HARRIS

A LINCOLN ELECTRIC COMPANY

Industrial Equipment Catalogue

INTERNATIONAL

CONTENTS

HARRIS
A LINCOLN ELECTRIC COMPANY

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THE HARRIS PRODUCTS GROUP

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

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

The Harris Products Group is a wholly-owned subsidiary of The Lincoln Electric Company. Lincoln Electric has 56 manufacturing locations in 19 countries and a worldwide network of distributors and sales offices serving customers in over 160 countries.

THE MERGER RESULTED FROM A SERIES OF

1990 Harris Calorific

2005 J.W. Harris Company

2005 Gulf Wire Corperation

2005 Filler Metals, Inc.

2008 Brastak

MANUFACTURING FACILITIES

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

ACQUISITIONS BY THE LINCOLN ELECTRIC COMPANY

2019
Worthington Industries
(Solder Products)

2021
Portugal Brazing Facility

2021
Overstreet-Hughes Company, Inc.
(Fabricated Tube Products)

2021
Shoals Tubular, Inc.

WHY
FOR OVER 100 YEARS PROFESSIONAL TRADESMEN TURN TO HARRIS

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, labour 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 an 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, labour and overhead, as well as new product development.

QUALITY

Each of Harris manufacturing plant is ISO 9001 certified. Quality is an integral part in all processes of the company from development, planning, design and manufacturing to sales and service activities.
Harris' quality system is regularly audited on both an internal and external basis to ensure that consistent business processes are applied.
All Harris equipment is 100% tested, 100% of the time for both workmanship and performance.

EXPERTISE

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

CERTIFICATIONS

The Harris Products Group is committed to environmental stewardship and resource conservation throughout the world.
All Harris facilities are ISO 14001 certified.
Each of our manufacturing plants is ISO 9001 certified.
Harris products are designed and manufactured according to the most recent international standards:
- Regulators: ISO 2503 (cylinder pressure and flow control regulators), ISO 5171 (pressure gauges);
- Torches: ISO 5172.

PRESSURE 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 MANUFACTURING PLANTS. WE OFFER A COMPLETE RANGE OF INDUSTRIAL REGULATORS TO MEET YOUR APPLICATIONS AND BUDGET.

GET CONNECTED
Go to www.facebook.com/HarrisProductsGroup

QUICK SELECTION GUIDE

SINGLE STAGE 230 BAR







601 MODEL	801 MODEL	821 MODEL	841 MODEL	842 MODEL	818 MODEL	829 MODEL
COMPACT	MEDIUM DUTY	REAR ENTRY	DOWNWARD KNOB	DOWNWARD KNOB	GAUGELESS MEDIUM DUTY	GAUGELESS HEAVY DUTY
p.11	p.11	p.12	p.12	p.13	p.14	p.14

SINGLE STAGE 230 BAR



25GX MODEL	S45 MODEL	94 MODEL
HIGH PERFORMANCE	HIGH PERFORMANCE	HEAVY DUTY
p.15	p.16	p.16

TWO STAGE 230 BAR



891 MODEL	896 MODEL	899 MODEL
MEDIUM DUTY	HEAVY DUTY	GAUGELESS
p.17	p.17	p.18

MODEL 25 GX

MODEL SHOWN:
25GX-10-OX

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

SINGLE STAGE 300 BAR

901 MODEL	941 MODEL	942 MODEL	918 MODEL	925 MODEL
MEDIUM DUTY	DOWNWARD KNOB	DOWNWARD KNOB	GAUGELESS	HEAVY DUTY
p.18	p.19	p.19	p.20	p.20

TWO STAGE 300 BAR

996 MODEL
HEAVY DUTY
p.21

PRO INFO

HARRIS TWO-STAGE PRESSURE REGULATORS

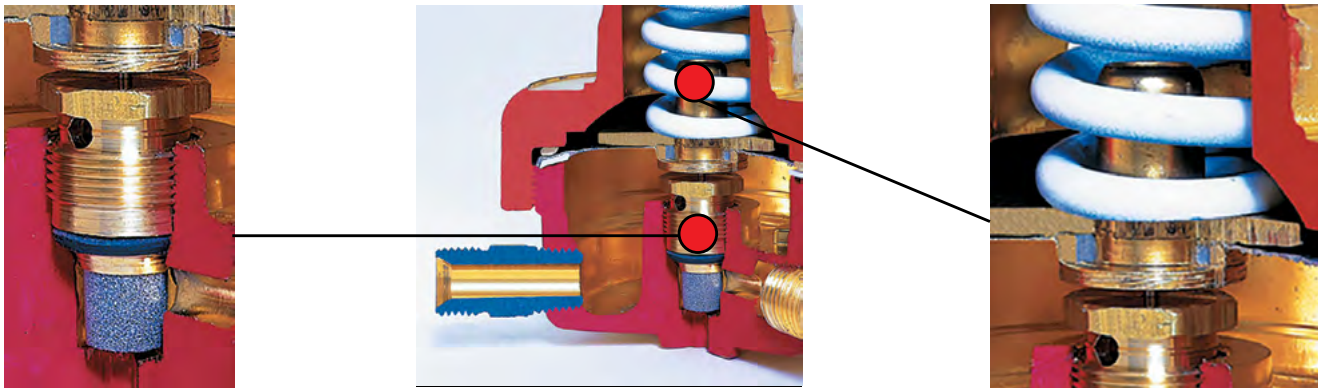
The basic function of a gas pressure regulator is to reduce unusable high pressure from the source to a lower usable delivery pressure. Two-stage regulators are designed to lower the high pressure in two stages. They require less readjustment and provide a more constant delivery pressure despite changes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

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

GENERAL FEATURES:

Harris regulators are designed and manufactured according to the most recent international standards: ISO 2503 (cylinder pressure and flow control regulators) and ISO 5171 (pressure and flow gauges).

- Made from the highest quality industrial grade components
- Designed to withstand the harshest environments
- 100% tested prior to shipment
- High pressure capsule seat with PCTFE (KEL-F)/PTFE (Teflon®*) sealing surface
- “D” version with tamperproof self-reseating internal safety relief valve (IRV)
- 7 year warranty for all Harris industrial regulators
- All regulators are supplied with inlet and outlet connection parts to attend country standards



One piece encapsulated seat with internal filter

Tamper proof, self reseating internal safety relief valve (IRV)

Harris offers a wide range of single-stage and two-stage regulators to meet your application and budget.

All regulators are designed to reduce the inlet pressure to a desired working pressure. The regulator can reduce the pressure in either one step or two steps. A single-stage regulator reduces the pressure in one step and a two-stage regulator reduces the pressure in two steps.

When is a two-stage regulator required?

- Applications where the delivery pressure rise from cylinder pressure decay cannot be tolerated.
- Situations where proper pressure is critical and the cylinders in use are in a remote or difficult to monitor location.
- Processes which require stable gas flow.

* Teflon® is a registered trademark of The Chemours Company

601 MODEL

COMPACT SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
601-1,5-AC

APPLICATIONS:

- Light duty cutting, welding and brazing

FEATURES:

- Compact and economical
- Maximum inlet pressure of 230 bar
- Forged brass body and bonnet
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Rear inlet connection (side entry optional)
- 50 mm safety gauges
- 7 year warranty

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
601-1.5-AC	-	Acetylene	25	0 - 1,5	7	0 - 2,5	0 - 40
601-4-LP	-	Propane	25	0 - 4	20	0 - 6	0 - 40
601P-4-LP	one gauge	Propane	25	0 - 4	20	0 - 6	-
601D-10-OX	-	Oxygen	230	0 - 10	42	0 - 16	0 - 315
601D-10**	-	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	42	0 - 16	0 - 315

801 MODEL

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
801-1,5-AC

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 300 mm steel
- Smooth adjustment, with high precision
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Side inlet connection
- Standard version with chrome-plated bonnet and gold painted gauge case
- "B" version fitted with black bonnet and black gauge case
- 7 year warranty

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
801-1.5-AC **801B-1.5-AC**	-	Acetylene	25	0 - 1,5	30	0 - 2,5	0 - 40
801-4-LP **801B-4-LP**	-	Propane	25	0 - 4	16,5	0 - 6	0 - 40
801P-4-LP **801BP-4-LP**	one gauge	Propane	25	0 - 4	16,5	0 - 6	-
801D-4-OX **801DB-4-OX**	-	Oxygen	230	0 - 4	100	0 - 6	0 - 315
801D-4** **801DB-4****	-	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 4	100	0 - 6	0 - 315
801D-10-OX **801DB-10-OX**	-	Oxygen	230	0 - 10	155	0 - 16	0 - 315
801D-10** **801DB-10****	-	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	155	0 - 16	0 - 315

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

821 MODEL

SINGLE-STAGE REGULATOR WITH REAR ENTRY

MODEL SHOWN:
821-1,5-AC

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 300 mm steel
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Rear inlet connection ideal for better visibility on small cylinder
- "B" version fitted with black bonnet and black gauge case
- 7 year warranty

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
821-1.5-AC **821B-1.5-AC**	-	Acetylene	25	0 - 1,5	30	0 - 2,5	0 - 40
821-4-LP **821B-4-LP**	-	Propane	25	0 - 4	16,5	0 - 6	0 - 40
821P-4-LP **821BP-4-LP**	one gauge	Propane	25	0 - 4	16,5	0 - 6	-
821D-10-OX **821DB-10-OX**	-	Oxygen	230	0 - 10	155	0 - 16	0 - 315
821D-10** **821DB-10****	-	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	155	0 - 16	0 - 315

841 MODEL

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
841-1,5-AC

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 300 mm steel
- Downward knob improves operator safety
- Outlet valve
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Chrome-plated bonnet and gold painted gauge case
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
841-1.5-AC	Acetylene	25	0 - 1,5	30	0 - 2,5	0 - 40
841-4-LP	Propane	25	0 - 4	16,5	0 - 6	0 - 40
841D-10-OX	Oxygen	230	0 - 10	155	0 - 16	0 - 315

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

842 MODEL

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
842-1,5-AC

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 300 mm steel
- Downward knob improves operator safety
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- Black bonnet and black gauge case
- Without regulation outlet valve
- "W" version fitted with outlet valve
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
842-1.5-AC	Acetylene	25	0 - 1,5	30	0 - 2,5	0 - 40
842-4-LP	Propane	25	0 - 4	16,5	0 - 6	0 - 40
842D-10-OX	Oxygen	230	0 - 10	155	0 - 16	0 - 315
842DW-10-OX	Oxygen	230	0 - 10	155	0 - 16	0 - 315
842D-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	155	0 - 16	0 - 315
842DW-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	155	0 - 16	0 - 315

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**The regulator is available for all the listed gases. When ordering always specify gas.

HARRIS®
A LINCOLN ELECTRIC COMPANY

7 YEAR WARRANTY LIMITED

"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."

818 MODEL

SINGLE-STAGE GAUGELESS REGULATOR

MODEL SHOWN:
818-4-LP

APPLICATIONS:

- Medium duty cutting, heating and welding
- Designed for all industrial applications in the toughest working conditions

FEATURES:

- Maximum inlet pressure of 230 bar
- Enough flow to cut up 300 mm steel
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Side inlet connection
- Cylinder pressure shown on indicator with polycarbonate cover
- Delivery pressure set by turning the knob on calibrated bonnet
- "B" version fitted with black bonnet
- 7 year warranty


Indicator


Bonnet calibration

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)
818-1.5-AC **818B-1.5-AC**	gaugeless	Acetylene	25	0 - 1,5	30
818-4-LP **818B-4-LP**	gaugeless	Propane	25	0 - 4	16,5
818D-10-OX **818DB-10-OX**	gaugeless	Oxygen	230	0 - 10	155
818D-10** **818DB-10****	gaugeless	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	155

829 MODEL

SINGLE-STAGE GAUGELESS REGULATOR

MODEL SHOWN:
829-1.5-AC

APPLICATIONS:

- Heavy duty cutting, designed for the really rough industrial applications in the toughest working conditions

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 400 mm steel
- Large Ø 70 mm diaphragm stabilizes working pressure
- Durable chrome-plated bonnet
- Cylinder pressure shown on indicator with polycarbonate cover
- Delivery pressure set by turning the knob on calibrated bonnet
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty


Indicator


Bonnet calibration

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)
829-1.5-AC	gaugeless	Acetylene	25	0 - 1,5	35
829-3,5-LP	gaugeless	Propane	25	0 - 3,5	25
829-8-OX	gaugeless	Oxygen	230	0 - 8	160

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

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

The Harris Model 25GX is a legendary American classic. It is a medium to heavy duty with a time-proven design that is built for those who want an economical, high-performance regulator. It features larger, easier to read gauges and an ergonomic adjusting knob that also shields the adjusting mechanism from contaminants.

The 25GX is designed to be the next generation workhorse of the Harris industrial regulator line.

