 3/8"
Weight	0.2 lb (0.1 kg)

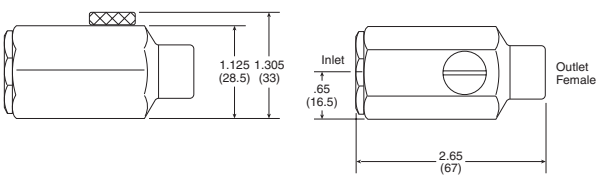
**Inlet pressure of 150 psig (10.3 bar). Pressure drop of 5 psid (0.3 bar).*
***Useful retention refers to usable volume.*

Port Size NPT (female)	Airflow cfm	Bowl Size oz	Weight lb	Poly Bowl with Bowl Guard
Inline Lubricators				
1/4"	36	0.25	0.2	L01-02-000
3/8"	38.1	0.25	0.2	L01-03-000

DIMENSIONAL DATA

Dimensions – in (mm)

L01-02-000





INGERSOLL-RAND FRL FLOWCHARTS

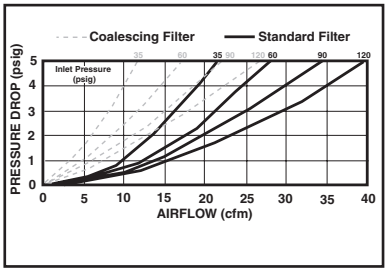
The following flow data is provided to further help in the sizing / selection of individual filters, regulators, and lubricators or combination units.

1. Determine the maximum system airflow requirements.
2. Determine the maximum allowable pressure drop at rated airflow in cfm.
3. Refer to the flowcharts to select the pipe size / series of FRL by choosing the curve that offers minimum pressure drop at the desired airflow in cfm.

