PurityPlus®

SPECIALTY GAS EQUIPMENT CATALOG

HARRIS
SPECIALTY GAS
Equipment

Table of Contents

High Purity Pressure Regulator Selection

Gases can be supplied in compressed gas high-pressure cylinders, liquid low-pressure cylinders or from low-pressure pipeline supply. The pressure from the supply source must be reduced to the desired working pressure for the application, to accomplish this a pressure reducing valve commonly referred to a regulator needs to be selected. Proper selection is critical for a safe and effective transfer of the gas from the gas supply to the instrument. Regulators are designed to control pressure. Regulators will not measure or control flow. An external device such as a flowmeter or metering valve specifically designed for flow control should be used for that purpose.

Selection of the correct regulator involves many variables. All items must be considered in making the proper regulator selection.

Materials Compatibility

Materials used to construct the pressure regulator need to be compatible with the intended gas service. All the wetted areas (parts of the regulator in contact with the gas) must be selected to avoid any reaction with the gas that can cause contamination in the gas stream or deterioration of the regulator components. Refer to Gas Materials Compatibility Table on Page 114.

Inlet Pressure Rating

Inlet pressures can range from low pressure in pipeline usage to high pressure from compressed gas cylinders. Regulators used in a pipeline will normally have only one gauge to indicate delivery pressure while a cylinder regulator will have two gauges; one to show inlet pressure and the other to show delivery pressure. An exception to this would be the use of regulators for liquid gas cylinders. In this application, only the delivery pressure gauge would be required since the supply pressure is generally constant. When selecting the regulator it must be capable of handling the incoming inlet pressure. When the gas is supplied from a cylinder the CGA (Compressed Gas Association) inlet connection number will dictate the maximum supply pressure. This pressure can range from 100 PSI to over 6000 PSI.

Delivery Pressure Range

The desired working pressure for the operation may range from low pressure up to 15 PSIG to a much higher working pressure (7500-PSIG). The regulator selected must be able to supply the proper working pressure consistent with the requirements of the process.

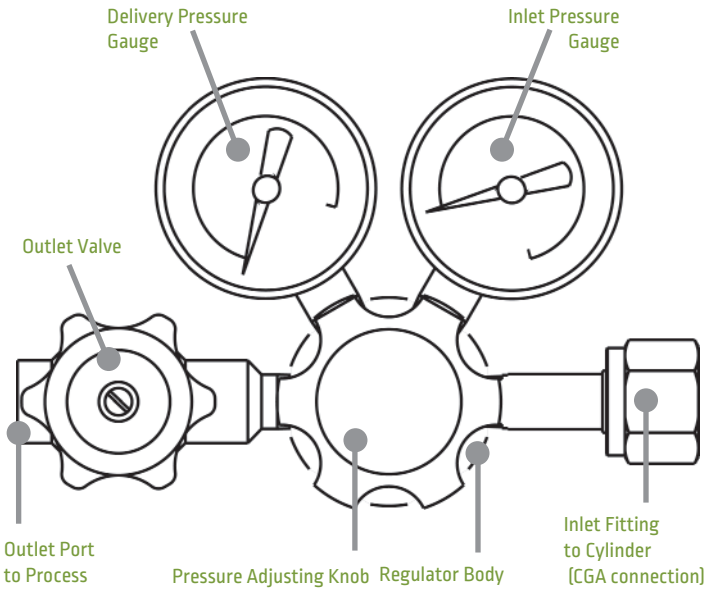
Gas Purity

Maintaining the purity level of the gas is of primary importance in the selection of the regulator. The selected regulator must be resistant to any introduction of contaminants that can be detrimental to the process. In addition to the proper selection of materials for gas compatibility, the design, assembly and testing of the regulator are critical items to consider in the selection process. Clean room assembly and Helium leak testing are common procedures used to insure the integrity of the regulator.

Pressure Regulation, Single-Stage or Two-Stage Design

All regulators are designed to reduce the inlet pressure to a desired working pressure. The regulator can reduce the pressure in either one step or two steps. A single-stage regulator reduces the pressure in one step and a two-stage regulator reduces the pressure in two steps, either may be suitable for the application based on the desired pressure control. Single-Stage regulators are best suited for applications where manual periodic adjustment of the delivery pressure settings is not a problem and the inlet pressure remains constant, such as the case in gas withdrawal from liquid cylinders.

Two-stage regulators are two regulators built into a single regulator body. The first regulator (first stage) is preset at a non-adjustable pressure to reduce the incoming pressure to a lower pressure referred to as the intermediate stage. The second regulator (second stage) is adjustable within the desired delivery range. The two-stage regulator allows for steady delivery pressure without periodic adjustment, well suited for applications requiring constant pressure from full to nearly empty cylinder.



Operation of Pressure Regulators

Single-Stage Regulators

Gas enters the inlet (high-pressure) chamber and its pressure is indicated on the inlet pressure gauge. When the pressure adjusting knob is turned counterclockwise and completely backed out to the stop, a valve and seat assembly located between the inlet chamber and the delivery (low pressure) chamber prevents gas from moving any further. A filter located at the inlet to the valve and seat assembly, removes particulate matter from the gas stream to help protect the seat area.

Turning the pressure-adjusting knob clockwise causes the adjusting screw to push against a spring button that compresses the pressure adjusting spring. The force of the compressed spring, in turn, causes the diaphragm to flex and push against the valve. This opens the regulator allowing gas to flow from the inlet chamber to the delivery chamber of the regulator.

Gas entering the delivery pressure chamber begins to build pressure and creates a counter-force (counter to the pressure adjusting spring) on the diaphragm. This pressure is indicated on the delivery pressure gauge attached to the delivery chamber. When pressure builds sufficiently to counteract the spring tension, it pushes the diaphragm away from the poppet allowing the regulator valve to close. In this manner, pressure in the delivery chamber is controlled or regulated by the amount of spring tension placed on the diaphragm and is selectable by turning the pressure adjusting knob until desired pressure is indicated on the delivery pressure gauge.

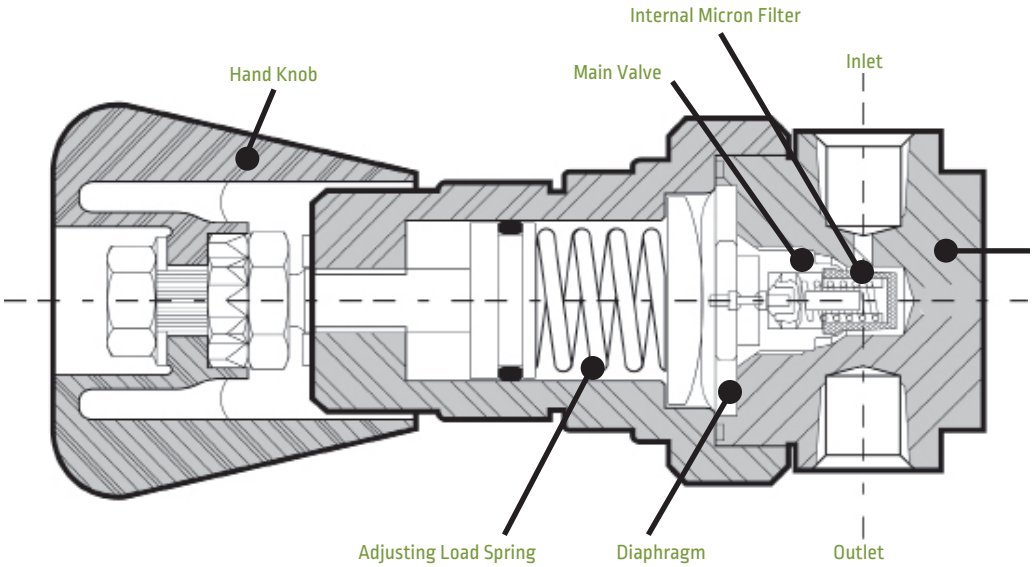
When gas from the delivery pressure chamber is sent to the end process, the resulting decrease in gas volume in the delivery chamber causes a pressure reduction in the chamber. When this occurs, the spring tension again causes the diaphragm to push the valve open, allowing additional gas to enter the delivery chamber.

Two-Stage Regulators

These regulators incorporate all components of a single-stage regulator. In addition, however, they also contain a second pressure adjusting spring, diaphragm, and valve seat assembly. The first stage is not user adjustable with the pressure adjusting spring "pre-compressed" at the factory. This allows the first stage to feed pressure to the second (adjustable) stage. The normal maximum delivery pressure for two-stage regulators is 500 PSI.

The second stage then performs in a manner similar to that of a single-stage regulator, except that the inlet pressure to the second stage is relatively constant. The two-step pressure reduction produces a final delivery pressure showing little effect from changes in cylinder pressure.

Components of a Single Stage Regulator



PurityPlus® SPECIALTY GASES

MODEL SUMMARY MATRIX

HIGH PURITY REGULATORS AND SWITCHOVER MANIFOLDS

HIGH PURITY REGULATORS

		Type	Stages	Type	Stages	Type	Stages
		Cylinder	1	Cylinder	2	Line	1
Construction	Forged	PP701		PP702		PP703	
Body	Brass						
Finish	Chrome-plated						
Construction	Machined bar stock	PP721		PP722		PP723	
Body	Brass						
Finish	Brass						
Construction	Machined bar stock	PP721C		PP722C		PP723C	
Body	Brass						
Finish	Chrome-plated						
Construction	Machined bar stock	PP741		PP742		PP743	
Body	Stainless steel						
Finish	Stainless steel						

HIGH PURITY SWITCHOVERS

		Semi automatic	Semi automatic
		2 inlet regulators	Combo inlet regulator
Construction	Machined bar stock	PP900B	PP905B
Body	Brass		
Finish	Chrome-plated		
Construction	Machined bar stock	PP900S	PP905S
Body	Stainless steel		
Finish	Stainless steel		

PP701

PurityPlus® SPECIALTY GASES

FORGED BRASS REGULATOR (CHROME PLATED)

Model PP701-125-580-B shown

Model PP701 is a chrome plated single stage cylinder regulator with a stainless steel diaphragm for general laboratory use. The PP701 can be used when a slight pressure rise from full to empty cylinder can be tolerated. The PP701 is suitable for:

- Non-corrosive gases
- Purging
- Pressure testing
- Blanketing

Recommended for gas purity up to Grade 5.0 (99.999).

