

Crown[®]

Pressure regulator for semiconductor
manufacturing process

e-flow[®]
for high purity process

PRODUCTS CATALOGUE

The First Name in Performance.
The Last Word in High Purity.



YUTAKA ENGINEERING CORPORATION, better known as Crown, was founded in 1956 by President and CEO, Yoshitake Toyokawa. Yoshitake's objectives were to provide products with sincerity, enthusiasm and originality from a company with excellent service and technical support. These goals have continued to guide the company throughout the years.

In 1956, YUTAKA began producing pressure regulators and flowmeters intended solely for the general industry. These products were designed and manufactured exclusively for the welding gas applications. In 1980, the company's efforts have remained focused on meeting the ever changing needs of the high purity applications. Our products designs

and manufacturing techniques are constantly evolving to meet the future challenges of the industry's next generation requirements at a competitive price. The product line continues to grow year by year with additional innovative components which compliment our offering.

Today, YUTAKA continues to strive towards our goals. We are still working to improve our already high standards of quality, performance and reliability backed by service and support.

For the Hi-Technology



e-flow
for high purity process



▲ Head Office in Tokyo



▲ Matsumoto Factory



▲ Integrated Gas System

Selection Table by Pressure and Flow Rate

	L Series		R Series		D Series	
	For Cylinder	For Point of Use	For Cylinder	For Point of Use	For Cylinder	For Point of Use
High Flow (More than 400NL/min)	L61 L62	LL2 LL1 LM1 LM2 LH1 LH2	R61	RH1 RH2 RLD		LM2-D RH2-D
Medium Flow (100~400NL/min)	L88	L35	R72	R35 R36		RH2-D
Standard Flow (10~100NL/min)	L20 L21 L81	L25 L26 L18 L18H	R20 R81	R25 R26		
Small Flow (Less than 10NL/min)		L96 (Absolute Pressure)				

[NOTE]

- Product availability and specifications contained herein are subject to change without notice. Consult local distributor or factory for potential revisions.
- To complete ordering information, select "SS" or "SH" in the "MATERIAL" category.
- Seat Materials: Special fluoroplastics are recommended for Chlorine (Cl₂) service.
- Seat Materials: Vespel® is recommended for Nitrous Oxide(N₂O) service.
- Stainless steel internals are recommended for Carbon Monoxide (CO) or Nickel Carbonyl service.
- Crown/YUTAKA® and e-flow® are registered trademarks of YUTAKA ENGINEERING CORPORATION.
- Hastelloy® is a registered trademark of Haynes International, Inc.
- Vespel® and VITON® are registered trademarks of DuPont Company.
- S-VCR®, VCR® and Swagelok® are registered trademarks of Swagelok Marketing CO.
- S-JSK® and JSK® are registered trademarks of SANKO KOGYO CO., LTD.
- UJR® is a registered trademark of Fujikin Incorporated.
- When selecting a regulator, the total system design must be considered to assure safe, trouble-free regulator performance. Regulator function, materials compatibility, adequate ratings, proper installation, operation and maintenance are the responsibility of the system designer and user.
- Custom fittings, porting, testing and dimension options are also available upon customer request.
- Do not mix or interchange parts with those of other manufacturers.

L20 Series

RoHS Directive Products

High Pressure Regulator

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.00021 MPaG (0.03 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSI), 1.5 MPa (Outlet Side)
CV	0.09
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	4.67 cc (0.28 in ³) w/o fittings
Approximate weight	1.29 kg (2 lbs.14 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

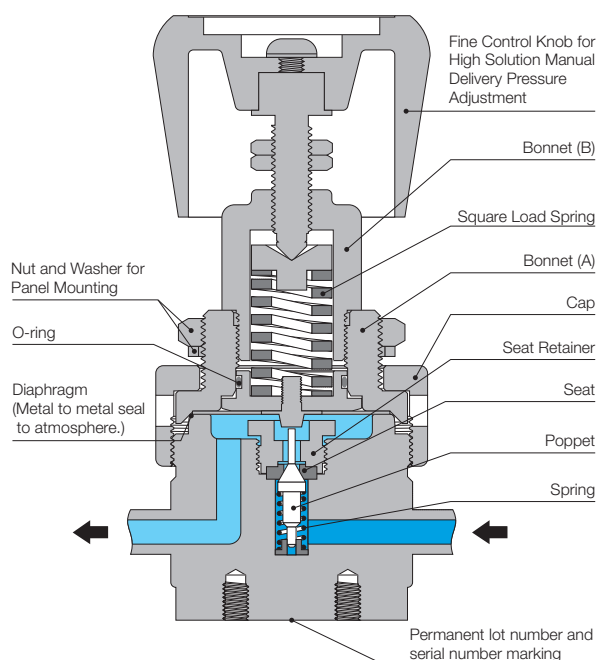
[NOTE]

1MPa = 10.2 kgf/cm² = 145.04 PSI

1MPa = 7504.36 mmHg = 295.4 inHg



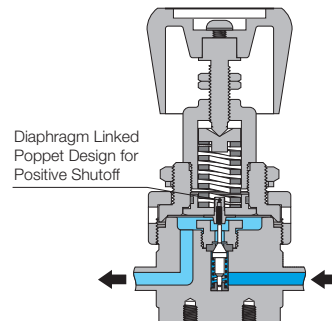
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- Series L25,L26 are recommended for Chlorine (CL₂) service and Nitrous Oxide (N₂O) service.
- No filter in this unit.

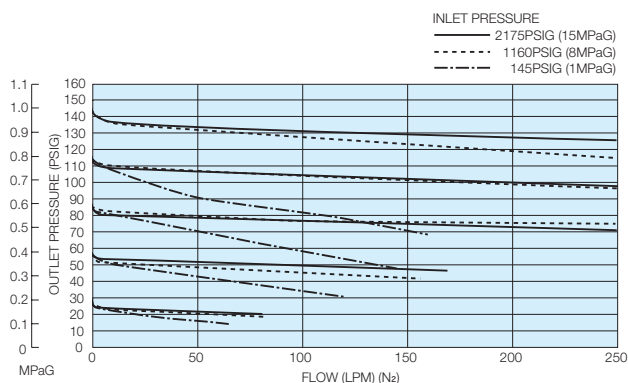
Tied Diaphragm (Optional)



[NOTE]

Operating the Tied Diaphragm Type: In order to minimize premature wear of regulator's internal parts. Be sure not to close regulator while under pressure.

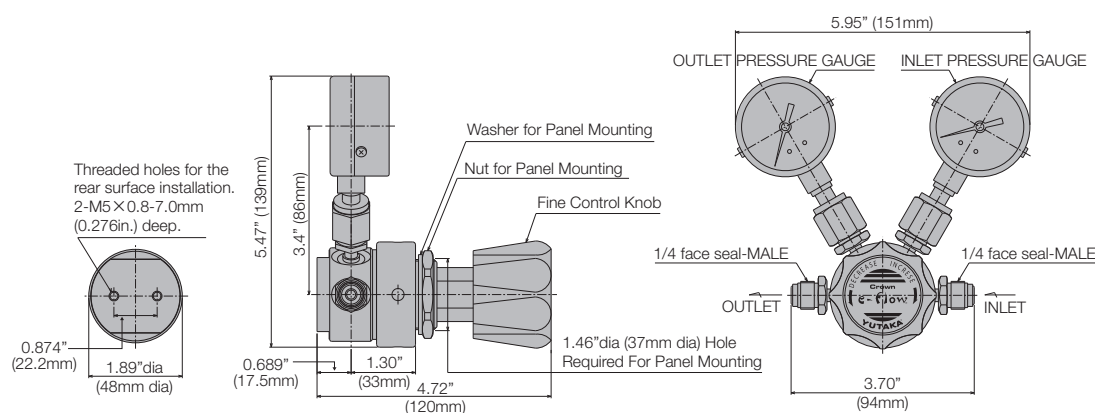
Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L20SS	L20SH	L20SS-CO
Wetted Parts			
Body	SUS316L		
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L
Diaphragm	Hastelloy® C-22		SUS316L
Seat	PCTFE		
Spring	SUS316	Hastelloy® C-22	SUS316
Gasket to seal for gauge	Ni		SUS316
Non-wetted Parts			
Bonnet (A)	SUS316		
Bonnet (B)	Nickel Plated Brass		
Cap	SUS304		
Control Knob	ABS Resin		
O-ring	NBR		

Wetted surface finishes

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

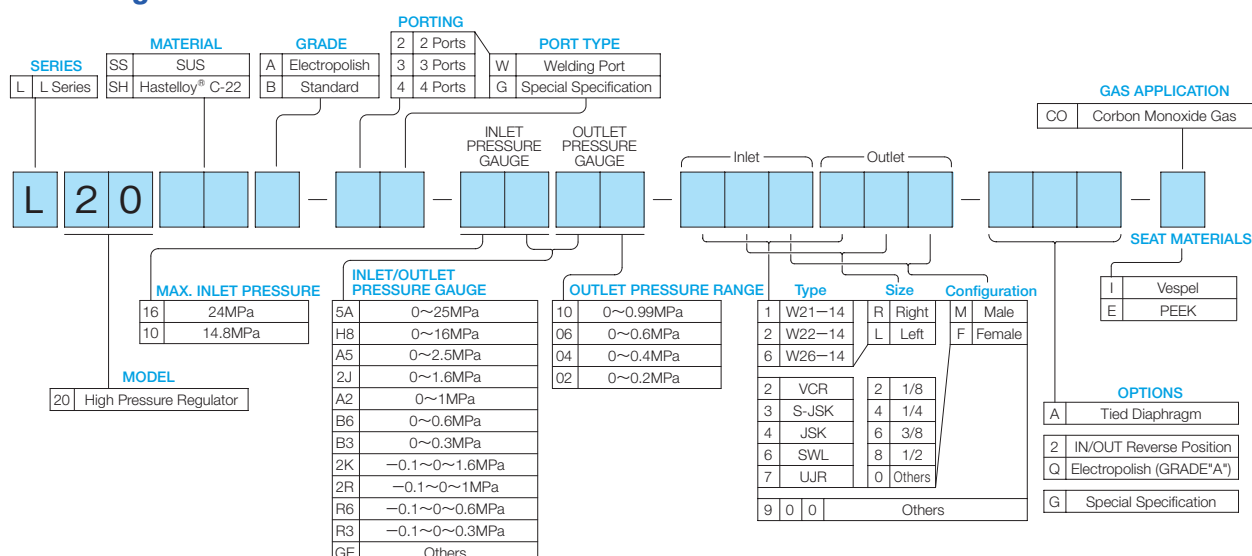
Standard connections

1/4" face to face length of the male and female are the same. 3.70in. (94mm)
1/4" Tube stubs and other connections available as options.

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



L25 Series

RoHS Directive Products

Point-of-Use Pressure Regulator

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0008 MPaG (0.12 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	22.2 MPa (3,215 PSI)
CV	0.15
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	4.67 cc (0.28 in ³) w/o fittings
Approximate weight	0.96 kg (2 lbs. 2 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

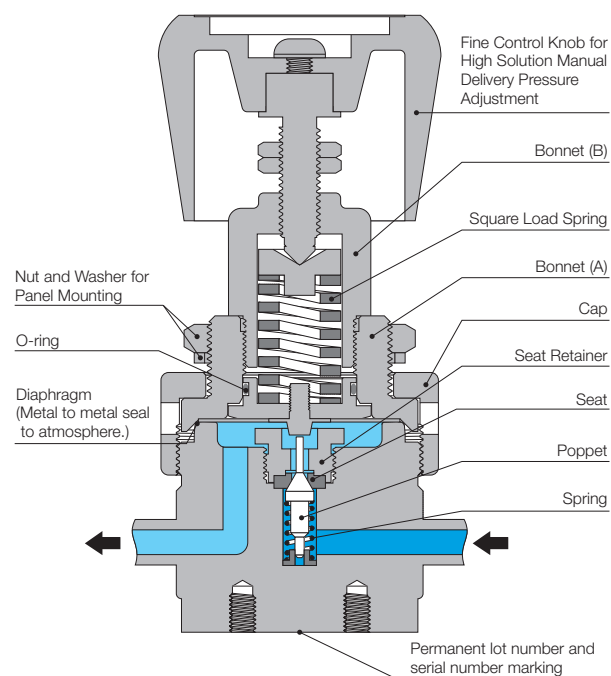
[NOTE]

1MPa = 10.2 kgf/cm² = 145.04 PSI

1MPa = 7504.36 mmHg = 295.4 inHg



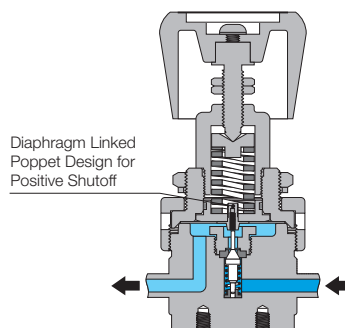
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- For purging at 870 PSIG (6 MPaG) and higher, operate the unit in consideration of changing the outlet pressure by the supply pressure effect.
- No filter in this unit.

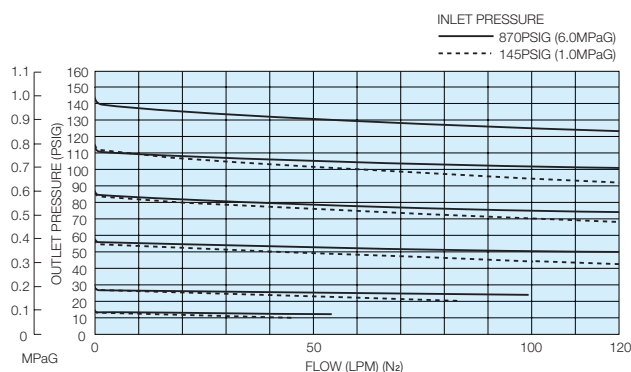
Tied Diaphragm (Optional)



[NOTE]

Operating the Tied Diaphragm Type: In order to minimize premature wear of regulator's internal parts. Be sure not to close regulator while under pressure.

Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

Technical drawing of the P-1000 pressure washer, showing front, side, and rear views with dimensions and labels.

Front View (Left):

- Overall width: 1.89" dia (48mm dia)
- Distance between mounting holes: 0.874" (22.2mm)

Side View (Middle):

- Overall height: 6.02" (153mm)
- Distance from base to top mounting point: 3.94" (100mm)
- Distance from base to trigger gun: 0.689" (17.5mm)
- Distance from base to fine control knob: 1.30" (33mm)
- Distance from base to rear mounting holes: 4.72" (120mm)
- Distance between rear mounting holes: 1.46" dia (37mm dia) Hole Required For Panel Mounting
- Labels: Washer for Panel Mounting, Nut for Panel Mounting, Fine Control Knob

Rear View (Right):

- Overall width: 3.70" (94mm)
- Labels: 1/4 face seal-MALE, OUTLET, INLET, OUTLET PRESSURE GAUGE

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice

MODEL & TYPE	L25SS	L25SH	L25SH-CL2	L25SS-N20	L25SS-CO	L25SS-NH3
Wetted Parts						
Body	SUS316L					
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22		SUS316L		
Diaphragm	Hastelloy® C-22				SUS316L	Hastelloy® C-22
Seat	PCTFE		Special Fluoroplastics	Vespel®	PCTFE	Special Fluoroplastics
Spring	SUS316	Hastelloy® C-22		SUS316		
Gasket to seal for gauge	Ni				SUS316	Ni
Non-wetted Parts						
Bonnet (A)	SUS316					
Bonnet (B)	Nickel Plated Brass					
Cap	SUS304					
Control Knob	ABS Resin					
O-ring	NBR					

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

1/4" face to face length of the male and female are the same. 3.70in. (94mm)
1/4" Tube stubs and other connections available as options.

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

The diagram illustrates the components and selection options for the Point-of-Use Pressure Regulator. The main assembly consists of several interconnected blocks:

- SERIES:** L (L Series)
- MATERIAL:** SS (SUS), SH (Hastelloy® C-22)
- GRADE:** A (Electropolish), B (Standard)
- PORTING:** 2 (2 Ports), 3 (3 Ports), 4 (4 Ports)
- PORT TYPE:** W (Welding Port), G (Special Specification)
- INLET PRESSURE GAUGE** and **OUTLET PRESSURE GAUGE**
- Inlet** and **Outlet** ports
- SEAT MATERIALS:** I (Vespel), E (PEEK)
- MODEL:** 25 (Point-of-Use Pressure Regulator)

MAX. INLET PRESSURE

04	6MPa
01	0.99MPa

INLET/OUTLET PRESSURE GAUGE

5A	0~25MPa
H8	0~16MPa
2A	0~10MPa
6B	0~6MPa
A5	0~2.5MPa
2J	0~1.6MPa
A2	0~1MPa
B6	0~0.6MPa
B3	0~0.3MPa
2K	-0.1~0~1.6MPa
2R	-0.1~0~1MPa
R6	-0.1~0~0.6MPa
R3	-0.1~0~0.3MPa
R1	-0.1~0~0.1MPa
GF	Others

OUTLET PRESSURE RANGE

10	0~0.99MPa
06	0~0.6MPa
04	0~0.4MPa
02	0~0.2MPa

Type

1	W21-14
2	W22-14
6	W26-14
2	VCR
3	S-JSK
4	JSK
6	SWL
7	UJR
9	0
0	0
0	Others

Size

R	Right
L	Left
2	1/8
4	1/4
6	3/8
8	1/2
0	Others

Configuration

M	Male
F	Female

GAS APPLICATION

NH3	Ammonia Gas
CO	Carbon Monoxide Gas
CL2	Chlorine Gas
N2O	Nitrous Oxide Gas

OPTIONS

A	Tied Diaphragm
2	IN/OUT Reverse Position
Q	Electropolish (GRADE"A")
G	Special Specification

L21 Series

RoHS Directive Products

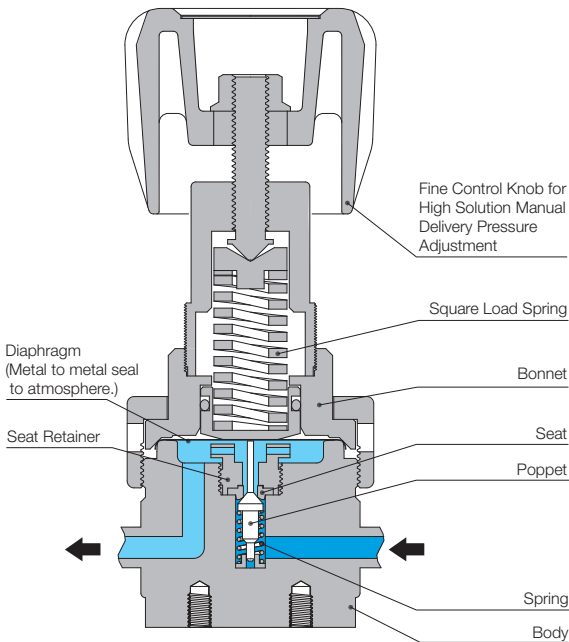
High Pressure Regulator

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0005 MPaG (0.0725 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSI), 1.5 MPa (Outlet Side)
CV	0.09
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	4.75 cc (0.29 in ³) w/o fittings
Approximate weight	1.4 kg (3 lbs. 1 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg



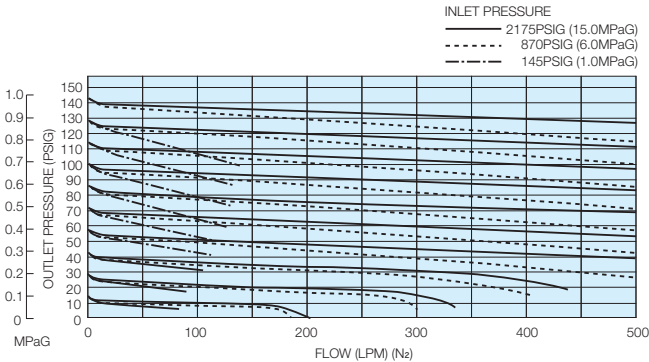
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- Series L25,L26 are recommended for Chroline (CL₂) service and Nitrous Oxide (N₂O) service.
- No filter in this unit.

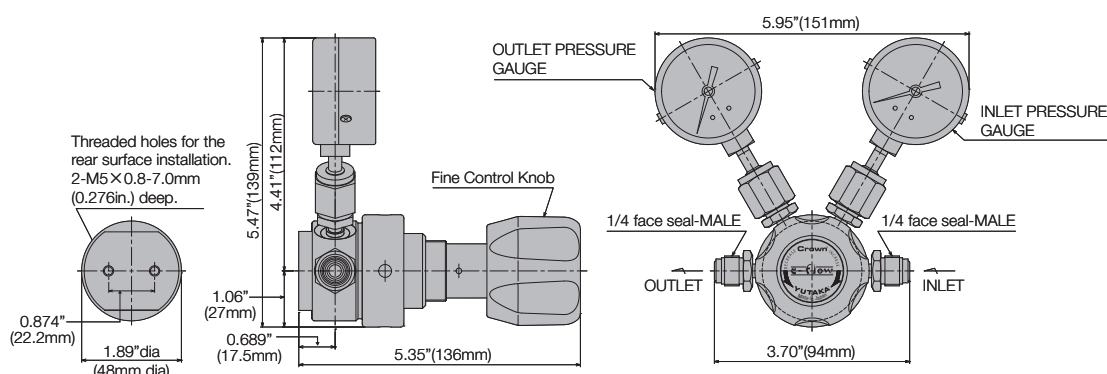
Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L21SS	L21SH	L21SS-CO
Wetted Parts			
Body	SUS316L		
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L
Diaphragm	Hastelloy® C-22		SUS316L
Seat	PCTFE		
Spring	SUS316	Hastelloy® C-22	SUS316
Gasket to seal for gauge	Ni		SUS316
Non-wetted Parts			
Bonnet	SUS316, C3604BD		
Control Knob	ABS Resin		
O-ring	NBR		

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

Standard connections

1/4" face to face length of the male and female are the same. 3.70in. (94mm)
1/4" Tube stubs and other connections available as options.

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information

SERIES	MATERIAL	GRADE	PORTING	PORT TYPE	GAS APPLICATION
L L Series	SS SUS	U Ultra	2 2 Ports	W Welding Port	
	SH SUS+Hastelloy®	A Electropolish	3 3 Ports	G Special Specification	CO Carbon Monoxide Gas
		B Standard	4 4 Ports		

MAX. INLET PRESSURE	INLET/OUTLET PRESSURE GAUGE	OUTLET PRESSURE RANGE	Type	Size	Configuration	OPTIONS
16 24MPa	5A 25MPa	10 0~0.99MPa	2 VCR	2 1/8	M Male	2 IN/OUT Reverse Position
14 21MPa	H8 16MPa	06 0~0.6MPa	3 S-JSK	4 1/4	F Female	M Front Panel Mounting
10 14.8MPa	2A 10MPa	04 0~0.4MPa	4 JSK	6 3/8		Q Electropolish (GRADE "A")
	6B 6MPa	02 0~0.2MPa	7 UJR	0 Others		
	A5 2.5MPa		8 YR			
	2J 1.6MPa		9 0 0			
	A2 1MPa					
	B6 0.6MPa					
	B3 0.3MPa					
	2K -0.1~0~1.6MPa					
	2R -0.1~0~1MPa					
	R6 -0.1~0~0.6MPa					
	R3 -0.1~0~0.3MPa					
	GE Others					

MODEL
21 High Pressure Regulator

L26 Series

RoHS Directive Products

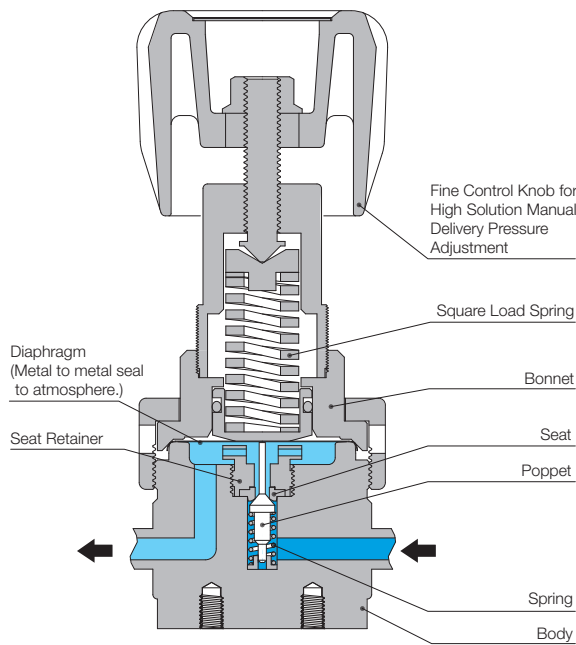
Point-of-Use Pressure Regulator

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.140 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.001 MPaG (0.145 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	22.2 MPa (Inlet side)
CV	0.21
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻¹¹ Pa·m ³ /sec·He (1×10 ⁻¹⁰ atm·cc/sec·He)
Internal Volume	4.75 cc (0.29 in ³) w/o fittings
Approximate weight	1.0 kg (2 lbs. 3 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

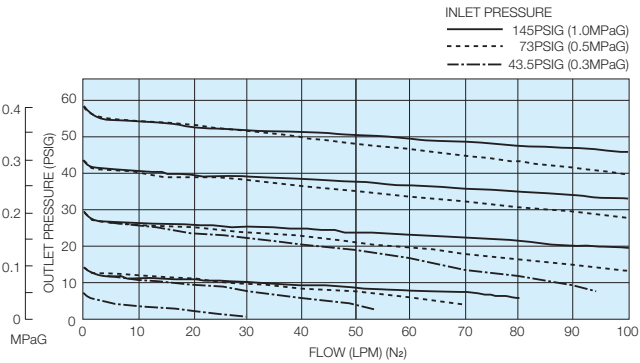


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

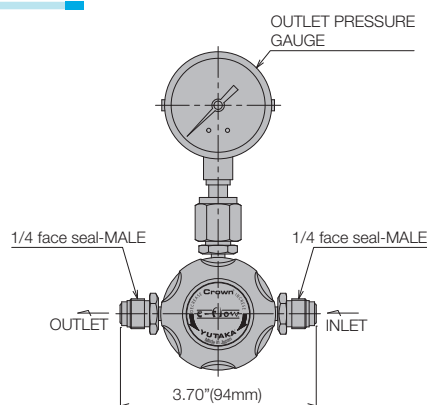
Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Technical drawing of the rear view of the 1000 Series Valve. The drawing includes the following dimensions and features:

- Threaded holes for the rear surface installation:** 2-M5 \times 0.8-7.0mm (0.276in.) deep.
- Overall width:** 1.89" dia (48mm dia)
- Distance between threaded holes:** 0.874" (22.2mm)
- Distance from centerline to mounting hole center:** 1.06" (27mm)
- Distance from centerline to valve body center:** 6.02" (153mm)
- Distance from centerline to Fine Control Knob center:** 4.96" (126mm)
- Distance from centerline to Fine Control Knob tip:** 5.35" (136mm)
- Distance from centerline to Fine Control Knob base:** 0.689" (17.5mm)
- Feature:** Fine Control Knob



- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

MODEL & TYPE	L26SS	L26SH	L26SH-CL2	L26SS-N2O	L26SS-CO	L26SS-NH3
Wetted Parts						
Body	SUS316L					
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22		SUS316L		
Diaphragm	Hastelloy® C-22				SUS316L	Hastelloy® C-22
Seat	PCTFE		Special Fluoroplastics	VespeI®	PCTFE	Special Fluoroplastics
Spring	SUS316	Hastelloy® C-22		SUS316		
Gasket to seal for gauge	Ni				SUS316	Ni
Non-wetted Parts						
Bonnet	SUS304					
Control Knob	ABS Resin					
O-ring	NBR					

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

1/4" face to face length of the male and female are the same. 3.70in. (94mm)
1/4" Tube stubs and other connections available as options.

