



Air System Components

MODEL 7472 BALANCER
IR Ingersoll Rand
THE ARO CORPORATION
Bryan, Ohio 43105, U.S.A.
**5 LBS.
CAPACITY**
MADE IN
U.S.A.



MAX
WARNING
Polycarbonate. Do not use
avoid rupture that may
cause personal injury or
personal property damage.
Clean with mild soap
and water. Do not use
max. pressure or temper-
ature. Do not use
degreasers. Do not use
incompatible chemicals.
MAX. PRESSURE
150 PSI (10.4 Bar)
MAX. TEMPERATURE
130°F (54°C)
MADE IN USA

| | |
|---|---|
| DOBCO EQUIPMENT LTD | Ontario's Largest Pneumatic & Hydraulic Tool Distributor |
| 1-2430 Lucknow Drive, Mississauga, Ontario L5S 1V3. Tel: 905-672-5557 Fax: 905-672-5559 Email: sales@dobcoeqp.com www.dobcoeqp.com | |

*Superior performance,
in the most challenging applications.*

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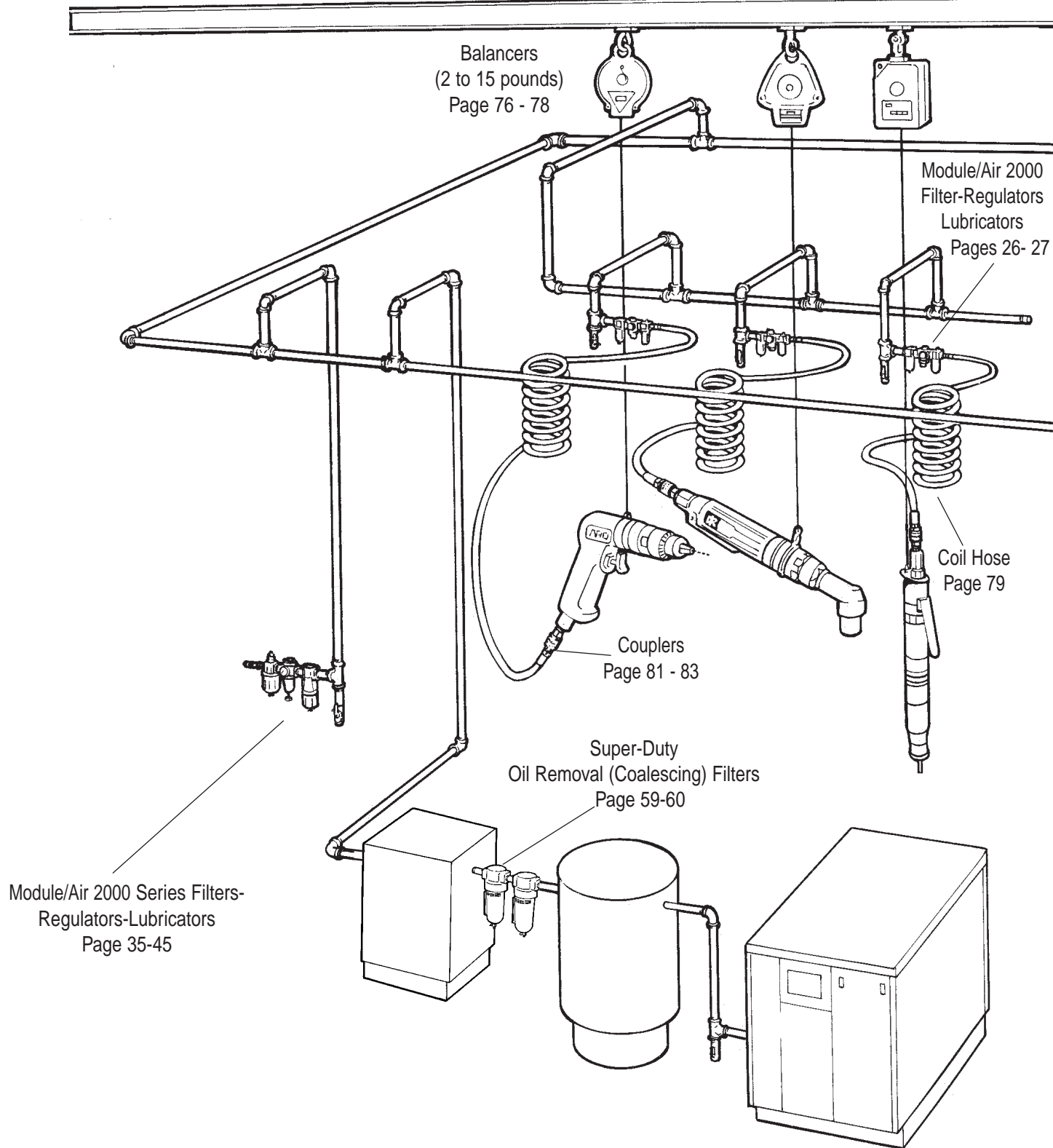
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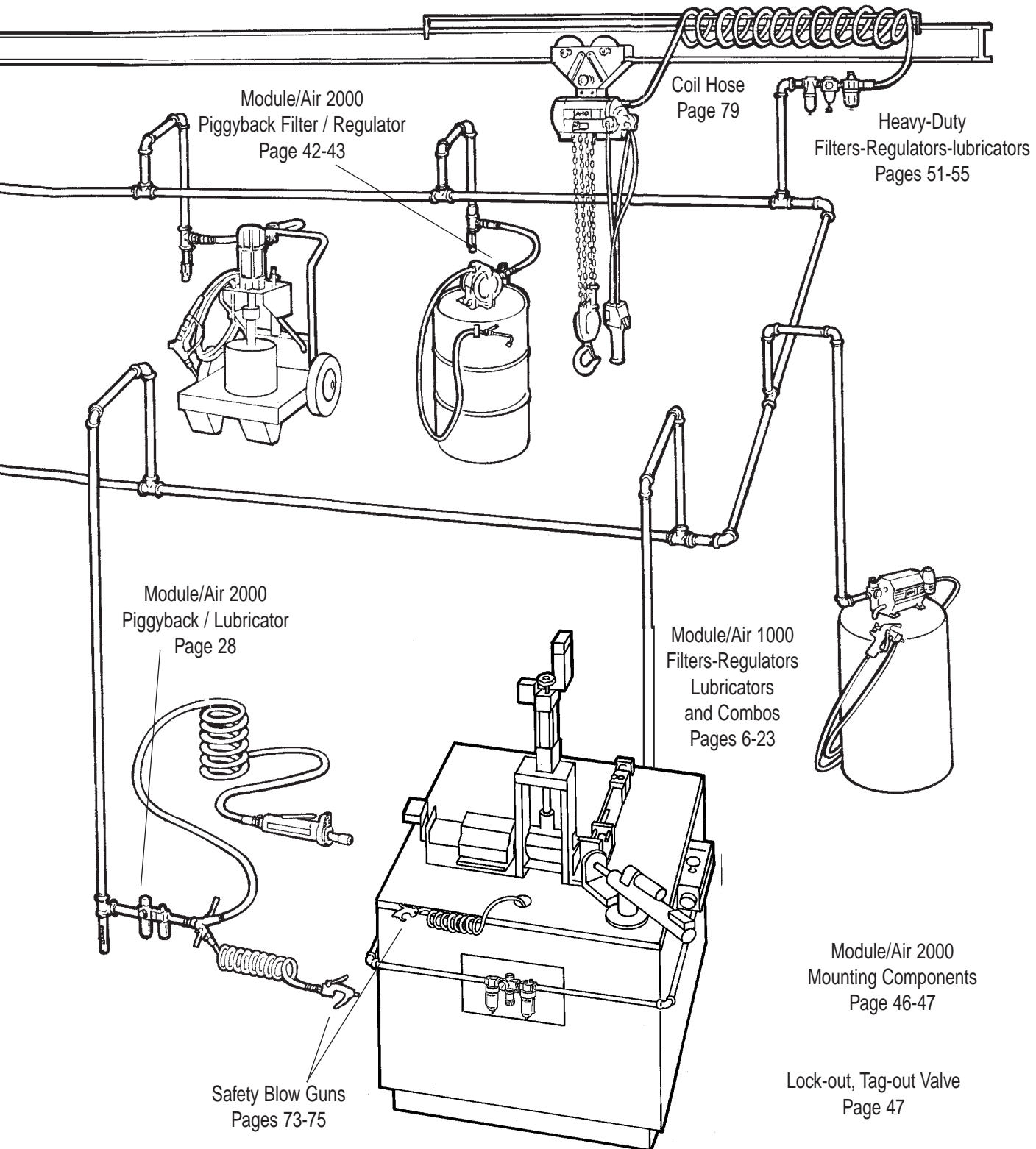
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Industrial Applications



This illustration represents typical plant-wide applications for ARO Air Systems Components. In addition to these industrial applications, ARO Air Systems Components can be used wherever compressed air is utilized, including automotive service stations and construction.

Page numbers are shown with each product as a handy quick reference.



Features



Aro Has The Right Combination . . .

Air preparation units for peak performance & longer service life.

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.

ARO offers an extensive line of air line filters, regulators and lubricators, including individual units, piggybacks and combos, to meet your exact air preparation requirements.



ARO Module/Air 1000 Series
Pages 6 thru 23

Filters

ARO compressed air filters are designed to remove airborne solid and liquid contaminants which may 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" thru 2" NPT
- Flows to 1300 SCFM (198 dm³/s)
- Maximum Inlet Pressures to 250 PSIG (17 bar)



ARO Module/ Air 2000® Series
Pages 24 thru 48

Regulators

ARO 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 Miniature Series regulator is available for fluid applications.

- Pipe Sizes from 1/8" thru 2" NPT
- Flows to 440 SCFM (208 dm³/s)
- Maximum Inlet Pressures to 300 PSIG (21 bar)



ARO Heavy-Duty Series
Pages 49 thru 55

Lubricators

ARO 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 the pneumatic components.

- Pipe Sizes from 1/8" thru 1-1/2" NPT
- Flows to 220 SCFM (104 dm³/s)
- Maximum Inlet Pressures to 250 PSIG (17 bar)

ARO F-R-L Product Selection Chart

| SERIES | NPT PORT SIZE | FLOW-SCFM (dm ³ /s) | | | | | PRESSURE RANGE IN REG. PSIG (bar) |
|---------------------|---------------|--------------------------------|-----------|------------|------------|------------|-----------------------------------|
| | | — FILTER — STD. | COAL | REGULATOR | PIGGY-BACK | LUBRICATOR | |
| Miniature | 1/8" | 28 (13) | 15 (6) | 13 (6) | 12 (6) | 41 (19) | 0-125 (0-8.6) |
| | 1/4" | 38 (18) | 17 (8) | 13 (6) | 12 (6) | 60 (28) | 0-125 (0-8.6) |
| Module/ Air 2000 | 1/4" | 54 (25) | 40 (19) | 100 (47) | 93 (44) | 75 (35) | 0-200 (0-13.8) |
| | 3/8" | 100 (47) | 51 (24) | 135 (61) | 135 (64) | 100 (47) | 0-200 (0-13.8) |
| | 1/2" | 122 (58) | 53 (25) | 140 (71) | 140 (66) | 110 (52) | 0-200 (0-13.8) |
| Heavy-Duty | 1/2" | 82 (39) | - | 256 (121) | - | 65 (31) | 0-250 (0-17) |
| | 3/4" | 87 (41) | - | 287 (135) | 300 (141) | 75 (35) | 0-250 (0-17) |
| | 1" | 88 (42) | - | 293 (138) | 300 (141) | 75 (35) | 0-250 (0-17) |
| Super-Duty | 3/4" | 345 (163) | 50 (24) | 180 (85) | - | 150 (71) | 160 (75.5) |
| | 1" | 345 (163) | 150 (71) | 200 (94) | - | 300 (141) | 275 (129.8) |
| | 1-1/4" | 445 (210) | 150 (71) | 440 (207) | - | 300 (141) | 275 (129.8) |
| | 1-1/2" | 445 (210) | 300 (141) | 440 (207) | - | 300 (141) | 275 (129.8) |
| | 2" | 1300 (613) | 300 (141) | 1000 (472) | - | - | - |



ARO Super-Duty Series
Pages 56 thru 63

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. **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 Air Flow (scfm) thru A.N.S.I. Standard Weight Schedule 40 Pipe.

| APPLIED PRESSURE PSIG | NOMINAL STANDARD PIPE SIZE - INCHES | | | | | | | | | | |
|-----------------------------|-------------------------------------|------|------|-------|-------|-----|-------|-------|------|-------|------|
| | 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 | 11.0 | 21 | 44 | 64 | 125 | 200 | 370 |
| 20 | 1.3 | 3.0 | 6.6 | 13.0 | 18.5 | 35 | 75 | 110 | 215 | 350 | 600 |
| 40 | 2.5 | 5.5 | 12.0 | 23.0 | 34.0 | 62 | 135 | 200 | 385 | 640 | 1100 |
| 60 | 3.5 | 8.0 | 18.0 | 34.0 | 50.0 | 93 | 195 | 290 | 560 | 900 | 1600 |
| 80 | 4.7 | 10.5 | 23.0 | 44.0 | 65.0 | 120 | 255 | 380 | 720 | 1200 | 2100 |
| 100 | 5.8 | 13.0 | 29.0 | 54.0 | 80.0 | 150 | 315 | 470 | 900 | 1450 | 2600 |
| 150 | 8.6 | 20.0 | 41.0 | 80.0 | 115 | 220 | 460 | 680 | 1350 | 2200 | 3900 |
| 200 | 11.5 | 26.0 | 58.0 | 108.0 | 155.0 | 290 | 620 | 910 | 1750 | 2800 | 5000 |
| 250 | 14.5 | 33.0 | 73.0 | 135.0 | 200 | 370 | 770 | 1150 | 2200 | 3500 | 6100 |

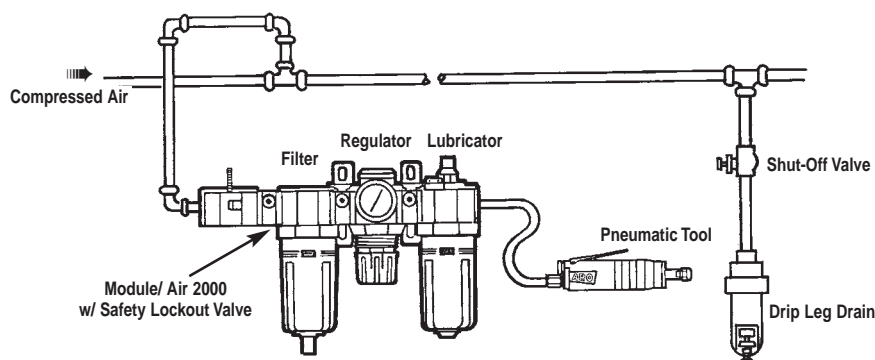
The flow values in the chart above are based upon a pressure drop (ΔP) as set forth in the following schedule:

| Pressure Drop (ΔP) per 100 ft. of Pipe | Pipe Size - Inches |
|--|-----------------------------------|
| 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 air flow 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.



The "MOD 1000" Modular Air Treatment in a Miniature Package!



High tech appearance enhances the overall look of any machine or fixture.

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

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

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



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

Modular clamp connects any two units together in a modular format. (Screws are combination phillips and slotted head type)



Filter-Regulator "Piggyback"

Standard Filter & Coalescing Filter
Provides 99.9% contaminant removal

Regulator Flexibility
Mount regulator up or down



Lubricator - Screwdriver adjustment slot has an optional tamper resistant cap which prevents unauthorized adjustment of oil delivery.

Quick change bowl 1/4 turn bayonet attachment. For safety, bowl cannot be removed when pressurized.



To Remove To Attach

Bowl options provide the user with a bowl to fit any application.



Nylon Composite Poly bowl w/bowl guard

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



Where's YOUR Module/Air 1000 Zone?

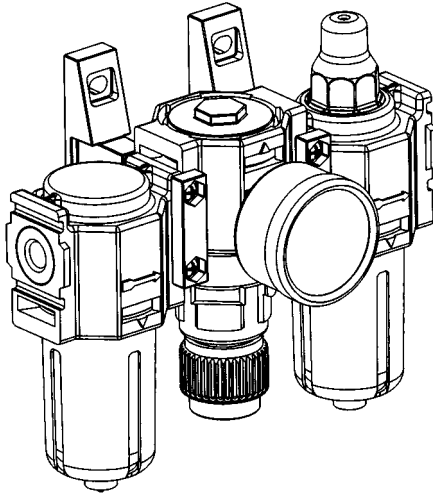
- Packaging
- Robotics
- Food/Beverage
- Woodworking
- Printing/Textile
- Material Handling
- Medical/Dental
- Car Wash
- Animation
- Laundry



Safety Lock-out Valve
Protection from unexpected start-up



Manifold Block
Provides additional circuit design

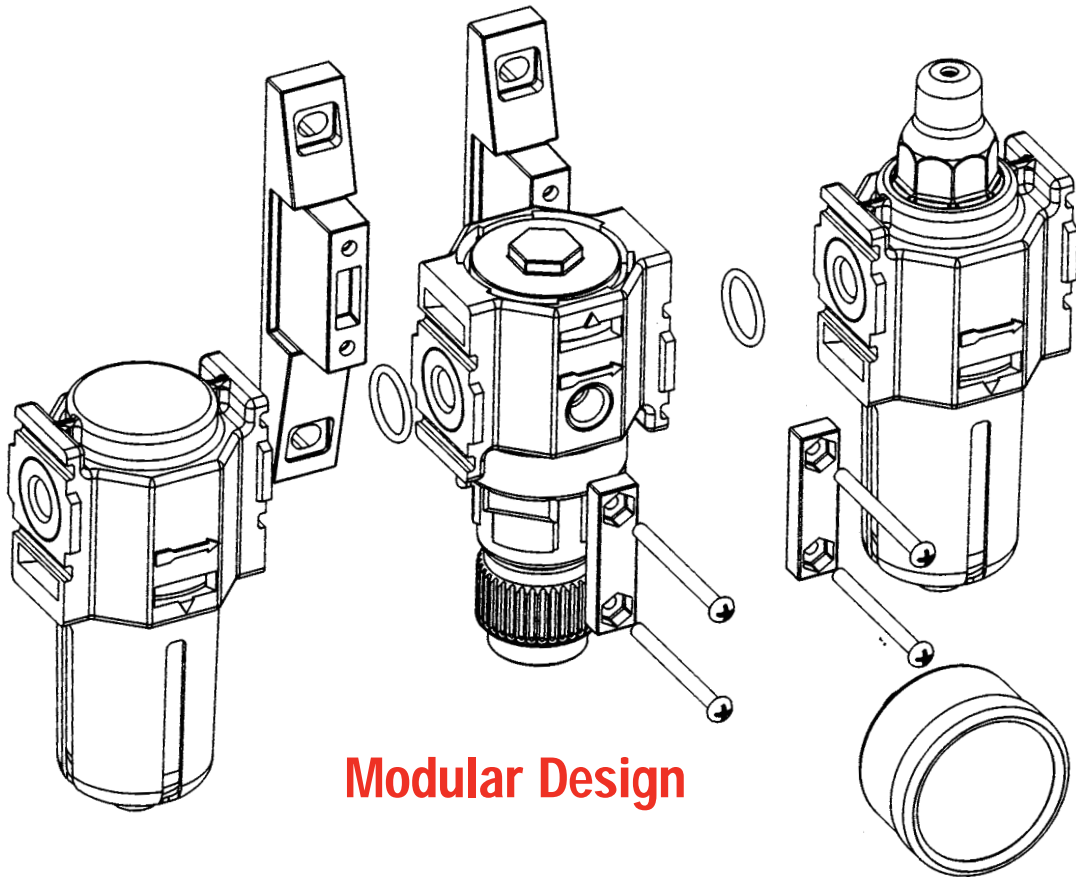


General Warranty

The Ingersoll-Rand Fluid Products ("I/R FP") warrants to the original use purchaser of the I/R FP Air Systems Components depicted in this catalog that I/R FP will repair or replace, free of charges, including return shipping costs within the Continental United States of America, any such product which under normal use and service proves defective in material or workmanship, as determined by I/R FP inspection, twenty-four months from date of purchase, provided the claimed defective product, or part thereof, is promptly returned to the I/R FP Service Repair Center or a factory authorized service repair center, with transportation charges prepaid.

If I/R FP inspection discloses no defect in material or workmanship, repair or replacement and return will be made at customary charges.

The foregoing warranty supersedes, voids and is in lieu of all or any other warranties, expressed or implied, and no warranty of merchantability or fitness for particular purpose is intended or made. I/R FP's sole obligation and the original use purchaser's sole remedy is as stated above and in no event shall I/R FP be liable for any special, direct, indirect, incidental, consequential or other damages or expenses of any nature including, without limitation, loss of profits or production time incurred by the original use purchaser or any other party.



Modular Design



Features

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.

Ordering



| Model No. | Description |
|-----------|------------------------------------|
| 104263 | Clamp Kit (fits all port sizes) |



T-Type Wall Mounting Brackets

These brackets provide easy wall mounting. They are excellent for mounting a single unit or multiple units which are 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.

| Model No. | Description |
|-----------|--------------------|
| 104262 | T-Type Bracket Kit |

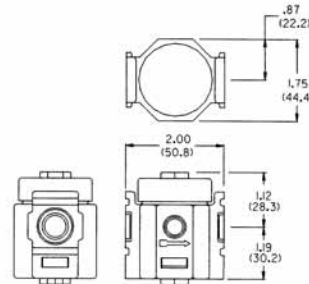


Modular Manifold Kit

The manifold block is an excellent way to provide circuit design flexibility. 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.

Threads are NPT.

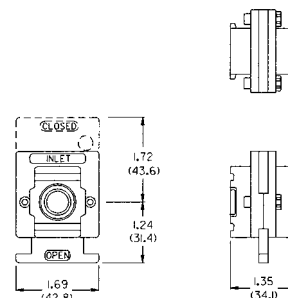
| Model No. | Description |
|-----------|-------------------|
| 104254-1 | 1/8" Manifold Kit |
| 104254-2 | 1/4" Manifold Kit |



Lockout, 3-Way Shut-off Valve

Meets OSHA regulation 1910.147. This lockout 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 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.

| Model No. | Description |
|-----------|----------------|
| 104253-1 | 1/8" NPT Ports |
| 104253-2 | 1/4" NPT Ports |

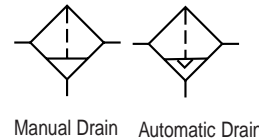


Features

1/8" and 1/4" Port Sizes

ARO® Module/Air 1000 Series filters are designed to separate condensed water, rust, scale and other debris from the air lines which may 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 light weight, corrosion resistant and have no paint to chip. Combination units can be pipe nipped 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 arrow heads provides easy bowl removal and filter element replacement.
- Air inlet arrow is molded into base.
- 20 micron filter element is standard. 5 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

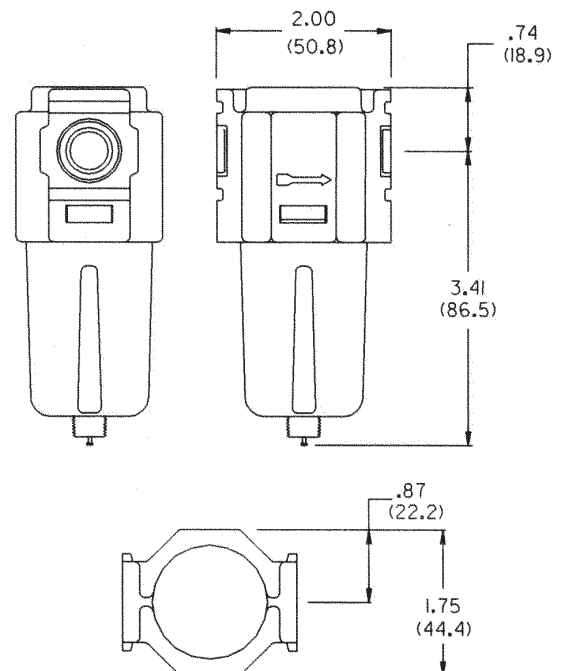
| | |
|------------------------|---|
| Body: | Glass Reinforced, Composite Nylon |
| Bowl: | Polycarbonate w/ Bowl Guard Standard |
| Bowl Guard: | Composite with Sight Windows |
| Seals: | Buna-N |
| Drain: | Push Type |
| Filter Element: | Porous Polypropylene |

Operating Conditions

| | |
|-----------------------------|--|
| Temperature Range: | 0° to 125° F (-18° to 52° C) |
| Max. Inlet Pressure: | Polycarbonate Bowl – 150 PSIG (10.4 bar) Composite Bowl – 150 PSIG (10.4 bar) |
| Sump Capacity: | .60 oz. (18 ml) |
| Flow: | Air flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (0.4 bar) pressure drop 1/8" = 28 scfm (13 dm ³ /s) 1/4" = 38 scfm (18 dm ³ /s) |

Dimensional Data

Dimensions in Inches (mm)



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 below the chart to select the proper model number. For BSP threads, consult factory.

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

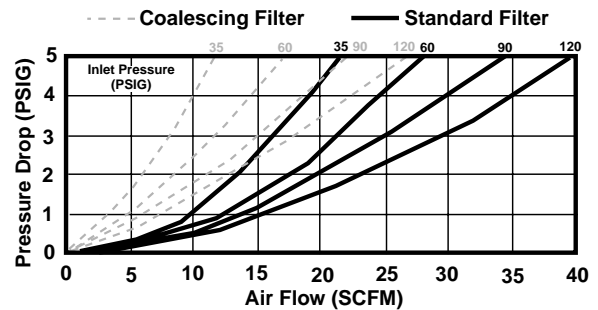
| Port Size NPT | Flow scfm | Bowl Size oz. (ml) | Filter Element (Micron) | Weight lbs. (g) | Manual Push Drain | | Automatic Drain | |
|---------------------------|--------------|-----------------------|----------------------------|--------------------|-------------------|----------------------------|-----------------|----------------------------|
| | | | | | Composite Bowl | Polycarbonate Bowl w/Guard | Composite Bowl | Polycarbonate Bowl w/guard |
| STANDARD FILTERS | | | | | | | | |
| 1/8" | 28 | 1.10 (33) | 20 | .25 (115) | | F25111-200 | | F25111-201 |
| 1/4" | 38 | 1.10 (33) | 20 | .22 (100) | F25121-220 | F25121-200 | F25121-221 | F25121-201 |
| COALESCING FILTERS | | | | | | | | |
| 1/8" | 15 | 1.10 (33) | | .25 (115) | | F25111-300 | | F25111-301 |
| 1/4" | 17 | 1.10 (33) | | .22 (100) | F25121-320 | F25121-300 | F25121-321 | F25121-301 |

| Basic Model No. | Port Size NPT |
|---------------------|----------------------------------|
| F 2 5 1 1 1 - X X X | 1/8" with Brass Insert |
| F 2 5 1 2 1 - X X X | 1/4" with Brass Insert |
| F 2 5 1 3 1 - X X X | 1/8" Molded Threads (No Inserts) |
| F 2 5 1 4 1 - X X X | 1/4" Molded Threads (No Inserts) |

Drain Option

| |
|-----------------------|
| 0 - Manual Push Drain |
| 1 - Automatic Drain |

| Filter Element | Bowl Option |
|---------------------------|---------------------------|
| 2 - 20 micron | 0 - Polycarbonate w/guard |
| 3 - .01 micron Coalescing | 2 - Composite Nylon |
| 4 - 5 micron | |



Coalescing Filters

These high efficiency filters are designed for applications where the delivered air must be free of oil and fine particles. For applications in paint spraying, instrumentation controls, and other compressed air applications. Use in conjunction with an upstream filter. See example at right. 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

Accessories



Kit Includes:
Screws and O-ring

104263 Clamp Kit



Kit Includes:
T-Bracket, Clamp, Screws and O-ring

104262 T-Type Wall Mount Bracket Kit

| Model No. | Description |
|-----------|--|
| 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 w/Guard |
| 104257 | Service Kit |

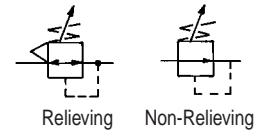
Features



1/8" and 1/4" Port Sizes

ARO® Module/Air 1000 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 light weight, corrosion resistant and have no paint to chip. Combination units can be pipe nipped or clamped together in a modular configuration.
- Non-rising, self locking adjustment knob cannot be vibrated loose. Increase/decrease arrows on the knob allows 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

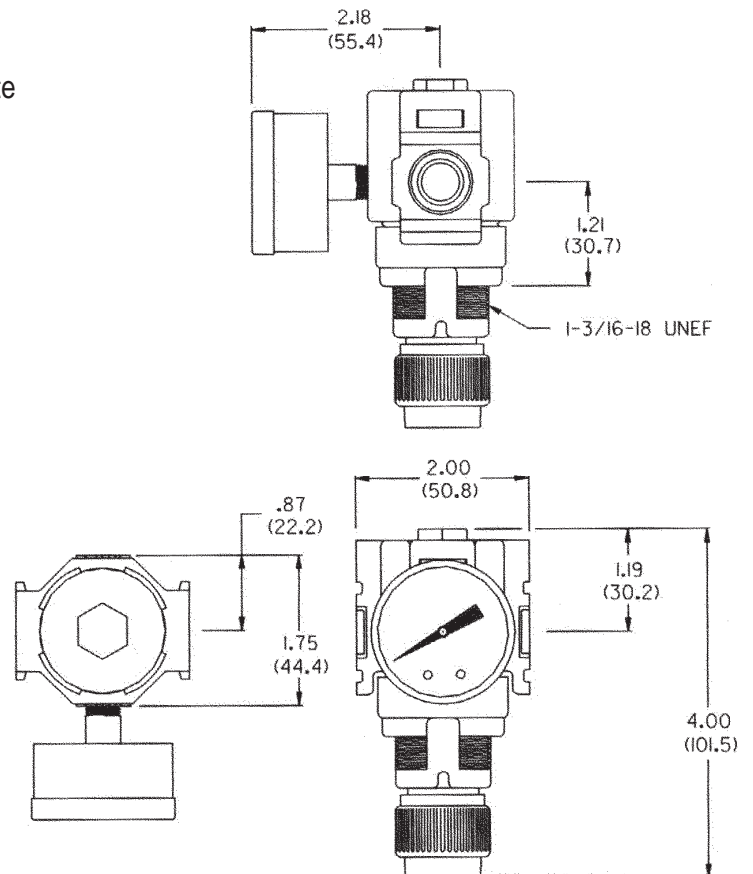
| | |
|------------------------|----------------------------|
| Body: | Glass Reinforced Composite |
| Seals: | Buna-N |
| Diaphragm: | Buna-N |
| Valve Spring: | Stainless Steel |
| Spring Housing: | Glass Filled Nylon |
| Cap and Knob: | High Impact ABS |
| Gauge Port: | 1/8" NPT |

Operating Conditions

| | |
|-----------------------------|--|
| Temperature Range: | 0° to 125° F (-18° to 52° C) |
| Max. Inlet Pressure: | 250 PSIG (17 bar) |
| Flow: | Air flow is at 100 PSIG (6.9 bar) inlet and 90 PSIG (6.2 bar) outlet 1/8" = 13 scfm (6 dm ³ /s) 1/4" = 13 scfm (6 dm ³ /s) |

Dimensional Data

Dimensions in Inches (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.

Ordering



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

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

| Port Size NPT | Flow scfm | Weight lbs. (g) | RELIEVING TYPE REGULATORS | | | |
|---------------|-----------|-----------------|---------------------------|------------|------------|------------|
| | | | Without Gauge | | With Gauge | |
| | | | 5-125 PSIG | 0-50 PSIG | 5-125 PSIG | 0-50 PSIG |
| 1/8" | 13 | .32 (143) | R27111-100 | R27111-200 | R27111-600 | R27111-700 |
| 1/4" | 13 | .30 (135) | R27121-100 | R27121-200 | R27121-600 | R27121-700 |

Basic Model No. Port Size NPT

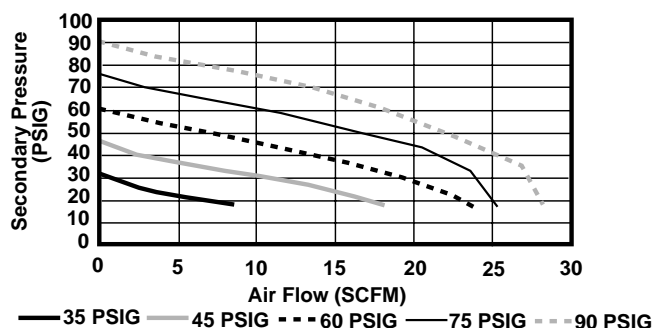
- R 2 7 1 1 1 - X X X 1/8" with Brass Insert
- R 2 7 1 2 1 - X X X 1/4" with Brass Insert
- R 2 7 1 3 1 - X X X 1/8" Molded Thread (No Insert)
- R 2 7 1 4 1 - X X X 1/4" Molded Thread (No Insert)

Control Option

- 0 - Standard Knob
- 3 - Tamper Resistant

Relieving Option

- 0 - Relieving
- 2 - Non-Relieving



Pressure Range PSIG (bar)

- 1 - 5-125 (.4 - 8.6) No gauge
- 2 - 0-50 (0 - 3.5) No gauge
- 4 - 0-15 (.0 - 1) No gauge
- 6 - 5-125 (.4-8.6) w/gauge 0-150 lb. (#100095-160)
- 7 - 0-50 (0-.35) w/gauge 0-60 lb. (#29863)

Accessories



104263 Clamp Kit

Kit Includes:
Two Clamps,
Screws and
O-Rings



100095-160



104262 T-Type Wall Mount Bracket Kit

Kit Includes:
T-Bracket,
Clamp,
Screws, and
O-Rings

Model No. Description

- 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
- 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)



Features

1/8" and 1/4" Port Sizes

ARO® Module/Air 1000 Series lubricator features 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. Light weight, non-detergent oils, like ARO pneumatic lubricating oil (part number 29665) is recommended.

