

Turn to the Pros

HARRIS

A LINCOLN ELECTRIC COMPANY

HARRIS INDUSTRIAL EQUIPMENT CATALOG

HARRIS KNOWS
WHAT IT TAKES TO GET THINGS DONE, THAT'S WHY WE'VE BEEN EQUIPPING PROS



CUT



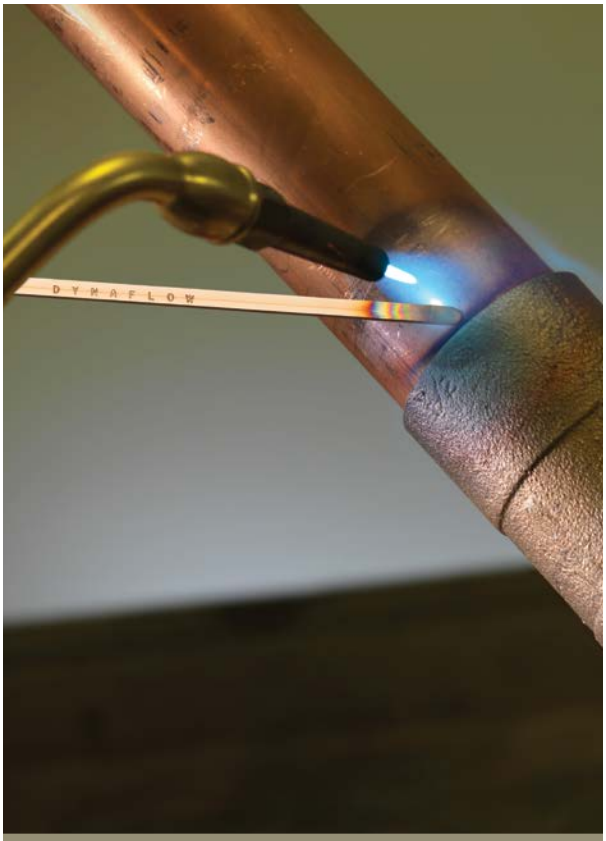
WELD

WITH THE BEST PRODUCTS FOR OVER 110 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

CONTENTS

THE HARRIS PRODUCTS GROUP 4
WHY PROFESSIONAL TRADESMEN TURN TO THE PROS 6
SINGLE-STAGE REGULATORS 8
Model 601, 601 HVAC 10
Model 301, 801 11
Model 25GX HVAC 12
Model 425 13
Model 45 14
Model 450, 45S 15
Model 29, 330 16
Model HP 750 17
Model 8700 18
Model 3500 19
Model 3510, 3520 20
Model 3530 21
Model 3540 21
Model 3560 22
Model 3590 22
Model 247 24
Model 447 25
Model 547 26
Model 2548 27
Model 647 27
TWO-STAGE REGULATORS 28
Model 2561 30
Model 9296 31
Model 9296SS 32
Model 9200 33
Model 9235 34
Model HP705 34
FLOWMETERS 36
Model 32 38
Model FM520 38
Model 351 39
Model 55-2 40
Model 355-2 40
Model 601 41
Model 6CD 41
Model 6S, 356 42
Model 2555, HP725 43
Model 351 Kit 44
Model 355-2 Kit 44
FLOWGAUGE REGULATORS 45
Model 601 46
Model 301 47
Model 801 47
Model 425, 330 48
Model 247, 447 49
Model 547, HP715 50
Model 601 AR/CD, 301 AR/CD 51
INERT GAS GUARDS 53
Model 25G IGG, 301 IGG 54
Model 447 IGG 56
TORCH HANDLES 57
Model 18-5 60
Model 43-2 61
Model V-315C 63
Model VH31 64
Model 19-6 65
Model 50-9 66
Model 50-10 67
Model 85 68
Model V-100C 70
Model VH10 71
Model 15-5 72
CUTTING ATTACHMENTS 73
Model 49-3F, 73-3 75
Model V-2460, 39-3F 76
Model 72-3, V-1350 77
Model VH24, Model VH13 78
Model 36-2N, 36-2 79
MIXERS 81
Model E-43, V-W 83
Model E2-43, V-W-2 84
Model E3-43, V-W-3 85
Model B-43-N, D-85 86
Model V-W-1, H-16-E 87
Model H-16-2E, H-16-S 88
Model B-15-3, B-15-3S 89
Model B-15-3F 90
HAND CUTTING TORCHES 92
Model 42-4E, 42-4F 94
Model 980E, 980F 95
Model V242-2 96
Model V242-4E 96
Model 62-5E 97
Model 62-5F 98
Model V-62-5F 99
Model 62-5SSF 101
Model 136 102
MACHINE CUTTING TORCHES 103
Model 98-6F, 98-6E 105
Machine Cutting Guide 106
Model 80 107
Model 524 107
Model 622 Trakmax™ Tractor 108, 109
HEATING TORCHES AND ASSEMBLIES
Model 89-3 111
Model K-43 112
Inferno 113
Thermite System 114, 115
TIPS 116
ACETYLENE HAND CUTTING TIPS
Model 3690, 3690AC 118
Model 6290, 6290-S 119
Model 6290AC 120
ALTERNATE FUEL HAND CUTTING TIPS
Model 3690-P, 6290 N & NX 121
Model 6290NFF, 6290NXP 122
V-SERIES CUTTING TIPS
Model V1-101 123
Model V1-101AC 124
Model 1-GPN, 1-GPP 125
Model V3-101 126
Model 3-GPN, 3-GPP 127
ALTERNATE FUEL MACHINE CUTTING TIPS
Model 6290-VVC 128
Model 6290-VVCU 129
Model 6290-VVCP 130
Model 8090 131
HEAVY HAND CUTTING TIPS
Model 136 131
Model 140, 140-HS 132
WELDING AND BRAZING TIPS
Model 23A90 134
Model 5090 135, 136
Model 1390 137
Model 8490 138
Model 1390-N 139, 140
Model 8490-N 141
HEATING TIPS
Model 2290-H&HPM 142
Model J&H-Series 143
Model RBA 146
Model RBP 147
ALTERNATE FUEL SPECIALTY TIPS
Model 6290 148
ACETYLENE FUEL SPECIALTY TIPS
Model 6290 149
KITS 151
CLASSIC - ALL FUEL GASES
Pipeliner® Classic 152
Steelworker® Classic 152
Expert® Classic 153
- ALTERNATE FUELS
Pipeliner® Classic/ Propane Kit 154
Steelworker® Classic/ Propane Kit 154
Pipeliner® Classic/ Propylene Kit 155
Steelworker® Classic/ Propylene Kit 155

CLASSIC CUTTER PAC® - ALL FUEL GASES
Classic 62-5E 156
CLASSIC CUTTER PAC® - ALTERNATE FUEL
Classic 62-5F 157
CLASSIC PORT-A-TORCH® 158
CLASSIC V-SERIES® COMBO - ALL FUEL GASES
V-Series® Pipeliner® 159
V-Series® Steelworker® 159
V-Series® Expert® 160
V-Series® Pipeliner® LPG® 160
CLASSIC V-SERIES® PORT-A-TORCH® 161
IRONWORKER® - ALL FUEL GASES
Medium Duty Harris 162
Heavy Duty Harris 163
Extra Heavy Duty Harris 163
IRONWORKER® V-SERIES®
Medium Duty V-Series 164
Heavy Duty V-Series 165
Extra Heavy Duty V-Series 165
HARDHAT® CLASSIC ALL FUEL GASES
Classic 43-2 Cutter Pac® 166
Classic 62-5E Cutter Pac® 166
HARDHAT® CLASSIC ALTERNATE FUEL
Classic 62-5F Cutter Pac® 167
Classic 42 Cutter Pac® 167
HARDHAT® CLASSIC V-SERIES® COMBO
V-Series® V-315 168
V-Series® V-100C 168
GAS DISTRIBUTION 169
Laser Kits 169
Two-Gas Blenders 170
Gas Manifolds 170
ACCESSORIES 173
Regulator and Torch Accessories 174
Machine Cutting Accessories 109
Pipeline and Manifold Accessories 181
TECHNICAL DATA
Regulator Technical Data 185
Torch Technical Data 203



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
- Brazing and soldering alloys
- Industrial and specialty gas regulation equipment
- Welding alloys
- Gas distribution systems
- 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 48 manufacturing locations, including operations and joint ventures in 19 countries and a worldwide network of distributors and sales offices covering more than 160 countries.

THE HARRIS PRODUCTS GROUP HISTORY

1889
John Harris, founder, invents the first flame-cutting torch.

1904
Harris exhibits his invention at the World's Fair in St. Louis, Missouri (USA).

1926
U.S. Welding Co. of Minnesota purchases Harris Calorific and becomes part of Emerson Electric Co. in 1973.

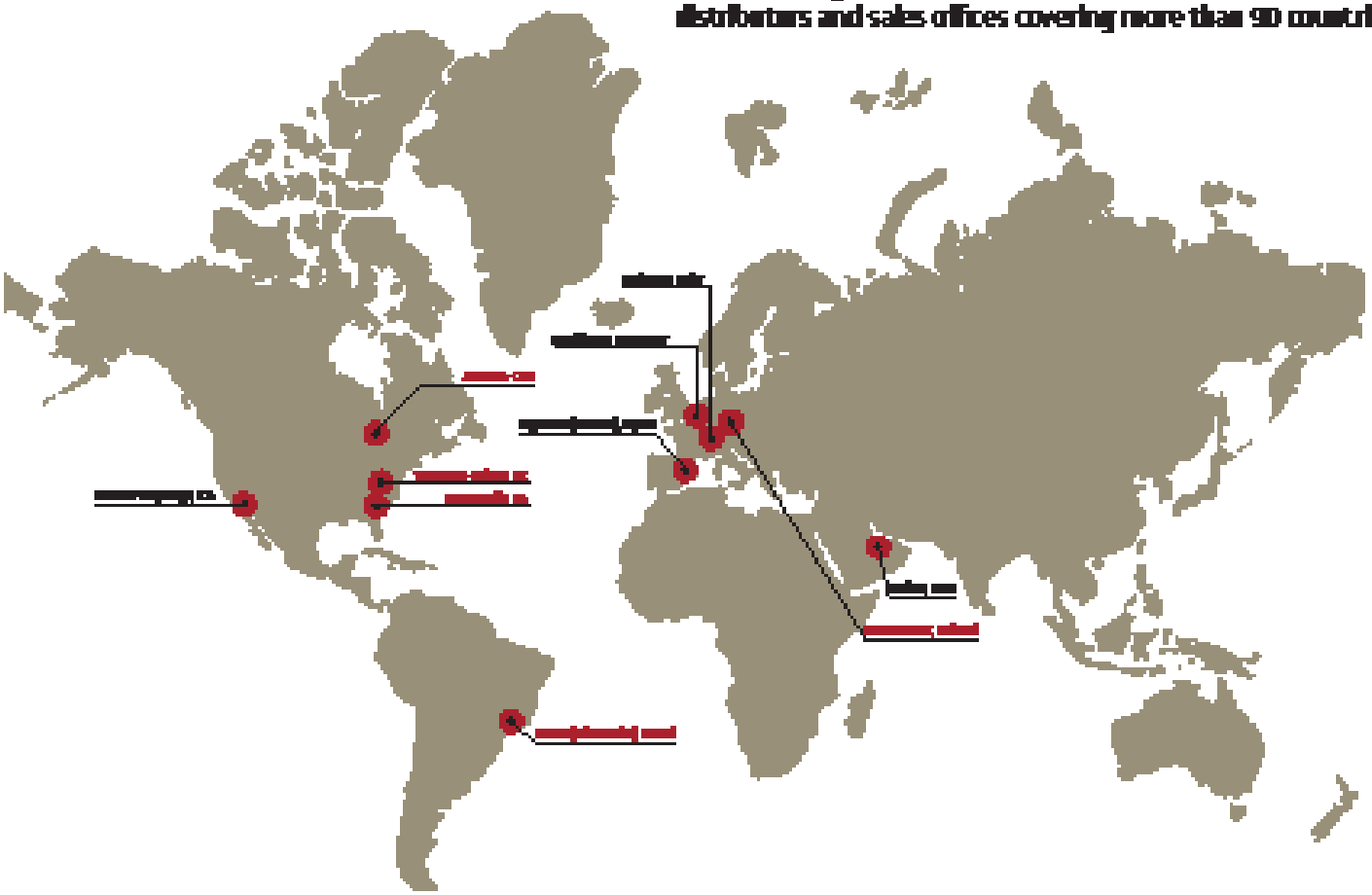
1890 1900 1910 1920 1930 1940 1950

1905
John Harris establishes The Harris Calorific Company. Harris continued to refine its gas torches and starts manufacturing related accessories, including gas pressure regulators.

1914
Joseph W. Harris founds the J.W. Harris Company, specializing in the distribution and repair of specialized parts for automotive and farm vehicles. The company later expands into welding alloys and accessories.

MANUFACTURING AND DISTRIBUTION FACILITIES

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



1960-1980
Both Harris companies expand around the world.

1990
Lincoln Electric purchases Harris Calorific from Emerson Electric.

2005
Lincoln Electric purchases the privately-held J.W. Harris Company.

2006
Harris Calorific and J.W. Harris combine, creating The Harris Products Group.

2008
The Harris Products Group purchases Brastak in Brazil.

2012
Harris introduces the 7-Year Warranty Plan and debuts the Model 25GX Regulator.

2018
Harris launches Aluxcor Aluminum Brazing Alloy.

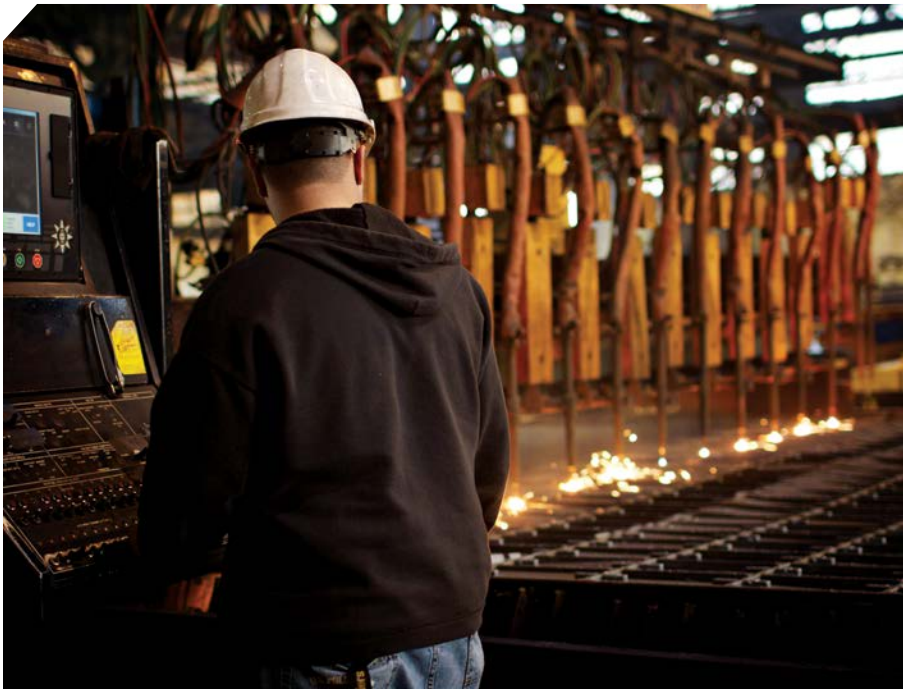
2019
Harris purchases the brazing and soldering business of Worthington Industries.

1960 1980 2000 2010 2011

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 specialist 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.

Many Harris industrial gas regulators and torches are certified to the UL® listed standard. Choosing to work with UL® standards demonstrates our commitment to the highest levels of safety and quality.

Harris regulators and torches are all manufactured to the applicable Compressed Gas Association (CGA) standard.

SINGLE-STAGE PRESSURE CONTROL REGULATORS

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

GET CONNECTED
Go to www.facebook.com/HarrisProductsGroup

QUICK SELECTION GUIDE

ECONOMICAL/COMPACT/LIGHT WEIGHT



601 MODEL
ECONOMICAL
p.10



601 MODEL
HVAC PURGING
p.10



301 MODEL
COMPACT
p.11

GENERAL PURPOSE



801 MODEL
COMPACT
p.11



25GX MODEL
BEST VALUE
p.12



25GX MODEL
HVAC PURGING
p.12



425 MODEL
BEST FEATURES
p.13

GENERAL PURPOSE



45 MODEL
HEAVY DUTY
p.14

STAINLESS STEEL DIAPHRAGM



450 MODEL
STAINLESS STEEL DIAPHRAGM
p.15

45S MODEL
STAINLESS STEEL DIAPHRAGM
p.15

GAUGELESS



29 MODEL
GAUGELESS
p.16

LIQUID CYLINDER



330 MODEL
LIQUID CYLINDER GASEOUS WITHDRAWAL
p.16



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.

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 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 110 years—and we are just getting started...

DOME LOADED



HP 750 MODEL
CONSTANT PRESSURE/ HIGH FLOW
p.17

HIGH PRESSURE



8700 MODEL
ULTRA HIGH PRESSURE
p.18

HIGH FLOW



3500 MODEL
HIGH PRESSURE
p.19

3510 MODEL
MANIFOLD
p.20

3520 MODEL
SIDE ENTRY
p.20

3530 MODEL
HIGH FLOW PIPELINE
p.21

3540 MODEL
ULTRA HIGH FLOW
p.21

HIGH FLOW



3560 MODEL
ULTRA HIGH FLOW
p.21

3590 MODEL
ULTRA HIGH FLOW STAINLESS STEEL DIAPHRAGM
p.22

PIPELINE STATION



247 MODEL
ECON. LINE/ STATION REG
p.24

447 MODEL
HEAVY DUTY PIPELINE/STATION
p.25

547 MODEL
HEAVY DUTY STATION
p.26

2548 MODEL
STAINLESS STEEL DIAPHRAGM
p.27

647 MODEL
PANEL MOUNT
p.27

601

MODEL

7 YEAR WARRANTY · MADE IN THE USA

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. 184

PART NO.	MODEL NO.	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" 9/16" - 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" 9/16" - 18 LH
3000331	601-15-510	ACETYLENE	400	0 - 15	30RZ	400	CGA 510	"B" 9/16" - 18 LH
3000332	601-15-300	ACETYLENE	400	0 - 15	30RZ	400	CGA 300	"B" 9/16" - 18 LH
3000409	601-50-510P	LPG*	400	0 - 50	60	400	CGA 510P	"B" 9/16" - 18 LH
3000296	601-80-540	OXYGEN	3000	0 - 80	100	4000	CGA 540	"B" 9/16" - 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.

601

MODEL

7 YEAR WARRANTY

HVAC PURGING REGULATOR

MODEL SHOWN:
601-400-580

DESCRIPTION

The model 601 is designed for applications where weight and size are critical factors. Used for HVAC purging, pressure testing and blanketing with nitrogen or other inert gases. Gauges feature rubber gauge guards for added protection in abusive conditions. Plastic knob for easy grip and precise adjustment. Maximum delivery pressure 400 or 800 PSIG.



DETAILS

Capacity: Light/Medium Duty

C_v: 0.17

Gauges: 50mm ABS plastic-psi/bar

Pressure Regulation: 0.4 PSIG/100 PSIG

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

Body: Brass

Outlet: 1/4" 45° Flare SAE

Certifications: CGA E-4

Where Used: HVAC purging, pressure testing and blanketing

Weight: 1.39 lbs./ 0.63 kg.

Related Items:
Gauge-Guard, CPR63332
P/N: 9003727

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000648	601-400-580	Ar, He, N2	3000	0-400	600	4500	CGA 580	1/4" 45° flare SAE CGA 165
3000649	601-800-580	Ar, He, N2	3000	0-800	1450	4500	CGA 580	1/4" 45° flare SAE CGA 165

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.184

PART NO.	MODEL NO.	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	9/16" - 18 LH
3000160	301-15-300	ACETYLENE	400	0 - 15	30RZ	400	CGA 300	9/16" - 18 LH
3000161	301-15-510	ACETYLENE	400	0 - 15	30RZ	400	CGA 510	9/16" - 18 LH
3000166	301-15-520B	ACETYLENE	400	0 - 15	30RZ	400	CGA 520B	9/16" - 18 LH
3001862	301-50-510P	LPG*	400	0-50	60	400	CGA510	9/16" - 18 LH
3000162	301-100-540	OXYGEN	3000	0 - 100	150	4000	CGA 540	9/16" - 18 RH
3000187	301-100-580	Ar, He, N_2	3000	0 - 100	150	4000	CGA 580	9/16" - 18 RH
3000192	301-100-320	CO_2	3000	0 - 100	150	4000	CGA 320	9/16" - 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.

801

MODEL

COMPACT GENERAL PURPOSE

MODEL SHOWN:
801-145-540

DESCRIPTION

The model 801 is designed to be a medium duty regulator, perfect for most industrial cutting and welding applications. It features 2" gauges that are easy to read and an ergonomic adjusting knob for precise operation and a longer service life.
***Now available in clamshell packaging

DETAILS

Capacity: Medium duty

C_v: 0.17

Gauges: 2" Steel dual scale

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

Body: Brass

Featured In: Ironworker HMD & VMD series outfits

Certifications: CGA E-4

Where Used: Industrial cutting and welding applications

Weight: 2.32 lbs. / 1.05 kg.



PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3002195	801-15-300	ACETYLENE	500	0 - 15	30 RZ	400	CGA 300	9/16" - 18 LH
3002193	801-15-510	ACETYLENE	500	0 - 15	30 RZ	400	CGA 510	9/16" - 18 LH
3002194	801-145-540	OXYGEN	3000	0 - 145	150	4000	CGA 540	9/16" - 18 RH
3004195	801-15-300 CS***	ACETYLENE	500	0 - 15	30 RZ	400	CGA 300	9/16" - 18 LH
3004193	801-15-510 CS***	ACETYLENE	500	0 - 15	30 RZ	400	CGA 510	9/16" - 18 LH
3004194	801-145-540 CS***	OXYGEN	3000	0 - 145	150	4000	CGA 540	9/16" - 18 RH

CS*** Packaged in clamshell

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 adjustment 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

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

Certifications: CGA E-4

Where Used: HVAC purging, pressure testing and blanketing

Weight: 3.2 lbs./1.45 kg.

Related Equipment:
Steel gauge guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238
Outlet P/N: 9001426

Additional Technical Information: PG. 185

PART NO.	MODEL NO.	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	¼" 45° Flare SAE CGA 165
3000606	25GX-500-580	Ar, He, N_2	3000	0 - 500	4000	CGA 580	¼" 45° Flare SAE CGA 165

25GX

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.
***Some models are available in clamshell packaging (CS).



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:
Steel gauge guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238

Additional Technical Information: PG. 186

PART NO.	MODEL NO.	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	30 RZ	400	CGA 300	9/16" - 18 LH
3000683	25GX-15-300 CS***	ACETYLENE	500	0 - 15	30 RZ	400	CGA 300	9/16" - 18 LH
3000380	25GX-15-510	ACETYLENE	500	0 - 15	30 RZ	400	CGA 510	9/16" - 18 LH
3000682	25GX-15-510 CS***	ACETYLENE	500	0 - 15	30 RZ	400	CGA 510	9/16" - 18 LH
3000450	25GX-50-510P	LPG*	500	0 - 50	60	400	CGA 510P	9/16" - 18 LH
3002450	25GX-50-510P CS***	LPG*	500	0-50	60	400	CGA 510P	9/16" - 18 LH
3000485	25GX-15-510P	LPG*	500	0 - 15	60	400	CGA 510P	9/16" - 18 LH
3001938	25GX-50-350	H_2 Methane	3000	0-50	60	4000	CGA 350	9/16" - 18 LH
3000554	25GX-50-540	OXYGEN	3000	0-50	60	4000	CGA 540	9/16" - 18 LH
3000510	25GX-145-540	OXYGEN	3000	0 - 145	200	4000	CGA 540	9/16" - 18 RH
3000681	25GX-145-540 CS***	OXYGEN	3000	0 - 145	200	4000	CGA 540	9/16" - 18 LH
3000540	25GX-145-580	Ar, He, N_2	3000	0 - 145	200	4000	CGA 580	9/16" - 18 RH **
3000550	25GX-145-590	INDUS. AIR	3000	0 - 145	200	4000	CGA 590	¼" - NPT (M)
3000599	25GX-145-320	CO_2	3000	0 - 145	200	4000	CGA 320	5/8" - 18 (RH)
3000806	25GX-200-580	Ar, He, N_2	3000	0 - 200	400	4000	CGA 580	9/16" - 18 RH **

*Regulators designed for propane service can be used with any other LPG fuel. NOT FOR USE WITH ACETYLENE.
**Supplied with 5/8"-18 adaptor P/N: 9000002 ***Packaged in clamshell
3000485 has 30 PSIG plain face gauge

425

MODEL

7 YEAR WARRANTY | MADE IN THE USA

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 and a neoprene diaphragm. The 425 is also available in a multitude of pressure ranges and for all standard industry gases. *Some models are available in clamshell packaging (CS).



Additional Technical Information: PG. 186

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:
Steel gauge guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238
Adaptor: 9/16 - 18(F) X 5/8" -18(F)
P/N: 9000002

PART NO.	MODEL NO.	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	9/16" - 18 LH
3000815	425-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	9/16" - 18 LH
3004542	425-15-510 CS*	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	9/16" - 18 LH
3000713	425-50-510P	LPG**	3000	0 - 50	60	400	CGA 510P	9/16" - 18 LH
3000784	425-50A-350	H_2 METHANE	3000	0 - 50	60	4000	CGA 350	9/16" - 18 LH
3000794	425-125A-350	H_2 METHANE	3000	0 - 125	200	4000	CGA 350	9/16" - 18 LH
3000787	425-125-350	ETHYLENE, METHANE	3000	0 - 125	200	4000	CGA 350	9/16" - 18 LH
3000714	425-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3004544	425-125-540 CS*	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3000796	425-200-540	OXYGEN	3000	0 - 200	400	4000	CGA 540	9/16" - 18 RH
3000762	425-125-346	MEDICAL AIR	3000	0 - 125	200	4000	CGA 346	9/16" - 18 RH
3000764	425-200-346	MEDICAL AIR	3000	0 - 200	400	4000	CGA 346	9/16" - 18 RH
3000821	425-125-590	INDUSTRIAL AIR	3000	0 - 125	200	4000	CGA 590	1/4" - NPT (M)
3000837	425-15-580	Ar, He, N_2	3000	0 - 15	30	4000	CGA 580	9/16" - 18 RH
3000843	425-50-580	Ar, He, N_2	3000	0 - 50	50	4000	CGA 580	9/16" - 18 RH
3000767	425-125-580	Ar, He, N_2	3000	0 - 125	200	4000	CGA 580	9/16" - 18 RH
3000765	425-125A-580	Ar, He, N_2***	3000	0 - 125	200	4000	CGA 580	9/16" - 18 RH
3000773	425-200-580	Ar, He, N_2	3000	0 - 200	400	4000	CGA 580	9/16" - 18 RH
3000848	425-15-555	BUTANE	3000	0 - 15	30	4000	CGA 555	9/16" - 18 RH
3000775	425-125-320	CO_2	3000	0 - 125	200	4000	CGA 320	9/16" - 18 RH

* Models with "CS" suffix are clamshell packaged.
**Regulators designed specifically for propane 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 H_2 applications feature the standard Harris internal safety.

PRO INFO

CHOOSE THE RIGHT HARRIS FLOW CONTROL DEVICES

One of the most common uses 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.

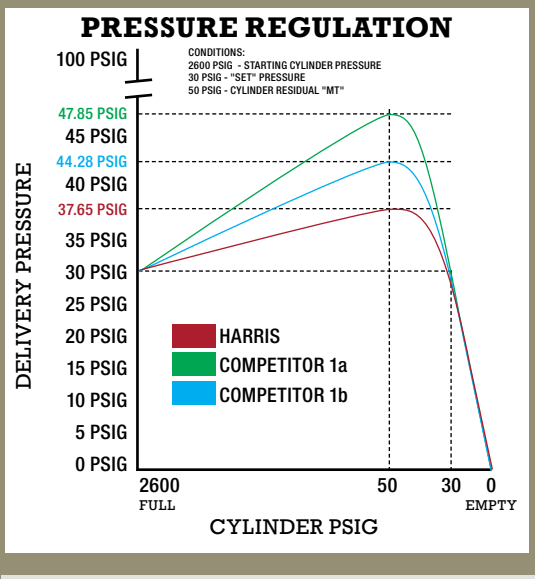
CONTACT YOUR HARRIS REPRESENTATIVE FOR THE FEATURES AND BENEFITS THAT BEST FIT YOUR APPLICATION(S).

PRO INFO: THE TRUE MEASURE OF A REGULATOR

HARRIS MODEL 450

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.

PRESSURE RISE

HARRIS 450 "RISE" = 0.30 PSIG FOR EVERY 100 PSIG DECAY IN CYLINDER

$$\frac{0.30 \times (2600-50)}{100} = \frac{.3 \times 2550}{100} = \textbf{7.65 PSIG}$$

COMPETITIVE MODEL 1a "RISE" = 0.56 PSIG FOR EVERY 100 PSIG DECAY IN CYLINDER

$$\frac{0.56 \times (2600-50)}{100} = \frac{.56 \times 2550}{100} = \textbf{14.28 PSIG}$$

COMPETITIVE MODEL 1b "RISE" = 0.56 PSIG FOR EVERY 100 PSIG DECAY IN CYLINDER

$$\frac{0.70 \times (2600-50)}{100} = \frac{.7 \times 2550}{100} = \textbf{17.85 PSIG}$$

Model Number	Pressure Rise PSI / 100 PSI	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%

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 industry. It defines product safety and production test requirements and it defines performance characteristics required to meet field applications.

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

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 internal tamper-proof self-reseating safety. *Some models are available in clamshell packaging (CS*).



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. 187

PART NO.	MODEL NO.	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	9/16" - 18 LH
3002494	450-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	9/16" - 18 LH
3002495	450-50-510P	LPG**	500	0 - 50	100	400	CGA 510P	9/16" - 18 LH
3004547	450-50-510P CS	LPG**	500	0 - 50	100	400	CGA 510P	9/16" - 18 LH
3002496	450-50-540	OXYGEN	3000	0 - 50	100	4000	CGA 540	9/16" - 18 RH
3002497	450-125-540	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3004548	450-125-540 CS	OXYGEN	3000	0 - 125	200	4000	CGA 540	9/16" - 18 RH
3002499	450-200-540	OXYGEN	3000	0 - 200	400	4000	CGA 540	9/16" - 18 RH
3002498	450-125-580	AR, HE, N_2	3000	0 - 125	200	4000	CGA 580	5/8" - 18 RH
3004492	450-200-580	AR, HE, N_2	3000	0 - 200	400	4000	CGA 580	5/8" - 18 RH

* Models with "CS" suffix are clamshell packaged.

**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

STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
45S-145-540

DESCRIPTION

The Model 45S single stage regulator has a stainless steel diaphragm for extra safety, longer life, and greater dependability. Harris 45S regulators have a Harris exclusive internal, tamper-proof, self-seating 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:
Steel gauge guards
Green (Oxygen) P/N: 4300239
Red (Fuel) P/N: 4300238

Additional Technical Information: PG. 188

PART NO.	Model NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3001777	45S-15-510	ACETYLENE	500	0 - 15	400	CGA 510	9/16" - 18LH

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. 186

PART NO.	MODEL NO.	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	9/16" - 18 LH
3600250	29-15C-300	ACETYLENE	500	0 - 15	-	-	CGA 300	9/16" - 18 LH
3600320	29-50C-510P	LPG*	500	0 - 50	-	-	CGA 510P	9/16" - 18 LH
3600340	29-100C-540	OXYGEN	3000	0 - 100	-	-	CGA 540	9/16" - 18 RH
3600200	29-100C-540SG	OXYGEN	3000	0 - 100	-	-	CGA 540SG	9/16" - 18 RH
3600345	29-100C-580	Ar, He, N_2	3000	0 - 100	-	-	CGA 580	9/16" - 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. The model 330 has an auxiliary plugged low pressure port.



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. 188

PART NO.	MODEL NO.	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	9/16" - 18
3001093	330-350-540	OXYGEN	3000	0 - 350	500	-	CGA 540	9/16" - 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	9/16" - 18
3001094	330-350-580	Ar, NITROGEN	3000	0 - 350	500	-	CGA 580	9/16" - 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	9/16" - 18
3001095	330-350-320	CO_2	3000	0 - 350	500	-	CGA 320	9/16" - 18
3001099	330-500-320	CO_2	3000	0 - 500	600	-	CGA 320	1/4" - NPT

HP 750 MODEL

1YR WARRANTY

MADE IN THE USA

CONSTANT PRESSURE/HIGH FLOW DOME LOADED

MODEL SHOWN:
HP750-500-3000

DESCRIPTION

The Model HP750 series dome loaded regulator is a high pressure, high flow dome loaded 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 and lasers too.



Additional Technical Information: PG. 189

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

PART NO.	MODEL NO.	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)
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)
3000951	HP750-250-540	NON CORROSIVE	3000	0 - 250	400	4000	CGA 540	½" NPT (F)
3000952	HP750-500-580	NON CORROSIVE	3000	0 - 500	600	4000	CGA 580	½" NPT (F)

PRO INFO

SERVO-DOME LOADED TECHNOLOGY

The servo-dome load feature automatically adjusts the regulator as the cylinder pressure declines which helps maintain a steady outlet pressure and flow rate without user adjustment. Unlike competitive models, the Harris Model 750 is a rugged one piece unit with no external tubing.

CONTACT YOUR HARRIS REPRESENTATIVE FOR THE FEATURES AND BENEFITS THAT BEST FIT YOUR APPLICATION(S).

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. 190

PART NO.	MODEL NO.	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
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

1YR WARRANTY | MADE IN THE USA

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. All models have a neoprene diaphragm.



DETAILS

Capacity: High pressure, high flow

C_v: 0.55 and 0.4

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:
¼" plug P/N: 9000306
⅜" plug P/N: 9000373

Weight: 4.6 lbs./2.09 kg.

Additional Technical Information: PG. 191

PART NO.	MODEL NO.	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
3003513	3500-200-350	H_2, METHANE	3000	0 - 200	400	4000	CGA 350	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	500	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.

3500 MOTOR SPORTS REGULATOR

MODEL SHOWN:
3500-600-580



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 ¼" NPT(F) auxiliary delivery port.

LINCOLN ELECTRIC MOTORSPORTS

PART NO.	MODEL NO.	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	500	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)

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 ½" NPT for direct mounting in piping systems. The 3510 now features both a ¼" NPT high and ¼" NPT low pressure port. All models have a neoprene diaphragm.



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. 191

PART NO.	MODEL NO.	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 (M)	1.00-11.5 NPS LH (F)
3003548*	3510-125-LH	FUEL GAS	3000	0 - 125	200	4000	1.00-11.5 NPS LH (M)	1.00-11.5 NPS LH (F)
3003551*	3510-200-LH	FUEL GAS	3000	0 - 100	400	4000	1.00-11.5 NPS LH (M)	1.00-11.5 NPS LH (F)
3003546**	3510-15-RH	NON-FUEL GAS	400	0 - 15	30	400	1.00-11.5 NPS RH (M)	1.00-11.5 NPS RH (F)
3003549	3510-125-RH	NON-FUEL GAS	3000	0 - 125	200	4000	1.00-11.5 NPS RH (M)	1.00-11.5 NPS RH (F)
3003550	3510-200-RH	NON-FUEL GAS	3000	0 - 200	400	4000	1.00-11.5 NPS RH (M)	1.00-11.5 NPS RH (F)

*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. Models with a 15 lb delivery pressure have a neoprene diaphragm. All models with a delivery pressure of 50 PSIG and above have a stainless steel diaphragm.



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.

HP Safety: External, self-seating, captured vent
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. 192

PART NO.	MODEL NO.	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	½" - NPT(F)	½" - NPT(F)
3003561	HP 3520-50	NON CORROSIVE	3000	0 - 50	100	4000	½" - NPT(F)	½" - NPT(F)
3003562	HP 3520-125	NON CORROSIVE	3000	0 - 125	200	4000	½" - NPT(F)	½" - NPT(F)
3003563	HP 3520-250	NON CORROSIVE	3000	0 - 250	400	4000	½" - NPT(F)	½" - NPT(F)
3003564	HP 3520-500	NON CORROSIVE	3000	0 - 500	600	4000	½" - NPT(F)	½" - NPT(F)

3530 MODEL

1YR WARRANTY | MADE IN THE USA

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. Models for high pressure inlet (500 PSI) include a high pressure external safety. Models with a 15 lb delivery pressure have a neoprene diaphragm. All models with a delivery pressure of 50 PSIG and above have a stainless steel diaphragm.



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

HP Safety: External, Self-seating, Captured vent

Certifications: CGA E-4

Where Used: Manifold systems, pipeline systems

Related Items: Brass bushing to convert ports. ¼" NPT (F) x ½" MNPT (M) P/N: 9005806

Weight: 4.3 lbs./1.95 kg.

Additional Technical Information: PG. 192

PART NO.	MODEL NO.	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

1YR WARRANTY | MADE IN THE USA

ULTRA HIGH FLOW PIPELINE

MODEL SHOWN:
3540-50-1/2" NPT(F)0

DESCRIPTION

The Model 3540 is a single-stage, neoprene diaphragm, brass barstock regulator. It is designed specifically for applications demanding extremely high gas flows even at low incoming pressures. The 3540 features 8 functional body ports, two 1/2" NPT and six 1/4" NPT that can be used for a wide variety of inlet/outlet and gauge location configurations.



DETAILS

Capacity: Ultra high flow

C_v: 1.0

Gauges: 2.5" Brass psi/bar

Pressure Regulation: 5.5 PSIG/100 PSIG

Seats: 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 1/4" NPT (F) x 1/2" MNPT P/N: 9005806

Panel Mount: Rear panel mountable

Weight: 6.9 lbs./3.13 kg..