MATERIALS

Body	Chrome Plated Brass
Bonnet	Chrome Plated Die Cast
Diaphragm	302 Stainless Steel
Nozzle	Brass
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Nickel-Plated Sintered Bronze - 10 Micron
Seat Return Spring	PH-17 Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 2 - 1/8" 302 stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One-piece encapsulated seat design to protect seat from particulate contamination
- Chrome plated bonnet, body and fittings
- 2" chrome plated dual scale gauges (psi/bar)
- External relief valve standard
- Designed to 1 x 10-8 cc/sec. inboard helium leak rate
- to maintain gas purity levels
- Maximum inlet pressure 3000 PSIG except for models with CGA 300 and 510 and equipped with 400 PSIG inlet gauge

RELATED OPTIONS

Wall mounting bracket P/N: 9101242

PP701 ORDERING INFORMATION

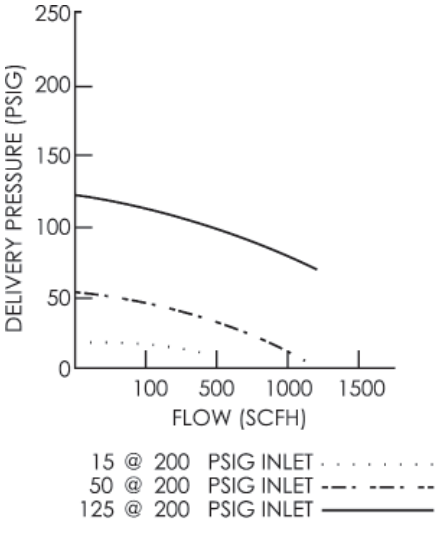
PP701 - xxx - xxx - xxxx - xxx

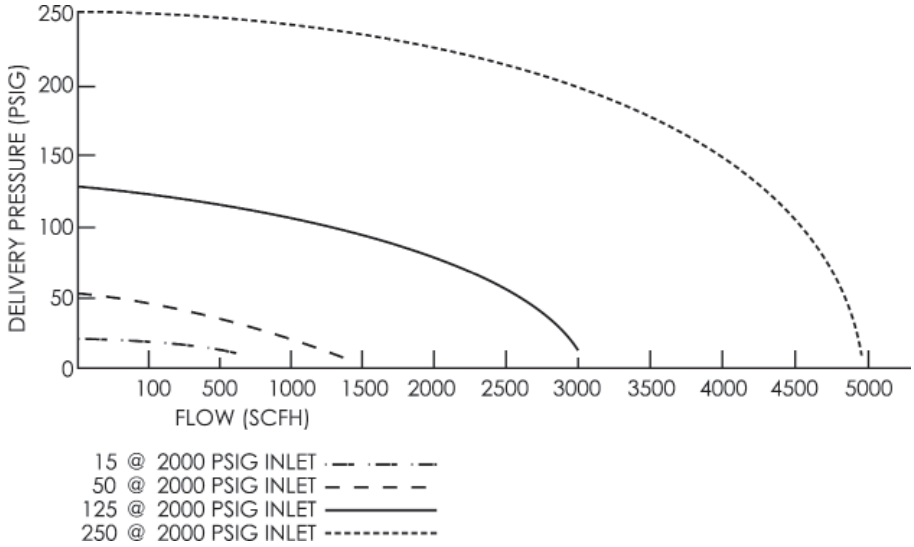
MODEL NO.	DELIVERY	DELIVERY PRESSURE (OUTLET GAUGE)	CGA / INLET FITTING		ACCESSORIES	OPTIONS
PP701	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	280	350	A) 1/4" MNPT Needle Valve	1) Without Relief Valve
	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	296	500	B) 1/4" FNPT Diaph. Valve	3) No Gauges
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	300	510	C) 1/4" MNPT Nipple	6) 400 psi inlet gauge
	0-250 PSIG	(400 psi/28 bar)	320	540	D) 1/4" FNPT Port	**Gas Service Must Be Specified**
			326	555	E) 1/4" Tube Fitting	
			346	580	F) 1/8" Tube Fitting	
			000 (1/4" FNPT)	590	G) 1/4" Hose barb x 1/4" MNPT	
			001 (1/4" MNPT)		H) 1/8" Hose barb x 1/4" MNPT	
					I) 1/4" Hose barb x 1/4" FNPT	
					J) 1/4" FNPT Needle Valve	
					K) Single Regulator Alarm	
					L) SG 910 BR Protocol w/36" Pigtail	

PP701

TECHNICAL SPECIFICATIONS

FLOW DATA

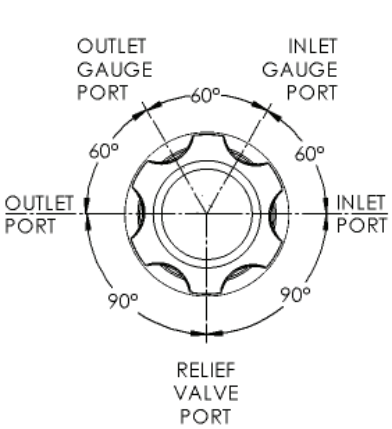


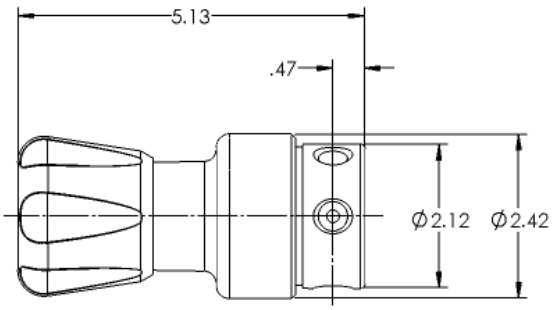


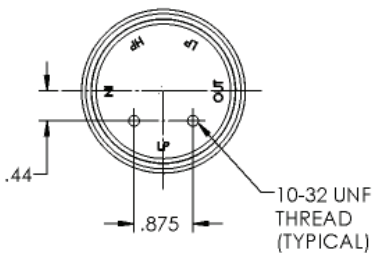
SPECIFICATIONS

- C_v: .17
- Pressure Regulation: 1.3 PSIG/100 PSIG
- Weight: 3.5 Lbs.

DIMENSIONS







PP702

PurityPlus® SPECIALTY GASES

FORGED BRASS REGULATOR (CHROME PLATED)

Model PP702-125-580-B shown

Model PP702 is a chrome plated brass two stage cylinder regulator with a stainless steel diaphragm for general laboratory use. The HP 702 provides constant delivery pressure from full to near empty cylinder conditions.
The PP702 is suitable for:

- Non-corrosive gases
- Purging
- Pressure testing
- Blanketing
- Incubators

Recommended for gas purity up to Grade 5.0 (99.999).

MATERIALS

Body	Chrome Plated Brass
Bonnets	Chrome Plated Die Cast
Diaphragms	302 Stainless Steel
Nozzles	Brass
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Nickel-Plated Sintered Bronze - 10 Micron
Seat Return Spring	PH-17 Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 2 1/8" 302 stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One-piece encapsulated seat design to protect seat from particulate contamination
- Chrome plated bonnet, body and fittings
- 2" chrome plated dual scale gauges (psi/bar)
- External relief valve standard
- Designed to 1 x 10^{-8} cc/sec. inboard helium leak rate to maintain gas purity levels
- Maximum inlet 3000 PSIG except for models with CGA 300 and 510 equipped with 400 PSIG inlet gauge

PP702 ORDERING INFORMATION

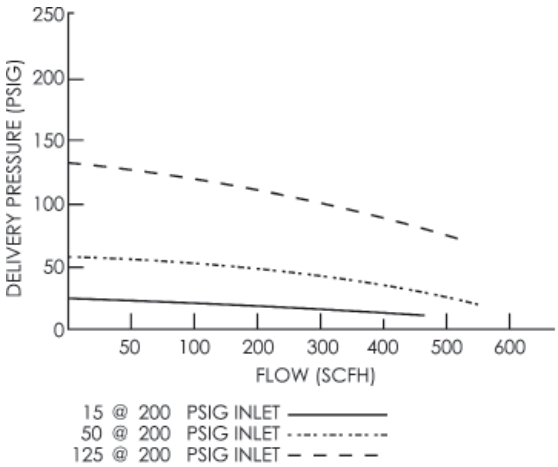
PP702 - XXX - XXX - XXXX - XX

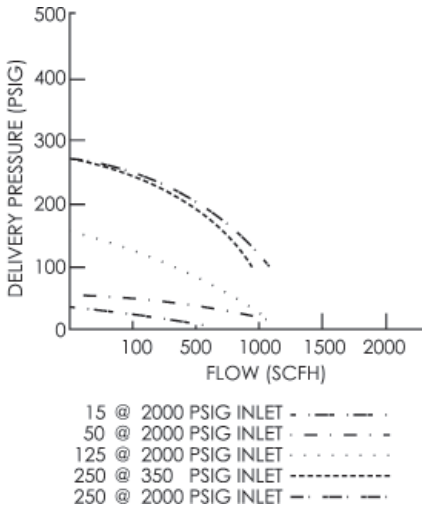
MODEL NO.	DELIVERY	DELIVERY PRESSURE (OUTLET GAUGE)	CGA INLET FITTING		ACCESSORIES	OPTIONS
PP702	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	000 (1/4" FNPT)	350	A. 1/4" MNPT Needle Valve	1. Without Relief Valve
	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	001 (1/4" MNPT)	500	B. 1/4" FNPT Diaph. Valve	3. No Gauges
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	280	510	C. 1/4" MNPT Nipple	
	0-250 PSIG	(400 psi/28 bar)	296	540	D. 1/4" FNPT Port	
			300	555	E. 1/4" Tube Fitting	
			326	580	F. 1/8" Tube Fitting	
			346	590	G. 1/4" Hose barb x 1/4" MNPT	
					H. 1/8" Hose barb x 1/4" MNPT	
					I. 1/4" Hose barb x 1/4" FNPT	
					J. 1/4" FNPT Needle Valve	
					K. Single Regulator Alarm	
					L. SG 910 BR Regulator Mounting Station	