- The oil adjustment feature has a tamper-resistant plug (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 light weight, corrosion resistant and have no paint to chip. Combination units can be pipe nipped or clamped together in a modular configuration.



Performance Specifications

Materials of Construction

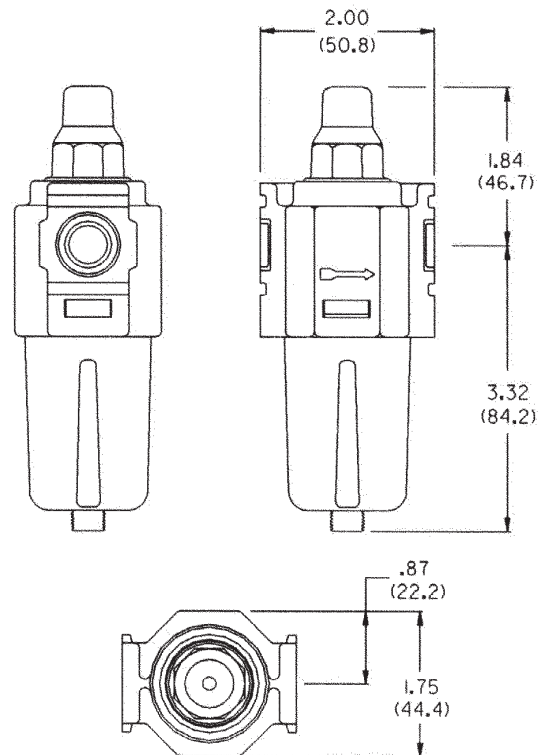
| | |
|--------------------|-------------------------------------|
| Body: | Glass Reinforced Bodies |
| Bowl: | Polycarbonate w/Bowl Guard Standard |
| Bowl Guard: | Composite with Sight Windows |
| Seals: | Buna-N |
| Sight Dome: | Nylon |

Operating Conditions

| | |
|-----------------------------|---|
| Temperature Range: | 0° to 125° F (-18° to 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) |
| Flow: | Air flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (0.4 bar) pressure drop 1/8" = 41 scfm (91 dm ³ /s) 1/4" = 60 scfm (28 dm ³ /s) |

Dimensional Data

Dimensions in Inches (mm)



Ordering



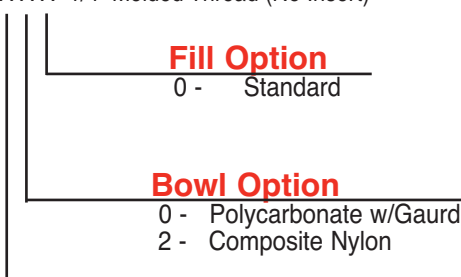
From the chart below select the model number associated with port size, and bowl option required. If other options are needed, use menu below the chart to select the proper model number. For BSP threads, consult factory.

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

| Port Size NPT | Flow scfm | Bowl Size Oz. (ml) | Weight lbs. (g) | Composite Bowl | Poly Bowl w/Guard |
|------------------|--------------|-----------------------|--------------------|-------------------|----------------------|
| 1/8" | 41 | 1.10 (33) | .25 (115) | L26111-120 | L26111-100 |
| 1/4" | 60 | 1.10 (33) | .23 (102) | L26121-120 | L26121-100 |

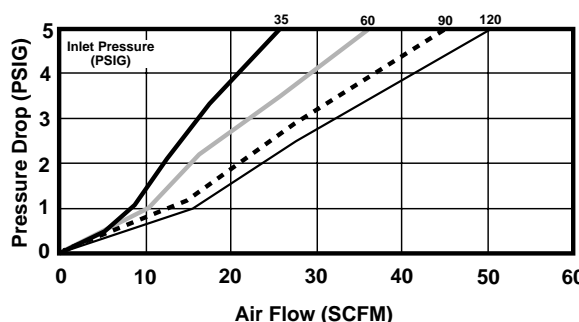
Basic Model No. Port Size NPT

- L 2 6 1 1 1 - X X X 1/8" with Brass Insert
- L 2 6 1 2 1 - X X X 1/4" with Brass Insert
- L 2 6 1 3 1 - X X X 1/8" Molded Thread (No Insert)
- L 2 6 1 4 1 - X X X 1/4" Molded Thread (No Insert)



Adjustment Option

- 1 - Standard



Accessories



104263 Clamp Kit

Kit Includes:
Two Clamps,
Screws and
O-Ring



104262 T-Type Wall
Mount Bracket Kit

Kit Includes:
T-Bracket,
Clamp,
Screws, and
O-Ring

Model No. Description

- 29665 Lubricating Oil (1 quart)
- 104260 Polycarbonate Bowl w/Guard
- 104261 Composite Bowl
- 104027 Tamper-Resistant Plug
- 104226 Sight Dome Repair Kit
- 104181 Service Kit



Features

1/8” and 1/4” Port Sizes

ARO® Module/Air 1000 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 light weight, corrosion resistant and have no paint to chip. Combination units can be pipe nipped or clamped together in a modular configuration.
- Non-rising, self locking adjustment knob cannot be vibrated loose.
- Increase/decrease arrows on the knob allows easy adjustment.
- Regulator offers in-line repairability. Diaphragm can be replaced without removing unit from line.
- Bayonet bowl attachment with line-up arrow heads provides easy filter element removal. Arrow heads 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.



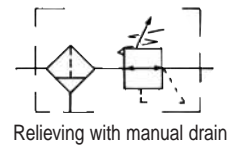
Performance Specifications

Materials of Construction

| | |
|------------------------|--|
| Body: | Glass Reinforced Bodies |
| Bowl: | Polycarbonate w/Bowl Guard Standard |
| Bowl Guard: | Composite w/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 |

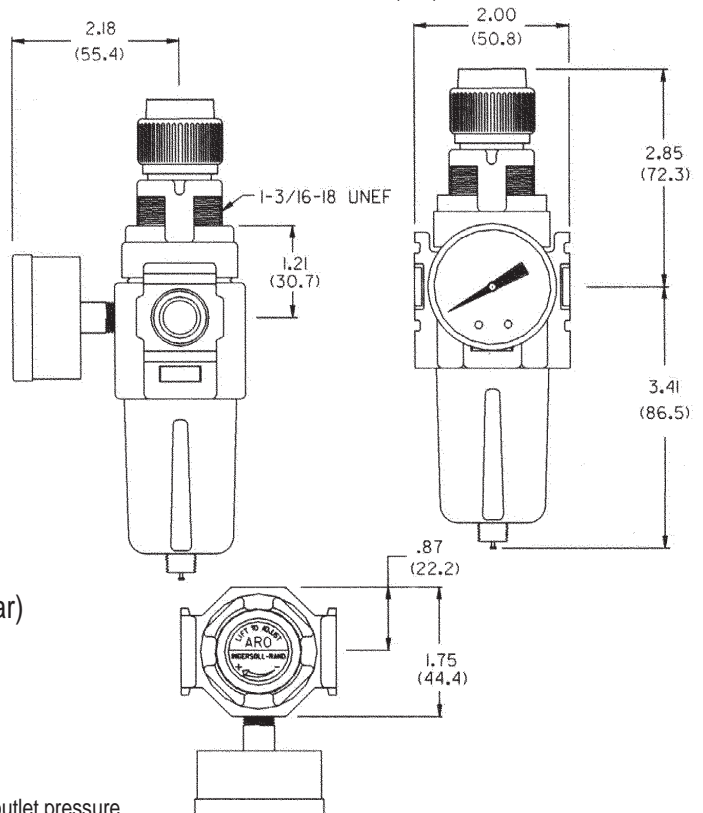
Operating Conditions

| | |
|-----------------------------|---|
| Temperature Range: | 0° to 125° F (-18° to 52° C) |
| Max. Inlet Pressure: | Poly Bowl – 150 PSIG (10.4 bar) Composite Bowl – 150 PSIG (10.4 bar) |
| Flow: | Air flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (0.4 bar) pressure drop 1/8” = 13 scfm (6 dm ³ /s) 1/4” = 13 scfm (6 dm ³ /s) |



Dimensional Data

Dimensions in Inches (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.



Ordering



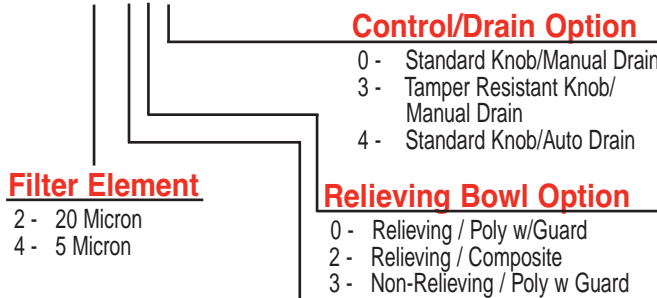
From the chart below select the model number associated with port size, pressure range and drain option required. If other options are needed, use menu below the chart to select the proper model number. For BSP threads, consult factory.

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

| Port Size NPT | Flow scfm | Weight lbs. (g) | Filter Element (Micron) | Pressure Range PSIG (bar) | Composite Bowl | | Poly Bowl w/Bowl Guard | |
|------------------|--------------|--------------------|----------------------------|------------------------------|----------------|-----------------|------------------------|-----------------|
| | | | | | Push Drain | Automatic Drain | Push Drain | Automatic Drain |
| 1/8" | 13 | .37 (169) | 20 | 5-125 (.4-8.6) | P29112-120 | P29112-124 | P29112-100 | P29112-104 |
| 1/4" | 13 | .36 (162) | 20 | 5-125 (.4-8.6) | P29122-120 | P29122-124 | P29122-100 | P29122-104 |

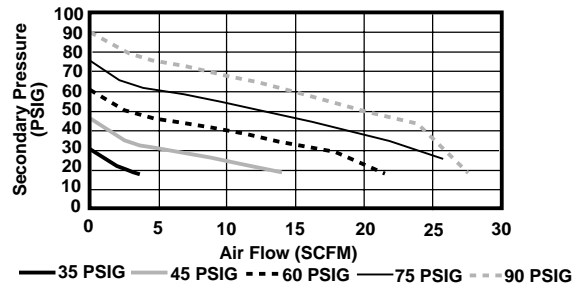
Basic Model No. Port Size NPT

- P 2 9 1 1 X - X X X 1/8" with Brass Inserts
- P 2 9 1 2 X - X X X 1/4" with Brass Inserts
- P 2 9 1 3 X - X X X 1/8" Molded Thread (No Insert)
- P 2 9 1 4 X - X X X 1/4" Molded Thread (No Insert)



Pressure Range PSIG (bar)

- 1 - 5-125 (.4-8.6) no gauge
- 2 - 0-50 (0-3.5) no gauge
- 4 - 0-15 (.0-1) no gauge
- 6 - 5-125 (.4-8.6) w/gauge
- 7 - 0-50 (0-3.5) w/gauge



Accessories



104263 Clamp Kit

Kit Includes:
Two Clamps,
Screws and
O-Ring



100095-160



104262 T-Type Wall
Mount Bracket Kit

Kit Includes:
T-Bracket,
Clamp,
Screws, and
O-Ring

Model No. Description

- 29668 Mounting Bracket
- 104094 Panel Mount Nut
- 104039 Stud Mount
- 104255 Service Kit, Relieving
- 104256 Service Kit, Non-Relieving
- 104109 Tamper Resistant Kit
- 29863 0-60 PSIG Gauge
- 100095-160 0-150 PSIG Gauge
- 29846 0-15 PSIG Gauge
- 29850 0-160 PSIG Gauge
- 104258 Poly Bowl w/Guard
- 104259 Composite Bowl
- 104265 Nut & Bracket Kit (Includes 104094 Nut and 29668 Bracket)
- 29660-1 5 Micron Element
- 29660-2 20 Micron Element
- 104264 Pulse Drain Kit

Performance Specifications



Filter-Regulator-Lubricator

Max. Inlet Pressure: 150 PSIG (10.4 bar)
Operating Temperature: 0° to 125°F (-18° to 52°C)
Filter Element: 20 Micron
Pressure Range in Regulator: 5 to 125 PSIG
 (.4 to 8.6 bar)
Gauge: 0 to 150 PSI
Gauge Port: 1/8 NPT



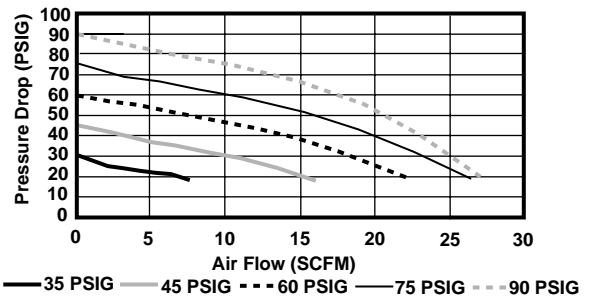
Ordering

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 factory.

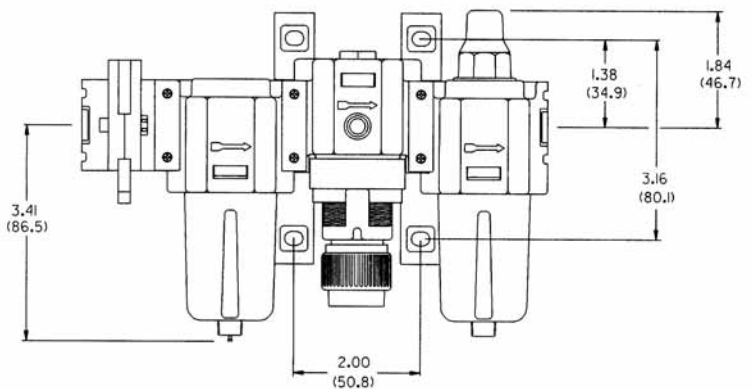
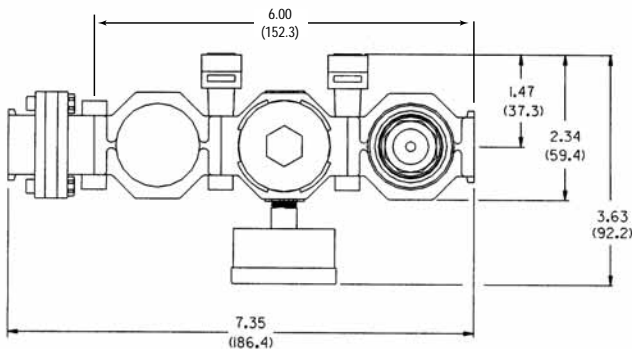
| Port Size NPT | Models | | Weight lbs. (g) | Components | | |
|---|---------------|------------------|-----------------|------------|------------|------------|
| | With T-Mounts | Without T-mounts | | Filter | Regulator | Lubricator |
| Push Drain • Polycarbonate Bowl with Bowl Guard | | | | | | |
| 1/8" | C28111-800 | C28112-800 | 1.05 (479) | F25111-200 | R27111-600 | L26111-100 |
| 1/4" | C28121-800 | C28122-800 | .99 (451) | F25121-200 | R27121-600 | L26121-100 |
| Automatic Drain • Polycarbonate Bowl with Bowl Guard | | | | | | |
| 1/8" | C28111-801 | | 1.05 (479) | F25111-201 | R27111-600 | L26111-100 |
| 1/4" | C28121-801 | C28122-801 | .99 (451) | 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



Dimensional Data Dimensions Inches (mm)



Performance Specifications



Piggyback-Lubricator

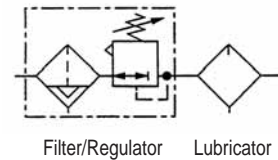
Max. Inlet Pressure: 150 PSIG (10.4 bar)
Operating Temperature: 0° to 125°F (-18° to 52°C)
Filter Element: 20 Micron
Pressure Range in Regulator: 5 to 125 PSIG (.4 to 8.6 bar)
Gauge: 0 to 150 PSI
Gauge Port: 1/8 NPT



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 factory.

| Port Size NPT | Models | | Weight lbs. (g) | Components | |
|---|------------------|---------------------|--------------------|------------------|------------|
| | With T-Mounts | Without T-mounts | | Filter/Regulator | Lubricator |
| Push Drain • Polycarbonate Bowl with Bowl Guard | | | | | |
| 1/8" | C28111-600 | C28112-600 | .81 (370) | P29112-600 | L26111-100 |
| 1/4" | C28121-600 | C28122-600 | .78 (352) | P29122-600 | L26121-100 |
| Automatic Drain • Polycarbonate Bowl with Bowl Guard | | | | | |
| 1/8" | C28111-601 | C28112-601 | .81 (370) | P29112-604 | L26111-100 |
| 1/4" | C28121-601 | C28122-601 | .78 (352) | P29122-604 | L26121-100 |

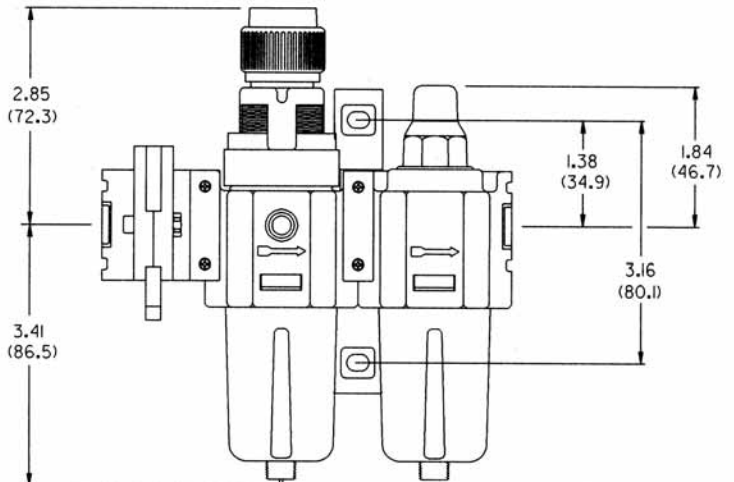
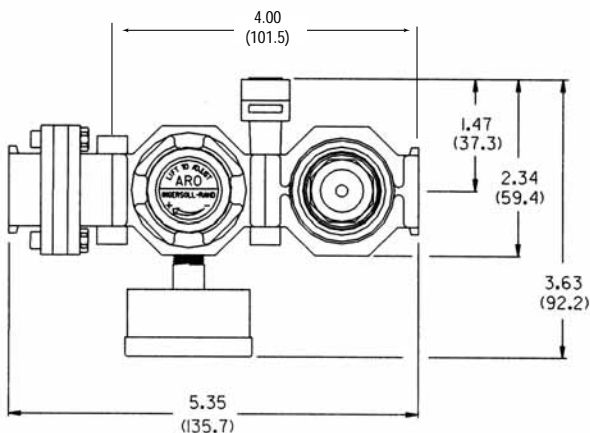


Notes: Order lock-out valve separately and attach to filter inlet with clamp kit (104263).

To order modular model with pipe nipples, place a "3" in the sixth position of the model number. Example: C28XX3-XXX

Dimensional Data

Dimensions in Inches (mm)

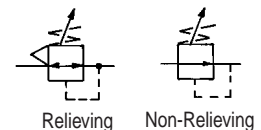
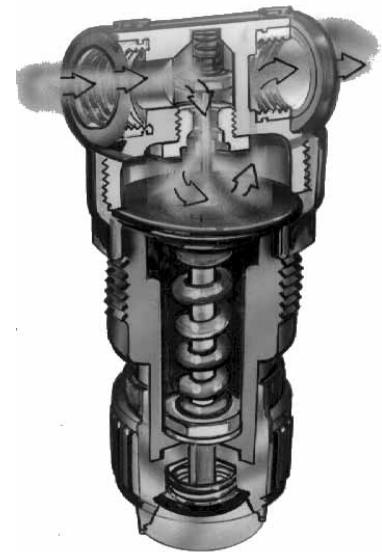


Features

1/8" and 1/4" Port Sizes (Ideal for water & low flow application)

ARO Miniature Series Regulators are the ideal choice where a small, compact unit is required to provide accurate control of either air or water flow. It's diaphragm design provides a durable, no-leak seal especially effective in water and low-flow applications. Offering exceptional repeatability, 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 it's 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". 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 |

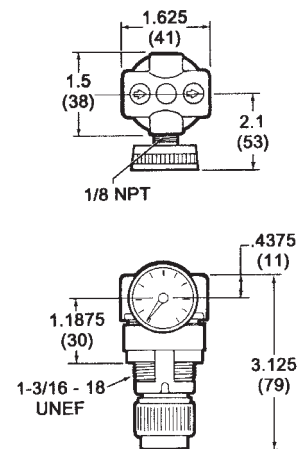
Performance Specifications

| | |
|-------------------------------------|---|
| Max. Inlet Pressure: | 250 PSIG (17 bar) |
| Pressure Range in Regulator: | 0 to 125 PSIG (0 to 8.6 bar) |
| Operating Temperature Range: | 0° to 150° F (-18° to 65° C) |
| Weight: | 1/8" = .25 lbs. (115 g) 1/4" = .22 lbs. (100 g) |
| * Air Flow: | 1/8" = 13 SCFM (6 dm³/s) 1/4" = 13 SCFM (6 dm³/s) |
| ** Water Flow: | 1/8" = 1.75 GPM (6.6 L /min.) 1/4" = 2 GPM (7.6 L /min.) |
| Gauge Port: | 1/8" NPT |

* Air flow is at 125 PSIG (8.6 bar) inlet and 100 PSIG (6.9 bar) outlet

** Water flow is at 60 PSIG (4.1 bar) inlet and 40 PSIG (2.8 bar) outlet.

Dimensional Data



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.

Ordering

1/8" and 1/4" Port Sizes (Ideal for water & low flow application)

Select the basic model number associated with the thread type (brass or molded threads) and port size (1/8" or 1/4") desired from the table below. For BSP threads, consult factory.

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

| 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" | 127132- | 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 service) | 0 = Standard Knob |
| 1 = 0-50 | .0-3.5 | No gauge | 2 = Non-Relieving (for air or water service) | 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 | W/ 0-160 lb. gauge (#29850) | | |
| 7 = 0-50 | .0-3.5 | W/ 0-60 lb. gauge (#29863) | | |
| 8 = 0-15 | .0-1.0 | W/ 0-15 lb. gauge (#29846) | | |

Shaded area = Best-Selling Models



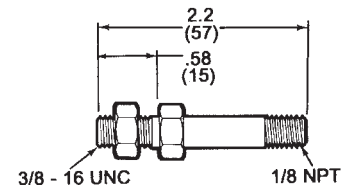
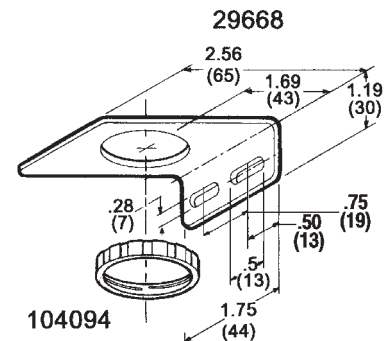
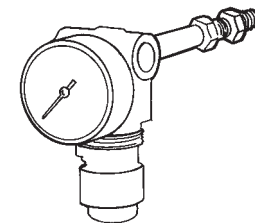
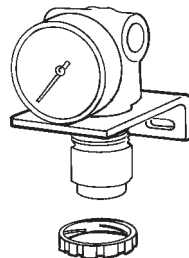
127122-600
(Shown with 29850 Gauge)



100095-160

Accessories

| MODEL | DESCRIPTION |
|------------|--|
| 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 lb. (Gold) |
| 29540 | Spring 0-50 lb. (Green) |
| 29754-1 | Spring 0-25 lb. (Blue) |
| 29622 | Spring 0-15 lb. (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) |



104039

Features



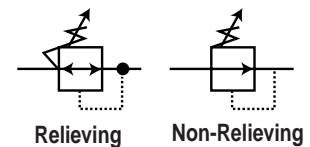
Miniature Series (1/8" and 1/4" Port Sizes)

FOR ACCURATE, LOW-COST CONTROL OF AIR AND WATER FLOW

- **Corrosion Protection** - Brass body with internal stainless steel valve spring provides corrosion protection against regulated fluids.
- **Accurate, Reliable Control** - Non-rising, locking adjustment knob maintains the desired setting.
- **Mounting Flexibility** - Panel mounting nut is part of the regulator and is included at no additional cost. Industry standard 1-3/16" - 18 threaded spring housing enables easy panel mounting (max. panel thickness is 3/16"). Available mounting bracket and stud mount provide a choice of wall mountings. Compact size is ideal for installations where space is limited.
- **Durability** - Brass construction makes this regulator the perfect choice for your most rugged and demanding air and water applications.



Graphic Symbols



Applications

- Medical and Dental Equipment
- Beverage Dispensing Equipment
- Lawn Irrigation Systems
- Water Purification Systems
- Car Wash Equipment
- Miniature Pneumatic Plumbing Circuits

Performance Specifications

| | |
|------------------------------|--|
| Max. Inlet Press.: | 250 PSIG (17 bar) |
| Max. Adjusted Press.: | 125 PSIG (8.6 bar) |
| Operating Temp.: | 0° to 150°F (-18° to 65°C) |
| Weight: | 1/8" = .75 lbs. (345 g) 1/4" = .67 lbs. (306 g) |
| Air Flow*: | 1/8" = 13 SCFM 1/4" = 13 SCFM |
| Water Flow**: | 1/8" = 1.75 GPM 1/4" = 2.0 GPM |

* Air flow is at 125 PSIG (8.6 bar) inlet and 100 PSIG (6.9 bar outlet).
** Water flow is at 60 PSIG (4.1 bar) inlet and 40 PSIG (2.8 bar) outlet.

WARNING: These regulators are designed for use in industrial compressed air or water systems only. Never use these regulators where pressure or temperature can exceed the rated operating conditions. See SPECIFICATIONS.

Ordering

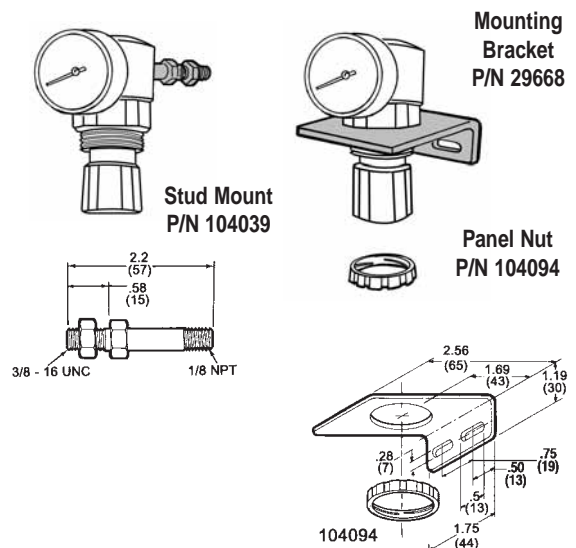
| Model Number | Port Size NPT | Gauge Port NPT | Type |
|--------------|---------------|----------------|--------------------|
| B27122-020 | 1/4" | 1/8" | Non-Relieving |
| B27112-000 | 1/8" | 1/8" | Relieving |
| B27122-000 | 1/4" | 1/8" | Relieving |
| B27122-100 | 1/4" | 1/8" | Relieving 0-50 psi |

Accessories

| Part Number | Description |
|-------------|--|
| 29850 | *Gauge 0-160 PSIG (0-11 bar) |
| 29668 | Mounting Bracket |
| 104094 | Panel Mounting Nut (Included with regulator) |
| 104039 | Stud Mounting |

*Gauge has polycarbonate lens.

Dimensional Data



Accessory Kits



Filters

| Kit Number: | Description: | Kit Contents: |
|-------------|-------------------------------|--|
| 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 w/guard | (1) Polycarbonate bowl w/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 |

Regulators

| Kit Number: | Description: | Kit Contents: |
|-------------|-----------------------------|---|
| 104039 | Stud Mount | (1) Stud and Mounting Nut |
| 104109 | Tamper Resistant Knob Kit | |
| 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 |

Lubricators

| Kit Number: | Description: | Kit Contents: |
|-------------|----------------------------|---------------------------------------|
| 104181 | Service Kit | (1) Compensating Valve and (1) O-Ring |
| 104260 | Polycarbonate Bowl w/Guard | (1) Polycarbonate Bowl w/Guard |
| 104261 | Composite Bowl | (1) Composite Bowl, (1) O-Ring |

Modular Components

| Kit Number: | Description: | Kit Contents: |
|-------------|------------------------|-------------------------------------|
| 104253-1 | Safety Lockout/Tagout | 1/8" NPT Threads |
| 104253-2 | Safety Lockout/Tagout | 1/4" NPT Threads |
| 104253-1-B | Safety Lockout/Tagout | 1/8" BSP Threads |
| 104253-2-B | Safety Lockout/Tagout | 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 |



Module/Air Filters / Regulators / Lubricators 2000™

Features

1/4", 3/8", & 1/2" Ports

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

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



Units have threaded ports in the housing allowing the user to mix pipe nipples and modular configurations to meet his needs.



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

Modular end pipe adapters provide plumbing flexibility and allow for reduced inventory by stocking one size FRL and the various sizes of adapters.



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

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.)

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



Filter-Regulator
"Piggyback"



Filter-Coalescing Filter
Provides 99.9% contaminant removal



Regulator Flexibility
Mount regulator up or down

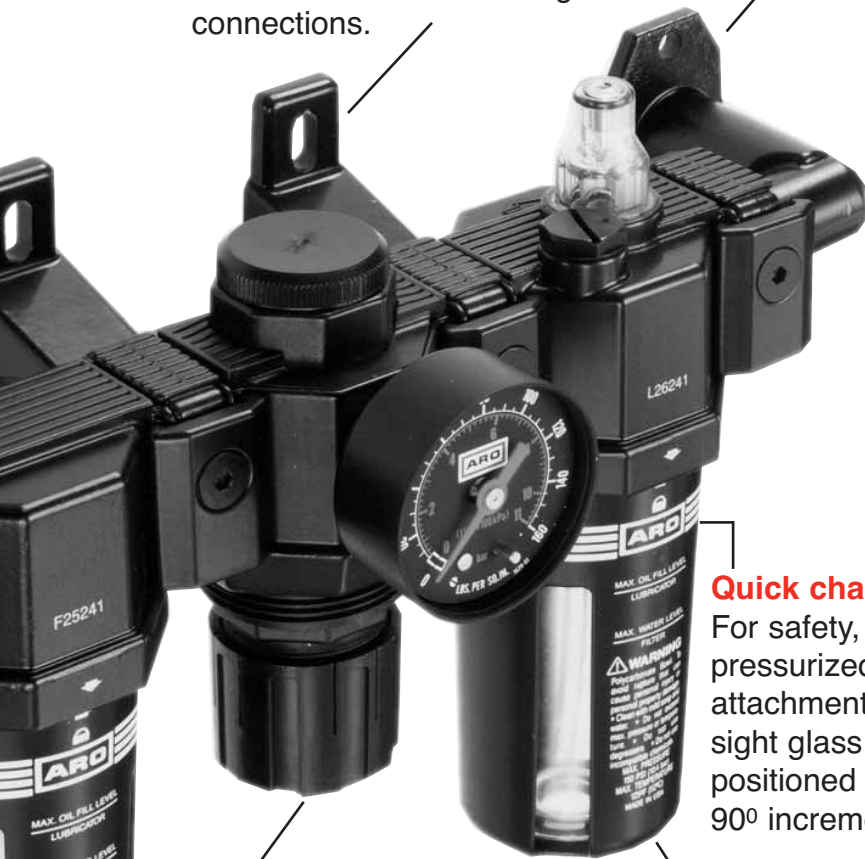


Safety Lock-out Valve
Protection from unexpected start-up

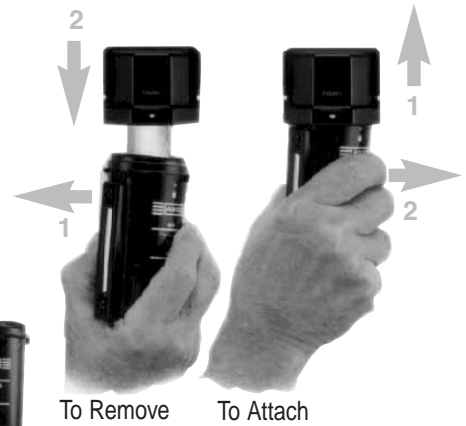
T-type wall mounting bracket provides a rugged heavy-duty wall mount with excellent wall to unit clearance for installing connections.

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

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.



Quick change bowl with bayonet attachment. For safety, bowl cannot be removed when pressurized. One quarter (1/4) turn bayonet attachment allows sight glass to be positioned in 90° increments.