Additional Technical Information: PG. 193

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTIONS (F)	OUTLET CONNECTIONS (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)

3560 MODEL

1YR WARRANTY · MADE IN THE USA

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 eight functional body ports, two 1/2" and six 1/4" ports allowing for a wide selection of inlets/outlets and gauge location configurations. It's auxiliary HP gauge port allows the 3560 be used for low pressure cylinder applications.

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

Used: High flow pipeline, manifold systems and bulk systems

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

Plug ¼" NPT hex socket P/N: 9000495

Panel Mount: Rear panel mountable

Weight: 6.7 lbs./3.04 kg.

Additional Technical Information: PG. 193

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTIONS (F)	OUTLET CONNECTIONS (F)
4000959	3560-15	NON CORROSIVE	500	0 - 15	30	N/A	½" NPT	½" NPT
4000960	3560-50	NON CORROSIVE	500	0 - 50	100	N/A	½" NPT	½" NPT
4000961	3560-125	NON CORROSIVE	500	0 - 125	200	N/A	½" NPT	½" NPT
4000962	3560-250	NON CORROSIVE	500	0 - 250	400	N/A	½" NPT	½" NPT

3590 MODEL

1YR WARRANTY · MADE IN THE USA

ULTRA HIGH FLOW PIPELINE WITH STAINLESS STEEL DIAPHRAGM AND BODY

MODEL SHOWN:
3590-125-½" 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 3560 features eight functional body ports, two 1/2" and six 1/4" ports allowing for a wide selection of inlets/outlets and gauge location configurations. It's auxiliary HP gauge port allows the 3560 be used for low pressure cylinder applications.

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 ¼" NPT (F) x ½"MNPT P/N: 9005752
Stainless steel plug ¼" NPT hex socket P/N: 9000553

Panel Mount: Rear panel mountable

Weight: 6.9 lbs./3.13 kg.

Additional Technical Information: PG. 194

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG/BAR	INLET CONNECTIONS	OUTLET CONNECTIONS
4000974	3590-50	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 50	100	–	½" NPT (F)	½" NPT (F)
4000975	3590-125	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 125	200	–	½" NPT (F)	½" NPT (F)
4000976	3590-250	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 250	400	–	½" NPT (F)	½" NPT (F)
4000977	3590-500	ATMOSPHERIC OR MILDLY CORROSIVE	500	0 - 500	1000	–	½" NPT (F)	½" NPT (F)

PRO INFO

HARRIS MANUFACTURES A COMPLETE LINE OF SPECIALTY GAS EQUIPMENT.

CONTACT CUSTOMER SERVICE OR YOUR HARRIS REPRESENTATIVE AND ASK FOR CATALOG
PN: 9505646



GAS PRESSURE & FLOW CONTROL

EQUIPMENT CATALOG

AT A GLANCE

- SPECIALTY GAS REGULATORS
- HIGH PURITY SWITCH OVERS
- SPECIALTY GAS ACCESSORIES
- MEDICAL EQUIPMENT

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.



Additional Technical Information: PG. 195

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.

PIPELINE ¼ NPT Inlet

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000815	247NC-15-¼"L	FUEL	500	0 - 15	30	¼" - NPT (F)	9/16" - 18LH
4000820	247-50-¼"L	FUEL	500	0 - 50	100	¼" - NPT (F)	9/16" - 18LH
4000819	247-50-¼"R	OXYGEN	500	0 - 50	100	¼" - NPT (F)	9/16" - 18RH
4000825	247-125-¼"R	OXYGEN	500	0 - 125	150	¼" - NPT (F)	9/16" - 18RH
4000829	247-200-¼"R	OXYGEN	500	0 - 200	400	¼" - NPT (F)	9/16" - 18RH
4000826	247-125-¼"R (F)	AIR, INERT , OIL FREE	500	0 - 125	150	¼" - NPT (F)	9/16" - 18RH (F)
4000821	247-50-¼"R (F)	AIR, INERT, OIL FREE	500	0 - 50	100	¼" - NPT (F)	9/16" - 18RH (F)

STATION "C" Inlet

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000817	247NC-15-CL	FUEL GAS	200	0 - 15	30	7/8" - 14LH (F) - 025	9/16" - 18LH
4000823	247-50-CL	FUEL GAS	200	0 - 50	100	7/8" - 14LH (F) - 025	9/16" - 18LH
4000822	247-50-CR	OXYGEN	200	0 - 50	100	7/8" - 14RH (F) - 024	9/16" - 18RH
4000827	247-125-CR	OXYGEN	200	0 - 125	150	7/8" - 14RH (F) - 024	9/16" - 18RH
4000830	247-200-CR	OXYGEN	200	0 - 200	400	7/8" - 14RH (F) - 024	9/16" - 18RH
4000824	247-50-CRM	AIR, INERT GAS, OIL FREE	200	0 - 50	100	7/8" - 14RH (M) - 034	9/16" - 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.



Additional Technical Information: PG. 195

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

PIPELINE 1/4" NPT Inlet

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000568	447NC-1-¼" L	FUEL	500	0 - 1	15	¼" NPT (F)	9/16" - 18 LH
4000569	447NC-15-¼" L	FUEL	500	0 - 15	30	¼" NPT (F)	9/16" - 18 LH
4000571	447-50-¼" L	FUEL	500	0 - 50	100	¼" NPT (F)	9/16" - 18 LH
4000585	447-125-¼" L	FUEL	500	0-125	200	¼" NPT (F)	9/16" - 18 LH
4000587	447NC-200-¼" L	FUEL	500	0-200	400	¼" NPT (F)	9/16" - 18 LH
4000573	447-50-¼" R	OXYGEN	500	0 - 50	100	¼" NPT (F)	9/16" - 18 RH
4000575	447-125-¼" R	OXYGEN	500	0 - 125	200	¼" NPT (F)	9/16" - 18 RH
4000577	447-200-¼" R	OXYGEN	500	0 - 200	400	¼" NPT (F)	9/16" - 18 RH
4000586	447NC-200-¼" R	OXYGEN	500	0 - 200	400	¼" NPT (F)	9/16" - 18 RH
4000579	447NC-15-¼" R	OXYGEN	500	0 - 15	30	¼" NPT (F)	9/16" - 18 RH
4000580	447-50-¼" R (F)	AIR, INERT	500	0 - 50	100	¼" NPT (F)	9/16" - 18 RH (F)
4000582	447-125-¼" R (F)	AIR, INERT	500	0 - 125	200	¼" NPT (F)	9/16" - 18 RH (F)
4000590	447NC-200-¼" R (F)	AIR, INERT	500	0 - 200	400	¼" NPT (F)	9/16" - 18 RH (F)
4000584	447-20P-¼" R	AIR, INERT	500	20 PRESET	N/A	¼" NPT (F)	9/16" - 18 RH (F)
4000588	447NC-1-¼" R (F)	AIR, INERT	500	0 - 1	15	¼" NPT (F)	9/16" - 18 RH (F)

STATION "C" Inlet (⅞" - 14")

PART NO.	MODEL NO.	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	⅞" - 14 LH (F) - 025	9/16" - 18 LH
4000549	447NC-15-CL	FUEL	200	0 - 15	30	⅞" - 14 LH (F) - 025	9/16" - 18 LH
4000551	447-50-CL	FUEL	200	0 - 50	100	⅞" - 14 LH (F) - 025	9/16" - 18 LH
4000566	447NC-15-CR	OXYGEN	200	0 - 15	30	⅞" - 14 RH (F) - 024	9/16" - 18 RH
4000553	447-50-CR	OXYGEN	200	0 - 50	100	⅞" - 14 RH (F) - 024	9/16" - 18 RH
4000555	447-125-CR	OXYGEN	200	0 - 125	200	⅞" - 14 RH (F) - 024	9/16" - 18 RH
4000557	447-200-CR	OXYGEN	200	0 - 200	400	⅞" - 14 RH (F) - 024	9/16" - 18 RH
4000559	447-50-CRM	AIR, INERT	200	0 - 50	100	⅞" - 14 RH (M) - 034	9/16" - 18 RH (F)
4000561	447-125-CRM	AIR, INERT	200	0 - 50	200	⅞" - 14 RH (M) - 034	9/16" - 18 RH (F)
4000563	447-200-CRM	AIR, INERT	200	0 - 200	400	⅞" - 14 RH (M) - 034	9/16" - 18 RH (F)

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

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. 195

PART NO.	MODEL NO.	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	-	⅞"-14-LH-025	9/16" - 18 LH
4000603	547-50-CL	FUEL	200	0 - 50	100	-	⅞"-14-LH-025	9/16" - 18 LH
4000605	547-50-CR	OXYGEN	200	0 - 50	100	-	⅞"-14-RH-024	9/16" - 18 RH
4000607	547-125-CR	OXYGEN	200	0 - 125	200	-	⅞"-14-RH-024	9/16" - 18 RH
4000609	547-200-CR	OXYGEN	200	0 - 200	400	-	⅞"-14-RH-024	9/16" - 18 RH
4000611	547-50-CRM	AIR, INERT OIL FREE	200	0 - 50	100	-	⅞"-14-RH-034	9/16" - 18 RH
4000613	547-125-CRM	AIR, INERT OIL FREE	200	0 - 125	200	-	⅞"-14-RH-034	9/16" - 18 RH
4000615	547-200-CRM	AIR, INERT OIL FREE	200	0 - 200	400	-	⅞"-14-RH-034	9/16" - 18 RH

PRO INFO

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

"A" Nut



"B" Nut



"C" Nut and Stem



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.

Visually, a "C" nut and stem is a little larger (7/8"-14"), than the more popular "B" size (9/16"-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.

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

Cv: 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.161

Additional Technical Information: PG. 196

PART #	MODEL #	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4000705	2548-125-¼"	FUEL GAS	500	0 - 125	200	¼" NPT	¼" 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. 189

PART NO.	MODEL NO.	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	¼" NPT (F)	¼" NPT (F)
4000681	647PM-050-000	NON-CORROSIVE	500	0 - 50	60	¼" NPT (F)	¼" NPT (F)
4000682	647PM-125-000	NON-CORROSIVE	500	0 - 125	150	¼" NPT (F)	¼" NPT (F)
4000683	647PM-175-000	NON-CORROSIVE	500	0 - 175	400	¼" NPT (F)	¼" NPT (F)

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.

GET CONNECTED
Go to www.twitter.com/HarrisProducts

QUICK SELECTION GUIDE

ECONOMICAL



2561 MODEL
ECONOMICAL
p.30

GENERAL PURPOSE



9296 MODEL
NEOPRENE DIAPHRAGM
p.31



9296SS MODEL
STAINLESS STEEL DIAPHRAGM
p.32

HIGH FLOW



9200 MODEL
HEAVY DUTY
p.33



9235 MODEL
TWO-STAGE MANIFOLD
p.34

ELECTRICALLY HEATED



HP705 MODEL
HIGH FLOW CO_2
p.34

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.

www.harrisproductsgroup.com



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.

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 - 10	14"	8 lbs.
B	33 - 40	23"	26 lbs.
2AWQ	55 - 60	31"	61 lbs.
NO.4	90 - 150	36"	113 lbs.
NO.4	151- 230	37.5"	150 lbs.
NO.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. 197

PART NO.	MODEL NO.	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	9/16" - 18 LH
3302601	9296NC-15-510	ACETYLENE	500	0 - 15	30RZ	400	CGA 510	9/16" - 18 LH
3302602	9296-50-510P	LPG*	500	0 - 50	60	400	CGA 510P	9/16" - 18 LH
3302611	9296-50-350	H_2, METHANE	3000	0 - 50	60	4000	CGA 350	9/16" - 18 LH
3302612	9296-125-350	H_2, METHANE	3000	0 - 125	150	4000	CGA 350	9/16" - 18 LH
3302613	9296-250-350	H_2, METHANE	3000	0 - 250	400	4000	CGA 350	1/4" NPT (F)
3302603	9296-50-540	OXYGEN	3000	0 - 50	60	4000	CGA 540	9/16" - 18 RH
3302604	9296-125-540	OXYGEN	3000	0 - 125	150	4000	CGA 540	9/16" - 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	5/8" - 18 RH (F)
3302607	9296-50-580	Ar, He, N_2	3000	0 - 50	60	4000	CGA 580	5/8" - 18 RH (F)
3302608	9296-125-580	Ar, He, N_2	3000	0 - 125	150	4000	CGA 580	5/8" - 18 RH (F)
3302609	9296-250-580	Ar, He, N_2	3000	0 - 250	400	4000	CGA 580	1/4" NPT (F)
3302614	9296-50-320	CO_2	3000	0 - 50	60	4000	CGA 320	5/8" - 18 RH (F)
3302615	9296-125-320	CO_2	3000	0 - 125	150	4000	CGA 320	5/8" - 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. 198

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3302694	9296SS-50-350	H_2, METHANE	3000	0 - 50	60	4000	CGA 350	9/16" - 18 LH
3302695	9296SS-125-350	H_2, METHANE	3000	0 - 125	150	4000	CGA 350	9/16" - 18 LH
3302696	9296SS-250-350	H_2, METHANE	3000	0 - 250	400	4000	CGA 350	1/4" NPT (F)
3302683	9296SS-50-540	OXYGEN	3000	0 - 50	60	4000	CGA 540	9/16" - 18 RH
3302684	9296SS-125-540	OXYGEN	3000	0 - 125	150	4000	CGA 540	9/16" - 18 RH
3302685	9296SS-250-540	OXYGEN	3000	0 - 250	400	4000	CGA 540	1/4" NPT (F)
3302697	9296SS-50-590	IND. AIR	3000	0 - 50	60	4000	CGA 590	1/4" NPT (M)
3302698	9296SS-125-590	IND. AIR	3000	0 - 125	150	4000	CGA 590	1/4" NPT (M)
3302699	9296SS-250-590	IND. AIR	3000	0 - 250	400	4000	CGA 590	1/4" NPT (M)
3302702	9296SS-125-346	MEDICAL AIR	3000	0 - 125	150	4000	CGA 346	5/8" - 18 RH (F)
3302703	9296SS-250-346	MEDICAL AIR	3000	0 - 250	400	4000	CGA 346	1/4" NPT (F)
3302686	9296SS-15-580	Ar, He, N_2	3000	0 - 15	30	4000	CGA 580	5/8" - 18 RH (F)
3302687	9296SS-50-580	Ar, He, N_2	3000	0 - 50	60	4000	CGA 580	5/8" - 18 RH (F)
3302688	9296SS-125-580	Ar, He, N_2	3000	0 - 125	150	4000	CGA 580	5/8" - 18 RH (F)
3302689	9296SS-250-580	Ar, He, N_2	3000	0 - 250	400	4000	CGA 580	1/4" NPT (F)
3302692	9296SS-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.

7 YEAR WARRANTY

"HARRIS MAKES PRODUCTS THAT ARE **DURABLE AND BUILT TO LAST,** THAT'S WHY WE OFFER A 7-YEAR WARRANTY ON OUR MOST POPULAR INDUSTRIAL REGULATORS."

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. The model 9200 has neoprene diaphragms and is equipped with a self-reseating relief valve. Standard 9200 models feature a "T" adjustment screw. Most low pressure models (2,5 and 6 psig) feature adjustment knobs. (**)



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 PSIG/100 PSIG other models

Certifications: CGA E-4

Weight: 6.8 lbs./3.08 kg.

Additional Technical Information: PG. 199

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY PRESSURE RANGE PSIG	DELIVERY PRESSURE GAUGE PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3302212	9200-50-510P	LPG*	500	0 - 50	100	400	CGA 510P	9/16" - 18 LH
3302215	9200-200-540	OXYGEN	3000	0 - 200	400	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 VALVE (M)
3302316	9200NC-6-350**	H_2, METHANE	3000	0 - 6	15	4000	CGA 350	1/4" NPT VALVE (M)
3302223	9200-200-350	H_2, METHANE	3000	0 - 200	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
3302314	9200NC-2-590**	IND. AIR	3000	0 - 2	5	4000	CGA 590	1/4" NPT VALVE (M)
3302292	9200NC-2-580**	Ar, He, N_2	3000	0 - 2	5	4000	CGA 580	1/4" NPT VALVE (M)
3302284	9200NC-5-580	Ar, He, N_2	3000	0 - 5	15	4000	CGA 580	5/8" - 18 RH (F)
3302317	9200NC-6-580	Ar, He, N_2	3000	0 - 6	15	4000	CGA 580	1/4" NPT VALVE (M)
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	9200-200-580	Ar, He, N_2	3000	0 - 200	400	4000	CGA 580	5/8" - 18 RH (F)
3302275	9200-200-320	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.

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. Outlet body port is ⅜" 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. 200

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	¼" NPT (M)
3302301	9235-350-540	OXYGEN	3000	0-350	600	4000	CGA 540	¼" NPT (M)
3302302	9235-350-580	Ar, He, N_2	3000	0-350	600	4000	CGA 580	¼" NPT (M)

HP 705 MODEL

HIGH FLOW CO_2

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, CO_2 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: 0.9 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: CO_2-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. 200

MODEL NO.	DELIVERY PRESSURE		CGA/INLET FITTING	ACCESSORIES	VOLTAGE
HP 705	**DELIVERY** **0 - 125** PSIG **0 - 200** PSIG	**Outlet Gauge** (200 psi/14 bar) (400 psi / 28 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** – ⅛" Tube Fitting **G** – ¼" NPT (M) Hose Barb **H** – ⅛" 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

*HP 705-200 not available in 240 VAC

TWO-STAGE REGULATORS

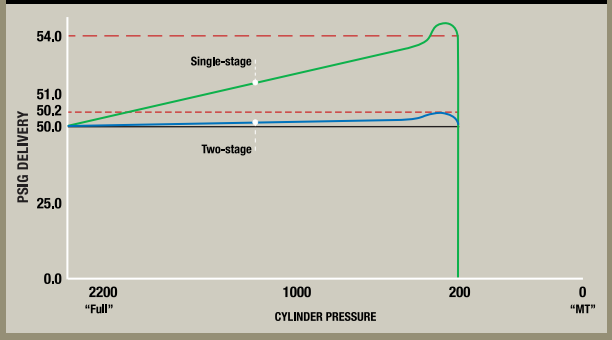
OPERATION OF TWO-STAGE REGULATORS

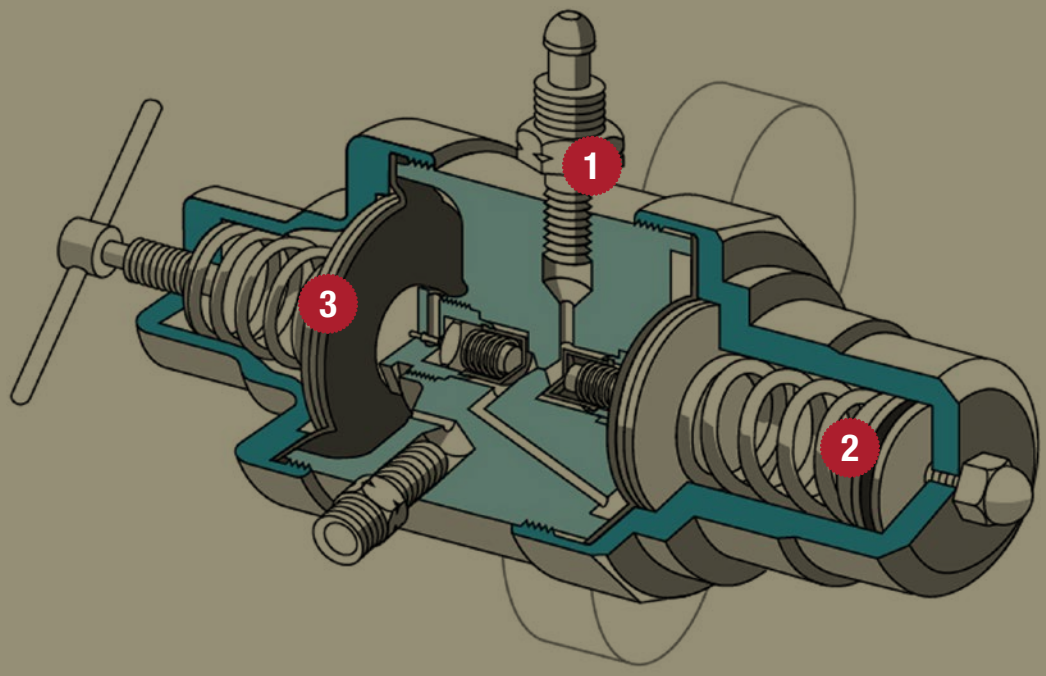
Two-stage regulators are two regulators built into a single regulator body. The first regulator (first stage) is preset at a non-adjustable pressure to reduce the incoming pressure to a lower pressure referred to as the intermediate pressure. The second regulator (second stage) is adjustable within the 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.

PRESSURE REGULATION





1 INLET PRESSURE IS REDUCED IN TWO STAGES

2 FACTORY PRESET FIRST STAGE

3 ADJUSTABLE SECOND STAGE

FLOWMETERS

FLOW CONTROL EQUIPMENT

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.



MODEL SHOWN:
2555-Ar70-680

for



MODEL SHOWN:
425-Ar100-580

PRO INFO

Visit www.harrisproductsgroup.com 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 = ± 3, 2, 3% of Full Scale	Accuracy = ± 5% of Full Scale @ Mid Range	Accuracy = ± 5% of Full Scale @ Mid Range
Surge Control Capability	No Surge Control Capability	Surge Control Capability



QUICK SELECTION GUIDE

ECONOMICAL



351 MODEL
ZERO COMPENSATED PIPELINE
p.38

351 MODEL
ZERO COMPENSATED CYLINDER
p.38

GENERAL PURPOSE



55-2 MODEL
COMPENSATED
p.39

32 MODEL
COMPENSATED
p.37

FM 520 MODEL
ZERO COMPENSATED
p.37

355-2 MODEL
COMPENSATED
p.39

CARBON DIOXIDE



601 MODEL
SINGLE-STAGE COMPENSATED
p.40

6CD MODEL
HIGH CAPACITY
p.40

6S MODEL
SINGLE-STAGE HIGH CAPACITY
p.41

DUAL FLOWMETER



356 MODEL
DUAL FLOWMETER
p.41

HIGH PRESSURE



2555 MODEL
FOR 4500 PSIG CYLINDERS
p.42

ELECTRONICALLY HEATED



HP725 MODEL
HIGH FLOW CO_2
p.42

SHIELDING GAS KITS



351 MODEL
ECONOMICAL COMPLETE WITH HOSE
p.43

355-2 MODEL
COMPACT COMPLETE WITH HOSE
p.43

FM520

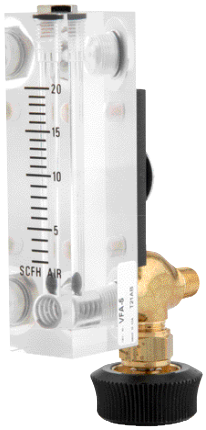
MODEL

BACK PURGING FLOWMETER

MODEL SHOWN:
FM520

DESCRIPTION

The Model FM520 is specifically designed for HVAC back purging. It is a zero compensated device allowing full and accurate flow control at varying inlet pressures up to 100 PSIG.



DETAILS

Capacity: 20 SCFH
Gauges: None
Seat: N/A
Body: Lexan®
Certifications: None
Accuracy: N/A
Where Used: HVAC

Weight: 1.2 lbs. / .544 kg.

Related Items:

- Flowmeter W/O Valve and bracket. PN: 5401200
- Valve -1/8" (M) x 1/8" (M). PN: 9100415

PART NO.	MODEL NO.	GASES	MAX. FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
5401201	FM520	AIR, N_2	20	0	100	1/8" NPT (M)	1/8" NPT (F)

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

351 MODEL

"ZERO" COMPENSATED PIPELINE

MODEL SHOWN:
351-70Ar/CD-⅝"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: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 2 lbs./ 0.91 kg.

PART NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
3100332	351-70Ar/CD-¼M	Ar/CO_2	10-70	0	200	¼" NPT (M)	⅝" - 18 (F)
3100333	351-70Ar/CD-9/16F	Ar/CO_2	10-70	0	200	9/16" - 18 (F)	⅝" - 18 (F)
3100334	351-70Ar/CD-⅝M	Ar/CO_2	10-70	0	200	⅝" - 18 (M)	⅝" - 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 CO_2 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: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 2.3 lbs./ 1.04 kg.

PART NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100331	351-60Ar-580	Ar, CO_2	10-70	0	3000	4000	CGA 580	⅝" - 18 (F)
3100330	351-60CD-320	Ar, CO_2	10-70	0	3000	4000	CGA 320	⅝" - 18 (F)

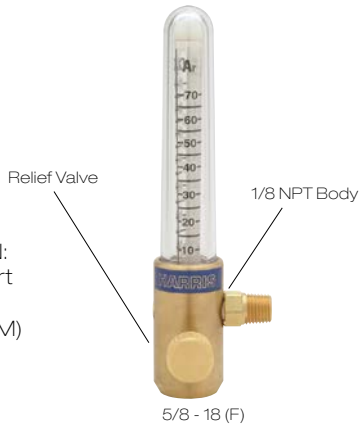
55-2 MODEL

FLOWMETER

MODEL SHOWN:
55-2-Ar/CD-¼"

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 pressure relief value. RH versions have left hand inlets*



DETAILS

Capacity: Heavy duty
Gauges: N/A
Seat: N/A
Body: Brass
Certifications: CGA E-8
Where Used: Gas shielded welding and other pipeline applications

Related Items:
447-20 Pipeline Reg-¼ RH P/N: 4000584, 3⁄16" x 10' Inert Hose P/N: 4300138,
Adaptor: 5⁄8"-18(M) x ¼"- NPT (M)
P/N: 8800527
Weight: 1.5 lbs./ 0.68 kg.

PART NO.	MODEL NO.	GAS	SCALE RANGE SCFH	COMPENSATED PSIG	MAX. RECOMMENDED INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
5400613	55-2 N_2/AIR	N_2, (AIR)	10 - 100 (10 - 100)	20	75	9⁄16" - 18 (F)	5⁄8" - 18 (F)
5400612	55-2 He/H_2	He, (H_2)	10 - 100 (20 - 140)	20	75	9⁄16" - 18 (F)	5⁄8" - 18 (F)
5400615	55-2 Ar/He	Ar, (He)	5 - 45 (10 - 140)	20	75	9⁄16" - 18 (F)	5⁄8" - 18 (F)
5400609	55-2 Ar/CD	Ar, (CO_2)	10 - 70 (10 - 70)	20	75	9⁄16" - 18 (F)	5⁄8" - 18 (F)
5400614	55-2 Ar/CD	Ar, (CO_2)	10 - 70 (10 - 70)	20	75	5⁄8" - 18 (M)	5⁄8" - 18 (F)
5400610	55-2 Ar/CD	Ar, (CO_2)	10 - 70 (10 - 70)	20	75	¼" NPT (M)	5⁄8" - 18 (F)
5400611	55-2 Ar/CD	Ar, (CO_2)	10 - 100 (10 - 100)	50	75	9⁄16" - 18 (F)	5⁄8" - 18 (F)
5400616	55-2 Ar/CD	Ar, (CO_2)	10 - 100 (10 - 100)	50	75	¼" NPT (M)	5⁄8" - 18 (F)
5400618	55-2 Ar/CD	Ar, (CO_2)	10 - 100 (10 - 100)	50	75	5⁄8" NPT (M)	5⁄8" - 18 (F)
5400621	55-2 N_2/AIR	N_2 (AIR)	10 - 100 (10 - 100)	50	75	5⁄8" NPT (M)	¼" - NPT (M)
5400620	55-2 Ar/He (LH)	Ar, (He)	5 - 45 (10 - 140) 20	20	N/A	¼" NPT (M)	5⁄8" - 18 (F)
5400619	55-2 Ar/He (RH)	Ar, (He)	5 - 45 (10 - 140) 20	20	N/A	¼" NPT (M))	5⁄8" - 18 (F)

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 NO.	MODEL NO.	GAS	SCALE RANGE SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100200	355-2-Ar-580	Ar, (CO_2)	10 - 70 (10 - 70)	20	3000	0 - 4000	CGA 580	5⁄8" - 18 (F)
3100201	355-2-CD-320	CO_2, (Ar)	10 - 70 * (10 - 70)	20	3000	0 - 4000	CGA 320	5⁄8" - 18 (F)
3100205	355-2-He-580	He, (H_2)	10 - 100 (0 - 140)	20	3000	0 - 4000	CGA 580	5⁄8" - 18 (F)
3100207	355-N2/Air-580	N_2, (Air)	10 - 100 (10 - 100)	20	3000	0 - 4000	CGA 580	5⁄8" - 18 (F)
3100204	355-2-Ar/He-580	Ar, (He)	5 - 45 (0 - 140)	20	3000	0 - 4000	CGA 580	5⁄8" - 18 (F)
3100546	355-2-CD/AR	Ar, (CO_2)	20 - 100 (20 - 100)	50	3000	0 - 4000	CGA 580	5⁄8" - 18 (F)
3104201	355-2	He, (H_2)	20 - 140 (10 -100)	20	3000	0 - 4000	CGA 350	5⁄8" - 18 (F)

*On maximum continuous duty cycle, CO_2 flows to 20 SCFH

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

601

MODEL

ECONOMICAL COMPENSATED

MODEL SHOWN:
601-AR-580

DESCRIPTION

This flowmeter 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 to medium duty

Gauges: 50mm Steel

Body: Forged Brass

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

Certifications: CGA E-4

Weight: 2.4 lbs. /1.1 kg.

PART NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX INLET PSIG	INLET CONNECTION	OUTLET CONNECTION
3100575	601-AR-580	Ar, CO2	70	20	3000	CGA 580	5/8''-18RH (F)
3100578	601-CD-320	CO2	70	20	3000	CGA 320	5/8''-18RH (F)

6S

MODEL

1YR WARRANTY · MADE IN THE USA

SINGLE-STAGE MEDIUM CAPACITY CO_2

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 CO_2 flowmeter regulator. Designed specifically for CO_2 applications, where CO_2 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 CO_2/CO_2 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 NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100066	6S-CD85F-320	CO_2 and mix	10 - 70	80	3000	4000	CGA 320	⅝" - 18 (F)

356

MODEL

7 YEAR WARRANTY · MADE IN THE USA

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

Flowmeters:
RH - P/N: 5400619
LH - P/N: 5400620

Weight: 4.8 lbs./2.18 kg.

PART NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3100140	356-Ar/He-580	Ar, He	10 - 45 (10 - 140)	20	3000	4000	CGA 580	⅝" - 18 (F)

PERFORMANCE FOCUS

CO_2 FREEZE-UP

Carbon Dioxide (CO_2) 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 CO_2 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 CO_2 applications. They are designed to prevent CO_2 freeze-up and deliver continuous flows to 100 SCFH without regulator freeze-up.

If you use CO_2 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 CO_2 freeze-up.

2555

MODEL

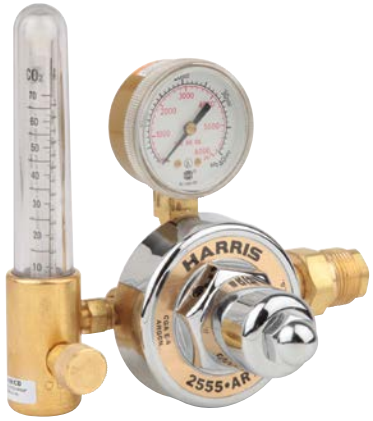
7 YEAR WARRANTY · MADE IN THE USA

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 NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3102555	2555-Ar70-680	Ar, CO_2	10 - 70	50	5500	0 - 6000	CGA 680	5⁄8"-18 (F)

351

MODEL

351 ECONOMICAL SHIELDING GAS KIT

MODEL SHOWN:
351-60CD-32010

DESCRIPTION

The Model 351 flowmeter regulator kits are designed to control argon, CO_2 mix shielding gases. The kit is supplied with a 3/16" x 10' approved inert gas hose.

DETAILS

Capacity: Heavy Duty

Gauges: 1.5" ABS

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.

Packaging: Clamshell



PART NO.	MODEL NO.	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	5/8"-18 (F)
3100401	351-60CD-32010	CO_2	70	0	3000	4000	CGA 320	5/8"-18 (F)

355-2

MODEL

355-2 COMPENSATED SHIELDING GAS KIT

MODEL SHOWN:
355-2Ar-58010

DESCRIPTION

The Model 355-2 flowmeter regulator kits are designed to control argon and or argon CO_2 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

Replacement Hose: 3/16" x 10' inert hose P/N: 4300138

Weight: 4.1 lbs./ 1.86 kg.

Packaging: Clamshell



PART NO.	MODEL NO.	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	5/8" - 18 (F)
4400234	355-2CD-32010	Ar/CO_2	70	20	3000	4000	CGA 320	5/8" - 18 (F)

FLOWGAGE REGULATORS

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.

GET CONNECTED
Go to www.facebook.com/HarrisProductsGroup

QUICK SELECTION GUIDE

GENERAL PURPOSE



601 MODEL	301 MODEL	801 MODEL	425 MODEL	330 MODEL
ECONOMICAL	COMPACT	MEDIUM DUTY	BEST FEATURES	LIQUID CYLINDER GAS WITHDRAWL
p.45	p.46	p.46	p.47	p.47

PIPELINE STATION



247 MODEL	447 MODEL	547 MODEL
ECONOMICAL	PREMIUM PIPELINE	PREMIUM PIPELINE SIDE ENTRY
p.48	p.48	p.49

ELECTRONICALLY HEATED



HP715 MODEL
HIGH FLOW CO_2
p.49

SHIELDING GAS KITS



601AR/CD MODEL	301AR/CD MODEL
LIGHT DUTY WITH HOSE	HEAVY DUTY WITH HOSE
p.50	p.50

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.
www.harrisproductsgroup.com



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).

601 MODEL

7 YEAR WARRANTY · MADE IN THE USA

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 NO.	MODEL NO.	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	5/8" - 18 (F)
3001299	601-60CD-320	CO_2	60	3000	4000	CGA 320	5/8" - 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 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 NO.	MODEL NO.	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	⅝" - 18 (F)
3000232	301-Ar30-580	Ar + Mixes	30	3000	4000	CGA 580	⅝" - 18 (F)
3000244	301-Ar60-680	Ar + Mixes	60	5500	6000	CGA 680	⅝" - 18 (F)
3000164	301-CD60-320	CO_2	60	3000	4000	CGA 320	⅝" - 18 (F)

801 MODEL

MEDIUM DUTY

MODEL SHOWN:
801-AR60-580

DESCRIPTION

This flowgauge regulator is designed to be compact, light weight and rugged. It provides accurate gas flow control to 60 SCFH. Versions for Argon, Argon mixes and CO_2.



DETAILS

Capacity: Light to medium duty

Gauges: 2" Steel

Body: Forged Brass

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

Certifications: CGA E-4

Weight: 2.4 lbs. /1.1 kg.

PART NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	MAX INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	DELIVERY FLOW GAUGE	INLET CONNECTION	OUTLET CONNECTION
3100508	801-AR60-580	Ar + Mixes	60	3000	4000	0-60SCFH	CGA 580	5/8"-18RH (F)
3100554	801-CD60-320	CO2	60	3000	4000	0-60SCFH	CGA 320	5/8"-18RH (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 NO.	MODEL NO.	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 NO.	MODEL NO.	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)

247 MODEL

ECONOMICAL PIPELINE

MODEL SHOWN:
247-FG-¼"

DESCRIPTION

Harris Model 247 flowgauge 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 NO.	MODEL NO.	GAS	MAXIMUM INLET PSIG	DELIVERY PRESSURE RANGE	DELIVERY PRESSURE GAUGE	INLET CONNECTION	OUTLET CONNECTION
4000810	247-FG-¼"	Ar, CO_2,	500	10-100 SCFH	100 SCFH	¼" - NPT (F)	⅝" - 18RH (M)

447 MODEL

HEAVY DUTY BACK ENTRY

MODEL SHOWN:
447-FG-¼"

DESCRIPTION

The Harris Model 447 flowgauge regulator was designed to deliver high gas flows from low pressure piping systems. The 447 features a sold 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 NO.	MODEL NO.	GAS	MAXIMUM INLET PSIG	DELIVERY FLOW RANGE	DELIVERY FLOW GAUGE	INLET CONNECTION	OUTLET CONNECTION
4000565	447-FG-¼"	Ar, CO_2,	500	10-100 SCFH	100 SCFH	¼"NPT (F)	⅝" - 18(F)

547 MODEL

PREMIUM PIPELINE SIDE ENTRY

MODEL SHOWN:
547-FG-¼"

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 NO.	MODEL NO.	GAS	MAXIMUM INLET PSIG	DELIVERY PRESSURE RANGE	DELIVERY PRESSURE GAUGE	INLET CONNECTION	OUTLET CONNECTION
4000617	547-FG-¼"	Ar, CO_2	500	10-100 SCFH	100 SCFH	¼"NPT (F)	⅝" - 18RH (F)

HP 715 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 CO_2 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.

Adaptor: 5/8" - 18 (M) x 1/4" NPT (M) P/N: 8800527

PART NO.	MODEL NO.	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	⅝" - 18RH (F)	120V

Orders: 1.800.733.4043

THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

A LINCOLN ELECTRIC COMPANY

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

Weight: 2.6 lbs./ 1.18 kg.

PART NO.	MODEL NO.	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	5/8" - 18 RH (F)
3000988	601CD-60-32010	CO_2	60	(N/A)	3000	4000	CGA 320	5/8" - 18 RH (F)

301 AR/CD MODEL

SHIELDING GAS KIT

MODEL SHOWN:
301Ar-58010

DESCRIPTION

The Model 301Ar/CD shielding gas kits include 10' of 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: 3/16" x 10' Inert Hose P/N: 4300138

Weight: 3.9 lbs./ 1.77 kg.

Packaging: Clamshell

PART NO.	MODEL NO.	GAS	FLOW CAPACITY SCFH	COMPENSATED PSIG	MAX. INLET PSIG	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
4400229	301Ar-58010 - CS	Ar + Mixes	60	(N/A)	3000	4000	CGA 580	5/8" - 18 RH (F)
4400231	301CD-32010 - CS	CO_2	60	(N/A)	3000	4000	CGA 320	5/8" - 18 RH (F)



CAN'T FIND WHAT YOU ARE LOOKING FOR?

