



A LINCOLN ELECTRIC COMPANY

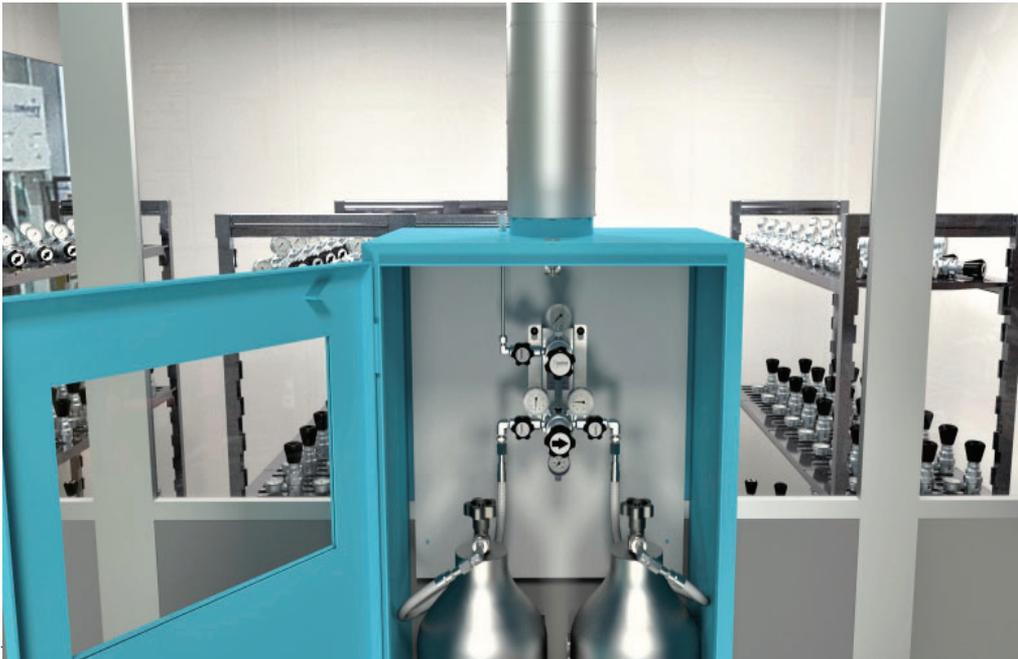


**SPECIALTY GAS
PRESSURE & FLOW CONTROL
ACCESSORY CATALOG**

THE HARRIS PRODUCTS GROUP, A LINCOLN ELECTRIC COMPANY

One of the largest independent manufacturers of pressure and flow control equipment in the world.

Harris products are sold and used in over 85 countries. Harris Specialty Gas Equipment Division was founded to provide complete solutions to customer's special gas handling requirements. The breadth of the product line is used in ANALYTICAL LABS, chemical processing, research and development, as well as BIOTECH AND PHARMACEUTICALS. In addition to pressure control equipment, Harris offers complete gas management products for flow control, gas purification, cylinder storage and audio/visual pressure indication.





P/N: 9100827



NEEDLE VALVES

These valves are used where a shut off feature or some degree of throttling is required. Max. Inlet Pressure: 3000 PSIG

PART NO.	BODY MATERIAL	SEAT	INLET	OUTLET	CV.
9100412	Brass	316 SS	1/4" MNPT	1/4" MNPT	.37
9100415	Brass	316 SS	1/4" MNPT	1/8" MNPT	.37
9100827	Chrome Plated Brass	316 SS	1/4" MNPT	1/4" MNPT	.37
9100927	Chrome Plated Brass	316 SS	1/4" MNPT	1/4" FNPT	.37

ADJUSTABLE RELIEF VALVES

These relief valves may be used as an integral part of a pressure regulator or on equipment downstream of a regulator. The relief valves have a 1/4" MNPT inlet and outlet thread to vent gases either externally or remotely. Cv= .37

