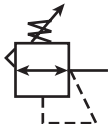
B

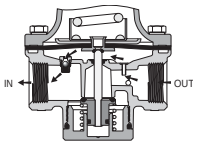
R119 Standard Regulators



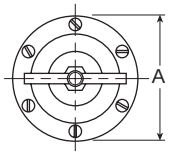


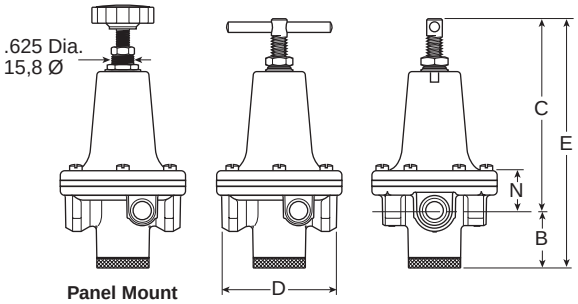
Features

- High Flow Performance Featuring Rugged Design for the Most Demanding Applications
- Ideal for Those Installations Calling for Constant Pressure with Wide Variation in Flow
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- Secondary Aspiration Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Heavy Duty Tee Handle Adjustment
- Reverse Flow Version Available
- Panel Mount Version Available
- High Flow: 1/4" - 100 SCFM§
  3/8" - 110 SCFM§
  1/2" - 150 SCFM§



X80 Reverse Flow Option





Panel Mount Version

Port Size	NPT Relieving	BSPP Relieving
Without Gauge 0-125 PSIG Reduced Pressure		
1/4"	**R119-02C**	R119G02C
3/8"	**R119-03C**	R119G03C
1/2"	**R119-04C**	R119G04C
With Gauge 0-125 PSIG Reduced Pressure		
1/4"	**R119-02CG**	—
3/8"	**R119-03CG**	—
1/2"	**R119-04CG**	—

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

R119 Regulator Dimensions					
A	**B**	**C**	**D**	**E**	**N**
R119-02C, R119-03C					
3.00 (76)	1.38 (35)	4.60 (117)	2.74 (70.5)	5.98 (152)	0.96 (24)
R119-04C					
3.56 (90)	1.56 (40)	5.20 (132)	3.25 (83)	6.76 (172)	1.27 (32)

inches
(mm)

Ordering Information

R	119	—	02	C		/**

Port Threads
— **NPT**
G BSPP

Port Size
02 1/4 Inch
03 3/8 Inch
04 1/2 Inch

Reduced Pressure Range
A 0-25 PSIG
B 0-60 PSIG
C 0-125 PSIG
D 0-250 PSIG

Options
G Gauge
K Non-Relieving
X64** Fluorocarbon O-Rings and Diaphragm
X80 Reverse Flow*
X7† Brass Bottom Plug

* Reverse flow for use downstream of control valves.

Engineering Change Designator
Will be entered at factory.

†**NOTE:** Beginning on the following dates, the regulators listed will come standard with Nylon Bottom Plugs.
1/4" & 3/8" January 2008
1/2" March 2008

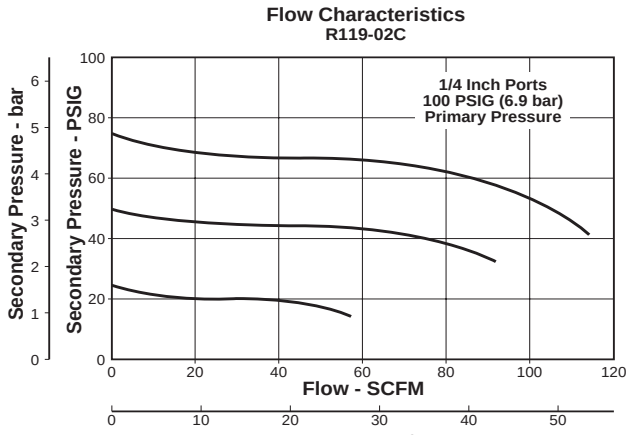
** Brass Bottom Plug Standard with X64 Option.

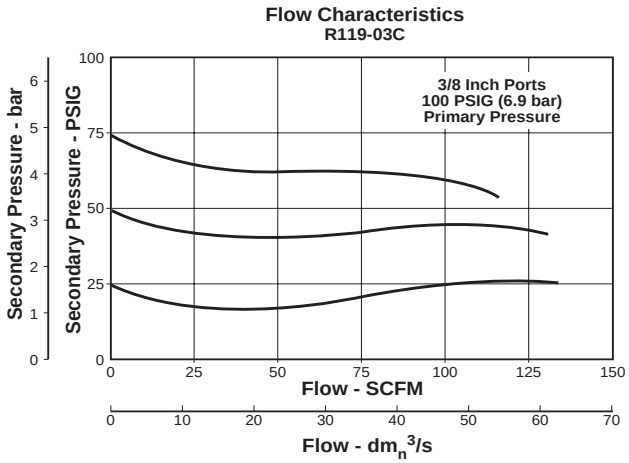
BOLD ITEMS ARE MOST POPULAR.