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

The diagram illustrates the Model 26 Point-of-Use Pressure Regulator, showing its physical components and the corresponding configuration options for each part.

Physical Components:

- SERIES:** L (L Series)
- MATERIAL:** SS (SUS), SH (SUS+Hastelloy®)
- GRADE:** A (Electropolish), B (Standard)
- PORTING:** 2 (2 Ports), 3 (3 Ports), 4 (4 Ports)
- PORT TYPE:** W (Welding Port), G (Special Specification)
- INLET PRESSURE GAUGE**
- OUTLET PRESSURE GAUGE**
- Inlet** (3 ports)
- Outlet** (3 ports)
- SEAT MATERIALS:** I (Vespel), E (PEEK)
- MODEL:** 26 (Point-of-Use Pressure Regulator)

Configuration Options:

- MAX. INLET PRESSURE:**
 - 04: 6MPa
 - 02: 2MPa
 - 01: 0.99MPa
- INLET/OUTLET PRESSURE GAUGE:**
 - 2A: 0~10MPa
 - 6B: 0~6MPa
 - A5: 0~2.5MPa
 - 2J: 0~1.6MPa
 - A2: 0~1MPa
 - B6: 0~0.6MPa
 - B3: 0~0.3MPa
 - 2K: -0.1~0~1.6MPa
 - 2R: -0.1~0~1.0MPa
 - R6: -0.1~0~0.6MPa
 - R3: -0.1~0~0.3MPa
 - GE: Others
- OUTLET PRESSURE RANGE:**
 - 10: 0~0.99MPa
 - 06: 0~0.6MPa
 - 04: 0~0.4MPa
 - 02: 0~0.2MPa
- Type:**
 - 2: VCR
 - 3: S-JSK
 - 4: JSK
 - 6: SWL
 - 7: UJR
 - 0: Others
- Size:**
 - 2: 1/8
 - 4: 1/4
 - 6: 3/8
 - 8: 1/2
 - 0: Others
- Configuration:**
 - M: Male
 - F: Female
 - 0: Others
- GAS APPLICATION:**
 - NH3: Ammonia Gas
 - CO: Carbon Monoxide Gas
 - CL2: Chlorine Gas
 - N2O: Nitrous Oxide Gas
- OPTIONS:**
 - 2: IN/OUT Reverse Position
 - Q: Electropolish (GRADE"A")
 - G: Special Specification

L35 Series

RoHS Directive Products

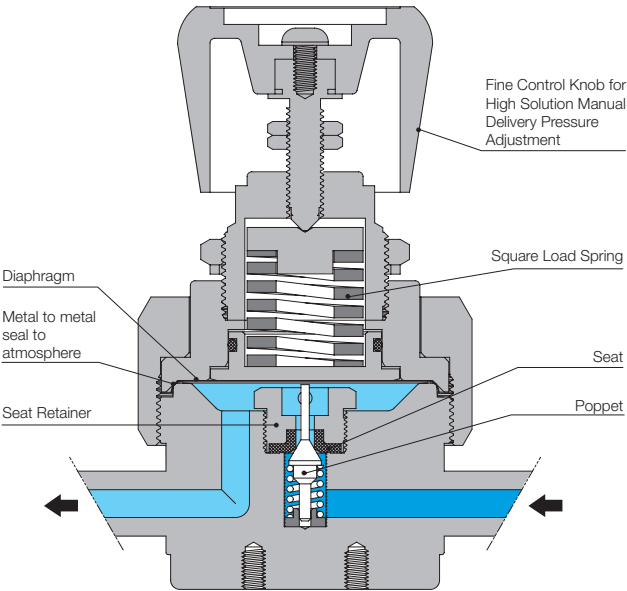
Medium Flow Rate Applications

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.9 MPaG (Max.130.5 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.9 MPa)
Supply Pressure Effect	0.0007 MPaG (0.10 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	9 MPa (1,305 PSI)
CV	0.21
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	11.3 cc (0.68 in ³) w/o fittings
Approximate weight	1.95 kg (4 lbs. 5 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

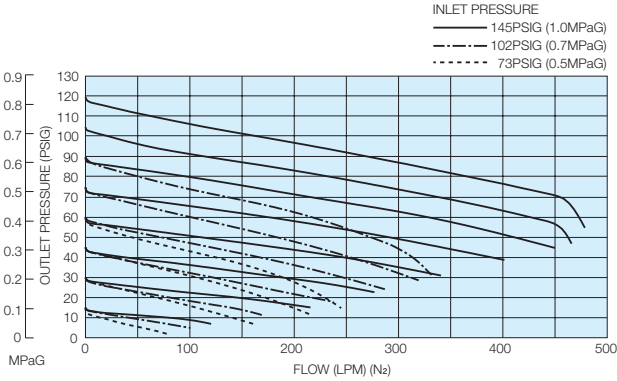


Cross sectional drawing



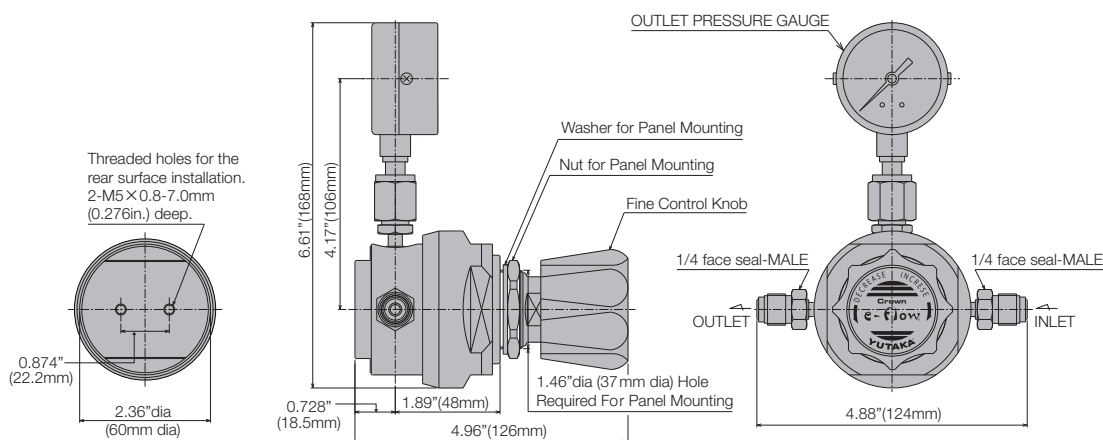
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L35SS	L35SH	L35SH-CL2	L35SS-N2O	L35SS-CO	L35SS-NH3
Wetted Parts						
Body	SUS316L					
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22		SUS316L		
Diaphragm	Hastelloy® C-22				SUS316L	Hastelloy® C-22
Seat	PCTFE		Special Fluoroplastics	VespeI®	PCTFE	Special Fluoroplastics
Spring	SUS316					
Gasket to seal for gauge	Ni				SUS316	Ni
Non-wetted Parts						
Bonnet	SUS304					
Control Knob	ABS Resin					
O-ring	NBR					

Wetted surface finishes

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

Standard connections

1/4" face to face length of the male and female are the same. 4.88in. (124mm)

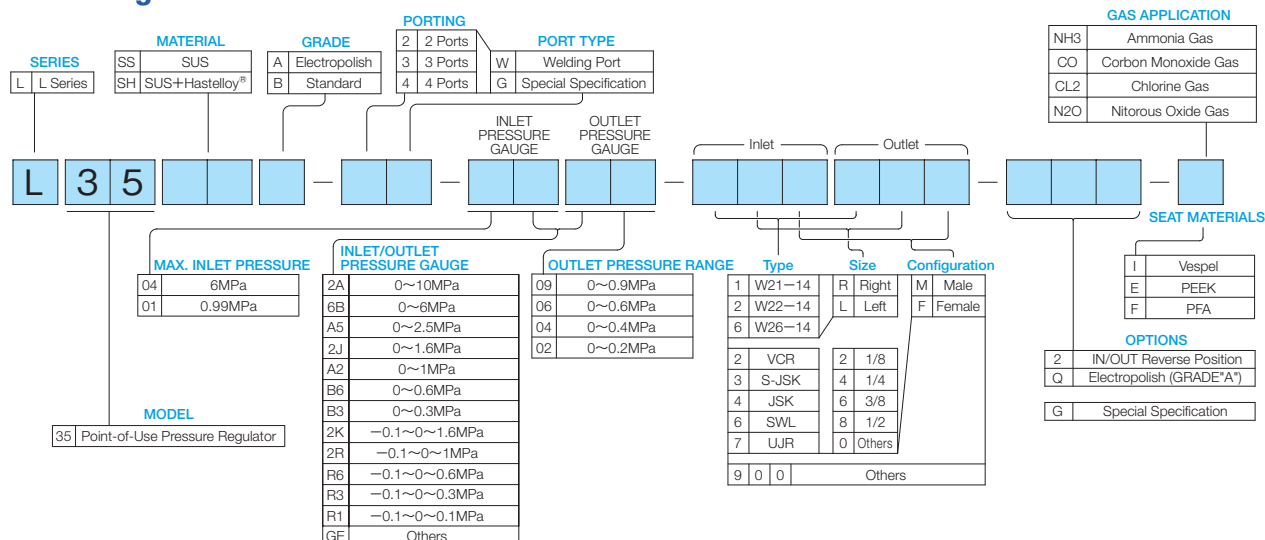
1/4" Tube stubs and other connections available as options.

3/8", 1/2" face to face length of the male and female are the same. 5.2in. (132mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



L61 Series

RoHS Directive Products

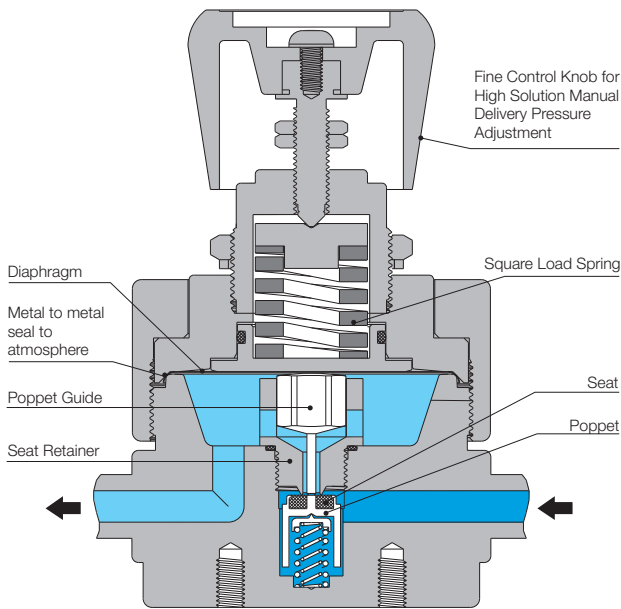
High Flow Rate Applications

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Supply Pressure Effect	0.0006 MPaG (0.087 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSI), 1.5 MPa (Outlet Side)
CV	0.07
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻¹¹ Pa·m ³ /sec·He (1×10 ⁻¹⁰ atm·cc/sec·He)
Internal Volume	32.3 cc (1.97 in ³) w/o fittings
Approximate weight	4.7 kg (10 lbs. 6 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

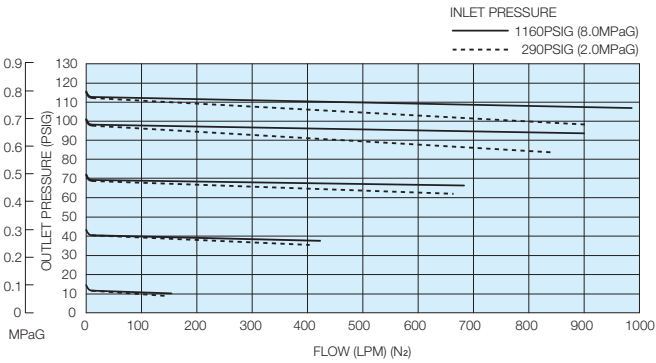


Cross sectional drawing



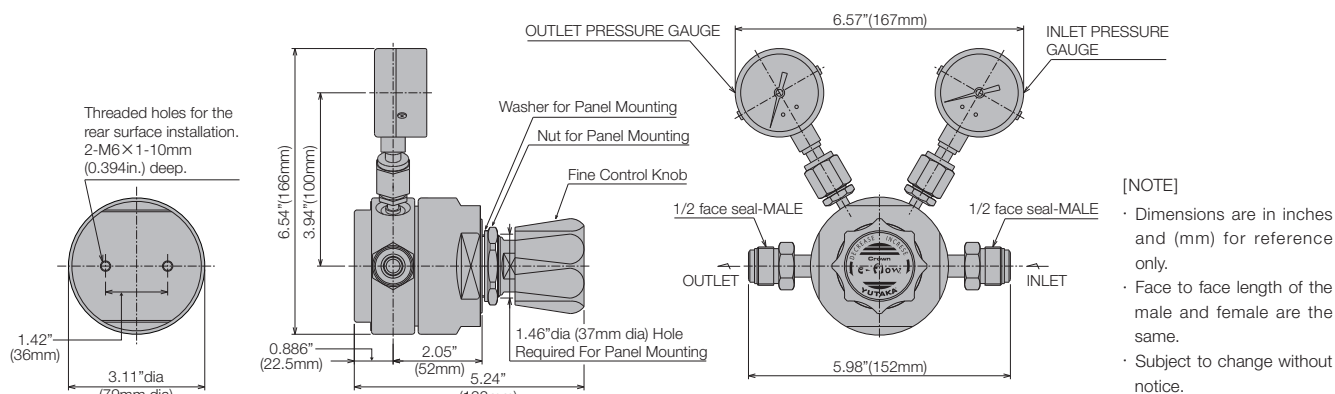
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



Materials of construction

MODEL & TYPE	L61SS		L61SH	L61SS-CO
Wetted Parts				
Body	SUS316L			
Poppet	SUS316	Hastelloy® C-22	SUS316	
Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L	
Diaphragm	Hastelloy® C-22			SUS316L
Seat	PCTFE			
Spring	SUS316			
Gasket to seal for gauge	Ni			SUS316
Non-wetted Parts				
Bonnet	SUS304			
Control Knob	ABS Resin			
O-ring	NBR			

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

Standard connections

1/4" face to face length of the male and female are the same. 4.96in. (126mm)

1/4" Tube stubs and other connections available as options.

3/8", 1/2" face to face length of the male and female are the same. 5.98in. (152mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information

SERIES	MATERIAL	GRADE	PORTING	PORT TYPE	GAS APPLICATION
L L Series	SS SUS SH Hastelloy [®] C-22	A Electropolish B Standard	2 2 Ports 3 3 Ports 4 4 Ports	W Welding Port G Special Specification	CO Carbon Monoxide Gas

MODEL	MAX. INLET PRESSURE	INLET/OUTLET PRESSURE GAUGE	OUTLET PRESSURE RANGE	Type	Size	Configuration	OPTIONS
61 High Pressure Regulator	16 24MPa 10 14.8MPa	5A 0~25MPa H8 0~16MPa 2A 0~10MPa 6B 0~6MPa A5 0~2.5MPa 2J 0~1.6MPa A2 0~1MPa B6 0~0.6MPa B3 0~0.3MPa 2K -0.1~0~1.6MPa 2R -0.1~0~1MPa R6 -0.1~0~0.6MPa R3 -0.1~0~0.3MPa R1 -0.1~0~0.1MPa GE Others	08 0~0.8MPa 06 0~0.6MPa 04 0~0.4MPa 02 0~0.2MPa	1 W21-14 2 W22-14 6 W26-14	2 1/8 4 1/4 6 3/8 8 1/2 0 Others	M Male F Female	2 IN/OUT Reverse Position Q Electropolish (GRADE "A") G Special Specification

L62 Series

RoHS Directive Products

High Flow Rate Applications (Needle Type)

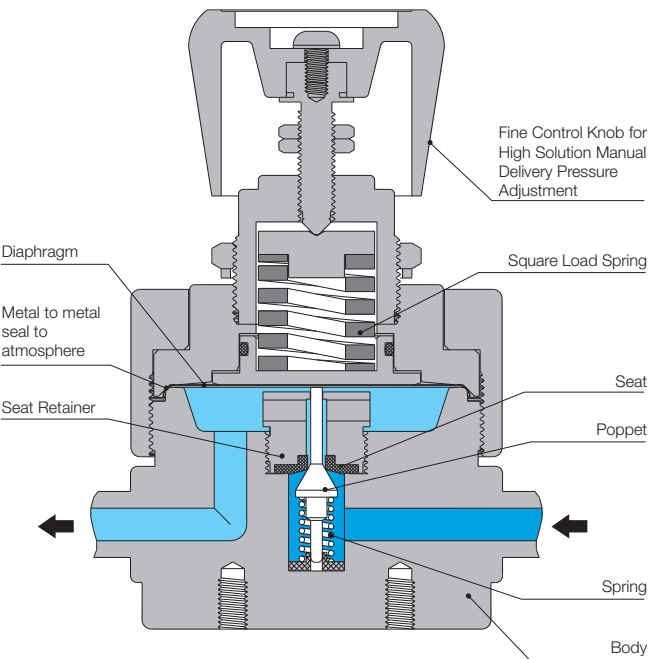
Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Supply Pressure Effect	0.001 MPaG (0.145 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSIG)
CV	0.11
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻¹¹ Pa·m ³ /sec·He (1×10 ⁻¹⁰ atm·cc/sec·He)
Internal Volume	32.3 cc (1.97 in ³) w/o fittings
Approximate weight	4.7 kg (10 lbs. 6 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]

1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg



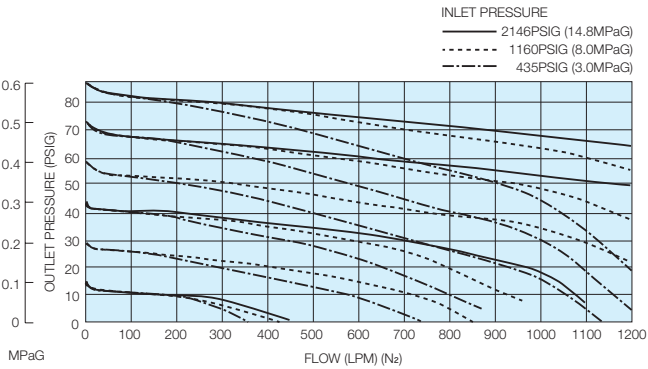
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- No filter in this unit.

Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

[illegible]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

MODEL & TYPE	L62SS	L62SH	L62SS-CO	L62SS-I
Wetted Parts				
Body	SUS316L			
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L	
Diaphragm	Hastelloy® C-22		SUS316L	Hastelloy® C-22
Seat	PCTFE			Vespel®
Spring	SUS316			
Gasket to seal for gauge	Ni		SUS316	Ni
Non-wetted Parts				
Bonnet	SUS304			
Control Knob	ABS Resin			
O-ring	NBR			

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

3/8", 1/2" face to face length of the male and female are the same.5.9in. (152mm)

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering Information

The diagram illustrates the components of a high-pressure cell, including the main body, inlet/outlet pressure gauges, and various accessories. The main body is composed of several parts: a series (L), a material (6), a grade (2), a porting (2), a port type (2), a gas application (CO), and seat materials (I, E). The main body is also connected to an inlet pressure gauge and an outlet pressure gauge. The inlet pressure gauge is connected to an inlet pressure range (0.8 MPa) and an inlet/outlet pressure gauge (0.25 MPa). The outlet pressure gauge is connected to an outlet pressure range (0.8 MPa) and an inlet/outlet pressure gauge (0.25 MPa). The main body is also connected to a gas application (CO) and seat materials (I, E). The main body is also connected to a model (62) and a high pressure regulator.

SERIES

L	L Series
---	----------

MATERIAL

SS	SUS
SH	SUS+ Hastelloy® C-22

GRADE

A	Electropolish
B	Standard

PORTING

2	2 Ports
3	3 Ports
4	4 Ports

PORT TYPE

W	Welding Port
G	Special Specification

INLET PRESSURE GAUGE

16	24MPa
13	20MPa
10	14.8MPa

MAX. INLET PRESSURE

16	24MPa
13	20MPa
10	14.8MPa

MODEL

62	High Pressure Regulator
----	-------------------------

INLET/OUTLET PRESSURE GAUGE

5A	0~25MPa
HB	0~16MPa
2A	0~10MPa
6B	0~6MPa
A5	0~2.5MPa
2J	0~1.6MPa
A2	0~1MPa
B6	0~0.6MPa
B3	0~0.3MPa
2K	-0.1~0~1.6MPa
2R	-0.1~0~1.0MPa
R6	-0.1~0~0.6MPa
R3	-0.1~0~0.3MPa
GE	Others

OUTLET PRESSURE RANGE

08	0~0.8MPa
06	0~0.6MPa
04	0~0.4MPa
02	0~0.2MPa

Type

1	W21-14
2	W22-14
6	W26-14
2	VCR
3	S-JSK
4	JSK
6	SWL
7	UJR
C	CVC
9	0 0 Others

Size

2	1/8
3	1/4
4	3/8
6	1/2
8	Others

Configuration

R	Right
L	Left
M	Male
F	Female

GAS APPLICATION

CO	Carbon Monoxide Gas
----	---------------------

SEAT MATERIALS

I	Vespel
E	PEEK

OPTIONS

2	IN/OUT Reverse Position
Q	Electropolish (GRADE"A")
G	Special Specification

L81 Series

RoHS Directive Products

High Pressure Regulator

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Supply Pressure Effect	0.000007 MPaG (0.10 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSIG)
CV	0.03
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	8.9 cc (0.54 in ³) w/o fittings
Approximate weight	2.0 kg (4 lbs. 7 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

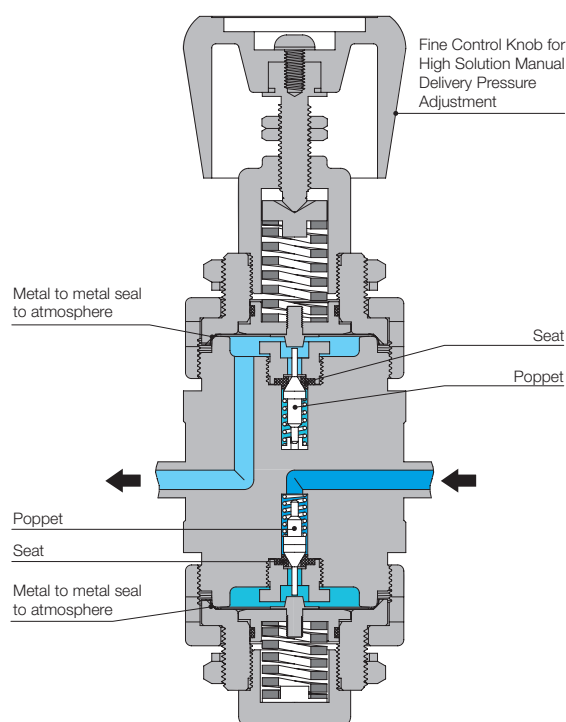
[NOTE]

1MPa = 10.2 kgf/cm² = 145.04 PSI

1MPa = 7504.36 mmHg = 295.4 inHg



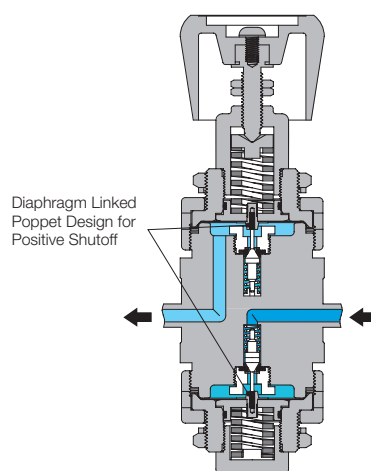
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- No filter in this unit.

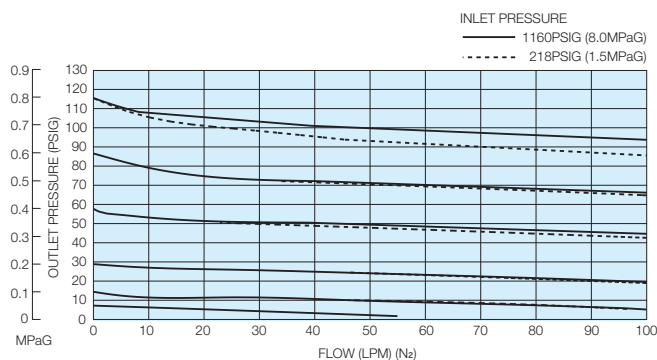
Tied Diaphragm (Optional)



[NOTE]

Operating the Tied Diaphragm Type: In order to minimize premature wear of regulator's internal parts. Be sure not to close regulator while under pressure.