PP702

TECHNICAL SPECIFICATIONS

FLOW DATA

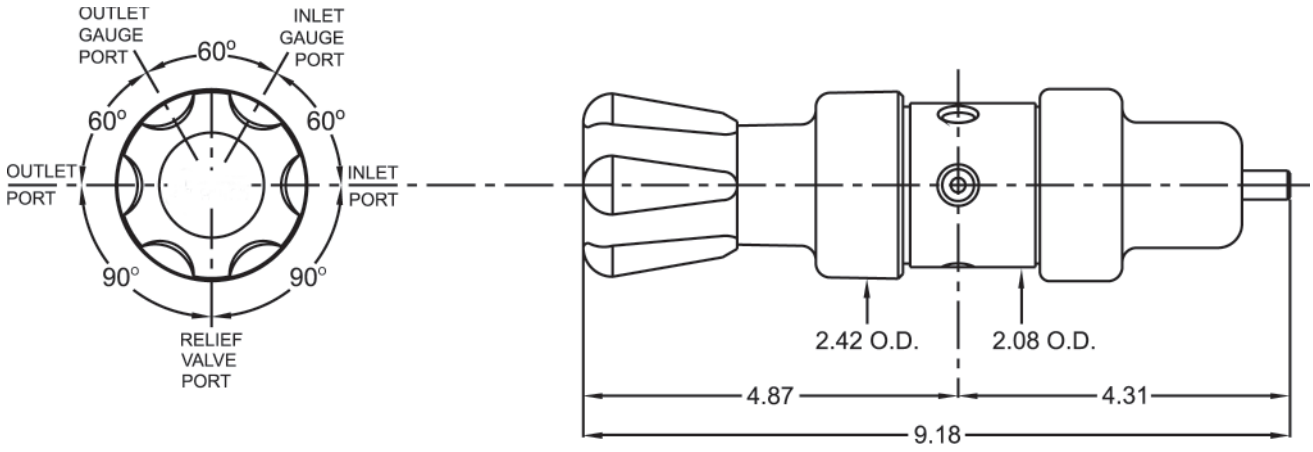




SPECIFICATIONS

- C_v: .15
- Pressure Regulation: 0.04 PSIG/100 PSIG
- Weight:: 4.48 lbs.

DIMENSIONS



PP703

PurityPlus® SPECIALTY GASES

FORGED BRASS REGULATOR (CHROME PLATED)

Model PP703-125-000-D shown

Model PP703 is a chrome plated brass single stage pipeline regulator with a stainless steel diaphragm for general laboratory use. The PP703 is suitable for:

- Non-corrosive gases
- Purging
- Pressure testing
- Blanketing

Recommended for gas purity up to Grade 5.0 (99.999).

FEATURES

- 2 - 1/8" 302 stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One-piece encapsulated seat design to protect seat from particulate contamination
- Chrome plated bonnet, body and fittings
- 2" chrome plated dual scale gauge (psi/bar)
- External relief valve standard
- Designed to 1 x 10^{-8} cc/sec. inboard helium leak rate to maintain gas purity levels
- Max inlet 3000 PSIG

RELATED OPTIONS

Wall mounting bracket P/N: 9101242

MATERIALS

Body	Chrome Plated Brass
Bonnet	Chrome Plated Die Cast
Diaphragm	302 Stainless Steel
Nozzle	Brass
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Nickel-Plated Sintered Bronze - 10 Micron
Seat Return Spring	PH-17 Stainless Steel
Adjusting Knob	ABS Plastic

PP703 ORDERING INFORMATION

PP 703 - xxx - xxx - xx - xx

MODEL NO.	Delivery Pressure DELIVERY	(OUTLET GAUGE)	INLET FITTING	ACCESSORIES	OPTIONS
PP 703	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	000 (1/4" FNPT)	A. 1/4" MNPT Needle Valve	1. Without Relief Valve
	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	001 (1/4" MNPT)	B. 1/4" FNPT Diaph. Valve	3. No Gauge
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	002 (1/4" Tube Fitting)	C. 1/4" MNPT Nipple	
	0-250 PSIG	(400 psi/28 bar)	003 (1/8" Tube Fitting)	D. 1/4" FNPT Port	
			004 (1/4" Hose barb x 1/4" MNPT)	E. 1/4" Tube Fitting	
			005 (1/8" Hose barb x 1/4" MNPT)	F. 1/8" Tube Fitting	
				G. 1/4" Hose barb x 1/4" MNPT	
				H. 1/8" Hose barb x 1/4" MNPT	
				I. 1/4" Hose barb x 1/4" FNPT	
				J. 1/4" FNPT Needle Valve	

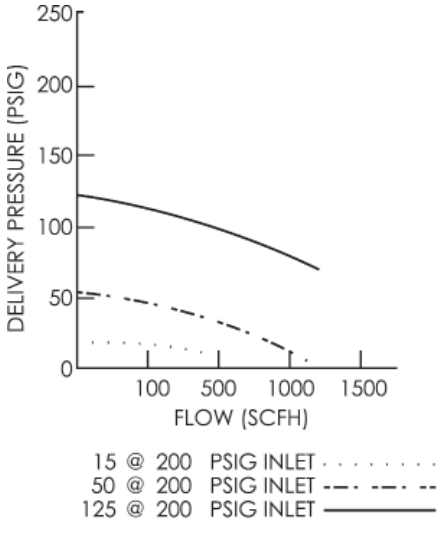
NOTE: Regulators with delivery pressure above 15 PSIG should not be used with acetylene.

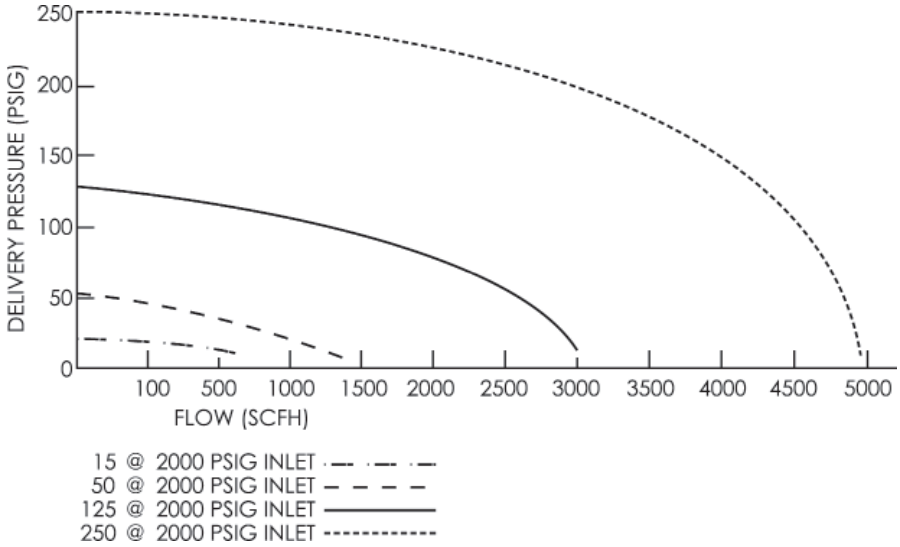
PurityPlus® SPECIALTY GASES

PP703

TECHNICAL SPECIFICATIONS

FLOW DATA

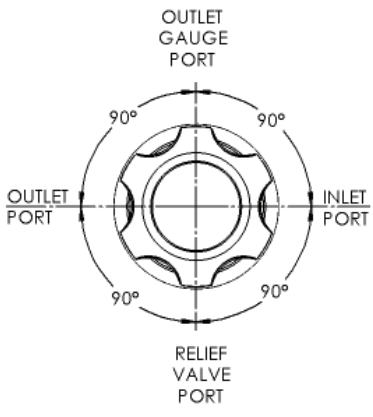


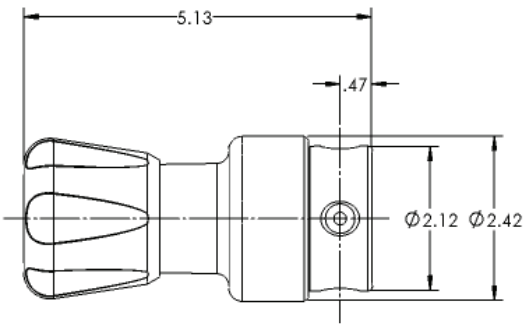


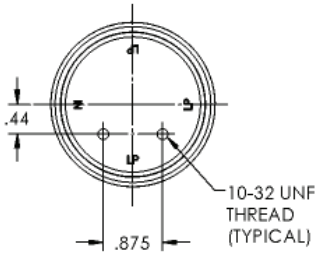
SPECIFICATIONS

- C_v: .17
- Pressure Regulation: 1.8 PSIG/100 PSIG
- Weight: 2.92 lbs.