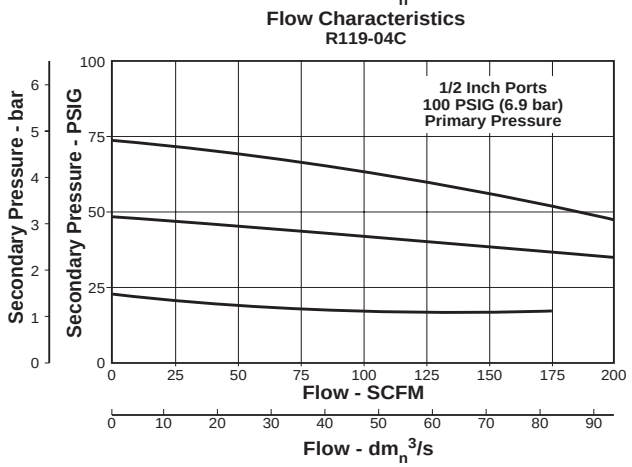
Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

B

Technical Information







⚠ WARNING

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

⚠ CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

R119 Regulator Kits & Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa) K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Mounting Bracket Kit –

1/4", 3/8" SA15Y57
1/2" 18A57

Panel Mount Conversion Kit –

1/4", 3/8" 4202
1/2" 4204

Repair Kits –

Non-Relieving Diaphragm,
Valve Assembly (1/4", 3/8"; All PSIG) RK118Y

Relieving Diaphragm,
Valve Assembly (1/4", 3/8"; All PSIG) RK119Y

Non-Relieving Diaphragm,
Valve Assembly (1/2"; 25, 60, 125 PSIG) RK118A

Non-Relieving Diaphragm,
Valve Assembly (1/2"; 250 PSIG) RK118A250

Relieving Diaphragm,
Valve Assembly (1/2"; 25, 60, 125 PSIG) RK119A

Relieving Diaphragm,
Valve Assembly (1/2"; 250 PSIG) RK119A250

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

Specifications

Gauge Ports (2) ..... 1/4 Inch
Port Threads ..... 1/4, 3/8, 1/2 Inch
Reduced Pressure Range ..... 2 to 125 PSIG (0.15 to 8.5 bar)
Supply Pressure ..... 300 PSIG Maximum (20.4 bar)
Temperature Rating ..... 40°F to 125°F (4.4°C to 52°C)

Weight –

R119-02, R119-03 ..... 1.8 lb. (0.82 kg) / Unit
26 lb. (11.79 kg) / 12-Unit Master Pack

R119-04 ..... 3.2 lb. (1.45 kg) / Unit
27 lb. (12.25 kg) / 8-Unit Master Pack

Materials of Construction

Adjusting Screw, Springs ..... Steel
Body, Spring Cage ..... Zinc
Bottom Plug ..... Nylon
Innervalve ..... Brass
Seals ..... Buna N

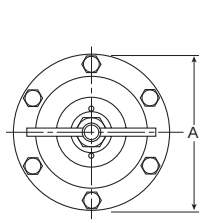
B

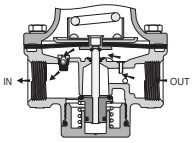
R119 Standard Regulators



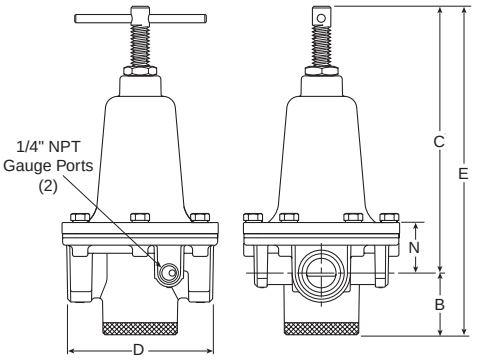
Features

- High Flow Performance Featuring Rugged Design for the Most Demanding Applications
- Ideal for Those Installations Calling for Constant Pressure with Wide Variation in Flow
- Diaphragm Operated Design with Balanced Poppet Design for Quick and Accurate Regulation
- Secondary Aspiration Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Heavy Duty Tee Handle Adjustment
- Reverse Flow Version Available
- High Flow: 3/4" - 300 SCFM§
  1" - 400 SCFM§
  1-1/4" & 1-1/2" - 500 SCFM§