STAINLESS STEEL			BRASS			CHROME-PLATED BRASS		
PART NO.	MODEL NO.	PSIG	PART NO.	MODEL NO.	PSIG	PART NO.	MODEL NO.	PSIG
9100856	RV-7050-SS	0-50	9100852	RV-7050-B	0-50	9100861	RV-7050-CHR	0-50
9100857	RV-7100-SS	0-100	9100853	RV-7100-B	0-100	9100863	RV-7100-CHR	0-100
9100858	RV-7250-SS	0-250	9100854	RV-7250-B	0-250	9100864	RV-7250-CHR	0-250
9100859	RV-7500-SS	0-500	9100855	RV-7500-B	0-500	9100865	RV-7500-CHR	0-500
9100877	RV-7800-SS	0-800	9100876	RV-7800-B	0-800	9100878	RV-7800-CHR	0-800

ANNUNCIATOR

The Harris Model 1031 two-channel remote alarm panel offers two input and two output channels, along with dry contact relay outputs and normally open output capabilities. Other features include a highly visible lighted status notification, a distinctive audible notification, auto-reset when cylinders are replenished, an audible alarm silence feature, the ability to "Daisy Chain" multiple alarm panels together, and Class I, Division II status with a NEMA 4 rating.

- 2" Gauge (0-400 psi or 0-3000 psi)
- Chrome Plated or Stainless Steel available
- Switch can be manually adjusted to any pressure on the gauge dial
- Requires 115VAC



PART NO.	DESCRIPTION	EXTENSION CABLE
9030318	Two-Channel Alarm Annunciator Box, only	-
4300823	Two-Channel Alarm Panel w/single gauge 3,000 psig for reg., chrome	25'
4300824	Two-Channel Alarm Panel w/ single gauge SS, 3,000 psig for reg., stainless steel	25'
4300825	Two-Channel Alarm Panel w/2 gauges for 900 and 905 series, chrome	25'
4300826	Two-Channel Alarm Panel w/2 gauges for 900 and 905 series, stainless steel	25'
4300827	Two-Channel Alarm Panel w/2 gauges for gas phase Dewar service, chrome	25'
4300828	Two-Channel Alarm Panel w/2 gauges for gas phase Dewar service, stainless steel	25'

OUTLET FITTINGS

PART NO.	TYPE	DESCRIPTION	MATERIAL
9000200	Male Hex Coupling	1/4" MNPT x 1/4" MNPT	Brass
9009247		1/4" NPT x 1/4" NPT	Chrome Plated
9007056		1/4" MNPT x 1/4" MNPT	316 Stainless Steel
9005724		1/4" NPT x 4"	Stainless Steel
9005707		1/2" NPT x 2"	Brass
9005704	Adaptors	1/2" MNPT x 4"	Brass
9005740		1/2" MNPT x 1/2" FNPT	Brass
9005752		1/2" MNPT x 1/4" FNPT	Brass
9005753	Tube Fittings	1/2" MNPT x 1/4" MNPT	Stainless Steel
9007049		1/4" x 1/4" MNPT	Stainless Steel
9007051		1/4" x 1/4" MNPT	Brass
9007050	Hose Barbs	1/8" x 1/4" MNPT	Stainless Steel
9007052		1/8" x 1/4" MNPT	Brass
9007055		1/4" x 1/4" MNPT	Brass
9007054	Bushing	1/8" x 1/4" MNPT	Brass
9510501		1/4" x 1/4" FNPT	Brass
9005386	Bushing	1/4" MNPT x 1/2" MNPT	Brass
9005806		1/4" FNPT x 1/2" MNPT	Brass



Male Hex Coupling



Adaptor



Tube Fitting



Hose Barb

OTHER FITTINGS AVAILABLE PLEASE CALL 1.800.733.4043

FLASHBACK ARRESTORS

Stainless steel flashback arrestors are designed for oxygen, hydrogen and other flammable or fuel gases. Standard with 1/4" FNPT inlet and 1/4" MNPT outlet connections make it easy to adapt in various applications. UL listed. Red fuel and green oxygen labels are included.