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



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



Manifold Block
Provides additional circuit design



Pipe Adapters
1/4", 3/8", 1/2" and 3/4" Pipe Sizes

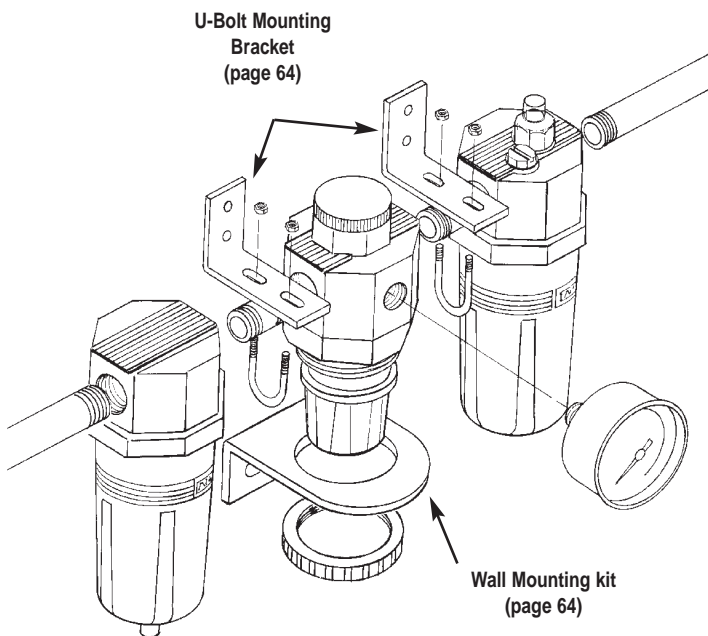
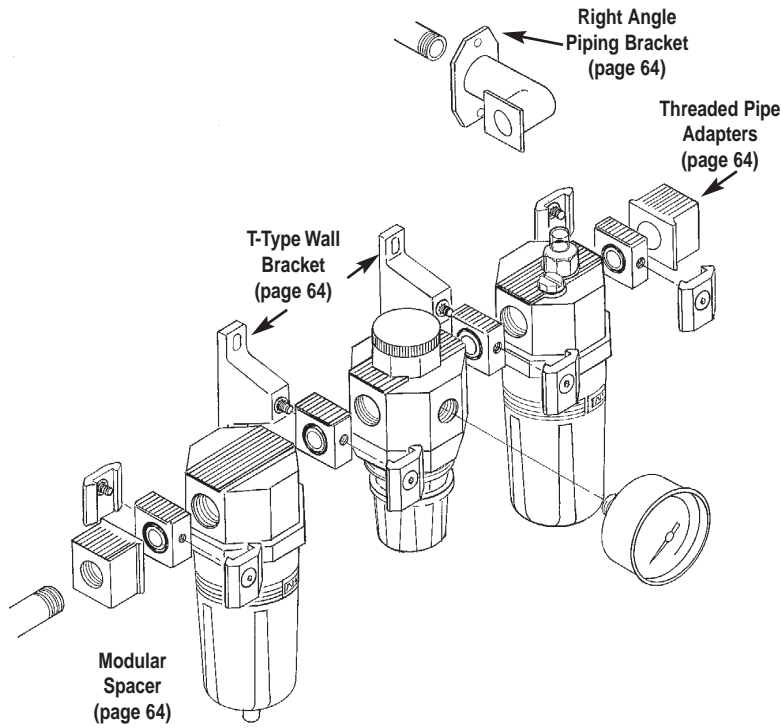


Right Angle panel Brackets
For cleaner installation

Features

The modular FRL with pipe nipple capability!

Individual components have threaded ports, allowing either modular configurations *or* pipe nipple connections.

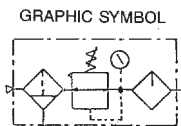


Performance Specifications



1/4", 3/8" & 1/2" Ports

| | |
|-------------------------------------|---|
| Max. Inlet Pressure: | Polycarbonate Bowl - 150 PSIG (10.4 bar) Metal Bowl - 175 PSIG (12 bar) |
| Operating Temperature Range: | Polycarbonate Bowl - 0° to 125° F (-18° to 52°C) Metal Bowl - 0° to 175°F (-18° to 79°C) |
| Filter Element: | 40 micron |
| Pressure Range in Regulator: | 5 to 125 PSIG (.3 to 8.6 bar) |
| Gauge: | 0 to 160 PSI |
| Gauge Port: | 1/4" NPT |
| Filter Drain: | Manual (standard); Automatic (optional) |



Ordering

Select the basic model number which represents the port size and bowl option required. Modular models listed include Gauge and "T" Brackets, and are shipped assembled. Pipe nipples models include Gauge and Nipples, and are shipped unassembled. If other options are required, order each unit separately.

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

NOTE: To order modular models without "T" Brackets, place a "2" in sixth position of model number. Example: CXXXX2-XXX. See page 64 for Mounting Brackets for pipe nipples models.

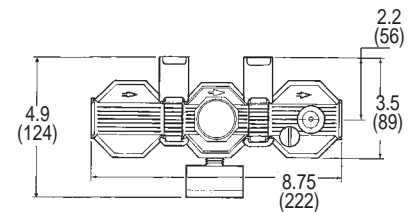
NOTE: Not all menu combinations are valid. See price book to verify.

| PORT SIZE NPT | MODELS | | WEIGHT lbs. (kg) | FILTER | COMPONENTS REGULATOR | LUBRICATOR |
|---------------------|---------|---------|---------------------|--------|-------------------------|------------|
| | MODULAR | NIPPLED | | | | |

Models & Dimensions, in. (mm)

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 • polycarb. bowl with bowl guard

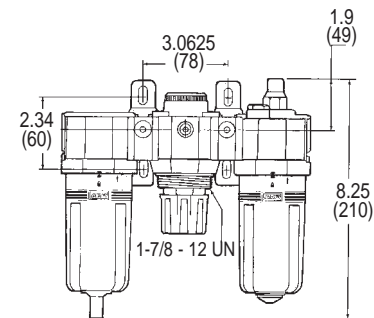
| | | | | | | |
|------|-------------------|-------------------|-----------|------------|------------|------------|
| 1/4" | C28221-800 | C28223-800 | 5.5 (2.5) | F25221-100 | R27221-600 | L26221-100 |
| 3/8" | C28231-800 | C28233-800 | 5.4 (2.4) | F25231-100 | R27231-600 | L26231-100 |
| 1/2" | C28241-800 | C28243-800 | 5.3 (2.4) | F25241-100 | R27241-600 | L26241-100 |

automatic drain • metal bowl with sight glass

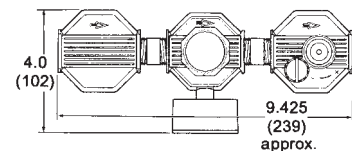
| | | | | | | |
|------|-------------------|----|-----------|------------|------------|------------|
| 1/4" | C28221-811 | ** | 5.5 (2.5) | F25221-111 | R27221-600 | L26221-110 |
| 3/8" | C28231-811 | ** | 5.4 (2.4) | F25231-111 | R27231-600 | L26231-110 |
| 1/2" | C28241-811 | ** | 5.3 (2.4) | F25241-111 | R27241-600 | L26241-110 |

automatic drain • polycarb bowl with bowl guard

| | | | | | | |
|------|-------------------|----|-----------|------------|------------|------------|
| 1/4" | C28221-801 | ** | 5.5 (2.5) | F25221-101 | R27221-600 | L26221-100 |
| 3/8" | C28231-801 | ** | 5.4 (2.4) | F25231-101 | R27231-600 | L26231-100 |
| 1/2" | C28241-801 | ** | 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 nipples FRL combo units with automatic drain, order individual filter, regulator and lubricator components and pipe nipples.



Performance Specifications

1/4", 3/8" & 1/2" Ports

| | |
|-------------------------------------|--|
| Max. Inlet Pressure: | Polycarbonate Bowl - 150 PSIG (10.4 bar) Metal Bowl - 175 PSIG (12 bar) |
| Operating Temperature Range: | Polycarbonate Bowl - 0° to 125° F (-18° to 52°C) Metal Bowl - 0° to 175° F (-18° to 79°C) |
| Filter Element: | 40 micron |
| Filter Drain: | Manual (standard); Automatic (optional) |
| Pressure Range in Regulator: | 5 to 125 PSIG (.3 to 8.6 bar) |
| Gauge: | 0 to 160 PSI |
| Gauge Port: | 1/4" NPT |



**C28241-610
(Modular)**

Ordering

Select the basic model number which represents the port size and bowl option required. Modular models listed include Gauge and "T" Brackets, and are shipped assembled. Pipe nipped models include Gauge and Nipple, and are shipped unassembled. If other options are required, order each unit separately.

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

NOTE: To order modular models without "T" Brackets, place a "2" in sixth position of model number. Example: CXXXX2-XXX. See page 64 for Mounting Brackets for pipe nipped models.

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

| PORT SIZE NPT | MODELS | | WEIGHT lbs. (kg) | COMPONENTS | |
|---------------------|---------|---------|---------------------|------------|------------|
| | MODULAR | NIPPLED | | PIGGYBACK | LUBRICATOR |

Models & Dimensions, in. (mm)

push drain • metal bowl with sight glass

| | | | | | |
|------|-------------------|-------------------|-----------|------------|------------|
| 1/4" | C28221-610 | | 4.1 (1.9) | P29221-610 | L26221-110 |
| 3/8" | C28231-610 | | 4.0 (1.8) | P29231-610 | L26231-110 |
| 1/2" | C28241-610 | C28243-610 | 3.9 (1.8) | P29241-610 | L26241-110 |

push drain • polycarb. 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 |

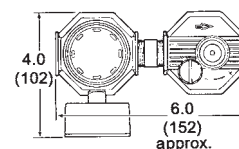
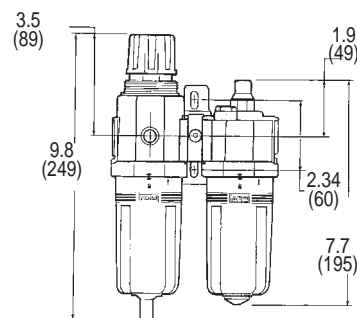
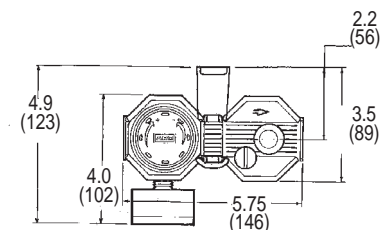
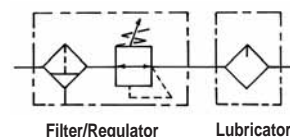
automatic drain • metal bowl with sight glass

| | | | | | |
|------|-------------------|----|-----------|------------|------------|
| 1/4" | C28221-611 | ** | 4.1 (1.9) | P29221-614 | L26221-110 |
| 3/8" | C28231-611 | ** | 4.0 (1.8) | P29231-614 | L26231-110 |
| 1/2" | C28241-611 | ** | 3.9 (1.8) | P29241-614 | L26241-110 |

automatic drain • polycarb bowl with bowl guard

| | | | | | |
|------|-------------------|----|-----------|------------|------------|
| 1/4" | C28221-601 | ** | 4.1 (1.9) | P29221-604 | L26221-100 |
| 3/8" | C28231-601 | ** | 4.0 (1.8) | P29231-604 | L26231-100 |
| 1/2" | C28241-601 | ** | 3.9 (1.8) | P29241-604 | L26241-100 |

NOTE: Two piece modular models include (1) **104171** T-Brackets and (1) **100067** Gauge. Pipe Nipped models include (1) **100067** Gauge and (1) appropriate sized pipe nipple. For pipe nipped FRL combo units with automatic drain, order individual filter/regulator and lubricator components and pipe nipples.



Performance Specifications



1/4", 3/8" & 1/2" Ports

| | |
|-------------------------------------|--|
| Max. Inlet Pressure: | Polycarbonate Bowl - 150 PSIG (10.4 bar) Metal Bowl - 175 PSIG (12 bar) |
| Operating Temperature Range: | Polycarbonate Bowl - 0° to 125° F (-18° to 52°C) Metal Bowl - 0° to 175° F (-18° to 79°C) |
| Filter Element: | 40 micron |
| Filter Drain: | Manual (standard); Automatic (optional) |



Ordering

Select the basic model number which represents the port size and bowl option required. Modular models listed include Gauge and "T" Brackets, and are shipped assembled. Pipe nipped models include Gauge and Nipple, and are shipped unassembled. If other options are required, order each unit separately.

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

NOTE: To order modular models without "T" Brackets, place a "2" in sixth position of model number. Example: CXXXX2-XXX. See page 64 for Mounting Brackets for pipe nipped models.

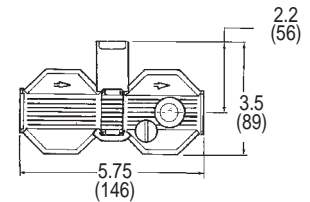
NOTE: Not all menu combinations are valid. See price book to verify.

| PORT SIZE NPT | MODELS | | WEIGHT lbs. (kg) | COMPONENTS | |
|---------------------|---------|---------|---------------------|------------|------------|
| | MODULAR | NIPPLED | | FILTER | LUBRICATOR |

Models & Dimensions, in. (mm)

push drain • metal bowl with sight glass

| | | | | | |
|------|-------------------|--|-----------|------------|------------|
| 1/4" | C28221-710 | | 3.6 (1.6) | F25221-110 | L26221-110 |
| 1/2" | C28241-710 | | 3.3 (1.5) | F25241-110 | L26241-110 |

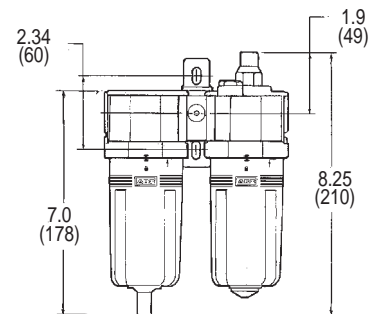


push drain • polycarb. bowl with bowl guard

| | | | | | |
|------|-------------------|--|-----------|------------|------------|
| 1/4" | C28221-700 | | 3.6 (1.6) | F25221-100 | L26221-100 |
|------|-------------------|--|-----------|------------|------------|

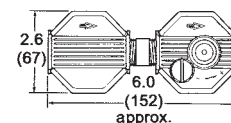
automatic drain • metal bowl with sight glass

| | | | | | |
|------|-------------------|----|-----------|------------|------------|
| 1/2" | C28241-711 | ** | 3.3 (1.5) | F25241-111 | L26241-110 |
|------|-------------------|----|-----------|------------|------------|



NOTE: Modular models include (1)104171 T-Bracket. Pipe Nipped models include (1) appropriate sized pipe nipple.

For pipe nipped FRL combo units with automatic drain, order individual filter, lubricator components and pipe nipple.



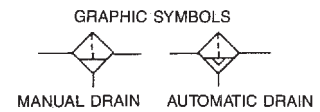
Features



1/4", 3/8" & 1/2" Ports

ARO Module/Air 2000® Series filters are designed to remove from the air any rust, scale, condensed water and other debris which may 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.
NOTE: See cautions on the use of polycarbonate bowls. (Page 90)
- 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. See page 33 for more information.
- 40 micron filter element with 12% more filter area.
- Automatic Drain has 1/8" NPT connection for drain line. 10 PSIG minimum operating pressure.

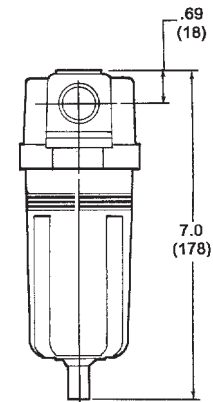
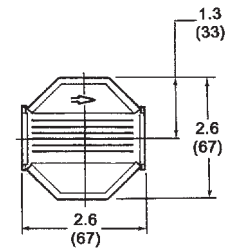


Performance Specifications

Models & Dimensions, in. (mm)

| | |
|-------------------------------------|--|
| 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 Temperature Range: | Polycarbonate Bowl - 0° to 125° F (-18° to 52°C) Metal Bowl - 0° to 175° F (-18° to 79°C) |
| * Flow: | 1/4" = 54 scfm (25 dm ³ /s) 3/8" = 100 scfm (47 dm ³ /s) 1/2" = 122 scfm (58 dm ³ /s) |

* Air flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (0.4 bar) pressure drop.





Ordering

1/4", 3/8" & 1/2" Ports

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

| PORT SIZE NPT | FLOW scfm (dms/s) | MODEL | BOWL SIZE oz. (ml) | FILTER ELEMENT (micron) | WEIGHT lbs. (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 • polycarb. 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 • polycarb 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) |



F25241-100

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

1/4" - F2522 X - X X X

3/8" - F2523 X - X X X

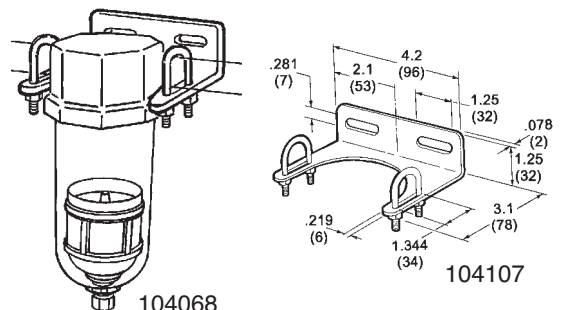
1/2" - F2524 X - X X X

Shaded area = Best-Selling Models

| Serv. Indicator Filter | Filter Element | Bowl Option | Drain Option |
|------------------------|-------------------------|----------------------------|-----------------------|
| 1 = None | 1 = 40 micron #100031-1 | 0 = Polycarbonate w/ guard | 0 = Manual Push Drain |
| 2 = Mechanical | 3 = Coalescing #100032 | 1 = Metal w/sight glass | 1 = Automatic Drain |
| | 4 = 5 micron #100031-3 | 2 = Metal | |

Filter Accessories

| MODEL | DESCRIPTION |
|----------|--|
| 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 w/guard |
| 104204 | Metal bowl w/ sight glass |
| 104206 | Metal bowl |
| 104248 | Activated Charcoal Element |





Features

1/4", 3/8" & 1/2" Ports

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% 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. See page 33.



Ordering

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

Specifications, dimensions and accessories same as standard filter, see pages 30 and 31.

| PORT SIZE NPT | FLOW scfm (dm ³ /s) | MODEL | BOWL SIZE oz. (ml) | WEIGHT lbs. (kg) |
|------------------|-----------------------------------|-------------------|-----------------------|---------------------|
| 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) |

push drain • polycarb. 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) |

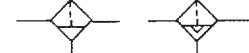
automatic drain • metal bowl with sight glass

| | | | | |
|------|---------|-------------------|-----------|------------|
| 1/4" | 40 (17) | F25221-311 | 6.0 (177) | 1.48 (.68) |
| 3/8" | 51 (24) | F25231-311 | 6.0 (177) | 1.46 (.66) |
| 1/2" | 53 (25) | F25241-311 | 6.0 (177) | 1.43 (.65) |

automatic drain • polycarb bowl with bowl guard

| | | | | |
|------|---------|-------------------|-----------|------------|
| 1/4" | 40 (17) | F25221-301 | 6.0 (177) | 1.48 (.68) |
| 3/8" | 51 (24) | F25231-301 | 6.0 (177) | 1.46 (.66) |
| 1/2" | 53 (25) | F25241-301 | 6.0 (177) | 1.43 (.65) |

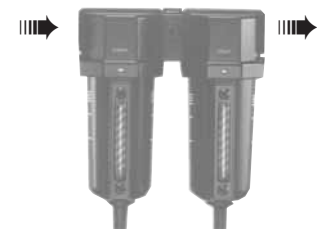
GRAPHIC SYMBOLS



Pre-Filters are essential for long coalescing life.

Recommended Installation

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



STANDARD PRE-FILTER COALESCING FILTER

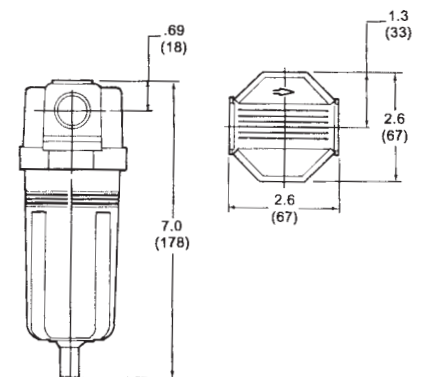
Additional Models Available

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

| Base Model | Filter Service Indicator | Bowl Option | Drain Option |
|------------|--------------------------|-------------|--------------|
| 1/4" F2522 | X | - 3 X X | |
| 3/8" F2523 | X | - 3 X X | |
| 1/2" F2524 | X | - 3 X X | |

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

| Filter Service Indicator | Bowl Option | Drain Option |
|----------------------------|----------------------------|-----------------------|
| 1 = None | 0 = Polycarbonate w/ guard | 0 = Manual Push Drain |
| 2 = With Service Indicator | 1 = Metal w/sight glass | 1 = Automatic Drain |
| | 2 = Metal | |



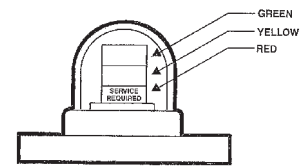
Features



1/4", 3/8" & 1/2" Ports

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 is 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 (pressure drop) causes the collar to rise, indicating 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°.



Ordering

From the chart below, select the model number associated with port size and bowl and drain option required. If other options are needed, refer to menu on page 31. Specifications, options and accessories same as standard filter, see pages 30 and 31.

| PORT SIZE NPT | FLOW | | MODEL WITH STANDARD ELEMENT | FLOW | | MODEL WITH COALESCING ELEMENT |
|---|------|----------------------|--------------------------------|------|--------------------|----------------------------------|
| | scfm | (dm ³ /s) | | scfm | dm ³ /s | |
| push drain • metal bowl with sight glass | | | | | | |
| 1/4" | 54 | (25) | F25222-110 | | | |
| 3/8" | 100 | (47) | F25232-110 | 51 | (24) | F25232-310 |
| 1/2" | 122 | (58) | F25242-110 | 53 | (25) | F25242-310 |

push drain • polycarb. bowl with bowl guard

| | | | | | | |
|------|-----|------|------------|----|------|------------|
| 1/4" | 54 | (25) | F25222-100 | 40 | (17) | F25222-300 |
| 3/8" | 100 | (47) | F25232-100 | | | |
| 1/2" | 122 | (58) | F25242-100 | 53 | (25) | F25242-300 |

automatic drain • metal bowl with sight glass

| | | | | | | |
|------|-----|------|------------|----|------|------------|
| 3/8" | 100 | (47) | F25232-111 | | | |
| 1/2" | 122 | (58) | F25242-111 | 53 | (25) | F25242-311 |

automatic drain • polycarb bowl with bowl guard

| | | | | | | |
|------|-----|------|------------|----|------|------------|
| 3/8" | 100 | (47) | F25232-101 | | | |
| 1/2" | 122 | (58) | F25242-101 | 53 | (25) | F25242-301 |

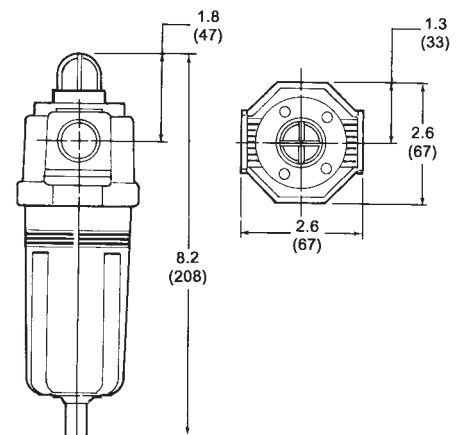


F25242-300

Accessories

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 w/guard |
| 104204 | Metal bowl w/ sight glass |
| 104206 | Metal bowl |

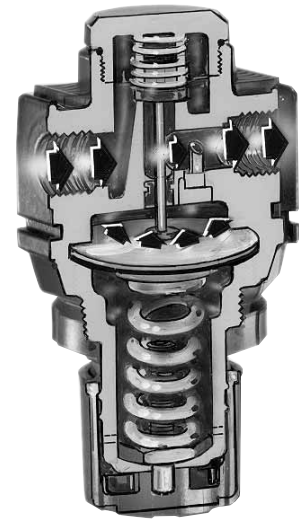


Features

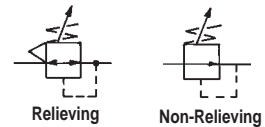
1/4", 3/8" & 1/2" Ports

ARO Module/Air 2000® 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 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.
- 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 reparability. 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.



GRAPHIC SYMBOLS



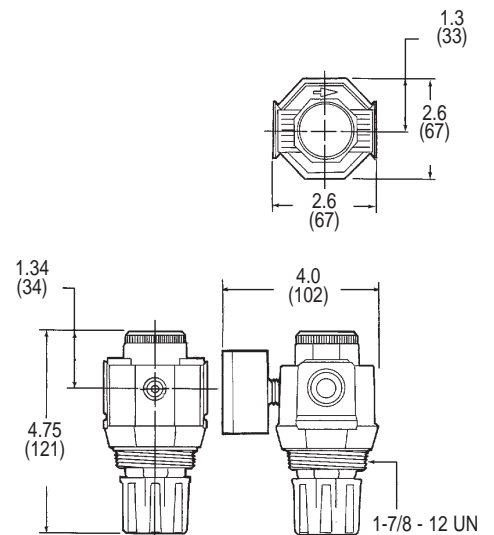
Performance Specifications

Models & Dimensions, in. (mm)

| | | | |
|-------------------------------------|-------------------------------|---|----------------------------------|
| 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 to 200 PSIG (0 to 13.8 bar) | | |
| Operating Temperature Range: | 0° to 180° F (-18° to 82°C) | | |
| Gauge Port: | 1/4" NPT | | |
| *Flow: | 1/4" | = | 100 scfm (47 dm ³ /s) |
| | 3/8" | = | 130 scfm (61 dm ³ /s) |
| | 1/2" | = | 150 scfm (71 dm ³ /s) |

*Air flow is at 100 PSIG (6.9 bar) inlet and 90 PSIG (6.2 bar) outlet.

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.



Ordering



1/4", 3/8" & 1/2" Ports

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

| PORT SIZE NPT | FLOW | | MODELS Spring Range | | WEIGHT lbs. (kg) |
|------------------|------|----------------------|--------------------------|-------------------------|---------------------|
| | scfm | (dm ³ /s) | 0 to 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 (.63) |
| 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 (.63) |
| 3/8" | 130 | (61) | R27231-700 | R27231-600 | 1.34 (.61) |
| 1/2" | 150 | (71) | R27241-700 | R27241-600 | 1.30 (.59) |

Additional Models Available

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

Port Size Basic Model

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

1/4" R27221 - X X X

3/8" R27231 - X X X

1/2" R27241 - X X X

Shaded area = Best-Selling Models

*Pressure Range
PSIG (bar)

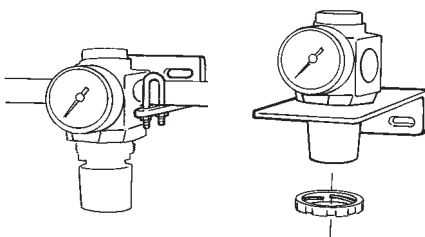
Relieving
Option

Control
Option

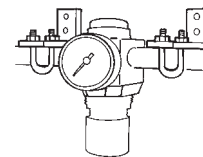
| | | |
|---|-------------------|-------------------|
| 1 = 5 - 125 (.4-8.6) no gauge | 0 = Relieving | 0 = Standard Knob |
| 2 = 0 - 50 (0-3.5) no gauge | 2 = Non-Relieving | |
| 3 = 10 - 200 (.7-13.8) no gauge | | |
| 6 = 5 - 125 (.4-8.6) w/ 0 - 160 lb. gauge (#100067) | | |
| 7 = 0 - 50 (0-3.5) w/ 0 - 60 lb. gauge (#100066) | | |
| 8 = 10 - 200 (.7-13.8) w/ 0 - 300 lb. gauge (#100083) | | |

MODEL DESCRIPTION

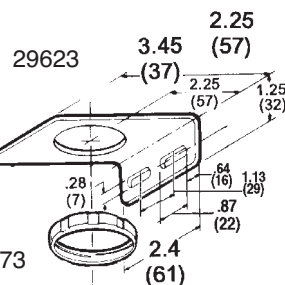
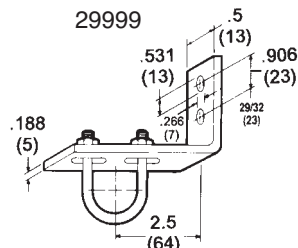
- 100066 Gauge 0 - 60 PSIG
- 100067 Gauge 0 - 160 PSIG
- 100083 Gauge 0 - 300 PSIG
- 104107 Mounting Bracket
- 104172 Wall Mounting Kit (includes Panel Nut & Bracket.)
- 104173 Panel Mount Nut
- 104175 Tamper Resistant Kit
- 104177 Service Kit, Relieving Type
- 104178 Service Kit, Non-Relieving Type
- 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



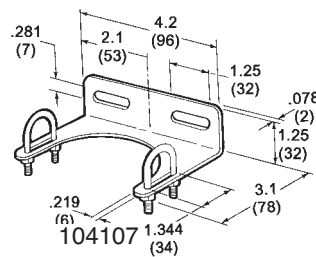
R27241-600



29999



104172 (includes Bracket & Nut)



Features



1/4" & 3/8" Ports

Precision/Air regulators are high precision, multi-stage pressure regulators. The highest degree of regulation and repeatability are achievable by reacting to down stream 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 SCFM (0.15 m³/hr.) works on the pilot diaphragm causing appropriate movement of the supply valve or the relief valve.** Movements as small as .0001 inches (.0025mm) will cause the main valve to correct to the proper position. Relief flows of up to 10 SCFM 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 need for any readjustment of the regulated pressure after long "down time." 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 m³/hr. (12 SCFM).
- The unit may be installed in any position. It can be panel mounted or supported by in-line plumbing.



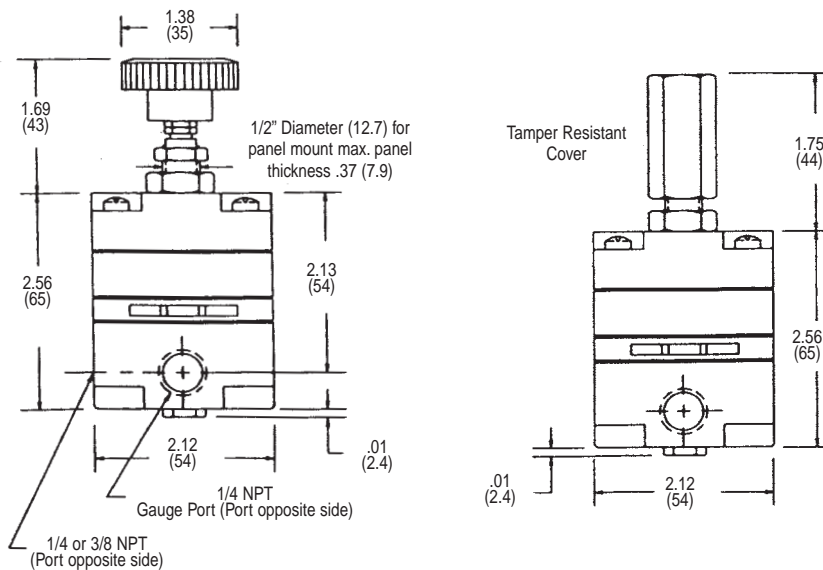
APPLICATIONS

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

Performance Specifications

Models & Dimensions, in. (mm)

| | |
|-------------------------------------|---|
| Body: | Zinc die-cast |
| Diaphragm: | Buna N |
| Metering Capsule: | Stainless Steel |
| Knob: | Phenolic Plastic |
| Flow Capacity: | 14 SCFM (25 m ³ /hr.) |
| Exhaust Capacity: | Up to 10 SCFM |
| Sensitivity: | .125 Inches (3.2 mm) Water Column |
| Total Air Consumption: | 6 SCFH (.17 m ³ /hr.) |
| Pilot Bleed Rate: | 0.08 SCFM (0.15 m ³ /hr.) |
| Supply Pressure Variation: | Less than .005 PSIG (.03 kpa) @ 25 PSIG variance |
| Maximum Supply Pressure: | 150 PSIG (1050 kpa) A filter with 5 micron element should be installed ahead of unit. |
| Operating Temperature Range: | 20° to 150°F (-7° to 66°C) |



Ordering



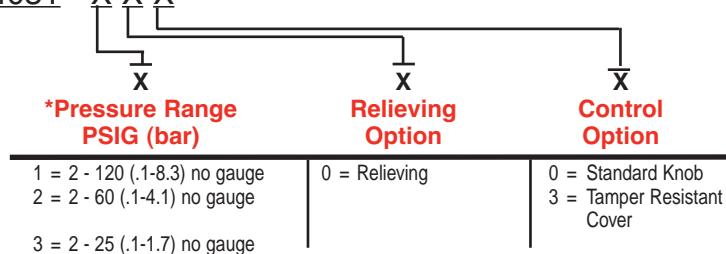
1/4" & 3/8" Ports

| PORT SIZE NPT | FLOW 2 to 120 PSIG (.4-8.6 bar) | MODELS Spring Range 2 to 60 PSIG .4-4.1 bar | 2-25 PSIG .4-1.7 bar | WEIGHT lbs. (kg) |
|------------------|------------------------------------|---|----------------------|---------------------|
| 1/4" | PR4021-100 | PR4021-200 | PR4021-300 | 1.4 (.64) |
| 3/8" | PR4031-100 | PR4031-200 | PR4031-300 | 1.4 (.64) |

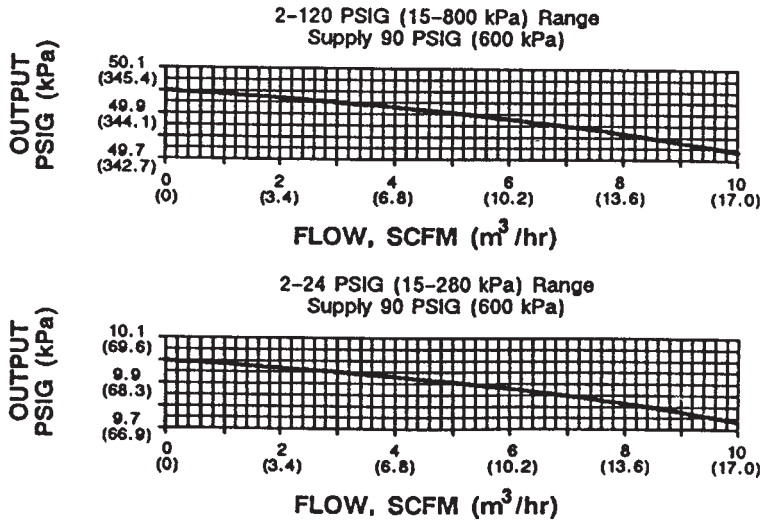
Additional Models Available

Port Size Basic Model

1/4" PR4021 - X X X
3/8" PR4031 - X X X

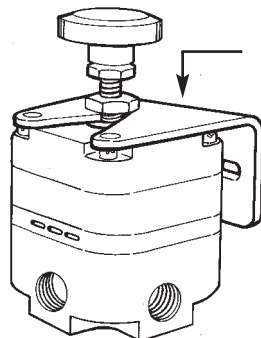


Flow Characteristics



Accessories

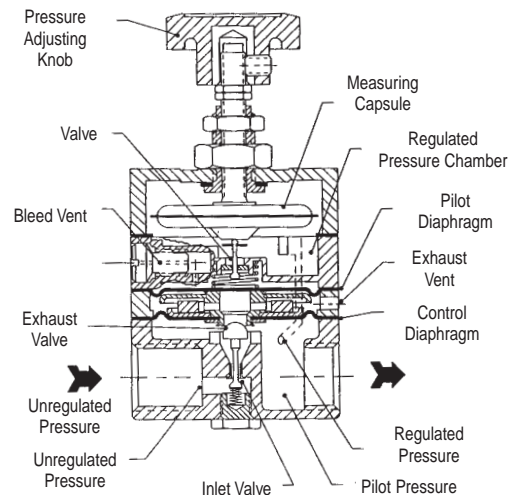
Precision/Air Regulators



Wall Mount
Bracket
P/N 29077

See Page 54
For Bracket
Dimensions

Service Kit: 100207-1 2 - 25 lb. or 2 - 60 lb. Spring Range
100207-2 2 - 120 lb. Spring Range





Features

- Flow rates of up to 200 SCFM.
- The ARO High Flow Precision Regulator is a direct acting, diaphragm-operated regulator. Once set to a desired output pressure, the regulator maintains the setting permanently.
- Available in 3/8", 1/2", and 3/4" NPT
- Rugged die-cast zinc and aluminum housings are pressure tested for safe operation and can handle harsh and abusive environments.