X80 Reverse Flow Option



Port Size	NPT Relieving	BSPP Relieving
Without Gauge 0-125 PSIG Reduced Pressure		
3/4"	**R119-06C**	R119G06C
1"	**R119-08C**	R119G08C
1-1/4"	**R119-10C**	R119G10C
1-1/2"	**R119-12C**	R119G12C
With Gauge 0-125 PSIG Reduced Pressure		
3/4"	**R119-06CG**	—
1"	**R119-08CG**	—
1-1/4"	**R119-10CG**	—
1-1/2"	**R119-12CG**	—

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

R119 Regulator Dimensions					
A	**B**	**C**	**D**	**E**	**N**
R119-06C, R119-08C					
4.69 (119)	1.87 (47)	8.15 (207)	4.38 (111)	10.02 (255)	1.61 (41)
R119-10C, R119-12C					
4.94 (125)	1.81 (46)	8.53 (217)	4.94 (125)	10.34 (263)	1.99 (50.6)

inches
(mm)

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

Ordering Information

R	119	—	06	C		/**

Port Threads
- **— NPT**
- G BSPP

Port Size
- **06 3/4 Inch**
- **08 1 Inch**
- **10 1-1/4 Inch**
- **12 1-1/2 Inch**

Reduced Pressure Range
- **C 0-125 PSIG**
- D 0-250 PSIG

Options
- G Gauge
- K Non-Relieving
- X64** Fluorocarbon O-Rings and Diaphragm
- X80 Reverse Flow*
- X7† Brass Bottom Plug

* Reverse flow for use downstream of control valves.

Engineering Change Designator
Will be entered at factory.

†**NOTE:** Beginning March 2008, Brass Bottom Plug is Optional - Nylon is Standard.

** Brass Bottom Plug Standard with X64 Option.

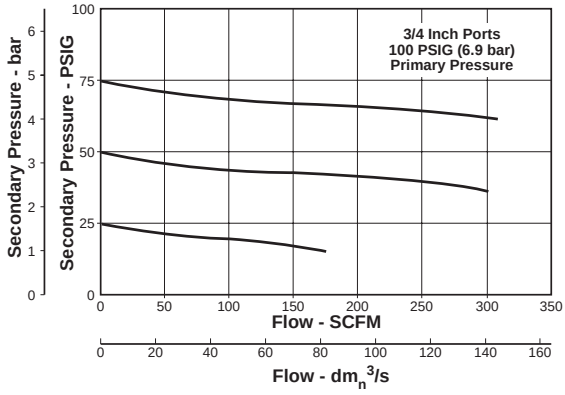
BOLD ITEMS ARE MOST POPULAR.

