



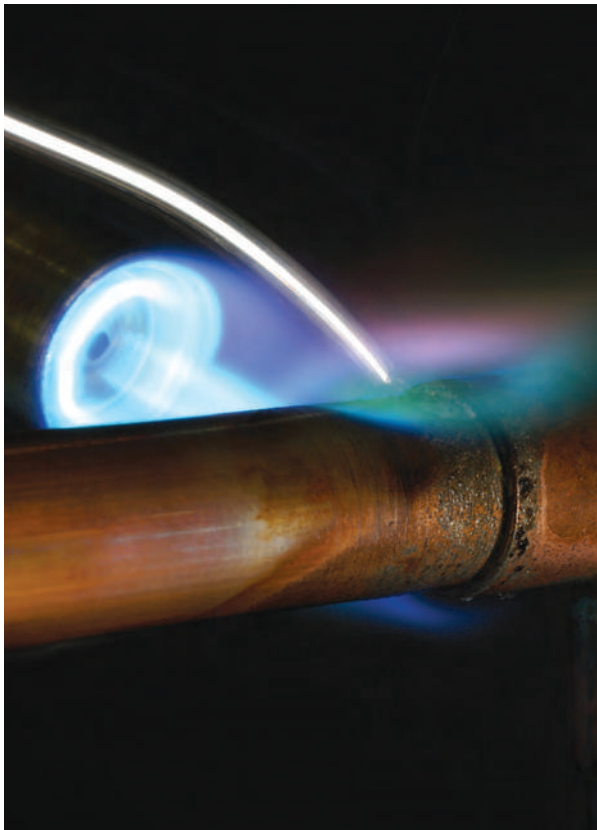
Turn to the Pros

A LINCOLN ELECTRIC COMPANY

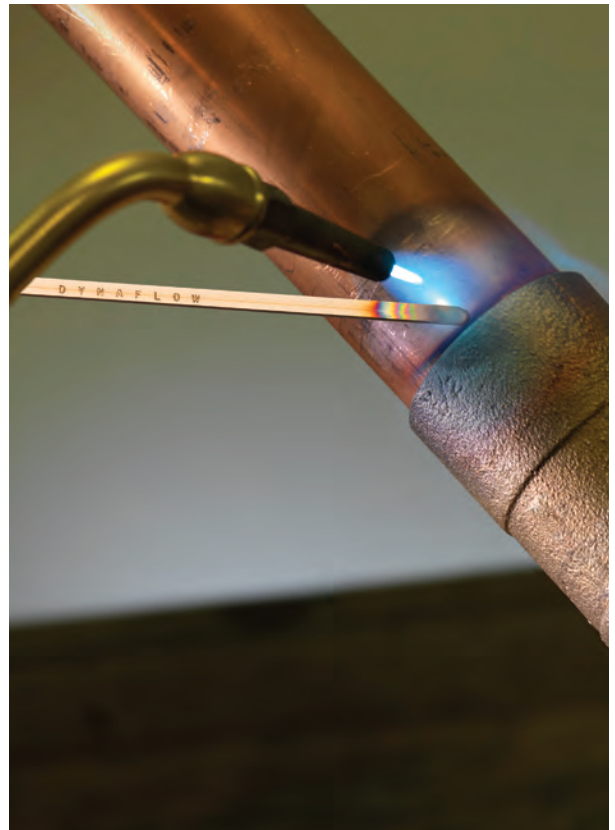
HARRIS INDUSTRIAL EQUIPMENT CATALOG

WITH THE BEST STUFF FOR OVER 100 YEARS.

EACH DAY, HARRIS SETS OUT TO MAKE THE BEST AND MOST COMPLETE LINE OF INDUSTRIAL GRADE TOOLS IN THE WORLD. WHY? BECAUSE SUPERIOR RESULTS COUNT TO PROFESSIONAL TRADESMEN. HAVING THE RIGHT TOOLS FROM HARRIS WILL DELIVER A JOB WELL DONE, EVERY TIME. WE'RE GOING TO KEEP DOING WHAT WE DO BEST, SO YOU CAN DO WHAT YOU DO BEST. FOR THE BEST AND MOST COMPLETE LINE OF INDUSTRIAL GRADE PRODUCTS, **TURN TO THE PROS – TURN TO HARRIS.**



SOLDER



BRAZE



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THE HARRIS PRODUCTS GROUP



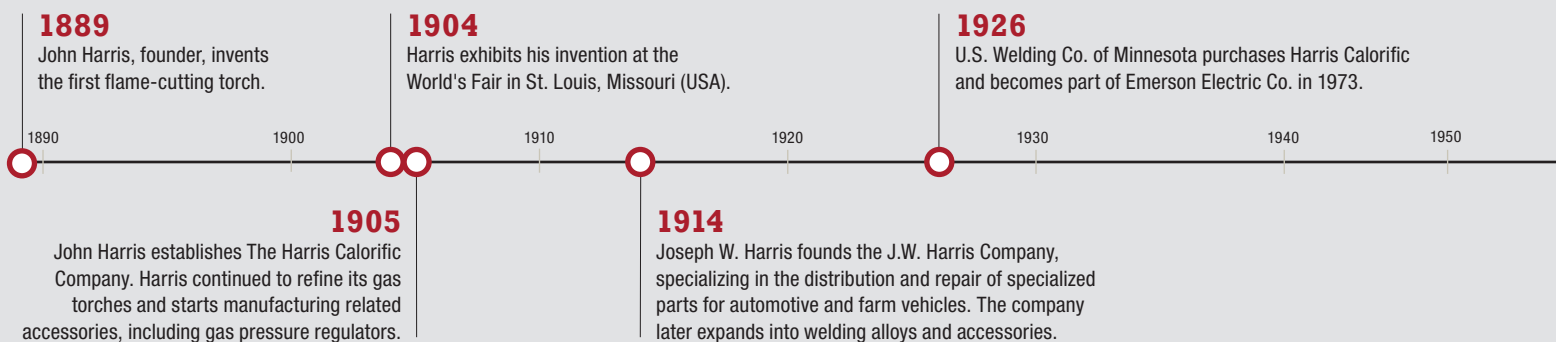
The Harris Products Group was formed by combining two strong names in the welding business—Harris Calorific and J.W. Harris. The Harris Products Group is a world leader in metalworking products used in the brazing, soldering, welding, cutting and gas distribution industries. The combined company offers excellence in the manufacture of:

- Gas welding and cutting equipment
- Industrial and specialty gas regulation equipment
- Gas distribution systems
- Brazing and soldering alloys
- Welding alloys
- Pre-formed bends, rings and return bends



The Harris Products Group is a wholly-owned subsidiary of The Lincoln Electric Company. Lincoln has more than 45 manufacturing locations, including operations and joint ventures in 20 countries and a worldwide network of distributors and sales offices covering more than 160 countries.

THE HARRIS PRODUCTS GROUP HISTORY



MANUFACTURING FACILITIES

Based in Mason, Ohio, The Harris Products Group has five manufacturing locations in four countries and a worldwide network of distributors and sales offices covering more than 90 countries.



1960-1980

Both Harris companies expand around the world.

2005

Lincoln Electric purchases the privately-held J.W. Harris Company.

2006

Harris Calorific and J.W. Harris combine, creating The Harris Products Group.

1990

Lincoln Electric purchases Harris Calorific from Emerson Electric.

2008

The Harris Products Group purchases Brastak in Brazil.

2012

Harris introduces the 7-Year Warranty Plan and debuts the Model 25GX Regulator.

WHY PROFESSIONAL TRADESMEN TURN TO THE PROS

EXPERIENCE

We know your industry. Our customers worldwide will attest that Harris products improve their processes, drive down costs and increase profits. We understand your business and the challenges you face every day.



COMMITMENT

The Harris Products Group is committed to a continuous pursuit of improvement in manufacturing excellence through the implementation of “lean manufacturing” concepts. Incorporated in our lean manufacturing initiatives are the principal concepts of continuous flow, pull demand, elimination of waste and pursuit of a system that is responsive to customers but lean in inventory, labor and manufacturing costs. Tools we currently use in this effort include Six Sigma, statistical process control, preventive maintenance, kanban and kaizen.

In addition to our lean manufacturing efforts we have also implemented automation systems, robotic systems and a incentive pay system. We use a rigorous financial planning process in conjunction with disciplined project management for the implementation of planned cost reductions for material, labor and overhead, as well as new product development.



QUALITY

The Harris Products Group is certified to ISO 9001:2000. Quality is an integral part in all processes of the company from development, planning, design and manufacturing to sales and service activities. Our quality system is regularly audited on both an internal and external basis to ensure that consistent business processes are applied.

EXPERTISE

Good companies become great companies when their employees are passionate about the company and the products they produce. We make it our business to know your company so that we can provide the right products for your processes. Our sales team is comprised of product application engineers that can complete on-site evaluations and surveys. They work closely with you to provide a total solution. This also includes support for our customers after the sale through our safety and factory training.

CERTIFICATIONS

The Harris Products Group is committed to environmental stewardship and resource conservation throughout the world. All Harris facilities are certified to ISO 14001.

The Harris Products Group is certified to ISO 9001:2000. Quality is an integral part in all processes of the company from development, planning, design and manufacturing to sales and service activities.

All Harris industrial gas regulators and torches are certified to the UL® listed standard. For more than a century, Underwriters Laboratories® has been one of the most recognized and trusted resources for product safety testing, certification and information. Choosing to work with UL® standards demonstrates our commitment to the highest levels of safety and quality. No other compliance organization speaks with more authority and integrity than UL.®

SINGLE-STAGE PRESSURE CONTROL REGULATORS






OUR REGULATORS ARE MADE FROM THE HIGHEST QUALITY INDUSTRIAL-GRADE COMPONENTS. THEY ARE DESIGNED TO WITHSTAND THE HARSHTEST ENVIRONMENTS AND ARE 100% TESTED PRIOR TO SHIPMENT FROM OUR FACILITY IN GAINESVILLE, GEORGIA. WE OFFER A COMPLETE RANGE OF SINGLE-STAGE INDUSTRIAL REGULATORS TO MEET YOUR APPLICATIONS AND BUDGET.



GET CONNECTED

Go to www.facebook.com/HarrisProductsGroup

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**MODEL
(25)
GX**

MODEL SHOWN:
25GX-145-540

HISTORY

Tradesmen today demand rugged, industrial-grade tools that can stand up to harsh work environments and are engineered to last. The time-proven technology of the Model 25 regulator has made it the workhorse of the Harris regulator offering. Fabricators everywhere depend on it to deliver consistent performance and reliability.

Harris is proud to introduce its newest regulator platform—Generation Next—the Model 25GX.

We've taken everything you've come to trust about the Model 25 performance and made it even better. Whether it's our silky smooth adjusting knob, our large easy-to-read gauges or our new 7-year warranty, we are delivering the next generation of regulation equipment now.

We've been designing the best equipment money can buy for over 100 years—and we are just getting started...

DOME LOADED



HP 750 MODEL

CONSTANT PRESSURE/
HIGH FLOW
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HIGH PRESSURE



8700 MODEL

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THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

Orders: 1.800.733.4043

REGULATORS

9

601

MODEL



ECONOMICAL

MODEL SHOWN:
601-15-520 A

DESCRIPTION

This single-stage regulator is designed to be compact and economical, but with features typically available in more expensive regulators. It is used where weight, cost and size are factors.

DETAILS

Capacity: Light duty

C_v: 0.08

Gauges: 50mm ABS plastic

Pressure Regulation:
0.4 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: UL® listed/CGA E-4

Featured In: Expert® series kits, air fuel equipment kits, Port-A-Torch®

Weight: 1.39 lbs. /0.63 kg.



Additional Technical Information: PG. 166

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000295	601-15-200	ACETYLENE	400	0 - 15	30RZ	400	CGA 200	"B" 1/8" - 18 LH
3000407	601-15-200 A	ACETYLENE	400	0 - 15	30RZ	400	CGA 200	"A" 3/8" - 24 LH
3000408	601-15-520 A	ACETYLENE	400	0 - 15	30RZ	400	CGA 520	"A" 3/8" - 24 LH
3000411	601-15-520	ACETYLENE	400	0 - 15	30RZ	400	CGA 520	"B" 1/8" - 18 LH
3000331	601-15-510	ACETYLENE	400	0 - 15	30RZ	400	CGA 510	"B" 1/8" - 18 LH
3000322	601-15-300	ACETYLENE	400	0 - 15	30RZ	400	CGA 300	"B" 1/8" - 18 LH
3000409	601-50-510P	LPG*	400	0 - 50	60	400	CGA 510P	"B" 1/8" - 18 LH
3002317	601-50-600	LPG*	400	0 - 50	60	400	CGA 600	"B" 1/8" - 18 LH
3002318	601-50-600A	LPG*	400	0 - 50	60	400	CGA 600	"A" 3/8" - 24 LH
3000296	601-80-540	OXYGEN	3000	0 - 80	100	4000	CGA 540	"B" 1/8" - 18 RH
3000412	601-80-540 A	OXYGEN	3000	0 - 80	100	4000	CGA 540	"A" 3/8" - 24 RH

*Regulator designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

301

MODEL



COMPACT

MODEL SHOWN:
301-100-540

DESCRIPTION

This single-stage regulator is designed to be compact, light weight and rugged. It provides accurate pressure regulation to 100 PSIG.

DETAILS

Capacity: Light to medium duty

C_v: 0.08

Gauges: 2" Steel dual scale

Pressure Regulation:
0.4 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications:
UL® listed/CGA E-4

Weight: 2.2 lbs./0.99 kg.



Additional Technical Information: PG. 166

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000165	301-15-200MC	ACETYLENE	400	0 - 15	30RZ	400	CGA 200 MC	1/8" - 18 LH
3000160	301-15-300	ACETYLENE	400	0 - 15	30RZ	400	CGA 300	1/8" - 18 LH
3000161	301-15-510	ACETYLENE	400	0 - 15	30RZ	400	CGA 510	1/8" - 18 LH
3000166	301-15-520B	ACETYLENE	400	0 - 15	30RZ	400	CGA 520B	1/8" - 18 LH
3000162	301-100-540	OXYGEN	3000	0 - 100	150	4000	CGA 540	1/8" - 18 RH
3000187	301-100-580	Ar, He, N ₂	3000	0 - 100	150	4000	CGA 580	1/8" - 18 RH
3000192	301-100-320	CO ₂	3000	0 - 100	150	4000	CGA 320	1/8" - 18 RH

GX 25 MODEL



BEST VALUE

MODEL SHOWN:
25GX-145-540

DESCRIPTION

The 25GX is designed to be the next generation workhorse of the Harris industrial regulator line. It features larger, easier to read gauges and an ergonomic adjusting knob that also shields the adjusting mechanism from contaminants.

DETAILS

Capacity: Medium to heavy duty

C_v: 0.17

Gauges: 2.5" Steel dual scale

Pressure Regulation:
0.2 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certification: UL® listed/
CGA E-4

Featured In: Steelworker® Classic & V-Series® kits

Weight: 2.9 lbs./1.32 kg.

Related Equipment: Gauge Guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238

See P. 160



Additional Technical Information: PG. 168

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000350	25GX-15-300	ACETYLENE	500	0 - 15		400	CGA 300	1/16" - 18 LH
3000380	25GX-15-510	ACETYLENE	500	0 - 15		400	CGA 510	1/16" - 18 LH
3000450	25GX-50-510P	PROPANE*	500	0 - 50		400	CGA 510P	1/16" - 18 LH
3000510	25GX-145-540	OXYGEN	3000	0 - 145		4000	CGA 540	1/16" - 18 RH
3000540	25GX-145-580	Ar, He, N ₂	3000	0 - 145		4000	CGA 580	1/16" - 18 RH **
3000550	25GX-145-590	INDUS. AIR	3000	0 - 145		4000	CGA 590	1/16" - 18 LH
3000806	25GX-200-580	Ar, He, N ₂	3000	0 - 200		4000	CGA 580	1/16" - 18 RH **

*Regulators designed for propane service can be used with any other LPG fuel. NOT FOR USE WITH ACETYLENE.

**Supplied with 1/8"-18 adaptor P/N: 9000002

ON THE HUNT FOR AN ALL-AROUND REGULATOR? CHECK OUT THE HARRIS MODEL 25GX.

The Harris Model 25GX is a legendary American classic. It is a medium to heavy duty regulator that provides you with a time-proven design that is built for those who want an economical, high-performance regulator.



ORIGIN:

Made in the USA in an ISO 9001 and 14001 certified facility.

QUALITY:

100% tested, 100% of the time

SAFETY:

Meets or exceeds all relevant industry standards —
UL® listed and CGA E-4. Passes all CGA E-4 ignition tests.

CAPACITY:

Medium to Heavy Duty

RELIABILITY:

One-piece encapsulated seat prevents damaging particles from entering the high pressure valve seat.

DESIGN:

Ergonomic modern design allows for precise pressure adjustments. Knob offers additional protection by shrouding the bonnet housing. Outlet angle improved for LP cylinder clearance.

DELIVERY PRESSURES:

0-15, 0-50, 0-145, 0-250 and 0-500

PRESSURE REGULATION:

Excellent pressure regulation from full to empty cylinder.

WARRANTY:

7 years



THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

Orders: 1.800.733.4043

REGULATORS

11

25GX MODEL



HVAC PURGING

MODEL SHOWN:
25GX-500-580

DESCRIPTION

This single-stage nitrogen purging regulator is designed for performance and economy, it is with features typically available in more expensive regulators. Specifically designed for HVAC and other nitrogen pressure testing and blanketing applications. Both the 25GX-250 and 25GX-500 feature a "T" bar for easier adjusting at high pressures.

DETAILS

Capacity: Medium to heavy duty

C_v: 0.17

Gauges: 2.5" Steel dual scale

Pressure Regulation:
0.2 PSIG/100 PSIG

Where Used: HVAC purging, pressure testing and blanketing

Weight: 3.2 lbs./1.45 kg.

Related Equipment: Gauge Guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238
See P. 160



Seat: One-piece encapsulated seat

Additional Technical Information: PG. 167

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000616	25GX-250-580	Ar, He, N ₂	3000	0 - 250	4000	CGA 580	1/4" 45° Flare SAE
3000606	25GX-500-580	Ar, He, N ₂	3000	0 - 500	4000	CGA 580	1/4" 45° Flare SAE

THE TRUE MEASURE OF A REGULATOR

Performance = Pressure Regulation

There is a reason they are called "pressure" regulators. Regulators take unusable high pressure, for example, from a cylinder and break it down into a lower usable pressure. This is the true function of a regulator. How well a regulator maintains the lower pressure, despite the changes in pressure upstream, is the true measure of a regulator. The more constant the set pressure is held, the better the regulator. The Harris Model 450 offers superior pressure regulation over competitive models.

Pressure Comparison

Both of the competitive models, delivery pressure rises twice as fast as the Harris Model 450. This is important because the Harris Model 450 user will get a better, more constant delivery pressure, as the cylinder empties. Additionally, the user won't have to adjust the regulator as much, meaning more time spent working.

Calculations were performed per the Compressed Gas Association (CGA) E-4 standard. It is the most up-to-date and comprehensive regulator standard in the world today for the welding industry. It defines product safety and production test requirements and it defines performance characteristics required to meet field applications.

Model Number	Pressure Rise PSI / 100PSI	Change In Delivery Pressure	Final Outlet Pressure	Percent Change
Harris Model 450	0.30	+ 7.65	37.65	25%
Competitive Model 1a	0.56	+ 14.28	44.28	47%
Competitive Model 1b	0.70	+ 17.85	47.85	60%

425

MODEL



BEST FEATURES

MODEL SHOWN:
425-125-540

DESCRIPTION

Model 425 is a premium, single-stage, industrial regulator that is an ideal choice for most industrial applications. This regulator incorporates a number of Harris features designed to make it a rugged, long-lasting performer, including an exclusive tamper-proof, self-reseating internal HP safety valve. The 425 is also available in a multitude of pressure ranges and for all standard industry gases.

DETAILS

Capacity: Heavy duty**C_v:** 0.17**Gauges:** 2.5" brass**Pressure Regulation:**
0.2 PSIG/100 PSIG**Seat:** One-piece encapsulated seat
design with internal filter and PTFE
Teflon® seat**Certifications:** UL® listed/CGA E-4**Featured In:**
Pipeliner® Classic kits**Weight:** 3.7 lbs./1.67 kg.**Related Equipment:** Gauge Guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238
See P. 160

Additional Technical Information: PG. 168

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000816	425-15-300	ACETYLENE	500	0 - 15	30RZ	400	CGA 300	1/16" - 18 LH
3000815	425-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	1/16" - 18 LH
3000713	425-50-510P	LPG**	3000	0 - 50	60	400	CGA 510P	1/16" - 18 LH
3000784	425-50A-350**	H ₂ METHANE	3000	0 - 50	60	4000	CGA 350	1/16" - 18 LH
3000794	425-125A-350**	H ₂ METHANE	3000	0 - 125	200	4000	CGA 350	1/16" - 18 LH
3000787	425-125-350	ETHYLENE, METHANE	3000	0 - 125	200	4000	CGA 350	1/16" - 18 LH
3000795	425-50-540	OXYGEN	3000	0 - 50	60	4000	CGA 540	1/16" - 18 RH
3000714	425-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	1/16" - 18 RH
3000796	425-200-540	OXYGEN	3000	0 - 200	400	4000	CGA 540	1/16" - 18 RH
3000762	425-125-346	MEDICAL AIR	3000	0 - 125	200	4000	CGA 346	1/16" - 18 RH
3000764	425-200-346	MEDICAL AIR	3000	0 - 200	400	4000	CGA 346	1/16" - 18 RH
3000821	425-125-590	INDUSTRIAL AIR	3000	0 - 125	200	4000	CGA 590	1/16" - 18 RH
3000837	425-15-580	Ar, He, N ₂	3000	0 - 15	30	4000	CGA 580	1/16" - 18 RH
3000843	425-50-580	Ar, He, N ₂	3000	0 - 50	50	4000	CGA 580	1/16" - 18 RH
3000767	425-125-580	Ar, He, N ₂	3000	0 - 125	200	4000	CGA 580	1/16" - 18 RH
3000765	425-125A-580**	Ar, He, N ₂	3000	0 - 125	200	4000	CGA 580	1/16" - 18 RH
3000773	425-200-580	Ar, He, N ₂	3000	0 - 200	400	4000	CGA 580	1/16" - 18 RH
3000848	425-15-555	BUTANE	3000	0 - 15	30	4000	CGA 555	1/16" - 18 RH
3000775	425-125-320	CO ₂	3000	0 - 125	200	4000	CGA 320	1/16" - 18 RH

*Regulators designed specifically for LPG service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

**Models with anti-vibrator "A" for He and H₂ applications feature the standard Harris internal safety.PERFORMANCE
FOCUSCHOOSE THE
RIGHT HARRIS
FLOW CONTROL
DEVICES

The most common use for gas flow control devices in the industrial gas market is to control shielding gases for GTAW (TIG) and GMAW (MIG) welding. No other manufacturer in the industry offers a more complete line of shielding gas equipment than Harris. Harris offers many designs and models of flow meters, flow meter regulators and flow gauge regulators for all gas supply systems, high-pressure cylinders, liquid cylinders and pipelines.

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APPLICATION(S).**

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REGULATORS

13

45

MODEL



HEAVY DUTY REGULATORS

MODEL SHOWN:
45-145-540

DESCRIPTION

The Model 45 single stage regulator is available with a neoprene diaphragm for extra safety, longer life, and greater dependability. Model 45 regulators have internal, tamper-proof high pressure safeties.

DETAILS

Capacity: Heavy duty**C_v:** 0.17**Gauges:** 2.5" brass**Seat:** One-piece encapsulated seat design with PTFE Teflon® seat**Pressure Regulation:**
.2 PSI/100 PSIG**Certification:** CGA E-4**Featured In:** Ironworker® 2 kits**Weight:** 3.2 lbs./ 1.45 kg.**Related Equipment:** Gauge Guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238

See P. 160



Additional Technical Information: PG. 169

PART #	Model #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3001781	45-145-540	OXYGEN	3000	0 - 145	4000	CGA 540	9/16" - 18RH
3001782	45-15-510	ACETYLENE	500	0 - 15	400	CGA 510	9/16" - 18LH
3001783	45-15-300	ACETYLENE	500	0 - 15	400	CGA 300	9/16" - 18LH

2500

MODEL



PREMIUM STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
2500-125-540

DESCRIPTION

The Model 2500 is a Harris premium single-stage regulator offering. It features a stainless steel diaphragm, a tamper-proof, self-reseating internal HP safety valve and a one-piece encapsulated seat.

DETAILS

Capacity: Heavy duty**C_v:** 0.17**Gauges:** 2.5" brass**Pressure Regulation:**
0.3 PSIG/100 PSIG**Seat:** One-piece encapsulated seat design with internal filter and PTFE Teflon® seat**Certifications:** UL® listed/
CGA E-4**Featured In :** V-Series®
Pipeliner® kits**Weight:** 4.6 lbs./2.09 kg.

Additional Technical Information: PG. 169

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3002508	2500-15-300	ACETYLENE	500	0 - 15	30RZ	400	CGA 300	9/16" - 18 LH
3002500	2500-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	9/16" - 18 LH
3002502	2500-50-510P	LPG*	500	0 - 50	100	400	CGA 510P	9/16" - 18 LH
3002504	2500-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3002511	2500-50-540	OXYGEN	3000	0 - 50	100	4000	CGA 540	9/16" - 18 RH
3002519	2500-125-580	Ar, He, N ₂	3000	0 - 125	200	4000	CGA 580	5/8" - 18 RH

*Regulators designed specifically for LPG service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

450

MODEL



STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
450-125-540

DESCRIPTION

The Model 450 is an economically priced industrial duty regulator, but with premium features found only in high priced regulators. The 450 has a stainless steel diaphragm and a Harris exclusive tamper-proof self-seating safety relief device.

DETAILS

Capacity: Heavy duty**C_v:** 0.17**Gauges:** 2.5" brass**Pressure Regulation:**
0.3 PSIG/100 PSIG**Seat:** One-piece encapsulated seat design with internal filter and PTFE Teflon® seat**Certifications:** UL® listed/CGA E-4**Weight:** 4.6 lbs./2.09 kg.

Additional Technical Information: PG. 169

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3002493	450-15-300	ACETYLENE	500	0 - 15	30RZ	400	CGA 300	1/16" - 18 LH
3002494	450-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	1/16" - 18 LH
3002495	450-50-510P	LPG*	500	0 - 50	100	400	CGA 510P	1/16" - 18 LH
3002496	450-50-540	OXYGEN	3000	0 - 50	100	4000	CGA 540	1/16" - 18 RH
3002497	450-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	1/16" - 18 RH
3002499	450-200-540	OXYGEN	3000	0 - 200	400	4000	CGA 540	1/16" - 18 RH
3002498	450-125-580	AR, HE, N ₂	3000	0 - 125	200	4000	CGA 580	5/16" - 18 RH

*Regulator designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

45S

MODEL



HEAVY DUTY REGULATORS

MODEL SHOWN:
45S-145-540

DESCRIPTION

The Model 45S single stage regulator is available with a stainless steel diaphragm for extra safety, longer life, and greater dependability. Model 45S regulators have internal, tamper-proof high pressure safety and features a self-reseating high pressure safety.

DETAILS

Capacity: Heavy duty**C_v:** 0.17**Gauges:** 2.5" brass**Seat:** One-piece encapsulated seat design with internal filter and PTFE Teflon® seat**Pressure Regulation:**

.3 PSI/ 100 PSIG

Certifications: CGA E-4**Featured In:** Ironworker® kits**Weight:** 3.2 lbs./ 1.45 kg.**Related Equipment:** Gauge Guards

Green (Oxygen) P/N: 4300239

Red (Fuel) P/N: 4300238

See P. 160



Additional Technical Information: PG. 170

PART #	Model #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3001776	45S-145-540	OXYGEN	3000	0 - 145	4000	CGA 540	1/16" - 18RH
3001777	45S-15-510	ACETYLENE	500	0 - 15	400	CGA 510	1/16" - 18LH
3001778	45S-15-300	ACETYLENE	500	0 - 15	400	CGA 300	1/16" - 18LH



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REGULATORS

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29

MODEL



GAUGELESS

MODEL SHOWN:
29-15C-300

DESCRIPTION

The Model 29 gaugeless regulator is specifically designed for use in installations where rough handling of gas apparatus is commonplace. The color coded cylinder contents indicator and the delivery pressure calibration on the bonnet are easy to read.

DETAILS

Capacity: Heavy duty

C_v: 0.17

Gauges: N/A

Pressure Regulation:
0.2 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: UL® listed/CGA E-4

Weight: 2.7 lbs./1.22 kg.



Additional Technical Information: PG. 168

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3600260	29-15C-510	ACETYLENE	500	0 - 15	-	-	CGA 510	1/16" - 18 LH
3600250	29-15C-300	ACETYLENE	500	0 - 15	-	-	CGA 300	1/16" - 18 LH
3600320	29-50C-510P	LPG*	500	0 - 50	-	-	CGA 510P	1/16" - 18 LH
3600340	29-100C-540	OXYGEN	3000	0 - 100	-	-	CGA 540	1/16" - 18 RH
3600200	29-100C-540SG	OXYGEN	3000	0 - 100	-	-	CGA 540SG	1/16" - 18 RH
3600345	29-100C-580	Ar, He, N ₂	3000	0 - 100	-	-	CGA 580	1/16" - 18 RH

*Regulator designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

330

MODEL



LIQUID CYLINDER GASEOUS WITHDRAWAL

MODEL SHOWN:
330-125-580

DESCRIPTION

The Model 330 regulator allows for gaseous withdrawal from oxygen, carbon dioxide, argon and/or nitrogen liquid cylinders. It has a stainless steel diaphragm and a tamper-proof, self-reseating internal HP safety valve. Its unique design permits inlet pressures of up to 3000 PSIG for use on high pressure cylinders.

DETAILS

Capacity: Heavy duty

C_v: 0.37

Gauges: 2" Brass

Pressure Regulation:
0.2 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4

Where Used: Cryogenic cylinders for vapor withdrawal

Weight: 4.3 lbs./1.95 kg.



Additional Technical Information: PG. 170

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3001090	330-125-540	OXYGEN	3000	0 - 125	200	-	CGA 540	1/16" - 18
3001093	330-350-540	OXYGEN	3000	0 - 350	500	-	CGA 540	1/16" - 18
3001097	330-500-540	OXYGEN	3000	0 - 500	600	-	CGA 540	1/4" - NPT
3001091	330-125-580	Ar, NITROGEN	3000	0 - 125	200	-	CGA 580	1/16" - 18
3001094	330-350-580	Ar, NITROGEN	3000	0 - 350	500	-	CGA 580	1/16" - 18
3001098	330-500-580	Ar, NITROGEN	3000	0 - 500	600	-	CGA 580	1/4" - NPT
3001092	330-125-320	CO ₂	3000	0 - 125	200	-	CGA 320	1/16" - 18
3001095	330-350-320	CO ₂	3000	0 - 350	500	-	CGA 320	1/16" - 18
3001099	330-500-320	CO ₂	3000	0 - 500	600	-	CGA 320	1/4" - NPT

HP750 MODEL



CONSTANT PRESSURE/HIGH FLOW

MODEL SHOWN:
HP750-500-3000

DESCRIPTION

The Model HP750 series regulator is a high pressure, high flow regulator system. The key to the performance of this regulator is the servo-dome load technology. The servo-dome load feature allows the regulator to supply high flow rates with straight line pressure regulation. Typical applications include high flow laser assist gases, pressure transfer, blanketing and high flow manifolds.

DETAILS

Capacity: High flow/constant pressure

C_v: 0.55 for 3000 PSIG inlet models
0.40 for 5500 PSIG inlet models

Gauges: 2.5" Brass - psi/bar

Pressure Regulation:

0.3 PSIG/100 PSIG on 5500 inlet models
0.5 PSIG/100 PSIG on 3000 PSIG inlet models

Bushing: ½" MNPT x ¼" NPT (F) P/N:9005806

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat for 3000 PSIG models CTFE (Kel-F®) for 5500 PSIG Models

Certifications: CGA E-4

Weight: 8.5 lbs./3.85 kg.

Related Options: Panel Mount Nut: P/N: 9100887

Adapters: CGA 580 P/N: 9103616, CGA 540 P/N:9103615,

CGA 680 P/N: 9103617

Additional Technical Information: PG. 171



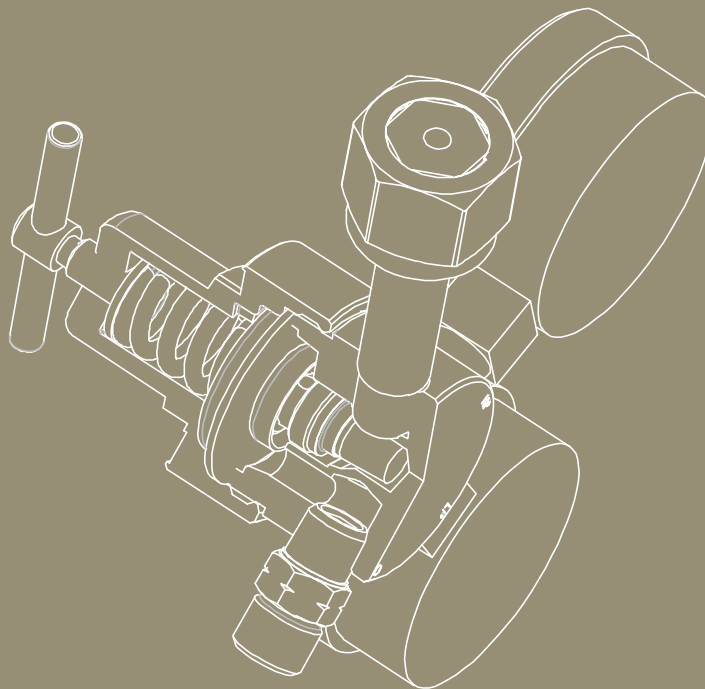
PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000865	HP750-250-3000	NON CORROSIVE	3000	0 - 250	400	4000	½" NPT (F)	½" NPT (F)
3000860	HP750-500-3000	NON CORROSIVE	3000	0 - 500	600	4000	½" NPT (F)	½" NPT (F)
3000866	HP750-1000-3000	NON CORROSIVE	3000	0 - 1000	2000	4000	½" NPT (F)	½" NPT (F)
3000867	HP750-250-5500	NON CORROSIVE	5500	0 - 250	400	6000	½" NPT (F)	½" NPT (F)
3000868	HP750-500-5500	NON CORROSIVE	5500	0 - 500	600	6000	½" NPT (F)	½" NPT (F)
3000869	HP750-1000-5500	NON CORROSIVE	5500	0 - 1000	2000	6000	½" NPT (F)	½" NPT (F)

PRODUCT OVERVIEW SINGLE-STAGE REGULATORS

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.

ADVANTAGES OF SINGLE-STAGE REGULATORS

- Smaller Size
- Lighter Weight
- Lower Cost
- Higher Gas Flows



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REGULATORS

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8700

MODEL



ULTRA HIGH PRESSURE UP TO 7500 PSI INLET

MODEL SHOWN:
8700-2500-350

DESCRIPTION

The Model 8700 is a single-stage, high pressure regulator designed to operate on high pressure cylinders up to 7500 PSIG. Typical applications include high pressure testing, charging accumulators and pressurizing aircraft struts. Models for inert gas and air are self-relieving for safety.

DETAILS

Capacity: Ultra high pressure

C_v: 0.08

Gauges: 2.5" Brass psi/bar

Pressure Regulation:
3.3 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and CTFE (Kel F®) seat

Certifications: CGA E-4

Related Items:
Panel mount nut P/N: 9100887

Weight: 5.8 lbs./2.63 kg.



Additional Technical Information: PG. 172

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3200306	8700-1500-540	OXYGEN	3000	0 - 1500	3000	4000	CGA 540	¼" - SS TUBE FITTING
3200307	8700-2500-540	OXYGEN	3000	0 - 2500	4000	4000	CGA 540	¼" - SS TUBE FITTING
3200308	8700-1500-540SG	OXYGEN	3000	0 - 1500	3000	4000	CGA 540	¼" - SS TUBE FITTING
3200309	8700-2500-540SG	OXYGEN	3000	0 - 2500	4000	4000	CGA 540	¼" - SS TUBE FITTING
3200273	8700-800-590*	INDUST. AIR	3000	0 - 800	1000	4000	CGA 590	¼" - SS TUBE FITTING
3200304	8700-1500-590*	INDUST. AIR	3000	0 - 1500	3000	4000	CGA 590	¼" - SS TUBE FITTING
3200305	8700-2500-590*	INDUST. AIR	3000	0 - 2500	4000	4000	CGA 590	¼" - SS TUBE FITTING
3200270	8700-800-346*	MEDICAL AIR	3000	0 - 800	1000	4000	CGA 346	¼" - SS TUBE FITTING
3200310	8700-1500-346*	MEDICAL AIR	3000	0 - 1500	3000	4000	CGA 346	¼" - SS TUBE FITTING
3200311	8700-2500-346*	MEDICAL AIR	3000	0 - 2500	3000	4000	CGA 346	¼" - SS TUBE FITTING
3200312	8700-1500-347*	MEDICAL AIR	5500	0 - 1500	3000	6000	CGA 347	¼" - SS TUBE FITTING
3200314	8700-3000-347*	MEDICAL AIR	5500	0 - 3000	4000	6000	CGA 347	¼" - SS TUBE FITTING
3200315	8700-4500-347*	MEDICAL AIR	5500	0 - 4500	6000	6000	CGA 347	¼" - SS TUBE FITTING
3200320	8700-1500-677*	Ar, He, N ₂	7500	0 - 1500	3000	10000	CGA 677	¼" - SS TUBE FITTING
3200321	8700-3000-677*	Ar, He, N ₂	7500	0 - 3000	4000	10000	CGA 677	¼" - SS TUBE FITTING
3200322	8700-4500-677*	Ar, He, N ₂	7500	0 - 4500	6000	10000	CGA 677	¼" - SS TUBE FITTING
3200323	8700-6000-677*	Ar, He, N ₂	7500	0 - 6000	10000	10000	CGA 677	¼" - SS TUBE FITTING
3200324	8700-1500-680*	Ar, He, N ₂	5500	0 - 1500	3000	6000	CGA 680	¼" - SS TUBE FITTING
3200326	8700-3000-680*	Ar, He, N ₂	5500	0 - 3000	4000	6000	CGA 680	¼" - SS TUBE FITTING
3200327	8700-4500-680*	Ar, He, N ₂	5500	0 - 4500	6000	6000	CGA 680	¼" - SS TUBE FITTING
3200272	8700-800-580*	Ar, He, N ₂	3000	0 - 800	1000	4000	CGA 580	¼" - SS TUBE FITTING
3200300	8700-1500-580*	Ar, He, N ₂	3000	0 - 1500	3000	4000	CGA 580	¼" - SS TUBE FITTING
3200301	8700-2500-580*	Ar, He, N ₂	3000	0 - 2500	4000	4000	CGA 580	¼" - SS TUBE FITTING
3200271	8700-800-350	H ₂ , METHANE	3000	0 - 800	1000	4000	CGA350	¼" - SS TUBE FITTING
3200302	8700-1500-350	H ₂ , METHANE	3000	0 - 1500	3000	4000	CGA 350	¼" - SS TUBE FITTING
3200303	8700-2500-350	H ₂ , METHANE	3000	0 - 2500	4000	4000	CGA 350	¼" - SS TUBE FITTING
3200316	8700-1500-695	H ₂ , METHANE	5500	0 - 1500	3000	6000	CGA 695	¼" - SS TUBE FITTING
3200318	8700-3000-695	H ₂ , METHANE	5500	0 - 3000	4000	6000	CGA 695	¼" - SS TUBE FITTING
3200319	8700-4500-695	H ₂ , METHANE	5500	0 - 4500	6000	6000	CGA 695	¼" - SS TUBE FITTING

*Self venting for safety and ease of adjustment
SG - Surge Guard - for Safety with Oxygen

3500

MODEL



HIGH PRESSURE/HIGH FLOW

MODEL SHOWN:
3500-125-540

DESCRIPTION

The Model 3500 is specifically designed to provide high gas flows from cylinders and to supply manifold gas systems. It is also ideal for special high flow cylinder applications such as heavy cutting and heating. All models offer dual port outlets.

DETAILS

Capacity: High pressure, high flow

C_v: Up to 0.55

Gauges: 2.5" Brass

Pressure Regulation:

1.6 PSIG/100 PSIG on 0.55

C_v models & 0.9 PSIG/100 PSIG on 0.4 C_v models

Seat: One-piece encapsulated seat design with internal filter and CTFE (Kel F®) seat

Certifications: CGA E-4

Related Items:

1/4" plug P/N: 9000306

3/8" plug P/N: 9000373

Weight: 4.6 lbs./2.09 kg.



Additional Technical Information: PG. 173

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3003504	3500-15-510	ACETYLENE	500	0 - 15	30	400	CGA 510	9/16" - 18 LH
3003505	3500-15-300	ACETYLENE	500	0 - 15	30	400	CGA 300	9/16" - 18 LH
3003514	3500-50-510P*	LPG*	500	0 - 50	100	400	CGA 510P	9/16" - 18 LH
3003503	3500-125-350	H ₂ , METHANE	3000	0 - 125	200	4000	CGA 350	9/16" - 18 LH
3003509	3500-125-695	H ₂ , METHANE	5500	0 - 125	200	6000	CGA 695	9/16" - 18 LH
3003513	3500-200-350	H ₂ , METHANE	3000	0 - 200	400	4000	CGA 350	9/16" - 18 LH
3003518	3500-200-695	H ₂ , METHANE	5500	0 - 200	400	6000	CGA 695	9/16" - 18 LH
3003500	3500-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3003510	3500-200-540	OXYGEN	3000	0 - 200	400	4000	CGA 540	9/16" - 18 RH
3003502	3500-125-346	AIR	3000	0 - 125	200	4000	CGA 346	9/16" - 18 RH
3003508	3500-125-347	AIR	5500	0 - 125	200	6000	CGA 347	9/16" - 18 RH
3003512	3500-200-346	AIR	3000	0 - 200	400	4000	CGA 346	9/16" - 18 RH
3003517	3500-200-347	AIR	5500	0 - 200	400	6000	CGA 347	9/16" - 18 RH
3003501	3500-125-580	Ar, He, N ₂	3000	0 - 125	200	4000	CGA 580	5/8" - 18 RH
3003507	3500-125-680	Ar, He, N ₂	5500	0 - 125	200	6000	CGA 680	5/8" - 18 RH
3003511	3500-200-580	Ar, He, N ₂	3000	0 - 200	400	4000	CGA 580	5/8" - 18 RH
3003516	3500-200-680	Ar, He, N ₂	5500	0 - 200	400	6000	CGA 680	5/8" - 18 RH
3003540	3500-400-580	Ar, He, N ₂	3000	0 - 400	600	4000	CGA 580	3/8" - NPT (M)
3003541	3500-600-580	Ar, He, N ₂	3000	0 - 600	1000	4000	CGA 580	3/8" - NPT (M)

*Regulators designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

**All 3500 series have auxiliary ports. Those with 9/16" "outlet connections" have 3/8" auxiliary ports. Those with 9/16" or 5/8" connections have 3/8" auxiliary connections.



DESCRIPTION

The Model 3500 is ideal for wheel guns used in NASCAR®, IRL® and CART® racing. In addition, our Model 3500-600-580 is especially designed for integral pit jack systems common in IRL® and CART® vehicles. Both models feature a 1/4" NPT(F) auxiliary delivery port.

MODEL SHOWN:
3500-600-580



PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3003538	3500-400-580	Ar, He, N ₂	3000	0-400	600	4000	CGA 580	3/8" NPT(M)
3003539	3500-600-580	Ar, He, N ₂	3000	0-600	1000	4000	CGA 580	3/8" NPT(M)



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REGULATORS

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3510

MODEL



HIGH FLOW MANIFOLD

MODEL SHOWN:
3510-200-RH

DESCRIPTION

The Model 3510 is a high flow manifold regulator. It is equipped with inlet and outlet connections required on Harris manifold systems. The body ports are 1/2" NPT for direct mounting in piping systems.

DETAILS

Capacity: Heavy duty

C_v: 0.4 for 15 PSIG models
0.55 for all other models

Gauges: 2.5" Brass psi/bar

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat. 15 PSIG models have neoprene seat.

Pressure Regulation:

1.6 PSIG/100 PSIG

Certifications: CGA E-4

Where Used: Manifold systems, pipeline systems

Weight: 5.5 lbs./2.49 kg.



Additional Technical Information: PG. 173

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3003547**	3510-15-LH	FUEL GAS	400	0 - 15	30	400	1.00-11.5 NPS LH (F)	1.00-11.5 NPS LH (M)
3003548*	3510-125-LH	FUEL GAS	3000	0 - 125	200	4000	1.00-11.5 NPS LH (F)	1.00-11.5 NPS LH (M)
3003551*	3510-200-LH	FUEL GAS	3000	0 - 100	400	4000	1.00-11.5 NPS LH (F)	1.00-11.5 NPS LH (M)
3003546**	3510-15-RH	NON-FUEL GAS	400	0 - 15	30	400	1.00-11.5 NPS RH (F)	1.00-11.5 NPS RH (M)
3003549	3510-125-RH	NON-FUEL GAS	3000	0 - 125	200	4000	1.00-11.5 NPS RH (F)	1.00-11.5 NPS RH (M)
3003550	3510-200-RH	NON-FUEL GAS	3000	0 - 200	400	4000	1.00-11.5 NPS RH (F)	1.00-11.5 NPS RH (M)

*NOT FOR USE WITH ACETYLENE.

** NOT FOR HIGH PRESSURE CYLINDER GASES

CGAs Gas-996(RH), 997(LH)

3520

MODEL



CYLINDER/PIPELINE HIGH FLOW

MODEL SHOWN:
HP 3520-25NPT(F)

DESCRIPTION

The Model 3520 is a high flow, two gauge, in-line manifold regulator for pipeline and other applications up to 3000 PSIG inlet pressure. Typically used for high flow, non-corrosive gas applications, high purity gas applications, process analyzer gases and bulk gas distribution systems.

DETAILS

Capacity: High flow

C_v: 0.55

Gauges: 2.5" Brass - psi/bar

Pressure Regulation:

1.6 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat. 15 PSIG model has neoprene seat.

Certifications: CGA E-4

Where Used: Manifold systems, pipeline systems

Related Items: CGA adaptor kits:

CGA 540 - P/N: 9103615,

CGA 580 - P/N: 9103616

Weight: 4.5 lbs./2.04 kg.



Additional Technical Information: PG. 174

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3003560	HP 3520-15	NON CORROSIVE	500	0 - 15	30	600	1/2" - NPT(F)	1/2" - NPT(F)
3003561	HP 3520-50	NON CORROSIVE	3000	0 - 50	100	4000	1/2" - NPT(F)	1/2" - NPT(F)
3003562	HP 3520-125	NON CORROSIVE	3000	0 - 125	200	4000	1/2" - NPT(F)	1/2" - NPT(F)
3003563	HP 3520-250	NON CORROSIVE	3000	0 - 250	400	4000	1/2" - NPT(F)	1/2" - NPT(F)
3003564	HP 3520-500	NON CORROSIVE	3000	0 - 500	600	4000	1/2" - NPT(F)	1/2" - NPT(F)

3530

MODEL



HIGH FLOW PIPELINE

MODEL SHOWN:
HP 3530-250 – ½" NPT

DESCRIPTION

The Model 3530 is a brass barstock regulator for pipeline and manifold applications, plumbed in-line for inlet pressures up to 3000 PSIG. Designed for non-corrosive, high flow gas applications, process analyzer gases, laser gas systems and emission monitoring system gases.

DETAILS

Capacity: High flow

C_v: 0.55

Gauges: 2.5" Brass psi/bar

Pressure Rise: 1.6 PSIG/100 PSIG

Seat: One-piece encapsulated valve design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4

Where Used: Manifold systems, pipeline systems

Related Items: Stainless steel bushing ¼" NPT (F) x ½" MNPT P/N: 9005806

Weight: 4.3 lbs./1.95 kg.



Additional Technical Information: PG. 174

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000800	HP 3530-15	NON CORROSIVE	500	0 - 15	30	-	½" - NPT (F)	½" - NPT (F)
4000801	HP 3530-50	NON CORROSIVE	3000	0 - 50	100	-	½" - NPT (F)	½" - NPT (F)
4000802	HP 3530-125	NON CORROSIVE	3000	0 - 125	200	-	½" - NPT (F)	½" - NPT (F)
4000803	HP 3530-250	NON CORROSIVE	3000	0 - 250	400	-	½" - NPT (F)	½" - NPT (F)
4000804	HP 3530-500	NON CORROSIVE	3000	0 - 500	600	-	½" - NPT (F)	½" - NPT (F)

3540

MODEL



EXTREMELY HIGH FLOW

MODEL SHOWN:
3540-50-½" NPT(F)

DESCRIPTION

The Model 3540 is a single-stage, neoprene diaphragm, brass barstock regulator. It is designed specifically for applications demanding ultra high gas flows at low incoming pressures. The 3540 features the new Harris twin encapsulated seat design and a variable inlet/outlet configuration.

DETAILS

Capacity: Ultra high flow

C_v: 1.0

Gauges: 2.5" Brass psi/bar

Pressure Rise: 5.5 PSIG/100 PSIG

Seat: One-piece encapsulated valve design with internal filter and neoprene seats

Certifications: CGA E-4

Where Used: High flow pipeline, manifold systems and bulk systems

Related Items: Stainless steel bushing ¼" NPT (F) x ½" MNPT P/N: 9005806

Panel Mount: Rear panel mountable

Weight: 6.9 lbs./3.13 kg.



Additional Technical Information: PG. 175

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG/BAR	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTION	OUTLET CONNECTION
4000950	HP 3540-15	NON CORROSIVE	500	0 - 15	30	600/40	½" - NPT (F)	½" - NPT (F)
4000951	HP 3540-50	NON CORROSIVE	500	0 - 50	100	600/40	½" - NPT (F)	½" - NPT (F)
4000952	HP 3540-125	NON CORROSIVE	500	0 - 125	200	600/40	½" - NPT (F)	½" - NPT (F)
4000953	HP 3540-250	NON CORROSIVE	500	0 - 250	400	600/40	½" - NPT (F)	½" - NPT (F)



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REGULATORS

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3560

MODEL



ULTRA HIGH FLOW PIPELINE

MODEL SHOWN:
3560-125-½" NPT (F)

DESCRIPTION

The Model 3560 is a single-stage neoprene diaphragm brass barstock regulator. It is designed specifically for applications demanding extremely high gas flows at low incoming pressures. The 3560 features the new Harris twin encapsulated seat design and a variable inlet/outlet configuration.

DETAILS

Capacity: Ultra high flow

C_v: 1.0

Gauges: 2.5" Brass psi/bar

Pressure Regulation: 5.5 PSIG/100 PSIG

Seat: One-piece encapsulated valve design with internal filter and neoprene seats

Certifications: CGA E-4

Where Used: High flow pipeline, manifold systems and bulk systems

Related Items:

Bushing ¼" NPT (F) x ½" MNPT
P/N: 9005806

Panel Mount: Rear panel mountable

Weight: 6.7 lbs./3.04 kg.



Additional Technical Information: PG. 175

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTION	OUTLET CONNECTION
4000959	3560-15	NON CORROSIVE	500	0 - 15	30	N/A	½" NPT (F)	½" NPT (F)
4000960	3560-50	NON CORROSIVE	500	0 - 50	100	N/A	½" NPT (F)	½" NPT (F)
4000961	3560-125	NON CORROSIVE	500	0 - 125	200	N/A	½" NPT (F)	½" NPT (F)
4000962	3560-250	NON CORROSIVE	500	0 - 250	400	N/A	½" NPT (F)	½" NPT (F)

3580

MODEL



ULTRA HIGH FLOW STAINLESS STEEL PIPELINE REGULATOR

MODEL SHOWN:
3580-125-½" NPT (F)

DESCRIPTION

The 3580 is a single-stage stainless steel diaphragm regulator with a stainless steel barstock body. Designed specifically for applications demanding ultra high gas flows at low incoming pressures. The 3580 features the new Harris twin encapsulated seat design and a variable inlet/outlet configuration.

DETAILS

Capacity: Ultra high flow

C_v: 1.0

Gauges: 2" Brass psi/bar

Pressure Regulation: 5.5 PSIG/100 PSIG

Seat: One-piece encapsulated valve design with internal filter and PTFE Teflon® seats

Certifications: CGA E-4

Where Used: Manifold systems, bulk systems

Related Items: Stainless steel bushing ¼" NPT (F) x ½" MNPT
P/N: 9005752

Panel Mount: Rear panel mountable

Weight: 6.9 lbs./3.13 kg.



Additional Technical Information: PG. 176

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTION	OUTLET CONNECTION
4000968	3580-15	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 15	30	600/40	½" NPT (F)	½" NPT (F)
4000969	3580-50	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 50	100	600/40	½" NPT (F)	½" NPT (F)
4000970	3580-125	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 125	200	600/40	½" NPT (F)	½" NPT (F)
4000971	3580-250	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 250	400	600/40	½" NPT (F)	½" NPT (F)
4000972	3580-500	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 500	1000	600/40	½" NPT (F)	½" NPT (F)

3590

MODEL



ULTRA HIGH FLOW PIPELINE WITH STAINLESS STEEL DIAPHRAGM AND BODY

MODEL SHOWN:
3590-125-1/2" NPT (F)

DESCRIPTION

The Model 3590 is a pipeline type stainless steel diaphragm regulator with a stainless steel barstock body. It is designed specifically for applications demanding extremely high flows at low incoming pressures. The 3590 features the new Harris twin encapsulated seat design and variable inlet/outlet configuration.