DIMENSIONS







PP721/721C

PurityPlus® SPECIALTY GASES

BRASS BARSTOCK REGULATOR (BARE BRASS AND CHROME PLATED)

Model PP721C-125-350-B shown

Model PP721-125-350-B shown

MADE IN THE USA

Model PP721 is a single stage cylinder regulator available in brass (PP721) or chrome plated brass (HP 721C) barstock for pressure control of non corrosive gases when pressure rise is not critical. The PP721 is suitable for:

- High purity gas applications
- Research sample systems gases
- Process analyzer gases
- Gas chromatography
- EPA protocol gases
- Laser gas systems
- Emission monitoring systems

Recommended for gas purity levels of Grade 5.0 (99.999) and higher.

MATERIALS

Body/Bonnet	Brass Barstock
Diaphragm	316L Stainless Steel
Nozzle	Brass
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Nickel-Plated Sintered Bronze - 10 Micron
Seat Return Spring	PH17-7 Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 1-11/16" 316L stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One piece encapsulated seat design includes a sintered filter to protect the seat from particulate contamination
- 2" dual scale brass gauges (psi/bar)
- Designed to 1 x 10^{-9} cc/sec. inboard helium leak rate to maintain gas purity levels
- Front or back panel mountable
- Maximum inlet 3000 PSIG except for models with CGA 300 and 510 equipped with 400 PSIG Inlet gauge
- External relief valve standard

RELATED OPTIONS

Front Panel Mount Kit P/N: 9100871
Wall Mounting Bracket P/N: 9101242

PP721 ORDERING INFORMATION

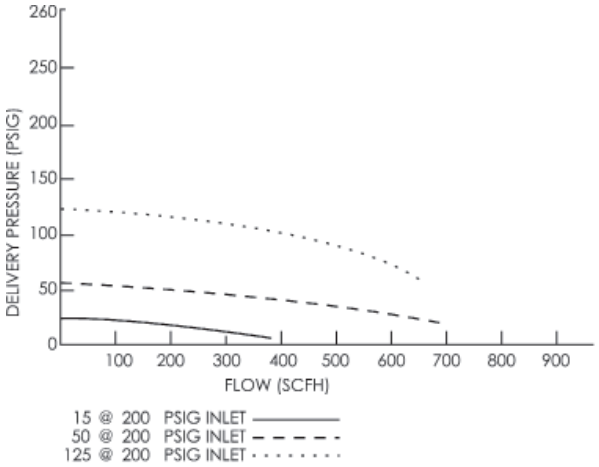
PP721 - XXX - XXX - XXXX - XXXXX

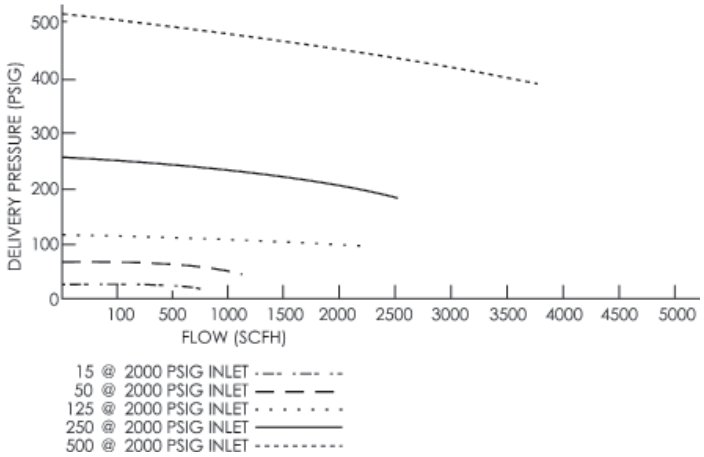
MODEL NO.	DELIVERY	DELIVERY PRESSURE (OUTLET GAUGE)	CGA/INLET FITTING		ACCESSORIES	OPTIONS
PP721	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	000 (1/4" FNPT)	350	A) 1/4" MNPT Needle Valve	1. Without Relief Valve
PP721C (chrome plated)	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	001 (1/4" MNPT)	510	B) 1/4" FNPT Diaph. Valve	2. He Leak Cert. (Inboard)
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	300	540	C) 1/4" MNPT Nipple	3. No Gauges
	0-250 PSIG	(400 psi/28 bar)	320	580	D) 1/4" FNPT Port	5. He Leak Cert.(Outboard)
	0-500 PSIG	(1000 psi/70 bar)	326	590	E) 1/4" Tube Fitting	6. 400 psi inlet gauge
			346		F) 1/8" Tube Fitting	**Gas Service Must Be Specified**
					G) Single Regulator Alarm	
					R) SG 910 EZ BR Regulator Mounting Station 1 cyl 36" Pigtail* *Call for different lengths	

PP721/721C

TECHNICAL SPECIFICATIONS

FLOW DATA

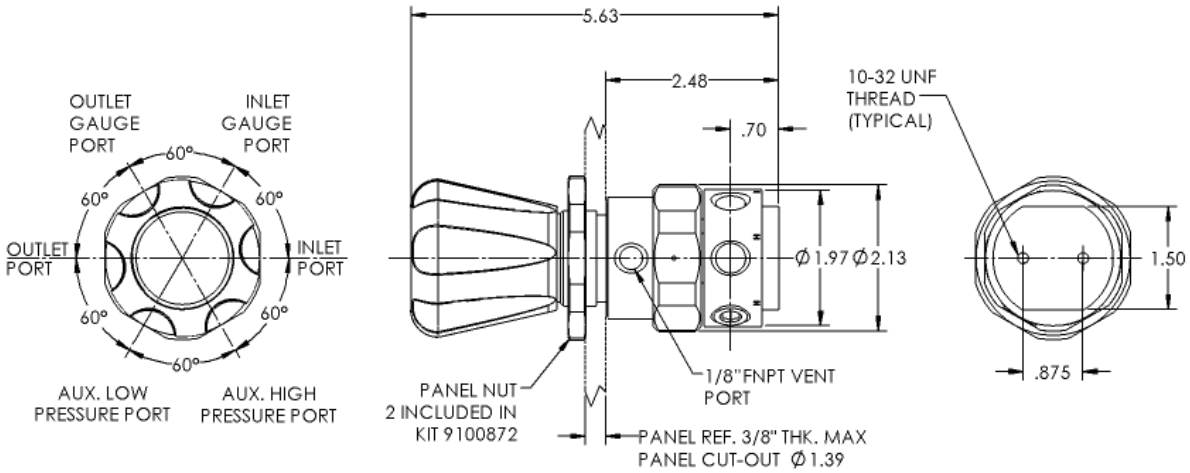




SPECIFICATIONS

- Cv: .08
- Pressure Regulation: 1.8 PSIG/100 PSIG
- Weight: 2.92 lbs.

DIMENSIONS



PP722/722C

PurityPlus® SPECIALTY GASES

BRASS BARSTOCK REGULATOR (BARE BRASS AND CHROME PLATED)

Model PP722C-125-320-B shown

Model PP722-125-320-B shown

Model PP722 is a two stage cylinder regulator available in brass (PP722) or chrome plated brass (PP722C) barstock for constant delivery pressure from full to near empty cylinder conditions. The PP 722 is suitable for:

- High purity gas applications
- Research sample systems gases
- Process analyzer gases
- Gas chromatography
- EPA protocol gases
- Laser gas systems
- Emission monitoring systems

Recommended for gas purity levels of Grade 5.0 (99.999) and higher.

MADE IN THE USA

MATERIALS

Body/Bonnet	Brass Barstock
Diaphragm	316L Stainless Steel
Nozzle	Brass
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Nickel-Plated Sintered Bronze - 10 Micron
Seat Return Spring	PH17-7 Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 1 11/16" 316L stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One piece encapsulated seat design includes a sintered filter to protect the seat from particulate contamination
- 2" dual scale brass gauges (psi/bar)
- Designed to 1 x 10-9 cc/sec. inboard helium leak rate to maintain gas purity levels
- Front and rear panel mountable
- Maximum inlet 3000 PSIG except for models with CGA 300 and 510 equipped with 400 PSIG inlet gauge
- External relief valve standard

RELATED OPTIONS

Front Panel Mount Kit P/N: 9100871

PP722 ORDERING INFORMATION

HP 722 - XXX - XXX - XXXX - XXXX

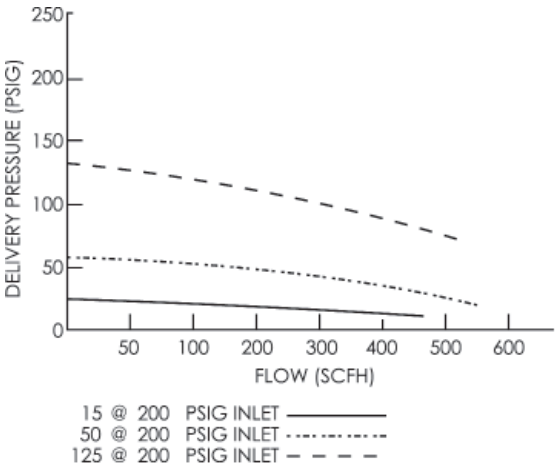
MODEL NO.	DELIVERY PRESSURE DELIVERY	(OUTLET GAUGE)	CGA / INLET FITTING		ACCESSORIES	OPTIONS
PP722	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	000 (1/4" FNPT)	346	A. 1/4" MNPT Needle Valve	1. Without Relief Valve
PP722C (chrome plated)	0-50 PSIG	(30" Hg Vac-100 psi/ 7 bar)	001 (1/4" MNPT)	350	B. 1/4" FNPT Diaph. Valve	2. He Leak Cert. (Inboard)
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	296	510	C. 1/4" MNPT Nipple	3. No Gauges
	0-250 PSIG	(400 psi/28 bar)	300	540	D. 1/4" FNPT Port	5. He Leak Cert. (Outboard)
	0-500 PSIG	(1000 psi/70 bar)	320	580	E. 1/4" Tube Fitting	
			326	590	F. 1/8" Tube Fitting	
					G. Single Regulator Alarm	
					R. SG 910 EZ BR Regulator Hose Barb Mounting Station 1 cyl 36" Pigtail* *Call for different lengths	