MODEL 25GX

ORIGIN:
Made in the European Union in an ISO 9001 and 14001 certified facility

QUALITY:
100% tested, 100% of the time

SAFETY:
Meets or exceeds all relevant industry standards - ISO 2503 (cylinder pressure and flow control regulators) and ISO 5171 (pressure gauges)

CAPACITY:
Medium to heavy duty

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

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

DELIVERY PRESSURES:
0 – 1,5; 0 – 4; 0 – 10; 0 – 15 bar

PRESSURE REGULATION:
Excellent pressure regulation from full to empty cylinder

WARRANTY:
7 year

25GX MODEL

7 YEAR WARRANTY LIMITED

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
25GX-1.5-AC

APPLICATIONS:

- Heavy duty, large, strong regulator for the professionals

FEATURES:

- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 400 mm steel
- Large Ø 70 mm diaphragm stabilizes working pressure
- Forged brass body for maximum strength
- Durable chrome-plated bonnet
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Side entry
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
25GX-1.5-AC	Acetylene	25	0 - 1,5	52	0 - 2,5	0 - 40
25GX-4-LP	Propane	25	0 - 4	25	0 - 6	0 - 40
25GX-D4-OX	Oxygen	230	0 - 4	112	0 - 6	0 - 315
25GX-D4**	Argon, CO_2, Nitrogen, Air, Methane	230	0 - 4	112	0 - 6	0 - 315
25GX-AD-4**	Helium, Hydrogen	230	0 - 4	112	0 - 6	0 - 315
25GX-D10-OX	Oxygen	230	0 - 10	170	0 - 16	0 - 315
25GX-D10**	Argon, CO_2, Nitrogen, Air, Methane	230	0 - 10	170	0 - 16	0 - 315
25GX-AD-10**	Helium, Hydrogen	230	0 - 10	170	0 - 16	0 - 315
25GX-D15-OX	Oxygen	230	0 - 15	275	0 - 25	0 - 315
25GX-D15**	Argon, CO_2, Nitrogen, Air, Methane	230	0 - 15	275	0 - 25	0 - 315
25GX-AD-15**	Helium, Hydrogen	230	0 - 15	275	0 - 25	0 - 315

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

S45 MODEL

SINGLE-STAGE WITH STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
S45S-1.5-AC

APPLICATIONS:

- Heavy duty, large, strong regulator for the professionals

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure of 230 bar
- Enough flow to cut up to 400 mm steel
- Large Ø 70 mm diaphragm stabilizes working pressure
- Side entry (vertical optional)
- Stainless steel diaphragm
- Brass T-screw handle
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
S45S-1.5-AC	Acetylene	25	0 - 1,5	52	0 - 2,5	0 - 40
S45S-4-LP	Propane	25	0 - 4	25	0 - 6	0 - 40
S45DS-4-0X	Oxygen	230	0 - 4	112	0 - 6	0 - 315
S45DS-4**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 4	112	0 - 6	0 - 315
S45DS-10-0X	Oxygen	230	0 - 10	170	0 - 16	0 - 315
S45DS-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	170	0 - 16	0 - 315

94 MODEL

SINGLE-STAGE REGULATOR WITH LARGE DIAPHRAGM

MODEL SHOWN:
94-1.5-AC

APPLICATIONS:

- Ideal for heavy duty applications in industrial and laboratory environment

FEATURES:

- Solid forged brass body and bonnet
- Maximum inlet pressure of 230 bar
- Large Ø 90 mm diaphragm accurately controls delivery pressure
- Sintered metal inlet filter
- Tough pressure gauge with easy-to-read calibration
- Brass T-screw handle
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
94-1.5-AC	Acetylene	25	0 - 1,4	35	0 - 2,5	0 - 40
94-10-0X	Oxygen	230	0 - 10	155	0 - 16	0 - 315

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

891 MODEL

TWO-STAGE REGULATOR

MODEL SHOWN:
891-D10-OX

APPLICATIONS:

- For demanding applications where constant outlet pressure over a wide range of inlet pressures is required. Ideal for quality cutting applications, laboratory systems or precision machine cutting.

FEATURES:

- Maximum inlet pressure of 230 bar
- Brass barstock body for minimalizing contamination or moisture absorption and easy purging
- First stage reduces full cylinder pressure by approximately 90%
- Smooth adjustment with high precision
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
891B-1.5-AC	Acetylene	25	0 - 1,5	12	0 - 2,5	0 - 40
891B-4-LP	Propane	25	0 - 4	9	0 - 6	0 - 40
891DB-4-OX	Oxygen	230	0 - 4	30	0 - 6	0 - 315
891DB-4**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 4	30	0 - 6	0 - 315
891DB-10-OX	Oxygen	230	0 - 10	42	0 - 16	0 - 315
891DB-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	42	0 - 16	0 - 315

896 MODEL

TWO-STAGE REGULATOR FOR INCREASED DELIVERY PRESSURE CONTROL

MODEL SHOWN:
896-1,5-AC

APPLICATIONS:

- For demanding applications where constant outlet pressure over a wide range of inlet pressures is required. Ideal for quality cutting applications, laboratory systems or precision machine cutting. Also ideal for heavy machine cutting, hand cutting and gouging.

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure of 230 bar
- First stage reduces full cylinder pressure by approximately 90%
- Large Ø 70 mm second stage diaphragm accurately controls delivery pressure
- Durable chrome-plated bonnet
- Side entry (vertical optional)
- "B" version fitted with black bonnet and black gauge case
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
896-1.5-AC	Acetylene	25	0 - 1,5	25	0 - 2,5	0 - 40
896-4-LP	Propane	25	0 - 4	19	0 - 6	0 - 40
896D-4-OX	Oxygen	230	0 - 4	95	0 - 6	0 - 315
896D-4**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 4	95	0 - 6	0 - 315
896D-10-OX	Oxygen	230	0 - 10	100	0 - 16	0 - 315
896D-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 10	100	0 - 16	0 - 315
896D-15-OX	Oxygen	230	0 - 15	120	0 - 25	0 - 315
896D-15**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	230	0 - 15	120	0 - 25	0 - 315

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

899 MODEL

TWO-STAGE GAUGELESS REGULATOR

MODEL SHOWN:
899D-10-0X

APPLICATIONS:

- For demanding applications where constant outlet pressure over a wide range of inlet pressures is required. Ideal for quality cutting applications, laboratory systems or precision machine cutting. Also ideal for heavy machine cutting, hand cutting and gouging.

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure of 230 bar
- First stage reduces full cylinder pressure by approximately 90%
- Large Ø 70 mm second stage diaphragm accurately controls delivery pressure
- Durable chrome-plated bonnet
- Cylinder pressure shown on indicator with polycarbonate cover
- Delivery pressure set by turning the knob on calibrated bonnet
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty


Indicator


Bonnet calibration

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)
899-1.5-AC	gaugeless	Acetylene	25	0 - 1,5	35
899D-10-0X	gaugeless	Oxygen	230	0 - 10	90

SERIES 900 - 300 BAR PRESSURE CONTROL REGULATORS

901 MODEL

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
901D-10N

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 300 bar
- Enough flow to cut up to 300 mm steel
- Forged brass body for maximum strength
- Smooth adjustment with high precision
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- “B” version fitted with black bonnet
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
901D-4-0X	Oxygen	300	0 - 4	105	0 - 6	0 - 400
901D-4**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 4	105	0 - 6	0 - 400
901D-10-0X	Oxygen	300	0 - 10	175	0 - 16	0 - 400
901D-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 10	175	0 - 16	0 - 400

* Teflon® is a registered trademark of The Chemours Company
**The regulator is available for all the listed gases. When ordering always specify gas.

941 MODEL

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
941D-4-OX

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 300 bar
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- Downward knob improves operator safety
- Outlet valve
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- Durable chrome-plated bonnet and gold painted gauge case
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
941D-10-OX	Oxygen	300	0 - 10	155	0 - 16	0 - 400

942 MODEL

SINGLE-STAGE CYLINDER REGULATOR

MODEL SHOWN:
942D-10-AIR

APPLICATIONS:

- Medium duty cutting, heating and welding

FEATURES:

- Maximum inlet pressure of 300 bar
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- Downward knob improves operator safety
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- Black bonnet and black gauge case
- Without regulation outlet valve
- "W" version fitted with outlet valve
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
942D-10-OX	Oxygen	300	0 - 10	155	0 - 16	0 - 400
942D-10*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 10	155	0 - 16	0 - 400
942DW-10-OX	Oxygen	300	0 - 10	155	0 - 16	0 - 400
942DW-10*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 10	155	0 - 16	0 - 400

*The regulator is available for all the listed gases. When ordering always specify gas.

918 MODEL

SINGLE-STAGE GAUGELESS REGULATOR

MODEL SHOWN:
918D-10-OX

APPLICATIONS:

- Medium duty cutting, heating and welding
- Designed for all industrial applications in the toughest working conditions

FEATURES:

- Maximum inlet pressure of 300 bar
- Enough flow to cut up to 300 mm steel
- Forged brass body for maximum strength
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- Smooth adjustment with high precision
- Side inlet connection
- Cylinder pressure shown on indicator with polycarbonate cover
- Delivery pressure set by turning the knob on calibrated bonnet
- "B" version fitted with black bonnet
- 7 year warranty


Indicator


Bonnet calibration

MODEL NO.	VERSON	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)
918D-4-OX	gaugeless	Oxygen	300	0 - 4	105
918D-4*	gaugeless	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 4	105
918D-10-OX	gaugeless	Oxygen	300	0 - 10	175
918D-10*	gaugeless	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 10	175

925 MODEL

SINGLE-STAGE REGULATOR WITH TWO GAUGES

MODEL SHOWN:
925D-10-OX

APPLICATIONS:

- Heavy duty cutting, heating and welding
- Large, strong regulator for the professionals

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure of 300 bar
- Enough flow to cut up to 400 mm steel
- Large Ø 70 mm diaphragm stabilizes working pressure
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- Side entry (optionally vertical entry)
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
925D-4-OX	Oxygen	300	0 - 4	115	0 - 6	0 - 400
925D-4**	Argon, CO_2, Nitrogen, Air, Methane	300	0 - 4	115	0 - 6	0 - 400
925AD-4**	Helium, Hydrogen	300	0 - 4	115	0 - 6	0 - 400
925D-10-OX	Oxygen	300	0 - 10	185	0 - 16	0 - 400
925D-10**	Argon, CO_2, Nitrogen, Air, Methane	300	0 - 10	185	0 - 16	0 - 400
925AD-10**	Helium, Hydrogen	300	0 - 10	185	0 - 16	0 - 400
925D-15-OX	Oxygen	300	0 - 15	325	0 - 25	0 - 400
925D-15**	Argon, CO_2, Nitrogen, Air, Methane	300	0 - 15	325	0 - 25	0 - 400
925AD-15**	Helium, Hydrogen	300	0 - 15	325	0 - 25	0 - 400

*The regulator is available for all the listed gases. When ordering always specify gas.

996 MODEL

TWO-STAGE REGULATOR WITH TWO GAUGES

MODEL SHOWN:
996D-10-0X

APPLICATIONS:

- For demanding applications where constant outlet pressure over a wide range of inlet pressures is required. Ideal for quality cutting applications, laboratory systems or precision machine cutting. Also ideal for heavy machine cutting, hand cutting and gouging.

FEATURES:

- Forged brass body for maximum strength
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- First stage reduces full cylinder pressure by approximately 90%
- Large Ø 70 mm second stage diaphragm accurately controls delivery pressure
- Durable chrome-plated bonnet
- Side entry (vertical optional)
- "B" version fitted with black bonnet and black gauge case
- Brass T-screw handle
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX AIR FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
996D-4-0X	Oxygen	300	0 - 4	85	0 - 6	0 - 400
996D-4**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 4	85	0 - 6	0 - 400
996D-10-0X	Oxygen	300	0 - 10	100	0 - 16	0 - 400
996D-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 10	100	0 - 16	0 - 400
996D-15-0X	Oxygen	300	0 - 15	120	0 - 25	0 - 400
996D-15**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	300	0 - 15	120	0 - 25	0 - 400

**The regulator is available for all the listed gases. When ordering always specify gas.

FLOWMETER REGULATORS

HARRIS INDUSTRIAL LINE OF FLOWMETERS IS DESIGNED TO IMPROVE WELD QUALITY AND CAN BE USED TO ACCURATELY MEASURE THE FLOW OF SHIELDING GASES TO GMAW/MIG AND GTAW/TIG WELDING APPLICATIONS.

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 = ± max 2,5 % 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

MODEL SHOWN:
925D-15-F

OVERVIEW

The basic function of a flowmeter regulator is to provide precise flow control of gases. Harris flowmeters have durable, easy-to-read, flow tubes and covers. All products have a 7-year warranty and are tested multiple times before the packing and shipping process.

TYPICAL APPLICATIONS

- Oxy-Fuel welding and brazing
- Laboratory applications
- Other allied processes

PRO INFO

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

QUICK SELECTION GUIDE

230 BAR

601D-F MODEL
COMPACT REGULATOR
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351 MODEL
ZERO COMPENSATED
p.25

801D-F MODEL
FLOWMETER REGULATOR
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821D-F MODEL
DOUBLE FLOWMETER REGULATOR
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825D-F MODEL
LARGE DIAPHRAGM
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411 MODEL
SINGLE STAGE HIGH CAPACITY
p.27

811DB-F MODEL
ELECTRICALLY HEATED
p.28

300 BAR

901D-F MODEL
FLOWMETER REGULATOR
p.28

925D-F MODEL
LARGE DIAPHRAGM
p.29

911DB-F MODEL
ELECTRICALLY HEATED
p.29

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 flowmeter and flowgauge regulators. It uses a flowmeter as an indicator, but generally functions as a variable pressure flowgauge regulator.