PART NO.	DESCRIPTION	WORKING PRESSURE	ELASTOMERS
4300146	Hydrogen	50 PSIG	Viton
	LPG/Methane	50 PSIG	
	Acetylene	15 PSIG	
	Oxygen	143 PSIG	



CHECK VALVES

Check valves insure unidirectional flow of compressed gases. They provide a simple, effective way to prevent backflow in gas delivery systems. Check valves are available in brass or 316 stainless steel.

SPECIFICATIONS

Cracking pressure: 1 psi

C_v: 0.15

Operating temperature range: -20F to +14F



PART NO.	INLET	OUTLET	MATERIAL	SEAT	MAX WORKING PRESSURE
4300379	1/4" FNPT	1/4" FNPT	Brass	Viton	3000 PSIG
4300380	1/4" FNPT	1/4" FNPT	316SS	Viton	3000 PSIG
4300386	1/4" FNPT	1/4" FNPT	316SS	EPR	3000 PSIG
4300421	1/4" MNPT	1/4" FNPT	316SS	EPR	6000 PSIG



1/2 Turn
Instrument Valve
P/N: 9105190



1/4 Turn
Regulator Valve
P/N: 9101386



Regulator Valve
P/N: 9101383



1/4 Turn
Instrument Valve
P/N: 9101389

REGULATOR OUTLET VALVE

Max. Inlet Pressure: 4500 PSIG, Flow Coefficient (CV): 0.13

PART NO.	INLET/OUTLET DESCRIPTION	BODY CONNECTION	DIAPHRAGM MATERIAL	SEAT MATERIAL	MATERIAL
9101382	Regulator Outlet Valve	1/4 NPT Female / 1/4 NPT female	Brass	316 SS	PCTFE (Kel-F™)
9101383	Regulator Outlet Valve	1/4 NPT Female / 1/4 NPT female	Nickel Plated Brass	316 SS	PCTFE (Kel-F™)
9101384	Regulator Outlet Valve	1/4 NPT Female / 1/4 NPT female	316 SS	316 SS	PCTFE (Kel-F™)

1/2 TURN INSTRUMENT VALVE

Max. Inlet Pressure: 4500 PSIG, Flow Coefficient (CV): 0.13

PART NO.	INLET/OUTLET DESCRIPTION	BODY CONNECTION	DIAPHRAGM MATERIAL	SEAT MATERIAL	MATERIAL
9105189	1/2 Turn Instrument Valve	1/4 NPT male / 1/4 NPT female	Brass	316 SS	PCTFE (Kel-F™)
9105190	1/2 Turn Instrument Valve	1/4 NPT male / 1/4 NPT female	Nickel Plated Brass	316 SS	PCTFE (Kel-F™)
9105191	1/2 Turn Instrument Valve	1/4 NPT male / 1/4 NPT female	316 SS	316 SS	PCTFE (Kel-F™)

1/4 TURN VALVE

Max. Inlet Pressure: 4500 PSIG, Flow Coefficient (CV): 0.13

PART NO.	INLET/OUTLET DESCRIPTION	BODY CONNECTION	DIAPHRAGM MATERIAL	SEAT MATERIAL	MATERIAL
9101388	1/4 Turn Instrument Valve	1/4 NPT female / 1/4 NPT female	Brass	316 SS	PCTFE (Kel-F™)
9101390	1/4 Turn Instrument Valve	1/4 NPT female / 1/4 NPT female	316 SS	316 SS	PCTFE (Kel-F™)
9101389	1/4 Turn Instrument Valve	1/4 NPT female / 1/4 NPT female	Nickel Plated Brass	316 SS	PCTFE (Kel-F™)
9101385	1/4 Turn Regulator Valve	1/4 NPT male / 1/4 NPT female	Brass	316 SS	PCTFE (Kel-F™)
9101387	1/4 Turn Regulator Valve	1/4 NPT male / 1/4 NPT female	316 SS	316 SS	PCTFE (Kel-F™)
9101386	1/4 Turn Regulator Valve	1/4 NPT male / 1/4 NPT female	Nickel Plated Brass	316 SS	PCTFE (Kel-F™)



G 100 SINGLE CYLINDER WALL BRACKET

The G 100 is an all steel construction bracket with many quality construction features. The edges are protected with steel reinforced vinyl edge guarding to maintain and protect your cylinders and provide extra grip. Steel parts are sealed with epoxy powder paint to assure long service life and chemical resistance. Straps and cinch style buckles are chosen as primary means of support as they enable the cylinders to be held tight and secure against the brackets. Support straps are 1 1/2" wide by 54" long polypropylene with steel cinch buckle and rate a robust 1200 PSIG strength. Supports hold cylinders from 4" to 12" diameter.