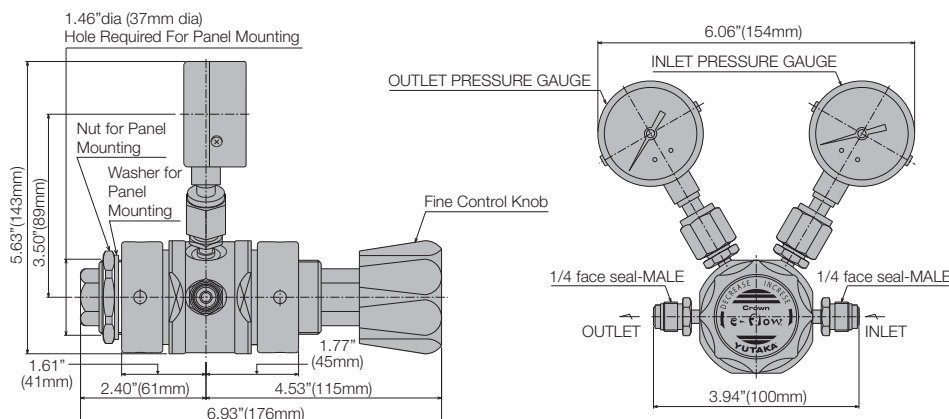
Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L81SS	L81SH	L81SS-N20	L81SS-CO	L81SS-NH3
Wetted Parts					
Body	SUS316L				
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L		
Diaphragm	Hastelloy® C-22			SUS316L	Hastelloy® C-22
Seat	PCTFE		VespeI®	PCTFE	Special Fluoroplastics
Spring	SUS316	Hastelloy® C-22	SUS316		
Gasket to seal for gauge	Ni			SUS316	Ni
Non-wetted Parts					
Bonnet	SUS316				
Control Knob	ABS Resin				
O-ring	NBR				

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

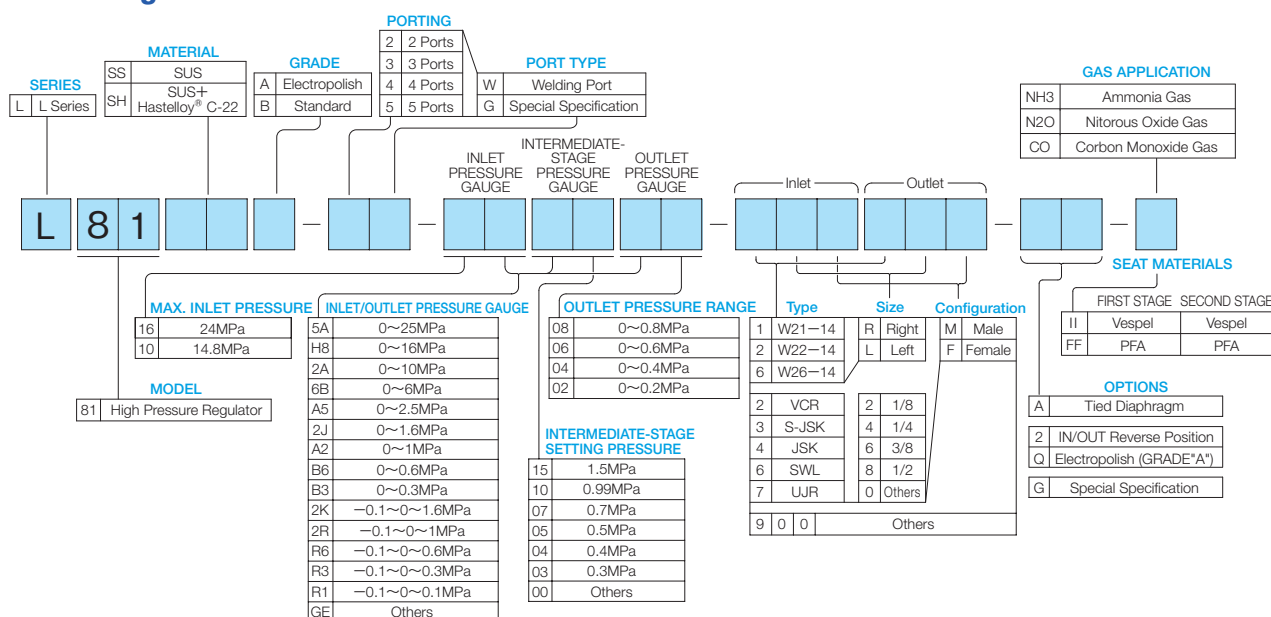
Standard connections

1/4" face to face length of the male and female are the same.3.94in. (100mm)
1/4" Tube stubs and other connections available as options.

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



L88 Series

RoHS Directive Products

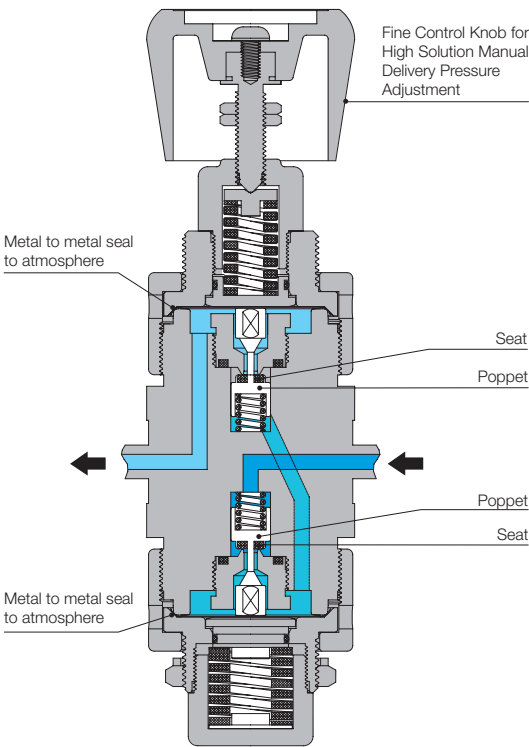
High Pressure Regulator
(Recommended for B₂H₆, NF₃ Service)

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.00075 MPaG (0.109 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSIG)
CV	0.10
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻¹¹ Pa·m ³ /sec·He (1×10 ⁻¹⁰ atm·cc/sec·He)
Internal Volume	12.58 cc (0.77 in ³) w/o fittings
Approximate weight	2.4 kg (5 lbs. 5 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

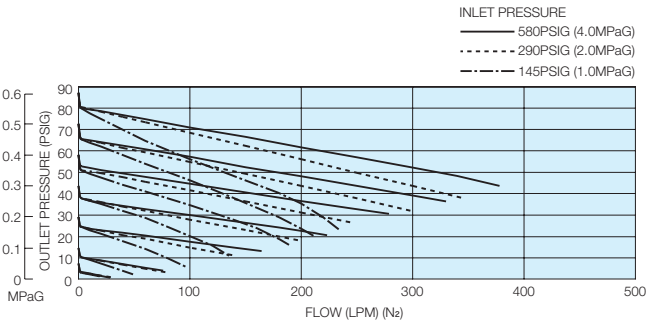


Cross sectional drawing



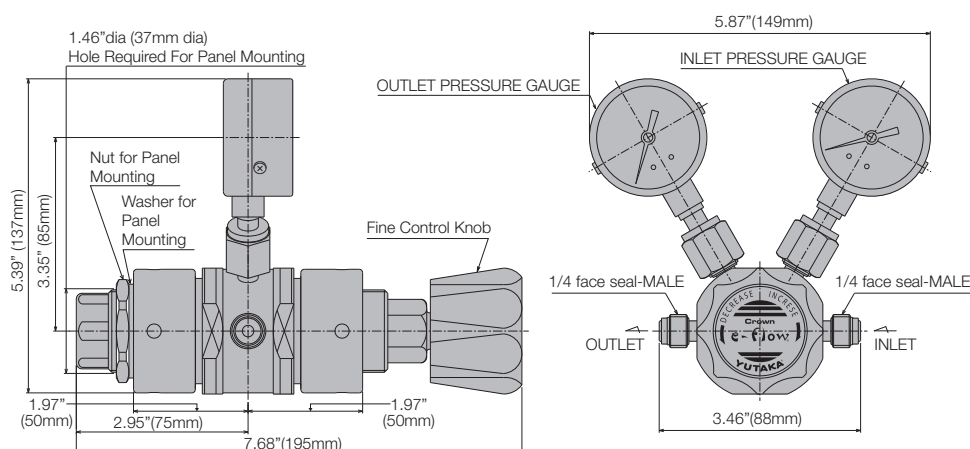
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L88SS	L88SH
Wetted Parts		
Body	SUS316L	
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22
Diaphragm	Hastelloy® C-22	
Seat	PTFE	
Spring	SUS316	
Gasket to seal for gauge	Ni	
Non-wetted Parts		
Bonnet	SUS316	
Control Knob	ABS Resin	
O-ring	NBR	

Wetted surface finishes

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

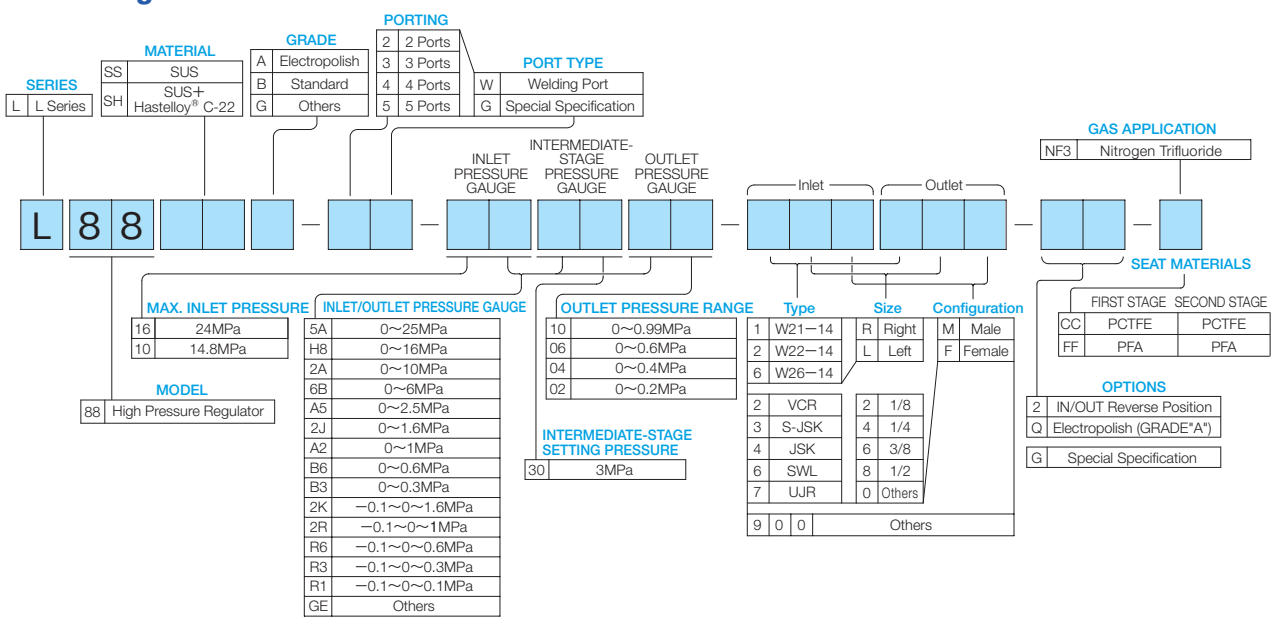
Standard connections

1/4" face to face length of the male and female are the same. (Male) 3.46in. (88mm)
 1/4" face to face length of the male and female are the same. (Female) 4.13in. (105mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



L96 Series

Absolute Pressure Regulator

Inlet Pressure	Max.1.0 MPaG (145 PSIG)
Outlet Pressure	-0.1 MPaG to 0.2 MPaG (-30 in HgG to 29.0 PSIG)
Proof Pressure	22.2 MPa (3,219 PSI)
CV	0.07
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	5.739 cc (0.35 in ³) w/o fittings
Approximate weight	1.6 kg (3 lbs. 8 oz.)
Installation	Threaded holes on the rear surface

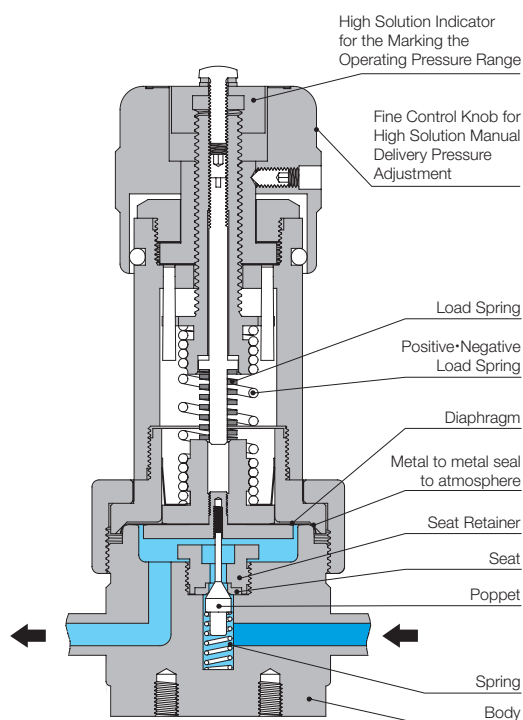
[NOTE]

1MPa = 10.2 kgf/cm² = 145.04 PSI

1MPa = 7504.36 mmHg = 295.4 inHg

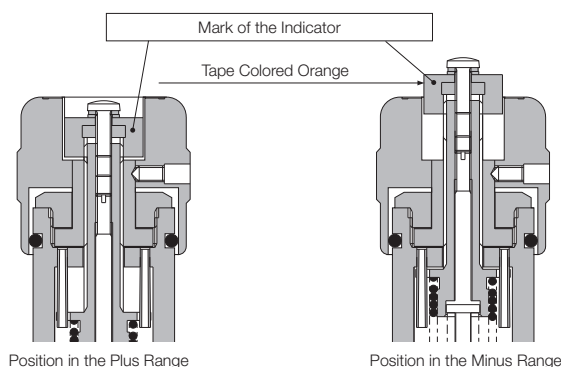


Cross sectional drawing

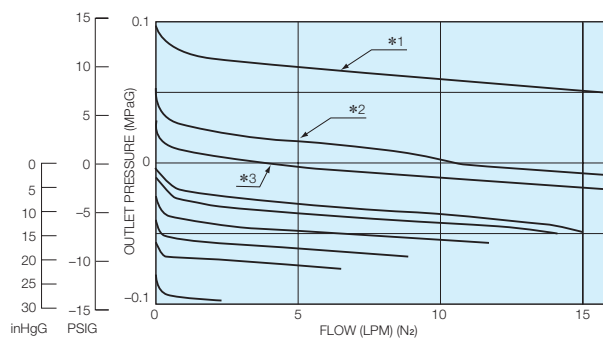


[NOTE]

- Avoid turning the control knob excessively.
- No filter in this unit.



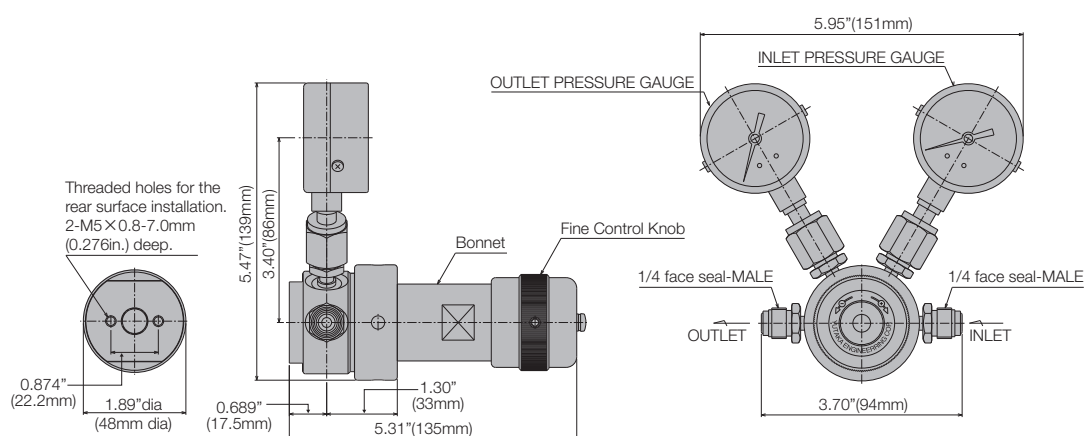
Flow characteristics



[NOTE]

- *1 Inlet Pressure=0.2MPaG (29.0 PSIG)
- *2 Inlet Pressure=0.1MPaG (14.5 PSIG)
- *3 Inlet Pressure=0.1MPaG (14.5 PSIG)
- Flow curves below 0 MPaG (0 PSIG) in the outlet pressure are under vacuumizing the outlet side.
- These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L96SS		L96SH	L96SS-CO
Wetted Parts				
Body	SUS316L			
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22		SUS316L
Diaphragm	Hastelloy® C-22			SUS316L
Seat	PCTFE			
Spring	SUS316L			
Gasket to seal for gauge	Ni			SUS316L
Non-wetted Parts				
Bonnet (B)	Chromium Plated Brass			
Cap	SUS304			
Stem	Nickel Plated Brass			
Control Knob	Chromium Plated Brass			

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

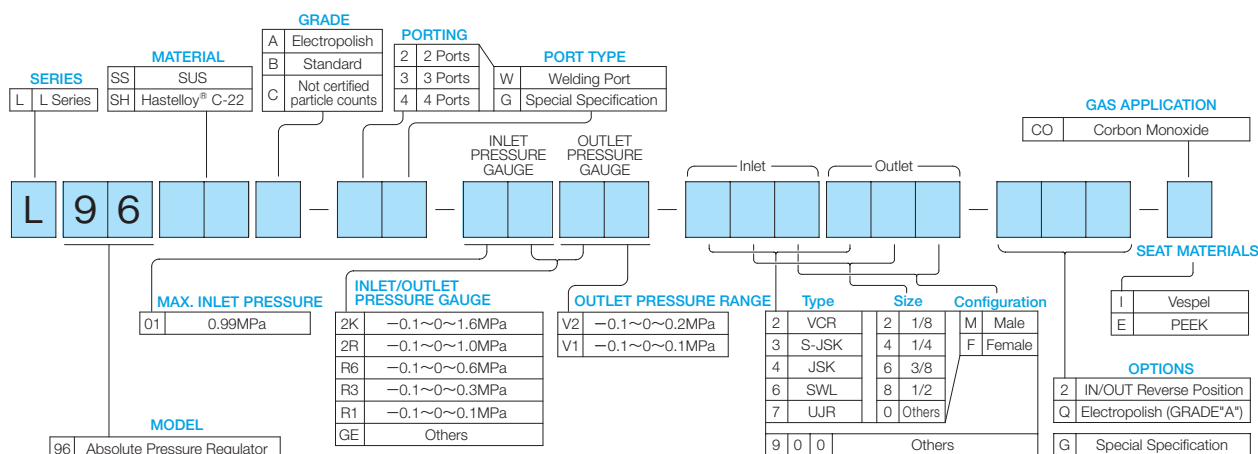
Standard connections

1/4" face to face length of the male and female are the same. 3.70in. (94mm)
1/4" Tube stubs and other connections available as options.

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



LH1 Series

RoHS Directive Products

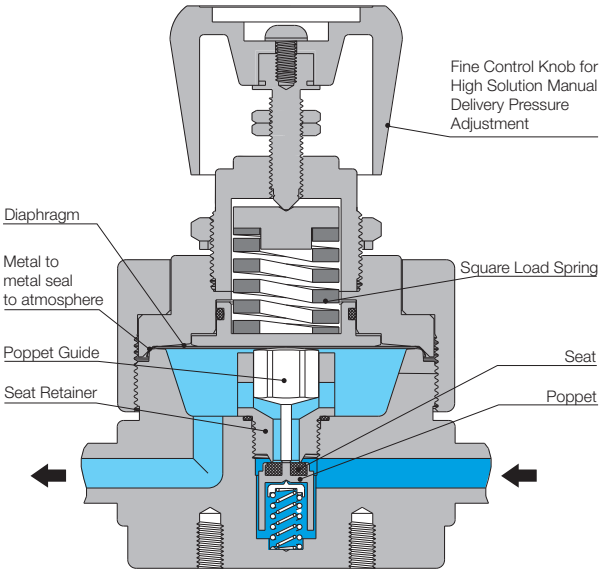
High Flow Rate Applications

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Supply Pressure Effect	0.0019 MPaG (0.28 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	9.0 MPa (1,305 PSI)
CV	0.7
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻¹¹ Pa・m ³ /sec・He (1×10 ⁻¹⁰ atm・cc/sec・He)
Internal Volume	32.3 cc (1.95 in ³) w/o fittings
Approximate weight	4.7 kg (10 lbs. 6 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg



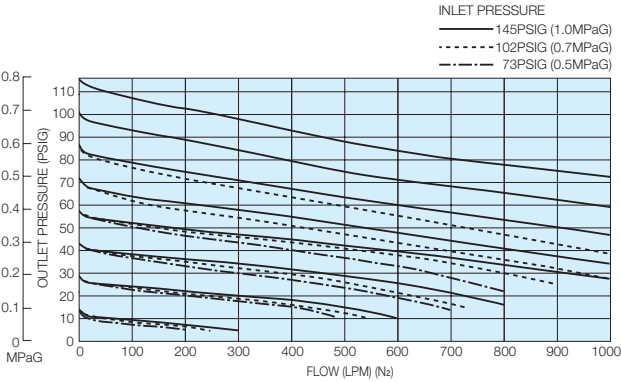
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- Series LH2 are recommended for Chlorine (CL₂) service and Nitrous Oxide (N₂O) service.
- No filter in this unit.

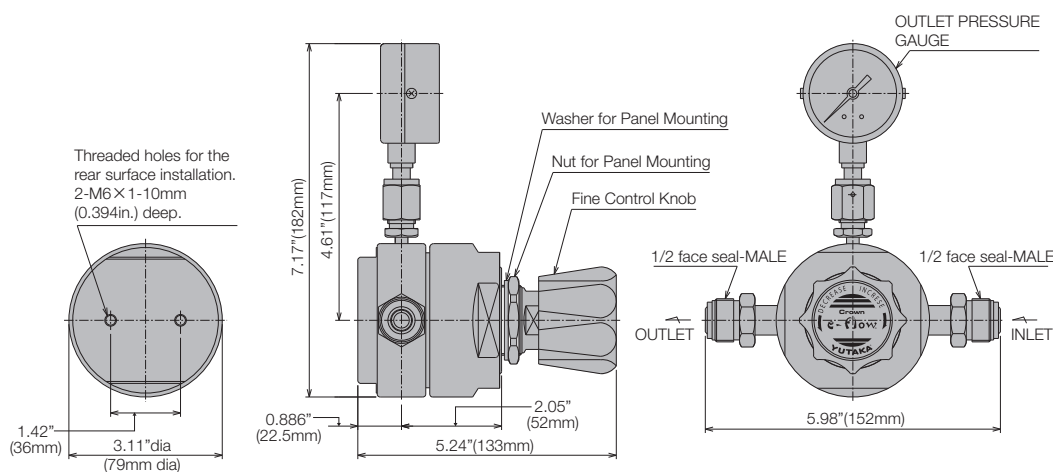
Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	LH1SS		LH1SH	LH1SS-CO
Wetted Parts				
Body	SUS316L			
Poppet	SUS316	Hastelloy® C-22	SUS316	
Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L	
Diaphragm	Hastelloy® C-22			SUS316L
Seat	PCTFE			
Spring	SUS316			
Gasket to seal for gauge	Ni			SUS316
Non-wetted Parts				
Bonnet	SUS304			
Control Knob	ABS Resin			
O-ring	NBR			

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

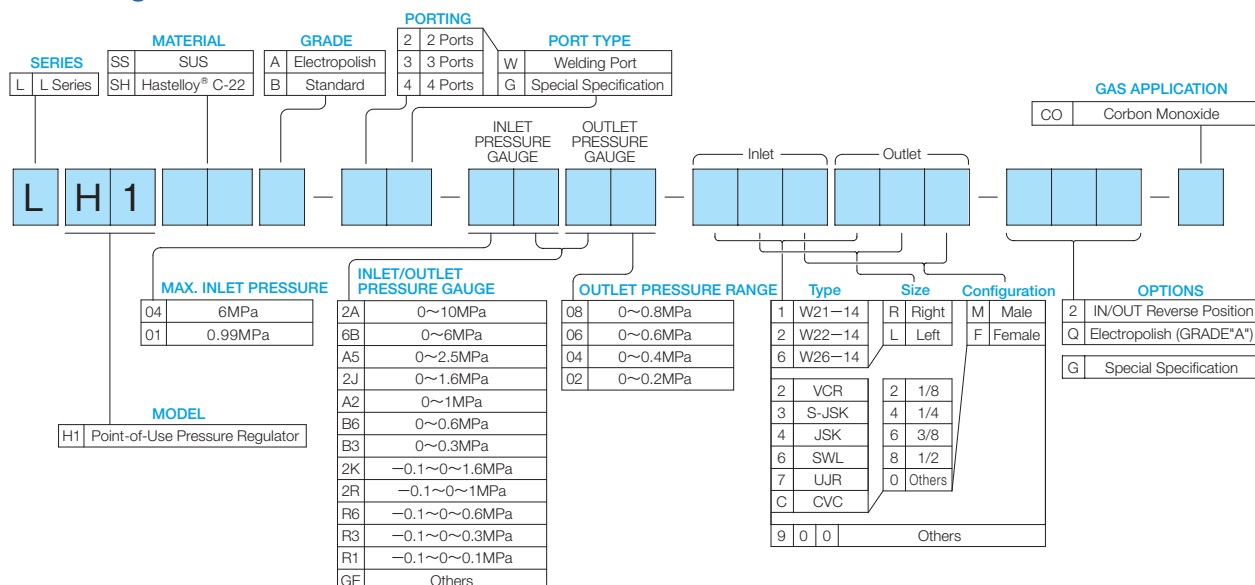
Standard connections

3/8", 1/2" face to face length of the male and female are the same. 5.98in. (152mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