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

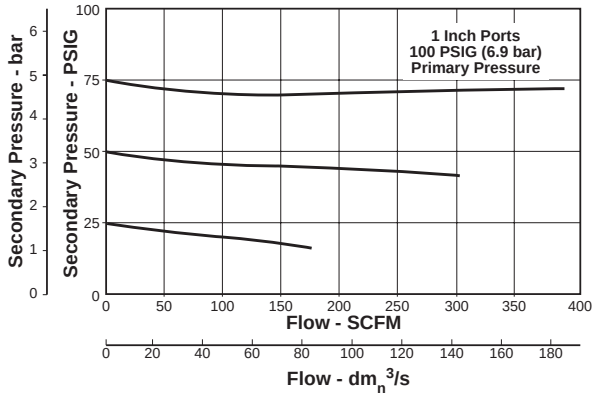
B

Technical Information

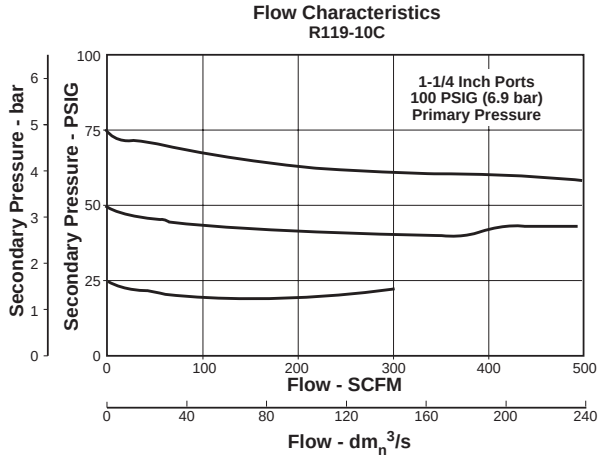
Flow Characteristics
R119-06C



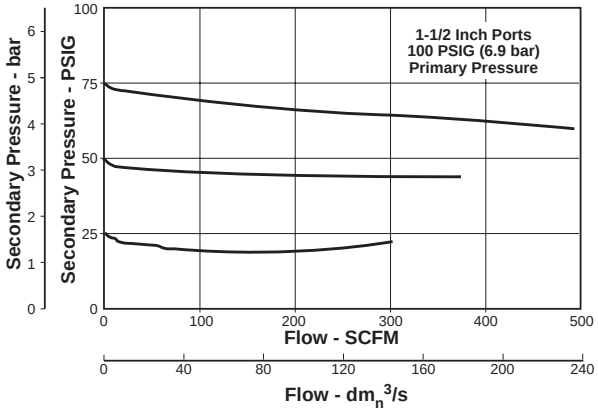
Flow Characteristics
R119-08C



Flow Characteristics
R119-10C



Flow Characteristics
R119-12C



⚠ CAUTION:

REGULATOR PRESSURE ADJUSTMENT – The working range of knob adjustment is designed to permit outlet pressures within their full range. Pressure adjustment beyond this range is also possible because the knob is not a limiting device. This is a common characteristic of most industrial regulators, and limiting devices may be obtained only by special design.
For best performance, regulated pressure should always be set by increasing the pressure up to the desired setting.

R119 Regulator Kits & Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa) K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Mounting Bracket Kit 18B57

Repair Kits –

Non-Relieving Diaphragm,
Valve Assembly (3/4", 1") RK118B

Non-Relieving Diaphragm,
Valve Assembly (1-1/4", 1-1/2") RK118D

Relieving Diaphragm,
Valve Assembly (3/4", 1") RK119B

Relieving Diaphragm,
Valve Assembly (1-1/4", 1-1/2") RK119D

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

Specifications

Gauge Ports (2) ..... 1/4 Inch

Port Threads ..... 3/4, 1, 1-1/4, 1-1/2 Inch

Reduced Pressure Range ..... 2 to 125 PSIG (0.15 to 8.5 bar)

Supply Pressure ..... 300 PSIG Maximum (20.4 bar)

Temperature Rating ..... 40°F to 125°F (4.4°C to 52°C)

Weight –

R119-06, R119-08 ..... 6.2 lb. (2.81 kg) / Unit
25 lb. (11.34 kg) / 4-Unit Master Pack

R119-10, R119-12 ..... 7.2 lb. (3.27 kg) / Unit
29 lb. (13.15 kg) / 4-Unit Master Pack

Materials of Construction

Adjusting Screw, Springs ..... Steel

Body, Spring Cage ..... Zinc

Bottom Plug ..... Nylon

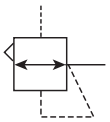
Innervalve ..... Brass

Seals ..... Buna N

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

B

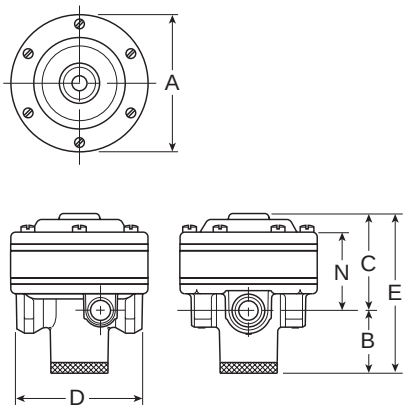
R119 Pilot Operated Regulators





Features

- Adapted for Control by a Remote or Distant Small Pilot Regulator. Ideal for Maximum Capacity Requirements in Applications where Units are Not Readily Accessible
- High Flow Performance Featuring Rugged Design for the Most Demanding Applications
- Ideal for Those Installations Calling for Constant Pressure with Wide Variation in Flow
- Diaphragm Operated Design with Balanced Poppet and Constant Bleed Pilot for Quick and Accurate Regulation.
- Secondary Aspiration Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Reverse Flow Available
- High Flow: 1/4" - 100 SCFM§
  3/8" - 110 SCFM§
  1/2" - 150 SCFM§



Port Size	NPT Relieving	BSPP Relieving
Without Gauge 0-125 PSIG Reduced Pressure		
1/4"	**R119-02J**	R119G02J
3/8"	**R119-03J**	R119G03J
1/2"	**R119-04J**	R119G04J

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

R119 Regulator Dimensions					
A	**B**	**C**	**D**	**E**	**N**
R119-02J, R119-03J					
3.00 (76)	1.38 (35)	2.10 (53)	2.74 (70)	3.48 (88)	1.69 (43)
R119-04J					
3.56 (90)	1.56 (40)	2.31 (59)	3.34 (85)	3.87 (98)	1.93 (49)

inches
(mm)

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

Ordering Information

R	119	—	02	J		/**

Port Threads
— **NPT**
G BSPP

Port Size
02 1/4 Inch
03 3/8 Inch
04 1/2 Inch

Reduced Pressure Range
J Air Pilot Operated

Options
K Non-Relieving
X64* Fluorocarbon O-Rings and Diaphragm
X71 Non-Bleed Pilot (For use with Electronic Controllers)
X7† Brass Bottom Plug

Engineering Change Designator
Will be entered at factory.

