

Air Preparation Units “12” Series

Catalog 9CW-BK-262



WILKERSON®

 **WARNING**

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from The Company, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by The Company and its subsidiaries at any time without notice.

Offer of Sale

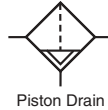
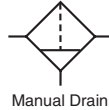
The items described in this document are hereby offered for sale by The Company, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled "Offer of Sale".

Table of Contents

F12 Series Particulate Filters	
Features & Operation	2
Model Numbering System	3
Technical Specifications	4-5
M12 Series Coalescing Filters	
Features & Operation	6
Model Numbering System	7
Technical Specifications	8-9
R12 Series Regulators	
Features & Operation	10
Model Numbering System	11
Series Technical Specifications	12-13
H12 Series Piloted Regulators	
Features & Operation	14
Model Numbering System	15
Series Technical Specifications	16-17
P12 Series Precision Regulators	
Features & Operation	18
Model Numbering System	19
Technical Specifications	20-21
L12 Series Atomist Lubricators	
Features & Operation	22
Model Numbering System	23
Technical Specifications	24-25
B12 Series Filter / Regulators	
Features & Operation	26
Model Numbering System	27
Technical Specifications	28-29
T12 Series Precision Filter / Regulators	
Features & Operation	30
Model Numbering System	31
Technical Specifications	32-33
D12 / G12 Filter / Regulator - Lubricator Combination	
Model Numbering System	35
D12 Technical Specifications	36
G12 Technical Specifications	37
C12 / J12 Filter / Regulator - Lubricator Combination	
Model Numbering System	39
C12 Technical Specifications	40
J12 Technical Specifications	41
12 Series Accessories	42-43
Offer Of Sale	45

Sub-Compact Particulate Filter F12 Series

Filters



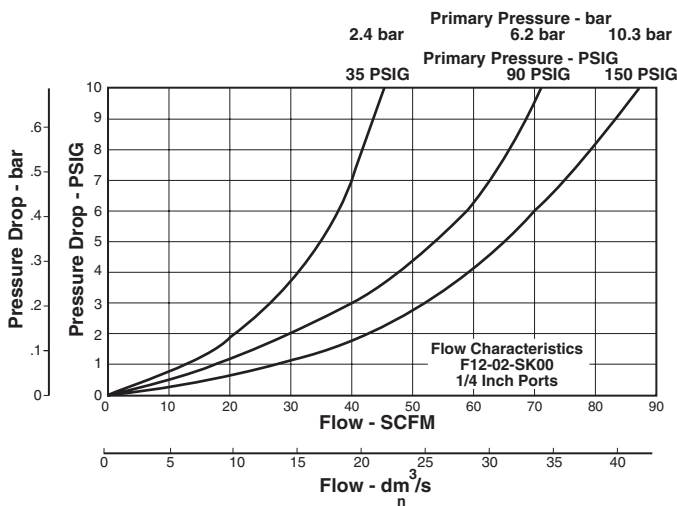
- Pipe Sizes 1/4 and 3/8 Inch
- High Flow
 - 5 Micron: 1/4" - 50 scfm
3/8" - 58 scfm
 - 40 Micron: 1/4" - 54 scfm
3/8" - 70 scfm
- Pressures to 250 psig

Air filters are designed to remove airborne solid contaminants, pipe scale, rust, pipe dope, etc., which may plug small orifices or cause excessive wear and premature failure of pneumatic components. They also separate bulk liquids from the airflow.

Filter Selection

1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select filter pipe size by choosing curve that offers minimum pressure drop at desired flow in scfm. For optimum performance, a 2 to 5 psig pressure drop should be selected.

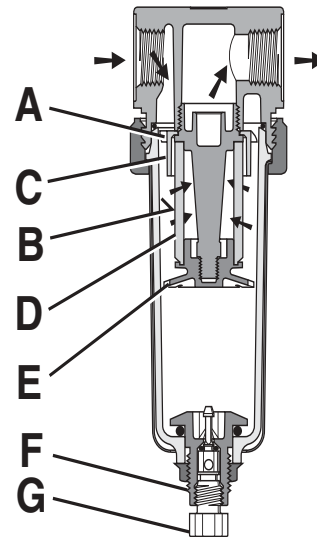
Reading Flow Charts to Size Filters



Once the required flow is determined for a pneumatic application, the filter can be selected by using the flow chart. To read the filter flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the

graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the filter and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in scfm. If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.

Operation



First Stage Filtration:

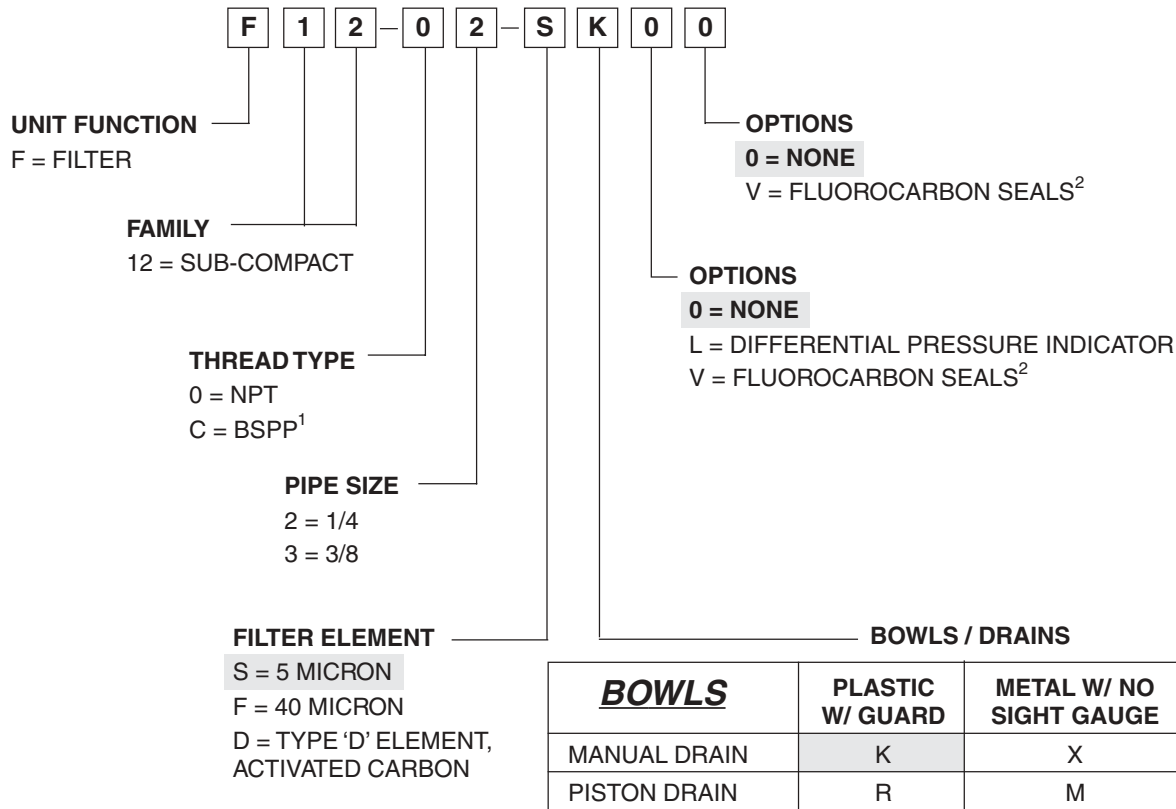
Air enters at inlet port and flows through deflector plate (A) which causes a swirling action. Liquids and coarse particles are forced to the bowl interior wall (B) by the centrifugal action of the swirling air. They then flow down the bowl wall by the force of gravity. Shroud (C) assures that the proper swirling action occurs and that the air does not pass directly through the filter element (D) until the large particles and liquids are removed. The baffle (E) separates the lower portion of the bowl into a "quiet zone" where the removed liquids and particles collect, unaffected by the swirling air, and are therefore not reentrained into the flowing air.

Second Stage Filtration:

After liquids and large particles are removed in the first stage of filtration, the air flows through element (D) where smaller particles are filtered out and retained. The filtered air then passes downstream. Collected liquids and particles in the "quiet zone" should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by the twist drain (F) which is actuated by twisting knob (G) counterclockwise. Or, by the automatic pulse drain when actuated by airline pressure cycles.

Sub-compact Particulate Filter Numbering System

 = "Most Popular"



¹ ISO, R228 (G SERIES)

² Fluorocarbon seals available only on units with metal bowl with manual drain.

Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements **meet or exceed ISO** Class 3 for maximum particle size and concentration of solid contaminants.

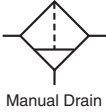
Type "D" activated carbon elements: All Wilkerson Type "F12" absorption filters with Type "D" activated carbon elements **exceed ISO** Class 1 on maximum oil content (ppm/wt).

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Sub-Compact Particulate Filter F12 Series

Particulate Filter F12

= "Most Popular"



Manual Drain



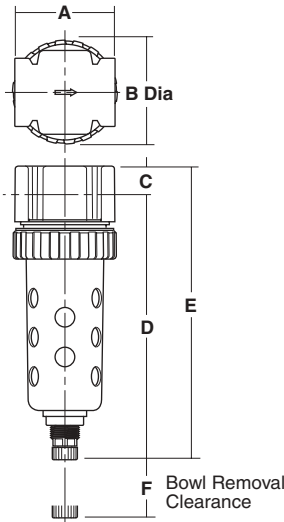
Piston Drain



F12-02-SK00

Features

- Excellent water removal efficiency.
- Unique deflector plate and shroud creates a swirling of the air stream ensuring maximum water and dirt separation.
- Large filter element surface guarantees low pressure drop and increased element life.
- 5 micron standard, 40 micron filter element, and activated carbon element available.



NOTE: Barb (piston drain) accepts 3/16" ID tubing.

Dimensions

Model

Sub-Compact Unit
F12-02-SK00

† With Manual or Piston Drain
Inches (mm)

Specifications

High Flow Capacity ¹	Port Size	5 Micron	40 Micron	
	1/4	50 SCFM	54 SCFM	
	3/8	58 SCFM	70 SCFM	
Maximum Operating Temperature	Without DPI		Plastic Bowl	125°F (52°C)
	With DPI		Metal Bowl	175°F (80°C)
	With Piston Drain			125°F (52°C)
				125°F (52°C)
Maximum Supply Pressure	Without DPI		Plastic Bowl	150 psig (10,3 bar)
	With DPI		Metal Bowl	250 psig (17,2 bar)
	With Piston Drain			150 psig (10,3 bar)
				150 psig (10,3 bar)
Standard Filtration	Micron	5		
Useful Retention ²	oz. (cc)	.9 (26,6)		
Port Size	NPT/BSPP-G	1/4, 3/8		
Weight	lb. (kg)	1.2 (0,54)		

¹ Inlet pressure 90 psig (6,2 bar) and 5 psig (0,3 bar) pressure drop.

² Useful Retention refers to volume below the quiet zone baffle.

Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Drain	Plastic	
Filter Element	Micron	Plastic
	Adsorber	Activated Charcoal
Element Holder	Acetal	
Seals	Nitrile	
Sight Gauge DPI	Polyamide (Nylon)	

Ordering Information

Port Size	Plastic Bowl w/ Guard		Metal Bowl w/ Sight Gauge	
	Manual Drain	Piston Drain	Manual Drain	Piston Drain
1/4"	F12-02-SK00	F12-02-SR00	F12-02-SL00	F12-02-SS00
3/8"	F12-03-SK00	F12-03-SR00	F12-03-SL00	F12-03-SS00

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

A	B	C	D [†]	E [†]	F
2.00 (51)	2.06 (52)	.56 (14)	5.35 (136)	5.91 (150)	2.25 (57)

Sub-Compact Particulate Filter F12 Series

= "Most Popular"

Replacement Bowl Kits

Plastic Bowl Guard	GRP-96-345
Plastic Bowl / Piston Drain	GRP-96-351
Plastic Bowl / Manual Drain	GRP-96-347
Metal Bowl / Piston Drain	GRP-96-353
Metal Bowl / Manual Drain	GRP-96-348
Metal Bowl / Sight Gauge / Piston Drain	GRP-96-352
Metal Bowl / Sight Gauge / Manual Drain	GRP-96-349

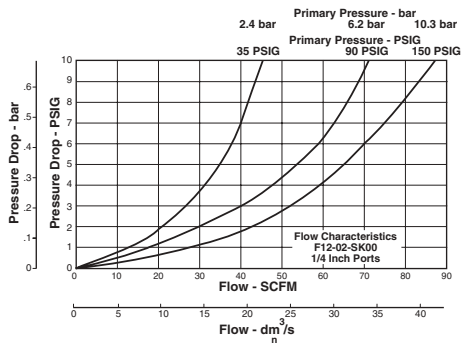
Accessories & Repair Kits

DPI Replacement Kit	FRP-96-300
Drain Kit / Piston Drain	GRP-96-354
Drain Kit / Manual Drain	GRP-96-340
Mounting Bracket Kit (See page 42)	GPA-96-300
Sight Gauge Kit	GRP-96-346

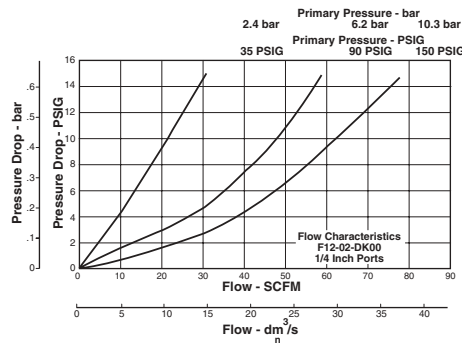
Replacement Element Kits

5 Micron	GRP-96-344
40 Micron	GRP-96-343
Adsorber (Activated Carbon)	FRP-96-301

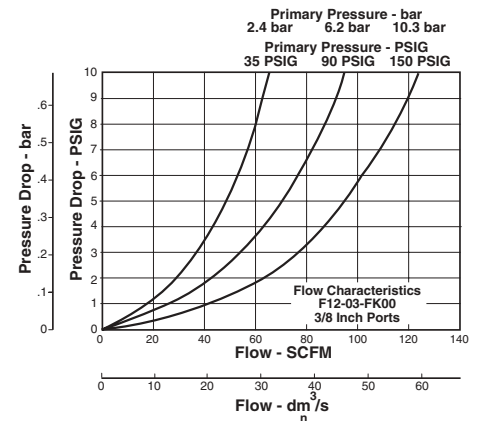
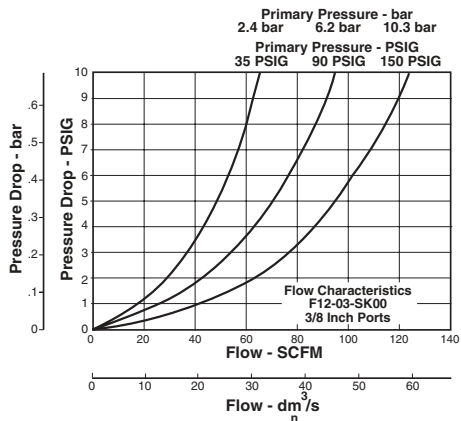
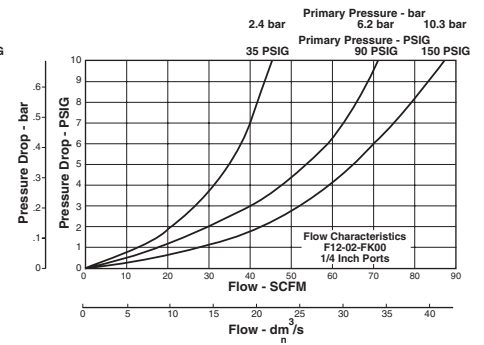
5 Micron Element



Activated Carbon Element



40 Micron Element



Sub-Compact Coalescing Filter M12 Series

Coalescing Filters



- Pipe Sizes 1/4 and 3/8 Inch
- High Flow
 - “C” Element: 1/4" - 34 scfm
 - 3/8" - 28 scfm
 - “B” Element: 1/4" - 51 scfm
 - 3/8" - 64 scfm

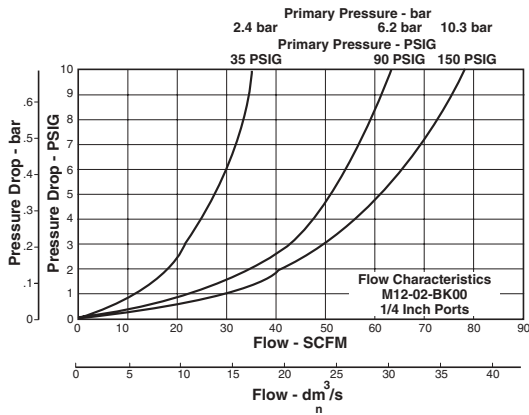
- Pressures to 250 psig

Coalescing filters are designed to remove 99.9% + of the liquid aerosols, both water and oil, and submicron particulate matter from your pneumatic system. These filters will provide oil free air for applications such as spray painting, air gauging, pneumatic instrumentation, printing and packaging.