DETAILS

Capacity: Ultra high flow

C_v: 1.0

Gauges: 2" Stainless steel psi/bar

Pressure Regulation: 5.5 PSIG rise/100 PSIG

Seat: One-piece encapsulated valve design with internal filter and PTFE® seats

Certifications: CGA E-4

Where Used: Manifold and pipeline systems, bulk systems

Related Items: Stainless steel bushing 1/4" NPT (F) x 1/2" MNPT
P/N: 9005752

Panel Mount: Rear panel mountable

Weight: 6.9 lbs./3.13 kg.



Additional Technical Information: PG. 176

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTION	OUTLET CONNECTION
4000973	3590-15	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 15	30	—	1/2" NPT (F)	1/2" NPT (F)
4000974	3590-50	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 50	100	—	1/2" NPT (F)	1/2" NPT (F)
4000975	3590-125	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 125	200	—	1/2" NPT (F)	1/2" NPT (F)
4000976	3590-250	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 250	400	—	1/2" NPT (F)	1/2" NPT (F)
4000977	3590-500	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 500	1000	—	1/2" NPT (F)	1/2" NPT (F)



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REGULATORS

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247

MODEL



ECONOMY PIPELINE/STATION BACK ENTRY

MODEL SHOWN:
247-125-CR

DESCRIPTION

The economically priced Model 247 provides high gas flow for gas distribution systems. It is available in both pipeline and station models. They feature chrome plated zinc die-cast bonnets.

DETAILS

Capacity: Heavy duty

C_v: 0.53

Gauge: 2" Steel

Pressure Regulation:
1.6 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat, low pressure versions feature a neoprene seat (NC)

Certifications: CGA E-4

Related Equipment:

Station Drops p.164

Station Valves p.163

Weight: 3.6 lbs./1.63 kg.



Additional Technical Information: PG. 177

PIPELINE ¼ NPT Inlet

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000812	247NC-1-¼"L	FUEL	500	0 - 1	15	¼" - NPT (F)	⅝" - 18LH
4000815	247NC-15-¼"L	FUEL	500	0 - 15	30	¼" - NPT (F)	⅝" - 18LH
4000820	247-50-¼"L	FUEL	500	0 - 50	100	¼" - NPT (F)	⅝" - 18LH
4000814	247NC-15-¼"R	OXYGEN	500	0 - 15	30	¼" - NPT (F)	⅝" - 18RH
4000819	247-50-¼"R	OXYGEN	500	0 - 50	100	¼" - NPT (F)	⅝" - 18RH
4000825	247-125-¼"R	OXYGEN	500	0 - 125	150	¼" - NPT (F)	⅝" - 18RH
4000829	247-200-¼"R	OXYGEN	500	0 - 200	400	¼" - NPT (F)	⅝" - 18RH
4000811	247NC-1-¼"R(F)	AIR, INERT, OIL FREE	500	0 - 1	15	¼" - NPT (F)	⅝" - 18RH (F)
4000826	247-125-¼"R(F)	AIR, INERT, OIL FREE	500	0 - 125	150	¼" - NPT (F)	⅝" - 18RH (F)
4000821	247-50-¼"R(F)	AIR, INERT, OIL FREE	500	0 - 50	100	¼" - NPT (F)	⅝" - 18RH (F)
4000818	247-20P-¼"R	AIR, INERT, OIL FREE	500	20 PRESET	NO GAUGE	¼" - NPT (F)	⅝" - 18RH (M)

STATION "C" Inlet

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000813	247NC-1-CL	FUEL	200	0 - 1	15	⅞" - 14LH (F)	⅝" - 18LH
4000817	247NC-15-CL	FUEL	200	0 - 15	30	⅞" - 14LH (F)	⅝" - 18LH
4000823	247-50-CL	FUEL	200	0 - 50	100	⅞" - 14LH (F)	⅝" - 18LH
4000816	247NC-15-CR	OXYGEN	200	0 - 15	30	⅞" - 14RH (F)	⅝" - 18RH
4000822	247-50-CR	OXYGEN	200	0 - 50	100	⅞" - 14RH (F)	⅝" - 18RH
4000827	247-125-CR	OXYGEN	200	0 - 125	150	⅞" - 14RH (F)	⅝" - 18RH
4000830	247-200-CR	OXYGEN	200	0 - 200	400	⅞" - 14RH (F)	⅝" - 18RH
4000831	247-200-CRM	AIR, INERT, OIL FREE	200	0 - 200	400	⅞" - 14RH (M)	⅝" - 18RH (F)
4000824	247-50-CRM	AIR, INERT, OIL FREE	200	0 - 50	100	⅞" - 14RH (M)	⅝" - 18RH (F)
4000828	247-125-CRM	AIR, INERT, OIL FREE	200	0 - 125	150	⅞" - 14RH (M)	⅝" - 18RH (F)

Note: "C" or station CGA inlet connection - fuel gas - 025, oxygen - 024, inert gas - 034

447

MODEL



PIPELINE/STATION BACK ENTRY

MODEL SHOWN:
447-125-CRM

DESCRIPTION

The Model 447 regulators are designed to deliver high gas flows from piping systems that are equipped with standard pipe connection outlets or with station regulator connections. The 447 also has a brass bonnet and gauge.

DETAILS

Capacity: Heavy duty, high flow**C_v:** 0.53**Gauge:** 2.5" Brass**Pressure Regulation:**
1.6 PSIG/100 PSIG**Seat:** One-piece encapsulated seat design with internal filter and PTFE Teflon® seat, low pressure models feature neoprene seats(NC)**Certifications:** CGA E-4**Weight:** 3.6 lbs./1.63 kg.**Related Equipment:**

Station Drops p.164

Station Valves p.163



Additional Technical Information: PG. 177

PIPELINE 1/4" NPT Inlet

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000568	447NC-1-1/4" L	FUEL	500	0 - 1	15	1/4" NPT (F)	3/8" - 18 LH
4000569	447NC-15-1/4" L	FUEL	500	0 - 15	30	1/4" NPT (F)	3/8" - 18 LH
4000571	447-50-1/4" L	FUEL	500	0 - 50	100	1/4" NPT (F)	3/8" - 18 LH
4000585	447-125-1/4" L	FUEL	500	0-125	200	1/4" NPT (F)	3/8" - 18 LH
4000587	447-125-1/4" L	FUEL	500	0-200	400	1/4" NPT (F)	3/8" - 18 LH
4000573	447-50-1/4" R	OXYGEN	500	0 - 50	100	1/4" NPT (F)	3/8" - 18 RH
4000575	447-125-1/4" R	OXYGEN	500	0 - 125	200	1/4" NPT (F)	3/8" - 18 RH
4000577	447-200-1/4" R	OXYGEN	500	0 - 200	400	1/4" NPT (F)	3/8" - 18 RH
4000586	447-200-1/4" R	OXYGEN	500	0 - 200	400	1/4" NPT (F)	3/8" - 18 RH
4000579	447NC-15-1/4" R	OXYGEN	500	0 - 15	30	1/4" NPT (F)	3/8" - 18 RH
4000580	447-50-1/4" RF	AIR, INERT	500	0 - 50	100	1/4" NPT (F)	3/8" - 18 RH (F)
4000582	447-125-1/4" RF	AIR, INERT	500	0 - 125	200	1/4" NPT (F)	3/8" - 18 RH (F)
4000590	447-200-1/4" RF	AIR, INERT	500	0 - 200	400	1/4" NPT (F)	3/8" - 18 RH (F)
4000584	447-20P-1/4" R	AIR, INERT	500	20 PRESET	N/A	1/4" NPT (F)	3/8" - 18 RH (M)
4000588	447NC-1-1/4" RF	AIR, INERT	500	0 - 1	15	1/4" NPT (F)	3/8" - 18 RH (F)

STATION "C" Inlet (3/8" - 14")

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000548	447NC-1-CL	FUEL	200	0 - 1	15	3/8" - 14 LH (F)	3/8" - 18 LH
4000549	447NC-15-CL	FUEL	200	0 - 15	30	3/8" - 14 LH (F)	3/8" - 18 LH
4000551	447-50-CL	FUEL	200	0 - 50	100	3/8" - 14 LH (F)	3/8" - 18 LH
4000566	447NC-15-CR	OXYGEN	200	0 - 15	30	3/8" - 14 RH (F)	3/8" - 18 RH
4000553	447-50-CR	OXYGEN	200	0 - 50	100	3/8" - 14 RH (F)	3/8" - 18 RH
4000555	447-125-CR	OXYGEN	200	0 - 125	200	3/8" - 4 RH (F)	3/8" - 18 RH
4000557	447-200-CR	OXYGEN	200	0 - 200	100	3/8" - 14 RH (F)	3/8" - 18 RH
4000559	447-50-CRM	AIR, INERT	200	0 - 50	100	3/8" - 14 RH (M)	3/8" - 18 RH (F)
4000561	447-125-CRM	AIR, INERT	200	0 - 50	100	3/8" - 14 RH (M)	3/8" - 18 RH (F)
4000563	447-200-CRM	AIR, INERT	200	0 - 200	400	3/8" - 14 RH (M)	3/8" - 18 RH (F)

Note: "C" or station CGA inlet connection - fuel gas - 025, oxygen - 024, inert gas - 034

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REGULATORS

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547 MODEL



HEAVY DUTY STATION - SIDE ENTRY

MODEL SHOWN:
547-125-CR

DESCRIPTION

The Model 547 high flow station regulator is designed to deliver high gas flows from piping systems that are equipped with station regulator connections.

DETAILS

Capacity: Heavy duty, high flow

C_v: 0.53

Gauge: 2.5" brass

Pressure Regulation:
1.6 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat, low pressure models feature neoprene seats (NC).

Certifications: CGA E-4

Weight: 3.6 lbs./1.63 kg.

Related Equipment:

Station Drops p.164

Station Valves p.163

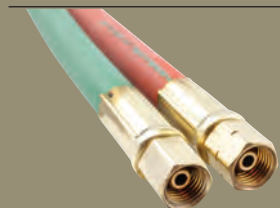


Additional Technical Information: PG. 177

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000601	547NC-15-CL	FUEL	200	0 - 15	30	-	7/8"-14-LH-025	1/16" - 18 LH
4000603	547-50-CL	FUEL	200	0 - 50	100	-	7/8"-14-LH-025	1/16" - 18 LH
4000605	547-50-CR	OXYGEN	200	0 - 50	100	-	7/8"-14-RH-024	1/16" - 18 RH
4000607	547-125-CR	OXYGEN	200	0 - 125	200	-	7/8"-14-RH-024	1/16" - 18 RH
4000609	547-200-CR	OXYGEN	200	0 - 200	400	-	7/8"-14-RH-024	1/16" - 18 RH
4000620	547NC-1-CRM	AIR, INERT OIL FREE	200	0 - 1	15	-	7/8"-14-RH-034	5/8" - 18 RH
4000611	547-50-CRM	AIR, INERT OIL FREE	200	0 - 50	100	-	7/8"-14-RH-034	5/8" - 18 RH
4000613	547-125-CRM	AIR, INERT OIL FREE	200	0 - 125	200	-	7/8"-14-RH-034	5/8" - 18 RH
4000615	547-200-CRM	AIR, INERT OIL FREE	200	0 - 200	400	-	7/8"-14-RH-034	5/8" - 18 RH

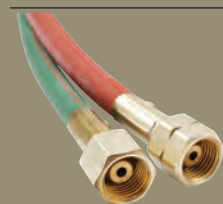
WHAT IS THE DIFFERENCE BETWEEN A STATION AND A PIPELINE REGULATOR?

"A" Nut



A station regulator is essentially a pipeline regulator with a "C" hose connection installed on the inlet to prevent the regulator from being used on a pressure source higher than its intended use.

"B" Nut



Visually, a "C" nut and stem is a little larger (7/8"-18"), than the more popular "B" size (1/2"-18"), found on the majority of regulators and torches in the welding industry. Both "B" and "C" hoses are limited to a maximum gas pressure of 200 PSIG according to the standard set by The Compressed Gas Association.

"C" Nut and Stem



The station regulator with the "C" inlet connection is, therefore, limited to a maximum gas pressure of 200 PSIG. A pipeline regulator, on the other hand, has no inlet pressure limit other than that specified by its manufacturer. For example, Harris Models 247, 447 and 547 pipeline regulators are limited by Harris to a stated maximum of 500 PSIG, unless equipped with a "C" inlet, thus limiting them to 200 PSIG.

The intent of the "C" connection station regulator standard is to prevent the use of a low pressure design regulator on a high pressure source, causing an accident and/or possible injury.

2548

MODEL



STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
2548-125-1/4"

DESCRIPTION

The Model 2548 high flow pipeline regulator is ideal for special gas applications requiring stainless steel diaphragms at inlet pressures up to 3000 PSIG with a variety of inlet/outlet port configurations. High pressure (3000 PSIG) models feature an internal high pressure relief valve.

DETAILS

Capacity: Heavy duty, high flow

C_v: 0.4

Gauge: 2.5" brass

Pressure Regulation:
0.9 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4

Weight: 3.8 lbs./1.72 kg.

Related Equipment:
Station Drops p.164



Additional Technical Information: PG. 178

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000701	2548-15-1/4"	FUEL	500	0 - 15	30 RZ	1/4" NPT	1/4" NPT
4000702	2548-50-1/4"	FUEL	500	0 - 50	100	1/4" NPT	1/4" NPT
4000705	2548-125-1/4"	FUEL	500	0 - 125	200	1/4" NPT	1/4" NPT
4000708	2548-200-1/4"	FUEL	500	0 - 200	400	1/4" NPT	1/4" NPT
4000704	2548-50-1/4"	OXYGEN	3000	0 - 50	100	1/4" NPT	1/4" NPT
4000707	2548-125-1/4"	OXYGEN	3000	0 - 125	200	1/4" NPT	1/4" NPT
4000710	2548-200-1/4"	OXYGEN	3000	0 - 200	400	1/4" NPT	1/4" NPT
4000703	2548-50-1/4"	AIR, INERT OIL FREE	3000	0 - 50	100	1/4" NPT	1/4" NPT
4000706	2548-125-1/4"	AIR, INERT OIL FREE	3000	0 - 125	200	1/4" NPT	1/4" NPT
4000709	2548-200-1/4"	AIR, INERT OIL FREE	3000	0 - 200	400	1/4" NPT	1/4" NPT

647

MODEL



PANEL MOUNT

MODEL SHOWN:
647PM-125-000

DESCRIPTION

The Model 647 is a panel mount pipeline regulator for accurate, repeatable delivery pressures. It is available in four pressure ranges that can be further customized to specific lower pressures. Panel mount nut is included.

DETAILS

Capacity: Heavy duty

C_v: 0.17

Gauge: 2" Steel

Pressure Regulation:
0.6 PSIG/100 PSIG

Seat: One-piece encapsulated seat designed with internal filter and neoprene seat

Certifications: CGA E-4

Weight: 3.8 lbs./1.72 kg.



Additional Technical Information: PG. 171

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000680	647PM-015-000	NON-CORROSIVE	500	0 - 15	60	1/4" NPT (F)	1/4" NPT (F)
4000681	647PM-050-000	NON-CORROSIVE	500	0 - 50	60	1/4" NPT (F)	1/4" NPT (F)
4000682	647PM-125-000	NON-CORROSIVE	500	0 - 125	150	1/4" NPT (F)	1/4" NPT (F)
4000683	647PM-175-000	NON-CORROSIVE	500	0 - 175	400	1/4" NPT (F)	1/4" NPT (F)



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REGULATORS

27

TWO-STAGE PRESSURE CONTROL REGULATORS

FOR DEMANDING APPLICATIONS WHERE CONSTANT OUTLET PRESSURE OVER A WIDE RANGE OF INLET PRESSURES IS REQUIRED. HARRIS DELIVERS WITH A COMPREHENSIVE OFFERING OF TWO-STAGE INDUSTRIAL REGULATORS.



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ECONOMICAL



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MODEL SHOWN:
2561-125C-540

OVERVIEW

The basic function of a gas pressure regulator is to reduce unusable high pressure from the source to a lower usable delivery pressure. Two-stage regulators are designed to lower the high pressure in two stages. They require less readjustment and provide a more constant delivery pressure despite changes in inlet pressure. They are exceptionally well suited for high pressure cylinder applications.

TYPICAL APPLICATIONS

- Oxy-Fuel Welding and Brazing
- Oxy-Fuel Cutting
- Other allied processes

PRO INFO

Visit www.harrisproductsgroup.com for complete details on our entire product line.



WHEN IS A TWO-STAGE REGULATOR REQUIRED?

CHECKLIST

- 1 Applications where the delivery pressure rise from cylinder pressure decay cannot be tolerated.
- 2 Situations where proper pressure is critical and the cylinders in use are in a remote or difficult to monitor location.
- 3 Typically are not required when using gases from low pressure (<500 PSIG) sources.

2561

MODEL



ECONOMICAL

MODEL SHOWN:
2561-125C-540

DESCRIPTION

The Model 2561 is an economical two-stage regulator for welding and similar applications where neoprene diaphragms are acceptable. It is used when constant delivery pressure is required over a wide range of inlet pressures.

DETAILS

Capacity: Medium to heavy duty

C_v: 0.15

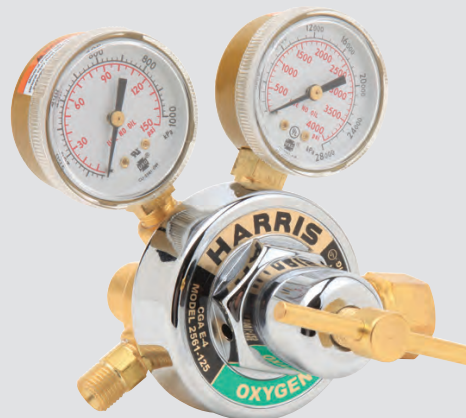
Gauges: 2" Steel

Pressure Regulation:
0.04 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4

Weight: 4.8 lbs./2.18 kg.



Additional Technical Information: PG. 179

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3300910	2561-15C-300	ACETYLENE	500	0 - 15	30RZ	400	CGA 300	1/8" - 18LH
3300909	2561-15C-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	1/8" - 18LH
3300911	2561-50C-510P	LPG*	500	0 - 50	60	400	CGA 510	1/8" - 18LH
3300916	2561-125C-540	OXYGEN	3000	0 - 125	150	4000	CGA 540	1/8" - 18RH
3300912	2561-125C-580	Ar, He, N ₂	3000	0 - 125	150	4000	CGA 580	1/8" - 18RH**

*Regulators designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

**Includes 1/8" adaptor - P/N: 9000002

TYPICAL CYLINDER SIZE WEIGHT AND CONTENT DATA

The data below, along with the oxy-acetylene tip charts in this catalog, can aid in estimating the minimum cylinder size requirements and/or the maximum tip size recommended for a particular oxy-acetylene application.

Acetylene consumption rate from tip chart x 7 = Minimum Cylinder Size in cubic feet (@60° F).

Cylinder size in cubic feet/7 = Maximum Cylinder Withdrawal Rate in SCFH (@60° F).

OXYGEN

SIZE	CU. FT.	HEIGHT	WEIGHT FULL
R	20	14"	14 lbs.
AXL	58	41"	54 lbs.
Q	92	35"	70 lbs.
D	125	48"	124 lbs.
S	155	51"	92 lbs.
K	251	56"	153 lbs.
H	281	56"	162 lbs.
T	337	60"	172 lbs.

ACETYLENE

SIZE	CU. FT.	HEIGHT	WEIGHT FULL
MC	8	14"	8 lbs.
B	33	23"	26 lbs.
2AWQ	55	31"	61 lbs.
#4	90-150	36"	113 lbs.
#4	151-230	37.5"	150 lbs.
#5WK	250-380	43.5"	200 lbs.

Data above may vary slightly because of ambient temperature, cylinder conditions, etc.

9296

MODEL



GENERAL PURPOSE NEOPRENE DIAPHRAGM

MODEL SHOWN:
9296-125-540

DESCRIPTION

The Model 9296 is a standard for general purpose, laboratory, industrial and welding applications where neoprene diaphragms are acceptable. It is designed for applications where a constant delivery pressure is required over a wide range of inlet pressures. Low pressure models feature neoprene seats (NC).

DETAILS

Capacity: Heavy duty

C_v: 0.15

Gauges: 2" steel

Pressure Regulation:
0.04 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® or neoprene seats (NC)

Certifications: CGA E-4

Weight: 4.8 lbs./2.18 kg.



Additional Technical Information: PG. 179

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3302600	9296NC-15-300	ACETYLENE	500	0 - 15	30RZ	400	CGA 300	1/8" - 18 LH
3302601	9296NC-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	1/8" - 18 LH
3302602	9296-50-510P	LPG*	500	0 - 50	60	400	CGA 510P	1/8" - 18 LH
3302610	9296NC-15-350	H ₂ , METHANE	3000	0 - 15	30	4000	CGA 350	1/8" - 18 LH
3302611	9296-50-350	H ₂ , METHANE	3000	0 - 50	60	4000	CGA 350	1/8" - 18 LH
3302612	9296-125-350	H ₂ , METHANE	3000	0 - 125	150	4000	CGA 350	1/8" - 18 LH
3302613	9296-250-350	H ₂ , METHANE	3000	0 - 250	400	4000	CGA 350	1/4" NPT (F)
3302779	9296NC-15-540	OXYGEN	3000	0 - 15	30	4000	CGA 540	1/8" - 18 RH
3302603	9296-50-540	OXYGEN	3000	0 - 50	60	4000	CGA 540	1/8" - 18 RH
3302604	9296-125-540	OXYGEN	3000	0 - 125	150	4000	CGA 540	1/8" - 18 RH
3302605	9296-250-540	OXYGEN	3000	0 - 250	400	4000	CGA 540	1/4" NPT (F)
3302606	9296NC-15-580	Ar, He, N ₂	3000	0 - 15	30	4000	CGA 580	1/8" - 18 RH (F)
3302607	9296-50-580	Ar, He, N ₂	3000	0 - 50	60	4000	CGA 580	1/8" - 18 RH (F)
3302608	9296-125-580	Ar, He, N ₂	3000	0 - 125	150	4000	CGA 580	1/8" - 18 RH (F)
3302609	9296-250-580	Ar, He, N ₂	3000	0 - 250	400	4000	CGA 580	1/4" NPT (F)
3302780	9296-15-320	CO ₂	3000	0 - 15	30	4000	CGA 320	1/8" - 18 RH (F)
3302614	9296-50-320	CO ₂	3000	0 - 50	60	4000	CGA 320	1/8" - 18 RH (F)
3302615	9296-125-320	CO ₂	3000	0 - 125	150	4000	CGA 320	1/8" - 18 RH (F)
3302616	9296-250-320	CO ₂	3000	0 - 250	400	4000	CGA 320	1/4" NPT (F)

*Regulators designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.

9296SS

MODEL



GENERAL PURPOSE STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
9296SS-125-540

DESCRIPTION

The Model 9296SS with a stainless steel-diaphragm is recommended for applications where outgassing and/or permeation are concerns. It is also designed for applications where a constant delivery pressure is required over a wide range of inlet pressures.

DETAILS

Capacity: Heavy duty

C_v: 0.15

Gauges: 2" Brass

Pressure Regulation:
0.04 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4

Weight: 5.4 lbs./2.45 kg.



Additional Technical Information: PG. 180

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3302681	9296SS-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	½" - 18 LH
3302693	9296SS-15-350	H ₂ , METHANE	3000	0 - 15	30	4000	CGA 350	½" - 18 LH
3302694	9296SS-50-350	H ₂ , METHANE	3000	0 - 50	60	4000	CGA 350	½" - 18 LH
3302695	9296SS-125-350	H ₂ , METHANE	3000	0 - 125	150	4000	CGA 350	½" - 18 LH
3302696	9296SS-250-350	H ₂ , METHANE	3000	0 - 250	400	4000	CGA 350	¼" NPT (F)
3302683	9296SS-50-540	OXYGEN	3000	0 - 50	60	4000	CGA 540	½" - 18 RH
3302684	9296SS-125-540	OXYGEN	3000	0 - 125	150	4000	CGA 540	½" - 18 RH
3302685	9296SS-250-540	OXYGEN	3000	0 - 250	400	4000	CGA 540	¼" NPT (F)
3302697	9296SS-50-590	IND. AIR	3000	0 - 50	60	4000	CGA 590	½" - 18 RH (F)
3302698	9296SS-125-590	IND. AIR	3000	0 - 125	150	4000	CGA 590	½" - 18 RH (F)
3302699	9296SS-250-590	IND. AIR	3000	0 - 250	400	4000	CGA 590	¼" NPT (F)
3302701	9296SS-50-346	MEDICAL AIR	3000	0 - 50	60	4000	CGA 346	½" - 18 RH (F)
3302702	9296SS-125-346	MEDICAL AIR	3000	0 - 125	150	4000	CGA 346	½" - 18 RH (F)
3302703	9296SS-250-346	MEDICAL AIR	3000	0 - 250	400	4000	CGA 346	¼" NPT (F)
3302686	9296SS-15-580	Ar, He, N ₂	3000	0 - 15	30	4000	CGA 580	½" - 18 RH (F)
3302687	9296SS-50-580	Ar, He, N ₂	3000	0 - 50	60	4000	CGA 580	½" - 18 RH (F)
3302688	9296SS-125-580	Ar, He, N ₂	3000	0 - 125	150	4000	CGA 580	½" - 18 RH (F)
3302689	9296SS-250-580	Ar, He, N ₂	3000	0 - 250	400	4000	CGA 580	¼" NPT (F)
3302690	9296SS-50-320	CO ₂	3000	0 - 50	60	4000	CGA 320	½" - 18 RH (F)
3302691	9296SS-125-320	CO ₂	3000	0 - 125	150	4000	CGA 320	½" - 18 RH (F)
3302692	9296SS-250-320	CO ₂	3000	0 - 250	400	4000	CGA 320	¼" NPT (F)

*Regulators designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.



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9200

MODEL



HEAVY DUTY

MODEL SHOWN:
9200NC-15-510

DESCRIPTION

The Model 9200 is a standard for general purpose laboratory, industrial and welding applications. It is designed for applications where a constant delivery pressure is required over a wide range of inlet pressures.

DETAILS

Capacity: Heavy duty

C_v: 0.53 for LP fuel models;
0.37 for other models

Gauges: 2.5" brass

Seat: One-piece encapsulated
seat design with internal filter
and PTFE Teflon® or neoprene
seats (NC)

Pressure Regulation:

0.05 PSIG/100 PSIG LP models
and 0.03 PSIG/100 PSIG other
models

Certifications: CGA E-4

Weight: 6.8 lbs./3.08 kg.



Additional Technical Information: PG. 181

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3302210	9200NC-15-300	ACETYLENE	500	0 - 15	30RZ	400	CGA 300	1/16" - 18 LH
3302211	9200NC-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	1/16" - 18 LH
3302212	9200-50-510P	LPG**	500	0 - 50	100	400	CGA 510P	1/16" - 18 LH
3302215	9200-250-540	OXYGEN	CGA 540	0 - 15	30	4000	CGA 580	9/16" - 18 RH (M)
3302293	9200NC-2-350	H ₂ , METHANE	3000	0 - 2	5	4000	CGA 350	1/4" NPT(M)
3302220	9200NC-15-350	H ₂ , METHANE	3000	0 - 15	30	4000	CGA 350	9/16" - 18 LH
3302221	9200-50-350	H ₂ , METHANE	3000	0 - 50	100	4000	CGA 350	9/16" - 18 LH
3302222	9200-125-350	H ₂ , METHANE	3000	0 - 125	200	4000	CGA 350	9/16" - 18 LH
3302223	9200-250-350	H ₂ , METHANE	3000	0 - 250	400	4000	CGA 350	9/16" - 18 LH
3302213	9200-50-540	OXYGEN	3000	0 - 50	100	4000	CGA 540	9/16" - 18 RH
3302214	9200-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3302224	9200-50-346	AIR	3000	0 - 50	100	4000	CGA 346	9/16" - 18 RH
3302225	9200-125-346	AIR	3000	0 - 125	200	4000	CGA 346	9/16" - 18 RH
3302226	9200-250-346	AIR	3000	0 - 250	400	4000	CGA 346	9/16" - 18 RH
3302227	9200-50-590	IND. AIR	3000	0 - 50	100	4000	CGA 590	9/16" - 18 RH
3302228	9200-125-590	IND. AIR	3000	0 - 125	200	4000	CGA 590	9/16" - 18 RH
3302229	9200-250-590	IND. AIR	3000	0 - 250	400	4000	CGA 590	9/16" - 18 RH
3302292	9200NC-2-580	Ar, He, N ₂	3000	0 - 2	5	4000	CGA 580	1/4" NPT(M)
3302284	9200NC-5-580	Ar, He, N ₂	3000	0 - 5	15	4000	CGA 580	5/8" - 18 RH (F)
3302216	9200NC-15-580	Ar, He, N ₂	3000	0 - 15	30	4000	CGA 580	5/8" - 18 RH (F)
3302217	9200-50-580	Ar, He, N ₂	3000	0 - 50	100	4000	CGA 580	5/8" - 18 RH (F)
3302218	9200-125-580	Ar, He, N ₂	3000	0 - 125	200	4000	CGA 580	5/8" - 18 RH (F)
3302219	9200-250-580	Ar, He, N ₂	3000	0 - 250	400	4000	CGA 580	5/8" - 18 RH (F)
3302276	9200-15-320	CO ₂	3000	0 - 15	30	4000	CGA 320	5/8" - 18 RH (F)
3302273	9200-50-320	CO ₂	3000	0 - 50	100	4000	CGA 320	5/8" - 18 RH (F)
3302274	9200-125-320	CO ₂	3000	0 - 125	200	4000	CGA 320	5/8" - 18 RH (F)
3302275	9200-250-320	CO ₂	3000	0 - 250	400	4000	CGA 320	5/8" - 18 RH (F)

*Regulators designed specifically for propane service can be used with any of the other welding grade liquid petroleum gases. NOT FOR USE WITH ACETYLENE.



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REGULATORS

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9235

MODEL



TWO-STAGE MANIFOLD

MODEL SHOWN:
9235-350-350

DESCRIPTION

The Model 9235 is a high flow two-stage manifold regulator. Typical applications for the 9235 are gas purging, gas blanketing, pressure testing and other high flow applications. Inlet and outlet body ports are 3/8" NPT (F).

DETAILS

Capacity: Heavy duty

C_v: 0.40

Gauges: 2.5" brass

Pressure Regulation:

.05 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4

Weight: 6.9 lbs./3.13 kg.



Additional Technical Information: PG. 182

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3302300	9235-350-350	H ₂ , METHANE	3000	0-350	600	4000	CGA 350	3/8" NPT (M)
3302301	9235-350-540	OXYGEN	3000	0-350	600	4000	CGA 540	3/8" NPT (M)
3302302	9235-350-580	Ar, He, N ₂	3000	0-350	600	4000	CGA 580	3/8" NPT (M)

HP705

MODEL



HIGH FLOW CO₂

MODEL SHOWN:
HP705-125-320-A-1

DESCRIPTION

The Model HP705 is an electrically heated two-stage regulator used for non-corrosive liquefied gases or gas mixtures with up to 3000 PSIG inlet pressure. It has a stainless steel diaphragm and is suitable for chemical storage blanketing, CO₂ incubators, inert gas purging and Ph control. Chrome plated brass construction.

DETAILS

Capacity: Heavy duty

C_v: 0.15

Gauges: 2.5" Chrome-plated brass

Pressure Regulation:

0.09 PSIG/100 PSIG

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Certifications: CGA E-4, electrical components UL® listed

Flow Capacity: CO₂-up to 500 SCFH peak flow, up to 100 SCFH continuous

Heater: 200 watt 120 or 240 VAC

Weight: 6.8 lbs./3.08 kg.



Additional Technical Information: PG. 182

MODEL #	DELIVERY PRESSURE		CGA/INLET FITTING	ACCESSORIES	VOLTAGE
HP 705	Range 0 - 125 PSIG	Outlet Gauge (200 psi/14 bar)	320 326 580 000 – No Inlet	A – ¼" MNPT Needle Valve B – ¼" NPT (F) Diaph. Valve C – ¼" NPT (F) Port D – ¼" MNPT Nipple E – ¼" Tube Fitting F – ½" Tube Fitting G – ¼" NPT (M) Hose Barb H – ½" NPT (M) Hose Barb J – Inert fitting (P/N: 9100986)	1 – 120 VAC 2 – 240 VAC
SPECIFY CATALOG ▼ ORDER CODE					
HP705	– 125	–	320	– A	– 1

SAMPLE CODE: HP705-125-320-A-1

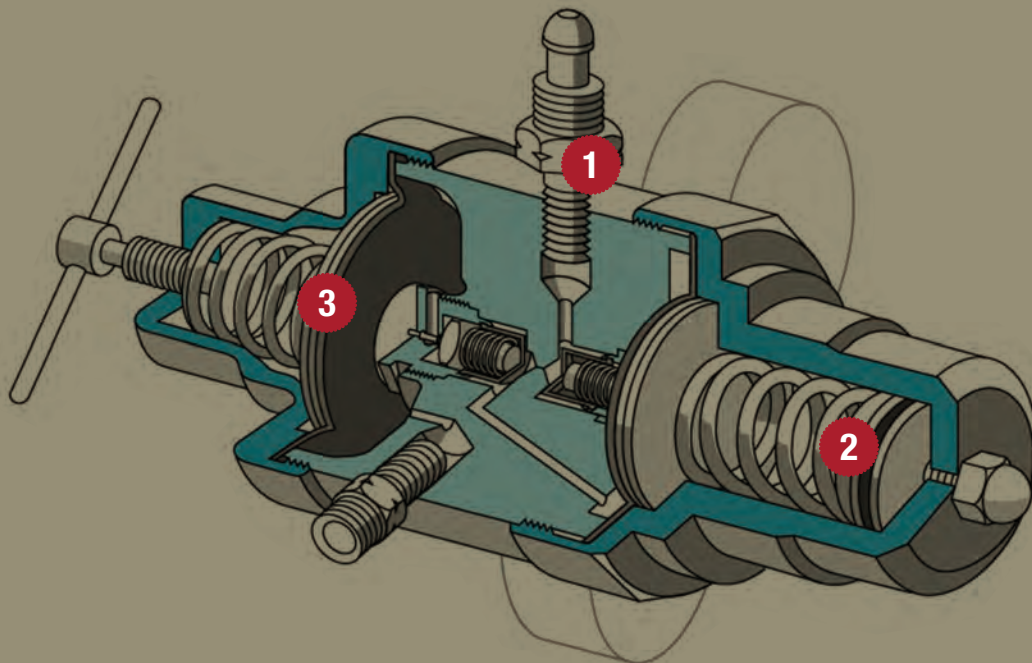
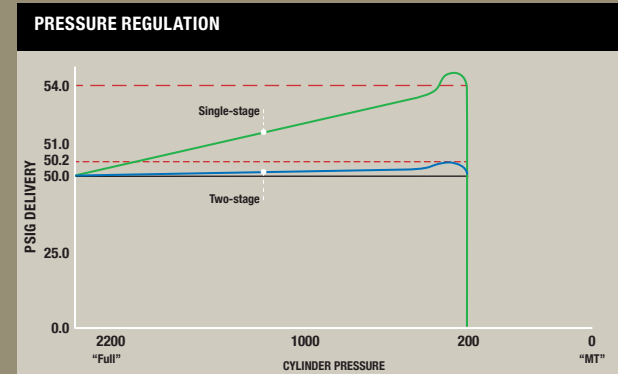
TWO-STAGE REGULATORS

OPERATION OF TWO-STAGE REGULATORS

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 pressure. The second regulator (second stage) is adjustable within the desired delivery range.

These regulators incorporate all components of a single-stage regulator. They also contain an additional stage to include a second pressure adjusting spring, diaphragm, and valve seat assembly. The first stage is not user adjustable. The pressure adjusting spring is “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.



1 INLET PRESSURE IS REDUCED IN TWO STAGES

2 FACTORY PRESET FIRST STAGE

3 ADJUSTABLE SECOND STAGE

FLOWMETERS

FLOW
CONTROL
EQUIPMENT

HARRIS FLOW CONTROL EQUIPMENT AND FLOWMETER REGULATORS ARE MADE IN GAINESVILLE, GEORGIA. THEY ARE 100% TESTED AND MANUFACTURED TO THE SAME EXACTING STANDARDS AS OUR OTHER GAS CONTROL EQUIPMENT.



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QUICK SELECTION GUIDE

ECONOMICAL



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GENERAL PURPOSE



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CARBON DIOXIDE



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DUAL FLOWMETER



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HIGH PRESSURE



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FOR 4500 PSIG
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ELECTRONICALLY HEATED



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SHIELDING GAS KITS



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MODEL**

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COMPLETE WITH HOSE
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**355-2
MODEL**

COMPACT COMPLETE
WITH HOSE
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MODEL SHOWN:
2555-Ar70-680

MODEL SHOWN:
425-Ar100-580

OVERVIEW

There are two basic types of flow control devices, generally referred to as "fixed pressure/variable orifice" and "variable pressure/fixed orifice". A typical flowmeter regulator is a "fixed pressure/variable orifice" device, pressure fixed at the factory to a "compensated" or "calibrated" pressure, depending on the flow range desired and the gases being used.

A third type of flow regulator is called a "zero" or "non-compensated" flowmeter regulator. It shares some features and advantages of both flow meter and flow gauge regulators. It uses a flowmeter as an indicator, but generally functions as a variable pressure flowgauge regulator.

PRO INFO

Visit www.harrisproductsgroup.com for complete details on our entire product line.

DEVICES FOR GAS FLOW CONTROL

All three types of regulators have their advantages. Use the comparison table below to select the type that best fits your application(s).



FLOWGAUGE REGULATOR	FLOWMETER REGULATOR	"ZERO" COMPENSATED FLOWMETER REGULATOR
Zero Compensated Variable Pressure/Fixed Orifice	Pressure Compensated Fixed Pressure/Variable Orifice	Zero Compensated Variable Pressure/Fixed Orifice
New	Traditional	New
\$\$	\$\$\$	\$
Tolerates More Abuse	Exposed Components Susceptible to Damage	Compact Less Susceptible to Damage
No Flow Indicator	Indicates When Flowing	Indicates When Flowing
All Position	Vertical Only	Vertical Only
Common Parts	Unique Parts	Few Unique Parts
Accuracy = $\pm 3, 2, 3\%$ of Full Scale	Accuracy = $\pm 5\%$ of Full Scale @ Mid Range	Accuracy = $\pm 5\%$ of Full Scale @ Mid Range
Surge Control Capability	No Surge Control Capability	Surge Control Capability

351

MODEL



"ZERO" COMPENSATED PIPELINE

MODEL SHOWN:
351-70Ar/CD- $\frac{5}{8}$ "M

DESCRIPTION

This pipeline version of the Model 351 is zero-compensated for more efficient shielding gas use. It is a compact flowmeter regulator at the price and size of most competitive flowmeters. It is designed to give an accurate consistent flow despite wide fluctuations in pipeline pressure.

DETAILS

Capacity: Heavy duty

Gauges: None

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Certifications: CGA E-4

Where Used: Gas-shielded welding and other pipeline applications

Related Items: $\frac{3}{16}$ " x 10' Inert Hose
P/N: 4300138

Weight: 2 lbs./ 0.91 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
3100332	351-70Ar/CD- $\frac{1}{4}$ "M	Ar/CO ₂	0-70	0	200	$\frac{1}{4}$ " NPT (M)	$\frac{5}{8}$ " - 18 (F)
3100333	351-70Ar/CD- $\frac{9}{16}$ "F	Ar/CO ₂	0-70	0	200	$\frac{9}{16}$ " - 18 (F)	$\frac{5}{8}$ " - 18 (F)
3100334	351-70Ar/CD- $\frac{5}{8}$ "M	Ar/CO ₂	0-70	0	200	$\frac{5}{8}$ " - 18 (M)	$\frac{5}{8}$ " - 18 (F)

351

MODEL



"ZERO" COMPENSATED CYLINDER

MODEL SHOWN:
351-60Ar-580

DESCRIPTION

This version of the Model 351 is designed for cylinder applications. Its unique design makes it more resistant to CO₂ freeze up than comparable competitive models. The Model 351 is zero-compensated for more efficient gas use.

DETAILS

Capacity: Heavy duty

Gauges: 50mm ABS

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Certifications: CGA E-4

Where Used: Gas-shielded arc welding and other industrial applications

Related Items: $\frac{9}{16}$ " x 10' Inert Hose
P/N: 4300138

Weight: 2.3 lbs./ 1.04 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100331	351-60Ar-580	Ar, CO ₂	0 - 70	0	3000	4000	CGA 580	$\frac{5}{8}$ " - 18 (F)
3100330	351-60CD-320	Ar, CO ₂	0 - 70	0	3000	4000	CGA 320	$\frac{5}{8}$ " - 18 (F)

55-2

MODEL



FLOWMETER

MODEL SHOWN:
55-2-Ar/CD-1/4"

DESCRIPTION

The Model 55-2 flowmeter is designed to give precise flow control in SCFH. They are compensated at 20 or 50 PSIG and calibrated for most common industrial gases. The 55-2 is equipped with a 70 PSIG relief value.

DETAILS

Capacity: Heavy duty

Gauges: N/A

Seat: N/A

Body: Brass

Certifications: CGA E-4

Where Used: Gas shielded welding and other pipeline applications

Related Items:

447-20 Pipeline Reg-1/4RH P/N: 4000584,

3/16" x 10' Inert Hose P/N: 4300138

Adapter: 5/8"-18(M) x 1/4"- NPT (M)

Weight: 1.5 lbs./ 0.68 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
5400613	55-2 N ₂ /AIR	N ₂ , AIR	0 - 100	20	75	5/16" - 18 (F)	5/8" - 18 (F)
5400612	55-2 He/H ₂	He, H ₂	0 - 100 (0 - 140)	20	75	5/16" - 18 (F)	5/8" - 18 (F)
5400615	55-2 Ar/He	Ar, He	0 - 45 (0 - 140)	20	75	5/16" - 18 (F)	5/8" - 18 (F)
5400609	55-2 Ar/CD	Ar, CO ₂	0 - 70	20	75	5/16" - 18 (F)	5/8" - 18 (F)
5400614	55-2 Ar/CD	Ar, CO ₂	0 - 70	20	75	5/8" - 18 (M)	5/8" - 18 (F)
5400610	55-2 Ar/CD	Ar, CO ₂	0 - 70	20	75	1/4" NPT (M)	5/8" - 18 (F)
5400611	55-2 Ar/CD	Ar, CO ₂	0 - 100	50	75	5/16" - 18 (F)	5/8" - 18 (F)
5400616	55-2 Ar/CD	Ar, CO ₂	0 - 100	50	75	1/4" NPT (M)	5/8" - 18 (F)

ON THE HUNT FOR AN ALL-AROUND FLOWMETER REGULATOR? CHECK OUT HARRIS MODEL 351.

The new Harris Model 351 promises to become a legendary American classic. It is a time-proven design that is specifically built for those who want economical, rugged, high-performance, flow control equipment.

- 1 ACCURATE DUAL-SCALE PSI/BAR
- 2 STANDARD 5/8"-18F INERT OUTLET CONNECTION
- 3 THE MODEL 351 DESIGN IS AVAILABLE FOR EITHER CYLINDER OR PIPELINE GAS FLOW CONTROL
- 4 DELIVERS UP TO 70 SCFH
- 5 ZERO COMPENSATED FOR MORE EFFICIENT GAS USAGE



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REGULATORS

39

355-2

MODEL



COMPACT PRESSURE COMPENSATED FLOWMETER REGULATOR

MODEL SHOWN:
355-2-Ar-580

DESCRIPTION

The Model 355-2 incorporates a regulator and flowmeter into one compact unit. The flow tube and float are easily changed for different gases. As supplied, the flow tube has dual calibration. It includes a sensitive needle valve for finger tip control.

DETAILS

Capacity: Up to 140 SCFH

Gauges: 1.5" Steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Certifications: UL® listed/CGA E-4

Where Used: Gas shielded welding and other industrial applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 2.9 lbs./ 1.32 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100200	355-2-Ar-580	Ar, CO ₂	0 - 70	20	3000	0 - 4000	CGA 580	1/8" - 18 (F)
3100201	355-2-CD-320	CO ₂	0 - 70 *	20	3000	0 - 4000	CGA 320	1/8" - 18 (F)
3100205	355-2-He-580	He, H	0 - 100 (0 - 140)	20	3000	0 - 4000	CGA 580	1/8" - 18 (F)
3100207	355-N2/Air-580	N ₂ , Air	0 - 100	20	3000	0 - 4000	CGA 580	1/8" - 18 (F)
3100204	355-2-Ar/He-580	Ar, He	0 - 45 (0 - 140)	20	3000	0 - 4000	CGA 580	1/8" - 18 (F)

*On maximum continuous duty cycle, CO₂ flows to 20 SCFH

6-CD

MODEL



TWO-STAGE HIGH CAPACITY CO₂

MODEL SHOWN:
6-CD100F-320

DESCRIPTION

The Model 6CD is a multi-stage designed flowmeter regulator specifically to deliver CO₂ flow rates of up to 100 SCFH continuously without freeze-up. This multi-stage design spreads out the cooling effect of CO₂ pressure reduction. Multi-finned black aluminum body design provides a high rate of heat transfer into the regulator. It requires no electrical power.

DETAILS

Capacity: Heavy duty

Gauges: 2.5" Brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Aluminum bar stock

Certifications: UL® listed/CGA E-4

Where Used: High flow CO₂/CO₂ mix shielded-gas welding & other industrial applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 6 lbs./ 2.72 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100090	6-CD100F-320	CO ₂	100	50	3000	4000	CGA 320	1/8" - 18 (F)

6S

MODEL



SINGLE-STAGE HIGH CAPACITY CO₂

MODEL SHOWN:
6S-CD85F-320

DESCRIPTION

The Model 6S is a compact, competitively priced, single-stage version of our heavy duty two-stage high flow CO₂ flowmeter regulator. Designed specifically for CO₂ applications, where CO₂ freeze-up cannot be tolerated. Its sensitive needle valve permits highly accurate flow settings. It requires no electrical power.

DETAILS

Capacity: Medium to heavy duty

Gauges: 2" steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Aluminum bar stock

Certifications: CGA E-4

Where Used: High flow CO₂/CO₂ mix shielding-gas welding & other industrial applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 4 lbs./ 1.8 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100096	6S-CD85F-320	CO ₂ and mix	0 - 70	80	3000	4000	CGA 320	1/2" - 18 (F)

356

MODEL



DUAL FLOWMETER REGULATOR

MODEL SHOWN:
356-Ar/He-580

DESCRIPTION

The Model 356 is a dual flowmeter, capable of providing two separate independent flows from one common gas source. It is equipped with two Model 55 flowmeters that can be set at different flow rates. It is ideal for back purging, trail purging and/or other dual applications.

DETAILS

Capacity: Dual heavy duty

Gauges: 2" Brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Certifications: UL® listed/CGA E-4

Where Used: Gas-shielded welding and other industrial applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 4.8 lbs./ 2.18 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100140	356-Ar/He-580	Ar, He	0 - 45 (0 - 140)	20	3000	4000	CGA 580	1/2" - 18 (F)

PERFORMANCE FOCUS

CO₂ FREEZE-UP

Carbon Dioxide (CO₂) gas can, under certain conditions of temperature and pressure, freeze-up and form a solid (dry ice). If this condition occurs, for example, within a MIG shielding gas system, the required CO₂ gas flow can be restricted or blocked entirely producing a costly adverse affect on weld quality.

Harris offers an extensive line of flow-control equipment, manufactured specifically for welding or other similar high-flow CO₂ applications. They are designed to prevent CO₂ freeze-up and deliver continuous flows to 100 SCFH without regulator freeze-up.

If you use CO₂ in a critical application that can be, or has been, adversely affected by an interruption in gas flow, contact your Harris gas flow experts for an extensive list of preventive options to CO₂ freeze-up.



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REGULATORS

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2555

MODEL



5K CYLINDER FLOWMETER REGULATOR

MODEL SHOWN:
2555-Ar70-680

DESCRIPTION

The Model 2555 was specifically designed to provide precise flow control of gases from ultra-high pressure (5500 PSIG) cylinders.

DETAILS

Capacity: Heavy duty

Gauges: 2.5" brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Certifications: CGA E-4

Where Used: Gas shielded welding and other industrial applications

Related Items: 3/16" x 10' inert hose P/N: 4300138

Weight: 4.5 lbs./ 2.04 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3102555	2555-Ar70-680	Ar, CO ₂	0 - 70	50	5500	0 - 6000	CGA 680	3/8"-18 (F)

HP725

MODEL



ELECTRICALLY HEATED FLOWMETER REGULATOR

MODEL SHOWN:
HP725-100SCFH-320 120

DESCRIPTION

The Model HP725 is a two-stage electrically heated flowmeter regulator designed to resist CO₂ regulator freeze up. It has stainless steel diaphragms and it is well suited for shielding arc welding, chemical blanketing, purging and Ph control.

DETAILS

Capacity: Heavy duty

Gauges: 2.5" chrome plated brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Chrome plated brass

Certifications: CGA E-4/ electrical components UL® listed

Where Used: High flow CO₂/CO₂ mix gas-shielded welding and other industrial applications

Heater: 200 watt 120v or 240v

Weight: 4.6 lbs./ 2.09 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION	ELECTRICAL POWER REQUIREMENTS
3100405	HP725-100SCFH-580 120	Ar, CO ₂	0 - 100	50	3000	4000	CGA 580	3/8" - 18 (F)	120V
3100406	HP725-100SCFH-580 240	Ar, CO ₂	0 - 100	50	3000	4000	CGA 580	3/8" - 18 (F)	240V
3100402	HP725-100SCFH-320 120	CO ₂	0 - 100	50	3000	4000	CGA 320	3/8" - 18 (F)	120V
3100404	HP725-100SCFH-320 240	CO ₂	0 - 100	50	3000	4000	CGA 320	3/8" - 18 (F)	240V

351

MODEL



351 ECONOMICAL SHIELDING GAS KIT

MODEL SHOWN:
351-60CD-32010

DESCRIPTION

The Model 351 flowmeter regulator kits are designed to control argon, CO₂ mix shielding gases. The kit is supplied with a 3/16" x 10' approved inert gas hose.

DETAILS

Capacity: Heavy Duty

Gauges: 1.5" Steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Certifications: UL® listed/
CGA E-4

Where Used: Gas-shielded welding & other industrial applications

Weight: 3.5 lbs./ 1.59 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100353	351-60Ar-58010	Ar	70	0	3000	4000	CGA 580	3/8"-18 (F)
3100401	351-60CD-32010	CO ₂	70	0	3000	4000	CGA 320	3/8"-18 (F)

355-2

MODEL



355-2 COMPACT SHIELDING GAS KIT

MODEL SHOWN:
355-2Ar-58010

DESCRIPTION

The Model 355-2 flowmeter regulator kits are designed to control argon and or argon CO₂ mix shielding gases. The 355-2Ar-58010 shielding gas kit is supplied with a 3/16" x 10' approved inert gas hose.

DETAILS

Capacity: Heavy Duty

Gauges: 1.5" Steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Certifications: UL® listed/
CGA E-4

Where Used: Gas-shielded welding & other industrial applications

Weight: 4.1 lbs./ 1.86 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4400235	355-2Ar-58010	Ar/CO ₂	70	20	3000	4000	CGA 580	3/8" - 18 (F)
4400234	355-2CD-32010	CO ₂	70	20	3000	4000	CGA 320	3/8" - 18 (F)

FLOWGAUGES

FLOW CONTROL
EQUIPMENT

HARRIS FLOWGAUGE REGULATORS ARE MADE IN GAINESVILLE,
GEORGIA. THEY ARE 100% TESTED AND MANUFACTURED TO THE SAME
EXACTING STANDARDS AS OUR OTHER GAS CONTROL EQUIPMENT.



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MODEL SHOWN:
301Ar

WHY DO PEOPLE USE FLOWGAUGE REGULATORS?

The most common use for gas flow control devices in the industrial gas market is to control shielding gases for GTAW (TIG) and GMAW (MIG) welding. Harris has the most complete line in the industry. Harris offers many designs and models of flowmeters, flowmeter regulators and flowgauge regulators for all gas supply systems, high-pressure cylinders, liquid cylinders and pipelines.

Contact your Harris representative for the devices that have the features and benefits that best fit your application(s).

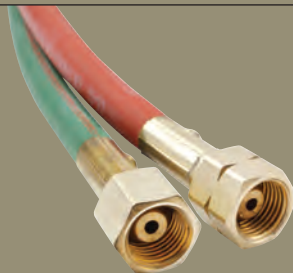
WHAT ARE THE THREAD SIZES FOR THE MOST COMMON HOSE CONNECTIONS?

"A" HOSE CONNECTION



HVAC/R or Plumbing Applications
3/8" - 24

"B" HOSE CONNECTION



"Standard" Twin Welding Hose
9/16" - 18

"C" HOSE CONNECTION



Station Regulators
High-Flow Torch Applications
7/8" - 14

601

MODEL



ECONOMICAL GENERAL PURPOSE

MODEL SHOWN:
601-60Ar-580

DESCRIPTION

This single-stage flowgauge regulator is designed to be compact and economical with features only available in more expensive flow control devices. The 601 flowgauge regulator is used where size and/or cost are major factors.

DETAILS

Capacity: Light/Medium Duty

Gauges: 50mm ABS plastic

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Featured In: 601-Ar/CD shielding gas kits

Certifications: UL® listed/CGA E-4

Where Used: Gas shielded welding and other industrial gas applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 1.39 lbs./ 0.63 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3001298	601-60Ar-580	Ar + Mixes	60	3000	4000	CGA 580	3/8" - 18 (F)
3001299	601-60CD-320	CO ₂	60	3000	4000	CGA 320	3/8" - 18 (F)

301

MODEL



COMPACT GENERAL PURPOSE

MODEL SHOWN:
301-Ar60-580

DESCRIPTION

This single-stage flowgauge regulator is designed to be compact, light weight and rugged. It is time-proven to give accurate flow-control to 60 SCFH using the most common welding shielding gases.