The ARO High Flow Precision Regulator is designed for applications that require large flow capability and accurate pressure control. With low droop, high accuracy, fine adjustment control, these units are excellent in material handling and conveyor applications. The use of a rolling diaphragm provides excellent sensitivity and improved accuracy while a balance pintle minimizes output pressure changes caused by fluctuations in the supply pressure. With a maximum supply pressure of 400 PSIG (22.7 bar) and output ranges up to 125 PSIG (8.6 bar) flow rates of 200 SCFM can be achieved.



High Flow Precision Regulator

Ordering

| Model No. | Description | Pressure Range |
|-------------------|--|----------------|
| PR4033-200 | 3/8" NPT Regulator | 0-60 PSIG |
| PR4033-300 | 3/8" NPT Regulator | 0-30 PSIG |
| PR4044-200 | 1/2" NPT Regulator | 0-60 PSIG |
| PR4044-300 | 1/2" NPT Regulator | 0-30 PSIG |
| PR4055-200 | 3/4" NPT Regulator | 0-60 PSIG |
| PR4055-300 | 3/4" NPT Regulator | 0-30 PSIG |
| 104270 | Repair Kit (includes diaphragm assembly and pintle assembly) | |
| 104271 | Mounting Bracket | |

Performance Specifications



PR40XX-X

Materials of Construction: Body-Die cast zinc
 Bonnet-Die cast Aluminum Alloy
 Knob-Phenolic Plastic,
 Plated Steel
 Diaphragms-Nitrile elastomers

Temperature Range: -20° to 180° F (-29° to 82° C)

Max. Pressure: 400 PSIG (27.6 bar)

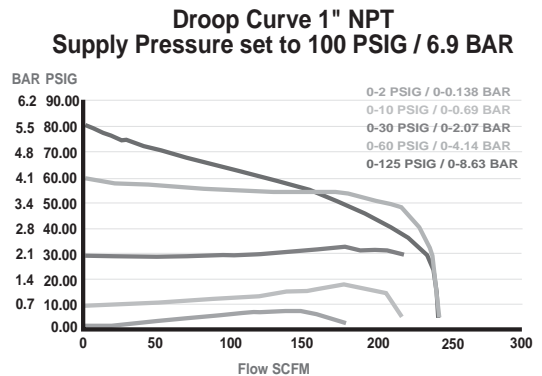
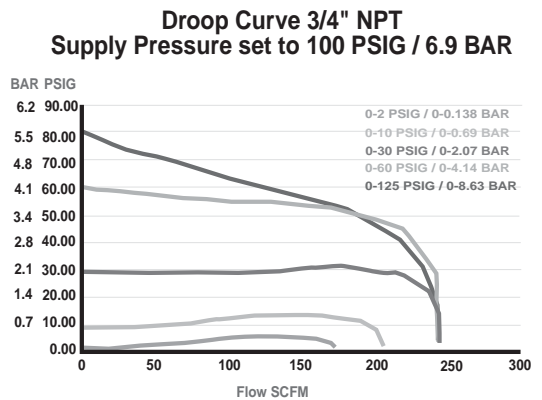
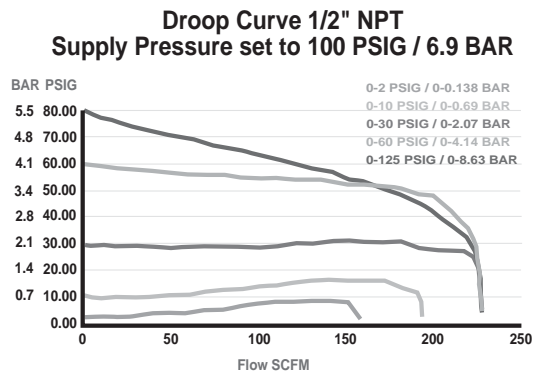
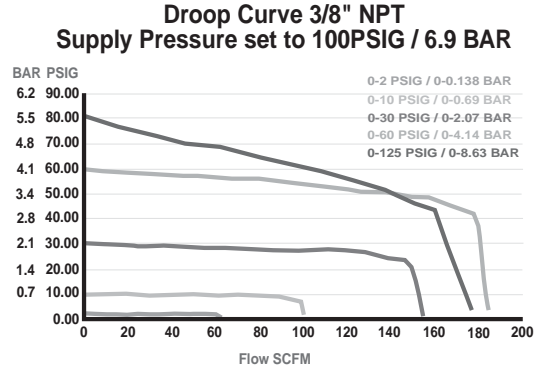
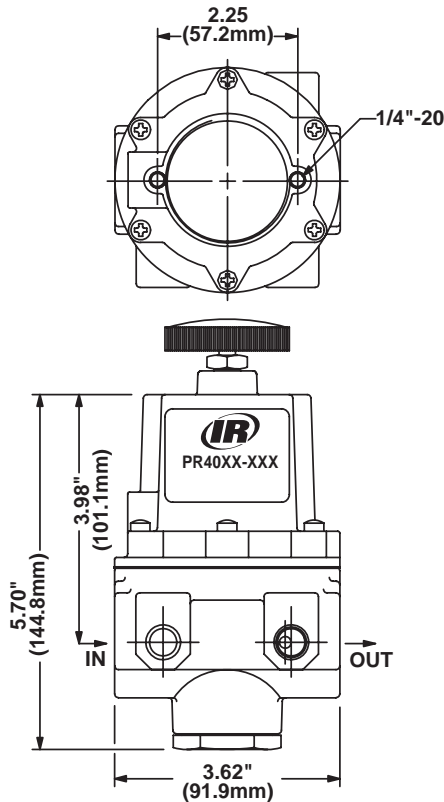
Media: Compressed Air

Gauge Ports: 1/4-18 NPTF

Flow @ 100 PSIG Supply: 200 SCFM (11.4 bar), see charts

Weight: Approx. 5 lbs.

Effect of supply pressure on regulated pressure: Less than ± 0.35 PSIG (.02 bar) for a supply variation of 100 PSIG (6.9 bar)



Stainless-Steel Precision Regulators & Filter/Regulators

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 their 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 Standard

This 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 off shore 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 and is easily removed for cleaning.

Ordering Information

| Model No. | 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 |
| 104267 | 316 Stainless Steel Mounting Bracket | |
| 104268 | 5 Micron Filter Element | |
| 104269 | 40 Micron Filter Element | |



Regulator



Filter/Regulator

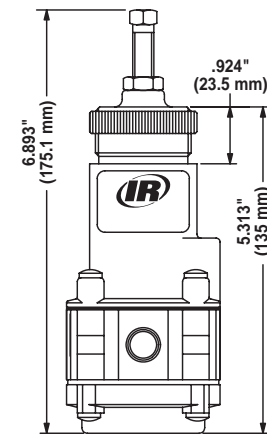
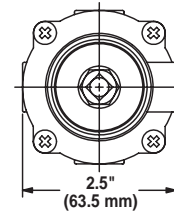
Performance Specifications



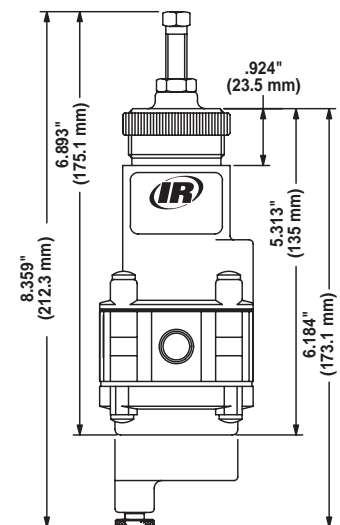
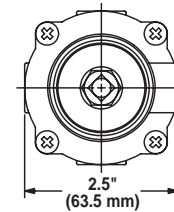
Performance Specifications

PFRSX1-X00 / PRSSX1-XOO

| | |
|-----------------------------------|--|
| Materials of Construction: | 316 Stainless |
| Seals: | Fluorocarbon |
| Filter Elements: | 5 Micron (for use with PFRSX1-X00 units only) |
| Temperature Range: | -20° to 180° F (-29° to 82° C) |
| Max. Pressure: | 250 PSIG (17.2 bar) |
| Media: | Compressed Air |
| Gauge Ports: | 1/4-18 NPTF |
| Flow @ 100 PSIG (6.9 bar) | |
| Supply 20 PSIG (1.4 bar) | |
| Outlet: | 20 SCFM (566 LPM) |

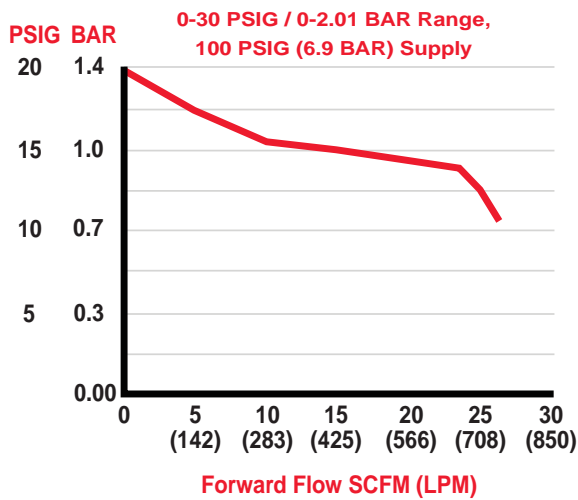


Regulator



Filter/Regulator

Regulated Pressure VS. Flow



Features

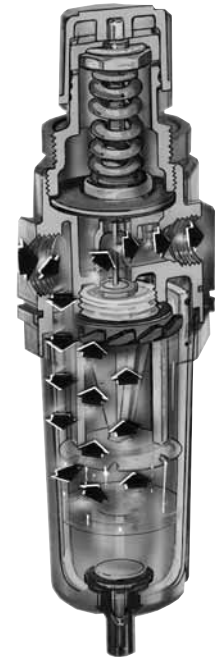


1/4", 3/8" & 1/2" Ports

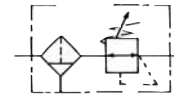
ARO Module/Air 2000® Series "Piggyback" units are compact to save space, giving more design flexibility. The filter and regulator have a common inlet and a common outlet. This saves on space, set-up time and piping costs.

- 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 contaminant's.
- 10 PSIG minimum operating pressure.

NOTE: See cautions on the use of polycarbonate bowls. (Page 90)



GRAPHIC SYMBOLS



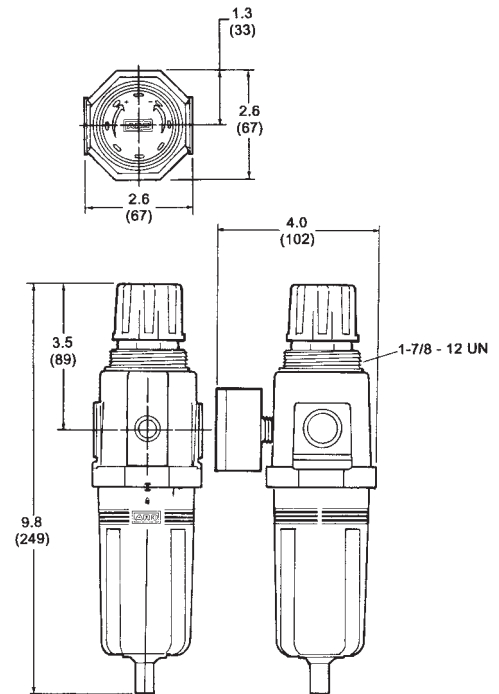
Relieving with manual drain

Performance Specifications

Models & Dimensions, in. (mm)

| | |
|-------------------------------------|--|
| 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 |
| 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 Temperature Range: | Polycarbonate Bowl - 0° to 125° F (-18° to 52°C) Metal Bowl - 0° to 175° F (-18° to 79°C) |
| Gauge Port: | 1/4" NPT |
| *Flow: | 1/4" = 93 scfm (44 dm ³ /s) 3/8" = 135 scfm (64 dm ³ /s) 1/2" = 140 scfm (66 dm ³ /s) |

*Air flow is at 100 PSIG (6.9 bar) inlet and 90 PSIG (6.2 bar) outlet.



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.

Ordering



1/4", 3/8" & 1/2" Ports

| PORT SIZE NPT | FLOW scfm | FLOW (dms/s) | MODEL W/O GAUGE | MODEL W/ GAUGE | BOWL SIZE oz. (ml) | FILTER ELEMENT (micron) | WEIGHT lbs. (kg) |
|---|-----------|--------------|-----------------|----------------|--------------------|-------------------------|------------------|
| 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 • polycarb. 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 • polycarb 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) |



P29221-600

***NOTE:** 10-175 PSI pressure range can be ordered *only* with Metal Bowl or Metal Bowl with Sight Glass.

Additional Models Available

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

Port Size Basic Model **NOTE:** Not all menu combinations are valid. See price book to verify.

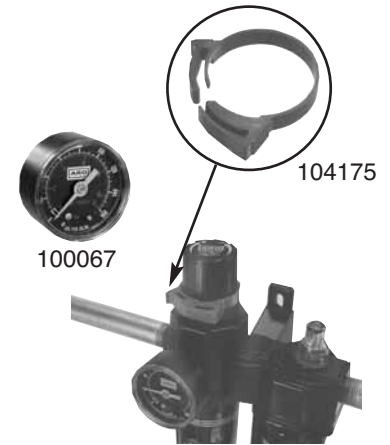
1/4" P2922X - X X X

3/8" P2923X - X X X

1/2" P2924X - X X X

Shaded area = Best-Selling Models

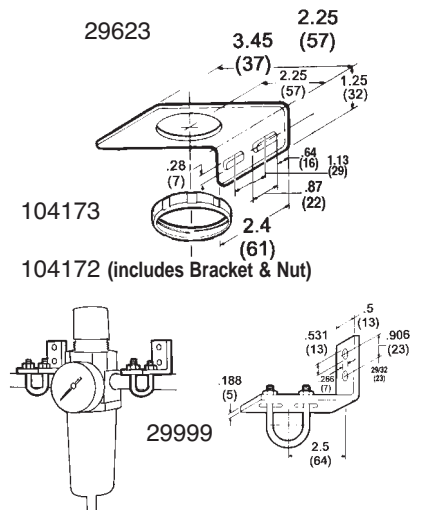
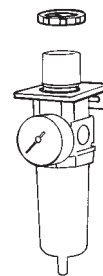
| Filter Element | *Pressure Range PSIG (bar) | Relieving / Bowl Option | Control Option / Drain |
|-------------------------------|--|---|---|
| 1 = 40 Micron 4 = 5 Micron | 1 = 5 - 125 (.4-8.6) No Gauge 2 = 0 - 50 (0-3.5) No Gauge 3 = 10 - 175 (.7-12.1) No Gauge* 6 = 5 - 125 (.4-8.6) w/ Gauge 7 = 0 - 50 (0-3.5) w/ Gauge 8 = 10 - 175 (.7-12.1) w/ Gauge* | 0 = Relieving/ Poly w/ Guard 1 = Relieving/ Metal w/ Sight Glass 2 = Relieving/ Metal | 0 = Standard Knob/ Manual 4 = Standard/ Auto Drain |



Accessories

"Piggyback"

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|--|--------|-----------------------------|
| 100066 | Gauge 0-60 PSIG | 104202 | Poly Bowl w/ Guard |
| 100067 | Gauge 0-160 PSIG | 104204 | Metal Bowl w/ Sight Glass |
| 100083 | Gauge 0-300 PSIG | 104206 | Metal Bowl |
| 104107 | Mounting Bracket | 29594 | Spring, 5-125 lb. (Gold) |
| 104149 | Push Drain Kit | 29595 | Spring, 0-50 lb. (Green) |
| 104172 | Wall Mounting Kit (includes Panel Nut & Bracket) | 29596 | Spring, 10-200 lb. (Silver) |
| 104173 | Panel Mount Nut | 29623 | Mounting Bracket |
| 104175 | Tamper Resistant Kit | 29999 | U-Bolt Mounting Bracket |
| 104179 | Service Kit, Relieving Type | 104068 | Automatic Drain |
| 104180 | Service Kit, Non-Relieving Type | 104209 | Knob Repair Kit |
| 104182 | Sight Glass Service Kit | | |



Features



1/4", 3/8" & 1/2" Ports

ARO Module/Air 2000® oil-fog lubricator features 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 avoids the inconvenience of 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.

NOTE: See cautions on the use of polycarbonate bowls. (Page 90)



GRAPHIC SYMBOL

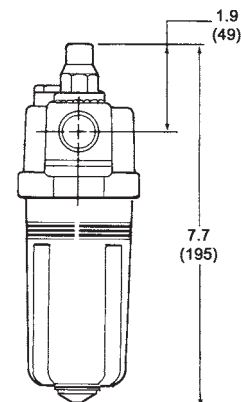
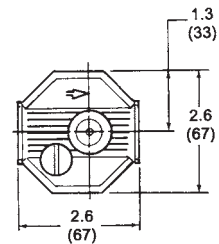


Performance Specifications

Models & Dimensions, in. (mm)

| | |
|-------------------------------------|--|
| Body: | Zinc die-cast |
| Bowls: | Polycarbonate or Zinc die-cast |
| Bowl Guard: | Zinc die-cast |
| Sight Glass: | Polyimide-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 Temperature Range: | Polycarbonate Bowl - 0° to 125° F (-18° to 52°C) Metal Bowl - 0° to 175° F (-18° to 79°C) |
| *Flow: | 1/4"=75 scfm (35 dm ³ /s) 3/8" = 100 scfm (47 dm ³ /s) 1/2" = 110 scfm (52 dm ³ /s) |

*Air flow is at 90 PSIG (6.2 bar) inlet and 10 PSIG (0.7 bar) pressure drop.





Ordering

1/4", 3/8" & 1/2" Ports

| PORT SIZE NPT | FLOW | | MODEL | BOWL SIZE oz. (ml) | WEIGHT lbs. (kg) |
|------------------|------|----------------------|------------|-----------------------|---------------------|
| | scfm | (dm ³ /s) | | | |
| 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) |

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

metal bowl with sight glass

polycarb. 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 below, select the numbers representing the lubricator options required. For BSP threads, add -B to end of model number.

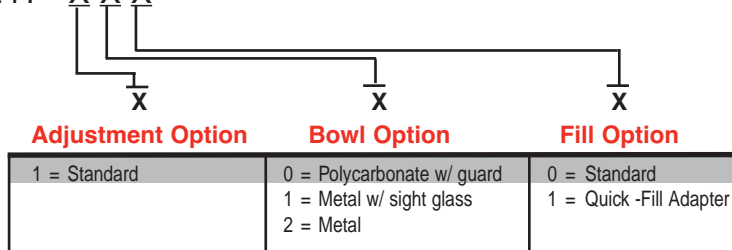
Port Size Basic Model

1/4" L26221 - X X X

3/8" L26231 - X X X

1/2" L26241 - X X X

Shaded area = Best-Selling Models



L26241-100

Accessories

Lubricator

| MODEL | DESCRIPTION |
|--------|--|
| 104027 | Tamper-Resistant Plug |
| 104107 | Mounting Bracket |
| 104181 | Service Kit |
| 104182 | Sight Glass Service Kit |
| 104203 | Polycarbonate Bowl w/ guard |
| 104205 | Metal Bowl w/ sight glass |
| 104207 | Metal Bowl |
| 104211 | Metal Bowl w/ sight glass and Quick-Fill Adapter |
| 104226 | Sight Dome Service Kit |
| 29235 | Quick-Fill Adapter |
| 29665 | Lubricating Oil (1 qt.) For additional details, see page 85. |
| 104251 | Fill Plug Kit |



29665



104211

Features



On Pipe Port Adapters, Manifold Kits, 3-Way Shut-off Valves and Piping Bracket Kit, Threads are NPT.

Modular Spacer Kit

Spacer has retained O-rings and allen head screws for ease of assembly/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 4mm or 5/32" allen head wrench. To assemble, simply put the spacer between the units and tighten screws for a secure seal. Fits all port sizes.

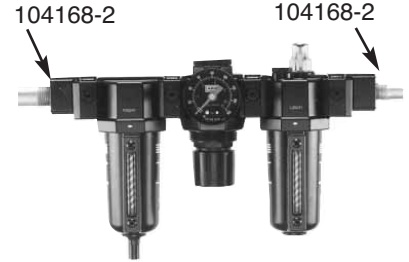
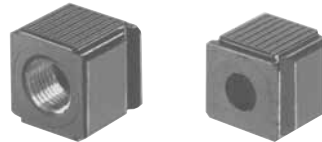
Model 104167



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

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 (Model 104167).

- Model
 104168-2 1/4" NPT Ports
 104168-3 3/8" NPT Ports
 104168-4 1/2" NPT Ports
 104168-6 3/4" NPT Ports



See page 64 for mounting dimensions.

T-Type Wall Mounting Brackets

These brackets provide heavy duty wall mounting. They are excellent for mounting a single unit or multiple units which are 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.

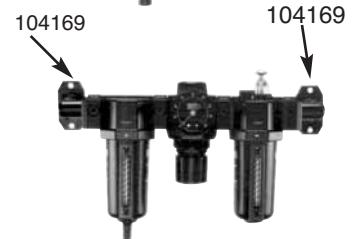
Model 104171



Right Angle Piping Bracket Kit

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 (Model 104167).

Model 104169

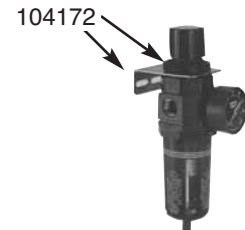


See page 64 for mounting dimensions.

Wall Mounting Kit

May be used to mount FRL combo units which include a regulator, "Piggyback" Filter/Regulator units, or individual regulators. Kit includes Model 29623 Bracket and Model 104173 Panel Mounting Nut. Bracket and Nut may be ordered individually.

Model 104172

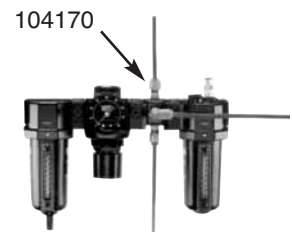


Modular Manifold Block Kit

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.

Model 104170



Manifold creates four additional 1/4" NPT outlet ports

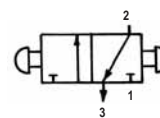


Safety Shutoff, Lockout Valve

Meets OSHA Lockout/Tagout regulation 1910.147. Exhaust-type safety shutoff valve 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 F-R-L unit, and 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 arrangement, it is secured to the unit with a modular spacer or T-type modular bracket.



104174-X
Shown in Open Position

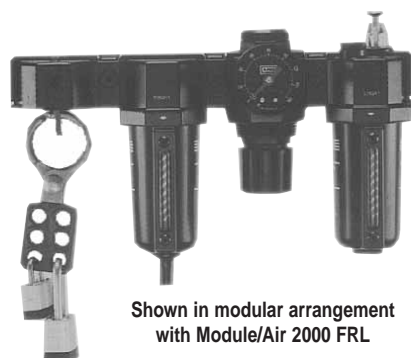


3 Port - 2 Position

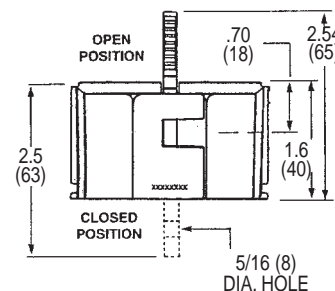
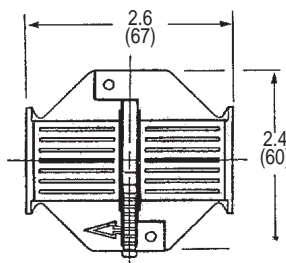
Performance Specifications

Models & Dimensions, in. (mm)

- Max. Inlet:** 175 PSIG (12 bar)
- Max. Temperature:** 0° to 125° F (-18° to 52°C)
- Body:** Zinc die-cast
- Seals:** Buna N
- Slide:** Delrin



Shown in modular arrangement
with Module/Air 2000 FRL



Ordering

| MODEL | PORT SIZE |
|----------|--------------|
| 104174-2 | 1/4" NPT |
| 104174-3 | 3/8" NPT |
| 104174-4 | 1/2" NPT |
| 100085 | Lockout Hasp |



Model
100085
Lockout
Hasp
(order
separately)

Shown as
individual
unit.

NOTE: ARO Safety Lockout Valves meet OSHA Lockout/Tagout regulation 1910.147. Which requires protection from unexpected start up of a machine during service or maintenance.

Accessories

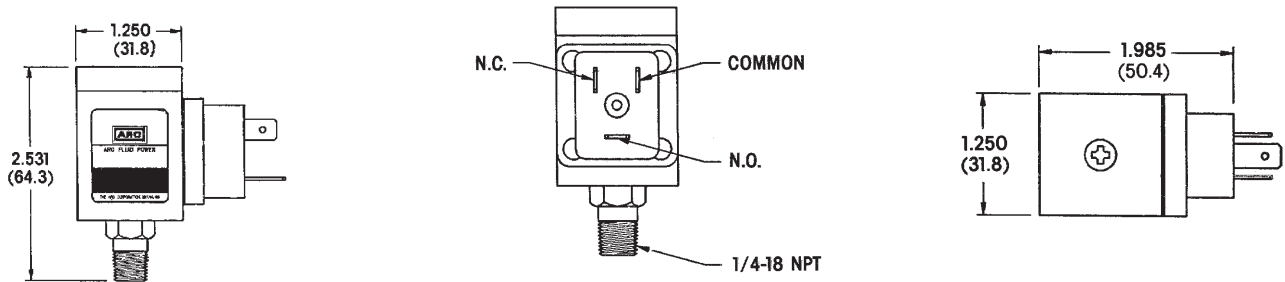
Pressure Switch

Pressure Switch allows the sensing of high or low pressure thresholds. Use with Model 104170 Manifold Block. Features include:

- Water resistant
- External pressure adjustment with allen screw
- Can be wired normally open or normally closed
- Computer-compatible since it allows electrical current to flow or to be stopped.
- Meets NEMA 4 & 13 specifications



Model 104196



Performance Specifications

Models & Dimensions, in. (mm)

| | |
|-------------------------------------|--|
| Medium: | Compressed Air |
| Max. Operating Pressure: | 150 PSI (10.4 bar) |
| Adjustable Pressure Range: | 20 to 100 PSI (1.4 to 6.9 bar) |
| Differential Pressure: | 5 to 10 PSI (0.3 to 0.9 bar) |
| Operating Temperature Range: | -40° to 300° F |
| Weight: | 11 oz. |
| Contact Type: | N.O./ N.C. |
| Contact Ratings: | 5 Amps at 125 VDC 5 Amps at 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 |

Ordering

| MODEL | DESCRIPTION |
|------------------------|---|
| 104196 | Switch only (without connector) |
| 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 |



104196-CHW



104196-CDW



104196-CSN

Features

- The Module/Air 3000 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 standard
- Automatic drain has pipe connection for draining away contaminants.
- Push-pull, non-rising adjustment knob.
- Bracket and Gauge comes standard with all units.



Piggyback/Lubricator Combo

Ordering

| Model No. | Description |
|-------------------|--|
| P29351-600 | Piggyback, 3/4" NPT, w/Gauge & Bracket |
| P29361-600 | Piggyback, 1" NPT, w/Gauge & Bracket |
| P29351-604 | Piggyback, 3/4" NPT, w/Gauge, Bracket & Auto Drain |
| P29361-604 | Piggyback, 1" NPT, w/Gauge, Bracket & Auto Drain |
| C28351-600 | Piggyback/Lube Combo, 3/4" NPT, w/Gauge & Bracket |
| C28361-600 | Piggyback/Lube Combo, 1" NPT, w/Gauge & Bracket |
| 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 |



Piggyback

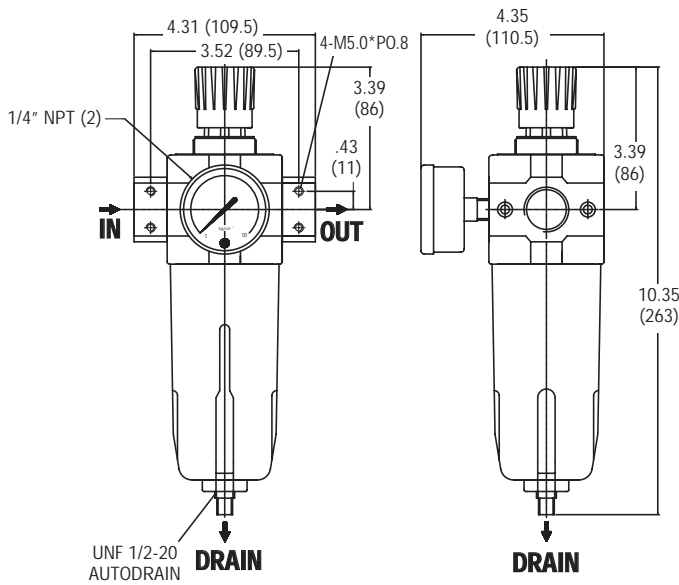
Performance Specifications

| | |
|---------------------------|---|
| Construction: | Piston Type Regulation |
| Material: | Body/Aluminum Die-Cast Bowl/Polycarbonate |
| Filter Element: | 40 Micron (Standard) |
| Temperature Range: | 14 to 140 F (-10 to 60 C) |
| Pressure Range: | 5 to 170 PSI (.4 to 11.7 bar) |
| Max. Pressure: | 170 PSI (11.7 bar) |
| Max. Flow Rate: | Piggyback, 300 scfm Lubricator, 320 scfm |
| Media: | Compressed Air |
| Bowl Capacity: | Filter, 7 oz. Lubricator, 8 oz. |
| Seals: | Buna-N |
| Weight: | Piggyback-Lube, 4.6 lbs. (2105 g) Piggyback, 3 lbs. (1360 g) |

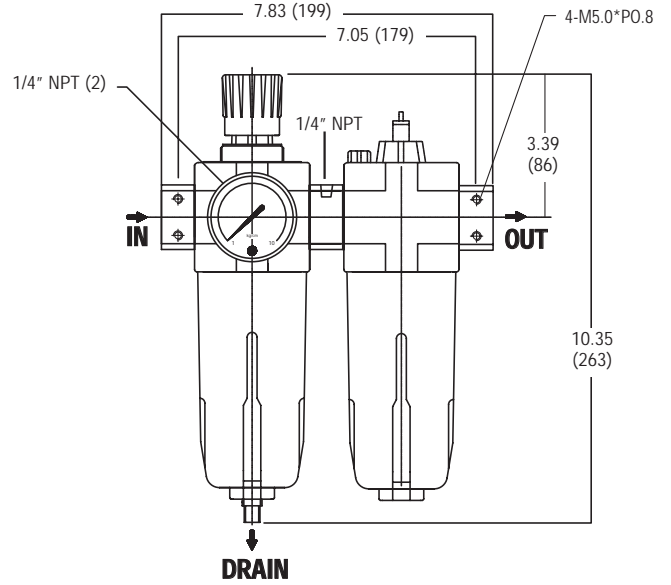
Dimensional Data



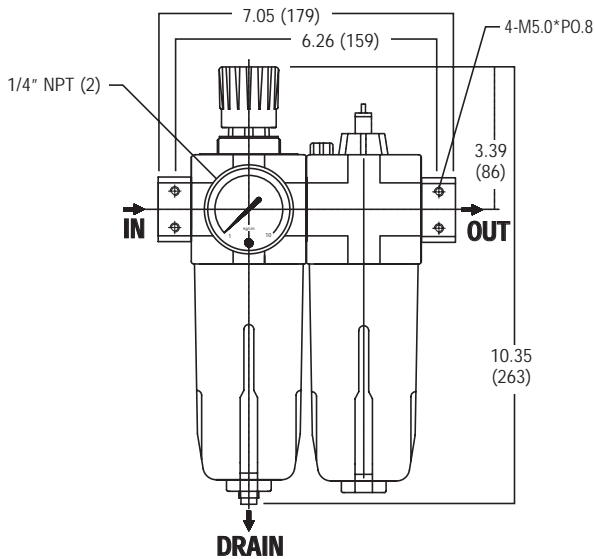
P293X1-60X



C28361-600



C28351-600



Features



1/2", 3/4" & 1" Ports

For application and feature/ benefit information for the combination units on this page, refer to individual component pages: Filters - page 53

Regulators - page 54

Lubricators - page 55

Performance Specifications

| | |
|-------------------------------------|------------------------------|
| Max. Inlet Pressure: | 200 PSIG (13.8 bar) |
| Operating Temperature Range: | 0° to 125° F (-18° to 52° C) |
| Filter Element: | 40 Micron |
| Bowl: | Polycarbonate w/ Bowl Guard |
| Pressure Range in Regulator: | 5 to 125 PSI (.4 to 8.6 bar) |
| Gauge: | 0 to 160 PSI |

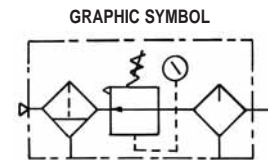


28368

Ordering

| PORT SIZE NPT | MODEL | WEIGHT LBS. (kg) | COMPONENTS | | | | PIPE NIPPLE |
|------------------|--------------|---------------------|------------|-----------|------------|--------|----------------|
| | | | FILTER | REGULATOR | LUBRICATOR | GAUGE | |
| 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 |

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



NOTE: Shipped unassembled. For assembled unit, change the last digit from 3 to 8. Example: 28358.