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

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

1. ACCURATE DUAL-SCALE PSI/BAR
2. OUTLET CONNECTION TO FIT INERT GAS HOSE
3. MODEL 351 FOR FLOW CONTROL FROM ARGON/CO2 CYLINDERS (MODEL 353 FOR PIPELINE)
4. DELIVERS UP TO 33 L/MIN
5. ZERO COMPENSATED DESIGN FOR LESS GAS SURGE AND MORE EFFICIENT GAS USAGE

CYLINDER FLOWMETER REGULATORS - GENERAL FEATURES:

- Conform to ISO 2503
- Accurate pressure compensated design flowmeter for precise flow
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- Factory pre-set outlet pressure at 3,5 bar (apart from Model 351)

601D-F MODEL

COMPACT FLOWMETER REGULATOR

MODEL SHOWN: **601D-30-F**

APPLICATIONS:

- Light duty welding

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 230 bar
- Factory pre-set outlet pressure at 3,5 bar
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Rear inlet connection (side inlet optional)
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
601D-15-F-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
601D-30-F-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30

351 MODEL

ECONOMICAL ZERO COMPENSATED FLOWMETER REGULATOR

MODEL SHOWN: **351-30F-ARC**

APPLICATIONS:

- Light duty welding

FEATURES:

- Built smart and priced economically
- Compact design, forged brass body for maximum strength
- Design is more resistant to CO2 freeze-up and gauge/ flowmeter damage than typical flow control devices
- Saves gas – operates at pressures lower than typical
- Maximum inlet pressure 230 bar
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
351-30F-ARC	Argon	230	0 - 30	0 - 315	0 - 30

* Teflon® is a registered trademark of The Chemours Company.

801D-F MODEL

FLOWMETER REGULATOR

MODEL SHOWN:
801DB-30-F

APPLICATIONS:

- Ideal for all welding applications

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 230 bar
- Factory pre-set outlet pressure at 3,5 bar
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- "B" version fitted with black bonnet and black gauge case
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
801D-15-F-AR/CD **801DB-15-F-AR/CD**	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
801D-30-F-AR/CD **801DB-30-F-AR/CD**	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
801D-20-F-FG **801DB-20-F-FG**	Forming gas (H_2/N_2 mixture)	230	0 - 20	0 - 315	0 - 20
801D-50-F-FG **801DB-50-F-FG**	Forming gas (H_2/N_2 mixture)	230	0 - 50	0 - 315	0 - 50

821D-F MODEL

PRECISION ENGINEERED DOUBLE FLOWMETER REGULATOR

MODEL SHOWN:
821DB-30-F

APPLICATIONS:

- Ideal for light and medium duty welding

FEATURES:

- One regulator / cylinder for two gas supply sources with separate flow control
- Two flowmeters (knob at 180° to inlet) with soft seat needle valve for smooth and precise control, easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- Factory pre-set outlet pressure at 3,5 bar
- Maximum inlet pressure 230 bar
- Forged brass body for maximum strength
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Rear entry
- "B" version fitted with black bonnet and black gauge case
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
821D-15-F-AR/CD 821DB-15-F-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
821D-30-F-AR/CD 821DB-30-F-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
821D-20-F-FG 821DB-20-F-FG	Forming gas (H_2/N_2 mixture)	230	0 - 20	0 - 315	0 - 20
821D-50-F-FG 821DB-50-F-FG	Forming gas (H_2/N_2 mixture)	230	0 - 50	0 - 315	0 - 50

* Teflon® is a registered trademark of The Chemours Company.

825D-F

MODEL

FLOWMETER REGULATOR

MODEL SHOWN:
825D-30-F

APPLICATIONS:

- Large, strong regulator for the welding professionals, suitable for all welding and laboratory applications

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 230 bar
- Large Ø 70 mm diaphragm for accurate flow and pressure regulation
- Factory pre-set outlet pressure at 3,5 bar
- Flowmeter with easy to read polycarbonate outer tube cover for strength and 360° visibility
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
825D-15-F-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
825D-30-F-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30

411

MODEL

FLOWMETER REGULATOR WITH INCREASED RESISTANCE TO CO_2

MODEL SHOWN:
411-30

APPLICATIONS:

- CO_2 gas-shielded welding and other industrial applications

FEATURES:

- Maximum inlet pressure of 230 bar
- Multi finned black aluminium body design provides a high rate of heat transfer into the regulator
- Requires no electrical power
- Increased resistance to CO_2 freeze-up
- Accurate pressure compensated design for precise flow
- Flowmeter with easy to read polycarbonate outer tube cover for strength and 360° visibility
- Factory pre-set outlet pressure at 3,5 bar
- Side entry (vertical optional)
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
411-15	CO_2	230	0 - 15	0 - 315	0 - 15
411-30	CO_2	230	0 - 30	0 - 315	0 - 30

* Teflon® is a registered trademark of The Chemours Company.

811DB-F

MODEL

ELECTRICALLY HEATED FLOWMETER REGULATOR

MODEL SHOWN:
811DB-30-F

APPLICATIONS:

- Ideal for all welding applications where high and continuous flow of CO_2 is required with accurate flow control

FEATURES:

- Maximum inlet pressure 230 bar
- CE marked
- Forged brass body for maximum strength
- Two independent heating elements controlled by thermostat
- Stabilized temperature up to 30 lpm continuous CO_2 flow
- Overheating protection with resettable thermal fuse
- Insulation IP 64 (EN 60529)
- Voltage: 110 and 240 volts versions
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 3 meters long power cable without plug
- Factory pre-set outlet pressure at 3,5 bar
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- 7 year limited warranty (excluding electrical components)

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
811DB-15-F	CO_2	230	0 - 15	0 - 315	0 - 15
811DB-30-F	CO_2	230	0 - 30	0 - 315	0 - 30

CYLINDER FLOWMETER REGULATORS - 300 BAR

901D-F

MODEL

FLOWMETER REGULATOR

MODEL SHOWN:
901D-30-F

APPLICATIONS:

- Ideal for all welding applications

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 300 bar
- Factory pre-set outlet pressure at 3,5 bar
- High pressure capsule seat with Kel-F (CFTE) sealing surface
- Flowmeter with easy to read polycarbonate outer tube cover for strength and 360° visibility
- "B" version fitted with black bonnet
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
901D-15-F-AR/CD	Argon / CO_2 / Mixture	300	0 - 15	0 - 400	0 - 15
901D-30-F-AR/CD	Argon / CO_2 / Mixture	300	0 - 30	0 - 400	0 - 30
901D-20-F-FG	Forming gas (H_2/N_2 mixture)	300	0 - 20	0 - 400	0 - 20
901D-50-F-FG	Forming gas (H_2/N_2 mixture)	300	0 - 50	0 - 400	0 - 50

* Teflon® is a registered trademark of The Chemours Company.

925D-F

MODEL

7 YEAR WARRANTY

FLOWMETER REGULATOR

MODEL SHOWN:
925D30-F

APPLICATIONS:

- Large, strong regulator for the welding professionals, suitable for all welding and laboratory applications.

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 300 bar
- Large Ø 70 mm diaphragm for accurate flow and pressure regulation
- High pressure capsule seat with Kel-F (CFTE) sealing surface
- Factory pre-set outlet pressure at 3,5 bar
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
925D-15-F-AR/CD	Argon / CO_2 / Mixture	300	0 - 15	0 - 400	0 - 15
925D-30-F-AR/CD	Argon / CO_2 / Mixture	300	0 - 30	0 - 400	0 - 30

911DB-F

MODEL

7 YEAR WARRANTY

ELECTRICALLY HEATED FLOWMETER REGULATOR

MODEL SHOWN:
911DB-30-F

APPLICATIONS:

- Ideal for all welding applications where high and continuous flow of CO_2 are required with accurate flow control

FEATURES:

- Maximum inlet pressure 300 bar
- CE marked
- Two independent heating elements controlled by thermostat
- Stabilized temperature up to 30 lpm continuous CO_2
- Overheating protection with resettable thermal fuse
- Insulation IP 64 (EN 60529)
- Voltage: 110 and 240 volts versions
- 3 meters long power cable without plug
- 7 year limited warranty (excluding electrical components)

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
911DB-15-F	CO_2	300	0 - 15	0 - 400	0 - 15
911DB-30-F	CO_2	300	0 - 30	0 - 400	0 - 30

FLOWGAUGE REGULATORS

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

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Go to www.facebook.com/HarrisProductsGroup

QUICK SELECTION GUIDE

230 BAR

601-L MODEL
COMPACT
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842-L MODEL
DOWNWARD KNOB
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300 BAR

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A LINCOLN ELECTRIC COMPANY

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.eu

MODEL SHOWN:
25GX-L

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).

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.

GENERAL FEATURES:

- Accurate flows through outlet calibrated orifice
- Flow set by adjusting knob

601-L MODEL

COMPACT SINGLE-STAGE FLOWGAUGE REGULATOR

MODEL SHOWN:
601D-30-L-AR

APPLICATIONS:

- Ideal for light duty welding

FEATURES:

- Maximum inlet pressure 230 bar
- Forged brass body and bonnet
- 50 mm safety gauge
- Complete with hose connection diameter hose 5 to 6 mm
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Rear inlet connection
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
601D-15-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
601D-30-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30

842-L MODEL

SINGLE-STAGE FLOWGAUGE REGULATOR

MODEL SHOWN:
842-30L-AR/CD

APPLICATIONS:

- Suitable for all light and medium duty welding

FEATURES:

- Maximum inlet pressure of 230 bar
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- Downward knob improves operator safety
- Black bonnet and black gauge case
- "W" version fitted with outlet valve
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
842-15L-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
842-30L-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
842-30L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 30	0 - 315	0 - 30
842-50L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 50	0 - 315	0 - 50
842W-15L-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
842W-30L-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
842W-30L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 30	0 - 315	0 - 30
842W-50L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 50	0 - 315	0 - 50

* Teflon® is a registered trademark of The Chemours Company.

801D-L

MODEL

7 YEAR WARRANTY

FLOWGAUGE REGULATOR

MODEL SHOWN:
801D50LAR

APPLICATIONS:

- Suitable for all light and medium duty welding

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 230 bar
- Smooth adjustment with high precision
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Side inlet connection
- "B" version fitted with black bonnet and black gauge case
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
801D-15-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
801D-30-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
801D-50-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 50	0 - 315	0 - 50
801D-30-L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 30	0 - 315	0 - 30
801D-50-L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 50	0 - 315	0 - 50
801DB-15-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
801DB-30-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
801DB-50-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 50	0 - 315	0 - 50
801DB-30-L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 30	0 - 315	0 - 30
801DB-50-L-FG	Forming gas (H_2/N_2 mixture)	230	0 - 50	0 - 315	0 - 50

818D-L

MODEL

7 YEAR WARRANTY

GAUGELESS FLOWGAUGE REGULATOR

MODEL SHOWN:
818D-15-L

APPLICATIONS:

- Suitable for all light and medium duty welding
- Designed for all industrial applications in the toughest working conditions

FEATURES:

- Forged brass body for maximum strength
- Smooth adjustment with high precision
- Maximum inlet pressure 230 bar
- Delivery flow set by turning the knob on calibrated bonnet
- Cylinder pressure shown on indicator with polycarbonate cover
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- "B" version fitted with black bonnet
- 7 year warranty


Indicator


Bonnet calibration

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	FLOWGAUGE (lpm)
818D-15-L-AR/CD **818DB-15-L-AR/CD**	Argon / CO_2 / Mixture	230	0 - 15	0 - 15
818D-50-L-AR/CD **818DB-50-L-AR/CD**	Argon / CO_2 / Mixture	230	0 - 50	0 - 50

25GX-L MODEL

FLOWGAUGE REGULATOR

MODEL SHOWN:
25GX-30L

APPLICATIONS:

- Heavy duty, large, strong flowgauge regulator for gas-shielded welding

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 230 bar
- Large Ø 70 mm diaphragm stabilizes working pressure
- Durable chrome-plated bonnet
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
25GX-15-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 15	0 - 315	0 - 15
25GX-30-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 30	0 - 315	0 - 30
25GX-50-L-AR/CD	Argon / CO_2 / Mixture	230	0 - 50	0 - 315	0 - 50

811DB-L MODEL

ELECTRICALLY HEATED FLOWGAUGE REGULATOR

MODEL SHOWN:
811DB-30-L

APPLICATIONS:

- Ideal for all welding applications where high and continuous flows of CO_2 are required with accurate flow control

FEATURES:

- Maximum inlet pressure 230 bar
- Forged brass body for maximum strength
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Outlet gauge enables direct low pressure reading
- CE marked
- Two independent heating elements controlled by thermostat
- Stabilized temperature up to 30 lpm continuous CO_2
- Overheating protection with resettable thermal fuse
- Insulation IP 64 (EN 60529)
- Voltage: 110 and 240 volt versions
- 3 meters long power cable without plug
- 7 year limited warranty (excluding electrical components)

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
811DB-15-L-CD	CO_2	230	0 - 15	0 - 315	0 - 15
811DB-30-L-CD	CO_2	230	0 - 30	0 - 315	0 - 30

* Teflon® is a registered trademark of The Chemours Company.

* Teflon® is a registered trademark of The Chemours Company.