FILTER FLOWCHARTS

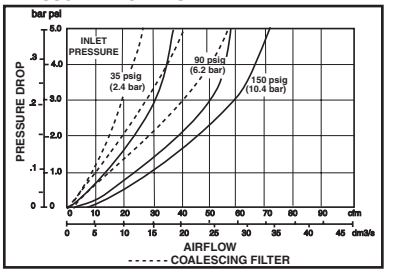
MINI SERIES FILTER

PRESSURE DROP TEST



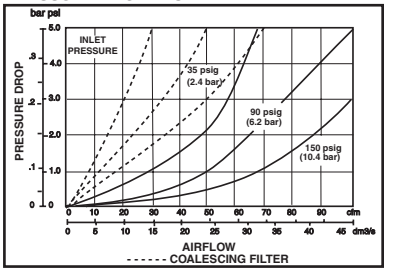
COMPACT SERIES 1/4" FILTER

PRESSURE DROP TEST



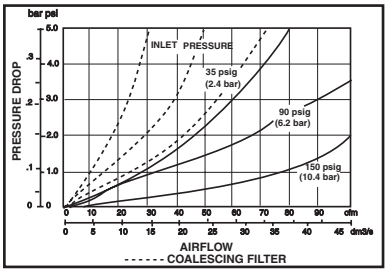
COMPACT SERIES 3/8" FILTER

PRESSURE DROP TEST



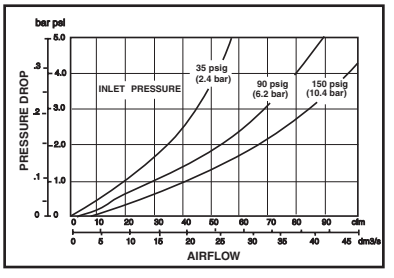
COMPACT SERIES 1/2" FILTER

PRESSURE DROP TEST



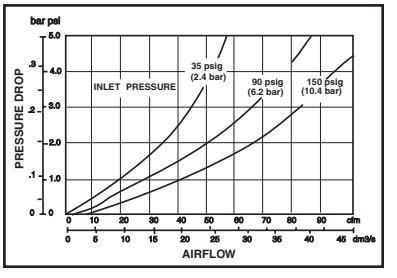
HEAVY-DUTY SERIES 1/2" FILTER

PRESSURE DROP TEST



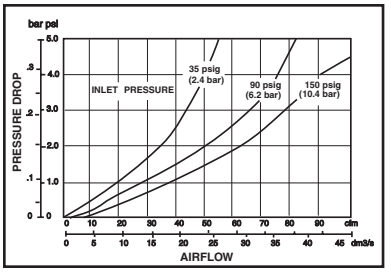
HEAVY-DUTY SERIES 3/4" FILTER

PRESSURE DROP TEST



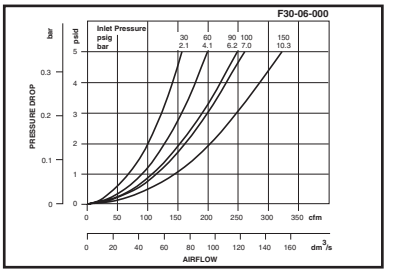
HEAVY-DUTY SERIES 1" FILTER

PRESSURE DROP TEST



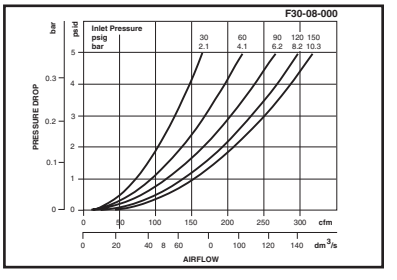
JUMBO SERIES 3/4" STANDARD FILTER

PRESSURE DROP TEST



JUMBO SERIES 1" STANDARD FILTER

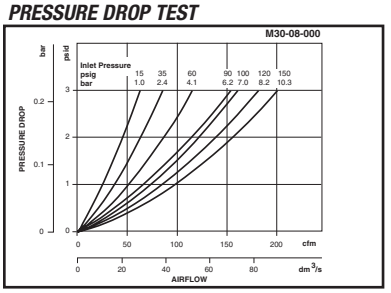
PRESSURE DROP TEST



FILTER FLOWCHARTS

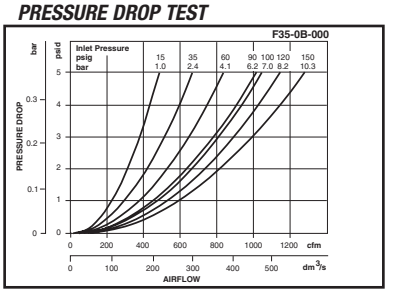
JUMBO SERIES 1" COALESCING FILTER

PRESSURE DROP TEST



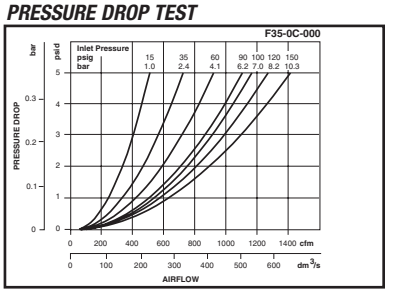
SUPER-DUTY SERIES 1-1/2" STANDARD FILTER

PRESSURE DROP TEST



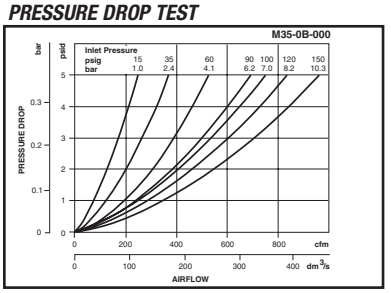
SUPER-DUTY SERIES 2" STANDARD FILTER

PRESSURE DROP TEST



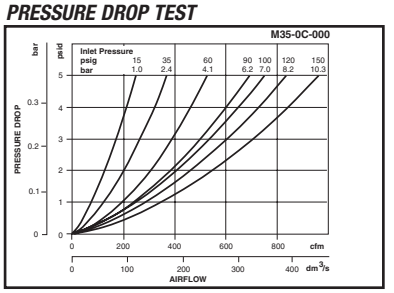
SUPER-DUTY SERIES 1-1/2" COALESCING FILTER