Performance Specifications

Filter-Regulator

| | |
|-------------------------------------|------------------------------|
| Max. Inlet Pressure: | 200 PSIG (13.8 bar) |
| Operating Temperature Range: | 0° to 125° F (-18° to 52° C) |
| Filter Element: | 40 Micron |
| Bowls: | Polycarbonate w/ Bowl Guard |
| Pressure Range in Regulator: | 5 to 125 PSI (.4 to 8.6 bar) |
| Gauge: | 0 to 160 PSI |

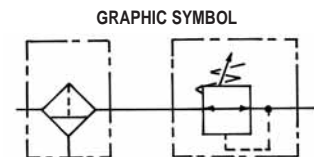


28369

Ordering

| PORT SIZE NPT | MODEL | GAUGE PORT | WEIGHT LBS. (kg) | COMPONENTS | | | PIPE NIPPLE |
|------------------|--------------|---------------|---------------------|------------|-----------|--------|----------------|
| | | | | FILTER | REGULATOR | GAUGE | |
| 1/2" | 28344 | 1/4" | 7.11 (3.22) | 25341-020 | 27344-000 | 100067 | Y27-54-C |
| 3/4" | 28354 | 1/4" | 7.06 (3.20) | 25351-020 | 27354-000 | 100067 | Y27-55-C |
| 1" | 28364 | 1/4" | 6.46 (2.93) | 25361-020 | 27364-000 | 100067 | Y27-56-C |

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



NOTE: Shipped unassembled. For assembled unit, change the last digit from 4 to 9. Example: 28349

Performance Specifications

1/2", 3/4" & 1" Ports

| | |
|------------------------------|----------------------------------|
| Max. Inlet Pressure: | 200 PSIG (13.8 bar) |
| Operating Temperature Range: | 0° to 125° F (-18° to 52° C) |
| Filter Element: | 40 Micron |
| Bowl: | Polycarbonate with metal guard |
| Lubricator: | Combination Fog-Type / Drop-Type |



28367

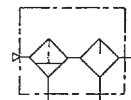
Ordering

| PORT SIZE NPT | MODEL | WEIGHT LBS. (kg) | FILTER | LUBRICATOR | PIPE NIPPLE |
|---------------|-------|------------------|--------|------------|-------------|
|---------------|-------|------------------|--------|------------|-------------|

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

| | | | | | |
|------|--------------|-------------|-----------|-----------|----------|
| 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 |

GRAPHIC SYMBOL

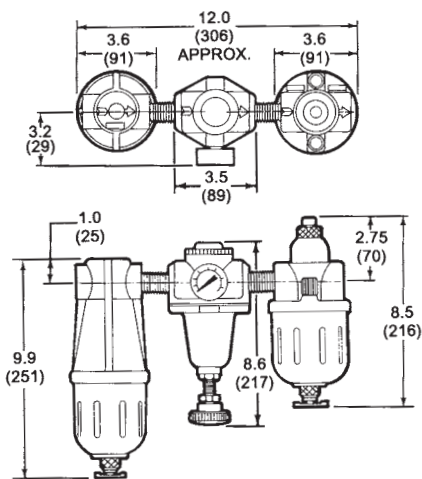


NOTE: Shipped unassembled. For assembled unit, change the last digit from 2 to 7. Example: 28347

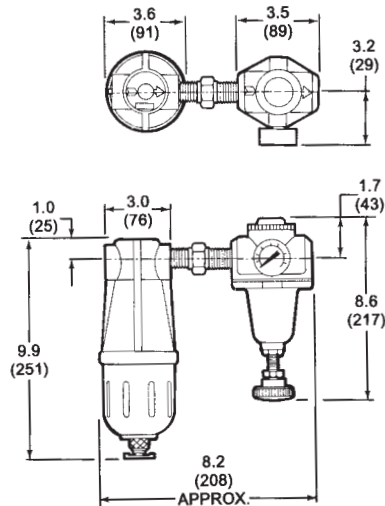
Dimensional Data

Heavy Duty Series

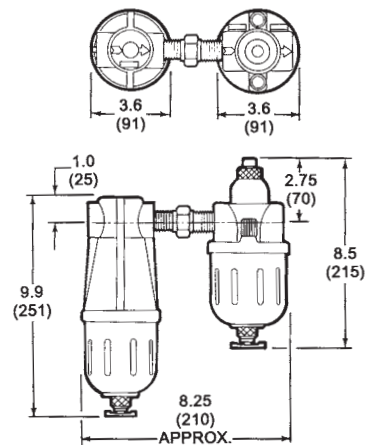
Filter-Regulator-Lubricator



Filter-Regulator



Filter-Lubricator



Features



1/2", 3/4" & 1" Ports

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.

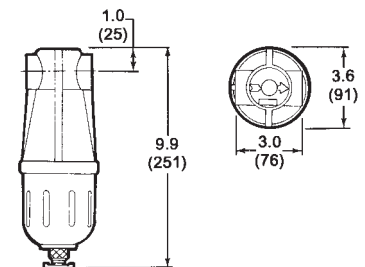
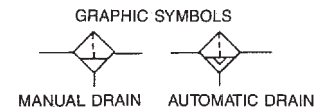


25361-020

Performance Specifications

| | | | |
|-----------------------------|---|---------------------|--------------------------|
| Sump Capacity: | 10 oz. (295 ml) | Body: | Zinc Die Cast |
| Filter Area: | 9.1 in. (5871 mm) | Bowls: | Polycarbonate or Steel |
| Max. Inlet Pressure: | Polycarbonate Bowl - 200 PSIG (13.8 bar) | Bowl Guards: | Steel With E-Coat Finish |
| | Metal Bowl - 250 PSIG (17 bar) | Seals: | Buna-N |
| Oper. Temp. Range: | Polycarbonate bowl - 0° to 125° F (-18° to 52° C) | Drain: | Brass Twist Type |
| | Metal Bowl - 0° to 200° F (-18° to 93° C) | Element: | Sintered Bronze |
| | | | 5, 20, 40 Micron |
| Weight: | 1/2" = 3.62 lbs. (1.65 kg), 3/4" = 3.48 lbs. (1.58 kg) 1" = 3.26 lbs. (1.48 kg) | | |
| *Flow: | 1/2" = 82 SCFM (39 dm³/s), 3/4" = 87 SCFM (41 dm³/s) 1" = 88 SCFM (42 dm³/s) | | |

*Air flow is at 125 PSIG (8.6 bar) and 100 PSIG (6.9 bar) outlet.



Ordering

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

PORT SIZE BASIC MODEL

| | | | | |
|-------------|---------------|----------|----------|----------|
| 1/2" | 25341- | X | X | X |
| 3/4" | 25351- | X | X | X |
| 1" | 25361- | X | X | X |

Shaded area = Best-Selling Models

| Filter Element | Bowl Option | Drain Option |
|----------------------|-----------------------------------|-------------------------|
| 0 = 40 micron #29392 | 2 = Polycarbonate w/ guard #29397 | 0 = Manual |
| 1 = 20 micron #29391 | 1 = Metal Bowl #29967 | 1 = Auto Drain #29969-2 |
| 2 = 5 micron #29390 | | |

Accessories

Filter

| MODEL | DESCRIPTION | MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|---------|-----------------|-------|-------------------|--------|--------------------|
| 29397 | Bowl Guard | 29390 | 5 Micron Element | 104020 | Service Kit |
| 29967 | Metal Bowl | 29391 | 20 Micron Element | 104069 | Polycarbonate Bowl |
| 29969-2 | Automatic Drain | 29392 | 40 Micron Element | Y57-1 | Twist Drain |



29397 29967 29969-2

Features



1/2", 3/4" & 1" Ports

These 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.



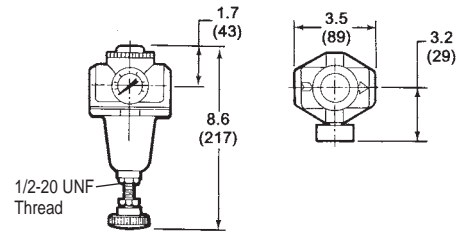
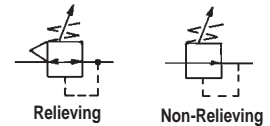
27364-600

Performance Specifications

| | | | |
|------------------------------|--|------------------------|-----------------|
| Max. Inlet Pressure: | 250 PSIG (17 bar) | Spring Housing: | Zinc Die Cast |
| Press. Range in Reg.: | 0 to 250 PSIG (0 to 17 bar) | Body: | Zinc Die Cast |
| Oper. Temp. Range: | 0° to 200° F (-18° to 93° C) | Seals: | Buna-N |
| Gauge Port: | 1/4" NPT | Diaphragm: | Buna-N |
| Weight: | 1/2" = 3.30 lbs. (1.5 kg), 3/4" = 3.21 lbs. (1.45 kg) 1" = 2.82 lbs. (1.28 kg) | Valve: | Brass |
| *Flow: | 1/2" = 256 SCFM (121 dm³/s), 3/4" = 287 SCFM (135 dm³/s) 1" = 293 SCFM (138 dm³/s) | Knob: | High Impact ABS |

*Air flow is at 125 PSIG (8.6 bar) and 100 PSIG (6.9 bar) outlet.

GRAPHIC SYMBOLS



Ordering

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

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

Shaded area = Best-Selling Models

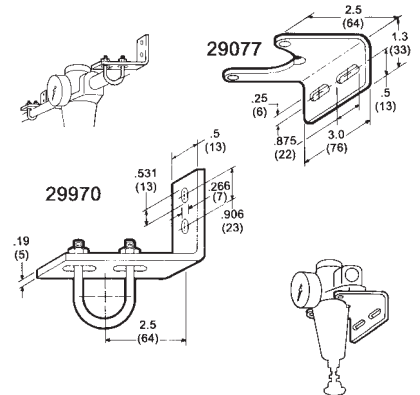
| | | |
|------------------------------------|---|--|
| Relieving Option | Pressure Range* PSIG bar | Control Option |
| 4 = Relieving 7 = Non-Relieving | 0 = 5-125 .4-8.6 6 = 5-125 with 0-160 Gauge 1 = 0-50 .0-3.5 2 = 10-250 .7-17 | 0 = Standard Knob or Panel Mount 3 = Tamper-Resistant |

***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.

Accessories

Regulator

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|--|-------|--|
| 100066 | Gauge 0-60 PSIG (0-4 bar) | 29970 | Mounting Bracket (U-Bolt Type), 3/4" and 1" Pipe |
| 100067 | Gauge 0-160 PSIG (0-11 bar) | 29960 | Service Kit, Relieving Type |
| 100083 | Gauge 0-300 PSIG (0-21 bar) | 29995 | Service Kit, Non-Relieving Type |
| 29077 | Mounting Bracket, L-Type | 29002 | Spring, 5-125 lb. (Gold) |
| 29999 | Mounting Bracket (U-Bolt Type), 1/4", 3/8" and 1/2" Pipe | 29119 | Spring, 0-50 lb. (Green) |
| | | 29120 | Spring, 10-250 lb. (Silver) |



Features



1/2", 3/4" & 1" Ports

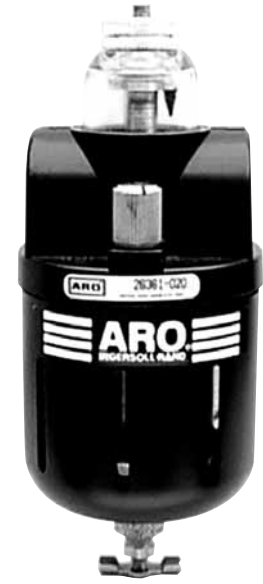
Extra rugged Heavy-Duty Series lubricators deliver the reliable lubrication needed for long service life of air line system and equipment. Units are convertible from drop-type to fog-type by rotating sight dome 180 degrees. For best results, lubricator should be located as close as possible to equipment 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: | 250 PSIG (17 bar) Metal 200 PSIG (13.8 bar) Polycarbonate | Body: | Zinc Die Cast |
| Oper. Temp. Range: | Polycarbonate bowl - 0° to 125° F (-18° to 52° C) Metal Bowl - 0° to 200° F (-18° to 93° C) | Bowls: | Polycarbonate or Steel |
| Oil Capacity: | 10 oz. (295 ml) | Bowl Guards: | Steel With E-Coat Finish |
| Weight: | 1/2" = 2.98 lbs. (1.35 kg), 3/4" = 2.83 lbs. (1.28 kg) 1" = 2.70 lbs. (1.22 kg) | Sight Glass: | Polyimide Nyloniz |
| *Flow: | 1/2" = 65 SCFM (31 dm³/s), 3/4" = 75 SCFM (35 dm³/s) 1" = 75 SCFM (35 dm³/s) | Seals: | Buna-N |

* Flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (0.4 bar) pressure drop.

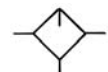


26361-020



26361-220
with tamper
Resistant Cap

GRAPHIC SYMBOL



Manual Drain

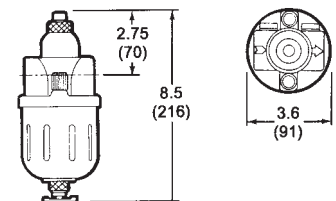
Ordering

Select the basic model number which represents the port size desired. From table below, select the number representing lubricator options required.

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

| Adjustment | Bowl Option | Fill Option |
|-----------------------|-----------------------------------|-------------------------------|
| 0 = Standard Knob | 2 = Polycarbonate w/ guard #29397 | 0 = Standard |
| 1 = 1/8" Allen Wrench | 1 = Metal Bowl #29967 | 1 = Quick Fill Adapter #29235 |
| 2 = Tamper Resistant | | |

Shaded area = Best-Selling Models



Accessories

Lubricator

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|--------------------|--------|--|
| 104069 | Polycarbonate Bowl | 29665 | ARO Lubricating Oil (1 Quart). See pg. 71. |
| 29967 | Metal Bowl | 104023 | Service Kit |
| 29397 | Bowl Guard | Y57-1 | Twist Drain |
| 29235 | Quick-Fill Adapter | | |



29235



29967

Features



3/4", 1", 1-1/4" & 1-1/2" Ports

For application and feature/ benefit information for the combination units on this page, refer to individual component pages: Filters - page 57

Regulators - page 61

Lubricators - page 63

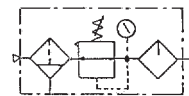
Performance Specifications

| | |
|------------------------------|------------------------------|
| Max. Inlet Pressure: | 250 PSIG (20.7 bar) |
| Operating Temperature Range: | 0° to 175° F (-18° to 79° C) |
| Filter Element: | 40 Micron Sintered Bronze |
| Bowl: | Metal Bowl/w Sight Glass |
| Pressure Range in Regulator: | 5 to 125 PSI (.4 to 8.6 bar) |
| Gauge: | 0 to 160 PSI |



C28453-810

GRAPHIC SYMBOL



Ordering

| PORT SIZE NPT | MODEL | WEIGHT LBS. (kg) | FILTER | COMPONENTS | | | PIPE NIPPLE |
|------------------|-------|---------------------|--------|------------|------------|-------|----------------|
| | | | | REGULATOR | LUBRICATOR | GAUGE | |

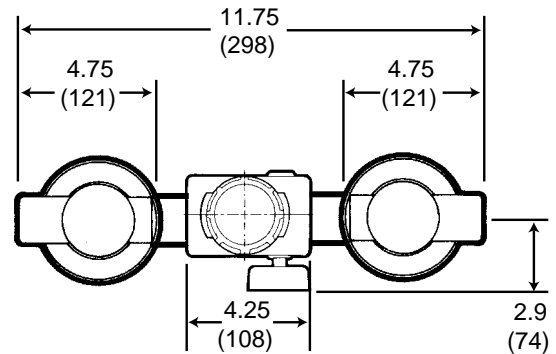
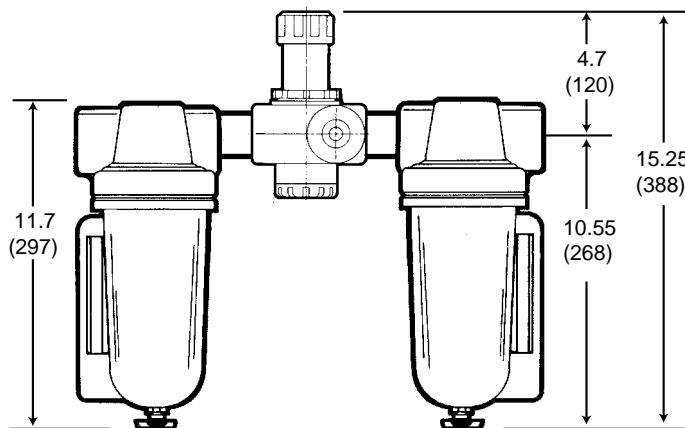
Select the basic model number which represents the port size desired. If other options are desired, order each component separately.

| | | | | | | | |
|--------|-------------------|--------------|------------|------------|------------|--------|----------|
| 3/4" | C28453-810 | 11.50 (5.23) | F25451-110 | R27451-100 | L26451-110 | 100067 | Y27-55-C |
| 1" | C28463-810 | 11.50 (5.23) | F25461-110 | R27461-100 | L26461-110 | 100067 | Y27-56-C |
| 1-1/4" | C28473-810 | 11.50 (5.23) | F25471-110 | R27471-100 | L26471-110 | 100067 | Y27-57-C |
| 1-1/2" | C28483-810 | 10.50 (4.77) | F25481-110 | R27481-100 | L26481-110 | 100067 | Y27-58-C |

NOTE: Combinations models are shipped unassembled.

Dimensional Data

Super-Duty



Features



3/4", 1", 1-1/4" & 1-1/2" Ports

ARO Super-Duty filters are specifically designed for use in applications where large air flow and bowl capacities are required. The removal of liquid and solid contaminants by these filters protects air tools, valves, cylinders and pumps.

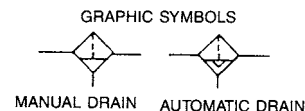
- Aluminum die-cast housings are lightweight and corrosion-resistant.
- 40 micron sintered bronze filter element has a large surface area and can be cleaned and replaced for long service life.
- Filter utilizes a depth-type element assembly that can be disassembled and cleaned without the use of tools or removal from the air line.
- Metal bowl with sight glass is standard. Bowl also features a spiral ramp thread to permit quick disconnect for easy filter maintenance.



F25481-110

Performance Specifications

| | | | |
|-----------------------------|--|---------------------|---|
| Bowl Capacity: | 32 oz. (946 ml) | *Flow: | 3/4" = 345SCFM (163 dm ³ /s), 1" = 345 SCFM (163 dm ³ /s) |
| Max. Inlet Pressure: | 250 PSIG (17 bar) | | 1-1/4" = 445 SCFM (210 dm ³ /s), 1-1/2" = 445 SCFM (210 dm ³ /s) |
| Oper. Temp. Range: | 0° to 175° F (-18° to 79° C) | Body: | Aluminum |
| Weight: | 3/4" = 5.0 lbs. (2.27 kg) 1" = 5.0 lbs. (2.27 kg) 1-1/4" = 4.65 lbs. (2.11 kg) 1-1/2" = 4.30 lbs. (1.95 kg) | Bowl: | Aluminum |
| | | Sight Glass: | Pyrex |
| | | Seals: | Buna-N |
| | | Element: | Sintered Bronze 40 Micron |



*Maximum Flow at 90 PSIG (6.9 bar) inlet pressure and 5 PSIG (.4 bar) pressure drop.

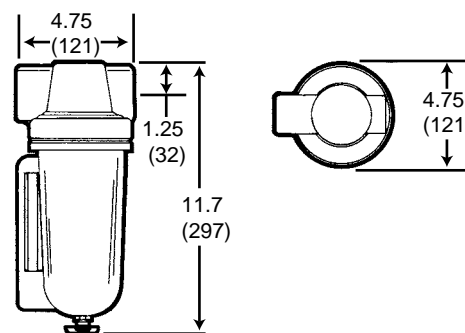
Ordering

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

| PORT SIZE | BASIC MODEL | | |
|-----------|-------------|---|---|
| 3/4" | F25451-X | X | X |
| 1" | F25461-X | X | X |
| 1-1/4" | F25471-X | X | X |
| 1-1/2" | F25481-X | X | X |

| | | |
|--------------------------|-------------------------|------------------------------|
| Filter Element | Bowl Option | Drain Option |
| 1 = 40 micron #104119 | 1 = Metal w/Sight Glass | 0 = Manual 1 = Auto Drain |

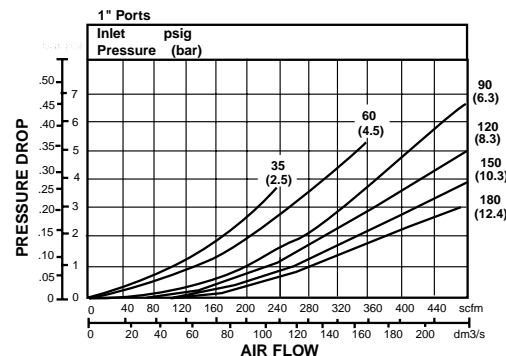
Dimensional Data



Accessories

Filter

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|-------------------------|--------|------------------|
| 104116 | Service Kit | 104068 | Automatic Drain |
| 104163 | Sight Glass Kit | 104241 | Twist Drain |
| 104119 | 40 Micron Element | 104235 | 5 Micron Element |
| 104115 | U-Bolt Mounting Bracket | | |



Features



2" Ports

ARO Super-Duty filters are specifically designed for use in applications where large air flow and bowl capacities are required. The removal of liquid and solid contaminants by these filters protects air tools and other equipment.

- Aluminum die-cast housings are lightweight and corrosion-resistant.
- 40 micron sintered bronze filter element has a large surface area and can be cleaned and replaced for long service life.
- Filter utilizes a depth-type element assembly that can be disassembled and cleaned without the use of tools or removal from the air line.
- Metal bowl with sight glass is standard. Bowl features a bayonet connection to permit quick disconnect for easy maintenance.



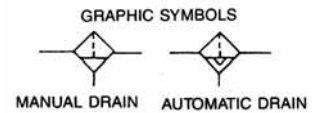
F25491-110

Performance Specifications

Max. Inlet Pressure: 250 PSIG (17 bar)
Oper. Temp. Range: 0° to 175° F (-18° to 79° C)
Weight: 2" = 16.5 lbs. (7.5 kg)
***Flow:** 2" = 1300 SCFM (613 dm³/s)

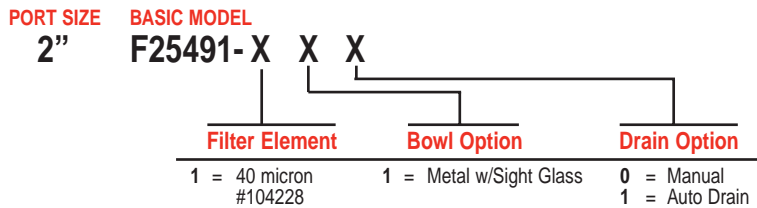
*Flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (.4 bar) pressure drop.

Body: Aluminum
Bowl: Aluminum
Sight Glass: Pyrex
Seals: Buna-N
Element: Sintered Bronze 40 Micron

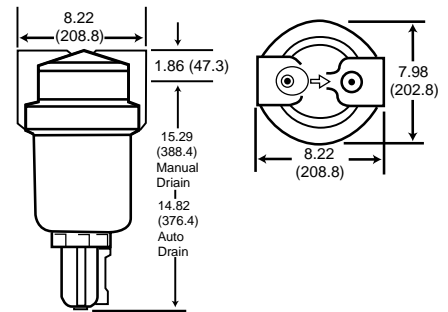


Ordering

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

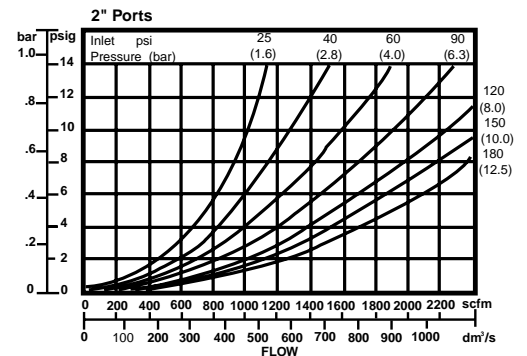


Dimensional Data



Accessories

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|-----------------|--------|-------------------|
| 104068 | Automatic Drain | 104228 | 40 Micron Element |
| 104229 | Service Kit | 104241 | Twist Drain |
| 104230 | Sight Glass Kit | 104227 | 5 Micron Element |



Features



3/4", 1" & 1-1/4" Ports

ARO Super-Duty high performance oil removal filters are designed to remove 99% of the oil and water aerosols found in all compressed air lines.

- Pop-up filter service indicator is standard. Indicator changes from green to red when element needs to be replaced.
- Super efficient coalescing filter element removes particles down to 0.01 micron.

Performance Specifications

| | | | |
|-----------------------------|-------------------------------|---------------------|---------------------------------------|
| Bowl Capacity: | 32 oz. (946 ml) | Body: | Aluminum |
| Max. Inlet Pressure: | 250 PSIG (17 bar) | Bowl: | Aluminum |
| Oper. Temp. Range: | 0° to 175° F (-18° to 79° C) | Sight Glass: | Pyrex |
| Weight: | 1-1/4" = 4.65 lbs. (2.11 kg), | Seals: | Buna-N |
| *Flow: | 3/4" = 50 SCFM (24 dm³/s), | Drain: | Twist Type |
| | 1" = 150 SCFM (71 dm³/s), | Element: | Synthetic Fiber and Polyurethane Foam |
| | 1-1/4" = 150 SCFM (71 dm³/s) | | |

*Flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (.4 bar) pressure drop.



F25462-310

Ordering

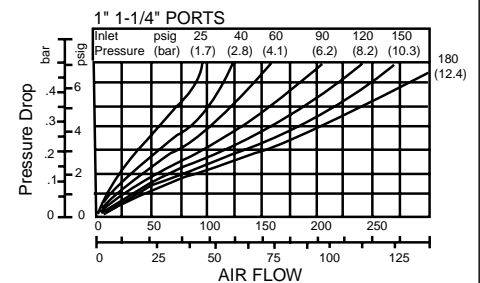
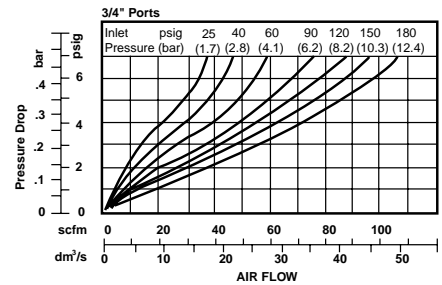
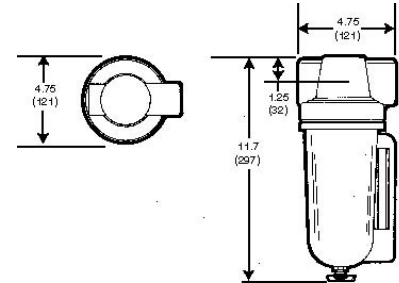
Select basic model representing the port size desired. Add number representing filter options required.

| | | | | |
|------------------|--------------------|---|---|--|
| PORT SIZE | BASIC MODEL | | | |
| 3/4" | F2545X-3 | X | X | |
| 1" | F2546X-3 | X | X | |
| 1-1/4" | F2547X-3 | X | X | |

Shaded area = Best-Selling Models

| | | | |
|--------------------------------------|-----------------------|------------------------------|------------------------------|
| Filter Service Indicator | Filter Element | Bowl Option | Drain Option |
| 2 = With Mechanical Drain (Standard) | 3 = Coalescing | 1 = Metal Bowl w/Sight Glass | 0 = Manual 1 = Auto Drain |

Dimensional Data



Accessories

| | | | |
|--------------|-------------------------|--------------|-------------------------------------|
| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
| 104068 | Automatic Drain | 104231 | Coalescing Element |
| 104115 | U-Bolt Mounting Bracket | 104241 | Twist Drain |
| 104116 | Service Kit | 104246 | Mechanical Filter Service Indicator |
| 104163 | Sight Gauge Kit | | |

Features



1-1/2" & 2" Ports

ARO Super-Duty high performance oil removal filters are designed to remove 99% of the oil and water aerosols found in all compressed air lines.

- Pop-up filter service indicator is standard. Indicator changes from green to red when element needs to be replaced.
- Super efficient coalescing filter element removes particles down to 0.01 micron.

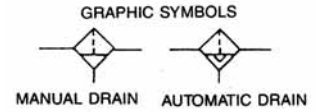


F25492-310

Performance Specifications

| | | | |
|-----------------------------|---|---------------------|--|
| Sump Capacity: | 6 oz. (946 ml) | Body: | Aluminum |
| Max. Inlet Pressure: | 250 PSIG (17 bar) | Bowl: | Aluminum |
| Oper. Temp. Range: | 0° to 175° F (-18° to 79° C) | Sight Glass: | Pyrex |
| Weight: | 1-1/2"= 16.0 lbs. (7.27 kg) | Seals: | Buna-N |
| | 2"= 6.5 lbs. (7.5 kg) | Element: | Synthetic Fibber and Polyurethane Foam |
| *Flow: | 1-1/2"= 440 SCFM (207 dm ³ /s) | | |
| | 2"= 1000 SCFM (472 dm ³ /s) | | |

*Flow is at 90 PSIG (6.2 bar)inlet and 5 PSIG (.4 bar) pressure drop.



Ordering

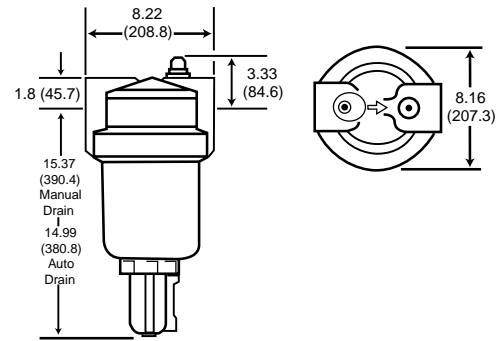
Select basic model representing the port size desired. Add number representing filter options required.

| | |
|------------------|--------------------|
| PORT SIZE | BASIC MODEL |
| 1-1/2" | F2548X-3X X |
| 2" | F2549X-3X X |

Shaded area = Best-Selling Models

| | | | |
|---------------------------------|-----------------------|------------------------------|------------------------------------|
| Filter Service Indicator | Filter Element | Bowl Option | Drain Option |
| 2 = With Mechanical (Standard) | 3 = Coalescing | 1 = Metal Bowl w/Sight Glass | 0 = Manual Drain 1 = Auto Drain |

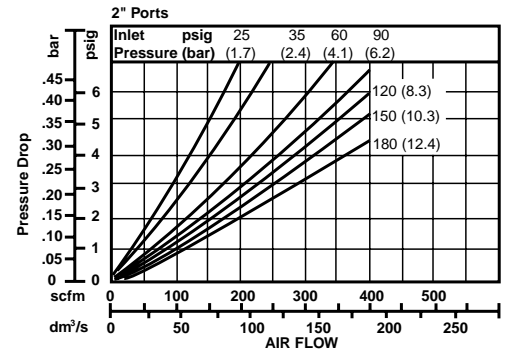
Dimensional Data



NOTE: For maximum element service life, install a general purpose filter with a 5 micron element upstream of the coalescing filter.

Accessories

| | | | |
|--------------|-------------------------|--------------|--------------------|
| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
| 104068 | Automatic Drain | 104230 | Sight Glass Kit |
| 104115 | U-bolt Mounting Bracket | 104232 | Coalescing Element |
| 104229 | Service Kit | 104241 | Twist Drain |



Features



3/4", 1", 1-1/4 & 1-1/2" Ports

Super-Duty Series regulators are used in large flow compressed air systems to help maintain constant outlet pressure. Gauge ports are 1/4" full flow and can be used as auxiliary outlet ports.

- Units can be mounted to a panel that is 1/16" min. to 5/32" max. thickness.
- Aluminum Die Cast body is light weight and corrosion resistant.
- Non-rising adjustment knob can be locked. Easy adjustment under any pressure.
- Buna N diaphragms and seals provide excellent elasticity and long seal life.
- Balanced valve design gives accurate and quick response to flow demands.

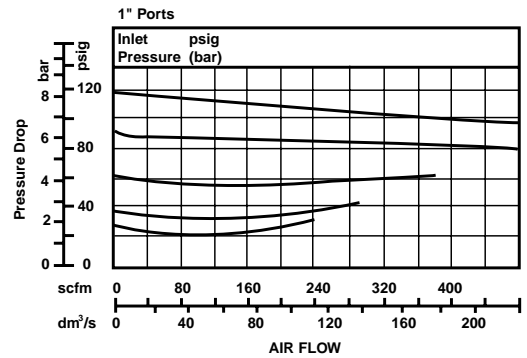


R27461-100
(order gauges separately)

Performance Specifications

| | | | |
|------------------------------|---|------------------------|------------------|
| Max. Inlet Pressure: | 300 PSIG (20.7 bar) | Spring Housing: | Aluminum |
| Press. Range in Reg.: | 5 to 250 PSIG (.4 to 17 bar) | Body: | Aluminum |
| Oper. Temp. Range: | 0° to 175° F (-18° to 79° C) | Seals: | Buna-N |
| Weight: | 3/4" = 3.51 lbs. (1.60 kg), 1" = 3.22 lbs. (1.46 kg), 1-1/4" = 2.90 lbs. (1.31 kg), 1-1/2" = 2.58 lbs. (1.17 kg) | Diaphragm: | Buna-N |
| | | Valve: | Aluminum & Nylon |
| *Flow: | 3/4" = 180 SCFM (85 dm³/s), 1" = 200 SCFM (94 dm³/s), 1-1/4" = 440 SCFM (207 dm³/s), 1-1/2" = 440 SCFM (207 dm³/s) | Knob: | High Impact ABS |

*Air flow is at 150 PSIG (10.4 bar) and 90 PSIG (6.9 bar) outlet.