LH2 Series

RoHS Directive Products

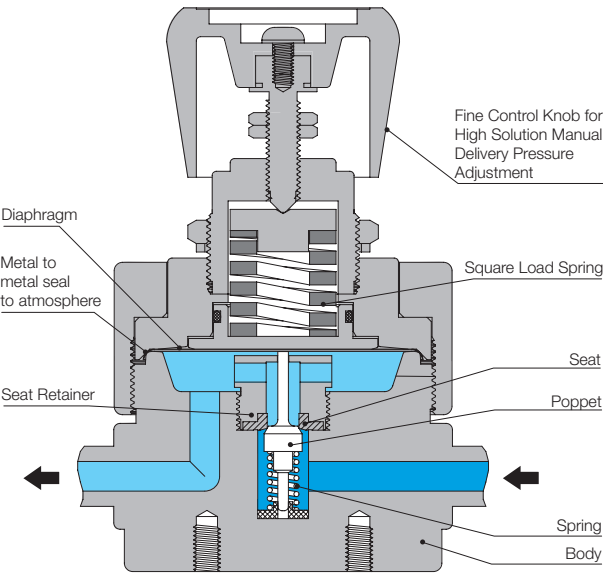
High Flow Rate Applications (Needle Type)

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Supply Pressure Effect	0.0019 MPaG (0.28 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	9.0 MPa (1,305 PSI)
CV	0.60
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻¹¹ Pa・m ³ /sec・He (1×10 ⁻¹⁰ atm・cc/sec・He)
Internal Volume	32.3 cc (1.95 in ³) w/o fittings
Approximate weight	4.7 kg (10 lbs. 6 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

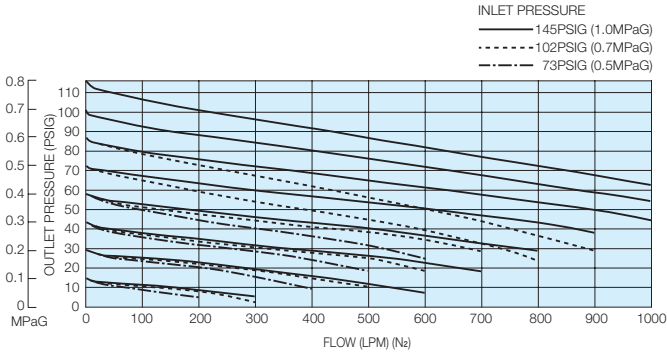


Cross sectional drawing



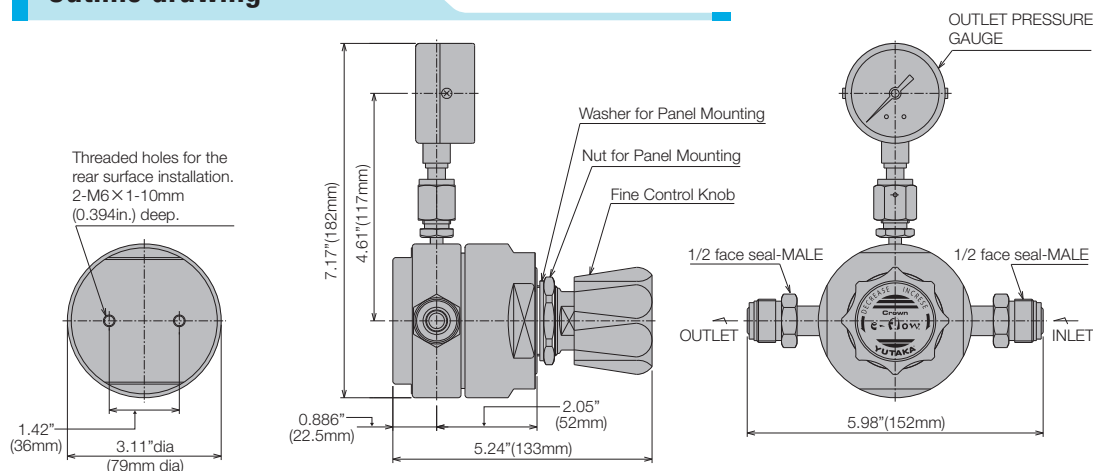
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	LH2SS	LH2SH	LH2SS-C0	LH2SH-CL2	LH2SS-N20	LH2SS-NH3
Wetted Parts						
Body	SUS316L					
Poppet	SUS316	Hastelloy® C-22	SUS316	Hastelloy® C-22	SUS316	
Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L	Hastelloy® C-22	SUS316L	
Diaphragm	Hastelloy® C-22		SUS316L	Hastelloy® C-22		
Seat	PCTFE			Fluoroplastics	Vespel®	Special Fluoroplastics
Spring	SUS316					
Gasket to seal for gauge	Ni		SUS316	Ni		
Non-wetted Parts						
Bonnet	SUS304					
Control Knob	ABS Resin					
O-ring	NBR					

Wetted surface finishes

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

Standard connections

3/8", 1/2" face to face length of the male and female are the same. 5.98in. (152mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information

SERIES		MATERIAL		GRADE		PORTING		PORT TYPE		GAS APPLICATION													
L	L Series	SS	SUS	A	Electropolish	2	2 Ports	W	Welding Port	NH3	Ammonia												
		SH	Hastelloy® C-22	B	Standard	3	3 Ports	G	Special Specification	CO	Carbon Monoxide												
						4	4 Ports			CL2	Chlorine												
										N2O	Nitrous Oxide												
<div><div>INLET PRESSURE GAUGE</div><div>OUTLET PRESSURE GAUGE</div><div>Inlet</div><div>Outlet</div></div>																							
<div><div>MAX. INLET PRESSURE</div><div>INLET/OUTLET PRESSURE GAUGE</div><div>OUTLET PRESSURE RANGE</div><div>Type</div><div>Size</div><div>Configuration</div><div>SEAT MATERIALS</div><div>OPTIONS</div></div>																							
MODEL		H2		Point-of-Use Pressure Regulator																			
		04		6MPa		2A		0~10MPa		1		W21-14		R		M		Male					
		01		0.99MPa		6B		0~6MPa		08		0~0.8MPa		2		W22-14		L		F		Female	
						A5		0~2.5MPa		06		0~0.6MPa		6		W26-14							
						2J		0~1.6MPa		04		0~0.4MPa											
						A2		0~1MPa		02		0~0.2MPa		2		VCR		2		1/8			
						A2		0~1MPa						3		S-JSK		4		1/4			
						B6		0~0.6MPa						4		JSK		6		3/8			
						B3		0~0.3MPa						6		SWL		8		1/2			
						2K		-0.1~0~1.6MPa						7		UJR		A		3/4			
						2R		-0.1~0~1MPa						C		CVC		B		1			
						R6		-0.1~0~0.6MPa										0		Others			
						R3		-0.1~0~0.3MPa															
						R1		-0.1~0~0.1MPa															
						GE		Others															

LM1 Series

RoHS Directive Products

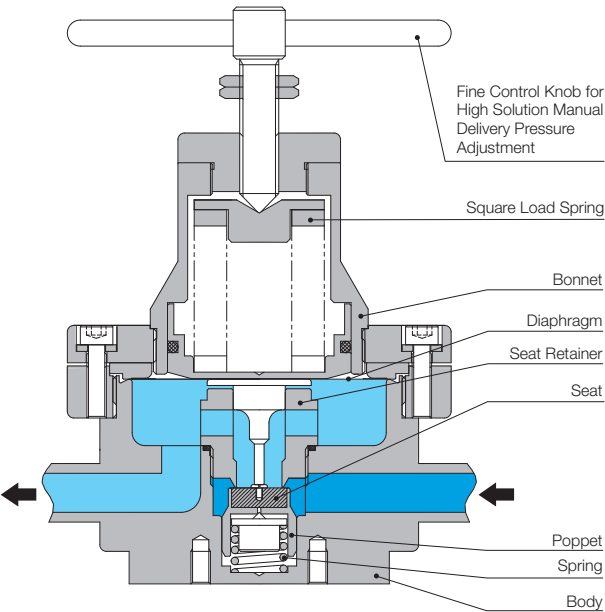
High Flow Rate Applications

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Proof Pressure	3.0 MPa (435 PSI)
CV	1.81
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻⁹ Pa・m ³ /sec・He (1×10 ⁻⁸ atm・cc/sec・He)
Approximate weight	5.5 kg (12 lbs. 2 oz.)
Installation	Threaded holes on the rear surface

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

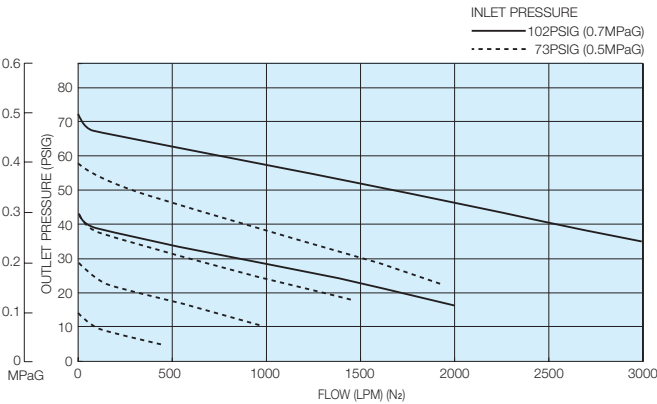


Cross sectional drawing



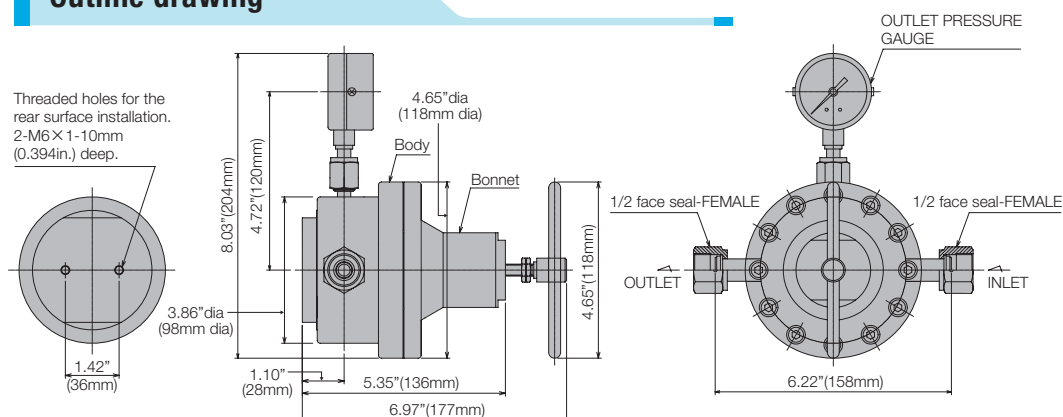
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	LM1SS
Wetted Parts	
Body	SUS316L
Poppet	SUS316
Diaphragm	Hastelloy [®] C-22
Seat	PCTFE
Gasket to seal for gauge	Ni
Gasket	PTFE
Non-wetted Parts	
Bonnet	Nickel Plated Brass
Control Knob	SUS304
O-ring	NBR

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Standard Ra (GRADE "C")	roughness on machined surface

Standard connections

1/2" face to face length of the male and female are the same. 6.22in. (158mm)
 3/4" face to face length of the male and female are the same. 7.22in. (183.5mm)
 JIS 10k-25A flange face to face length 8.78in. (223mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information

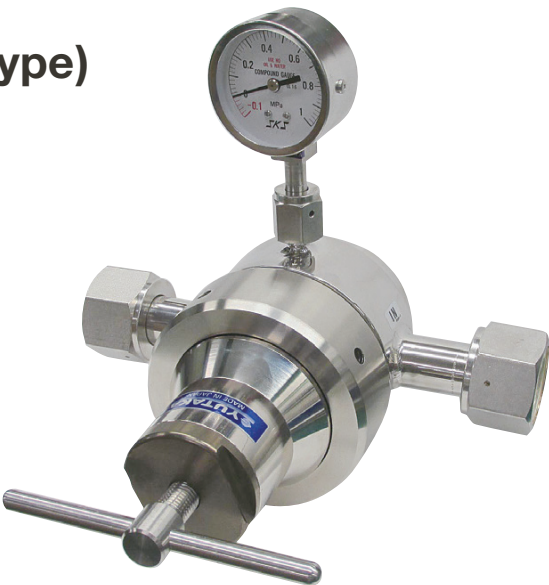
SERIES		MATERIAL		GRADE	PORTING	PORT TYPE	
L	L Series	SS	SUS	B Standard C Not certified particle counts	2 2 Ports 3 3 Ports 4 4 Ports	W Welding Port P Screw Port G Special Specification	
<div> <div>MODEL (LM1 Series)</div> <div>MAX. INLET PRESSURE</div> <div>INLET/OUTLET PRESSURE GAUGE</div> <div>OUTLET PRESSURE RANGE</div> <div>Type</div> <div>Size</div> <div>Configuration</div> <div>OPTIONS</div> </div>							
M1	Point-of-Use Pressure Regulator	02 2MPa 01 0.99MPa 99 Others	A5 0~2.5MPa 2J 0~1.6MPa A2 0~1MPa B6 0~0.6MPa B3 0~0.3MPa 2K -0.1~0~1.6MPa 2R -0.1~0~1.0MPa R6 -0.1~0~0.6MPa R3 -0.1~0~0.3MPa GE Others	08 0~0.8MPa 06 0~0.6MPa 04 0~0.4MPa 02 0~0.2MPa	0 NPT 2 VCR 6 SWL 7 UJR 8 YR T TOM P Tube Stub	6 3/8 8 1/2 A 3/4 B 1 0 Others	M Male F Female B Tube Stub
L	Flange	6 10K-10A	0 Flange				
P	Tube Stub	8 10K-15A A 10K-20A B 10K-25A C 10K-32A D 10K-40A E 10K-50A 0 Others	A Tube Stub				
9	0	0	Others				

LM2 Series

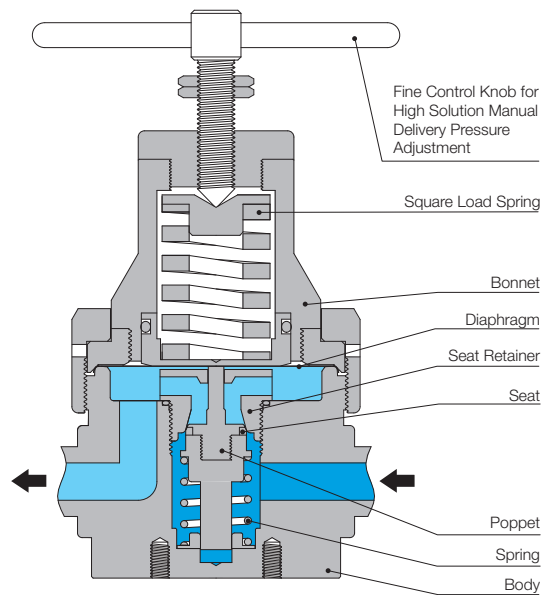
High Flow Rate Applications (Needle Type)

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Supply Pressure Effect	0.016 MPaG (2.32 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	3.0 MPa (435 PSI), 1.5 MPa (Outlet Side)
CV	1.69
Temperature	-10°C to +40°C
Outboard Leakage	Welding (W): 1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He) Screw (P): 1×10^{-9} Pa·m ³ /sec·He (1×10^{-8} atm·cc/sec·He)
Approximate weight	5.0 kg (11 lbs. 0 oz.)
Installation	Threaded holes on the rear surface

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

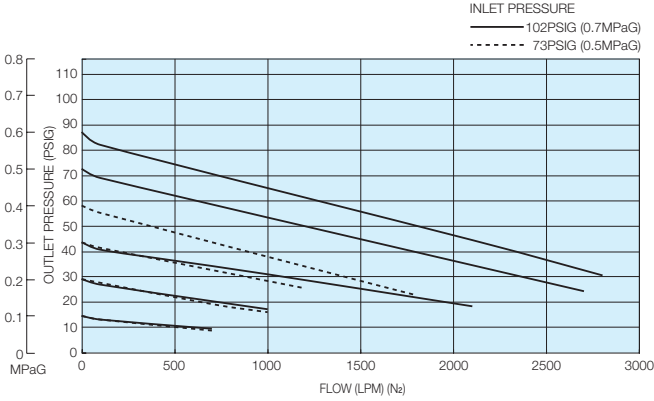


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

LL1 Series

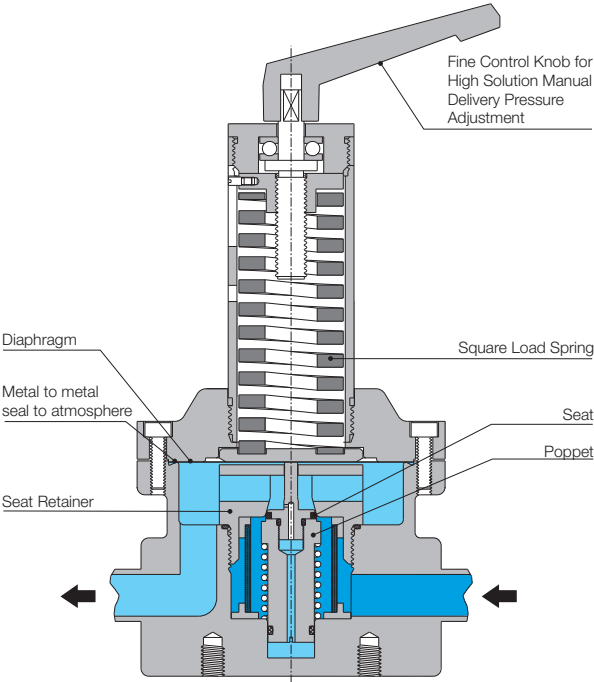
High Flow Rate Applications

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG)
Supply Pressure Effect	0.00158 MPaG (0.229 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	3.0 MPa (435 PSI)
CV	1.69
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻⁹ Pa·m ³ /sec·He (1×10 ⁻⁸ atm·cc/sec·He) (GRADE"B")
Approximate weight	8.4 kg (18 lbs. 8 oz.)
Installation	Threaded holes on the rear surface

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

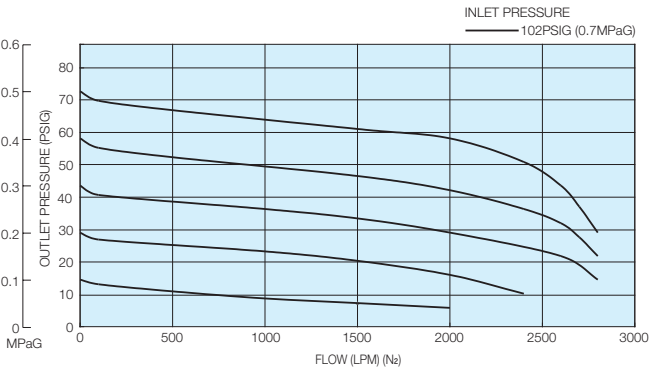


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Technical drawings of the 1/2" NPT x 1/2" NPT 3000 Series High Pressure Differential Pressure Transmitter, showing side, front, and top views with dimensions in inches and millimeters.

Side View Dimensions:

- Total Height: 7.80" (198mm)
- Bonnet Height: 4.53" (115mm)
- Body Diameter: 4.53" dia (115mm)
- Bonnet Diameter: 4.65" dia (118mm)
- Fine Control knob for High: 1.90" dia (48.2mm)
- Body Width: 8.35" (212mm)
- Knob Width: 1.22" (31mm)
- Knob Depth: 3.15" (80mm)
- Knob Diameter: 1.81" (46mm)

Front View Dimensions:

- Total Width: 8.27" (210mm)
- Total Height: 10.157" (258mm)
- Total Depth: 1.81" (46mm)
- Outlet Pressure Gauge: 3/4 face seal-MALE
- Inlet Pressure Gauge: 3/4 face seal-MALE
- Outlet: 3/4 face seal-MALE
- Inlet: 3/4 face seal-MALE

Top View Dimensions:

- Body Diameter: 4.53" dia (115mm)
- Hole Diameter: 2.36" (60mm)
- Hole Depth: 0.472" (12mm)

Labels:

- Body
- Bonnet
- Fine Control knob for High
- OUTLET PRESSURE GAUGE
- INLET PRESSURE GAUGE
- OUTLET
- INLET

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice

MODEL & TYPE	LL1SS
Wetted Parts	
Body	SUS316L
Poppet & Seat Retainer	SUS316L
Diaphragm	Hastelloy® C-22
Seat	PTFE
Spring	SUS316
Gasket to seal for gauge	Ni
O-ring	VITON®
Non-wetted Parts	
Bonnet	SUS304
Control Knob	Aluminum

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Standard Ra (GRADE "C")	roughness on machined surface

3/4" face to face length of the male and female are the same. 8.27in. (210mm)
JIS 10k-25A flange face to face length 9.45in. (240mm)

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male

The diagram illustrates the assembly structure of the L Series Point-of-Use Pressure Regulator. The main assembly consists of the following components in sequence:

- L Series** (L)
- Material** (SS, SUS)
- Grade** (B, C)
- Porting** (2, 3, 4 Ports)
- Port Type** (W, P, G)
- Inlet Pressure Gauge**
- Outlet Pressure Gauge**
- Inlet** (3/4, 1/2, 3/8, 1/4, 1/8, 1/16, 1/32, 1/64, 1/128, 1/256, 1/512, 1/1024, 1/2048, 1/4096, 1/8192, 1/16384, 1/32768, 1/65536, 1/131072, 1/262144, 1/524288, 1/1048576, 1/2097152, 1/4194304, 1/8388608, 1/16777216, 1/33554432, 1/67108864, 1/134217728, 1/268435456, 1/536870912, 1/1073741824, 1/2147483648, 1/4294967296, 1/8589934592, 1/17179869184, 1/34359738368, 1/68719476736, 1/137438953472, 1/274877906944, 1/549755813888, 1/1099511627776, 1/2199023255552, 1/4398046511104, 1/8796093022208, 1/17592186044416, 1/35184372088832, 1/70368744177664, 1/140737488355328, 1/281474976710656, 1/562949953421312, 1/1125899906842624, 1/2251799813685248, 1/4503599627370496, 1/9007199254740992, 1/18014398509481984, 1/36028797018963968, 1/72057594037927936, 1/144115188075855872, 1/288230376151711744, 1/576460752303423488, 1/1152921504606846976, 1/2305843009213693952, 1/4611686018427387904, 1/9223372036854775808, 1/18446744073709551616, 1/36893488147419103232, 1/73786976294838206464, 1/147573952589676412928, 1/295147905179352825856, 1/590295810358705651712, 1/1180591620717411303424, 1/2361183241434822606848, 1/4722366482869645213696, 1/9444732965739290427392, 1/18889465931478580854784, 1/37778931862957161709568, 1/75557863725914323419136, 1/151115727451828646838272, 1/302231454903657293676544, 1/604462909807314587353088, 1/1208925819614629174706176, 1/2417851639229258349412352, 1/4835703278458516698824704, 1/9671406556917033397649408, 1/19342813113834066795298816, 1/38685626227668133590597632, 1/77371252455336267181195264, 1/154742504910672534362390528, 1/309485009821345068724781056, 1/618970019642690137449562112, 1/1237940039285380274899124224, 1/2475880078570760549798248448, 1/4951760157141521099596496896, 1/9903520314283042199192993792, 1/19807040628566084398385987584, 1/39614081257132168796771975168, 1/79228162514264337593543950336, 1/158456325028528675187087900672, 1/316912650057057350374175801344, 1/633825300114114700748351602688, 1/1267650600228229401496703205376, 1/2535301200456458802993406410752, 1/5070602400912917605986812821504, 1/10141204801825835211973625643008, 1/20282409603651670423947251286016, 1/40564819207303340847894502572032, 1/81129638414606681695789005144064, 1/162259276829213363391578010288128, 1/324518553658426726783156020576256, 1/649037107316853453566312041152512, 1/1298074214633706907132624082305024, 1/2596148429267413814265248164610048, 1/5192296858534827628530496329220096, 1/10384593717069655257060992658440192, 1/20769187434139310514121985316880384, 1/41538374868278621028243970633760768, 1/83076749736557242056487941267521536, 1/166153499473114484112975882535043072, 1/332306998946228968225951765070086144, 1/664613997892457936451903530140172288, 1/1329227995784915872903807060280344576, 1/2658455991569831745807614120560689152, 1/5316911983139663491615228241121378304, 1/10633823966279326983230456482242756608, 1/21267647932558653966460912964485513216, 1/42535295865117307932921825928971026432, 1/85070591730234615865843651857942052864, 1/170141183460469231731687303715884105728, 1/340282366920938463463374607431768211456, 1/680564733841876926926749214863536422912, 1/1361129467683753853853498429727072845824, 1/2722258935367507707706996859454145691648, 1/5444517870735015415413993718908291383296, 1/10889035741470030830827987437816582766592, 1/21778071482940061661655974875633165533184, 1/43556142965880123323311949751266331066368, 1/87112285931760246646623899502532662132736, 1/174224571863520493293247799005065324265472, 1/348449143727040986586495598010130648530944, 1/696898287454081973172991196020261297061888, 1/1393796574908163946345982392040522594123776, 1/2787593149816327892691964784081045188247552, 1/5575186299632655785383929568162090376495104, 1/11150372599265311570767859136324180752990208, 1/22300745198530623141535718272648361505980416, 1/44601490397061246283071436545296723011960832, 1/89202980794122492566142873090593