PRESSURE DROP TEST



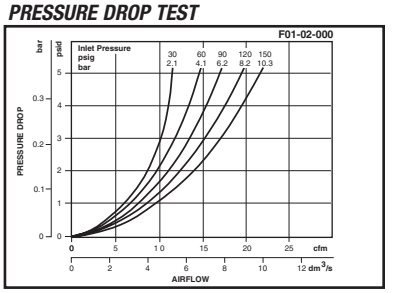
SUPER-DUTY SERIES 2" COALESCING FILTER

PRESSURE DROP TEST



INLINE SERIES 1/4" FILTER

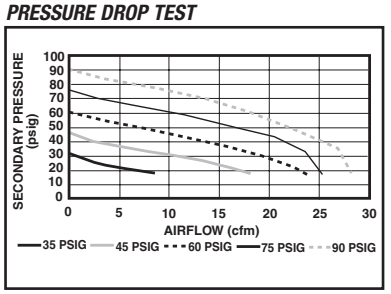
PRESSURE DROP TEST



REGULATOR FLOWCHARTS

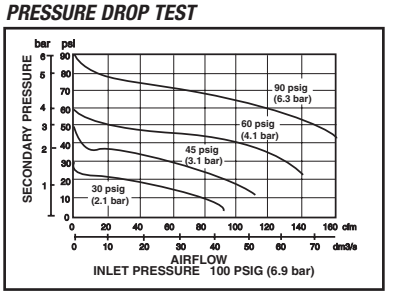
MINI SERIES REGULATOR

PRESSURE DROP TEST



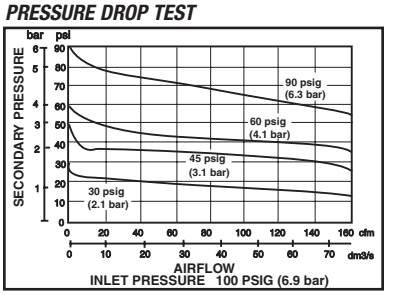
COMPACT SERIES 1/4" REGULATOR

PRESSURE DROP TEST



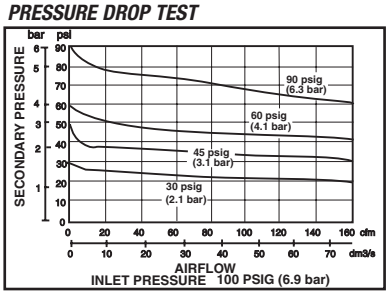
COMPACT SERIES 3/8" REGULATOR

PRESSURE DROP TEST



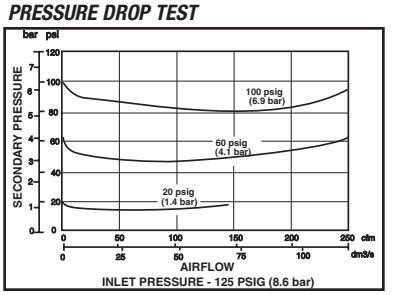
COMPACT SERIES 1/2" REGULATOR

PRESSURE DROP TEST



HEAVY-DUTY SERIES 1/2" REGULATOR

PRESSURE DROP TEST

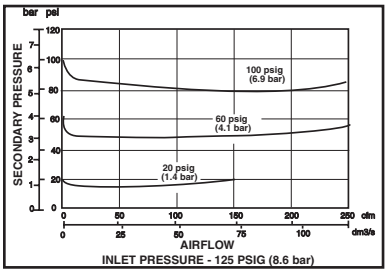


Power Supply

REGULATOR FLOWCHARTS

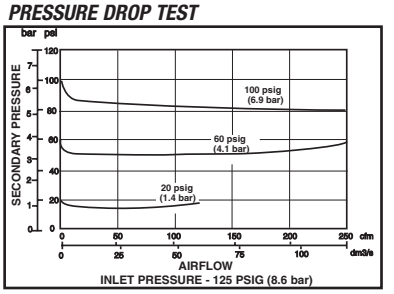
HEAVY-DUTY SERIES 3/4" REGULATOR

PRESSURE DROP TEST



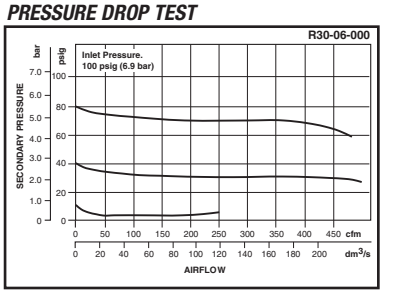
HEAVY-DUTY SERIES 1" REGULATOR