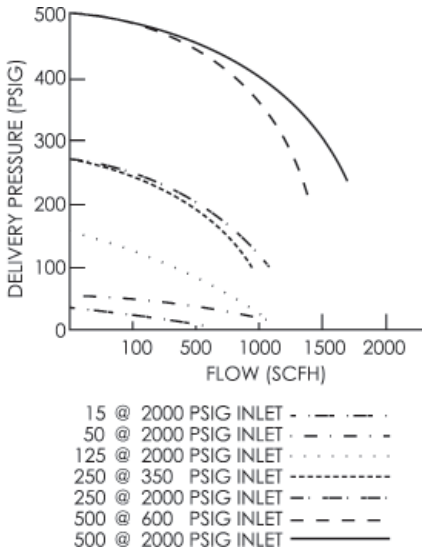
PurityPlus® SPECIALTY GASES

PP722/722C

TECHNICAL SPECIFICATIONS

FLOW DATA

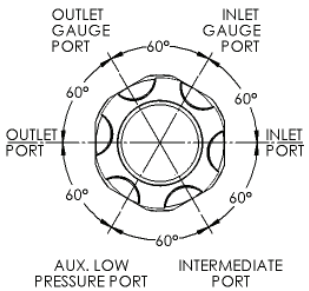


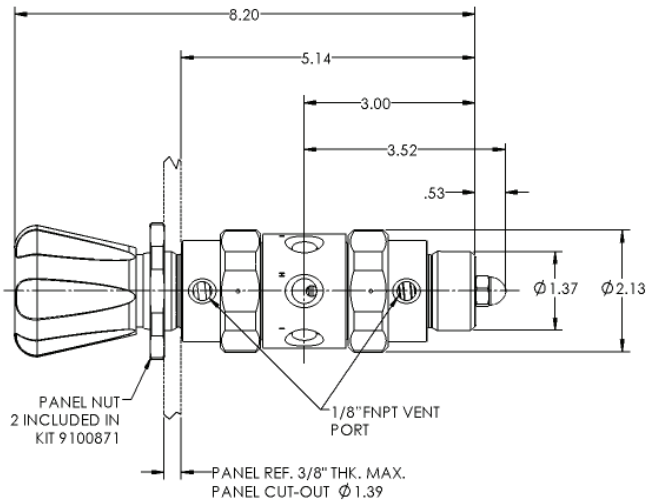


SPECIFICATIONS

- Cv: .06
- Pressure Regulation: .05 PSIG/100 PSIG
- Weight: 4.43 lbs.

DIMENSIONS

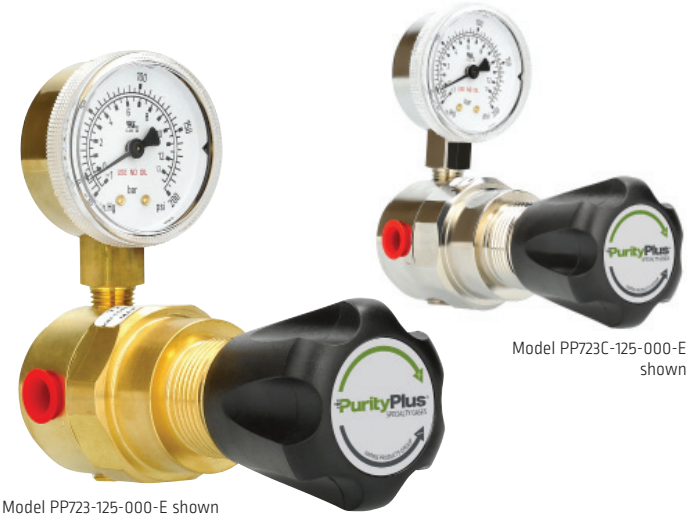




PP723/723C

PurityPlus® SPECIALTY GASES

BRASS BARSTOCK REGULATOR (BARE BRASS AND CHROME PLATED)



Model PP723C-125-000-E shown

Model PP723-125-000-E shown

Model PP723 is a single stage pipeline regulator available in brass (PP723) or chrome plated brass (HP 723C) barstock and are rated up to 3000 psig inlet pressure.
The PP723 is suitable for:

- High purity gas applications
- Research sample systems gases
- Process analyzer gases
- Gas chromatography
- EPA protocol gases
- Laser gas systems
- Emission monitoring systems

Recommended for gas purity levels of Grade 5.0 (99.999) and higher.

MADE IN THE USA

MATERIALS

Body/Bonnet	Brass Barstock
Diaphragm	316L Stainless Steel
Nozzle	Brass
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Nickel-Plated Sintered Bronze - 10 Micron
Seat Return Spring	PH 17-7 Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 1-11/16" 316L stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One piece encapsulated seat design includes a sintered filter to protect the seat from particulate contamination
- 2" dual scale brass gauge (psi/bar)
- Designed to 1 x 10-9 cc/sec. inboard helium leak rate to maintain gas purity levels
- Front or back panel mountable
- External relief valve standard
- Maximum inlet 3000 PSIG

RELATED OPTIONS

Front Panel Mount Kit P/N: 9100871

PP723 ORDERING INFORMATION

PP723 - XXX - XXX - XX - XXXX

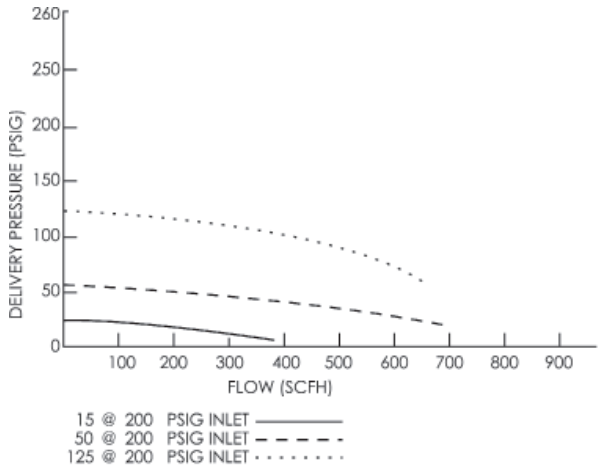
MODEL NO.	DELIVERY PRESSURE DELIVERY	(OUTLET GAUGE)	INLET	ACCESSORIES	OPTIONS
PP723	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	000 (1/4" FNPT)	A. 1/4" MNPT Needle Valve	1. Without Relief Valve
PP723C (chrome plated)	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	001 (1/4" MNPT)	B. 1/4" FNPT Diaph. Valve	2. He Leak Cert. (Inboard)
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	002 (1/4" Tube fitting)	C. 1/4" MNPT Nipple	3. No Gauge
	0-250 PSIG	(400 psi/28 bar)	003 (1/8" Tube fitting)	D. 1/4" FNPT Port	5. He Leak Cert. (Outboard)
	0-500 PSIG	(1000 psi/70 bar)		E. 1/4" Tube Fitting	
				F. 1/8" Tube Fitting	
				G. 1/4" Hose barb x 1/4" MNPT	
				H. 1/8" Hose barb x 1/4" MNPT	

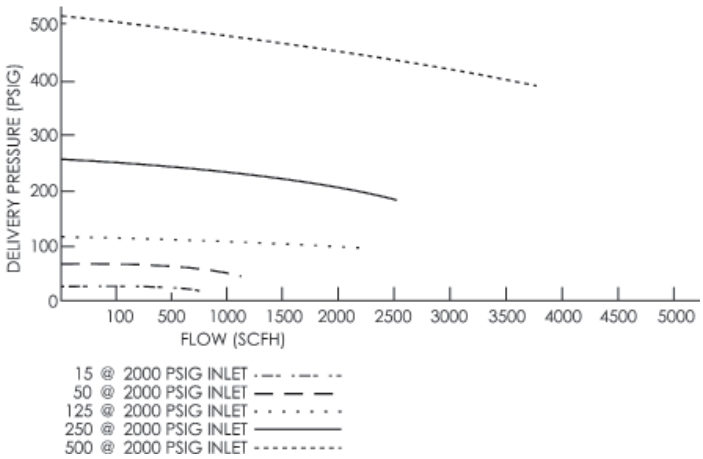
NOTE: Regulators with delivery pressure above 15 PSIG should not be used with acetylene.