Ordering

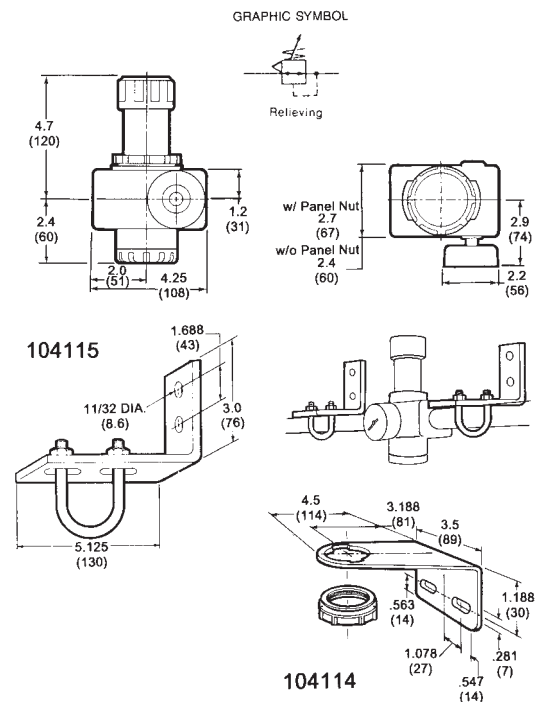
Select the basic model number which represents the port size desired. From table below, select the number representing lubricator options required.

| PORT SIZE | BASIC MODEL | | | |
|-----------|-------------|---|---|---|
| 3/4" | R27451- | X | X | X |
| 1" | R27461- | X | X | X |
| 1-1/4" | R27471- | X | X | X |
| 1-1/2" | R27481- | X | X | X |

Shaded area = Best-Selling Models

| | | |
|---|------------------|------------------|
| Pressure Range PSIG (Bar) | Relieving Option | Control Option |
| 1= 5 - 125 (.4 - 8.6) No gauge 2= 5 - 50 (.4 - 3.5) No gauge 3= 10 - 250 (.7 - 17) No gauge | 0= Relieving | 0= Standard Knob |

Dimensional Data



Accessories

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|------------------------------|--------|-------------------------|
| 100066 | Gauge 0-60 PSIG (0-4) | 104115 | U-Bolt Mounting Bracket |
| 100067 | Gauge 0-160 PSIG (0-11) | 104120 | Spring, 5-50 lb. |
| 100083 | Gauge 0-300 PSIG (0-21) | 104121 | Spring, 5-125 lb. |
| 104117 | Service Kit, Relieving Type | 104122 | Spring, 15-250 lb. |
| 104114 | Panel Nut & Mounting Bracket | | |

***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.

Features



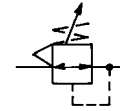
2" Ports

Super-Duty High Flow regulators are used in large flow compressed air systems to help maintain constant outlet pressure. Gauge ports are full flow and can be used as auxiliary outlet ports.

- Aluminum Die Cast body is light weight and corrosion resistant.
- Non-rising adjustment knob can be locked. Easy adjustment under any pressure.
- Balanced valve design gives accurate and quick response to flow demands.
- Exceptionally high relief flow.



R27491-100



Performance Specifications

| | |
|--|---------------------------------|
| Max. Inlet Pressure: 450 PSIG | Spring Housing: Aluminum |
| Press. Range in Reg: 15 to 250 PSIG (1.0 to 17 bar) | Body: Aluminum |
| Oper. Temp. Range: 0° to 175° F (-18° to 79° C) | Seals: Buna-N |
| Weight: 2" = 9 lbs. (4.1 kg) | Diaphragm: Buna-N |
| *Flow: 2" = 1000 SCFM (472 dm ³ /s) | Valve: Teflon |
| <small>*Air flow is at 100 PSIG (10.4 bar) and 90 PSIG (6.9 bar) outlet.</small> | Knob: High Impact ABS |

Ordering

| PORT SIZE NPT | MODEL | GAUGE PORT NPT | EXHAUST PORT NPT | PRESSURE RANGE* PSIG BAR | |
|------------------|------------|-------------------|---------------------|-----------------------------|--------|
| 2" | R27491-100 | 1/4" | 3/4" | 5-125 | .4-8.6 |
| 2" | R27491-200 | 1/4" | 3/4" | 5-50 | .4-5 |
| 2" | R27491-300 | 1/4" | 3/4" | 15-250 | 1.1-17 |

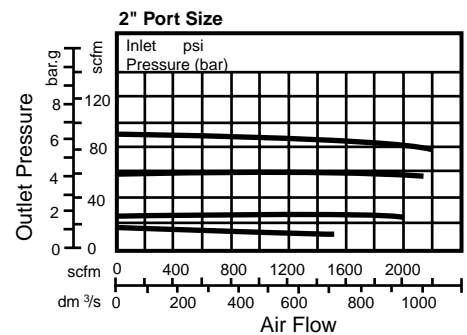
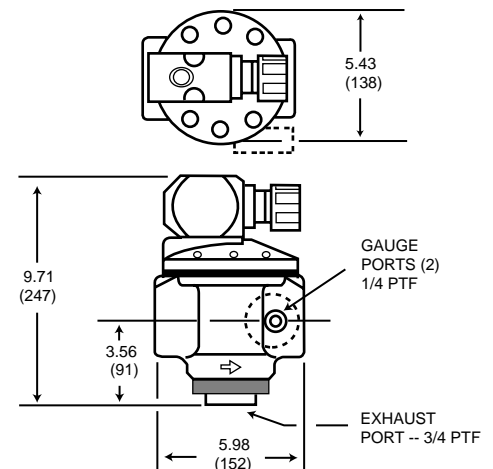
Select model representing port size and pressure range desired.
Order gauge and accessories separately.

Shaded area = Best Selling Model

NOTE: All models are relieving type only.

***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





Features

3/4", 1", 1-1/4 & 1-1/2" Ports

ARO Super-Duty High Flow lubricators are designed for application in compressed air systems where a constant ratio of oil-to-air is desired over widely varying air flows. They provide lubrication to air tools, cylinders, and other air-powered equipment. Recommended for lengthy, complex piping systems or multiple points of lubrication.

- Bodies feature aluminum die-cast construction for corrosion resistance.
- Oil feed adjustment has a screw driver adjustment that offers tamper-resistant capability. Automatic flow sensing delivers oil in proportion to air flow.
- Bowl is aluminum with glass sight gauge and has a spiral ramp thread to permit quick disconnect for easy maintenance.
- Optional quick-fill adapter and fill pump are available for lubricator filling and maintenance. See accessories below.



L26481-110

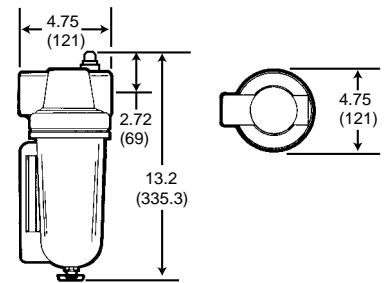


Performance Specifications

| | | | |
|-----------------------------|---|---------------------|----------|
| Max. Inlet Pressure: | 250 PSIG (17 bar) | Body: | Aluminum |
| Oper. Temp. Range: | 0° to 175° F (-18° to 79° C) | Sight Glass: | Pyrex |
| Oil Capacity: | 32 oz. (946 ml) | Seals: | Buna-N |
| Weight: | 3/4" = 4.60 lbs. (2.09 kg), 1" = 4.30 lbs. (1.95 kg), 1-1/4" = 3.94 lbs. (1.79 kg), 1-1/2" = 3.58 lbs. (1.62 kg) | | |
| *Flow: | 3/4" = 190 SCFM (90 dm³/s), 1" = 200 SCFM (94 dm³/s), 1-1/4" = 220 SCFM (104 dm³/s), 1-1/2" = 220 SCFM (104 dm³/s) | | |

* Flow is at 90 PSIG (6.2 bar) inlet and 5 PSIG (.4 bar) pressure drop.

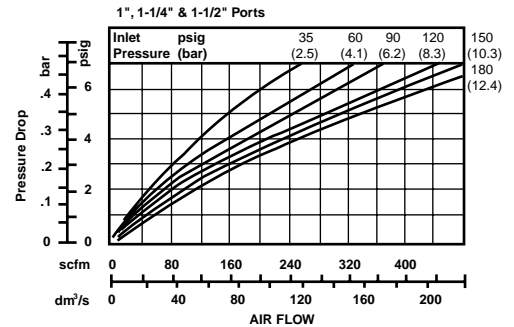
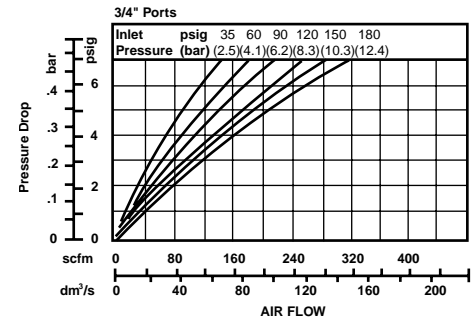
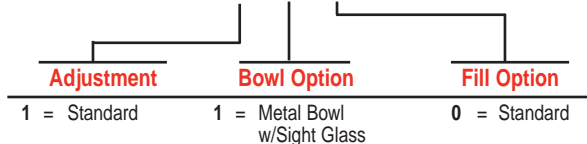
Dimensional Data



Ordering

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

| PORT SIZE | BASIC MODEL | | |
|-----------|-------------|---|---|
| 3/4" | L26451- | X | X |
| 1" | L26461- | X | X |
| 1-1/4" | L26471- | X | X |
| 1-1/2" | L26481- | X | X |



Accessories

| MODEL | DESCRIPTION | MODEL | DESCRIPTION |
|--------|-------------------------------------|--------|--------------------------------------|
| 104118 | Service Kit | 29235 | Quick-Fill Adapter (1/8"-27 Threads) |
| 29665 | ARO Lubricating Oil. (See page 71). | 104115 | U-Bolt Mounting Bracket |
| 104124 | Sight Feed Dome Kit | 104241 | Twist Drain Kit |
| 104163 | Sight Gauge Kit | | |



29665

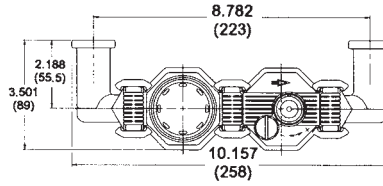
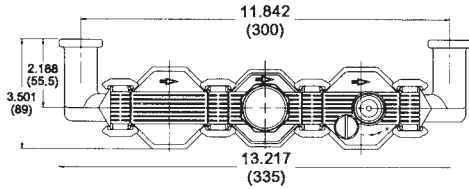


29235

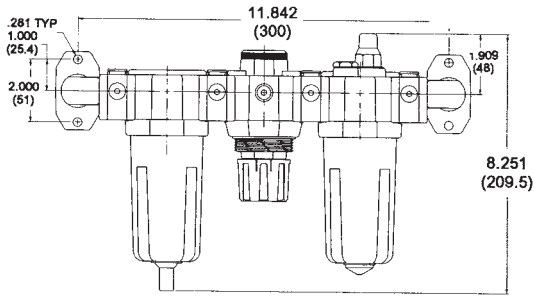
Dimensional Data



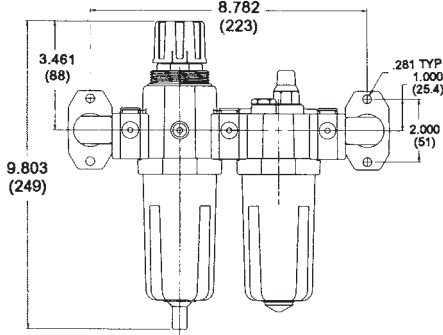
Module/Air 2000 Series



104169 Right-Angle Piping Brackets



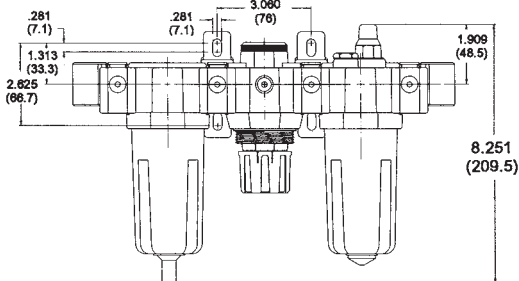
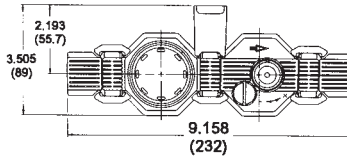
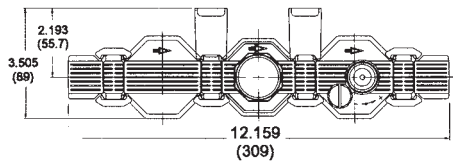
Filter-Regulator-Lubricator with Right-Angle Brackets



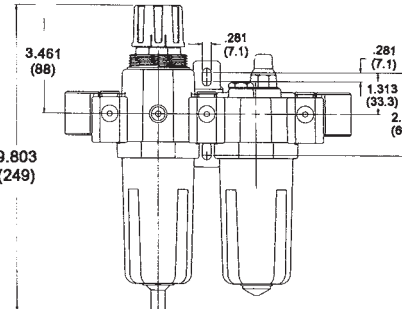
Piggyback-Lubricator with Right-Angle Brackets



104171 T-Type Mounting Brackets



Threaded Pipe Adapters Filter-Regulator-Lubricator with Pipe Adapters
 104168-2 1/4" Threads
 104168-3 3/8" Threads
 104168-4 1/2" Threads
 104168-6 3/4" Threads



Piggyback-Lubricator with Pipe Adapters



Panel Mounting
 Use 104173 Panel Mounting Nut
 Use 29722 Panel Mount Gauge



104172 Mounting Kit
 Includes 29623 Bracket &
 104173 Panel Mounting Nut

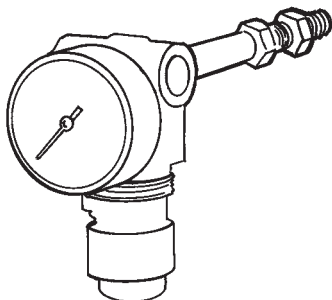


29999 U-Bolt Mounting Bracket
 For 1/4", 3/8" & 1/2" pipe

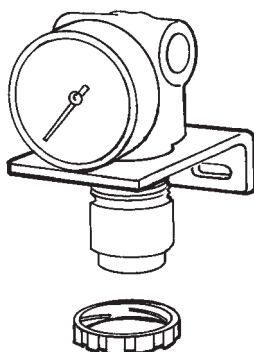


Features

Miniature Series



104039 Stud Mount
For use on Piggyback and Regulator units.



29668 Mounting Bracket with 104094 Panel Mounting Nut
For Use on Piggyback and Regulator units.



Panel Mounting
Use 104094 Panel Mounting Nut
Use 29722 for Panel Mount Gauge

Heavy Duty Series



U-Bolt Mounting Brackets
29999 for 1/2" pipe
29970 for 3/4" & 1" pipe



29077 L- Type Mounting Bracket

Super Duty Series



104114 Panel Nut & Mounting Bracket



104115 U- Bolt Mounting Bracket
For both 1 1/4" & 1 1/2" pipe

Performance Specifications



1/8" & 1/4" NPT For Compressed Air or Inert Gas

| | |
|-----------------------------|--|
| Lens: | Polycarbonate or Glass |
| Connection Location: | Centered back or bottom |
| Scale: | Dual - PSIG and bar |
| Accuracy: | 2% of full scale at mid range. 3% of full scale at other ranges |
| Max. Inlet Pressure: | 100% of full scale on gauge |
| Max. Operating Temp: | 150° F (65°C) |
| Media: | Compressed air or inert gas |

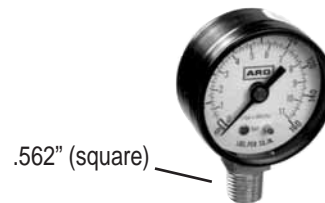
GRAPHIC SYMBOL



CAUTION: The accuracy of pressure gauge indicator can change, both during shipment (despite care in packaging) and during the service life.

| MODEL NUMBER | THREAD NPT | DUAL RANGE PSIG (bar) | CASE MATERIAL | LENS | DIAMETER in. (mm) |
|--------------|------------|-----------------------|---------------|---------------|-------------------|
| 29724 | 1/8" | 0-60 (0-4) | Steel | Polycarbonate | 1.5 (38) |
| 29725 | 1/8" | 0-160 (0-11) | Steel | Polycarbonate | 1.5 (38) |
| 29727 | 1/4" | 0-60 (0-4) | Steel | Polycarbonate | 2.0 (51) |
| 29728 | 1/4" | 0-160 (0-11) | Steel | Polycarbonate | 2.0 (51) |

Bottom Ported Gauges



29725

Back Ported Gauges

| | | | | | |
|----------------|------|--------------|---------|---------------|----------|
| 29755-1 | 1/8" | 0-30 (0-2) | Steel | Polycarbonate | 1.5 (38) |
| 29846 | 1/8" | 0-15 (0-1) | Plastic | Polycarbonate | 1.5 (38) |
| 29863 | 1/8" | 0-60 (0-4) | Steel | Polycarbonate | 1.5 (38) |
| 29883 | 1/8" | 0-160 (0-4) | Steel | Glass | 2.0 (38) |
| 29850 | 1/8" | 0-160 (0-11) | Plastic | Polycarbonate | 1.5 (38) |
| 29975 | 1/8" | 0-160 (0-11) | Steel | Glass | 1.5 (38) |



100067

Back Ported Gauges (w/Black Face & Neon Needle)

| | | | | | |
|---------------|------|--------------|---------|---------------|----------|
| 100066 | 1/4" | 0-60 (0-4) | Plastic | Polycarbonate | 2.0 (51) |
| 100090 | 1/4" | 0-60 (0-4) | Steel | Glass | 2.0 (51) |
| 100067 | 1/4" | 0-160 (0-11) | Plastic | Polycarbonate | 2.0 (51) |
| 100091 | 1/4" | 0-160 (0-11) | Steel | Glass | 2.0 (51) |
| 100083 | 1/4" | 0-300 (0-21) | Plastic | Polycarbonate | 2.0 (51) |



29722

Panel-Mounted/Back Ported Gauges*

| | | | | | |
|--------------|------|--------------|-------|---------------|----------|
| 29720 | 1/8" | 0-15 (0-1) | Steel | Polycarbonate | 1.5 (38) |
| 29721 | 1/8" | 0-60 (0-4) | Steel | Polycarbonate | 1.5 (38) |
| 29722 | 1/8" | 1-160 (0-11) | Steel | Polycarbonate | 1.5 (38) |

*NOTE: Require 1.625" (41.275 mm) diameter hole for mounting.

Performance Specifications



1/8" & 1/4" NPT For Compressed Air or Inert Gas

Case Material: Metal
 Lens: Polycarbonate
 Connection Location: Centered Back
 Media: Compressed Air or Inert Gas
 Maximum Inlet Pressure: 100% of Full Scale on Gauge
 Max Operating Temperature: 150° F (65°C)

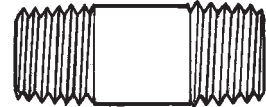


100095-160

| MODEL NUMBER | THREAD NPT | RANGE PSI | USED ON | DIAL FACE SIZE | |
|--------------|------------|-----------|-----------|----------------|------|
| | | | | Inches | (mm) |
| 100095-160 | 1/8" | 0-150 | Miniature | 1.5 | (38) |

Pipe Nipples

| PART NUMBER | NPT SIZE | ARO FRL SERIES |
|-------------|----------|-------------------------------|
| Y237-2 | 1/8" | Miniature |
| Y27-2-C | 1/4" | Miniature |
| Y27-52-C | 1/4" | Module/ Air 2000 |
| Y27-53-C | 3/8" | Module/ Air 2000 |
| Y27-54-C | 1/2" | Module/ Air 2000 & Heavy Duty |
| Y27-55-C | 3/4" | Heavy Duty |
| Y27-56-C | 1" | Heavy-Duty |
| Y27-57-C | 1-1/4" | Super-Duty |
| Y27-58-C | 1-1/2" | Super-Duty |



One Compact Solution



Ensure only quality compressed air gets through to your air equipment.

PUP - Point of Use Provider, protects against mechanical failure, lost productivity and high maintenance caused by oil, water and particle contaminants at point of use.

One compact filter and automatic drain with multiple outlet distribution.

DOBCO
EQUIPMENT LTD

PUP - Point of Use Provider



PUP - Point of Use Provider (Patent pending) provides enhanced solutions for your compressed air system.

The bottom of a compressed air drop, the lowest point in any system is where most oil, water and particle contaminates collect. This is the most hazardous area in any system.

Even in a treated system, scale particles from the piping and moisture condensate which forms even in the best of systems, will, if not removed at the point of use, enter into the air process causing severe mechanical failure, lost productivity and high maintenance costs.

PUP incorporates a high efficiency 1-micron coalescing filter, which will remove solid particles, moisture and oil contamination leaving the air clean and your system protected.

In addition to providing high air quality, PUP's unique design provides the solution for condensate removal and multiple outlet connections all in one compact unit.

From a 1" female top entry connection, up to 4 outlet connections can be made to PUP.

Two 1/2" ports, and two 3/8" ports are positioned around the head of the unit allowing for any piping configuration.

You can run solid pipe, hoses or quick disconnects. PUP allows for any requirement to be met simply and easily.

In the base of the PUP an automatic drain with manual override removes condensate. This eliminates the need to install a manual valve that is rarely used.

Providing high air quality, reducing leakage and wasted energy, ensuring moisture is removed and making installation easier. PUP really is the all in one, POINT of USE PROVIDER.



Technical Specification

Filtration Efficiency

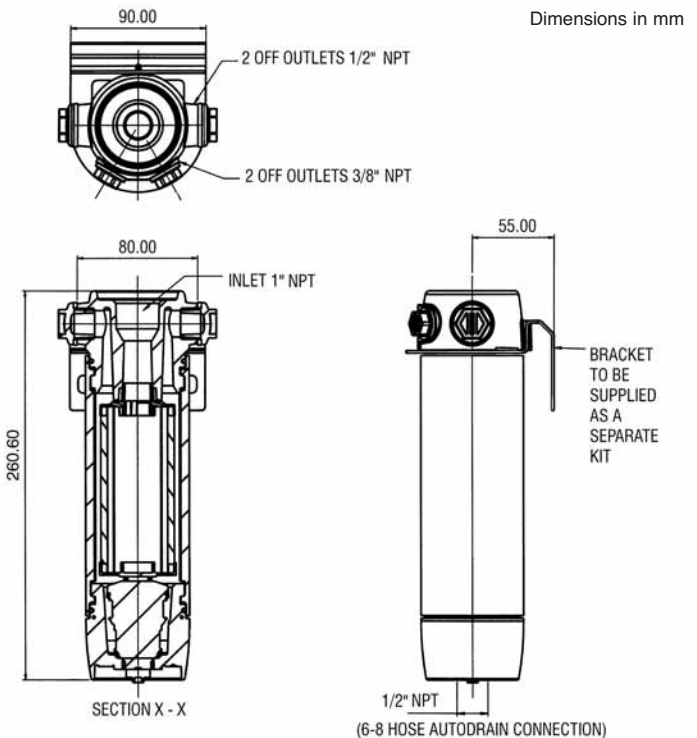
Particle Removal down to 1 Micron including coalesced liquid water and oil, providing a maximum remaining oil aerosol content of 0.6 mg/m³ (0.5ppm) at 21°C (70°F)

Operating Limitations

| | |
|---|------------------------------------|
| Maximum flow of unit | 1.70 m ³ /min (60 scfm) |
| Maximum operating pressure | 16 bar g (232 psi g) |
| Maximum recommended operating temperature | 66°C (150°F) |
| Minimum recommended operating temperature | 1°C (34°F) |
| Recommended filter element change: | 12 months or 6000 hours |

PUP Part Numbers

| | |
|-----------------------|------------|
| Description | CCN |
| NPT PUP | 42526707-A |
| Replacement Element | 38027223-A |
| Drain Kit | 88344171-A |
| Wall Mounting Bracket | 38027249-A |



Cross Reference



Filters

| | ARO | Arrow | M-Pneu | Parker | Schrader | Norgren | WATTS | Wilkerson | SMC |
|--|------------|----------------|-------------------|------------------|------------------|------------------------------|-----------------------|---------------------------|------------------------------|
| Miniature | | | | | | | | | |
| 1/8" | F25111-200 | F300-01 | F150-1 | 8AF01B 14F01B | 7AF01B | F07-100-MITA | F35-01AH F504-01AH | F08-01-SK00 F00-01-000 | NAF2000-N01 |
| 1/4" | F25121-200 | F300-02 | F150-2 | 8AF11B 14F11B | 7AF11B | F07-200-MITA | F35-02AH F504-02AH | F08-02-SK00 F00-02-000 | NAF2000-N02 |
| Module/Air 2000 with Poly Bowl and Guard | | | | | | | | | |
| 1/4" | F25221-100 | F352 | F60-2 F100-2 | 06F12A | 06F12A | F72G-2AN-QT3 F08-200-M3TA | F602-02BJ F75-02BJ | F16-02-000 F18-02-SK00 | NAF3000-N02 |
| 3/8" | F25231-100 | F353 | F60-3 F100-3 | 06F22A 07F22A | 06F22A 07F22A | F72G-3AN-QT3 F08-300-M3TA | F602-03BJ F75-03BJ | F16-03-000 F18-03-SK00 | NAF3000-N03 NAF4000-N03 |
| 1/2" | F25241-100 | F354 | F60-4 F100-4 | 06F32A 07F32A | 06L32A 07F32A | F74G-4AN-OP3 F08-400-M3TA | F602-04BJ F75-04BJ | F16-04-000 F18-04-SK00 | NAF4000-N04 |
| Module/Air 2000 with Metal Bowl and Sight Glass | | | | | | | | | |
| 1/4" | F25221-110 | F362W | BF60-2 BF100-2 | 06F14A | 06F14A | F72G-2AN-QD3 F08-200-M3DA | F602-02WJ F75-02WJ | F16-02-G00 F18-02-SL00 | NAF3000-N028 |
| 3/8" | F25231-110 | F373W F363W | BF60-3 BF100-3 | 06F24A 07F24A | 06F24A 07F24A | F72G-3AN-QD3 F08-300-M3DA | F602-03WJ F75-03WJ | F16-03-G00 F18-03-SL00 | NAF3000-N038 NAF4000-N038 |
| 1/2" | F25241-110 | F374W F364W | BF60-4 BF100-4 | 06F34A 07F34A | 06F34A 07F34A | F74G-4AN-QD3 F08-400-M3DA | F602-04WJ F75-04WJ | F16-04-G00 F18-04-SL00 | NAF4000-N048 |
| Heavy Duty | | | | | | | | | |
| 3/4" | 25351-020 | F329-06 | F100-6 | 08F44A | 08F44A | F17-600-M3DA | F602-06WJ | F38-06-SL00 F30-06-000 | NAF4000-N06 |
| 1" | 25361-020 | F329-08 | F100-8 | 08F54A | 08F54A | F17-800-M3DA | F602-08WJ | F38-08-SL00 F30-08-000 | NAF5000-N10 |
| Super Duty | | | | | | | | | |
| 1-1/4" | F25471-110 | N/A | BF100-10 | 08F64A | 08F64A | F17-A00-M3DA | F602-10WJ | F42-0A-000 | NAF800-N12-2 |
| 1-1/2" | F25481-110 | F329-12 | BF100-12 | 08F74A | 08F74A | F17-B00-M3DA | F602-12WJ | F42-0B-000 | NAF800-N14-2 |

Regulators

| | ARO | Arrow | M-Pneu | Parker | Schrader | Norgren | WATTS | Wilkerson | SMC |
|------------------------|------------|-------|----------------|--------------------|--------------------|------------------------------|---------------------|---------------------------|----------------------------|
| Miniature | | | | | | | | | |
| 1/8" | 127112-000 | R161 | R55-1 | 8AR013F 14R013F | 7AR013F | R07-100-RNLA | R35-01C R364-01C | R08-01-C000 R00-01-000 | NAR2000-N01 |
| 1/4" | 127122-000 | R162 | R55-2 | 8AR113F 14R113F | 7AR113F | R07-200-RNLA | R35-02C R364-02C | R08-01-C000 R00-01-000 | NAR2000-N02 |
| Module/Air 2000 | | | | | | | | | |
| 1/4" | R27221-100 | R352 | R60-2 R75-2 | 06R113A | 06R113A | R72G-2AK-RMN R08-200-RNMA | R119-02C R75-02C | R16-02-000 R18-02-C000 | NAR3000-N02 |
| 3/8" | R27231-100 | R353 | R60-3 R75-3 | 06R213A 07R213A | 06R213A 07R213A | R72G-3AK-RMN R08-300-RNMA | R119-03C R75-03C | R16-03-000 R18-03-C000 | NAR3000-N03 NAR4000-N03 |
| 1/2" | R27241-100 | R354 | R60-4 R75-4 | 06R313A 07R313A | 06R313A 07R313A | R74G-4AK-RMN R08-400-RNMA | R119-04C R75-04C | R16-04-000 R18-04-C000 | NAR4000-N04 |
| Heavy Duty | | | | | | | | | |
| 3/4" | 27354-000 | 1586 | R180M-6 | 08R413A | 08R413A | R17-600-RNLA | R119-06C | R38-06-F000 R30-06-000 | NAR4000-N06 |
| 1" | 27364-000 | 1588 | R180M-8 | 08R513A | 08R513A | R17-800-RNLA | R119-08C | R38-08-F000 R30-08-000 | NAR5000-N10 |
| Super Duty | | | | | | | | | |
| 1-1/4" | R27471-100 | N/A | R180M-10 | 08R613A | 08R613A | R17-A00-RNLA | R119-10C | R03-0A-000 | N/A |
| 1-1/2" | R27481-100 | N/A | R180M-12 | 08R713A | 08R713A | R17-B00-RNLA | R119-12C | R30-0B-000 | N/A |

Cross Reference



Filter / Regulator

| ARO | | Arrow | M-Pneu | Parker | Schrader | Norgren | WATTS | Wilkerson | SMC |
|--|------------|----------------|-----------------------|------------------------|------------------------|----------------------------------|-------------------------|---------------------------|------------------------------|
| Miniature | | | | | | | | | |
| 1/8" | P29112-100 | B741 | CFR55-1 | 8AE01B13F 14E01B13F | 7AE01B13F | B07-102-MIKA | B35-01AHC B508-01AHC | C04-01-000 B08-01-FK00 | NAW2000-N01-C |
| 1/4" | P29122-100 | B742 | CFR55-2 | 8AE11B13F 14E11B13F | 7AE11B13F | B07-202-MIKA | B35-02AHC B508-02AHC | C04-02-000 B08-02-FK00 | NAW2000-N02-C |
| Module/Air 2000 with Poly Bowl and Guard | | | | | | | | | |
| 1/4" | P29221-100 | B752 B762 | CFR60-2 CFR100-2 | 06E12A13A | 06E12A13A | B72G-2AK-QT3-RMG B08-297-M0MA | B75-02BJC | CB6-02-000 B18-02-FK00 | NAW3000-N020 |
| 3/8" | P29231-100 | B753 B763 | CFR60-3 CFR100-3 | 06E22A13A 07E22A13A | 06E22A13A 07E22A13A | B72G-3AK-QT3-RMG B08-397-M0MA | B75-03BJC | CB6-03-000 B18-03-FK00 | NAW3000-N030 NAW4000-N030 |
| 1/2" | P29241-100 | B754 B764 | CFR60-4 CFR100-4 | 06E32A13A 07E32A13A | 06E32A13A 07E32A13A | B74G-4AK-QT3-RMG B08-497-M0MA | B75-04BJC | CB6-04-000 B18-04-FK00 | NAW4000-N040 |
| Module/Air 2000 with Metal Bowl and Sight Glass | | | | | | | | | |
| 1/4" | P29221-110 | B752W B762W | BCFR60-2 BCFR100-2 | 06E14A13A | 06E14A13A | B72G-2AK-QD3-RMG B08-297-M3MA | B11-02WJC B75-02WJC | CB6-02-G00 B18-02-SL00 | NAW3000-N028 |
| 3/8" | P29231-110 | B752W B762W | BCFR60-3 BCFR100-3 | 06E24A13A 07E24A13A | 06E24A13A 07E24A13A | B72G-3AK-QD3-RMG B08-397-M3MA | B11-03WJC B75-03WJC | CB6-03-G00 B18-03-SL00 | NAW3000-N038 NAW4000-N038 |
| 1/2" | P29241-110 | B752W B762W | BCFR60-4 BCFR100-4 | 06E34A13A 07E34A13A | 06E34A13A 07E34A13A | B74G-4AK-QD3-RMG B08-497-M3MA | B11-04WJC B75-04WJC | CB6-04-G00 B18-04-SL00 | NAW4000-N048 |
| Heavy Duty | | | | | | | | | |
| 3/4" | N/A | N/A | CFR100-6 | N/A | N/A | B74G-6AK-QD3-RMG | B105-06-WJC | B38-06-SL00 | NAW4000-N06 |
| 1" | N/A | N/A | N/A | N/A | N/A | N/A | N/A | B38-08-SL00 | N/A |