DETAILS

Capacity: Medium/Heavy Duty

Gauges: 2" Steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Featured In: 301-Ar/CD shielding gas kits

Certifications: UL® listed / CGA E-4

Where Used: Gas-shielded welding and other industrial gas applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 2.2 lbs./1.0 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000163	301-Ar60-580	Ar + Mixes	60	3000	4000	CGA 580	3/8" - 18 (F)
3000232	301-Ar30-580	Ar + Mixes	30	3000	4000	CGA 580	3/8" - 18 (F)
3000244	301-Ar60-680	Ar + Mixes	60	5500	6000	CGA 680	3/8" - 18 (F)
3000164	301-CD60-320	CO ₂	60	3000	4000	CGA 320	3/8" - 18 (F)

425

MODEL



GENERAL PURPOSE BEST FEATURES

MODEL SHOWN:
425-Ar100-580

DESCRIPTION

The Model 425-AR/CD flowgauge regulator is based upon our premium Model 425 single-stage pressure regulator. It is a rugged, long lasting performer capable of 100 SCFH flow and it features an internal, self-seating high pressure safety valve.

DETAILS

Capacity: Heavy Duty**Gauges:** 2.5" brass**Seat:** One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat**Body:** Brass**Certifications:** UL® listed/CGA E-4**Where Used:** Gas shielded welding and other industrial gas applications**Related Items:** 3/16" x 10' Inert Hose P/N: 4300138**Weight:** 3.7 lbs./1.69 kg.

PART #	MODEL #	GAS	FLOW CAPACITY SCFH	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	DELIVERY FLOW GAUGE	INLET CONNECTION	OUTLET CONNECTION
3000774	425-Ar100-580	Ar + Mixes	100	3000	4000	0-100 SCFH	CGA 580	5/8" - 18RH (F)
3000776	425-CD100-320	CO ₂	100	3000	4000	0-100 SCFH	CGA 320	5/8" - 18RH (F)

330

MODEL



LIQUID CYLINDER GAS WITHDRAWAL

MODEL SHOWN:
330-Ar100-580

DESCRIPTION

The Model 330 Ar/CD is a single-stage flowgauge regulator designed specifically for liquid cylinders. It features a stainless steel diaphragm. The Harris exclusive self-seating, tamper-proof internal safety allows it to be used on high pressure cylinders of up to 3000 PSIG.

DETAILS

Capacity: Heavy Duty**Gauges:** 2.5" brass**Seat:** One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat**Body:** Brass**Diaphragm:** Stainless Steel**Certifications:** UL® listed/CGA E-4**Where Used:** Gas-shielded welding and other industrial gas applications**Related Items:** 3/16" x 10' Inert Hose P/N: 4300138**Weight:** 3.7 lbs./1.68 kg.

PART #	MODEL #	GAS	FLOW CAPACITY SCFH	MAX. INLET PSIG	DELIVERY FLOW GAUGE	INLET CONNECTION	OUTLET CONNECTION
3001089	330-Ar100-580	Ar + Mixes	100	3000	0-100 SCFH	CGA 580	5/8" - 18RH (F)
3001096	330-CD100-320	CO ₂	100	3000	0-100 SCFH	CGA 320	5/8" - 18RH (F)



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REGULATORS

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247

MODEL



ECONOMICAL PIPELINE

MODEL SHOWN:
247-FG-1/4"

DESCRIPTION

Harris Model 247 flowmeter regulator is designed to deliver high gas flows from low pressure piping systems. The 247 features a brass body and chrome-plated bonnet. For installations requiring back entry equipment.

DETAILS

Capacity: Medium Duty

Gauges: 2" steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Bonnet: Chrome-Plated Zinc

Certifications: CGA E-4

Where Used: Gas-shielded welding and other industrial applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 3.6 lbs./1.63 kg.



PART #	MODEL #	GAS	MAXIMUM INLET PSIG	DELIVERY PRESSURE RANGE	DELIVERY PRESSURE GAUGE	INLET CONNECTION	OUTLET CONNECTION
4000810	247-FG-1/4"	Ar, CO ₂ , He and Mixes	500	0-100 SCFH	100 SCFH	1/4" - NPT (F)	5/8" - 18RH (M)

447

MODEL



HEAVY DUTY BACK ENTRY

MODEL SHOWN:
447-FG-1/4"

DESCRIPTION

The Harris Model 447 flowmeter regulator was designed to deliver high gas flows from low pressure piping systems. The 447 features a solid brass body and bonnet. For installations requiring back entry equipment.

DETAIL

Capacity: Heavy Duty

Gauges: 2.5" Brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Bonnet: Brass

Certifications: CGA E-4

Where Used: Gas-shielded welding and other industrial gas applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 3.6 lbs./1.63 kg.



PART #	MODEL #	GAS	MAXIMUM INLET PSIG	DELIVERY FLOW RANGE	DELIVERY FLOW GAUGE	INLET CONNECTION	OUTLET CONNECTION
4000565	447-FG-1/4"	Ar, CO ₂ , He and Mixes	500	0-100 SCFH	100 SCFH	1/4" NPT (F)	5/8" - 18(F)

547

MODEL



PREMIUM PIPELINE SIDE ENTRY

MODEL SHOWN:
547-FG-1/4"

DESCRIPTION

The Harris Model 547 flowmeter regulator was designed to deliver high gas flows from low pressure piping systems. The 547 features a brass body and bonnet. For installations requiring side entry equipment.

DETAILS

Capacity: Light/Medium Duty

Gauges: 2.5" Brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Featured In: 601-Ar/CD shielding gas kits

Certifications: CGA E-4

Where Used: Gas-shielded welding and other industrial gas applications

Related Items: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 3.6 lbs./1.63 kg.



PART #	MODEL #	GAS	MAXIMUM INLET PSIG	DELIVERY PRESSURE RANGE	DELIVERY PRESSURE GAUGE	INLET CONNECTION	OUTLET CONNECTION
4000617	547-FG-1/4"	Ar, CO ₂ , He and Mixes	500	0-100 SCFH	100 SCFH	1/4"NPT (F)	3/8" - 18RH (F)

HP715

MODEL



ELECTRICALLY HEATED FLOWGAUGE REGULATOR

MODEL SHOWN:
HP715-100CD-320-240

DESCRIPTION

The Model HP715 is an electrically heated two-stage flowgauge regulator designed to resist high-flow CO₂ regulator freeze-up. It is perfectly suited for gas shielded welding, Ph control, blanketing and purging.

DETAILS

Capacity: Heavy Duty

Gauges: 2.5" Chrome-Plated Brass

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® Seat

Body: Brass

Diaphragm: Stainless Steel

Certifications: CGA E-4

Where Used: Gas-shielded welding and other industrial gas applications

Related Items: Heater - 200 watts, 120V or 240V

Weight: 6.8 lbs./ 3.08 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION	ELECTRICAL POWER REQUIREMENTS
3100220	HP715-100CD-320-120	CO ₂	100	3000	4000	CGA 320	3/8" - 18RH (F)	120V
3100221	HP715-100CD-320-240	CO ₂	100	3000	4000	CGA 320	3/8" - 18RH (F)	240V



THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

Orders: 1.800.733.4043

601AR/CD

MODEL



SHIELDING GAS KIT

MODEL SHOWN:
601Ar-60-58010

DESCRIPTION

The Model 601Ar/CD shielding gas kits are ideal for low amperage MIG welders with built-in wire feeders. Designed to give precise flow-control at an economical price. Includes a $\frac{3}{16}$ " x 10' inert hose with fittings.

DETAILS

Capacity: Light Duty

Gauges: 50mm ABS plastic

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Certifications: CGA E-4

Where Used: Gas-shielded welding

Related Items: $\frac{3}{16}$ " x 10' Inert Hose P/N: 4300138

Weight: 2.6 lbs./ 1.18 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000322	601Ar-60-58010	Ar + Mixes	60	(N/A)	3000	4000	CGA 580	$\frac{1}{8}$ " - 18 RH (F)
3000988	601CD-60-32010	CO ₂	60	(N/A)	3000	4000	CGA 320	$\frac{1}{8}$ " - 18 RH (F)

301AR/CD

MODEL



SHIELDING GAS KIT

MODEL SHOWN:
301Ar-58010

DESCRIPTION

The Model 301Ar/CD shielding gas kits include 10' of $\frac{3}{16}$ " ID approved hose with inert fittings. They feature the Harris time proven 301 flowgauge regulators to give precise control of the most common welding shielding gases up to 60 SCFH.

DETAILS

Capacity: Medium/Heavy Duty

Gauges: 2" Steel

Seat: One-piece encapsulated seat design with internal filter and PTFE Teflon® seat

Body: Brass

Diaphragm: Neoprene

Certifications: UL® listed/CGA E-4

Where Used: Gas-shielded welding and other industrial gas applications

Related Items: $\frac{3}{16}$ " x 10' Inert Hose P/N: 4300138

Weight: 3.9 lbs./ 1.77 kg.



PART #	MODEL #	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4400229	301Ar-58010	Ar + Mixes	60	(N/A)	3000	4000	CGA 580	$\frac{1}{8}$ " - 18 RH (F)
4400231	301CD-32010	CO ₂	60	(N/A)	3000	4000	CGA 320	$\frac{1}{8}$ " - 18 RH (F)



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WHAT YOU ARE
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REPRESENTATIVE**

**FOR THE DEVICES THAT HAVE THE FEATURES
AND BENEFITS THAT BEST FIT
YOUR APPLICATION(S)**

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INERT GAS GUARDS

FLOW GAUGE REGULATORS
FOR GAS SHIELDED
ARC WELDING

HARRIS HAS A SOLID UNDERSTANDING OF THE IMPORTANCE OF GAS FLOW IN WELDING APPLICATIONS. THIS EXPERTISE, COMBINED WITH OUR KNOWLEDGE OF GAS EQUIPMENT, HAS RESULTED IN THE INDUSTRY'S MOST COMPREHENSIVE RANGE OF SURGE CONTROL REGULATION EQUIPMENT. THE HARRIS INERT GAS GUARD LINE OF FLOWGAUGE REGULATORS VIRTUALLY ELIMINATES THE GAS WASTE ASSOCIATED WITH ALL GAS-SHIELDED ARC WELDING.



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QUICK SELECTION GUIDE

GENERAL PURPOSE



25 IGG MODEL

CYLINDER MOUNT

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ADD ON



301 IGG MODEL

ADD-ON TO CURRENT
EQUIPMENT

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ECONOMICAL



447 IGG MODEL

PIPELINE
SHIELDING GASES

p.55



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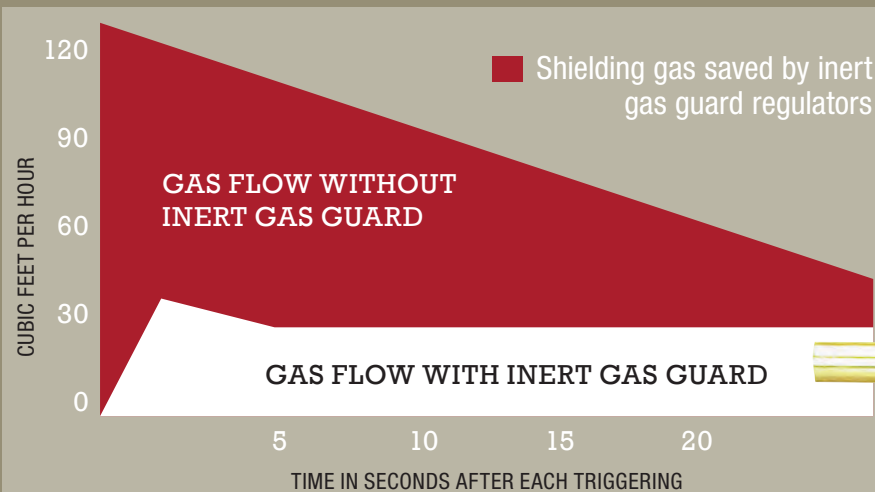
MODEL SHOWN:
301-80-IGGRF-032

HARRIS INERT GAS GUARD REGULATORS ARE DESIGNED TO SAVE SHIELDING GASES IN TWO WAYS.

First, Inert Gas Guard Regulators reduce gas surge when a MIG gun or TIG torch is activated. Gas surge is created by excess pressure trapped in the supply hose between the pressure control system and the valve or solenoid. Inert Gas Guard regulators lower the excess pressure on the supply hose and reduce the surge or gas waste when the gas system is activated.

Secondly, Inert Gas Guard Regulators deliver a more controlled flow rate. Operators tend to set shielding gas rates much higher than necessary for a welding operation. Inert Gas Guard Regulators are tamper-proof and can be set to deliver the precise amount of flow for the operation, eliminating the needless waste of shielding gas.

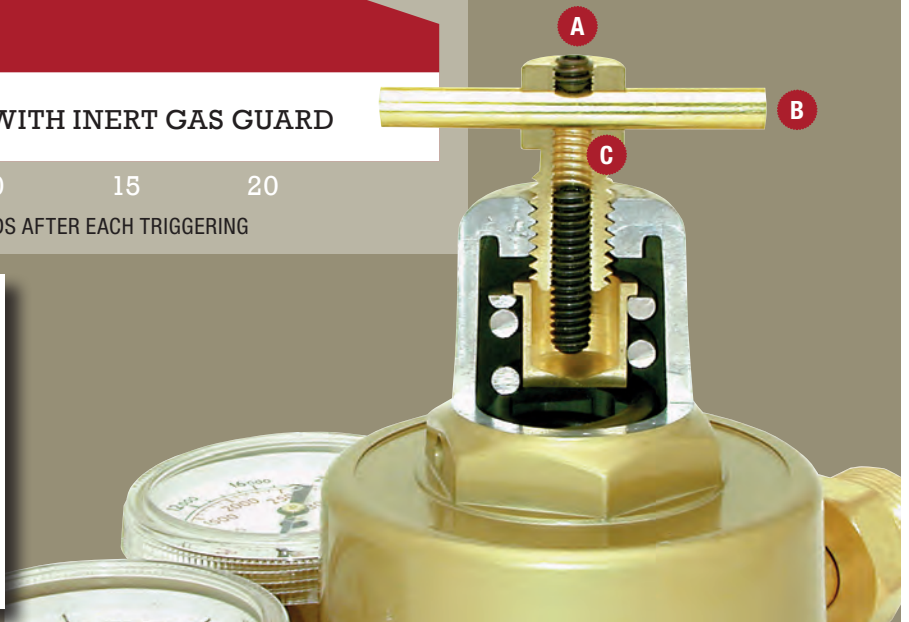
GAS SAVINGS WITH HARRIS IGG REGULATORS



If preferred, you can set a flow limit. Remove set screw **A** and crossbar **B**. With gas flowing, set inner set screw **C** to desired flow rate. To prevent tampering, replace crossbar and install customer supplied padlock.



Shown with a customer supplied pad lock to prevent tampering.



IGG 25 MODEL



FOR CYLINDER APPLICATIONS

MODEL SHOWN:
25-60-IGG-320

DESCRIPTION

The Model 25 Inert Gas Guard Regulator are special cylinder-mounted flowgauge regulators for argon and argon-mix shielding gases. These are designed to save shielding gases by controlling surge. Models are available for MIG and TIG.

DETAILS

Capacity: Heavy Duty

Gauges: 2" Steel

Seat: One-piece encapsulated seat designed with internal filter and PTFE Teflon® seat

Certifications: UL® listed/CGA E-4

Where Used: Gas-shielded welding

Weight: 2.9 lbs./ 1.32 kg.



PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY FLOW RANGE SCFH	DELIVERY FLOWGAUGE SCFH	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000433	25-40-IGG-580	Ar, CO ₂	3000	0 - 40	40	4000	CGA 580	½" - 18RH (F)
3000432	25-60-IGG-320	CO ₂	3000	0 - 60	60	4000	CGA 320	½" - 18RH (F)
3000431	25-80-IGG-580	Ar, CO ₂	3000	0 - 80	80	4000	CGA 580	½" - 18RH (F)

IGG 301 MODEL



ADD-ON TO ELIMINATE SURGE IN EXISTING EQUIPMENT

MODEL SHOWN:
301-80-IGGRFNG-032
301-80-IGGRF-032

DESCRIPTION

The Model 301 Inert Gas Guard Regulator is a special regulator designed to correct surge and provide full flow control when added to existing flow control equipment. Models available will mount to flowmeter, regulator or wire feeder. A feeder mount is available with a flowgauge.

DETAILS

Capacity: Heavy Duty

Gauges: 2" Steel

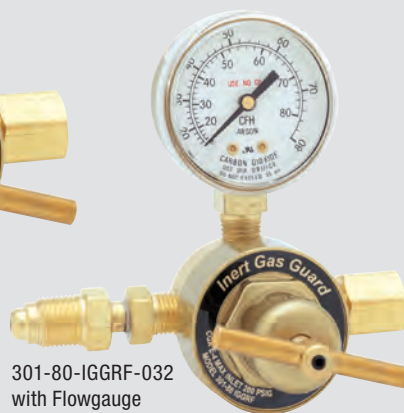
Seat: One-piece encapsulated seat designed with internal filter and PTFE Teflon® seat

Certifications: UL® listed/CGA E-4

Where Used: Gas-shielded welding



301-80-IGGRFNG-032
Weight: 2.1 lbs./ 0.95 kg.



301-80-IGGRF-032
with Flowgauge
Weight: 2.4 lbs./ 1.09 kg.

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY FLOW RANGE SCFH	DELIVERY FLOWGAUGE SCFH	INLET CONNECTION	OUTLET CONNECTION	MOUNTING LOCATION
3000326	301-80-IGG-032	Ar, CO ₂	200	0 - 80	-	½" - 18RH (M)	½" - 18RH (F)	Flowmeter Outlet
3000328	301-80-IGGRF-032	Ar, CO ₂	200	0 - 80	80	½" - 18RH (F)	½" - 18RH (M)	Feeder Inlet
3000340	301-80-IGGRFNG-032	Ar, CO ₂	200	0 - 80	-	½" - 18RH (F)	½" - 18RH (M)	Feeder Inlet

IGG 447 MODEL



FOR PIPELINE APPLICATIONS

MODEL SHOWN:
447-80-IGG-1/4"

DESCRIPTION

The Model 447 is a special pipeline flow control device designed to deliver shielding gases more economically than other flow control devices, thus eliminates wasteful "surge". Available models for MIG and TIG.

DETAILS

Capacity: Heavy Duty

Gauges: 2" Steel

Seat: One-piece encapsulated seat designed with internal filter and PTFE Teflon® seat

C_v: N/A

Certifications: UL® listed/CGA E-4

Where Used: Gas-shielded welding

Weight: 3.37 lbs./ 1.53 kg.



PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY FLOW RANGE SCFH	DELIVERY FLOW GAUGE SCFH	INLET CONNECTION	OUTLET CONNECTION
4000547	447-40-IGG-1/4	Ar, CO ₂	500	0 - 40	40	1/4" FNTF	3/8" - 18RH (F)
4000546	447-80-IGG-1/4	Ar, CO ₂	500	0 - 80	80	1/4" FNTF	3/8" - 18RH (F)



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DESIGNED TO
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REGULATORS

55

TORCH HANDLES

GET THE BEST HANDLE ON IT! HARRIS MANUFACTURES ONLY INDUSTRIAL-DUTY EQUIPMENT INCLUDING OUR COMBINATION TORCH HANDLES. WHEN YOU BUY A HARRIS HANDLE, YOU CAN BE SURE THAT IT IS THE **BEST** THAT MONEY CAN BUY. OUR HANDLES ARE DESIGNED TO GIVE THE BEST PERFORMANCE, MADE OF THE BEST MATERIALS BY THE BEST MANUFACTURER IN THE INDUSTRY.



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QUICK SELECTION GUIDE

HEAVY DUTY



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MEDIUM DUTY



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FRONT VALVES
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**50
MODEL**
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**85
MODEL**
CLASSIC
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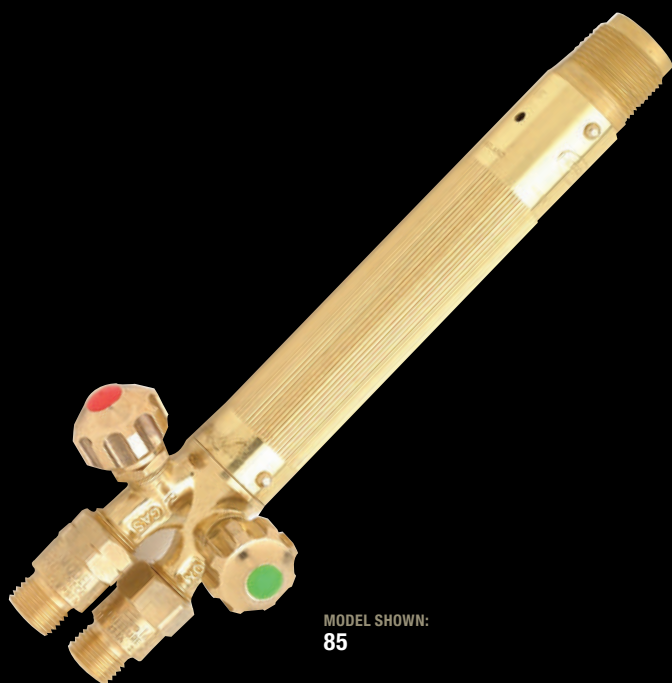


**V-100C
MODEL**
VICTOR® COMPATIBLE
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LIGHT DUTY



**15-3
MODEL**
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MODEL SHOWN:
85

OVERVIEW

Most Harris combination torch handles have silver-brazed twin inner tube construction for strength and are light weight. For special applications, where weight can be compromised, Harris features tube-within-a-tube construction to provide optimum flow performance.

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

Visit www.harrisproductsgroup.com for complete details on our entire product line.



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TORCH HANDLES

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WHEN CONSTRUCTION MATTERS USING **HARRIS** MAKES THE DIFFERENCE.



MODEL SHOWN:
85

For most applications Harris combination torch handles have silver-brazed twin inner tube construction for strength, light weight and maximum leak integrity.



MODEL SHOWN:
43-2

For special applications where gas flow requirements are critical and light weight can be compromised, Harris uses tube-within-a-tube construction to fulfill those requirements while still maintaining the strength and leak integrity that these applications require.

WHAT IS THE DIFFERENCE BETWEEN **BRAZING**, **SOLDERING** & **GAS WELDING**?

- 1 BRAZING** is a metal joining process utilizing a filler metal which melts above 840°F (450°C) and below the melting point of the base metal(s). The filler metal is drawn into the joint by capillary attraction producing a sound, leak-proof connection.
- 2 SOLDERING** has the same definition as brazing except for the fact that the filler metal (s) melts below 840°F (450°C).
- 3 GAS WELDING** the base metal(s) allow the metal(s) to actually melt and flow together along with the filler metal if used. Filler metal(s) are used when the joint size or properties of the joint require it.

18-5 MODEL

1YR
WARRANTY

HEAVY-DUTY AUTOMATIC TORCH HANDLE

MODEL SHOWN:
18-5

DESCRIPTION

The Model 18-5 is a heavy-duty automatic torch handle. The thumb-operated on/off control can be used for welding, brazing, cutting and light heating with all fuel gases. The pilot light feature can be used for acetylene welding and brazing only.

The 18-5 is not recommended for heavy heating.

DETAILS

Capacity:





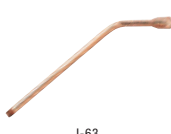

Welds to ½"/12.7mm; cuts to 5"/127.0mm

Length: 10½"/266.7mm


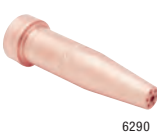
Weight: 1.4 lbs./ 0.64 kg.

Equipped with: FlashGuard® check valves



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H ₂ (SIZE) (PG. 120)	ALT. FUEL (SIZE) (PG. 124)	ACET/H ₂ (PG. 128)	ALT. FUEL (PG. 124)
		 E-43	 8593	 23A90	 1390-N	 J-63	 1390-B
1401820	18-5	E-43	—	23A90 (1-10)	—	J-63 (1&2)	—
		E-43	8593	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (B&H)
		E2-43	—	23A90 (13 & 15)	—	—	—
		E2-43	T-43	1390 (13)	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)
		E3-43	T-43	1390 (13)	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)
		B-43-N	T-43	—	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)

Example of Brazing Combination: 18-5 + E-43 + 23A90

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 105)
		 73-3	 6290
1401820	18-5	73-3	6290, 6290AC & S, 6290 NX, NXP, NXM, & NFF
		49-3F*	6290 NX, NXP, NXM, & NFF

Example of Cutting Combination: 18-5 + 73-3 + 6290

*For alternate fuels only.

43-2

MODEL

1YR
WARRANTY

HIGH-CAPACITY COMBINATION HANDLE

MODEL SHOWN:
43-2

DESCRIPTION

The Model 43-2 high-capacity combination handle with the capacity to maximize the performance of the largest Harris tips. The 43-2 is Harris' premium heavy-duty combination torch handle.

DETAILS

Capacity:

Welds to 1"/25.4mm; cuts to 5"/127mm

Length: 9½"/241.3mm







Weight: 1.4 lbs./ 0.64 kg.

Certification: UL® listed



Equipped with: FlashGuard® check valves

Featured in Pipeliner®, Alternate Fuel Classic and HardHat™ kits



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H ₂ (SIZE) (PG. 120)	ALT. FUEL (SIZE) (PG. 124)	ACET/H ₂ (PG. 128)	ALT. FUEL (PG. 127)
		 E-43	 8593	 23A90	 1390-N	 J-63	 2290-HPM
1401150	43-2	E-43	—	23A90 (0-10)	—	J-63 (1 & 2)	—
		E-43	8593	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (B&H)
		E2-43	—	23A90 (13 & 15)	—	J-63 (3 & 4)	—
		E2-43	T-43	1390 (13)	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)
		E2-43	2393	—	—	—	2290-H & HPM (1-3)
		E2-43	2393	—	—	RBA (2, 4, 6)	RBP (2, 4, 6)
		E3-43	T-43	1390 (13)	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)
		E3-43	2393	—	—	—	2290-H & HPM (1-5)
		E3-43	2393	—	—	RBA (2, 4, 6)	RBP (2, 4, 6)
		B-43-N	T-43	—	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)
		B-43-N	2393	—	—	—	2290-H & HPM (1-3)
		B-43-N	2393	—	—	—	RBP (2, 4, 6)

Example of Brazing Combination: 43-2 + E2-43 + T-43 + 1390-N

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 105)
		 73-3	 6290
1401150	43-2	73-3	6290, 6290 S, 6290 AC, 6290 NX, NXP, NXM & NFF
		49-3F*	6290 NX, NXP, NXM & NFF

Example of Cutting Combination: 43-2 + 49-3F + 6290 NX

*For alternate fuels only.

ON THE HUNT FOR AN ALL-AROUND TORCH HANDLE? CHECK OUT THE HARRIS **MODEL V-315C**.

Convert your Victor® oxy-fuel equipment to Harris "V" Series and get all the features, advantages and benefits of Harris designed equipment.



- 1 Harris V-315C supplied with Harris Flashguard® high-capacity check valves
- 2 Equipped with Harris high-volume, long-lasting ball valves.
- 3 Tube-within-a-tube construction for the highest heating capacity.
- 4 Selecting the proper Harris V-W series mixer allows use of Harris tips for welding, brazing or heating.
- 5 Harris also offers a V-2460 cutting attachment, compatible with Victor® style cutting tips (PG. 63).
- 6 Guaranteed UL® listed

WHAT IS V-SERIES?



The Harris "V" Series products allow users of Victor® style cutting torches, handles, cutting attachments, mixers and tips to inexpensively convert to and enjoy the benefits of genuine Harris designed gas apparatus.

Only Harris "V" Series V-315C handles, V-2460 cutting attachments and Type V-W, V-W-2 and V-W-3 mixers have genuine UL® listing—the industry's most trusted standard of quality.

V-315C

MODEL

1YR
WARRANTY

VICTOR® COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
V-315C

DESCRIPTION

The Model V-315C is a Victor® compatible combination handle for welding, brazing, heating and cutting. This heavy-duty handle is compatible with all fuel gases and features tube-within-a-tube construction.

DETAILS

Capacity:

Welds to 1"/25.4mm; cuts to 5"/127.0mm

Length: 9½"/241.3mm







Weight: 1.4 lbs./0.64 kg.

Certification: UL® listed



Equipped with: FlashGuard® check valves

Featured in "V" Series
Pipeliner®, Alternate Fuel
Combo and HardHat™ kits



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H2 (SIZE) (PG. 120)	ALT. FUEL (SIZE) (PG. 124)	ACET/H2 (PG. 128)	ALT. FUEL (PG. 127)
		 V-W	 8593	 23A90	 1390-N	 J-63	 2290-HPM
1400315	V-315C	V-W	—	23A90 (0-10)	—	J-63 (1 & 2)	—
		V-W	8593	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (B&H)
		V-W-2	—	23A90 (13 & 15)	—	J-63-(3 & 4)	—
		V-W-2	T-43	1390 (13)	1390-N (20,30,80)	—	1390 (3H)
		V-W-2	2393	—	—	—	2290-H & HPM (1-3)
		V-W-2	2393	—	—	RBA (2, 4, 6)	RBP (2, 4, 6)
		V-W-3	—	23A90 (13 & 15)	—	J-43 (5)	—
		V-W-3	T-43	1390 (13)	1390-N (13, 15, 20, 30, 80)	—	1390 (3H)
		V-W-3	2393	—	—	—	2290-H & HPM (1-5)
		V-W-3	2393	—	—	RBA (2, 4, 6)	RBP (2, 4, 6)

Example of Brazing Combination: V-315C + V-W-2 + T-43 + 1390-N

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 75)	CUTTING TIP STYLE (PG. 109)
		 V-2460	 V1-101
1400315	V-315C	V-2460	V1-101, V1-101AC 1-GPN, 1-GPP

Example of Cutting Combination: V-315C + V-2460 + V1-101

*For alternate fuels only.

VH31

MODEL

1YR
WARRANTY

VICTOR® COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
VH31

DESCRIPTION

The model VH31 is a Victor® compatible heavy duty combination handle for welding, brazing, heating and cutting. It is designed to offer the highest flow possible allowing the use of larger tips. The handle is designed with a tube within a tube construction and is o-ring sealed for greater strength and higher capacity.

DETAILS

Capacity:

Welds to 1/2" / 12.7mm; cuts to 8" / 203.2mm

Length: 11" / 279.4mm

Weight: 1.91 lbs. / 0.86 kg.







Hose Connection:



9/16-18 "B" FITTING

Featured in Ironworker® and Ironworker® 2 kits



All VH31 handles include model 88-5N FBTL&R flashback arrestors installed.

WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	Model #	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H. (SIZE) (PG. 120)	ALT. FUEL (SIZE) (PG. 124)	ACET/H. (PG. 126)	ALT. FUEL (PG. 124)
		 V-W	 8593	 23A90	 1390-N	 J-63-1	 1390-B
1400422	VH31	V-W	8593	23A90-3 (0-10)	1390-N (2-80N)	J-63 (1-3)	1390 (H, 3H, B)
Example of Heating Combination: VH31 + V-W + 23A90-3							

CUTTING			
PART #	Model #	COMPATIBLE CUTTING ATTACHMENT (PG. 77)	CUTTING TIP STYLE (PG. 109)
		 VH24	 V1-101
1400422	VH31	VH24	V-101, V-101AC
Example of Cutting Combination: VH31+VH24+ V1-101			

19-6

MODEL

1YR
WARRANTY

COMBINATION HANDLE FOR MEDIUM-DUTY

MODEL SHOWN:
19-6

DESCRIPTION

The Models 19-6 and 19-6A are combination handles for medium-duty welding, brazing, heating and cutting. They can be used with oxy-acetylene or any of the alternate fuel gases. The Model 19 features silver brazed twin-tube construction. Both Models 19-6 and 19-6A have front valves for easier adjustment while welding and brazing. The 19-6A features 3/8"-24 class "A" hose fittings.

DETAILS

Capacity: Welds to 5/16"/7.9mm; cuts to 2"/50.8 mm

Lengths: 7 1/2"/190.5mm

Weight: 0.7 lbs./0.32 kg.

Certification: UL® listed







Equipped with: FlashGuard® check valves

Inlet connections:



19-6: 1/16" - 18

19-6A: 3/8" - 24



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H2 (SIZE) (PG. 121)	ALT. FUEL (SIZE) (PG. 124)	ACET/H2 (PG. 128)	ALT. FUEL (PG. 124)
		 H-16-E	 D-50-C	 5090	 1390-N	 J-16	 1390-B
1401143 1401156	19-6A 19-6	H-16-E	—	5090 (0-10)	—	J-16 (1&2)	—
		H-16-E	D-50-C	1390 (0-10)	1390-N (4-10)	1390 (HA)	1390 (B&H)
		H-16-E	D-50-CXL	1390 (0-10)	1390-N (4-10)	1390 (HA)	1390 (B&H)
		H-16-E	TH-50-2	8490 (2, 4, 6, 8)	8490-N (4-8)	8490-6-65	8490-6-65
		H-16-E	TH-50-2XL	8490 (2, 4, 6, 8)	8490-N (4-8)	8490-6-65	8490-6-65
		H-16-2E	—	23A90 (0-10)	—	J-63 (1 & 2)	—
		H-16-2E	8593	1390 (0-10)	1390-N (4-10)	1390 (HA)	1390 (B&H)
		H-16-S	D-50-C	—	1390-N (2-10)	—	1390 (B&H)
		H-16-S	D-50-CXL	—	1390-N (2-10)	—	1390 (B&H)
		H-16-S	TH-50-2	—	8490-N (4-8)	—	8490-6-65
		H-16-S	TH-50-2XL	—	8490-N (4-8)	—	8490-6-65

Example of Welding Combination: 19-6 + H-16-E + 5090

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 78)	CUTTING TIP STYLE (PG. 104)
		 36-2	 3690
1401143 1401156	19-6	36-2	3690, 3690AC
		36-2N*	3690-P
	19-6A	36-2	3690, 3690AC
		36-2N*	3690-P

Example of Cutting Combination: 19-6 + 36-2 + 3690AC

*For alternate fuels only.

6-50-9

MODEL

1YR
WARRANTY

MEDIUM-DUTY AUTOMATIC TORCH HANDLE

MODEL SHOWN:
50-9

DESCRIPTION

The Model 50-9 is an automatic medium-duty handle. The handle features a lever control on/off for welding, brazing and cutting; and a unique pilot light for welding and brazing with acetylene. The on/off feature is not recommended for acetylene heating applications.

DETAILS

Capacity: Welds to 1/2"/12.7mm; cuts to 3"/76.2mm







Length: 8"/203.2mm



Weight: 0.8 lbs./0.36 kg.

Equipped with: FlashGuard® check valves

Gas service:
Acetylene & hydrogen



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H2 (SIZE) (PG. 121)	ALT. FUEL (SIZE) (PG. 122)	ACET/H2 (PG. 122)	ALT. FUEL (PG. 124)
		 H-16-E	 D-50-C	 5090	 1390	 1390-HA	 1390-B
1401585	50-9	H-16-E	—	5090 (0-10)	—	J-16 (1&2)	—
		H-16-E	D-50-C	1390 (0-10)	1390 (0-10)	1390 (HA)	1390 (B&H)
		H-16-E	D-50-CXL	1390 (0-10)	1390(0-10)	1390 (HA)	1390 (B&H)
		H-16-E	TH-50-2	8490 (2, 4, 6, 8)	8490 (2,4,6,8)	8490-6-65	8490-6-65
		H-16-E	TH-50-2XL	8490 (2, 4, 6, 8)	8490 (2,4,6,8)	8490-6-65	8490-6-65
		H-16-2E	8593	1390 (0-10)	1390(0-10)	1390 (HA)	1390 (B&H)
		H-16-2E	—	23A90 (0-10)	—	J-63 (1&2)	—
		H-16-S	D-50-C	—	1390 (0-10)	—	1390 (B&H)
		H-16-S	D-50-CXL	—	1390 (0-10)	—	1390 (B&H)
		H-16-S	TH-50-2	—	8490 (2,4,6,8)	—	8490-6-65
		H-16-S	TH-50-2XL	—	8490 (2,4,6,8)	—	8490-6-65
Example of Welding Combination: 50-9 + H-16-E + 8593 + 1390							

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 78)	CUTTING TIP STYLE (PG. 104)
		 36-2	 3690
1401585	50-9	36-2, 36-2N	3690, 3690AC
Example of Cutting Combination: 50-9 + 36-2 + 3690			



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Orders: 1.800.733.4043

TORCH HANDLES

65

50-10

MODEL

1YR
WARRANTY

MEDIUM-DUTY AUTOMATIC TORCH HANDLE

MODEL SHOWN:
50-10

DESCRIPTION

The Model 50-10 is an automatic medium-duty handle. The handle features a lever control on/off for welding, brazing and cutting, and a unique pilot light for brazing. The Model 50-10 is not recommended for any acetylene heating applications.

DETAILS

Capacity: Welds to 1/2"/12.7mm, cuts to 3"/76.2mm





Length: 8"/203.2mm

Weight: 0.8 lbs./0.36 kg.



Equipped with: FlashGuard® check valves

Gas service:
Propane, propylene,
natural gas/methane



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	BRAZING TIP STYLE	HEATING TIP STYLE
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 122)	ALT. FUEL (SIZE) (PG. 124)	ALT. FUEL (PG. 124)
		 H-16-E	 D-50-C	 1390-N	 1390-B
1401590	50-10	H-16-S	D-50-C	1390-N (2-10)	1390 (B&H)
		H-16-S	D-50-CXL	1390-N (2-10)	1390 (B&H)
		H-16-S	TH-50-2	8490-N (4-8)	8490-6-65
		H-16-S	TH-50-2XL	8490-N (4-8)	8490-6-65
		H-16-E	D-50-C	1390-N (2-10)	1390 (B&H)
		H-16-E	D-50-CXL	1390-N (2-10)	1390 (B&H)
		H-16-E	TH-50-2	8490-N (4-8)	8490-6-65
		H-16-2E	TH-50-2XL	8490-N (4-8)	8490-6-65

Example of Brazing Combination: 50-10 + H-16-E + D-50-C + 1390-N

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 77)	CUTTING TIP STYLE (PG. 107)
		 36-2N	 3690-P
1401590	50-10	36-2N*	3690-P

Example of Cutting Combination: 50-10 + 36-2N + 3690-P

*For alternate fuels only.

L88 MODEL

1YR
WARRANTY

MEDIUM-DUTY COMBINATION HANDLE

MODEL SHOWN:
85

DESCRIPTION

The Model 85 is a medium-duty combination handle designed for welding, brazing, cutting or heating with acetylene or alternate fuels. The 85 features twin-tube silver-brazed connections for safety and durability. The Model 85 is Harris' most popular torch handle.

DETAILS

Capacity: Welds to 1/2"/12.7mm; cuts to 5"/127.0mm

Length: 8 1/2"/215.9mm

Weight: 1 lb./0.45 kg.







Certification: UL® listed

Equipped with: FlashGuard®



Check Valves

*Featured in Expert®, Steelworker®,
Alternate Fuel Combo and
Port-A-Torch® Classic kits*



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 120)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H ₂ (SIZE) (PG. 120)	ALT. FUEL (SIZE) (PG. 124)	ACET/H ₂ (PG. 128)	ALT. FUEL (PG. 124)
		 D-85	 8593	 23A90	 1390-N	 J-63	 1390-B
1401340	85	D-85	—	23A90 (0-10)	—	J-63 (1&2)	—
		D-85	8593	1390 (0-10)	1390-N (4-10)	1390 (HA)	1390 (B&H)

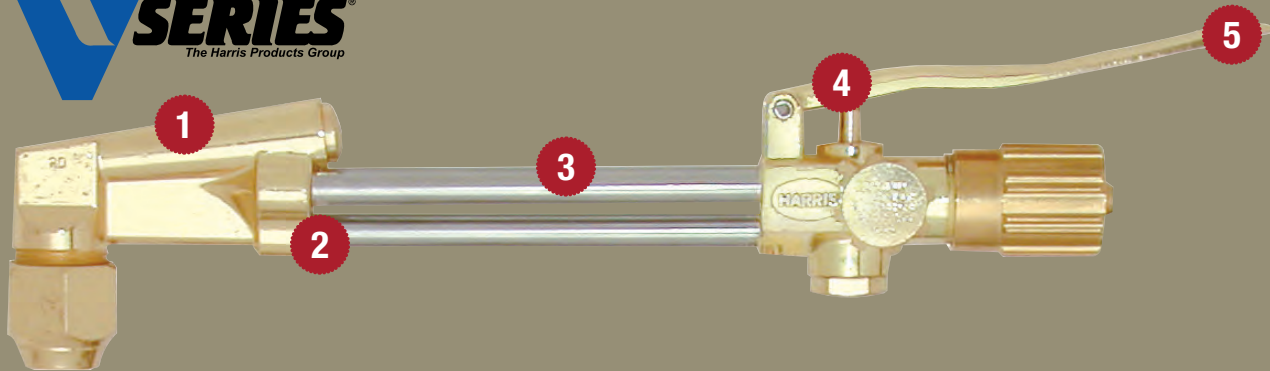
Example of Welding Combination: 85 + D-85 + 23A90

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 105)
		 72-3	 6290
1401340	85	72-3	6290, 6290S, 6290AC, 6290NX, NXP, NXM, & NFF
		39-3F*	6290 NX, NXP, NXM & NFF

Example of Cutting Combination: 85 + 72-3 + 6290AC

*For alternate fuels only.

THE HARRIS V-SERIES® ADVANTAGE



1 SOLID FORGED HEAD WITH MIXER

- Resist flashback damage
- Readily accessible mixer
- Alternate fuel injector mixer available

2 BRAZED CONSTRUCTION

- Superior strength
- Cannot loosen

3 TRIANGULAR TUBE CONSTRUCTION

- Lightweight with strength and rigidity

4 CUTTING OXYGEN VALVE

- Ease-on for smoother starts
- Easily accessible for service

5 SOLID BRASS FORGED LEVER

- Exceptional strength and durability
- Flips forward for safety and convenience

"V" SERIES CUTTING ATTACHMENTS MAKE IT POSSIBLE FOR VICTOR® TORCH HANDLE USERS TO ENJOY THE UNIQUE FEATURES AND BENEFITS OF HARRIS CUTTING ATTACHMENTS.

FEATURES AND ADVANTAGES OF HARRIS V-SERIES® EQUIPMENT

The heavy duty construction of the Harris V-Series® components will deliver years of superior performance.

- Harris V-Series® handles feature Harris flashguard replaceable check valves
- Harris V-Series® cutting attachment features:
 - Solid forged head for long service life
 - Brazed triangular tube construction for added strength and rigidity
 - Protected torch unions to reduce damage from abuse
 - Head mixing design for safety and efficiency
 - Use Victor® or Harris V-Series® cutting tips available in both acetylene and alternate fuels
 - Cutting lever flips away for safety and ease of service
 - Cutting oxygen valve has ease-on for smoother starts
- Harris V-Series® welding and brazing mixers are compatible with high-performance Harris welding, brazing and heating tips

V-100C

MODEL

1YR
WARRANTY

VICTOR® COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
V-100C

DESCRIPTION

The Model V-100C is a Victor® compatible combination handle for welding, brazing, heating and cutting. It is a medium duty handle compatible with all fuel gases. It has silver-brazed twin-tube construction. Select the Harris V-W-1 mixer to use Harris welding, brazing and heating tips.

DETAILS

Capacity:

Welds to ½"/12.7mm; cuts to 5"/127.0mm







Length: 8 ½"/215.9mm

Weight: 1 lb./0.45 kg



Equipped with: FlashGuard® check valves

Featured in "V" Series
Steelworker®, Expert®,
HardHat™ and "V"
Port-A-Torch® kits



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART #	MODEL #	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H ₂ (SIZE) (PG. 120)	ALT. FUEL (SIZE) (PG. 124)	ACET/H ₂ (PG. 128)	ALT. FUEL (PG. 124)
		 V-W-1	 8593	 23A90	 1390-N	 J-63-1	 1390-B
1400402	V-100C	V-W-1	—	23A90 (0-10)	—	J-63 (1 & 2)	—
		V-W-1	8593	1390 (0-10)	1390-N (4-10)	1390 (HA)	1390 (B&H)

Example of Heating Combination: V-100C + V-W-1 + J-63

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 112)
		 V-1350	 V3-101
1400402	V-100C	V-1350	V3-101, 3-GPN, 3-GPP

Example of Cutting Combination: V-100C + V-1350 + V3-101



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Orders: 1.800.733.4043

TORCH HANDLES

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15-3 MODEL



LIGHTWEIGHT AIRCRAFT-STYLE HANDLE

MODEL SHOWN:
15-3

DESCRIPTION

The Model 15 is a lightweight aircraft-style (Class "A" $\frac{3}{8}$ "-24 hose connection) handle with front valves for more convenient adjustment while welding or brazing. The Model 15 is compatible with all fuel gases. The Model 15 can be used for welding, brazing and light heating.

DETAILS

Capacity: Welds to $\frac{3}{16}$ "/7.9mm

Length: 5 $\frac{3}{4}$ "/146.0mm







Weight: 0.5 lb./0.23 kg.

Hose connections: $\frac{3}{8}$ " - 24 "A"

Optional Equipment:

$\frac{3}{8}$ " - 24 check valves P/N: 4300835



PART #	MODEL #	MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
		COMPATIBLE MIXER(S) (PG. 88)	COMPATIBLE TIP TUBE(S) (PG. 122)	ACET/H ₂ (SIZE) (PG.121)	ALT. FUEL (SIZE) (PG. 126)	ACET/H ₂ (PG. 126)	ALT. FUEL (PG. 124)
		 B-15-3	 D-50-C	 5090	 8490-N	 8490-6-65	 1390-B
1400010	15-3	B-15-3	—	5090 (0-10)	—	—	—
		B-15-3	TH-50-2	8490 (2,4,6,8)	8490-N (4-8)	8490-6-65	8490-6-65
		B-15-3	TH-50-2XL	8490 (2,4,6,8)	8490-N (4-8)	8490-6-65	8490-6-65
		B-15-3	D-50-C	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (H&B)
		B-15-3	D-50-CXL	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (H&B)
		B-15-3S	8493-N	—	8490-N (4-8)	8490-6-65	8490-6-65

Example of Brazing Combination: 15-3 + B-15-3S + 8493-N + 8490-6-65

NEED A SPECIAL TORCH?

Harris manufactures a wide variety of torch products that will meet the needs of most fabricators. Harris also can custom design a torch to meet your special requirements. Whether you need to cut 60' material or any specialty alloy such as aluminum, stainless or cast iron, Harris can design and manufacture a specialty torch to meet your needs. These include torches for the heavy scrap industry, steel mills and demolition.

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NEED A SPECIAL TORCH?

THE INFERNO® PROPANE TORCH

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- Repairing road surfaces.
- Removing paint.
- Burning brush, weeds and stumps.
- Melting snow and ice.
- Roofing, melts tar and asphalt.

FEATURES

- 500,000 BTU Output • Excess flow safety valve
- Brass valve for flame adjustment • 10' LP Gas hose • Flint striker



P/N.: KH825-01



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TORCH HANDLES

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CUTTING ATTACHMENTS

HARRIS CUTTING ATTACHMENTS HAVE THE BEST FEATURES IN THE INDUSTRY. ALL HARRIS AND HARRIS "V" SERIES HAVE THE SAME GREAT FEATURES FOR SAFETY, RELIABILITY AND LONG LIFE. ALL HARRIS CUTTING ATTACHMENTS ARE SUITABLE FOR INDUSTRIAL USE.



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QUICK SELECTION GUIDE

HEAVY DUTY



**49-3F
MODEL**
ALTERNATE FUEL
INJECTOR
p.74



**73-3
MODEL**
ALL FUELS
p.74



**V-2460
MODEL**
VICTOR COMPATIBLE
ALL FUEL
p.75



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MEDIUM DUTY



**39-3F
MODEL**
ALTERNATE FUEL
INJECTOR
p.75



**72-3
MODEL**
ALL FUELS
p.76



**V-1350
MODEL**
VICTOR COMPATIBLE
ALL FUEL
p.76



**VH24
MODEL**
VICTOR COMPATIBLE
ALL FUEL
p.77

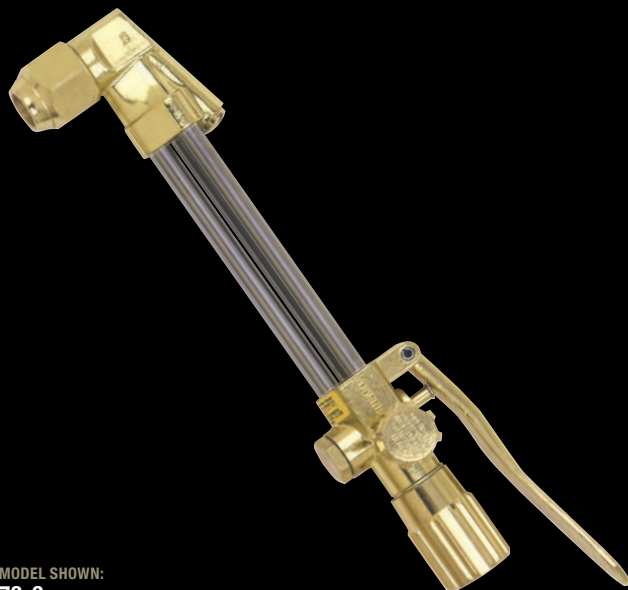
LIGHT DUTY



**36-2N
MODEL**
ALTERNATE FUEL
INJECTOR
p.77



**36-2
MODEL**
ALL FUELS
p.78



MODEL SHOWN:
73-3

OVERVIEW

All Harris Cutting Attachments share these great features:

- Brazed triangular tube construction for safety and durability
- Solid forged brass heads for performance and long service life
- Flip-up oxygen cutting lever for convenience and ease of operation
- Captive union nut protects connections from damage
- Ease-on cutting valve for safety and cutting control

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

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RUGGED EQUIPMENT
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CUTTING ATTACHMENTS

73

49-3F

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALTERNATE* FUELS

MODEL SHOWN:
49-3F

DESCRIPTION

The Model 49-3F is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage. It features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions. This model also features a unique low pressure injector mixing system for the hottest preheat flame and the most efficient use of alternate fuels.

DETAILS

Capacity: 6"/152.4mm

Duty: Heavy

Length: 10 1/4"/260.3mm

Weight: 1.5 lbs./0.68 kg.

Mixer Type: Low pressure injector

Certification: UL® listed

Where Used: Fabrication, construction, shipbuilding, etc.

Related Equipment:

Circle cutting attachment – R-69-3B
P/N: 4300200

Featured in Classic Alternate Fuel kits



				TIP STYLES
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ALTERNATE* FUEL
1300440	49-3F	90°	43-2, 18-5	6290-NX, 6290-NXP, NXM, & NFF
1300430	49-3AF	70°	43-2, 18-5	6290-NX, 6290-NXP, NXM, & NFF

*Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.

73-3

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
73-3

DESCRIPTION

The Model 73-3 is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage. It features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions.

DETAILS

Capacity: 6"/152.4mm

Duty: Heavy

Length: 9 1/2"/241.3mm

Weight: 1.5 lbs./0.68 kg

Mixer Type: Equal pressure

Certification: UL® listed

Where Used: Fabrication, construction, shipbuilding, etc.

Related Equipment:

Circle cutting attachment – R-69-3B
P/N: 4300200

Featured in Classic Pipeliner® kits



				TIP STYLES	
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H ₂	ALTERNATE* FUEL
1300340	73-3	90°	43-2, 18-5	6290, 6290AC, 6290S	6290-NX, NXP, NXM, & NFF

*Propylene or propane-based fuels and natural gas.

V-2460

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
V-2460

DESCRIPTION

The Model V-2460 is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage. It features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions.

DETAILS

Capacity: 6"/152.4mm

Duty: Heavy

Length: 10 ¼"/260.3mm

Weight: 1.5 lbs./0.68 kg.

Mixer Type: Equal pressure

Certification: UL® listed

Where Used: Fabrication, construction, shipbuilding, etc.

Featured in "V" Series Pipeliner® and Alternate Fuel kits



				TIP STYLES	
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H ₂	ALTERNATE* FUEL
1300512	V-2460	90°	V-315C	V-101, V-101AC	1-GPN, GPP

*Propylene or propane-based fuels and natural gas.

39-3F

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALTERNATE* FUELS

MODEL SHOWN:
39-3F

DESCRIPTION

The Model 39-3F is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight but still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage. It features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions. This model also features a unique low pressure injector mixing system for the hottest preheat flame and the most efficient use of alternate fuels.

DETAILS

Capacity: 6"/152.4mm

Duty: Medium

Length: 10 ¼"/260.3mm

Weight: 1.5 lbs./0.68 kg.

Mixer Type: Low pressure injector

Certification: UL® listed

Where Used: Fabrication, construction, maintenance, etc.

Related Equipment:

Circle cutting attachment – R-69-3B
P/N: 4300200

Featured in Classic Alternate Fuel kits



				TIP STYLES
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLE	ALTERNATE* FUEL
1300405	39-3F	90°	85	6290NX, 6290NXP, 6290NXM,

*Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.



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CUTTING ATTACHMENTS

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72-3

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
72-3

DESCRIPTION

The Model 72-3 is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage. It features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions.

DETAILS

Capacity: 5"/127.0mm

Duty: Medium

Length: 9½"/241.3mm

Weight: 1.5 lbs./0.68 kg.

Mixer Type: Equal pressure

Certification: UL® listed

Where Used: Construction, maintenance, agriculture, etc.