CONTRACT YOUR HARRIS REPRESENTATIVE

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

1.800.241.0804

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.

GET CONNECTED
Go to www.twitter.com/HarrisProducts

QUICK SELECTION GUIDE

GENERAL PURPOSE



25GX IGG MODEL
CYLINDER MOUNT
p.54

ADD ON



301 IGG MODEL
ADD-ON TO CURRENT EQUIPMENT
p.54

ECONOMICAL



447 IGG MODEL
PIPELINE SHIELDING GASES
p.55

HARRIS

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.

www.harrisproductsgroup.com



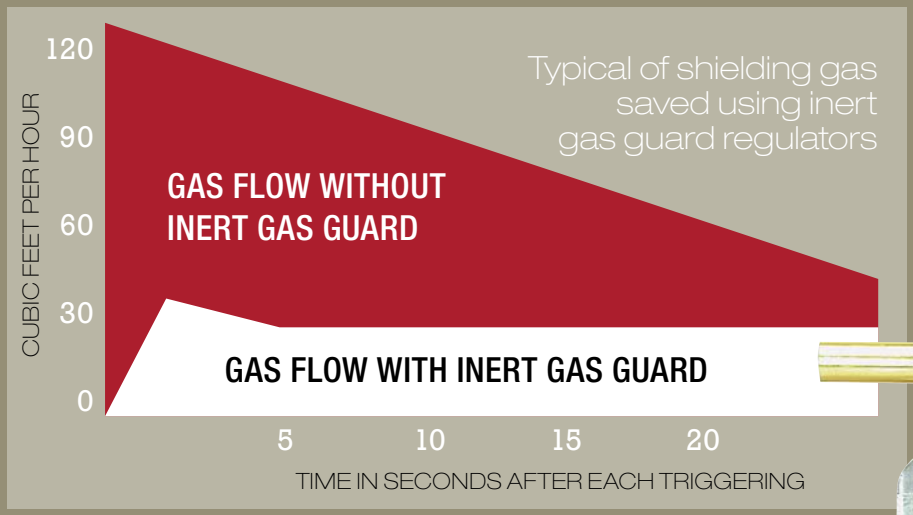
MODEL SHOWN:
301-80-IGGRF-032

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

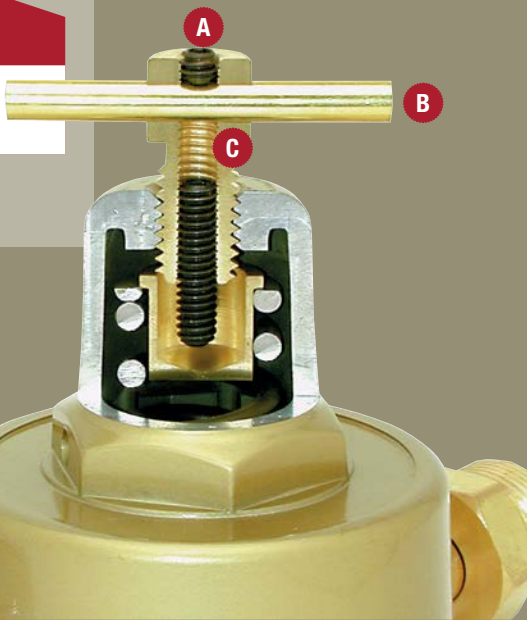
First, Inert Gas Guard Regulators reduce gas surge when a MIG gun or TIG torch is activated. Gas surge is created by excess pressure trapped in the supply hose between the pressure control system and the valve or solenoid. Inert Gas Guard regulators lower the excess pressure on the supply hose and reduce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

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

IGG 25 MODEL

FOR CYLINDER APPLICATIONS

MODEL SHOWN:
25GX-60-IGG-320

DESCRIPTION

The Model 25GX Inert Gas Guard Regulator are special cylinder-mounted flowgauge regulators for argon and argon-mix shielding gases, now with a brass plated bonnet. 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 NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY FLOW RANGE SCFH	DELIVERY FLOWGAUGE SCFH	SUPPLY PRESSURE GAUGE PSIG	INLET CONNECTION	OUTLET CONNECTION
3000433	25GX-40-IGG-580	Ar, CO_2	3000	0 - 40	40	4000	CGA 580	⅝" - 18RH (F)
3000432	25GX-60-IGG-320	CO_2	3000	0 - 60	60	4000	CGA 320	⅝" - 18RH (F)
3000431	25GX-80-IGG-580	Ar, CO_2	3000	0 - 80	80	4000	CGA 580	⅝" - 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.



301-80-IGGRFNG-032
P/N:3000340
Weight: 2.1 lbs./ 0.95 kg.



301-80-IGGRF-032
P/N:3000328
with Flowgauge
Weight: 2.4 lbs./ 1.09 kg.

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

PART NO.	MODEL NO.	GAS	MAX. INLET PSIG	DELIVERY FLOW RANGE SCFH	DELIVERY FLOW GAUGE SCFH	INLET CONNECTION	OUTLET CONNECTION	MOUNTING LOCATION
3000326	301-80-IGG-032	Ar, CO_2	200	0 - 80	-	⅝" - 18RH (M)	⅝" - 18RH (F)	Flowmeter Outlet
3000328	301-80-IGGRF-032	Ar, CO_2	200	0 - 80	80	⅝" - 18RH (F)	⅝" - 18RH (M)	Feeder Inlet
3000340	301-80-IGGRFNG-032	Ar, CO_2	200	0 - 80	-	⅝" - 18RH (F)	⅝" - 18RH (M)	Feeder Inlet

IGG 447 MODEL

FOR PIPELINE APPLICATIONS

MODEL SHOWN:
447-80-IGG-¼"

DESCRIPTION

The Model 447 is a special pipeline flow control device with a brass plated bonnet, 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: CGA E-4
Where Used: Gas-shielded welding
Weight: 3.37 lbs./ 1.53 kg.

PART NO.	MODEL NO.	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	¼" FNTP	⅝" - 18RH (F)
4000546	447-80-IGG-1/4	Ar, CO_2	500	0 - 80	80	¼" FNTP	⅝" - 18RH (F)



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.

GET CONNECTED
Go to www.youtube.com/harrisproductsgroup

QUICK SELECTION GUIDE

HEAVY DUTY



18-5 MODEL
AUTOMATIC
p.59



43-2 MODEL
HIGH FLOW
p.60



V-315C MODEL
VICTOR® COMPATIBLE
p.62



VH31 MODEL
VICTOR® COMPATIBLE
p.63

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.
www.harrisproductsgroup.com

MEDIUM DUTY



19-6 MODEL
FRONT VALVES
p.64



50-9,10 MODEL
AUTOMATIC
p.65/66



85 MODEL
CLASSIC
p.67



V-100C-2 MODEL
VICTOR® COMPATIBLE
p.69



VH10 MODEL
VICTOR® COMPATIBLE
p.70

LIGHT DUTY



15-5 MODEL
AIRCRAFT
p.71



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.



TURN TO THE PROS-
TURN TO HARRIS

Orders: 1.800.733.4043

THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

HARRIS
A LINCOLN ELECTRIC COMPANY

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** is a joining process in which the base metal(s) 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 NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 128)	ACET/H_2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H_2 (PG. 132)	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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 74)	CUTTING TIP STYLE (PG. 109)
		 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.

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

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 NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H_2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H_2 (PG. 132)	ALT. FUEL (PG. 129)
		 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)
		E3-43	–	23A90 (13+15)	–	J-43-5	–
		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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 74)	CUTTING TIP STYLE (PG. 109)
		 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?

VSERIES The Harris Products Group

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



V-SERIES The Harris Products Group

WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H2 (PG. 132)	ALT. FUEL (PG. 129)
		 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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 75)	CUTTING TIP STYLE (PG. 111)
		 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

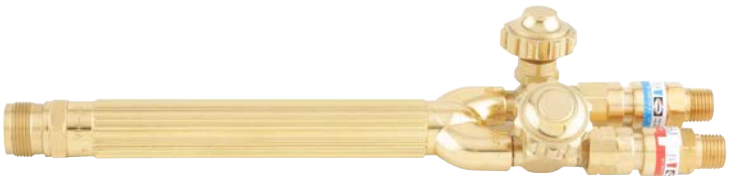
Capacity:
Welds to 1/2" / 12.7mm;
cuts to 8" / 203.2mm

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 NO.	Model NO.	COMPATIBLE MIXER(S) (PG. 82)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H_2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H_2 (PG. 132)	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 NO.	Model NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 77)	CUTTING TIP STYLE (PG. 111)
		 VH24 V1-101	
1400422	**VH31**	**VH24**	**V-101, V-101AC**

Example of Cutting Combination: VH31+VH24+ V1-101

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

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: 7½"/190.5mm

Weight: 0.7 lbs./0.32 kg.

Certification: UL® listed

Equipped with: FlashGuard® check valves

Inlet connections:
19-6: 9/16" - 18
19-6A: 3/8" - 24



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H2 (SIZE) (PG. 123)	ALT. FUEL (SIZE) (PG. 124)	ACET/H2 (PG. 132)	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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 78)	CUTTING TIP STYLE (PG. 106)
		 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.

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 ½"/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 NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H2 (SIZE) (PG. 123)	ALT. FUEL (SIZE) (PG. 124)	ACET/H2 (PG. 124)	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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 78)	CUTTING TIP STYLE (PG. 106)
		 36-2	 3690
1401585	50-9	36-2, 36-2N	3690, 3690AC

Example of Cutting Combination: 50-9 + 36-2 + 3690

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

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 ½"/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 NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 124)	ALT. FUEL (SIZE) (PG. 126)	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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 78)	CUTTING TIP STYLE (PG. 109)
		 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.

85

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 ½"/12.7mm; cuts to 5"/127.0mm
Length: 8½"/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



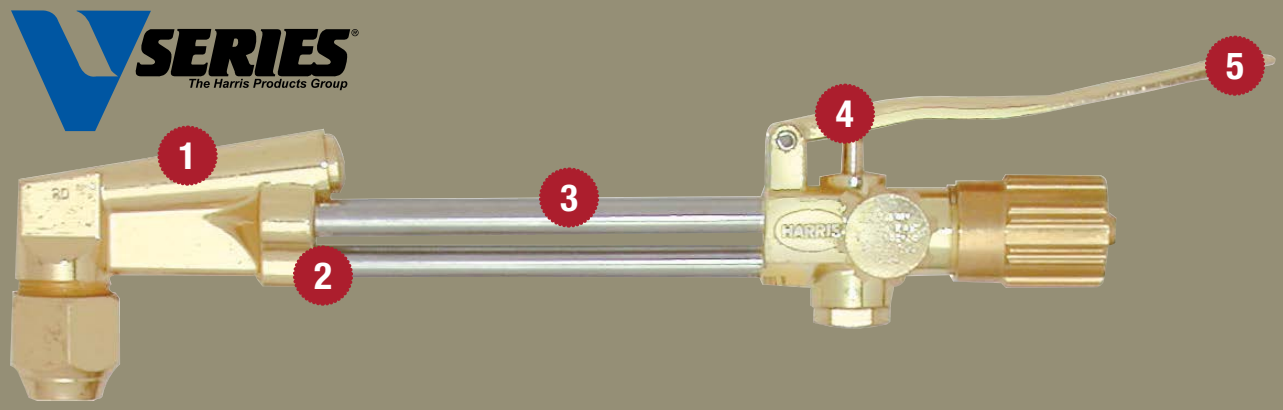
WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 85)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H_2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H_2 (PG. 132)	ALT. FUEL (PG. 124)
		 D-85	 8593	 23A90	 1390-N	 J-63	 1390-B
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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 109)
		 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.

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

THE HARRIS V-SERIES® ADVANTAGE



1 SOLID FORGED HEAD WITH MIXER
- Resist flashback damage
- Readily accessible mixer
- Alternate fuel injetor 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-2

MODEL

1YR WARRANTY

VICTOR® COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
V-100C-2

DESCRIPTION

The Model V-100C-2 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"

V SERIES The Harris Products Group

Port-A-Torch® kits



WELDING/BRAZING/HEATING		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 86)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H_2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H_2 (PG. 132)	ALT. FUEL (PG. 124)
		 V-W-1	 8593	 23A90	 1390-N	 J-63-1	 1390-B
1400402	V-100C-2	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 NO.	MODEL NO.	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 114)
		 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			

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS A LINCOLN ELECTRIC COMPANY

VH10

MODEL

1YR WARRANTY

VICTOR® COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
VH10

DESCRIPTION

The Model VH10 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 a tube within a tube construction. With threaded connections and o-ring seals. The VH10 is equipped with easy to replace Harris Flash-Guard® high capacity check valves.

DETAILS

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

Length: 8¾"/222.2 mm

Weight: 1 lb./0.45 kg.

Equipped with:
FlashGuard® check valves

Featured in Ironworker®

V SERIES® VMD kits



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. 124)	ACET/H_2 (SIZE) (PG. 122)	ALT. FUEL (SIZE) (PG. 126)	ACET/H_2 (PG. 132)	ALT. FUEL (PG. 124)
		 V-W-1	 8593	 23A90	 1390-N	 J-63-1	 1390-B
1400424	VH10	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: VH10 + V-W-1 + J-63							

CUTTING			
PART #	MODEL #	COMPATIBLE CUTTING ATTACHMENT (PG. 76)	CUTTING TIP STYLE (PG. 114)
		 VH13	 V3-101
1400424	VH10	VH13	V3-101, 3-GPN, 3-GPP
Example of Cutting Combination: VH10 + VH13 + V3-101			

15-5

MODEL

1YR WARRANTY

MADE IN THE USA

LIGHTWEIGHT AIRCRAFT-STYLE HANDLE

MODEL SHOWN: **15-5**

DESCRIPTION

The Model 15 is a lightweight aircraft-style (Class "A" 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. Seals and seats compatible with gas flux.

DETAILS

Capacity: Welds to 5/16"/7.9mm
Length: 5 3/4"/146.0mm
Weight: 0.5 lb./0.23 kg.
Hose connections: 3/8" - 24 "A"
Optional Equipment:
3/8" - 24 check valves P/N: 4300835 **DELETED**



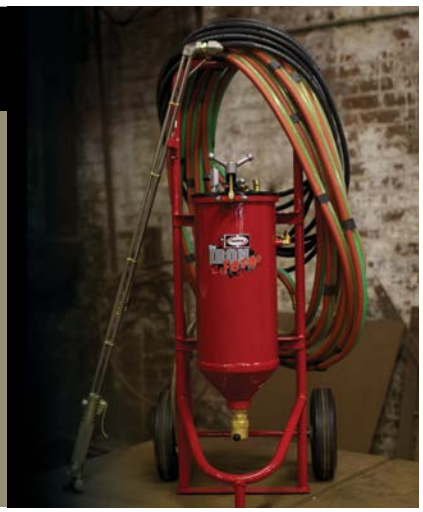
		MIXERS	TIP TUBE	WELDING/BRAZING TIP STYLE		HEATING TIP STYLE	
PART NO.	MODEL NO.	COMPATIBLE MIXER(S) (PG. 88)	COMPATIBLE TIP TUBE(S) (PG. 124)	ACET/H_2 (SIZE) (PG.123)	ALT. FUEL (SIZE) (PG. 128)	ACET/H_2 (PG. 125)	ALT. FUEL (PG. 124)
		 B-15-3	 D-50-C	 5090	 8490-N	 8490-6-65	 1390-B
1401410	15-5	B-15-3	–	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-15-3	QC-D-50-C12	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (H&B)
		B-15-3	D-50-CS	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390 (H&B)
		B-15-3F	TH-50-2	–	8490-N (4-8)	–	8490-6-65
		B-15-3F	TH-50-2XL	–	8490-N (4-8)	–	8490-6-65
		B-15-3F	D-50-C	–	1390-N (2-10)	–	1390 (H&B)
		B-15-3F	D-50-CXL	–	1390-N (2-10)	–	1390 (H&B)
		B-15-3F	QC-D-50-C12	–	1390-N (2-10)	–	1390 (H&B)
		B-15-3F	D-50-CS	–	1390-N (2-10)	–	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 manufacturers 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.

CALL YOUR LOCAL HARRIS REPRESENTATIVE FOR DETAILS: 1-800-241-0804



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.

GET CONNECTED
Go to www.facebook.com/HarrisProductsGroup

QUICK SELECTION GUIDE

HEAVY DUTY

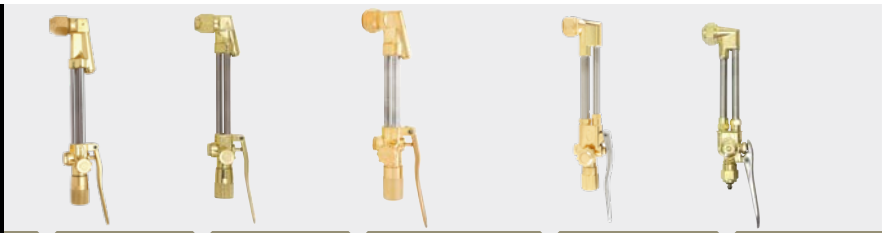


49-3F MODEL	73-3 MODEL	V-2460 MODEL
ALTERNATE FUEL INJECTOR	ALL FUELS	VICTOR COMPATIBLE ALL FUEL
p.74	p.74	p.75

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.

www.harrisproductsgroup.com

MEDIUM DUTY



39-3F MODEL	72-3 MODEL	V-1350 MODEL	VH24 MODEL	VH13 MODEL
ALTERNATE FUEL INJECTOR	ALL FUELS	VICTOR COMPATIBLE ALL FUEL	VICTOR COMPATIBLE ALL FUEL	VICTOR COMPATIBLE ALL FUEL
p.75	p.76	p.76	p.77	p.77

LIGHT DUTY



36-2N MODEL	36-2 MODEL
ALTERNATE FUEL INJECTOR	ALL FUELS
p.78	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

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



Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

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 ¼"/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 NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLES	ALTERNATE* FUEL
1300440	49-3F	90°	43-2, 18-5	6290-NX, 6290-NXP, NFF
1300430	49-3AF	70°	43-2, 18-5	6290-NX, 6290-NXP, 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: 9½"/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 NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLES	ACET/H_2	ALTERNATE* FUEL
1300340	73-3	90°	43-2, 18-5	6290, 6290AC, 6290S	6290-NX, NXP, & 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

V SERIES The Harris Products Group

				TIP STYLES	
PART NO.	MODEL NO.	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: 4"/152.4mm
Duty: Medium
Length: 10¼"/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 NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLE	ALTERNATE* FUEL
1300405	39-3F	90°	85	6290NX, 6290NXP, 6290NFF

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

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: Cuts to 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
Related Equipment:
Circle cutting attachment – R-69-3B
P/N: 4300200
Featured in Classic Steelworker® and Expert® kits

				TIP STYLES	
PART NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLES	ACETYLENE / H_2	ALTERNATE* FUEL
1300380	72-3	90°	85	6290, 6290AC, 6290S	6290-NX, NXP, 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: Cuts to 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
Featured in "V" Series Steelworker® and Expert® kits

V SERIES The Harris Products Group

				TIP STYLES	
PART NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLES	ACETYLENE / H_2	ALTERNATE* FUEL
1300506	V-1350	90°	V-100C	V3-101	3-GPN, 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 NO.	Model NO.	HEAD ANGLE	COMPATIBLE HANDLES	ACETYLENE / H_2	ALTERNATE* FUEL
1300452	VH24	90°	VH31	V-101, V-101AC	1-GPN, GPP

*Propylene or propane-based fuels and natural gas.

VH13

MODEL

1YR WARRANTY

VICTOR® COMPATIBLE CUTTING ATTACHMENT

MODEL SHOWN:
VH13



DESCRIPTION

The Model VH13 is a Victor® compatible medium duty cutting attachment. It is equipped with a durable stainless steel lever, an in-tube mixer, and threaded connections for easy repair.

DETAILS

Capacity: Cuts to 4"/ 101.6 mm
Duty: Medium
Length: 8" / 203.2mm
Weight: .896 lbs./0.41 kg.
Mixer Type: Equal pressure

Where Used: Construction, maintenance, agriculture

Featured in Ironworker® V SERIES® kits

				TIP STYLES	
PART NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLES	ACETYLENE / H_2	ALTERNATE* FUEL
1300048	VH13	90°	VH10	V3-101	3-GPN, 3-GPP

*Propylene or propane-based fuels and natural gas.

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. 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: Cuts to 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 NO.	MODEL NO.	HEAD ANGLE	COMPATIBLE HANDLES	ACETYLENE / 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
Go to www.youtube.com/harrisproductsgroup
HARRIS

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.

GET CONNECTED
Go to www.twitter.com/HarrisProducts

QUICK SELECTION GUIDE

HEAVY DUTY



E-43 MODEL	V-W MODEL	E2-43 MODEL	V-W-2 MODEL	E3-43 MODEL	V-W-3 MODEL	B-43-N MODEL
EQUAL PRESSURE	HEAVY DUTY V-SERIES®	HIGH FLOW EQUAL PRESSURE	HIGH FLOW V-SERIES®	MAXIMUM FLOW EQUAL PRESSURE	MAXIMUM HIGH FLOW V-SERIES®	HIGH FLOW ALT. FUEL INJECTOR
p.82	p.82	p.83	p.83	p.84	p.84	p.85

MEDIUM DUTY



D-85 MODEL	V-W-1 MODEL	H-16-E MODEL	H-16-2E MODEL	H-16-S MODEL
EQUAL PRESSURE	MEDIUM DUTY V-SERIES®	EQUAL PRESSURE	EQUAL PRESSURE	ALTERNATE FUEL INJECTOR
p.85	p.86	p.86	p.87	p.87

LIGHT DUTY



B-15-3 MODEL	B-15-3S MODEL	B-15-3F MODEL
LIGHT DUTY EQUAL PRESSURE	LIGHT DUTY ALT. FUEL INJECTOR	LIGHT TO MEDIUM DUTY ALT. FUEL INJECTOR
p.88	p.88	p.89



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 ration 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.



Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

E-43

MODEL

1YR WARRANTY

HEAVY DUTY EQUAL PRESSURE MIXER

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:
Welds to ½"/12.7mm;
Heats to 100,000 BTU
Duty: Heavy

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

Certification: UL® listed

Where Used: Metal fabrication, maintenance

Featured in Pipeliner® Classic kits



PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

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:
Welds to ½"/12.7mm;
Heats to 100,000 BTU
Duty: Heavy

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

Certification: UL® listed

Where Used: Metal fabrication, maintenance, etc.

Featured in Pipeliner® V-Series kits

V SERIES The Harris Products Group



PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

MODEL SHOWN:
E2-43

DESCRIPTION

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

DETAILS

Capacity:
Welds to 1"/25.4mm;
Heats to 590,000 BTU

Duty: Light to medium

Thread Size: Mixer to tip tube ½" - 25

Certification: UL® listed

Where Used: Metal fabrication, shipbuilding, etc.



PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

MODEL SHOWN:
V-W-2

DESCRIPTION

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

DETAILS

Capacity:
Welds to 1"/25.4mm;
Heats to 590,000 BTU

Duty: Heavy

Thread Size: Mixer to tip tube ½" - 25

Certifications: UL® listed

Where Used: Metal fabrication, shipbuilding, etc.



PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

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:
Welds to ¾"/19.0mm;
Heats to 1,025,000 BTU

Duty: Heavy

Thread Size: Mixer to tip tube ½" - 25

Certification: UL® listed

Where Used: Metal fabrication, shipbuilding

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

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 with Harris largest welding, brazing and heating tips.

DETAILS

Capacity:
Welds to ¾"/19.0mm
Heats to 1,025,000 BTU

Duty: Heavy

Thread Size: Mixer to tip tube ½" - 25

Certification: UL® listed **Where Used:** Metal fabrication, shipbuilding

V SERIES The Harris Products Group

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

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:
Heats to 590,000 BTU

Duty: Medium to heavy

Thread size: Mixer to tip tube ½" - 25

Certification: UL® listed

Where Used: Metal fabrication, ship building, etc.

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ALTERNATE FUEL BRAZING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

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:
Welds to ½"/12.7mm;
Heats to 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 NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (SIZES)
9100614	D-85	85	–	23A90 (0-10)	–	J-16 (1 & 2)	–
		85	8593	1390 (0-10)	1390-N (2-10)	–	1390 (B&H)

V-W-1

MODEL

1YR WARRANTY

MEDIUM DUTY EQUAL PRESSURE MIXER

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:
Welds to ½"/12.7mm
Heats to 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



VSERIES The Harris Products Group

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)*	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (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 MIXER

MODEL SHOWN:
H-16-E

DESCRIPTION

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

DETAILS

Capacity:
Welds to ½"/12.7mm
Heats to 100,000 BTU

Duty: Medium

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

Certification: UL® listed

Where Used: Metal art, maintenance, production brazing



PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (SIZES)
9100096	H-16-E	50-9	–	5090 (0-10)	–	J-16 (1&2)	–
		50-9	D-50-C (All Sizes)	1390 (0-10)	–	1390-HA	–
		50-10	D-50-C (All Sizes)	–	1390-N (2-10)	–	1390 (B&H)
		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-C & CXL	1390 (0-10)	1390-N (2-10)	1390-HA	1390 (B&H)
		19-6 & 6A	–	5090 (0-10)	–	J-16 (1&2)	–

H-16-2E

MODEL

1YR WARRANTY

MEDIUM DUTY EQUAL PRESSURE MIXER

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:
Welds to ½"/12.7mm
Heats to 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 NO.	MODEL NO.	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 (B&H)
		19-6 & 6A	8593	1390 (2, 4, 6 & 8)	1390-N (2-10)	1390-HA	1390 (B&H)
		19-6 & 6A	–	23A90 (0-10)	–	J-63 (1&2)	–

H-16-S

MODEL

1YR WARRANTY

MEDIUM DUTY ALTERNATE FUEL INJECTOR MIXER

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:
Heats to 100,000 BTU

Duty: Medium

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

Certification: UL® listed

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



PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (SIZES)
9100100	H-16-S	50-9	D-50-C (All Sizes)	–	1390-N (2-10)	–	1390 (B&H)
		50-10	D-50-C (All Sizes)	–	1390 (2-10)	–	1390 (B&H)
		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 (B&H)

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

B-15-3

MODEL

1YR WARRANTY

LIGHT DUTY EQUAL PRESSURE MIXER

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:
Welds to ½"/12.7mm
Heats to 60,000 BTU

Duty: Light

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

Where Used: Metal art, maintenance, production brazing

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (SIZES)
		15-5	–	5090 (0-10)	–	–	–
9100070	B-15-3	15-5	D-50-C (All Sizes)	1390 (0-10)	1390-N (2-10)	1390 (HA)	1390-(B&H)
		15-5	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 MIXER

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 with alternate fuels.* Primarily for using 8493-N tip tube and 8490-N tips.



DETAILS

Capacity: Heats to 30,000 BTU

Duty: Light

Thread size: Mixer to tip or tip tube ¼" - 32

Where Used: Metal art, maintenance, production brazing

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (SIZES)
9100072	B-15-3S	15-5	8493-N	NA	8490-N (4-8)	NA	8490-(6-65)

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

B-15-3F

MODEL

1YR WARRANTY

LIGHT DUTY ALTERNATE FUEL INJECTOR MIXER

MODEL SHOWN:
B-15-3F

DESCRIPTION

The Model B-15-3F is an "F" injector or low-pressure mixer primarily for brazing and or heating with alternate fuel gases.



DETAILS

Capacity: Heats to 100,000 BTU

Duty: Light to Medium

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

Where Used: Metal art, maintenance, production brazing

PART NO.	MODEL NO.	COMPATIBLE HANDLE(S)	TIP TUBE MODEL NO.	ACETYLENE BRAZING/WELDING TIPS (SIZES)	ALTERNATE FUEL BRAZING TIPS (SIZES)	ACETYLENE HEATING TIPS (SIZES)	ALTERNATE FUEL HEATING TIPS (SIZES)
9105207	B-15-3F	15-5	D-50-C (All Sizes) TH-50-2 (All Sizes) 8493B	- - -	1390-N (2-10) 8490-N (4-8) 8490-N	- - -	1390-(B+H) 8490-(6-65) 8490-6-65

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

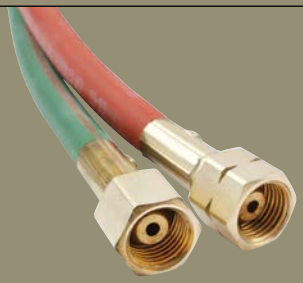
WHAT ARE THE THREAD SIZES FOR THE MOST COMMON HOSE CONNECTIONS?

"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

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/

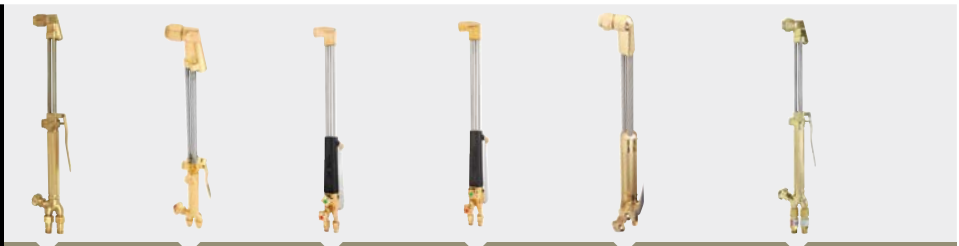
HAND CUTTING TORCHES

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	980E MODEL	980F MODEL	V242-2 MODEL	V42-4E MODEL
MEDIUM DUTY ALL FUELS	MEDIUM DUTY ALTERNATE FUEL	MEDIUM DUTY ACETYLENE FUEL	MEDIUM DUTY ALTERNATE FUEL	VICTOR COMPATIBLE ALL FUELS	VICTOR COMPATIBLE ALL FUELS
p.93	p.93	p.94	p.94	p.95	p.95

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	HEAVY DUTY ALTERNATE FUEL	VICTOR COMPATIBLE ALTERNATE FUEL	HEAVY CAPACITY ALTERNATE FUEL	EXTRA HIGH CAPACITY ALT. FUEL
p.96	p.97	p.98	p.100	p.101

HARRIS

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.

www.harrisproductsgroup.com



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.

TYPICALAPPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

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



TURN TO HARRIS FOR THE **MOST COMPLETE LINE** OF INDUSTRIAL GRADE EQUIPMENT

FOR ADDITIONAL EQUIPMENT SEE OUR HEAVY INDUSTRIES CATALOG (P/N: 9502736) **WWW.HARRISPRODUCTSGROUP.COM**

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
Duty: Medium
Mixer Type: Equal or positive pressure
Lengths: 17" and 20"
Certifications: UL® listed

Where Used: Fabrication, maintenance
Related Items: Flashback arrestors P/N: 4302202
Equipped with: FlashGuard® check valves

PART NO.	MODEL NO.	HEAD ANGLE	LENGTH	WEIGHT	TIP STYLES
1001204	42-4E	90°	17" / 431.8 mm	2.4 lbs. / 1.1 kg.	6290, 6290AC, 6290S, 6290NX, 6290NXP, 6290NFF
1001218	42-4EL-20	90°	20" / 508.0 mm	2.5 lbs. / 1.2 kg.	

42-4F

MODEL

1YR WARRANTY

MEDIUM DUTY CUTTING FOR USE 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 produces 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
Duty: Medium
Mixer Type: Injector
Lengths: 17" and 20"
Certifications: UL® listed

Where Used: Fabrication, maintenance
Related Items: Flashback Arrestors P/N: 4302202
Equipped with: FlashGuard® check valves

PART NO.	MODEL NO.	HEAD ANGLE	LENGTH	WEIGHT	TIP STYLES
1001210	42-4F	90°	17" / 431.8 mm	2.4 lbs. / 1.1 kg.	6290 NX 6290 NXP 6290 NFF
1001212	42-4AF	70°	17" / 431.8 mm	2.4 lbs. / 1.1 kg.	
1001214	42-4FL	90°	20" / 508 mm	2.5 lbs. / 1.2 kg.	
1001216	42-4AFL	70°	20" / 508 mm	2.5 lbs. / 1.2 kg.	

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

980E

MODEL

1YR WARRANTY

MEDIUM DUTY CUTTING TORCH FOR ACETYLENE FUEL

MODEL SHOWN:
980E

DESCRIPTION

The 980E is a medium duty straight cutting torch designed to be used with acetylene. The 980E features a unique patented head mixing system and a top rear cutting lever with locking clip. It's ease-on cutting valve allows for easy piercing and its solid forged head provides years of reliable performance.

DETAILS

Capacity: 8"/ 203 mm
Mixer Type: Equal Pressure
Duty: Medium
Where Used: Fabrication, maintenance, construction
Related Items: Flashback arrestors
Equipped with: Flash Guard® check values
Mixer Replacement Kit: 9100813



		DESCRIPTION			
PART #	MODEL #	HEAD	LENGTH	WEIGHT	TIP STYLES
1001981	980E	90°	19" / 482 mm	2.6 lbs. / 1.11kg.	6290, 6290AC, 6290S

V242-2

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"/152.4 mm

Duty: Medium

Mixer Type: Equal pressure

Lengths: 18" and 21"

Certification: UL® listed

Where Used: Fabrication, maintenance

Related Items: Flashback arrestor P/N: 4302202

Cutting Tip Style: Victor®

Equipped with: FlashGuard® check valves

		DESCRIPTION			
PART NO.	MODEL NO.	HEAD	LENGTH	WEIGHT	TIP STYLES
1004618	V2422HV	90°	18" / 457.2 mm	3.0 lbs. / 1.36 kg.	V1-101, V1-101AC, 1-GPN, 1-GPP
1004639	V2422AHV	70°	18" / 457.2 mm	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.	

V42-4E

MODEL

1YR WARRANTY

VICTOR® COMPATIBLE CUTTING TORCH FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
V42-4EL

DESCRIPTION

The Model V42-4E is a medium duty, Victor® compatible straight cutting torch designed to use all fuel gases. The 42-4E has a solid forged head, brazed triangular tubes and a flip up solid forged brass cutting lever. Also features visible, easily replaceable, external FlashGuard® flashback arrestors.



DETAILS

Capacity: 6"/152.4mm

Duty: Medium

Mixer Type: Equal or positive pressure

Lengths: 20"

Where Used: Fabrication, maintenance, etc.

Related Items: FlashGuard® check valves

Cutting Tip Style: Victor®

Equipped with:

Flashback arrestors P/N: 4302202

					TIP STYLES	
PART NO.	MODEL NO.	HEAD ANGLE	LENGTH	WEIGHT	ACETYLENE	ALT. FUELS
1001263	V42-4 EL	90°	20" / 508.0 mm	2.5 lbs. / 1.13 kg.	V-101 V-101AC	1-GPN GPP

Victor® Is a registered trademark of ESAB.

Orders: 1.800.733.4043

THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

HARRIS
A LINCOLN ELECTRIC COMPANY

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
Duty: Heavy
Mixer Type: Equal pressure
Lengths: 18", 21", 36"*
Certifications: UL® listed
Where Used: Fabrication, demolition, etc.

Cutting Tip Style: Harris 6290
Related Items: Flashback arrestors
P/N: 4302202, 9302202
Equipped with:
FlashGuard® check valves
Featured in Harris Classic and HardHat™ Cutter Pac®

PART NO.	MODEL NO.	HEAD ANGLE	LENGTH*	WEIGHT	**TIP STYLES
1003350	62-5AE	70°	18" / 457.2 mm	3 lbs. / 1.3 kg.	6290 6290 AC 6290 NX 6290 NXP 6290 NFF Acetylene Specialty Tips
1003430	62-5E	90°	18" / 457.2 mm	3 lbs. / 1.3 kg.	
1003464	62-5AEL	70°	21" / 533.4 mm	3.1 lbs. / 1.4 kg.	
1003440	62-5EL	90°	21" / 533.4 mm	3.1 lbs. / 1.4 kg.	
1003351	62-5AEL	70°	36" / 914.4 mm	4.5 lbs. / 2.1 kg.	
1003441	62-5EL	90°	36" / 914.4 mm	4.5 lbs. / 2.1 kg.	
1003365	62-5EL	90°	48"/ 1219.2 mm	4.8 lbs. / 2.2 kg.	