PRESSURE DROP TEST



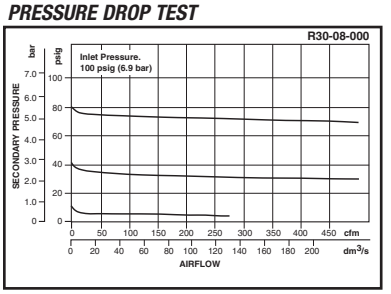
JUMBO SERIES 3/4" REGULATOR

PRESSURE DROP TEST



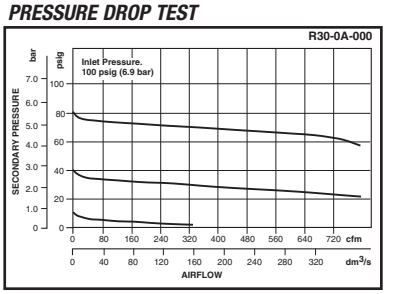
JUMBO SERIES 1" REGULATOR

PRESSURE DROP TEST



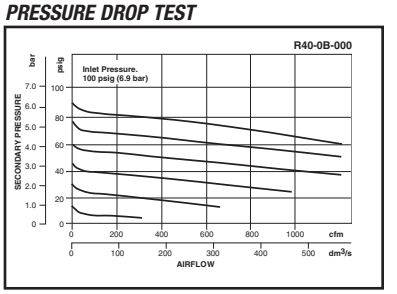
SUPER-DUTY SERIES 1-1/4" REGULATOR

PRESSURE DROP TEST



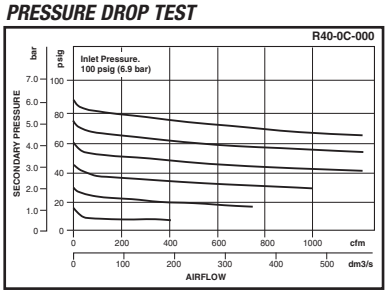
SUPER-DUTY SERIES 1-1/2" REGULATOR

PRESSURE DROP TEST



SUPER-DUTY SERIES 2" REGULATOR

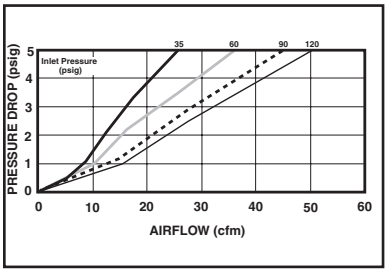
PRESSURE DROP TEST



LUBRICATOR FLOWCHARTS

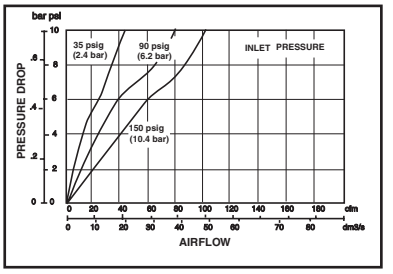
MINI SERIES LUBRICATOR

PRESSURE DROP TEST



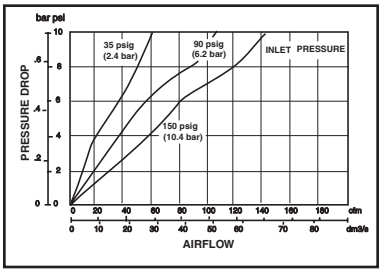
COMPACT SERIES 1/4" LUBRICATOR

PRESSURE DROP TEST



COMPACT SERIES 3/8" LUBRICATOR

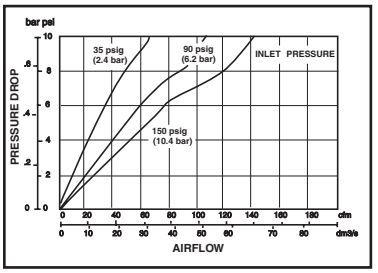
PRESSURE DROP TEST



LUBRICATOR FLOWCHARTS

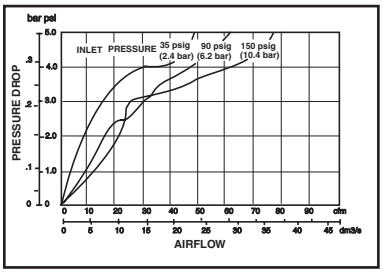
COMPACT SERIES 1/2" LUBRICATOR

PRESSURE DROP TEST