Filter Selection

1. Determine flow and pressure requirements.
2. Refer to Flow Chart and select the proper filter to match your flow and pressure needs.

Reading Flow Charts For Coalescing Filters



To read the coalescer flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the coalescer and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in scfm. If the flow is too low, select a larger port size or body

size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.

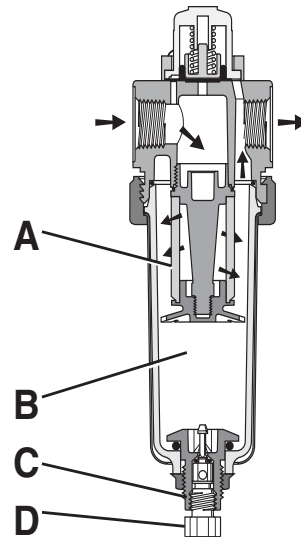
Media Specifications

Grade	D.O.P. Coalescing Efficiency .3 to .6 Micron Particles	Maximum Oil Carryover ¹ PPM w/w	Pressure Drop (PSID) ² @ Rated Flow		Particulate Micron Rating
			Media Dry	Media Wet With 10-20 wt. oil	
C	99.97%	.008	1.0	2-3	.01
B	95%	.85	.5	.5	.7

¹ Tested per BCAS 860900 at 40 ppm inlet.
² Add dry + wet for total pressure drop.

D.O.P. = Dioctylphthalate

Operation



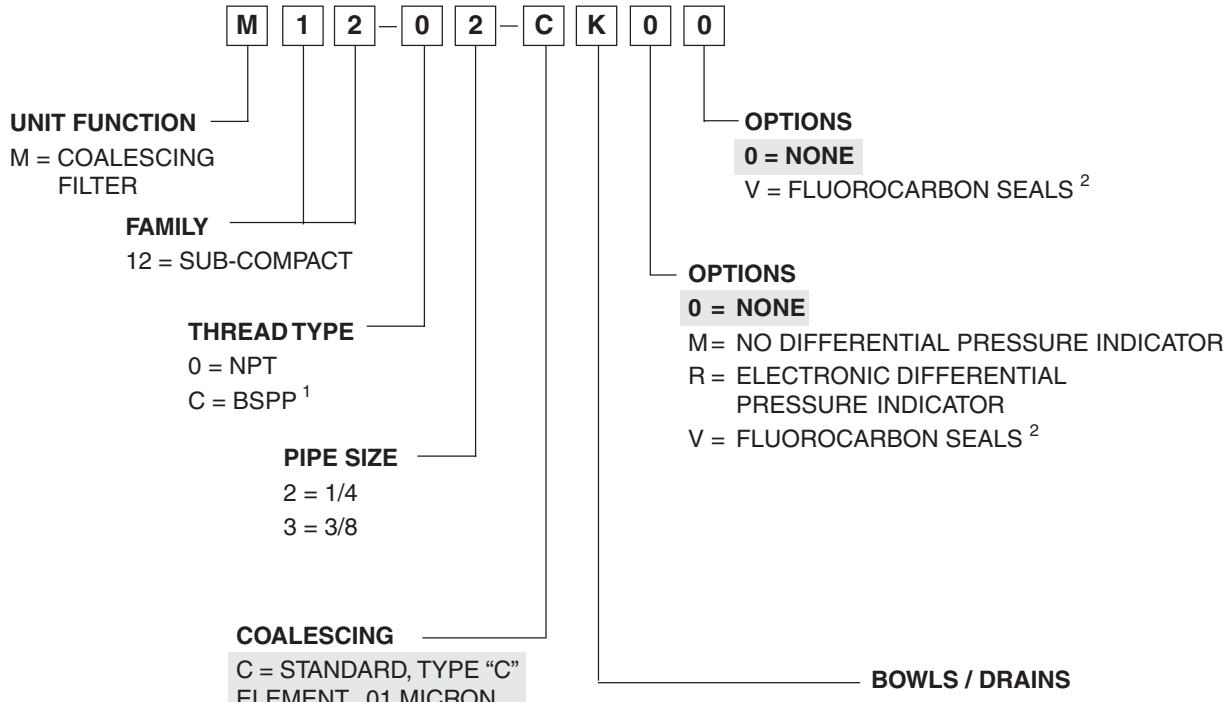
The contaminated air enters the element interior and is forced through a thick membrane of borosilicate glass fibers coated with epoxy (A). Flow then passes through an outer structural support and, at this stage, has removed up to 99.97% + of the sub-micron particles evident in the contaminated air. These tiny droplets coalesce together and are blotted from the filter surface by the drain and release layers of non-woven glass felt and rayon cloth. The drops now begin a gravitational passage to the filter sump (B) where they can be manually or automatically drained.

The clean, filtered air now passes through the outer screen plastic net and out into the pneumatic system. The Air Line Coalescing Filter removes liquid aerosols and sub-micron particulate matter.

Collected liquids and particles in the “quiet zone” should be drained before their level reaches a height where they would be reentrained in the flowing air. This can be accomplished by the manual drain (C) which is actuated by twisting knob (D) counterclockwise. Or, by the automatic pulse drain when actuated by airline pressure cycles.

Sub-compact Coalescing Numbering System

 = "Most Popular"



<i>BOWLS</i>	PLASTIC W/ GUARD	METAL W/ NO SIGHT GAUGE	METAL W/ SIGHT GAUGE
MANUAL DRAIN	K	X	L
PISTON DRAIN	R	M	S

¹ ISO, R228 (G SERIES)

² Fluorocarbon seals available only on units with metal bowl with manual drain.

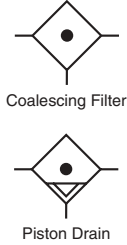
"M" Series Coalescing Filters, with Type "B" 0.7 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "B" 0.7 micron elements **exceed ISO Class 2** for maximum particle size and concentration of solid contaminants, and **exceed Class 3** on maximum oil content (ppm/wt).

"M" Series Coalescing Filters, with Type "C" 0.01 micron elements: All Wilkerson Type "M" Oil Removal (Coalescing) Filters with Type "C" 0.01 micron elements **exceed ISO Class 1** for maximum particle size and concentration of solid contaminants, and **exceed Class 1** on maximum oil content (ppm/wt).

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Sub-Compact Coalescing Filter M12 Series

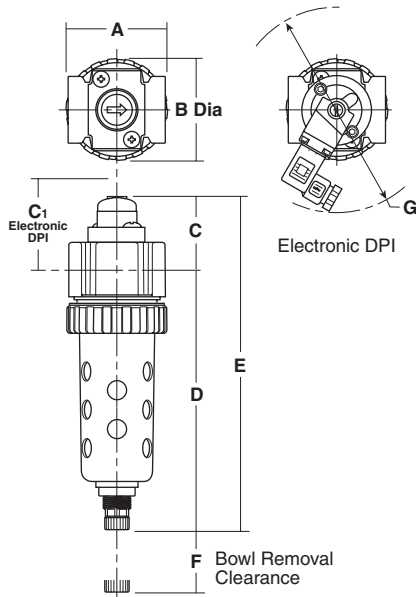
Coalescing Filter M12



M12-02-CK00

Features

- Removes liquid aerosols and sub-micron particles.
- Liquids gravitate to the bottom of the element and will not re-enter the airstream.
- Oil free air for critical applications, such as air gauging and pneumatic instrumentation and controls.
- Interchangeable manual and piston drains.
- Differential pressure indicator standard.



NOTE: Barb (piston drain) accepts 3/16" ID tubing.

Dimensions

Model

Sub-Compact Unit
M12-02-CK00

	A	B	C	C ₁	D [†]	E [†]	F	G Dia.
	2.00 (51)	2.06 (52)	1.50 (38)	1.86 (47)	5.35 (136)	6.85 (174)	1.77 (45)	4.50 (114)

[†] With Manual or Piston Drain
Inches (mm)

= "Most Popular"

Specifications

High Flow Capacity ¹	Port Size	"C" Element	"B" Element
	1/4	30 SCFM	50 SCFM
	3/8	30 SCFM	65 SCFM
Maximum Operating Temperature	Without DPI		125°F (52°C)
	With DPI		175°F (80°C)
	With Piston Drain		125°F (52°C)
Maximum Supply Pressure	Without DPI		150 psig (10,3 bar)
	With DPI		250 psig (17,2 bar)
	With Piston Drain		150 psig (10,3 bar)
Standard Filtration	Micron	(C) 0.01 (B) 0.7	
Useful Retention ²	oz. (cc)	.9 (26,6)	
Port Size	NPT/BSPP-G	1/4, 3/8	
Weight	lb. (kg)	1.2 (0,54)	

¹ Inlet pressure 90 psig (6,2 bar) and 5 psig (0,3 bar) pressure drop.

² Useful Retention refers to volume below the quiet zone baffle.

Materials of Construction

Body	Zinc	
Bowls	Plastic Bowl Metal Bowl	Polycarbonate Zinc
Drain	Plastic	
Filter Element	Type B, C	Borosilicate & Felt Glass Fibers
Element Holder	Acetal	
Seals	Nitrile	
Sight Gauge DPI	Polyamide (Nylon)	

Ordering Information

Port Size	Plastic Bowl w/ Guard		Metal Bowl w/ Sight Gauge	
	Manual Drain	Piston Drain	Manual Drain	Piston Drain
1/4"	M12-02-CK00	M12-02-CR00	M12-02-CL00	M12-02-CS00
3/8"	M12-03-CK00	M12-03-CR00	M12-03-CL00	M12-03-CS00

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

Sub-Compact Coalescing Filter M12 Series

= "Most Popular"

Replacement Bowl Kits

Plastic Bowl Guard	GRP-96-345
Plastic Bowl / Piston Drain	GRP-96-351
Plastic Bowl / Manual Drain	GRP-96-347
Metal Bowl / Piston Drain	GRP-96-353
Metal Bowl / Manual Drain	GRP-96-348
Metal Bowl / Sight Gauge / Piston Drain	GRP-96-352
Metal Bowl / Sight Gauge / Manual Drain	GRP-96-349

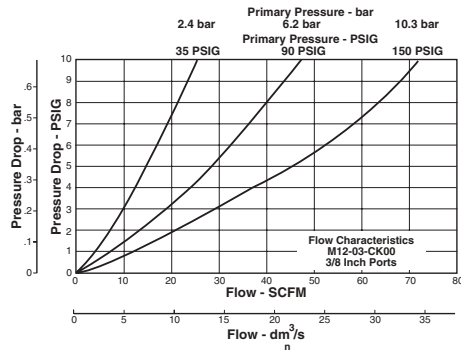
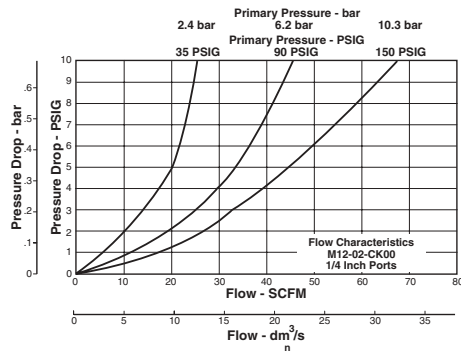
Accessories & Repair Kits

DPI Replacement Kit	FRP-96-300
Electronic DPI Kit	PS765
Drain Kit / Piston Drain	GRP-96-354
Drain Kit / Manual Drain	GRP-96-340
Mounting Bracket Kit (See page 42)	GPA-96-300
Sight Gauge Kit	GRP-96-346

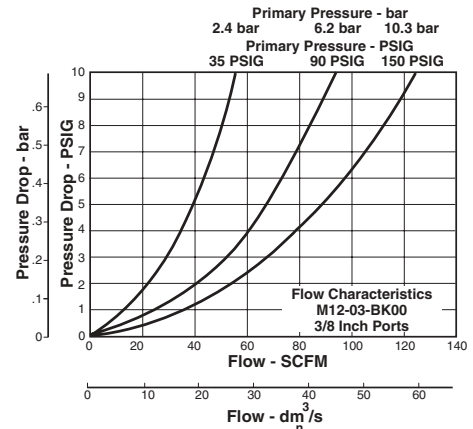
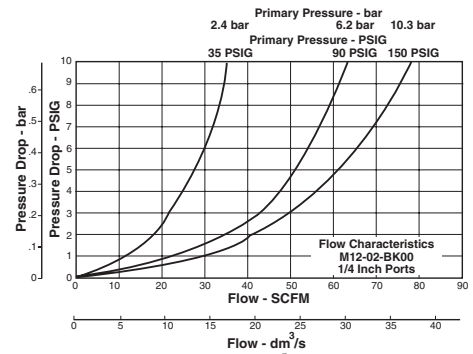
Replacement Element Kits

"C" Element (Standard)	MRP-96-300
"B" Element (Optional)	MRP-96-301

"C" Element

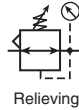


"B" Element

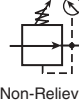


Sub-Compact Regulator R12 Series

Regulators



Relieving



Non-Relieving

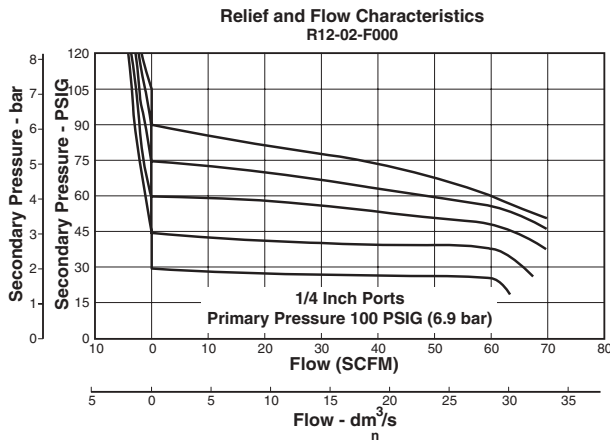
- Pipe Sizes 1/4 and 3/8 Inch
- High Flow: 1/4" - 30 scfm
3/8" - 40 scfm
- Pressures to 250 psig

Air regulators are designed to provide quick response and accurate pressure regulation for the most demanding industrial applications.

Regulator Selection

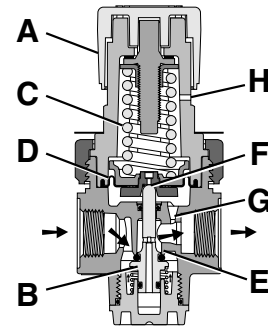
1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Regulators



Once the required flow is determined for a pneumatic application the regulator can be selected by using the flow chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

Operation



With the adjusting knob **(A)** turned fully counterclockwise (no spring load), and pressure supplied to the regulator inlet port, the valve assembly **(B)** is closed. Turning the adjusting knob clockwise applies a load to control spring **(C)**. This load causes the piston / diaphragm **(D)** and the valve assembly **(B)** to move downward allowing flow across the seat area **(E)** created between the valve assembly and the seat. Pressure in the downstream line is sensed below the piston / diaphragm **(D)** and offsets the load of spring **(C)**.