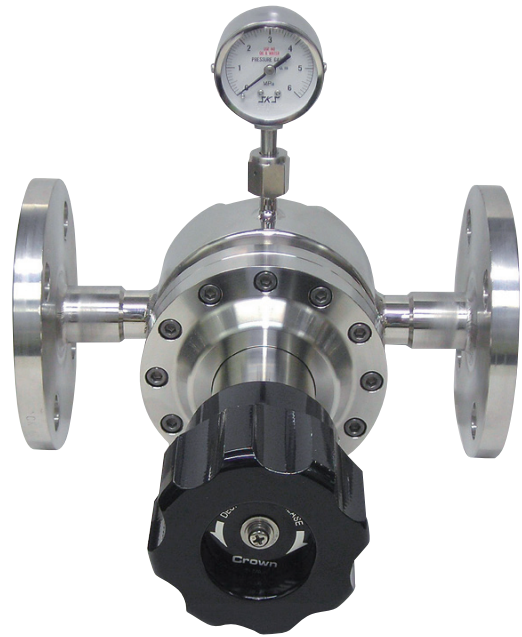
LL2 Series

RoHS Directive Products

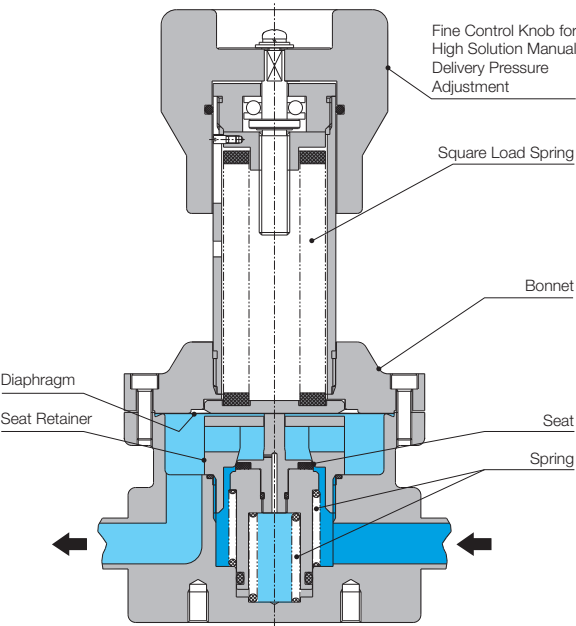
High Flow Rate Applications

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG)
Supply Pressure Effect	0.00162 MPaG (0.235 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	3.0 MPa (435 PSI)
CV	2.42
Temperature	-10°C to +40°C
Outboard Leakage	1×10 ⁻⁹ Pa・m ³ /sec・He (1×10 ⁻⁸ atm・cc/sec・He) (GRADE"B")
Approximate weight	12.2 kg (26 lbs. 14 oz.)
Installation	Threaded holes on the rear surface

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

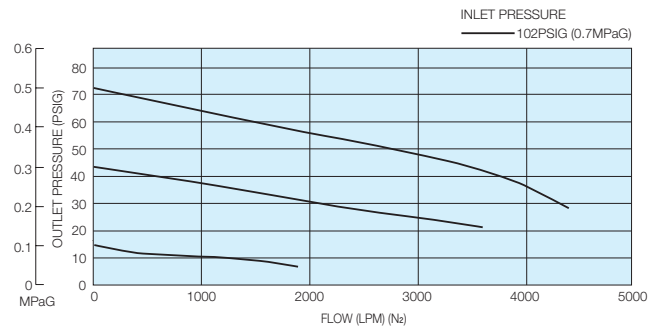


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

[illegible]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

MODEL & TYPE	LL2SS
Wetted Parts	
Body	SUS316L
Poppet & Seat Retainer	SUS316L
Diaphragm	Hastelloy® C-22
Seat	PTFE
Spring	SUS316
Gasket to seal for gauge	Ni
O-ring	PTFE FKM
Non-wetted Parts	
Bonnet	SUS304
Control Knob	A6063S

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Standard Ra (GRADE "C")	roughness on machined surface

JIS 10k-40A flange face to face length
..... **9.606in. (244mm)**

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

SERIES

L	L Series
---	----------

MATERIAL

SS	SUS
----	-----

GRADE

B	Standard
C	Not certified particle counts

PORTING

2	2 Ports
3	3 Ports
4	4 Ports

PORT TYPE

W	Welding Port
P	Screw Port
G	Special Specification

MODEL

L2	Point-of-Use Pressure Regulator
----	---------------------------------

MAX. INLET PRESSURE

02	2MPa
01	0.99MPa
99	Others

INLET/OUTLET PRESSURE GAUGE

A5	0~2.5MPa
2J	0~1.6MPa
A2	0~1MPa
B6	0~0.6MPa
B3	0~0.3MPa
2K	-0.1~0~1.6MPa
2R	-0.1~0~1.0MPa
R6	-0.1~0~0.6MPa
R3	-0.1~0~0.3MPa
GE	Others

OUTLET PRESSURE RANGE

08	0~0.8MPa
06	0~0.6MPa
04	0~0.4MPa
02	0~0.2MPa

Type

2	VCR
3	S-JSK
4	JSK
6	SWL
7	UJR

Size

6	3/8
8	1/2
A	3/4
B	1
0	Others

Configuration

M	Male
F	Female

OPTIONS

2	IN/OUT Reverse Position
Q	Electropolish (GRADE "A")
G	Special Specification

L18 Series

RoHS Directive Products

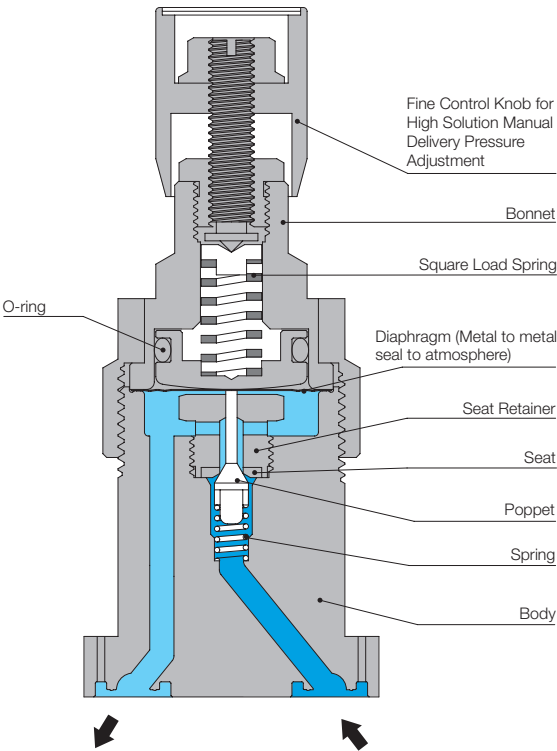
Miniature Pressure Regulator
Standard Flow Rate Applications

Inlet Pressure	Max.0.99 MPaG (Max.144 PSIG)
Outlet Pressure	Max.0.7 MPaG (Max.102 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4MPa, 0~0.6MPa, 0~0.7MPa)
Supply Pressure Effect	0.0007 MPaG (0.102 PSIG) per 0.05 MPaG (0.102 PSIG)
Proof Pressure	1.5 MPa (218 PSI)
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Approximate weight	IGS: 420 g (0 lbs. 15 oz.), Welding: 360 g (0 lbs. 13 oz.)
Installation	Threaded holes on the rear surface

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

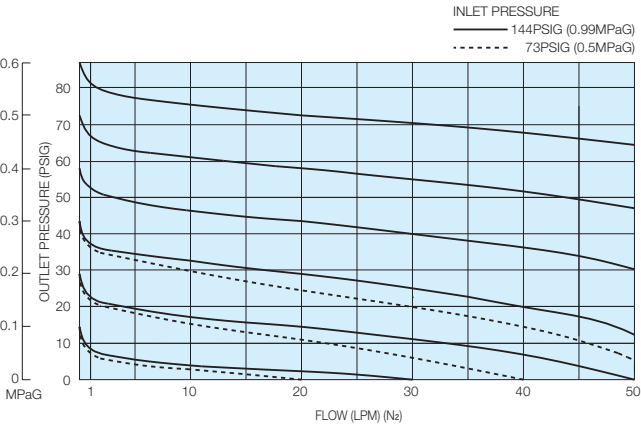


Cross sectional drawing



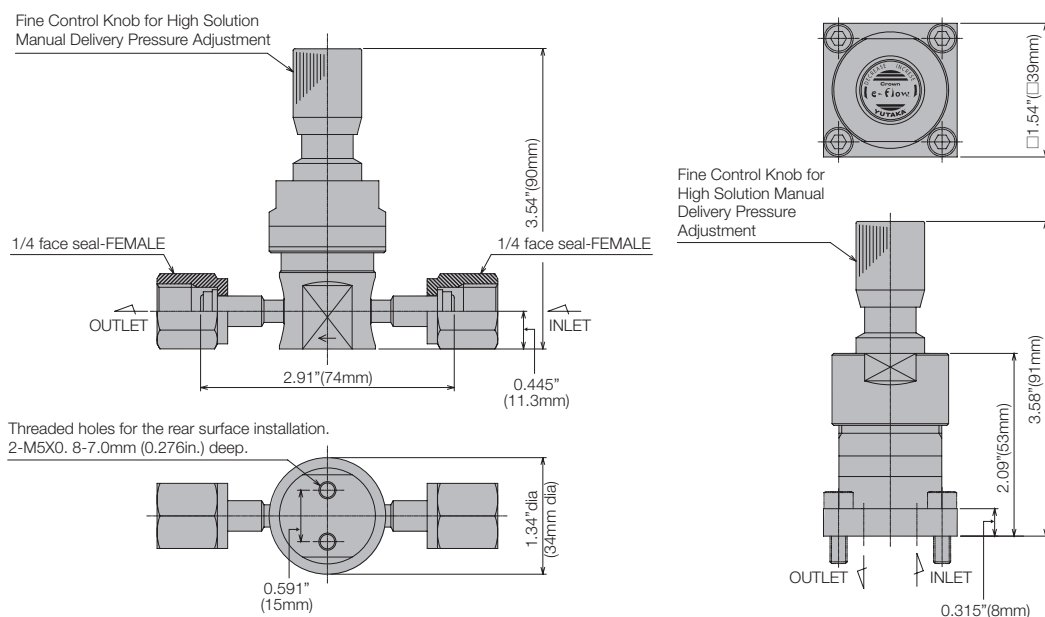
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L18SS	L18SH	L18SV	L18VH	L18SH-CL2
Wetted Parts					
Body	SUS316L		SUS316L V.I.M		SUS316L
Poppet	SUS316L	Hastelloy® C-22	SUS316L	Hastelloy® C-22	
Diaphragm	Hastelloy® C-22				
Seat	PCTFE				Fluoroplastics
Gasket to seal for gauge	Ni				
Non-wetted Parts					
Bonnet	Chromium Plated Brass				
Control Knob	Chromium Plated Brass				
O-ring	NBR				

Wetted surface finishes

Standard Ra
(GRADE "S")

3.2µin. (0.08µm) or less

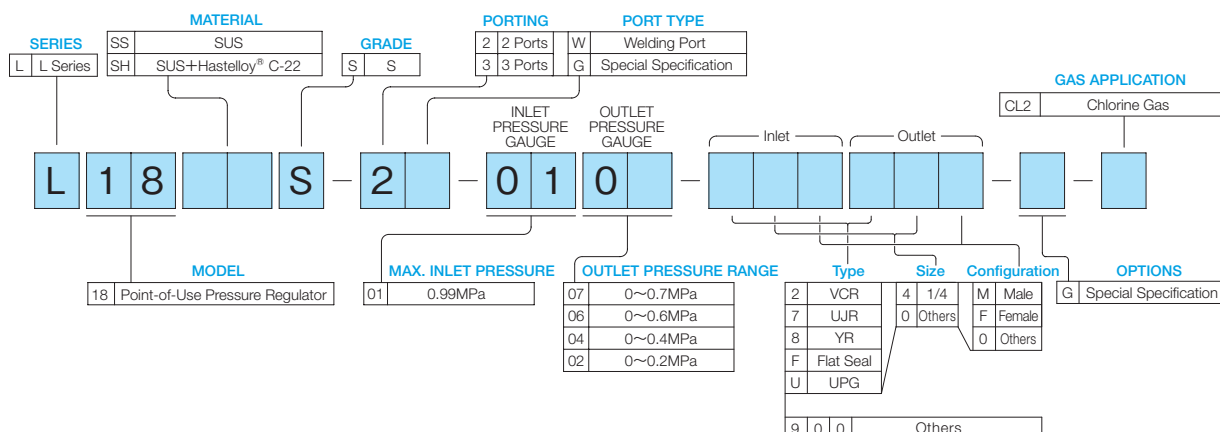
Standard connections

1/4" face to face length of the male and female are the same. 2.91in. (74mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



L18H Series

RoHS Directive Products

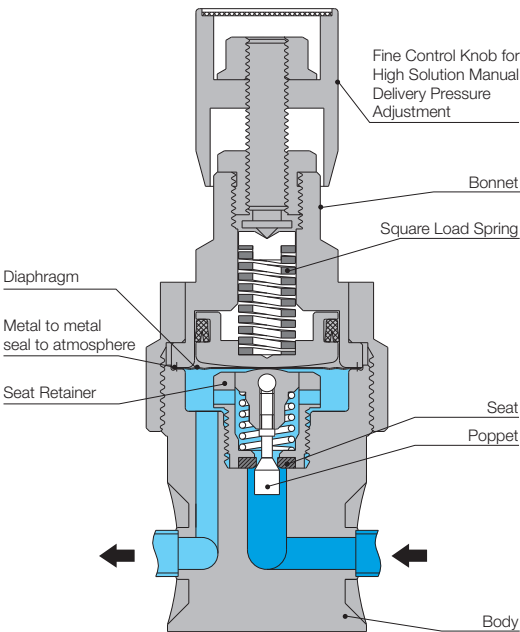
Miniature Pressure Regulator Medium Flow Rate Applications

Inlet Pressure	Max.0.99 MPaG (Max.144 PSIG)
Outlet Pressure	Max.0.7 MPaG (Max.102 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.7 MPa)
Proof Pressure	1.5 MPa (218 PSI)
Temperature	-10°C to +40°C
Outboard Leakage	1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Approximate weight	0.36 kg (0 lbs. 13 oz.)
Installation	Threaded holes on the rear surface

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

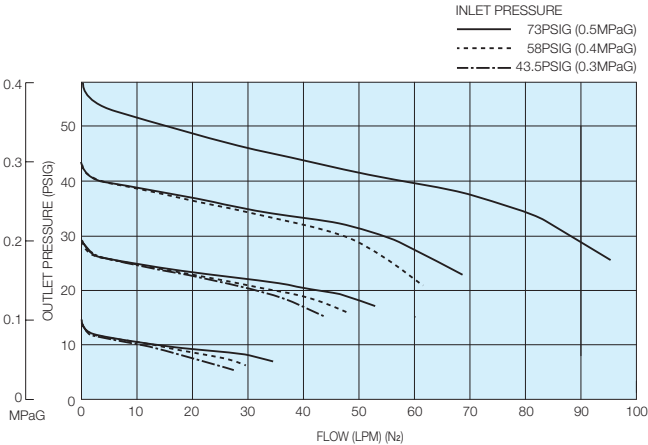


Cross sectional drawing



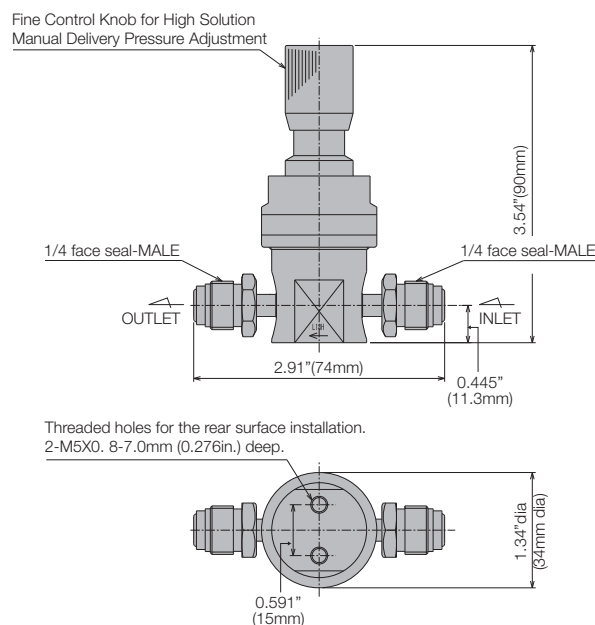
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	L18HSS	L18HSH	L18HSV	L18HVH	L22HSH-CL2
Wetted Parts					
Body	SUS316L		SUS316L V.I.M		SUS316L
Poppet	SUS316L	Hastelloy® C-22	SUS316L	Hastelloy® C-22	
Diaphragm	Hastelloy® C-22				
Seat	PCTFE				Fluoroplastics
Gasket to seal for gauge	Ni				
Non-wetted Parts					
Bonnet	Chromium Plated Brass				
Control Knob	Chromium Plated Brass				
O-ring	NBR				

Wetted surface finishes

Standard Ra (GRADE "S")	3.2μin. (0.08μm) or less
Standard Ra (GRADE "A")	7μin. (0.18μm) or less
Standard Ra (GRADE "B")	32μin. (0.80μm) or less

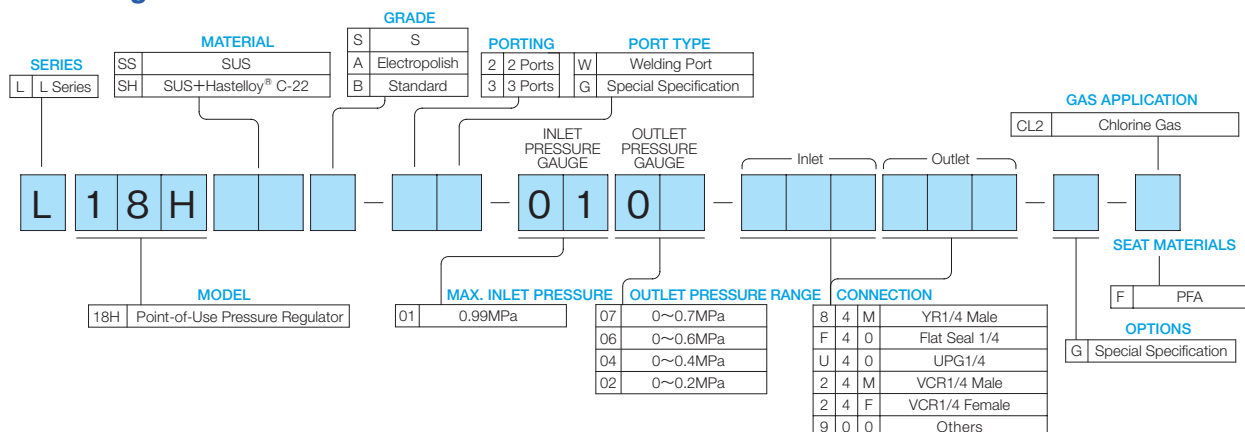
Standard connections

1/4" face to face length of the male and female are the same. 2.91in. (74mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R20 Series

High Pressure Regulator

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.00086 MPaG (0.12 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSI), 1.5 MPa (Outlet Side)
CV	0.08
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Internal Volume	4.67 cc (0.28 in ³) w/o fittings
Approximate weight	1.29 kg (2 lbs.14 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

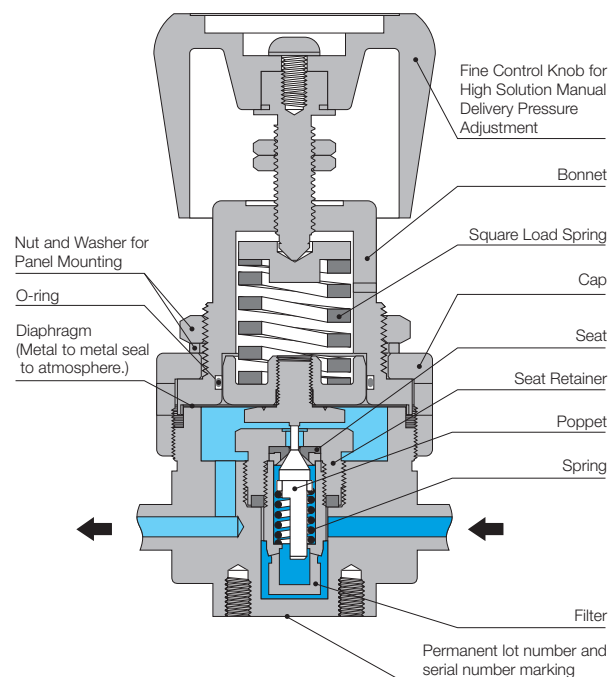
[NOTE]

1MPa = 10.2 kgf/cm² = 145.04 PSI

1MPa = 7504.36 mmHg = 295.4 inHg



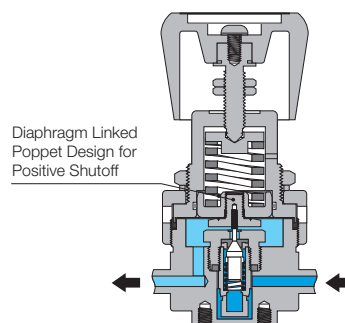
Cross sectional drawing



[NOTE]

- Avoid turning the control knob excessively.
- Series R25, R26 are recommended for Chlorine (Cl₂) service and Nitrous Oxide (N₂O) service.

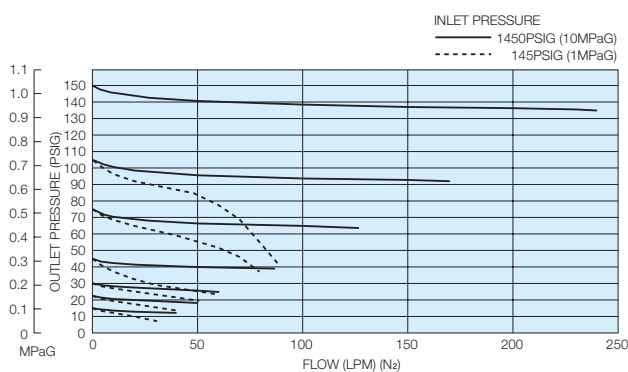
Tied Diaphragm (Optional)



[NOTE]

Operating the Tied Diaphragm Type: In order to minimize premature wear of regulator's internal parts. Be sure not to close regulator while under pressure.

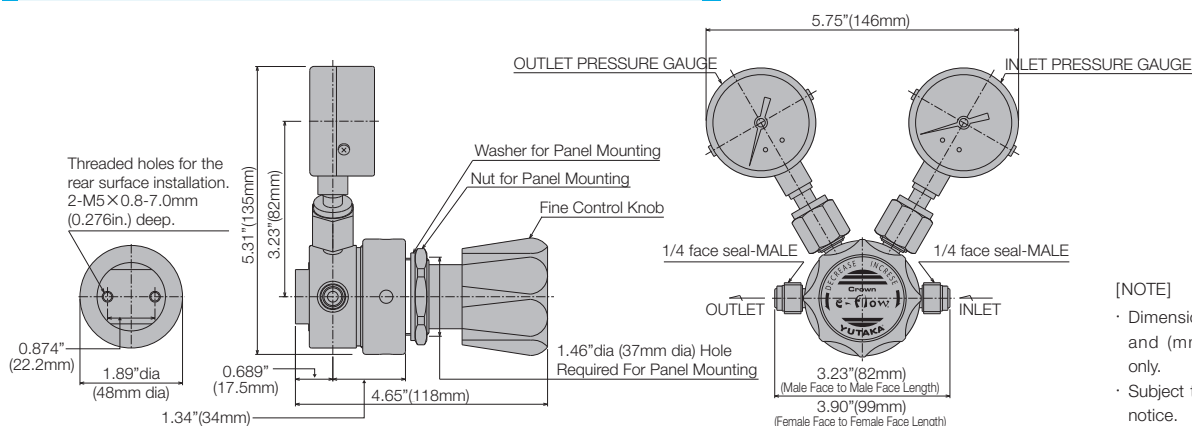
Flow characteristics



[NOTE]

- These tests were performed at ambient conditions.