*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



Torch Type Flashback Arrestors
P/N: 4302202 - (Sold in pairs only)
See P. 159

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

Duty: Heavy

Mixer Type: Injector

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

Certifications: UL® listed

Where Used: Fabrication, shipbuilding, maintenance

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®

PART NO.	MODEL NO.	HEAD ANGLE	LENGTH**	WEIGHT	TIP STYLES
1003360	62-5AF	70°	18" / 457.2 mm	3 lbs. / 1.3 kg.	6290 NX 6290 NXP 6290 NFF Alternate Fuel Specialty Tips
1003450	62-5F	90°	18" / 457.2 mm	3 lbs. / 1.3 kg.	
1003460	62-5BF	180°	18" / 457.2 mm	3 lbs. / 1.3 kg.	
1003370	62-5AFL	70°	21" / 533.4 mm	3.1 lbs. / 1.4 kg.	
1003470	62-5FL	90°	21" / 533.4 mm	3.1 lbs. / 1.4 kg.	
1003400	62-5AFL	70°	36" / 914.4 mm	3.8 lbs. / 1.7 kg.	
1003480	62-5FL	90°	36" / 914.4 mm	3.8 lbs. / 1.7 kg.	
1003426	62-5BFL	180°	36" / 914.4 mm	3.8 lbs. / 1.7 kg.	
1003411	62-5AFL	70°	48" / 1219.2 mm	4.4 lbs. / 1.9 kg.	
1003481	62-5FL	90°	48" / 1219.2 mm	4.4 lbs. / 1.9 kg.	
1003421	62-5BFL	180°	48" / 1219.2 mm	4.4 lbs. / 1.9 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



Torch Type Flashback Arrestors
P/N: 4302202 - (Sold in pairs only)
See P. 159

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
Duty: Heavy
Mixer Type: Injector
Lengths: 21" & 36" **
Certifications: UL® listed
Where Used: Fabrication, shipbuilding, maintenance

Related Items:
Flashback arrestor
P/N: 4302202
Slitting skid P/N: QC1HZSTK5 70°/90°
Skid P/N: QC1HZSTK2

Equipped with:
FlashGuard® check valves

PART NO.	MODEL NO.	HEAD ANGLE	LENGTH*	WEIGHT	TIP STYLES
1003261	V-62-5FL	90°/VICTOR® STYLE	21" / 533.4 mm	3.7 lbs. / 1.7 kg.	1-GPP, 1-GPN (000 THRU 6)
1003287	V-62-5AFL	70°/VICTOR® STYLE	36" / 914.4 mm	4.5 lbs. / 2.0 kg.	
1003274	V-62-5FL	90°/VICTOR® STYLE	36" / 914.4 mm	4.5 lbs. / 2.0 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



180° Slitting Skid
P/N: QC1HZSTK5



Torch Type Flashback Arrestors
P/N: 4302202 - (Sold in pairs only)
See P. 159


NEED HELP
SETTING UP
A PROPER
FLAME
GET CONNECTED
Go to www.youtube.com/
harrisproductsgroup
HARRIS

62-5SSTF

MODEL

1YR WARRANTY

MADE IN THE USA

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 NO.	MODEL NO.	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

*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

1YR WARRANTY

MADE IN THE USA

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 (special order torch with welded bracket required)

P/N: QC1HZSTK1

180° Slitting skid P/N: QC1HZSTK6

		DESCRIPTION			
PART NO.	MODEL NO.	HEAD	LENGTH*	WEIGHT	TIP STYLES
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:
136
(See P. 117)

ACCESSORIES



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



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

MACHINE CUTTING TORCHES

NOBODY IN THE INDUSTRY KNOWS MORE ABOUT OXY-FUEL MACHINE CUTTING THAN HARRIS. WHETHER YOU ARE SHAPE CUTTING, STRIP CUTTING, OR BEVELING, HARRIS MACHINES TORCHES ALLOW YOU TO DO IT BETTER, FASTER, AND MOREECONOMICALLY.

GET CONNECTED
Go to twitter.com/HarrisProducts

QUICK SELECTION GUIDE

MACHINE CUTTING TORCHES



98-6F MODEL
HEAVY DUTY, ALTERNATE FUEL
p.144



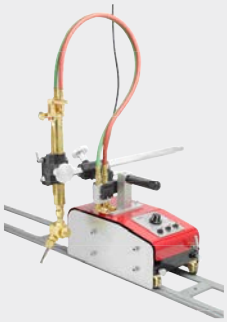
98-6E MODEL
HEAVY DUTY, ACETYLENE
p.144



80 MODEL
JUMBO, HIGH CAPACITY, ALT FUEL
p.146



524 MODEL
ALTERNATE FUEL MACHINE CUTTING TORCH
p.146



622 MODEL
TRAKMAX™
PORTABLE CUTTING AND WELDING TRACTOR

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.

www.harrisproductsgroup.com

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 torches are available in two-hose and three-hose design for all fuel gases.

MODEL 98 FEATURES

- Solid head for maximum strength
- Standard 1⅜" 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.)



MODEL SHOWN:
98-6TAFR-32



MODEL SHOWN:
98-3TFR-32

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



MODEL SHOWN:
98-6FR-32

98-6FR-32 TWO-HOSE TORCHES

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

98-3TFR-32 THREE-HOSE TORCHES

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



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).



S-98-C Adjustable Tip Adapter
P/N: 1200080
Adjust tip to any angle without moving the torch. Use with any 6290 tips (not included).



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).



98-6F MODEL

1YR WARRANTY · MADE IN THE USA

ALTERNATE FUEL MACHINE CUTTING TORCH

MODEL SHOWN:
98-6TAFR-32



DESCRIPTION

The Model 98-6F machine cutting torch features a "F" or low pressure type injector mixer 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 13⁄8" with a 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 three-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 5½"
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

						RECOMMENDED TIP STYLES	
PART NO.	MODEL NO.	STYLE	CUTTING VALVE TYPE	BARREL LENGTH	WEIGHT (LBS.)	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	5½"	2.2	–	66290 VVCM

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

98-6E MODEL

1YR WARRANTY · MADE IN THE USA

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 1⅜" 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"

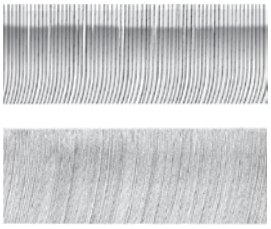
Certifications: UL® listed
Where used: Straight and contour cutting
Related items:
S-98-C – P/N: 1200080
TH-98 – P/N: 1200090

						RECOMMENDED TIP STYLES	
PART NO.	MODEL NO.	STYLE	CUTTING VALVE TYPE	BARREL LENGTH	WEIGHT (LBS.)	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

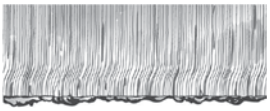
CORRECT CUTS



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.

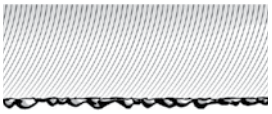
PRODUCTION CUT - Moderately sloping drag lines and a reasonably smooth surface characterize a production cut. For production operations a cut of this type represents the best combination of quality and economy.

DIRTY TIP



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.

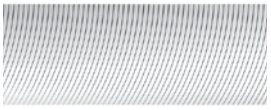
CUTTING SPEED



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.



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.



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.



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.

TIP DISTANCE



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.



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.

GAS ADJUSTMENT

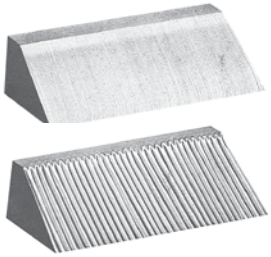


TOO MUCH CUTTING OXYGEN - Pressure marks are caused by too much cutting oxygen. When more oxygen is supplied than can be consumed in oxidation, the remainder goes around the slag creating gouges, or pressure marks. Correct this fault by lowering cutting oxygen pressure, increasing speed, or using a smaller tip. As oxygen volume nears correct proportion, pressure marks appear closer to the bottom edge until they finally disappear.



TOO HOT PREHEAT - Rounded top edge caused by too much preheat. Excess preheat does not increase cutting speed, it only wastes gases.

WHAT TO LOOK FOR IN BEVEL CUTTING



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.

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.

80

MODEL

1YR WARRANTY

MADE IN THE USA

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 NO.	MODEL NO.	STYLE	CUTTING VALVE TYPE	ALTERNATE FUELS*
1100030	80-R	3 Hose, w/ rack	Lever	8090

*Propylene or propane-based fuels and natural gas

524

MODEL

MADE IN THE USA

ALTERNATE FUEL MACHINE CUTTING TORCH

MODEL SHOWN:
QC1HS524RB-2

DESCRIPTION

The 524 series machine torch is used in all types of applications from general to heavy cutting. The primary design feature of the 524 torch series is positive pressure tip mix design. This design allows for greater flow rates while enhancing safety and maximizing versatility. Torches can be used with alternate fuels (above 5psi) and are available in two hose and three hose models. Two hose models have a cutting range up to 15 inches, while three hose models have a cutting range up to 30". It has a standard 1-3/8" diameter barrel with and includes a 32 pitch 10.12 teeth per inch rack.



DETAILS

Capacity: 2 Hose - to 15"; 3 hose - to 30"

Mixer Type: "E" or positive pressure

Duty: Heavy

Where used: Straight and contour cutting

Length: 10"-18"

Related items:

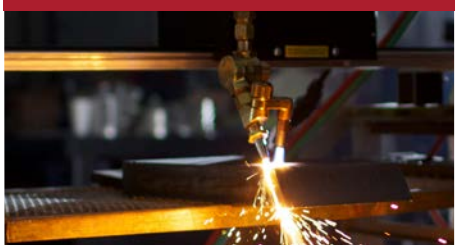
TH-98 – P/N: 1200090

PART #	STYLE	HOSE FITTING	CUTTING VALVE TYPE	BARREL LENGTH	WEIGHT (LBS.)	FUEL TYPE	CUT CAPACITY	TIP STYLES
QC1HS524RB-2	2 Hose	B	Lever	20"	5.5 lbs	Alternate	15"	136/139/140

SHAPE CUTTING



BEVEL CUTTING



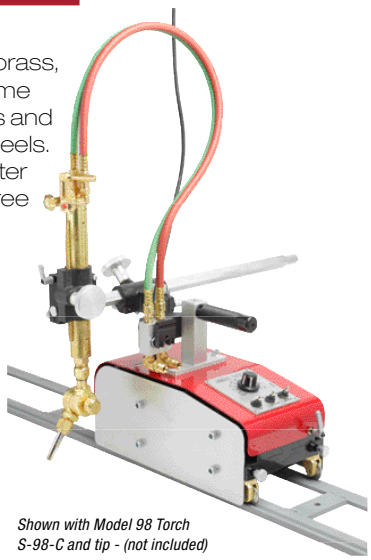
STRAIGHT CUTTING



622 MODEL

TRAKMAX™ TRACTOR

MODEL SHOWN:
QC2SCM2504



Shown with Model 98 Torch S-98-C and tip - (not included)

DESCRIPTION

The Trakmax™ features all metal construction including steel, aluminum, brass, and stainless steel. It has a welded steel, uni-body construction and a frame that is integral to the design of the machine. Its stainless steel drive wheels and casters are corrosion and abrasion resistant resulting in longer lasting wheels. The large diameter drive wheels are knurled for positive traction. The caster wheels can be locked into position in-line with the drive wheels for track free straight line cutting or left free wheeling for circles.

DETAILS

Cutting Capacity: 30"/ 762 mm* (with appropriate torch equipment)
Weight: 32 lbs/ 14.5 kg. (Tractor Only)
Length: 15" / 381 mm
Height: 6 3/8" / 161.92 mm
Width: 7 ¼ / 184.15 mm
Circle Cutting Range: 2 - 96" /50.8 - 1371.6 mm with optional radius rod kit
P/N QC25CM2710

Where used:
Straight, square, bevel & circle cutting
plasma cutting, and welding

Related items:
BV-98-2 P/N: 1200124
S-98-C P/N: 1200080
TH-98 P/N: 1200090

See more accessories P.168

PART#	WEIGHT LBS. (KG)	CARRYING LOAD MAXIMUM LBS.	SPEED RANGE IPM	POWER REQUIREMENTS	STANDARD PACKAGE
QC2SCM1000	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-40/0-110	120 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Portable track machine
QC2SCM2500	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-40/0-110	120 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine and standard rigging kit (cross slide & 24" gear rack, torch holder, connecting block, 3' hose set, flip style hose block)
QC2SCM2502	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-40/0-110	120 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine and standard rigging kit (cross slide & 24" gear rack, torch holder, connecting block, 3' hose set, flip style hose block) and 6' track
QC2SCM2503	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-40/0-110	120 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine and standard rigging kit (cross slide & 24" gear rack, torch holder, connecting block, 3' hose set, flip style hose block), 6' track and 98-6ER-32 machine torch
QC2SCM2504	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-40/0-110	120 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine and standard rigging kit (cross slide & 24" gear rack, torch holder, connecting block, 3' hose set, flip style hose block), 6' track and 98-6FR-32 machine torch
QC2SCM2505	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-40/0-110	120 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine, welding/plasma rigging kit (cross slide & 24" gear rack, welding/plasma holder, connecting block (staggered), extension block (4"- ¾"F x ¾"M) and 6ft track, cable guide clamp and torch holder
INTERNATIONAL (220VAC)					
QC2SCM2518	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-350/0-100	220 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Portable track machine
QC2SCM2520	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-350/0-100	220 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine and standard rigging kit (cross slide & 24" gear rack, torch holder, connecting block, 3' hose set, flip style hose block)
QC2SCM2522	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-350/0-100	220 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine and standard rigging kit(cross slide & 24" gear rack, torch holder, connecting block, 3' hose set, flip style hose block) and 6" track
QC2SCM2525	32lbs. (14.5 kg) (Without Rigging or torch)	500	*0-350/0-100	220 VAC, 1 AMP (Maximum) 50/60 HZ, 1PH	Includes portable track machine, welding/plasma rigging kit (cross slide & 24" gear rack, welding/plasma holder, connecting block (staggered), extension block (4"- ¾"F x ¾"M) and 6ft track, cable guide clamp and torch holder

* High/low range

(Torch packages do not include tips.)

MACHINE CUTTING ACCESSORIES



Hose Blocks
MODEL SHOWN: **P/N: QC2SCM2655**

PART #	DESCRIPTION
QC2SCM2655	Hose block, 2 hose with flip-valve
QC2SCM2660	Hose block, 3 hose, without valves
QC2SCM2661	Hose block, 3 hose & flip valves
QC2SCM2662	Hose block, 3 hose rack mount
QC2SCM2663	Hose block, 3 hose with flip-valves and rack mount



Welding/Plasma Holder*
P/N: QC2SCM0815
Universal holder that securely clamps most shapes, brands and or types of plasma and MIG torches.



Torch Holder
P/N: QC2SCM0800
For mounting 1 3/8" diameter machine cutting torches and controlling the vertical movement of the torch.



Counter Weight
P/N: QC2SCM2700
May be attached to opposite side of gear rack when off balance loading of equipment is encountered such as when running two torches on one side. Standard operation does not require counterweights.



Connecting Block*
P/N: QC2SCM0518
Attaches torch or welding/ plasma holders to gear rack.

Connections:
3/4" dia. (F) x 3/4"dia. (F)



Extension Block (4")*
P/N: QC2SCM0521
Attaches welding/ plasma holder to connecting block.

Connections:
3/4" dia. (F) x 3/4"dia. (M)



Radius Rod Kit
P/N: QC2SCM2710
18" radius bar, sliding pivot pin – cuts 2 – 54" diameter circles. For larger diameter circle cutting contact Harris Products Group.



50' 3/8" T Grade Hose
P/N: 4300847
For all fuel gases

100' 3/8" T Grade Hose
P/N: 4300848
For all fuel gases



3' Twin T-Grade Hose
P/N: QC2SCM0400
3' twin, grade T, hose to connect the torch to the hose block



Universal* Connectible Track System

PART #	DESCRIPTION
QC2SCM2600	Track, 6'
QC2SCM2601	Track, 7.5'
QC2SCM2602	Track, 9'
QC2SCM2603	Track, 12'

*Compatible with other domestic track systems



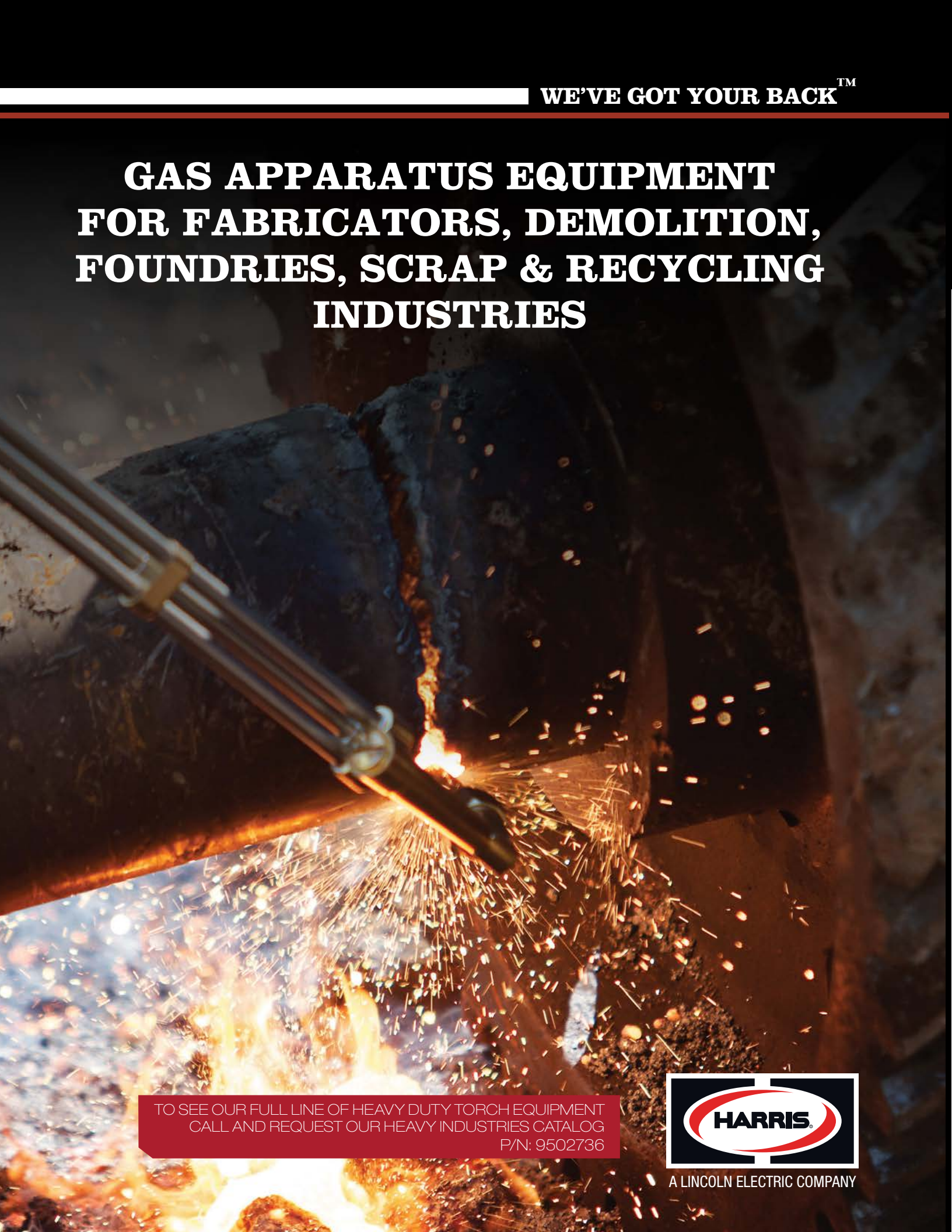
Power Cord, with connector and plug

PART #	DESCRIPTION
QC2SCM2735	Cord,25' TRC 622 power
QC2SCM2737	Cord,50' TRC 622 power
QC2SCM2739	Cord,100' TRC 622 power

*Component of welding/plasma rigging kit (P/N: QC25CM2570)

WE'VE GOT YOUR BACK™

GAS APPARATUS EQUIPMENT FOR FABRICATORS, DEMOLITION, FOUNDRIES, SCRAP & RECYCLING INDUSTRIES



TO SEE OUR FULL LINE OF HEAVY DUTY TORCH EQUIPMENT
CALL AND REQUEST OUR HEAVY INDUSTRIES CATALOG
P/N: 9502736

HARRIS®

A LINCOLN ELECTRIC COMPANY

HEATING TORCHES AND ASSEMBLIES

89-3

MODEL

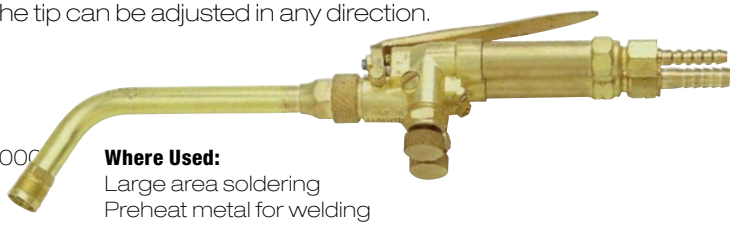
1YR WARRANTY

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 NO.	MODEL NO.	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. Tips ordered separately P.133



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 **

** For fuel gas pressures of 10 PSIG or less order B-43-N mixer (P/N 9100306)

Model 43-2 Handle (P/N 1401150) and select 2393 Tip Tube + Tip below

Limited to Tip sizes 2290 1-3H or HPM

PART NO.	MODEL NO.	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	PROPANE	PROPYLENE	MAPP®	NATURAL GAS
	CLASSIC E-3-43/(F43) MIXER				BTU/HR. RATING			
Tip Size NO.1	10 25	160 320	4 12	40 80	103,000 205,000	95,000 190,000	96,000 192,000	65,000 130,000
Tip Size NO.2	15 45	220 520	7 22	55 130	141,000 333,000	130,000 308,000	132,000 312,000	90,000 212,000
Tip Size NO.3	25 70	340 920	8 25	85 230	218,000 590,000	201,000 545,000	204,000 552,000	139,000 375,000
Tip Size NO.4	50 110	640 1,300	10 30	160 325	410,000 833,000	379,000 770,000	384,000 780,000	216,000 530,000
Tip Size NO.5	60 135	720 1,600	14 40	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 ⅜" hose.
2. On continuous duty, withdrawal manifolding of cylinders may be required.
3. For additional heating tip information see pages 133-135

COUPLINGS & ADAPTORS



½" - 25 ½" - 25

2357-3
P/N:
9000738



½" - 25 ½" - 25

2543-3
P/N:
8800584



½" - 25 ¼" - NPT

2327
P/N:
9000720



½" - 25 ¼" - NPT

2357
P/N:
9000734



¼" - NPT ¼" - NPT

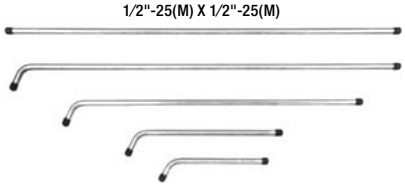
P/N: 8800985

Multiple arrangements of 2290-H Heating Tips can be assembled using Harris coupling 2327, nipple 2357 and standard ¼" pipe fittings when wider bands of heat are necessary. Capacity of K-43 heating torch is 5 NO.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.

2393 HEATING TIP TUBES

PART NO.	MODEL NO.	LENGTH
1800200	2393-1F	36" Curved
1800210	2393-2F	28" Curved
1800220	2393-3F	16" Curved
1800230	2393-4F	10½" Curved
1800241	2393-F	60" Curved
1800240	2393-5F	36" Straight
1800211	2393-2F	28" Straight
1800221	2393-3F	16" Straight
1800231	2393-4F	10½" Straight
1800206	2393-6F	48" Straight

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




INFERNO
PROPANE TORCH - SOPLETE A PROPANO - CHALUMEAU AU PROPANE


WHEN PROS USE
HARRIS, THEY
USE THE BEST.
THERMITE HEATING
AND CUTTING
SYSTEM
HARRIS

HARRIS THERMITE HEATING AND CUTTING SYSTEMS.

The New Harris Products Group Thermite Heating and Cutting Torch Systems are purposely designed for one of railroads most special and critical applications. Product designs and materials of construction were selected to maximize operator safety, performance and service life. They promise to reduce costs associated with repair and or replacement even in extremely hostile work environments like those found in the railroad industry.

TWO SEPARATE SYSTEMS:

Thermite Heating Systems:

1. Thermite rail preheating system

Includes tip/tube assembly, mixer, hand and gauge set.

- Specifically designed for the application
- Maximizes performance
- Maximizes gas efficiency
- Maximizes service life
- Maximizes safety



2. Rail Cutting System With Guide Wheels

Includes handle, gauge set, cutting attachment, guide wheels and tip.

- Specifically designed and selected
- Maximizes performance
- Maximizes gas efficiency
- Maximizes service life
- Maximizes safety





TIPS

GET CONNECTED
Go to www.facebook.com/HarrisProductsGroup

QUICK SELECTION GUIDE

ACETYLENE HAND CUTTING TIPS



3690 MODEL	3690-AC MODEL	6290 MODEL	6290-S MODEL	6290-AC MODEL
ONE-PIECE GENERAL PREHEAT	TWO-PIECE HEAVY PREHEAT	ONE-PIECE GENERAL PREHEAT	ONE-PIECE HEAVY PREHEAT	TWO-PIECE HEAVY PREHEAT
p.110	p.110	p.111	p.111	p.112

ALTERNATE FUEL HAND CUTTING TIPS



3690-P MODEL	6290-N&NX MODEL
TWO-PIECE GENERAL PREHEAT	TWO-PIECE GENERAL PREHEAT
p.113	p.113

ALTERNATE FUEL HAND CUTTING TIPS



6290-NFF MODEL	6290-NXP MODEL
TWO-PIECE HEAVY PREHEAT	TWO-PIECE GENERAL PREHEAT
p.114	p.114

V-SERIES® CUTTING TIPS



V1-101 MODEL	V1-101AC MODEL	1-GPN MODEL	1-GPP MODEL	V3-101 MODEL
ONE-PIECE GENERAL PREHEAT	TWO-PIECE HEAVY PREHEAT	ONE-PIECE GENERAL PREHEAT	ONE-PIECE HEAVY PREHEAT	TWO-PIECE HEAVY PREHEAT
p.115	p.116	p.117	p.117	p.118

V-SERIES® CUTTING TIPS



3-GPN MODEL	3-GPP MODEL
TWO-PIECE HEAVY PREHEAT	TWO-PIECE GENERAL PREHEAT
p.119	p.119

ALTERNATE FUEL MACHINE CUTTING TIPS



6290-VVC MODEL	6290-VVCU MODEL	6290-VVCP MODEL	8090 MODEL
PREMIUM NAT. GAS/ PROPANE HIGH SPEED TIP	NATURAL GAS/PROPANE HIGH SPEED TIP	PREMIUM PROPYLENE HIGH SPEED TIP	NATURAL GAS/PROPANE HEAVY MACHING CUTTING
p.120	p.121	p.122	p.123

FOR LONGER TIP LIFE AND A BETTER CUT, CHOOSE HARRIS

HARRIS TIPS ARE MANUFACTURED TO THE HIGHEST STANDARD IN THE INDUSTRY. EVERY HARRIS TIP IS 100% FLAME TESTED AT THE FACTORY TO ENSURE A PERFECT FLAME FOR YOUR PARTICULAR APPLICATION. THEY ARE MANUFACTURED UTILIZING THE HIGHEST GRADE METALS AVAILABLE. HARRIS TIPS DESIGNED TO OFFER A SIGNIFICANTLY LONGER TIP LIFE THAN COMPETITIVE OR AFTERMARKET TIPS.

HEAVY HAND CUTTING TIPS



136 MODEL
HIGH CAPACITY CAPTIVE NUT
p.123

140 MODEL
HIGH CAPACITY
p.124

140-HS MODEL
HIGH CAPACITY DIVERGENT BORE
p.124

WELDING AND BRAZING TIPS



5090-N MODEL
LIGHT DUTY STANDARD TIP
p.136

WELDING AND BRAZING TIPS



23A90 MODEL
STANDARD TIP
p.126

5090 MODEL
LIGHT DUTY TIP
p.127

1390 MODEL
SEPARABLE TIP
p.128

8490 MODEL
LIGHT DUTY SEPARABLE TIP
p.129

BRAZING TIPS



1390-N MODEL
SEPARABLE TIP
p.130

8490-N MODEL
LIGHT DUTY SEPARABLE TIP
p.132

HEATING TIPS



2290-H&HPM MODEL
ALTERNATE FUEL HEATING
p.133

J&H-SERIES MODEL
ACYELENE HEATING
p.136

RBA MODEL
ACETYLENE CLEANING HEAD
p.137

RBP MODEL
ALTERNATE FUEL CLEANING HEAD
p.138

ALTERNATE FUEL SPECIALTY TIPS



6290 MODEL
p.139

ACETYLENE FUEL SPECIALTY TIPS



6290 MODEL
p.140

TURN TO THE PROS – TURN TO HARRIS.
To learn more about the most complete line of industrial grade tools in the world, visit us online.
www.harrisproductsgroup.com

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 NO.	MODEL NO.	DEPTH OF CUT	O_2 PSIG	O_2 FLOW SCFH	FUEL PSIG	FUEL SCFH	CUTTING DRILL SIZE
1500650	3690-0	¼" - ½"	20 - 25	70 - 80	5	10 - 15	NO. 60
1500660	3690-1	½" - 1"	25 - 40	95 - 105	5	15 - 25	NO. 56
1500670	3690-2	1" - 3"	40 - 60	180 - 215	5	20 - 30	NO. 52

3690AC 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. Heavy preheat facilitates cutting of steel that is rusted, painted and or heavy scaled.

DETAILS

Construction: Two-piece

Preheat Type: Heavy

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

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



PART NO.	MODEL NO.	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	NO. 60
36901AC	3690-1AC	½" - 1"	25-45	95-105	5	15-25	NO. 56

6290 MODEL

1YR WARRANTY · MADE IN THE USA

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 NO.	SIZE	DEPTH OF CUT	O_2 PSIG	TOTAL O_2 SCFH	ACETYLENE FUEL PSIG	FUEL SCFH	CUTTING DRILL SIZE
1500810	000	Light gauge to 3/16"	15 - 20	35 - 40	5 - 15	10 - 15	NO. 68
1500820	00	3/16" - 3/8"	20 - 25	45 - 50	5 - 15	10 - 15	NO. 64
1500830	0	3/8" - 5/8"	35 - 40	45 - 50	5 - 15	10 - 15	NO. 60
1500840	1	5/8" - 1"	35 - 40	100 - 110	5 - 15	15 - 25	NO. 56
1500850	2	1" - 2"	40 - 45	180 - 195	10 - 15	20 - 30	NO. 52
1500860	3	2" - 3"	45 - 50	270 - 290	10 - 15	20 - 35	NO. 48
1500870*	4	3" - 6"	50 - 75	450 - 600	10 - 15	25 - 40	NO. 42

*To provide proper gas flow, use 3/8" 1D hose for size 4 tip and larger

6290-S MODEL

1YR WARRANTY · MADE IN THE USA

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 NO.	SIZE	DEPTH OF CUT	O_2 PSIG	TOTAL O_2 SCFH	ACETYLENE FUEL PSIG	FUEL SCFH	CUTTING DRILL SIZE
1501470	1S	5/8" - 1"	35 - 40	100 - 110	5 - 15	15 - 25	NO. 56
1501480	2S	1" - 2"	40 - 45	190 - 205	5 - 15	20 - 30	NO. 52
1501490	3S	2" - 3"	45 - 50	285 - 305	5 - 15	20 - 35	NO. 48
1501500	4S	3" - 6"	50 - 75	465 - 615	10 - 15	25 - 40	NO. 42
1501510*	5S	6" - 8"	65 - 80	700 - 850	10 - 15	35 - 40	NO. 35
1501520*	6S	8" - 12"	70 - 90	960 - 1160	10 - 15	40 - 60	NO. 30

*To provide proper gas flow, use 3/8" ID hose for Size 4 tip and larger.

AC 6290 MODEL

1YR WARRANTY | MADE IN THE USA

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 NO.	SIZE	DEPTH OF CUT	O_2 PSIG	TOTAL O_2 SCFH	ACETYLENE FUEL PSIG	FUEL SCFH	CUTTING DRILL SIZE
1502170	00AC	3⁄16" - 3⁄8"	15 - 30	38 - 55	8 - 15	9 - 18	NO. 64
1502171	0AC	3⁄8" - 5⁄8"	20 - 35	45 - 73	8 - 15	9 - 18	NO. 60
1502172	1AC	5⁄8" - 1"	30 - 50	73 - 128	8 - 15	18 - 36	NO. 56
1502173	2AC	1" - 2"	40 - 65	161 - 252	8 - 15	18 - 36	NO. 53
1502174	3AC	2" - 4"	40 - 65	196 - 287	8 - 15	18 - 36	NO. 52
1502175	4AC	4" - 7"	50 - 80	338 - 534	8 - 15	18 - 36	NO. 42
1502176*	5AC	7" - 10"	65 - 80	494 - 625	8 - 15	32 - 54	NO. 35
1502177	6AC	10" - 12"	70 - 95	565 - 731	8 - 15	32 - 54	NO. 31

*To provide proper gas flow, use 3⁄8" 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.

3690-P MODEL

1YR WARRANTY · MADE IN THE USA

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



					FUEL PSIG			
PART NO.	MODEL NO.	DEPTH OF CUT	O_2 PSIG	O_2 FLOW SCFH	EQUAL	INJECTOR OR LOW	FUEL SCFH	CUTTING DRILL SIZE
1500600	00P	TO ¼"	15 - 30	50 - 60	5	4 oz. - 2 lbs.	8.7	NO. 64
1500610	0P	¼" - ½"	20 - 25	65 - 75	5	4 oz. - 2 lbs.	8.7	NO. 60
1500620	1P	½" - 1"	25 - 45	85 - 105	5	4 oz. - 2 lbs.	8.7	NO. 56

N&NX 6290 MODEL

1YR WARRANTY · MADE IN THE USA

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



					FUEL PSIG			
PART NO.	MODEL NO.	DEPTH OF CUT	O_2 PSIG	O_2 FLOW SCFH	EQUAL	INJECTOR OR LOW	FUEL SCFH	CUTTING DRILL SIZE
1500970	000N	LIGHT GAUGE	15 - 30	50 - 60	5 - 15	4 oz. - 2 lbs.	7.5	NO. 68
1501200	000NX	LIGHT GAUGE ⅜"	10 - 30	50 - 60	5 - 15	4 oz. - 2 lbs.	7.5	NO. 68
1501210	00NX	3⁄16" - ⅜"	20 - 30	65 - 75	5 - 15	4 oz. - 2 lbs.	7.5	NO. 64
1501220	0NX	⅜" - 5⁄8"	20 - 30	85 - 100	5 - 15	4 oz. - 2 lbs.	7.5	NO. 60
1501230	1NX	5⁄8" - 1"	35 - 50	100 - 135	5 - 15	4 oz. - 2 lbs.	8.7	NO. 56
1501240	2NX	1" - 2"	40 - 55	200 - 250	5 - 15	4 oz. - 2 lbs.	10	NO. 52
1501250	3NX	2" - 3"	45 - 60	290 - 365	5 - 15	4 oz. - 2 lbs.	10	NO. 48
1501260	4NX	3" - 6"	50 - 70	475 - 625	5 - 15	4 oz. - 2 lbs.	12.5	NO. 42
1501270	5NX	6" - 8"	65 - 80	710 - 860	5 - 15	4 oz. - 2 lbs.	15	NO. 35
1501280	6NX	8" - 12"	70 - 90	970 - 1100	5 - 15	4 oz. - 2 lbs.	17.5	NO. 30

NFF 6290 MODEL

1YR WARRANTY · MADE IN THE USA

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



					FUEL PSIG*			
PART NO.	MODEL NO.	DEPTH OF CUT	O_2 PSIG	O_2 FLOW SCFH	EQUAL	INJECTOR	FUEL SCFH	CUTTING DRILL SIZE
1501020	1NFF	TO 5/8"	20 - 35	115 - 140	5 - 15	4 oz. - 2 lbs.	17.5	NO. 56
1501030	2NFF	5/8" - 2"	30 - 55	170 - 230	5 - 15	4 oz. - 2 lbs.	17.5	NO. 53
1501040	3NFF	2" - 4"	45 - 65	355 - 420	5 - 15	4 oz. - 2 lbs.	17.5	NO. 47
1501050	4NFF	4" - 7"	55 - 75	520 - 645	5 - 15	4 oz. - 2 lbs.	17.5	NO. 42
1501060	5NFF	7" - 10"	60 - 80	660 - 870	10 - 15	4 oz. - 2 lbs.	17.5	NO. 35
1501070	6NFF	10" - 11"	80 - 90	870 - 1020	10 - 15	4 oz. - 2 lbs.	17.5	NO. 31
1501080	7NFF	12" - 13"	80 - 90	1050 - 1205	10 - 15	4 oz. - 2 lbs.	17.5	NO. 30

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

NXP 6290 MODEL

1YR WARRANTY · MADE IN THE USA

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



					FUEL PSIG*			
PART NO.	MODEL NO.	DEPTH OF CUT	O_2 PSIG	O_2 FLOW SCFH	EQUAL	INJECTOR	FUEL SCFH	CUTTING DRILL SIZE
1502150	000NXP	LIGHT GAUGE - 3/16	15 - 30	20 - 30	5 - 15	4 oz. - 2 lbs.	11.5	NO. 68
1502152	00NXP	3/16" - 3/8"	20 - 30	30 - 40	5 - 15	4 oz. - 2 lbs.	11.5	NO. 64
1502154	0NXP	3/8" - 5/8"	30 - 40	50 - 65	5 - 15	4 oz. - 2 lbs.	11.5	NO. 60
1502156	1NXP	5/8" - 1"	35 - 50	75 - 100	5 - 15	4 oz. - 2 lbs.	11.5	NO. 56
1502158	2NXP	1" - 2"	40 - 55	160 - 210	5 - 15	4 oz. - 2 lbs.	11.5	NO. 52
1502160	3NXP	2" - 3"	45 - 60	250 - 325	5 - 15	4 oz. - 2 lbs.	11.5	NO. 48
1502162	4NXP	3" - 6"	50 - 75	425 - 575	5 - 15	4 oz. - 2 lbs.	11.5	NO. 42
1502164	5NXP	6" - 8"	65 - 80	650 - 800	5 - 15	4 oz. - 2 lbs.	11.5	NO. 35
1502166	6NXP	8" - 12"	70 - 90	900 - 1100	5 - 15	4 oz. - 2 lbs.	11.5	NO. 30

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

V1-101

MODEL

1YR WARRANTY

MADE IN THE USA

V-SERIES® GENERAL PREHEAT ACETYLENE SINGLE PIECE 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 NO.	TIP SIZE	DEPTH OF CUT	OXYGEN PSIG	ACETYLENE PSIG	CUTTING DRILL SIZE
1502088	000	LIGHT GAUGE to 1/8"	20-30	5	NO.70
1502089	00	1/8" - 5/16"	20-30	5	NO.69
1502090	0	5/16" - 5/8"	30-40	7	NO.61
1502091	1	5/8" - 1"	40-50	7	NO.56
1502092	2	1" - 2"	45-55	8	NO.53
1502093	3	2" - 3"	50-60	9	NO.50
1502094	4	3" - 4"	60-75	10	NO.46
1502095	5	4" - 6"	70-80	12	NO.39
1502096	6	6"	75-80	15	NO.31

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

V1-101AC MODEL

1YR WARRANTY · MADE IN THE USA

V-SERIES® HEAVY PREHEAT ACETYLENE TWO PIECE HAND / MACHINE CUTTING TIP

MODEL SHOWN:
V1-101AC

DESCRIPTION

A two piece acetylene hand cutting 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