†**NOTE:** Beginning on the following dates, the regulators listed will come standard with Nylon Bottom Plugs.
1/4" & 3/8" January 2008
1/2" March 2008

* Brass Bottom Plug Standard with X64 Option.

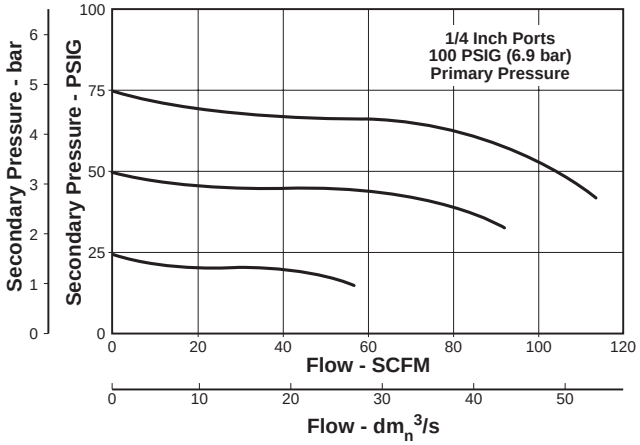
BOLD ITEMS ARE MOST POPULAR.

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

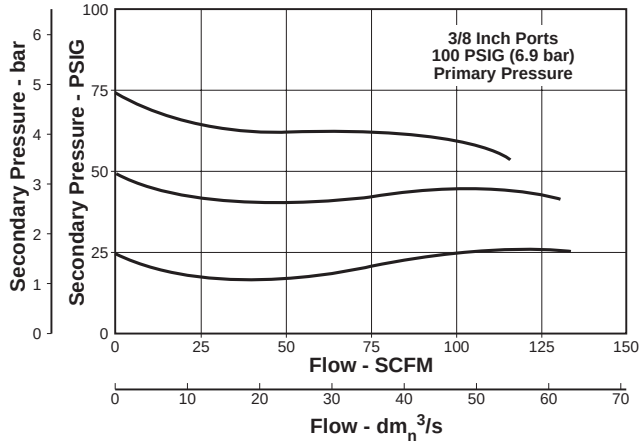
B

Technical Information

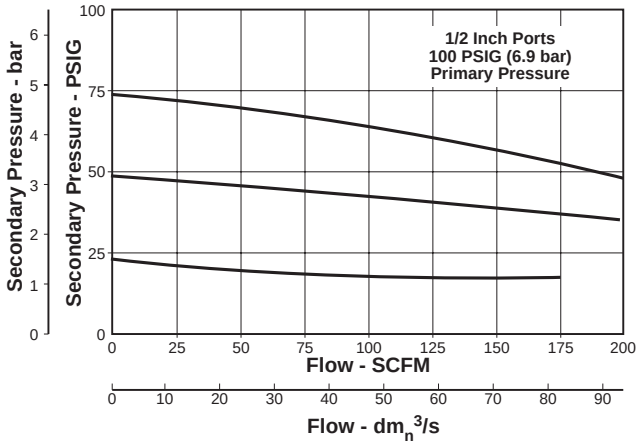
Flow Characteristics
R119-02J



Flow Characteristics
R119-03J



Flow Characteristics
R119-04J



R119 Regulator Kits & Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa) K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Repair Kits –

Non-Relieving Diaphragm,
Valve Assembly (1/2") RK118X20A

Non-Relieving Diaphragm,
Valve Assembly (1/4", 3/8") RK118X20Y

Relieving Diaphragm,
Valve Assembly (1/2") RK119X20A

Relieving Diaphragm,
Valve Assembly (1/4", 3/8") RK119X20Y

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

Specifications

Gauge Ports (2) .....1/4 Inch

Port Threads .....1/4, 3/8, 1/2 Inch

Reduced Pressure Range –
Adjustable to within 5 to 7 PSIG of Supply Pressure

Supply Pressure .....300 PSIG Maximum (20.4 bar)

Air Consumption –
Constant bleed from air pilot chamber: approx. 0.17 SCFM (10 SCFH)

Temperature Rating .....40°F to 125°F (4.4°C to 52°C)

Weight –
R119-02J, R119-03J ..... 1.6 lb. (0.73 kg) / Unit
19 lb. (8.62 kg) / 12-Unit Master Pack
R119-04J ..... 2.6 lb. (1.18 kg) / Unit
21 lb. (9.53 kg) / 8-Unit Master Pack