PART NO.	DESCRIPTION	SIZE	WEIGHT
4302650	G 100	4.25" x 8" x 2.25"	3 lb.
4302652	Optional Chain Set	41"	1 lb.

*P/N: 4302651 Replacement Strap, 1 1/2" x 54" 1 lb.

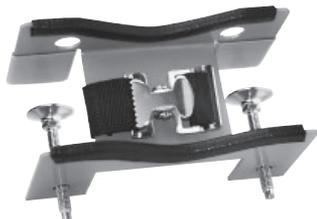


G 110 SINGLE CYLINDER ADJUSTABLE WALL BRACKET

Molded from reinforced polypropylene, the G 110 bracket can be adjusted to snugly support any cylinder from 4" to 14" diameter. Unit is first set to designated cylinder diameter with recessed set screws locking in width position. Permanently mounts to wall using fasteners (not included). Strap and security chain sets included.

PART NO.	SIZE	WEIGHT
1302653	9" x 4" x 5"	2 lb.

*P/N: 4302651 Replacement Strap, 1 1/2" x 54" 1 lb.



G 150 SINGLE CYLINDER BENCH MOUNT BRACKET

Bench cylinder bracket G-150: This bench mount single cylinder bracket uses dual mounting posts with swivel feet and non-slip pads to clamp to bench or table tops from 3/8" to 1 3/4" thick. Standard strap set and optional chain set [G-105] secure cylinders 4" to 14" diameter. Especially useful where walls are not accessible to attach brackets or when temporary, safe cylinder supports are required.

PART NO.	DESCRIPTION	SIZE	WEIGHT
4302654	G 150	4.25" x 8" x 4.25"	4.5 lb.
4302652	Optional Chain Set	41"	1lb.

*P/N: 4302651 Replacement Strap, 1 1/2" x 54" 1 lb.

G 181 SINGLE CYLINDER FLOOR STAND

The G-181, safely supports 4" through 10" diameter cylinders using a combination of cinch buckle, polypropylene strap, and 10 gauge steel bar. Designed and built for the safe storage of industrial and commercial use gas cylinders, this stationary rack is constructed from cold rolled steel. One cylinder capacity stands share the 1 1/2" polypropylene straps and steel cinch buckles used in our brackets. All welded construction and quality epoxy powder paint finishes provide structural integrity and long service life. As with our cylinder brackets, surfaces coming into direct contact with the cylinders are protected with steel reinforced vinyl edge guards, protecting your equipment.



PART NO.	SIZE	WEIGHT
4302655	16" x 16" x 15"	21 lb.

WALL MOUNTED CYLINDER BRACKETS

All steel construction brackets and racks share many quality construction features. 11 gauge hot rolled steel form the foundation. Edges are protected with steel reinforced vinyl edge guarding to help maintain your cylinders and provide extra grip. Steel parts are sealed with epoxy powder paint to assure long service life and chemical resistance. Straps and cinch style buckles are chosen as primary means of support as they enable the cylinders to be held tight and secure against the brackets. Support straps are 1 1/2" wide by 54" long polypropylene with steel cinch buckle and rate a robust 1200 PSIG strength. Supports hold cylinders from 4" to 12" diameter.

PART NO.	MODEL NO.	SIZE	WEIGHT
4302656	G200	24"x2"x4"	8 lb.
4302659	G300	4.25"x36"x2.25"	11 lb.
4302662	G401	4.25"x48"x2.25"	14 lb.

*P/N: 4302651 Replacement Strap, 1 1/2" x 54" 1 lb.