Related Equipment:

Circle cutting attachment – R-69-3B
P/N: 4300200

Featured in Classic Steelworker® and Expert® kits



				TIP STYLES	
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H ₂	ALTERNATE* FUEL
1300380	72-3	90°	85	6290, 6290AC, 6290S	6290-NX, NXP, NXM, NFF

*Propylene or propane-based fuels and natural gas.

V-1350

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
V-1350

DESCRIPTION

The Model V-1350 is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage and it features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions.

DETAILS

Capacity: 4"/101.6mm

Duty: Medium

Length: 10¼"/260.3mm

Weight: 1.5 lbs./0.68 kg.

Mixer Type: Equal pressure

Where Used: Construction, maintenance, agriculture, etc.

Featured in "V" Series Steelworker® and Expert® kits



				TIP STYLES	
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H ₂	ALTERNATE* FUEL
1300506	V-1350	90°	V-100C	V3-101	3-GPN, 3-GPP

*Propylene or propane-based fuels and natural gas.

VH24

MODEL

1YR
WARRANTY

VICTOR® COMPATIBLE CUTTING ATTACHMENT

MODEL SHOWN:
VH24

DESCRIPTION

The Model VH24 is a Victor® compatible heavy duty cutting attachment. The mixer design resists damage due to flashback. It is equipped with a durable stainless steel lever, has a coupling nut with locking ring to protect cutting attachment seat, and the cutting oxygen valve has an ease-on feature for more precise control.

DETAILS

Capacity: Cuts to 8" / 203.2mm

Duty: Heavy

Length: 12 1/8" / 307.9mm

Weight: 2.41 lbs/ 1.09 kg.

Mixer Type: Equal pressure

Where Used: Heavy fabrication, construction, ship building, pipeline connection

Featured in Ironworker® and Ironworker® 2 kits



				TIP STYLES	
PART #	Model #	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H ₂	ALTERNATE* FUEL
1300452	VH24	90°	VH31	V-101, V-101AC	1-GPN, GPP

*Propylene or propane-based fuels and natural gas.

36-2N

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALTERNATE* FUELS

MODEL SHOWN:
36-2N

DESCRIPTION

The Model 36-2N is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage and it features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions. This model also features a unique low pressure injector mixing system for the hottest preheat flame and the most efficient use of alternate fuels.

DETAILS

Capacity: 1"/25.4mm

Duty: Light

Length: 8"/203.2mm

Weight: 0.75 lbs. /0.34 kg.

Mixer Type: Low pressure injector

Where Used: HVAC, maintenance, metal art, etc.



				TIP STYLES
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ALTERNATE* FUEL
1300011	36-2N	90°	50-10, 50-9, 19-6, 19-6A	3690-P

*Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.



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Orders: 1.800.733.4043

36-2

MODEL

1YR
WARRANTY

CUTTING ATTACHMENT – FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
36-2

DESCRIPTION

The Model 36-2 is a classic design Harris cutting attachment with brazed triangular stainless steel tubes, making it light in weight while still providing exceptional strength and rigidity. The captive union nut protects the seats and "O" rings from damage and it features a fold forward cutting lever allowing easier connection, even with gloves on. The ease-on cutting valve provides smoother controlled starts. The forged solid brass head provides years of safe, dependable service, even under the most abusive conditions.

DETAILS

Capacity: 3"/76.2mm acetylene;
1"/25.4mm alternate fuels

Duty: Light

Length: 7½"/190.5mm

Weight: 0.75 lbs./0.34 kg.

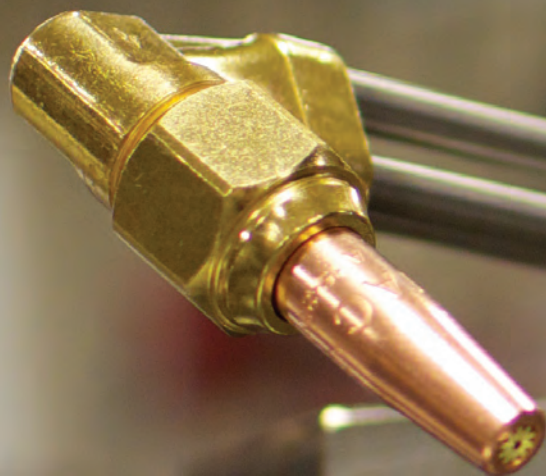
Mixer Type: Equal pressure

Where Used: HVAC, maintenance,
metal art, etc.



				TIP STYLES	
PART #	MODEL #	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H ₂	ALTERNATE* FUEL
1300020	36-2	90°	50-9, 19-6, 19-6A	3690, 3690AC	3690-P

*Propylene or propane-based fuels and natural gas.



HERE'S A TIP:
WHEN PROS USE
HARRIS, THEY
USE THE BEST



GET CONNECTED

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A LINCOLN ELECTRIC COMPANY

MIXERS

HARRIS COMBINATION TORCH MIXERS ARE DESIGNED TO PROVIDE OPTIMUM PERFORMANCE FROM HARRIS WELDING, BRAZING AND HEATING TIPS. HARRIS MIXERS ARE VARIABLE-PRESSURE TYPE MIXERS ALLOWING THE USE OF THE SAME MIXER ON A FULL RANGE OF WELDING OR BRAZING TIPS ELIMINATING ADDITIONAL EXPENSES FOR SEPARATE MIXERS OF EACH TIP SIZE.



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QUICK SELECTION GUIDE

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MODEL SHOWN:
B-15-3

OVERVIEW

Harris mixers are available in either "equal pressure" or "injector styles." Equal pressure injectors are recommended for acetylene-oxygen, but also work well on alternate fuels when low or inconsistent pressure is not an issue. Harris recommends equal pressure mixers when absolute control of the oxy-fuel ratio is a must—as in critical brazing applications.

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

Visit www.harrisproductsgroup.com for complete details on our entire product line.



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**BEST FOR OVER
100 YEARS**



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MIXERS

81

E-43

MODEL

1YR
WARRANTY

HEAVY DUTY EQUAL PRESSURE

MODEL SHOWN:
E-43

DESCRIPTION

The Model E-43 is an "E" or positive pressure mixer for welding, brazing or light heating. It can be use with all fuel gases. The E-43 is for use with all fuel gases.

DETAILS

Capacity: Welding: 1/2"/12.7mm;
Heating: 100,000 BTU

Where Used: Metal fabrication,
maintenance, etc.

Thread size: Mixer to
tip tube 23/64" - 26

Featured in Pipeliner® Classic kits

Certification: UL® listed



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100312	E-43	43-2	—	23A90 (0-10)	—	J-63-1 & 2	—
		43-2	8593	1390 (0-10)	1390-N (2-10)	1390-HA	1390-(B&H)
		18-5*	8593	1390 (0-10)	1390-N (2-10)	—	1390-(B&H)

*18-5 handle is recommended for light alternate fuel heating only.

V-W

MODEL

1YR
WARRANTY

HEAVY DUTY EQUAL PRESSURE

MODEL SHOWN:
V-W

DESCRIPTION

The Model V-W is a "V" Series "E" or positive pressure mixer for welding, brazing or light heating. It is for use with all fuel gases. The V-W is for use with all fuel gases.

DETAILS

Capacity:
Welding: 1/2"/12.7mm;
Heating: 100,000 BTU

Certification: UL® listed

Where Used: Metal fabrication,
maintenance, etc.

Thread size: Mix to tip or
tube 23/64" - 26

*Featured in Pipeliner® V-Series
kits*



PART #	MODEL #	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9105214	V-W	V-315C	—	23A90 (0-10)	—	J-63-1 & 2	—
		V-315C	8593	1390 (0-10)	1390-N (2-10)	1390-HA	1390-(B&H)

*The V-W is also compatible with Victor® 315C Series handles.

E2-43

MODEL
1YR
WARRANTY

HIGH FLOW EQUAL PRESSURE

MODEL SHOWN:
E2-43

DESCRIPTION

The Model E2-43 is an "E" equal or positive pressure mixer for all fuel gases. The E2-43 mixer is recommended for light to medium duty welding, brazing and heating tip applications.

DETAILS

Capacity: Welding: 1"/25.4mm;

Heating: 590,000 BTU

Duty: Heavy

Thread Size: Mixer to
tip tube 1/2" - 25

Certification: UL® listed

Where Used: Metal fabrication,
shipbuilding, etc.



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100314	E2-43	43-2	—	23A90 (13 & 15)	—	J-63 (3 & 4)	—
		43-2	T-43	1390 (13)	1390-N (13 & 15)	—	1390 (3H)
		43-2	2393	—	—	—	2290 H&HPM (1-3)

V-W-2

MODEL
1YR
WARRANTY

HIGH FLOW EQUAL PRESSURE

MODEL SHOWN:
V-W-2

DESCRIPTION

The Model V-W-2 is V-Series "E" equal or positive pressure mixer for all fuel gases. The V-W-2 mixer is recommended for light to medium duty welding, brazing and heating tip applications.

DETAILS

Capacity: Welding: 1"/25.4mm;

Heating: 590,000 BTU

Duty: Heavy

Thread Size: Mixer to
tip tube 1/2" - 25

Certifications: UL® listed

Where Used: Metal fabrication,
shipbuilding, etc.



PART #	MODEL #	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9105217	V-W-2	V-315C	—	23A90 (13 & 15)	—	J-63 (3 & 4)	—
		V-315C	T-43	1390 (13 & 15)	1390-N (13 & 15)	—	1390 (3H)
		V-315C	2393	—	—	—	2290 H&HPM (1-3)

*The V-W-2 is also compatible with Victor® 315C Series handles.

E3-43

MODEL

1YR
WARRANTY

HIGH FLOW EQUAL PRESSURE

MODEL SHOWN:
E3-43

DESCRIPTION

The Model E3-43 is an "E" equal or positive pressure mixer for welding, brazing and heating with all fuel gases. The E3-43 mixer can be used to supply Harris largest welding, brazing and heating tips.

DETAILS

Capacity:

Welding: 3/4"/19.0mm;
Heating: 1,025,000 BTU

Duty: Heavy

Thread Size: Mixer to tip
tube 1/2" - 25

Certification: UL® listed

Where Used: Metal fabrication,
shipbuilding



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100316	E3-43/ (F-43)	43-2	—	23A90 (13 & 15)	—	J-63-4 J-43-5	—
		43-2	T-43	1390 (13 & 15)	1390-N (13-80)	—	1390 (3H)
		43-2	2393	—	—	—	2290 (1 thru 5 H&HPM)
		18-5*	T-43	23A90 (13 & 15)	—	—	—
		18-5*	T-43	1390 (13 & 15)	1390-N (13-80)	—	1390 (3H)

*18-5 handle is recommended for light alternate fuel heating only.

V-W-3

MODEL

1YR
WARRANTY

HIGH FLOW EQUAL PRESSURE

MODEL SHOWN:
V-W-3

DESCRIPTION

The Model V-W-3 is a V-Series "E" equal or positive pressure mixer for welding, brazing or heating with all fuel gases. The V-W-3 mixer can be used to supply Harris largest welding, brazing and heating tips.

DETAILS

Capacity:

Welding: 3/4"/19.0mm
Heating: 1,025,000 BTU

Duty: Heavy

Thread Size: Mixer to
tip tube 1/2" - 25

Certification: UL® listed

Where Used: Metal fabrication,
shipbuilding



PART #	MODEL #	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9105220	V-W-3	V-315C	—	23A90 (13 & 15)	—	J-63-4 J-43-5	—
		V-315C	T-43	1390 (13 & 15)	1390-N (13-80)	—	1390 (3H)
		V-315C	2393	—	—	—	2290 (1 thru 5 H&HPM)

*The V-W-3 is also compatible with Victor® 315C Series handles.

B-43-N

MODEL

1YR
WARRANTY

HIGH FLOW ALTERNATE FUEL INJECTOR

MODEL SHOWN:
B-43-N

DESCRIPTION

The Model B-43-N is an "F" injector or low-pressure mixer for brazing and heating, providing maximum performance from alternate fuels.* The B-43-N is for medium to heavy heating and brazing with alternate fuels only.

DETAILS

Capacity:

Heating: 590,000 BTU

Duty: Heavy

Thread size: Mixer to
tip tube 1/2" - 25

Certification: UL® listed

Where Used: Metal fabrication,
ship building, etc.



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ALTERNATE FUEL BRAZING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100306	B-43-N	43-2, 18-5	T-43	1390-20N, 30N & 80N	
		43-2	2393-1 thru 5	—	2290-1 thru 3, H & HPM

* Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.

D-85

MODEL

1YR
WARRANTY

MEDIUM DUTY EQUAL PRESSURE

MODEL SHOWN:
D-85

DESCRIPTION

The Model D-85 is an "E" equal or positive pressure mixer for welding, brazing and heating with all fuel gases.

DETAILS

Capacity:

Welding: 1/2"/12.7mm;

Heating: 100,000 BTU

Duty: Medium

Thread size: Mixer to
tip tube — 23/64" - 26

Certification: UL® listed

Where Used: Metal fabrication,
maintenance, etc.

*Featured in Steelworker® ,
Expert® and Port-A-Torch®
Classic kits*



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100614	D-85	85	—	23A90 (0-10)	—	J-16 (1 & 2)	—
		85	8593	1390 (0-10)	1390-N (2-10)	—	1390 (B&H)



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MIXERS

85

V-W-1

MODEL

1YR
WARRANTY

MEDIUM DUTY EQUAL PRESSURE

MODEL SHOWN:
V-W-1

DESCRIPTION

The Model V-W-1 is a V-Series "E" equal or positive pressure mixer for welding, brazing and heating with all fuel gases.

DETAILS

Capacity:

Welding: 1/2"/12.7mm

Heating: 100,000 BTU

Duty:

Medium

Thread size: Mixer to tip or tube — 23/64" - 26

Where Used: Metal fabrication, maintenance, etc.

Featured in Steelworker®, Expert® and Port-A-Torch® V-Series kits



PART #	MODEL #	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9105213	V-W-1	V-100C	—	23A90 (0-10)	—	J-63 (1 or 2)	—
		V-100C	8593	1390 (0-10)	1390-N (2-10)	—	1390 (B&H)

*The V-W-1 is also compatible with Victor® 100C handles.

H-16-E

MODEL

1YR
WARRANTY

MEDIUM DUTY EQUAL PRESSURE

MODEL SHOWN:
H-16-E

DESCRIPTION

The Model H-16-E is an "E" or positive pressure mixer for welding, brazing or heating and is for use with all fuel gas.

DETAILS

Capacity:

Welding to 1/2"/12.7mm

Heating: 100,000 BTU

Duty:

Thread size: Mixer to tip or tip tube 5/16" - 27

Certification: UL® listed

Where Used: Metal art, maintenance, production brazing



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100096	H-16-E	50-9	—	5090 (0-10)	—	J-16 (1&2)	—
		50-9	D-50-C & CXL	1390 (0-10)	—	1390-HA	—
		50-10	D-50-C & CXL	—	1390-N (2-10)	—	1390-(H&B)
		19-6 & 6A	TH-50-2 & 2XL	8490 (2, 4, 6 & 8)	8490-N (4-8)	8490-6-65	8490-6-65
		19-6 & 6A	D-50-CRCXL	1390 (0-10)	1390-N (2-10)	1390-HA	1390-(H&B)
		19-6 & 6A	—	5090 (0-10)	—	J-16 (1&2)	—

H-16-2E

MODEL

1YR
WARRANTY

MEDIUM DUTY EQUAL PRESSURE

MODEL SHOWN:
H-16-2E

DESCRIPTION

The Model H-16-2E is an "E" equal or positive pressure mixer for welding, brazing or heating with all fuel gas.

DETAILS

Capacity:

Welding to 1/2"/12.7mm

Heating: 100,000 BTU

Duty: Medium to heavy

Thread size: Mixer to tip or tip
tube — 23/64" - 26

Certification: UL® listed

Where Used: Metal art,
maintenance, production brazing



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100787	H-16-2E	50-9	—	23A90 (0-10)	—	J-63 (1&2)	—
		50-10	8593	—	1390-N (2-10)	1390-HA	1390-(H&B)
		19-6 & 6A	8593	1390 (2, 4, 6 & 8)	1390-N (2-10)	1390-HA	1390-(H&B)
		19-6 & 6A	—	23A90 (0-10)	—	J-63 (1&2)	—

H-16-S

MODEL

1YR
WARRANTY

MEDIUM DUTY ALTERNATE FUEL INJECTOR

MODEL SHOWN:
H-16-S

DESCRIPTION

The Model H-16-S is an "F" injector or low pressure mixer for brazing and heating with alternate fuels.*

DETAILS

Capacity:

Heating: 100,000 BTU

Duty: Medium

Thread size: 5/16" - 27

Certification: UL® listed

Where Used: Metal art,
maintenance, production
brazing, etc.



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100100	H-16-S	50-9	D-50-C & CXL	—	1390-N (2-10)	—	1390 (H&B)
		50-10	D-50-C & CXL	—	1390 (2-10)	—	1390 - (H&B)
		19-6 & 6A	TH-50-2 & 2XL	—	8490-N (4-8)	—	8490-6-65
		19-6 & 6A	D-50-C & CXL	—	1390-N (2-10)	—	1390 (H&B)

*Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.



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Orders: 1.800.733.4043

MIXERS

87

B-15-3

MODEL

1YR
WARRANTY

LIGHT DUTY EQUAL PRESSURE

MODEL SHOWN:
B-15-3

DESCRIPTION

The Model B-15-3 is an "E" equal or positive pressure mixer for welding, brazing and heating with all fuel gases.

DETAILS

Capacity:

Welding: 1/2" / 12.7mm

Heating: 60,000 BTU

Duty:

Light
Thread size: Mixer to tip or tube - 5/16" - 27

Where Used: Metal art, maintenance, production brazing



PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100070	B-15-3	15-3	-	5090 (0-10)	-	-	-
		15-3	D-50-C & CXL	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390-(B&H)
		15-3	TH-50-2 & 2XL	8490 (2, 4, 6 & 8)	8490-N (4-8)	8490-6-65	8490-6-65

B-15-3S

MODEL

1YR
WARRANTY

LIGHT DUTY ALTERNATE FUEL INJECTOR

MODEL SHOWN:
B-15-3S

DESCRIPTION

The Model B-15-3S is an "F" injector or low-pressure mixer for brazing and heating, providing maximum performance for alternate fuels.*

DETAILS

Capacity: Heating: 30,000 BTU

Duty:

Light
Thread size: Mixer to tip or tip tube 1/4" - 32

Where Used: Metal art, maintenance, production brazing, etc.



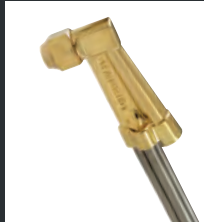
PART #	MODEL #	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIP (SIZES)
9100072	B-15-3S	15-3	8493-N	NA	8490-N (4-8)	NA	8490-(6-65)

*Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.

CHANGING TO ALTERNATE FUELS

GET THE RIGHT TORCH

Use an injector style torch to maximize your performance with alternate fuel

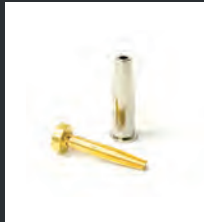


1

TORCH

GET THE RIGHT TIP

There are tips designed for the alternate fuel of your choice



2

TIP

GET THE RIGHT REGULATOR

A Harris Model 25GX-50-510P is a great option

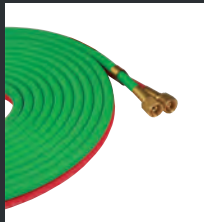


3

REGULATOR

GET THE RIGHT HOSE

Grade "T" hose should always be used with all alternate fuels



4

HOSE



View an alternate fuel equipment video
at www.HarrisProductsGroup.com

WARNING

MIXING DIFFERENT FUEL GASES CAN CAUSE FIRE OR EXPLOSION.

- Do not change over equipment used with acetylene, like the regulator, tip or hose, to a different fuel gas.
- Be sure your equipment is rated for the fuel gas you plan to use and, if not, replace it with the proper equipment.
- Read and follow the Harris Equipment Operation Safety Guidelines available at <http://www.harrisproductsgroup.com/> and Compressed Gas Association (CGA) Safety Bulletin SB-8 available at <http://www.cganet.com/>.

HAND CUTTING TORCHES

HARRIS CUTTING TORCHES FEATURE BRAZED CONNECTIONS FOR STRENGTH AND DURABILITY. ALL FEATURED TORCHES ARE AVAILABLE FOR USE WITH ALL FUEL GASES AND ARE AVAILABLE WITH CUTTING CAPACITIES OF UP TO 50".



GET CONNECTED






Go to www.youtube.com/harrisproductsgroup

QUICK SELECTION GUIDE

MEDIUM DUTY			
	42-4E MODEL	42-4F MODEL	V242 MODEL
	MEDIUM DUTY ALL FUELS p.92	MEDIUM DUTY ALTERNATE FUEL p.92	VICTOR COMPATIBLE ALL FUELS p.93

LOOKING FOR AN EXTENDED LENGTH TORCH OR A HIGH CUTTING CAPACITY TORCH?

**CALL CUSTOMER SERVICE AND REQUEST
OUR HEAVY INDUSTRIES CATALOG**
P/N 9502736

HEAVY DUTY					
	62-5E MODEL	62-5F MODEL	V-62-5F MODEL	62-5SSFL MODEL	136 MODEL
	HEAVY DUTY ALL FUELS p.94	HEAVY DUTY ALTERNATE FUEL p.95	HEAVY DUTY ALTERNATE FUEL p.96	HIGH CAPACITY ALTERNATE FUEL p.98	EXTRA HIGH CAPACITY ALT. FUEL p.99



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MODEL SHOWN:
62-5F

OVERVIEW

Harris specializes in straight cutting torches that use readily available, low cost and safe alternate fuels. Harris pioneered and perfected the low-pressure injector mixer that maximizes performance when using alternate fuels.

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

Visit www.harrisproductsgroup.com for complete details on our entire product line.



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Orders: 1.800.733.4043

42-4E

MODEL

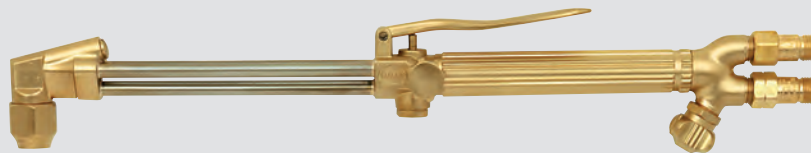
1YR
WARRANTY

MEDIUM DUTY CUTTING TORCH FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
42-4E

DESCRIPTION

The Model 42-4E is a medium duty straight cutting torch designed to use all fuel gases. The 42-4E is lightweight, has a solid forged head, brazed triangular tubes and a solid forged brass cutting lever.



DETAILS

Capacity: 6"/152.4mm

Mixer Type: Equal or positive pressure

Duty: Medium

Lengths: 17" and 20"

Certifications: UL® listed

Where Used: Fabrication, maintenance, etc.

Related Items: Flashback arrestors
P/N: 4302202

Equipped with: FlashGuard® check valves

		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH	WEIGHT	TIP STYLES
1001204	42-4E	90°	17" / 431.8mm	2.4 lbs. / 1.0886 kg.	6290, 6290AC, 6290S, 6290NX, 6290NXP, 6290NFF
1001218	42-4EL-20	90°	20" / 508.0mm	2.5 lbs. / 1.1339 kg.	

42-4F

MODEL

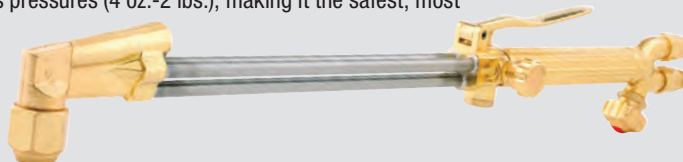
1YR
WARRANTY

MEDIUM DUTY CUTTING WITH ALTERNATE FUELS*

MODEL SHOWN:
42-4FL

DESCRIPTION

The Model 42-4F is a medium duty straight cutting torch designed to provide maximum performance using low-cost alternate fuel gases.* Our special "F" injector can produce the hottest flame possible at the lowest gas pressures (4 oz.-2 lbs.), making it the safest, most efficient design in the industry.



DETAILS

Capacity: 6"/152.4mm

Mixer Type: Injector

Duty: Medium

Lengths: 17" and 20"

Certifications: UL® listed

Where Used: Fabrication, maintenance, etc.

Related Items: Flashback Arrestors
P/N: 4302202

Equipped with: FlashGuard® check valves

		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH	WEIGHT	TIP STYLES
1001210	42-4F	90°	17" / 431.8mm	2.4 lbs. / 1.0886 kg.	6290 NX, 6290 NXP, 6290 NFF
1001212	42-4AF	70°	17" / 431.8mm	2.4 lbs. / 1.0886 kg.	
1001214	42-4FL	90°	20" / 508mm	2.5 lbs. / 1.1339 kg.	
1001216	42-4AFL	70°	20" / 508mm	2.5 lbs. / 1.1339 kg.	

NOT FOR USE WITH ACETYLENE *Propane or propylene-based fuel gases and natural gas.

V242

MODEL

1YR
WARRANTY

"V" SERIES HAND CUTTING TORCH FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
V2422HV

DESCRIPTION

The Model V242 is a Victor® compatible medium duty straight cutting torch designed for use with all fuel gases. The V242 features stainless steel cutting lever, ease on cutting valve and triangular tube design.

DETAILS

Capacity: 6"/152.4mm

Mixer Type: Equal

Duty: Medium

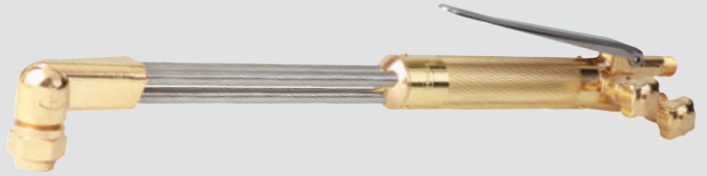
Lengths: 18" and 21"

Where Used: Fabrication,
maintenance

Related Items: Flashback arrestor
P/N: 4302202

Cutting Tip Style: Victor®

Equipped with: FlashGuard®
check valves



PART #	MODEL #	DESCRIPTION			TIP STYLES
		HEAD	LENGTH	WEIGHT	
1004618	V2422HV	90°	18" / 457.2mm	3.0 lbs. / 1.36 kg.	V1-101, V1-101AC, 1-GPN, 1-GPP
1004639	V2422AHV	70°	18" / 457.2mm	3.0 lbs. / 1.36 kg.	
1004603	V2422L	90°	21" / 533.4 mm	3.2 lbs./ 1.45 kg.	
1004637	V2422AL	70°	21" / 533.4 mm	3.2 lbs./ 1.45 kg.	

WHATEVER THE
TORCH LENGTH

WHATEVER THE
METAL

WHATEVER THE
THICKNESS

WHATEVER THE
FUEL GAS

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MAKES A
TORCH
FOR
THAT!**



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HAND CUTTING TORCHES **93**

62-5E

MODEL

1YR
WARRANTY

HEAVY DUTY CUTTING TORCH FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
62-5E

DESCRIPTION

The Model 62-5E is a heavy duty straight cutting torch designed to use any fuel gas. The 62 is an industry standard that is less expensive to own and operate, and is safer to use. Its triangular tube design and brazed connections offer strength, safety and a long service life.

DETAILS

Capacity: 12"/304.8mm

Certifications: UL® listed

Mixer Type: Equal pressure

Warranty: 1 year

Duty: Heavy

Where Used: Fabrication, demolition, etc.



Lengths: 18", 21", 36"*

Related Items: Flashback arrestors P/N: 4302202

Equipped with: FlashGuard® check valves

*Featured in Harris Classic
and HardHat™ Cutter Pac®*

		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH*	WEIGHT	**TIP STYLES
1003350	62-5AE	70°	18" / 457.2mm	3 lbs. / 1.3607 kg.	6290
1003430	62-5E	90°	18" / 457.2mm	3 lbs. / 1.3607 kg.	6290 AC
1003464	62-5AEL	70°	21" / 533.4mm	3.1 lbs. / 1.4061 kg.	6290 NX
1003440	62-5EL	90°	21" / 533.4mm	3.1 lbs. / 1.4061 kg.	6290 NXP
1003351	62-5AEL	70°	36" / 914.4mm	3.8 lbs. / 1.7236 kg.	6290 NFF
1003441	62-5EL	90°	36" / 914.4mm	3.8 lbs. / 1.7236 kg.	Acetylene Specialty Tips

*Also available in other lengths as a special.

**All tips fit all torches

HEAD ANGLES



70° Head



90° Head

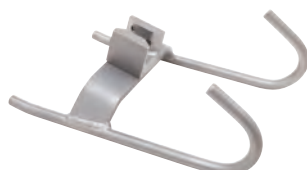


180° Head

ACCESSORIES



70°/90°Skid
P/N: QC1HZSTK2



180° Slitting Skid
P/N: QC1HZSTK5

62-5F

MODEL

1YR
WARRANTY

MAXIMUM PERFORMANCE WHEN USING ALTERNATE FUELS*

MODEL SHOWN:
62-5F

DESCRIPTION

The 62-5F is a heavy-duty straight cutting torch designed to give maximum performance using low-cost alternate fuel gases.* Our special "F" injector can produce the hottest flame possible at the lowest gas pressures, making it the safest, most efficient design in the industry.



DETAILS

Capacity: 12"/304.8mm

Mixer Type: Injector

Duty: Heavy

Lengths: 18", 21", 27",
36" & 48"***

Certifications: UL® listed

Where Used: Fabrication,
shipbuilding, maintenance, etc.

Related Items:

Flashback arrestor P/N: 4302202

Slitting skid P/N: QC1HZSTK5

70°/90° Skid P/N: QC1HZSTK2

Equipped with:

FlashGuard® check valves

Featured in *Classic and HardHat™*

Cutter Pac®

		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH**	WEIGHT	TIP STYLES
1003360	62-5AF	70°	18" / 457.2mm	3 lbs. / 1.3607 kg.	6290 NX 6290 NXP 6290 NFF Alternate Fuel Specialty Tips
1003450	62-5F	90°	18" / 457.2mm	3 lbs. / 1.3607 kg.	
1003460	62-5BF	180°	18" / 457.2mm	3 lbs. / 1.3607 kg.	
1003370	62-5AFL	70°	21" / 533.4mm	3.1 lbs. / 1.4061 kg.	
1003470	62-5FL	90°	21" / 533.4mm	3.1 lbs. / 1.4061 kg.	
1003400	62-5AFL	70°	36" / 914.4mm	3.8 lbs. / 1.7236 kg.	
1003480	62-5FL	90°	36" / 914.4mm	3.8 lbs. / 1.7236 kg.	
1003426	62-5BFL	180°	36" / 914.4mm	3.8 lbs. / 1.7236 kg.	
1003411	62-5AFL	70°	48" / 1219.2mm	4.4 lbs. / 1.9958 kg.	
1003481	62-5FL	90°	48" / 1219.2mm	4.4 lbs. / 1.9958 kg.	
1003421	62-5BFL	180°	48" / 1219.2mm	4.4 lbs. / 1.9958 kg.	

NOT FOR USE WITH ACETYLENE.

*Propane or Propylene based fuels and natural gas

**Available in other lengths as a "special order."

HEAD ANGLES



70° Head



90° Head



180° Head

ACCESSORIES



70°/90° Skid
P/N: QC1HZSTK2



180° Slitting Skid
P/N: QC1HZSTK5



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V-62-5F

MODEL

1YR
WARRANTY

MAXIMUM PERFORMANCE WHEN USING ALTERNATE FUELS*

MODEL SHOWN:
V-62-5FL

DESCRIPTION

The V-62-5F is a Victor® compatible heavy-duty straight cutting torch designed to give maximum performance using low-cost alternate fuel gases.* Our special "F" injector can produce the hottest flame possible at the lowest gas pressures, making it the safest and most efficient design in the industry. All the features of the classic Harris 62-5F Torch but compatible with Victor® style cutting tips.



DETAILS

Capacity: 12"/305 mm

Mixer Type: Injector

Duty: Heavy

Lengths: 21" & 36" **

Certifications: UL® listed

Where Used: Fabrication, shipbuilding, maintenance, etc.

Related Items:

Flashback arrestor P/N: 4302202

Slitting skid P/N: QC1HZSTK5

70°/90° Skid P/N: QC1HZSTK2

Equipped with:

FlashGuard® check valves

		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH*	WEIGHT	TIP STYLES
1003261	V-62-5FL	90°/VICTOR® STYLE	21" / 533.4mm	3 lbs. / 1.36 kg.	1-GPP, 1-GPN (000 THRU 6)
1003266	V-62-5AFL	70°/VICTOR® STYLE	21" / 533.4mm	3 lbs. / 1.36 kg.	
1003287	V-62-5AFL	70°/VICTOR® STYLE	36" / 914.4mm	3 lbs. / 1.36 kg.	
1003274	V-62-5FL	90°/VICTOR® STYLE	36" / 914.4mm	3lbs. / 1.40 kg.	

NOT FOR USE WITH ACETYLENE.

*Propane or Propylene based fuels and natural gas

**Available in other lengths as a "special order."

HEAD ANGLES



70° Head



90° Head

ACCESSORIES



70°/90° Skid
P/N: QC1HZSTK2

NEED HELP SETTING UP A PROPER FLAME



GET CONNECTED

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62-5SSAF

MODEL

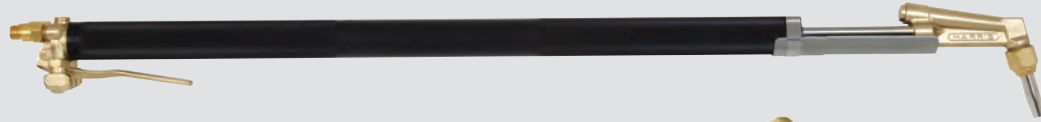


EXTRA HEAVY CUTTING WHEN USING ALTERNATE FUELS**

MODEL SHOWN:
62-5SSAFL

DESCRIPTION

Model 62-5SSAFL is an extra capacity (14") heavy duty straight cutting torch with full-length handle for added strength and operator comfort. Features solid forged head, triangular tube design and brazed connections and is equipped with FlashGuard® check valves. * SPECIAL ORDER ONLY



DETAILS

Capacity: 14"/355.6mm

Mixer Type: Injector

Duty: Extra heavy

Lengths: 36" and 48"*

Certifications: UL® listed

Where Used: Demolition, Steel Mills

Related Items: 70°/90° Skid, tube guard, 180° Slitting skid

Equipped with: FlashGuard® check valves

(shown with optional Tube Guard)

		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH**	WEIGHT	TIP STYLES
QC1003550	62-5SSAFL-36K	70°	36" / 914.4mm	3 lbs. / 1.3607 kg.	6290 NX 6290 NFF 6290 NXP Alternate Fuel Specialty Tips 6290-NH
QC1003554	62-5SSFL-36	90°	36" / 914.4mm	3 lbs. / 1.3607 kg.	
QC1003553	62-5SSBFL-36	180°	36" / 914.4mm	3 lbs. / 1.3607 kg.	
QC1003551	62-5SSAFL-48	70°	48" / 1219.2mm	4.8 lbs. / 2.1772 kg.	
QC1003555	62-5SSFL-48	90°	48" / 1219.2mm	4.8 lbs. / 2.1772 kg.	
QC1003552	62-5SSBFL-48	180°	48" / 1219.2mm	4.8 lbs. / 2.1772 kg.	

*Also available as a special in other lengths.

**Propane or Propylene based fuels and natural gas. Not for use with acetylene.

HEAD ANGLES



70° Head



90° Head



180° Head

ACCESSORIES



70°/90° Skid
P/N: QC1HZSTK2



Tube Guard
P/N: QC1WHP625031P



180° Slitting Skid
P/N: QC1HZSTK5

136

MODEL



HIGH CAPACITY CUTTING FOR USE WITH ALTERNATE FUELS

MODEL SHOWN:
136 - 2L-36"

DESCRIPTION

The Model 136 is a very high capacity (36") designed cutting torch for use with alternate fuels. The 136 features brazed triangular SS tubes, SS head and an internal tip nut for long service life under the most abusive working conditions.

Special order only.

DETAILS

Capacity: 36"/914.4mm
Mixer Type: Equal pressure head mix

Duty: High capacity (extra heavy duty)

Lengths: To 12'

Where Used: Demolition, foundries, etc.

Related Items:

75°/90° Skid
P/N: QC1HZSTK1
180° Slitting skid P/N:
QC1HZSTK6



		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH*	WEIGHT	TIP STYLES
QC1362A21	136-2A-21"	75°	21" / 533.4mm	3.8 lbs. / 1.7236 kg.	136 & 140
QC136221	136-2-21"	90°	21" / 533.4mm	3.8 lbs. / 1.7236 kg.	136 & 140
QC1362B21	136-2B-21"	180°	21" / 533.4mm	3.8 lbs. / 1.7236 kg.	136 & 140
QC1362A36	136-2A-36"	75°	36" / 914.4mm	4 lbs. / 1.8143 kg.	136 & 140
QC136236	136-2L-36"	90°	36" / 914.4mm	4 lbs. / 1.8143 kg.	136 & 140
QC1362B36	136-2BL-36"	180°	36" / 914.4mm	4 lbs. / 1.8143 kg.	136 & 140
QC1362A48	136-2AL-48"	75°	48" / 1219.2mm	4.65 lbs. / 2.1092 kg.	136 & 140
QC136248	136-2L-48"	90°	48" / 1219.2mm	4.65 lbs. / 2.1092 kg.	136 & 140
QC1362B48	136-2BL-48"	180°	48" / 1219.2mm	4.65 lbs. / 2.1092 kg.	136 & 140

*Propane or Propylene based fuels and natural gas

**Requires 3/8" hose for proper gas flow. Not for use with acetylene.

TIPS



MODEL SHOWN:
8090
(See P. 117)



MODEL SHOWN:
136
(See P. 117)

ACCESSORIES



75°/90° Skid
P/N: QC1HZSTK1
(Only for Model 136 Torches with welded on brackets.
(Special order only.)



180° Slitting Skid
P/N: QC1HZSTK6
(For 180° heads only)

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FOUNDRIES, SCRAP & RECYCLING
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HEATING TORCHES AND ASSEMBLIES

89-3
MODEL

1YR
WARRANTY

PROPANE/NATURAL GAS AIR FUEL HEATING TORCH

MODEL SHOWN:
89-3

DESCRIPTION

The Model 89-3 heating and soldering torch is designed to operate with natural gas or propane 4 oz.-2 lbs. and compressed air 50-100 PSIG. The 89-3 is automatic. Once adjusted to the proper flame a pilot light can be retained during down time and a full flame returned instantly by pressing the hand lever. The pilot light can also be adjusted to a lower secondary flame when desired for applications like soldering. The tip can be adjusted in any direction. Order tip separately.

DETAILS

Capacity: BTU – natural gas, 85,000;
propane, 130,000

Duty: Heavy

Related Items: Heating tip – 81-12
P/N: 1601950

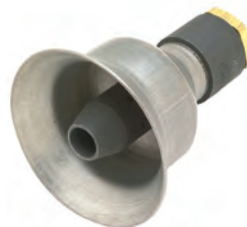


Where Used:

Large area soldering
Preheat metal for welding
Heating pipes in chemical plants
Mold drying
Burning vegetation
Removing paint
Heating forming dies prior to hand facing
Stress relieving die shoes
Metal cleaning: Brewery vats, rubber molds, etc.

PART #	MODEL #	DESCRIPTION
1400382	89-3	Torch and Tube
1601950	81-12	Tip*

*Tip sold separately.



81-12 Tip P/N: 1601950

- Bell shaped design has wick flame adjustment eliminating the need for numerous sizes
- Stainless steel construction for long life and heat resistance

K-43 MODEL

1YR
WARRANTY

ALTERNATE FUELS HEATING TORCH ASSEMBLY

MODEL SHOWN:
K-43

DESCRIPTION

The Model K-43 Heating Torch Assemblies features the heavy duty 42-3 heating handle, 2393 SS tip tube and the high-flow E3-43 (F-43) mixer. It is designed to use the Harris 2290-H and HPM high-performance multi-flame heating tips. Ideal for use with RBA and RBP flame cleaning heads.



DETAILS

Capacity: 1,025,000 BTU
Mixer Type: "E" or positive pressure
Duty: Heavy
Lengths: 20" - 46"

Where Used: Shipbuilding, fabrication, etc.

Related Items: Model 2290-H or HPM tips

Fuel gas pressure requirements: Minimum 10 PSIG *

PART #	MODEL #	HANDLE	MIXER	TIP TUBE	HEATING TIP RECOMMENDATIONS **
1801350	K-43-1	43-2	E3-43	2393-1F 36" / 914.4mm	2290-H or HPM Size 1-5
1801360	K-43-2	43-2	E3-43	2393-2F 28" / 711.2mm	2290-H or HPM Size 1-5
1801370	K-43-3	43-2	E3-43	2393-3F 16" / 406.4mm	2290-H or HPM Size 1-5
1801380	K-43-4	43-2	E3-43	2393-4F 10" / 254.0mm	2290-H or HPM Size 1-5

*Propylene or propane-based fuels or natural gas

**B-43-N mixer is limited to sizes 1 thru 3 2290-H or HPM tip.

NOTE: Assembly does NOT include heating tip.

2290-H and HPM PERFORMANCE DATA

2290-H ID HPM	OXYGEN PSIG	OXYGEN SCFH	FUEL GAS PSIG	FUEL GAS SCFH	OXYGEN PSIG	OXYGEN SCFH	FUEL GAS PSIG	FUEL GAS SCFH	PROPANE	PROPYLENE	MAPP®	NATURAL GAS
	CLASSIC E-3-43/(F43) MIXER				PRO SERIES H-2030 MIXER				BTU/HR. RATING			
Tip Size #1	10 25	160 320	4 12	40 80	15 30	160 320	3 6	40 80	103,000 205,000	95,000 190,000	96,000 192,000	65,000 130,000
Tip Size #2	15 45	220 520	7 22	55 130	15 40	220 520	5 10	55 130	141,000 333,000	130,000 308,000	132,000 312,000	90,000 212,000
Tip Size #3	25 70	340 920	8 25	85 230	20 80	340 920	7 13	85 230	218,000 590,000	201,000 545,000	204,000 552,000	139,000 375,000
Tip Size #4	50 110	640 1,300	10 30	160 325	50 100	640 1,200	7 21	160 325	410,000 833,000	379,000 770,000	384,000 780,000	216,000 530,000
Tip Size #5	60 135	720 1,600	14 40	180 400	60 150	720 1,600	8 23	180 400	461,000 1,025,000	427,000 950,000	432,000 960,000	293,000 652,000

NOTES: 1. For maximum flow and BTU output use 3/4" hose.

2. On continuous duty, withdrawal manifolding of cylinders may be required.

2393 HEATING TIP TUBES

PART #	MODEL #	LENGTH
1800200	2393-1F	36" Curved
1800210	2393-2F	28" Curved
1800220	2393-3F	16" Curved
1800230	2393-4F	10 1/2" Curved
1800241	2393-F	60" Curved
1800240	2393-5F	36" Straight
1800211	2393-2F	28" Straight
1800221	2393-3F	16" Straight
1800231	2393-4F	10 1/2" Straight
1800206	2393-6F	48" Straight

1/2"-25(M) X 1/2"-25(M)



COUPLINGS & ADAPTORS



Multiple arrangements of 2290-H Heating Tips can be assembled using Harris coupling 2327, nipple 2357 and standard 1/4" pipe fittings when wider bands of heat are necessary. Capacity of K-43 heating torch is 5 #1-H tips. Use coupling 2543-3 to couple 2393 Tip Tubes for extended reach. For extended tube and tip life, use adaptor 2357-3.



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HEATING TORCHES

101

TIPS



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QUICK SELECTION GUIDE

ACETYLENE HAND CUTTING TIPS



**3690
MODEL**

ONE-PIECE
GENERAL PREHEAT
p.104

**3690-AC
MODEL**

TWO-PIECE
HEAVY PREHEAT
p.104

**6290
MODEL**

ONE-PIECE
GENERAL PREHEAT
p.105

**6290-S
MODEL**

ONE-PIECE
HEAVY PREHEAT
p.105

**6290-AC
MODEL**

TWO-PIECE
HEAVY PREHEAT
p.106

ALTERNATE FUEL HAND CUTTING TIPS



**3690-P
MODEL**

TWO-PIECE
GENERAL PREHEAT
p.107

**6290-N&NX
MODEL**

TWO-PIECE
GENERAL PREHEAT
p.107

ALTERNATE FUEL HAND CUTTING TIPS



**6290-NFF
MODEL**

TWO-PIECE
HEAVY PREHEAT
p.108

**6290-NXP
MODEL**

TWO-PIECE
GENERAL PREHEAT
p.108

V-SERIES® CUTTING TIPS



**V1-101
MODEL**

ONE-PIECE
GENERAL PREHEAT
p.109

**V1-101AC
MODEL**

TWO-PIECE
HEAVY PREHEAT
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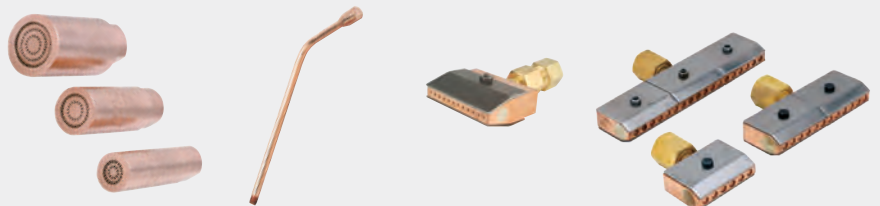
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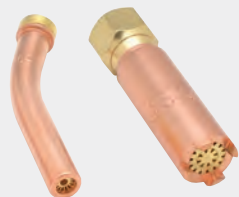
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3690

MODEL

1YR
WARRANTY

GENERAL PREHEAT SINGLE-PIECE HAND CUTTING TIPS

MODEL SHOWN:
3690

DESCRIPTION

Acetylene cutting tips specifically used with the light duty Harris Model 36 series of cutting attachments.

DETAILS

Construction: One-piece

Preheat Type: General

Where Used: HVAC,
maintenance, metal art, etc.

Compatible Equipment:
C-9 Tip cleaner P/N: 9000156



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	FUEL SCFH	DRILL CUT SIZE
1500650	3690-0	¼" - ½"	20 - 25	70 - 80	5	10 - 15	# 60
1500660	3690-1	½" - 1"	25 - 40	95 - 105	5	15 - 25	# 56
1500670	3690-2	1" - 3"	40 - 60	180 - 215	5	20 - 30	# 52

AC 3690

MODEL

1YR
WARRANTY

HEAVY PREHEAT TWO-PIECE HAND CUTTING TIPS

MODEL SHOWN:
3690AC

DESCRIPTION

Acetylene cutting tips specifically used with the Harris Model 36 cutting attachment.

DETAILS

Construction: Two-piece

Preheat Type: Heavy

Where Used: HVAC,
maintenance, metal art, etc.

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	FUEL SCFH	DRILL CUT SIZE
36900AC	3690-0AC	¼" - ½"	20-25	70-85	5	10-15	# 60
36901AC	3690-1AC	½" - 1"	25-45	95-105	5	15-25	# 56
36902AC	3690-2AC	1" - 2"	40-60	180-215	5	20-30	# 52

6290

MODEL



GENERAL PREHEAT SINGLE PIECE HAND CUTTING TIPS

MODEL SHOWN:
6290

DESCRIPTION

A single-piece acetylene cutting tip for cutting relatively clean steel.

DETAILS

Construction: One-piece

Preheat Type: General

Where Used: Fabrication, maintenance, etc.

Compatible Equipment:
C-9 Tip cleaner P/N: 9000156



PART #	SIZE	DEPTH OF CUT	O ₂ PSIG	TOTAL O ₂ SCFH	ACETYLENE FUEL PSIG	FUEL SCFH	DRILL CUT SIZE
1500810	000	Light gauge to 3/16"	15 - 20	35 - 40	5 - 15	10 - 15	# 68
1500820	00	3/16" - 1/8"	20 - 25	45 - 50	5 - 15	10 - 15	# 64
1500830	0	3/8" - 1/2"	35 - 40	45 - 50	5 - 15	10 - 15	# 60
1500840	1	5/8" - 1"	35 - 40	100 - 110	5 - 15	15 - 25	# 56
1500850	2	1" - 2"	40 - 45	180 - 195	10 - 15	20 - 30	# 52
1500860	3	2" - 3"	45 - 50	270 - 290	10 - 15	20 - 35	# 48
1500870*	4	3" - 6"	50 - 75	450 - 600	10 - 15	25 - 40	# 42

*To provide proper gas flow, use 3/4" 1D hose for size 4 tip and larger

6290-S

MODEL



HEAVY PREHEAT SINGLE PIECE TIPS

MODEL SHOWN:
6290-S

DESCRIPTION

A single-piece acetylene tip with a heavy preheat to facilitate cutting steel that is painted, rusted or has a heavily scaled surface.

DETAILS

Construction: One-piece

Preheat Type: Heavy

Where Used: Demolition, maintenance, repair, etc.

Compatible Equipment:
C-9 Tip cleaner P/N: 9000156



PART #	SIZE	DEPTH OF CUT	O ₂ PSIG	TOTAL O ₂ SCFH	ACETYLENE FUEL PSIG	FUEL SCFH	DRILL CUT SIZE
1501470	1S	3/8" - 1"	35 - 40	100 - 110	5 - 15	15 - 25	# 56
1501480	2S	1" - 2"	40 - 45	190 - 205	5 - 15	20 - 30	# 52
1501490	3S	2" - 3"	45 - 50	285 - 305	5 - 15	20 - 35	# 48
1501500	4S	3" - 6"	50 - 75	465 - 615	10 - 15	25 - 40	# 42
1501510*	5S	6" - 8"	65 - 80	700 - 850	10 - 15	35 - 40	# 35
1501520*	6S	8" - 12"	70 - 90	960 - 1160	10 - 15	40 - 60	# 30

*To provide proper gas flow, use 3/4" ID hose for Size 4 tip and larger.



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TIPS

105

AC 6290 MODEL



HEAVY PREHEAT TWO-PIECE TIPS

MODEL SHOWN:
6290-AC

DESCRIPTION

A two-piece acetylene tip with a heavy preheat to facilitate cutting steel that is painted, rusted or has a heavily scaled surface.

DETAILS

Construction: Two-piece

Preheat Type: Heavy

Where Used: Demolition, maintenance acetylene machine cutting

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



PART #	SIZE	DEPTH OF CUT	O ₂ PSIG	TOTAL O ₂ SCFH	ACETYLENE FUEL PSIG	FUEL SCFH	DRILL CUT SIZE
1502170	00AC	3/16" - 3/8"	15 - 30	38 - 55	8 - 15	9 - 18	# 64
1502171	0AC	3/8" - 5/8"	20 - 35	45 - 73	8 - 15	9 - 18	# 60
1502172	1AC	5/8" - 1"	30 - 50	73 - 128	8 - 15	18 - 36	# 56
1502173	2AC	1" - 2"	40 - 65	161 - 252	8 - 15	18 - 36	# 53
1502174	3AC	2" - 4"	40 - 65	196 - 287	8 - 15	18 - 36	# 52
1502175	4AC	4" - 7"	50 - 80	338 - 534	8 - 15	18 - 36	# 42
1502176*	5AC	7" - 10"	65 - 80	494 - 625	8 - 15	32 - 54	# 35
1502177	6AC	10" - 12"	70 - 95	565 - 731	8 - 15	32 - 54	# 31

*To provide proper gas flow, use 3/4" ID hose for Size 4 tip and larger.

TWO-PIECE OXY-ACETYLENE CUTTING TIPS

Commonly one-piece tips are for oxy-acetylene cutting and two-piece tips are for cutting with alternate fuels such as natural gas, propane and propylene. Harris, however, offers both one and two-piece tips for acetylene cutting.

WHAT ARE THE ADVANTAGES OF HARRIS AC TWO-PIECE ACETYLENE TIPS?

Two-piece acetylene tips are less expensive, easier to clean, and produce a special high pre-heat for fast cutting of dirty, scaled and/or heavily rusted plate. AC tips are also highly recommended for acetylene machine cutting.

Available for both Harris and Victor® style torches.

3690-P

MODEL



GENERAL PREHEAT TWO PIECE HAND CUTTING TIPS

MODEL SHOWN:
3690-P

DESCRIPTION

Propane/natural gas cutting tips specifically designed for Harris Model 36 series cutting attachments.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: HVAC, metal art, maintenance, etc.

Compatible Equipment:

E-9 Tip cleaner P/N: 9000160



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG		FUEL SCFH	DRILL CUT SIZE
					EQUAL	INJECTOR OR LOW		
1500600	00P	TO ¼"	15 - 30	50 - 60	5	4 oz. - 2 lbs.	8.7	# 64
1500610	0P	¼" - ½"	20 - 25	65 - 75	5	4 oz. - 2 lbs.	8.7	# 60
1500620	1P	½" - 1"	25 - 45	85 - 105	5	4 oz. - 2 lbs.	8.7	# 56

N&NX

6290

MODEL



GENERAL PREHEAT TWO-PIECE HAND CUTTING TIPS

MODEL SHOWN:
6290-NX

DESCRIPTION

Propane/natural gas cutting tips for the most popular Harris hand torches, machine torches and cutting attachments. Features a general preheat for a relatively clean plate.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Steel fabricating, demolition, shipbuilding, etc.