			OPERATING PRESSURES		
PART NO.	TIP SIZE NO.	DEPTH OF CUT	OXYGEN PSIG	ACETYLENE PSIG	CUTTING DRILL SIZE
1502069	000	LIGHT GAUGE to ⅛"	20-25	3-5	NO. 68
1502070	00	⅛" - ¼"	20-25	3-5	NO. 64
1502071	0	¼" - ½"	25-35	7	NO. 60
1502072	1	½" - ¾"	30-35	3-5	NO. 56
1502073	2	¾" - 1 ½"	35-45	3-7	NO. 53
1502074	3	1 ½" - 2 ½"	40-50	4-10	NO. 51
1502075	4	2 ½" - 3"	40-50	5-10	NO. 42
1502076	5	3"- 5"	45-55	5-13	NO. 35
1502077	6*	5" - 8"	45-55	7-14	NO. 31

*For best performance use ⅜" I.D. hose for tip sizes 6 and larger

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS A LINCOLN ELECTRIC COMPANY

1-GPN

MODEL

1YR WARRANTY | MADE IN THE USA

V-SERIES® GENERAL PREHEAT PROPANE / NATURAL GAS TWO PIECE HAND CUTTING TIP

MODEL SHOWN:
1-GPN

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 NO.	TIP SIZE NO.	DEPTH OF CUT	OXYGEN PSIG	FUEL GAS	CUTTING DRILL SIZE
1502300	000	LIGHT GAUGE to 1/8"	20-25	3-5	NO.71
1502301	00	1/4"	20-25	3-5	NO.67
1502302	0	3/8" - 1/2"	25-35	3-5	NO.60
1502303	1	3/4"	30-35	4-6	NO.56
1502304	2	1 - 1 1/2"	35-45	4-9	NO.53
1502305	3	2 - 2 1/2"	40-50	5-10	NO.50
1502306	4	3"	45-50	8-12	NO.45
1502307	5	4-5"	45-55	8-12	NO.39
1502308	6*	6"	45-55	10-15	NO.31

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

1-GPP

MODEL

1YR WARRANTY | MADE IN THE USA

V-SERIES® GENERAL PREHEAT PROPYLENE TWO PIECE HAND CUTTING TIP

MODEL SHOWN:
1-GPP

DESCRIPTION

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

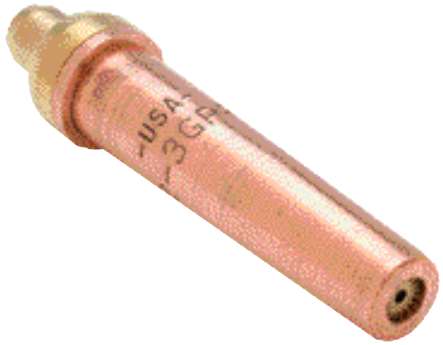
DETAILS

Construction: Two-piece

Preheat Type: General

Where Used: Metal Fabrication, shipbuilding, maintenance

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



			OPERATING PRESSURES		
PART NO.	TIP SIZE NO.	DEPTH OF CUT	OXYGEN PSIG	FUEL GAS	CUTTING DRILL SIZE
1502317	000	LIGHT GAUGE to 1/8"	20-25	3-5	NO. 68
1502318	00	1/4"	20-25	3-5	NO. 64
1502319	0	3/8" - 1/2"	25-35	7	NO. 60
1502320	1	3/4"	30-35	3-5	NO. 56
1502321	2	1 1/2" - 1 1/2"	35-45	3-7	NO. 53
1502322	3	2 - 2 1/2"	40-50	4-10	NO. 57
1502323	4	3"	40-50	5-10	NO. 42
1502324	5	4 - 5"	45-55	5-13	NO. 35
1502325	6*	6 - 8"	45-55	7-14	NO. 31

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

V3-101

MODEL

1YR WARRANTY

MADE IN THE USA

V-SERIES® 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 NO.	TIP SIZE NO.	DEPTH OF CUT	OXYGEN PSIG	ACETYLENE PSIG	CUTTING DRILL SIZE
1502080	000	LIGHT GAUGE to 1/8"	20-30	5	NO.70
1502081	00	1/8" - 5/16"	20-30	5	NO.69
1502082	0	5/16" - 5/8"	30-40	7	NO.61
1502083	1	5/8" - 1"	40-50	7	NO.56
1502084	2	1" - 2"	45-55	8	NO.53
1502085	3	2" - 3"	50-60	9	NO.50
1502086	4	3" - 4"	60-75	10	NO.46
1502136	5	4 - 6"	70-80	12	NO.39
1502137	6*	6"	75-80	15	NO.31

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

Orders: 1.800.733.4043

THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com

HARRIS
A LINCOLN ELECTRIC COMPANY

3-GPN MODEL

1YR WARRANTY · MADE IN THE USA

V-SERIES® GENERAL PREHEAT TWO PIECE PROPANE/ NATURAL GAS HAND CUTTING TIP

MODEL SHOWN: **3-GPN**

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

			OPERATING PRESSURES		
PART NO.	TIP SIZE NO.	DEPTH OF CUT	OXYGEN PSIG	FUEL GAS	CUTTING DRILL SIZE
1502309	000	LIGHT GAUGE to ⅛"	20-25	3-5	NO.71
1502311	0	⅜" - ½"	25-35	3-5	NO.60
1502312	1	¾"	30-35	4-6	NO.56
1502314	3	2 - 2½"	40-50	5-10	NO.50
1502315	4	3"	45-50	8-12	NO.45
1502316	5*	4-5"	45-55	8-12	NO.39

*For best performance use ⅜" I.D. hose for tip sizes 5 and larger

3-GPP MODEL

1YR WARRANTY · MADE IN THE USA

V-SERIES® GENERAL PREHEAT SINGLE PIECE PROPYLENE HAND CUTTING TIP

MODEL SHOWN: **3-GPP**

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

			OPERATING PRESSURES		
PART NO.	TIP SIZE NO.	DEPTH OF CUT	OXYGEN PSIG	FUEL GAS	CUTTING DRILL SIZE
1502331	00	¼"	20-25	3-5	NO.67
1502332	0	⅜" - ½"	25-35	3-5	NO.60
1502333	1	¾"	30-35	4-6	NO.56
1502334	2	1" - 1½"	35-45	4-9	NO.53
1502335	3	2 - 2½"	40-50	5-10	NO.50
1502336	4	3"	45-50	8-12	NO.45
1502337	5	4 - 5"	45-55	8-12	NO.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

					PREHEAT OXYGEN PSIG							
PART NO.	TIP SIZE	PLATE THICKNESS INCHES	CUTTING SPEED I.P.M	CUTTING OXYGEN PSIG	HIGH	LOW	PREHEAT FUEL PSIG	CUTTING OXYGEN CONSUMPTION SCFH	LOW PREHEAT OXYGEN CONSUMP-TION SCFH	PROPANE CONSUMP-TION SCFH	NATURAL GAS CONSUMP-TION SCFH	APPROXI-MATE KERF INCHES
1501310	5/0	3/16	20	40	15	8	4 oz.- 2	15	20 - 30	6	15	.05
1501320	4/0	1/4	20	50	15	10	4 oz.- 2	40	20 - 35	7	18	.06
1501330	3/0	3/8	18	75	35	10	4 oz.- 2	80	20 - 35	7	18	.07
1501340	2/0	1/2	18	75	35	10	4 oz.- 2	90	25 - 35	7	18	.07
1501350	0	3/4	15	90	35	10	4 oz.- 2	125	25 - 35	7	18	.08
1501360	0 1/2	1 1/4	14	100	35	12	4 oz.- 2	170	25 - 40	8	20	.09
1501370	1	2	13	100	35	12	4 oz.- 2	200	25 - 40	8	20	.11
1501380	1 1/2	3	9	100	35	12	4 oz.- 2	250	25 - 40	8	20	.12
1501390	2	4	7	100	35	12	4 oz.- 2	325	25 - 40	8	20	.13
1501400	2 1/2	5	6	100	35	12	4 oz.- 2	395	25 - 40	8	20	.14
1501410	3	6	5	100	40	30	4 oz.- 2	425	25 - 40	8	20	.16
1501420	4	8	5	100	40	35	4 oz.- 2	525	25 - 40	8	20	.20
1501430	5	9	4	90	40	30	4 oz.- 2	580	50 - 100	20	50	.25
1501440	5 1/2	10	4	90	40	30	4 oz.- 2	600	50 - 100	20	50	.25
1501120	5NH*	10	4	60	40	30	4 oz.- 2	600	50 - 100	20	50	.25
1501130	6NH*	11	4	60	40	30	4 oz.- 2	690	50 - 100	20	50	.25
1501140	7NH*	12	4	60	50	40	4 oz.- 2	825	50 - 100	20	50	.25
1501190	8NH*	15	3	60	50	40	4 oz.- 2	925	50 - 100	20	50	.30

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.
* NH Tips are not plated

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

VVCU 6290 MODEL

1YR WARRANTY | MADE IN THE USA

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



					PREHEAT OXYGEN PSIG							
PART NO.	TIP SIZE NO.	PLATE THICKNESS INCHES	CUTTING SPEED I.P.M	CUTTING OXYGEN PSIG	HIGH	LOW	PREHEAT FUEL PSIG	CUTTING OXYGEN CONSUMPTION SCFH	LOW PREHEAT OXYGEN CONSUMPTION SCFH	PROPANE CONSUMPTION SCFH	NATURAL GAS CONSUMPTION SCFH	APPROXIMATE KERF INCHES
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
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.



HARRIS

AS MANUFACTURERS STRIVE TO REDUCE OVERALL COSTS, HARRIS CAN ASSIST IN THOSE EFFORTS.

OUR TECHNICAL TEAM IS FOCUSED ON COST REDUCTION SOLUTIONS FOR SPECIFIC APPLICATIONS IN YOUR PLANT.

VVCP 6290 MODEL

1YR WARRANTY

MADE IN THE USA

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 NO.	TIP SIZE NO.	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	4 oz - 2	15	32	13	.05
1502202	4/0	1/4	20	50	12	8	4 oz - 2	40	32	13	.06
1502204	3/0	3/8	18	75	25	8	4 oz - 2	80	32	13	.08
1502206	2/0	1/2	18	90	25	8	4 oz - 2	90	32	13	.07
1502208	0	3/4	15	100	25	8	4 oz - 2	125	32	13	.08
1502210	0 - 1/2	1 1/4	14	100	25	8	4 oz - 2	170	32	13	.08
1502212	1	2	13	100	25	10	4 oz - 2	200	40	16	.09
1502214	1 1/2	3	9	100	25	10	4 oz - 2	250	40	16	.11
1502216	2	4	7	100	25	10	4 oz - 2	325	40	16	.12
1502218	2 1/2	5	6	100	30	10	4 oz - 2	395	40	16	.13
1502220	3	6	5	100	30	10	4 oz - 2	425	40	16	.14
1502222	4	8	5	100	30	10	4 oz - 2	525	40	16	.16
1502224	5	9	4	90	30	10	4 oz - 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

1YR WARRANTY · MADE IN THE USA

HEAVY CUTTING MACHINE TIPS

MODEL SHOWN: **8090**

DESCRIPTION

For Model 8090 Jumbo Machine 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 NO.	TIP SIZE NO.	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	9/32	250 - 425
				PROPANE - 10-20	–	55 - 125
1501940	3	20 - 25	3 - 1½	CUT. OXYGEN - 25-50	9/32	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	11/32	250 - 425
				PROPANE - 10-20	–	55 - 125

*NOTE: Propylene style available as SPECIAL ORDER.

136 MODEL

1YR WARRANTY · MADE IN THE USA

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 NO.	MODEL NO.	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	11/32"	136

*NOT FOR USE WITH ACETYLENE.

140

MODEL

1YR WARRANTY

MADE IN THE USA

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 NO.	MODEL NO.	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.

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

1YR WARRANTY

MADE IN THE USA

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.



23/64" - 26

DETAILS

Warranty: 1 year

Where Used: Fabricating, maintenance

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

			EQUAL PRESSURE				
PART NO.	TIP SIZE NO.	METAL THICKNESS INCHES	OXYGEN PSIG	ACETYLENE PSIG	ACETYLENE SCFH *	RECOMMENDED HOSE ID **	TIP THREAD
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 1/7th acetylene rule when determining gas supply.

HEAVY DUTY EQUAL PRESSURE MIXERS FOR MODEL 43-2 & 18-5 HANDLE



23/64" - 26

E-43



1/2" - 25

E3-43



E2-43

1/2" - 25

MEDIUM DUTY EQUAL PRESSURE MIXERS FOR MODEL 85 HANDLE



23/64" - 26

D-85

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



23/64" - 26

H-16-2E

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

5090 MODEL

1YR WARRANTY

MADE IN THE USA

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

			EQUAL PRESSURE				
PART NO.	**TIP SIZE NO.**	**METAL THICKNESS INCHES**	**OXYGEN PSIG**	**ACETYLENE PSIG**	**ACETYLENE SCFH ***	**RECOMMENDED HOSE ID ****	**TIP THREAD**
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 1/7th 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

5090-N

MODEL

1YR WARRANTY

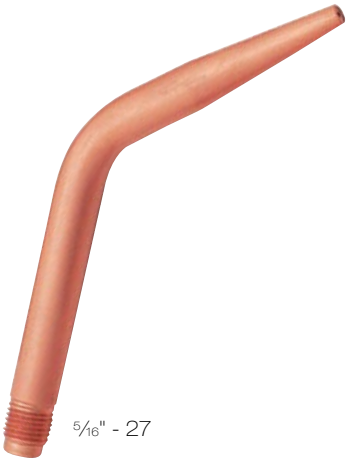
MADE IN THE USA

ALTERNATE FUEL BRAZING TIPS

MODEL SHOWN:
5090-N

DESCRIPTION

Model 5090-N 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 are designed for use with alternate fuels and can be used with either injector or equal pressure Mixers. Either of which will fit all 8490-N tip sizes. All 8490-N tips feature a metal to metal tip to mixer seat virtually eliminating the possibility of leaks and the need for thread sealants.



5/16" - 27

DETAILS

Where Used: Maintenance, metal art production, brazing

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

5090-N Tips can also be used with equal pressure mixers

INJECTOR						EQUAL PRESSURE					
PART NO.	TIP SIZE NO.	OXYGEN PSIG	FUEL GAS PSIG	OXYGEN SCFH	* NATURAL GAS SCFH	OXYGEN PSIG	PROPANE PSIG	OXYGEN SCFH	* PROPANE SCFH	THREAD SIZE	RECOMMENDED HOSE ID
1600134	3N	15	4 oz - 2 psig	10	5	2	1	20	5	5/16" - 27	3/16"
1600135	5N	25	4 oz - 2 psig	13	6.5	2	1	22	5.5	5/16" - 27	3/16"
1600136	6N	25	4 oz - 2 psig	15	7.5	2	2	25	6.3	5/16" - 27	3/16"

*For comparison purposes Natural Gas - 1000 BTU.CuFt, Propane - 2500 BTU/CuFt
**Hose sizes are suitable for hoses up to 25'. For longer hoses, higher pressures should be used.

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



5/16" - 27

H-16-E

LIGHT DUTY EQUAL PRESSURE MIXERS FOR **MODEL 15 HANDLE**



5/16" - 27

B-15-3

MEDIUM DUTY INJECTOR MIXERS FOR **MODEL 16, 19 AND 50 HANDLES**



5/16" - 27

H-16-S

LIGHT DUTY INJECTOR MIXERS FOR **MODEL 15 HANDLE**



5/16" - 27

B-15-3F

1390

MODEL

1YR WARRANTY

MADE IN THE USA

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.



⅜" - 24 ⅜" - 24

DETAILS

Where Used: Maintenance, metal art production, brazing, etc.
Compatible Equipment: C-9 Tip Cleaner P/N: 9000156
Threaded Pattern: Standard: 3/8"-24, 1390-13 and 15N - 1/2"-25

			EQUAL PRESSURE				
PART NO.	TIP SIZE NO.	METAL THICKNESS INCHES	OXYGEN PSIG	ACETYLENE PSIG	ACETYLENE SCFH *	RECOMMENDED HOSE ID **	TIP THREAD
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
1600170	15	1"	15	15	35 - 65	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 1/7th rule when determining gas supply.

HEAVY DUTY EQUAL PRESSURE MIXERS FOR MODEL 43-2 HANDLE



23/64" - 26
E-43



1/2" - 25
E3-43/(F-43)



1/2" - 25
E2-43

MEDIUM DUTY EQUAL PRESSURE MIXER FOR MODEL 85 HANDLE



23/64" - 26
D-85

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



5/16" - 27
H-16-E



23/64" - 26
H-16-2E

COMPATIBLE TIP TUBES - MATCH THREAD SIZE



23/64" - 26
3/8" - 24
8593
P/N: 9003678
Length: 4"



5/16" - 27
3/8" - 24
D-50-C
P/N: 9100379
Length: 4"
DC-50-CXL
P/N: 9100872
Length: 7"
D-50-C12
P/N: QCD50C12
Length: 12"



1/2" - 25
1/2" - 25
T-43
P/N: 9100322
Length: 9.8"

NOTE: There are currently 3 different sizes of D-50-C's

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

			EQUAL PRESSURE				
PART NO.	**TIP SIZE NO.**	**METAL THICKNESS INCHES**	**OXYGEN PSIG**	**ACETYLENE PSIG**	**ACETYLENE SCFH ***	**RECOMMENDED HOSE ID ****	**TIP THREAD**
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 1/7th acetylene rule when determining gas supply.

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



H-16-E

LIGHT DUTY EQUAL PRESSURE MIXERS FOR **MODEL 15 HANDLE**



B-15-3

COMPATIBLE TIP TUBES - MATCH THREAD SIZE



TH-50-2
P/N: 1601590
Length: 5½"

TH-50-2XL
P/N: 1601596
Length: 7¼"



8493B
P/N: QC8493B
Length: 4"

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
A LINCOLN ELECTRIC COMPANY

1390-N

MODEL

1YR WARRANTY

MADE IN THE USA

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 usig 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.



⅜" - 24 1390-N | ⅜" - 24 1390-B | ⅜" - 24 1390-H

DETAILS

Where Used: Production brazing, arts and crafts, HVAC, maintenance, etc.
Thread Pattern: Standard - 3/8" 24 13N Through 80N and 3H-1/2"-25

Compatible Equipment:
E-9 Two-piece Tip cleaner
P/N: 9000160
1390-N Tips can also be used with equal pressure mixers

		INJECTOR*				EQUAL PRESSURE					
PART NO.	TIP SIZE	OXYGEN PSIG	INJECTOR FUEL GAS PSIG	OXYGEN SCFH	NATURAL GAS SCFH	OXYGEN PSIG	PROPANE PSIG	OXYGEN SCFH	PROPANE SCFH	THREAD SIZE	RECOMMENDED Hose ID
1600180	2N	15	4 oz to 2 PSIG	6	3	2	1	12	3	⅜" - 24	3⁄16"
1600190	3N	15	4 oz to 2 PSIG	10	5	2	1	20	5	⅜" - 24	3⁄16"
1600200	4N	20	4 oz to 2 PSIG	12	6	2	1	20	5	⅜" - 24	3⁄16"
1600210	5N	25	4 oz to 2 PSIG	13	6.5	2	1	22	5.5	⅜" - 24	3⁄16"
1600220	6N	25	4 oz to 2 PSIG	15	7.5	2	2	25	6.3	⅜" - 24	3⁄16"
1600230	7N	30	4 oz to 2 PSIG	20	10.5	3	2	30	7.5	⅜" - 24	¼"
1600240	8N	30	4 oz to 2 PSIG	25	12.5	3	2	35	7.8	⅜" - 24	¼"
1600250	9N	35	4 oz to 2 PSIG	30	15	4	3	40	10	⅜" - 24	¼"
1600260	10N	40	4 oz to 2 PSIG	35	17.5	4	3	45	11.2	⅜" - 24	¼"
1600270	13N	40	4 oz to 2 PSIG	60	30	7	4	100	25	½" - 25	⅜"
1600280	15N	45	4 oz to 2 PSIG	65	32.5	12	8	150	38	½" - 25	⅜"
1600290	20N	50	4 oz to 2 PSIG	185	92.5	15	12	200	50	½" - 25	⅜"
1600300	30N	50	4 oz to 2 PSIG	200	100	18	14	225	56	½" - 25	⅜"
1600310	80N	60	4 oz to 2 PSIG	215	107.5	20	16	250	63	½" - 25	⅜"
1800020	1390-H Heating	50	4 oz to 2 PSIG	40 - 128	12 - 40	25 - 30	5 - 10	48 - 160	12 - 40	⅜" - 24	¼"
1800098	1390-3H Heating	50	4 oz to 2 PSIG	90 - 250	20 - 65	30	15	250	63	½" - 25	⅜"
1800015	1390-B Heating	50	4 oz to 2 PSIG	40 - 128	12 - 40	25 - 30	5 - 10	48 - 160	12 - 40	⅜" - 24	¼"

*NOTE: Low-pressure injector-type mixers

PERFORMANCE FOCUS

1390-N BRAZING TIPS AND TIP TUBE ADVANTAGES

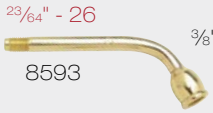
- 1390-N tips are designed with a counter-bored tip end for maximum performance using alternate fuels. They produce flames that are stable over an extremely broad BTU range. One tip size can cover a very wide range of joint sizes.
- The 1390-N tips and tip tubes use a special universal size mixer covering 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 also includes 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



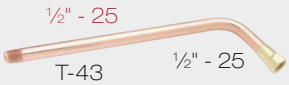
8593



E2-43



E3-43/(F-43)

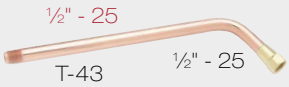


T-43

HEAVY DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 43-2 HANDLE**



B-43-N

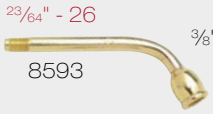


T-43

MEDIUM DUTY EQUAL PRESSURE FOR **MODEL 85 HANDLE**



D-85



8593

VERY LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 15 HANDLE**



Injector mixer
B-15-3S

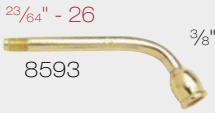


8493-N
P/N: 9003656
Length: 5"

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



H-16-2E



8593

H-16-E





D-50-C

LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 16, 19 AND 50 HANDLES**

H-16-S





D-50-C

VERY LIGHT DUTY EQUAL PRESSURE MIXER FOR **MODEL 15-5 HANDLE**



B-15-3



D-50-C

VERY LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 15-5 HANDLE**

P/N: 9105207

Injector mixer
B-15-3F





D-50-C

COMPATIBLE TIP TUBES - MATCH THREAD SIZE



8593
P/N: 9003678
Length: 4"



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

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

D-50-C12
P/N: QCD50C12
Length: 12"



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

8490-N

MODEL

1YR WARRANTY

MADE IN THE USA

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, Model 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
8490-N Tips can also be used with equal pressure mixers.

		INJECTOR*				EQUAL PRESSURE					
PART NO.	MODEL NO.	OXYGEN PSIG	FUEL GAS PSIG	OXYGEN SCFH	NATURAL GAS SCFH	OXYGEN PSIG	PROPANE PSIG	OXYGEN SCFH	PROPANE SCFH	THREAD SIZE "F"	HOSE ID
1602090	4N	20	4 oz. - 2 lbs	12	6	2	1	8	2	¼" - 27	3⁄16"
1602100	5N	25	4 oz. - 2 lbs	13	6.5	2	1	10	2.5	¼" - 27	3⁄16"
1602110	6N	25	4 oz. - 2 lbs	15	7.5	3	1	12	3	¼" - 27	3⁄16"
1602120	7N	30	4 oz. - 2 lbs	20	10.5	4	1	20	4	¼" - 27	¼"
1602130	8N	30	4 oz. - 2 lbs	25	12.5	5	2	24	6	¼" - 27	¼"
1602040	6-65 (heating)	50	4 oz. - 2 lbs	30	15	8	8	30	8	¼" - 27	¼"

*NOTE: Low-pressure F injector-type mixers

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



H-16-E

VERY LIGHT DUTY EQUAL PRESSURE MIXERS FOR **MODEL 15-5 HANDLE**



B-15-3

MEDIUM DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 16, 19, 50-9 AND 50-10**



Injector mixer
H-16-S

VERY LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 15 HANDLE**



Injector mixer
B-15-3S

VERY LIGHT DUTY INJECTOR MIXER COMPATIBLE WITH **MODEL 15-5 HANDLE**

Injector mixe
B-15-3F



P/N: 9105207

COMPATIBLE TIP TUBES - MATCH THREAD SIZE



TH-50-2
P/N: 1601590
Length: 5½"

TH-50-2XL
P/N: 1601596
Length: 7¼"



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



8493B
P/N: QC8493B
Length: 4"

H&HPM 2290 MODEL

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

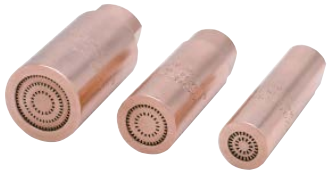
Where used: Fabrication, shipbuilding, etc.

Related items:

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



2290-H



2290-HPM

			PROPANE & NATURAL GAS		PROPYLENE	
HANDLE MODEL NO.	MIXER MODEL NO.	MIXER PART NO.	MODEL NO.	PART NO.	MODEL NO.	PART NO.
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	PROPANE	PROPYLENE	MAPP®	NATURAL GAS
	CLASSIC F43 MIXER				BTU/HR. RATING			
Tip Size NO.1	10 25	160 320	4 12	40 80	103,000 205,000	95,000 190,000	96,000 192,000	65,000 130,000
Tip Size NO.2	15 45	220 520	7 22	55 130	141,000 333,000	130,000 308,000	132,000 312,000	90,000 212,000
Tip Size NO.3	25 70	340 920	8 25	85 230	218,000 590,000	201,000 545,000	204,000 552,000	139,000 375,000
Tip Size NO.4	50 110	640 1,300	10 30	160 325	410,000 833,000	379,000 770,000	384,000 780,000	216,000 530,000
Tip Size NO.5	60 135	720 1,600	14 40	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 ⅜" hose.
2. On continuous duty, withdrawal manifolding of cylinders may be required.

COUPLINGS & ADAPTORS



½" - 25

½" - 25
2357-3
P/N: 9000738



½" - 25

½" - 25
2543-3
P/N: 8800584



¼" - NPT

¼" - NPT
2327
P/N: 9000720



½" - 25

¼" - NPT
2357
P/N: 9000734



¼" - NPT

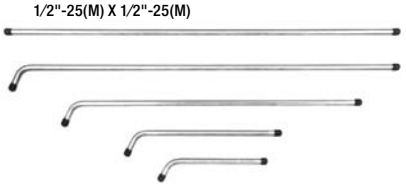
¼" - NPT
P/N: 8800985

Multiple arrangements of 2290-H Heating Tips can be assembled using Harris coupling 2327, nipple 2357 and standard ¼" pipe fittings when wider bands of heat are necessary. Capacity of 43-2 heating torch is 5 NO.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.

2393 HEATING TIP TUBES

PART NO.	MODEL NO.	LENGTH
1800200	2393-1F	36" Curved
1800210	2393-2F	28" Curved
1800220	2393-3F	15" Curved
1800230	2393-4F	10½" Curved
1800241	2393-F	60" Curved
1800240	2393-5F	36" Straight
1800211	2393-2F	28" Straight
1800221	2393-3F	15" Straight
1800231	2393-4F	10½" Straight
1800206	2393-6F	48" Straight

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

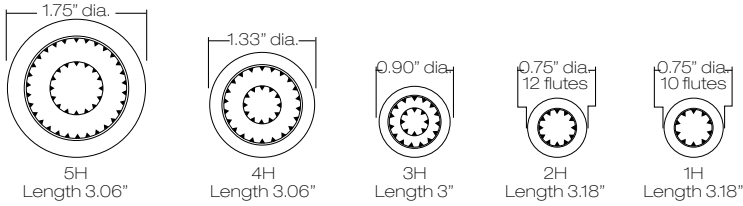


Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS A LINCOLN ELECTRIC COMPANY

2290 H TIPS FOR PROPANE OR NATURAL GAS

FOR EQUAL (POSITIVE) PRESSURE MIXING SYSTEMS

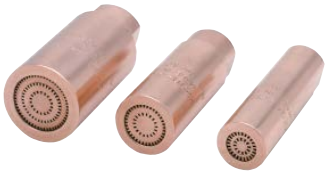


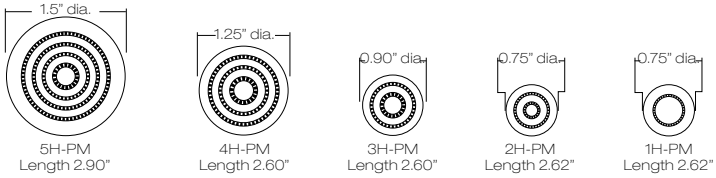


PART NUMBER	MODEL NUMBER	OXYGEN PRESSURE PSIG	PROPANE PRESSURE PSIG	FLAME CONE LENGTH	OXYGEN CFH	PROPANE CFH
1800130	2290 1-H	10 - 25	4 - 12	1/4" - 3/4"	160 - 320	40 - 80
1800140	2290 2-H	15 - 45	7 - 22	1/4" - 3/4"	220 - 520	55 - 130
1800150	2290 3-H	25 - 70	8 - 25	1/4" - 1"	340 - 920	85 - 230
1800160	2290 4-H	50 - 110	10 - 30	1/4" - 1"	640 - 1300	160 - 325
1800170	2290 5-H	60 - 135	14 - 40	5/16" - 1-1/4"	720 - 1600	180 - 400

2290 HPM TIPS FOR PROPYLENE

FOR EQUAL (POSITIVE) PRESSURE MIXING SYSTEMS





PART NUMBER	MODEL NUMBER	OXYGEN PRESSURE PSIG	PROPYLENE PSIG	FLAME CONE LENGTH	OXYGEN CFH	PROPYLENE CFH
1800136	1H-PM	10 - 25	4 - 12	1/4" - 3/4"	160 - 320	40 - 80
1800146	2H-PM	15 - 45	7 - 22	1/4" - 3/4"	220 - 520	55 - 130
1800156	3H-PM	25 - 70	8 - 25	1/4" - 1"	340 - 920	85 - 230
1800166	4H-PM	50 - 110	10 - 30	1/4" - 1"	640 - 1300	160 - 325
1800176	5H-PM	60 - 135	14 - 40	5/16" - 1-1/4"	720 - 1600	180 - 400

Note: When using natural gas, fuel flow rates of Propane or Propylene will double.
BTU/CU.FT. - Propane = 2560 • Propylene = 2370 • Nat. GAS = 1000
For LPG cylinder withdrawal rates see chart on next page.

USE MODEL 43-2 HANDLE, PN: 1401150 • MODEL V-315C, PN: 1400315 FOR 2290 H & HPM HEATING TIPS

HARRIS 2393 TIP TUBE

PART #	MODEL #	LENGTH	STYLE	THREAD
1800200	2393-1F	36"	"Curved" 70°	½" - 25
1800210	2393-2F	28"	"Curved" 70°	½" - 25
1800220	2393-3F	16"	"Curved" 70°	½" - 25
1800230	2393-4F	10½"	"Curved" 70°	½" - 25
1800241	2393-F	60"	"Curved" 70°	½" - 25
1800240	2393-5F	36"	"Straight" 180°	½" - 25
1800211	2393-2F	28"	"Straight" 180°	½" - 25
1800221	2939-3F	16"	"Straight" 180°	½" - 25
1800231	2393-4F	10½"	"Straight" 180°	½" - 25
1800206	2393-6F	48"	"Straight" 180°	½" - 25



HARRIS EQUAL (POSITIVE PRESSURE) MIXERS

PART NUMBER	HARRIS® MODEL NUMBER	MAX CAPACITY OXYGEN	MAX CAPACITY LPG	V-SERIES®
9100316	E3-43	1600 CFH	400 CFH	V-W-3
9100314	E2-43	920 CFH	230 CFH	V-W-2



HARRIS INJECTOR (LOW PRESSURE) MIXERS

PART NUMBER	HARRIS® MODEL NUMBER	MAX CAPACITY OXYGEN	MAX CAPACITY LPG
9100306	B-43-N	920 CFH	230 CFH



WITHDRAWAL RATE OF LPG FROM 100 LB CYLINDER

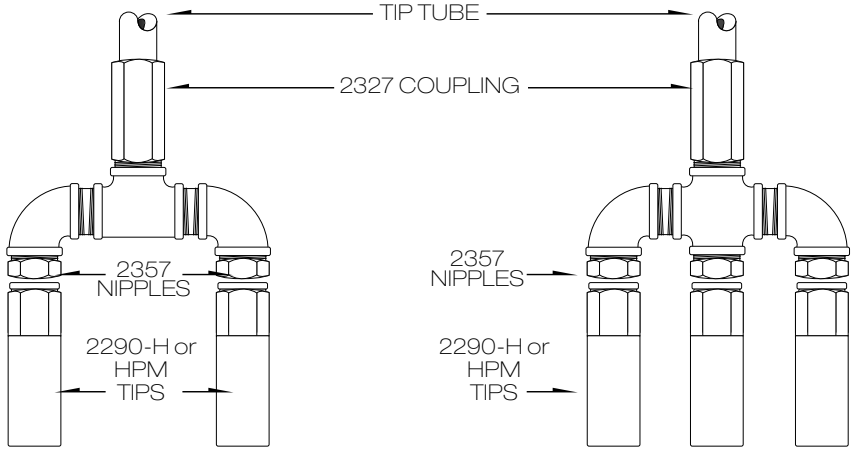
	Temperature in °F				
PERCENTAGE OF FULL CYL.	**0**	**20**	**40**	**60**	**70**
100	45	67	85	110	120
90	42	61	80	99	110
80	38	55	72	86	95
70	33	49	64	80	86
60	30	43	56	70	77
50	26	38	50	62	67
40	22	32	42	52	56
30	18	26	34	43	47
20	14	20	27	33	37
10	11	15	20	24	26
	Withdrawal rates in SCFH				

All though Chart is specifically for Propane fuel gas it can be used to closely approximate rates for other LPG liquid petroleum gases such as Propylene and Propane blend

2290 H & HPM MULTIPLE HEATING TIPS ASSEMBLIES

For special heating tip assemblies featuring multiple heating tips, Harris recommends the Harris Model 43-2 handle, E3-43 mixer, 2393 tip tubes, 2290 heating tips, model 2327 couplings and Model 2357 nipples. These Harris parts and standard 1/4" NPT steel pipe and couplings can be used to create special multiple heating tip assemblies (example shown below) with certain restrictions.

- Use only tips specified for the gas being used.
- Multiple tips must be the same size to insure equal flame length.
- Maximum BTU output or fuel gas flow cannot exceed the flow capacity listed for the mixer being used.
- Operating /Lighting procedures: Same as those for single heating tips.
- Maximum aggregate fuel flow capacity should not exceed 400 SCFH of LPG.
- Calculate total fuel requirements by multiplying number of tips by individual tip flow rate from tip charts.
- Total assembly flow rate requirements may necessitate manifolding of multiple cylinders to insure safe equipment operation and to control cylinder residual.



COUPLINGS & ADAPTORS



½" - 25	½" - 25	¼" - NPT	¼" - NPT	¼" - NPT
2357-3	2543-3	2327	2357	
P/N: 9000738	P/N: 8800584	P/N: 9000720	P/N: 9000734	P/N: 8800985

Note: For extended tube and tip life, use tip adaptor - 2357-3

SERIES J&H

ACETYLENE HEATING TIPS AND ASSEMBLIES

MODELS SHOWN:
"J" & "H"

1YR WARRANTY

MADE IN THE USA

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.



"J" Heating Tip



"H" Heating Assembly

DETAILS

Warranty: 1 year

Where used: Fabrication, shipbuilding, maintenance, etc.

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

TORCH AND MIXER		MIXER	"J" SERIES TIP LESS MIXER		"H" SERIES TIP ASSEMBLY WITH MIXER	
HANDLE MODEL NO.	MIXER MODEL NO.	PART NO.	MODEL NO.	PART NO.	MODEL NO.	PART NO.
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-63-3	1800730	H-63-3	1800830
43-2	E2-43	9100314	J-63-4	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				
16 or 19-6	H-16-E	9100096				
16 or 19-6	H-16-2E	9100787	J-63-1	1800710	–	–
16 or 19-6	H-16-2E	9100787	J-63-2	1800720	–	–
V-100C	V-W-1	9105213	J-63-1	1800710	–	–
V-100C	V-W-1	9105213	J-63-2	1800720	–	–

			OXY-ACETYLENE EQUAL PRESSURE		ACETYLENE SCFH[3]		HEAT OUTPUT BTU/HR[4]	
TIP SIZE NO.	HOLE PATTERN DRAWING	ORIFICE (NUMBER) & SIZE	MIN PSIG[1]	MAX PSI[2]	MIN FLOW	MAX FLOW	MIN	MAX
1		N0.60(6) (.040)	2	6	20	35	29,500	51,500
2		N0.60(8) (.040)	3	7	30	50*	44,000	74,000
3		N0.56(8) (.0465)	4	8	50*	80*	74,000	118,000
4		N0.56(12) (.065)	8	15	80*	140*	118,000	206,500
5		N0.52(13) (.0635)	Oxy-12 Acet-8	Oxy-20 Acet-15	160*	300*	236,000	442,500

[1]Minimum pressure – neutral flame with no flame blow-off (lowest stable flame)
[2]Maximum pressure – neutral flame with no flame pop-out (highest stable flame)
[3]Acetylene flow shown – oxygen flow theoretically 1.1 of acetylene for neutral flame
[4]Heat output calculated with 1,475 BTU/cu.ft.
NOTE: Hose size recommendations – ¼" ID for sizes 1 and 2; ⅜" ID for sizes 3, 4 and 5
*Caution: Exceeds the withdrawal capacity of one standard 320 CF acetylene cylinder 1/7th 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)	
HANDLE MODEL NO.	MIXER MODEL NO.	MIXER PART NO.	MODEL NO.	PART NO.	WIDTH	OXYGEN	ACETYLENE	OXYGEN	ACETYLENE
43-2	E3-43 or E2-43	9100312 or 9100314	RBA-2	1800440	2"	6 - 10	6 - 10	29 - 40	25 - 35
			RBA-4	1800450	4"	10 - 12	10 - 12	55 - 59	49 - 53
V-315-C	V-W-3 or V-W-2	9105220 or 9105217	RBA-2	1800440	2"	6 - 10	6 - 10	29 - 40	25 - 35
			RBA-4	1800450	4"	10 - 12	10 - 12	55 - 59	49 - 53

(1) Multiply acetylene SCFH times 1470 to calculate BTU/Hr
Observe ½ th" rule of acetylene when determining acetylene supply required.