901D-L MODEL

SINGLE-STAGE FLOWGAUGE REGULATOR

MODEL SHOWN:
901D-30-L

APPLICATIONS:

- Suitable for all light and medium duty welding

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 300 bar
- High pressure capsule seat with Kel-F (CFTE) sealing surface
- Standard version with chrome-plated bonnet and gold painted gauge case
- "B" version fitted with black bonnet
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
901D-30-L-FG	Forming gas (H_2/N_2 mixture)	300	0 - 30	0 - 400	0 - 30
901D-50-L-FG	Forming gas (H_2/N_2 mixture)	300	0 - 50	0 - 400	0 - 50
901D-15-L-AR/CD	Argon / CO_2 / Mixture	300	0 - 15	0 - 400	0 - 15
901D-30-L-AR/CD	Argon / CO_2 / Mixture	300	0 - 30	0 - 400	0 - 30
901D-50-L-AR/CD	Argon / CO_2 / Mixture	300	0 - 50	0 - 400	0 - 50

942-L MODEL

SINGLE-STAGE FLOWGAUGE REGULATOR

MODEL SHOWN:
942W-30-LARC

APPLICATIONS:

- Suitable for all light and medium duty welding

FEATURES:

- Maximum inlet pressure of 300 bar
- Downward knob improves operator safety
- Smooth adjustment with high precision
- Forged brass body for maximum strength
- High pressure capsule seat with Kel-F (CFTE) sealing surface
- Black bonnet
- Without regulation outlet valve
- "W" version fitted with outlet valve
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
942-15L-AR/CD	Argon / CO_2 / Mixture	300	0 - 15	0 - 400	0 - 15
942-30L-AR/CD	Argon / CO_2 / Mixture	300	0 - 30	0 - 400	0 - 30
942-30L-FG	Forming gas (H_2/N_2 mixture)	300	0 - 30	0 - 400	0 - 30
942-50L-FG	Forming gas (H_2/N_2 mixture)	300	0 - 50	0 - 400	0 - 50
942W-15L-AR/CD	Argon / CO_2 / Mixture	300	0 - 15	0 - 400	0 - 15
942W-30L-AR/CD	Argon / CO_2 / Mixture	300	0 - 30	0 - 400	0 - 30
942W-30L-FG	Forming gas (H_2/N_2 mixture)	300	0 - 30	0 - 400	0 - 30
942W-50L-FG	Forming gas (H_2/N_2 mixture)	300	0 - 50	0 - 400	0 - 50

925D-L

MODEL

FLOWGAUGE REGULATOR

MODEL SHOWN:
925D-30-L

APPLICATIONS:

- Large size flowgauge regulator for gas-shielded welding

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 300 bar
- Large Ø 70 mm diaphragm for accurate flow and pressure regulation
- Durable chromed bonnet
- High pressure capsule seat with Kel-F (CFTE) sealing surface
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
925D-15-L-AR/CD	Argon / CO_2 / Mixture	300	0 - 15	0 - 400	0 - 15
925D-30-L-AR/CD	Argon / CO_2 / Mixture	300	0 - 30	0 - 400	0 - 30
925D-50-L-AR/CD	Argon / CO_2 / Mixture	300	0 - 50	0 - 400	0 - 50

911DB-L

MODEL

ELECTRICALLY HEATED FLOWGAUGE REGULATOR

MODEL SHOWN:
911DB-30-L

APPLICATIONS:

- Ideal for all welding applications where high and continuous flows of CO_2 are required with accurate flow control

FEATURES:

- Maximum inlet pressure 300 bar
- Outlet gauge enables direct low pressure reading
- CE marked
- Two independent heating elements controlled by thermostat
- Stabilized temperature up to 30 lpm continuous CO_2 flow
- Overheating protection with resettable thermal fuse
- Insulation IP 64 (EN 60529)
- Voltage: 110 and 240 volts versions
- 3 meters long power cable without plug
- 7 year limited warranty (excluding electrical components)

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
911DB-15-L-CD	CO_2	300	0 - 15	0 - 400	0 - 15
911DB-30-L-CD	CO_2	300	0 - 30	0 - 400	0 - 30

HARRIS
A LINCOLN ELECTRIC COMPANY

CAN'T FIND WHAT YOU ARE LOOKING FOR?

CONTACT YOUR HARRIS REPRESENTATIVE

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

HIGH PERFORMANCE REGULATORS

HARRIS HIGH PERFORMANCE REGULATORS ARE DESIGNED FOR DEMANDING APPLICATIONS WHERE CONSTANT OUTLET PRESSURE OVER A WIDE RANGE OF INLET PRESSURES IS REQUIRED.
THEY DELIVER A SUFFICIENT FLOW IN SITUATIONS WHERE PROPER GAS SUPPLY IS CRITICAL.

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QUICK SELECTION GUIDE

230 BAR

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HIGH PRESSURE
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300 BAR

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MODEL SHOWN:
996ARS-40

HARRIS HIGH PERFORMANCE REGULATORS ARE IDEAL FOR QUALITY CUTTING APPLICATIONS, LABORATORY SYSTEMS OR PRECISION MACHINE CUTTING.

Harris delivers a comprehensive offering of two-stage industrial regulators to meet your needs and budget.

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).

GENERAL FEATURES:

- Stainless steel diaphragm - no internal contamination

DS ARS 825 MODEL

SINGLE-STAGE CYLINDER PRESSURE REGULATOR

MODEL SHOWN:
825ARS-40

APPLICATIONS:

- All applications where high outlet pressure is required
- Ideal for high pressure plasma cutting

FEATURES:

- Forged brass body
- Maximum inlet pressure 230 bar
- Stainless steel diaphragm - no internal contamination
- Enough oxygen flow to cut up to 400 mm steel
- Large Ø 70 mm diaphragm stabilizes working pressure
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Side entry (vertical optional)
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
825DS-20**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	230	0 - 20	300	0 - 40	0 - 315
825DS-25**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	230	0 - 25	350	0 - 40	0 - 315
825ARS-40**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	230	0 - 40	400	0 - 60	0 - 315
825ARS-50**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	230	0 - 50	450	0 - 100	0 - 315

DS 896 MODEL

TWO-STAGE WITH STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
896DS-25

APPLICATIONS:

- Used where outlet pressure must be held within strict limits. Ideal for quality cutting applications, laboratory system or precision machine cutting. Also ideal for heavy machine cutting, hand cutting, and gouging.

FEATURES:

- Forged brass body
- Maximum inlet pressure 230 bar
- Stainless steel diaphragm on first stage - no internal contamination
- Enough oxygen flow to cut up to 400 mm steel
- Large Ø 70 mm second stage diaphragm accurately controls delivery pressure
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Stainless steel T- screw handle
- Side entry (vertical optional)
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
896DS-25**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	230	0 - 25	150	0 - 40	0 - 315

* Teflon® is a registered trademark of The Chemours Company.
**The regulator is available for all the listed gases. When ordering always specify gas.

DS ARS 925 MODEL

HIGH PERFORMANCE WITH STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
925ARS-40

APPLICATIONS:

- All applications where high outlet pressure is required. Ideal for high pressure plasma cutting

FEATURES:

- Forged brass body
- Maximum inlet pressure 300 bar
- Stainless steel diaphragm - no internal contamination
- Enough oxygen flow to cut up to 400 mm steel
- Large Ø 70 mm diaphragm accurately controls delivery pressure
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- T-screw for easier pressure adjustment
- Side entry (vertical optional)
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
925DS-20*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 20	380	0 - 40	0 - 400
925DS-25*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 25	400	0 - 40	0 - 400
925ARS-40*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 40	500	0 - 60	0 - 400
925ARS-50*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 50	600	0 - 100	0 - 400

DS ARS 996 MODEL

HIGH PERFORMANCE WITH STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
996ARS-40

APPLICATIONS:

- For demanding applications where constant outlet pressure over a wide range of inlet pressures is required. Ideal for quality cutting applications, laboratory systems or precision machine cutting. Also ideal for heavy machine cutting, hand cutting and gouging.

FEATURES:

- Forged brass body for maximum strength
- Maximum inlet pressure 300 bar
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- First stage reduces full cylinder pressure by approximately 90%
- Large Ø 70 mm second stage diaphragm accurately controls delivery pressure
- Durable chrome-plated bonnet
- Side entry (vertical optional)
- T-screw for easier pressure adjustment
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
996DS-25*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	25	275	0 - 40	0 - 400
996ARS-40*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	40	330	0 - 60	0 - 400

*The regulator is available for all the listed gases. When ordering always specify gas.

H25 MODEL

SINGLE-STAGE WITH STAINLESS STEEL DIAPHRAGM

MODEL SHOWN:
H25ARS-40

APPLICATIONS:

- Specially designed for high flow requirements. Ideal for feeding plasma and laser cutting systems

FEATURES:

- Forged brass body
- Maximum inlet pressure 300 bar
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- Stainless steel T- screw handle
- Air flow up to > 500 m^3/h
- External safety relief valve
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
H25DS-10*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 10	380	0 - 16	0 - 400
H25DS-15*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 15	450	0 - 25	0 - 400
H25DS-25*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 25	500	0 - 40	0 - 400
H25ARS-40*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 40	> 500	0 - 60	0 - 400

987 MODEL

HIGH PRESSURE CYLINDER REGULATOR

MODEL SHOWN:
987S-170

APPLICATIONS:

- Designed to operate with high pressure cylinder. Typical applications include high pressure testing, charging accumulators, pressurizing aircraft struts, oil refineries, chemical plants, research laboratories and general industry.
- Ideal also for high pressure manifold distribution.

FEATURES:

- Maximum inlet pressure 300 bar
- Stainless steel diaphragm - no internal contamination
- High pressure capsule seat with Kel-F (CTFE) sealing surface
- Corrosion resistant, forged brass, body and bonnet
- Bronze bonnet bushing and stainless steel T-screw handle
- Heavy duty inlet 15 mm thread with metal-to-metal seal
- Outlet ¼" external diameter copper tube compression fitting
- Models available for all non-corrosive compressed gases
- This regulator can be used for lightweight gases without vibration
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
987S-100*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 100	400	0 - 315	0 - 400
987AS-170*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	300	0 - 170	500	0 - 315	0 - 400
CLIMATESTER	Nitrogen	300	0 - 55	120	0 - 70	0 - 400

*The regulator is available for all the listed gases. When ordering always specify gas.

8700 MODEL

HIGH PRESSURE CYLINDER REGULATOR

MODEL SHOWN: **8700**

APPLICATIONS:

- Designed to operate in high pressure cylinder. Typical applications include high pressure testing, charging accumulators and pressurizing aircraft struts.

FEATURES:

- Maximum inlet pressure 380 bar
- Enables smooth and precise pressure adjustment without having to apply much force or use extra tools
- One piece encapsulated valve with CTFE seats and internal filter
- Elastomeric diaphragm for longer life
- Ergonometric knob for improved grip
- Conforms to CGA E-4
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
8700 2500 psi*	Argon, CO2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	380	0 - 170	0 - 280	0 - 400
8700 3000 psi*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	380	0 - 205	0 - 280	0 - 400
8700 4500 psi*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	380	0 - 300	0 - 400	0 - 400
8700 6000 psi*	Argon, CO2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	515	0 - 415	0 - 700	0 - 700

HP750 MODEL

HIGH FLOW & HIGH PRESURE SERVO DOME LOADED REGULATOR

MODEL SHOWN: **HP-750**

APPLICATIONS:

- Laser assist gases, pressure transfer, blanketing and high flow manifolds

FEATURES:

- High pressure, high flow regulator
- Maximum inlet pressure 380 bar
- One piece encapsulated seat design with 10 micron filtration
- Servo dome load technology. The regulator has an internal pressure feedback sensing line which monitors the outlet pressure and constantly opens or closes the regulator valve to maintain the internal pressure balance. The result is a constant delivery pressure regardless of the flow rate or inlet pressure conditions
- Conforms to CGA E-4
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
HP750-17 (3000867)*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	380	0 - 17	> 500	0 - 28	0 - 400
HP750-35 (3000868)*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	380	0 - 35	> 500	0 - 42	0 - 400
HP750-70 (3000869)*	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	380	0 - 70	> 500	0 - 138	0 - 400

*The regulator is available for all the listed gases. When ordering always specify gas.

PIPELINE REGULATORS

HARRIS PIPELINE REGULATORS ARE IDEAL TO USE IN LINE PRESSURE APPLICATIONS FOR WIDE VARIETY OF INDUSTRIAL PROCESSES.
WITH A COMPACT DESIGN MANUFACTURED FROM HIGHEST QUALITY MATERIALS THEY PROVIDE AN OUTSTANDING RELIABILITY AND PRECISION OF GAS CONTROL.

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MODEL SHOWN:
845-30-L-AR/CD

ADVANTAGES OF PIPELINE REGULATORS

A pipeline regulator has no inlet pressure limit other than that specified by its manufacturer.
For example, Harris Models 847, 845 and 846 pipeline regulators are limited by Harris to a stated maximum of 25 bar but some other models could usually reach up to 60 bar.
The pipeline regulators are the second-stage of pressure regulation thus more constant pressure and flow delivery to the working equipment is achieved.
In addition, the installation of point-of-use systems with pipeline regulators ensures that no high pressure gas cylinders have to be transported and handled inside a building.