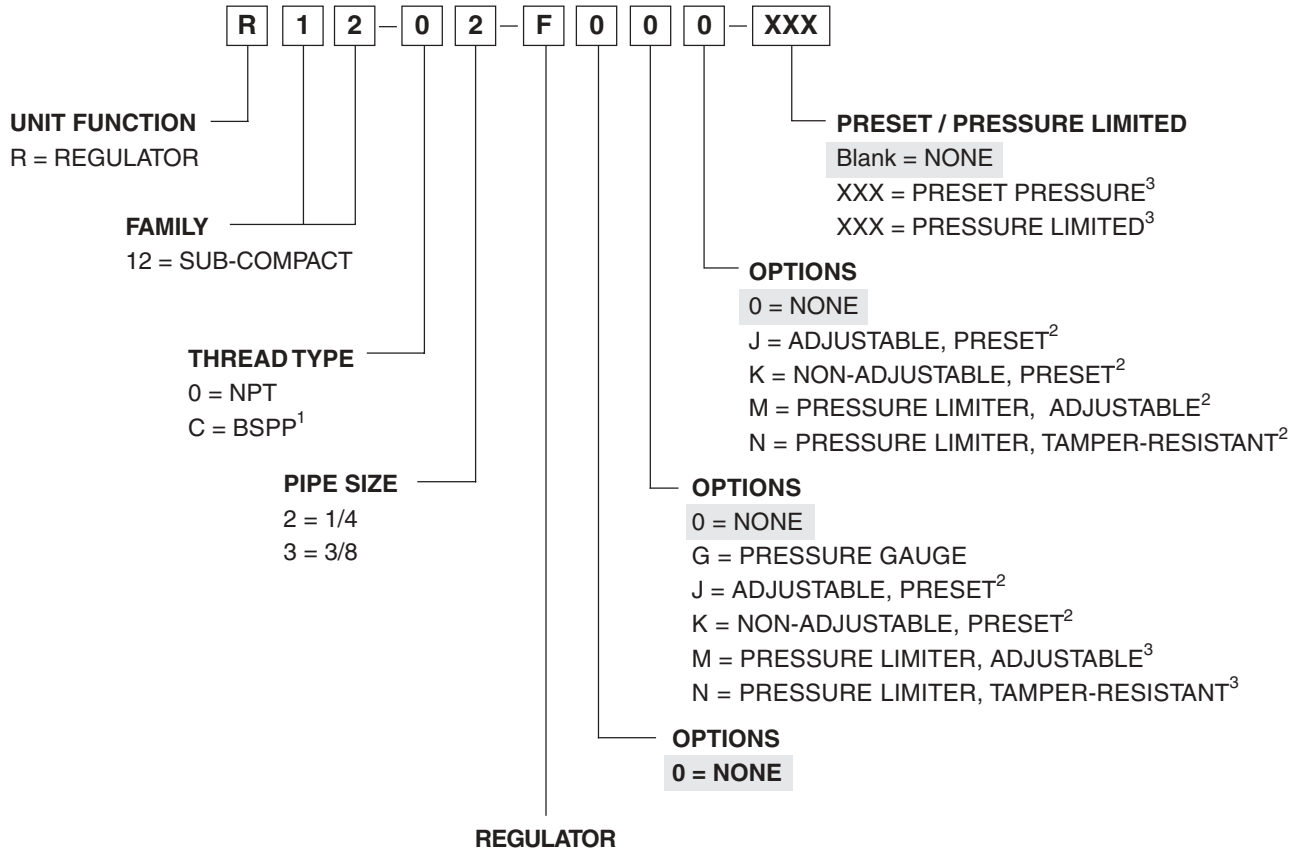
As downstream pressure rises, valve assembly **(B)** and control piston **(C)** move upward until the area **(E)** is closed and the load of the spring **(C)** and pressure under piston / diaphragm **(D)** are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the piston / diaphragm **(D)**. The load of control spring **(C)** now causes the valve assembly to move downward opening seat area **(E)** allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening **(E)**.

During low flow requirements, the amount of opening at the seat **(E)** is small, while at high flows it is large. The downstream pressure signal, which regulates the amount of opening, requires an adjustment over this range, in order to attempt a constant output. This adjustment is the orifice **(G)**, which is sized and located in such a manner as to provide a compensation to the downstream pressure signal transmitted to the piston. This effect is called aspiration and its effect is to maintain downstream pressure nearly constant over a wide range of flow demands.

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the piston / diaphragm **(D)** to move upward against control spring **(C)**, open vent hole **(F)**, and vent the excess pressure to atmosphere through the hole in the bonnet **(H)**. (This occurs in the relieving type regulator only.)

Sub-compact Regulator Numbering System

 = "Most Popular"



DIAPHRAGM FUNCTION	FLUOROCARBON	SPRING RANGE			
		0-30 psi (0-2,1 bar)	0-60 psi (0-4,1 bar)	0-125 psi (0-8,6 bar)	0-200 psi (0-13,8 bar)
RELIEVING	NO	C	D	F	H
	YES	J	K	L	N
NON-RELIEVING	NO	P	W	R	T
	YES	V	X	Y	U

NOTE: When selecting from the options columns, please enter letters in alphabetical order for positions 8 and 9.

For example:

R 1 2 - 0 2 - F 0 G K.

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

¹ ISO, R228 (G SERIES)

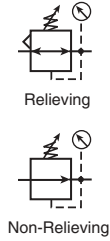
² Inlet pressure is 100 PSIG. For other pressures, contact factory.

³ Available Preset / Pressure Limited Range, 10 to 90 PSIG in 5 PSIG increments. For higher pressures, contact factory. (Example: 065 = 65 PSIG)

Sub-Compact Regulator R12 Series

Regulator R12

= "Most Popular"



R12-02-F000

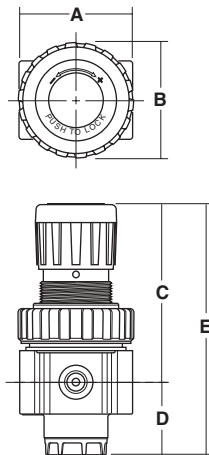
Features

- Secondary aspiration plus balanced valve provides quick response and accurate pressure regulation.
- Rolling diaphragm for extended life.
- Removable non-rising knob for panel mounting and tamper resistance.
- Easily serviced.
- Reverse Flow.

⚠ WARNING
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.
Product rupture can cause serious injury.

NOTE: Panel Mount Nut sold separately.

NOTE: 1.53" (39 mm) Dia. hole required for panel mounting.



Dimensions

Model

Sub-Compact Unit
R12-02-F000

Inches (mm)

Specifications

High Flow Capacity ¹	1/4 3/8	30 SCFM 40 SCFM
Maximum Operating Temperature	175°F (80°C)	
Maximum Supply Pressure	250 psig (17.2 bar)	
Adjusting Range Pressure	1-30 psig (0,06-2,1 bar) 1-60 psig (0,06-4,1 bar) 2-125 psig (0,13-8,6 bar) 2-250 psig (0,13-17,2 bar)	
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	1.1 (0,49)

¹ Inlet pressure 100 psig (7 bar), no flow secondary pressure set 90 psig (6,2 bar), 10 psig pressure drop at rated flow.

Materials of Construction

Body	Zinc	
Adjustment Stem	Brass	
Collar & Knob	Plastic	
Valve & Cap	Plastic	
Bonnet	Plastic	
Diaphragm Assembly	Nitrile	
Springs	Valve & Control	Steel
Seals	Nitrile	

Ordering Information

Port Size	0-125 psi (0-8,6 bar)	
	Without Gauge	With Gauge
1/4"	R12-02-F000	R12-02-F0G0
3/8"	R12-03-F000	R12-03-F0G0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

CAUTION:

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

A	B	C	D	E
2.00 (51)	2.06 (52)	3.16 (80)	1.28 (32)	4.44 (113)

Sub-Compact Regulator R12 Series

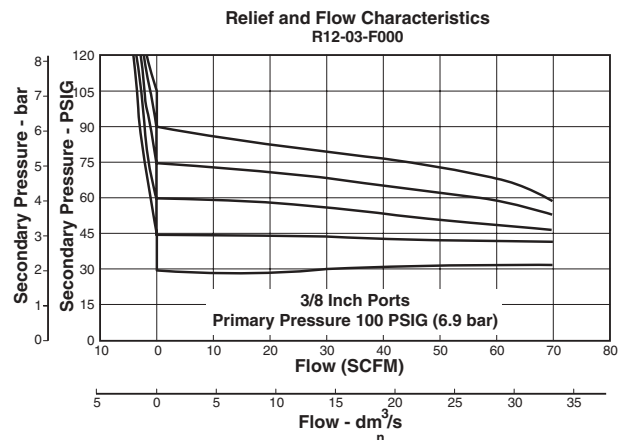
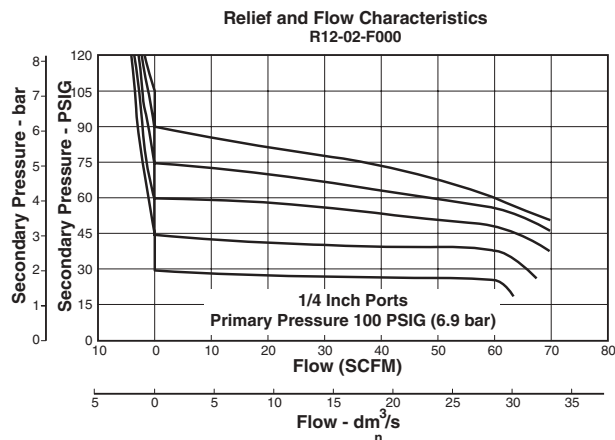
= "Most Popular"

Replacement Kits

Bonnet Assembly Kit	RRP-96-308
Control Knob	RRP-96-300
30 psig Gauge	RRP-96-663
60 psig Gauge	RRP-96-664
160 psig Gauge	RRP-96-665
300 psig Gauge	RRP-96-666
Springs, Regulating 1-30 psig (0,06-2,1 bar)	RRP-96-303
Springs, Regulating 1-60 psig (0,06-4,1 bar)	RRP-96-302
Springs, Regulating 2-125 psig (0,13-8,6 bar)	RRP-96-301
Springs, Regulating 2-200 psig (0,13-17,2 bar)	RRP-96-304
Relieving, Service Kit	RRP-96-306
Non-Relieving, Service Kit	RRP-96-307

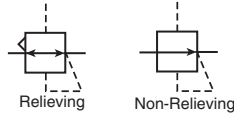
Accessories

Mounting Bracket Kit (With Panel Mount Nut)	GPA-96-313
Panel Mount Nut, Metal	GPA-96-314



Air Piloted Regulator H12 Series

Air Piloted Regulators



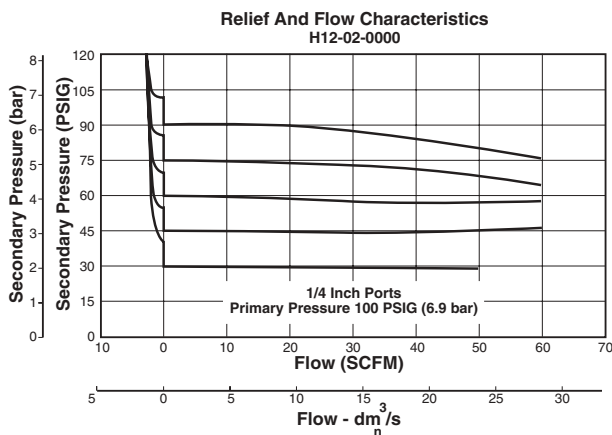
- Pipe Sizes 1/4 and 3/8 Inch
- High Flow: 1/4" - 50 scfm
3/8" - 50 scfm
- Pressures to 250 psig

Air regulators are designed to provide quick response and accurate pressure regulation for the most demanding industrial applications.

Regulator Selection

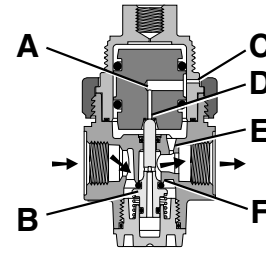
1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Regulators



Once the required flow is determined for a pneumatic application the regulator can be selected by using the flow chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

Operation



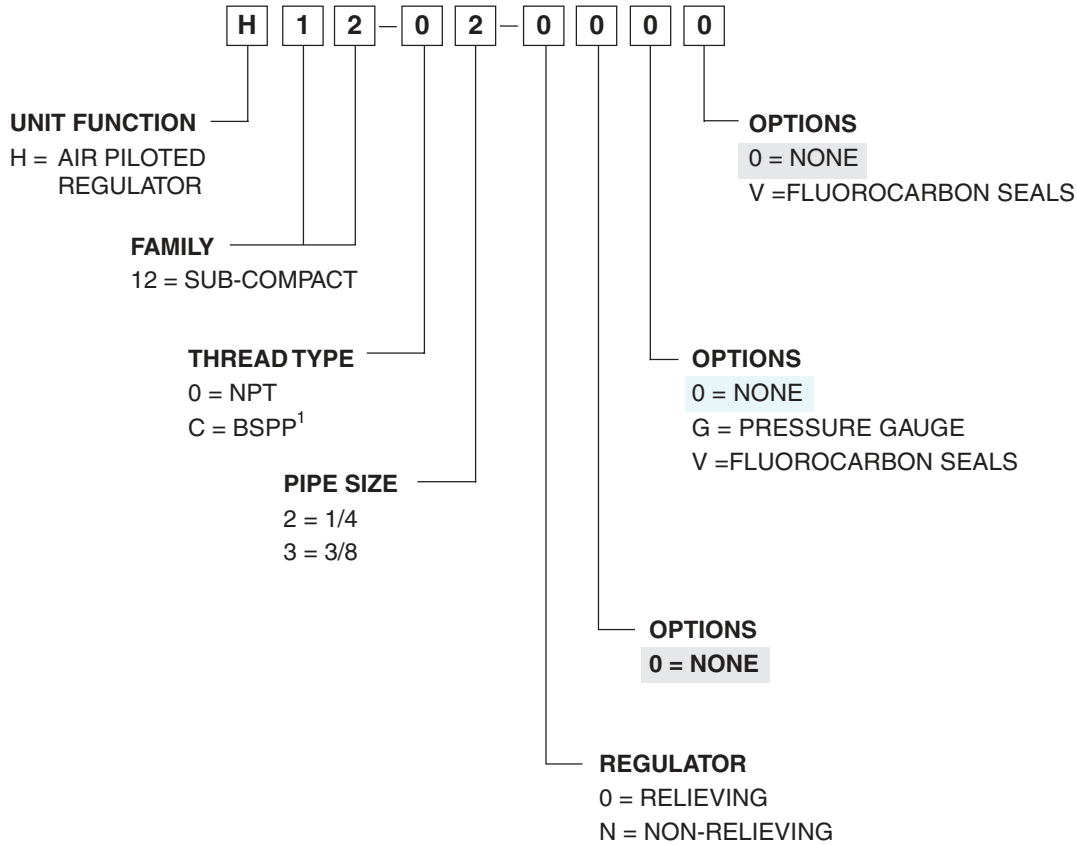
With pressure supplied to the regulator inlet port and no pilot signal, the valve assembly (**B**) is closed. Pressurizing the pilot port applies a load to control piston (**A**). This load causes the piston (**A**) and the valve assembly (**B**) to move downward allowing flow thru the pathway (**F**) created between the valve assembly and the body. Pressure in the downstream line is sensed below the control piston (**A**) and offsets the load of piston (**A**). As downstream pressure rises, valve assembly (**B**) and control piston (**A**) move upward until the pathway (**F**) is closed and the load of the piston (**A**) and pressure under piston (**A**) are in balance. A reduced outlet pressure has now been obtained. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the control piston (**A**). The load of control piston (**A**) now causes the valve assembly to move downward opening seat area pathway (**F**) and allowing air to flow downstream. The flow of downstream air is metered by the amount of opening (**F**).

During low flow requirements, the amount of opening at the seat (**F**) is small, while at high flows it is large. The downstream pressure signal, which regulates the amount of opening, requires an adjustment over this range, in order to attempt a constant output. This adjustment is the orifice (**E**), which is sized and located in such a manner as to provide a compensation to the downstream pressure signal transmitted to the piston. This effect is called aspiration and its effect is to maintain downstream pressure nearly constant over a wide range of flow demands.

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the control piston (**A**) to move upward, off of the valve assembly, opening vent hole (**D**) and vent the excess pressure to atmosphere through the hole in the bonnet (**C**). (This occurs in the relieving type regulator only.)

Sub-compact Air Piloted Regulator Numbering System

 = "Most Popular"

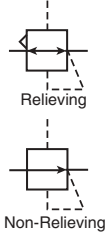


¹ ISO, R228 (G SERIES)

Air Piloted Regulator H12 Series

Air Piloted Regulator H12

= "Most Popular"



H12-02-0000

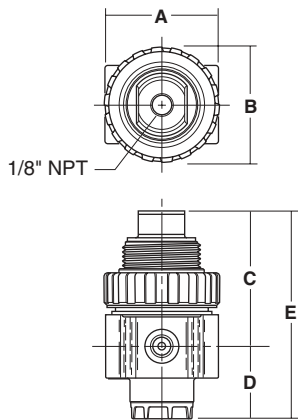
Features

- Unique balanced valve minimizes secondary pressure fluctuations.
- Solid control piston with resilient seat for service-free operation.
- Easily serviced.

WARNING
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.
Product rupture can cause serious injury.

NOTE: Panel Mount Nut sold separately.