2393 HEATING TIP TUBES

PART NO.	MODEL NO.	LENGTH	STYLE	THREAD
1800200	2393-1F	36"	"Curved" 70°	½" - 25
1800210	2393-2F	28"	"Curved" 70°	½" - 25
1800220	2393-3F	15"	"Curved" 70°	½" - 25
1800230	2393-4F	10½"	"Curved" 70°	½" - 25
1800241	2393-F	60"	"Curved" 70°	½" - 25
1800240	2393-5F	36"	"Straight" 180°	½" - 25
1800211	2393-2F	28"	"Straight" 180°	½" - 25
1800221	2939-3F	15"	"Straight" 180°	½" - 25
1800231	2393-4F	10½"	"Straight" 180°	½" - 25
1800206	2393-6F	48"	"Straight" 180°	½" - 25

2393 TIP TUBE ½" - 25(M) X ½" - 25(M)



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

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS A LINCOLN ELECTRIC COMPANY

RBP MODEL

1YR WARRANTY · MADE IN THE USA

FLAME CLEANING HEADS

MODEL SHOWN:
RBP-43-2, 4 & 6w

DESCRIPTION

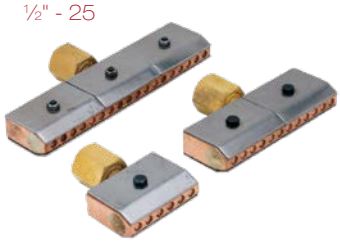
Model RBP flame cleaning heads are designed specifically for removing rust, paint and mill scale from metal surface before welding, painting, etc. They are also used for general surface heating and spalling using oxy-propane or natural gas. Features steel scraping plates on either side of tip.

DETAILS

Duty: Heavy

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

½" - 25



CLEANING HEAD					OXYGEN		FUEL		BTU PER HOUR (PROPANE)
PART NO.	MODEL NO.	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 - 1 2	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-43-2	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-43-4	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 NO.	MODEL NO.	LENGTH	STYLE	THREAD
1800200	2393-1F	36"	"Curved" 70°	½" - 25(M)
1800210	2393-2F	28"	"Curved" 70°	½" - 25(M)
1800220	2393-3F	15"	"Curved" 70°	½" - 25(M)
1800230	2393-4F	10½"	"Curved" 70°	½" - 25(M)
1800241	2393-5F	60"	"Curved" 70°	½" - 25(M)
1800240	2393-1F	36"	"Straight" 180°	½" - 25(M)
1800211	2393-2F	28"	"Straight" 180°	½" - 25(M)
1800221	2393-3F	15"	"Straight" 180°	½" - 25(M)
1800231	2393-4F	10½"	"Straight" 180°	½" - 25(M)
1800206	2393-5F	48"	"Straight" 180°	½" - 25(M)

2393 TIP TUBES ½" - 25(M) X ½" - 25(M)



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

6290 MODEL

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



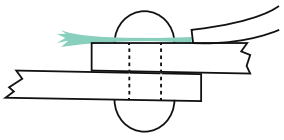
HEATING, CUTTING AND WASHING TIPS					FUEL PSIG	
PART NO.	MODEL NO.	APPLICATION	O_2 PSIG	O_2 FLOW SCFH	EQUAL PRESSURE	INJECTOR
9100516	H-62-1P	HEATING TIP	45	160*	5 - 15	4 oz. 2 lbs. PRESSURE
9100518	H-62-2P	HEATING TIP	50	220*	5 - 15	4 oz. 2 lbs. PRESSURE
9100520	H-62-3P	HEATING TIP	55	340*	5 - 15	4 oz. 2 lbs. PRESSURE
1501090	6290-NFFR	RIVET CUTTING	45	–	–	4 oz. 2 lbs. PRESSURE
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 TIPS		**GOUGE SIZE**				
1500940	6290-1GG	⅛" - ¼" WIDE	35	–	5 - 15	4 oz. 2 lbs. PRESSURE
1500950	6290-2GG	3⁄16" - ⅜" WIDE	50	–	5 - 15	4 oz. 2 lbs. PRESSURE
1500960	6290-3GG	¼" - ½" WIDE	50	–	5 - 15	4 oz. 2 lbs. PRESSURE
PROPYLENE GOUGING TIPS		**GOUGE SIZE**				
1500944	6290-1GGM	⅛" - ¼" WIDE	35	–	5 - 15	4 oz. 2 lbs. PRESSURE
1500954	6290-2GGM	3⁄16" - ⅜" WIDE	50	–	5 - 15	4 oz. 2 lbs. PRESSURE
1500964	6290-3GGM	¼" - ½" WIDE	50	–	5 - 15	4 oz. 2 lbs. PRESSURE

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

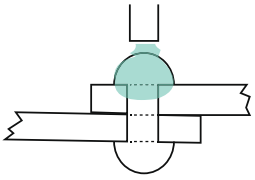
* Fuel SCFH - Oxy: Fuel ratio at neutral should be - Natural Gas 1.5:1, Propane 3.7:1, Propylene: 2.6:1

CUTTING WASHING GOUGING

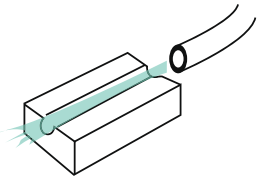
RIVET CUTTING



RIVET WASHING



GOUGING



Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS A LINCOLN ELECTRIC COMPANY

6290 MODEL

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

					FUEL PSIG	
PART NO.	MODEL NO.	APPLICATION	O_2 PSIG	O_2 FLOW SCFH	EQUAL PRESSURE	FUEL SCFH
1500910	6290-1G	GOUGE - ⅛" - ¼"	35	–	5 - 15	–
1500920	6290-2G	GOUGE - 3⁄16" - ⅜"	50	–	5 - 15	–
1500930	6290-3G	GOUGE - ¼" - ½"	50	–	5 - 15	–
1501290	6290-R	RIVET CUTTING	45	–	5 - 15	–
1800495	6290-1HA	HEATING	12	90	5 - 15	28 ***
1800496	6290-2HA	HEATING	14	170	5 - 15	40 ***

*For maximum performance Harris recommends the use of tips only with straight cutting torches.
**6290-HA cannot be used with "V" Series torches.
*** Estimated MAXIMUM

CAN'T FIND THE BRAZING EQUIPMENT YOU LIKE? CHECK OUT OUR CUSTOM BRAZING EQUIPMENT SOLUTIONS

Contact your Harris Products Group Representative in your area: 1-800-241-0804



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.



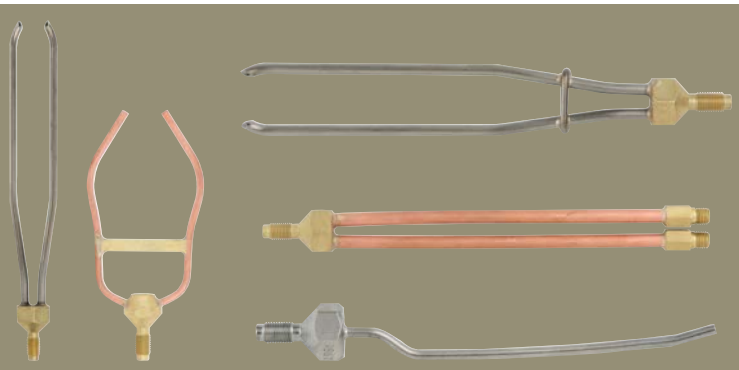
MODEL 19-6AP PISTOL TORCH

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.

CUSTOM BRAZING TIPS TO MEET YOUR SPECIFICATIONS

Contact your Harris Products Group Representative in your area: 1-800-241-0804



KITS

WHAT'S YOUR STYLE?

HARRIS OFFERS THREE STYLES OF KITS.

Harris Combination Kits are equipped with a handle, cutting attachment, welding/brazing mixer and cylinder regulators. These kits contain all the basic equipment necessary to cut, weld/braze and heat. Choose kits with or without accessories such as hose, striker, goggles/glasses, tool bag, etc. Deluxe kits include a selection of welding/brazing tips and "Plus" kits include a multi-flame heating tip. Combination kits are available for use with acetylene specific, all gases or alternate fuels (LPG). Alternate fuel combination kits generally do not include a welding/brazing mixer or tips. These kits are available in both Harris® "Classic" and "V"-Series® designs.

Cutter Pac® Kits are equipped with a straight cutting torch and cylinder regulators. The Cutter Pac® kits are specifically for cutting and specialty cutting/heating applications. Order the Cutter Pac® Kits by specific gas type (acetylene, propane, propylene, LPG, or all fuel gases). These kits are available in both Harris® "Classic" and "V"-Series® designs.

Port-A-Torch® Kits are generally combination-style kits including a cylinder tote putting an emphasis on portability and convenience. All Port-A-Torch® Kits come equipped with torch handle, cutting attachment, mixer, regulators, hose and other accessories including cutting and welding tips. They can be ordered with or without cylinders.



CLASSIC COMBINATION KITS

CLASSIC
COMBINATION PIPELINER®
ALTERNATE FUELS/PROPANE
MODEL

COMBINATION KITS-ALTERNATE FUEL GASES

MODEL SHOWN:
43425F-510P DXL

DESCRIPTION

This combination Pipeliner® Classic deluxe kit contains all the major components needed for cutting, welding, brazing and heating using alternate fuels/propane. With supplied propane tip, this outfit is capable of cutting up to a 1" plate. The outfit can also cut up to a 5" plate with optional larger tips.



DETAILS

Capacity: Cuts to 1" (25.4mm) plate with supplied tips. Cuts to 5" (127.0mm) plate with larger tips.

Duty: Heavy

Gauges: 2.5" Brass

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

Mixer Type: Equal pressure

Handle equipped with: FlashGuard® Check Valves

Warranty: 7 years - Regulator; 1 year - All other components

PART NO.	MODEL NO.	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	• Goggles • 20' x ¼" "T" Hose • Striker • Tool Bag • Tip	15.8s. / 7.08 kg.

CUTTER PAC®

Cutter Pac® Kits are equipped with a straight cutting torch and cylinder regulators. The Cutter Pac® kits are specifically for cutting and specialty cutting/heating applications. Order the Cutter Pac® Kits by specific gas type (acetylene, propane, propylene, LPG, or all fuel gases). These kits are available in both Harris® "Classic" and "V"-Series® designs.

CLASSIC CUTTER PAC® ACETYLENE MODEL

CUTTER PAC® - ACETYLENE

MODEL SHOWN:
6225EGX-510

DESCRIPTION

This Cutter Pac® Classic kit contains all the major components needed for cutting and special applications using acetylene gas. With supplied acetylene tip, this outfit is capable of cutting up to 1" plate, and can cut up to 12" plate with optional larger tips. (Sold Separately)

DETAILS

Capacity: Cuts to 1" (25.4mm) plate with supplied tip. Cuts to 12" (304.8mm) plate with optional larger tips.

Mixer Type: Equal pressure

Typical Application: Demolition, Construction, Fabrication, Shipbuilding, and Railroads

Warranty: 7 years - Regulator; 1 year - All other components



PART NO.	MODEL NO.	TORCH	TORCH LENGTH	TORCH HEAD ANGLE	CUTTING TIP*	REGULATORS		WEIGHT
						OXYGEN	FUEL	
4401638	6225EGX-510	62-5E	18"	90⁰	6290-1AC	25GX-145-540	25GX-15-510	10.69 lbs./ 4.85 kg.

*Includes Acetylene tip—other tips available.

CLASSIC CUTTER PAC® ALTERNATE FUEL/PROPANE MODEL

CUTTER PAC® - ALTERNATE FUELS

MODEL SHOWN:
6225FGX-510P

DESCRIPTION

This Cutter Pac® Classic kit contains all the major components needed for cutting and special applications using alternate fuels/propane gas. With supplied propane tip, this outfit is capable of cutting up to 1" plate, and can cut up to 12" plate with optional larger tips. (Sold Separately)

DETAILS

Capacity: Cuts to 1" (25.4mm) plate with supplied tip. Cuts to 12" (304.8mm) plate with optional larger tips.

Mixer Type: Injector

Warranty: 7 years - Regulator; 1 year - All other components



PART NO.	MODEL NO.	TORCH	TORCH LENGTH	TORCH HEAD ANGLE	CUTTING TIP*	REGULATORS		
						OXYGEN	FUEL	
4401639	6225FGX-510P	62-5F	18"	90⁰	6290-1NX	25GX-145-540	25GX-50-510P	10.68 lbs./ 4.84 kg.

*Includes Propane tip—other alternate fuel tips available.

PORT-A-TORCH®

CLASSIC PORT-A-TORCH® WITH CYLINDERS

MODEL

CLASSIC PORT-A-TORCH®

MODEL SHOWN:
85601-200

DESCRIPTION

This Classic Port-A-Torch® deluxe kit with cylinders 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 also cut up to a 4" plate and weld up to a 1⁄2" plate with optional larger tips and an acetylene cylinder.



DETAILS

Capacity: Cuts to 1" (25.4mm) with supplied tip(s). Cuts to 4" (101.6mm) with optional larger tip(s) and acetylene cylinder.

Welds to 1/16" (1.6mm) with supplied tip(s). Welds to 1/2" (12.7mm) with optional larger tip(s) and acetylene cylinder.

Duty: Light to Medium

Gauges: 50mm ABS plastic

Mixer Type: Equal pressure

Typical Application: HVAC, maintenance, hobby arts & crafts

Warranty: 7 years - Regulator; 1 year - All other components

PART NO.	MODEL NO.	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	• Goggles • Striker • 12' x 3⁄16" Hose • Acet. Cylinder Wrench • 20 CU. Ft. O_2 Cylinder * • 10 CU. FT. Acet. Cylinder * • Tool Bag * Cylinders shipped empty	38.0 lbs. / 17.24 kg.

CLASSIC PORT-A-TORCH® WITHOUT CYLINDERS

MODEL

CLASSIC PORT-A-TORCH®

MODEL SHOWN:
85601-200

DESCRIPTION

This Classic Port-A-Torch® deluxe kit without cylinders 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 also cut up to a 4" plate and weld up to a 1⁄2" plate with optional larger tips and an acetylene cylinder.



DETAILS

Capacity: Cuts to 1" (25.4mm) with supplied tip(s). Cuts to 4" (101.6mm) with optional larger tip(s) and acetylene cylinder.

Welds to 1/16" (1.6mm) with supplied tip(s). Welds to 1/2" (12.7mm) with optional larger tip(s) and acetylene cylinder.

Mixer Type: Equal pressure

Typical Application: HVAC, maintenance, hobby arts & crafts

Warranty: 7 years - Regulator; 1 year - All other components

PART NO.	MODEL NO.	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	• Goggles • 12' x 3⁄16" Hose • Striker • Acet. Cylinder Wrench	16.0 lbs. / 7.26 kg.

CLASSIC V SERIES PORT-A-TORCH® W/ OR W/O CYLINDERS

MODEL

MADE IN THE USA

V-SERIES® CLASSIC PORT-A-TORCH®

MODEL SHOWN:
V-100601-200 DLX

DESCRIPTION

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.



DETAILS

Capacity: Cuts to 1" (25.4mm) plate with supplied tips. Cuts to 4" (101.6mm) plate with optional larger tips and acetylene cylinder.

Welds up to 1/16" (1.6mm) plate with supplied tips. Welds up to 1/2" (12.7mm) plate with larger tips and acetylene cylinder.

Duty: Medium

Gauges: 50mm ABS plastic

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

Mixer Type: Equal pressure

Handle equipped with: FlashGuard® Check Valves

Warranty: 7 years - Regulator; 1 year - All other components

V SERIES The Harris Products Group

PART NO.	MODEL NO.	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4403215	V-100601-200 STD.	100C	V-W-1	1-V3-101	V-1350	23A90-3	601-80-540	601-15-200	• Goggles •Striker • 12' x 3⁄16" Hose • Acet. Cylinder Wrench • Tool Bag	33 lbs./ 14.97 kg.

IRONWORKER® OUTFIT SERIES

All Harris® Ironworker® Kits feature a thermally insulated fabric tool bag that protects valuable equipment during storage and transportation. These kits are available in both Harris® "Classic" and "V"-Series® designs. Both designs are for use with acetylene for medium, heavy or extra-heavy duty applications. Harris' "V"-Series equipment is compatible with original Victor® cutting attachments, combination handles and welding/brazing acetylene mixers. Harris "V"-Series® cutting attachments use Victor®-style seats and the "V"-Series® welding/brazing mixers use Harris®-style tips and tip tubes. All Harris® Ironworker® Combination Kits include a striker, goggles and 20' R-Grade ¼" ID hose.

IRONWORKER® CLASSIC COMBINATION ALL FUELS/ ACETYLENE

MODEL

MEDIUM DUTY ACETYLENE OUTFITS

MODEL SHOWN:
85801-510

DESCRIPTION

The Harris HMD medium duty welding and cutting outfit features the new Model 801 regulators and Harris' most popular combination torch handle and cutting attachment. The Model 801 regulators include one-piece encapsulated seats for longer service life, and a 7 year warranty. The Model 85 torch handle features twin-tube, silver-brazed connections for safety and durability when welding, brazing, cutting or heating with acetylene. It is equipped with FlashGuard® check valves. The Model 72-3 cutting attachment with brazed triangular stainless steel tubes makes it light in weight while providing exceptional strength and rigidity. 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: Cuts up to 5" plate with optional tips, welds to ½" plate with optional tips

Duty: Medium

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

Mixer Type: Equal pressure

Torch equipped with: FlashGuard® Check Valves

Warranty: 7 years - Regulator
1 year - All other components



PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4400366	85801-510-DLX HMD	85	D-85	6290-1AC	72-3	23A90-5	801-145-540	801-15-510	• Goggles • Striker • 20' x ¼" Hose • Insulated tool bag	12.3 lbs. / 5.6 kg.
4400369	85801-300 DLX HMD	85	D-85	6290-1AC	72-3	23A90-5	801-145-540	801-15-300	• Goggles • Striker • 20' x ¼" Hose • Insulated tool bag	12.3 lbs. / 5.6 kg.

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS A LINCOLN ELECTRIC COMPANY

IRONWORKER® OUTFIT SERIES

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

IRONWORKER® V SERIES
COMBINATION
ALL FUELS/ ACETYLENE
MODEL

MEDIUM DUTY ACETYLENE OUTFITS

MODEL SHOWN:
VH10C-801-510 DLX

DESCRIPTION

The Harris VMD medium duty welding and cutting outfit features the new Model 801 regulators, VH10 combination torch handle and VH31 cutting attachment. The Model 801 regulators include one-piece encapsulated seats for longer service life, and a 7 year warranty. The Model VH10 torch handle features a tube within a tube construction. It is equipped with FlashGuard® check valves. The Model VH13 cutting attachment features an all gas in-tube mixer which allows for easy maintenance.

DETAILS

Capacity: Cuts up to 4"/ 101.6 mm plate with optional tips, welds to ½"/ 12.7 mm plate with optional tips

Duty: Medium

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

Mixer Type: Equal pressure

Torch equipped with: FlashGuard® Check Valves

Warranty: 7 years - Regulator Warranty

1 year - all other components

1 year - All other components



PART #	MODEL #	TORCH HANDLE	MIXER	CUTTING TIP	CUTTING ATTACHMENT	WELDING/ BRAZING TIPS	REGULATORS		ACCESSORIES	WEIGHT
							OXYGEN	FUEL		
4400372	VH10C801-510 DLX	VH31	V-W-1	1-V3-101	VH13	23A90-5	801-145-540	801-15-510	• Goggles • Striker • 20' x ¼" Hose • Insulated tool bag	12.9 lbs. / 5.7 kg.
4400375	VH10C801-300 DLX	VH31	V-W-1	1-V3-101	VH13	23A90-5	801-145-540	801-15-300	• Goggles • Striker • 20' x ¼" Hose • Insulated tool bag	12.9 lbs. / 5.7 kg.

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

GAS DISTRIBUTION

GET CONNECTED
Go to twitter.com/HarrisProducts

LASER KITS

BASIC LASER GAS START-UP KITS

1YR WARRANTY · MADE IN THE USA

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 N_2 and O_2 for assist kits
- High flow assist gas and high purity laser hose for assist kits
- Assorted fittings for easy hook-up

PART NO.	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
4703514	Mazak® Laser Start-Up Kit Resonator and Assist Gas

PREMIUM LASER GAS START-UP KITS

1YR WARRANTY · MADE IN THE USA

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.



DETAILS

- High purity laser gas switchover with purges (Resonator kits only)
- High flow dome loaded regulators for N_2 and O_2
- High flow assist gas and high purity laser hose
- T-Type particle filters to protect optics (Assist gas kits only)
- Assorted fittings for easy hook-up

PART NO.	DESCRIPTION
4703515	Universal Premium Assist Gas Start-Up Kit
4703518	Nitrogen Only Premium Assist Start-Up Gas Kit
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
- ¼" NPT or ½" NPT inlet/outlet connection
- Accuracy +/- 2%

PART NO.	MODEL NO.	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	N2/Os	500 SCFH	0-25% O_2 in N_2	No
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)
Order online www.harrisproductsgroup.com

GAS MANIFOLDS

OPEN SWITCHOVER SYSTEMS

1YR WARRANTY · MADE IN THE USA

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 NO.	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 NO.	DESCRIPTION	GAS SERVICE
4700232	Model 900 Switchover 125 PSI	Industrial High Purity
4700250	Model 900BR-IR-IL-580	Ar/He/N_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 NO.	DESCRIPTION	GAS SERVICE
4701204	SG905-125 Switchover	Industrial or High Purity

*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.

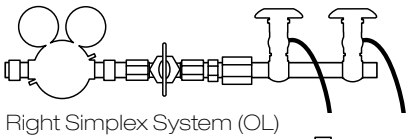
GAS MANIFOLDS

SIMPLEX AND DUPLEX ALL BRASS INDUSTRIAL MANIFOLDS

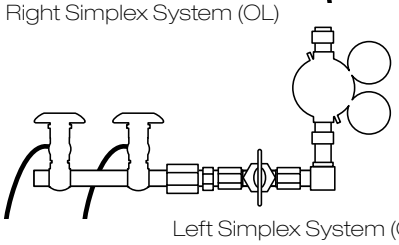
1YR WARRANTY · MADE IN THE USA

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

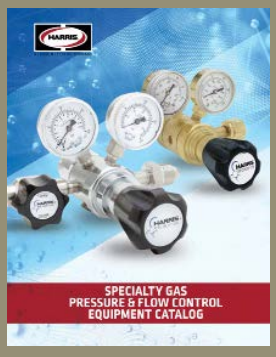
The Model 210 is a basic automatic switchover system requiring manual resetting of cylinder tanks when empty.

*Line control regulator sold separately.

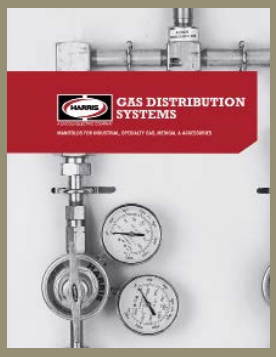


LOOKING FOR SPECIALTY GAS REGULATORS OR MANIFOLDS?

Contact your Harris Products Group Representative in your area: 1-800-241-0804



P/N: 9505646



P/N: 9505658

ACCESSORIES

GET CONNECTED
Go to www.youtube.com/harrisproductsgroup

GAUGES

1½" DUAL SCALE STEEL (PSI/kPA)	
PART NO.	**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 NO.	**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 NO.	**PRESSURE PSI/kPA**
9006100	30/200 Red Zone
9006070	60/400
9006075	100/700
9006065	200/1,400
9006060	400/2,800
9006080	2,000/14,000
9006050	4,000/28,000

REPLACEMENT GAUGE CRYSTALS	
PART NO.	**GAUGE DIAMETER**
9006223	1½" DIA.
9006226	2" DIA.
9006228	2½" DIA.

NOTE: 1/4-NPT Stem

2½" DUAL SCALE BRASS PLATED (PSI/BAR)	
PART NO.	**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

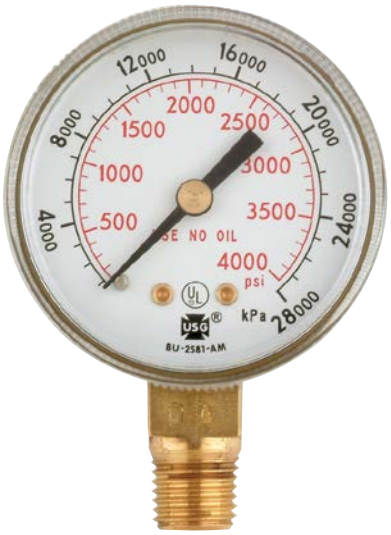
NOTE: 1/4-NPT Stem

2½" DUAL SCALE STEEL (PSI/ kPA)	
PART NO.	**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
9007253	4,000/28,000

NOTE: 1/4-NPT Stem

FLOWGAUGES* 1/4-NPT			
PART NO.	**SIZE**	**FLOW SCFH**	**(DRILL) ⅝" F**
9006133	2"	0-60	(NO.59-P/N 9100408)
9006417	2"	5-30	(NO.64-P/N 9100906)
9006139	2½"	0-100	(NO.76-P/N 9100908)
9007252	2½"	0-60	(NO.59-P/N 9100408)
9007254	2½"	0-40	(NO.64-P/N 9100906)
9007255	2½"	0-80	(NO.55-P/N 9100925)

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 NO.	**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 NO.	**PRESSURE SCFH/LPM**
9006253	60 CFH/Ar/CO_2
9006303	30 CFH/Ar

NOTE: 1/8-BSP Stem - Requires Gasket P/N: 9000643

GAUGE GUARDS

- 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:
RED (FUEL)
P/N: 4300238

MODEL SHOWN:
GREEN (OXYGEN)
P/N: 4300239

REGULATOR AND TORCH ACCESSORIES

TIP NUTS

PART NO.	MODEL NO.	DESCRIPTION	THREAD
9002560	6259-B	Tip Nut (for 98, 62, 72-3, 71-3, 73-2, 73-3, 39-3, 49-3 and 42-4)	INT
9005227	7259-2R	Tip Nut (for V-1350)	EXT
9005236	6259-V	Tip Nut (for V-2460, V-62 and V-242)	EXT
9002537	213159	Tip Nut (for 2101, 3101 and 880)	EXT
9010112	VH13	Tip Nut (for VH13)	EXT
9008437	3659-1	Tip Nut (for 36 CAs)	INT
QC1WHP8001P	8059	Tip Nut (for 80 Torch)	INT



External Thread



Internal Thread

NEEDLE VALVES-NPT

PART NO.	INLET	OUTLET
9100412	¼"	¼"
9100416	¼"	9⁄16"-18 RH
9100414	¼"	9⁄16"-18 LH



HOSES

PART NO.	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	¼" x 12.5' twin hose,"T" grade*
4300683	¼" x 20' twin hose
4300533	¼" x 20' twin hose, "T" grade*
4300530	¼" x 50' twin hose
4300138	3⁄16" x 10' single line inert gas hose
4300847	3⁄8" x 50' twin hose, "T" grade*
4300848	3⁄8" x 100' twin hose, "T" grade*

*Recommended for Alternate Fuels



HOSE ADAPTORS - "A" AND "B"

PART NO.	DESCRIPTION
9004418	Hose Adaptor - B x A (R)
9004419	Hose Adaptor - B x A (L)
9004688	Hose Adaptor - B x A (R)
9004718	Hose Adaptor - B x A (L)



P/N: 9004418



P/N: 9004419



P/N: 9004688



P/N: 9004718

OTHER ACCESSORIES ARE AVAILABLE

Contact your Harris Products Group Representative in your area:
1-800-241-0804

- WELDING CABLE
- SOAPSTONE
- WELDING HELMETS
- BRUSHES
- GLOVES
- CYLINDER CAPS
- CHIPPING HAMMERS
- WELPERS
- LENSES
- ANTI-SPATTER
- FLINTS & LIGHTERS
- GOUGING CARBONS
- ELECTRODE HOLDERS

REGULATOR AND TORCH ACCESSORIES

GAS BLOCK

The lever on the Gas Block™ acts as an on/off control which eliminates the need to reset the torch each time it is used and offers quick ignition. The Gas Block™ comes equipped with a set screw and lock nut which allows the user to easily adjust the shut off lever. The Gas Block™ is a safer option than other competitive models that pose a safety risk with open flames. It is available in two and three gas version. The three gas version offers control of the nitrogen purge line for brazing applications. Ask the Pros at Harris to help document a nitrogen gas cost savings today.

2 GAS VERSION & 3 GAS VERSION

- Heavy-duty rigid design with a laser cut and formed 10 gauge stainless steel base
- Welded stainless steel swivel bracket and stainless steel plunger
- Can be used with the LightPro Spark, Harris' electric ignitor and the valveless torches on the Perfect Flame.

3 GAS VERSION

- Offers control of the nitrogen purge line for brazing applications
- Ensures nitrogen use compliance – when the torch is lit, the nitrogen is on
- Offers nitrogen cost reduction – gas won't flow when the operator is away
- Offers more control of nitrogen usage with the ability to turn the purge line on and off with the flame.

DETAILS

Capacity: Heavy Duty
Where Used: Used at brazing stations, gas welding stations, test labs, schools and training centers
Weight: 3.5 lbs./ 1.59 kg. (2 gas P/N: 4300943)
4.9 lbs./ 2.22 kg. (3 gas P/N: 4300944)
Related Items: Light Pro Spark P/N: 4304535



PART #	DESCRIPTION	GAS	INLET CONNECTION	OUTLET CONNECTION
4300943	GAS BLOCK, 2 GAS ASY	Propane, Natural Gas, Hydrogen, Propylene, Acetylene	Fuel 9/16" - 18 (LH) Oxy 9/16" - 18 (RH)	Fuel 9/16" - 18 (LH) Oxy 9/16" - 18 (RH)
4300944	GAS BLOCK, 3 GAS ASY	Propane, Natural Gas, Hydrogen, Propylene, Acetylene	Fuel 9/16" - 18 (LH) Oxy 9/16" - 18 (RH)	Fuel 9/16" - 18 (LH) Oxy 9/16" - 18 (RH)
		Nitrogen	5/8" - 18 (F)	1/4" NPT (M)

LIGHT PRO SPARK II

The LightPro Spark is a portable, hands-free piezoelectric ignitor for use in repetitive brazing operations. When the lever is depressed the piezoelectric ignitor is engaged and a spark is created. It offers a quicker and more reliable ignition compared to typical hand held strikers and offers greater safety than afforded by open pilot lights. The unit is battery powered and eliminates the need for an external power source.

- Safer and less expensive than an open pilot light*
- Replaces manual hand-held strikers
- Shock proof, metal housing
- Powered by two standard AA batteries (sold separately)
- Compact design – 2" x 3" x 4"
- No need to replace striker flint
- Not recommended for use with large multi-flame heating tips



DETAILS

Capacity: Medium duty
Housing: Zinc die cast
Where used: Brazing and welding operations
Weight: 0.43 lbs. / 0.20 kg.

PART #	DESCRIPTION	POWER REQUIREMENTS	OUTPUT	IGNITION RATING
4304536	IGNITOR,LIGHTPRO SPARK	STANDARD AA BATTERIES	14K	100,000

* Estimated savings of $5.00/mo. For more information about gas cost savings please contact your Harris representative.

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

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 SHOWN:
P/N: 4300200

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.

GWA

MODEL

MADE IN THE USA

GUIDE WHEELS ASSEMBLY

MODEL SHOWN:
QC2SCA7700

DESCRIPTION

The Harris Guide Wheel Assembly is specially designed to withstand extrtemely harsh environments such as rail road and ship yard maintenance and mining. The Guide Wheel Assembly is of all stainless steel and brass construction and is adjustable for bevel cutting. The Model QC2SCA770 fits Harris medium and heavy cutting attachments and straight cutting torches using 6200 series tips. It is adjustable for coupling distance and bevel cutting.

DETAILS

Duty: Heavy
Width: 4"/101.6 cm
Weight: .90 lbs./.40 kg
Where Used: Fabrication, construction, shipbuilding, etc.
Related Equipment: Spare tip nuts P/N: 9SCA7762, 6290 Cutting tips



				TIP STYLES	
PART #	MODEL #	CUTTING ATTACHMENT	COMPATIBLE HANDLES	ALTERNATE* FUEL	ACETYLENE
4300995	QC2SCA7700	49-3F	43-2	6290-NX, 6290-NFF	6290, 6290-AC

REGULATOR AND TORCH ACCESSORIES

INLET NUTS AND STEMS



CGA 200 "MC" Cylinder (10 CF)



CGA 300



CGA 320



CGA 326



CGA 346



CGA 350



CGA 510



CGA 520 "B" Cylinder (40 CF)



CGA 540



CGA 590



CGA 580



CGA 600

COMMON INLET NUTS AND STEMS

CGA CONN NO.	STANDARD CONN FOR (TYPE GAS)	NUT NO.	STEM NO. ¼" NPT	RING NO.	NUT	STEM NO. 15MM
CGA 200	Acetylene	- 9005132	- 9005126	9005133	9005132 (Assembly 9100934)	9000667
CGA 300	Acetylene	9002984	9005108	9004030	9000699	9000693
CGA 320	Carbon Dioxide (Gasket 9002910)	9002986	9005114	9004030	9000659	9000661 9005692 (3½")
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 (3½")
CGA 590	Industrial Air (Argon, Helium, Nitrogen)	9003052	9005109	-	-	-
CGA 600	LPG*	-	-	-		

*LPG compatible with all Liquid Petroleum Gases

SURGE GUARD PROTECTION

CGA CONN NO.	STANDARD CONN OXYGEN	STEM NO. ¼" NPT
540	Oxygen	9105602



REDUCING BUSHING

PART NO.	
9005806	1/2" NPT(M) x 1/4" NPT (F)



HIGH PRESSURE 5500 PSIG INLET STEMS AND NUTS

CGA CONN NO.	STANDARD CONN FOR (TYPE GAS)	NUT NO.	STEM NO. ¼" NPT	RING NO.
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
- 9/16" - 18 "B" connections
- Meets OSHA 29CFR, 1926.350(f)(5) and ISO 7289



MODEL SHOWN:

Regulator Type Model 26-QCR (R&L)
P/N: 4301736 - (Sold in pairs only)



MODEL SHOWN:

Torch Type Model 26-QCT (R&L)
P/N: 4301737 - (Sold in pairs only)

REGULATOR OUTLET MOUNT TYPE

PART NO.	MODEL NO.	PACK	FUEL/OXYGEN
4301736	26-QCR (R&L)	Pairs only	Fuel and Oxygen

TORCH INLET TYPE

PART NO.	MODEL NO.	PACK	FUEL/OXYGEN
4301737	26-QCT (R&L)	Pairs only	Fuel and Oxygen

FLASHBACK QUICK CONNECTORS

HARRIS "B" HOSE TORCH TYPE FLASH ARRESTORS WITH QUICK CONNECTORS

FEATURES

This item includes both a flashback arrestor with performance and features of the model 88-5FBR (R+L) along with a quick connect feature similar to the Model 26-QCT Torch Type quick connect. Replacement Pins available. Flow capacity is similar to Harris 88-5FB R&L Flash Arrestors.



MODEL SHOWN:

Torch to Hose Type 8826-FBT (R+L)
P/N: 4302206 - (Sold in pairs only)

TORCH TO HOSE TYPE

PART NO.	MODEL NO.	PRESSURE RATINGS	GAS TYPE
4302206	8826-FBT (R+L)	143 PSIG (985 KPA)	Oxygen
		50 PSIG (345 KPA)	Fuel Gas
		15 PSIG (103 KPA)	Acetylene

REPLACEMENT PINS

PART NO.	MODEL NO.	GAS TYPE
4302208	8826-FBTPR	Oxygen
4302207	8826-FBTPL	Fuel Gas

REGULATOR AND TORCH SAFETY ACCESSORIES

HIGH FLOW TORCH FLASH 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 or 7/8"- 14 "C" size
- 100 Micron inlet filter helps keep dust and dirt out
- Cv 0.379

PART NO.	MODEL NO.	GAS TYPE
4302209	88-5 FBTL (B)	Fuel
4302210	88-5 FBTR (B)	Oxygen
4302211	88-5 FBTLC (C)	Fuel
4302212	88-5 FBTRC (C)	Oxygen



MODEL SHOWN:
Model 88-5 FBTL (B)
P/N: 4302209



MODEL SHOWN:
Model 88-5 FBTR (B)
P/N: 4302210

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: NO.5 (except for NFF Tips -NO.4)
  - Machine Cutting Tips: NO.5 1/2
  - Acetylene Heating Tips: NO.4
  - Alternate Fuel Heating Tips: NO.2
  - Cleaning Heads: NO.2 RBP (no limitation with RBA)
- Cv 0.135



MODEL SHOWN:
Regulator Type - Model 88-5FBR (R&L)
P/N: 4301651 - (Sold in pairs only)



MODEL SHOWN:
Torch Type - Model 88-5FBT (R&L) **P/N: 4302202** - (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
- Cv 0.379



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"-24W) 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)

REGULATOR AND TORCH SAFETY ACCESSORIES

C" HOSE (⅞"-14) HIGH FLOW REGULATOR TYPE FLASHBACK ARRESTORS

FEATURES

- Same features as Model 88-5FBHFR above except with ⅞"-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
- Cv 0.379



MODEL SHOWN:
High-Flow Regulator Type -
Model 88-5FBHFR C (R&L)
OXYGEN P/N: 4300235 - (Sold separately)
FUEL P/N: 4300236- (Sold separately)

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: Enough to cut up to 15" steel and for operating our 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
- 9/16"-18 connections
- Conforms to OSHA regulations



MODEL SHOWN:
88-6CVRL
P/N: 4300384



MODEL SHOWN:
88-7CVRL
P/N: 4300382

REGULATOR OUTLET CHECK VALVES

REGULATOR OUTLET MOUNT TYPE

PART NO.	MODEL NO.	PACK	FUEL/OXYGEN
4300389	88-6CVR (R&L)	Pair	Fuel and Oxygen
4300384	88-6CVL	Individual	Fuel

Regulator Type - Model 88-6CVR (R&L)- Mounts on regulator outlet. P/N: 4300389 (Blister pack pair)

REGULATOR OUTLET REPLACEMENT TYPE

PART NO.	MODEL NO.	PACK	FUEL/OXYGEN
4300382	88-7CVRL	Individual	Fuel
4300381	88-7CVRR	Individual	Oxygen

Regulator Type - Model 88-7CVR-Permanently mounts in the regulator, replacing the outlet nipple.