353 MODEL

ECONOMICAL PIPELINE REGULATOR

MODEL SHOWN:
353-30FLAR

APPLICATIONS:

- Designed for light duty welding from industrial pipeline points

FEATURES:

- Built smart and priced economically
- Compact design, forged brass body for maximum strength
- Design is more resistant to CO2 freeze-up and flowmeter damage than typical flow control devices
- Saves gas - produces less gas surge because it operates at pressures lower than standard regulators
- Maximum inlet pressure 10 bar
- Flowmeter with easy-to-read polycarbonate outer tube cover for strength and 360° visibility
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	FLOWMETER (lpm)
353-30F-ARC	Argon / CO_2 / Mixture	10	0 - 30	0 - 30

845 MODEL

PIPELINE REGULATOR

MODEL SHOWN:
845-30-L-AR/CD

APPLICATIONS:

- Specially designed to allow high flow rate from industrial and laboratory pipeline points

FEATURES:

- Saves space due both to vertical inlet and outlet connections (a point-of-use device with bottom outlet connection is required)
- High flow
- Outlet pressure up to 10 bar
- Forged brass body for maximum strength
- Maximum inlet pressure 25 bar
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
845-1.5-AC	Acetylene	25	0 - 1,5	13	0 - 2,5	-
845-4-LP	Propane	25	0 - 4	76	0 - 6	-
845-10-OX	Oxygen	25	0 - 10	95	0 - 16	-
845-10**	Argon, CO_2, Nitrogen, Air, Helium, Oxygen, Methane	25	0 - 10	95	0 - 16	-
845-15-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 15
845-30-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 30
845-50-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 50

846 MODEL

PIPELINE REGULATOR

MODEL SHOWN:
846-4-LP-GAS

APPLICATIONS:

- Specially designed to allow high flow rate from industrial and laboratory pipeline points

FEATURES:

- High flow and outlet pressure (up to 10 bar) line regulator
- Forged brass body for maximum strength
- Sintered alloy inlet filter to trap impurities
- Downward knob improves operator safety
- Maximum inlet pressure 25 bar
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
846-1.5-AC	Acetylene	25	0 - 1,5	13	0 - 2,5	-
846-4-LP	Propane	25	0 - 4	76	0 - 6	-
846-10-OX	Oxygen	25	0 - 10	95	0 - 16	-
846-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	25	0 - 10	95	0 - 16	-
846-15-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 15
846-30-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 30
846-50-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 50

* Teflon® is a registered trademark of The Chemours Company.
**The regulator is available for all the listed gases. When ordering always specify gas.

847 MODEL

PIPELINE REGULATOR

MODEL SHOWN:
847-50-L

APPLICATIONS:

- Specially designed to allow high flow rate from industrial and laboratory pipeline points. Particularly suited to machine cutting where more than one torch is used. Also for heavy cutting and heating.

FEATURES:

- High flow and outlet pressure (up to 15 bar) line regulator
- Forged brass body for maximum strength
- Sintered alloy inlet filter to trap impurities
- Maximum inlet pressure 25 bar
- 15 lpm, 30 lpm and 50 lpm versions with single or double flowmeter available for argon and CO_2
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

Model 847 with a double flowmeter

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)	FLOWGAUGE (lpm)
847-1.5-AC	Acetylene	25	0 - 1,5	13	0 - 2,5	-
847-4-LP	Propane	25	0 - 4	76	0 - 6	-
847-10-OX	Oxygen	25	0 - 10	95	0 - 16	-
847-10**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	25	0 - 10	95	0 - 16	-
847-15-OX	Oxygen	25	0 - 15	135	0 - 25	-
847-15**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Methane	25	0 - 15	135	0 - 25	-
847-15-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 15
847-30-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 30
847-50-L-AR/CD	Argon / CO_2	25	-	-	-	0 - 50

H47 MODEL

HIGH FLOW PIPELINE REGULATOR

MODEL SHOWN:
H47AS-40-OX

APPLICATIONS:

- Designed for high flow requirement for feeding industrial gas pipelines for plasma and laser cutting

FEATURES:

- Maximum inlet pressure 60 bar
- Rear inlet connection
- Air flow over 450 m^3/h
- Stainless steel diaphragm
- T- screw handle provides smooth turning action and long service life
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	MAX (AIR) FLOW (m^3/h)	DELIVERY PRESSURE GAUGE (bar)
H47DS-15**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	60	0 - 15	330	0 - 25
H47DS-25**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	60	0 - 25	350	0 - 40
H47AS-40**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	60	0 - 40	390	0 - 60
H47L**	Argon, CO_2, Nitrogen, Air, Helium, Hydrogen, Oxygen, Methane	60	0 - 40	450	0 - 60

* Teflon® is a registered trademark of The Chemours Company.
**The regulator is available for all the listed gases. When ordering always specify gas.

OTHER APPLICATION REGULATORS

APART FROM STANDARD REGULATORS, HARRIS MANUFACTURES ALSO NITROGEN PURGING REGULATORS, SHIELDING GAS SAVERS, BEVERAGE REGULATORS AND BALLOON FILLING REGULATORS.

GET CONNECTED
Go to www.twitter.com/HarrisProducts

QUICK SELECTION GUIDE

NITROGEN PURGING REGULATOR

601 HVAC MODEL
COMPACT HVAC TESTING
p.49

SHIELDING GAS SAVERS

603 MODEL
COMPACT GAS GUARD
p.50

803P MODEL
SHIELDING GAS GUARD
p.50

651 MODEL
TWO-STAGE FLOWMETER WITH GAS SAVING FEATURE
p.51

653 MODEL
PIPELINE FLOWMETER WITH GAS SAVING FEATURE
p.51

BEVERAGE REGULATORS

802/822D MODEL
p.52

BALLOON FILLING REGULATORS

HELIFILLER MODEL
TILT VALVE
p.52

MODEL SHOWN:
802D

HARRIS REGULATORS ARE MEANT FOR VARIOUS PURPOSES

Harris has great experience when it comes to industrial products which are used in factories and gas distribution companies throughout the world.

Relying on the expertise of our enegineers, we are also able to provide solutions for other markets: gastronomy, catering, entertainment and more.

601 MODEL

COMPACT SINGLE-STAGE CYLINDER PRESSURE REGULATOR FOR HVAC&R APPLICATIONS

MODEL SHOWN:
601-30

APPLICATIONS:

- HVAC purging, pressure testing and blanketing with nitrogen or other inert gases

FEATURES:

- Allows to perform leak test (HVAC&R pressure testing) - maximum delivery pressure 55 bar
- Compact and economical
- Forged brass body and bonnet
- Maximum inlet pressure of 230 bar
- Side inlet connection (rear entry optional)
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

Model shown with additional accessories to be ordered separately

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
601-30	Nitrogen	230	30	0 - 40	0 - 315
601-55	Nitrogen	230	55	0 - 100	0 - 315

* Teflon® is a registered trademark of The Chemours Company.
**The regulator is available for all the listed gases. When ordering always specify gas.

603 & 803P

MODEL

SHIELDING GAS GUARDS

MODEL SHOWN:
603 & 803P

APPLICATIONS:

- Designed to eliminate pressure surge at the beginning of each weld in MIG/MAG and TIG welding
- Maintains constant flow and pressure with each weld
- Provides gas savings up to 60%

FEATURES:

Harris Gas Guards are designed to save shielding gases in two ways:

- by reducing the gas surge when a MIG/MAG gun or TIG torch is activated. They are designed to reduce the pressure held in supply hose. Gas waste is reduced when the gun or torch is triggered;
- by delivering a controlled flow rate.

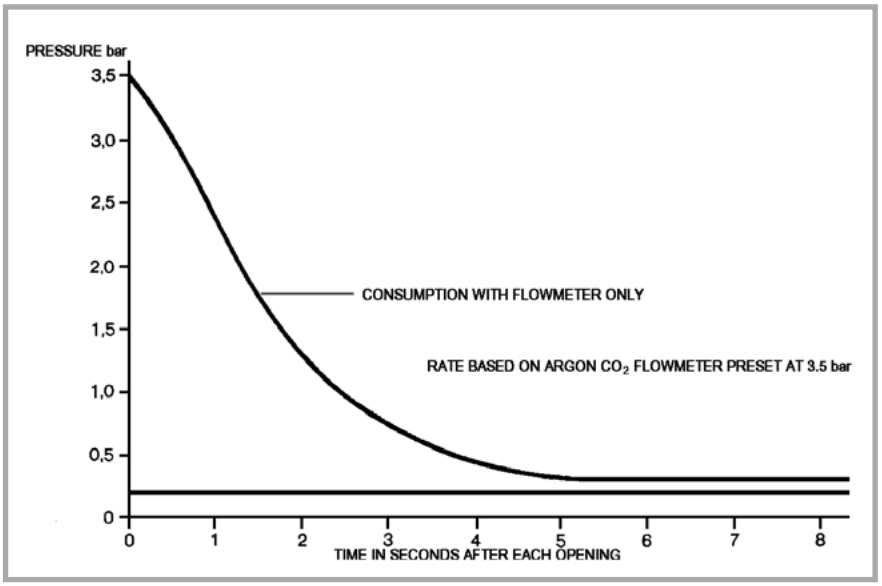
Operators will typically set shielding gas flow rates higher than necessary for a welding operation.
Once set by a supervisor, the Gas Guard delivers the precise amount of flow for the operation, eliminating the needless waste of gas.

- Forged brass body for maximum strength
- 7 year warranty

WHERE TO USE:

- Connect Models 603 and 803-P between your existing flowmeter and hose to torch

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	INLET	OUTLET
603Z-001	Argon / CO_2	15	1,1 – 1,4	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228
603Z-002	Argon / CO_2	15	1,1 – 1,4	9/16"-18-UNF-2B-RH	9/16"-18-UNF-2A-RH
603Z-003	Argon / CO_2	15	1,1 – 1,4	G 1/4"-RH-UNI ISO 228	G 1/4" A-RH-UNI ISO 228
803P-001	Argon / CO_2	15	0,6 - 0,9	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228
803P-002	Argon / CO_2	15	0,6 - 0,9	9/16"-18-UNF-2B-RH	9/16"-18-UNF-2A-RH
803P-003	Argon / CO_2	15	0,6 - 0,9	G 1/4"-RH-UNI ISO 228	G 1/4" A-RH-UNI ISO 228



- The curve on this chart illustrates the extent of costly shielding gas waste that can occur each time a MIG/MAG gun or TIG torch is activated. Conversely, the line illustrates how Harris Gas Guard can significantly reduce gas waste by delivering a set flow of shielding gas.

- Actual argon, carbon dioxide and other shielding gas savings will vary depending upon the specific requirements of the MIG/MAG or TIG welding operation.

651 MODEL

TWO-STAGE FLOWMETER REGULATOR WITH SHIELDING GAS SAVING FEATURE

MODEL SHOWN:
651-30L-AR

APPLICATIONS:

- All types of welding
- Designed to deliver high accuracy gas flow and to reduce the consumption of shielding gas

FEATURES:

- Two-stage flowmeter regulator
- Forged brass body for maximum strength
- Cylinder gas supplied
- Inlet filter to protect against contamination
- Precise gas flow control
- Strong flowmeter resistant to mechanical damages
- Polycarbonate outer tube cover with good 360° visibility
- First stage - capsule valve with Kel-F (CTFE) seat
- Second stage - one-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Lockable version available
- 7 year warranty


Lockable version

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	SUPPLY PRESSURE GAUGE (bar)	FLOWMETER (lpm)
651-30L-AR	Argon / CO_2	300	0 - 30	0 - 400	0 - 34
651-20L-AR	Argon / CO_2	300	0 - 20	0 - 400	0 - 20
651-20L-ARH	Argon / H_2	300	0 - 20	0 - 400	0 - 20

653 MODEL

PIPELINE FLOWMETER WITH SHIELDING GAS SAVING FEATURE

MODEL SHOWN:
653-30FLAR

APPLICATIONS:

- All types of welding
- Designed to deliver high accuracy gas flow and to reduce the consumption of shielding gas

FEATURES:

- Forged brass body for maximum strength
- Pipeline gas supplied
- Inlet filter to protect against contamination
- Precise gas flow control
- Strong flowmeter resistant to mechanical damages
- Extreme accurate shielding gas flow adjustment at 5 bar inlet pressure
- Polycarbonate outer tube cover with good 360° visibility
- Side entry
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- Lockable version available
- 7 year warranty


Lockable version

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	FLOW (lpm)	FLOWMETER (lpm)
653-30FLAR	Argon / CO_2	10	0 - 30	0 - 34

* Teflon® is a registered trademark of The Chemours Company.