Materials of Construction

Body, Ring, Top Plate .....Zinc

Bottom Plug ..... Nylon

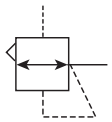
Innervalve ..... Brass

Seals ..... Buna N

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

R119 Pilot Operated Regulators

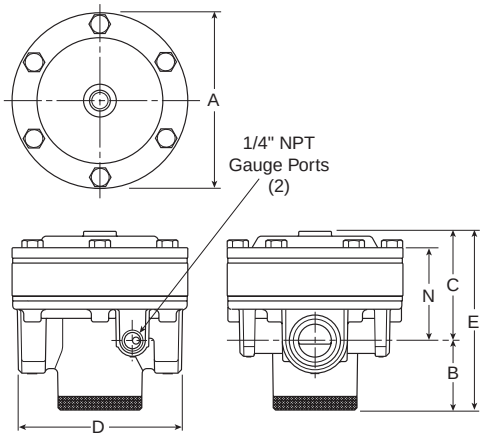
B





Features

- Adapted for Control by a Remote or Distant Small Pilot Regulator. Ideal for Maximum Capacity Requirements in Applications where Units are Not Readily Accessible
- High Flow Performance Featuring Rugged Design for the Most Demanding Applications
- Ideal for Those Installations Calling for Constant Pressure with Wide Variation in Flow
- Diaphragm Operated Design with Balanced Poppet and Constant Bleed Pilot for Quick and Accurate Regulation.
- Secondary Aspiration Plus Balanced Poppet Provides Quick Response and Accurate Pressure Regulation
- Reverse Flow Version Available
- High Flow: 3/4", 1" - 300 SCFM§, 1-1/4" & 1-1/2" - 380+ SCFM§



Port Size	NPT Relieving	BSPP Relieving
Without Gauge 0-125 PSIG Reduced Pressure		
3/4"	**R119-06J**	R119G06J
1"	**R119-08J**	R119G08J
1-1/4"	**R119-10J**	R119G10J
1-1/2"	**R119-12J**	R119G12J

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

R119 Regulator Dimensions					
A	**B**	**C**	**D**	**E**	**N**
R119-06J, R119-08J					
4.72 (120)	1.87 (47)	2.94 (75)	4.38 (111)	4.81 (122)	2.47 (63)
R119-10J, R119-12J					
4.94 (125)	1.81 (46)	3.32 (84)	4.94 (125)	5.13 (130)	2.88 (73)

inches
(mm)

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

Ordering Information

R	119	—	06	J		/**

Port Threads
- **— NPT**
- G BSPP

Port Size
- **06 3/4 Inch**
- **08 1 Inch**
- **10 1-1/4 Inch**
- **12 1-1/2 Inch**

Reduced Pressure Range
- **J Air Pilot Operated**

Options
- K Non-Relieving
- X64* Fluorocarbon O-Rings and Diaphragm
- X71 Non-Bleed Pilot (For use with Electronic Controllers)
- X7† Brass Bottom Plug

Engineering Change Designator
Will be entered at factory.

†**NOTE:** Beginning March 2008, Brass Bottom Plug is Optional - Nylon is Standard.

* Brass Bottom Plug Standard with X64 Option.

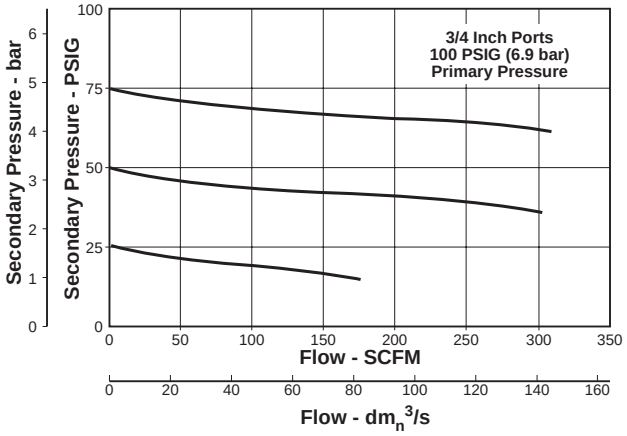
BOLD ITEMS ARE MOST POPULAR.