G 200 Double Cylinder Wall



G 300 Triple Cylinder Wall Bracket



G 401 Four Cylinder Wall Bracket

PIGTAILS



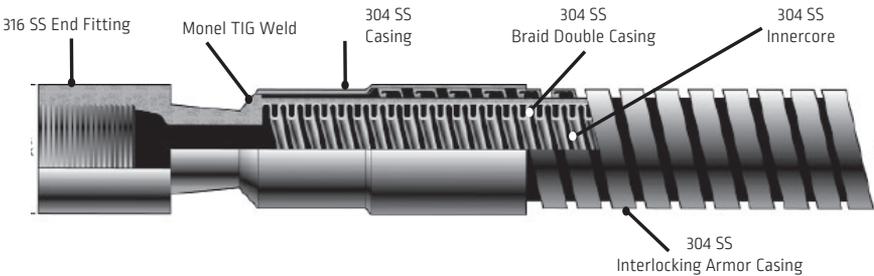
Pigtails are flexible hose designed for gas systems at pressures up to 3000 psig. Harris offers pigtails with a variety of end fittings including common CGA connections with integral non-return check valves. Armor cased pigtails come with an outer armor casing to prevent kinking and whipping in the event of an internal failure.

Harris offers these pigtails in varies different lengths, in either all stainless steel construction or stainless steel lined with PTFE.

FEATURES

- Brass and Stainless Steel Fittings
- Available in different materials of construction for various gases
- Intergrated check vales to prevent reverse flow of gases. Limited to CGA
- Helium and Hydrogen Diffusion resitant stainless steel models
- Cleaned for oxygen service

PIGTAIL CROSS SECTIONAL VIEW



PIGTAIL ORDERING INFORMATION

PT	120	D	B	320	4MN - 1/4" NPT Male	
SERIES	LENGTH (INCHES)	PIGTAIL TYPE (BOTH ENDS)	CONNECTION MATERIAL	INLET CONNECTION	OUTLET CONNECTION	PRESSURE RATING
PT	24 36 48 72 120	D - Tefzel Line / Brass Ends A - Armor Case / Stainless Steel Line / Stainless Steel Ends	B - Brass S - Stainless Steel	4FN - 1/4" NPT Female 4MN - 1/4" NPT Male 4TB - 1/4" Tube Fitting Brass 6TB - 3/8" Tube Fitting Brass 4TS - 1/4" Tubing Fitting Stainless Steel 4FV - 1/4" VCR Female Stainless Steel 240 - CGA 240 - Ammonia 280 - CGA 280-Medical O2 Mixtures 296 - CGA 296-Ind ¹ Oxidizing Mix 300 - CGA 300 - Acetylene 320 - CGA 320-Carbon Dioxide 320HT - CGA 320-Carbon Dioxide Hand Tight 326 - CGA 326-Nitrous Oxide 330 - CGA 330-HCL, H2S G corrosives 346 - CGA 346-Medical Air 346HT - CGA 346-Medical Air Hand Tight 350 - CGA 350-Methane-H2-Ethylene 500 - CGA 500-Medical Mixtures 510 - CGA 510 (Not for Acetylene) A 296-Ind ¹ Oxidizing Mix 510A - CGA 510A-Acetylene 510P - CGA 510P-Propane & LP Gases 540 - CGA 540-Oxygen 540HT - CGA-540-Oxygen Hand Tight 580 - CGA 580-N2-He-Ar 580HT - CGA 580-N2-He-Ar Hand Tight 590 - CGA 590-Industrial Air-SF6 660 - CGA 660-Corrosives Gases 705 - CGA 705-Anhydrous Ammonia	4FN - 1/4" NPT Female 4MN - 1/4" NPT Male 4TB - 1/4" Tube Fitting Brass 4TS - 1/4" Tubing Fitting SS 4FV - 1/4" VCR Female SS 346 - CGA 346-Medical Air 580 - CGA 580-N2-He-Ar	Blank -3k psig 6 - 6k psig



Shown as PT36AB5104MN





PRESSURE GAUGES

Two-inch pressure gauges are available in brass, chrome-plated brass and 316 stainless steel. All gauges have a bottom mount 1/4 NPT male connection. All gauges have an accuracy of ± 3 -2-3% of full scale.