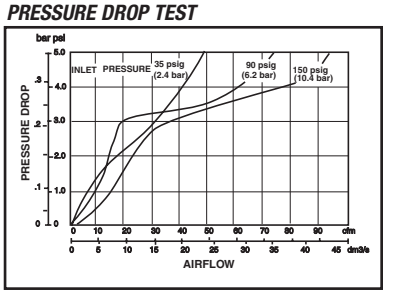
HEAVY-DUTY SERIES 1/2" LUBRICATOR

PRESSURE DROP TEST



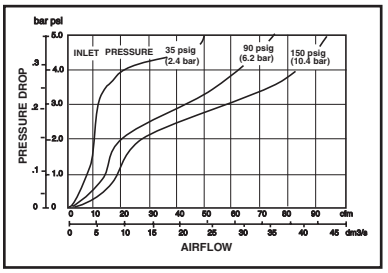
HEAVY-DUTY SERIES 3/4" LUBRICATOR

PRESSURE DROP TEST



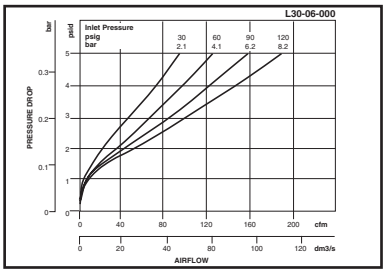
HEAVY-DUTY SERIES 1" LUBRICATOR

PRESSURE DROP TEST



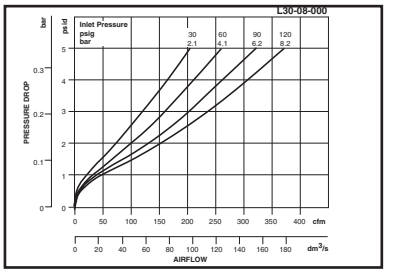
JUMBO SERIES 3/4" LUBRICATOR

PRESSURE DROP TEST



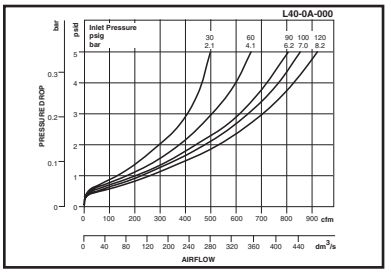
JUMBO SERIES 1" LUBRICATOR

PRESSURE DROP TEST



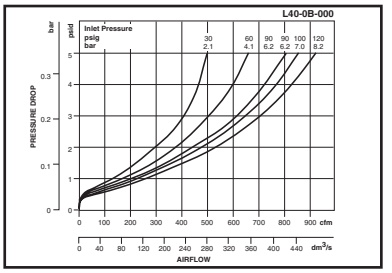
SUPER-DUTY SERIES 1-1/4" LUBRICATOR

PRESSURE DROP TEST



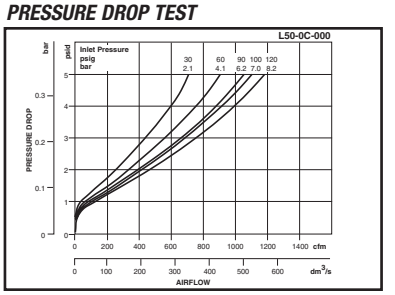
SUPER-DUTY SERIES 1-1/2" LUBRICATOR

PRESSURE DROP TEST



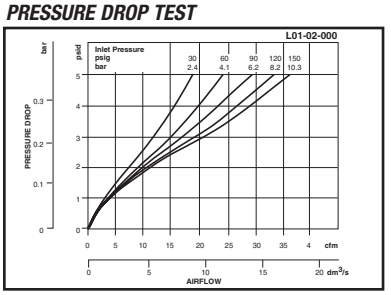
SUPER-DUTY SERIES 2" LUBRICATOR

PRESSURE DROP TEST



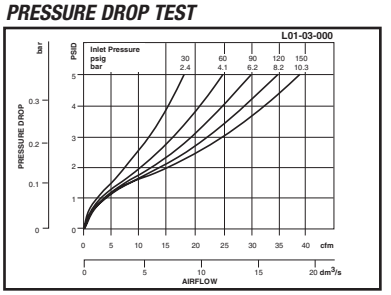
INLINE SERIES 1/4" LUBRICATOR

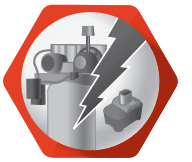
PRESSURE DROP TEST