802/822D MODEL

BEVERAGE REGULATOR FOR CYLINDER

MODEL SHOWN: **802D**

APPLICATIONS:

- Ideal for breweries, beverage manufacturers, wholesale distribution for use in bars, pubs and wineries

FEATURES:

- High flow beverage regulator for CO_2, nitrogen or mixtures
- Model 802 side entry Model 822 rear entry
- Compression fitting outlet (7/16"-20-UNF) for 1/4" plastic hose (special reverse flow valve to avoid internal liquid contamination upon request)
- Safety pressure gauge with dual scale bar/kPa
- Forged brass body and bonnet
- Maximum inlet pressure of 230 bar
- One-piece encapsulated seat design with internal filter and PTFE (Teflon®*) seat
- 7 year warranty

MODEL NO.	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)	DELIVERY PRESSURE GAUGE (bar)	SUPPLY PRESSURE GAUGE (bar)
802D-4-CD side inlet	CO_2	100	0 - 4	0 - 6	0 - 100
802D-4-N side inlet	Nitrogen	230	0 - 4	0 - 6	0 - 315
802D-8-CD side inlet	CO_2	100	0 - 8	0 - 10	0 - 100
802D-8-N side inlet	Nitrogen	230	0 - 8	0 - 10	0 - 315
802R-4-CD side inlet	CO_2	100	0 - 4	0 - 6	0 - 100
802R-4-N side inlet	Nitrogen	230	0 - 4	0 - 6	0 - 315
802R-8-CD side inlet	CO_2	100	0 - 8	0 - 10	0 - 100
802R-8-N side inlet	Nitrogen	230	0 - 8	0 - 10	0 - 315
822D-4-CD rear inlet	CO_2	100	0 - 4	0 - 6	0 - 100
822D-4-N rear inlet	Nitrogen	230	0 - 4	0 - 6	0 - 315
822D-8-CD rear inlet	CO_2	100	0 - 8	0 - 10	0 - 100
822D-8-N rear inlet	Nitrogen	230	0 - 8	0 - 10	0 - 315
822R-4-CD rear inlet	CO_2	100	0 - 4	0 - 6	0 - 100
822R-4-N rear inlet	Nitrogen	230	0 - 4	0 - 6	0 - 315
822R-8-CD rear inlet	CO_2	100	0 - 8	0 - 10	0 - 100
822R-8-N rear inlet	Nitrogen	230	0 - 8	0 - 10	0 - 315

HELIFILLER MODEL

COMPACT SINGLE-STAGE BALLOON FILLER REGULATOR

MODEL SHOWN: **HELIFILLER**

APPLICATION:

- Balloon filler designed for helium and helium mixtures

FEATURES:

- Forged brass body and bonnet
- High pressure capsule seat with PTFE (Teflon®*) sealing surface
- Fixed pressure pre-set at 2 bar (30 psi / 200 kPa)
- Complete with rubber coated "tilt valve". When vertical the valve is closed, when pulled to the side, it opens
- Side inlet connection
- 7 year warranty

MODEL NO.	VERSION	GAS	MAX INLET PRESSURE (bar)	DELIVERY PRESSURE (bar)
HELIFILLER	Gaugeless, tilt valve	Helium and helium mixtures	230	2 (pre-set)

REGULATOR ORDERING INFORMATION

CODE FOR REGULATOR MODEL PART
801 / 901
904
802
814 / 914
818 / 918
821
822
25 GX / 825 / 925 / H25
829
841
842
845 / 846
847 / H47
848
987
891 / 896 / 996
S45

WHEN SELECTING MORE THAN ONE OPTION, MAINTAIN ORDER INDICATED

TYPE CODE (Only if non-standard)	
-	Horizontal entry (standard)
V	Placed in Kit
E	Vertical entry
A	Anti vibrator (lightweight gases)
D	IRV Diaphragm safety relief valve
R	External safety relief valve
S	Stainless steel diaphragm
B	Black-painted gauges
P	Without HP gauge
N	1/4" NPT gauge (std is 1/4" G)
G	Inlet connection 3/8"
W	Outlet valve (when not standard)
T	With lock "T" screw
X	With inlet stem valve "SNAP SAFE"

NOMINAL PRESSURE OR FLOW		
bar	1,5	
	4	
	8	
	10	
	15	Only for 825, 847, 896
	25	Only for 896
	40	Only for 825
kPa	150	
	400	
	800	
	1000	
	1500	Only for 825, 847, 896
	2500	Only for 896
	4000	Only for 825
lpm	15	
	30	
	50	

CALIBRATION	
-	Pressure gauges calibrated bar or kPa
L	Flow gauge or indicator calibrated, (lpm)
F	Flowmeter, (lpm)
LK	Flow gauge or indicator in (lpm), Pressure gauge in kPa
FK	Flowmeter in (lpm), Pressure gauge in kPa

GAS	
OX	Oxygen
AC	Acetylene
AIR	Air
AR	Argon
CD	Carbon Dioxide
N	Nitrogen
N2O	Nitrous oxide
H	Hydrogen
LP	Propane
PG	Pratical Gas
ARC	ARCD
HE	Helium
FG	Forming gas

PROGRESSIVE NUMBER PERSONALIZES
xxx

801	E	10		OX	xxx

PRO INFO

HARRIS MANUFACTURES A COMPLETE LINE OF SPECIALTY GAS EQUIPMENT.

CONTACT CUSTOMER SERVICE OR YOUR
HARRIS REPRESENTATIVE FOR MORE INFORMATION

GAS PRESSURE & FLOW CONTROL
EQUIPMENT CATALOG

AT A GLANCE

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

DISCOVER OUR NEW FAMILY OF PRODUCTS DEDICATED TO SPECIALTY GASES

Model shown: HPI120

Model shown: HPI904

Want to know more about Specialty Gas?
Download our dedicated catalogs:

Specialty Gas Equipment
- for gas purity level up to 6.0

HPI904 Affordable Line
- for gas purity level up to 5.0

All Harris regulators for non-corrosive gases have a 3 year warranty.

3 YEAR WARRANTY FOR REGULATORS WITH NON-CORROSIVE GASES

GAS CONTROL SYSTEMS

LET THE EXPERTS AT HARRIS SHOW YOU HOW YOU CAN RAISE PRODUCTIVITY, LOWER OPERATIONAL COST, AND IMPROVE THE QUALITY OF YOUR PRODUCTS BY CHOOSING THE RIGHT GASES AND EQUIPMENT FOR YOUR SPECIFIC APPLICATION. WHETHER YOU ARE WORKING WITH OXYGEN, HYDROGEN, NITROGEN, OR ANY OF THE FUEL GASES, HARRIS OFFERS A COMPLETE LINE OF GAS CONTROL SYSTEMS COUPLED WITH EXPERIENCED ENGINEERS AND TECHNICAL SPECIALISTS THAT ARE READY TO ASSIST YOU FROM THE GAS SUPPLY TO THE WORKING EQUIPMENT.

GAS SUPPLY MANIFOLDS

the first stage of a gas reduction, provide continuous gas flow from a single cylinder or bank of cylinders.

POINT-OF-USE STATIONS

the second stage of a gas reduction, installed directly off the pipeline.

More information about this product range can be found in our Industrial Gas Distribution Systems Catalogue. Scan here to download it:

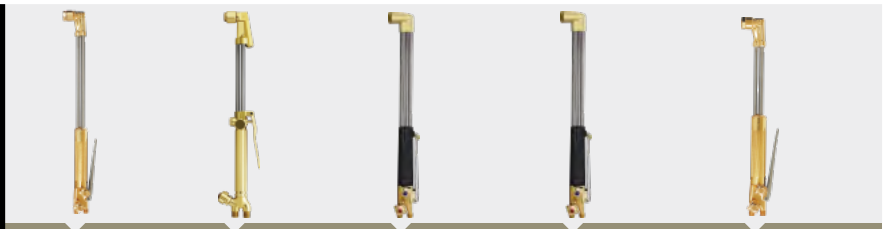
HAND CUTTING TORCHES

HARRIS CUTTING TORCHES HAVE FORGED HEAD AND BRAZED CONNECTIONS FOR STRENGTH AND DURABILITY. ALL FEATURED TORCHES ARE AVAILABLE FOR USE WITH ALL FUEL GASES AND WITH CUTTING CAPACITIES OF UP TO 900 MM.

YouTube **GET CONNECTED**
Go to www.youtube.com/harrisproductsgroup

QUICK SELECTION GUIDE

MEDIUM DUTY



242 MODEL	42 MODEL	980 MODEL	980-NM MODEL	242-NM MODEL
FOR 6290 HARRIS TIPS p.62	FOR 6290 HARRIS TIPS p.62	FOR 6290 HARRIS TIPS p.63	AIRCO ® STYLE TIP MIXING p.63	AIRCO ® STYLE TIP MIXING p.63

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

CALL CUSTOMER SERVICE AND REQUEST OUR DEDICATED BROCHURE

HEAVY DUTY

62 MODEL	H28 MODEL	28 MODEL	136 MODEL
FOR 6290 HARRIS TIPS p.64	FOR 2890 STYLE TIPS p.65	FOR 2890 STYLE TIPS p.65	EXTRA HEAVY DUTY p.65

MODEL SHOWN:
62-5F

OVERVIEW

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

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

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

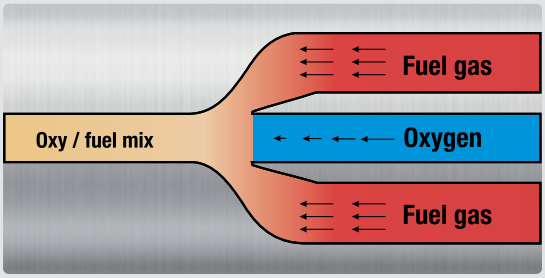
FOR ADDITIONAL EQUIPMENT SEE OUR HEAVY INDUSTRIES CATALOG
WWW.HARRISPRODUCTSGROUP.EU

FUEL MIXER

- Harris Calorific offers two types of oxy / fuel mixers. Equal or positive pressure mixers are referred to as “E” type mixers. 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 features and benefits of each mixer type are detailed below.

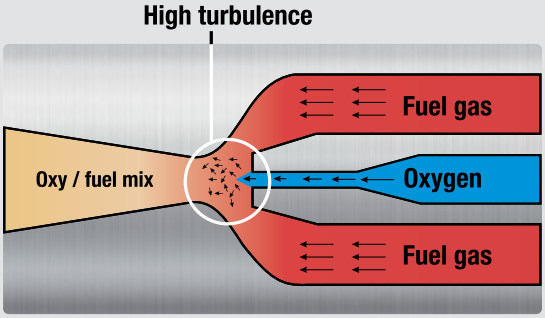
TYPICAL “E” MIXER DESIGN

- To thoroughly mix the oxygen and fuel gas, “E” mixer designs rely on equal pressure control of both oxygen and fuel gas.
- Both gases enter the mixing chamber at controlled pressures. “E” mixers provide the end-user with greater control of the oxy / fuel ratio. This feature has an advantage in applications where a very carburizing or oxidizing flame is required. Also, due to 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 alternative 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 causing 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 Calorific line are designed to operate at fuel gas pressures as low as 0,015 bar. “F” mixers tend to produce a more homogenous oxy / fuel mixture because of the high turbulence in the mixing chamber. This feature is most important when using the more difficult to mix alternative fuels. “F” mixers tend to have a narrower operating range than “E” mixers but because of their superior mixing capabilities they tend to maximize calories output within that range. “F” mixers are used primarily with low pressure natural gas. However, they are also recommended for use with alternative fuels when maximum calories output is needed and / or positive pressure control of the fuel gas is not available.



WHATEVER
THE TORCH LENGTH

WHATEVER
THE METAL

WHATEVER
THE THICKNESS

WHATEVER
THE FUEL GAS

HARRIS MAKES A TORCH FOR THAT!

OVERVIEW

For over 115 years Harris' technology has produced numerous product innovations that are now industry standards. Harris pioneered and perfected the low pressure injector mixer that maximizes performance when using alternate fuels. All cutting torches are 100% tested.

- Harris torches are available for use with all fuel gases and with cutting capacities up to 900 mm
- Designed and manufactured according to ISO 5172

HARRIS OFFERS TORCHES SPECIFICALLY DESIGNED FOR THE BEST PERFORMANCE POSSIBLE WITH EACH FUEL GAS.

EQUAL PRESSURE "E-TYPE" MIXING SYSTEM

- Head mixing
- Equal pressure mixing of oxygen and fuel gas is extremely resistant to backfire
- Torch can be used with all fuel gases - just change the tips
- Recommended for Acetylene fuel gas

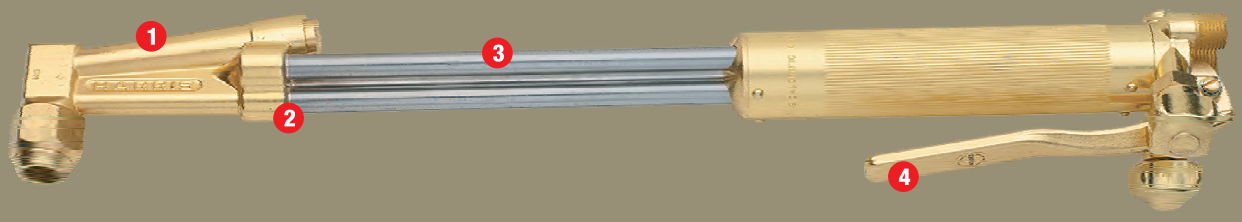
LOW PRESSURE "F-TYPE" MIXING SYSTEM

- Injector style
- Low pressure head mixing - fuel gas can be used at pressures as low as 0,015 bar
- Steady preheat flame during cutting
- Less fuel gas intake during cutting
- Pays for itself by drawing all fuel gas out of cylinder
- Recommended for Propane, LPG, Natural Gas and Mapp® fuel gases

Standard torches are not supplied with inlet hose connections or cutting tips.

* MAPP® is a registered trademark of Messer Group GmbH.