PP723/723C

TECHNICAL SPECIFICATIONS

FLOW DATA

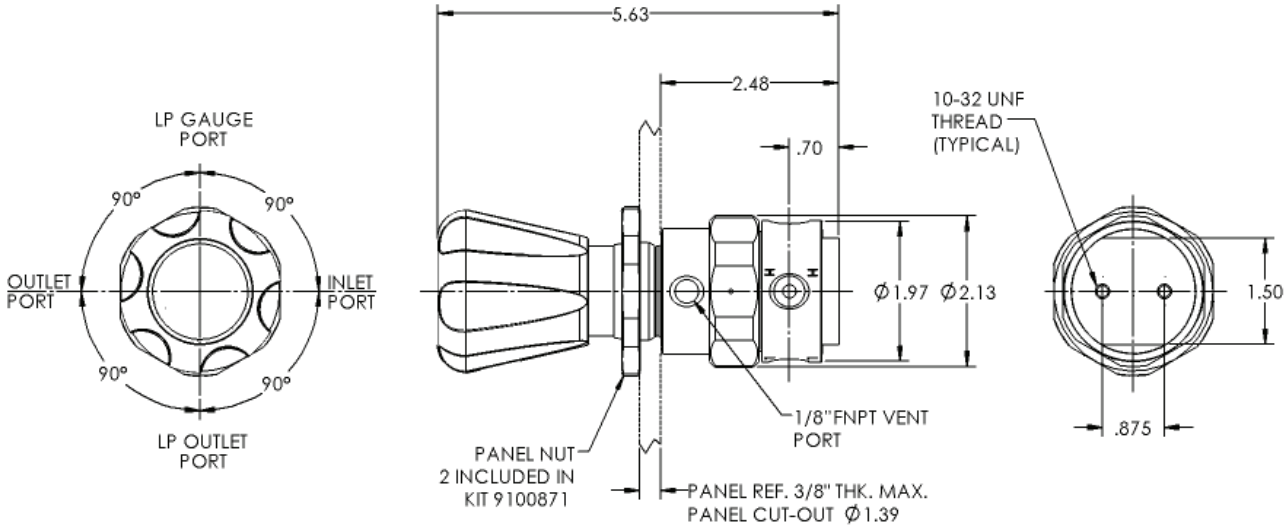




SPECIFICATIONS

- Cv: .08
- Pressure Regulation: 1.8 PSIG/100 PSIG
- Weight: 2.68 lbs.

DIMENSIONS



PP741

PurityPlus® SPECIALTY GASES

STAINLESS STEEL BARSTOCK REGULATOR

MADE IN THE USA

Model PP741-125-580-A shown

Model HP 741 is a single stage, stainless steel cylinder regulator for applications where a slight rise in delivery pressure from full to empty cylinder can be tolerated. The Model HP 741 is suitable for:

- Corrosive gas applications
- High purity gas applications
- Research sample systems gases
- Process analyzer gases
- Gas chromatography
- EPA protocol gases
- Laser gas systems
- Emission monitoring systems

Recommended for corrosive gases or purity levels of Grade 6.0 (99.9999) and higher.

MATERIALS

Body	316L Stainless Steel Barstock
Bonnet	Chrome Plated Brass Barstock
Diaphragm	316L Stainless Steel
Nozzle	316L Stainless Steel
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Sintered Stainless Steel - 10 Micron
Seat Return Spring	316L Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 1 - 11/16" 316L stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One piece encapsulated seat design includes a sintered filter to protect the seat from particulate contamination
- Chrome plated bonnet, 316L SS body and fittings
- 2" stainless steel dual scale gauges (psi/bar)
- 1 x 10-9 cc/sec. inboard helium leak rate to maintain gas
- purity levels
- Front or back panel mountable
- Maximum inlet 3000 PSIG except for models with
- CGA 240 and 510 equipped with 400 PSIG inlet gauge

RELATED OPTIONS

Front Panel Mount Kit P/N: 9100871
Wall mounting Bracket P/N: 9101242

PP741 ORDERING INFORMATION

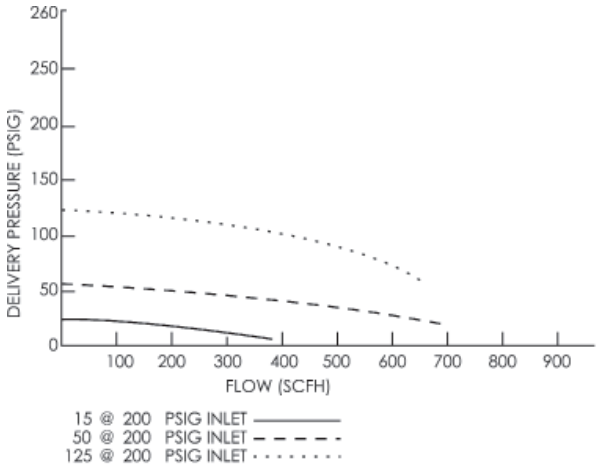
PP741 - XXX - XXX - XXXX - XXXXX

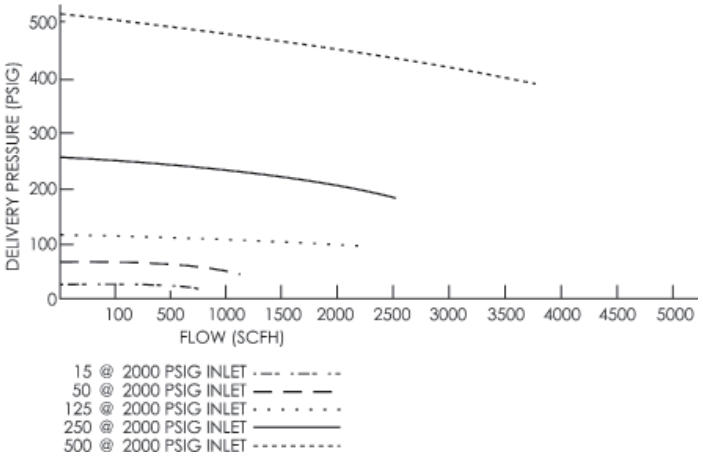
MODEL NO.	DELIVERY	DELIVERY PRESSURE (OUTLET GAUGE)	CGA INLET FITTING		ACCESSORIES	OPTIONS
PP741	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	240	510	A) 1/4" FNPT Diaph. Valve	2) He Leak Cert. (Inboard)
	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	320	540	B) 1/4" MNPT Nipple	3) No Gauges
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	326	580	C) 1/4" FNPT Port	4) With Relief Valve
	0-250 PSIG	(400 psi/28 bar)	330	590	D) 1/4" Tube Fitting	5) He Leak Cert.(Outboard)
	0-500 PSIG	(1000 psi/70 bar)	346	660	E) 1/8" Tube Fitting	6) 400 PSI Inlet Gauge
			350	705	F) Single Regulator Alarm	**Gas Service Must Be Specified**
			000 (1/4" FNPT)		R) SG910 EZ Regulator mounting station 1 Cyl 36" Pigtail* *Call for different lengths	
			001 (1/4" MNPT)			

PP741

TECHNICAL SPECIFICATIONS

FLOW DATA

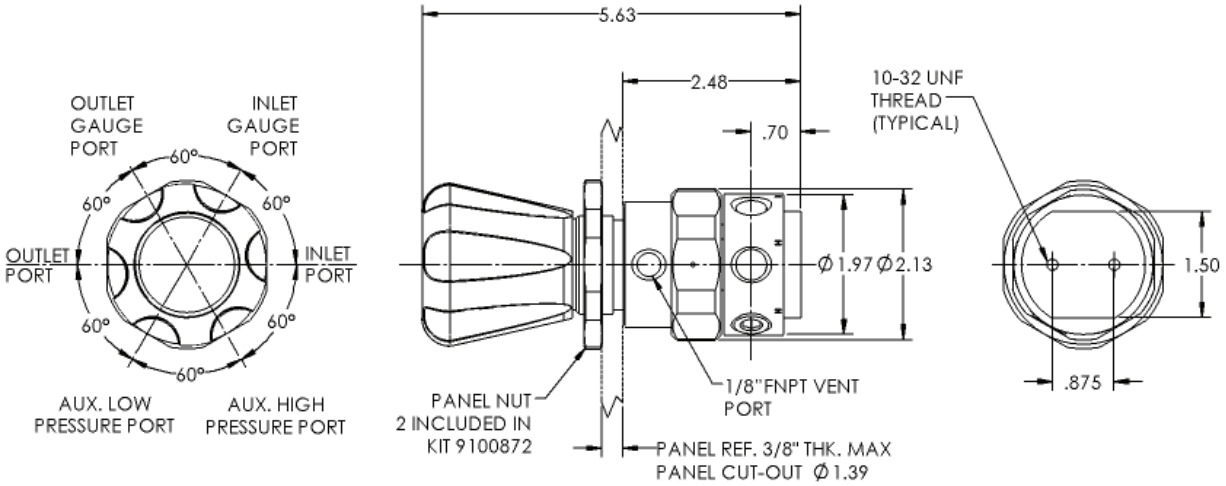




SPECIFICATIONS

- Cv: .08
- Pressure Regulation: 1.8 PSIG/100 PSIG
- Weight: 2.92 lbs.

DIMENSIONS



PP742

STAINLESS STEEL BARSTOCK REGULATOR

MADE IN THE USA

Model PP742-125-580-A shown

Model PP742 is a two stage stainless steel cylinder regulator for constant delivery pressure from full to near empty cylinder conditions. The HP 742 is suitable for:

- Corrosive gas applications
- High purity gas applications
- Research sample systems gases
- Process analyzer gases
- Gas chromatography
- EPA protocol gases
- Laser gas systems
- Emission monitoring systems

Recommended for corrosive gases or purity levels of Grade 6.0 (99.9999) and higher.