Lubricators

| ARO | | Arrow | M-Pneu | Parker | Schrader | Norgren | WATTS | Wilkerson | SMC |
|--|------------|----------------|--------------------|------------------|------------------|------------------------------|-----------------------|---------------------------|------------------------------|
| Miniature | | | | | | | | | |
| 1/8" | L26111-100 | 1811 | L10-1 L50-1 | 8AL00G | 7AL00G | L07-100-MPAA | L508-01A L35-01A2A | L08-01-LK00 L00-01-000 | NAL2000-N01 |
| 1/4" | L26121-100 | 1812 | L10-2 L50-2 | 8AL10G 14L10G | 7AL10G | L07-200-MPAA | L508-02A L35-02AA | L08-02-LK00 L00-02-000 | NAL2000-N02 |
| Module/Air 2000 with Poly Bowl and Guard | | | | | | | | | |
| 1/4" | L26221-100 | L352 | L60D-2 L28D-2 | 06L12B | 06L12B | L08-200-OPCA L72M-2AP-QTN | L606-02B L75-02B | L16-02-000 L18-02-LK00 | NAL3000-N02 |
| 3/8" | L26231-100 | L353 | L60D-3 L28D-3 | 06L22B 07L22B | 06L22B 07L22B | L08-300-OPCA L72M-3AP-QTN | L606-03B L75-03B | L16-03-000 L18-03-LK00 | NAL3000-N03 NAL4000-N03 |
| 1/2" | L26241-100 | L354 | L60D-4 L28D-4 | 06L32B 07L32B | 06L32B 07L32B | L08-400-OPCA L74M-4AP-QTN | L606-04B L75-04B | L16-04-000 L18-04-LK00 | NAL4000-N04 |
| Module/Air 2000 with Metal Bowl and Sight Glass | | | | | | | | | |
| 1/4" | L26221-110 | L372W L452M | BL60D-2 BL28D-2 | 06L14B | 06L14B | L08-200-OPDA L72M-2AP-QDN | L606-02W L75-02W | L16-02-G00 L18-02-LL00 | NAL3000-N028 |
| 3/8" | L26231-110 | L373W L453M | BL60D-3 BL28D-3 | 06L24B 07L24B | 06L24B 07L24B | L08-300-OPDA L72M-3AP-QDN | L606-03W L75-03W | L16-03-G00 L18-03-LL00 | NAL3000-N038 NAL4000-N038 |
| 1/2" | L26241-110 | L374W L454M | BL60D-4 BL28D-4 | 06L34B 07L34B | 06L34B 07L34B | L08-400-OPDA L74M-4AP-QDN | L606-04W L75-04W | L16-04-G00 L18-04-LL00 | NAL4000-N048 |
| Heavy Duty | | | | | | | | | |
| 3/4" | 26351-020 | 4106 | L29D-6 | 08L44B | 08L44B | L17-600-MPDA | F606-06W | L38-06-LK00 L30-06-000 | NAL4000-N06 |
| 1" | 26361-020 | 4108 | L29D-8 | 08L54B | 08L54B | L17-800-MPDA | F606-08W | L38-08-LK00 L30-08-000 | NAL5000-N10 |
| Super Duty | | | | | | | | | |
| 1-1/4" | L26471-110 | N/A | L29D-10 | 08L64B | 08L64B | L17-AOO-MPDA | F606-10W | L42-0A-000 | NAL800-N12-2 |
| 1-1/2" | L26481-110 | 4112 | L29D-12 | 08L74B | 08L74B | L17-B00-MPDA | F606-12W | L42-0B-000 | NAL800-N14-2 |

FRL Selection Guide



Piston Pump

| Piston Model | Type Construction | GPM | Ratio | Fluid Inlet/Outlet | Air Inlet | Recommended Filter/Regulator | Recommended Lubricator |
|----------------|-------------------|------|-------|--------------------|-----------|------------------------------|------------------------|
| 612041-X | Carbon Steel | 12.3 | 1:1 | 3/4" | 1/4" | P29221-610 | L26221-110 |
| 613100-1 | Stainless Steel | 4 | 9:1 | 3/8" | 1/2" | P29241-610 | L26241-110 |
| NM2328A-11-X | Carbon Steel | 0.75 | 28:1 | 1/4" | 1/4" | P29221-610 | L26221-110 |
| NM2304A-11-X11 | Carbon Steel | 4.2 | 4:1 | 1 1/4" / 3/4" | 1/4" | P29221-610 | L26221-110 |
| NM2304A-41-X11 | Carbon Steel | 4.2 | 4:1 | 1 1/4" / 3/4" | 1/4" | P29221-610 | L26221-110 |
| 650110-XX | Carbon Steel | 4 | 2:1 | 1" | 1/4" | P29221-610 | L26221-110 |
| 65013X-1 | Stainless Steel | 4 | 2:1 | 1/2" | 1/4" | P29221-610 | L26221-110 |
| NM2304B-11-X11 | Stainless Steel | 4.2 | 4:1 | 1 1/4" / 3/4" | 1/2" | P29241-610 | L26241-110 |
| NM2304B-41-X11 | Stainless Steel | 4.2 | 4:1 | 1 1/4" / 3/4" | 1/4" | P29221-610 | L26221-110 |
| 650384-X43 | Stainless Steel | 2.5 | 12:1 | 1" | 1/2" | P29241-610 | L26241-110 |
| 650385-X43 | Stainless Steel | 1.5 | 17:1 | 3/4" | 1/4" | P29221-610 | L26221-110 |
| 650408-X-B | Stainless Steel | 4 | 9:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650409-X | Stainless Steel | 4 | 9:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650432-XXX-B | Stainless Steel | 25 | 2:1 | 3/4" | 1/4" | P29221-610 | L26221-110 |
| 650432-X43-B | Carbon Steel | 25 | 2:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650437-XXX | Stainless Steel | 15 | | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650453-X | Carbon Steel | 4 | 9:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650453-X | Carbon Steel | 4 | 9:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650483-X43 | Stainless Steel | 4.6 | 11:1 | 1" | 1/2" | P29241-610 | L26241-110 |
| 650484-X43 | Stainless Steel | 2.4 | 22:1 | 1" | 1/2" | P29241-610 | L26241-110 |
| 650491-X43 | Carbon Steel | 3.3 | 12:1 | 1" | 1/2" | P29241-610 | L26241-110 |
| 650492-X43 | Carbon Steel | 2.1 | 23:1 | 1" | 1/2" | P29241-610 | L26241-110 |
| 650616-X43-B | Carbon Steel | 38 | 3:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650632-XXX-B | Carbon Steel | 25 | 4:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650634-XXX-B | Stainless Steel | 25 | 4:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650635-XXX-B | Stainless Steel | 25 | 4:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650636-XXX | Stainless Steel | 38 | 3:1 | 3/4" | 1/2" | P29241-610 | L26241-110 |
| 650637-X69 | Stainless Steel | 15 | 6:1 | 1 1/4" | 1/2" | P29241-610 | L26241-110 |
| 650638-XXX | Stainless Steel | 15 | 6:1 | 1 1/4" | 1/2" | P29241-610 | L26241-110 |
| 650683-X43 | Stainless Steel | 4.6 | 23:1 | 1" | 1/2" | P29241-610 | L26241-110 |
| 6711X-P43 | Carbon Steel | 0.78 | 21:1 | 1/2" | 1/4" | P29221-610 | L26221-110 |

| Piston Model | Type Construction | GPM | Ratio | Fluid Inlet/Outlet | Air Inlet | Recommended Filter | Recommended Regulator | Recommended Lubricator |
|--------------|-------------------|------|-------|--------------------|-----------|--------------------|-----------------------|------------------------|
| 613112-XXX-B | Stainless Steel | 15 | 10:01 | 1-1/4" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 613123-X66-B | Stainless Steel | 15 | 15:01 | 1-1/4" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 613124-X36-B | Stainless Steel | 15 | 23:01 | 1-1/4" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 650866-X63 | Stainless Steel | 15 | 10:01 | 1-1/4" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 650867-X63 | Stainless Steel | 15 | 15:01 | 1-1/4" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 650871-X44-B | Carbon Steel | 10.5 | 13:01 | 1-1/2" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 650871-X44-B | Carbon Steel | 10.5 | 13:01 | 1-1/2" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| 650967-X63 | Stainless Steel | 15 | 23:01 | 1-1/4" | 3/4" | F25451-110 | R27451-100 | L26451-110 |

FRL Selection Guide



Diaphragm Pump

| Diaphragm Model | Size Pump | GPM | Ratio | Fluid Inlet/Outlet | Air Inlet | Recommended Filter/Regulator | Recommended Lubricator |
|-----------------|-----------|-------|-------|--------------------|-----------|------------------------------|------------------------|
| PD02P-AXX-XXX | 1/4" | 4.6 | 1:1 | 1/4" | 1/4" | P29122-100 | L26121-100 |
| 66605J-XXX | 1/2" | 13 | 1:1 | 1/2" | 1/4" | P29221-610 | L26221-110 |
| 6661X3-XXX-C | 1" | 35 | 1:1 | 1" | 1/4" | P29221-610 | L26221-110 |
| 6661X3-XXX-C | 1" | 40 | 1:1 | 1" | 1/4" | P29221-610 | L26221-110 |
| 6661XX-XXX-C | 1-1/2" | 90 | 1:1 | 1 1/2" | 1/2" | P29241-610 | L26241-110 |
| 6661XX-2A4-C | 1" | 12-25 | 3:1 | 1" | 3/8" | P29231-610 | L26231-110 |
| 650709-C | 1" | 29 | 1:1 | 1" | 1/4" | P29221-610 | L26221-110 |
| 650717-C | 1" | 29 | 1:1 | 1" | 1/4" | P29221-610 | L26221-110 |
| 650710-C | 1 1/2" | 75 | 1:1 | 1 1/2" | 1/2" | P29241-610 | L26241-110 |
| 650718-C | 1 1/2" | 75 | 1:1 | 1 1/2" | 1/2" | P29241-610 | L26241-110 |
| 650719-C | 2" | 105 | 1:1 | 2" | 1/2" | P29241-610 | L26241-110 |
| 650711-C | 2" | 105 | 1:1 | 2" | 1/2" | P29241-610 | L26241-110 |

| Diaphragm Model | Size Pump | GPM | Ratio | Fluid Inlet/Outlet | Air Inlet | Recommended Filter | Recommended Regulator | Recommended Lubricator |
|-----------------|-----------|-----|-------|--------------------|-----------|--------------------|-----------------------|------------------------|
| 6662XX-XXX-C | 2" | 145 | 1:01 | 2" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| PD20X-AXX-XXX | 2" | 170 | 1:01 | 2" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| PF20X-XXX-XXX | 2" Flap | 170 | 1:01 | 2" | 3/4" | F25451-110 | R27451-100 | L26451-110 |
| PD30X-XXX-XXX | 3" | 275 | 1:01 | 3" | 3/4" | F25451-110 | R27451-100 | L26451-110 |

Safety Blow Guns

ARO Safety Blow Guns are designed to prevent pressure buildup above 29 PSIG if nozzle is obstructed [to meet OSHA requirement 29 CFR1910.242(b)]. The composite bodied guns on this page are extremely lightweight and corrosion resistant.



8440

Features

Model 8440 - Our most popular blow gun!

- Built-in orifice and non-removable relieved tip prevent pressure buildup above 29 PSIG, if nozzle is obstructed.
- Provides greater chip removal force with less air consumption.
- Tough polyester body offers corrosion resistance.
- Shop safety yellow color makes for easy identification.
- Weighs just 2.7 oz., for easy handling.
- Thumb-actuated lever throttle provides excellent flow control.
- Hook-shaped body for convenient storage when not in use.

| INLET PSI | PSI AT TIP DEAD END | CFM AT TIP | NOISE LEVEL dB(A) |
|-----------|---------------------|------------|-------------------|
| 30 | 5.0 | 4 | 78 |
| 60 | 12.0 | 6 | 81 |
| 90 | 12.6 | 8 | 85 |
| 100 | 12.8 | 9 | 87 |
| 120 | 16.2 | 11 | 89 |
| 150 | 21.0 | 12 | 90 |
| 180 | 27.0 | 14 | 90 |

Performance Specifications

Max. Inlet Pressure: 180 PSIG (12 bar)
Regulated Pressure: 29 PSIG (2 bar) max.
Temperature Range: 32° to 175° F (0° to 79° C)
Inlet Size: 1/4" NPT (female)
Weight: 2.7 oz.

CAUTION: These blow guns should not be used for fluids other than compressed air, nor in applications which may exceed maximum recommended operating conditions.

Proper eye protection should always be worn when operating these devices.

To order, specify Model 8440. For BSP threads. (Consult Factory)



Features

Composite Body

ARO Safety Blow Guns are designed to prevent pressure buildup above 29 PSIG if nozzle is obstructed [to meet OSHA requirement 29 CFR1910.242(b)]. The composite bodied guns on this page are extremely lightweight and corrosion resistant.

Models 8338, 8338-1 & 8338-2

Internal regulation offers tamper resistance!

- Unique built-in internal regulation, as compared to the traditional thru-the-tip design, helps ensure compliance with OSHA requirement against pressure buildup.
- Tough polyester body provides corrosion resistance.
- Lightweight, ergonomic design offers easy, comfortable handling.
- Hand lever actuation provides excellent flow control.
- Slim barrel design allows access into hard-to-reach places.

CAUTION: These blow guns should not be used for fluids other than compressed air, nor in applications which may exceed maximum recommended operating conditions.

Proper eye protection should always be worn when operating these devices.

Performance Specifications

- Max. Inlet Pressure:** 250 PSIG (17 bar)
- Regulated Pressure:** 29 PSIG (2 bar) max.
- Temperature Range:** 32° to 175° F (0° to 79° C)
- Inlet Size:** 1/4" NPT (female)
- Weight:** 4.8 oz.

| INLET PSI | PSI AT TIP DEAD END | CFM AT TIP | NOISE LEVEL dB(A) |
|-----------|---------------------|------------|-------------------|
| 30 | 26.75 | 6.3 | 75 |
| 60 | 27.0 | 10.0 | 83 |
| 90 | 27.25 | 13.0 | 86 |
| 100 | 27.5 | 13.1 | 87 |
| 120 | 27.75 | 13.2 | 87 |
| 150 | 28.0 | 13.4 | 87 |



8338



8338-1



8338-2

Ordering

- | MODEL | DESCRIPTION |
|--------|--|
| 8338 | Standard Tip Gun. Tapered standard tip concentrates the air stream for efficient chip and dirt removal. |
| 8338-1 | Air Shield Tip Gun. Tapered air shield tip generates a protective cone for chip deflection. |
| 8338-2 | Rubber Tip Gun. Tapered rubber tip provides a leakproof connection for blowing out fuel lines and other openings. |

Accessories

Tips

(All accessory tips fit the 8338 Series Blow Gun)

- | MODEL | DESCRIPTION |
|---------|---------------------------|
| 22101 | Brass Tip |
| 22151 | Rubber Tip |
| 22180-1 | Standard Tip |
| 22180-2 | Air Shield Tip |
| 33970 | 10" (254mm) Extension Tip |
| 22180-3 | 3" (76mm) Extension Tip |
| 22180-6 | 6" (152mm) Extension Tip |



22101



22180-2



22151



33970



22180-1



Model 7472, 5lb. Capacity

Ideal for use with small to medium portable power tools, small fixtures, pendent stations and air hoses.

- Center-pull design for smooth performance.
- Adjustable spring tension.
- Adjustable cable clamp to set length of travel.
- Nylon coated steel aircraft cable for smooth, long lasting performance.
- Compact, rugged steel housing.



7472

Model 7072- (), 10 & 15 lb. Capacity

Rugged balancers suitable for a wide range of applications, including larger nutsetters and impact wrenches.

- Center-pull design for smooth performance.
- Adjustable spring tension.
- Adjustable cable clamp to set length of cable travel.
- Nylon-coated steel aircraft cable for smooth, long lasting performance.
- Durable steel housing.



7072

Specifications / Ordering

| MODEL | Capacity | | Working Cable Length | | Hook to Hook | | Width | |
|---------|----------|-----------|----------------------|-------|--------------|-------|-------|-------|
| | lb. | (kg) | ft. | (m) | in. | (mm) | in. | (mm) |
| 7472 | 3-5 | (1.4-2.3) | 8.0 | (2.4) | 10.4 | (264) | 5.4 | (136) |
| 7072 | 6-10 | (2.7-4.5) | 8.0 | (2.4) | 14.0 | (356) | 8.1 | (205) |
| 7072-15 | 11-15 | (5.0-6.8) | 8.0 | (2.4) | 14.0 | (356) | 8.1 | (205) |

Accessories

| MODEL NUMBER | DESCRIPTION |
|--------------|---|
| 33872-8-F | 7472 - 5 lb. Replacement Cable Assembly |
| 32359-8-J | 7072 - 10 lb. Replacement Cable Assembly |
| 32359-8-J | 7072-15 - 15 lb. Replacement Cable Assembly |
| 29796 | Replacement Cable Assembly Fits: 7670-18, -25, -35, -45 |

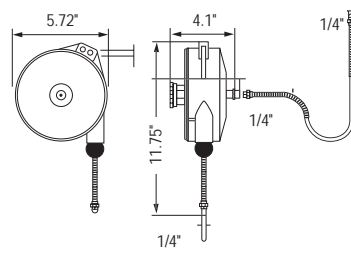
Balancers



Hose Reel Balancers



BHR-15



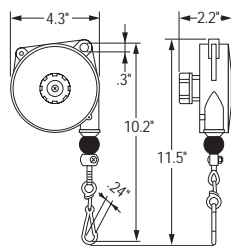
BHR Series

| Part Number | Hose Nipple Size | cfm Extended | Capacity lb (kg) | Lift ft (mm) |
|--|------------------|--------------|------------------------------|--------------|
| Hose Reel Balancers — 0.875 – 5.5 lb Capacity | | | | |
| BHR-8 | 1/4" | 18.4 | 0.875 – 1.75 (0.397 – 0.794) | 4.25 (1295) |
| BHR-15 | 1/4" | 18.4 | 1.5 – 3.33 (0.68 – 1.51) | 4.25 (1295) |
| BHR-25 | 1/4" | 18.4 | 2.625 – 5.5 (1.191 – 2.495) | 4.25 (1295) |

Light-duty Balancers



BLD1



BLD Series

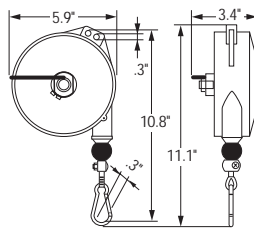
| Part Number | Capacity lb (kg) | Weight of Balancer lb (net-kg) | Lift ft (mm) |
|---|---------------------|--------------------------------|--------------|
| Light-duty Balancers — 0.9 – 6.6 lb Capacity | | | |
| BLD1 | 0.9 – 2.2 (0.4 – 1) | 1.3 (0.6) | 5.2 (1600) |
| BLD1/P (nylon cable) | 0.9 – 2.2 (0.4 – 1) | 1.3 (0.6) | 5.2 (1600) |
| BLD2 | 2.2 – 4.4 (1 – 2) | 1.3 (0.6) | 5.2 (1600) |
| BLD3 | 4.4 – 6.6 (2 – 3) | 1.3 (0.7) | 5.2 (1600) |

- Rotary hook
- Adjustable capacity and stroke limiting device
- Self-lubricating bushings
- Auxiliary safety suspension

Medium-duty Balancers



BMDS-2



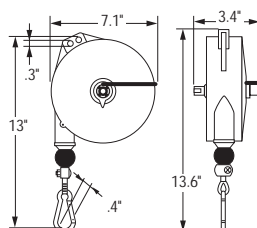
BMDS Series

| Part Number | Capacity lb (kg) | Weight of Balancer lb (net-kg) | Lift ft (mm) |
|---|---------------------|--------------------------------|--------------|
| Medium-duty Balancers — 2.2 – 30 lb Capacity | | | |
| Short Cable | | | |
| BMDS-2 | 2.2 – 5.5 (1 – 2.5) | 4.4 (2) | 6.5 (2000) |
| BMDS-4 | 4.4 – 8.8 (2 – 4) | 4.4 (2) | 6.5 (2000) |
| BMDS-6 | 8.8 – 13.2 (4 – 6) | 5.1 (2.3) | 6.5 (2000) |
| BMDS-8 | 13.2 – 17.6 (6 – 8) | 5.5 (2.5) | 6.5 (2000) |
| Long Cable | | | |
| BMDL-4 | 4.4 – 8.8 (2 – 4) | 6.4 (2.9) | 8.2 (2500) |
| BMDL-6 | 8.8 – 13.2 (4 – 6) | 7.1 (3.2) | 8.2 (2500) |
| BMDL-8 | 13.2 – 17.6 (6 – 8) | 7.7 (3.5) | 8.2 (2500) |
| BMDL-10 | 17.6 – 22 (8 – 10) | 8.2 (3.7) | 8.2 (2500) |
| BMDL-12 | 22 – 26.5 (10 – 12) | 8.8 (4) | 8.2 (2500) |
| BMDL-14 | 22 – 30 (10 – 14) | 5.6 (2.5) | 8.2 (2500) |
| BMDL-14-Y (Yellow) | 22 – 30 (10 – 14) | 5.6 (2.5) | 8.2 (2500) |

Medium-duty Locking Balancers



BMDLL-10



BMDL / BMDLL Series

| Part Number | Capacity lb (kg) | Weight of Balancer lb (net-kg) | Lift ft (mm) |
|---|---------------------|--------------------------------|--------------|
| Medium-duty Locking Balancers — 4.4 – 22 lb Capacity | | | |
| Long Cable | | | |
| BMDLL-4 | 4.4 – 8.8 (2 – 4) | 6.6 (3) | 8.2 (2500) |
| BMDLL-6 | 8.8 – 13.2 (4 – 6) | 7.3 (3.3) | 8.2 (2500) |
| BMDLL-8 | 13.2 – 17.6 (6 – 8) | 7.9 (3.6) | 8.2 (2500) |
| BMDLL-10 | 17.6 – 22 (8 – 10) | 8.4 (3.8) | 8.2 (2500) |

- Safety device prevents dropping of load due to spring breakage (except BMDS-2)
- Anti-friction cable guide
- Adjustable stroke limiting device

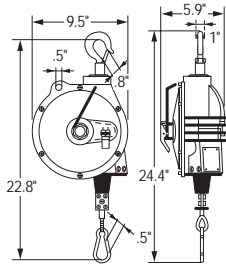
Balancers



Intermediate-duty Balancers



BIDS-10



BIDS Series

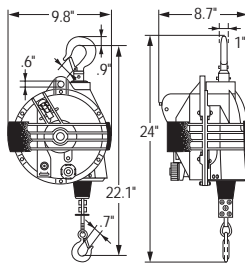
| Part Number | Capacity lb (kg) | Weight of Balancer lb (net-kg) | Lift ft (mm) |
|---|-----------------------|--------------------------------|--------------|
| Intermediate-duty Balancers — 8.8 – 55 lb Capacity | | | |
| BIDS-7 | 8.8 – 15.4 (4 – 7) | 5 (2.26) | 6.5 (2000) |
| BIDS-10 | 15.4 – 22 (7 – 10) | 5.5 (2.49) | 6.5 (2000) |
| BIDS-14 | 22 – 30.8 (10 – 14) | 5.5 (2.49) | 6.5 (2000) |
| BIDS-18 | 30.8 – 39.6 (14 – 18) | 6.5 (2.95) | 6.5 (2000) |
| BIDS-22 | 39.6 – 48.4 (18 – 22) | 6.5 (2.95) | 6.5 (2000) |
| BIDS-26 | 48.4 – 55 (22 – 25) | 6.5 (2.95) | 6.5 (2000) |

- Safety device prevents load dropping due to spring breakage
- Anti-friction cable guide
- Adjustable stroke limiting device
- Upper rotary suspension
- Safety hook
- Auxiliary safety suspension

Heavy-duty Balancers



BHD-35



BHD Series

| Part Number | Capacity lb (kg) | Weight of Balancer lb (net-kg) | Lift ft (mm) |
|--|---------------------|--------------------------------|--------------|
| Heavy-duty Balancers — 22 – 143 lb Capacity | | | |
| BHD-15 | 22 – 33 (10 – 15) | 22.7 (10.3) | 6.5 (2000) |
| BHD-20 | 33 – 44 (15 – 20) | 23.4 (10.6) | 6.5 (2000) |
| BHD-25 | 44 – 55 (20 – 25) | 24.7 (11.2) | 6.5 (2000) |
| BHD-30 | 55 – 66 (25 – 30) | 25.4 (11.5) | 6.5 (2000) |
| BHD-35 | 66 – 77 (30 – 35) | 26 (11.8) | 6.5 (2000) |
| BHD-45 | 77 – 99 (35 – 45) | 27.3 (12.4) | 6.5 (2000) |
| BHD-55 | 99 – 121 (45 – 55) | 27.6 (12.5) | 6.5 (2000) |
| BHD-65 | 121 – 143 (55 – 65) | 30 (13.6) | 6.5 (2000) |

- Safety device prevents load dropping due to spring breakage
- Upper suspension with rotary safety hook
- Precision guided cable winding prevents jamming
- Anti-friction cable guide
- Manual locking device for instant clamping or release
- Worm screw capacity adjustment
- Spring drum assembly
- Floor controlled locking device available (BIL-7343)

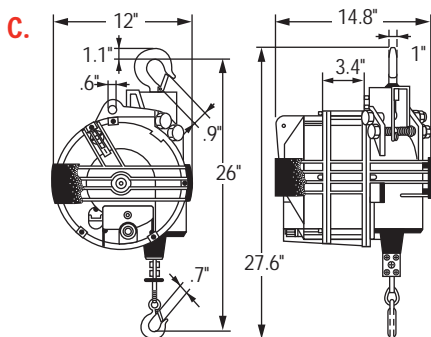
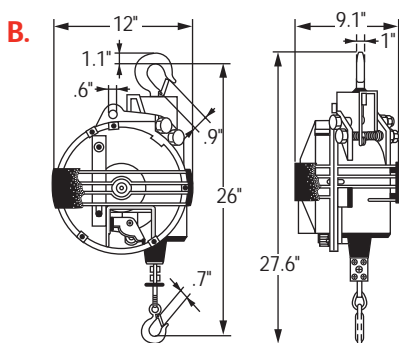
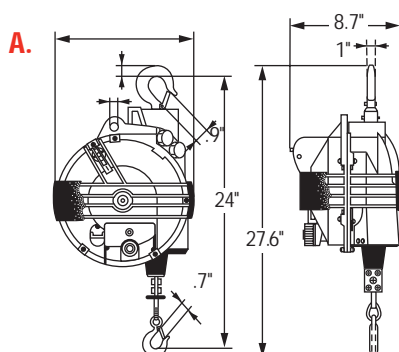
Balancers



Super-duty Balancers



BSD-20



| Part Number | Capacity lb (kg) | Weight of Balancer lb (net-kg) | Lift ft (mm) | Diagram |
|---|-----------------------|--------------------------------|--------------|---------|
| Super-duty Balancers — 33 – 363 lb Capacity | | | | |
| BSD-20 | 33 – 44 (15 – 20) | 41.9 (19) | 8.2 (2500) | A |
| BSD-30 | 44 – 66 (20 – 30) | 43.7 (19.8) | 8.2 (2500) | A |
| BSD-40 | 66 – 88 (30 – 40) | 45.9 (20.8) | 8.2 (2500) | A |
| BSD-50 | 88 – 110 (40 – 50) | 52.7 (23.9) | 8.2 (2500) | A |
| BSD-60 | 110 – 132 (50 – 60) | 56 (25.4) | 8.2 (2500) | A |
| BSD-70 | 132 – 154 (60 – 70) | 59.1 (26.8) | 8.2 (2500) | B |
| BSD-80 | 154 – 176 (70 – 80) | 61.3 (27.8) | 8.2 (2500) | B |
| BSD-90 | 176 – 198 (80 – 90) | 63.5 (28.8) | 8.2 (2500) | B |
| BSD-100 | 198 – 220 (90 – 100) | 78.5 (35.6) | 8.2 (2500) | C |
| BSD-120 | 220 – 265 (100 – 120) | 85.3 (38.7) | 8.2 (2500) | C |
| BSD-140 | 265 – 309 (120 – 140) | 92.2 (41.8) | 8.2 (2500) | C |
| BSD-150 | 287 – 330 (130 – 150) | 98.1 (44.5) | 8.2 (2500) | C |
| BSD-165 | 330 – 363 (150 – 165) | 106.3 (48.2) | 8.2 (2500) | C |
| Super-duty Balancers — 33 – 330 lb Capacity Long Cable | | | | |
| BSDL-20 | 33 – 44 (15 – 20) | 42.1 (19.1) | 9.85 (3000) | A |
| BSDL-25 | 44 – 55 (20 – 25) | 43.9 (19.9) | 9.85 (3000) | A |
| BSDL-35 | 55 – 77 (25 – 35) | 46.1 (20.9) | 9.85 (3000) | A |
| BSDL-45 | 77 – 99 (35 – 45) | 52.5 (23.8) | 9.85 (3000) | B |
| BSDL-50 | 88 – 110 (40 – 50) | 52.7 (23.9) | 9.85 (3000) | B |
| BSDL-60 | 110 – 132 (50 – 60) | 55.8 (25.3) | 9.85 (3000) | B |
| BSDL-70 | 132 – 154 (60 – 70) | 58.9 (26.7) | 9.85 (3000) | B |
| BSDL-80 | 154 – 176 (70 – 80) | 61.7 (28) | 9.85 (3000) | B |
| BSDL-90 | 176 – 198 (80 – 90) | 64 (29) | 9.85 (3000) | B |
| BSDL-100 | 198 – 220 (90 – 100) | 81.1 (36.8) | 9.85 (3000) | C |
| BSDL-115 | 220 – 254 (100 – 115) | 85.3 (38.7) | 9.85 (3000) | C |
| BSDL-130 | 254 – 286 (115 – 130) | 88 (39.9) | 9.85 (3000) | C |
| BSDL-140 | 286 – 309 (130 – 140) | 94.4 (42.8) | 9.85 (3000) | C |
| BSDL-150 | 309 – 330 (140 – 150) | 100.6 (45.6) | 9.85 (3000) | C |

*Higher capacities available upon request.

- Safety device prevents load dropping
- Upper suspension with rotary safety hook
- Precision guided cable winding prevents jamming
- Anti-friction cable guide
- Manual locking device for instant clamping or release
- Worm screw capacity adjustment
- Alignable rotating upper hook
- Cable replacement without balancer disassembly
- Cable visible for inspection
- Floor controlled locking device available (BIL-3224)

Hi-Flow Series Industrial Interchange



- Premium automatic-type, one-way shutoff coupler
- Delivers high volume air with low pressure drop
- Features a protective drag collar that minimizes accidental disconnection

Female Couplers



Female NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Hose Stem OD | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|------------------------|---------------------|--------------|-------------------|------------------------|--------------------------|
| Female Couplers | | | | | |
| 1/4" | 1/4" | 5/8" | 38 | HFCF22 | HFCH22 |
| 1/4" | 3/8" | 5/8" | 38 | HFCF23 | HFCH23 |
| 3/8" | 1/4" | 1/2" | 72 | HFCF32 | N/A |
| 3/8" | 3/8" | 5/8" | 72 | HFCF33 | HFCH33 |
| 3/8" | 1/2" | - | 72 | HFCF34 | HFCH34 |
| 1/2" | 1/2" | 7/8" | 85 | HFCF44 | HFCH44 |

Female Plugs



Female NPT



Hose Stem ID



45ATH

| Body Size | NPT or Hose Stem ID | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|---------------------|---------------------|-------------------|------------------------|--------------------------|
| Female Plugs | | | | |
| 1/4" | 1/8" | 38 | MSPF21 | N/A |
| 1/4" | 1/4" | 38 | MSPF22 | MSPH22 |
| 1/4" | 3/8" | 38 | MSPF23 | MSPH23 |
| 3/8" | 1/4" | 72 | MSPF32 | N/A |
| 3/8" | 3/8" | 72 | MSPF33 | MSPH33 |
| 3/8" | 1/2" | 72 | 45ATH | MSPH34 |
| 1/2" | 3/8" | 85 | MSPF43 | N/A |
| 1/2" | 1/2" | 85 | MSPF44 | MSPH44 |
| 1/2" | 3/4" | 85 | MSPF46 | N/A |

*At 90 psig inlet and 10 psig pressure drop.

Male Couplers



Male NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Hose Stem OD | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|----------------------|---------------------|--------------|-------------------|------------------------|--------------------------|
| Male Couplers | | | | | |
| 1/4" | 1/4" | 5/8" | 38 | HFCM22 | HFCH22 |
| 1/4" | 3/8" | 5/8" | 38 | HFCM23 | HFCH23 |
| 3/8" | 1/4" | 1/2" | 72 | HFCM32 | N/A |
| 3/8" | 3/8" | 5/8" | 72 | HFCM33 | HFCH33 |
| 3/8" | 1/2" | - | 72 | HFCM34 | HFCH34 |
| 1/2" | 1/2" | 7/8" | 85 | HFCM44 | HFCH44 |

Male Plugs



Male NPT



Hose Stem ID



PRPM33

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Male NPT Part Number | Hose Stem ID Part Number |
|-------------------|---------------------|-------------------|----------------------|--------------------------|
| Male Plugs | | | | |
| 1/4" | 1/8" | 38 | MSPM21 | N/A |
| 1/4" | 1/4" | 38 | MSPM22 | MSPH22 |
| 1/4" | 3/8" | 38 | MSPM23 | MSPH23 |
| 3/8" | 1/4" | 72 | MSPM32 | N/A |
| 3/8" | 3/8" | 72 | PRPM33 | MSPH33 |
| 3/8" | 1/2" | 72 | MSPM34 | MSPH34 |
| 1/2" | 3/8" | 85 | MSPM43 | N/A |
| 1/2" | 1/2" | 85 | MSPM44 | MSPH44 |

*At 90 psig inlet and 10 psig pressure drop.