NOTE: 1.53" (39 mm) Dia. hole required for panel mounting.



Dimensions

Model

Air Piloted Unit
H12-02-0000

Inches (mm)

A	B	C	D	E
2.00 (51)	2.06 (52)	2.43 (61)	1.28 (32)	3.71 (93)

Specifications

High Flow Capacity ¹	1/4	50 SCFM
	3/8	50 SCFM
Operating Pressure Range	0 to 250 PSIG (0 to 17,2 bar)	
Operating Temperature Range	32°F to 175°F (0°C to 80°C)	
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	.90 (0,41)

¹ Inlet pressure 100 psig (7 bar), no flow secondary pressure set 90 psig (6,2 bar), 10 psig pressure drop at rated flow.

Materials of Construction

Body	Zinc
Piston & Valve	Plastic
Spring (Valve)	Steel
Seals	Nitrile

Ordering Information

Port Size	0-125 psi (0-8,6 bar)	
	Without Gauge	With Gauge
1/4"	H12-02-0000	H12-02-00G0
3/8"	H12-03-0000	H12-03-00G0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

Air Piloted Regulator H12 Series

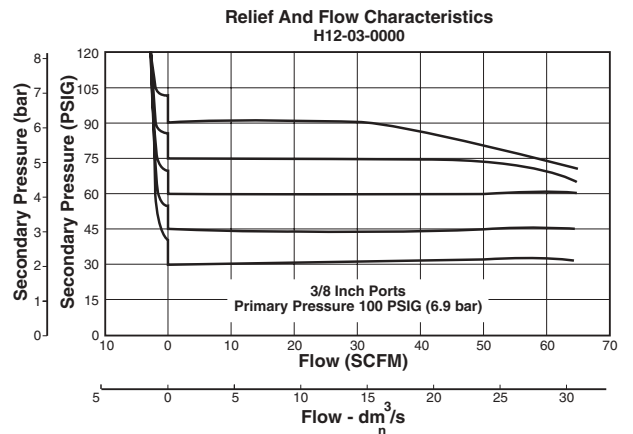
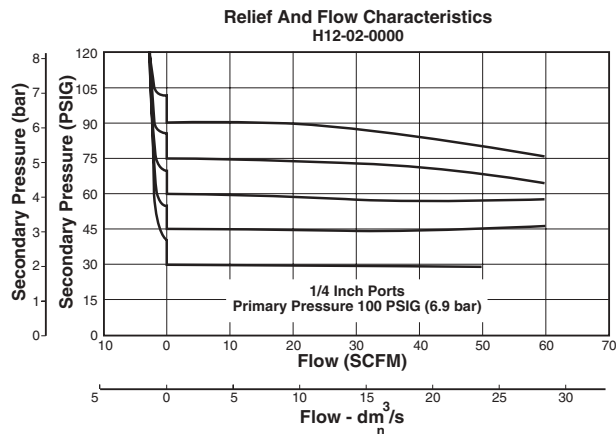
= "Most Popular"

Replacement Kits

30 psig Gauge	RRP-96-663
60 psig Gauge	RRP-96-664
160 psig Gauge	RRP-96-665
300 psig Gauge	RRP-96-666
Relieving, Service Kit	RRP-96-310
Non-Relieving, Service Kit	RRP-96-309

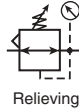
Accessories

Mounting Bracket Kit (With Panel Mount Nut)	GPA-96-313
Panel Mount Nut, Metal	GPA-96-314



Precision Regulator P12 Series

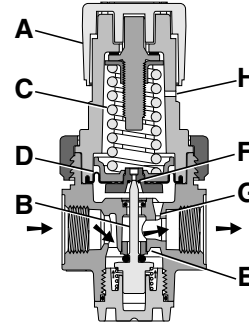
Precision Regulators



- Pipe Sizes 1/4 and 3/8 Inch
- High Flow: 1/4" - 25 scfm
3/8" - 25 scfm
- Pressures to 250 psig

Precision air regulators are designed to provide quick response and accurate pressure regulation for the most demanding industrial applications.

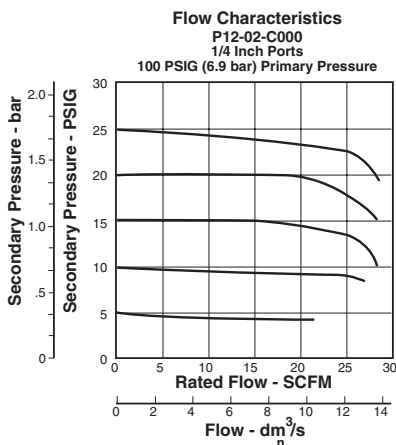
Operation



Regulator Selection

1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Regulators



Once the required flow is determined for a pneumatic application the regulator can be selected by using the flow chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

With the adjusting knob **(A)** turned fully counterclockwise (no spring load), and pressure supplied to the regulator inlet port, the valve assembly **(B)** is closed. Turning the adjusting knob clockwise applies a load to control spring **(C)**. This load causes the piston / diaphragm **(D)** and the valve assembly **(B)** to move downward allowing flow across the seat area **(E)** created between the valve assembly and the seat. Pressure in the downstream line is sensed below the piston / diaphragm **(D)** and offsets the load of spring **(C)**.

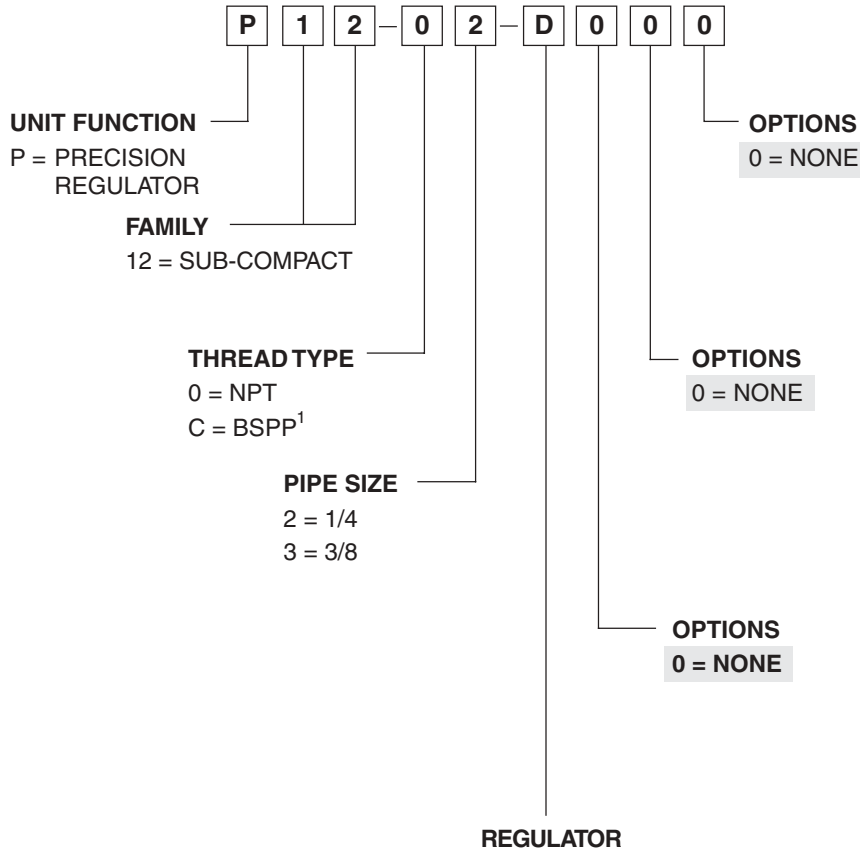
As downstream pressure rises, the valve assembly **(B)** and control piston **(C)** move upward until the area **(E)** is closed and the load of the spring **(C)** and pressure under piston / diaphragm **(D)** are in balance. A reduced outlet pressure has now been obtained, depending on spring load. Creating a demand downstream, such as opening a valve, results in a reduced pressure under the piston / diaphragm **(D)**. The load of control spring **(C)** now causes the valve assembly to move downward opening seat area **(E)** allowing air to flow to meet the downstream demand. The flow of downstream air is metered by the amount of opening **(E)**.

During low flow requirements, the amount of opening at the seat **(E)** is small, while at high flows it is large. The downstream pressure signal, which regulates the amount of opening, requires an adjustment over this range, in order to attempt a constant output. This adjustment is the orifice **(G)**, which is sized and located in such a manner as to provide a compensation to the downstream pressure signal transmitted to the piston. This effect is called aspiration and its effect is to maintain downstream pressure nearly constant over a wide range of flow demands.

Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the piston / diaphragm **(D)** to move upward against control spring **(C)**, open vent hole **(F)**, and vent the excess pressure to atmosphere through the hole in the bonnet **(H)**.

Sub-compact Precision Regulator Numbering System

 = "Most Popular"



DIAPHRAGM FUNCTION	FLUOROCARBON	SPRING RANGE			
		0-15 psi (0-1,7 bar)	0-30 psi (0-2,1 bar)	0-60 psi (0-4,1 bar)	0-125 psi (0-8,6 bar)
RELIEVING	NO	A	C	D	F
	YES	B	J	K	L

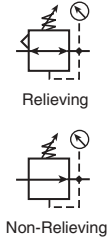
CAUTION: Regulator Pressure Adjustment - The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators,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

¹ ISO, R228 (G SERIES)

Precision Regulator P12 Series

Precision Regulator P12

= "Most Popular"

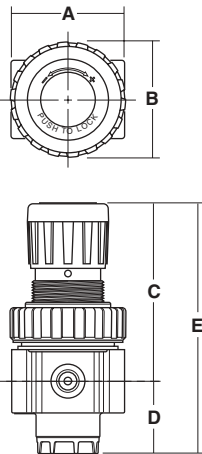


P12-02-D000

Features

- Fine adjustment sensitivity.
- Good repeatability and minimal pressure drop.
- High flow capacity.
- Two 1/4" gauge ports.
- Brass Valve for long life.
- High Flow: 25 scfm.
- Modular with 12 Series FRL.
- Non-rising, removable knob.
- Multiple porting options.

⚠ WARNING
 Do not connect regulator to bottled gas.
 Do not exceed maximum primary pressure rating.
 Product rupture can cause serious injury.



NOTE: Panel Mount Nut sold separately.

NOTE: 1.53" (39 mm) Dia. hole required for panel mounting.

Dimensions

Model

Precision Unit
P12-02-D000

Inches (mm)

Specifications

High Flow Capacity ¹	1/4	25 SCFM
	3/8	25 SCFM
Maximum Operating Temperature	175°F (80°C)	
Maximum Supply Pressure	250 psig (17.2 bar)	
Adjusting Range Pressure 1-15 psig (0,06-1,05 bar)	1-30 psig (0,06-2,1 bar)	
	1-60 psig (0,06-4,1 bar)	
	2-125 psig (0,13-8,6 bar)	
Gauge Ports (2x)	NPT/BSPP-G	1/4
P1, P2 Port Size (Inlet/Outlet)	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	1.0 (0,45)

Effect of Supply Pressure Variation – 0.5 psig (.035 bar) for 25 psig (1.73 bar) change in P₁

Relief Capacity – 0.5 SCFM (0.24 dm³/s) @ 5 psig (.35 bar) increase in P₂

¹ **Flow Capacity** – Inlet pressure 100 psig (7 bar), no flow secondary pressure set 90 psig (6.2 bar), 15 psig pressure drop at rated flow.

Materials of Construction

Body	Zinc	
Collar & Knob	Plastic	
Poppet	Brass	
Bonnet & Bottom Cap	Plastic	
Diaphragm Assembly	Nitrile	
Springs	Valve & Control	Steel
Seals	Nitrile	

Ordering Information

Pressure Range	1/4" NPT Without Gauge
15 psig	P12-02-A000
30 psig	P12-02-C000
60 psig	P12-02-D000
125 psig	P12-02-F000

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

CAUTION:

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

A	B	C	D	E
2.00 (51)	2.06 (52)	3.16 (80)	1.28 (32)	4.44 (113)

Precision Regulator P12 Series

 = "Most Popular"

Replacement Kits

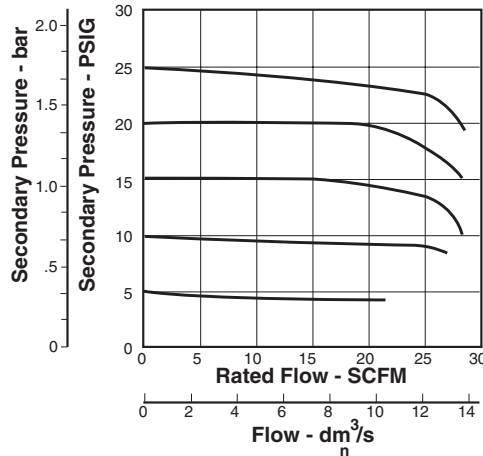
30 psig Gauge	PPA-95-107
60 psig Gauge	PPA-95-106
120 psig Gauge	PPA-95-108
Springs, Regulating 1-15 psig (0,06-1,7 bar)	RRP-96-311
Springs, Regulating 1-30 psig (0,06-2,1 bar)	RRP-96-303
Springs, Regulating 1-60 psig (0-4,1 bar)	RRP-96-302
Springs, Regulating 2-125 psig (0,13-8,6 bar)	RRP-96-301
Service Kit	RRP-96-305
Control Knob	RRP-96-312

Accessories

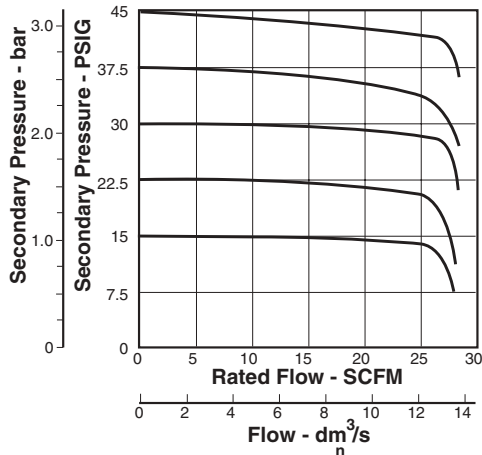
Mounting Bracket Kit (With Panel Mount Nut)	GPA-96-313
Panel Mount Nut, Metal	GPA-96-314

NOTE: Gauge not included, order separately by accessory number.

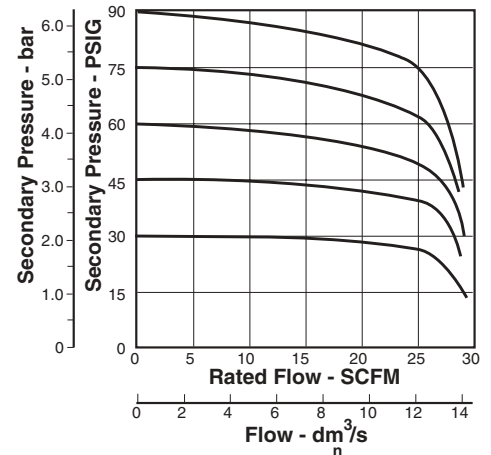
Flow Characteristics
P12-02-C000
 1/4 Inch Ports
 100 PSIG (6.9 bar) Primary Pressure



Flow Characteristics
P12-02-D000
 1/4 Inch Ports
 100 PSIG (6.9 bar) Primary Pressure



Flow Characteristics
P12-02-F000
 1/4 Inch Ports
 100 PSIG (6.9 bar) Primary Pressure



Sub-Compact Lubricator L12 Series

Atomist Lubricators

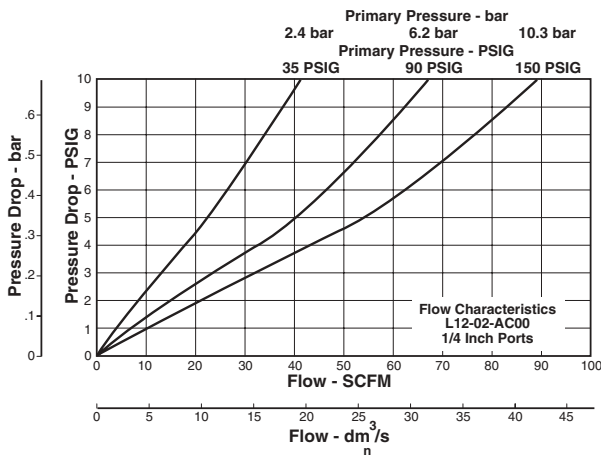
- Pipe Sizes 1/4 thru 3/4 Inch
- High Flow: 1/4" - 40 scfm
3/8" - 40 scfm
- Pressures to 250 PSIG

Ato-Mist Air Lubricators are designed to provide optimum and uniform lubrication with fine micro-mist particles of 5 micron or smaller, to pneumatic components even through complex piping arrangements.