CHROME-PLATED BRASS GAUGES

PART NO.	RANGE	INCREMENTS
9006270	*30" Hg-0-30psi/2bar	1 PSIG
9006271	*30" Hg-0-100psi/7bar	2 PSIG
9006272	*30" Hg-0-200psi/14bar	5 PSIG
9006273	400psi/28bar	10 PSIG
9006274	1000psi/70bar	20 PSIG
9006275	4000psi/280bar	100 PSIG

* Compound gauge 30" Hg VAC to psi/bar

316 STAINLESS STEEL GAUGES

PART NO.	RANGE	INCREMENTS
9006282	*30" Hg-0-30psi/2bar	1 PSIG
9006283	*30" Hg-0-100psi/7bar	2 PSIG
9006284	*30" Hg-0-200psi/14bar	5 PSIG
9006285	400psi/28bar	10 PSIG
9006286	1000psi/70bar	20 PSIG
9006287	4000psi/280bar	100 PSIG

* Compound gauge 30" Hg VAC to psi/bar

BRASS GAUGES

PART NO.	RANGE	INCREMENTS
9006276	*30" Hg-0-30psi/2bar	1 PSIG
9006277	*30" Hg-0-100psi/7bar	2 PSIG
9006278	*30" Hg-0-200psi/14bar	5 PSIG
9006279	400psi/28bar	10 PSIG
9006280	1000psi/70bar	20 PSIG
9006281	4000psi/280bar	100 PSIG

* Compound gauge 30" Hg VAC to psi/bar

CYLINDER INLET CONNECTIONS STEMS: 1/4" MNPT X CGA

CGA	Brass Chrome Plated BrassStainless Steel							
	NUT	STEM	STEM/ CV	NUT	STEM	NUT	STEM	GASKET
240	-	-	-	-	--	-	9100752	-
300	9002984	9005168	9005732	9003017	9005184	-	-	-
300P	9002989	9005168	9005732	-	-	-	-	-
320	9002986	9005114	9005746	9002987	9005365	9003062	9005188	9002908
326	9002966	9005170	9005733	9002967	9005364	9003063	9005189	-
330	-	-	-	-	-	9003019	9005185	9003097
346	9002969	9000319	9005734	9002970	9005181	9003064	9005190	-
350	9003006	9005145	9005735	9003012	9005179	9003033	9005191	-
510	9002972	9005109	9005736	9002973	9005174	9003035	9005194	-
510P	9002974	9005109	-	9000429	9005174	-	-	-
540	9002950	9005110	9005737	9002952	9005363	9003067	9005193	-
580	9003048	9005109	9005736	9003050	9005174	9003036	9005194	-
590	9003052	9005109	9005736	9003061	9005174	9003037	9005194	-
660	9003089	9005207	-	-	-	9003023	9005186	9003098
705	-	-	-	-	-	9003024	9005187	9003099



PROTOCOL STATION - STAINLESS



The SG 910 stainless steel single regulator protocol station can be ordered for one or two cylinders. A variety of outlet regulators are available based on delivery pressure and material requirements.

Protocol stations can be ordered with outlet regulator or separately. See regulator ordering information.

FEATURES

- Wall bracket included
- Maximum inlet pressure 3000 PSIG
- Includes 36" all stainless steel pigtail with stainless steel CGA and integral check valve