STANDARD HARRIS® CUTTING EQUIPMENT ADVANTAGES



1 SOLID FORGED HEAD WITH MIXER

- Resists abuse; less subject to distortion
- Resists flashback damage
- Easily accessible mixer

2 BRAZED CONSTRUCTION

- Prevents leaks
- Superior strength
- Longer service life

3 TRIANGULAR TUBE CONSTRUCTION

- Lightweight with strength and rigidity
- Longer service life

4 SOLID BRASS FORGED LEVER

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

242 MODEL

STRAIGHT CUTTING HAND TORCH

MODEL SHOWN: **242-2**

FEATURES:

- Cutting capacity up to 200 mm
- Total versatility - one torch suitable for use with all fuel gases: simply change tip for cutting, heating, gouging
- Available to suit all tip styles
- Long life torch - thought design, triangular stainless steel tubes, solid forged brass head
- Ease-on cutting oxygen control for smoother starts
- Head mixing and equal pressure design for maximum operator safety
- Stainless steel lever
- Fast heating and cutting
- Spare parts and accessories readily available
- Extended lengths available upon request
- Use with 6290 tips (see pages 106-109)

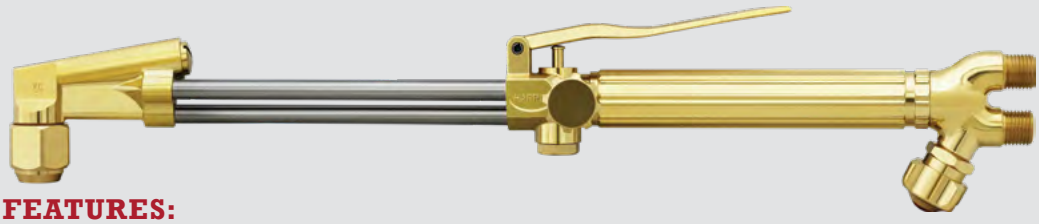
242 EQUAL PRESSURE TORCHES (FOR ACETYLENE AND ALTERNATIVE FUELS)

90°HEAD		70°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
242-2	1,15	**242-2A**	1,30	460
242-2L	1,20	**242-2AL**	1,35	530
242-2L36	1,40	**242-2AL36**	1,55	915

42 MODEL

STRAIGHT CUTTING HAND TORCH

MODEL SHOWN: **42-4**



FEATURES:

- Cuts up to 200 mm
- Lightweight
- Solid forged head and lever
- Triangular tube design
- Brazed tube connections
- Head mixing
- Use with 6290 tips (see pages 106-109)

HANDWHEEL VALVE

Model 42 available with handwheel valve. Add "V" to product code when ordering.

42-4F LOW PRESSURE "F" INJECTOR TORCHES (FOR MAXIMUM PERFORMANCE WITH ALTERNATIVE FUELS)

90°HEAD		70°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
42-4F	1,02	**42-4AF**	1,02	420
42-4FL	1,06	**42-4AFL**	1,06	500
42-3FL-835	1,21	**42-3AFL-835**	1,21	835
42-3FL-1000	1,35	**42-3AFL-1000**	1,35	1000

42-4E EQUAL PRESSURE "E" TORCHES (FOR ACETYLENE AND ALTERNATIVE FUELS)

90°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	
42-4E	0,99	420
42-4EL	1,04	500

42-4 LOW PRESSURE TORCHES (FOR ACETYLENE)

90°HEAD		70°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
42-4	1,03	**42-4A**	1,04	420
42-4L	1,07	**42-4AL**	1,07	500
42-3L-835	1,28	**42-3AL-835**	1,25	835
42-3L-1000	1,35	**42-3AL-1000**	1,35	1000

Available with G 3/8" A-UNI ISO 228 inlet threads, add "GB" to product code when ordering.

980 MODEL

STRAIGHT CUTTING HAND TORCH

MODEL SHOWN: **980**

FEATURES:

- Cuts up to 200 mm
- Stainless steel cutting lever with „hold-on" button
- Protected internal tip nut threads
- Needle valves for accurate flame control
- Solid forged brass head and lever
- In-line tube design
- Metal handle coated with tough black polyurethane
- Brazed tube connections
- Head mixing
- Use with 6290 tips (see pages 106-109)

980 EQUAL PRESSURE "E" TORCH (FOR ACETYLENE)

90°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	
980	1,11	480

980-F LOW PRESSURE "F" INJECTOR TORCH (FOR MAXIMUM PERFORMANCE ALTERNATIVE FUELS)

90°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	
980-F	1,09	480

980-NM MODEL

STRAIGHT CUTTING HAND TORCH

MODEL SHOWN: **980NM**

FEATURES:

- Cuts up to 200 mm
- Stainless steel cutting lever with „hold-on" button
- Protected internal tip nut threads
- Needle valves for accurate flame control
- Solid forged brass head and lever
- In-line tube design
- Metal handle coated with tough black polyurethane
- Brazed tube connections
- Tip mixing
- Use with 8290 tips (see page 110)

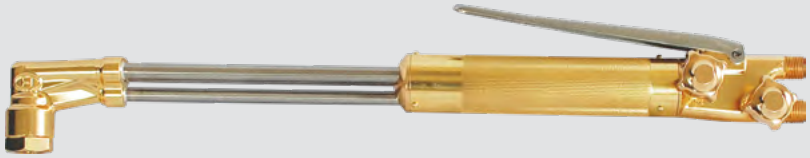
980-NM EQUAL PRESSURE TIP MIX TORCHES (FOR ACETYLENE AND ALTERNATIVE FUELS)

90°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	
980-NM	1,12	480

242-NM MODEL

STRAIGHT CUTTING HAND TORCH

MODEL SHOWN: **242NM**



FEATURES:

- Cutting capacity 200 mm
- One torch suitable for use with all fuel gases
- Toughest design - triangular stainless steel tubes
- Solid forged brass head
- Stainless steel cutting oxygen lever
- Brazed tube connections
- Tip mixing
- Use with 8290 tips (see page 110)

242-NM EQUAL PRESSURE TIP MIX TORCHES (FOR ACETYLENE OR ALTERNATIVE FUELS)

90°HEAD		70°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
242-2NM	1,10	**242-2NM-A**	1,25	460
242-2NML	1,16	**242-2NM-AL**	1,31	530
242-2NML36	1,35	**242-2NM-AL36**	1,50	915

Available with G 3/8" A-UNI ISO 228 inlet threads, add "GB" to product code when ordering.

62 MODEL

HEAVY DUTY STRAIGHT CUTTING TORCH

MODEL SHOWN:
62-5F

- The Model 62-5 is a heavy duty straight cutting torch that is the most recognizable Harris® torch. The 62-5 has become an industry standard. It is known as less expensive to own and operate and it is safer to use. Its triangular tube design and brazed connections offer strength, safety and a long service life.
- The Model 62-5E can be used with any fuel gas.
- The 62-5F is designed to provide maximum performance using low-cost alternate fuel gases.* Harris® special "F" injector can produce the hottest flame possible at the lowest gas pressures, making it the safest, most efficient design in the industry.

FEATURES:

- Cuts up to 300 mm steel
- Solid forged brass head and lever
- Triangular tube design
- Brazed connections
- Head mixing
- Use with 6290 tips (see pages 106-109)

HEAD ANGLES

70° Head

90° Head

180° Head

62-5E EQUAL PRESSURE "E" TORCHES (FOR ACETYLENE AND ALTERNATIVE FUELS)

90°HEAD		70°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
62-5E	1,27	62-5AE	1,25	460
62-5EL	1,32	62-5AEL	1,31	530
62-5EL-1000	1,73	62-5AEL-1000	1,58	900

62-5F LOW PRESSURE "F" INJECTOR TORCHES (FOR MAXIMUM PERFORMANCE WITH ALTERNATIVE FUELS)

90°HEAD		70°HEAD		180°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
62-5F	1,27	62-5AF	1,25	62-5BF	1,14	460
62-5FL	1,32	62-5AFL	1,31	62-5BFL	1,18	530
62-5FL-835	1,59	62-5AFL-835	1,58	62-5BFL-835	1,42	835
62-5FL-1000	1,70	62-5AFL-1000	1,69	62-5BFL-1000	1,52	900
62-5FL-1250	1,82	62-5AFL-1250	1,80	62-5BFL-1250	1,63	1210
62-5FL-1500	2,00	62-5AFL-1500	1,98	62-5BFL-1500	1,79	1500
62-5FL-2000	2,50	62-5AFL-2000	2,50	62-5BFL-2000	2,30	2000

62-5 LOW PRESSURE TORCHES (FOR ACETYLENE)

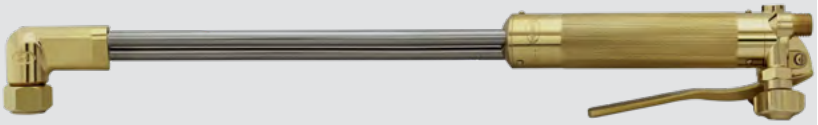
90°HEAD		70°HEAD		180°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
62-5	1,27	62-5A	1,25	62-5B	1,14	460
62-5L	1,32	62-5AL	1,31	62-5BL	1,18	530
62-5L-835	1,59	62-5AL-835	1,58	62-5BL-835	1,42	835
62-5L-1000	1,70	62-5AL-1000	1,69	62-5BL-1000	1,52	900
62-5L-1250	1,82	62-5AL-1250	1,80	62-5BL-1250	1,63	1210
62-5L-1500	2,00	62-5AL-1500	1,98	62-5BL-1500	1,79	1500

All models available with G 3/8" A-UNI ISO 228 inlet threads, add "GB" to product code when ordering.
* Propane or Propylene based fuels and natural gas.

H28 MODEL

HEAVY DUTY HAND CUTTING TORCH

MODEL SHOWN: **H28**



FEATURES:

- Cutting capacity 350 mm*
- Toughest design – triangular stainless steel tubes
- Solid forged brass head and lever
- Fast heating and cutting
- Operates with acetylene or alternative fuels
- Brazed tube connections
- Tip mix principle
- Use with 2890 tip mix tips (see page 110)

H28 EQUAL PRESSURE TIP MIX TORCHES (FOR ACETYLENE OR ALTERNATIVE FUELS)

	90°HEAD	
PART NO.	WEIGHT (kg)	LENGTH (mm)
H28	1,25	500
H28-L	1,55	820

28 MODEL

HEAVY DUTY HAND CUTTING TORCH

MODEL SHOWN: **28-2L**

FEATURES:

- Cuts up to 400 mm with acetylene*
- Cuts up to 500 mm with propane*
- Operates with acetylene or alternative fuels
- Stainless steel in-line tube design
- Brazed tube connections
- Tip mix principle
- Use with 2890 tip mix tips (see page 110)

28 EQUAL PRESSURE TIP MIX TORCHES (FOR ACETYLENE OR ALTERNATIVE FUELS)

	90°HEAD	
PART NO.	WEIGHT (kg)	LENGTH (mm)
28-2	1,42	500
28-2L	1,60	660

* For maximum cutting capacity it is recommended to use bulk oxygen back-up

136 MODEL

HEAVY DUTY FOUNDRY HAND CUTTING TORCHES

MODEL SHOWN: **136-2AFL**

APPLICATIONS:

- Foundry and special heavy cutting applications

FEATURES:

- Cuts up to 900 mm (27") for ½" oxygen hose (1HZADT-1 Hose Adaptor required) or 580 mm (23") for 3/8" oxygen hose
- Robust - stainless steel head and tubes
- Triangular tube design offers more stability to the operator
- Tip mix torch for oxygen/propane or natural gas (not to be used with acetylene)
- Requires oxygen and fuel gas hoses with minimum 3/8" internal diameter
- Internal tip nut

PART NO.	HEAD ANGLE	WEIGHT (kg)	LENGTH (mm)
136-2FL1200	**90°**	2,2	1200
136-2AFL1200	**70°**	2,2	1200
136-2BFL1200	**180°**	2,2	1200

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 150 cm 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: +48 74 646 23 52 (3)

ACCESSORIES FOR MODEL 136-2

HIGH CAPACITY TIPS

136 ONE-PIECE TIPS FOR OXY-PROPANE, NATURAL GAS*

MODEL SHOWN: **136**

- For Model 136 torch
- Increased tip life - heavy shell with shroud
- "U" spline standard preheat

PART NO.	PLATE THICKNESS (mm)	OPERATING PRESSURE (bar)		GAS FLOW (l/h)	
		OXYGEN	GAS	OXYGEN	GAS
136-11	500	4,0 - 5,5	0,5 - 1,0	27000 - 82000	1700 - 3400
136-13	700	4,0 - 5,5	0,7 - 1,0	59000 - 113000	1700 - 3400
136-15	900	5,5 - 7,0	1,0 - 1,4	71000 - 136000	2200 - 4200

140 ONE-PIECE TIPS FOR OXYGEN-PROPANE / NATURAL GAS*

MODEL SHOWN: **140**

- For Model 136 torch
- Non-shrouded
- "V" spline heavy preheat
- High speed “D” versions

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)
140-1	250 - 400	4,5 - 6,0	0,8 - 1,0
140-2	400 - 500	4,5 - 6,0	0,8 - 1,0
140-3	500 - 600	4,5 - 6,0	0,8 - 1,0
140-4	600 - 700	4,5 - 6,0	1,0 - 1,2
140-1D	250 - 400	6,2 - 9,0	0,8 - 1,0
140-2D	400 - 500	6,2 - 9,0	0,8 - 1,0
140-3D	500 - 600	6,2 - 9,0	0,8 - 1,0

* Not for use with Acetylene.