Lubricator Selection

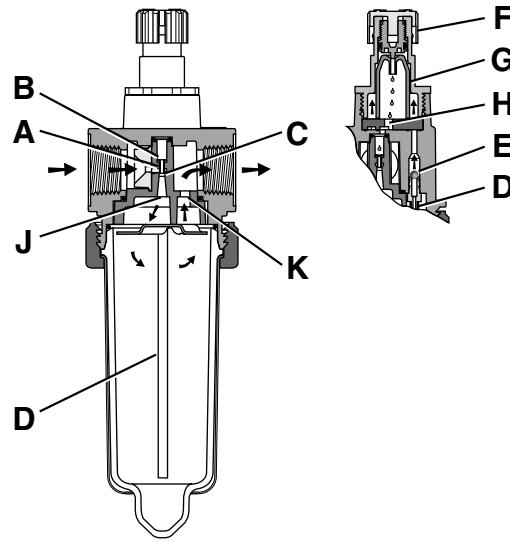
1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select lubricator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

Reading Flow Charts to Size Atomist Lubricators



Once the required flow is determined for a pneumatic application the lubricator can be selected by using the flow chart. To read the lubricator flow chart, first determine the inlet pressure that will be used. Find the appropriate pressure curve on the graph. Each graph will contain three pressure curves. If the required inlet pressure is not on the graph, interpolate a similar curve for the required pressure. Next, determine the acceptable pressure drop across the lubricator and locate it on the vertical axis. Find the intersection point of the acceptable pressure drop and the inlet pressure curve. At this point follow a vertical path downward to view the flow in scfm. If the flow is too low, select a larger port size or body size to give the required flow. If the flow is higher than necessary, select a smaller port size or body size to give the required flow.

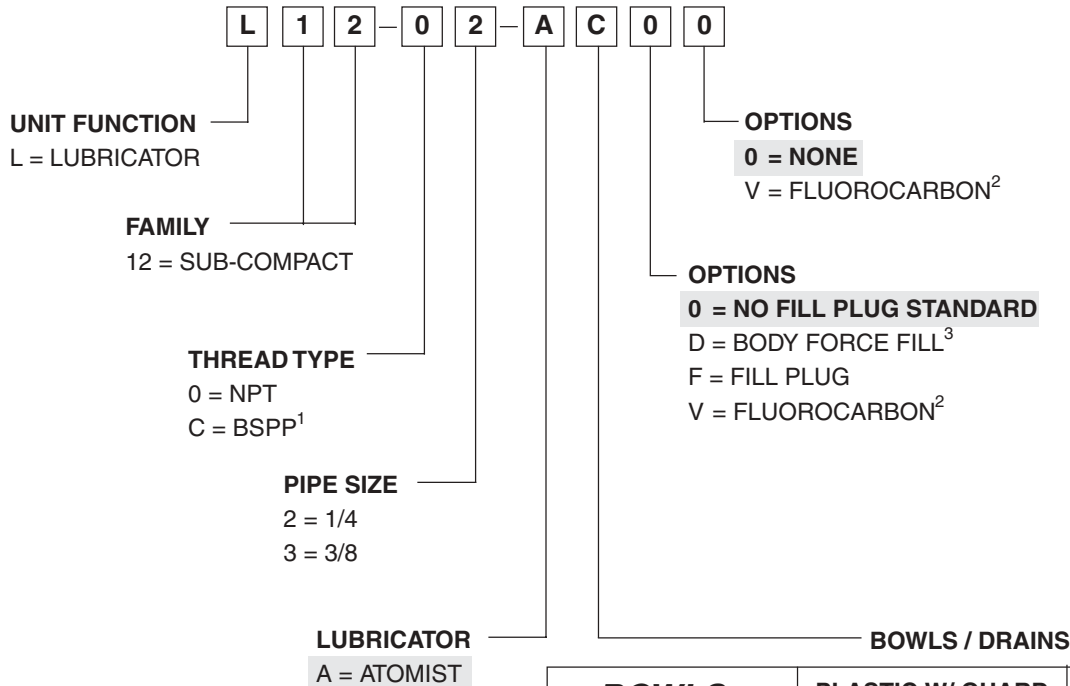
Operation



Air flowing through the unit goes through two paths. At low air flow rates, the majority of the air flows through venturi section (A). The rest of the air slightly deflects and flows by the restrictor disc (B). The velocity of the air flowing through venturi section (A) creates a pressure drop at throat section (C). This lower pressure allows oil to be forced from the reservoir through the pickup tube (D) past the check ball (E), to the meter block assembly where the rate of oil flow is controlled by metering screw (F). Rotation of the metering screw (F) in the counterclockwise direction increases the oil flow rate; in the clockwise direction decreases the oil flow rate. Oil then flows through the clearance between inner and outer sight domes (G) where drops are formed and drip into the nozzle tube (H). Here it is then broken into fine particles as it expands into the low pressure venturi. From there, the atomized oil flows through the precision orifice (J). This action causes the larger particles of oil to fall back into the reservoir where it can recirculate through the system. The remaining mist of fine particles (5 micron or smaller – about 3% of which passed through the sight dome) is then carried through opening (K) where it joins and mixes with air that bypassed the restrictor disc (B). As air flow rate increases, the restrictor disc (B) deflects, allowing most of the inlet air to bypass the venturi section (A). However, a proportion of the inlet air passes through the venturi, assuring that oil delivery increases linearly with increased air flow rate. This proportioning method is advantageous at low inlet flows because the venturi design remains efficient. The check ball (E) prevents reverse oil flow down the pickup tube when air flow stops. Thus, oil delivery can resume immediately when air flow restarts. **Atomist Lubricators can only be filled when the air supply is shut off.**

Sub-compact Lubricator Numbering System

 = "Most Popular"



<i>BOWLS</i>	PLASTIC W/ GUARD NITRILE STANDARD	METAL W/ SIGHT GAUGE NITRILE STANDARD
NONE	C	—
MANUAL DRAIN	K	L
FORCE FILL ⁴	A	B

¹ ISO, R228 (G SERIES)

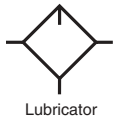
² Fluorocarbon seals available only on units with metal bowl with manual drain.

³ "D" option body force fill adapter installed in fill plug location.

⁴ Bowl mounted force fill options, refer to catalog for details.

Sub-Compact Lubricator L12 Series

Lubricator L12 Atomist

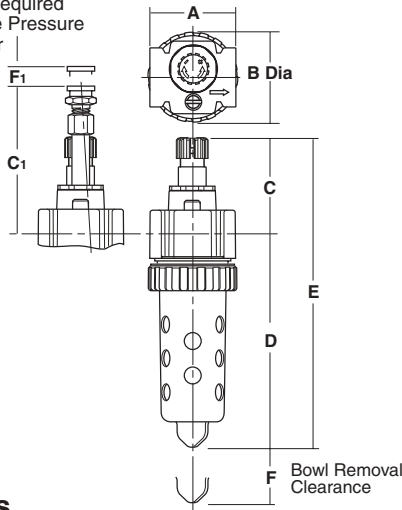


L12-02-AC00

Features

- Proportional oil delivery over a wide range of air flows.
- Generates oil particles of 5 micron and smaller downstream to lubricate systems having complex piping arrangements.
- Precision needle valve assures repeatable oil delivery and provides simple adjustment of delivery rate.
- Ideal for low and high flow applications with changing air flow.
- Transparent sight dome for 360° visibility.
- Removable drip control knob for tamper resistance.

Distance Required To Remove Pressure Fill Adapter



Dimensions

Model

Sub-Compact Unit
L12-02-AC00

	A	B	C	C ₁	D	D [†]	E	E [†]	F	F ₁
	2.00 (51)	2.06 (52)	2.26 (57)	3.35 (85)	5.12 (130)	5.35 (136)	7.38 (187)	7.61 (193)	1.77 (45)	.39 (10)

† With Manual Drain
Inches (mm)

Specifications

= "Most Popular"

High Flow Capacity ¹	1/4	40 SCFM
	3/8	40 SCFM
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Bowl Oil Capacity		1.5 oz. (44,3 cc ³)
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	1.0 (0,45)

¹ Inlet pressure 90 psig (7 bar). Secondary pressure 5 psig (0,3 bar).

Materials of Construction

Body	Zinc	
Bowl Guard	Steel	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Collar	Plastic	
Drain-Manual	Body & Nut	Plastic
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Seals	Nitrile	
Minimum Flow Requirement	2 scfm at 100 psig	

Ordering Information

Port Size	Plastic Bowl No Drain	Metal Bowl With Sight Gauge Manual Drain
1/4"	L12-02-AC00	L12-02-AL00
3/8"	L12-03-AC00	L12-03-AL00

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

Sub-Compact Lubricator L12 Series

= "Most Popular"

Replacement Bowl Kits

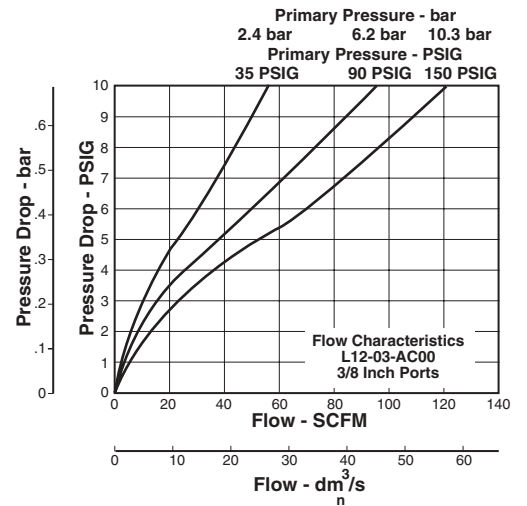
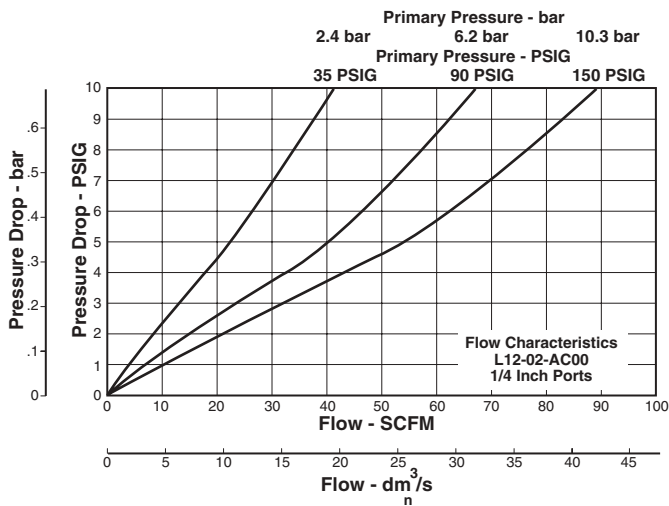
- Plastic Bowl / Bowl Guard, No Drain LRP-96-308
- Metal Bowl / Sight Gauge, Manual Drain LRP-96-306

Replacement Kits

- Adjustment Knob LRP-96-300
- Bowl Guard Kit GRP-96-345
- Drain Kit – Manual Drain GRP-96-340
- Service Kit LRP-96-309
- Sight Dome Kit LRP-96-301
- Bowl Sight Gauge Kit GRP-96-346

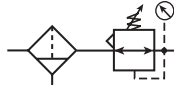
Accessories

- Pressure Fill Adapter Kit LRP-96-302
- Mounting Bracket Kit (See Page 42) GPA-96-300



Sub-Compact Filter / Regulator B12 Series

Filter / Regulators



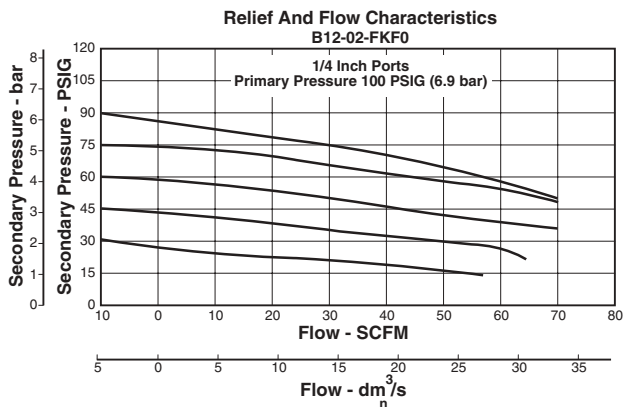
- Pipe Sizes 1/4 and 3/8 Inch
- High Flow
 - 5 Micron: 1/4" - 30 scfm
3/8" - 40 scfm
 - 40 Micron: 1/4" - 30 scfm
3/8" - 40 scfm
- Pressures to 250 psig

Integral Filter / Regulator "Piggybacks" are an excellent choice where accurate pressure regulation and high moisture removal efficiency are required in a space saving package.

Filter / Regulator Selection

1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select filter / regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

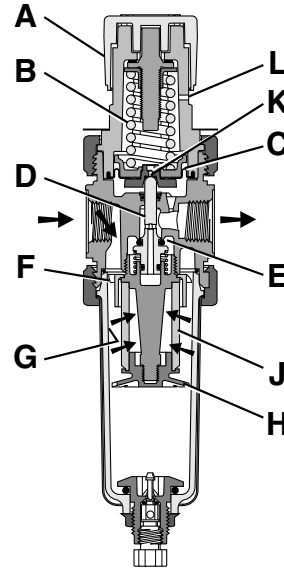
Reading Flow Charts to Size Filter / Regulators



Once the required flow is determined for a pneumatic application the filter / regulator can be selected by using the flow chart. When reading the flow chart, first determine the secondary pressure that will be used. Find the appropriate

pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

Operation

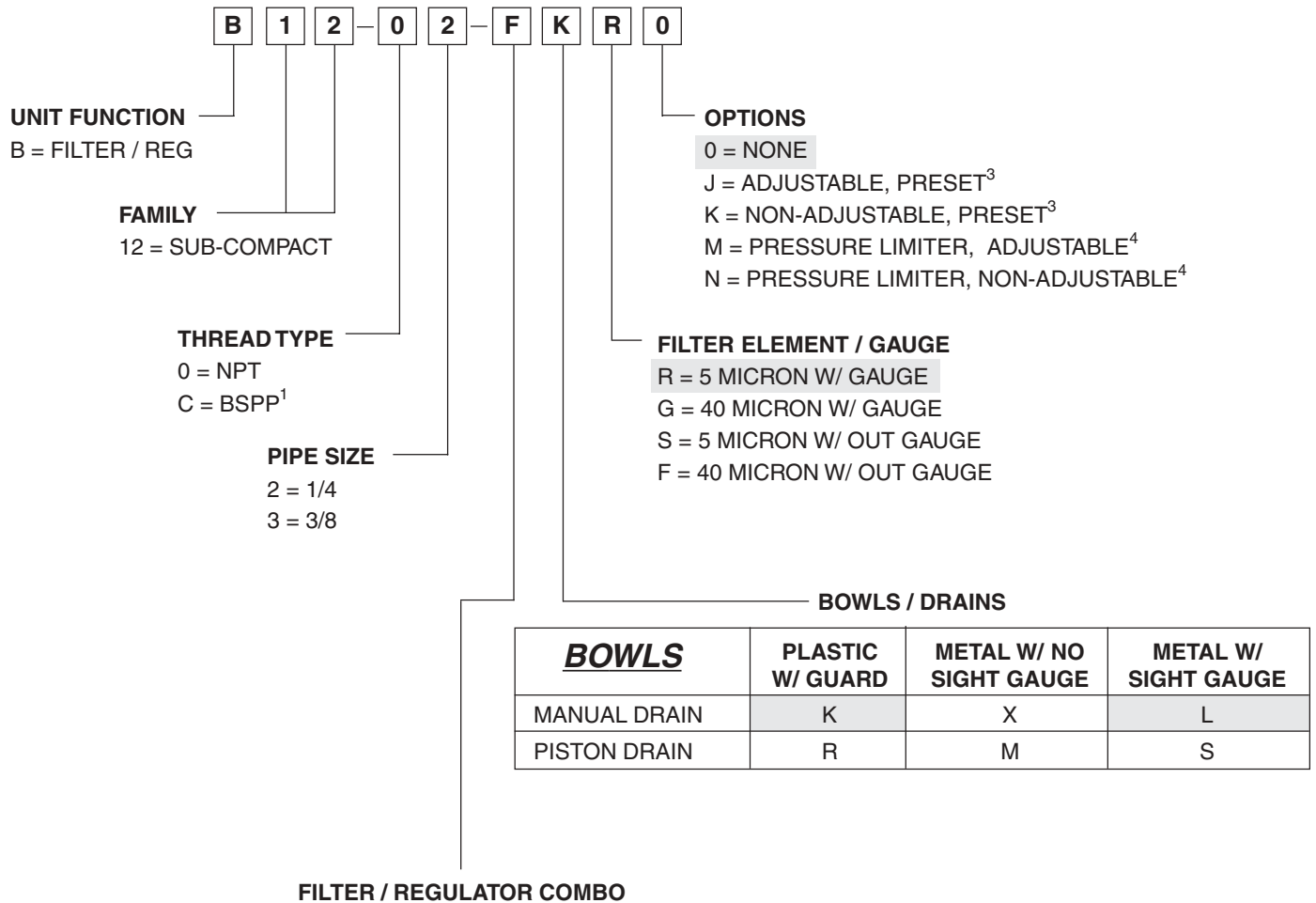


Turning the knob (A) clockwise applies a load to control spring (B) which forces the piston/diaphragm (C) and valve assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the valve assembly and the seat. "First stage filtration" begins when air pressure supplied to the inlet port is directed through deflector plate (F) causing a swirling centrifugal action forcing liquids and coarse particles to the inner bowl wall (G) and down below the lower baffle (H) to the quiet zone. After liquids and large particles are removed in the first stage of filtration "second stage filtration" occurs as air flows through element (J) where smaller particles are filtered out and retained. The air flow now passes through seat area (E) to the outlet port of the unit.