Shown with Model 741 Regulator Attached

SG 910SS ORDERING INFORMATION

*** SHIPS IN 24 TO 48 HOURS**

PART NO.	MODEL NO.	GAS SERVICE	BRACKET ONLY (NO PIGTAIL)
1 CYLINDER			
4704520*	910SS-1-296	CGA 296-Oxidizing Mixtures	4702845
4700480*	910SS-1-320	CGA 320-Carbon Dioxide	4702819
4700494*	910SS-1-330	CGA 330 Corrosive	4702820
4700481*	910SS-1-346	CGA 346-Air (Breathing)	4702821
4700482*	910SS-1-350	CGA 350-Hydrogen	4702822
4700483*	910SS-1-510	CGA 510-Acetylene	4702823
4700484*	910SS-1-540	CGA 540-Oxygen	4702824
4700485*	910SS-1-580	CGA 580-N ² /He/Ar	4702825
4700486*	910SS-1-590	CGA 590-Air (Industrial)	4702826
4700495*	910SS-1-660	CGA 660 Corrosive	4702827
2 CYLINDERS			
4700487	910SS-2-320	CGA 320-Carbon Dioxide	4702835
4700496	910SS-2-330	CGA 330 Corrosive	4702836
4700488	910SS-2-346	CGA 346-Air (Breathing)	4702837
4700489	910SS-2-350	CGA 350-Hydrogen	4702838
4700490	910SS-2-510	CGA 510-Acetylene	4702839
4700491	910SS-2-540	CGA 540-Oxygen	4702840
4700492	910SS-2-580	CGA 580-N ² /He/Ar	4702841
4700493	910SS-2-590	CGA 590-Air (Industrial)	4702842
4700497	910SS-2-660	CGA 660 Corrosive	4702843





PROTOCOL STATION - BRASS



The SG 910 brass single regulator protocol station can be ordered for one or two cylinders. A variety of outlet regulators are available based on delivery pressure and material requirements.

Single regulator protocol station can be ordered with outlet regulator or separately. See regulator ordering information.

FEATURES

- Wall bracket included
- Maximum inlet pressure 3000 PSIG
- Includes 36" stainless steel lined stainless steel pigtail with CGA integral check valve



Shown with Model 721 Regulator Attached

SG 910BR ORDERING INFORMATION

*** SHIPS IN 24 TO 48 HOURS**

PART NO.	MODEL NO.	GAS SERVICE	BRACKET ONLY (NO PIGTAIL)
1 CYLINDER			
4700465*	910BR-1-320	CGA 320-Carbon Dioxide	4702814
4700466*	910BR-1-346	CGA 346- Air (Breathing)	4702815
4700467*	910BR-1-350	CGA 350-Hydrogen	4702816
4700468*	910BR-1-510	CGA 510-Acetylene	4702817
4700469*	910BR-1-540	CGA 540-Oxygen	4702813
4700470*	910BR-1-580	CGA 580-N ² /He/Ar	4702812
4700471*	910BR-1-590	CGA 590-Air(Industrial)	4702818
2 CYLINDERS			
4700472	910BR-2-320	CGA 320-Carbon Dioxide	4702830
4700473	910BR-2-346	CGA 346-Air(Breathing)	4702831
4700474	910BR-2-350	CGA 350-Hydrogen	4702832
4700475	910BR-2-510	CGA 510-Acetylene	4702833
4700476	910BR-2-540	CGA 540-Oxygen	4702829
4700477	910BR-2-580	CGA 580-N ² /He/Ar	4702828
4700478	910BR-2-590	CGA 590-Air(Industrial)	4702834



THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

Orders: 1.800.733.4043

IN NEED OF TURNKEY SPECIALTY GAS SYSTEMS? HARRIS DELIVERS!

SKILLFULLY DESIGNED AND BUILT FOR RELIABILITY

- + Harris Products Group has 100 years of experience producing gas delivery systems and control valves you can depend upon
- + We have proven experience with the critical requirements of high-purity specialty gas
- + We are your trusted partner in creating turnkey solutions for those unique requirements



**CONTACT A HARRIS®
SPEC GAS EXPERT**

1.800.733.4043 option 2

5 EASY STEPS to a *customized configuration*

- 1 Provide the specialty gas application and parameters to Harris
- 2 Harris' technical staff will design a system tailored to the application
- 3 Within 24 hours, Harris will send a quote and a 3-D drawing of the complete system
- 4 Review the design to ensure all customer expectations are met
- 5 Upon approval, Harris will build the system with high-quality components and parts



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IF IT USES GAS, IT NEEDS HARRIS.®



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