Full Bore Series Industrial Interchange

- Premium automatic-type, one-way shutoff coupler
- Pressure-relieving feature fully vents downstream air, making connection / disconnection fast and easy, and reducing hose whip
- Unique straight-through design eliminates restrictive springs and poppet valves, allowing unimpeded airflow
- Accidental uncoupling virtually eliminated

Female Couplers



Female NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Hose Stem OD | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|------------------------|---------------------|--------------|-------------------|------------------------|--------------------------|
| Female Couplers | | | | | |
| 3/8" | 3/8" | 5/8" | 95 | FBCF33 | FBCH33 |
| 3/8" | 1/2" | N/A | 95 | FBCF34 | FBCH34 |
| 1/2" | 3/8" | 3/4" | 150 | N/A | FBCH43 |
| 1/2" | 1/2" | 7/8" | 150 | FBCF44 | FBCH44 |

Female Plugs



Female NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|---------------------|---------------------|-------------------|------------------------|--------------------------|
| Female Plugs | | | | |
| 3/8" | 1/4" | 95 | MSPF32 | N/A |
| 3/8" | 3/8" | 95 | MSPF33 | MSPH33 |
| 3/8" | 1/2" | 95 | 45ATH | MSPH34 |
| 1/2" | 3/8" | 126 | MSPF43 | N/A |
| 1/2" | 1/2" | 126 | MSPF44 | MSPH44 |
| 1/2" | 3/4" | 126 | MSPF46 | N/A |

*At 90 psig inlet and 10 psig pressure drop.

Male Couplers



Male NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Hose Stem OD | Average Flow cfm* | Male NPT Part Number | Hose Stem ID Part Number |
|----------------------|---------------------|--------------|-------------------|----------------------|--------------------------|
| Male Couplers | | | | | |
| 3/8" | 1/2" | N/A | N/A | FBCM34 | FBCH34 |
| 1/2" | 3/8" | 3/4" | N/A | FBCM43 | FBCH43 |
| 1/2" | 1/2" | 7/8" | 150 | FBCM44 | FBCH44 |
| 1/2" | 3/4" | N/A | 150 | FBCM46 | N/A |

Male Plugs



Male NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Male NPT Part Number | Hose Stem ID Part Number |
|-------------------|---------------------|-------------------|----------------------|--------------------------|
| Male Plugs | | | | |
| 3/8" | 3/8" | 95 | MSPM22 | MSPH33 |
| 3/8" | 1/4" | 95 | MSPM32 | N/A |
| 3/8" | 1/2" | 95 | MSPM34 | MSPH34 |
| 1/2" | 3/8" | 150 | MSPM43 | N/A |
| 1/2" | 1/2" | 150 | MSPM44 | MSPH44 |

*At 90 psig inlet and 10 psig pressure drop.

210-310 Series



- Automatic, pin-type couplers
- Designed for one-way shutoff operation

Female Couplers



Female NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|------------------------|---------------------|-------------------|------------------------|--------------------------|
| Female Couplers | | | | |
| 1/4" | 1/4" | 18 | ARCF22 | N/A |
| 3/8" | 3/8" | 60 | ARCF33 | ARCH33 |

Female Plugs



Female NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|---------------------|---------------------|-------------------|------------------------|--------------------------|
| Female Plugs | | | | |
| 1/4" | 1/4" | 18 | ARPF22 | ARPH22 |
| 1/4" | 3/8" | 18 | N/A | ARPH23 |
| 1/4" | 5/16" | 18 | N/A | ARPH25 |
| 3/8" | 3/8" | 60 | ARPF33 | ARPH33 |

*At 90 psig inlet and 10 psig pressure drop.

Male Couplers



Male NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|----------------------|---------------------|-------------------|------------------------|--------------------------|
| Male Couplers | | | | |
| 1/4" | 1/4" | 18 | ARCM22 | N/A |
| 1/4" | 3/8" | 18 | ARCM23 | ARCH23 |
| 3/8" | 3/8" | 60 | ARCM33 | ARCH33 |

Male Plugs



Male NPT



Hose Stem ID

| Body Size | NPT Or Hose Stem ID | Average Flow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|-------------------|---------------------|-------------------|------------------------|--------------------------|
| Male Plugs | | | | |
| 1/4" | 1/8" | 18 | ARPM21 | N/A |
| 1/4" | 1/4" | 18 | ARPM22 | ARPH22 |
| 1/4" | 3/8" | 18 | N/A | ARPH23 |
| 1/4" | 5/16" | 18 | N/A | ARPH25 |
| 3/8" | 1/4" | 60 | ARPM32 | N/A |
| 3/8" | 3/8" | 60 | ARPM33 | ARPH33 |

*At 90 psig inlet and 10 psig pressure drop.

Safety Air Fuse Valves



- Valve designed to meet OSHA requirements
- Provides automatic pressure reduction if a hose is cut, ruptures, or accidentally uncouples, thus preventing the hose from whipping
- Constant bleed hole in the valve allows the flow check to automatically open, or reset, after repair to the hose is made
- Brass body and adapter; stainless steel spring; celcon valve
- All parts are corrosion-resistant
- Max temperature: 180° F
- Max allowable working pressure: 250 psig (17 bar)

Safety Air Fuse Valves



170-6

| Female / Male NPT | Part Number | Length | Max Diameter in (mm) | Cut-off Flow Rate @ 90 psig |
|-------------------------------|-------------|--------|----------------------|-----------------------------|
| Safety Air Fuse Valves | | | | |
| 3/4 | 170-6 | 3" | 1-1/4" (31.8) | 112 – 128 |
| 1 | 170-8 | 3-1/8" | 1-1/2" (38.1) | 220 – 260 |

Warning: Ingersoll Rand air fuse valves will function only on air lines having capacities equal to or exceeding the air fuse's respective closing capacity. Nominal sizes of air fuses, therefore, must be equal to, or less than, that of their supply lines and must be consistent with the connecting hose. For example, a 1/2" air fuse should be used with a 1/2" hose.

Features



1/4", 3/8" & 1/2" I.D.

- Self-retracting for easy storage in minimum space to reduce clutter.
- Minimizes safety hazards from tripping or tangling.
- A low-cost alternative to bulky, expensive hose reels.
- Resistant to most chemicals, gasoline, oil and grease.
- Lightweight and highly flexible with 360° swivel fittings to reduce user strain and fatigue.
- Abrasion and corrosion resistant.
- Ideal for use with portable air tools, spray guns, moving air cylinders and hoists.
- Retractability is easily restored by reversing hose through its axis.

Max. Operating Pressure: 180 PSI (12.4 bar)
Operating Temperature Range: -20° to 170° F (-29° to 77° C)
Hose Material: Nylon II

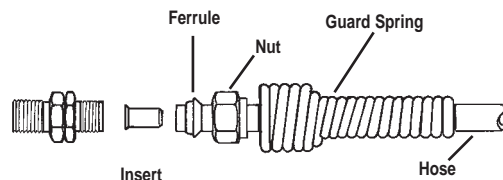
Ordering

| Model | Thread Size Male NPT | Hose I.D. | Hose O.D. | Hose Length ft. (mm) | Working Length ft. (mm) | Outside Coil Diameter in. | Inside Diameter in. | Retracted Length ft. (mm) |
|---|----------------------|-----------|-----------|----------------------|-------------------------|---------------------------|---------------------|---------------------------|
| Hose Assemblies (Include swivel fittings at both ends) | | | | | | | | |
| 628004-12 | 1/4" | 1/4" | 5/16" | 12 (3.7) | 11 (3.3) | 3" | 2-1/2" | 6 (152) |
| 628004-25 | 1/4" | 1/4" | 5/16" | 25 (7.6) | 23.5 (7.2) | 3" | 2-1/2" | 12 (305) |
| 628004-50 | 1/4" | 1/4" | 5/16" | 50 (15.2) | 47 (14.3) | 3" | 2-1/2" | 23 (584) |
| 628020-12 | 3/8" | 3/8" | 15/32" | 12 (3.7) | 10 (3.0) | 5-1/2" | 4-1/2" | 5 (127) |
| 628020-25 | 3/8" | 3/8" | 15/32" | 25 (7.6) | 22 (6.7) | 5-1/2" | 4-1/2" | 10 (254) |
| 628020-50 | 3/8" | 3/8" | 15/32" | 50 (15.2) | 44 (13.4) | 5-1/2" | 4-1/2" | 20 (508) |
| 628023-12 | 1/2" | 1/2" | 5/8" | 12 (3.7) | 8.5 (2.6) | 8" | 6-1/2" | 5 (127) |
| 628023-25 | 1/2" | 1/2" | 5/8" | 25 (7.6) | 19 (5.8) | 8" | 6-1/2" | 9 (229) |
| 628023-50 | 1/2" | 1/2" | 5/8" | 50 (15.2) | 38 (11.6) | 8" | 6-1/2" | 18 (457) |

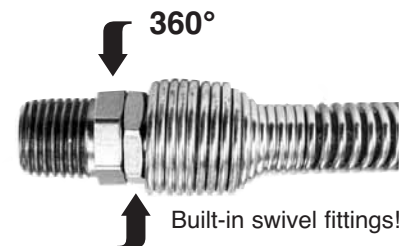
Swivel Fitting Kits (use for repair)

| KIT NO. | HOSE THREAD SIZE | |
|---------|------------------|----------|
| | I.D. | MALE NPT |
| 22800 | 1/4" | 1/4" |
| 22801 | 3/8" | 3/8" |
| 22802 | 1/2" | 1/2" |

NOTE: Order one kit for each hose end.



628004-12



Features



Lubricating Oil

ARO Lubricating Oil is recommended for use with pneumatic power tools, motors, valves, cylinders and hoists. It is specially formulated for use in air line lubricators. Proper, regular lubrication helps ensure longer, trouble-free operation by reducing wear, save power and cut equipment maintenance costs.

ARO Lubricating Oil is available in 1-quart containers, and may be ordered by specifying part number **29665** (one 1-quart container).

NOTE: There are twelve 1-quart containers per case.

Viscosity: 100-200 S.S.U. @ 100°F (38°C) min. aniline point of 200°F (93°C).

Class: II Lubricant

Approx. SAE No: Light SAE 10, non-detergent.



29665

Air Tool Oils

Air Tool Oils



| Part Number | Description | Size |
|----------------------|---|--------|
| Air Tool Oils | | |
| 63Z4 | #63 oil for cyclone wick lubrication | 4 oz |
| 10Z4 | Class 1 #10 oils for use with percussive, assembly, & impact wrenches | 4 oz |
| 10G | Class 1 #10 oils for use with percussive, assembly, & impact wrenches | 1 gal |
| 10P | Class 1 #10 oils for use with percussive, assembly, & impact wrenches | 1 pt |
| 10G55 | Class 1 #10 oils for use with percussive, assembly, & impact wrenches | 55 gal |
| 10GW | Class 1 #10 oil / antifreeze for use with percussive, assembly, & impact wrenches | 1 gal |
| 50P | Class II lubricant, #50 oil for use with grinders, impact wrenches, hoists, & winches | 1 pt |
| 50G | Class II lubricant, #50 oil for use with grinders, impact wrenches, hoists, & winches | 1 gal |
| 62 1 Gal | Class II #62 oil for hoist & winch gear boxes | 1 gal |

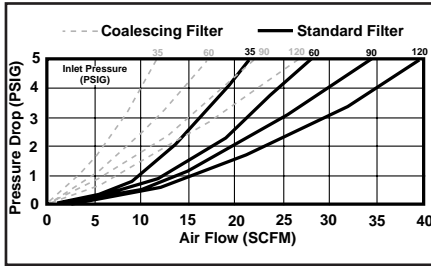


Flow Data

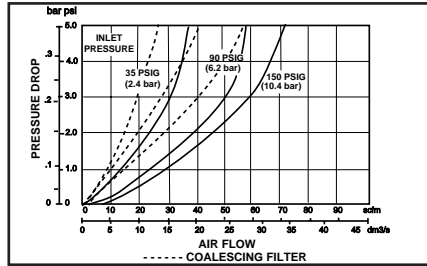
The following flow data are provided to further help in the sizing/ selection of individual ARO filters, regulators and lubricators or combo units. First, determine the maximum system flow requirements. Second, determine the maximum allowable pressure drop at rated flow in SCFM. Third, refer to the flow charts to select the pipe size/ series of FRL by choosing the curve that offers minimum pressure drop at the desired flow in SCFM.

Filters

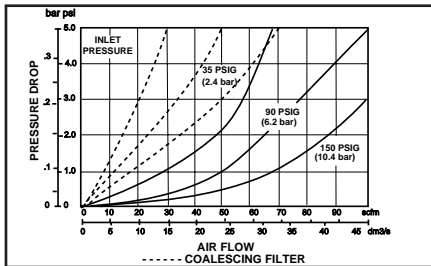
**MODULE/AIR 1000 FILTER
PRESSURE DROP TEST**



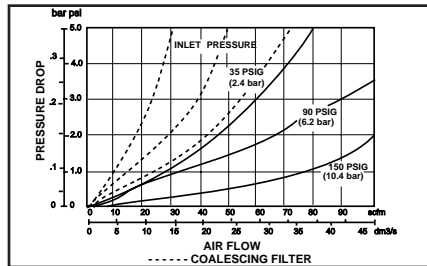
**1/4" MODULE/AIR FILTER
PRESSURE DROP TEST**



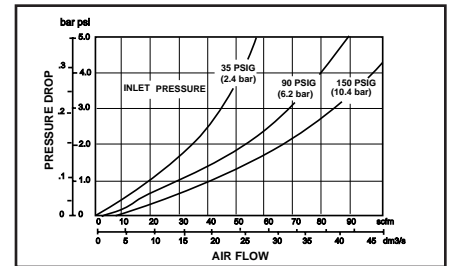
**3/8" MODULE/AIR FILTER
PRESSURE DROP TEST**



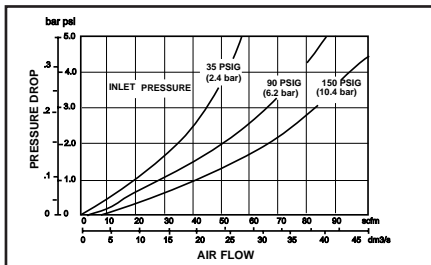
**1/2" MODULE/AIR FILTER
PRESSURE DROP TEST**



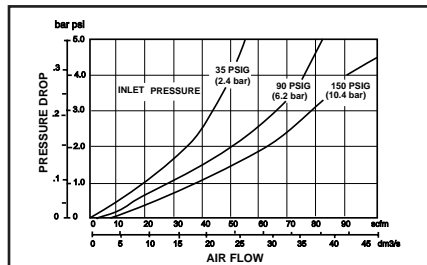
**1/2" HEAVY-DUTY FILTER
PRESSURE DROP TEST**



**3/4" HEAVY-DUTY FILTER
PRESSURE DROP TEST**

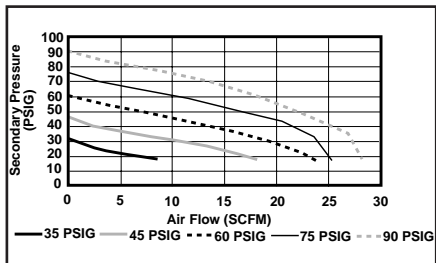


**1" HEAVY-DUTY FILTER
PRESSURE DROP TEST**

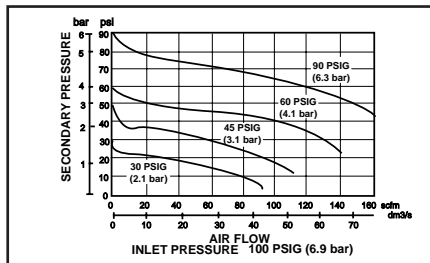


Regulators

**MODULE/AIR 1000 REGULATOR
PRESSURE DROP TEST**



**1/4" MODULE/AIR REGULATOR
PRESSURE DROP TEST**

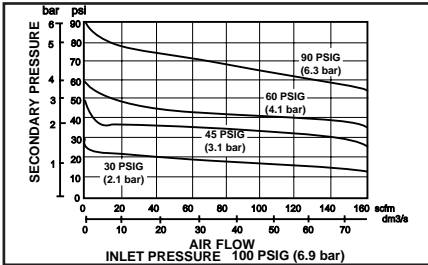


Flow Data

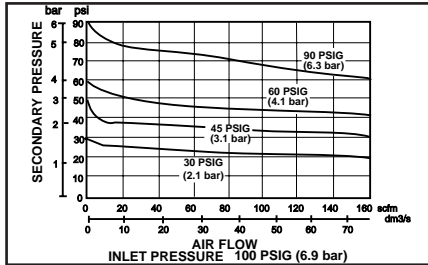


Regulators

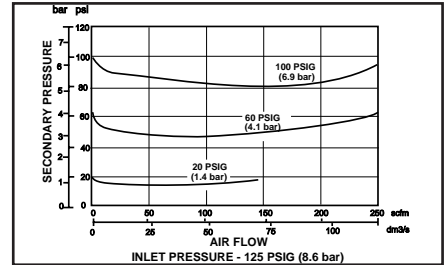
**3/8" MODULE/AIR REGULATOR
PRESSURE DROP TEST**



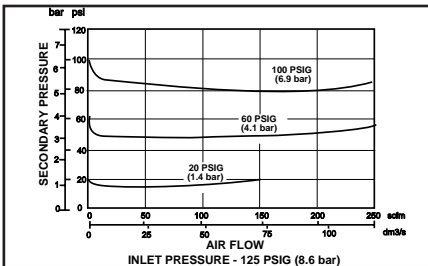
**1/2" MODULE/AIR REGULATOR
PRESSURE DROP TEST**



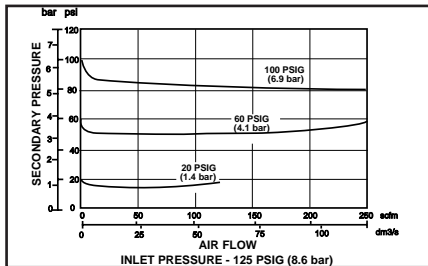
**1/2" HEAVY-DUTY REGULATOR
PRESSURE DROP TEST**



**3/4" HEAVY-DUTY REGULATOR
PRESSURE DROP TEST**

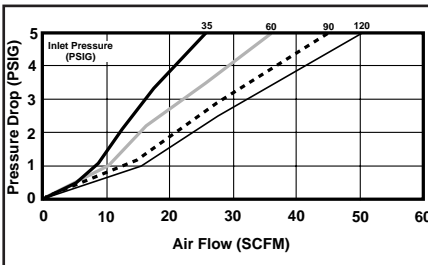


**1" HEAVY-DUTY REGULATOR
PRESSURE DROP TEST**

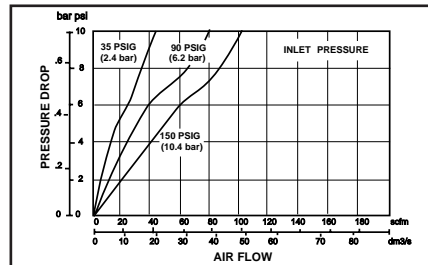


Lubricators

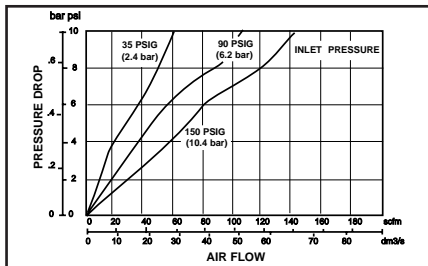
**MODULE/AIR 1000 LUBRICATOR
PRESSURE DROP TEST**



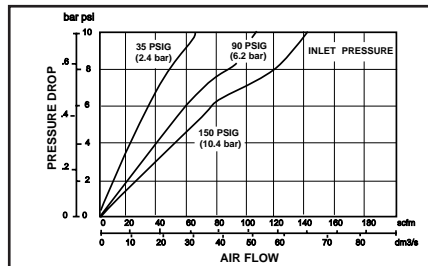
**1/4" MODULE/AIR LUBRICATOR
PRESSURE DROP TEST**



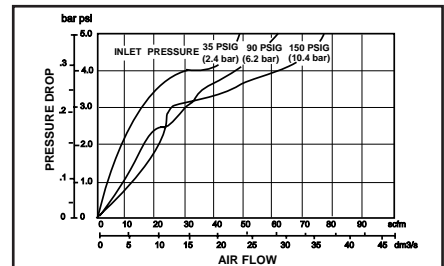
**3/8" MODULE/AIR LUBRICATOR
PRESSURE DROP TEST**



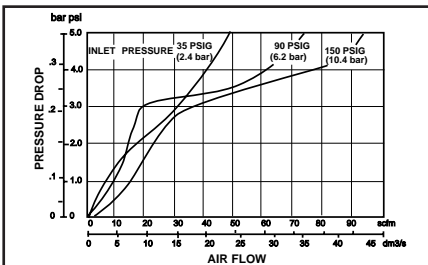
**1/2" MODULE/AIR LUBRICATOR
PRESSURE DROP TEST**



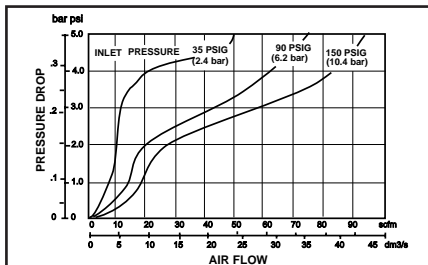
**1/2" HEAVY-DUTY LUBRICATOR
PRESSURE DROP TEST**



**3/4" HEAVY-DUTY LUBRICATOR
PRESSURE DROP TEST**



**1" HEAVY-DUTY LUBRICATOR
PRESSURE DROP TEST**

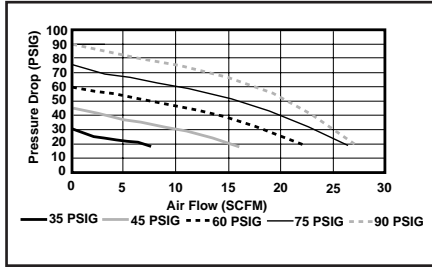


Flow Data

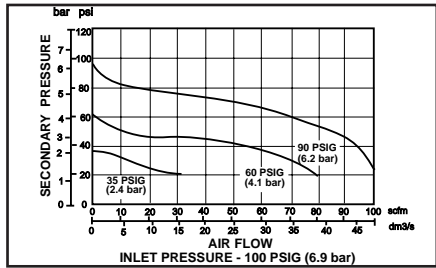


Filter-Regulator-Lubricator Combos

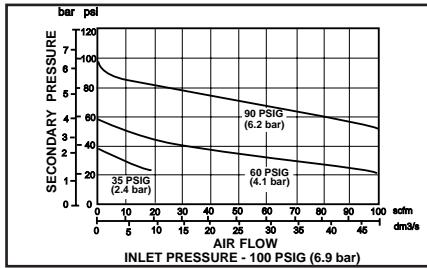
**MODULE/AIR 1000 F-R-L COMBO
PRESSURE DROP TEST**



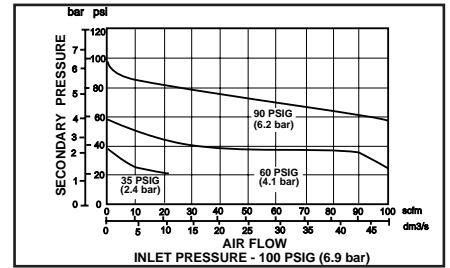
**1/4" MODULE/AIR F-R-L COMBO
PRESSURE DROP TEST**



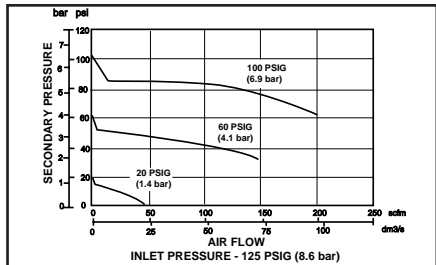
**3/8" MODULE/AIR F-R-L COMBO
PRESSURE DROP TEST**



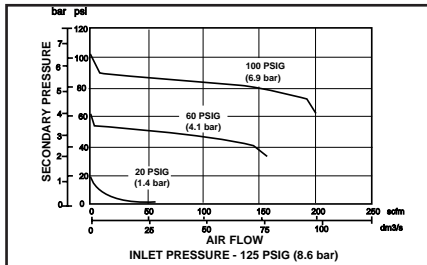
**1/2" MODULE/AIR F-R-L COMBO
PRESSURE DROP TEST**



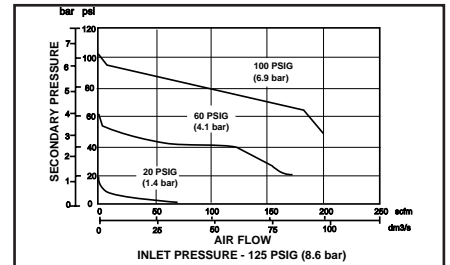
**1/2" HEAVY-DUTY F-R-L COMBO
PRESSURE DROP TEST**



**3/4" HEAVY-DUTY F-R-L COMBO
PRESSURE DROP TEST**

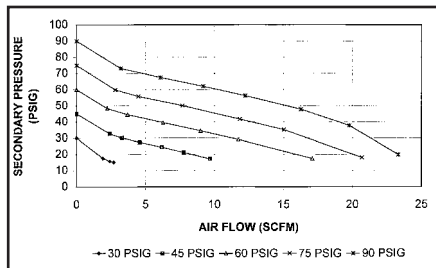


**1" HEAVY-DUTY F-R-L COMBO
PRESSURE DROP TEST**

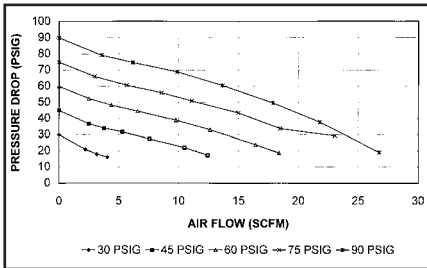


Piggyback-Lubricator Combos

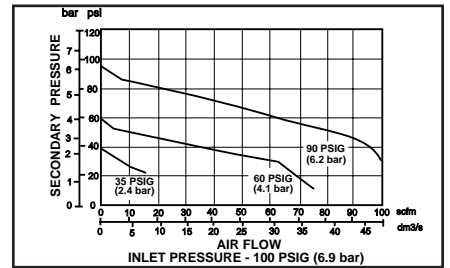
**1/8" MOD 1000 PIGGYBACK-LUBRICATOR
PRESSURE DROP TEST**



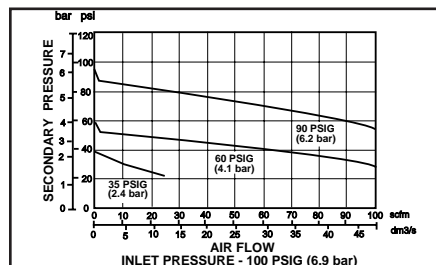
**1/4" MOD 1000 PIGGYBACK-LUBRICATOR
PRESSURE DROP TEST**



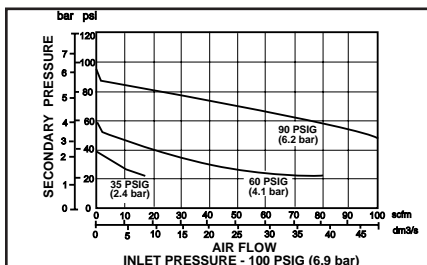
**1/4" MODULE/AIR PIGGYBACK-LUBRICATOR
PRESSURE DROP TEST**



**3/8" MODULE/AIR PIGGYBACK-LUBRICATOR
PRESSURE DROP TEST**



**1/2" MODULE/AIR PIGGYBACK-LUBRICATOR
PRESSURE DROP TEST**

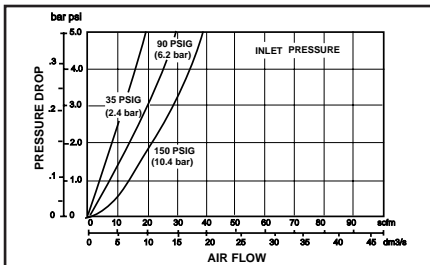


Flow Data

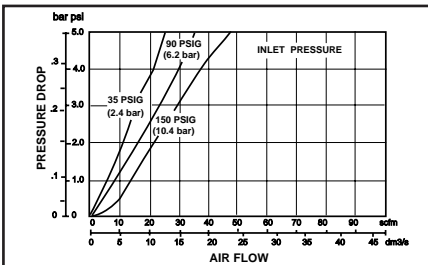


Filter-Lubricator Combos

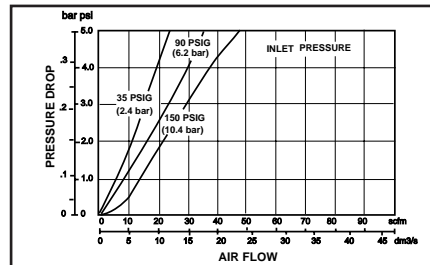
1/4" MODULE/AIR FILTER-LUBRICATOR
PRESSURE DROP TEST



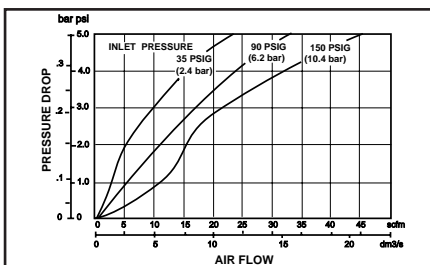
3/8" MODULE/AIR FILTER-LUBRICATOR
PRESSURE DROP TEST



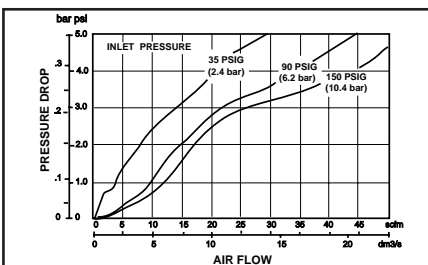
1/2" MODULE/AIR FILTER-LUBRICATOR
PRESSURE DROP TEST



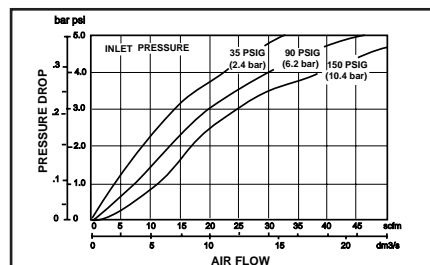
1/2" HEAVY-DUTY FILTER-LUBRICATOR
PRESSURE DROP TEST



3/4" HEAVY-DUTY FILTER-LUBRICATOR
PRESSURE DROP TEST

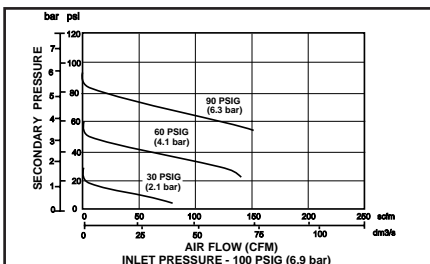


1" HEAVY-DUTY FILTER-LUBRICATOR
PRESSURE DROP TEST

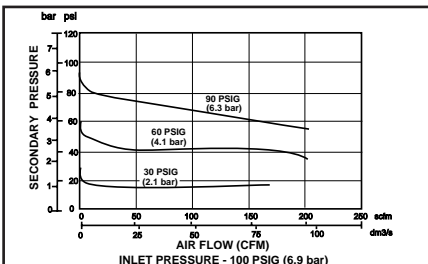


Filter/Regulators

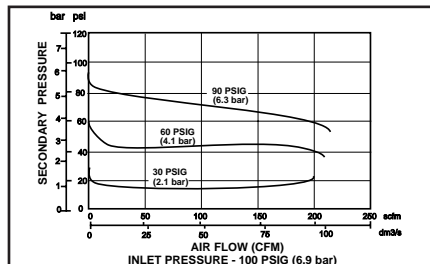
1/4" MODULE/AIR filter/regulators
PRESSURE DROP TEST



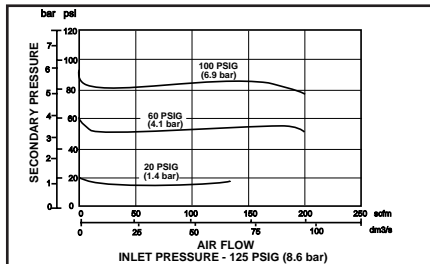
3/8" MODULE/AIR filter/regulators
PRESSURE DROP TEST



1/2" MODULE/AIR filter/regulators
PRESSURE DROP TEST



1" HEAVY-DUTY filter-regulator
PRESSURE DROP TEST



Compatibility Data



Compatible Lubricants

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

The best oils to use in pneumatic systems are those specifically compounded for air line lubricator service. We recommend ARO Lubricative Oil P/N 29665, it is specially formulated for use with pneumatic power tools, motors, valves, cylinders and hoists.

Cautions of the Use of Polycarbonate Plastic Bowls

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

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

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

Substances HARMFUL to Polycarbonate Plastic Bowls

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

Trade Names of Stustances HARMFUL to Polycarbonate Plastic Bowls

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

Warranty



Ingersoll Rand /ARO warrants to the original use purchaser of the Ingersoll Rand /ARO Air Systems Components depicted in this catalog that Ingersoll Rand /ARO will repair or replace, free of charges, including return shipping costs within the Continental United States of America, any such product which under normal use and service proves defective in material or workmanship, as determined by Ingersoll Rand /ARO inspection, twenty-four months from date of purchase, provided the claimed defective product, or part thereof, is promptly returned to the Ingersoll Rand /ARO Service Repair Center or a factory-authorized service repair center, with transportation charges prepaid.

If Ingersoll Rand /ARO inspection discloses no defect in material or workmanship, repair or replacement and return will be made at customary charges.

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Ingersoll Rand Industrial Technologies provides products, services, and solutions to enhance the efficiency and productivity of our commercial, industrial, and process customers. Our innovative products include air compressors, air systems components, tools, pumps, material and fluid handling systems and microturbines.



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