Pressure in the downstream line is sensed below the piston / diaphragm (C) and offsets the load of control spring (B). When downstream pressure reaches the set-point, the valve assembly (D) and piston / diaphragm (C) move upward closing seat area (E). Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the piston / diaphragm (C) to move upward opening vent hole (K) venting the excess pressure to atmosphere through the hole in the bonnet (L). (This occurs in the standard relieving type regulator only.)

Sub-compact Filter / Regulator Numbering System

 = "Most Popular"



DIAPHRAGM FUNCTION	FLUOROCARBON	SPRING RANGE			
		0-30 psi (0-2,1 bar)	0-60 psi (0-4,1 bar)	0-125 psi (0-8,6 bar)	0-200 psi ⁵ (0-13,8 bar)
RELIEVING	NO	C	D	F	H
	YES ²	J	K	L	N
NON-RELIEVING	NO	P	W	R	T
	YES ²	V	X	Y	U

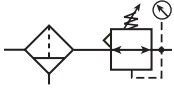
¹ ISO, R228 (G SERIES).
² Fluorocarbon seals available only on units with metal bowl with manual drain.
³ Specify both inlet and outlet (set) pressures.
⁴ Specify both inlet pressure and maximum limited pressure.
⁵ 0-200 psi (0-13,8 bar) pressure range available only on units with metal bowl.

"A" 5 micron elements: All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Sub-Compact Filter / Regulator B12 Series

Filter / Regulator B12



B12-02-FKS0

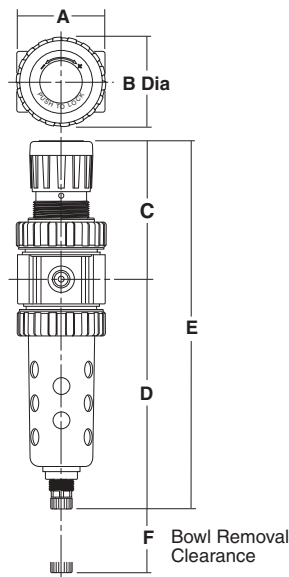
Features

- Space saving package offers both filter and regulator features for optimal performance.
- Excellent water removal efficiency.
- Rolling diaphragm for extended life.
- Removable non-rising knob for tamper resistance.
- Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure.
- 5 micron standard, 40 micron filter element available.

⚠ WARNING
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.
Product rupture can cause serious injury.

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

NOTE: Panel Mount Nut sold separately.



Dimensions

Model

Sub-Compact Unit
B12-02-FKS0

† With Manual or Piston Drain
Inches (mm)

Specifications

= "Most Popular"

High Flow Capacity ¹ Port Size	5 Micron	40 Micron
	1/4	30 SCFM
	3/8	40 SCFM
Bowl Capacity	Ounces	2.0
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Standard Filtration	Micron	5
Useful Retention ²	oz. (cc)	.9 (26,6)
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	1.35 (0,6)

¹ Inlet pressure 100 psig (7 bar), no flow secondary pressure set 90 psig (6,2 bar), 10 psig pressure drop at rated flow.
² Useful retention refers to volume below the quiet zone baffle.

Materials of Construction

Body	Zinc	
Adjustment Knob	Plastic	
Bonnet, Internal Parts	Plastic	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Bowl Guard	Steel	
Drain	Plastic	
Filter Element	Sintered Plastic	
Seals	Nitrile	
Springs	Steel	
Valve Assembly	Plastic	
Diaphragm	Nitrile	

Ordering Information

Port Size	Plastic Bowl w/ Guard		Metal Bowl w/ Sight Gauge	
	Manual Drain	Piston Drain	Manual Drain	Piston Drain
1/4"	B12-02-FKS0	B12-02-FRS0	B12-02-FLS0	B12-02-FSS0
3/8"	B12-03-FKS0	B12-03-FRS0	B12-03-FLS0	B12-03-FSS0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

A	B	C	D†	E†	F
2.00 (51)	2.06 (52)	3.16 (80)	5.35 (136)	8.51 (216)	1.77 (45)

Sub-Compact Filter / Regulator B12 Series

= "Most Popular"

Replacement Bowl Kits

Plastic Bowl Guard	GRP-96-345
Plastic Bowl / Piston Drain	GRP-96-351
Plastic Bowl / Manual Drain	GRP-96-347
Metal Bowl / Piston Drain	GRP-96-353
Metal Bowl / Manual Drain	GRP-96-348
Metal Bowl / Sight Gauge / Piston Drain	GRP-96-352
Metal Bowl / Sight Gauge / Manual Drain	GRP-96-349

Springs, Regulating 1-30 psig (0,06-2,1 bar)	RRP-96-303
Springs, Regulating 1-60 psig (0,06-4,1 bar)	RRP-96-302
Springs, Regulating 2-125 psig (0,13-8,6 bar)	RRP-96-301
Springs, Regulating 2-200 psig (0,13-17,2 bar)	RRP-96-304
Relieving, Service Kit	RRP-96-306
Non-Relieving, Service Kit	RRP-96-307

Replacement Element Kits

5 Micron	GRP-96-344
40 Micron	GRP-96-343

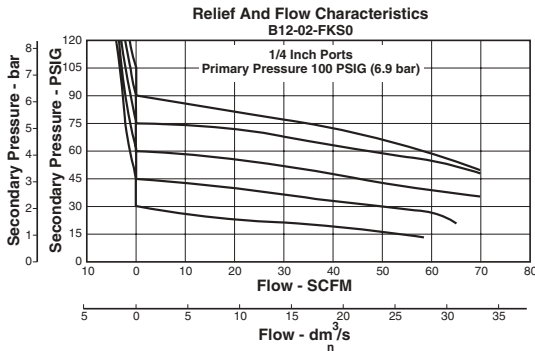
Replacement Kits

Bonnet Assembly Kit	RRP-96-308
Control Knob	RRP-96-300
30 psig Gauge	RRP-96-663
60 psig Gauge	RRP-96-664
160 psig Gauge	RRP-96-665
300 psig Gauge	RRP-96-666

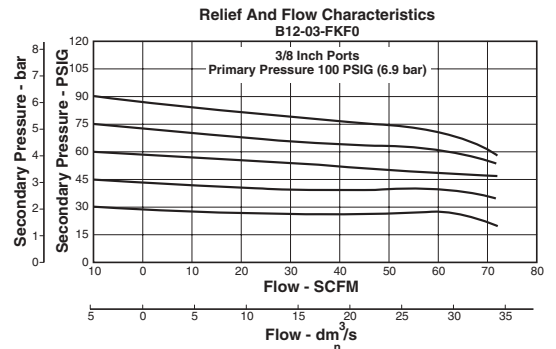
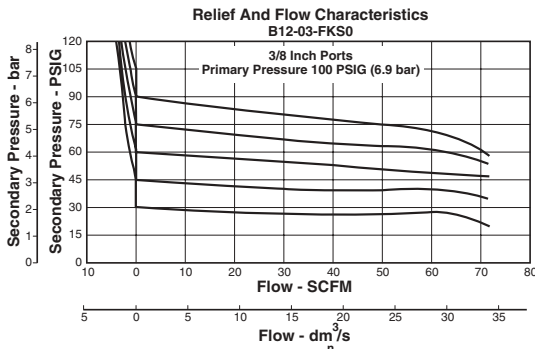
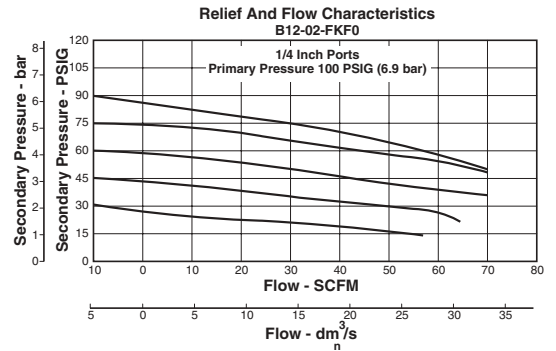
Accessories

Drain Kit / Piston Drain	GRP-96-354
Drain Kit / Manual Drain	GRP-96-340
Mounting Bracket Kit (With Panel Mount Nut)	GPA-96-313
Panel Mount Nut, Metal	GPA-96-314
Sight Gauge Kit	GRP-96-346

5 Micron Element

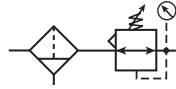


40 Micron Element



Sub-Compact Precision Filter / Regulator T12 Series

Precision Filter / Regulators



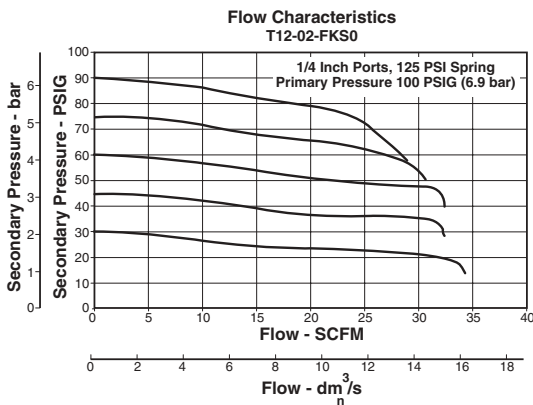
- Pipe Sizes 1/4 and 3/8 Inch
- High Flow
 - 5 Micron: 1/4" - 25 scfm
3/8" - 25 scfm
 - 40 Micron: 1/4" - 25 scfm
3/8" - 25 scfm
- Pressures to 250 psig

Integral Filter / Regulator "Piggybacks" are an excellent choice where accurate pressure regulation and high moisture removal efficiency are required in a space saving package.

Filter / Regulator Selection

1. Determine maximum system flow requirements.
2. Determine maximum allowable pressure drop at rated flow in scfm.
3. Refer to flow chart and select filter / regulator by choosing the curve that offers minimum pressure drop at desired flow in scfm.

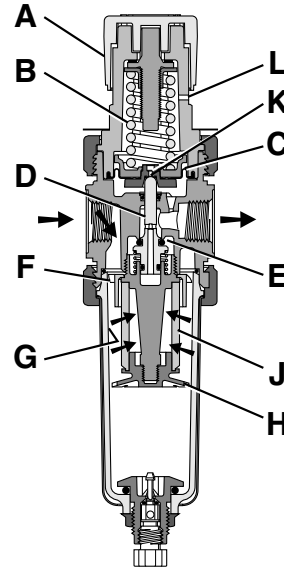
Reading Flow Charts to Size Filter / Regulators



Once the required flow is determined for a pneumatic application the filter / regulator can be selected by using the flow chart. To read the relief characteristics use the left side of the chart. When reading the flow chart, first determine the

secondary pressure that will be used. Find the appropriate pressure curve on the graph. Given an acceptable pressure drop for an application, follow the flow curve until it intersects the pressure drop point. This will give the flow at that particular pressure drop.

Operation

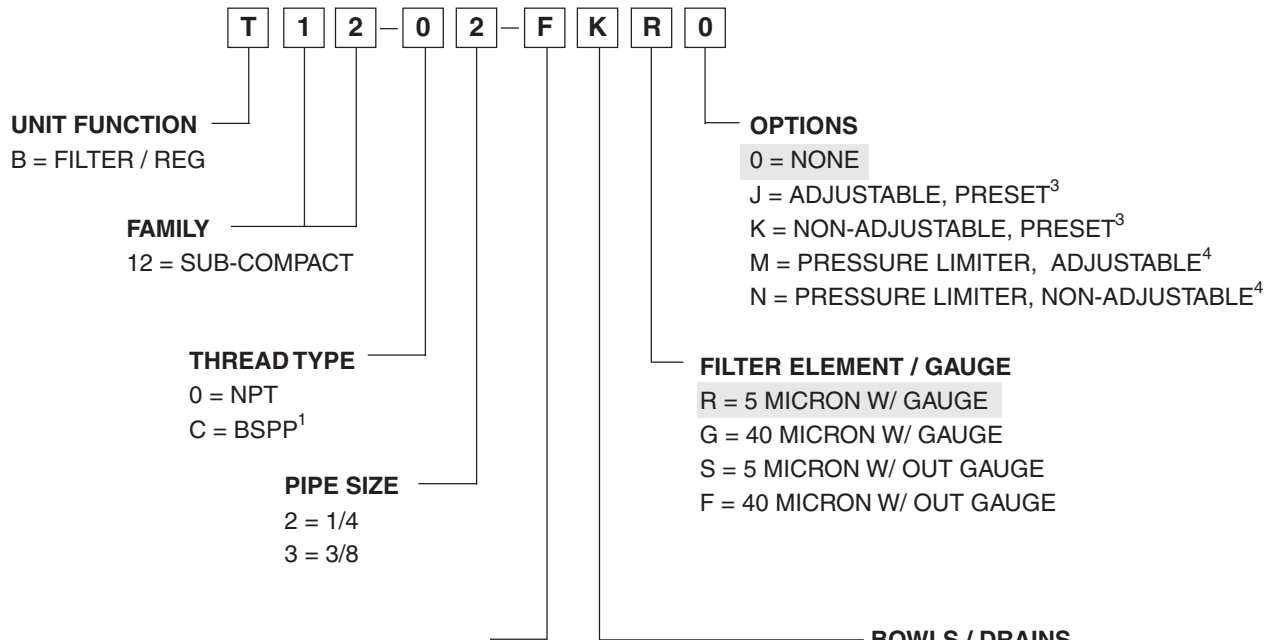


Turning the knob (A) clockwise applies a load to control spring (B) which forces the piston/diaphragm (C) and valve assembly (D) to move downward allowing filtered air to flow through the seat area (E) created between the valve assembly and the seat. "First stage filtration" begins when air pressure supplied to the inlet port is directed through deflector plate (F) causing a swirling centrifugal action forcing liquids and coarse particles to the inner bowl wall (G) and down below the lower baffle (H) to the quiet zone. After liquids and large particles are removed in the first stage of filtration "second stage filtration" occurs as air flows through element (J) where smaller particles are filtered out and retained. The air flow now passes through seat area (E) to the outlet port of the unit.

Pressure in the downstream line is sensed below the piston / diaphragm (C) and offsets the load of control spring (B). When downstream pressure reaches the set-point, the valve assembly (D) and piston / diaphragm (C) move upward closing seat area (E). Should downstream pressure exceed the desired regulated pressure, the excess pressure will cause the piston / diaphragm (C) to move upward opening vent hole (K) venting the excess pressure to atmosphere through the hole in the bonnet (L). (This occurs in the standard relieving type regulator only.)

Sub-compact Precision Filter / Regulator Numbering System

 = "Most Popular"



BOWLS / DRAINS

<i>BOWLS</i>	PLASTIC W/ GUARD	METAL W/ NO SIGHT GAUGE	METAL W/ SIGHT GAUGE
MANUAL DRAIN	K	X	L
PISTON DRAIN	R	M	S

FILTER / REGULATOR COMBO

DIAPHRAGM FUNCTION	FLUOROCARBON	SPRING RANGE			
		0-15 psi (0-1,7 bar)	0-30 psi (0-2,1 bar)	0-60 psi (0-4,1 bar)	0-125 psi (0-8,6 bar)
RELIEVING	NO	A	C	D	F
	YES ²	B	J	K	L

¹ ISO, R228 (G SERIES).