MATERIALS

Body	316L Stainless Steel Barstock
Bonnet	Chrome Plated Brass Barstock
Diaphragm	316L Stainless Steel
Nozzle	316L Stainless Steel
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Sintered Stainless Steel - 10 Micron
Seat Return Spring	316L Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 1 11/16" 316L stainless steel diaphragm eliminatescontamination from diffusion or outgassing
- One piece encapsulated seat design includes a sintered filter to protect the seat from particulate contamination
- Chrome plated bonnet, 316L SS body and fittings
- 2" stainless steel dual scale gauges (psi/bar)
- Designed to 1 x 10-9 cc/sec. inboard helium leak rate to maintain gas purity levels
- Maximum inlet 3000 PSIG except for models with CGA 240 and 510 equipped with 400 PSIG inlet gauge
- Front panel mountable

RELATED OPTIONS

Front Panel Mount Kit P/N: 9100871

PP742 ORDERING INFORMATION

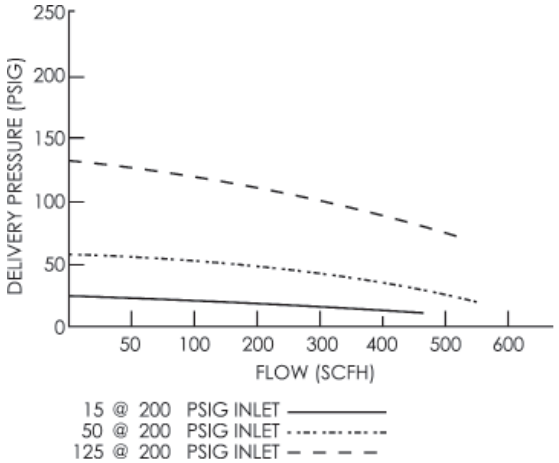
PP742 - XXX - XXX - XXXX - XXXX

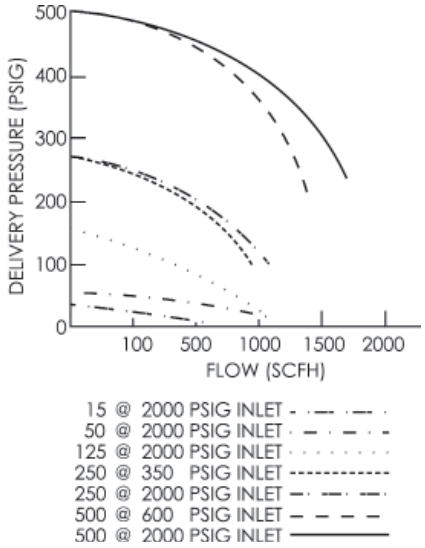
Model No.	Delivery Pressure Delivery	(Outlet Gauge)	CGA/Inlet Fitting		Accessories	Options
PP742	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	240	510	A) 1/4" FNPT Diaph. Valve	2) He Leak Cert. (Inboard)
	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	320	540	B) 1/4" MNPT Nipple	3) No Gauges
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	326	580	C) 1/4" FNPT Port	4) With Relief Valve
	0-250 PSIG	(400 psi/28 bar)	330	590	D) 1/4" Tube Fitting	5) He Leak Cert. (Outboard)
	0-500 PSIG	(1000 psi/70 bar)	346	660	E) 1/8" Tube Fitting	
			350	705	F) Single Regulator Alarm	
			000 (1/4" FNPT)		R) SG910 EZ Regullator	
			001 (1/4" MNPT)		Mounting Station station 1 Cyl 36" Pigtail Call for different lengths	

PP742

TECHNICAL SPECIFICATIONS

FLOW DATA

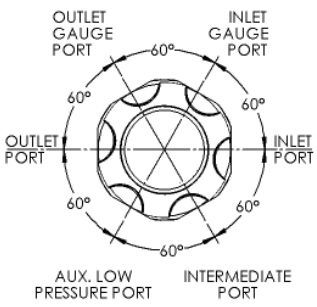


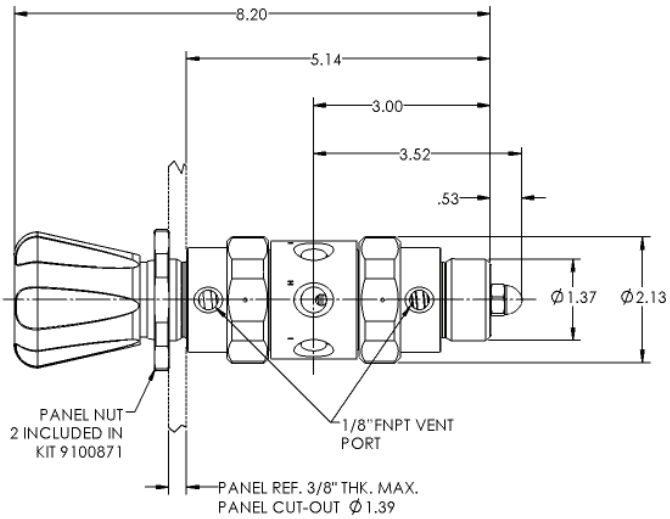


SPECIFICATIONS

- Cv: .06
- Pressure Regulation: .05 PSIG/100 PSIG
- Weight: 4.43 lbs.

DIMENSIONS





PP743

PurityPlus® SPECIALTY GASES

STAINLESS STEEL BARSTOCK REGULATOR

Model PP743-125-000-E shown

Model HP 743 is a single stage stainless steel pipeline regulator for pipeline and other applications up to 3000 PSIG inlet pressure. The Model HP 743 is suitable for:

- Corrosive gas applications
- High purity gas applications
- Research sample systems gases
- Process analyzer gases
- Gas chromatography
- EPA protocol gases
- Laser gas systems
- Emission monitoring systems

Recommended for corrosive gases or purity levels of Grade 6.0 (99.9999) and higher.

MATERIALS

Body	316L Stainless Steel Barstock
Bonnet	Chrome Plated Brass Barstock
Diaphragm	316L Stainless Steel
Nozzle	316L Stainless Steel
Seat	PTFE Teflon
Seals	PTFE Teflon
Filter	Sintered Stainless Steel - 10 Micron
Seat Return Spring	316L Stainless Steel
Adjusting Knob	ABS Plastic

FEATURES

- 1-11/16" 316L stainless steel diaphragm eliminates contamination from diffusion or outgassing
- One piece encapsulated seat design includes a sintered filter to protect the seat from particulate contamination
- Chrome plated bonnet, 316L body and fittings
- 2" stainless steel single scale gauge (psi/bar)
- Designed to 1 x 10-9 cc/sec. inboard helium leak rate to maintain gas purity levels
- Maximum inlet 3000 PSIG
- Front or back panel mountable

RELATED OPTIONS

Front Panel Mount Kit P/N: 9100871
Wall mounting Bracket P/N: 9101242

PP743 ORDERING INFORMATION

PP743 - XXX - XXX - XX - XXXX

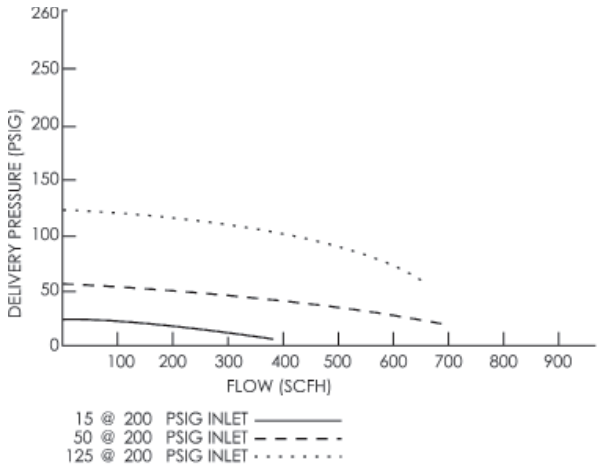
MODEL NO.	DELIVERY PRESSURE DELIVERY	(OUTLET GAUGE)	INLET	ACCESSORIES	OPTIONS
PP743	0-15 PSIG	(30" Hg Vac-30 psi/2 bar)	000 (1/4" FNPT)	A. 1/4" FNPT Diaph. Valve	2. He Leak Cert. (Inboard)
	0-50 PSIG	(30" Hg Vac-100 psi/7 bar)	001 (1/4" MNPT)	B. 1/4" MNPT Nipple	3. No Gauge
	0-125 PSIG	(30" Hg Vac-200 psi/14 bar)	002 (1/4" Tube fitting)	C. 1/4" FNPT Port	4. With Relief Valve
	0-250 PSIG	(400 psi/28 bar)	003 (1/8" Tube fitting)	D. 1/4" Tube Fitting	5. He Leak Cert (Outboard)
	0-500 PSIG	(1000 psi/70 bar)		E. 1/8" Tube Fitting	

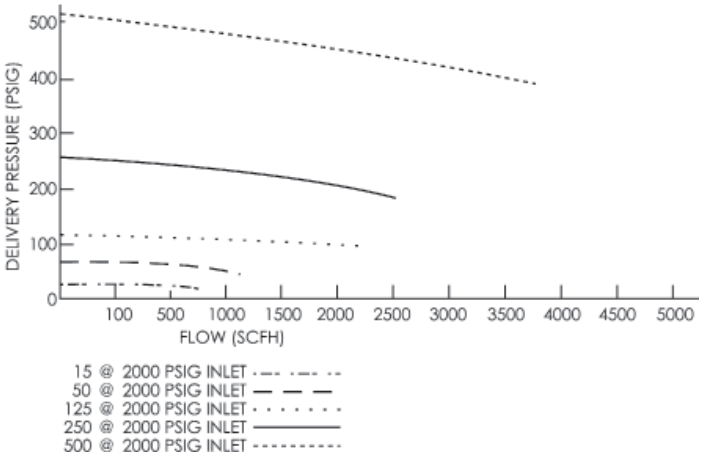
NOTE: Regulators with delivery pressure above 15 PSIG should not be used with acetylene.