Compatible Equipment:

E-9 Tip cleaner P/N: 9000160



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG		FUEL SCFH	DRILL CUT SIZE
					EQUAL	INJECTOR OR LOW		
1500970	000N	LIGHT GAUGE	15 - 30	50 - 60	5 - 15	4 oz. - 2 lbs.	7.5	# 68
1501200	000NX	LIGHT GAUGE ⅜"	10 - 30	50 - 60	5 - 15	4 oz. - 2 lbs.	7.5	# 68
1501210	00NX	⅜" - ⅝"	20 - 30	65 - 75	5 - 15	4 oz. - 2 lbs.	7.5	# 64
1501220	0NX	⅝" - ⅞"	20 - 30	85 - 100	5 - 15	4 oz. - 2 lbs.	7.5	# 60
1501230	1NX	⅞" - 1"	35 - 50	100 - 135	5 - 15	4 oz. - 2 lbs.	8.7	# 56
1501240	2NX	1" - 2"	40 - 55	200 - 250	5 - 15	4 oz. - 2 lbs.	10	# 52
1501250	3NX	2" - 3"	45 - 60	290 - 365	5 - 15	4 oz. - 2 lbs.	10	# 48
1501260	4NX	3" - 6"	50 - 70	475 - 625	5 - 15	4 oz. - 2 lbs.	12.5	# 42
1501270	5NX	6" - 8"	65 - 80	710 - 860	5 - 15	4 oz. - 2 lbs.	15	# 35
1501280	6NX	8" - 12"	70 - 90	970 - 1100	5 - 15	4 oz. - 2 lbs.	17.5	# 30



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TIPS

107

NFF 6290 MODEL



HEAVY PREHEAT TWO PIECE HAND CUTTING TIPS

MODEL SHOWN:
6290-NFF

DESCRIPTION

Propane/natural gas cutting tips with a heavy preheat for hand cutting steel with rusted, painted or heavily scaled surfaces.

DETAILS

Construction: Two-piece

Preheat Type: Heavy

Where Used: Demolition, maintenance, etc.

Compatible Equipment:

E-9 Tip cleaner P/N: 9000160



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG*		FUEL SCFH	DRILL CUT SIZE
					EQUAL	INJECTOR		
1501020	1NFF	TO 5/8"	20 - 35	115 - 140	5 - 15	4 oz. - 2 lbs.	17.5	# 56
1501030	2NFF	5/8" - 2"	30 - 55	170 - 230	5 - 15	4 oz. - 2 lbs.	17.5	# 53
1501040	3NFF	2" - 4"	45 - 65	355 - 420	5 - 15	4 oz. - 2 lbs.	17.5	# 47
1501050	4NFF	4" - 7"	55 - 75	520 - 645	5 - 15	4 oz. - 2 lbs.	17.5	# 42
1501060	5NFF	7" - 10"	60 - 80	660 - 870	10 - 15	4 oz. - 2 lbs.	17.5	# 35
1501070	6NFF	10" - 11"	80 - 90	870 - 1020	10 - 15	4 oz. - 2 lbs.	17.5	# 31
1501080	7NFF	12" - 13"	80 - 90	1050 - 1205	10 - 15	4 oz. - 2 lbs.	17.5	# 30

*High fuel PSIG - "E" or positive pressure torches

NXP 6290 MODEL



GENERAL PREHEAT TWO PIECE HAND CUTTING TIPS

MODEL SHOWN:
6290-NXP

DESCRIPTION

A general preheat hand cutting tip designed for long life and excellent performance when using propylene gas.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Fabrication, ship building, etc.

Compatible Equipment:

E-9 Tip cleaner P/N: 9000160



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG*		FUEL SCFH	DRILL CUT SIZE
					EQUAL	INJECTOR		
1502150	000NXP	LIGHT GAUGE - 3/16"	15 - 30	20 - 30	5 - 15	4 oz. - 2 lbs.	11.5	# 68
1502152	00NXP	3/16" - 3/8"	20 - 30	30 - 40	5 - 15	4 oz. - 2 lbs.	11.5	# 64
1502154	0NXP	3/8" - 5/8"	30 - 40	50 - 65	5 - 15	4 oz. - 2 lbs.	11.5	# 60
1502156	1NXP	5/8" - 1"	35 - 50	75 - 100	5 - 15	4 oz. - 2 lbs.	11.5	# 56
1502158	2NXP	1" - 2"	40 - 55	160 - 210	5 - 15	4 oz. - 2 lbs.	11.5	# 52
1502160	3NXP	2" - 3"	45 - 60	250 - 325	5 - 15	4 oz. - 2 lbs.	11.5	# 48
1502162	4NXP	3" - 6"	50 - 75	425 - 575	5 - 15	4 oz. - 2 lbs.	11.5	# 42
1502164	5NXP	6" - 8"	65 - 80	650 - 800	5 - 15	4 oz. - 2 lbs.	11.5	# 35
1502166	6NXP	8" - 12"	70 - 90	900 - 1100	5 - 15	4 oz. - 2 lbs.	11.5	# 30

*High fuel PSIG - "E" or positive pressure torches

V1-101

MODEL



GENERAL PREHEAT SINGLE PIECE "V" SERIES HAND CUTTING TIP

MODEL SHOWN:
V1-101

DESCRIPTION

A single piece acetylene hand cutting tip for relatively clean steel. The V1-101 is compatible with V-Series and Victor® style torches.

DETAILS

Construction: One-piece

Preheat Type: General

Where Used: Metal fabrication,
shipbuilding

Compatible Equipment:
C9 Tip cleaner P/N: 9000156



			OPERATING PRESSURES		
PART #	TIP SIZE	DEPTH OF CUT	OXYGEN PSIG	ACETYLENE PSIG	DRILL CUT SIZE
1502088	000	LIGHT GAUGE to 1/8"	20-30	5	#70
1502089	00	1/8" - 5/16"	20-30	5	#69
1502090	0	5/16" - 5/8"	30-40	7	#61
1502091	1	5/8" - 1"	40-50	7	#56
1502092	2	1" - 2"	45-55	8	#53
1502093	3	2" - 3"	50-60	9	#50
1502094	4	3" - 4"	60-75	10	#46
1502095	5	4" - 6"	70-80	11	#39
1502096	6	6"	75-80	12	#31

*For best performance use 3/8" I.D. hose for tip sizes 6 and larger

AC V1-101-1A

MODEL



HEAVY PREHEAT TWO PIECE "V" SERIES HAND CUTTING TIP

MODEL SHOWN:
V1-101AC

DESCRIPTION

A two piece acetylene handcutting tip for scaled, painted or rusted plate. The V1-101AC is compatible with V-Series and Victor® style torches.

DETAILS

Construction: Two piece

Preheat Type: Heavy

Where Used: Construction, demolition
maintenance

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



PART #	TIP SIZE #	DEPTH OF CUT	OPERATING PRESSURES		DRILL CUT SIZE
			OXYGEN PSIG	ACETYLENE PSIG	
1502069	000	LIGHT GAUGE to 1/8"	20-25	3-5	# .031
1502070	00	1/8" - 1/4"	20-25	3-5	# .036
1502071	0	1/4" - 1/2"	25-35	7	# .040
1502072	1	1/2" - 3/4"	30-35	3-5	# .046
1502073	2	3/4" - 1 1/2"	35-45	3-7	# .059
1502074	3	1 1/2" - 3 1/2"	40-50	4-10	# .067
1502075	4	1 1/2" - 2 1/2"	40-50	5-10	# .093
1502076	5	2 1/2"-3	45-55	5-13	# .110
1502077	6*	5-8	45-55	7-14	# .120

*For best performance use 3/8" I.D. hose for tip sizes 6 and larger

I-GPN

MODEL
1YR
WARRANTY
MADE IN THE
USA

GENERAL PREHEAT TWO PIECE "V" SERIES HAND CUTTING TIPS

MODEL SHOWN:
GPN-1

DESCRIPTION

A two piece propane/ natural gas hand cutting tip for relatively clean steel.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Metal fabrication,
shipbuilding, construction

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



			OPERATING PRESSURES		
PART #	TIP SIZE #	DEPTH OF CUT	OXYGEN PSIG	FUEL GAS	DRILL CUT SIZE
1502300	000	LIGHT GAUGE to 1/8"	20-25	3-5	#71
1502301	00	1/4"	20-25	3-5	#67
1502302	0	3/8" - 1/2"	25-35	3-5	#60
1502303	1	3/4"	30-35	4-6	#56
1502304	2	1 - 1 1/2"	35-45	4-9	#53
1502305	3	2 - 2 1/2"	40-50	5-10	#50
1502306	4	3"	45-50	8-12	#45
1502307	5	4-5"	45-55	8-12	#39
1502308	6*	6"	45-55	10-15	#31

*For best performance use 3/8" I.D. hose for tip sizes 6 and larger

I-GPP

MODEL
1YR
WARRANTY
MADE IN THE
USA

GENERAL PREHEAT SINGLE PIECE HAND CUTTING TIPS

MODEL SHOWN:
GPP-1

DESCRIPTION

A two piece propane/ natural gas hand cutting tip for relatively clean steel.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Metal Fabrication,
shipbuilding, maintenance

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



			OPERATING PRESSURES		
PART #	TIP SIZE #	DEPTH OF CUT	OXYGEN PSIG	FUEL GAS	DRILL CUT SIZE
1502317	000	LIGHT GAUGE to 1/8"	20-25	3-5	# .031
1502318	00	1/4"	20-25	3-5	# .036
1502319	0	3/8" - 1/2"	25-35	7	# .040
1502320	1	3/4"	30-35	3-5	# .046
1502321	2	1 1/2" - 1 1/2"	35-45	3-7	# .059
1502322	3	2 - 2 1/2"	40-50	4-10	# .067
1502323	4	3"	40-50	5-10	# .093
1502324	5	4 - 5"	45-55	5-13	# .110
1502325	6*	6 - 8"	45-55	7-14	# .120

*For best performance use 3/8" I.D. hose for tip sizes 6 and larger



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TIPS

111

V3-101

MODEL

1YR
WARRANTY



GENERAL PREHEAT SINGLE PIECE ACETYLENE HAND CUTTING TIP

MODEL SHOWN:
V3-101

DESCRIPTION

A single piece acetylene hand cutting tip for relatively clean plate. The V3-101 is compatible with V-Series and Victor® style torches.

DETAILS

Construction: One piece

Preheat Type: General

Where Used: Maintenance , metal art construction

Compatible Equipment:

C-9 Tip cleaner P/N: 9000156



			OPERATING PRESSURES		
PART #	TIP SIZE #	DEPTH OF CUT	OXYGEN PSIG	ACETYLENE PSIG	DRILL CUT SIZE
1502080	000	LIGHT GAUGE to 1/8"	20-30	5	#70
1502081	00	1/8" - 5/16"	20-30	5	#69
1502082	0	5/16" - 5/8"	30-40	7	#61
1502083	1	5/8" - 1"	40-50	7	#56
1502084	2	1" - 2"	45-55	8	#53
1502085	3	2" - 3"	50-60	9	#50
1502086	4	3" - 4"	60-75	10	#46
1502136	5	4 - 6"	70-80	12	#39
1502137	6*	6"	75-80	15	#31

*For best performance use 3/8" I.D. hose for tip sizes 6 and larger

3-GPN

MODEL
1YR WARRANTY
MADE IN THE USA

GENERAL PREHEAT TWO PIECE PROPANE/ NATURAL GAS HAND CUTTING TIPS

MODEL SHOWN:
GPN-3

DESCRIPTION

A two piece propane/natural gas hand cutting tip for relatively clean steel.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Maintenance, metal sculpture construction

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



PART #	TIP SIZE #	DEPTH OF CUT	OPERATING PRESSURES		DRILL CUT SIZE
			OXYGEN PSIG	FUEL GAS	
1502309	000	LIGHT GAUGE to 1/8"	20-25	3-5	#71
1502310	00	1/4"	20-25	3-5	#67
1502311	0	3/8" - 1/2"	25-35	3-5	#60
1502312	1	3/4"	30-35	4-6	#56
1502313	2	1 - 1 1/2"	35-45	4-9	#53
1502314	3	2 - 2 1/2"	40-50	5-10	#50
1502315	4	3"	45-50	8-12	#45
1502316	5*	4-5"	45-55	8-12	#39

*For best performance use 3/8" I.D. hose for tip sizes 6 and larger

3-GPP

MODEL
1YR WARRANTY
MADE IN THE USA

GENERAL PREHEAT SINGLE PIECE HAND CUTTING TIPS

MODEL SHOWN:
GPP-3

DESCRIPTION

A two piece propylene hand cutting tip for relatively clean steel.

DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Maintenance, Metal Art, Construction

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



PART #	TIP SIZE #	DEPTH OF CUT	OPERATING PRESSURES		DRILL CUT SIZE
			OXYGEN PSIG	FUEL GAS	
1502330	000	LIGHT GAUGE to 1/8"	20-25	3-5	#71
1502331	00	1/4"	20-25	3-5	#67
1502332	0	3/8" - 1/2"	25-35	3-5	#60
1502333	1	3/4"	30-35	4-6	#56
1502334	2	1" - 1 1/2"	35-45	4-9	#53
1502335	3	2 - 2 1/2"	40-50	5-10	#50
1502336	4	3"	45-50	8-12	#45
1502337	5	4 - 5"	45-55	8-12	#39

VVC 6290 MODEL

1YR
WARRANTY

PREMIUM MACHINE CUTTING TIPS

MODEL SHOWN:
6290 VVC

DESCRIPTION

High-speed oxy-propane/natural gas cutting tip with a chrome-plated shell (.088 cup depth).

DETAILS

- Minimizes kerf
- Increased cutting speeds, reduces heat input
- High-quality cut, reduces after work
- Used with low-cost fuel gases
- NH tips listed are not plated and have heat-resistant heavy shell

Compatible Equipment:
E-9 Tip cleaner P/N: 9000160



PART #	TIP SIZE	PLATE THICKNESS INCHES	CUTTING SPEED I.P.M	CUTTING OXYGEN PSIG	PREHEAT OXYGEN PSIG		PREHEAT FUEL PSIG	CUTTING OXYGEN CONSUMPTION SCFH	LOW PREHEAT OXYGEN CONSUMPTION SCFH	PROPANE CONSUMPTION SCFH	NATURAL GAS CONSUMPTION SCFH	APPROXIMATE KERF INCHES
					HIGH	LOW						
1501310	5/0	3/16	20	40	15	8	4 oz.-2PSIG	15	20 - 30	6	15	.05
1501320	4/0	1/4	20	50	15	10	4 oz.-2PSIG	40	20 - 35	7	18	.06
1501330	3/0	3/8	18	75	35	10	4 oz.-2PSIG	80	20 - 35	7	18	.07
1501340	2/0	1/2	18	75	35	10	4 oz.-2PSIG	90	25 - 35	7	18	.07
1501350	0	3/4	15	90	35	10	4 oz.-2PSIG	125	25 - 35	7	18	.08
1501360	0 1/2	1 1/4	14	100	35	12	4 oz.-2PSIG	170	25 - 40	8	20	.09
1501370	1	2	13	100	35	12	4 oz.-2PSIG	200	25 - 40	8	20	.11
1501380	1 1/2	3	9	100	35	12	4 oz.-2PSIG	250	25 - 40	8	20	.12
1501390	2	4	7	100	35	12	4 oz.-2PSIG	325	25 - 40	8	20	.13
1501400	2 1/2	5	6	100	35	12	4 oz.-2PSIG	395	25 - 40	8	20	.14
1501410	3	6	5	100	40	30	4 oz.-2PSIG	425	25 - 40	8	20	.16
1501420	4	8	5	100	40	35	4 oz.-2PSIG	525	25 - 40	8	20	.20
1501430	5	9	4	90	40	30	4 oz.-2PSIG	580	50 - 100	20	50	.25
1501440	5 1/2	10	4	90	40	30	4 oz.-2PSIG	600	50 - 100	20	50	.25
1501120	5NH*	10	4	60	40	30	4 oz.-2PSIG	600	50 - 100	20	50	.25
1501130	6NH*	11	4	60	40	30	4 oz.-2PSIG	690	50 - 100	20	50	.25
1501140	7NH*	12	4	60	50	40	4 oz.-2PSIG	825	50 - 100	20	50	.25
1501190	8NH*	15	3	60	50	40	4 oz.-2PSIG	925	50 - 100	20	50	.30

NOTES:

- (1) next size larger tip with same PSIG for contour or intricate cutting.
 - (2) For thin plate cutting use a highly carburizing preheat flame.
 - (3) Cutting oxygen pressures should be measured at torch entry.
 - (4) When using two hose machine torches set oxygen pressure at cutting oxygen PSIG above.
- * NH Tips are not plated

VVCU**6290****MODEL****ECONOMICAL MACHINE CUTTING TIPS****MODEL SHOWN:
6290 VVCU****DESCRIPTION**

High-speed oxygen propane/natural gas cutting tip with an unplated shell (.062 cup depth).

DETAILS

- Minimizes kerf
- Increased cutting speeds, reduces heat input
- High-quality cut, reduces after work
- Used with low-cost fuel gases

Compatible Equipment:

E-9 Tip cleaner P/N: 9000160



PART #	TIP SIZE #	PLATE THICKNESS INCHES	CUTTING SPEED I.P.M	CUTTING OXYGEN PSIG	PREHEAT OXYGEN PSIG		PREHEAT FUEL PSIG	CUTTING OXYGEN CONSUMPTION SCFH	LOW PREHEAT OXYGEN CONSUMPTION SCFH	PROPANE CONSUMPTION SCFH	NATURAL GAS CONSUMPTION SCFH	APPROXIMATE KERF INCHES
					HIGH	LOW						
1502120	5/0	3/16	20	40	15	8	4 oz.-2PSIG	15	30	6	15	.05
1502121	4/0	1/4	20	50	15	10	4 oz.-2PSIG	40	35	7	18	.06
1502122	3/0	3/8	18	75	35	10	4 oz.-2PSIG	80	35	7	18	.07
1502123	2/0	1/2	18	75	35	10	4 oz.-2PSIG	90	35	7	18	.07
1502124	0	3/4	15	90	35	10	4 oz.-2PSIG	125	35	7	18	.08
1502125	0 1/2	1 1/4	14	100	35	12	4 oz.-2PSIG	170	40	8	20	.08
1502126	1	2	13	100	35	12	4 oz.-2PSIG	200	40	8	20	.09
1502127	1 1/2	3	9	100	30	25	4 oz.-2PSIG	250	40	8	20	.11
1502128	2	4	7	100	30	35	4 oz.-2PSIG	325	40	8	20	.12
1502129	2 1/2	5	6	100	30	35	4 oz.-2PSIG	395	40	8	20	.13
1502130	3	6	5	100	50	40	4 oz.-2PSIG	425	40	8	20	.14
1502131	4	8	5	100	50	40	4 oz.-2PSIG	525	40	8	20	.16
1502132	5	9	4	90	50	40	4 oz.-2PSIG	580	100	20	50	.20

NOTES:

- (1) Use next size larger tip with same PSIG for contour or intricate cutting.
- (2) For thin plate cutting use a highly carburizing preheat flame.
- (3) Cutting oxygen pressures should be measured at torch entry.
- (4) When using two hose machine torches set oxygen pressure at cutting oxygen PSIG above.



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TIPS

115

VVCP**6290****MODEL****PREMIUM MACHINE CUTTING TIPS FOR PROPYLENE****MODEL SHOWN:
6290-VVCP****DESCRIPTION**

High speed oxygen propylene cutting tips with a chrome-plated shell (.034 cup depth).
Ideal for machining cutting using propylene-based fuel gases.

DETAILS

- Minimizes kerf
- Increases cutting speed
- Reduces heat input
- High-quality cut reduces after work
- Uses lower-cost fuel gases

Compatible Equipment:

E-9 Tip cleaner P/N: 900160



PART #	TIP SIZE #	PLATE THICKNESS INCHES	CUTTING SPEED I.P.M	CUTTING OXYGEN PSIG	HIGH	LOW	PREHEAT FUEL PSIG	CUTTING OXYGEN CONSUMPTION	LOW PREHEAT OXYGEN CONSUMPTION	PROPYLENE CONSUMPTION SCFH	APPROX. KERF IN.
1502200	5/0	3/16	20	40	12	8	2	15	32	13	.05
1502202	4/0	1/4	20	50	12	8	2	40	32	13	.06
1502204	3/0	3/8	18	75	25	8	2	80	32	13	.08
1502206	2/0	1/2	18	90	25	8	2	90	32	13	.07
1502208	0	3/4	15	100	25	8	2	125	32	13	.08
1502210	0 - 1/2	1 1/4	14	100	25	8	2	170	32	13	.08
1502212	1	2	13	100	25	10	2	200	40	16	.09
1502214	1 1/2	3	9	100	25	10	2	250	40	16	.11
1502216	2	4	7	100	25	10	2	325	40	16	.12
1502218	2 1/2	5	6	100	30	10	2	395	40	16	.13
1502220	3	6	5	100	30	10	2	425	40	16	.14
1502222	4	8	5	100	30	10	2	525	40	16	.16
1502224	5	9	4	90	30	10	2	580	40	16	.20

NOTES:

(1) Use next size larger tip with same PSIG for contour or intricate cutting.

(2) For thin plate cutting use a highly carburizing preheat flame.

(3) Cutting oxygen pressures should be measured at torch entry.

(4) When using two hose machine torches set oxygen pressure at cutting oxygen PSIG above.

8090

MODEL



HEAVY CUTTING MACHINE TIPS

MODEL SHOWN:
8090

DESCRIPTION

For Model 8090 Jumbo Machining Torch (see p. 138) used with propane and natural gas.* Operates on fuel pressures of 10 to 15 PSIG.

DETAILS

Construction: Screw in/Tip mix

Where Used: For heaving cutting
8"-30"



PART #	TIP SIZE #	METAL THICKNESS INCHES	SPEED INCHES PER MINUTE	OPERATING PRESSURES PSIG	ORIFICE DIA. INCHES	GAS FLOW CUBIC FEET PER HOUR
1501910	0	8 - 12	6 - 3	CUT. OXYGEN - 30-60	5/32	600 - 1500
1501920	1	—	—	P.H. OXYGEN - 20-40	3/16	200 - 375
				PROPANE - 10-15	—	55 - 105
1501920	1	12 - 16	6 - 3	CUT. OXYGEN - 30-60	3/16	1900 - 3600
1501930	2	—	—	P.H. OXYGEN - 25-50	1/4	250 - 425
				PROPANE - 10-20	—	55 - 125
1501930	2	16 - 20	4 - 2	CUT. OXYGEN - 25-50	1/4	1900 - 3600
1501940	3	—	—	P.H. OXYGEN - 25-50	5/32	250 - 425
				PROPANE - 10-20	—	55 - 125
1501940	3	20 - 25	3 - 1½	CUT. OXYGEN - 25-50	5/32	2100 - 4400
1501950	4	—	—	P.H. OXYGEN - 25-50	5/16	250 - 425
				PROPANE - 10-20	—	55 - 125
1501950	4	OVER 25	3 - 1	CUT/ OXYGEN - 40-90	5/16	2100 - 4400
1501960	4½	—	—	P.H. OXYGEN - 25-50	1½/32	250 - 425
				PROPANE - 10-20	—	55 - 125

*NOTE: Propylene style available as SPECIAL ORDER.

136

MODEL



HEAVY-DUTY HAND CUTTING TIPS

MODEL SHOWN:
136

DESCRIPTION

Propane/natural gas* cutting tips specifically for Harris Model 136 (see p. 99) cutting torches.

DETAILS

- Heavy shell with shroud
- Captive nut
- General preheat



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	FUEL SCFH	DRILL CUT SIZE	TORCH MODEL
QC13611	136-11	12 - 19"	60 - 80	950 - 2900	8 - 15	130 - 350	3/16"	136
QC13613	136-13	19 - 28"	60 - 80	2100 - 4000	10 - 15	150 - 400	1/4"	136
QC13615	136-15	28 - 36"	80 - 100	2500 - 4800	15 - 20	180 - 450	1½/32"	136

*NOT FOR USE WITH ACETYLENE.



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TIPS

117

140

MODEL



HEAVY-DUTY HAND CUTTING TIPS

MODEL SHOWN:
140

DESCRIPTION

Propane/natural gas* cutting tips specifically for Harris Model 136 cutting torches.

DETAILS

- Low cost
- Straight bore
- Heavy preheat
- Single-piece: requires separate tip nut
P/N: QC1WHP13601P



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	FUEL SCFH	DRILL CUT SIZE	TORCH MODEL
QC14009	140-09	15"	65 - 85	1300 - 1500	12 - 15	100 - 120	5/32"	136
QC14011	140-11	19"	65 - 85	1700 - 1950	12 - 15	130 - 160	3/16"	136
QC14012	140-12	20"	65 - 85	1800 - 2250	12 - 15	165 - 180	7/32"	136
QC14013	140-13	25"	65 - 85	2100 - 2500	15 - 18	175 - 210	1/4"	136

*NOT FOR USE WITH ACETYLENE.

HS

140

MODEL



HEAVY-DUTY HIGH SPEED MACHINE CUTTING TIPS

MODEL SHOWN:
140-HS

DESCRIPTION

Propane/natural gas* cutting tips specifically for Harris Model 136 cutting torches.

DETAILS

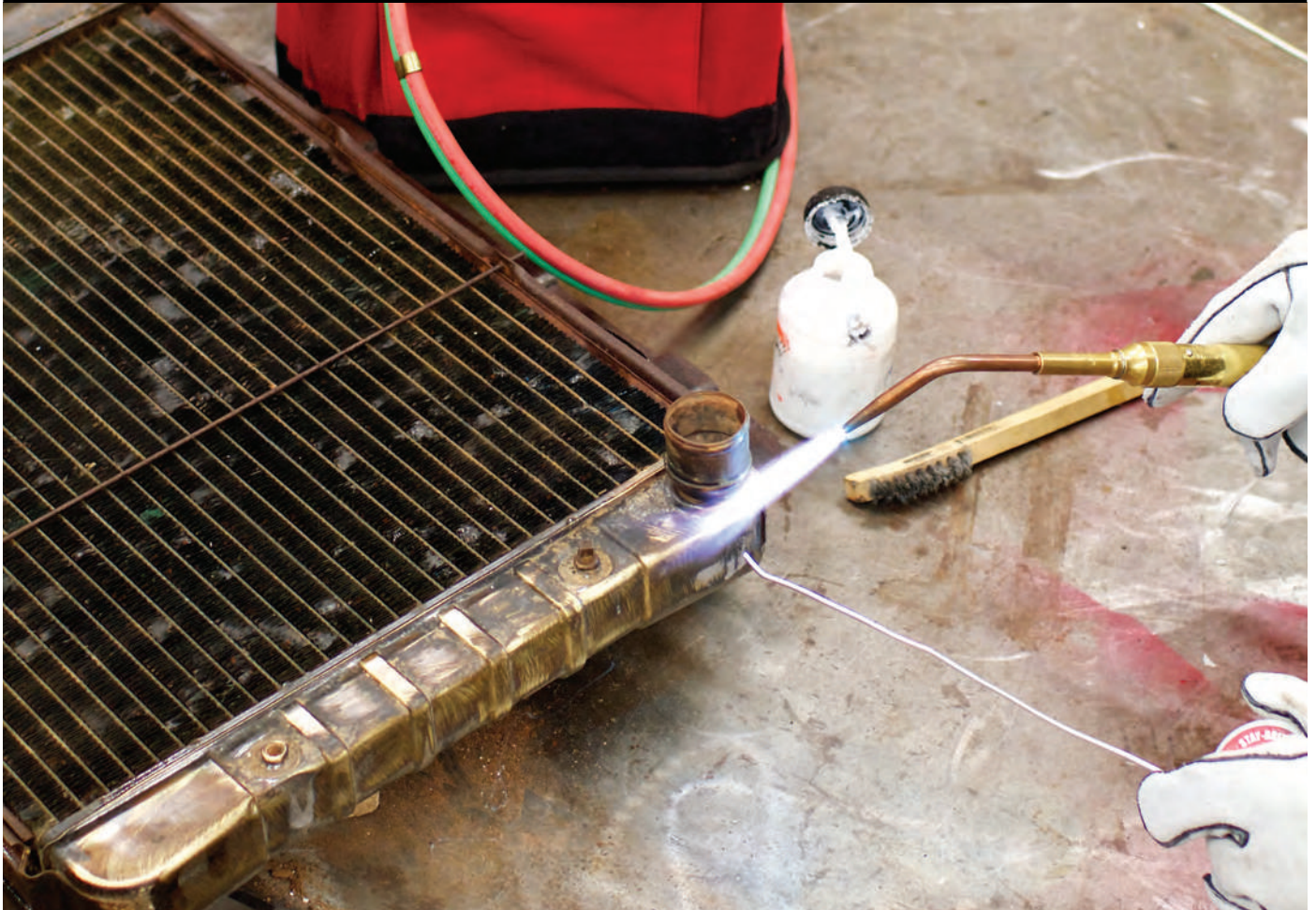
- High-speed divergent bore
- General preheat
- Single-piece: requires separate tip nut
P/N: QC1WHP13601P



PART #	MODEL #	DEPTH OF CUT	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	FUEL SCFH	DRILL SIZE	TORCH MODEL
QC140160	140-160	15"	90 - 130	2100 - 2300	12 - 15	100 - 120	—	136
QC140200	140-200	19"	90 - 130	3100 - 3500	12 - 15	130 - 160	—	136
QV140240	140-240	25"	90 - 130	4600 - 5100	12 - 15	165 - 180	—	136

*NOT FOR USE WITH ACETYLENE.

THE HARRIS ADVANTAGE **OUR MOST POPULAR WELDING & BRAZING TIPS**



**23A90
AND
5090**

**WELDING &
BRAZING
TIPS**

- 1 Are made from lead-free, environmentally friendly tellurium copper that has excellent machinability characteristics resulting in a higher quality tip with more precise flames.
- 2 Are swaged for more precise and consistent flames.
- 3 Use a universal mixer that fits the complete line of sizes (0-10) eliminating the extra expense of requiring a special mixer for each tip size.
- 4 Have a metal to metal mixer contact seat virtually eliminating thread leaks and the need for thread sealants.

23A90

MODEL



ACETYLENE WELDING AND BRAZING TIPS

MODEL SHOWN:
23A90

DESCRIPTION

Model 23A90 tips are manufactured using environmentally-friendly tellurium copper that has excellent machining properties resulting in a higher quality tip. They are swaged for more precise and consistent flames. They use a universal mixer for sizes 0-10, eliminating the expense of using a different mixer for every tip size. All 23A90 tips have a metal-to-metal seat, virtually eliminating possible leaks and the need for thread sealants.

DETAILS

Warranty: 1 year

Where Used: Fabricating, maintenance

Compatible Equipment:
C-9 Tip cleaner P/N: 9000156



PART #	TIP SIZE #	METAL THICKNESS INCHES	EQUAL PRESSURE		ACETYLENE SCFH *	RECOMMENDED HOSE ID **	TIP THREAD
			OXYGEN PSIG	ACETYLENE PSIG			
1600840	0	1/64"	1	1	1 - 3	3/16"	23/64 - 26
1600850	1	1/32"	1	1	2 - 5	3/16"	23/64 - 26
1600860	2	3/64"	2	2	3 - 8	3/16"	23/64 - 26
1600870	3	1/16"	3	3	5 - 11	3/16"	23/64 - 26
1600880	4	3/32"	4	4	6 - 14	3/16"	23/64 - 26
1600890	5	1/8"	5	5	8 - 18	3/16"	23/64 - 26
1600900	6	3/16"	6	6	10 - 20	3/16"	23/64 - 26
1600910	7	1/4"	7	7	13 - 25	3/16"	23/64 - 26
1600920	8	5/16"	8	8	16 - 32	3/16"	23/64 - 26
1600930	9	3/8"	9	9	20 - 37	1/4"	23/64 - 26
1600940	10	1/2"	10	10	24 - 42	1/4"	23/64 - 26
1600960	13	3/4"	13	13	30 - 50	3/8"	1/2 - 25
1600970	15	1"	15	15	35 - 65	3/8"	1/2 - 25

* Oxygen SCFH is equal to 1.1 times acetylene for neutral flame.

** Hose sizes are suitable for hoses up to 25'; for longer hoses higher pressures should be used. Observe 1/3th acetylene rule when determining gas supply.

HEAVY DUTY EQUAL PRESSURE MIXERS FOR MODEL 43-2 HANDLE



E-43



E3-43/(F-43)



E2-43

MEDIUM DUTY EQUAL PRESSURE MIXERS FOR MODEL 85 HANDLE



D-85

LIGHT DUTY EQUAL PRESSURE MIXERS FOR MODEL 16, 19 AND 50-9 HANDLES



H-16-2E

5090

MODEL



ACETYLENE WELDING AND BRAZING TIPS

MODEL SHOWN:
5090

DESCRIPTION

Model 5090 tips are manufactured using environmentally-friendly tellurium copper that has excellent machining properties resulting in a higher quality tip. They are swaged for more precise and consistent flames. They use a universal mixer for sizes 0-10, eliminating the expense of using a different mixer for every tip size. All 5090 tips have a metal-to-metal mixer seat virtually eliminating the possibility of leaks and the need for thread sealants.

DETAILS

Where Used: Maintenance, metal art production, brazing

Compatible Equipment:
C-9 Tip Cleaner P/N: 900156



PART #	TIP SIZE #	METAL THICKNESS INCHES	EQUAL PRESSURE		ACETYLENE SCFH *	RECOMMENDED HOSE ID **	TIP THREAD
			OXYGEN PSIG	ACETYLENE PSIG			
1601690	0	1/64"	1	1	1 - 3	3/16"	5/16" - 27
1601700	1	1/32"	1	1	2 - 5	3/16"	5/16" - 27
1601710	2	3/64"	2	2	3 - 8	3/16"	5/16" - 27
1601730	3	1/16"	3	3	5 - 11	3/16"	5/16" - 27
1601740	4	3/32"	4	4	6 - 14	3/16"	5/16" - 27
1601760	5	1/8"	5	5	8 - 18	3/16"	5/16" - 27
1601780	6	3/16"	6	6	10 - 20	3/16"	5/16" - 27
1601800	7	1/4"	7	7	13 - 25	3/16"	5/16" - 27
1601810	8	5/16"	8	8	16 - 32	3/16"	5/16" - 27
1601830	9	3/8"	9	9	20 - 37	1/4"	5/16" - 27
1601840	10	1/2"	10	10	24 - 42	1/4"	5/16" - 27

*Oxygen SCFH is equal to 1.1 times acetylene for neutral flame.

**Hose sizes are suitable for hoses up to 25'. For longer hoses, higher pressures should be used. Observe 1/3th acetylene rule when determining gas supply.

MEDIUM DUTY
EQUAL PRESSURE MIXERS
FOR MODEL 16, 19 AND 50-9 HANDLES



H-16-E

LIGHT DUTY
EQUAL PRESSURE MIXERS
FOR MODEL 15 HANDLE



B-15-3



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TIPS

121

1390

MODEL



ACETYLENE SEPARABLE WELDING AND BRAZING TIPS

MODELS SHOWN:
1390 and 1390-HA

DESCRIPTION

Model 1390 tips are manufactured using environmentally friendly tellurium copper that has excellent machining properties resulting in a higher quality tip. They are precision drilled for more precise and consistent flames. They use a universal separable tip tube and mixer system for tip sizes 0-10 eliminating the expense of using special mixers for each tip. All 1390 tips have a metal to metal tip contact seat virtually eliminating the possibility of leaks and the need for thread sealants.

DETAILS

Where Used: Maintenance, metal art production, brazing, etc.

Compatible Equipment: C-9 Tip Cleaner P/N: 9000156



PART #	TIP SIZE #	METAL THICKNESS INCHES	EQUAL PRESSURE		ACETYLENE SCFH *	RECOMMENDED HOSE ID **	TIP THREAD
			OXYGEN PSIG	ACETYLENE PSIG			
1600020	0	1/64"	1	1	1 - 3	3/16"	3/8" - 24
1600030	1	1/32"	1	1	2 - 5	3/16"	3/8" - 24
1600040	2	3/64"	2	2	3 - 8	3/16"	3/8" - 24
1600050	3	1/16"	3	3	5 - 11	3/16"	3/8" - 24
1600060	4	3/32"	4	4	6 - 14	3/16"	3/8" - 24
1600070	5	1/8"	5	5	8 - 18	3/16"	3/8" - 24
1600080	6	3/16"	6	6	10 - 20	3/16"	3/8" - 24
1600090	7	1/4"	7	7	13 - 25	3/16"	3/8" - 24
1600100	8	5/16"	8	8	16 - 32	3/16"	3/8" - 24
1600140	9	3/8"	9	9	20 - 37	1/4"	3/8" - 24
1600150	10	1/2"	10	10	24 - 42	1/4"	3/8" - 24
1600160	13	3/4"	13	13	30 - 50	3/8"	1/2" - 25
1800025	HA	Heating	5 - 10	5 - 10	35 - 52	1/4"	3/8" - 24

*Oxygen SCFH is equal to 1.1 times acetylene for neutral flame.

**Hose sizes are suitable for hoses lengths up to 25'. For longer lengths, higher pressures should be used. Observe acetylene 1/4th rule when determining gas supply.

HEAVY DUTY EQUAL PRESSURE MIXERS FOR MODEL 43-2 HANDLE



MEDIUM DUTY EQUAL PRESSURE MIXERS FOR MODEL 85 HANDLE



LIGHT DUTY EQUAL PRESSURE MIXERS FOR MODEL 16, 19 AND 50-9 HANDLES



COMPATIBLE TIP TUBES - MATCH THREAD SIZE

23/64" - 26



5/16" - 27



1/2" - 25



T-43
P/N: 9100322
Length: 9.8"

8490

MODEL



ACETYLENE SEPARABLE WELDING AND BRAZING TIPS

MODEL SHOWN:
8490-1

DESCRIPTION

The Model 8490 series separable welding and brazing tips are made of high-quality brass bar stock. The 8490 tips include a special compact multi-flame heating tip using standard mixer and tip tube combinations.

DETAILS

Where Used: Metal art, maintenance and production brazing

Compatible Equipment:
C-9 Tip Cleaner P/N: 9000156



PART #	TIP SIZE #	METAL THICKNESS INCHES	EQUAL PRESSURE		ACETYLENE SCFH *	RECOMMENDED HOSE ID **	TIP THREAD
			OXYGEN PSIG	ACETYLENE PSIG			
1601990	2	3/64"	2	2	3 - 8	3/16"	1/4" - 27
1602010	4	3/32"	4	4	6 - 14	3/16"	1/4" - 27
1602030	6	3/16"	6	6	10 - 20	3/16"	1/4" - 27
1602060	8	5/16"	8	8	16 - 32	3/16"	1/4" - 27
1602040	6 - 65	Heating	8	8	45 - 56	1/4"	1/4" - 27

*Oxygen SCFH is equal to 1.1 times acetylene for neutral flame.

**Hose sizes are suitable for hoses up to 25'. For longer hoses, higher pressures should be used.

Observe 1/3th acetylene rule when determining gas supply.

MEDIUM DUTY
EQUAL PRESSURE MIXERS
FOR 16, 19 AND 50-9 HANDLES



LIGHT DUTY
EQUAL PRESSURE MIXERS
FOR MODEL 15 HANDLE



COMPATIBLE TIP TUBES -
MATCH THREAD SIZE



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TIPS

123

1390-N

MODEL



ALTERNATE FUEL SEPARABLE BRAZING TIPS

MODELS SHOWN:

1390-N, 1390-B, 1390-H

DESCRIPTION

Model 1390-N separable brazing/heating tips are made from environmentally-friendly tellurium copper. They are designed to be used with a Harris universal tip tube and mixer system for tip sizes 2-10 and sizes 15-80N eliminating the expense of using a special mixer for each size tip. The 1390-N series are designed with a counter-bored tip end for maximum performance using alternate fuels. They are stable over an extremely broad BTU range, consequently one tip size can be used over a very wide range of joint sizes. A unique metal to metal seat reduces leaks eliminating the need for joint sealants.

DETAILS

Where Used: Production brazing, arts and crafts, HVAC, maintenance, etc.

Compatible Equipment:
E-9 Two-piece Tip cleaner
P/N: 9000160



PART #	TIP SIZE	OXYGEN PSIG	INJECTOR*			EQUAL PRESSURE				THREAD SIZE	RECOMMENDED Hose ID
			INJECTOR FUEL GAS PSIG	OXYGEN SCFH	NATURAL GAS SCFH	OXYGEN PSIG	PROPANE PSIG	OXYGEN SCFH	PROPANE SCFH		
1600180	2N	15	4 oz to 2 PSIG	6	3	2	1	12	3	3/8" - 24	3/16"
1600190	3N	15	4 oz to 2 PSIG	10	5	2	1	20	5	3/8" - 24	3/16"
1600200	4N	20	4 oz to 2 PSIG	12	6	2	1	20	5	3/8" - 24	3/16"
1600210	5N	25	4 oz to 2 PSIG	13	6.5	2	1	22	5.5	3/8" - 24	3/16"
1600220	6N	25	4 oz to 2 PSIG	15	7.5	2	2	25	6.3	3/8" - 24	3/16"
1600230	7N	30	4 oz to 2 PSIG	20	10.5	3	2	30	7.5	3/8" - 24	1/4"
1600240	8N	30	4 oz to 2 PSIG	25	12.5	3	2	35	7.8	3/8" - 24	1/4"
1600250	9N	35	4 oz to 2 PSIG	30	15	4	3	40	10	3/8" - 24	1/4"
1600260	10N	40	4 oz to 2 PSIG	35	17.5	4	3	45	11.2	3/8" - 24	1/4"
1600270	13N	40	4 oz to 2 PSIG	60	30	7	4	100	25	1/2" - 25	3/8"
1600280	15N	45	4 oz to 2 PSIG	65	32.5	12	8	150	38	1/2" - 25	3/8"
1600290	20N	50	4 oz to 2 PSIG	185	92.5	15	12	200	50	1/2" - 25	3/8"
1600300	30N	50	4 oz to 2 PSIG	200	100	18	14	225	56	1/2" - 25	3/8"
1600310	80N	60	4 oz to 2 PSIG	215	107.5	20	16	250	63	1/2" - 25	3/8"
1800020	1390-H Heating	50	4 oz to 2 PSIG	40 - 128	12 - 40	5 - 25	2 - 12	48 - 160	12 - 40	3/8" - 24	1/4"
1800098	1390-3H Heating	50	4 oz to 2 PSIG	90 - 250	20 - 65	30	15	250	63	1/2" - 25	3/8"
1800015	1390-B Heating	50	4 oz to 2 PSIG	40 - 128	12 - 40	5 - 25	2 - 12	48 - 160	12 - 40	3/8" - 24	1/4"

*NOTE: Low-pressure injector-type mixers

PERFORMANCE FOCUS

1390-N BRAZING TIPS AND TIP TUBE ADVANTAGES

- 1390-N tips are designed with a counter-bored tip end for maximum performance using alternate fuels. They produce flames that are stable over an extremely broad BTU range. One tip size can cover a very wide range of joint sizes.
- The 1390-N tips and tip tubes use a special universal size mixer covering a broad range of sizes. This unique design reduces initial equipment costs and storage space requirements.
- The mass of the bell-shaped tip tubes for the 1390 series tips help dissipate much of the reflective heat from the flame, allowing the tip tube to run cooler and last longer.
- The 1390-N brazing equipment include special compact multi-flame heating tips that can produce up to 100,000 BTUs using the standard mixer and tip-tube configuration.

MIXERS AND TIP TUBES FOR 1390-N TIPS FOR PROPANE AND NATURAL GAS

HEAVY DUTY EQUAL PRESSURE FOR MODEL 43-2 AND 18-5 HANDLES



E-43



E2-43/(F-43)



E3-43/(F-43)

HEAVY DUTY INJECTOR MIXER COMPATIBLE WITH MODEL 43-2 HANDLE



B-43-N

MEDIUM DUTY EQUAL PRESSURE FOR MODEL 85 HANDLE



D-85

LIGHT DUTY EQUAL PRESSURE FOR MODEL 16, 19 AND 50-9 HANDLES



H-16-2E



H-16-E

LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH MODEL 16, 19 AND 50-9



H-16-S

VERY LIGHT DUTY EQUAL PRESSURE MIXER FOR MODEL 15-3 HANDLE



B-15-3

COMPATIBLE TIP TUBES - MATCH THREAD SIZE

23/64" - 26



8593
P/N: 9003678
Length: 4"

5/16" - 27



D-50-C
P/N: 9100379
Length: 4"

3/8" - 24

DC-50-CL
P/N: 9100872
Length: 7"

1/2" - 25



T-43
P/N: 9100322
Length: 9.8"

8490-N

MODEL



ALTERNATE FUELS SEPARABLE BRAZING TIPS

MODEL SHOWN:
8490-4N

DESCRIPTION

The Model 8490-N series separable brazing tips are made of high-quality brass bar stock. The 8490-N series tips are designed with a counter bored tip end for maximum performance with alternate fuels. They are stable over a broad BTU range, consequently, one tip size can be used over a wide range of joint sizes. The 8490-N series includes a special multi-flame heating tiip, 8490-6-65.

DETAILS

Where Used: Production brazing, maintenance, arts and crafts, HVAC, etc.

Compatible Equipment:
E-9 Two-piece tip cleaner
P/N: 9000160



PART #	MODEL #	INJECTOR*				EQUAL PRESSURE				THREAD SIZE "F"	HOSE ID
		OXYGEN PSIG	FUEL GAS PSIG	OXYGEN SCFH	NATURAL GAS SCFH	OXYGEN PSIG	PROPANE PSIG	OXYGEN SCFH	PROPANE SCFH		
1602090	4N	20	4 oz. - 2 lbs	12	6	2	1	8	2	1/4" - 27	3/16"
1602100	5N	25	4 oz. - 2 lbs	13	6.5	2	1	10	2.5	1/4" - 27	3/16"
1602110	6N	25	4 oz. - 2 lbs	15	7.5	3	1	12	3	1/4" - 27	3/16"
1602120	7N	30	4 oz. - 2 lbs	20	10.5	4	1	20	4	1/4" - 27	1/4"
1602130	8N	30	4 oz. - 2 lbs	25	12.5	5	2	24	6	1/4" - 27	1/4"
1602040	6-65 (heating)	50	4 oz. - 2 lbs	30	15	8	8	30	8	1/4" - 27	1/4"

*NOTE: Low-pressure injector-type mixers

LIGHT DUTY EQUAL PRESSURE MIXERS FOR MODEL 16, 19 AND 50-9 HANDLES



5/16" - 27

H-16-E

MEDIUM DUTY EQUAL PRESSURE MIXERS FOR MODEL 15-3 HANDLE



5/16" - 27

B-15-3

LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH MODEL 16, 19 AND 50-9



5/16" - 27

Injector mixer
H-16-S

LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH MODEL 16, 19 AND 50-9



1/4" - 32

Injector mixer
B-15-3S

COMPATIBLE TIP TUBES - MATCH THREAD SIZE



1/4" - 27

1/4" - 27

5/16" - 27

TH-50-2
P/N: 1601590
Length: 5 1/2"

TH-50-2XL
P/N: 1601596
Length: 7 1/4"



1/4" - 32

8493-N
P/N: 9003656
Length: 5"



ALTERNATE FUEL HEAVY HEATING TIPS

MODELS SHOWN:
2290-H & HPMs

DESCRIPTION

Model 2290 heating tips are capable of producing more than 1 million BTU per hour using low-cost, readily available, safe alternate fuels. They are available in five sizes. Each size is adjustable over a broad heat range.

DETAILS

Warranty: 1 year

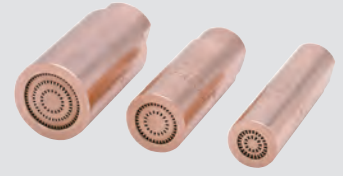
Where used: Fabrication, shipbuilding, etc.

Related items:

Adaptors P/N: 2373-9000738
P/N: 2357-9000734
P/N: 2327-9000720
P/N: 2543-9000584



2290-H



2290-HPM

HANDLE MODEL #	MIXER MODEL #	MIXER PART #	PROPANE & NATURAL GAS		PROPYLENE	
			MODEL #	PART #	MODEL #	PART #
43-2	E2-43	9100314	2290-1H	1800130	2290-1HPM	1800136
43-2	E2-43	9100314	2290-2H	1800140	2290-2HPM	1800146
43-2	E2-43	9100314	2290-3H	1800150	2290-3HPM	1800156
43-2	E3-43 (or F-43)	9100316	2290-4H	1800160	2290-4HPM	1800166
43-2	E3-43 (or F-43)	9100316	2290-5H	1800170	2290-5HPM	1800176

2290-H and HPM PERFORMANCE DATA

2290-H ID HPM	OXYGEN PSIG	OXYGEN SCFH	FUEL GAS PSIG	FUEL GAS SCFH	OXYGEN PSIG	OXYGEN SCFH	FUEL GAS PSIG	FUEL GAS SCFH	PROPANE	PROPYLENE	MAPP®	NATURAL GAS
	CLASSIC E-3-43/(F43) MIXER				PRO SERIES H-2030 MIXER				BTU/HR. RATING			
Tip Size #1	10 25	160 320	4 12	40 80	15 30	160 320	3 6	40 80	103,000 205,000	95,000 190,000	96,000 192,000	65,000 130,000
Tip Size #2	15 45	220 520	7 22	55 130	15 40	220 520	5 10	55 130	141,000 333,000	130,000 308,000	132,000 312,000	90,000 212,000
Tip Size #3	25 70	340 920	8 25	85 230	20 80	340 920	7 13	85 230	218,000 590,000	201,000 545,000	204,000 552,000	139,000 375,000
Tip Size #4	50 110	640 1,300	10 30	160 325	50 100	640 1,200	7 21	160 325	410,000 833,000	379,000 770,000	384,000 780,000	216,000 530,000
Tip Size #5	60 135	720 1,600	14 40	180 400	60 150	720 1,600	8 23	180 400	461,000 1,025,000	427,000 950,000	432,000 960,000	293,000 652,000

NOTES: 1. For maximum flow and BTU output use 3/8" hose.

2. On continuous duty, withdrawal manifolding of cylinders may be required.

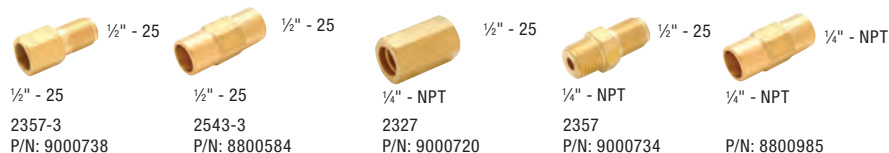
2393 HEATING TIP TUBES

PART #	MODEL #	LENGTH
1800200	2393-1F	36" Curved
1800210	2393-2F	28" Curved
1800220	2393-3F	16" Curved
1800230	2393-4F	10 1/2" Curved
1800241	2393-F	60" Curved
1800240	2393-5F	36" Straight
1800211	2393-2F	28" Straight
1800221	2393-3F	16" Straight
1800231	2393-4F	10 1/2" Straight
1800206	2393-6F	48" Straight

1/2"-25(M) X 1/2"-25(M)



COUPLINGS & ADAPTORS



Multiple arrangements of 2290-H Heating Tips can be assembled using Harris coupling 2327, nipple 2357 and standard 1/4" pipe fittings when wider bands of heat are necessary. Capacity of K-43 heating torch is 5 #1-H tips. Use coupling 2543-3 to couple 2393 Tip Tubes for extended reach. For extended tube and tip life, use adaptor 2357-3.

SERIES

"J" & "H"



ACETYLENE HEATING TIPS AND ASSEMBLIES

MODELS SHOWN:
"J" & "H"

DESCRIPTION

The Model "J" heating tips are a single-piece, all copper tip tube and tip combination specifically used for oxygen acetylene heating applications. The Model "H" series heating tips are a tip tube, tip and mixer combination that are available for the most popular Harris torch handles.

DETAILS

Warranty: 1 year

Where used: Fabrication, shipbuilding, maintenance, etc.

Related items: C-9 Tip cleaner
P/N: 9000156



"J" Heating Tip



"H" Heating Assembly

TORCH AND MIXER		MIXER	"J" SERIES TIP LESS MIXER		"H" SERIES TIP ASSEMBLY WITH MIXER	
TORCH MODEL #	MIXER MODEL #	PART #	MODEL #	PART #	MODEL #	PART #
43-2	E-43	9100312	J-63-1	1800710	H-63-1	1800810
43-2	E-43	9100312	J-63-2	1800720	H-63-2	1800820
43-2	E2-43	9100314	J-63-4	1800730	H-63-3	1800830
43-2	E2-43	9100314	J-63-5	1800740	H-63-4	1800840
43-2	E3-43	9100316	J-43-5	1800117	H-43-5	1800115
V-315-C	V-W	9105214	J-63-1	1800710	—	—
V-315-C	V-W	9105214	J-63-2	1800720	—	—
V-315-C	V-W-2	9105217	J-63-3	1800730	—	—
V-315-C	V-W-2	9105217	J-63-4	1800740	—	—
V-315-C	V-W-3	9105220	J-63-5	1800117	—	—
85	D-85	9100614	J-63-1	1800710	H-85-1	1800500
85	D-85	9100614	J-63-2	1800720	H-85-2	1800510
16 or 19-6	H-16-E	9100096	J-16-1	1800102	H-16-1	1800100
16 or 19-6	H-16-E	9100096	J-16-1	1800112	H-16-2	1800110
16 or 19-6	H-16-2E	9100787	J-63-1	1800710	—	—
		9100787	J-63-2	1800720	—	—
V-100C	V-W-1	9105213	J-63-1	1800710	—	—
		9105213	J-63-2	1800720	—	—

TIP SIZE #	HOLE PATTERN DRAWING	ORIFICE (NUMBER) & SIZE	OXY-ACETYLENE EQUAL PRESSURE		ACETYLENE SCFH ³		HEAT OUTPUT BTU/HR ⁴	
			MIN PSIG ¹	MAX PSI ²	MIN FLOW	MAX FLOW	MIN	MAX
1		#60(6) (.040)	2	6	20	35	29,500	51,500
2		#60(8) (.040)	3	7	30	50*	44,000	74,000
3		#56(8) (.0465)	4	8	50*	80*	74,000	118,000
4		#56(12) (.065)	8	15	80*	140*	118,000	206,500
5		#52(13) (.0635)	Oxy-12 Acet-15	Oxy-20 Acet-8	160*	300*	236,000	442,500

¹Minimum pressure – neutral flame with no flame blow-off (lowest stable flame)

²Maximum pressure – neutral flame with no flame pop-out (highest stable flame)

³Acetylene flow shown – oxygen flow theoretically 1.1 of acetylene for neutral flame

⁴Heat output calculated with 1,475 BTU/cu.ft.