Outline drawing



Materials of construction

MODEL & TYPE	R20SS	R20SH	R20SS-CO
Wetted Parts			
Body	SUS316L		
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22	SUS316L
Diaphragm	SUS316L	Hastelloy® C-22	SUS316L
Seat	PCTFE		
Spring	SUS316		
Gasket	PCTFE and PTFE		
Gasket to seal for gauge	Ni		SUS316
Non-wetted Parts			
Bonnet	Nickel Plated Brass		
Cap	Nickel Plated Brass		
Control Knob	ABS Resin		
O-ring	NBR		

Wetted surface finishes

Standard Ra (GRADE "B" & "C")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

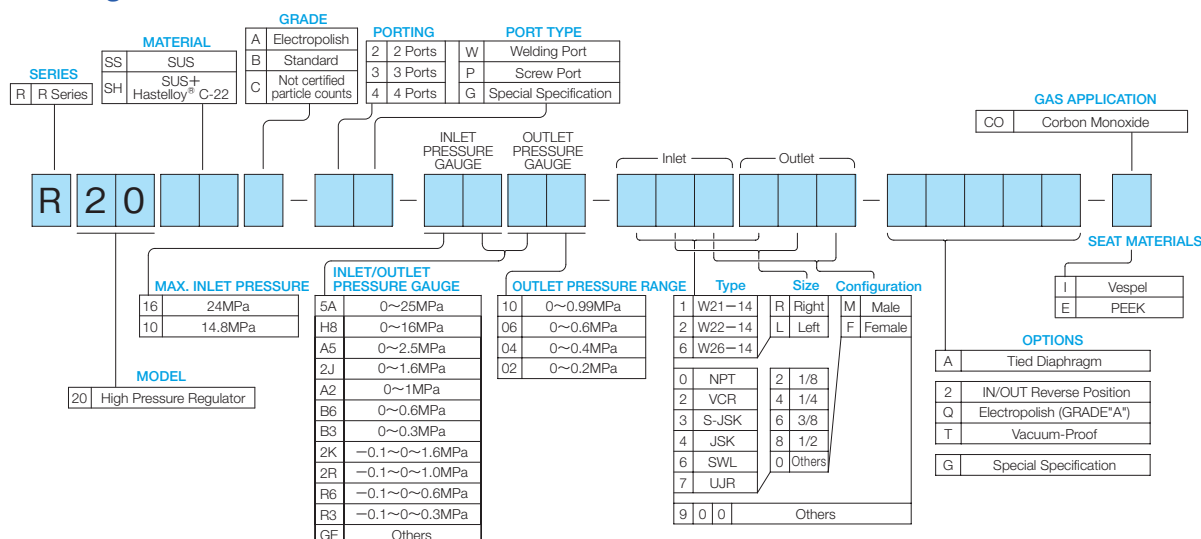
Standard connections

1/4" NPT body length	1.93in. (48mm)
1/4" face to face length of the male and female are the same. (Male)	3.23in. (82mm)
1/4" face to face length of the male and female are the same. (Female)	3.90in. (99mm)
1/4" sus tube fitting length	4.37in. (111mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R25 Series

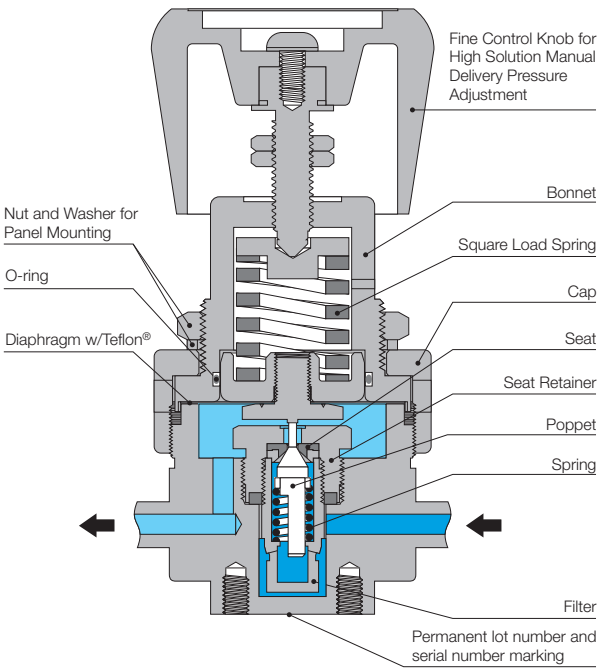
Point-of-Use Pressure Regulator

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.00178 MPaG (0.27 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSI), 1.5 MPa (Outlet Side)
CV	0.12
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Internal Volume	4.67 cc (0.28 in ³) w/o fittings
Approximate weight	0.96 kg (2 lbs. 2 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

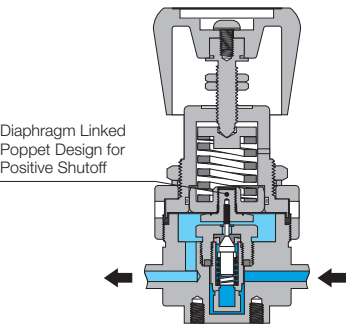


Cross sectional drawing



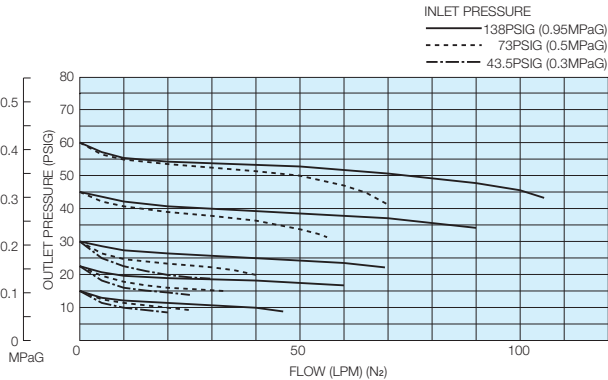
[NOTE]
· Avoid turning the control knob excessively.
· For purging at 870 PSIG (6 MPaG) and higher, operate the unit in consideration of changing the outlet pressure by the supply pressure effect.

Tied Diaphragm (Optional)



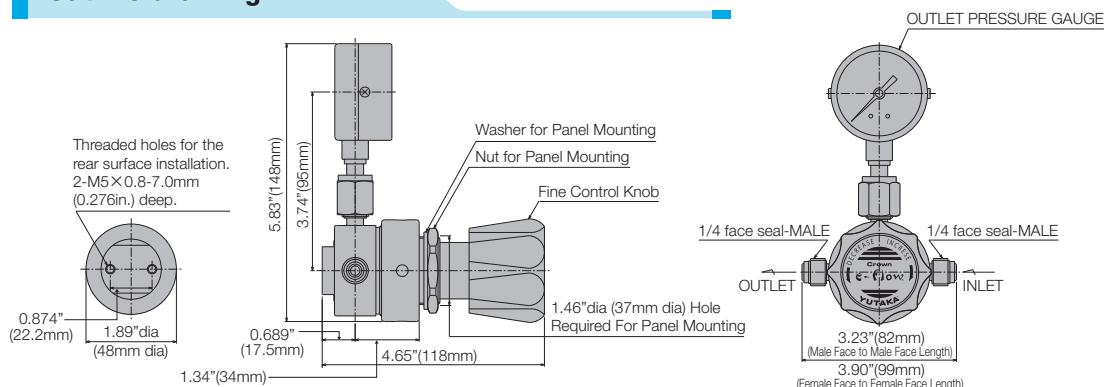
[NOTE]
Operating the Tied Diaphragm Type: In order to minimize premature wear of regulator's internal parts. Be sure not to close regulator while under pressure.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	R25SS	R25SH	R25SH-CL2	R25SS-N2O	R25SS-CO
Wetted Parts					
Body	SUS316L				
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22		SUS316L	
Diaphragm	SUS316L	Hastelloy® C-22		SUS316L	
Seat	PCTFE		Special Fluoroplastics	Vespeℙ®	PCTFE
Spring	SUS316				
Gasket	PCTFE and PTFE				
Gasket to seal for gauge	Ni				SUS316
Non-wetted Parts					
Bonnet	Nickel Plated Brass				
Cap	Nickel Plated Brass				
Control Knob	ABS Resin				
O-ring	NBR				

Wetted surface finishes

Standard Ra (GRADE "B"&"C")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

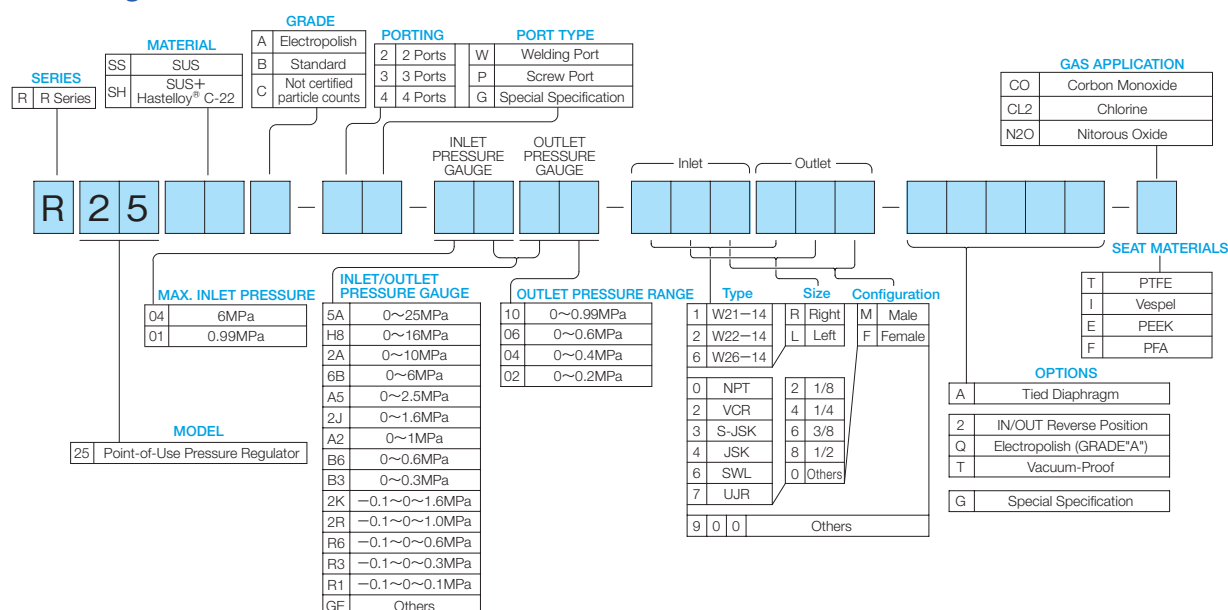
Standard connections

1/4" NPT body length **1.93in. (48mm)**
1/4" face to face length of the male and female are the same. (Male) **3.23in. (82mm)**
1/4" face to face length of the male and female are the same. (Female) **3.90in. (99mm)**
1/4" sus tube fitting length **4.37in. (111mm)**

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R26 Series

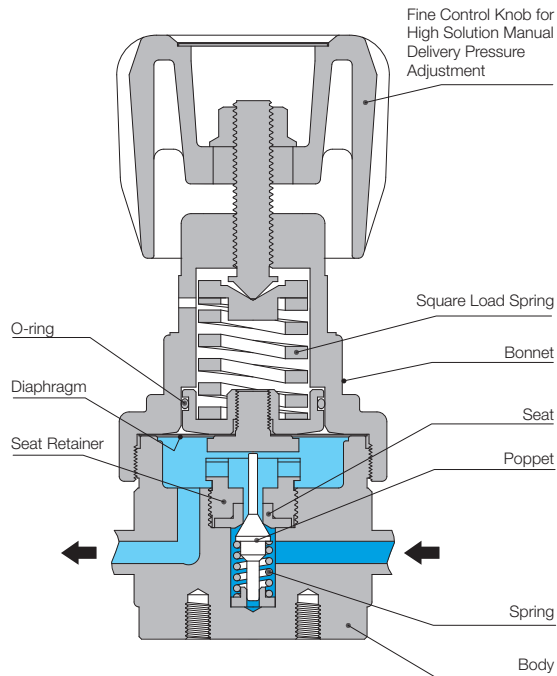
Point-of-Use Pressure Regulator

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0019 MPaG (0.27 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	22.2 MPa (3,219 PSI)
CV	0.18
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Approximate weight	1.1 kg (21 lbs. 7 oz.)
Installation	Threaded holes on the surface (OPTIONS: Surface panel mounting)

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

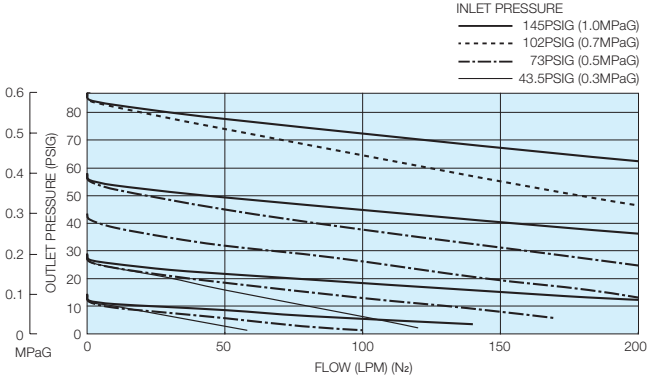


Cross sectional drawing



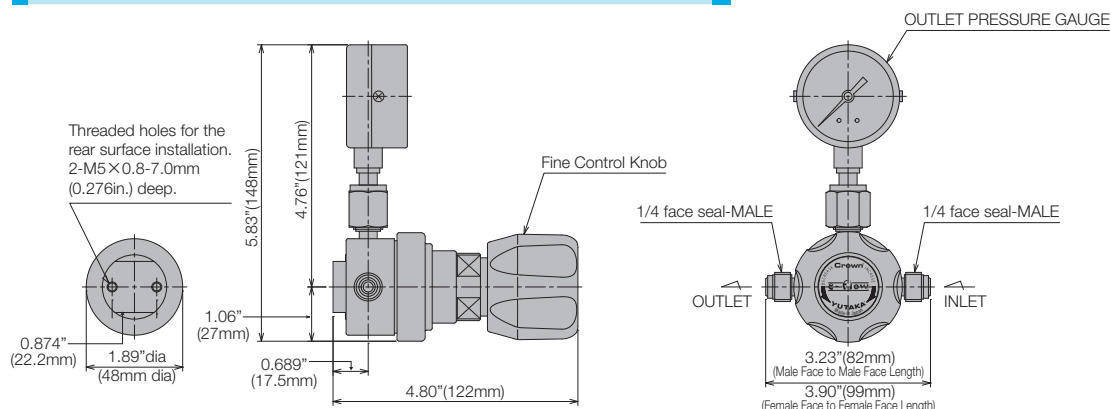
[NOTE]
· Avoid turning the control knob excessively.
· For purging at 870 PSIG (6 MPaG) and higher, operate the unit in consideration of changing the outlet pressure by the supply pressure effect.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	R26SS	R26SS-CO
Wetted Parts		
Body	SUS316L	
Poppet & Seat Retainer	SUS316L	
Diaphragm	SUS316L	
Seat	PTFE	
Spring	SUS316	
Gasket	PTFE	
Gasket to seal for gauge	Ni	SUS316
Non-wetted Parts		
Bonnet	Nickel Plated Brass	
Control Knob	ABS Resin	
O-ring	NBR	

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

Standard connections

1/4" NPT body length 1.93in. (48mm)

1/4" face to face length of the male and female are the same. (Male) 3.23in. (82mm)

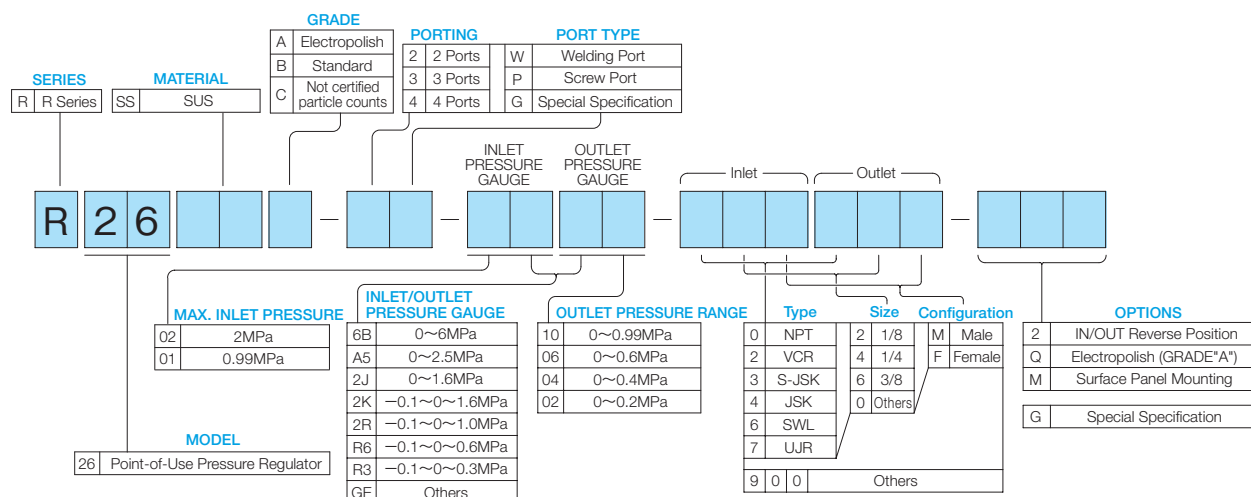
1/4" face to face length of the male and female are the same. (Female) 3.90in. (99mm)

1/4" sus tube fitting length 4.37in. (111mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R35 Series

RoHS Directive Products

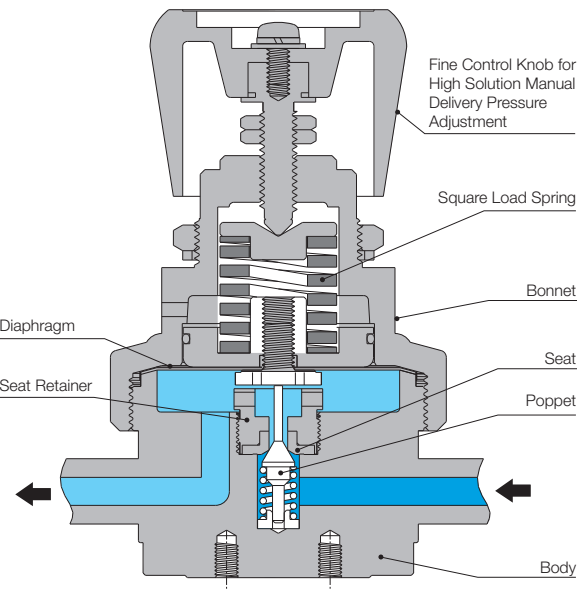
Medium Flow Applications

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0006 MPaG (0.087 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	9 MPa (1,305 PSI)
CV	0.35
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Internal Volume	19.74 cc (1.2 in ³) w/o fittings
Approximate weight	1.95 kg (4 lbs. 5 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg



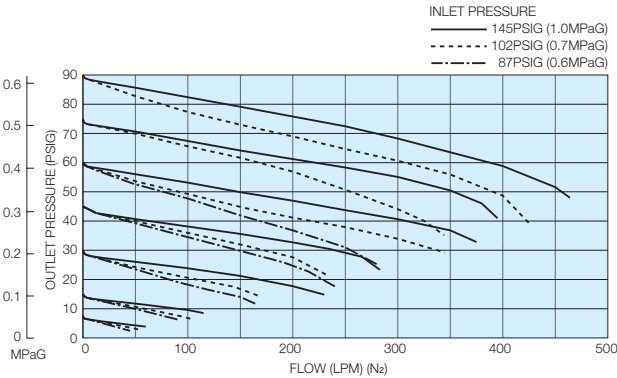
Cross sectional drawing



[NOTE]

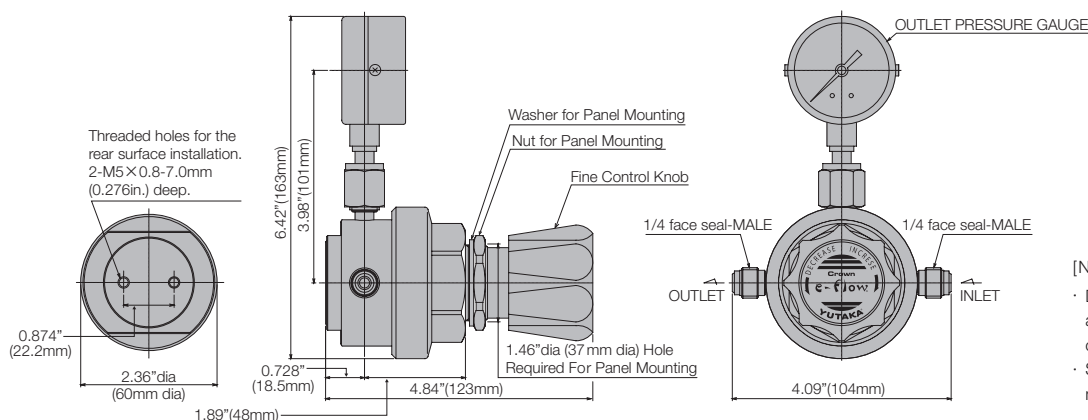
- Avoid turning the control knob excessively.
- For purging at 870 PSIG (6 MPaG) and higher, operate the unit in consideration of changing the outlet pressure by the supply pressure effect.
- No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



Materials of construction

MODEL & TYPE	R35SS	R35SH	R35SH-CL2	R35SS-N20	R35SS-CO
Wetted Parts					
Body	SUS316L				
Poppet & Seat Retainer	SUS316L	Hastelloy® C-22		SUS316L	
Diaphragm	SUS316L	Hastelloy® C-22		SUS316L	
Seat	PCTFE		Special Fluoroplastics	VespeI®	PCTFE
Spring	SUS316				
Gasket	PTFE				
Gasket to seal for gauge	Ni				SUS316
Non-wetted Parts					
Bonnet	Nickel Plated Brass				
Control Knob	ABS Resin				
O-ring	NBR				

Wetted surface finishes

Standard Ra (GRADE "B"&"C")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

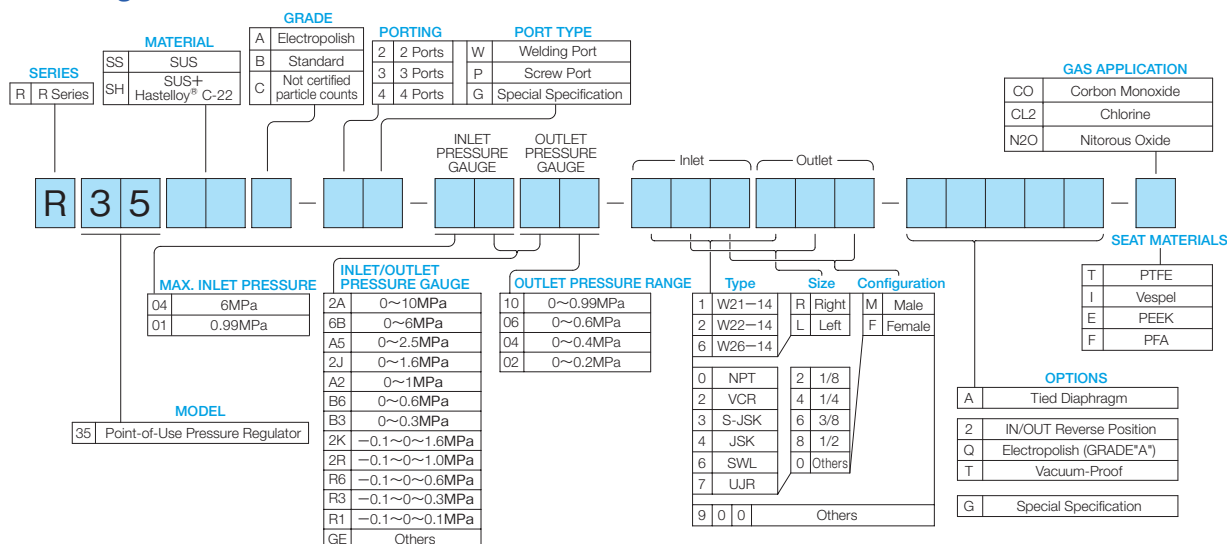
Standard connections

1/4" NPT body length 2.36in. (60mm)
 1/4" face to face length of the male and female are the same. (Male) 4.09in. (104mm)
 1/4" face to face length of the male and female are the same. (Female) 4.33in. (110mm)
 3/8", 1/2" face to face length of the male and female are the same. 4.72in. (120mm)
 3/8" sus tube fitting length 4.96in. (126mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R36 Series

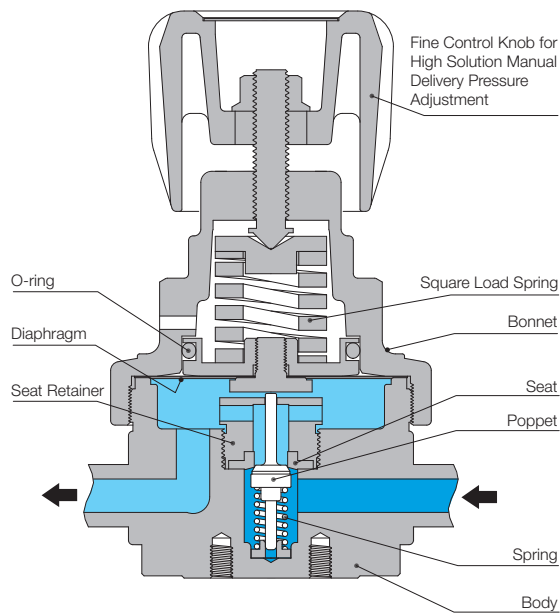
Medium Flow Rate Applications

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0034 MPaG (0.49 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	9 MPa (1,305 PSI)
CV	0.62
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Approximate weight	1.7 kg (3 lbs. 12 oz.)
Installation	Threaded holes on the surface (OPTIONS: Surface panel mounting)

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

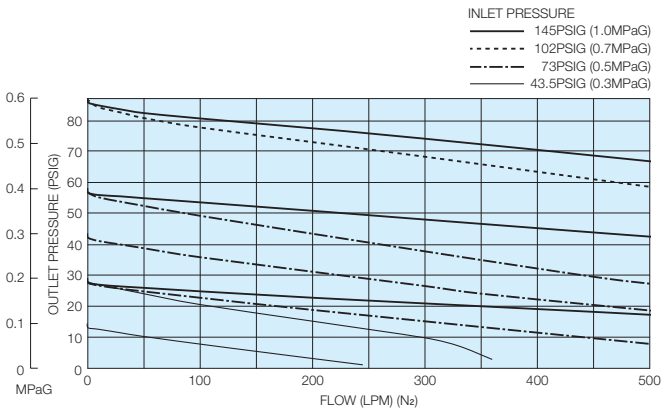


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

MODEL & TYPE	R36SS	R36SS-CO
Wetted Parts		
Body	SUS316L	
Poppet & Seat Retainer	SUS316L	
Diaphragm	SUS316L	
Seat	PCTFE	
Spring	SUS316	
Gasket	PTFE	
Gasket to seal for gauge	Ni	SUS316
Non-wetted Parts		
Bonnet	Nickel Plated Brass	
Control Knob	ABS Resin	
O-ring	NBR	

Standard Ra (GRADE "B")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

3/8" NPT body length	2.52in. (64mm)
3/8", 1/2" face to face length of the male and female are the same.	4.72in. (120mm)
3/8" sus tube fitting length	5.24in. (133mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

The diagram illustrates the R Series Point-of-Use Pressure Regulator, showing its physical components and their corresponding specifications. The main unit is labeled 'R 36' and includes a 'MAX. INLET PRESSURE' section with options 02 (2MPa) and 01 (0.99MPa). The 'MODEL' section identifies it as the '36 | Point-of-Use Pressure Regulator'. The 'GRADE' section lists options A (Electropolish), B (Standard), and C (Not certified particle counts). The 'PORTING' section shows options 2 (2 Ports), 3 (3 Ports), and 4 (4 Ports). The 'PORT TYPE' section lists options W (Welding Port), P (Screw Port), and G (Special Specification). The 'INLET PRESSURE GAUGE' and 'OUTLET PRESSURE GAUGE' sections show options 10 (0~0.99MPa), 06 (0~0.6MPa), 04 (0~0.4MPa), and 02 (0~0.2MPa). The 'Type' section lists options 0 (NPT), 2 (VCR), 3 (S-JSK), 4 (JSK), 6 (SWL), 7 (UJR), and 9 (Others). The 'Size' section lists options 1/4, 3/8, and Others. The 'Configuration' section lists options M (Male) and F (Female). The 'OPTIONS' section lists options 2 (IN/OUT Reverse Position), Q (Electropolish (GRADE "A")), M (Surface Panel Mounting), and G (Special Specification).