INLINE SERIES 3/8" LUBRICATOR

PRESSURE DROP TEST

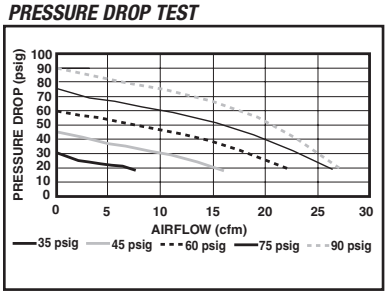




FILTER / REGULATOR / LUBRICATOR COMBO FLOWCHARTS

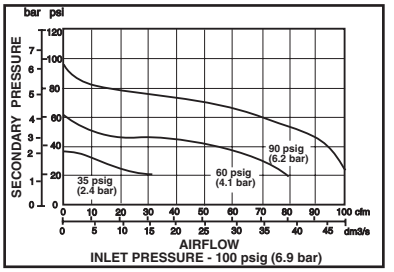
MINI SERIES FRL COMBO

PRESSURE DROP TEST



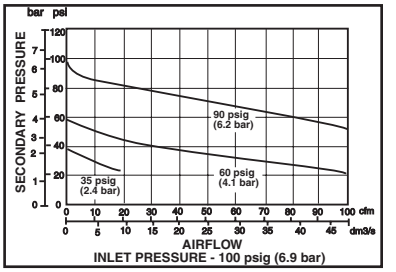
COMPACT SERIES 1/4" FRL COMBO

PRESSURE DROP TEST



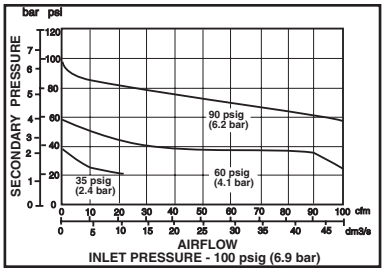
COMPACT SERIES 3/8" FRL COMBO

PRESSURE DROP TEST



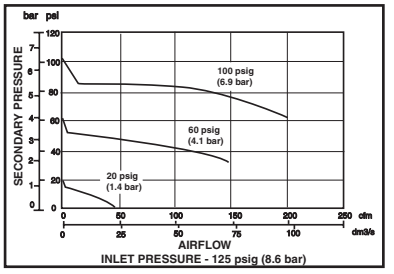
COMPACT SERIES 1/2" FRL COMBO

PRESSURE DROP TEST



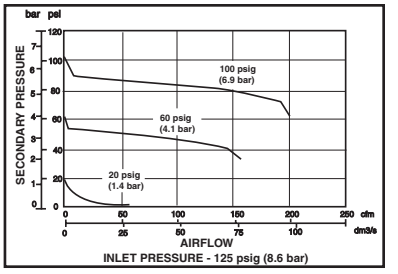
HEAVY-DUTY SERIES 1/2" FRL COMBO

PRESSURE DROP TEST



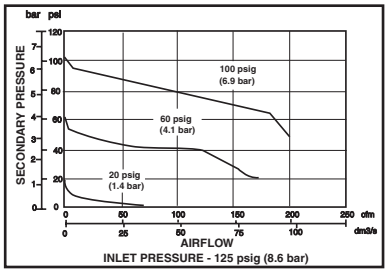
HEAVY-DUTY SERIES 3/4" FRL COMBO

PRESSURE DROP TEST



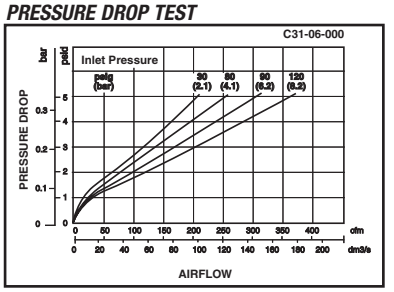
HEAVY-DUTY SERIES 1" FRL COMBO

PRESSURE DROP TEST



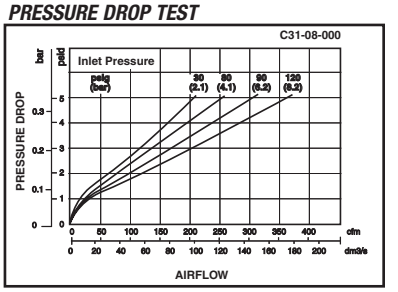
JUMBO SERIES 3/4" FRL COMBO

PRESSURE DROP TEST



JUMBO SERIES 1" FRL COMBO