² Fluorocarbon seals available only on units with metal bowl with manual drain.

³ Specify both inlet and outlet (set) pressures.

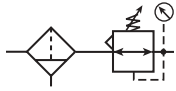
⁴ Specify both inlet pressure and maximum limited pressure.

Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Sub-Compact Precision Filter / Regulator T12 Series

Precision Filter / Regulator T12



T12-02-FKS0

Features

- Space saving package offers both filter and regulator features for optimal performance.
- Excellent water removal efficiency.
- Rolling diaphragm for extended life.
- Removable non-rising knob for tamper resistance.
- Quick response, and accurate pressure regulation regardless of changing flow or inlet pressure.
- 5 micron standard.

⚠ WARNING
Do not connect regulator to bottled gas.
Do not exceed maximum primary pressure rating.
Product rupture can cause serious injury.

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

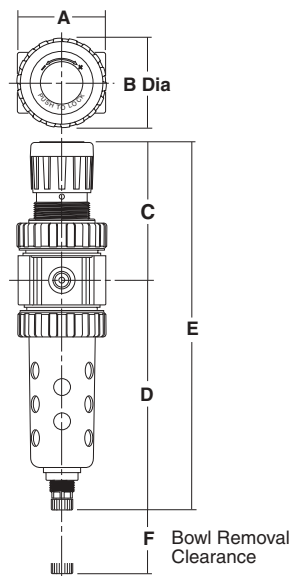
NOTE: Panel Mount Nut sold separately.

Dimensions

Model

Sub-Compact Unit
T12-02-FKS0

† With Manual or Piston Drain
Inches (mm)



Specifications

= "Most Popular"

High Flow Capacity ¹	5 and 40 Micron	
Port Size	1/4	25 SCFM
	3/8	25 SCFM
Bowl Capacity	Ounces	2.0
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Standard Filtration	Micron	5
Useful Retention ²	oz. (cc)	.9 (26,6)
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	1.35 (0,6)

¹ Inlet pressure 100 psig (7 bar), no flow secondary pressure set 90 psig (6,2 bar), 10 psig pressure drop at rated flow.
² Useful retention refers to volume below the quiet zone baffle.

Materials of Construction

Body	Zinc	
Adjustment Knob	Plastic	
Bonnet, Internal Parts	Plastic	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Bowl Guard	Steel	
Drain	Plastic	
Filter Element	Sintered Plastic	
Seals	Nitrile	
Springs	Steel	
Valve Assembly	Plastic	
Diaphragm	Nitrile	

Ordering Information

Port Size	Plastic Bowl w/ Guard		Metal Bowl w/ Sight Gauge	
	Manual Drain	Piston Drain	Manual Drain	Piston Drain
1/4"	T12-02-FKS0	T12-02-FRS0	T12-02-FLS0	T12-02-FSS0
3/8"	T12-03-FKS0	T12-03-FRS0	T12-03-FLS0	T12-03-FSS0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

A	B	C	D†	E†	F
2.00 (51)	2.06 (52)	3.16 (80)	5.35 (136)	8.51 (216)	1.77 (45)

Sub-Compact Precision Filter / Regulator T12 Series

= "Most Popular"

Replacement Bowl Kits

Plastic Bowl Guard	GRP-96-345
Plastic Bowl / Piston Drain	GRP-96-351
Plastic Bowl / Manual Drain	GRP-96-347
Metal Bowl / Piston Drain	GRP-96-353
Metal Bowl / Manual Drain	GRP-96-348
Metal Bowl / Sight Gauge / Piston Drain	GRP-96-352
Metal Bowl / Sight Gauge / Manual Drain	GRP-96-349

Springs, Regulating 1-15 psig (0,06-1,7 bar)	RRP-96-311
Springs, Regulating 1-30 psig (0,06-2,1 bar)	RRP-96-303
Springs, Regulating 1-60 psig (0,06-4,1 bar)	RRP-96-302
Springs, Regulating 2-125 psig (0,13-8,6 bar)	RRP-96-301
Springs, Regulating 2-200 psig (0,13-17,2 bar)	RRP-96-304
Relieving, Service Kit	RRP-96-305

Replacement Element Kits

5 Micron	GRP-96-344
40 Micron	GRP-96-343

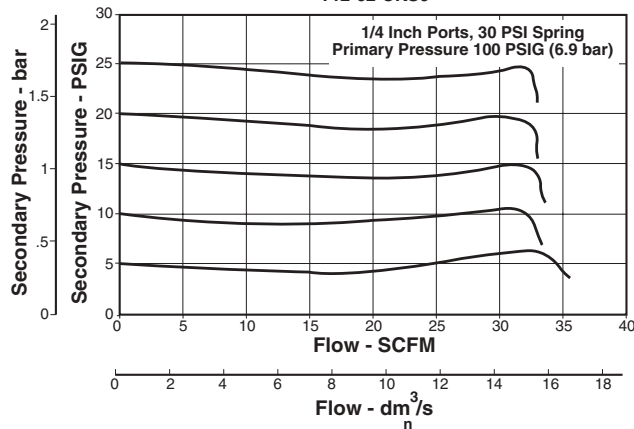
Replacement Kits

Bonnet Assembly Kit	RRP-96-308
Control Knob	RRP-96-312
30 psig Gauge	PPA-95-107
60 psig Gauge	PPA-95-106
120 psig Gauge	PPA-95-108

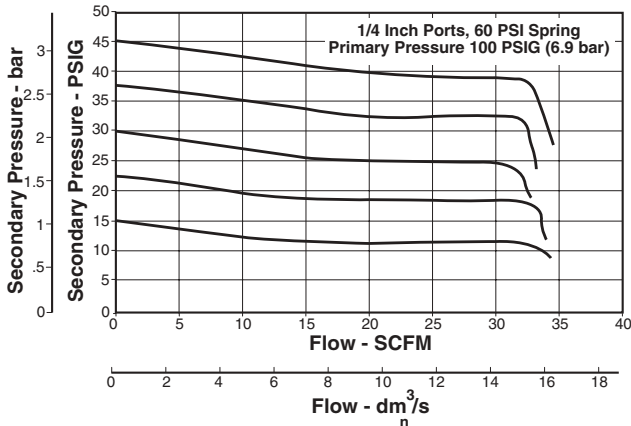
Accessories

Drain Kit / Piston Drain	GRP-96-354
Drain Kit / Manual Drain	GRP-96-340
Mounting Bracket Kit (With Panel Mount Nut)	GPA-96-313
Panel Mount Nut, Metal	GPA-96-314
Sight Gauge Kit	GRP-96-346

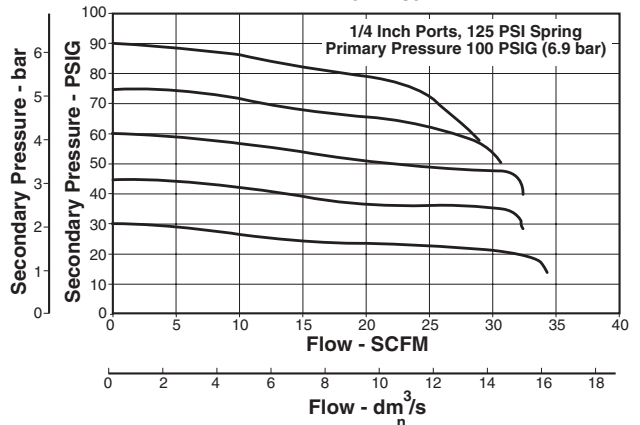
Flow Characteristics
T12-02-CKS0



Flow Characteristics
T12-02-DKS0



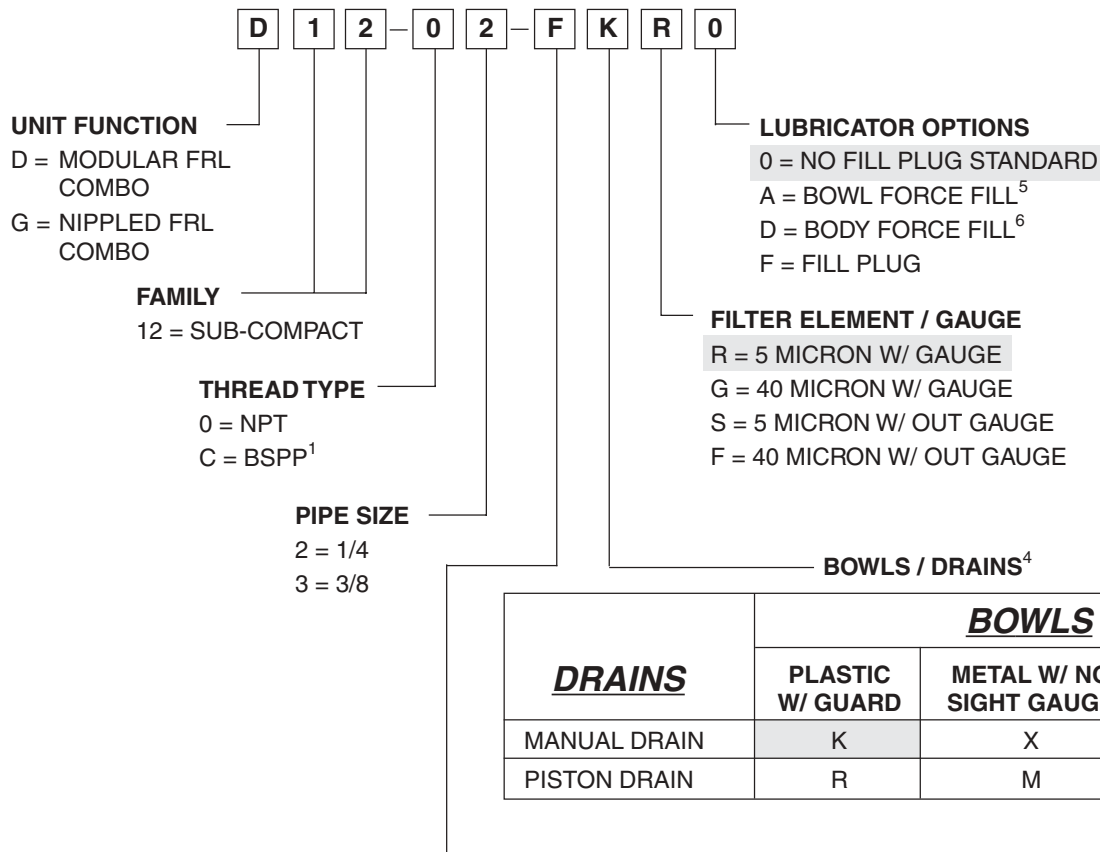
Flow Characteristics
T12-02-FKS0



Notes

Sub-compact Filter / Regulator - Lubricator Numbering System

 = "Most Popular"



REGULATOR OPTIONS

DIAPHRAGM FUNCTION	FLUOROCARBON	SPRING RANGE			
		0-30 psi (0-2,1 bar)	0-60 psi (0-4,1 bar)	0-125 psi (0-8,6 bar)	0-200 psi⁵ (0-13,8 bar)
RELIEVING	NO	C	D	F	H
	YES ²	J	K	L	N
NON-RELIEVING	NO	P	W	R	T
	YES ²	V	X	Y	U

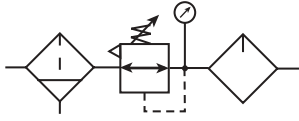
- ¹ ISO, R228 (G SERIES)
- ² Fluorocarbon seals available only on units with metal bowl with manual drain.
- ³ 0-200 psi (0-13,8 bar) pressure range available only on units with metal bowl.
- ⁴ Filter bowl selection only. Lubricator bowl material same as filter bowl (plastic or metal). Plastic lubricator bowl comes with closed-end bowl as standard. Metal lubricator bowl comes with manual drain standard.
- ⁵ Bowl mounted force fill option, refer to catalog for details.
- ⁶ "D" option force fill adapter installed in fill plug location.

Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Sub-Compact Modular Combination D12 Series

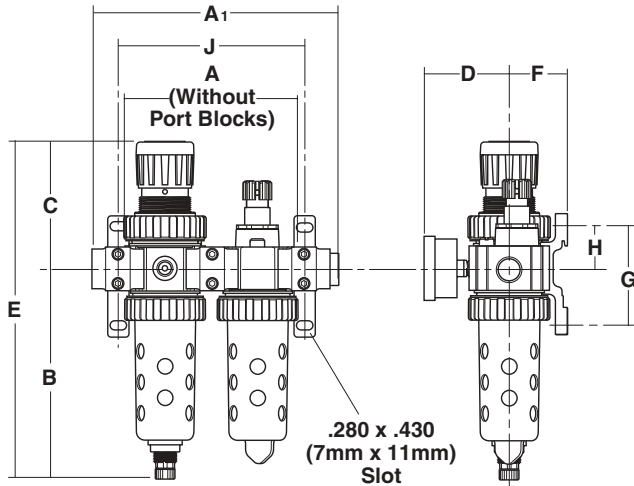
Modular Combination D12



D12-02-FKR0

Features

- See individual component pages for details.
- Port Blocks, Manifold Block, Ball Valve and Wall Bracket must be ordered separately.



Dimensions

Model

Sub-Compact Unit
D12-02-FKR0

	A	A ₁	B	C	D	E	F	G	H	J
	4.33 (110)	6.38 (162)	5.35 (136)	3.15 (80)	2.05 (52)	8.50 (216)	1.45 (37)	2.60 (66)	1.14 (29)	4.72 (120)

Inches (mm)

Specifications

= "Most Popular"

High Flow Capacity ¹	1/4	40 SCFM
	3/8	40 SCFM
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Useful Retention	oz. (cc)	.9 (26,6)
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	2.50 (1,13)

¹ Inlet pressure 100 psig (7 bar). Secondary pressure 90 psig (6,2 bar).

Materials of Construction

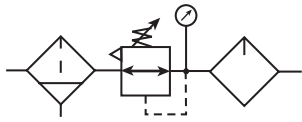
Body	Zinc	
Bowl Guard	Steel	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Collar	Plastic	
Drain-Manual	Body & Nut	Plastic
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Seals	Nitrile	

Ordering Information

Port Size	Plastic Bowl With Guard Manual Drain	Metal Bowl With Sight Gauge Manual Drain
1/4"	D12-02-FKR0	D12-02-FLR0
3/8"	D12-03-FKR0	D12-03-FLR0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

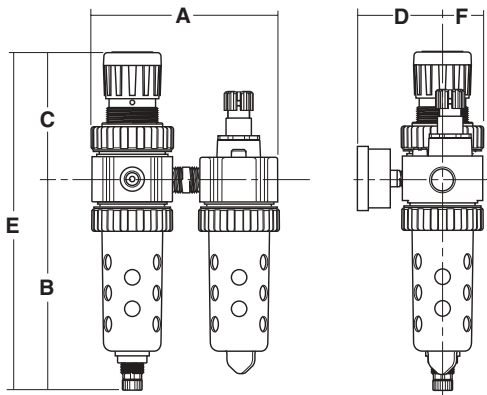
Nippled Combination G12



G12-02-FKR0

Features

- See individual component pages for details.



Dimensions

Model

Sub-Compact Unit
G12-02-FKR0

Inches (mm)

A	B	C	D	E	F
4.49	5.35	2.24	2.05	8.50	1.09
114	136	57	52	216	26

Specifications

 = "Most Popular"

High Flow Capacity ¹	1/4	40 SCFM
	3/8	40 SCFM
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Useful Retention	oz. (cc)	.9 (26,6)
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	2.45 (1,11)

¹ Inlet pressure 100 psig (7 bar). Secondary pressure 90 psig (6,2 bar).