R61 Series

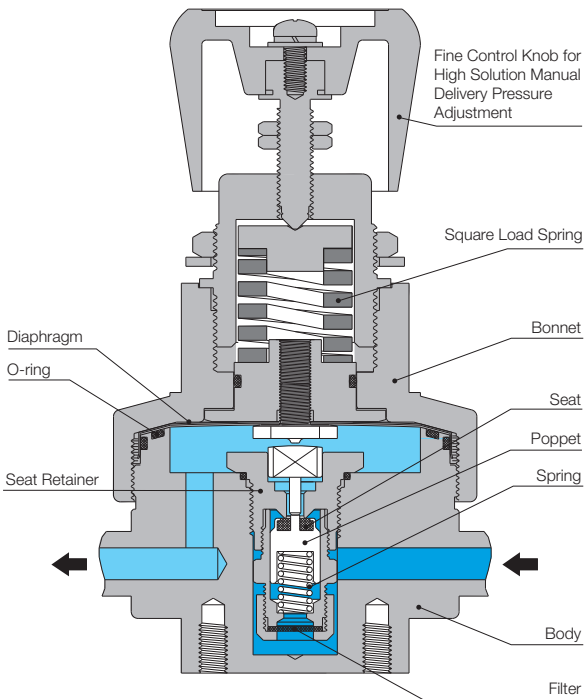
High Flow Rate Applications

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.001 MPaG (0.145 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSI), 1.5 MPa (Outlet Side)
CV	0.31
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Internal Volume	25.3 cc (1.54 in ³) w/o fittings
Approximate weight	2.0 kg (4 lbs. 7 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

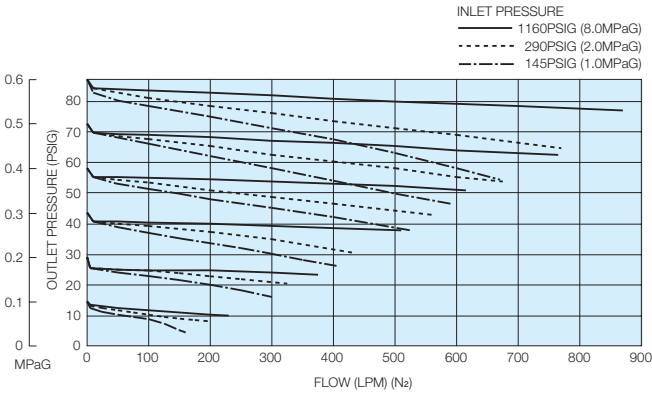


Cross sectional drawing



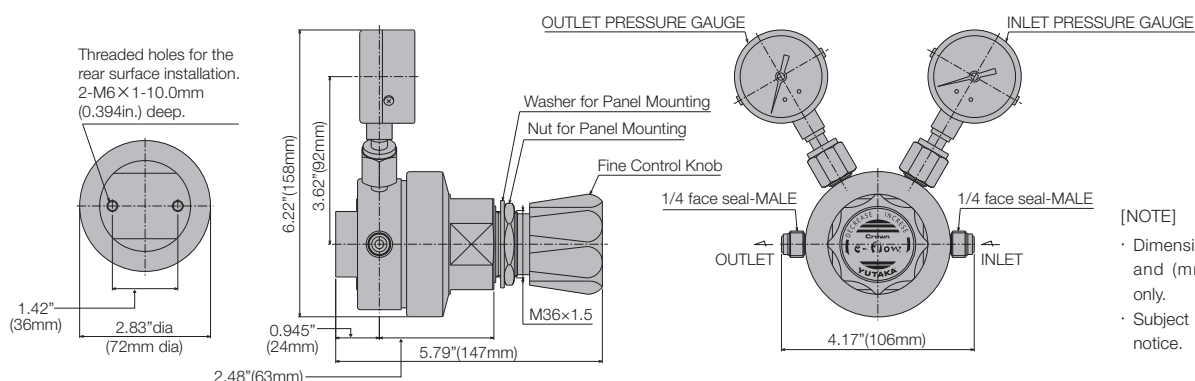
[NOTE]
· Avoid turning the control knob excessively.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	R61SS
Wetted Parts	
Body	SUS316
Poppet & Seat Retainer	SUS316
Diaphragm	SUS316L
Seat	PCTFE
Spring	SUS316
Gasket	PTFE
Gasket to seal for gauge	Ni
Non-wetted Parts	
Bonnet	Chromium Plated Brass
Control Knob	ABS Resin
O-ring	NBR

Wetted surface finishes

Standard Ra (GRADE "B"&"C")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

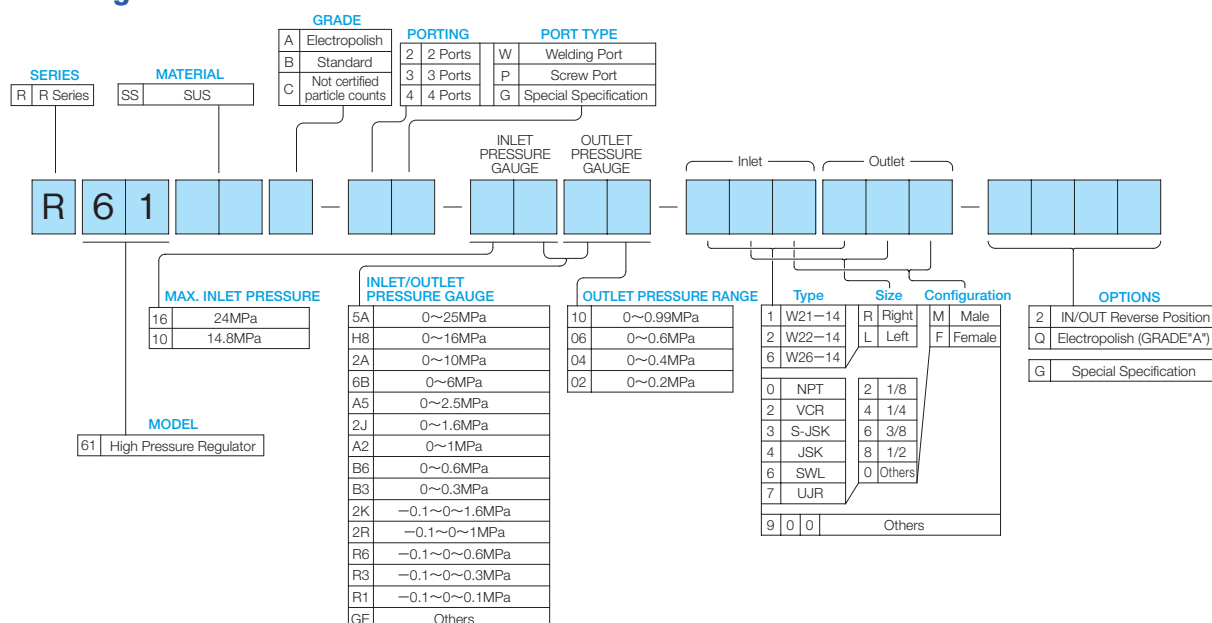
Standard connections

1/4" NPT body length 2.83in. (72mm)
 1/4" face to face length of the male and female are the same. (Male) 4.17in. (106mm)
 1/4" face to face length of the male and female are the same. (Female) 4.84in. (123mm)
 3/8", 1/2" face to face length of the male and female are the same. 5.20in. (132mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R72 Series

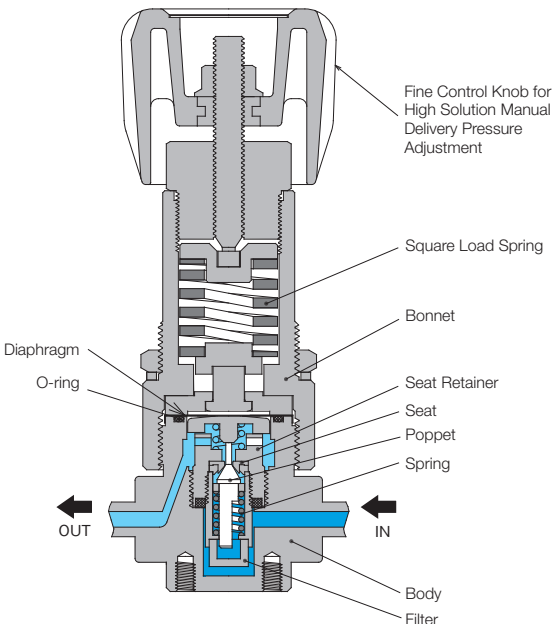
High Delivery Pressure Regulator

Inlet Pressure	Max.21 MPaG (Max.3046 PSIG)
Outlet Pressure	Max.15 MPaG (Max.2176 PSIG) (Pressure Range:0~4 MPa, 0~6 MPa, 0~10 MPa, 0~15 MPa)
Supply Pressure Effect	0.007 MPaG (0.1 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4567 PSIG), 22.5 MPa (Outlet Side)
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa·m ³ /sec·He (1×10^{-8} atm·cc/sec·He) Welding (W); 1×10^{-11} Pa·m ³ /sec·He (1×10^{-10} atm·cc/sec·He)
Internal Volume	3.66 cc (0.22 in ³) w/o fittings
Approximate weight	1.9 kg (4 lbs. 3 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

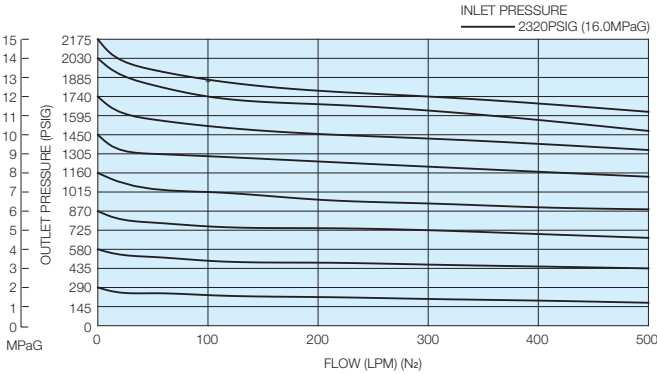


Cross sectional drawing



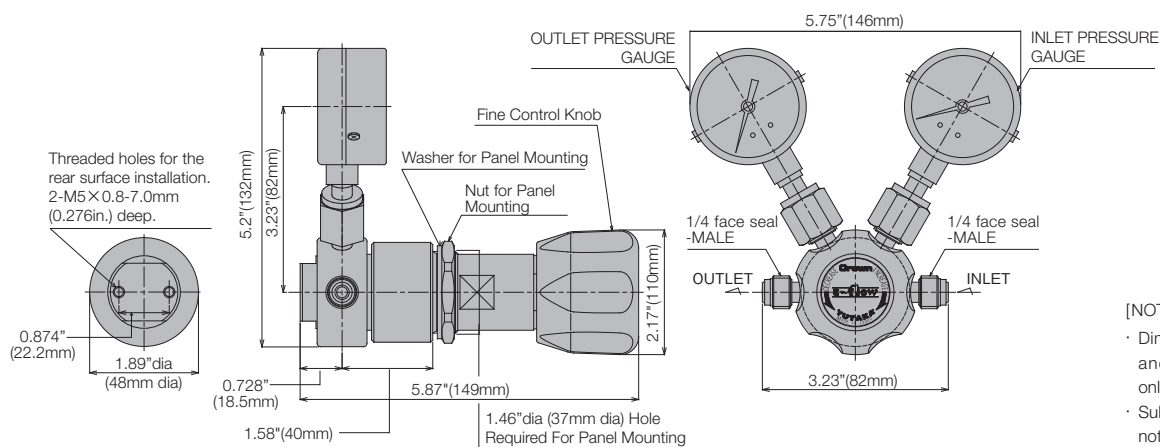
[NOTE]
· Avoid turning the control knob excessively.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	R72SS	R72SS-CO
Wetted Parts		
Body	SUS316L	
Poppet	SUS316L	
Seat Retainer	SUS316	
Diaphragm	SUS316L	
Seat	PCTFE	
Spring	SUS316	
Gasket	PTFE	
Gasket to seal for gauge	Ni	SUS316
Non-wetted Parts		
Bonnet	SUS304	
Control Knob	SUS304	

Wetted surface finishes

Standard Ra (GRADE "B"&"C")	32μin. (0.80μm) or less
Optional Ra (GRADE "A")	7μin. (0.18μm) or less

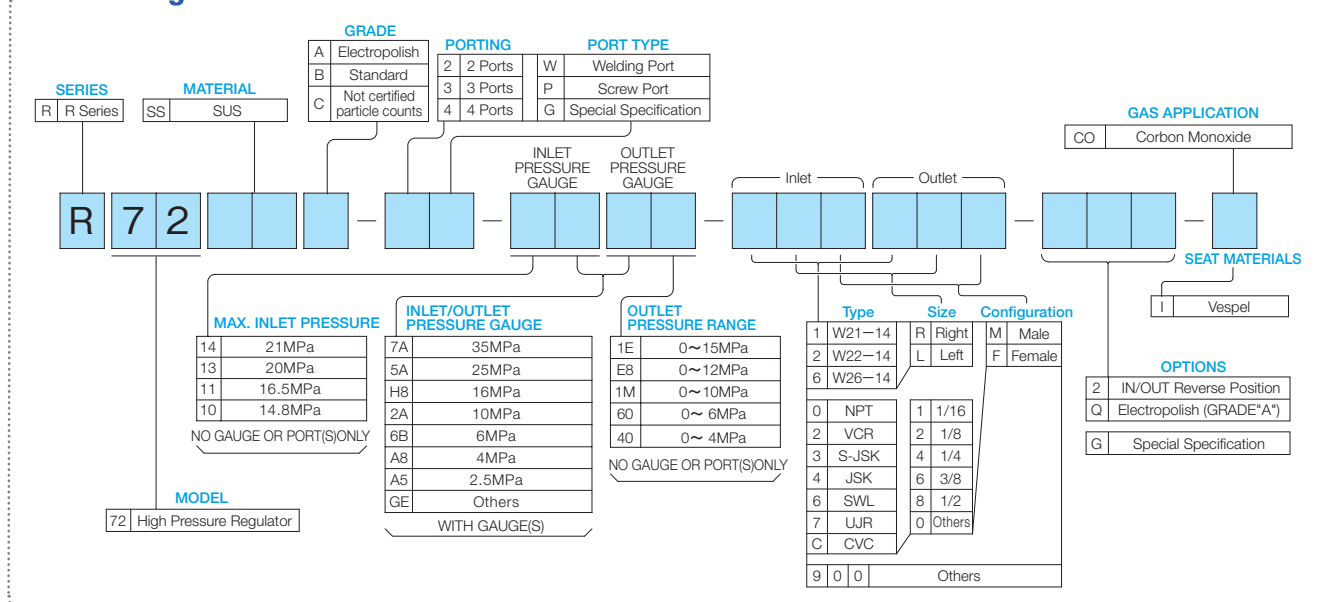
Standard connections

1/4" NPT body length	1.93in. (48mm)
1/4" face to face length of the male and female are the same. (Male)	3.23in. (82mm)
1/4" face to face length of the male and female are the same. (Female)	3.90in. (99mm)
1/4" sus tube fitting length	4.37in. (111mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



R81 Series

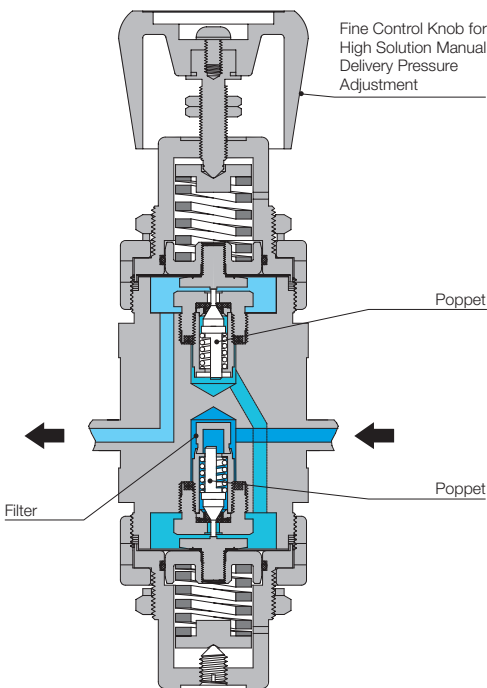
Minimizes Supply Pressure Effect

Inlet Pressure	Max.24 MPaG (Max.3,480 PSIG)
Outlet Pressure	Max.0.6 MPaG (Max.87 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa)
Supply Pressure Effect	0.00004 MPaG (0.0058 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	31.5 MPa (4,567 PSIG)
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Internal Volume	14.5 cc (0.88 in ³) w/o fittings
Approximate weight	2.4 kg (5 lbs. 5 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

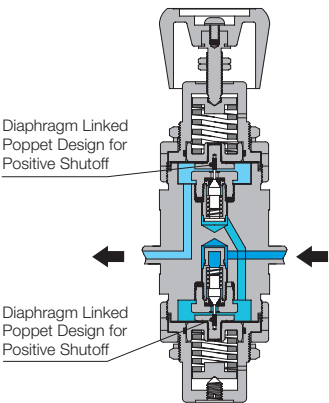


Cross sectional drawing



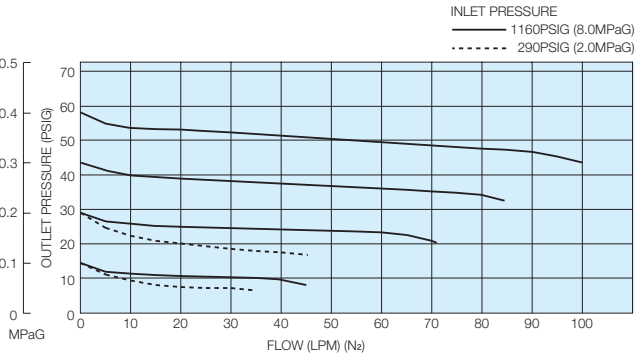
[NOTE]
· Avoid turning the control knob excessively.

Tied Diaphragm (Optional)



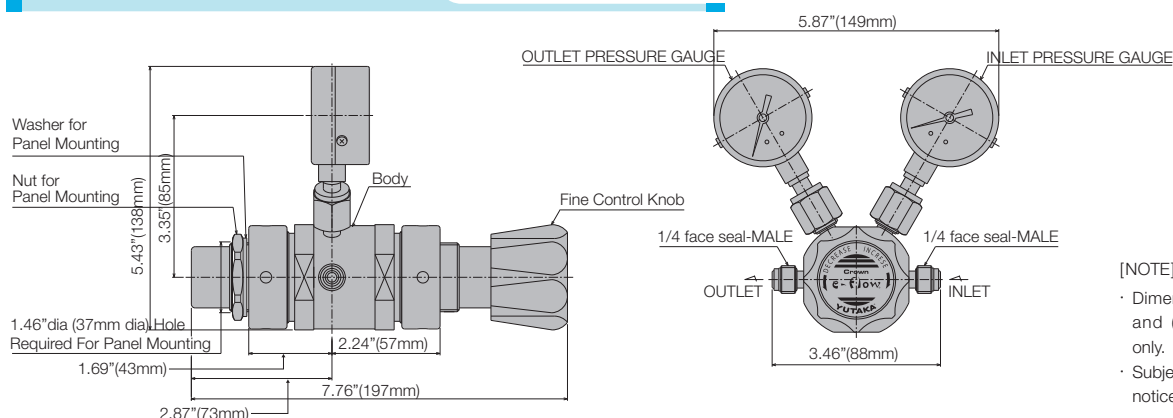
[NOTE]
Operating the Tied Diaphragm Type: In order to minimize premature wear of regulator's internal parts. Be sure not to close regulator while under pressure.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	R81SS	R81SH	R81SS-N20	R81SS-CO
Wetted Parts				
Body	SUS316L			
Poppet	SUS316L	Hastelloy® C-22	SUS316L	
Seat Retainer	SUS316	Hastelloy® C-22	SUS316	
Diaphragm	SUS316L	Hastelloy® C-22	SUS316L	
Seat	PCTFE		Vespel®	PCTFE
Spring	SUS316			
Gasket	PCTFE and PTFE		PTFE and Vespel®	PCTFE and PTFE
Gasket to seal for gauge	Ni			SUS316
Non-wetted Parts				
Bonnet	Nickel Plated Brass			
Control Knob	ABS Resin			
O-ring	NBR			

Wetted surface finishes

Standard Ra (GRADE "B"&"C")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

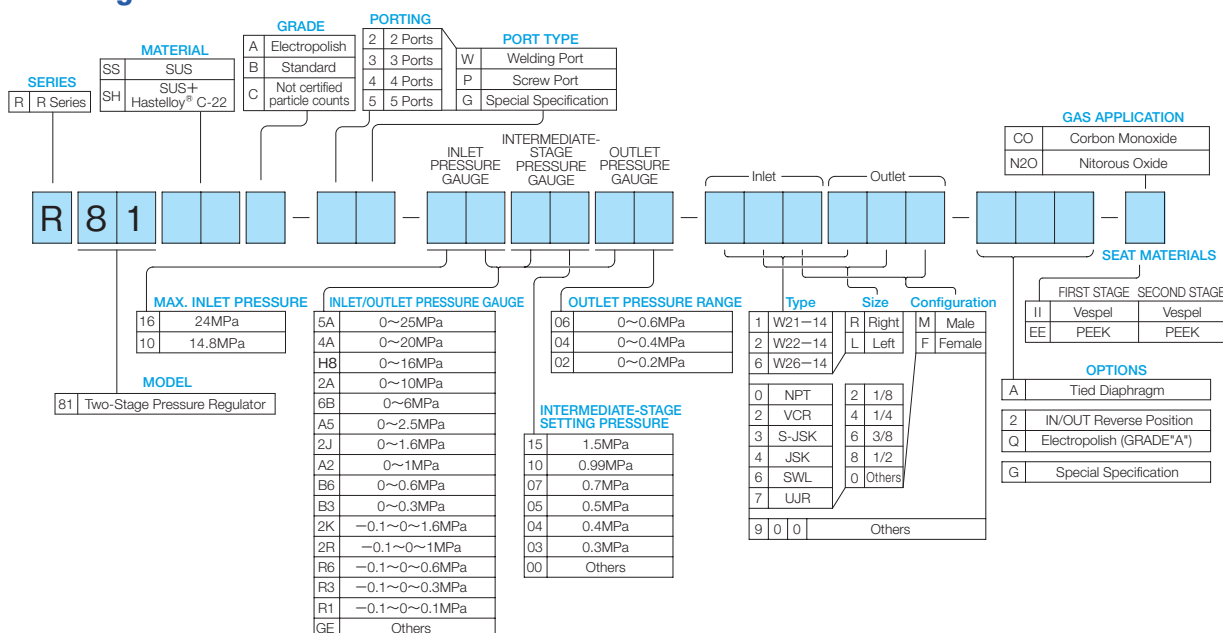
Standard connections

1/4" NPT body length 2.13in. (54mm)
 1/4" face to face length of the male and female are the same. (Male) 3.46in. (88mm)
 1/4" face to face length of the male and female are the same. (Female) 4.13in. (105mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



RH1 Series

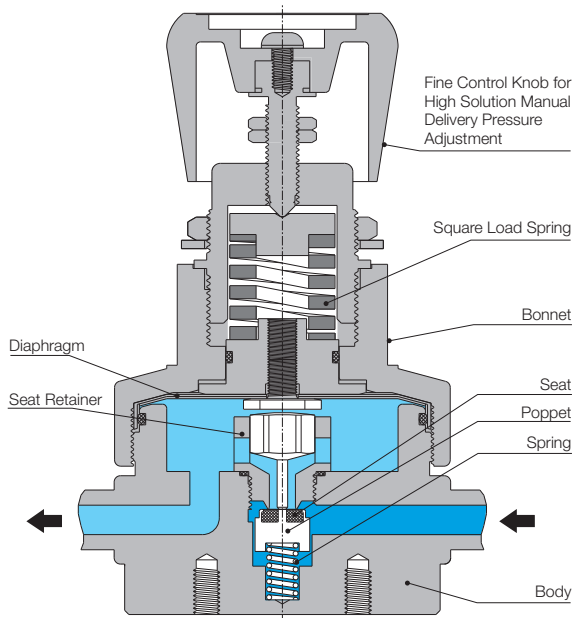
High Flow Rate Applications

Inlet Pressure	Max.6 MPaG (Max.870 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0019 MPaG (0.28 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	9.0 MPa (1,305 PSI)
CV	0.69
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Internal Volume	47.2 cc (2.85 in ³) w/o fittings
Approximate weight	2.7 kg (5 lbs. 15 oz.)
Installation	Threaded holes on the rear surface or Panel mounting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

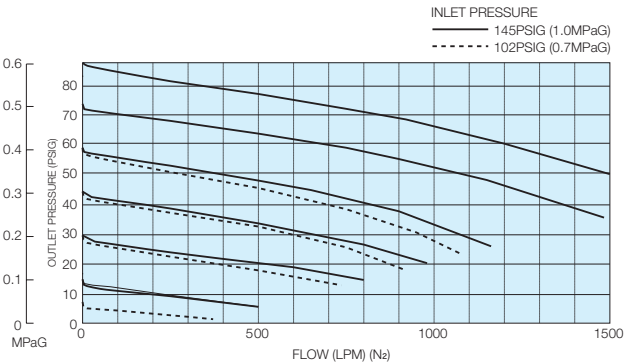


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Technical drawings of the F-60W valve assembly, showing dimensions and component labels.

Top View (Left):

- Threaded holes for the rear surface installation. 2-M6 \times 1-8.0mm (0.315in.) deep.
- 1.42" (36mm) diameter.
- 3.11" dia (79mm dia).