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

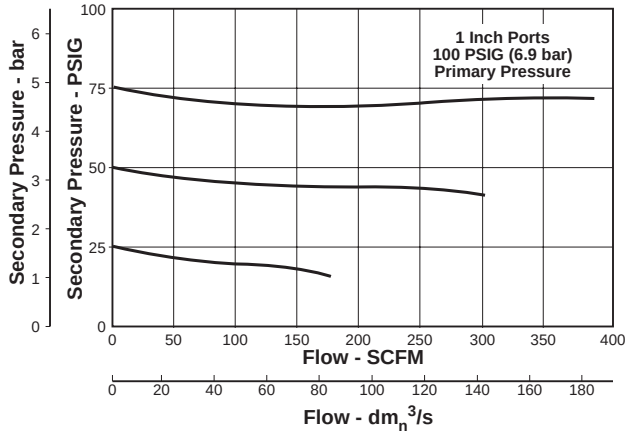
B

Technical Information

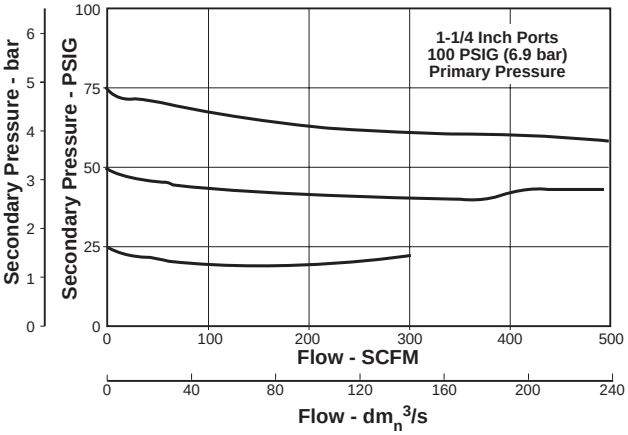
Flow Characteristics
R119-06J



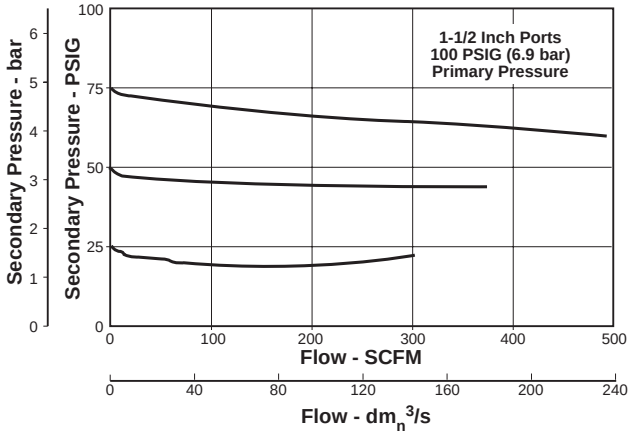
Flow Characteristics
R119-08J



Flow Characteristics
R119-10C



Flow Characteristics
R119-12C



R119 Regulator Kits & Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa) K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Repair Kits –

Non-Relieving Diaphragm,
Valve Assembly (3/4", 1") RK118X20B

Non-Relieving Diaphragm,
Valve Assembly (1-1/4", 1-1/2") RK118X20D

Relieving Diaphragm,
Valve Assembly (3/4", 1") RK119X20B

Relieving Diaphragm,
Valve Assembly (1-1/4", 1-1/2") RK119X20D

For Fluorocarbon Repair Kits, add X64 to Kit Number suffix.

Specifications

Gauge Ports (2) .....1/4 Inch

Port Threads ..... 3/4, 1, 1-1/4, 1-1/2 Inch

Reduced Pressure Range –
Adjustable to Within 5 to 7 PSIG of Supply Pressure

Supply Pressure .....300 PSIG Maximum (20.4 bar)

Air Consumption –
Constant bleed from air pilot chamber: approx 0.17 SCFM (10 SCFH)

Temperature Rating .....40°F to 125°F (4.4°C to 52°C)

Weight –
R119-06J, R119-08J ..... 5.2 lb. (2.36 kg) / Unit
42 lb. (19.05 kg) / 8-Unit Master Pack
R119-10J, R119-12J ..... 5.6 lb. (2.54 kg) / Unit
46 lb. (20.87 kg) / 8-Unit Master Pack