PP743

TECHNICAL SPECIFICATIONS

FLOW DATA

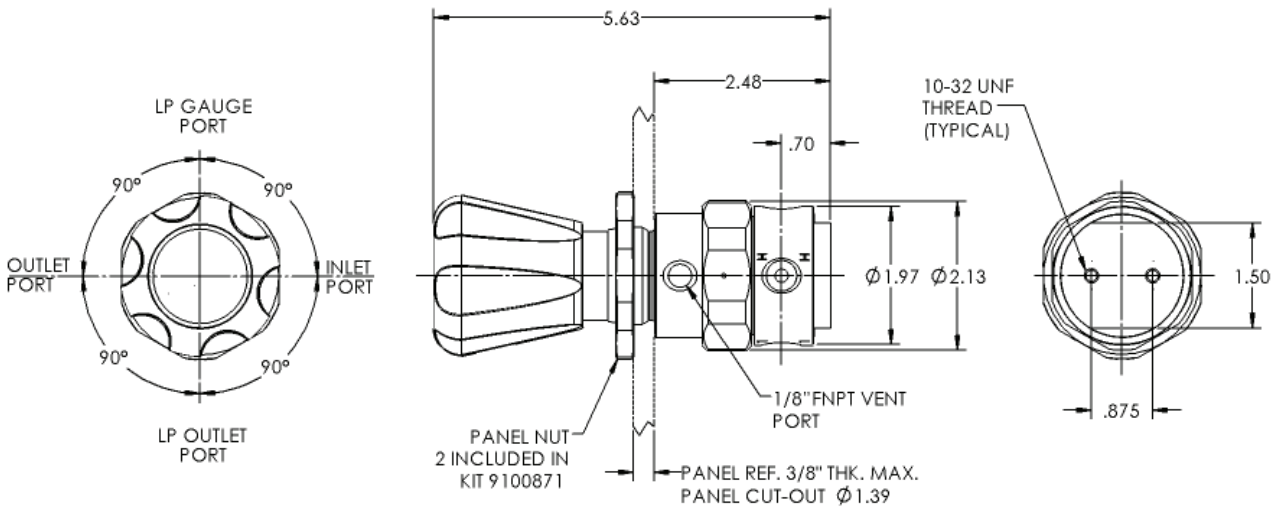




SPECIFICATIONS

- Cv: .08
- Pressure Regulation: 1.8 PSIG/100 PSIG
- Weight: 2.68 lbs.

DIMENSIONS




PurityPlus
SPECIALTY GASES
AIRGAS PRODUCTS GROUP

PurityPlus® SPECIALTY GASES

PP910EZ

REGULATOR MOUNTING STATION

Model 721C - 050 - 580 - BER shown

The EZ Mount accessory enables a practical and safe wall-mounted installation of any Harris high-purity bar stock cylinder regulator. This simple design allows for right out-of-the-box installation of the regulator assembly onto a wall or structure. The convenient, compact design significantly minimizes the amount of valuable wall space normally required to wall mount regulators.

The EZ Mount accessory is available with a choice of 1 or 2 all stainless steel flexible pigtails in 36", 48" or 72" lengths and a wall-mount bracket.It is equipped with a CGA connection with integrated check valves to prevent contaminates from entering the gas delivery supply during cylinder change out. The mounting brackets are fabricated from 16 gauge aluminum for durable, long-life service and are suitable for most environments and locations.

- Compact design minimizes valuable wall space required to wall mount regulators
- Convenient installation - ready to mount right out-of-the-box
- Regulator available with a packless diaphragm valve for easy shut-off
- Safe & efficient - eliminates the need to handle regulator during cylinder change-outs
- Regulator available with a wide range of outlet compression fittings
- Check valve CGA prevents contaminates from entering gas stream
- Maximum inlet pressure 3000 psig
- Cleaned to CGA G-4.1

910EZ ORDERING INFORMATION

PART NO.	MATERIAL	REGULATORS	NUMBER OF CYLINDERS
Call customer service at 1.800.733.4043 Option 2 for part numbers for your specific application	Brass	721, 721C, 722, 722C	1
	Brass	721, 721C, 722, 722C	2
	Stainless Steel	741 & 742	1
	Stainless Steel	741 & 742	2

SPECIFICATIONS

Maximum Rated Inlet Pressure: 3000 psig
Temperature Range: -40°F to +165°F
Weight: 2 lbs (without regulator)
Bracket: 16 Gauge Aluminum
Pigtail - One or Two
Available lengths are 36", 48" and 72" 316 stainless steel flexible hose (other lengths are available by special order)

Choose EZ Mount as an accessory when ordering regulators listed below.

Model 721/ 721C see P. 14
Model 722/ 722C see P. 16
Model 741 see P.8
Model 742 see P.10

PP900

SWITCHOVER MANIFOLDS BRASS & STAINLESS STEEL

The PP900 BR / PP905 SS semi-automatic high purity switchover prevents downtime by automatically switching gas supply from the primary cylinder bank to the reserve cylinder bank. The user resets the primary bank by turning the knob. Manual adjustment of the individual regulators is not required. All systems include a line control regulator.

FEATURES

- Wall mounting panel and brackets included
- Maximum inlet pressure 3000 PSIG
- Delivery pressure: 0-15, 0-50, 0-125, 0-250, 0-500 except acetylene (CGA 510A) 0-15 psig
- Inlet/outlet - 1/4" NPT Ports
- Headers include diaphragm-type shut-off valves
- All systems include stainless steel pigtails with integral check in the CGA stem added safety.
- Acetylene (CGA 510A) includes dry-type flash arrestors on pigtail end

RELATED OPTIONS

4302473 - Two Cylinder Process Station
4302615 - Four Cylinder Process Station
4302616 - Six Cylinder Process Station

PP900 ORDERING INFORMATION

MATERIAL	MODEL	DELIVERY PRESSURE	RIGHT # CYLINDERS	GAS SOURCE RIGHT	PIGTAIL LENGTH RIGHT	VALVE SPACING	LEFT # CYLINDERS	GAS SOURCE LEFT	PIGTAIL LENGTH LEFT	VALVE SPACING	INLET CGA
	XX	XXX	X	X	XX	(X)	X	X	XX	(X)	XXX
BRASS	900B	015	1-25	High Pressure Cylinder	24" (std)	10" (std)	1-25	High Pressure Cylinder	24" (std)	10" (std)	000
	900BV- Isolation Valve	050			36"	5"			36"	5"	(No CGA)
	900BA - Alarm	125			72"				72"		280 (Brass Only)
	900BVA - Valves and Alarm	250									320
	900BP - Inlet Purge	500									326
	900BPA - Inlet Purge and Alarm										330 (SS Only)
316L SS	900S										346
	900SV - Isolation Valve										350
	900SA - Alarm										500 (Brass Only)
	900SVA - Valve and Alarm										540
	900SP - Purge										580
	900SPA - Purge and Alarm										590
											660 (SS Only)
											705 (SS Only)

PurityPlus® SPECIALTY GASES

PP905

SWITCHOVER MANIFOLDS BRASS & STAINLESS STEEL

MADE IN THE USA

The PP905 BR / PP905 SS semi-automatic high purity switchover prevents downtime by automatically switching gas supply from the primary cylinder bank to the reserve cylinder bank. The user resets the primary bank by turning the knob. Manual adjustment of the individual regulators is not required. All systems include a line control regulator.

FEATURES

- Wall mounting panel and brackets included
- Maximum inlet pressure 3000 PSIG
- Delivery pressure: 0-15, 0-50, 0-125, 0-250, 0-500 except acetylene (CGA 510A) 0-15 psig
- Inlet/outlet - 1/4" NPT
- Headers include diaphragm-type shut-off valves
- All systems include stainless steel pigtails with check valves and stainless steel inner core and armor casing for added safety.
- Acetylene (CGA 510A) includes dry-type flash arrestors on pigtail end

RELATED OPTIONS

4302473 - Two Cylinder Process Station
4302615 - Four Cylinder Process Station
4302616 - Six Cylinder Process Station

PP905 ORDERING INFORMATION

MATERIAL	MODEL	DELIVERY PRESSURE	RIGHT # CYLINDERS	GAS SOURCE RIGHT	PIGTAIL LENGTH RIGHT	VALVE SPACING	LEFT # CYLINDERS	GAS SOURCE LEFT	PIGTAIL LENGTH LEFT	VALVE SPACING	INLET CGA
	XX	XXX	X	X	XX	(X)	X	X	XX	(X)	XXX
BRASS	905B	015	1-25	High Pressure Cylinder Liquid Cylinder	24" (std)	10" (std)	1-25	High Pressure Cylinder Liquid Cylinder	24" (std)	10" (std)	000
	905BV	050			36"	5"			36"	5"	(No CGA)
	905BA - Alarm	125			72"				72"		280 (Brass Only)
	905BVA - Valves and Alarm	250									320
	905BP - Inlet Purge	500									326
	905BPA - Inlet Purge and Alarm										330 (SS Only)
316L SS	905S										346
	905SV - Isolation Valve										350
	905SA - Alarm										500 (Brass Only)
	905SVA - Valve and Alarm										540
	905SP - Purge										580
	905SPA - Purge and Alarm										590
											660 (SS Only)
											705 (SS Only)

PurityPlus®

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DISTRIBUTOR LOCATOR CLICK HERE

https://www.purityplusgases.com/distributor-locator/

HARRIS SPECIALTY GAS Equipment