Side View (Right):

- Overall height: 6.83" (176mm).
- Washer for Panel Mounting.
- Nut for Panel Mounting.
- Fine Control Knob.
- 1/2 face seal-MALE.
- OUTLET.
- INLET.
- 5.51" (140mm) diameter.
- M36 \times 1.5.
- 2.36" (60mm).
- 5.59" (142mm).
- 0.886" (22.5mm).
- 4.37" (111mm).

[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

MODEL & TYPE	RH1SS	RH1SH
Wetted Parts		
Body	SUS316L	
Poppet & Seat Retainer	SUS316	Hastelloy® C-22
Diaphragm	SUS316L	
Seat	PTFE	
Spring	SUS316	
Gasket	PTFE	
Gasket to seal for gauge	Ni	
Non-wetted Parts		
Bonnet	Chromium Plated Brass	
Control Knob	ABS Resin	
O-ring	NBR	

Standard Ra (GRADE "B"&"C")	32µin. (0.80µm) or less
Optional Ra (GRADE "A")	7µin. (0.18µm) or less

3/8" NPT body length 3.11in. (79mm)
 3/8", 1/2" face to Face length of the male and female
 are the same. 5.51in. (140mm)
 3/8", 1/2" Tube stubs and other connections available
 as options.

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male

Modeling Information

SERIES

R	R Series
---	----------

MATERIAL

SS	SUS
SH	SUS+ Hastelloy® C-22

GRADE

A	Electropolish
B	Standard
C	Not certified particle counts

PORTING

2	2 Ports
3	3 Ports
4	4 Ports

PORT TYPE

W	Welding Port
P	Screw Port
G	Special Specification

Modeling Diagram:

The diagram shows a sequence of components: **R** (Series), **H** (Material), **1** (Grade), followed by three empty boxes for **PORTING**, **PORT TYPE**, and **MAX. INLET PRESSURE**. These are followed by a dash and three more empty boxes for **INLET/OUTLET PRESSURE GAUGE**, **OUTLET PRESSURE RANGE**, and **Options**. The next section is labeled **MODEL** and shows **H1** (Point-of-Use Pressure Regulator). This is followed by a dash and three empty boxes for **Type**, **Size**, and **Configuration**. The final section is labeled **OPTIONS** and shows a table for **IN/OUT Reverse Position**, **Electropolish (GRADE "A")**, and **Special Specification**.

MAX. INLET PRESSURE

04	6MPa
01	0.99MPa
99	Others

MODEL

H1	Point-of-Use Pressure Regulator
----	---------------------------------

INLET/OUTLET PRESSURE GAUGE

2A	0~10MPa
6B	0~6MPa
A5	0~2.5MPa
2J	0~1.6MPa
A2	0~1MPa
B6	0~0.6MPa
B3	0~0.3MPa
2K	-0.1~0~1.6MPa
2R	-0.1~0~1.0MPa
R6	-0.1~0~0.6MPa
R3	-0.1~0~0.3MPa
R1	-0.1~0~0.1MPa
GE	Others

OUTLET PRESSURE RANGE

10	0~0.99MPa
06	0~0.6MPa
04	0~0.4MPa
02	0~0.2MPa

Type

1	W21-14
2	W22-14
6	W26-14
0	NPT
2	VCR
3	S-JSK
4	JSK
6	SWL
7	UJR
C	CVC
F	Flat Seal
U	UPG
T	TOM
L	Flange

Size

1	1/16
2	1/8
4	1/4
6	3/8
8	1/2
A	3/4
B	1
0	Others

Configuration

R	Right
L	Left
M	Male
F	Female

OPTIONS

2	IN/OUT Reverse Position
Q	Electropolish (GRADE "A")
G	Special Specification

Options Table:

6	10K-10A	0
8	10K-15A	
A	10K-20A	
B	10K-25A	
C	10K-32A	
D	10K-40A	
E	10K-50A	
0	Others	

RH2 Series

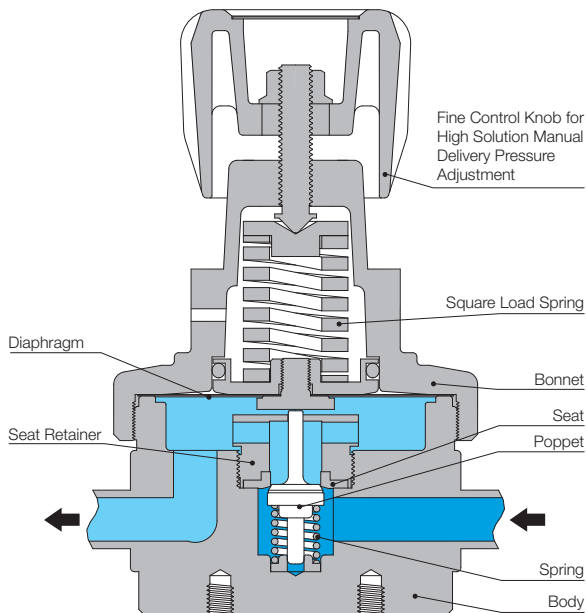
High Flow Rate Applications

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Supply Pressure Effect	0.0082 MPaG (1.19 PSIG) per 0.1 MPaG (14.5 PSIG)
Proof Pressure	22.2 MPa (3,215 PSI)
CV	0.84
Temperature	-10°C to +40°C
Outboard Leakage	Screw (P); 1×10^{-9} Pa · m ³ /sec · He (1×10^{-8} atm · cc/sec · He) Welding (W); 1×10^{-11} Pa · m ³ /sec · He (1×10^{-10} atm · cc/sec · He)
Approximate weight	2.8 kg (6 lbs. 5 oz.)
Installation	Threaded holes on the rear surface (OPTIONS: Surface panel mounting)

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

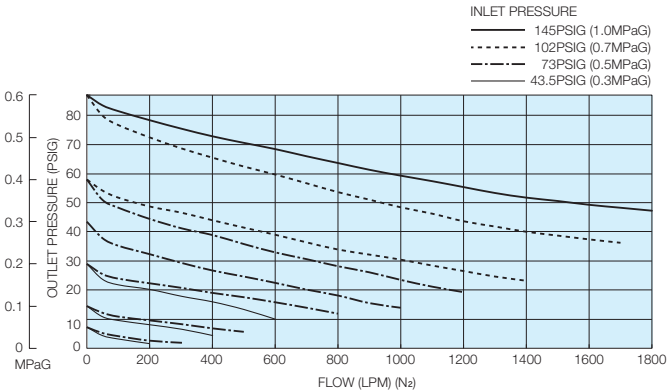


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

RLD Series

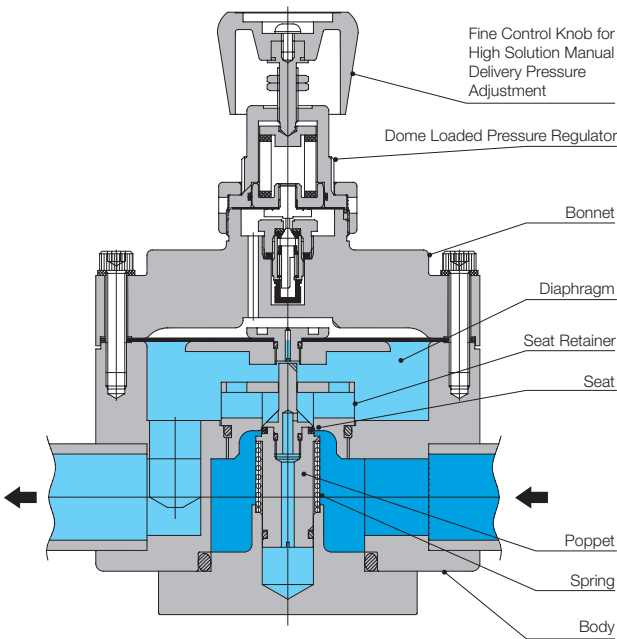
Dome Loaded Pressure Regulator
Designed for Remote Operation in
High Flow Rate Applications

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG)
CV	11.3
Approximate weight	19 kg (41 lbs. 14 oz.)

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

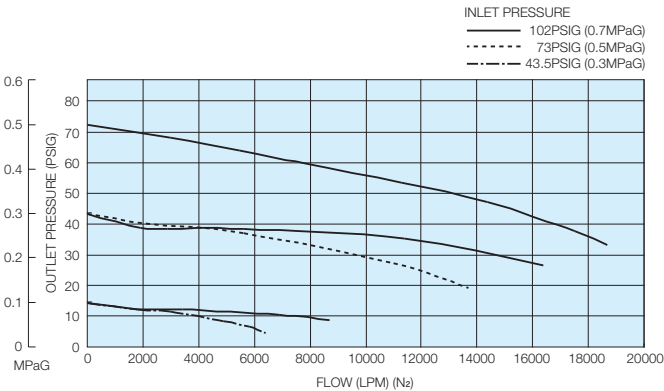


Cross sectional drawing



[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



[NOTE]
· These tests were performed at ambient conditions.

Technical drawings of the 100 Series 1/2" In-Line Check Valve. The left drawing is a side view showing the valve body, fine control knob, and mounting bracket. Dimensions include a total height of 9.685" (246mm), a mounting bracket height of 2.95" (75mm), and a fine control knob diameter of 1.57" (40mm). The right drawing is a front view showing the valve's circular body with 12 mounting holes, flanges, and an outlet pressure gauge. Dimensions include a flange diameter of 5.91" (150mm) and a total body diameter of 11.811" (300mm).

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice

MODEL & TYPE	RLDSS
Wetted Parts	
Body	SUS316
Poppet & Seat Retainer	SUS316
Diaphragm	GYLON®
Seat	PTFE
Spring	SUS316
Gasket to seal for gauge	Ni
O-ring	VITON®
Non-wetted Parts	
Bonnet	SUS316
Control Knob	ABS Resin

Standard Ra (GRADE "C")	roughness on machined surface
----------------------------	-------------------------------

JIS 10k-40A flange face to face length
..... **11.81in. (300mm)**

JIS 10k-50A flange face to face length
..... **11.81in. (300mm)**

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

[illegible]

RH2-D Series

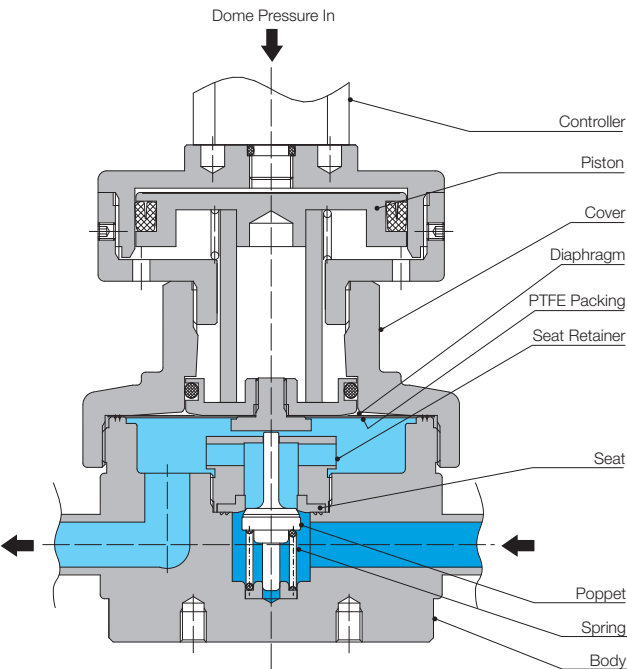
Point-of-Use Auto Pressure Regulator

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.99 MPaG (Max.144 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.99 MPa)
Pressure controller	YP100
Power source	DC24 V ±10%
Power consumption	200 mA or less
External communication	4-20 mA, RS485
Pressure sensor input	4-20 mA, 1-5 V
Air supply pressure	0.4~0.6 MPa
Air supply pressure connection	0.157" (4.0 mm) Push-In Fitting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

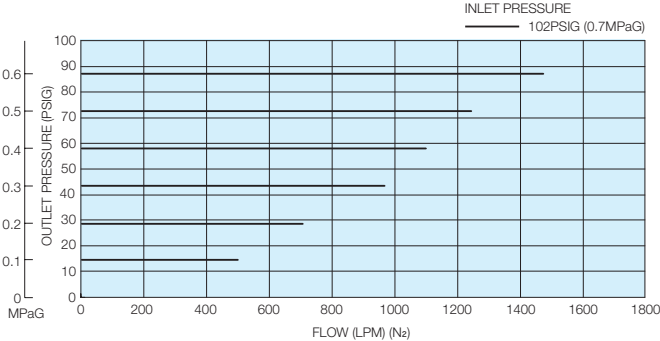


Cross sectional drawing



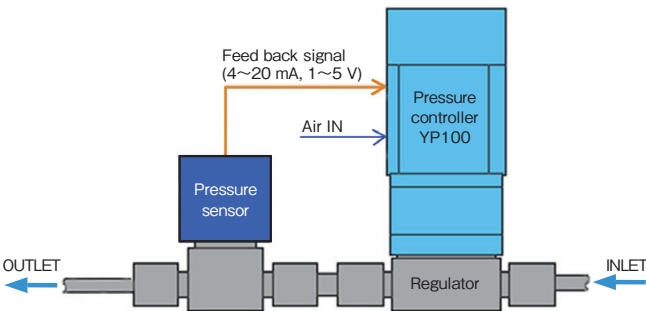
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics



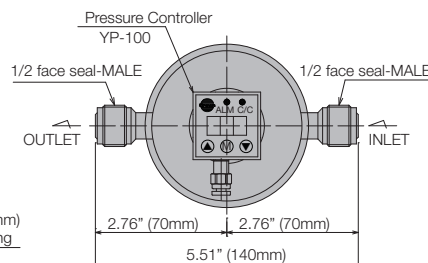
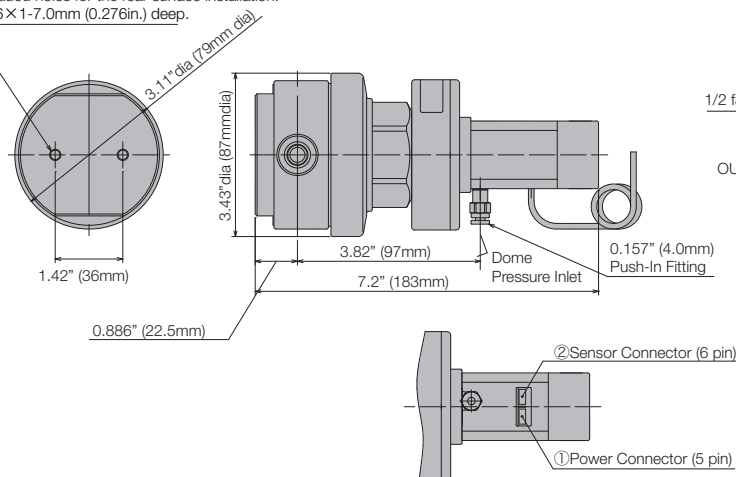
[NOTE]
· These tests were performed at ambient conditions.

Example of use



Outline drawing

Threaded holes for the rear surface installation.
2-M6×1-7.0mm (0.276in.) deep.



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	RH2SS-D
Wetted Parts	
Body	SUS316L
Poppet	SUS316L
Seat Retainer	SUS316L
Diaphragm	SUS316L
Seat	PCTFE
Spring	SUS316
Gasket to seal for gauge	Ni
Packing	PTFE
Non-wetted Parts	
Bonnet	C3604B
Pressure controller	YP100
O-ring	NBR

Wetted surface finishes

Optional Ra (GRADE "A")	7μin. (0.18μm) or less
Standard Ra (GRADE "B")	32μin. (0.80μm) or less

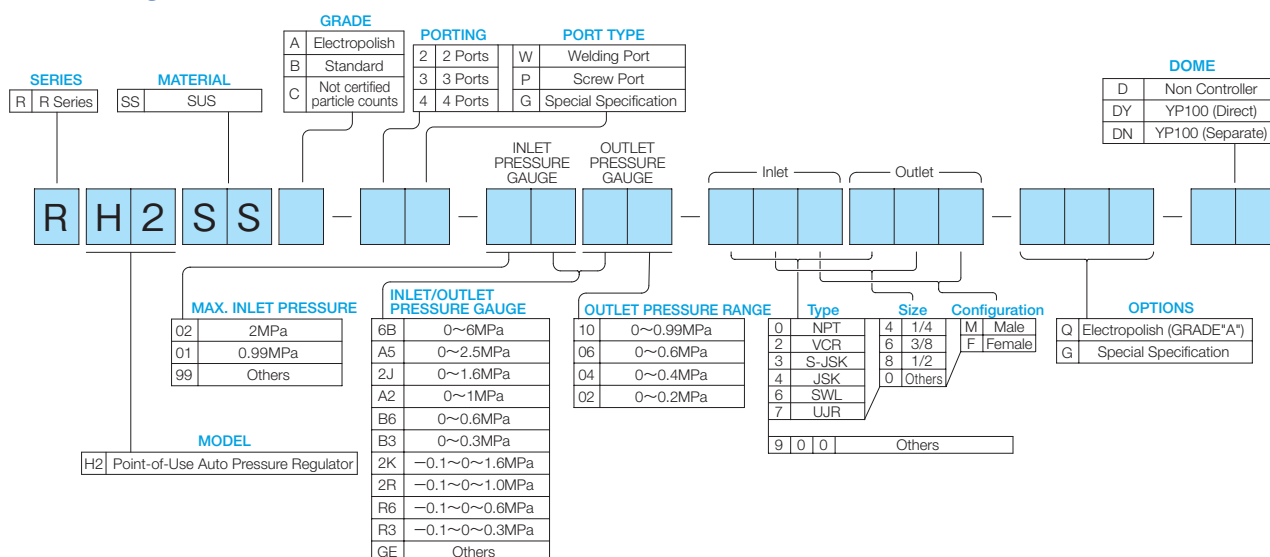
Standard connections

1/2" NPT body length 3.11in. (79mm)
 3/8", 1/2" face to face length of the male and female are the same. 5.51in. (140mm)
 1/2" sus tube fitting length 5.98in. (152mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information



LM2-D Series

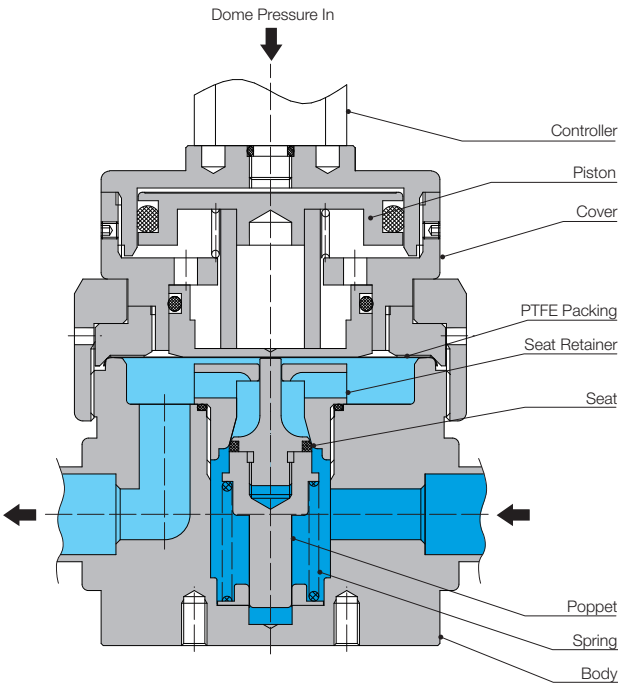
Point-of-Use Auto Pressure Regulator

Inlet Pressure	Max.2 MPaG (Max.290 PSIG)
Outlet Pressure	Max.0.8 MPaG (Max.116 PSIG) (Pressure Range: 0~0.2 MPa, 0~0.4 MPa, 0~0.6 MPa, 0~0.8 MPa)
Pressure controller	YP100
Power source	DC24 V ±10%
Power consumption	200 mA or less
External communication	4-20 mA, RS485
Pressure sensor input	4-20 mA, 1-5 V
Air supply pressure	0.4~0.6 MPa
Air supply pressure connection	0.157" (4.0 mm) Push-In Fitting

[NOTE]
1MPa = 10.2 kgf/cm² = 145.04 PSI
1MPa = 7504.36 mmHg = 295.4 inHg

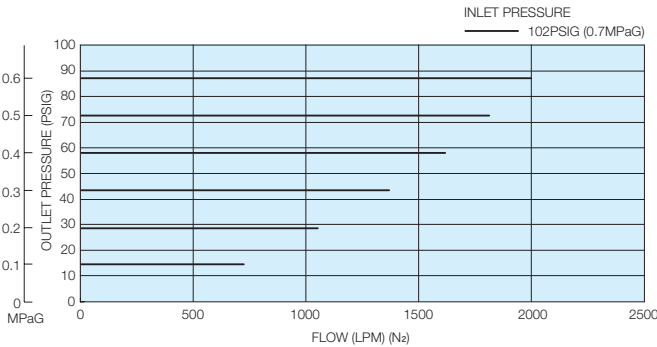


Cross sectional drawing



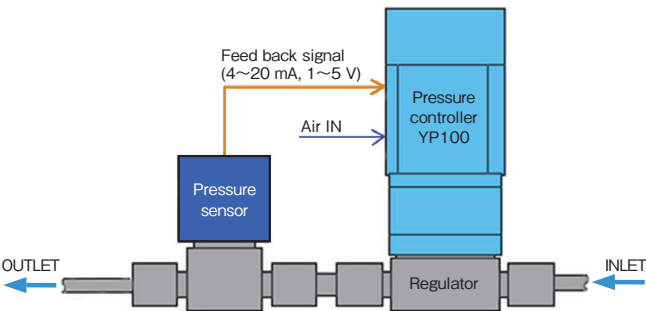
[NOTE]
· Avoid turning the control knob excessively.
· No filter in this unit.

Flow characteristics

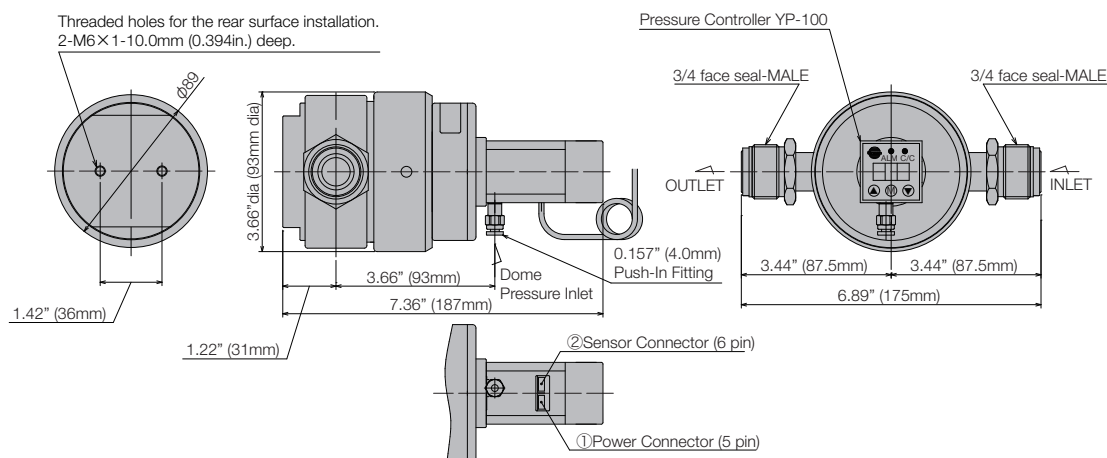


[NOTE]
· These tests were performed at ambient conditions.

Example of use



Outline drawing



[NOTE]

- Dimensions are in inches and (mm) for reference only.
- Face to face length of the male and female are the same.
- Subject to change without notice.

Materials of construction

MODEL & TYPE	LM2-D
Wetted Parts	
Body	SUS316L
Poppet	SUS316L
Seat Retainer	SUS316L
Diaphragm (Metal to metal seal to atmosphere)	Hastelloy [®] C-22
Seat	PTFE
Spring	SUS316
Gasket to seal for gauge	Ni
Packing	PTFE
Non-wetted Parts	
Bonnet	C3604B
Pressure controller	YP100
O-ring	NBR

Wetted surface finishes

Standard Ra (GRADE "B")	32μin. (0.80μm) or less
Standard Ra (GRADE "C")	7μin. (0.18μm) or less

Standard connections

1/2" NPT body length 3.50in. (89mm)
 3/4", 1/2" face to face length of the male and female
 are the same. 6.89in. (175mm)

[NOTE]

- Any combination of Face Seal male and/or female fittings are available for inlet and outlet.
- Size and configuration of pressure gauge port is 1/4" Face Seal male.

Ordering information

MATERIAL		GRADE MATERIAL		PORTING		PORT TYPE		DOME	
SS	SUS	B	Standard	2	2 Ports	W	Welding Port	D	Non Controller
		C	Not certified particle counts	3	3 Ports	P	Screw Port	DY	YP100 (Direct)
				4	4 Ports	G	Special Specification	DN	YP100 (Separate)

MODEL	MAX. INLET PRESSURE	INLET/OUTLET PRESSURE GAUGE	OUTLET PRESSURE RANGE	Type	Size	Configuration	OPTIONS
LM2	02 2MPa	A5 0~2.5MPa	10 0~0.99MPa	0	6 3/8	M Male	Q Electropolish (GRADE "A")
	01 0.99MPa	2J 0~1.6MPa	09 0~0.9MPa (130psi)	2	8 1/2	F Female	G Special Specification
	99 Others	A2 0~1MPa	08 0~0.8MPa	6	A 3/4		
		B6 0~0.6MPa	06 0~0.6MPa (90psi)	7	B 1		
		2K -0.1~0~1.6MPa	04 0~0.4MPa (60psi)		0 Others		
		2R -0.1~0~1.0MPa					
		R6 -0.1~0~0.6MPa					
		GE Others					

9	0	0	Others
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TOTAL ENGINEERING OF GAS REGULATING EQUIPMENT
YUTAKA ENGINEERING CORPORATION

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MHW Certified Medical Equipment Manufacturer ((東用)No.2755)