Materials of Construction

Body, Ring, Top Plate .....Zinc

Bottom Plug ..... Nylon

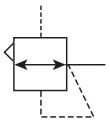
Innervalve ..... Brass

Seals ..... Buna N

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

B

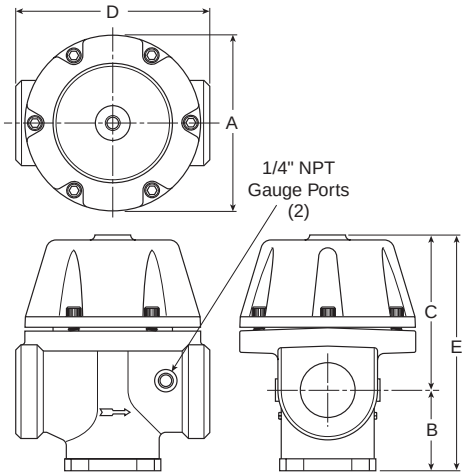
R119 Pilot Operated Regulators





Features

- Adapted for Control by a Remote or Distant Small Pilot Regulator. Ideal for Maximum Capacity Requirements in Applications where Units are Not Readily Accessible
- High Flow Performance Featuring Rugged Design for the Most Demanding Applications
- Ideal for Those Installations Calling for Constant Pressure with Wide Variation in Flow
- Piston Operated Design with Balanced Poppet and Dual Constant Bleed for Quick and Accurate Regulation
- High Flow: 2" & 2-1/2" - 1500+ SCFM§



Port Size	NPT Relieving	BSPP Relieving
Without Gauge 0-125 PSIG Reduced Pressure		
2"	**R119-16J**	R119G16J
2-1/2"	**R119-20J**	R119G20J

Bold Items are Most Popular.
For other models refer to ordering information below.

§ SCFM = Standard cubic feet per minute at 100 PSIG inlet, 75 PSIG no flow secondary setting, and 20 PSIG pressure drop.

R119 Regulator Dimensions				
A	**B**	**C**	**D**	**E**
R119-16J, R119-20J				
6.63 (168)	3.09 (79)	7.78 (147)	7.31 (185)	10.87 (276)

inches
(mm)

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

Ordering Information

R	119	—	16	J

Port Threads
— NPT
G BSPP

Port Size
16 2 Inch
20 2-1/2 Inch

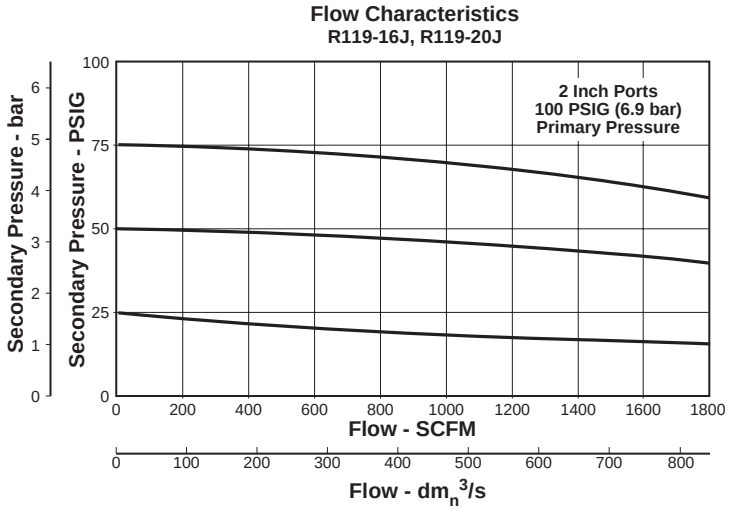
Reduced Pressure Range
J Air Pilot Operated

NOTE: Non-Relieving Not Available.

BOLD ITEMS ARE MOST POPULAR.

Pneumatic Division
Richland, Michigan
www.wattsfluidair.com

Technical Information



R119 Regulator Kits & Accessories

Gauges –

2" Dial Size, 1/4" Back Connection
0 to 60 PSIG (0 to 400 kPa) K4520N14060

2" Dial Size, 1/4" Back Connection
0 to 160 PSIG (0 to 1100 kPa) K4520N14160

2" Dial Size, 1/4" Back Connection
0 to 300 PSIG (0 to 2068 kPa) K4520N14300

Repair Kits –

Piston Type Regulation (2", 2-1/2") RK119G

Specifications

Gauge Ports (2) .....1/4 Inch
(Can be used for Full Flow)
High Pressure Outlet for Pilot (Not seen in photo) .....1/4 Inch

Port Threads ..... 2, 2-1/2 Inch

Reduced Pressure Range –
Adjustable to Within 5 to 7 PSIG of Supply Pressure

Supply Pressure .....300 PSIG Maximum (20.4 bar)

Air Consumption –
Constant Bleed from Air Pilot Chamber:
Approx. 0.17 SCFM (10 SCFH)

Constant Bleed from Reduced Pressure:
Approx. 0.17 SCFM (10 SCFH)

Temperature Rating .....40°F to 125°F (4.4°C to 52°C)

Weight –
R119-16J, R119-20J ..... 11 lb. (4.99 kg) / Unit
12 lb. (5.44 kg) / 1-Unit Master Pack

Materials of Construction

Body, Piston .....Aluminum

Seals ..... Buna N

Innervalve ..... Brass & Stainless