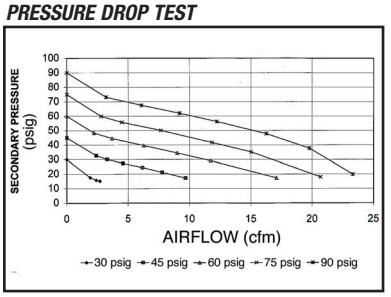
PRESSURE DROP TEST



PIGGYBACK / LUBRICATOR COMBO FLOWCHARTS

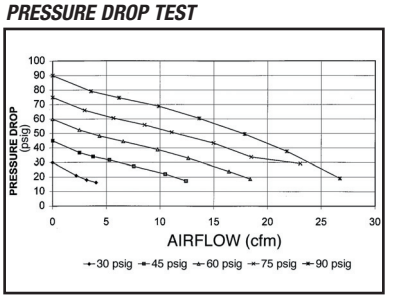
MINI SERIES 1/8" PIGGYBACK / LUBRICATOR COMBO

PRESSURE DROP TEST



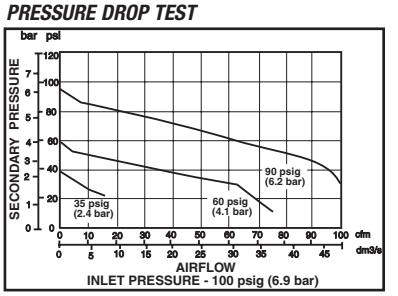
MINI SERIES 1/4" PIGGYBACK / LUBRICATOR COMBO

PRESSURE DROP TEST



COMPACT SERIES 1/4" PIGGYBACK / LUBRICATOR COMBO

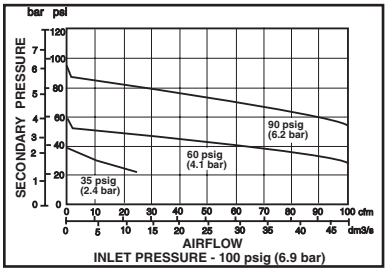
PRESSURE DROP TEST



PIGGYBACK / LUBRICATOR COMBO FLOWCHARTS

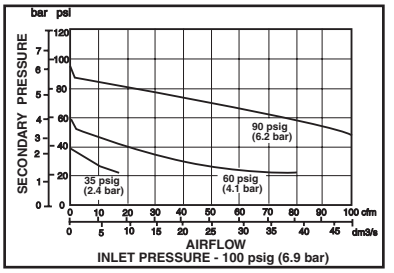
COMPACT SERIES 3/8" PIGGYBACK / LUBRICATOR COMBO

PRESSURE DROP TEST



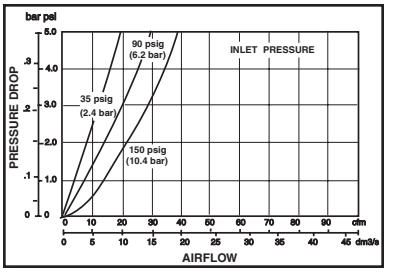
COMPACT SERIES 1/2" PIGGYBACK / LUBRICATOR COMBO

PRESSURE DROP TEST



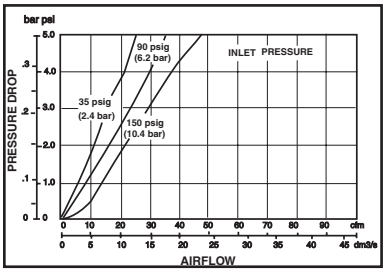
COMPACT SERIES 1/4" FILTER / LUBRICATOR COMBO

PRESSURE DROP TEST



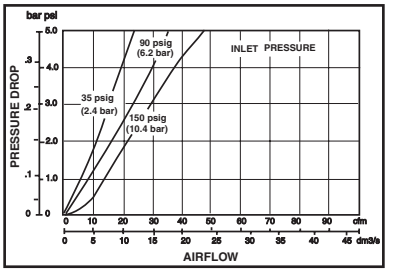
COMPACT SERIES 3/8" FILTER / LUBRICATOR COMBO