TORCH TYPE CHECK VALVES

TORCH INLET MOUNT TYPE

PART NO.	MODEL NO.	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

PIPELINE AND MANIFOLD ACCESSORIES

REMOTE ALARM KITS FOR FUEL GAS SERVIC

PART NO.	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



PIPELINE FLASHBACK ARRESTORS

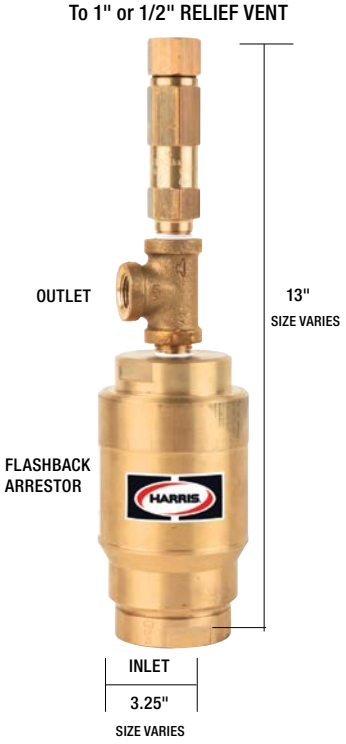
8530 AND 147 MODELS DRY TYPE FLASHBACK ARRESTOR SYSTEMS

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 NO.	MODEL NO.	GAS	FLOW SCFH	INLET/OUTLET	RELIEF VALVE
4300221	8530-A-1"	Acetylene	750	1" NPT	20 PSIG
4300222	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

PIPELINE AND MANIFOLD ACCESSORIES

ADJUSTABLE WALL BRACKET

PART NO.	DESCRIPTION
9103308	90°, Black, includes U-bolt and mounting clamp



HEADER AND STATION VALVES

PART NO.	MATERIAL	VALVE TYPE	INLET	OUTLET
9005700	Brass	Packed Stem	½" MNPT	580 CGA
9005706	Brass	Master Shut-off Valve	½" NPT (F)	½" NPT (F)
9005086	Brass	Station Oxygen	½" MNPT	⅞"-14 RH
9005088	Brass	Station Fuel	½" MNPT	⅞"-14 LH



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 NO.	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	⅜" 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 ⅜" NPT union bushing, RH	3000
9005727	Brass	1.00-11.5 NPS x ⅜" 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 40 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 NO.	GAS	INLET/OUTLET	FLOW SCFH AIR @ 100 PSI
QC2HLF2560	Fuel	1" NPT (F)	25,000
QC2HLF2580	Oxygen/Inert	1" NPT (F)	25,000
QC2HLF2360	Fuel	½" NPT (F)	14,000
QC2HLF2380	Oxygen/Inert	½" NPT (F)	14,000

CARTRIDGE PART NO.	FOR MODEL
QC2HLF2600	2400 and 2500
QC2HLF2610	2300



Filter Cartridge

PRO INFO

WHY DO CYLINDER VALVES HAVE DIFFERENT THREAD TYPES?



It is required in the U.S. by OSHA and the Compressed Gas Association (CGA) that cylinder valves be designed differently to prevent interchangeability with gas systems and equipment. This is one of the most important safety practices in the gas industry. For instance, if a used acetylene regulator were allowed to be assembled to a full oxygen cylinder, the result could be a catastrophic fire/explosion with the possibility of severe injuries and/or death to personnel in close proximity.

Every cylinder valve has a number stamped on its body to indicate the proper gas service. That number must correspond exactly to the CGA cylinder connection number on regulators and valves, or it will not assemble. It is extremely dangerous to attempt to connect gas regulators to cylinders for which they were not designed. All users of gas control equipment should make sure that all regulator, pigtails, manifolds, etc., have matching CGA numbers on the cylinder valve. If there are any questions at all, immediately contact the gas supplier or Harris Technical Service for assistance.

STATION DROPS

SINGLE AND DOUBLE OUTLET DROPS

MODEL SHOWN:
4300811

DESCRIPTION

The Harris Products Group single and dual station drops are OSHA compliant and can safely deliver a variety of gases from central piping systems to oxy-fuel, welding and other work stations. Single stations are equipped with fittings to allow conversion to dual stations with the purchase of required minor components. * Fuel and oxygen drops are equipped with check valves to meet OSHA and NFPA requirements. All models come with gas specific CGA connections as well as hard cap and chain to protect unused connections from contamination and damage. Plug on drip leg can be removed to clean system of contamination.

DETAILS

- **Inlet –** ½" FNPT, ¼ Quick Turn Valve
- **Mount –** Rear mount and side mount models available
- **Labels –** Variety of gas specific labels shipped with different models**
- **Drip Leg –** Included on all models
- **Length –** 20" (approx.) both single and dual drop models

***• Required fittings to convert single to dual station**

"B" Inert - CGA 032
1/2" MNPT x 1/4" FNPT - PN 9005806
1/4" MNPT x 5/8"-18 FRH - PN 9000371
Cap and Chain - PN 9109688

"C" Inert CGA 034
1/2" MNPT x 1/4" FNPT - PN 9005806
1/4" MNPT x 7/8"-14 FRH - PN 9109689
Cap and Chain - PN 9109690

"C" Fuel - CGA 025
1/2" MNPT x CGA 025 - PN 9109686
Cap and Chain - PN 9109687
Check Valve - PN 8809679

"C" Oxygen - CGA 025
1/2" MNPT x CGA 024 - PN 9109684
Cap and Chain - PN 9109685
Check Valve - PN 8809679



PART NO.	DESCRIPTION	GAS SERVICE	INLET CONNECTION	OUTLET CONNECTION	
4300805	Single Station Drop, Oxygen	Oxygen	1/2" FNPT	7/8-14 RH "C" (M)	CGA 024
4300806	Single Station Drop, Flammable Gas	Fuel Gas	1/2" FNPT	7/8-14 LH "C" (M)	CGA 025
4300807	Single Station Drop, Inert/Air	Inert/Air	1/2" FNPT	5/8-18 RH "B" (F)	CGA 032
4300808	Single Station Drop, Inert/Air	Inert/Air	1/2" FNPT	7/8-14 RH "C" (F)	CGA 034
4300813	Side Mount Single Station Drop, Oxygen	Oxygen	1/2" FNPT	7/8-14 RH "C" (M)	CGA 024
4300814	Side Mount Single Station Drop, Flammable Gas	Fuel Gas	1/2" FNPT	7/8-14 LH "C" (M)	CGA 025
4300815	Side Mount Single Station Drop, Inert/Air	Inert/Air	1/2" FNPT	5/8-18 RH "B" (F)	CGA 032
4300816	Side Mount Single Station Drop, Inert/Air	Inert/Air	1/2" FNPT	7/8-14 RH "C" (F)	CGA 034
4300809	Double Station Drop, Oxygen	Oxygen	1/2" FNPT	7/8-14 RH "C" (M)	CGA 024
4300810	Double Station Drop, Flammable Gas	Fuel Gas	1/2" FNPT	7/8-14 LH "C" (M)	CGA 025
4300811	Double Station Drop, Inert/Air	Inert/Air	1/2" FNPT	5/8-18 RH "B" (F)	CGA 032
4300812	Double Station Drop, Inert/Air	Inert/Air	1/2" FNPT	7/8-14 RH "C" (F)	CGA 034
4300817	Side Mount Double Station Drop, Oxygen	Oxygen	1/2" FNPT	7/8-14 RH "C" (M)	CGA 024
4300818	Side Mount Double Station Drop, Flammable Gas	Fuel Gas	1/2" FNPT	7/8-14 LH "C" (M)	CGA 025
4300819	Side Mount Double Station Drop, Inert/Air	Inert/Air	1/2" FNPT	5/8-18 RH "B" (F)	CGA 032

**Gas specific labels provided
Flammable Gas: Acetylene, LPG and Hydrogen
Inert gases: Argon, CO2, Helium, Nitrogen, Ar/CO_2, Air

REGULATOR TECHNICAL DATA

REGULATORPERFORMANCE DEFINITIONS

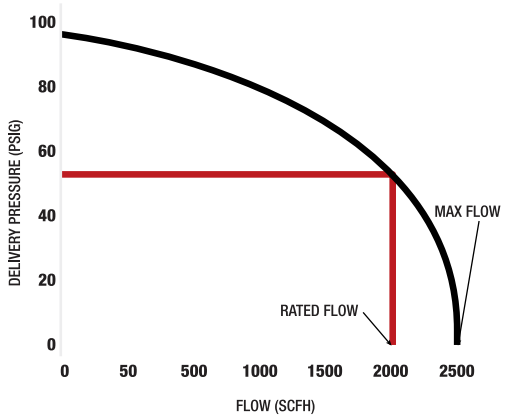
WHAT INFORMATION CAN BE DETERMINED FROM A FLOW CURVE?

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 pointon 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.

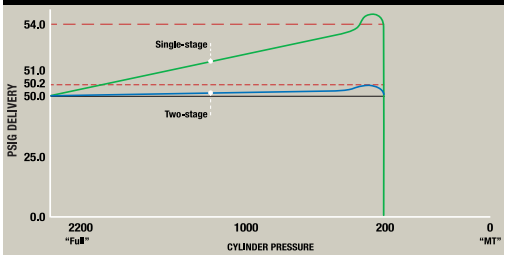
TABLE 1a. GAS CORRECTION FACTORS

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

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

PRESSURE REGULATION



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.

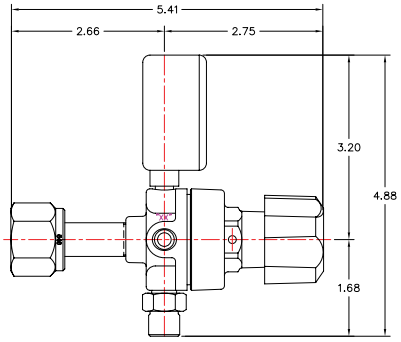
WHAT ARE GAS FLOW CORRECTION FACTORS?

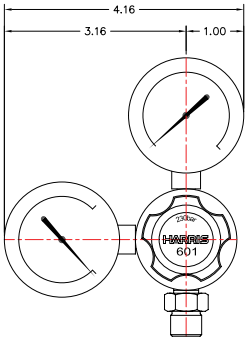
Each gas has a different density and therefore flows at different rates under the same pressures and conditions. The correction factor compares their densities to air.

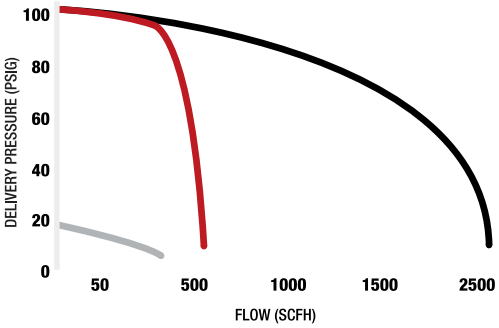
MODELS 601 & 301

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 601







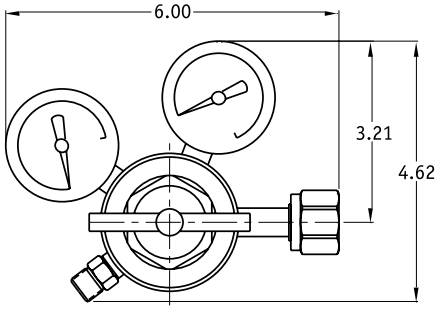
MODEL 601 SINGLE-STAGE REGULATOR

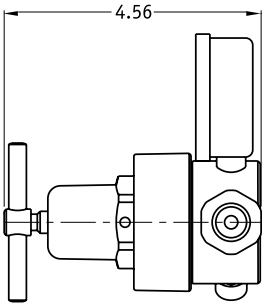
- 601-100 @ 2000 PSIG inlet
- 601-100 @ 200 PSIG inlet
- 601-15 @ 200 PSIG inlet

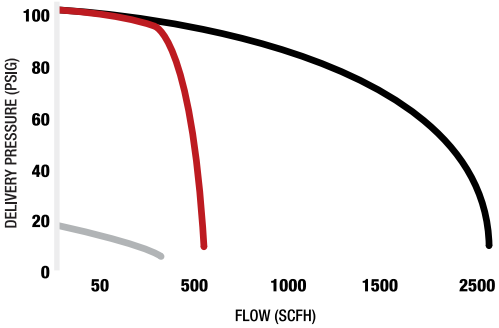
DETAILS

Regulator Weight: 1.39 lbs./0.63 kg.
Pressure Rise: 0.43 PSIG per 100 PSIG
C_v: 0.08

MODEL 301







MODEL 301 SINGLE-STAGE REGULATOR

- 301-100 @ 2000 PSIG inlet
- 301-100 @ 200 PSIG inlet
- 301-15 @ 200 PSIG inlet

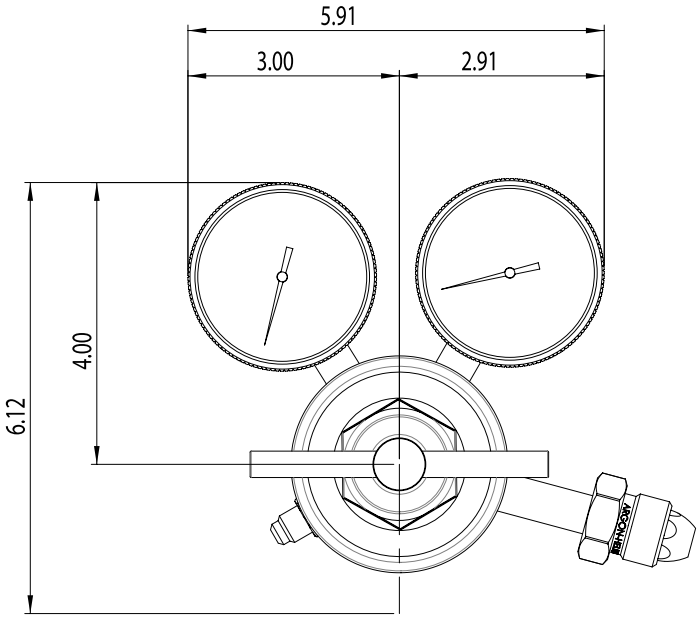
DETAILS

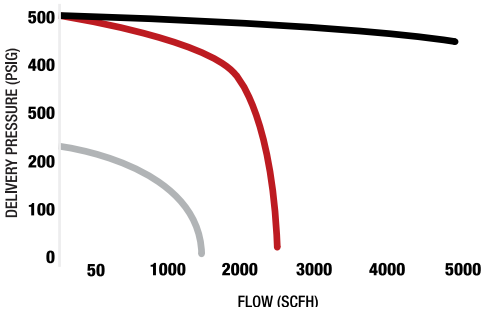
Regulator Weight: 2.2 lbs./0.99 kg
Pressure Rise: 0.4 PSIG per 100 PSIG
C_v: 0.08

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

MODEL 25GX HVAC

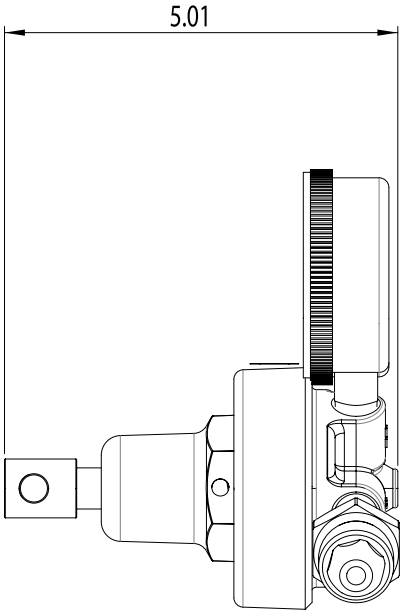
PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

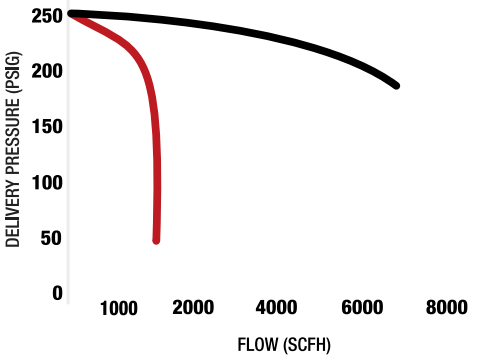




MODEL 25GX-500 HIGH PRESSURE SINGLE-STAGE REGULATOR

- 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

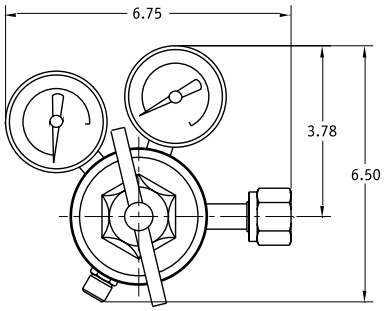
DETAILS

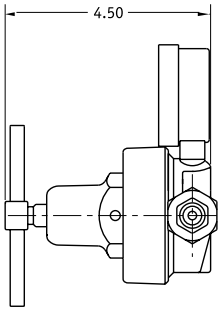
Regulator Weight: 3.2 lbs./1.45 kg
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

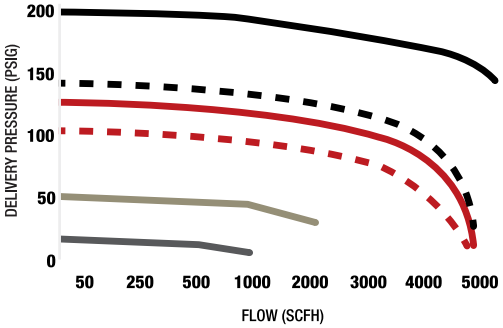
MODELS 425,29&25GX

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 425







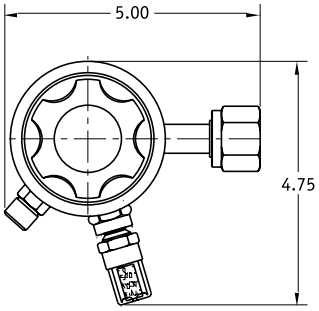
DETAILS

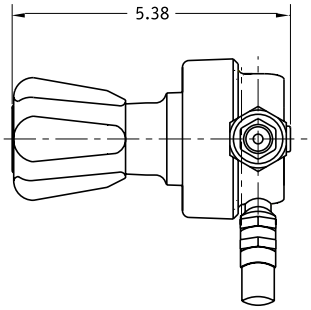
Regulator Weight: 3.7 lbs. /1.67 kg.
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

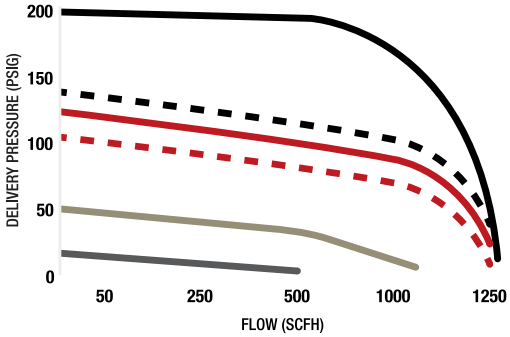
MODEL 425, 29, 25GX AND 45 - 2000 PSIG INLET

- 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 29







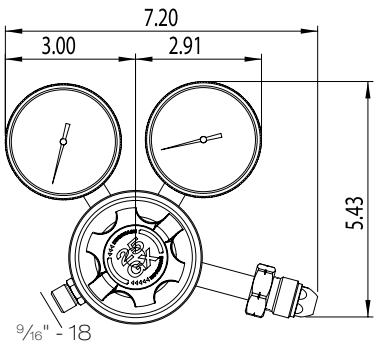
DETAILS

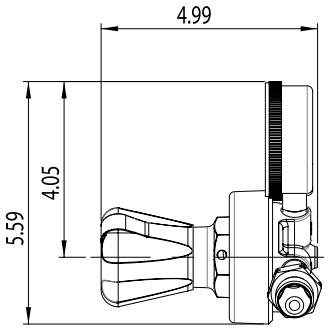
Regulator Weight: 2.7 lbs./1.22 kg.
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

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 25GX





DETAILS

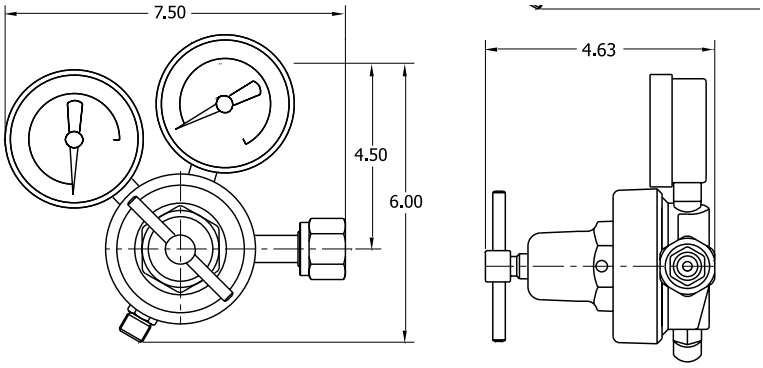
Regulator Weight: 3.2 lbs. /1.45 kg.
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

MODEL 45,2500 & 450

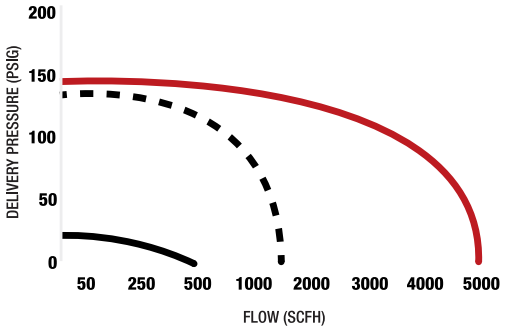
PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 45



DETAILS

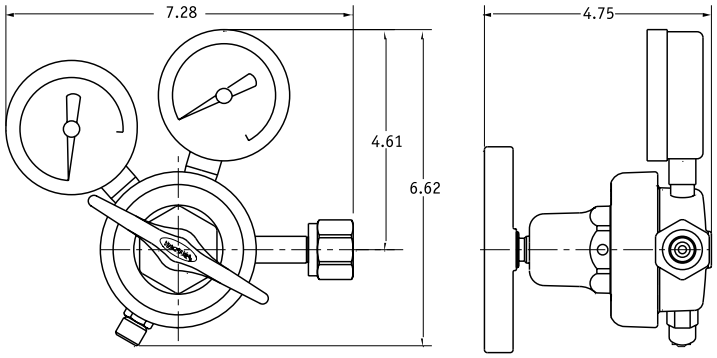
Regulator Weight: 3.2 lb /1.45 kg
Pressure Rise: 0.2 PSIG per 100 PSIG
C_v: 0.17



MODEL 45 SINGLE-STAGE REGULATOR

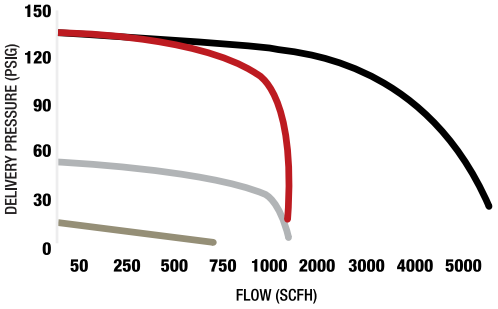
- 45-145@ 2000 PSIG inlet
- 45-145@ 200 PSIG inlet
- 45-15 @ 200 PSIG inlet

MODEL 2500



DETAILS

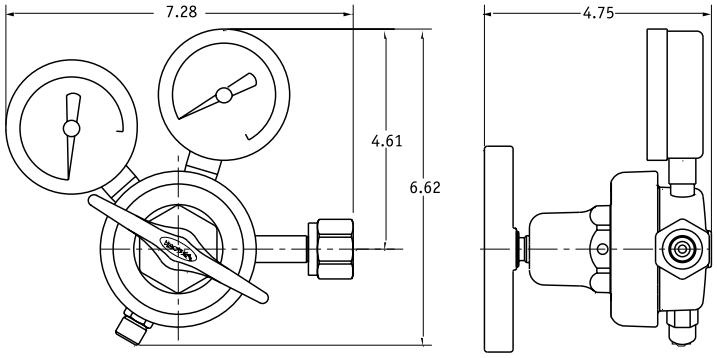
Regulator Weight: 4.6 lb /2.09 kg
Pressure Rise: 0.3 PSIG per 100 PSIG
C_v: 0.17



MODEL 2500 SINGLE-STAGE REGULATOR

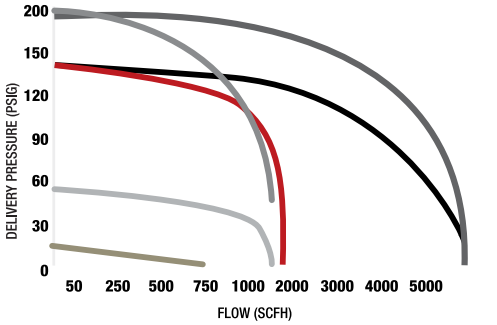
- 2500-125 @ 2000 PSIG inlet
- 2500-125 @ 200 PSIG inlet
- 2500-50 @ 200 PSIG inlet
- 2500-15 @ 200 PSIG inlet

MODEL 450



DETAILS

Regulator Weight: 4.6 lb /2.09 kg
Pressure Rise: 0.3 PSIG per 100 PSIG
C_v: 0.17



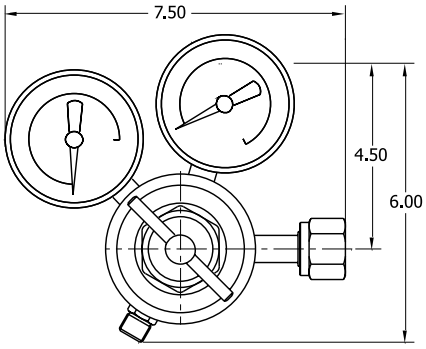
MODEL 450 SINGLE-STAGE REGULATOR

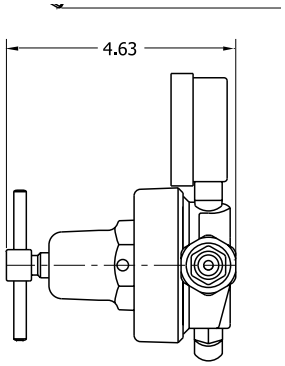
- 450-200 @ 200 PSIG inlet
- 450-200 @ 2000 PSIG inlet
- 450-125 @ 2000 PSIG inlet
- 450-125 @ 200 PSIG inlet
- 450-50 @ 200 PSIG inlet
- 450-15 @ 200 PSIG inlet

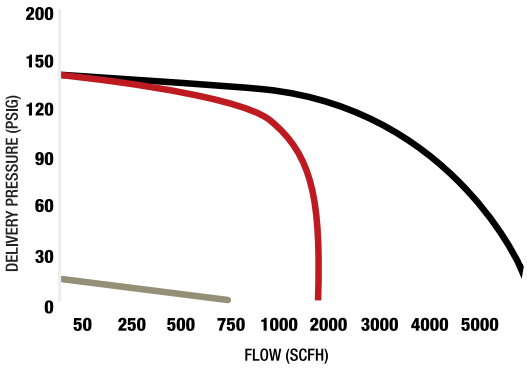
MODEL 45S & 330

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 45S







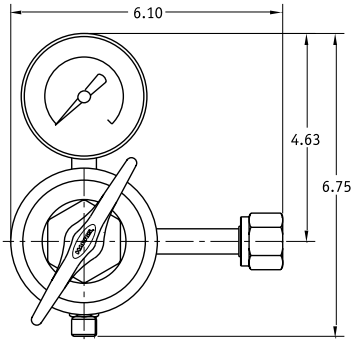
MODEL 45S SINGLE-STAGE REGULATOR

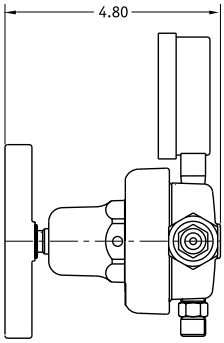
- 45S-145 @ 2000 PSIG inlet
- 45S-145 @ 200 PSIG inlet
- 45S-15 @ 200 PSIG inlet

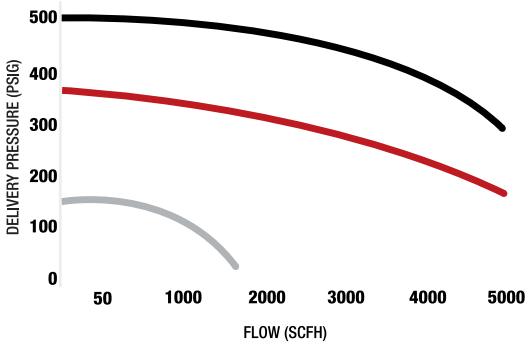
DETAILS

Regulator Weight: 3.2 lb /1.45 kg
Pressure Rise: 0.3 PSIG per 100 PSIG
C_v: 0.17

MODEL 330







MODEL 330 LIQUID CYLINDER REGULATOR

- 330-125 @ 200 PSIG inlet
- 330-350 @ 400 PSIG inlet
- 330-500 @ 600 PSIG inlet

DETAILS

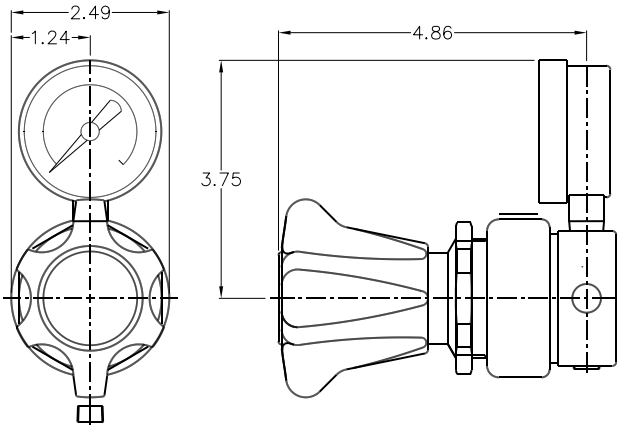
Regulator Weight: 4.3 lb /1.95 kg.
C_v: 0.37

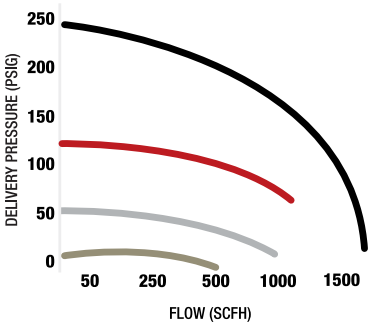
Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

MODEL 647 & HP 750

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 647



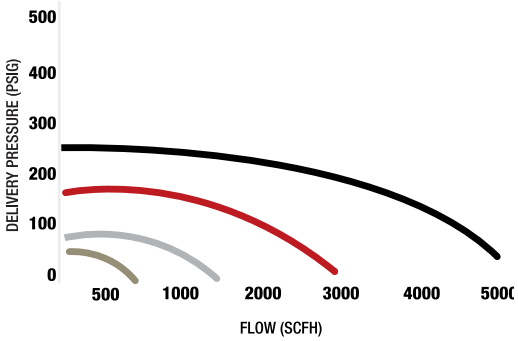


MODEL 647 SINGLE-STAGE REGULATOR - 200 PSIG INLET

- 647-250 @ 200 PSIG inlet
- 647-125 @ 200 PSIG inlet
- 647-50 @ 200 PSIG inlet
- 647-15@ 200 PSIG inlet

DETAILS

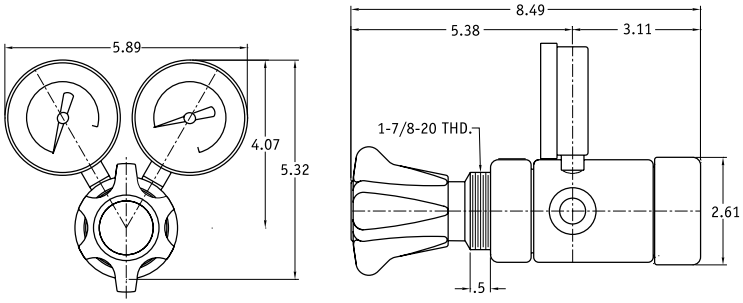
Regulator Weight: 3.8 lb /1.72 kg
C_v: 0.17



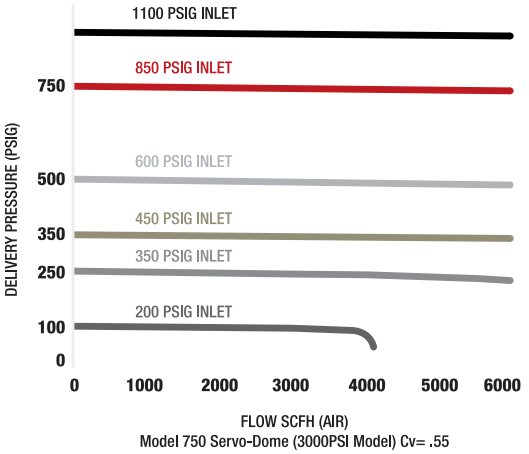
MODEL 647 SINGLE-STAGE REGULATOR - 2000 PSIG INLET

- 647-250 @ 2000 PSIG inlet
- 647-125 @ 2000 PSIG inlet
- 647-50 @ 2000 PSIG inlet
- 647-15@ 2000 PSIG inlet

MODEL 750



MODEL 750 SINGLE-STAGE REGULATOR - 3000 PSIG INLET



Model 750 Servo-Dome (3000PSI Model) Cv= .55

DETAILS

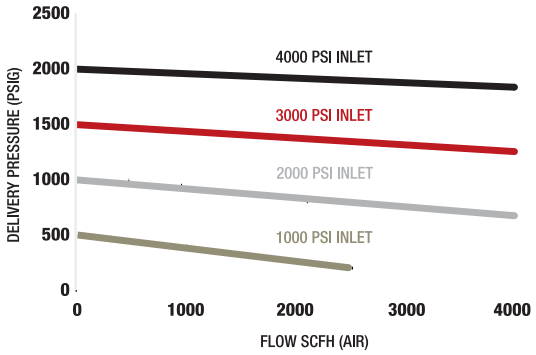
Regulator Weight: 8.5 lbs. /3.85 kg.
Pressure Rise: 0.4 on 5500 psi inlet models
C_v: 0.55 on 3000 psi inlet models

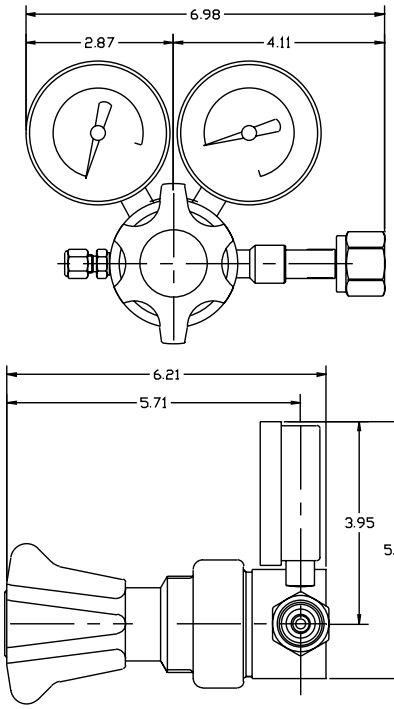
PRESSURE REGULATION

0.3 PSIG/100 PSIG on 5500 psi inlet Models
0.5 PSIG/100 PSIG on 3000 psi inlet Models

MODEL 8700

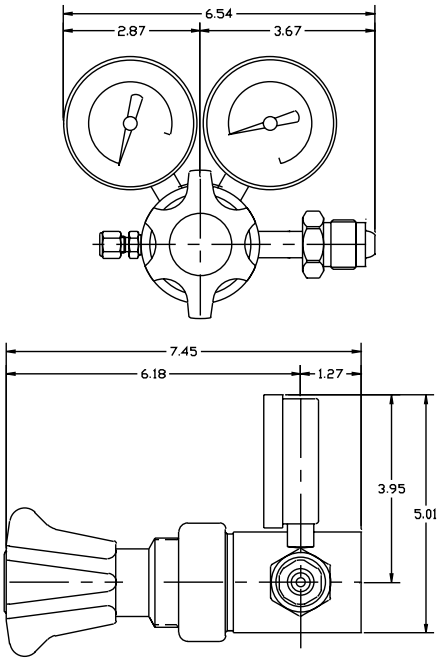
PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F





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

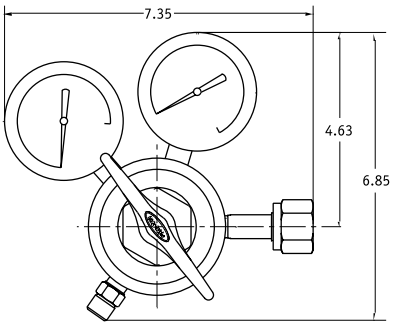
SELF-RELIEVING VALVES
Regulator Weight: 7.0 lb /3.17 kg.
Pressure Rise: 3.3 PSIG per 100 PSIG
C_v: 0.08