NOTE: Hose size recommendations – 1/4" ID for sizes 1 and 2; 3/8" ID for sizes 3, 4 and 5

*Caution: Exceeds the withdrawal capacity of one standard 320 CF acetylene cylinder 1/3th Rule

RBA

MODEL

1YR
WARRANTY

MADE IN THE
USA

FLAME CLEANING HEADS

MODEL SHOWN:
RBA-2

DESCRIPTION

Model RBA flame cleaning heads are designed specifically for cleaning rust, mill scale and paint from metal surfaces prior to welding, painting, etc. They can also be used for general surface heating or spalling using oxy-acetylene⁽¹⁾. Features steel-scraping plate on either side of the tip.

DETAILS

Warranty: 1 year

Where used: Flame cleaning and general heating

Related items: Tip tubes – select from 2393 chart below



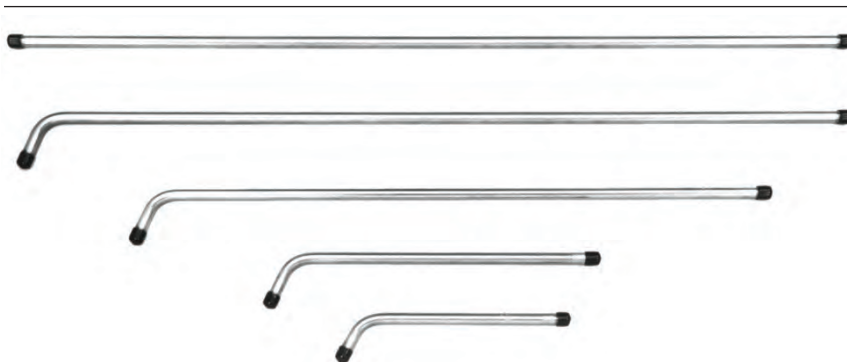
RECOMMENDED		MIXER	FLAME CLEANING HEAD			GAS PRESSURES PSIG MIN-MAX		GAS FLOWS SCFH ⁽¹⁾	
TORCH MODEL #	MIXER MODEL #	MIXER PART #	MODEL #	PART #	WIDTH	OXYGEN	ACETYLENE	OXYGEN	ACETYLENE
43-2	E3-43	9100312	RBA-2	1800440	2"	6 - 10	6 - 10	29 - 40	25 - 35
	or E2-43	9100314	RBA-4	1800450	4"	10 - 12	10 - 12	55 - 59	49 - 53
V-315-C	V-W-3	9105220	RBA-2	1800440	2"	6 - 10	6 - 10	29 - 40	25 - 35
	or V-W-2	9105217	RBA-4	1800450	4"	10 - 12	10 - 12	55 - 59	49 - 53

(1) Multiply acetylene SCFH times 1470 to calculate BTU/Hr
Observe 1/3 th" rule of acetylene when determining acetylene supply required.

2393 HEATING TIP TUBES

PART #	MODEL #	LENGTH	STYLE	THREAD
1800200	2393-1F	36"	"Curved" 70°	1/2" - 25
1800210	2393-2F	28"	"Curved" 70°	1/2" - 25
1800220	2393-3F	16"	"Curved" 70°	1/2" - 25
1800230	2393-4F	10 1/2"	"Curved" 70°	1/2" - 25
1800241	2393-F	60"	"Curved" 70°	1/2" - 25
1800240	2393-5F	36"	"Straight" 180°	1/2" - 25
1800211	2393-2F	28"	"Straight" 180°	1/2" - 25
1800221	2393-3F	16"	"Straight" 180°	1/2" - 25
1800231	2393-4F	10 1/2"	"Straight" 180°	1/2" - 25
1800206	2393-6F	48"	"Straight" 180°	1/2" - 25

2393 TIP TUBE 1/2" - 25(M) X 1/2" - 25(M)



For additional heating tip adaptors and instructions refer to page 101 or page 127.



THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

Orders: 1.800.733.4043

TIPS

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FLAME CLEANING HEADS

MODEL SHOWN:
RBP-43-2, 4 & 8

DESCRIPTION

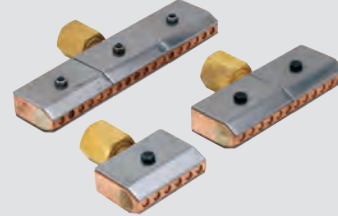
Model RBP flame cleaning heads are designed specifically for removing rust, paint and mill scale from metal surface before welding, painting, etc. They are also used for general surface heating and spalling using oxy-propane or natural gas. Features steel scraping plates on either side of tip.

DETAILS

Duty: Heavy

Related items: Select 2393 tip tube length and style from chart below

1/2" - 25



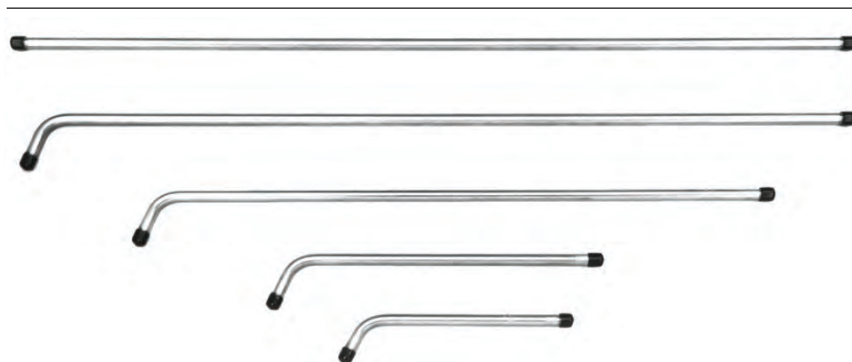
CLEANING HEAD					OXYGEN		FUEL		BTU PER HOUR (PROPANE)
PART #	MODEL #	TIP WIDTH	RECOMMENDED HANDLE	MIXER	PSIG MIN/MAX	SCFH MIN/MAX	PSIG MIN/MAX	SCFH MIN/MAX	MIN/MAX
1800470	RBP-43-2	2"	43-2	E3-43 or E2-43	5 - 10	90 - 120	4 - 8	27 - 38	69,200 - 97,395
1800480	RBP-43-4	4"	43-2	E3-43 or E2-43	10 - 22	225 - 300	6 - 12	65 - 88	166,600 - 225,544
1800490	RBP-43-6	6"	43-2	E3-43 or E2-43	25 - 55	490 - 640	10 - 20	106 - 146	271,700 - 374,200
1800470	RBP-43-6	2"	V-315-C	V-W-2 or V-W-3	5 - 10	90 - 120	4 - 8	27 - 38	69,200 - 97,395
1800480	RBP-43-6	4"	V-315-C	V-W-2 or V-W-3	10 - 22	225 - 300	6 - 12	65 - 88	166,600 - 225,544
1800490	RBP-43-6	6"	V-315-C	V-W-2 or V-W-3	25 - 55	490 - 640	10 - 20	106 - 146	271,700 - 225,544

To calculate BTU/hr using Propylene, multiply fuel gas flow by 2375.
To calculate BTU/hr using Natural Gas, multiply BTU/hour by 1000.

2393 HEATING TIP TUBES

PART #	MODEL #	LENGTH	STYLE	THREAD
1800200	2393-1F	36"	"Curved" 70°	1/2" - 25(M)
1800210	2393-2F	28"	"Curved" 70°	1/2" - 25(M)
1800220	2393-3F	16"	"Curved" 70°	1/2" - 25(M)
1800230	2393-4F	10 1/2"	"Curved" 70°	1/2" - 25(M)
1800241	2393-5F	60"	"Curved" 70°	1/2" - 25(M)
1800240	2393-1F	36"	"Straight" 180°	1/2" - 25(M)
1800211	2393-2F	28"	"Straight" 180°	1/2" - 25(M)
1800221	2393-3F	16"	"Straight" 180°	1/2" - 25(M)
1800231	2393-4F	10 1/2"	"Straight" 180°	1/2" - 25(M)
1800206	2393-5F	48"	"Straight" 180°	1/2" - 25(M)

2393 TIP TUBES 1/2" - 25(M) X 1/2" - 25(M)



For additional heating tip adaptors and instructions refer to page 101 or page 127.

6290

MODEL

1YR
WARRANTY

ALTERNATE FUEL SPECIALTY TIPS

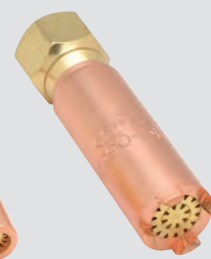
MODELS SHOWN:
6290-GG & H-62-1P

DESCRIPTION

Model 6290 alternate fuel specialty tips are designed to allow additional performance from our straight cutting torches. Applications like heating, rivet washing, rivet cutting, gouging and extended reach cutting can be performed using standard cutting torches eliminating the need for separate handles, tip tubes etc. Tips are designed for use with alternate fuels.* Especially useful where storage space is at a premium.



6290-GG



H-62-1P

DETAILS

Duty: Heavy**Where used:** Metal heating, beam cutting and weld repair**Related items:** 62-5F, 62-5SSF and 98-6 torches

Additional 6290 Tips

6290-NFFL



6290-NFW



6290-NFFR



HEATING, CUTTING AND WASHING TIPS

PART #	MODEL #	APPLICATION	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	
					EQUAL PRESSURE	INJECTOR
9100516	H-62-1P	HEATING TIP	45	160	5 - 15	4 oz. 2 lbs. PRESSURE
9100518	H-62-2P	HEATING TIP	50	220	5 - 15	4 oz. 2 lbs. PRESSURE
9100520	H-62-3P	HEATING TIP	55	340	5 - 15	4 oz. 2 lbs. PRESSURE
1501090	6290-NFFR	RIVET CUTTING	45	—	—	4 oz. 2 lbs. PRESSURE
1501100	6290-NFW	RIVET WASHING	50	—	—	4 oz. 2 lbs. PRESSURE
1501110	6290-8NFW	RIVET WASHING	50	—	—	4 oz. 2 lbs. PRESSURE
1501054	6290-0NFFL	8" CUTTING TIP	80	75 - 100	5 - 15	4 oz. 2 lbs. PRESSURE
1501055	6290-1NFFL	8" CUTTING TIP	80	100 - 150	5 - 15	4 oz. 2 lbs. PRESSURE
1501053	6290-2NFFL	8" CUTTING TIP	80	175 - 200	5 - 15	4 oz. 2 lbs. PRESSURE
1501051	6290-4NFFL	8" CUTTING TIP	80	350 - 400	5 - 15	4 oz. 2 lbs. PRESSURE
1501052	6290-6NFFL	8" CUTTING TIP	80	500 - 650	5 - 15	4 oz. 2 lbs. PRESSURE

PROPANE
GOUGING TIPSGOUGE
SIZE

1500940	6290-1GG	1/8" - 1/4" WIDE	35	—	5 - 15	4 oz. 2 lbs. PRESSURE
1500950	6290-2GG	3/16" - 3/8" WIDE	50	—	5 - 15	4 oz. 2 lbs. PRESSURE
1500960	6290-3GG	1/4" - 1/2" WIDE	50	—	5 - 15	4 oz. 2 lbs. PRESSURE

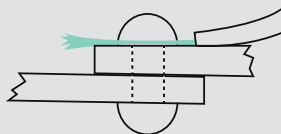
PROPYLENE
GOUGING TIPSGOUGE
SIZE

1500944	6290-1GGM	1/8" - 1/4" WIDE	35	—	5 - 15	4 oz. 2 lbs. PRESSURE
1500954	6290-2GGM	3/16" - 3/8" WIDE	50	—	5 - 15	4 oz. 2 lbs. PRESSURE
1500964	6290-3GGM	1/4" - 1/2" WIDE	50	—	5 - 15	4 oz. 2 lbs. PRESSURE

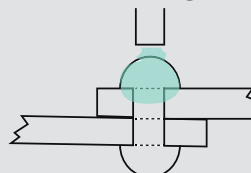
For maximum performance use straight torch
*NOT FOR USE WITH ACETYLENE.

CUTTING.
WASHING.
GOUGING.

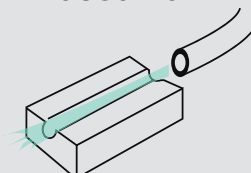
RIVET CUTTING



RIVET WASHING



GOUGING



THE HARRIS PRODUCTS GROUP
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Orders: 1.800.733.4043

TIPS

131

6290

MODEL

1YR
WARRANTY

ACETYLENE SPECIALTY TIPS FOR HARRIS CUTTING TORCHES

MODEL SHOWN:
6290-G, -HA & -R

DESCRIPTION

Acetylene tips are made available to add more versatility to the Harris cutting torch line. Specialty tips allow the use of existing torches to heat gouge and rivet cut without the need to purchase additional equipment.

DETAILS

Duty: Heavy*

Where used: Metal heating, gouging, rivet cutting



6290-G



6290-HA**



6290-R

PART #	MODEL #	APPLICATION	O ₂ PSIG	O ₂ FLOW SCFH	FUEL PSIG	FUEL SCFH
					EQUAL PRESSURE	
1500910	6290-1G	GOUGE - 1/8" - 1/4"	35	—	5 - 15	—
1500920	6290-2G	GOUGE - 3/16" - 3/8"	50	—	5 - 15	—
1500930	6290-3G	GOUGE - 1/4" - 1/2"	50	—	5 - 15	—
1501290	6290-R	RIVET CUTTING	45	—	5 - 15	—
1800495	6290-1HA	HEATING	12	90	5 - 15	80
1800496	6290-2HA	HEATING	14	170	5 - 15	160

*For maximum performance Harris recommends the use of tips only with straight cutting torches.

**6290-HA cannot be used with "V" Series torches.

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MODEL 50-10P PISTOL TORCH

It is an ergonomically designed, full featured Model 50-10P automatic torch with a pistol grip. The new design retains all the features of the original Model 50-10P but with greater operator comfort to help eliminate the unnatural hand position that causes fatigue and often results in carpal tunnel syndrome.

The original Harris Model 50-10P automatic torch handles feature a unique gas control system to reduce operating cost and improve safety and convenience. The thumb operated on/off gas control and adjustable pilot light eliminates relighting and flame readjustment each time the torch is used. The on/off feature can be used for welding, brazing and heating.



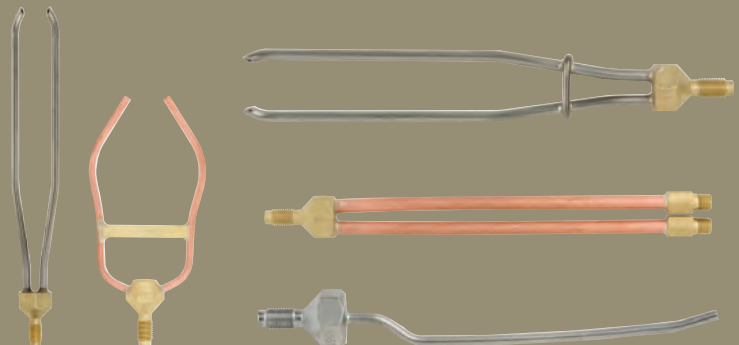
MODEL 19-6AP PISTOL TORCH

The newly designed Model 19-AP Pistol torch is an ergonomically designed, light weight, front valve medium duty torch for welding, brazing and heating. The pistol grip, "A" class hose fittings and light weight are for operator comfort and to help eliminate the unnatural hand position that causes fatigue and often results in carpal tunnel syndrome.

The Model 19-6AP also features silver brazed twin tube construction and front valves for more precise control while welding, soldering and brazing. The 19-6AP is suitable for use with any fuel gas.

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MACHINE CUTTING TORCHES


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QUICK SELECTION GUIDE

MACHINE CUTTING TORCHES				
	98-6F MODEL	98-6E MODEL	80 MODEL	STRAIGHT LINE CUTTING MACHINE
	HEAVY DUTY, ALTERNATE FUEL p.136	HEAVY DUTY, ACETYLENE p.136	JUMBO, HIGH CAPACITY, ALT FUEL p.138	STRAIGHT LINE CUTTING MACHINE p.138



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MODEL 98 MACHINE TORCHES

Harris machine cutting torches are designed to handle all types of machine cutting applications. Rugged and dependable, these torches provide up to 15" cutting capacity. The Model 98-6 torches are available in two-hose and three-hose design for all fuel gases.

MODEL 98 FEATURES

- Solid head for maximum strength
- Standard 1½" diameter barrel
- Use with 6290 high speed machine cutting tips
- Equipped with Flash Guard® check valves
- Rack supplied is 32 pitch (10.12 teeth/in.)

98-6TAFR-32 THREE-HOSE TORCHES

- Quick opening cutting oxygen valve for immediate full flow
- Separate preheat and cutting oxygen valves for high and low preheat control
- Cutting capacity to 15"
- 98-6 torches supplied with check valves on preheat oxygen and preheat fuel

98-6FR-32 TWO-HOSE TORCHES

- Cutting capacity to 8"
- 98-6 torches supplied with check valves on preheat oxygen and preheat fuel

98-6TFR-32 THREE-HOSE TORCHES

- Three-hose valveless design for pipe beveling, multiple beveling and similar applications
- Cutting capacity to 15"



MODEL SHOWN:
98-6TAFR-32



MODEL SHOWN:
98-6FR-32



MODEL SHOWN:
98-6TFR-32



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MACHINE CUTTING TORCHES **135**

98-6F

MODEL



ALTERNATE FUEL MACHINE CUTTING TORCH

MODEL SHOWN:
98-6TAFR-32

DESCRIPTION

The Model 98-6F machine cutting torch feature has a cutting "F" or (low pressure) for maximum performance using alternate fuels. Model 98 three hose machine cutting torches have a cutting capacity of 15". Two hose 98-6 torches have a barrel diameter of 1 1/8" and 32 pitch, 10.12 TPI rack that will fit any industry standard torch holder. Model 98 10" barrel torches have a cutting lever, and 18" barrel torches have a separate valve knob to actuate the cutting oxygen. The 98-6F is also available in a 3-hose valveless design for pipe beveling and multiple torch beveling.

DETAILS

Capacity: 2 hose - 8", 3 hose - 15"

Mixer Type: "F" or low pressure injector

Duty: Heavy

Length: 10", 18" and 5 1/2"

Certifications: UL® listed

Where used: Straight and contour machine cutting

Related items:

BV-98-2 P/N: 1200124

S-98-C P/N: 1200080

TH-98 P/N: 1200090



PART #	MODEL #	STYLE	CUTTING VALVE TYPE	BARREL LENGTH	WEIGHT (LBS.)	RECOMMENDED TIP STYLES	
						ACETYLENE-H ₂	ALTERNATE FUELS*
1101455	98-6FR-32	2 Hose	Lever	10"	3.3	—	6290 VVC
1101465	98-6TFR-32	3 Hose	Knob	10"	3.3	—	6290 VVCU
1101475	98-6TAFR-32	3 Hose	Knob	18"	4.2	—	6290 VVCP
1100231	98-3TFR-32	3 Hose	None	5 1/2"	2.2	—	66290 VVCM

*Propylene or propane-based fuels and natural gas. NOT FOR USE WITH ACETYLENE.

98-6E

MODEL



ACETYLENE MACHINE CUTTING TORCH

MODEL SHOWN:
98-6ER-32

DESCRIPTION

The Harris Model 98-6E machine cutting torch features an "E" or positive equal pressure mixer for all fuel gases. Harris Model 98-6 three hose cutting torches have a cutting capacity of 15" and two hose torches cut to 8". All machine torches have a barrel diameter of 1 1/8" and 32 pitch, 10.12 TPI rack that will fit any industry standard torch holder. Model 98 10" barrel torches have a cutting lever and 18" barrel torches have a separate valve knob to actuate the cutting oxygen.

DETAILS

Capacity: 2 hose - to 8";
3 hose - to 15"

Mixer Type: "E" or positive pressure

Duty: Heavy

Length: 10"-18"

Certifications: UL® listed

Where used: Straight and contour cutting

Related items:

S-98-C – P/N: 1200080

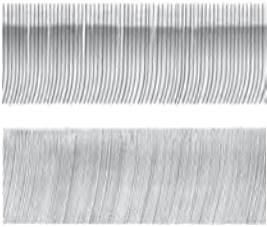

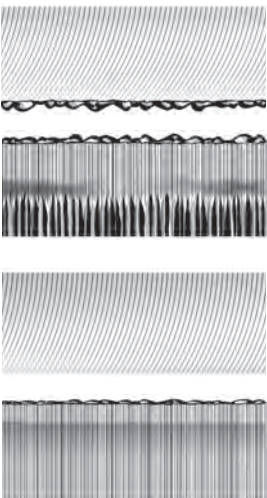


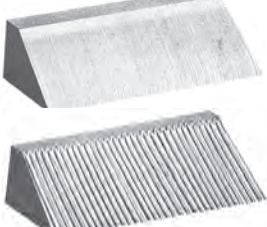
TH-98 – P/N: 1200090



PART #	MODEL #	STYLE	CUTTING VALVE TYPE	BARREL LENGTH	WEIGHT (LBS.)	RECOMMENDED TIP STYLES	
						ACETYLENE-H ₂	ALTERNATE FUELS*
1101425	98-6ER-32	2 Hose	Lever	10"	3.3	6290	6290 VVC
1101435	98-6TER-32	3 Hose	Knob	10"	3.3	6290AC	6290 VVCM
1101445	98-6TAER-32	3 Hose	Knob	18"	4.2	6290S	6290 VVCP 6290 VVCU

*Recommended for Acetylene.

MACHINE CUTTING GUIDE

CORRECT CUTS		<p>PERFECT CUT - Regular surface with slightly sloping drag lines indicates a perfect cut. A slight amount of scale at the top of the cut is caused by preheat flames and is easily removed. This surface can be used for many purposes without machining.</p> <p>PRODUCTION CUT - Moderately sloping drag lines and a reasonably smooth surface characterize a production cut. For production operations a cut of this type represents the best combination of quality and economy.</p>
DIRTY TIP		<p>DIRTY TIP - Dirt or scale in the tip will deflect the oxygen stream and cause one or more of the following problems: Excess slag on the steel, an irregular cut surface, pitting and undercutting.</p>
CUTTING SPEED		<p>EXTREMELY FAST - Rake angle of drag lines shows extremely fast cutting speed. Top edge is good and cut face is smooth. However, slag adheres to the bottom side and there is danger of losing the cut. Not enough time is allowed for slag to blow out of the kerf. Cut face often slightly concave.</p> <p>EXTREMELY SLOW - Pressure marks indicate too much oxygen for cutting conditions. Either the tip is too big, cutting oxygen pressure too high, or speed is too slow as shown by a rounded or beaded top edge as in this case. As oxygen volume nears correct proportions, pressure marks appear closer to the bottom edge until they finally disappear.</p> <p>SLIGHTLY TOO FAST - Drag lines incline backwards, but a "drop cut" is still attained. Top edge is good. Cut face is smooth and slag free. Quality is satisfactory for most production work.</p> <p>SLIGHTLY TOO SLOW - Cut is high quality although there is some surface roughness caused by vertical drag lines. Top edge is usually slightly beaded. Quality is generally acceptable, faster speeds are more desirable.</p>
TIP DISTANCE		<p>TOO CLOSE - Grooves and deep drag lines caused by unstable cutting action. Part of preheat cone burns inside kerf where normal gas expansion deflects oxygen cutting stream.</p> <p>TOO HIGH - Top edge is beaded or rounded, cut face is not smooth and often is slightly beveled when preheat effectiveness is partially lost due to the tip being held too high. Cutting speed is reduced because of the danger of losing the cut.</p>
GAS ADJUSTMENT		<p>TOO MUCH CUTTING OXYGEN - Pressure marks are caused by too much cutting oxygen. When more oxygen is supplied than can be consumed in oxidation, the remainder goes around the slag creating gouges, or pressure marks. Correct this fault by lowering cutting oxygen pressure, increasing speed, or using a smaller tip. As oxygen volume nears correct proportion, pressure marks appear closer to the bottom edge until they finally disappear.</p> <p>TOO HOT PREHEAT - Rounded top edge caused by too much preheat. Excess preheat does not increase cutting speed, it only wastes gases.</p>
WHAT TO LOOK FOR IN BEVEL CUTTING		<p>GOOD QUALITY - Top edge is excellent and cut face extremely smooth. Slag should be easy to remove and the cut part dimensionally accurate. Cutting speed is slower than vertical cutting because preheat effect is partially deflected from plate.</p> <p>POOR QUALITY - Gouging is the most common fault. It is caused by either a speed that is too fast or preheat flames that are too mild. Another fault is a rounded top edge, caused by too much preheat, indicating excessive gas consumption.</p>

80

MODEL



JUMBO MACHINE CUTTING TORCH

MODEL SHOWN:
80

DESCRIPTION

The Model 80 Jumbo Machine Cutting Torch has a recommended cutting range of 8" to 30". (See P. 117 for Model 8090 tips) It operates on fuel pressures of 10-15 PSIG. It features a solid head for maximum strength, and requires ½" oxygen cutting hose with "C" or ⅞" - 14 connections. Equipped with standard barrel diameter of 1 3/8" and a 32 pitch, 10.12 TPI rack.

DETAILS

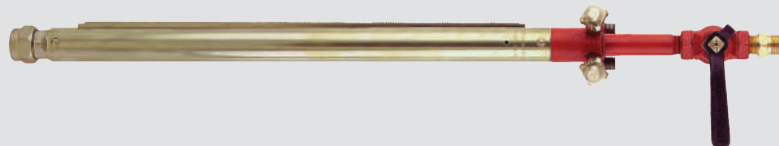
Capacity: 30"

Mixer Type: "E" equal or positive pressure

Duty: Heavy

Length: 8"-30"

Where used: Heavy straight or contour cutting

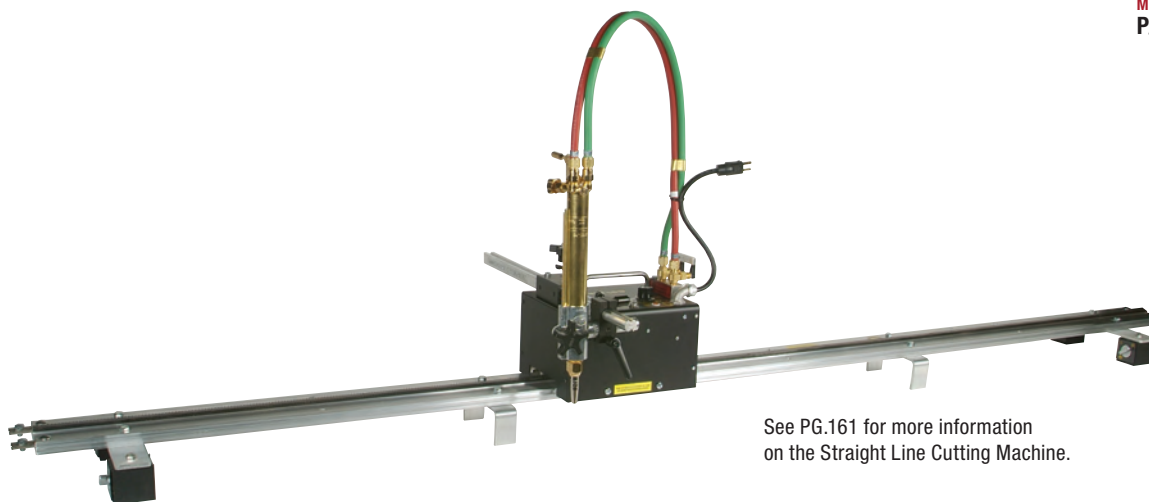


				TIP STYLES
PART #	MODEL #	STYLE	CUTTING VALVE TYPE	ALTERNATE FUELS*
1100010	80	3 Hose, no rack	Lever	8090
1100030	80-R	3 Hose, w/ rack	Lever	8090

*Propylene or propane-based fuels and natural gas

STRAIGHT LINE CUTTING MACHINE FOR BOTH MODELS 98 & 80

MODEL SHOWN:
P/N:4300950



See PG.161 for more information on the Straight Line Cutting Machine.

MACHINE CUTTING ACCESSORIES FOR MODEL 98-6 TORCHES



MODEL SHOWN:
BV-98-2 Beveling Head
P/N: 1200124

Increases speed of quality bevel cuts. Preheat tip swivels for either left or right travel. Equipped with 1390-3H heating tip. Use with natural gas or propane 6290 tips (not included).



MODEL SHOWN:
S-98-C Adjustable Tip Adapter
P/N: 1200080

Adjust tip to any angle without moving the torches. Use with any 6290 tips (not included).



MODEL SHOWN:
Model TH-98 Adjustable Twin Tip Holder
P/N: 1200090

For making two cuts simultaneously with one torch. Adjust from 1½" to 12" width. Use with any 6290 tips (not included).

SHAPE CUTTING



BEVEL CUTTING



STRAIGHT CUTTING



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COMBINATION KIT

Contain all the major components to allow you to weld, braze, heat and cut. Determine the fuel gas needed, and if you prefer heavy, medium or light duty.

CUTTERPAC®

Contain the major components necessary for cutting and some special applications. As with combination kits, determine the fuel gas to be used.

PORT-A-TORCH®

are generally combination kits with the emphasis on portability. Choose between these with or without cylinders.

YOUR CHOICE

Choose between Classic, "V" series, and Ironworker. Classic style components are genuine Harris. The Harris "V" series is compatible with Victor® style equipment but with superior Harris design features.



COMBINATION KITS-ALL FUEL GASES

MODEL SHOWN:
Pipeliner®
 Classic
 P/N: 4403235



MODEL SHOWN:
Steelworker®
 Classic
 P/N: 4403225



PIPELINER® CLASSIC

Cuts up to 1" plate, welds up to 1/8" plate with supplied tips. Cuts up to 5" plate, welds up to 1" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403236	43425-300 DLX	43-2	E-43	6290-1AC	73-3	23A90-5	425-125-540	425-15-300	• Goggles • Striker • 20' x 1/4" Hose • Tool Bag	18.9 lbs./ 8.57 kg.
4403235	43425-510 DLX	43-2	E-43	6290-1AC	73-3	23A90-5	425-125-540	425-15-510	• Tool Bag	17.6 lbs./ 7.98 kg.
4403237	43425-300 STD	43-2	E-43	6290-1AC	73-3	23A90-5	425-125-540	425-15-300	• Tool Bag	17.6 lbs./ 7.98 kg.
4403234	43425-510 STD	43-2	E-43	6290-1AC	73-3	23A90-5	425-125-540	425-15-510	• Tool Bag	17.6 lbs./ 7.98 kg.

STEELWORKER® CLASSIC

Cuts up to 1" plate, welds up to 1/8" plate with supplied tips. Cuts up to 5" plate, welds up to 1/2" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403225	8525GX-300 DLX	85	D-85	6290-1AC	72-3	23A90-5	25GX-145-540	25GX-15-300	• Goggles • Striker • 20' x 3/16" Hose • Tool Bag	15.8 lbs./ 7.17 kg.
4403224	8525GX-510 DLX	85	D-85	6290-1AC	72-3	23A90-5	25GX-145-540	25GX-15-510	• Tool Bag	11.14 lbs./ 5.05 kg.
4403227	8525FGX-300 STD	85	D-85	6290-1AC	72-3	23A90-5	25GX-145-540	25GX-15-300	• Tool Bag	11.14 lbs./ 5.05 kg.
4403226	8525FGX-510 STD	85	D-85	6290-1AC	72-3	23A90-5	25GX-145-540	25GX-15-510	• Tool Bag	11.14 lbs./ 5.05 kg.

EXPERT® CLASSIC

Cuts up to 1" plate, welds up to 1/8" plate with supplied tips. Cuts up to 4" plate, welds up to 1/2" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403229	85601-300 DLX	85	D-85	6290-1AC	72-3	23A90-5	601-80-540	601-15-300	• Goggles • 20' x 3/16" Hose • Striker • Tool Bag	12.9 lbs./ 5.85 kg.
4403228	85601-510 DLX	85	D-85	6290-1AC	72-3	23A90-5	601-80-540	601-15-510	• Tool Bag	11.28 lbs./ 5.12 kg.
4403244	85601-300 STD	85	D-85	6290-1AC	72-3	23A90-5	601-80-540	601-15-300	• Tool Bag	11.28 lbs./ 5.12 kg.
4403243	85601-510 STD	85	D-85	6290-1AC	72-3	23A90-5	601-80-540	601-15-510	• Tool Bag	11.28 lbs./ 5.12 kg.



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COMBINATION KITS-ALTERNATE FUELS

MODEL SHOWN:
Pipeliner®
Classic/Propane Kit
P/N: 4403240



MODEL SHOWN:
Steelworker®
Classic/Propane Kit
P/N: 4403239



PIPELINER® CLASSIC/PROPANE KIT*

Cuts up to 1" plate with supplied tips. Cuts up to 5" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	REGULATORS		ACCESSORIES	WEIGHT
						OXYGEN	FUEL		
4403240	43425F-510P DLX	43-2	—	6290-1NX	49-3F	425-125-540	425-50-510P	<ul style="list-style-type: none"> Goggles 20' x 1/4" "T" Hose Striker Tool Bag Tip 	15.8s. / 7.08 kg.

STEELWORKER® CLASSIC/PROPANE KIT*

Cuts up to 1" plate with supplied tips, cuts up to 4" plate with larger tips

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	REGULATORS		ACCESSORIES	WEIGHT
						OXYGEN	FUEL		
4403239	8525FGX-510P DLX	85	—	6290-1NX	39-3F	25GX-145-540	25GX-15-510P	<ul style="list-style-type: none"> Goggles 20' x 1/4" "T" Hose Striker Tool Bag 	14.7 lbs. / 2.13 kg.

*Supplied with Propane/Natural Gas or Propylene tips.

MODEL SHOWN:
Pipeliner®
Classic/Propylene Kit
P/N: 4403255



MODEL SHOWN:
Steelworker®
Classic/Propylene Kit
P/N: 4403254



PIPELINER® CLASSIC/PROPYLENE KIT*

Cuts up to 1" plate with supplied tips. Cuts up to 5" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	REGULATORS		ACCESSORIES	WEIGHT
						OXYGEN	FUEL		
4403255	43425F-510P DLX	43-2	—	6290-1NXP	49-3F	425-125-540	425-50-510P	<ul style="list-style-type: none"> Goggles 20' x 1/4" "T" Hose Striker Tool Bag 	20 lbs./ 9.07 kg.

*Supplied with Propane/Natural Gas or Propylene tips.

STEELWORKER® CLASSIC/PROPYLENE KIT*

Cuts up to 1" plate with supplied tips. Cuts up to 4" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	REGULATORS		ACCESSORIES	WEIGHT
						OXYGEN	FUEL		
4403254	8525FGX-510P DLX	85	—	6290-1NXP	39-3F	25GX-145-540	25GX-15-510P	<ul style="list-style-type: none"> Goggles 20' x 1/4" "T" Hose Striker Tool Bag 	19 lbs./ 8.62 kg.

*Supplied with Propane/Natural Gas or Propylene tips.

CLASSIC PORT-A-TORCH®

HARRIS PORT-A-TORCH®

A Harris Port-A-Torch® contains all the quality equipment needed for cutting, welding and brazing packaged in a rugged, molded plastic carrying case. The outfit is designed to carry one MC acetylene cylinder and one 20 cu. ft. oxygen cylinder. As supplied, the outfit is capable of cutting up to a 1" plate and welding up to a 1/16" plate. The outfit can cut up to a 4" plate and weld up to a 1/2" plate with larger tips and acetylene cylinder.

MODEL SHOWN:
Port-A-Torch®
P/N: 4403211



CLASSIC PORT-A-TORCH® WITH CYLINDERS

Cuts up to 1" plate, welds up to 1/16" plate with supplied tips.

Cuts up to 4" plate, welds up to 1/2" plate with larger tips and Acetylene cylinder.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403211	85601-200 w/Cyl.	85	D-85	6290-1AC	72-3	23A90-3	601-80-540B	601-15-200B	<ul style="list-style-type: none"> Goggles Striker 12' x 3/16" Hose 20 CU. Ft. O₂ Cylinder 10 CU. FT. Acet. Cylinder Acet. Cylinder Wrench Tool Bag (Cylinders shipped empty) 	38.0 lbs. / 17.24 kg.

CLASSIC PORT-A-TORCH® WITHOUT CYLINDERS

Cuts up to 1" plate, welds up to 1/16" plate with supplied tips.* Cuts up to 4" plate, welds up to 1/2" plate with larger tips and Acetylene cylinder.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403213	85601-200 w/o Cyl.	85	D-85	6290-1AC	72-3	23A90-3	601-80-540B	601-15-200B	<ul style="list-style-type: none"> Goggles 20' x 3/16" Hose Toolbag Striker Acet. Cylinder Wrench 	16.0 lbs. / 7.26 kg.

V-SERIES® COMBINATION KITS - ALL FUEL GASES

MODEL SHOWN:
V-Series® Pipeliner®
All Gas/Acetylene Kit
P/N: 4403230



MODEL SHOWN:
V-Series® Steelworker®
All Gas/Acetylene Kit
P/N: 4403222

* See next page



V-SERIES® PIPELINER® ALL GAS/ACETYLENE KIT

Cuts up to 1" plate, welds up to 1/8" with supplied tips. Cuts up to 6" plate, welds up to 1" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403223	V-3152500-300 DLX	V-315C	V-W	N/A	V-2460	23A90-5	2500-125-540	2500-15-300	<ul style="list-style-type: none"> Goggles Striker 20' x 1/4" Hose Tool Bag 	13.36 lbs. / 9.01 kg
4403221	V-3152500-510 DLX	V-315C	V-W	N/A	V-2460	23A90-5	2500-125-540	2500-15-510	<ul style="list-style-type: none"> Goggles Striker 20' x 1/4" Hose Tool Bag J-63-2 Heating Tip 	19.86 lbs. / 6.17 kg.
4403230	V-3152500-510 DLX (Plus)	V-315C	V-W	1-V1-101	V-2460	23A90-3, 5 & 8	2500-125-540	2500-15-510	<ul style="list-style-type: none"> Goggles Striker 20' x 1/4" Hose Tool Bag J-63-2 Heating Tip 	19.86 lbs. / 6.17 kg.



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V-SERIES® COMBINATION KITS - ALL FUEL GASES

V-SERIES® STEELWORKER® ALL GAS/ACETYLENE KIT

Cuts up to 1" plate, welds up to 1/8" with supplied tips. Cuts up to 4" plate, welds up to 1/2" plate with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403220	V-100C25GX-510	V-100C	V-W-1	1-V3-101	V-1350	23A90-5	25GX-145-540	25GX-15-510	• Goggles • 20' x 1/4" Hose	• Striker • Tool Bag 14.92 lbs. / 6.77 kg.
4403222	V-100C25GX-300 DLX	V-100C	V-W-1	1-V3-101	V-1350	23A90-5	25GX-145-540	25GX-15-300	• Goggles • 20' x 1/4" Hose	• Striker • Tool Bag 14.92 lbs. / 6.77 kg.
4403231	V-100C25GX-510 DLX (Plus)	V-100C	V-W-1	1-V3-101	V-1350	23A90-3, 5 & 8	25GX-145-540	25GX-15-510	• Goggles • 20' x 1/4" Hose	• Striker • Tool Bag • J-63-2 Heating Tip 14.92 lbs. / 6.77 kg.

MODEL SHOWN:
V-Series® Expert
All Gas/Acetylene Kit
P/N: 4403233



MODEL SHOWN:
V-Series®
LPG Combo Kit
P/N: 4403241



V-SERIES® EXPERT ALL GAS/ACETYLENE KIT

Cuts up to 1" plate, welds up to 1/8" with supplied tips. Cuts up to 4" plate, welds up to 1/2" with larger tips.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403233	V-100601-300 DLX	V-100C	V-W-1	1-V3-101	V-1350	23A90-5	601-80-540 B	601-15-300 B	• Goggles • Striker	13.16 lbs./ 5.97 kg.
4403232	V-100601-510 DLX	V-100C	V-W-1	1-V3-101	V-1350	23A90-5	601-80-540 B	601-15-510 B	• 20' x 1/4" Hose • Tool Bag	
4403246	V-100601-300 STD	V-100C	V-W-1	1-V3-101	V-1350	23A90-5	601-80-540 B	601-15-300 B	• Tool Bag	11.28 lbs. / 5.12 kg.
4403245	V-100601-510 STD (Plus)	V-100C	V-W-1	1-V3-101	V-1350	23A90-5	601-80-540 B	601-15-510 B		

V-SERIES® LPG COMBO KIT

Cuts up to 1" plate supplied tip. Cuts up to 6" plate with larger tip.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403241	V-315C-2500-510P DLX	V-315C	—	—	V-2460-F	—	2500-125-540	2500-50-510 P	• Goggles • 20' x 1/4" "T" Grade Hose	• Striker • Tool Bag 15.56 lbs. / 7.06 kg.

IRONWORKER® KITS

MODEL SHOWN:
IRONWORKER®
Acetylene Kit
P/N: 4400359



MODEL SHOWN:
IRONWORKER® 2
Acetylene Kit
P/N: 4400361



IRONWORKER® ACETYLENE KIT WITH STAINLESS STEEL DIAPHRAGM REGULATORS

Cuts up to 1" plate, welds up to 1/16" with supplied tips. Cuts up to 8" plate, weld up to 1/2" Plate with larger tips.

PART #	Model #	TORCH HANDLE	FLASHBACK ARRESTORS		MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
			OXYGEN	FUEL					OXYGEN	FUEL		
4400359	HV3145S-300 DLX	VH31	88-5N FBTR	88-5N FBTL	V-W	V1-101-1	VH24	23A90-3	45S-145-540	45S-15-300	<ul style="list-style-type: none"> Goggles Striker Tip Cleaner Replacement Flints 20' x 1/4" Grade R Hose Cooler Bag 	18 lbs./ 8.16 kg
4400358	HV3145S-510 DLX	VH31	88-5N FBTR	88-5N FBTL	V-W	V1-101-1	VH24	23A90-3	45S-145-540	45S-15-510	<ul style="list-style-type: none"> Goggles Striker Tip Cleaner Replacement Flints 20' x 1/4" Grade R Hose Cooler Bag 	

IRONWORKER® 2 ACETYLENE KIT WITH NEOPRENE DIAPHRAGM REGULATORS

Cuts up to 1" plate. Cuts up to 8" plate, weld up to 1/2" Plate with larger tips.

PART #	Model #	TORCH HANDLE	FLASHBACK ARRESTORS		MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
			OXYGEN	FUEL					OXYGEN	FUEL		
4400361	HV3145-300 DLX	VH31	88-5N FBTR	88-5N FBTL	-	V1-101-1	VH24	-	45-145-540	45-15-300	<ul style="list-style-type: none"> Goggles Striker 20' x 1/4" Grade R Hose Cooler Bag 	17 lbs./ 7.71 kg
4400360	HV3145-510 DLX	VH31	88-5N FBTR	88-5N FBTL	-	V1-101-1	VH24	-	45-145-540	45-15-510	<ul style="list-style-type: none"> Goggles Striker 20' x 1/4" Grade R Hose Cooler Bag 	

V-SERIES® CLASSIC PORT-A-TORCH®

HARRIS PORT-A-TORCH®

A V-Series® Port-A-Torch® contains all the quality equipment needed for cutting, welding and brazing packaged in a rugged, molded plastic carrying case. The outfit is designed to carry one MC acetylene cylinder and one 20 cu. ft. oxygen cylinder. As supplied, the outfit is capable of cutting up to a 1" plate and welding up to a 1/16" plate. The outfit can cut up to a 4" plate and weld up to a 1/2" plate with larger tips and acetylene cylinder.

MODEL SHOWN:
Port-A-Torch®
P/N: 4403214



V-SERIES® PORT-A-TORCH®

Cuts up to 1" plate, welds up to 1/16" plate with supplied tips. Cuts up to 4" plate, welds up to 1/2" with larger tips and acetylene cylinder.

PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403214	V-100601-200 DLX	100C	V-W-1	1-V3-101	V-2460	23A90-3	601-80-540	601-15-200	<ul style="list-style-type: none"> Goggles Striker 12' x 3/16" Hose 20 CU. Ft. O₂ Cylinder 10 CU. FT. Acet. Cylinder Acet. Cylinder Wrench Tool Bag (Cylinders shipped empty) 	38.30 lbs. / 17.37 kg.
4403215	V-100601-200 STD.	100C	V-W-1	1-V3-101	V-2460	23A90-3	601-80-540	601-15-200	<ul style="list-style-type: none"> Goggles Striker 12' x 3/16" Hose Acet. Cylinder Wrench Tool Bag 	33 lbs./ 14.97 kg.

CUTTER PAC® - ALL FUEL GASES



MODEL SHOWN:
Cutter Pac®
Classic 62-5E Acetylene Gas
P/N: 4401640



MODEL SHOWN:
Cutter Pac®
Classic 62-5E Acetylene Gas
P/N: 4401638

CLASSIC 62-5E ACETYLENE GAS CUTTER PAC®

Cuts up to 1" plate. Cuts up to 12" plate with optional tips.

PART #	MODEL #	TORCH	TORCH LENGTH	TORCH HEAD ANGLE	CUTTING TIP	REGULATORS		WEIGHT
						OXYGEN	FUEL	
4401640	6225EGX-300	62-5E	18"	90°	—	25GX-145-540	25GX-15-300	10.42 lbs. / 4.73 kg.

CLASSIC 62-5E ACETYLENE GAS CUTTER PAC® *

Cuts up to 1" plate with supplied tip. Cuts up to 12" plate with larger tips.

PART #	MODEL #	TORCH	TORCH LENGTH	TORCH HEAD ANGLE	CUTTING TIP*	REGULATORS		WEIGHT
						OXYGEN	FUEL	
4401638	6225EGX-510	62-5E	18"	90°	6290-1AC	25GX-145-540	25GX-15-510	10.69 lbs. / 4.85 kg.

*Includes Acetylene tip—other tips available.

CUTTER PAC® - ALTERNATE FUELS



MODEL SHOWN:
Cutter Pac®
Classic 62-5F Alternate
Fuel/Propane Gas
P/N: 4401639

CLASSIC 62-5F ALTERNATE FUEL/PROPANE GAS CUTTER PAC® *

Cuts up to 1" plate with supplied tip. Cuts up to 12" plate with larger tips.

PART #	MODEL #	TORCH	TORCH LENGTH	TORCH HEAD ANGLE	CUTTING TIP*	REGULATORS		WEIGHT
						OXYGEN	FUEL	
4401639	6225FGX-510P	62-5F	18"	90°	6290-1NX	25GX-145-540	25GX-50-510P	10.68 lbs. / 4.84 kg.

*Includes Propane tip—other alternate fuel tips available.



HARDHAT™ SERIES

**ALL HARDHAT
KITS FEATURE
FLASHBACK
ARRESTORS**



MODEL SHOWN:
Oxygen 88-5N FBTR
P/N: 4301628

MODEL SHOWN:
Fuel 88-5N FBTL
P/N: 4301629

CLASSIC HARDHAT™ CUTTER PAC® - ALL FUEL GASES

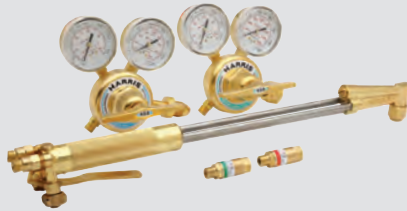
CLASSIC 62-5E ALL FUEL CUTTER PAC®

Cuts up to 12" plate with optional tips.

PART #	MODEL #	TORCH	FLASHBACK ARRESTORS		TORCH LENGTH	TORCH HEAD ANGLE	REGULATORS		WEIGHT
			OXYGEN	FUEL			OXYGEN	FUEL	
4401739	62450E-510	62-5EL-21	88-5N FBTR	88-5N FBTL	21"	90°	450-125-540	450-15-510	14.20 lbs. / 6.44 kg.

CLASSIC HARDHAT™ CUTTER PAC® - ALTERNATE FUELS

MODEL SHOWN:
Classic Hardhat
Cutter Pac®
P/N: 4401735



MODEL SHOWN:
Classic Hardhat
Cutter Pac®
P/N: 4401732



CLASSIC HARDHAT CUTTER PAC®

Cuts up to 12" plate with optional tips.

PART #	MODEL #	TORCH	FLASHBACK ARRESTORS		TORCH LENGTH	TORCH HEAD ANGLE	REGULATORS		WEIGHT
			OXYGEN	FUEL			OXYGEN	FUEL	
4401735	62450F-510P	62-5FL-21	88-5N FBTR	88-5N FBTL	21"	90°	450-125-540	450-50-510P	13.5 lbs. / 6.12 kg.
4401733	62425F-510P	62-5FL-21	88-5N FBTR	88-5N FBTL	21"	90°	425-125-540	425-50-510P	13.5 lbs. / 6.12 kg.

CLASSIC HARDHAT CUTTER PAC®

Cuts up to 6" plate with optional tips.

PART #	MODEL #	TORCH	FLASHBACK ARRESTORS		TORCH LENGTH	TORCH HEAD ANGLE	REGULATORS		WEIGHT
			OXYGEN	FUEL			OXYGEN	FUEL	
4401734	42450F-510P	42-4FL-20	88-5N FBTR	88-5N FBTL	20"	90°	450-125-540	450-50-510P	13.5 lbs. / 6.12 kg.
4401732	42425F-510P	42-4FL-20	88-5N FBTR	88-5N FBTL	20"	90°	425-125-540	425-50-510P	13.5 lbs. / 6.12 kg.

MODEL SHOWN:
Classic Hardhat
Alternate Fuel Cutter Pac®
P/N: 4401743



MODEL SHOWN:
Classic Hardhat
All Fuel Cutter Pac®
P/N: 4401739



CLASSIC HARDHAT ALTERNATE FUEL COMBO KIT

Maximum capacity. Cuts up to 12" plate with optional tips.

PART #	MODEL #	TORCH HANDLE	FLASHBACK ARRESTORS		MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		WEIGHT
			OXYGEN	FUEL					OXYGEN	FUEL	
4401743	43450F-510P	43-2	88-5N FBTR	88-5N FBTL	—	—	49-3F	—	450-125-540	450-50-510P	15.5 lbs. / 7.03 kg.



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KITS

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CLASSIC HARDHAT™ V-SERIES® COMBINATION KITS - ALL FUEL GASES

MODEL SHOWN:
V-Series® Hardhat
P/N: 4401737



MODEL SHOWN:
V-Series® Hardhat
P/N: 4401742



V-SERIES® HARDHAT

Cuts up to 6" plate, welds up to ½" plate with optional tips.

PART #	MODEL #	TORCH HANDLE	FLASHBACK ARRESTORS		CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		WEIGHT
			OXYGEN	FUEL			OXYGEN	FUEL	
4401741	V-315450-300	V-315C	88-5N FBTR	88-5N FBTL	V-2460	—	450-125-540	450-15-300	13.8 lbs. / 6.26 kg.
4401737	V-315450-510	V-315C	88-5N FBTR	88-5N FBTL	V-2460	—	450-125-540	450-15-510	13.8 lbs. / 6.26 kg.
4401740	V-315425-300	V-315C	88-5N FBTR	88-5N FBTL	V-2460	—	425-125-540	425-15-300	11.6 lbs. / 5.26 kg.
4401736	V-315425-510	V-315C	88-5N FBTR	88-5N FBTL	V-2460	—	425-125-540	425-15-510	11.6 lbs. / 5.26 kg.

V-SERIES® HARDHAT

Cuts up to 4" plate, welds up to ½" plate with optional tips.

PART #	MODEL #	TORCH HANDLE	FLASHBACK ARRESTORS		CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		WEIGHT
			OXYGEN	FUEL			OXYGEN	FUEL	
4401738	V-100C450-510	V-100C	88-5N FBTR	88-5N FBTL	V-1350	—	450-125-540	450-15-510	11.2 lbs. / 5.08 kg.
4401742	V-100C425-300	V-100C	88-5N FBTR	88-5N FBTL	V-1350	—	425-125-540	425-15-300	11.2 lbs. / 5.08 kg.



NOW THAT'S A HOT TIPSM

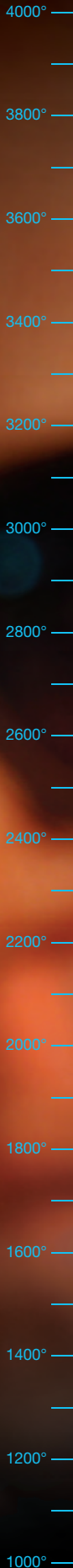
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LASER KITS

BASIC LASER GAS START-UP KITS



TYPICAL APPLICATION

Harris Universal Basic Laser Start-Up Kits provide the most common equipment necessary for supplying resonator and assist gases to the laser. Basic kits contain high purity regulators for resonator gases, high-flow dome-loaded regulators for nitrogen and oxygen assist gases. Laser grade hose is included for the resonator gas, as well as, two high-capacity hoses for the assist gases and various fittings.

DETAILS:

- High purity laser gas regulator with purge for resonator kits
- High flow dome loaded regulators for N₂ and O₂ for assist kits
- High flow assist gas and high purity laser hose for assist kits
- Assorted fittings for easy hook-up



PART #	DESCRIPTION
4703521	Universal Basic Assist Gas Start-Up Kit
4703522	Harris Basic Resonator Laser Start-Up Kit, Premix Gas Universal
4703519	Harris Basic Resonator Laser Start-Up Kit, 3-Gas Universal

PREMIUM LASER GAS START-UP KITS



TYPICAL APPLICATION

Harris Universal Premium Laser Start-Up Kits provide the essential equipment for supplying resonator and assist gases from source to point-of-use. All premium kits include switchover systems for the resonator gases, high-flow dome-loaded regulators for the assist gases and cylinder process stations. Premium kits also include purges and "T" filters to protect laser optics and various fittings.