PRESSURE DROP TEST



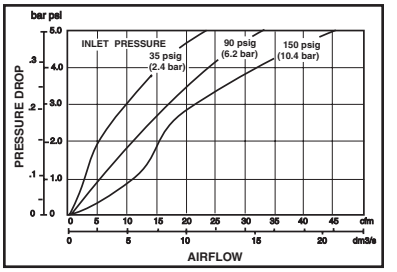
COMPACT SERIES 1/2" FILTER / LUBRICATOR COMBO

PRESSURE DROP TEST



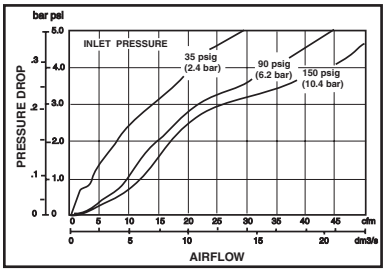
HEAVY-DUTY SERIES 1/2" FILTER / LUBRICATOR COMBO

PRESSURE DROP TEST



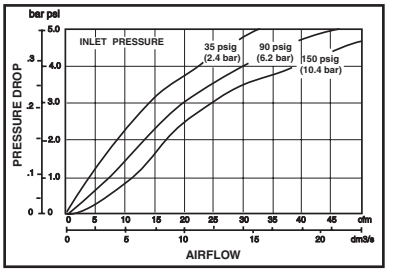
HEAVY-DUTY SERIES 3/4" FILTER / LUBRICATOR COMBO

PRESSURE DROP TEST



HEAVY-DUTY SERIES 1" FILTER / LUBRICATOR COMBO

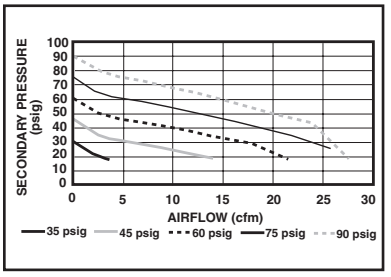
PRESSURE DROP TEST



FILTER / REGULATOR FLOWCHARTS

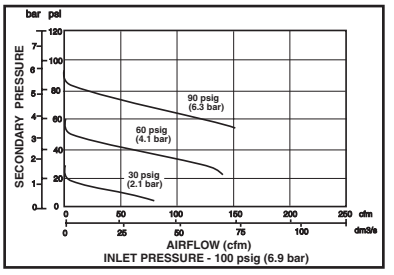
MINI SERIES PIGGYBACK / LUBRICATOR AND FILTER / REGULATOR

PRESSURE DROP TEST



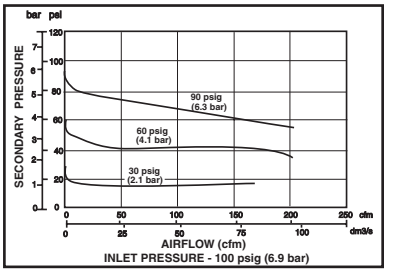
COMPACT SERIES 1/4" FILTER / REGULATOR

PRESSURE DROP TEST



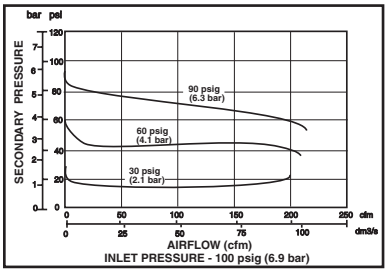
COMPACT SERIES 3/8" FILTER / REGULATOR

PRESSURE DROP TEST



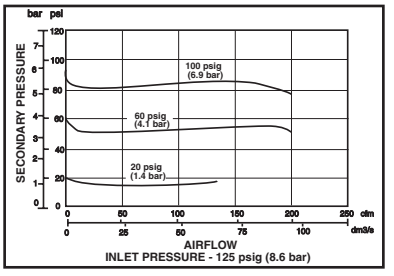
COMPACT SERIES 1/2" FILTER / REGULATOR

PRESSURE DROP TEST



HEAVY-DUTY SERIES 1" FILTER / REGULATOR

PRESSURE DROP TEST



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