Materials of Construction

Body	Zinc	
Bowl Guard	Steel	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Collar	Plastic	
Drain-Manual	Body & Nut	Plastic
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Seals	Nitrile	
Suggested Lubricant		

Ordering Information

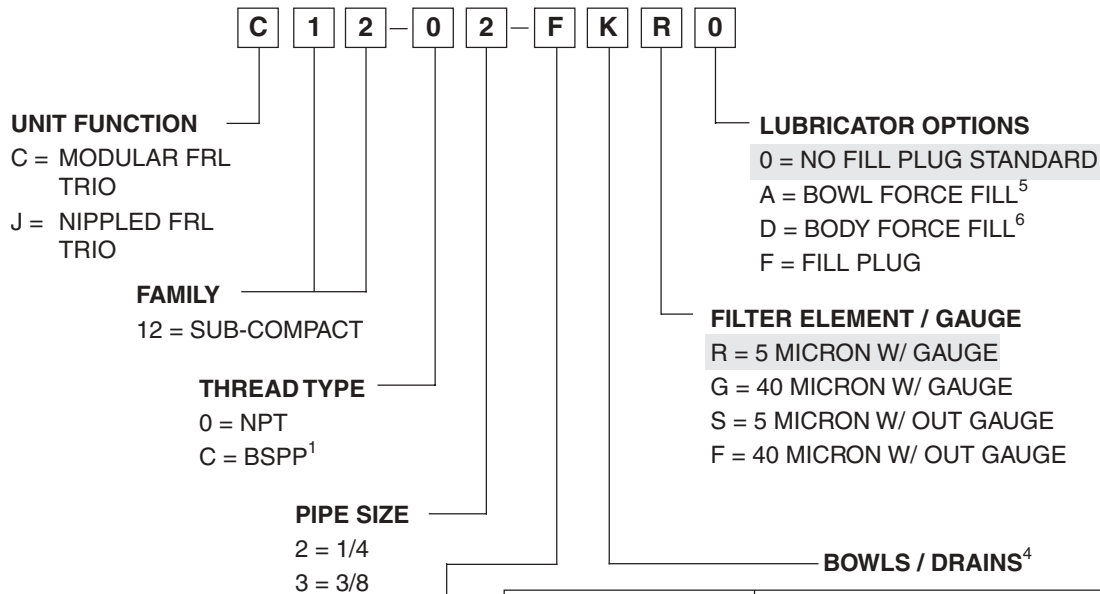
Port Size	Plastic Bowl With Guard Manual Drain	Metal Bowl With Sight Gauge Manual Drain
1/4"	G12-02-FKR0	G12-02-FLR0
3/8"	G12-03-FKR0	G12-03-FLR0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

Notes

Sub-compact Combination Numbering System

 = "Most Popular"



<u>DRAINS</u>	<u>BOWLS</u>		
	PLASTIC W/ GUARD	METAL W/ NO SIGHT GAUGE	METAL W/ SIGHT GAUGE
MANUAL DRAIN	K	X	L
PISTON DRAIN	R	M	S

REGULATOR OPTIONS

DIAPHRAGM FUNCTION	FLUOROCARBON	SPRING RANGE			
		0-30 psi (0-2,1 bar)	0-60 psi (0-4,1 bar)	0-125 psi (0-8,6 bar)	0-200 psi⁵ (0-13,8 bar)
RELIEVING	NO	C	D	F	H
	YES ²	J	K	L	N
NON-RELIEVING	NO	P	W	R	T
	YES ²	V	X	Y	U

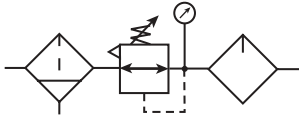
- ¹ ISO, R228 (G SERIES THREADS)
- ² Fluorocarbon seals available only on units with metal bowl with manual drain.
- ³ 0-200 psi (0-13,8 bar) pressure range available only on units with metal bowl.
- ⁴ Filter bowl selection only. Lubricator bowl material same as filter bowl (plastic or metal). Plastic lubricator bowl comes with closed-end bowl as standard. Metal lubricator bowl comes with manual drain standard.
- ⁵ Bowl mounted force fill option, refer to catalog for details.
- ⁶ "D" option force fill adapter installed in fill plug location.

Type "A" 5 micron elements: All Wilkerson Type "A" 5 micron elements meet or exceed ISO Class 3 for maximum particle size and concentration of solid contaminants.

NOTE: All classes above refer to International Standards Organization (ISO) standard 8573-1:1991(E), pertaining to maximum particle size and concentration of solid contaminants, and maximum oil content.

Sub-Compact Modular Combination C12 Series

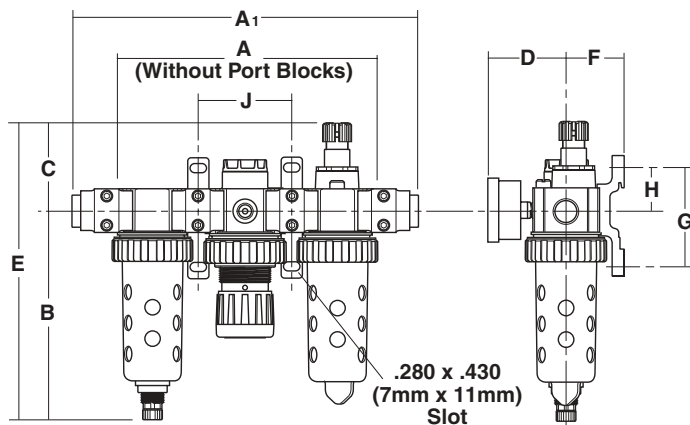
Modular Combination C12



C12-02-FKR0

Features

- Regulator can be mounted with knob in up or down position.
- See individual component pages for details.
- Port Blocks, Manifold Blocks and Ball Valve must be ordered separately.



Specifications

= "Most Popular"

High Flow Capacity ¹	1/4	40 SCFM
	3/8	40 SCFM
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Useful Retention	oz. (cc)	.9 (26,6)
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	3.72 (1,69)

¹ Inlet pressure 100 psig (7 bar). Secondary pressure 90 psig (6,2 bar).

Materials of Construction

Body	Zinc	
Bowl Guard	Steel	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Collar	Plastic	
Drain-Manual	Body & Nut	Plastic
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Seals	Nitrile	

Ordering Information (Includes Gauges)

Port Size	Plastic Bowl With Guard Manual Drain	Metal Bowl With Sight Gauge Piston Drain
1/4"	C12-02-FKR0	C12-02-FSR0
3/8"	C12-03-FKR0	C12-03-FSR0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

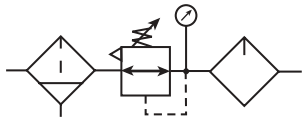
Dimensions

Model	A	A ₁	B	C	D	E	F	G	H	J
Sub-Compact Unit C12-02-FKR0	5.70 (170)	8.72 (222)	5.35 (136)	2.24 (57)	2.05 (52)	7.59 (193)	1.45 (37)	2.60 (66)	1.14 (29)	2.35 (60)

Inches (mm)

Sub-Compact Nippled Combination J12 Series

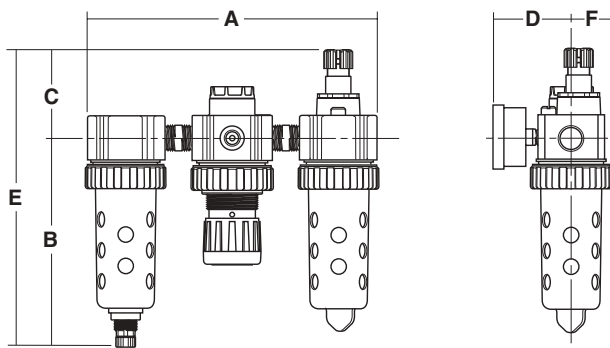
Nippled Combination J12



J12-02-FKR0

Features

- Regulator can be mounted with knob in up or down position.
- See individual component pages for details.



Dimensions

Model

Sub-Compact Unit
J12-02-FKR0

Inches (mm)

A	B	C	D	E	F
7.00 (178)	5.35 (136)	2.24 (57)	2.05 (52)	7.59 (193)	1.09 (26)

Specifications

 = "Most Popular"

High Flow Capacity ¹	1/4	40 SCFM
	3/8	40 SCFM
Maximum Operating Temperature	Plastic Bowl	125°F (52°C)
	Metal Bowl	175°F (80°C)
Maximum Supply Pressure	Plastic Bowl	150 psig (10,3 bar)
	Metal Bowl	250 psig (17,2 bar)
Useful Retention	oz. (cc)	.9 (26,6)
Gauge Ports (2x)	NPT/BSPP-G	1/4
Port Size	NPT/BSPP-G	1/4, 3/8
Weight	lb. (kg)	3.61 (1,65)

¹ Inlet pressure 100 psig (7 bar). Secondary pressure 90 psig (6,2 bar).

Materials of Construction

Body	Zinc	
Bowl Guard	Steel	
Bowls	Plastic Bowl	Polycarbonate
	Metal Bowl	Zinc
Collar	Plastic	
Drain-Manual	Body & Nut	Plastic
Sight Dome	Polycarbonate	
Sight Gauge	Metal Bowl	Polyamide (Nylon)
Seals	Nitrile	

Ordering Information

Port Size	Plastic Bowl With Guard Manual Drain	Metal Bowl With Sight Gauge Manual Drain
1/4"	J12-02-FKR0	J12-02-FLR0
3/8"	J12-03-FKR0	J12-03-FLR0

Options - To order additional or alternate options, add the appropriate option letter code in the designated position of the model number. (See Numbering System page.) For additional information on accessories and repair kits refer to pages 42 through 43.

Body Connectors

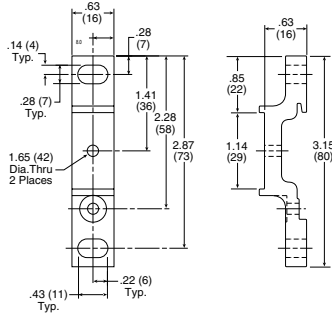
GPA-96-310



Body Connectors allow for easy assembly and disassembly of Modular Combinations. Body Connectors are required to assemble two components together. Each Kit includes one set.

Wall Mounting Kits

GPA-96-311



Wall Mounting Kits are available for mounting Modular Assemblies and can be assembled and used with any standard body connector set.

Wall Mounting Kits will fit Standard DIN rail.

Modular Combinations are always identical in size, which allow predrilling for wall mounting on equipment.

Oval mounting holes will accommodate competitive mounting patterns.

Kit includes 1 assembly.

Body Connector / Wall Mount Kit

GPA-96-312



The GPA-96-312 is a combination GPA-96-310 Body Connector and a GPA-96-311 Wall Mount Bracket. Each Kit includes one set.

Pressure Gauges

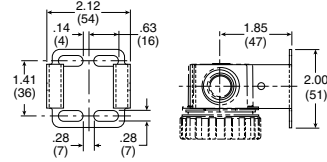
- 0-30 PSIG RRP-96-663
- 0-60 PSIG RRP-96-664
- 0-160 PSIG RRP-96-665
- 0-300 PSIG RRP-96-666



Pressure Gauges allow accurate monitoring of system pressures. Three pressure ranges are available to better match system requirements.

Mounting Bracket Kit

GPA-96-300



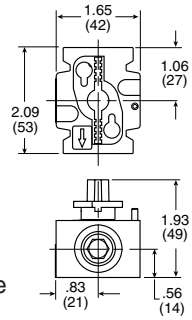
Modular Lockout Ball Valve

V12-02-0000

(1/4" Ports)

V12-03-0000

(3/8" Ports)



Ball Valves provide positive shutoff and exhaust capability to isolate Modular units so they can be easily removed from the line and can be locked in a closed position.

NOTE: Body Connectors are not supplied with Ball Valves.

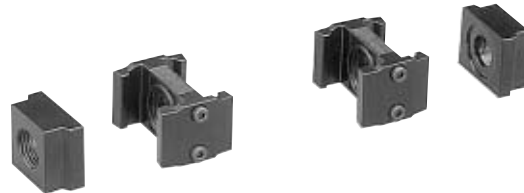
Port Block Connectors

1/8"

1/4"

3/8"

- | | | | |
|------|------------------|----------------|---------------|
| NPT | GPA-96-301 | ... GPA-96-302 | .. GPA-96-303 |
| BSPP | GPA-96-304 | ... GPA-96-305 | .. GPA-96-306 |
| BSPT | GPA-96-307 | ... GPA-96-308 | .. GPA-96-309 |

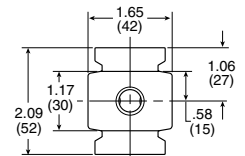


Port Block Connectors allow threaded port connections to Modular units and are available in various port sizes to match system requirements.

Each Kit includes all the necessary pieces to make two port connections.

Modular Manifold Block

N12-02-0000

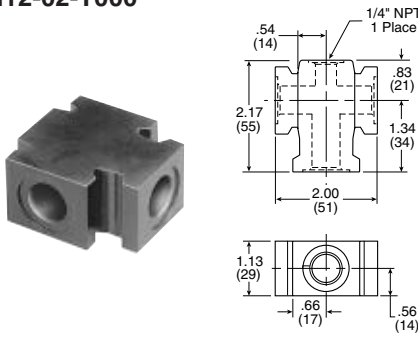


A Modular Manifold Block can be used between any two Modular units to give additional outlet ports. The 1/4" Manifold Block provides three additional outlets. Any standard pipe plug can be used to close off unused ports.

NOTE: Body Connectors are not supplied with Manifold Blocks.

3-Way Modular Block

N12-02-T000



NOTE: Body Connectors are not supplied with 3-Way Modular Blocks.

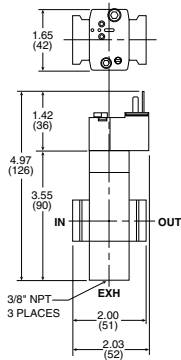
Allows for 90° installation for flexibility.

Allows for common port regulation.

Soft Start / Quick Dump Valves

Air Pilot E12-03-A000
24VDC E12-03-EC00
120VAC E12-03-ED00

- Combines Soft Start and Quick Dump Valve in same body
- Large flow capacities
- Inline or Modular mounting
- Air Pilot or Solenoid operation
- Soft Start flow easily adjusted
- 3/8" Port

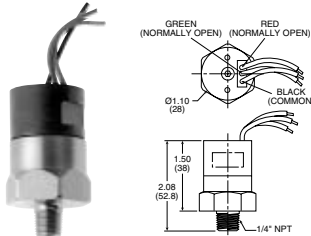


Wiring Options

3-Pin Connector With 6' Cord VRP-96-300
3-Pin Connector, Without Cord VRP-96-301
3-Pin Lighted Connector 24AC/DC VRP-96-302
3-Pin Lighted 120VAC VRP-96-303
3-Pin Lighted 24AC/DC With 6' Cord VRP-96-304
3-Pin Lighted 120AC/DC With 6' Cord VRP-96-305
3-Pin QD With 18" Wires VRP-96-306

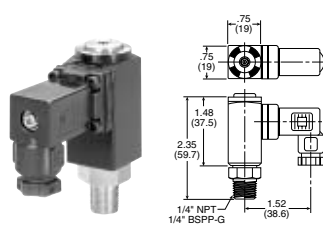
Pressure Switches

P01908



- Features of P01908**
- 7 amp rated snap action micro switch
 - Flying leads electrical connection
 - Field adjustable 10-110 PSIG
 - Electrical: 7 amp, 12/24VDC
 - Standard Electrical Circuit:
 Black – Common
 Green – Normally Closed
 Red – Normally Open

P01909 / P01913



- Features of P01909 / P01913**
- Dial indicator for easy pressure setting
 - 5 amp rated snap action micro switch
 - Din 43650C connector
 - Field adjustable 30-150 PSIG
 - Electrical: 5 amp, 12/24VDC
 - P01909 = 1/4" NPT
 P01913 = 1/4" BSPP-G

The pressure switch monitors the air pressure in pneumatic systems. When pressure in the system either drops below or exceeds the set point pressure, an electrical output is given.

- Inline Mounting
- Heavy Duty Stainless Steel and Aluminum Components
- Compact size
- +/- 2% Repeatability
- Temperature Range:
 -40°F to 180°F (-40°C to 80°C)
- Maximum Inlet Pressure: 300 PSIG (20 bar)
- Single Pole / Double Throw Switch

Notes

Offer of Sale

The items described in this document and other documents or descriptions provided by The Company, its subsidiaries and its authorized distributors, are hereby offered for sale at prices to be established by The Company, its subsidiaries and its authorized distributors. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any such item, when communicated to The Company, its subsidiaries or an authorized distributor ("Seller") verbally or in writing, shall constitute acceptance of this offer.

1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.

2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLLY OR PARTIALLY, TO BUYER'S DESIGN OR SPECIFICATIONS.

5. Limitation of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.

6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitations, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has

been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer, or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter "Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

WILKERSON®

Wilkerson
Pneumatic Division
8676 E. M89
P.O. Box 901
Richland, MI 49083 USA

Customer/Technical Service

Tel: (269) 629-2550
Fax: (269) 629-2475
Web site: www.wilkersoncorp.com