DETAILS

- High purity laser gas switchover with purges
- High flow dome loaded regulators for N₂ and O₂
- High flow assist gas and high purity laser hose
- T-Type particle filters to protect optics
- Assorted fittings for easy hook-up



PART #	DESCRIPTION
4703515	Universal Premium Assist Gas Start-Up Kit
4703518	Nitrogen Only Premium Assist Start-Up Gas Kit
4703514	Premium Mazak® Laser Start-Up Kit Resonator and Assist Gas
4703516	Harris Premium Laser Start-Up Kit, Premix Universal
4703517	Harris Premium Laser Start-Up Kit, 3-Gas Universal

TWO-GAS BLENDERS

FOR WELDING GASES AND OTHER APPLICATIONS



DESCRIPTION

Harris offers a full range of industrial gas blenders for a wide array of applications including welding processes, packaging and food service. These gas blenders are designed to create a custom gas mixture defined by the user with the turn of a single knob.

FEATURES

- Variable ratios up to 100% on some Models
- Flow ranges up to 2500 SCFH
- 1/4" NPT or 1/2" NPT inlet/outlet connection
- Accuracy +/- 2%



PART #	MODEL #	GAS SERVICE	MAXIMUM FLOW	RANGE	RECEIVER TANK REQUIRED
4302053	US-S10-1	Ar/CO ₂	500 SCFH	0-100% CO ₂ in Ar	No
4302054	US-S10-2	Ar/O ₂	500 SCFH	0-25% O ₂ in Ar	No
4302063	US-S10-3	Ar/He	500 SCFH	0-100% He in Ar	No
4302068	US-S10-4	N ₂ /O ₂	500 SCFH	0-25% O ₂ in N ₂	No
4302070	US-L20-1	Ar/CO ₂	700 SCFH	0-100% CO ₂ in Ar	Yes (included)
4302071	US-L20-2	Ar/O ₂	700 SCFH	0-25% O ₂ in Ar	Yes (included)
4307072	US-L20-3	Ar/He	700 SCFH	0-100% He in Ar	Yes (included)
4302067	MG 75-2 Fixed	Ar/CO ₂	2500 SCFH	Custom Fixed Blend of Ar/CO ₂ (specify when ordering)	Not required
4302066	MG 75-2 Flex	Ar/CO ₂	2500 SCFH	Variable Ratio of Ar/CO ₂ from 5-41%	Not required
ACCESSORY					
4302076	Oxybaby M+	CO ₂ and O ₂ Blends	N/A	CO ₂ and O ₂ Gas Analyzer	N/A

GAS MANIFOLDS

BOXED SWITCHOVER MANIFOLDS



MODEL 220 AND 220HP —

High pressure cylinder switchover systems

The Models 220 and 220HP are automatic switchover systems designed to provide uninterrupted gas supply from high pressure gas cylinders.

MODEL 240 AND 240HP —

Liquid cylinder switchover systems

The Models 240 and 240HP are automatic switchover systems designed to provide uninterrupted gas supply from liquid cylinders.

See our INDUSTRIAL MANIFOLD BROCHURE (P/N: 9503065)
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GAS MANIFOLDS

OPEN SWITCHOVER SYSTEMS



MODEL 260 AND 260LE (LIQUID CYLINDER) — High pressure/high flow cylinder switchover systems

The Model 260 and 260 LE are automatic switchover systems designed to deliver flows to 5500 SCFH and pressures up to 500 psig. Typical applications include laser assist gas supply, bulk gas back-up and high flow blanketing.

FEATURES

- Outlet line control regulator included
- Max inlet 3000 PSIG for Model 260 and 350 PSIG for Model 260 LE
- 72" pigtails with integral check valves
- Inlet/outlet ½" NPT
- Stainless steel panel
- Model 260 LE has built-in gas economizer circuit



PART #	DESCRIPTION	GAS SERVICE
4701502	Model 260 Switchover (250 PSI)	Industrial High Purity
4701508	Model 260-IR42-1L72-580 (250 PSI)	Ar/He/N ₂
4701525	Model 260-IR72-1L72-540	Oxygen

* For a complete listing, see the Gas Distribution systems catalog

MODEL 900 — High Purity or Industrial Switchover System

The Model 900 is an automatic switchover system designed to provide uninterrupted gas supply from cylinders.

FEATURES

- Outlet line control regulator included
- Max inlet 3000 PSIG
- Delivery pressure 0-125 PSIG
- Inlet/Outlet ¼" NPT
- Max flow up to 750 SCFH
- Can be used with industrial or high-purity gases



PART #	DESCRIPTION	GAS SERVICE
4700232	Model 900 Switchover 125 PSI	Industrial High Purity
4700250	Model 900BR-IR-IL-580	Ar/He/N ₂
4700247	Model 900BR-IR-IL-540	Oxygen
4700233	Model 900BR-IR-IL-320	CO ₂

*For a complete listing, see the Gas Distribution systems catalog

MODEL 905 — Economical High Purity or Industrial Switchover System

The Model 905 is a compact economical automatic switchover system designed to provide uninterrupted gas supply from cylinders.

FEATURES

- Compact design
- Includes outlet line control regulator
- Delivery pressure 0-125 PSIG
- Inlet/Outlet ¼" NPT
- 24" or 36" pigtails available
- Can be used with industrial or high-purity gases



PART #	DESCRIPTION	GAS SERVICE
4701204	SG905-125 Switchover	Industrial or High Purity
4701240	SG905-IR-IL-580	Ar/He/N ₂
4701239	SG905-IR-IL-580	Oxygen

*For a complete listing, see the Gas Distribution systems catalog

For more information on Harris' complete line of manifolds, see the Gas Distribution Systems catalog.

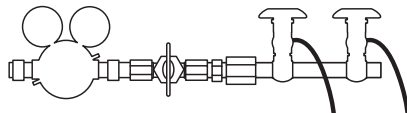
GAS MANIFOLDS

SIMPLEX AND DUPLEX ALL BRASS INDUSTRIAL MANIFOLDS

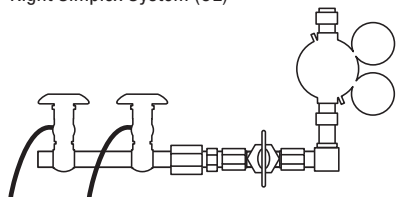


MODEL 200 — Single Regulator Simplex (R or L) or Duplex System

The Model 200 is a manual switchover system for single source or dual source gas supply. High flow Model 3510 line control regulator sold separately.



Right Simplex System (OL)



Left Simplex System (OR)



MODEL 210* — Duplex Automatic Switchover/Manual Reset System

The Model 210 is a basic automatic switchover system requiring manual resetting of cylinder tanks when empty.

*Line control regulator sold separately.

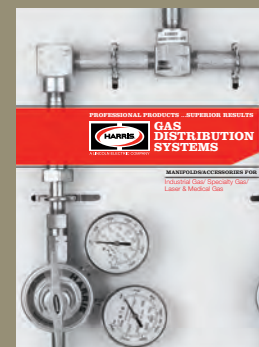


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ACCESSORIES



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REGULATOR AND TORCH ACCESSORIES

GAUGES

1½" DUAL SCALE STEEL (PSI/kPA)

PART #	PRESSURE PSI/kPA
9006044	30/200 Red Zone
9006051	30/200
9006035	150/1,000
9006030	400/2,800
9006025	4,000/28,000

NOTE: 1/8-NPT Stem

2" DUAL SCALE STEEL (PSI/kPA)

PART #	PRESSURE PSI/kPA
9006127	30/200 Red Zone
9006128	30/200
9006120	60/400
9006125	150/1,000
9006130	400/2,800
9006131	1,000/700
9006135	4,000/28,000

NOTE: 1/4-NPT Stem

2½" DUAL SCALE BRASS (PSI/kPA)

PART #	PRESSURE PSI/kPA
9006100	30/200 Red Zone
9006070	60/400
9006077	100/700
9006065	200/1,400
9006060	400/2,800
9006080	2,000/14,000
9006050	4,000/28,000

NOTE: 1/4-NPT Stem

2½" DUAL SCALE BRASS PLATED (PSI/BAR)

PART #	PRESSURE PSI/BAR
9006118	30/2
9006289	100/7
9006109	200/14
9006108	400/28
9006117	500/35
9006302	600/40
9006203	3,000/200
9006107	4,000/280
9006252	6,000/400
9006251	10,000/700

NOTE: 1/4-NPT Stem

2½" DUAL SCALE STEEL (PSI/ kPA)

PART #	PRESSURE PSI/BAR
9007248	30/200 Red Zone
9007249	30/200
9007246	60/400
9007247	200/1,400
9007250	400/2,800
9007251	1,000/7,000
9007252	4,000/28,000

NOTE: 1/4-NPT Stem

FLOWGAUGES* 1/4-NPT

PART #	SIZE	FLOW SCFH	(DRILL) ⅜" F
9006133	2"	0-60	(#59-P/N 9100408)
9006417	2"	5-30	(#64-P/N 9100906)
9006139	2½"	0-100	(#76-P/N 9100908)

NOTE: 1/4-NPT Stem

*Flowgauge must be matched with the proper drilled orifice and gas to be accurate.



50MM DUAL SCALE ABS (PSI/BAR)

PART #	PRESSURE PSI/BAR
9006257	30/2
9006255	100/7
9006256	400/28
9006254	4000/300

NOTE: 1/8-BSP Stem - Requires Gasket P/N: 9000643

50MM DUAL SCALE ABS (SCFH/LPM)

PART #	PRESSURE SCFH/LPM
9006253	60 CFH/30 LPM
9006303	60 CFH/15 LPM

NOTE: 1/8-BSP Stem - Requires Gasket P/N: 9000643

REGULATOR AND TORCH ACCESSORIES

TIP NUTS

PART #	MODEL #	DESCRIPTION
9002560	6259-B	Tip Nut (for 98, 62, 72-3, 71-3, 39-3, 49-3 and 42-4)
9005227	7259-2R	Tip Nut (for V-1350)
9005236	6259-V	Tip Nut (for V-2460, V-62 and V-242)
9002537	213159	Tip Nut (for 2101, 3101 and 880)
9002925	110059	Tip Nut (for 1000)
9008437	3659-1	Tip Nut (for 36 CAs)



"V" Series



Classic Series

NEEDLE VALVES-NPT

PART #	INLET	OUTLET
9100412	1/4"	1/4"
9100416	1/4"	9/16"-18 RH
9100414	1/4"	9/16"-18 LH



HOSES

PART #	DESCRIPTION
4300556	3/16" x 12' twin hose
4300725	3/16" x 12.5' twin hose, B & B fittings, "T" grade
4300005	3/16" x 12' twin hose, A & B fittings
4300771	3/16" x 12.5' twin hose, A & B fittings, "T" grade*
4300499	3/16" x 20' twin hose
4300532	3/16" x 20' twin hose, "T" grade*
4300772	3/16" x 20' twin hose, A & B fittings, "T" grade*
4300583	1/4" x 12.5' twin hose, "T" grade*
4300500	1/4" x 20' twin hose
4300533	1/4" x 20' twin hose, "T" grade*
4300530	1/4" x 50' twin hose
4300138	3/16" x 10' single line inert gas hose

*Recommended for Alternate Fuels



OTHER ACCESSORIES ARE AVAILABLE

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WELDING CABLE
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ACCESSORIES

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REGULATOR AND TORCH ACCESSORIES

TIP CLEANERS

Always use the proper type and size tip cleaners. The right tip cleaner does the job more efficiently, maintaining the proper gas stream, and lessening the chance of permanent damage to more expensive torches and tips.

STANDARD TIP CLEANER

CLEANING INSTRUCTIONS: Care should be taken not to be too aggressive when cleaning tips. Always use the proper size tip cleaner and be careful not to enlarge or distort the original tip bore size.



C-9 Standard Tip Cleaner
MODEL SHOWN:
P/N: 9000156

LARGE TIP CLEANER

CLEANING INSTRUCTIONS: Care should be taken not to be too aggressive when cleaning tips. Always use the proper size tip cleaner and be careful not to enlarge or distort the original tip bore size.



D-9 For Large Bore Tips
MODEL SHOWN:
P/N: 9000158

TWO-PIECE AND DIVERGENT BORE TIP CLEANER

CLEANING INSTRUCTIONS: The wire brush included with tip cleaner E-9 (P/N: 9000160) should be used for cleaning preheat slots and for removing spatter from the tip face. When cleaning the preheat slots, do not brush across the slots as this motion can damage the slots. Always brush along the length of the slot to remove dirt or spatter.



E-9 Two-piece Tip Cleaner
MODEL SHOWN:
P/N: 9000160

CIRCLE CUTTING ATTACHMENT

MODEL R-69-3B CIRCLE CUTTING ATTACHMENT*

The Model R-69-3B can be used for cutting circles up to 30" in diameter, as well as straight line cutting. A swivel nut permits circle cutting without tangling hoses. Wheels are adjustable for individual torch height. The R-69-3B makes it possible to have better quality cuts with hand torches.

*Not for use with Pro Series equipment, Model 36 cutting attachment, Model 880 cutting torch or V-Series equipment.



MODEL SHOWN:
P/N: 4300200

REGULATOR AND TORCH ACCESSORIES

INLET NUTS AND STEMS



CGA 200 "MC" Cylinder



CGA 300



CGA 320



CGA 326



CGA 346



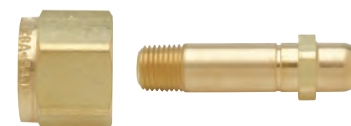
CGA 350



CGA 510



CGA 520 "B" Cylinder



CGA 540



CGA 590



CGA 580



CGA 600

COMMON INLET NUTS AND STEMS

CGA CONN #	STANDARD CONN FOR (TYPE GAS)	NUT #	STEM # 1/4" NPT	RING #	NUT	STEM # 15MM
CGA 200	Acetylene	-	-	9004030	9005132	9000667
		9005132	9005126	9005133	(Assembly 9100934)	
CGA 300	Acetylene	9002984	9005108	9004030	9000699	9000693
CGA 320	Carbon Dioxide (Gasket 9002910)	9002986	9005114	9004030	9000659	9000661 9005692 (3 1/2")
CGA 326	Nitrous Oxide	9002966	9005149	9004030	-	-
CGA 346	Medical Air	9002969	9000319	9004030	-	-
CGA 350	Hydrogen	9003006	9005145	9004030	-	-
CGA 510	Acetylene LPG*	9002972 9002974	9005109 9005109	- -	9000968 9003119	9000647 9000647
CGA 520	Acetylene	9002980	9005125	9004030	9002980	9003118
CGA 540	Oxygen	9002950	9005110	9004030	9000671	9000673
CGA 580	Nitrogen, Argon, Helium	9003048	9005109	-	9000645	9000647 9005693 (3 1/2")
CGA 590	Industrial Air (Argon, Helium, Nitrogen)	9003052	9005109	-	-	-
CGA 600	LPG*	-	-	-	(Assembly 9101181)	

*LPG compatible with all Liquid Petroleum Gases

SURGE GUARD PROTECTION

CGA CONN #	STANDARD CONN OXYGEN	STEM # 1/4" NPT
540	Oxygen	9105602



HIGH PRESSURE 5500 PSIG INLET STEMS AND NUTS

CGA CONN #	STANDARD CONN FOR (TYPE GAS)	NUT #	STEM # 1/4" NPT	RING #
CGA 347	Air	9003001	9005161	N/A
CGA 680	Argon, Helium, Nitrogen	9003000	9005160	N/A
CGA 695	Hydrogen	9002963	9005160	N/A
CGA 677	Argon, Helium, Nitrogen	9005197	9005196	N/A

REGULATOR AND TORCH ACCESSORIES

OSHA COMPLIANT OXYGEN-FUEL QUICK CONNECTORS

FEATURES

- Long-lasting stainless steel pin connection
- Automatic gas cut-off feature to positively shut off the gas supply when disconnected
- Helps prevent theft by making it easier to take down and put away equipment
- Durable brass and stainless steel construction
- 5/16" - 18 "B" connections
- Meets OSHA 29CFR, 1926.350(f)(5) and ISO 7289



MODEL SHOWN:

Regulator Type Model 26-QCR (R&L)
P/N: 4301653 - (Sold in pairs only)



MODEL SHOWN:

Torch Type Model 26-QCT (R&L)
P/N: 4301654 - (Sold in pairs only)

REGULATOR OUTLET MOUNT TYPE

PART #	MODEL #	PACK	FUEL/OXYGEN
4301653	26-QCR (R&L)	Pairs only	Fuel and Oxygen

TORCH INLET TYPE

PART #	MODEL #	PACK	FUEL/OXYGEN
4301654	26-QCT (R&L)	Pairs only	Fuel and Oxygen

INERT QUICK CONNECTORS

HARRIS REGULATOR TO HOSE OR MACHINE TO HOSE QUICK CONNECTORS

FEATURES

- Long-lasting stainless steel pin connection
- Automatic gas cut-off feature to positively shut off the gas supply when disconnected
- Durable brass and stainless steel construction
- Available for regulator or machine mount
- Makes moving equipment fast and easy
- Flow up to 200 SCFH; pressure up to 200 PSIG



MODEL SHOWN:

Regulator to Hose Type
P/N: 4301613



MODEL SHOWN:

Hose to Machine Type
P/N: 4301614

REGULATOR TO HOSE TYPE

PART #	MODEL #	CONNECTIONS	GAS TYPE
4301613	IQC M-F	5/8" - 18	Inert

HOSE TO MACHINE TYPE

PART #	MODEL #	CONNECTIONS	GAS TYPE
4301614	IQC F-M	5/8" - 18	Inert

REGULATOR AND TORCH SAFETY ACCESSORIES

REGULATOR AND TORCH FLASHBACK ARRESTORS

FEATURES

- Prevents reverse flow of gases with built-in check valves
- Extinguishes flashback fire with stainless steel sintered element
- 9/16"-18 connections CGA "B" size
- 100 Micron inlet filter helps keep dust and dirt out
- Flow Capacity: Models 88-5FBT (R&L) and 88-5FBR (R&L) arrestors should not be used with tip sizes larger than those noted below:
 - Hand Cutting Tips: #5 (except for NFF Tips -#4)
 - Machine Cutting Tips: #5 1/2
 - Acetylene Heating Tips: #4
 - Alternate Fuel Heating Tips: #2
 - Cleaning Heads: #2 RBP (no limitation with RBA)



MODEL SHOWN:
Torch Type - Model 88-5FBT (R&L)
P/N: 4302202 - (Sold in pairs only)



MODEL SHOWN:
Regulator Type - Model 88-5FBR (R&L)
P/N: 4301651 - (Sold in pairs only)

B" HOSE (9/16"-18) HIGH FLOW REGULATOR TYPE FLASHBACK ARRESTORS

FEATURES

- Same features as Model 88-5FBR (R&L) above, plus a thermal shut-off which positively shuts off the gas in case of hose fire, burn back or repeated flashbacks
- 100 Micron inlet filter helps keep dust and dirt out
- High flow capacity: can use all Harris tips featured in this catalog



MODEL SHOWN:
High-Flow Regulator Type -
 Model 88-5FBHFR (R&L)
OXYGEN P/N: 4301652 - (Sold separately)
FUEL P/N: 4301655 - (Sold separately)

FLASHGUARD (3/8"-14) TORCH TYPE ARRESTORS FOR HVAC APPLICATIONS

FEATURES

- Automatically stops flashback fire at the torch with stainless steel sintered element, no resetting necessary
- 100 Micron inlet screen helps keep dust and dirt out
- Prevents reverse flow of gases with built-in check valves
- Fits Harris HVAC torches (3/8"-24 CGA "A" connections)



MODEL SHOWN:
Torch Type - Model 88-5FBT A (R&L)
P/N: 4302205 - (Sold in pairs only)

C" HOSE (7/8"-14) HIGH FLOW REGULATOR TYPE FLASHBACK ARRESTORS

FEATURES

- Same features as Model 88-5FBHFR above except with 7/8"-14 connections CGA "C" size
- 100 Micron inlet screen helps keep dust and dirt out
- High flow capacity: can supply all Harris tips featured in this catalog



MODEL SHOWN:
High-Flow Regulator Type -
 Model 88-5FBHFR C (R&L)
OXYGEN P/N: 4300235 - (Sold separately)
FUEL P/N: 4300236 - (Sold separately)



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ACCESSORIES

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REGULATOR AND TORCH SAFETY ACCESSORIES

FLASHGUARD® CHECK VALVES

Check valves fully open with only ounces of pressure. If reverse flow starts, the valve closes immediately for total shut-off.

FEATURES

- High capacity: adequate for cutting 15 steel and for operating the largest heating torches
- Quality manufacture: valve spring made of stainless steel for long life
- 100% production tested: individually tested and packaged immediately to assure cleanliness
- 3/8"-18 connections
- Conforms to OSHA regulations



MODEL SHOWN:
88-6CVRL
P/N: 4300384

MODEL SHOWN:
88-6CVRR
P/N: 4300383



MODEL SHOWN:
88-7CVRL
P/N: 4300382

MODEL SHOWN:
88-6CVRR
P/N: 4300383

REGULATOR OUTLET CHECK VALVES

REGULATOR OUTLET MOUNT TYPE

PART #	MODEL #	PACK	FUEL/OXYGEN
4300389	88-6CVR (R&L)	Pair	Fuel and Oxygen
4300384	88-6CVL	Individual	Fuel
4300383	88-6CVR	Individual	Oxygen

Regulator Type - Model 88-6CVR (R&L) - Mounts on regulator outlet.
P/N: 4300389 (Blister pack pair)

REGULATOR OUTLET REPLACEMENT TYPE

PART #	MODEL #	PACK	FUEL/OXYGEN
4300382	88-7CVRL	Individual	Fuel
4300381	88-7CVRR	Individual	Oxygen

Regulator Type - Mount 88-7CVR-Permanently mounts in the regulator, replacing the outlet nipple. (Sold separately only)

TORCH TYPE CHECK VALVES

TORCH INLET MOUNT TYPE

PART #	MODEL #	PACK	FUEL/OXYGEN
4300390	88-6CVT (R&L)	Pair	Fuel and Oxygen
4300161	88-6CVTL	Individual	Fuel
4300162	88-6CVTR	Individual	Oxygen

Torch Type - Model 88-6CVT (R&L) P/N: 4300390, Blister pack pair



MODEL SHOWN:
88-6CVTL
P/N: 4300161

MODEL SHOWN:
88-6CVTR
P/N: 4300162

TORCH TYPE HVAC CHECK VALVES

"A" TYPE (3/8" - 24) CHECK VALVES

PART #	MODEL #	PACK	FUEL/OXYGEN
4300835	88-6CVTA (R&L)	Pair	Fuel and Oxygen



MODEL SHOWN:
88-6CVTA (R&L)
P/N: 4300835

GAUGE GUARDS

FEATURES

- Sturdy steel, heavy-duty gauge guard that can withstand multiple impacts
- 100% carbon steel construction
- Laser cut and hand TIG welded fabrication - not stamped.
- Easy gas identification with color coded exterior (green for oxygen and red for fuel)
- Powder coated surfaces that resist fading from exposure to sunlight and harsh environments
- Cork lined clamp band for contact with the regulator that will not damage regulator finish and dampens vibration that may cause guard to loosen
- Clear, unobstructed view of pressure readings with complete protection of the gauges
- Fits Harris Models 25GX, 425 and 45 regulators



MODEL SHOWN:
GREEN (OXYGEN)
P/N: 4300239



MODEL SHOWN:
RED (FUEL)
P/N: 4300238

MACHINE CUTTING ACCESSORIES

The Harris Straight Line Cutting Machine can be used for flame and plasma cutting for both Models 98 & 80. Each machine has with on/off magnets for easy set-up and positive positioning on magnetic material. Included with every machine is a quick-acting manifold that eliminates the need to reset the torch when flame cutting. It's easy to take the machine to the job site. The machine is compact, lightweight and has a convenient carrying handle. Cut surfaces are smooth and accurate so that grinding and restarts are basically eliminated.

FEATURES

- Positive rack and pinion drive
- Wide speed range (5-100 I.P.M.)
- Dynamic brake
- Convenient carrying handle
- Torch holder assembly for standard 1½" barrel/32 pitch rack

PART #	MODEL #	DESCRIPTION
4300950	GOF-3250-HS	Deluxe Cutting Machine
Replacement Parts		
4300951	ARM-2505	Spacer bar assembly
4300952	ARM-2500	On/Off magnet plate assembly
4300953	ARM-1080	Heavy duty rigid rail 93.5" (2.37m)
4300962	BUG-2915	Torch holder assembly
4300954	ARR-1085	Heavy duty rigid rail 48" (1.18m)
4300955	BUG-2975	Plasma cable mounting assembly

TECHNICAL DATA

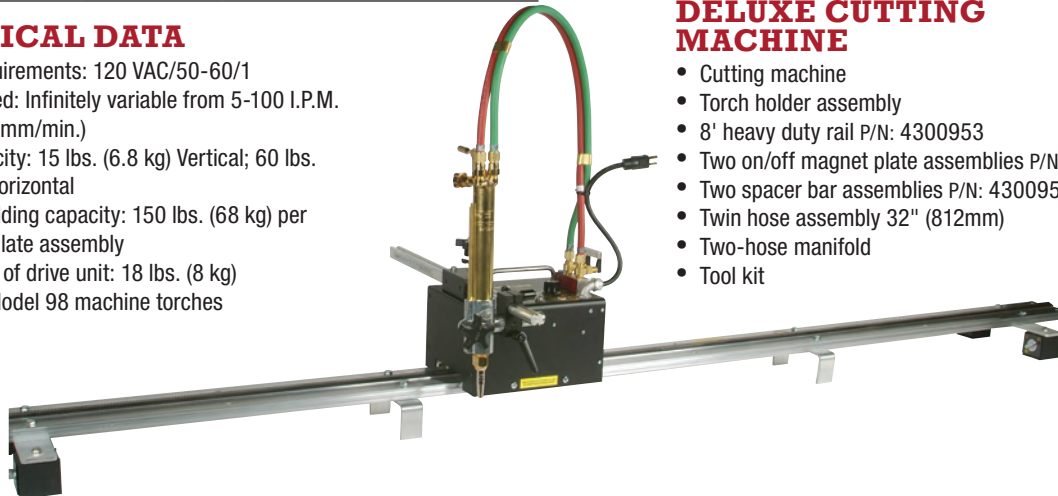
- Power requirements: 120 VAC/50-60/1
- Travel speed: Infinitely variable from 5-100 I.P.M. (127-2450 mm/min.)
- Load capacity: 15 lbs. (6.8 kg) Vertical; 60 lbs. (27.3 kg) Horizontal
- Magnet holding capacity: 150 lbs. (68 kg) per magnetic plate assembly
- Net weight of drive unit: 18 lbs. (8 kg)
- Use with Model 98 machine torches



DELUXE CUTTING MACHINE

MODEL SHOWN:
P/N:4300950
Torch not included

- Cutting machine
- Torch holder assembly
- 8' heavy duty rail P/N: 4300953
- Two on/off magnet plate assemblies P/N: 4300952
- Two spacer bar assemblies P/N: 4300951
- Twin hose assembly 32" (812mm)
- Two-hose manifold
- Tool kit



ACCESSORIES FOR MODEL 98-6 TORCHES



MODEL SHOWN:
BV-98-2 Beveling Head
P/N: 1200124

Increases speed of quality bevel cuts. Preheat tip swivels for either left or right travel. Equipped with 1390-3H heating tip. Use with natural gas or propane 6290 tips (not included).



MODEL SHOWN:
S-98-C Adjustable Tip Adapter
P/N: 1200080

Adjust tip to any angle without moving the torches. Use with any 6290 tips (not included).



MODEL SHOWN:
Model TH-98 Adjustable Twin Tip Holder
P/N: 1200090

For making two cuts simultaneously with one torch. Adjust from 1½" to 12" width. Use with any 6290 tips (not included).



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PIPELINE AND MANIFOLD ACCESSORIES

REMOTE ALARM KITS NOT FOR FUEL GAS SERVICE

PART #	DESCRIPTION	USE WITH MANIFOLD SERIES
4300698	A/V Alarm Box	220 and 240 Systems
4300699	10ft Cable	220 and 240 Systems
4300709	50ft Cable	220 and 240 Systems



REMOTE ALARM KITS FOR FUEL GAS SERVICE

PART #	GAS SERVICE	DESCRIPTION	USE WITH MANIFOLD SERIES
4300343	Acetylene	Visual and audio	Optional on 220 Acetylene Systems
4300344	Hydrogen	Visual and audio	Optional on 220 Hydrogen Systems
4300345	LPG Gases	Visual and audio	Optional on 220 LPG Gas Systems

FUEL GAS SAFETY KITS (Kit includes piping)

PART #	GAS SERVICE	DESCRIPTION	FLOW CAPACITY	USE WITH MANIFOLD SERIES	RELIEF VALVES
4300346	LPG/H ₂	Dry Arrestor Kit	300 SCFH	Optional on 220 LPG/H ₂ Systems	35 PSIG
4300347	Acetylene	Hydraulic Arrestor Kit	300 SCFH	Optional on 220 Acetylene Systems	20 PSIG

PIPELINE FLASHBACK ARRESTORS

8530 AND 147 MODELS DRY TYPE FLASHBACK ARRESTOR SYSTEMS

Flashback arrestors incorporate ASME relief valves and check valves in their design. They meet the requirements of NFPA 51 in oxy-fuel gas piping systems. Unlike hydraulic flash arrestors, dry arrestors are virtually maintenance free, do not require fluid, take up less space and provide continuous safe operation in fuel gas distribution systems. BAM/ABZ/003 Approved.

8530 AND 147 FEATURES

- High surface area stainless steel flash arrestor material extinguishes flashback
- Temperature sensitive shut-off valve extinguishes sustained flashbacks
- Check valve prevents reverse flow from forming explosive mixtures in the gas supply system
- Can be mounted in any position

PART #	MODEL #	GAS	FLOW SCFH	INLET/OUTLET	RELIEF VALVE
4300222	8530-A-1"	Acetylene	750	1" NPT	20 PSIG
4300221	8530-A-½"	Acetylene	750	½" NPT	20 PSIG
4300223	8530-FG-1"	LPG, Natural Gas, H ₂	1000	1" NPT	40 PSIG
4300224	8530-FG-½"	LPG, Natural Gas, H ₂	1000	½" NPT	40 PSIG
4300228	147-OX-1"	Oxygen	5000	1" NPT	225 PSIG
4300229	147-OX-½"	Oxygen	5000	½" NPT	225 PSIG

HYDRAULIC FLASHBACK ARRESTORS

PART #	DESCRIPTION	GAS	FLOW CAPACITY	INLET/OUTLET	RELIEF VALVE
4300350	Hydraulic Arrestor	Acetylene	300 SCFH	1" NPT	20 PSIG
4300354	Hydraulic Arrestor	LPG, Natural Gas, H ₂	300 SCFH	1" NPT	40 PSIG
4300357	Floor Stand	LPG, Natural Gas, H ₂	-	-	-



PIPELINE AND MANIFOLD ACCESSORIES

HEADER EXTENSION

PART #	MATERIALS	LENGTH	CONNECTIONS	HEADER PLUG
9103300	Brass	10"	½" NPT	9005711
9103304	Stainless Steel	10"	½" NPT	9005715



ADJUSTABLE WALL BRACKET

PART #	DESCRIPTION
9103308	90°, Black, includes U-bolt and mounting clamp



HEADER AND STATION VALVES

PART #	MATERIAL	VALVE TYPE	INLET	OUTLET
9005700	Brass	Packed Stem	½" MNPT	580 CGA
9107062	Stainless Steel	Diaphragm	¼" MNPT	¼" NPT (F)
9005706	Brass	Master Shut-off Valve	½" NPT (F)	½" NPT (F)
9005086	Brass	Station Oxygen	½" MNPT	¾"-14 RH
9005088	Brass	Station Fuel	½" MNPT	¾"-14 LH



MODEL SHOWN:
Diaphragm Valve
P/N: 9107062



MODEL SHOWN:
Master Shutoff Valve
P/N: 9005706



MODEL SHOWN:
Packed Stem Valve
P/N: 9005700



MODEL SHOWN:
Station Valve
P/N: 9005088

MANIFOLD CONNECTION FITTINGS

PART #	MATERIAL	VALVE TYPE	PRESSURE RATING PSIG
9005701	Brass	1.00-11.5 NPS union nut, RH	3000
9005725	Brass	1.00-11.5 NPS union nut, LH	3000
9005703	Brass	½" NPT union nipple, 3" long	3000
9005759	Brass	¾" NPT union nipple, 3" long	3000
9005708	Brass	1.00-11.5 NPS x ½" NPT union bushing, RH	3000
9005726	Brass	1.00-11.5 NPS x ½" NPT union bushing, LH	3000
9005747	Brass	1.00-11.5 NPS x ¾" NPT union bushing, RH	3000
9005727	Brass	1.00-11.5 NPS x ¾" NPT union bushing, LH	3000



Union Nut



Union Bushing



Union Nipple

PIPELINE AND MANIFOLD ACCESSORIES

LOW PRESSURE/HIGH FLOW PIPELINE PARTICLE FILTER FOR OXYGEN, FUEL GASES AND INERT GASES

Removes dust, rust, scale and other particulate matter that can damage critical down stream components such as regulators, flash arrestors, valves, torches, etc. They feature an easy-to-replace 60 micron sintered bronze filter element.

FILTER FEATURES

- "T" style design allows filter replacement without removing from piping
- Low initial pressure drop within capacity of up to 25,000 SCFH (air)
- Pressure rating of up to 350 psi
- 1 year warranty
- Can be mounted in a vertical or horizontal position
- Cartridge included with filter

FILTER PART #	GAS	INLET/OUTLET	FLOW SCFH AIR @ 100 PSI
QC2HLF2560	Fuel	1" NPT (F)	25,000
QC2HLF2580	Oxygen/Inert	1" NPT (F)	25,000
QC2HLF2460	Fuel	¾" NPT (F)	20,000
QC2HLF2480	Oxygen/Inert	¾" NPT (F)	20,000
QC2HLF2360	Fuel	½" NPT (F)	14,000
QC2HLF2380	Oxygen/Inert	½" NPT (F)	14,000

CARTRIDGE PART #	FOR MODEL
QC2HLF2600	2400 and 2500
QC2HLF2610	2300



Filter

Cartridge

PIPELINE AND MANIFOLD ACCESSORIES

STATION DROPS

Equipped with an in-line shut-off valve, drip leg, outlet cap or plug, chain and labeled for the gas type.



MODEL SHOWN:
Single Outlet Drop
P/N: 4300361



MODEL SHOWN:
Double Outlet Drop
P/N: 4300393

PART #	GAS SERVICE	OUTLET CONNECTION	LENGTH	DESCRIPTION
4300361	Acetylene	¾"-14 LH (M)	25"	½" Single Outlet Station Drop
4300362	Compressed Air	¾"-18 RH (F)	25"	½" Single Outlet Station Drop
4300363	Argon	¾"-18 RH (F)	25"	½" Single Outlet Station Drop
4300364	Carbon Dioxide	¾"-18 RH (F)	25"	½" Single Outlet Station Drop
4300365	Helium	¾"-18 RH (F)	25"	½" Single Outlet Station Drop
4300366	Hydrogen	¾"-14 LH (M)	25"	½" Single Outlet Station Drop
4300367	Nitrogen	¾"-18 RH (F)	25"	½" Single Outlet Station Drop
4300368	Oxygen	¾"-14 RH (M)	25"	½" Single Outlet Station Drop
4300369	LPG Gases	¾"-14 LH (M)	25"	½" Single Outlet Station Drop
4300391	Acetylene	¾"-14 LH (M)	35"	½" Double Outlet Station Drop
4300392	Compressed Air	¾"-18 RH (M)	35"	½" Double Outlet Station Drop
4300393	Argon	¾"-18 RH (F)	35"	½" Double Outlet Station Drop
4300394	Carbon Dioxide	¾"-18 RH (F)	35"	½" Double Outlet Station Drop
4300395	Helium	¾"-18 RH (F)	35"	½" Double Outlet Station Drop
4300396	Hydrogen	¾"-14 LH (M)	35"	½" Double Outlet Station Drop
4300397	Nitrogen	¾"-18 RH (F)	35"	½" Double Outlet Station Drop
4300398	Oxygen	¾"-14 RH (M)	35"	½" Double Outlet Station Drop
4300399	LPG Gases	¾"-14 LH (M)	35"	½" Double Outlet Station Drop

TECHNICAL DATA

REGULATOR TECHNICAL DATA

REGULATOR PERFORMANCE DEFINITIONS

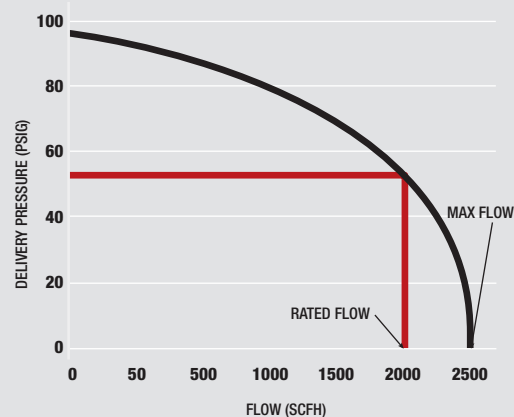
WHAT INFORMATION CAN BE DETERMINED FROM A FLOW CURVE?

The following sketch explains how to interpret the flow curves presented in this catalog.

Maximum Flow - A rating defined as the maximum amount a regulator can flow when the set delivery pressure approaches 0 PSIG (vertical axis on flow curve). This point on the curve represents a blanketing operation.

Rated Flow - A rating defined as 80% of the maximum flow. This point on the flow curve corresponds to typical operating conditions.

Note: All regulator flow curves in the catalog have been developed using air at 70°F. To obtain flow rates for other gases, multiply flow by the correction factor in Table 1a (to the right).



WHAT IS C_v ?

The C_v or the flow coefficient is a number that represents the flow capacity of a regulator for a given set of conditions. The C_v can be used to compare flow capacity between two regulators. The higher the C_v , the greater the flow capacity. The C_v values listed in this catalog represent the overall C_v of the regulator including the outlet fitting.

WHAT IS PRESSURE RISE?

Pressure rise is the change in set delivery pressure as a result of a drop or decay in inlet pressure. For example, the rise on a Model 25GX is expressed as 0.2 PSIG/100 PSIG. Regulators are measured on their ability to provide a flat delivery curve. Pressure rise can be used to explain the main advantage of two stage vs. single-stage. See pressure regulation chart.

WHAT IS CGA E-4?

CGA E-4 is a regulator standard developed by the Industrial Gas Apparatus Committee of the Compressed Gas Association. The standard defines product safety requirements, product test requirements and performance characteristics to meet field applications.

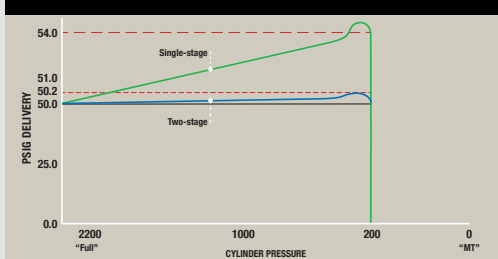
WHAT ARE GAS FLOW CORRECTION FACTORS?

Each gas has a different density and therefore flows at different rates under the same pressures and conditions. The correction factor compares their densities to air.

TABLE 1a. GAS CORRECTION FACTORS

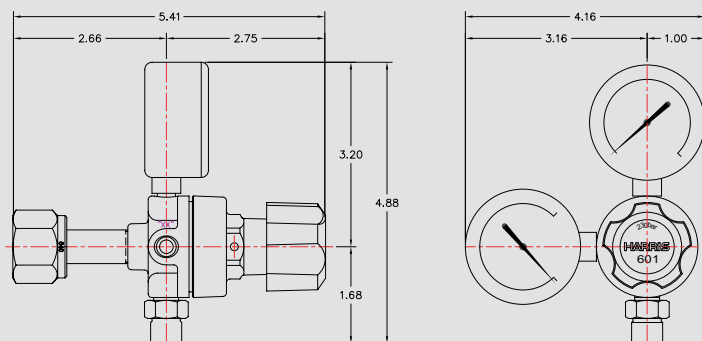
Carbon Dioxide	0.81
Propane	0.81
Propylene	0.83
Argon	0.85
Oxygen	0.95
Air	1.00
Nitrogen	1.02
Acetylene	1.05
Methane	1.34
Helium	2.69
Hydrogen	3.79

PRESSURE REGULATION



MODELS 601 & 301

MODEL 601



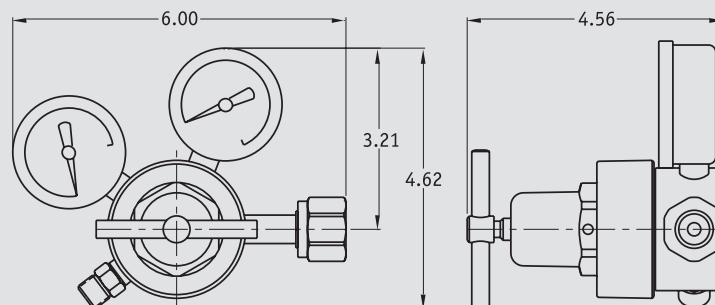
DETAILS

Regulator Weight: 1.39 lbs./0.63 kg.

Pressure Rise: 0.43 PSIG per 100 PSIG

C_v: 0.08

MODEL 301



DETAILS

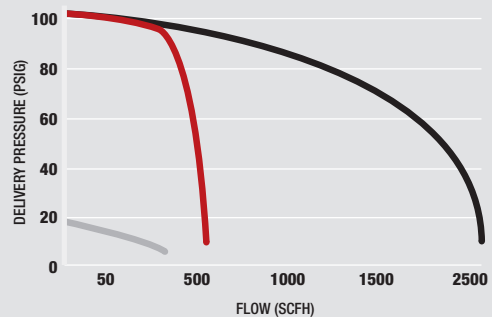
Regulator Weight: 2.2 lbs./0.99 kg

Pressure Rise: 0.4 PSIG per 100 PSIG

C_v: 0.08

PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F

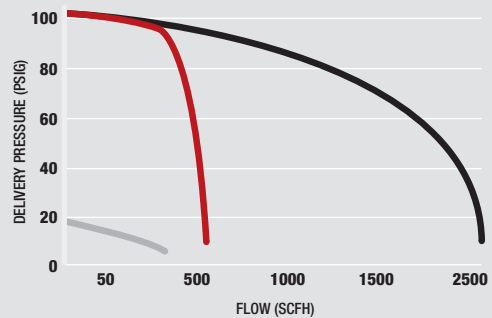


MODEL 601 SINGLE-STAGE REGULATOR

— 601-100 @ 2000 PSIG inlet

— 601-100 @ 200 PSIG inlet

— 601-15 @ 200 PSIG inlet



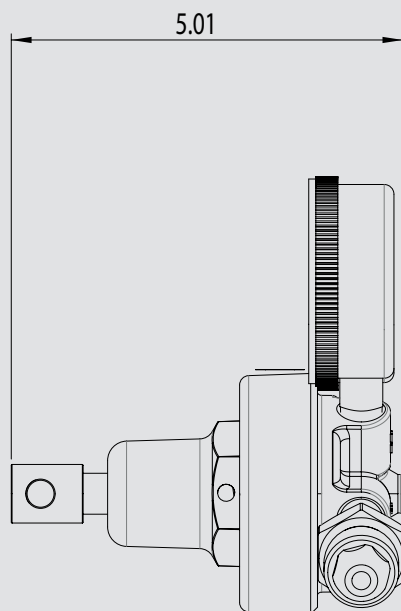
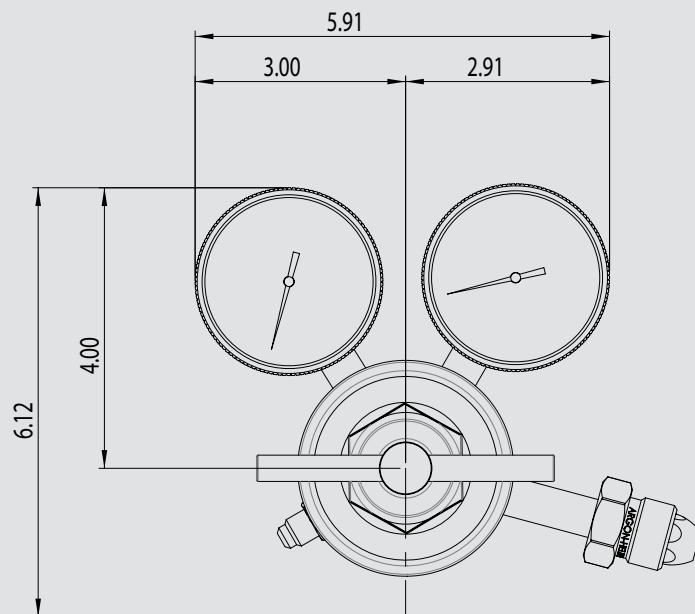
MODEL 301 SINGLE-STAGE REGULATOR

— 301-100 @ 2000 PSIG inlet

— 301-100 @ 200 PSIG inlet

— 301-15 @ 200 PSIG inlet

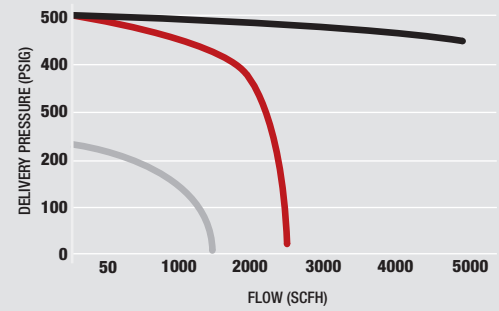
MODEL 25GX HVAC



DETAILS

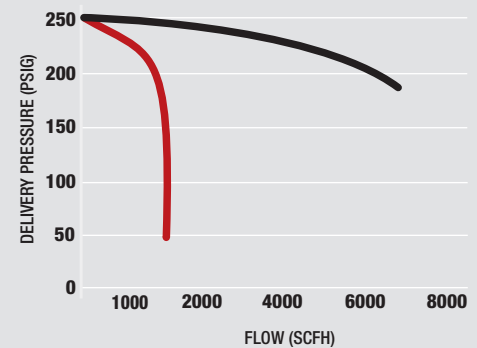
Regulator Weight: 3.2 lbs./1.45 kg
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

PERFORMANCE CHART
 ALL FLOWS BASED ON AIR @ 70°F



MODEL 25GX-500 HIGH PRESSURE SINGLE-STAGE REGULATOR

— 25GX-500 @ 2000 PSIG inlet
 — 25GX-500 @ 500 PSIG inlet

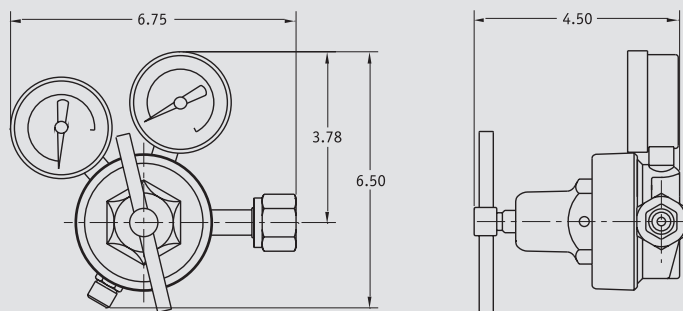


MODEL 25GX-250 HIGH PRESSURE SINGLE-STAGE REGULATOR

— 25GX-250 @ 2000 PSIG inlet
 — 25GX-250 @ 250 PSIG inlet

MODELS 425, 29 & 25GX

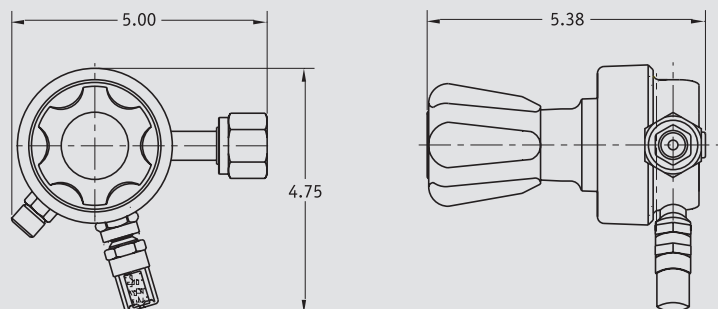
MODEL 425



DETAILS

Regulator Weight: 3.7 lbs. /1.67 kg.
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

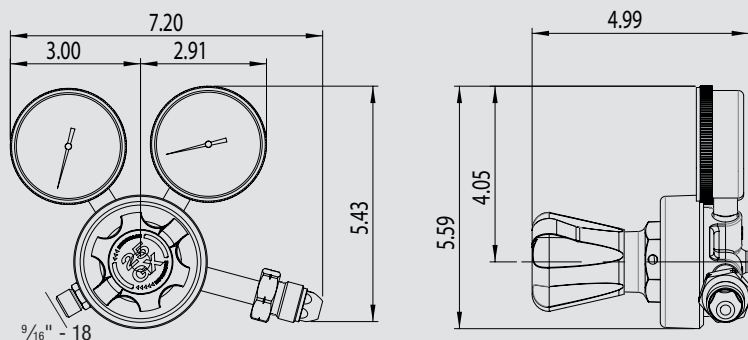
MODEL 29



DETAILS

Regulator Weight: 2.7 lbs./1.22 kg.
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

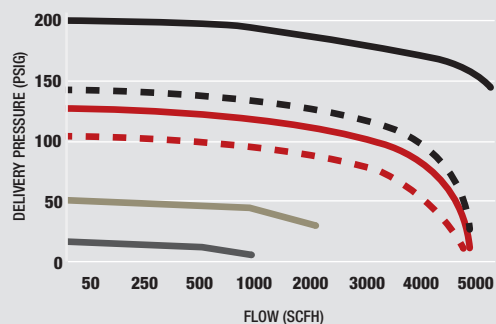
MODEL 25GX



DETAILS

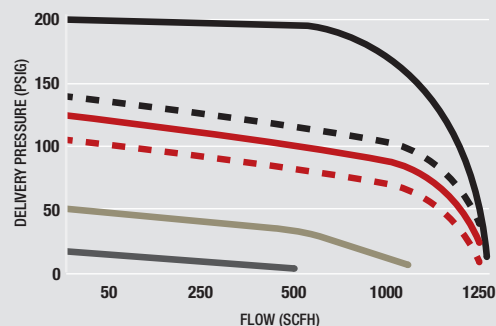
Regulator Weight: 3.2 lbs. /1.45 kg.
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

PERFORMANCE CHART
 ALL FLOWS BASED ON AIR @ 70°F



MODEL 425, 29, 25GX AND 45 - 2000 PSIG INLET

- 425, 25GX-200@ 2000 PSIG inlet
- - 25GX-145@ 2000 PSIG inlet
- 425-125@ 2000 PSIG inlet
- - 29-100 @ 2000 PSIG inlet
- 425, 29, 25GX-50 @ 2000 PSIG inlet
- 425, 29, 25GX-15 @ 2000 PSIG inlet

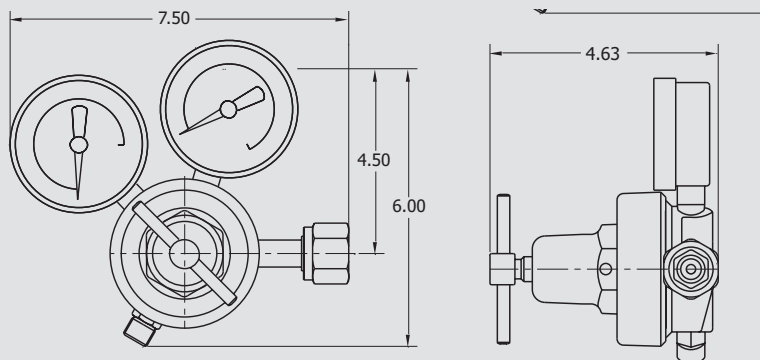


MODEL 425, 29, 25GX AND 45- 200 PSIG INLET

- 425, 25GX-200@ 200 PSIG inlet
- - 25GX-145@ 200 PSIG inlet
- 425-125@ 200 PSIG inlet
- - 29-100 @ 200 PSIG inlet
- 425, 29, 25GX-50 @ 200 PSIG inlet
- 425, 29, 25GX-15 @ 200 PSIG inlet

MODEL 45,2500 & 450

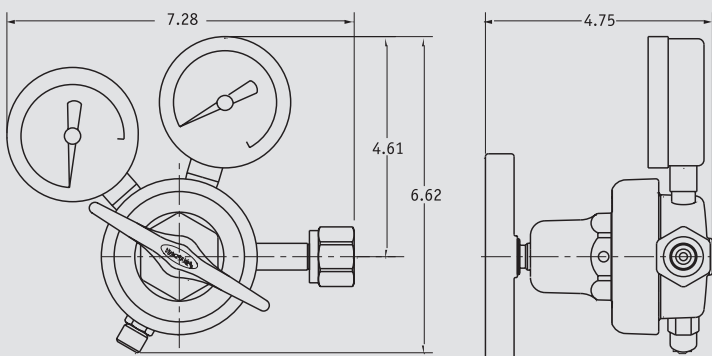
MODEL 45



DETAILS

Regulator Weight: 3.2 lb / 1.45 kg
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