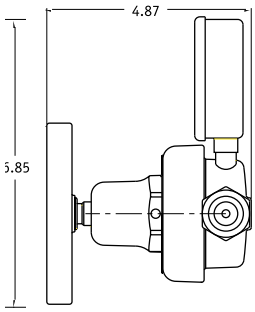
Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

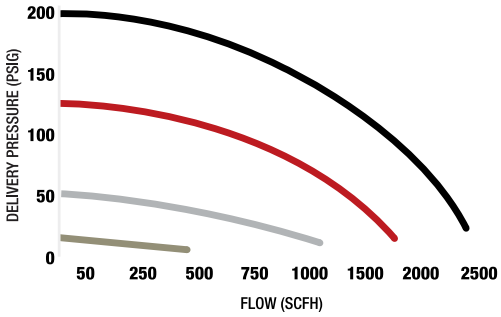
MODELS 3500 & 3510

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 3500







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

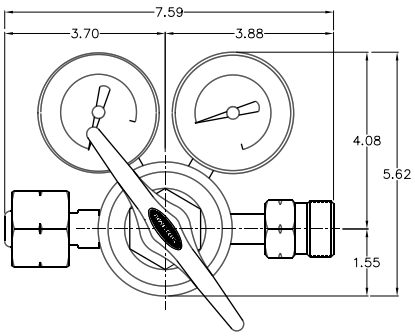
DETAILS

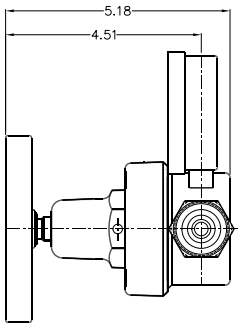
Regulator Weight: 4.6 lbs. /2.09 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.55
For Models 3003504, 3003505, 3003514, 3003540, 3003541, 3003538, 3003539 and all 3510 Manifold Regulator

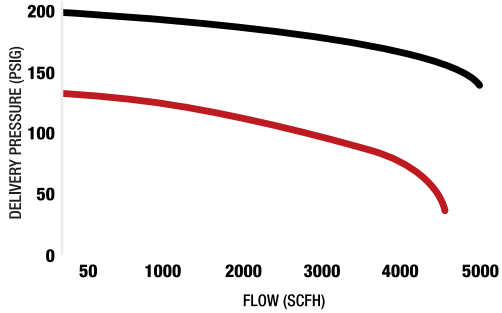
FOR OTHER MODELS

Pressure Rise: 0.9 PSIG per 100 PSIG
C_v: 0.4

MODEL 3510







MODEL 3500 & 3510 REGULATOR - 2000 PSIG INLET

- 3500-200 @ 2000 PSIG inlet
- 3500-125 @ 2000 PSIG inlet

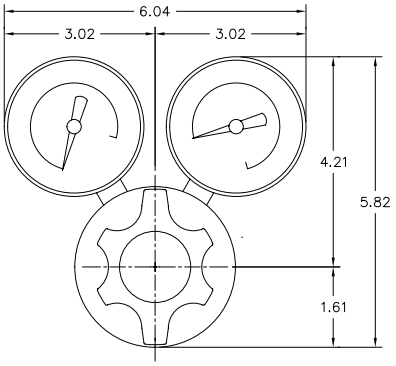
DETAILS

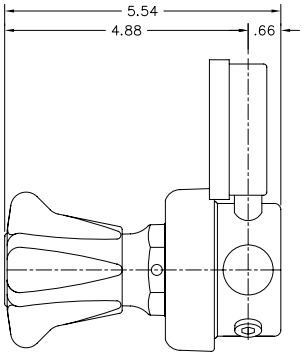
Regulator Weight: 5.5 lbs. /2.49 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.4 for 15 PSIG models and 0.55 for all other models

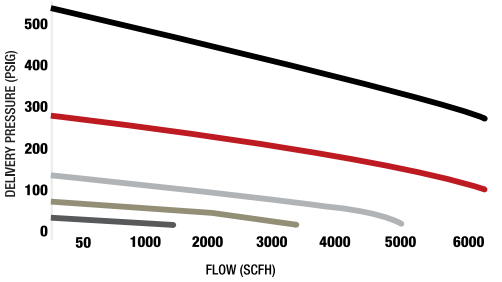
MODELS 3520 & 3530

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 3520







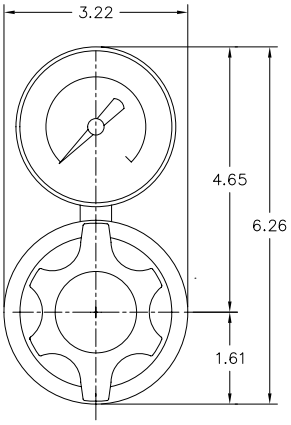
MODEL 3520 & 3530 PIPELINE REGULATOR

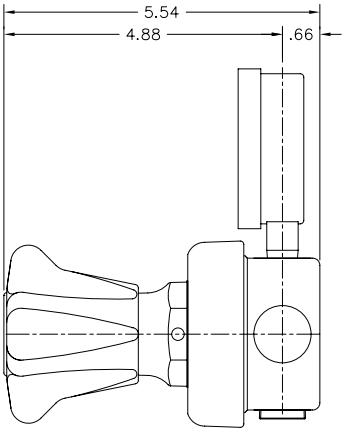
- 3520-500 @ 750 PSIG inlet
- 3520-250 @ 500 PSIG inlet
- 3520-125 @ 250 PSIG inlet
- 3520-50 @ 200 PSIG inlet
- 3520-15 @ 100 PSIG inlet

DETAILS

Regulator Weight: 4.5 lbs.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.55

MODEL 3530





DETAILS

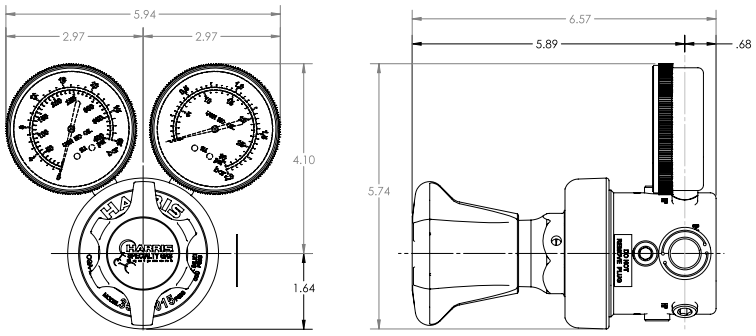
Regulator Weight: 4.3 lbs.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.55

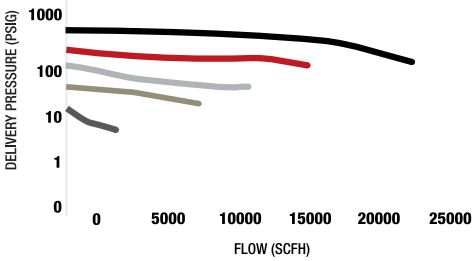
Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

MODELS 3540 & 3560

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 3540





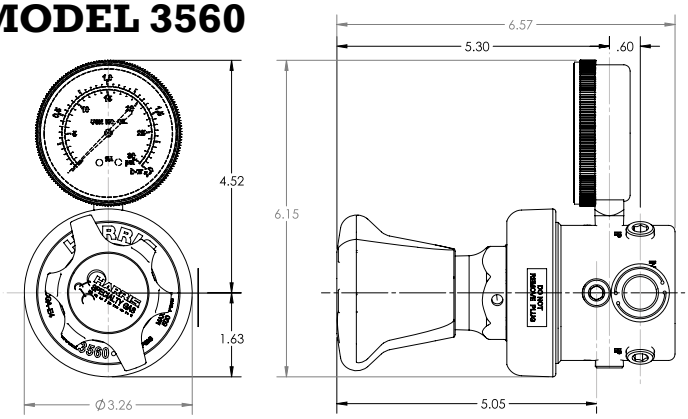
MODEL 3540 & 3560 PIPELINE REGULATOR

- 15 @ 100 PSIG inlet
- 50 @ 200 PSIG inlet
- 125 @ 300 PSIG inlet
- 250 @ 400 PSIG inlet
- 500 @ 750 PSIG inlet

DETAILS

Regulator Weight: 6.9 lbs. /3.13 kg.
Pressure Rise: 5.5 PSIG per 100 PSIG
C_v: 1.0

MODEL 3560



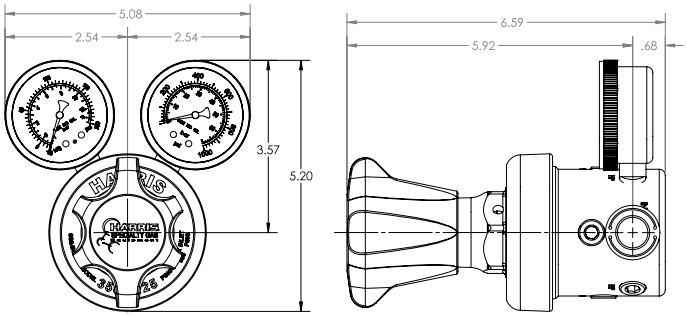
DETAILS

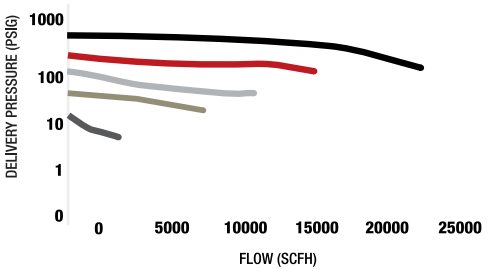
Regulator Weight: 6.7 lbs. /3.04 lbs.
Pressure Rise: 5.5 PSIG per 100 PSIG
C_v: 1.0

MODELS 3580 & 3590

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 3580





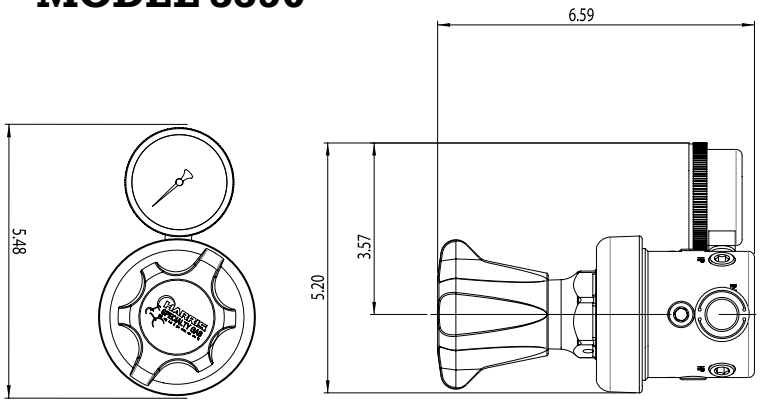
MODEL 3580 & 3590 PIPELINE REGULATOR

- 15 @ 100 PSIG inlet
- 50 @ 200 PSIG inlet
- 125 @ 300 PSIG inlet
- 250 @ 400 PSIG inlet
- 500 @ 750 PSIG inlet

DETAILS

Regulator Weight: 6.9 lbs. /3.13 kg.
Pressure Rise: 5.5 PSIG per 100 PSIG
C_v: 1.0

MODEL 3590



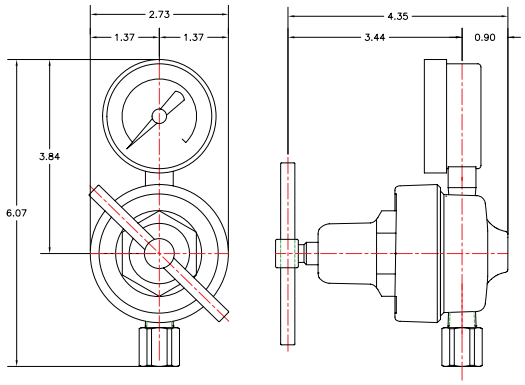
DETAILS

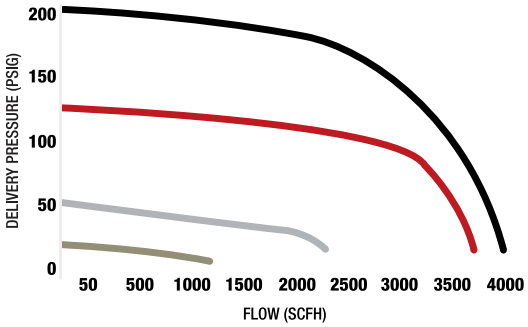
Regulator Weight: 6.9 lbs. /3.13 kg.
Pressure Rise: 5.5 PSIG per 100 PSIG
C_v: 1.0

MODELS 247,447 & 547

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

MODEL 247





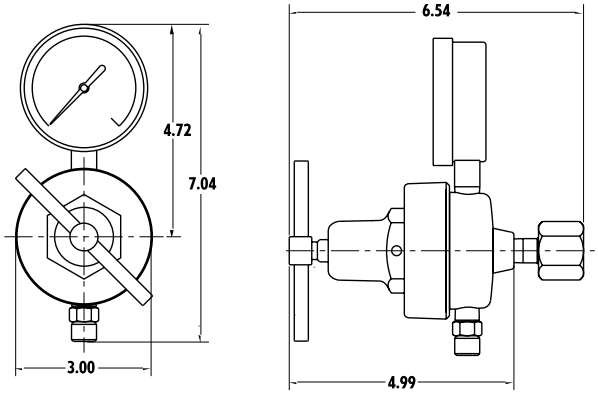
MODEL 247, 447 & 547 STATION/PIPELINE REGULATOR

- 447/547-200 @ 200 PSIG inlet
- 447/547-125 @ 200 PSIG inlet
- 447/547-50 @ 200 PSIG inlet
- 447/547-15 @ 200 PSIG inlet

DETAILS

Regulator Weight: 3.6 lbs. /1.63 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.53

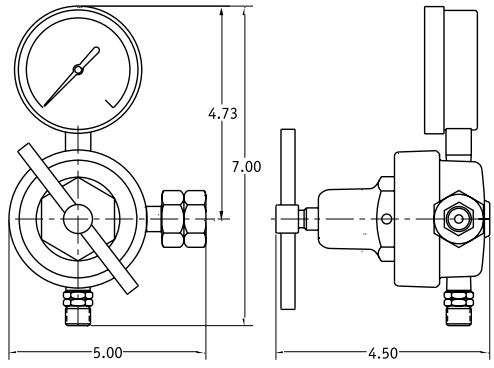
MODEL 447



DETAILS

Regulator Weight: 3.6 lbs. /1.63 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.53

MODEL 547

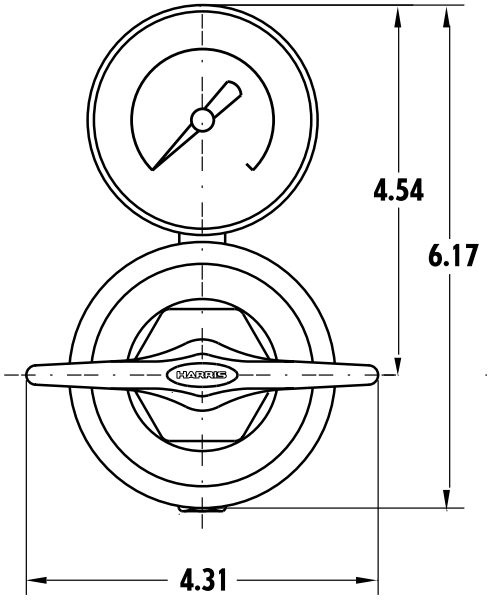


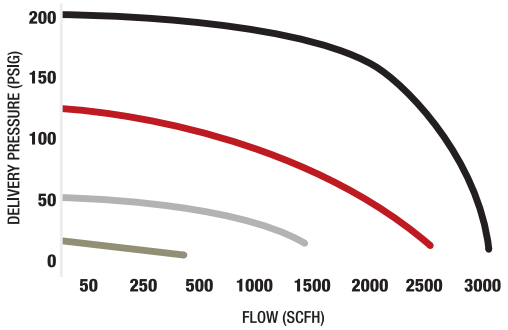
DETAILS

Regulator Weight: 3.6 lbs. /1.63 kg.
Pressure Rise: 1.6 PSIG per 100 PSIG
C_v: 0.53

MODEL 2548

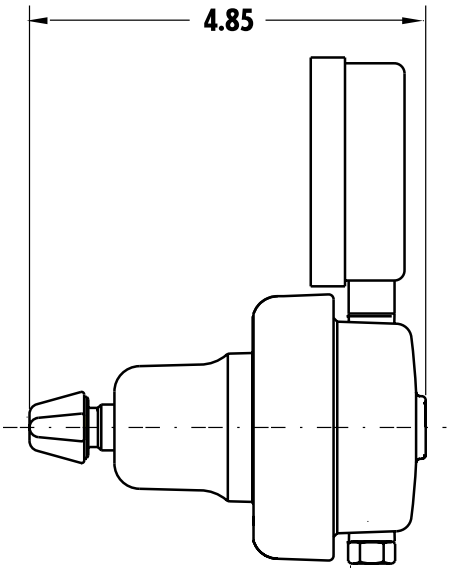
PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

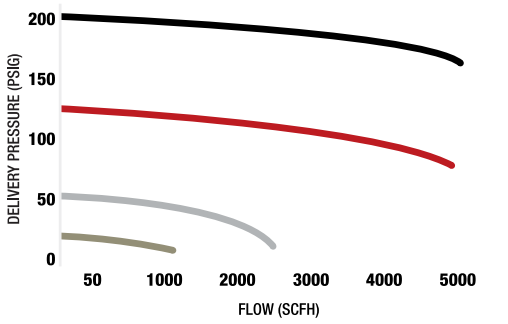




MODEL 2548 PIPELINE REGULATOR - 200 PSIG INLET

- 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

DETAILS

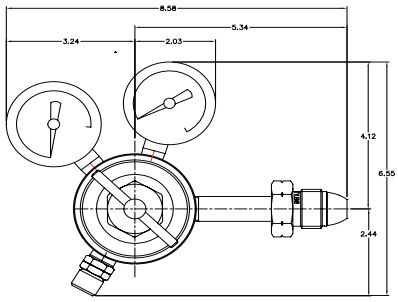
Regulator Weight: 3.8 lbs./1.72 kg.
Pressure Rise: 0.9 PSIG per 100 PSIG
C_v: 0.4

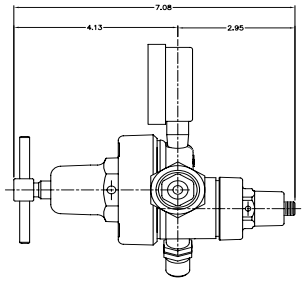
Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

MODEL 2561 & 9296

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

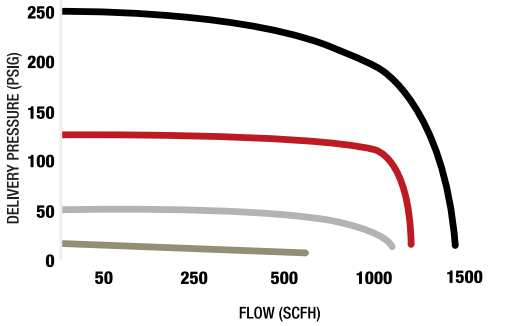
MODEL 2561





DETAILS

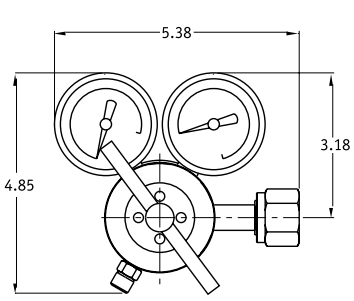
Regulator Weight: 4.8 lbs. /2.18 kg.
Pressure: 0.04 PSIG per 100 PSIG
C_v: 0.15

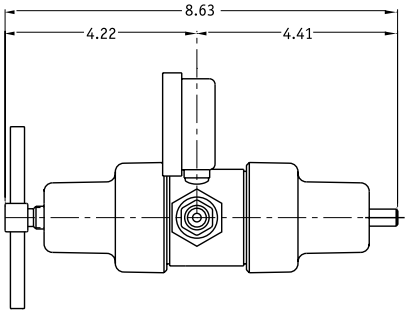


MODEL 9296 & 2561 TWO STAGE REGULATOR

- 9296-250 @ 250 PSIG inlet
- 9296-125 @ 200 PSIG inlet
- 9296-50 @ 200 PSIG inlet
- 9296-15 @ 200 PSIG inlet

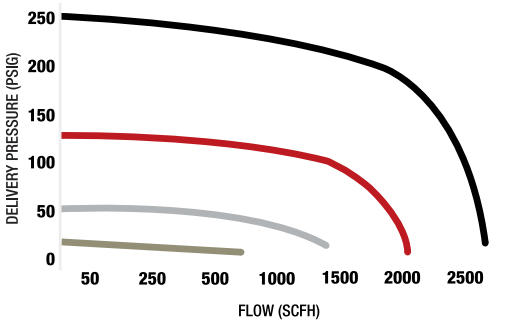
MODEL 9296





DETAILS

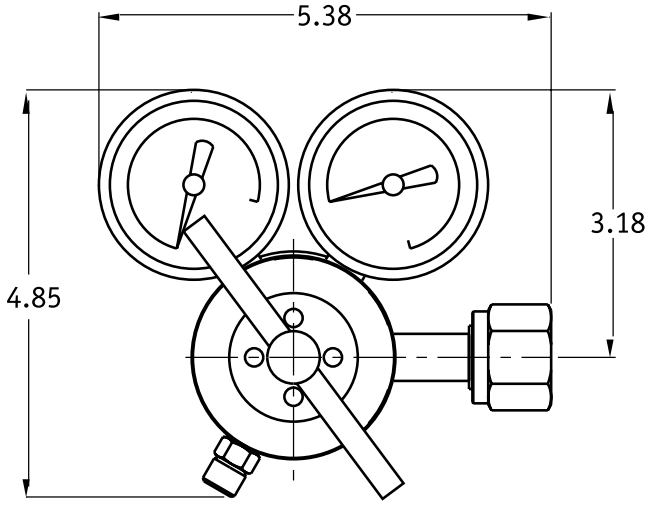
Regulator Weight: 4.8 lbs. /2.18 kg.
Pressure Rise: 0.04 PSIG per 100 PSIG
C_v: 0.15

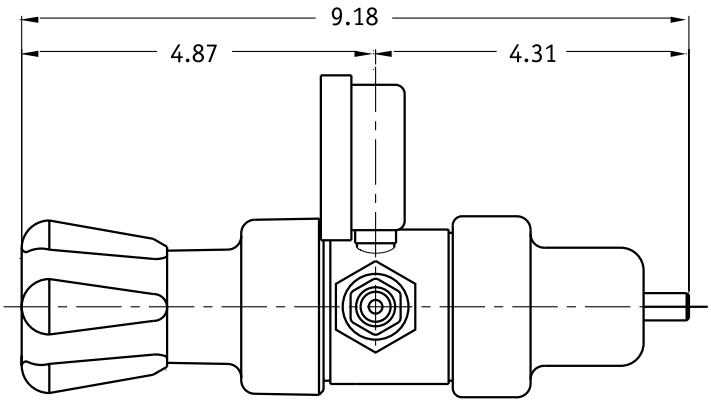


MODEL 9296 & 2561 TWO STAGE REGULATOR

- 9296-250 @ 2000 PSIG inlet
- 9296-125 @ 2000 PSIG inlet
- 9296-50 @ 2000 PSIG inlet
- 9296-15 @ 2000 PSIG inlet

MODEL 9296SS

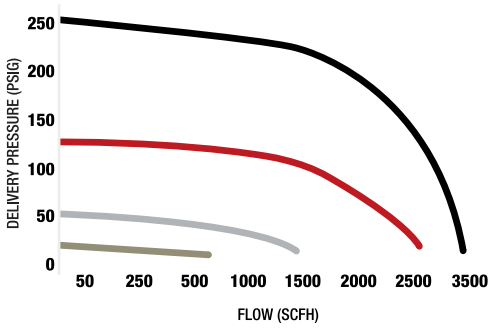




DETAILS

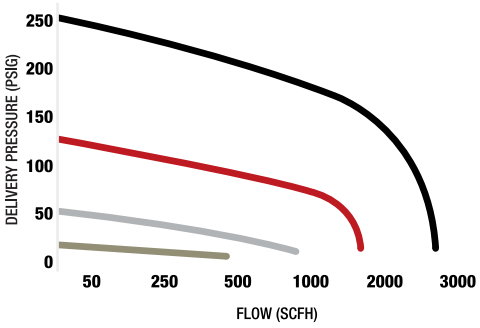
Regulator Weight: 5.4 lbs. /2.45 kg.
Pressure Rise: 0.04 PSIG per 100 PSIG
C_v: 0.15

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

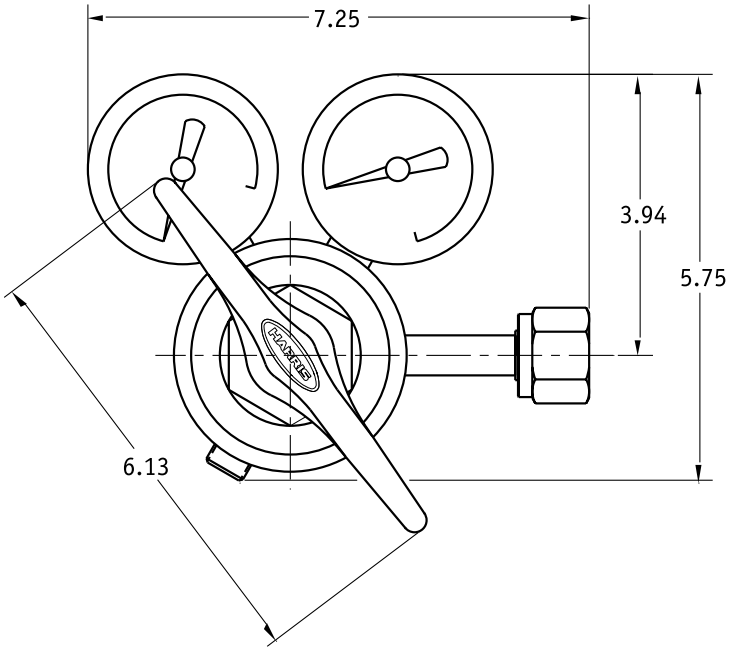


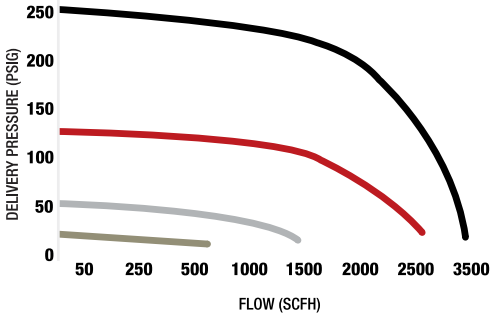
MODEL 9296 SS TWO STAGE REGULATOR

- 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

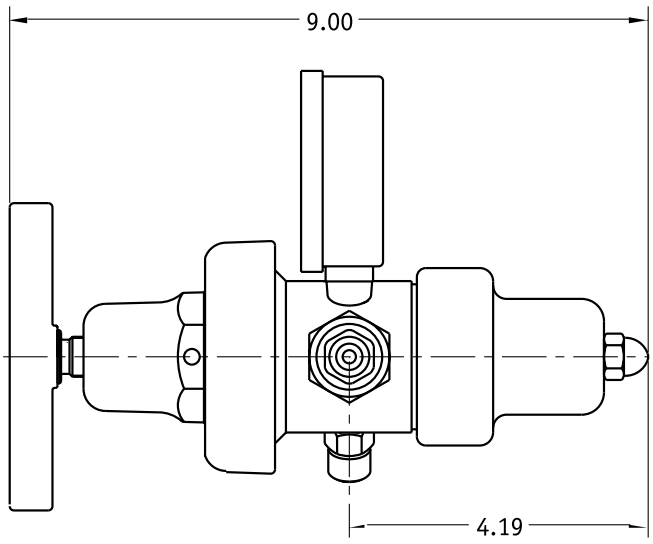
PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F

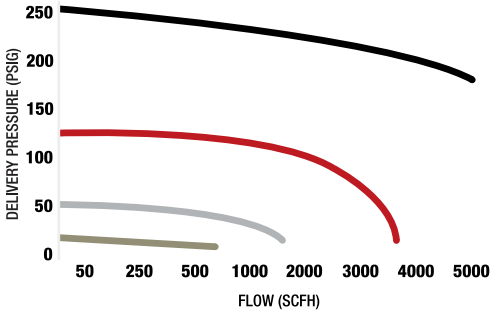




MODEL 9200 TWO STAGE REGULATOR - 200 PSIG INLET

- 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

DETAILS

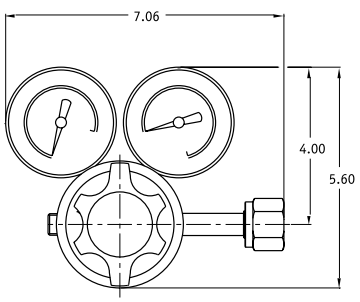
Regulator Weight: 6.8 lbs. /13.08 kg
Pressure Rise: 0.05 PSIG per 100 PSIG
C_v: 0.53
For fuel gas Models P/N:3302212)

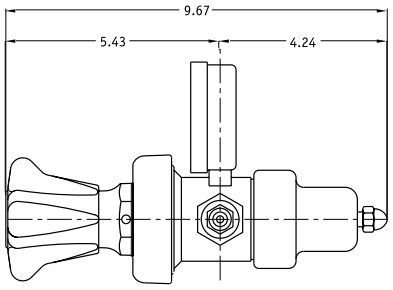
FOR OTHER MODELS

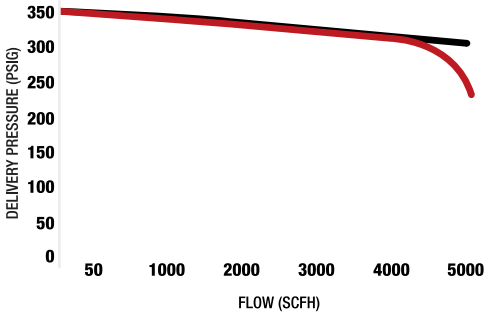
Regulator Weight:6.8 lbs. / 13.08 kg.
Pressure Rise: 0.03 PSIG per 100 PSIG
C_v: 0.37

MODEL 9235 & HP 705

PERFORMANCE CHART
ALL FLOWS BASED ON AIR @ 70°F







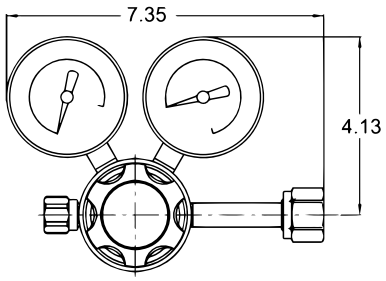
DETAILS

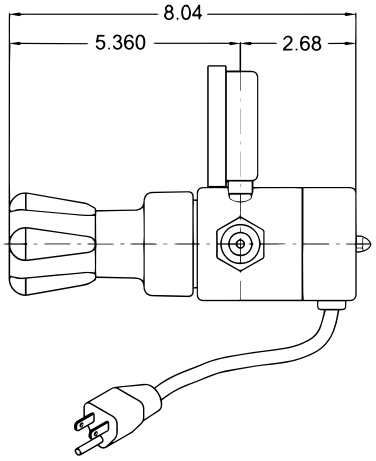
Regulator Weight: 6.9 lbs. /3.13 kg.
Pressure Rise: 0.05 PSIG per 100 PSIG
C_v: 0.4

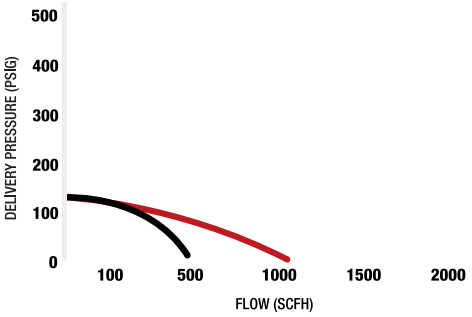
MODEL 9235 TWO STAGE REGULATOR

- 9235-350 @ 2000 PSIG inlet
- 9235-350 @ 500 PSIG inlet

MODEL HP705







DETAILS

Regulator Weight: 6.8 lbs. / 13.08 kg.
Pressure Rise: 0.09 PSIG per 100 PSIG
C_v: 0.15

MODEL HP705 TWO STAGE REGULATOR

- HP 705-125 @ 200 PSIG inlet
- HP 705-125 @ 2000 PSIG inlet

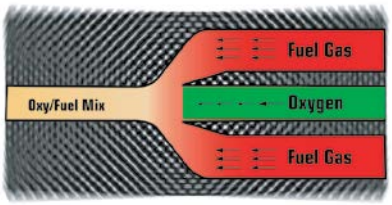
TORCH TECHNICAL DATA

"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.

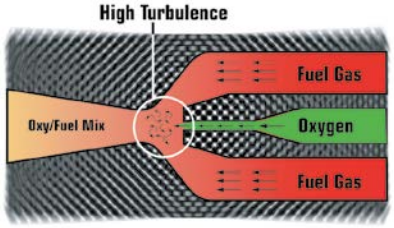
TYPICAL "E" MIXER DESIGN

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 us 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.



FUEL GAS TECHNICAL DATA

TECHNICAL DATA FOR THE MOST COMMON INDUSTRY FUEL GASES

	ACETYLENE	BUTANE	PROPYLENE	PROPANE	NATURAL GAS
MAX. FLAME TEMPERATURE °F	5720	4980	5240	5130	5040
OXY/FUEL COMBINATION RATIO (MAXIMUM TEMP.)	1.5:1	4.5:1	3.6:1	4.5:1	1.9:1
NEUTRAL FLAME TEMPERATURE °F	5620	4925	5190	5090	5010
OXY/FUEL COMBINATION RATIO (NEUTRAL)	1.1:1	3.8:1	2.6:1	3.7:1	1.5:1
BTU'S PER CUBIC FOOT	1470	3394	2370	2563	1000
% BTU IN OUTER CONE	65	92	84	89	97
BURNING VELOCITY IN O_2	22.7/sec.	11.2/sec.	15.0/sec.	12.2/sec.	15.2/sec.
FLAMMABILITY LIMITS IN O_2	3-93 %	1.9:8.5%	2.5-60%	2.4-57%	5-59%
FLAMMABILITY LIMITS IN AIR	2.5-80 %	N/A	2.0-11.1 %	2.3-9.5 %	5.3-14 %
SPECIFIC GRAVITY (AIR=1@60°F)	0.91	2.08	1.45	1.56	0.55
VAPOR PRESSURE (PSIG @ 70°F)	250	16.3	135	120	(LINE PRESSURE)
LBS/GAL LIQUID	-	4.7	4.8	4.35	4.28
CUBIC FT/LB GAS	14.6	6.4	9.0	8.66	23.6
CUBIC FT/GAL LIQUID	-	30	43.5	43	37

*Data above is from reliable industry sources and is used in Harris Fuel Gas Cost Analysis Programs

Victor® is registered trademark owned by Victor Technologies, Inc.
Kel-F®- is registered trademark owned by 3m Company
Telfon® - is registered trademark owned by E.I. du Pont de Ne mours and Company
Nascar® - is registered trademark owned by National Associataion for Stock Car Auto Racing, Inc.
IRL® & CART® - is registered trademark owned by Bridayard Trademarks, Inc.
CGA®- is registered trademark owned by Compressed Gas Association
UL®- is registered trademark owned by UL, LLC.

Orders: 1.800.733.4043
THE HARRIS PRODUCTS GROUP
www.harrisproductsgroup.com
HARRIS
A LINCOLN ELECTRIC COMPANY

GAS FLOW TECHNICAL DATA

HOW TO ACCURATELY USE OTHER GASES THROUGH FLOW DEVICES CALIBRATED FOR SPECIFIC GASES.

Flow control devices like the Harris Model 32 can be used for gases other than those for which it is calibrated. Accurate flow rates for virtually any other gas can be determined by using the proper scale on the flowmeter and the proper gas correction factor (C.F). Harris recommends using only gases that are not flammable and are compatible with the materials use in the constructions of the flow device being used.

INDICATED GAS FLOW X CORRECTION FACTOR (C.F.) = ACTUAL GAS FLOW
EXAMPLE: DETERMINE ACTUAL ARGON FLOW THROUGH A FLOW DEVICE CALIBRATED FOR NITROGEN

NITROGEN TUBE READING X C.F. (FROM CHART) = ACTUAL ARGON FLOW

20 SCFH x 0.84 = 16.8 SCFH Actual Argon Flow

CORRECTION FACTORS FOR SOME COMMON GASES AND GAS MIXTURES USED TO DETERMINE ACTUAL FLOW WHEN USING A FLOW DEVICE CALIBRATED FOR NITROGEN CALIBRATED DEVICES.

GAS SPECIFIC GRAVITY	CORRECTION FACTOR	GAS MIXES	MIX SPECIFIC GRAVITY	CORRECTION FACTOR
OXYGEN - 0.94	0.94	Ar 75% / CO_2 25%	1.41	.89 - 0.85
ARGON - 0.84	0.84	Ar 90% / CO_2 10%	1.39	.70 - 0.86
HE - 2.69	2.64	Ar 98% / O_2 2%	1.37	.85 - 0.86
CO_2 - 0.81	3.74	Ar 90% / He 8% / CO_2 2%	1.28	.88 - 0.89
AIR - 1.00	0.98	-	-	-
N_2 - 1.02	1.00	-	-	-

TO CALCULATE CORRECTION FACTORS:

$$CF = \frac{\text{S.G. OF GAS FOR WHICH INSTRUMENTS CALIBRATED}}{\text{S.G OF GAS OR MIX BEING USED}}$$

TO CALCULATE SPECIFIC GRAVITY OF MIXES:
1/100 X (% Vol.GasAxS.G.)+(% Vol.GasBxS.G.)+(% Vol.GasCxS.G.)

NOTES:



The Harris Products Group
A Lincoln Electric Company
2345 Murphy Blvd.
Gainesville, GA 30504 USA
1.800.733.4043
www,harrisprodutsgroup.com