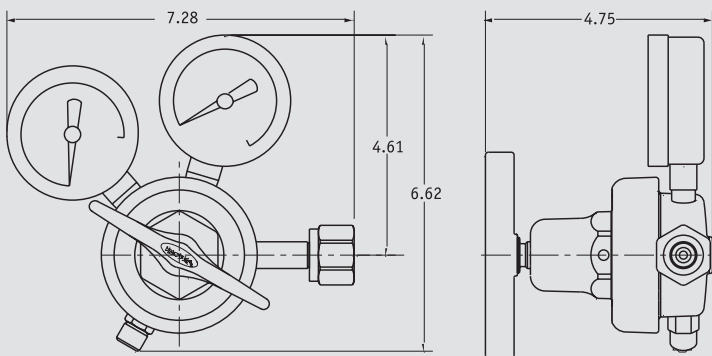
MODEL 2500



DETAILS

Regulator Weight: 4.6 lb / 2.09 kg
Pressure Rise: 0.3 PSIG per 100 PSIG
C_v: 0.17

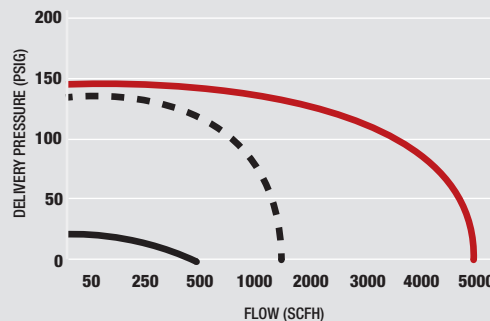
MODEL 450



DETAILS

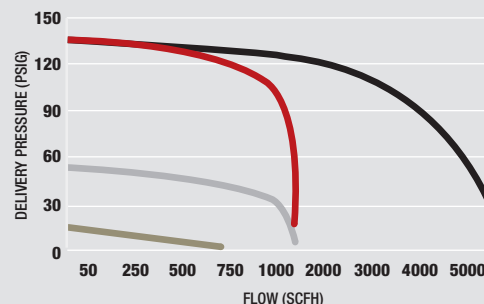
Regulator Weight: 4.6 lb / 2.09 kg
Pressure Rise: 0.3 PSIG per 100 PSIG
C_v: 0.17

PERFORMANCE CHART ALL FLOWS BASED ON AIR @ 70°F



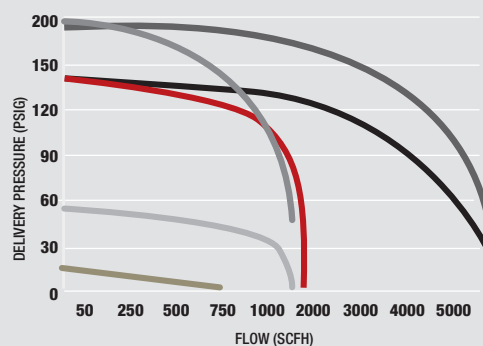
MODEL 45 SINGLE-STAGE REGULATOR

- 45-145 @ 2000 PSIG inlet
- - 45-145 @ 200 PSIG inlet
- 45-15 @ 200 PSIG inlet



MODEL 2500 SINGLE-STAGE REGULATOR

- 2500-125 @ 2000 PSIG inlet
- 2500-125 @ 200 PSIG inlet
- 2500-50 @ 200 PSIG inlet
- 2500-15 @ 200 PSIG inlet

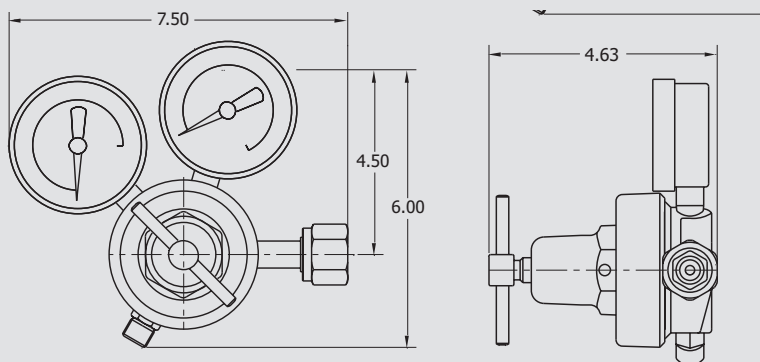


MODEL 450 SINGLE-STAGE REGULATOR

- 450-200 @ 200 PSIG inlet
- 450-200 @ 2000 PSIG inlet
- 450-125 @ 2000 PSIG inlet
- 450-125 @ 200 PSIG inlet
- 450-50 @ 200 PSIG inlet
- 450-15 @ 200 PSIG inlet

MODEL 45S & 330

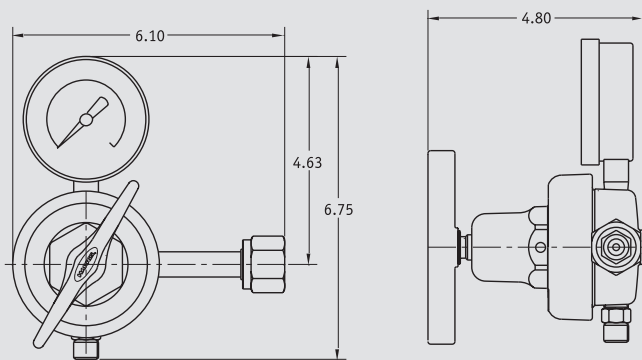
MODEL 45S



DETAILS

Regulator Weight: 3.2 lb / 1.45 kg
Pressure Rise: 0.3 PSIG per 100 PSIG
C_v: 0.17

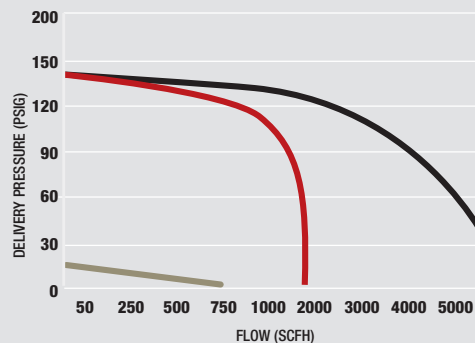
MODEL 330



DETAILS

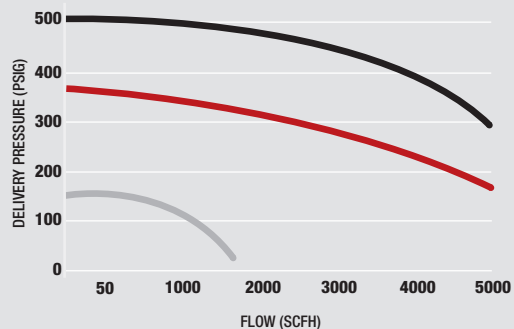
Regulator Weight: 4.3 lb / 1.95 kg.
C_v: 0.37

PERFORMANCE CHART
 ALL FLOWS BASED ON AIR @ 70°F



MODEL 45S SINGLE-STAGE REGULATOR

- 45S-145 @ 2000 PSIG inlet
- 45S-145 @ 200 PSIG inlet
- 45S-15 @ 200 PSIG inlet

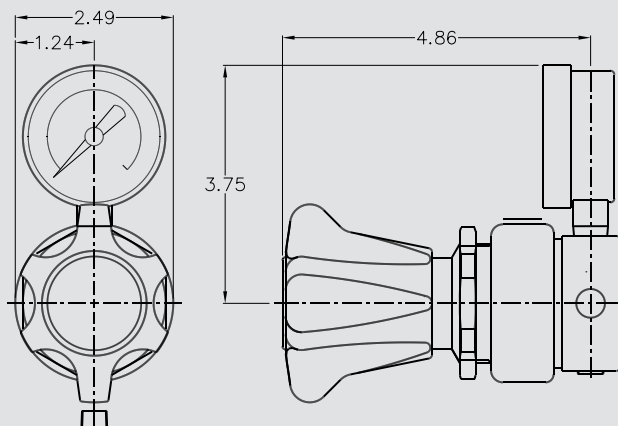


MODEL 330 LIQUID CYLINDER REGULATOR

- 330-125 @ 200 PSIG inlet
- 330-350 @ 400 PSIG inlet
- 330-500 @ 600 PSIG inlet

MODEL 647 & HP 750

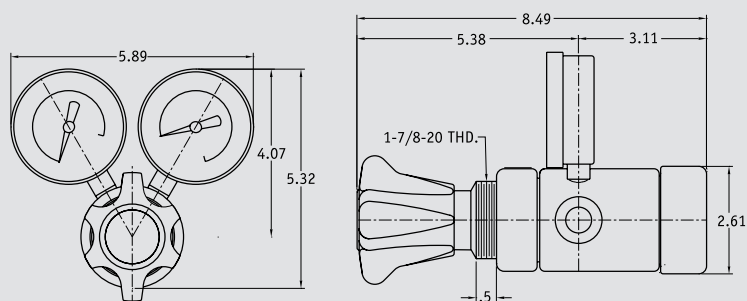
MODEL 647



DETAILS

Regulator Weight: 3.8 lb / 1.72 kg

C_v: 0.17



DETAILS

Regulator Weight: 8.5 lbs. / 3.85 kg.

Pressure Rise: 0.4 on 5500 psi inlet models

C_v: 0.55 on 3000 psi inlet models

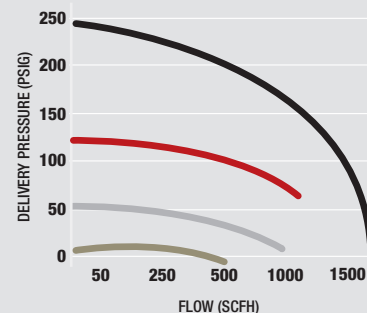
PRESSURE REGULATION

0.3 PSIG/100 PSIG on 5500 psi inlet Models

0.5 PSIG/100 PSIG on 3000 psi inlet Models

PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F



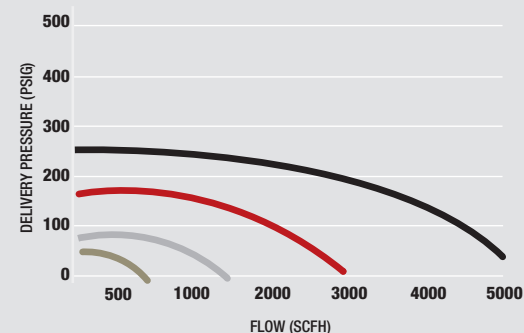
MODEL 647 SINGLE-STAGE REGULATOR - 200 PSIG INLET

— 647-250 @ 200 PSIG inlet

— 647-125 @ 200 PSIG inlet

— 647-50 @ 200 PSIG inlet

— 647-15 @ 200 PSIG inlet



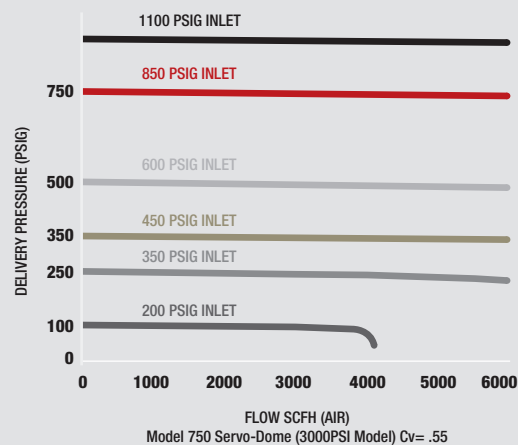
MODEL 647 SINGLE-STAGE REGULATOR - 2000 PSIG INLET

— 647-250 @ 2000 PSIG inlet

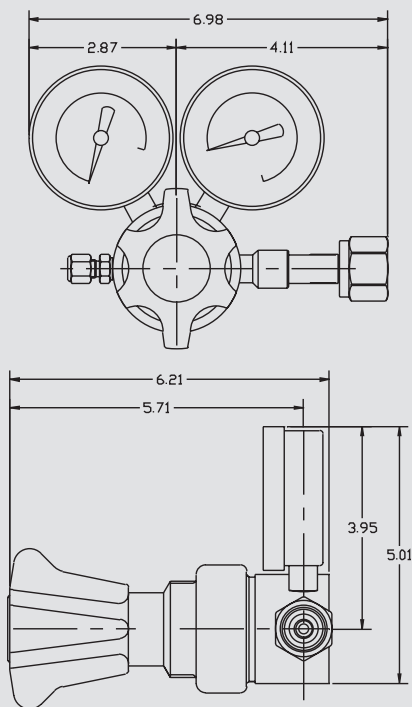
— 647-125 @ 2000 PSIG inlet

— 647-50 @ 2000 PSIG inlet

— 647-15 @ 2000 PSIG inlet



MODEL 8700



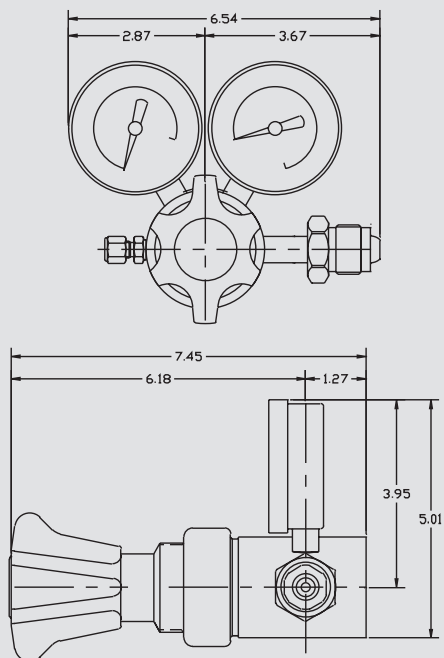
DETAILS

NON-RELIEVING VALVES

Regulator Weight: 5.8 lb / 2.63 kg

Pressure Rise: 3.3 PSIG per 100 PSIG

C_v: 0.08



DETAILS

SELF-RELIEVING VALVES

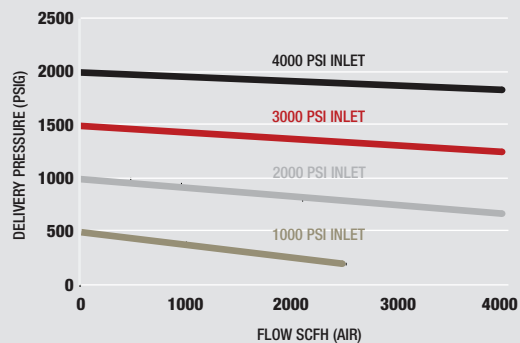
Regulator Weight: 7.0 lb / 3.17 kg.

Pressure Rise: 3.3 PSIG per 100 PSIG

C_v: 0.08

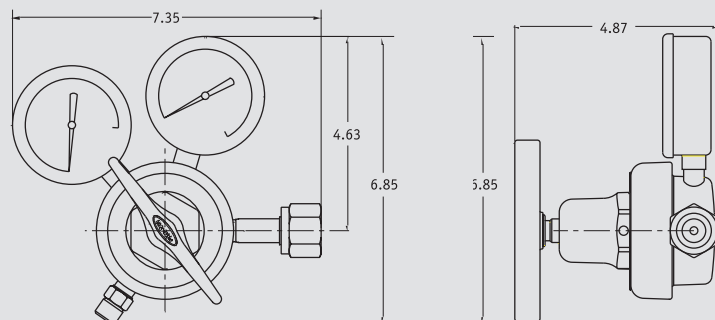
PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F



MODELS 3500 & 3510

MODEL 3500



DETAILS

Regulator Weight: 4.6 lbs. /2.09 kg.

Pressure Rise: 1.6 PSIG per 100 PSIG

C_v: 0.55

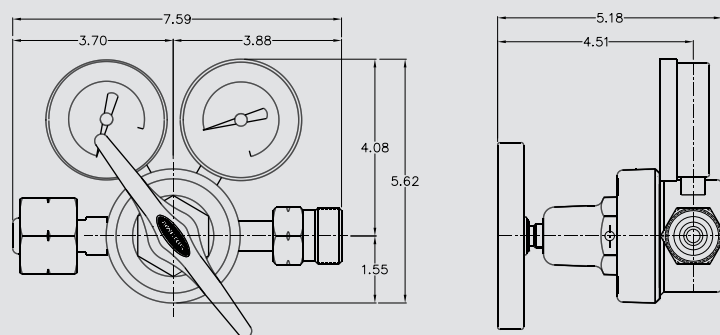
For Models 3003504, 3003505, 3003514, 3003540, 3003541, 3003538, 3003539 and all 3510 Manifold Regulator

FOR OTHER MODELS

Pressure Rise: 0.9 PSIG per 100 PSIG

C_v: 0.4

MODEL 3510



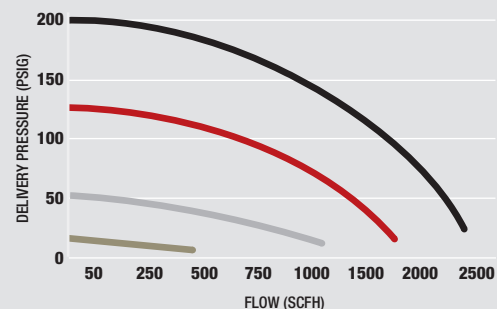
DETAILS

Regulator Weight: 5.5 lbs. /2.49 kg.

Pressure Rise: 1.6 PSIG per 100 PSIG

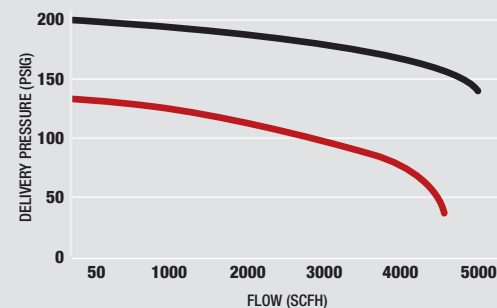
C_v: 0.4 for 15 PSIG models and 0.55 for all other models

PERFORMANCE CHART ALL FLOWS BASED ON AIR @ 70°F



MODEL 3500 & 3510 REGULATOR - 200 PSIG INLET

- 3500-200 @ 200 PSIG inlet
- 3500-125 @ 200 PSIG inlet
- 3500-50 @ 200 PSIG inlet
- 3500-15 @ 200 PSIG inlet

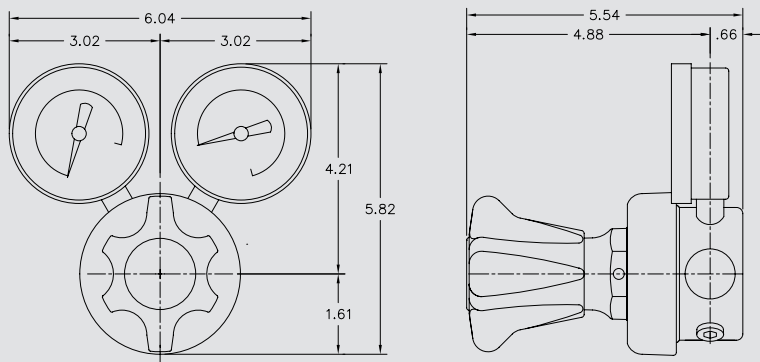


MODEL 3500 & 3510 REGULATOR - 2000 PSIG INLET

- 3500-200 @ 2000 PSIG inlet
- 3500-125 @ 2000 PSIG inlet

MODELS 3520 & 3530

MODEL 3520



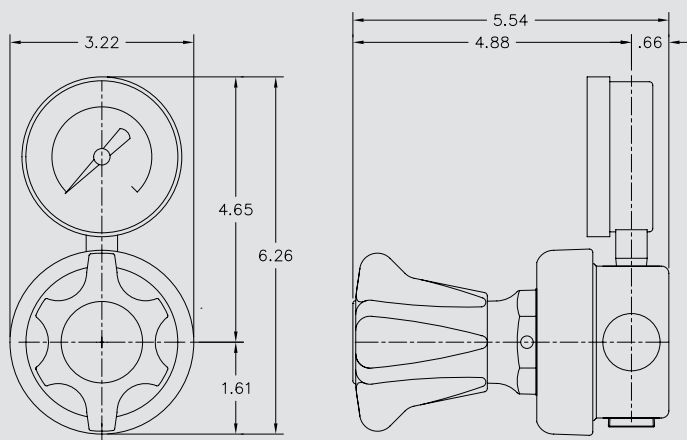
DETAILS

Regulator Weight: 4.5 lbs.

Pressure Rise: 1.6 PSIG per 100 PSIG

C_v: 0.55

MODEL 3530



DETAILS

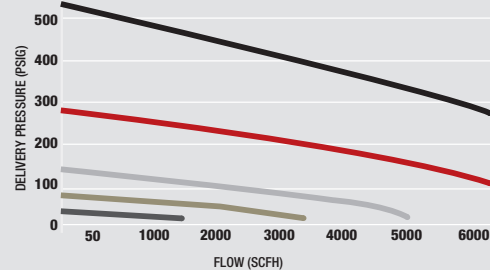
Regulator Weight: 4.3 lbs.

Pressure Rise: 1.6 PSIG per 100 PSIG

C_v: 0.55

PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F



MODEL 3520 & 3530 TWO STAGE REGULATOR

— 3520-500 @ 750 PSIG inlet

— 3520-250 @ 500 PSIG inlet

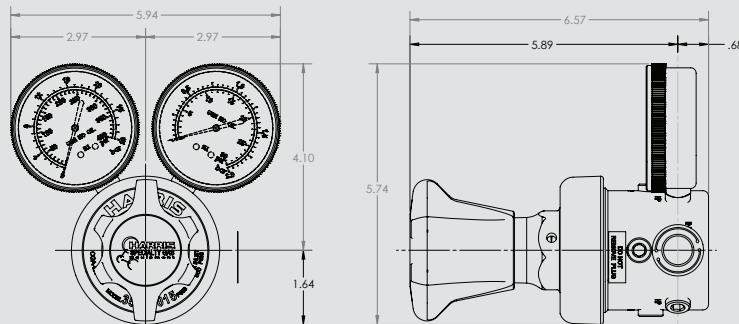
— 3520-125 @ 250 PSIG inlet

— 3520-50 @ 200 PSIG inlet

— 3520-15 @ 100 PSIG inlet

MODELS 3540 & 3560

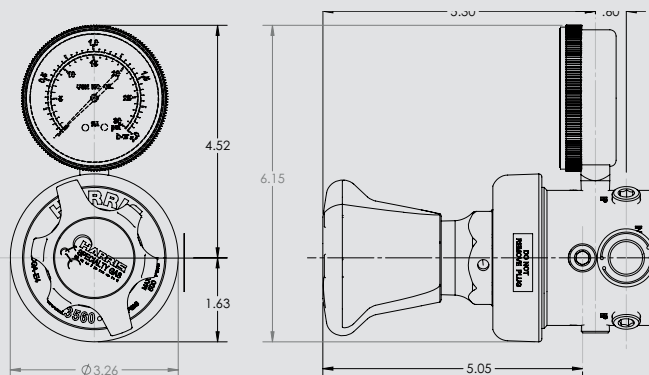
MODEL 3540



DETAILS

Regulator Weight: 6.9 lbs. /3.13 kg.
Pressure Rise: 5.5 PSIG per 100 PSIG
C_v: 1.0

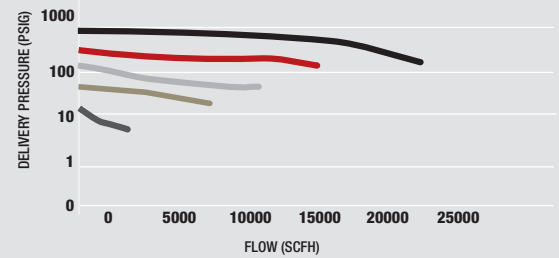
MODEL 3560



DETAILS

Regulator Weight: 6.7 lbs. /3.04 lbs.
Pressure Rise: 5.5 PSIG per 100 PSIG
C_v: 1.0

PERFORMANCE CHART ALL FLOWS BASED ON AIR @ 70°F

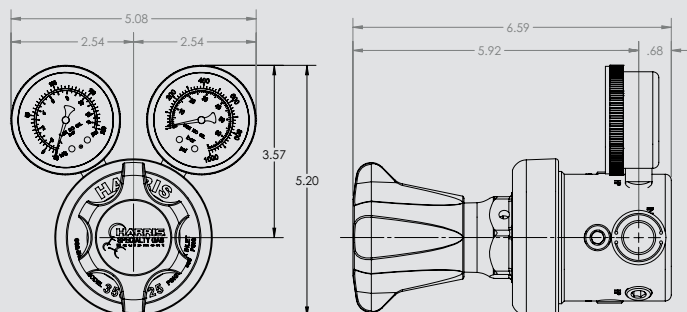


MODEL 3540 & 3560 TWO STAGE REGULATOR

- 15 @ 100 PSIG inlet
- 50 @ 200 PSIG inlet
- 125 @ 300 PSIG inlet
- 250 @ 400 PSIG inlet
- 500 @ 750 PSIG inlet

MODEL 3580 & 3590

MODEL 3580



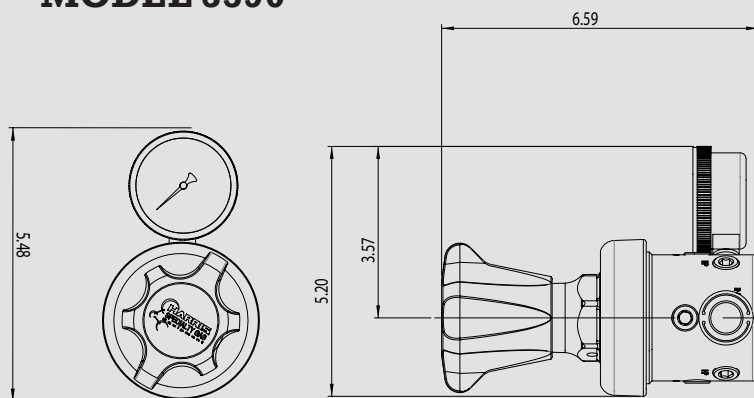
DETAILS

Regulator Weight: 6.9 lbs. /3.13 kg.

Pressure Rise: 5.5 PSIG per 100 PSIG

C_v: 1.0

MODEL 3590



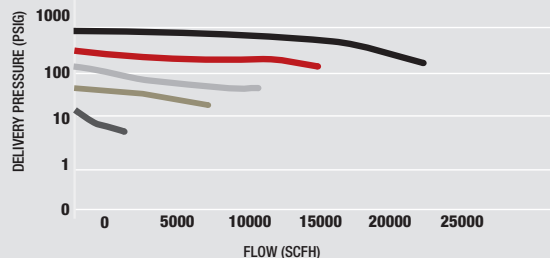
DETAILS

Regulator Weight: 6.9 lbs. /3.13 kg.

Pressure Rise: 5.5 PSIG per 100 PSIG

C_v: 1.0

PERFORMANCE CHART ALL FLOWS BASED ON AIR @ 70°F

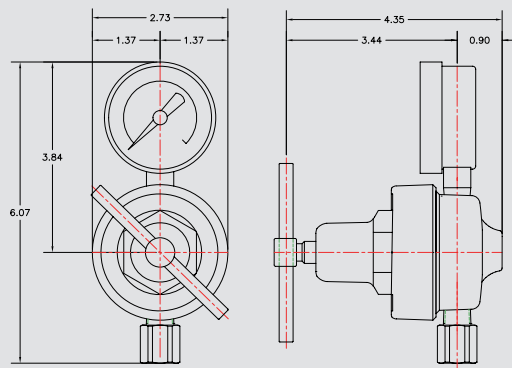


MODEL 3580 & 3590 TWO STAGE REGULATOR

- 15 @ 100 PSIG inlet
- 50 @ 200 PSIG inlet
- 125 @ 300 PSIG inlet
- 250 @ 400 PSIG inlet
- 500 @ 750 PSIG inlet

MODELS 247, 447 & 547

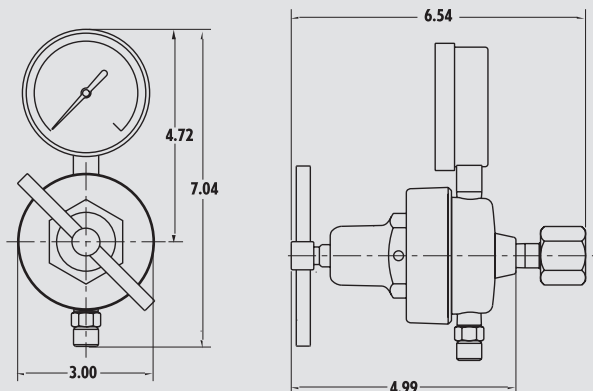
MODEL 247



DETAILS

Regulator Weight: 3.6 lbs. /1.63 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.53

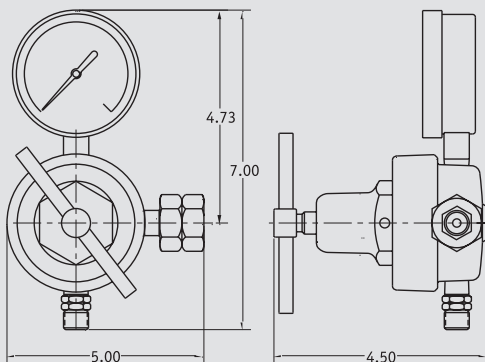
MODEL 447



DETAILS

Regulator Weight: 3.6 lbs. /1.63 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.53

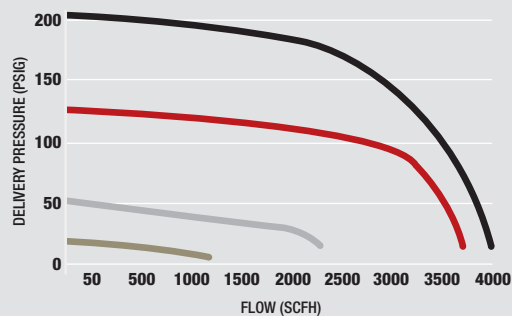
MODEL 547



DETAILS

Regulator Weight: 3.6 lbs. /1.63 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.53

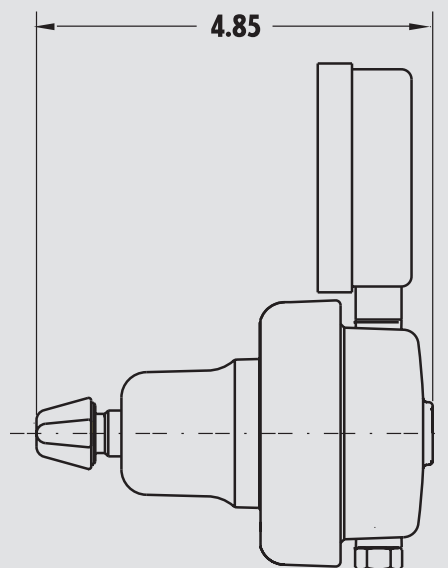
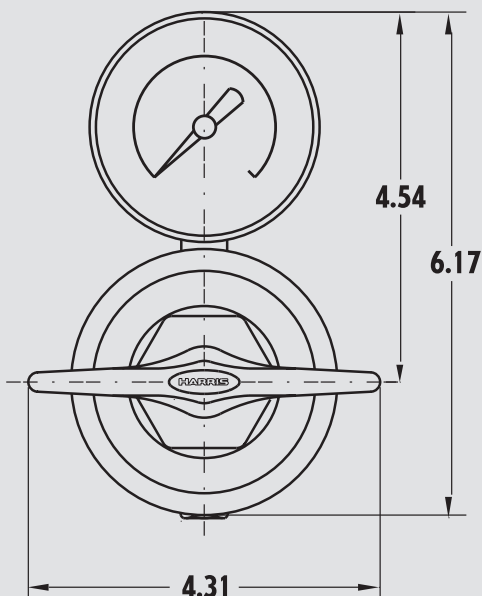
PERFORMANCE CHART ALL FLOWS BASED ON AIR @ 70°F



MODEL 247, 447 & 547 STATION/PIPELINE REGULATOR

- 447/547-200 @ 200 PSIG inlet
- 447/547-125 @ 200 PSIG inlet
- 447/547-50 @ 200 PSIG inlet
- 447/547-15 @ 200 PSIG inlet

MODEL 2548



DETAILS

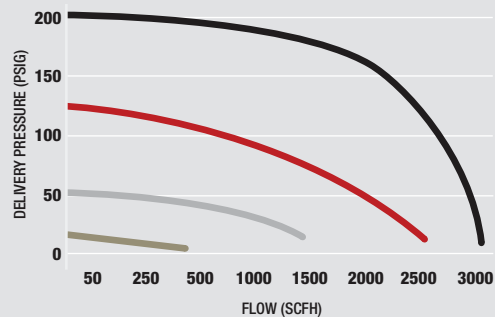
Regulator Weight: 3.8 lbs./1.72 kg.

Pressure Rise: 0.9 PSIG per 100 PSIG

C_v: 0.4

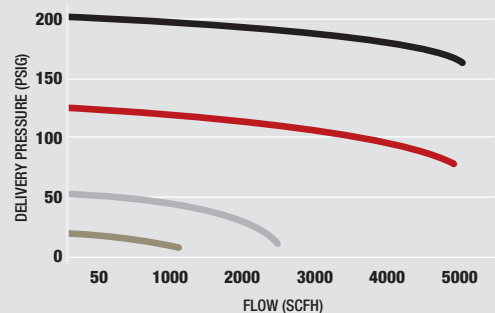
PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F



MODEL 2548 PIPELINE REGULATOR - 200 PSIG INLET

- 2548-200 @ 200 PSIG inlet
- 2548-125 @ 200 PSIG inlet
- 2548-50 @ 200 PSIG inlet
- 2548-15 @ 200 PSIG inlet

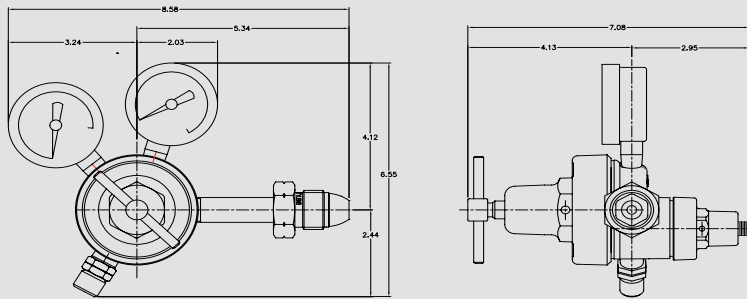


MODEL 2548 PIPELINE REGULATOR - 2000 PSIG INLET

- 2548-200 @ 2000 PSIG inlet
- 2548-125 @ 2000 PSIG inlet
- 2548-50 @ 2000 PSIG inlet
- 2548-15 @ 2000 PSIG inlet

MODEL 2561 & 9296

MODEL 2561



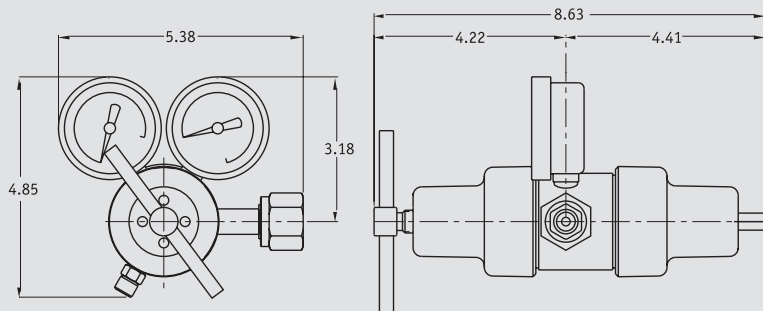
DETAILS

Regulator Weight: 4.8 lbs. /2.18 kg.

Pressure: 0.04 PSIG per 100 PSIG

C_v: 0.15

MODEL 9296



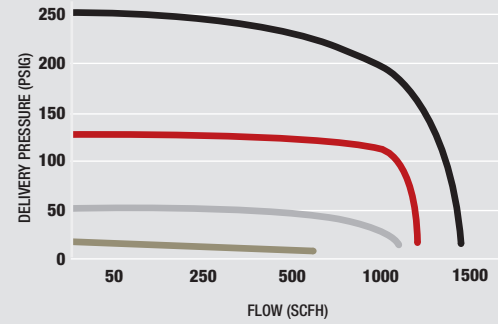
DETAILS

Regulator Weight: 4.8 lbs. /2.18 kg.

Pressure Rise: 0.04 PSIG per 100 PSIG

C_v: 0.15

PERFORMANCE CHART ALL FLOWS BASED ON AIR @ 70°F



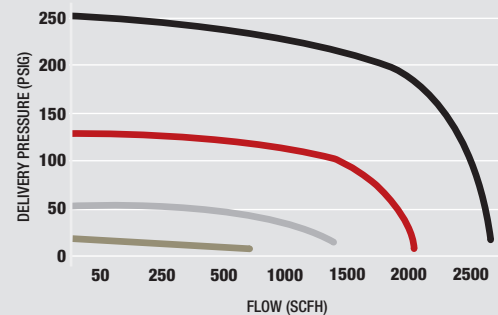
MODEL 9296 & 2561 TWO STAGE REGULATOR

— 9296-250 @ 250 PSIG inlet

— 9296-125 @ 200 PSIG inlet

— 9296-50 @ 200 PSIG inlet

— 9296-15 @ 200 PSIG inlet



MODEL 9296 & 2561 TWO STAGE REGULATOR

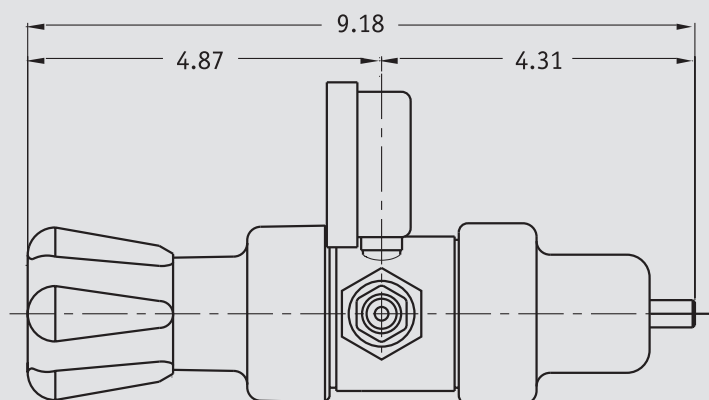
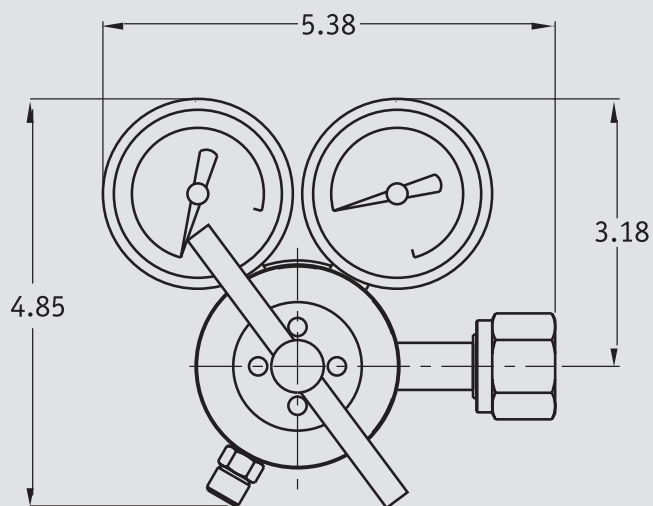
— 9296-250 @ 2000 PSIG inlet

— 9296-125 @ 2000 PSIG inlet

— 9296-50 @ 2000 PSIG inlet

— 9296-15 @ 2000 PSIG inlet

MODEL 9296SS



DETAILS

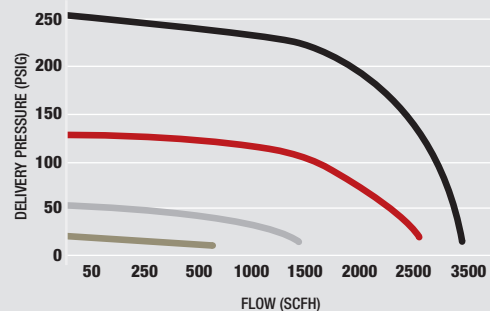
Regulator Weight: 5.4 lbs. /2.45 kg.

Pressure Rise: 0.04 PSIG per 100 PSIG

C_v: 0.15

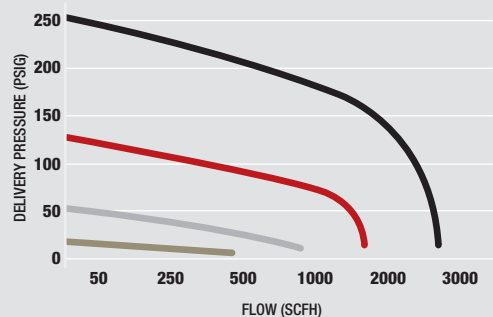
PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F



MODEL 9296 SS TWO STAGE REGULATOR

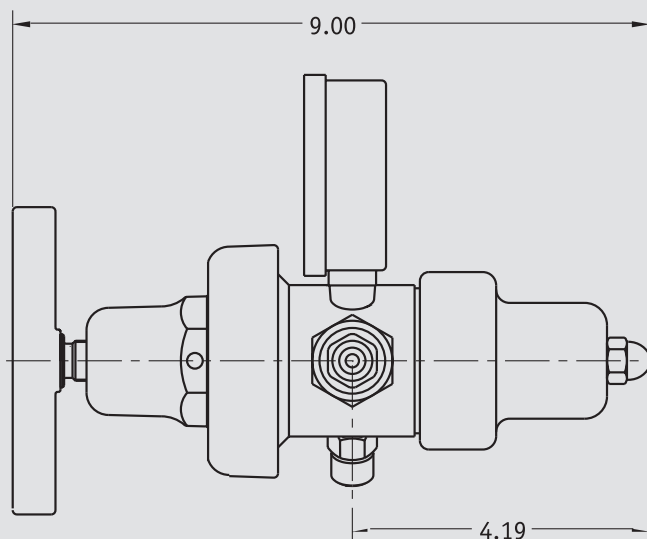
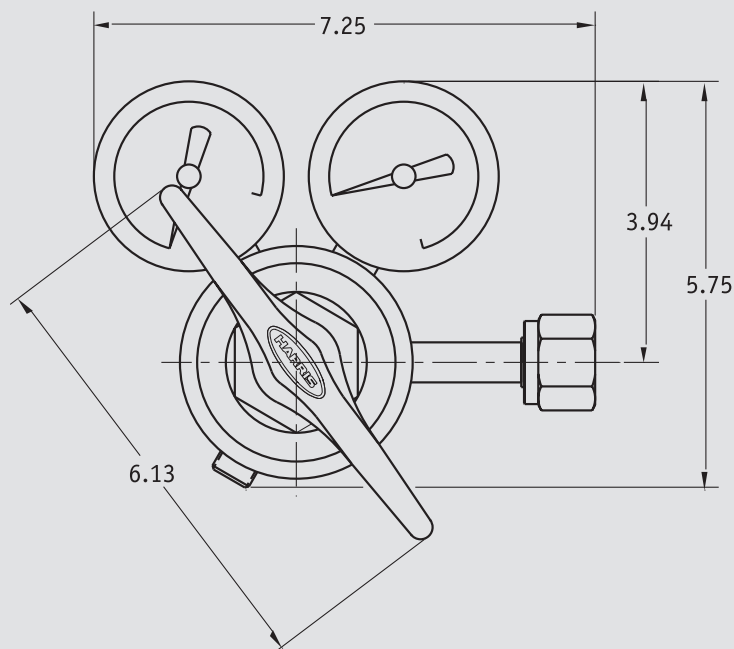
- 9296 SS-250 @ 250 PSIG inlet
- 9296 SS-125 @ 200 PSIG inlet
- 9296 SS-50 @ 200 PSIG inlet
- 9296 SS-15 @ 200 PSIG inlet



MODEL 9296 SS TWO STAGE REGULATOR

- 9296 SS-250 @ 2000 PSIG inlet
- 9296 SS-125 @ 2000 PSIG inlet
- 9296 SS-50 @ 2000 PSIG inlet
- 9296 SS-15 @ 2000 PSIG inlet

MODEL 9200



DETAILS

Regulator Weight: 6.8 lbs. / 13.08 kg

Pressure Rise: 0.05 PSIG per 100 PSIG

C_v: 0.53

For fuel gas Models (P/N:3302210, 3302211 and 3302212)

FOR OTHER MODELS

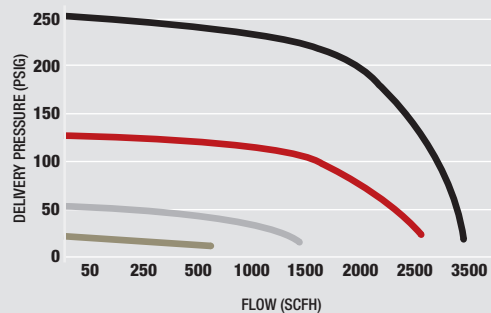
Regulator Weight: 6.8 lbs. / 13.08 kg.

Pressure Rise: 0.03 PSIG per 100 PSIG

C_v: 0.37

PERFORMANCE CHART

ALL FLOWS BASED ON AIR @ 70°F



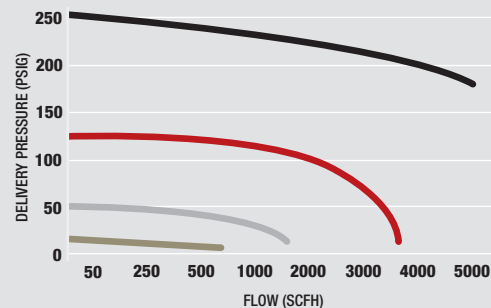
MODEL 9200 TWO STAGE REGULATOR - 200 PSIG INLET

— 9200-250 @ 250 PSIG inlet

— 9200-125 @ 200 PSIG inlet

— 9200-50 @ 200 PSIG inlet

— 9200-15 @ 200 PSIG inlet



MODEL 9200 TWO STAGE REGULATOR - 2000 PSIG INLET

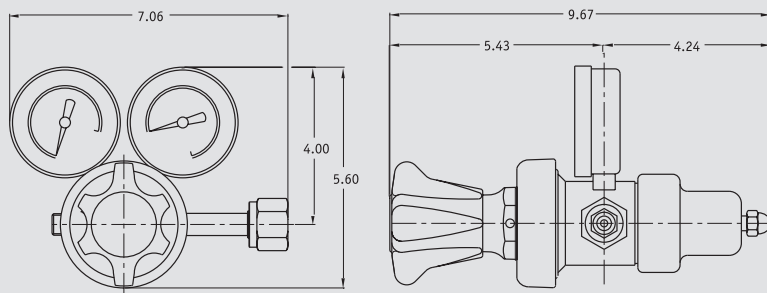
— 2548-200 @ 2000 PSIG inlet

— 2548-125 @ 2000 PSIG inlet

— 2548-50 @ 2000 PSIG inlet

— 2548-15 @ 2000 PSIG inlet

MODEL 9235 & HP 705



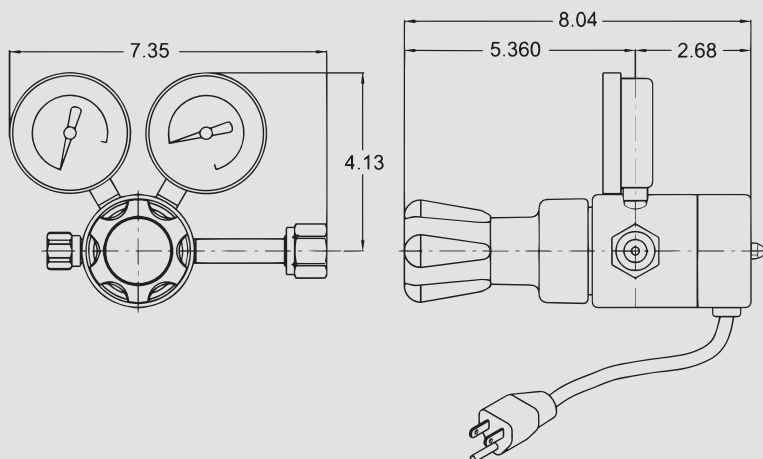
DETAILS

Regulator Weight: 6.9 lbs. / 3.13 kg.

Pressure Rise: 0.05 PSIG per 100 PSIG

C_v: 0.4

MODEL HP705



DETAILS

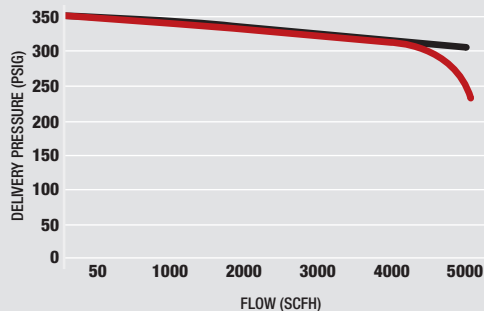
Regulator Weight: 6.8 lbs. / 13.08 kg.

Pressure Rise: 0.09 PSIG per 100 PSIG

C_v: 0.15

PERFORMANCE CHART

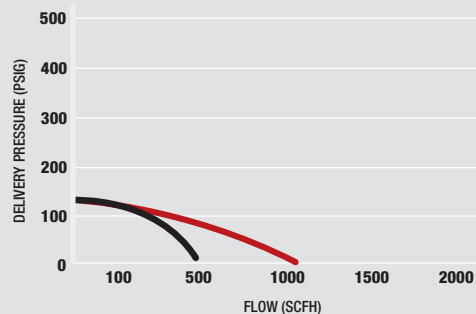
ALL FLOWS BASED ON AIR @ 70°F



MODEL 9235 TWO STAGE REGULATOR

— 9235-350 @ 2000 PSIG inlet

— 9235-350 @ 500 PSIG inlet



MODEL HP705 TWO STAGE REGULATOR

— HP 705-125 @ 200 PSIG inlet

— HP 705-125 @ 2000 PSIG inlet

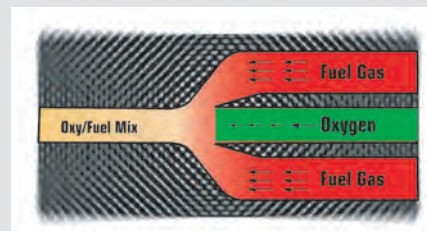
TORCH TECHNICAL DATA

"E" MIXER VS. "F" MIXER

HARRIS OFFERS TWO TYPES OF OXY/FUEL MIXERS. EQUAL PRESSURE OR POSITIVE MIXERS ARE REFERRED TO AS "E" TYPE MIXERS WHILE, LOW PRESSURE INJECTOR MIXERS ARE REFERRED TO AS "F" MIXERS. THE TYPE OF MIXER WHICH BEST SUITS THE NEED DEPENDS ON THE APPLICATION AND THE AVAILABLE FUEL GAS SUPPLY. THE FOLLOWING EXPLAINS SOME OF THE FEATURES AND BENEFITS OF EACH MIXER DESIGN.

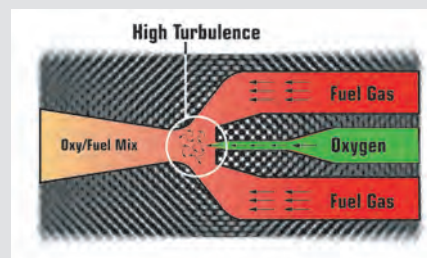
TYPICAL "E" MIXER DESIGN

To thoroughly mix the oxygen and fuel gas, "E" mixer designs rely on the positive pressure control of both oxygen and fuel gas. Both gases enter the mixing chamber at controlled pressures. "E" mixers allow the end-user greater control of the oxy/fuel ratio. This feature has an advantage in applications where a very carburizing or oxidizing flame is required. Also because of their higher potential flow rates, "E" mixers are required for high flow heating applications. This design is primarily used with acetylene but can also be used with alternate fuels when positive pressure control of the fuel gas is available.



TYPICAL "F" MIXER DESIGN

"F" or low pressure injector mixers require that only the oxygen has a positive pressure control. The oxygen exits a specially designed chamber at a very high velocity which causes the fuel gas to be aspirated into the mixing chamber. Because of the aspirating effect on the fuel gas, positive control of the fuel gas is not required. In fact, the mixers in the Harris line are designed to operate at fuel gas pressures as low as 4 ounces. "F" mixers tend to produce a more homogenous oxy/fuel mixture because of the high turbulence in the mixing chamber. This feature is most important when using the more difficult to mix alternate fuels. "F" mixers tend to have a narrower operating range than "E" mixers but because of their superior mixing capabilities they tend to maximize BTU output within that range. "F" mixers are used primarily with low pressure natural gas. However, they are also recommended for use with alternate fuels when maximum BTU output is needed and/or positive pressure control of the fuel gas is not available.



TORCH TECHNICAL DATA

FUEL GAS TECHNICAL DATA

TECHNICAL DATA FOR THE MOST COMMON INDUSTRY FUEL GASES

	ACETYLENE	PROPYLENE	PROPANE	NATURAL GAS
MAX. FLAME TEMPERATURE °F	5720	5240	5130	5040
OXY/FUEL COMBINATION RATIO (MAXIMUM TEMP.)	1.5:1	3.6:1	4.5:1	1.9:1
NEUTRAL FLAME TEMPERATURE °F	5620	5190	5090	5010
OXY/FUEL COMBINATION RATIO (NEUTRAL)	1.1:1	2.6:1	3.7:1	1.5:1
BTU'S PER CUBIC FOOT	1470	2370	2563	1000
% BTU IN OUTER CONE	65	84	89	97
BURNING VELOCITY IN O ₂	22.7/sec.	15.0/sec.	12.2/sec.	15.2/sec.
FLAMMABILITY LIMITS IN O ₂	3-93 %	2.5-60%	2.4-57%	5-59%
FLAMMABILITY LIMITS IN AIR	2.5-80 %	2.0-11.1 %	2.3-9.5 %	5.3-14 %
SPECIFIC GRAVITY (AIR=1@60°F)	0.91	1.45	1.56	0.55
VAPOR PRESSURE (PSIG @ 70°F)	250	135	120	(LINE PRESSURE)
LBS/GAL LIQUID	-	4.8	4.35	4.28
CUBIC FT/LB GAS	14.6	9.0	8.66	23.6
CUBIC FT/GAL LIQUID	-	43.5	43	37

*Data above is from reliable industry sources and is used in Harris Fuel Gas Cost Analysis Programs

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