NOTE:
Maximum cutting capacity is for reference only, due to many variables beyond our control we are not able to guarantee that the operator will achieve this thickness. These torches cannot be used with single gas cylinders. Proper pressure regulators, flashback arresters and gas hoses have to be used to achieve proper gas flows and trouble-free operation. For additional information please contact your local distributor or our technical specialists team.

NUT & TWIN HOSES

MODEL SHOWN:
6000-DM and 136-DM

PART NO.	DESCRIPTION
6000-DM	Nut for Model 6000
136-DM	Nut for Model 136

MODEL SHOWN:
214460

PART NO.	DESCRIPTION	LENGTH (mm)	HOSE DIAMETER (mm)		THREADING	
			OXYGEN	FUEL GAS	OXYGEN	FUEL GAS
214460/10	Twin hoses	10	12,5	9,0	G 1/2"RH	G 3/8" RH
214460/20	Twin hoses	20	12,5	9,0	G 1/2"RH	G 3/8" RH

CUTTING ATTACHMENTS

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

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QUICK SELECTION GUIDE

HEAVY DUTY

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FOR 6290 HARRIS TIPS
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49-3 MODEL
FOR 6290 HARRIS TIPS
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MEDIUM DUTY

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LIGHT DUTY

36 MODEL
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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.eu for complete details on our entire product line.

73 MODEL

EQUAL PRESSURE "E" CUTTING ATTACHMENTS

MODEL SHOWN: **73-3**

FEATURES:

- Heavy duty equipment
- For acetylene and alternative fuels
- Cuts up to 150 mm
- Handwheel valve option

Handwheel valve

73 EQUAL PRESSURE "E" FOR ACETYLENE AND ALTERNATIVE FUELS

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
73-3	**90°**	6290	43-2; 263; 543	0,638	227
73-3B	**180°**	6290	43-2; 263; 543	0,630	253
73-3V*	**90°**	6290	43-2; 263; 543	0,650	227

49-3 MODEL

LOW PRESSURE CUTTING ATTACHMENTS

MODEL SHOWN: **49-3**

FEATURES:

- Heavy duty equipment
- Model 49 for acetylene
- Model 49-F for alternative fuels
- Cuts up to 150 mm
- Handwheel valve option

Handwheel valve

49 LOW PRESSURE FOR ACETYLENE

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
49-3	**90°**	6290	43-2; 263; 543	0,678	248
49-3A	**70°**	6290	43-2; 263; 543	0,686	258
49-3L500	**90°**	6290	43-2; 263; 543	0,750	490
49-3V*	**90°**	6290	43-2; 263; 543	0,692	248

49-F LOW PRESSURE "F" FOR ALTERNATIVE FUELS

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
49-3AF	**70°**	6290	43-2; 263; 543	0,674	258
49-3AFV*	**70°**	6290	43-2; 263; 543	0,700	258
49-3F	**90°**	6290	43-2; 263; 543	0,678	248
49-3FL500	**90°**	6290	43-2; 263; 543	0,804	490
49-3FV*	**90°**	6290	43-2; 263; 543	0,688	248

* "V" handwheel valve instead of lever.

273 MODEL

EQUAL PRESSURE CUTTING ATTACHMENTS

MODEL SHOWN: 273

FEATURES:

- Medium - heavy duty equipment
- Equal pressure mixing
- For acetylene and alternative fuels
- Cuts up to 150 mm

273 BRAZED IN MIXER

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
273-2	**90°**	6290	43-2; 263; 543	0,840	230
273-2A	**70°**	6290	43-2; 263; 543	0,845	230

273-NM

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
273-2-NM	**90°**	8290	43-2; 263; 543	0,800	230

72 MODEL

EQUAL PRESSURE "E" CUTTING ATTACHMENTS

MODEL SHOWN: 72

Handwheel valve

FEATURES:

- Medium duty equipment
- For acetylene and alternative fuels
- Cuts up to 100 mm
- Handwheel valve option

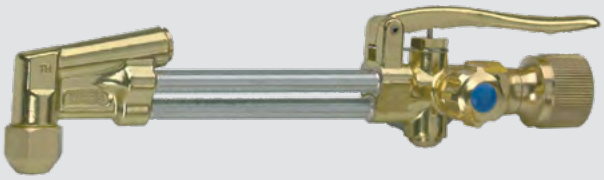
72 EQUAL PRESSURE "E" FOR ACETYLENE AND ALTERNATIVE FUELS

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
72-3	**90°**	6290	85	0,636	227
72-3V*	**90°**	6290	85	0,642	227

36 MODEL

EQUAL PRESSURE "E" CUTTING ATTACHMENTS

MODEL SHOWN: 36-2



FEATURES:

- Light duty equipment
- For acetylene and alternative fuels
- Cuts up to 75 mm

36 EQUAL PRESSURE "E" FOR ACETYLENE AND ALTERNATIVE FUELS

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
36-2	**90°**	3690	19-6	0,326	189

* "V" handwheel valve instead of lever.

TORCH HANDLES

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

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QUICK SELECTION GUIDE

HEAVY DUTY

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HIGH CAPACITY
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MEDIUM DUTY

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LIGHT DUTY

15 MODEL
LIGHTWEIGHT
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MODEL SHOWN:
85

OVERVIEW

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

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

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

43 MODEL

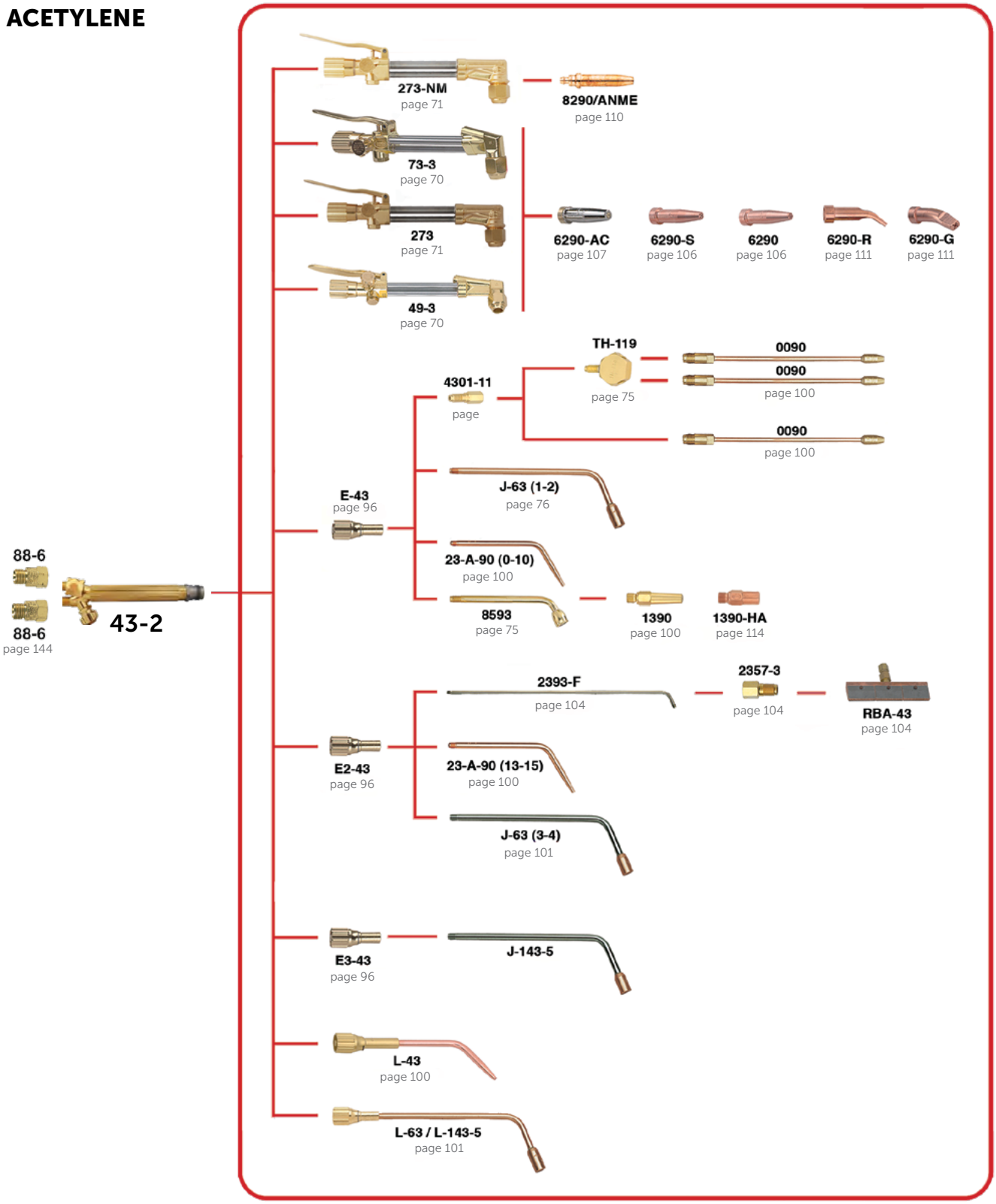
HIGH CAPACITY COMBINATION HANDLE

MODEL SHOWN:
43-2

FEATURES:

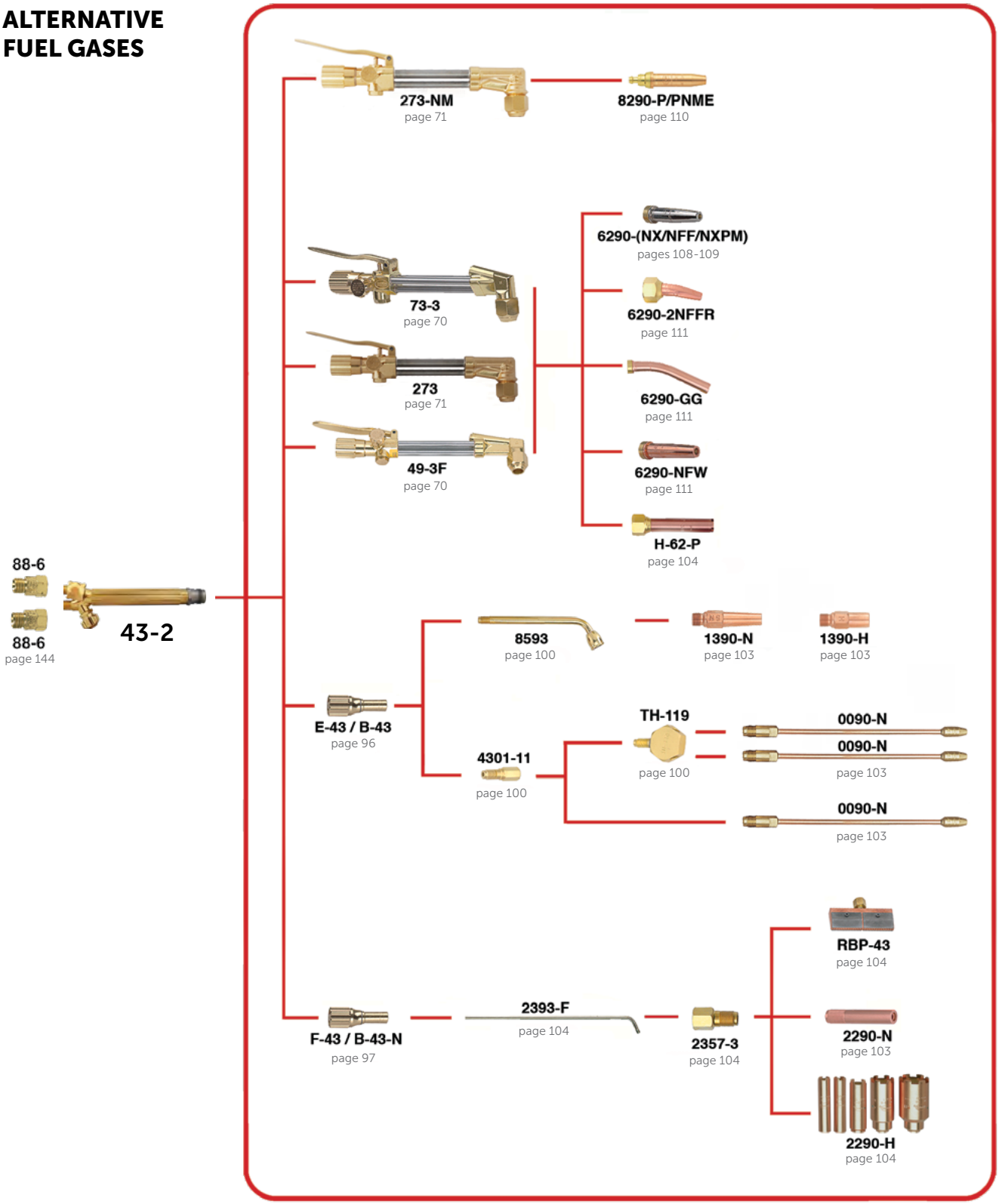
- Welds up to 50 mm
- Cuts up to 150 mm
- For acetylene or alternative fuel gases
- Stainless steel head
- Tough extruded brass handle
- Stainless steel ball valves
- No screws or soldered parts for easier maintenance

ACETYLENE



PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
43-2	49-3; 59-3; 73-3; 273	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,550	208
43-2GB	49-3; 59-3; 73-3; 273	G 3/8" A-RH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	0,558	208

ALTERNATIVE FUEL GASES



263 MODEL

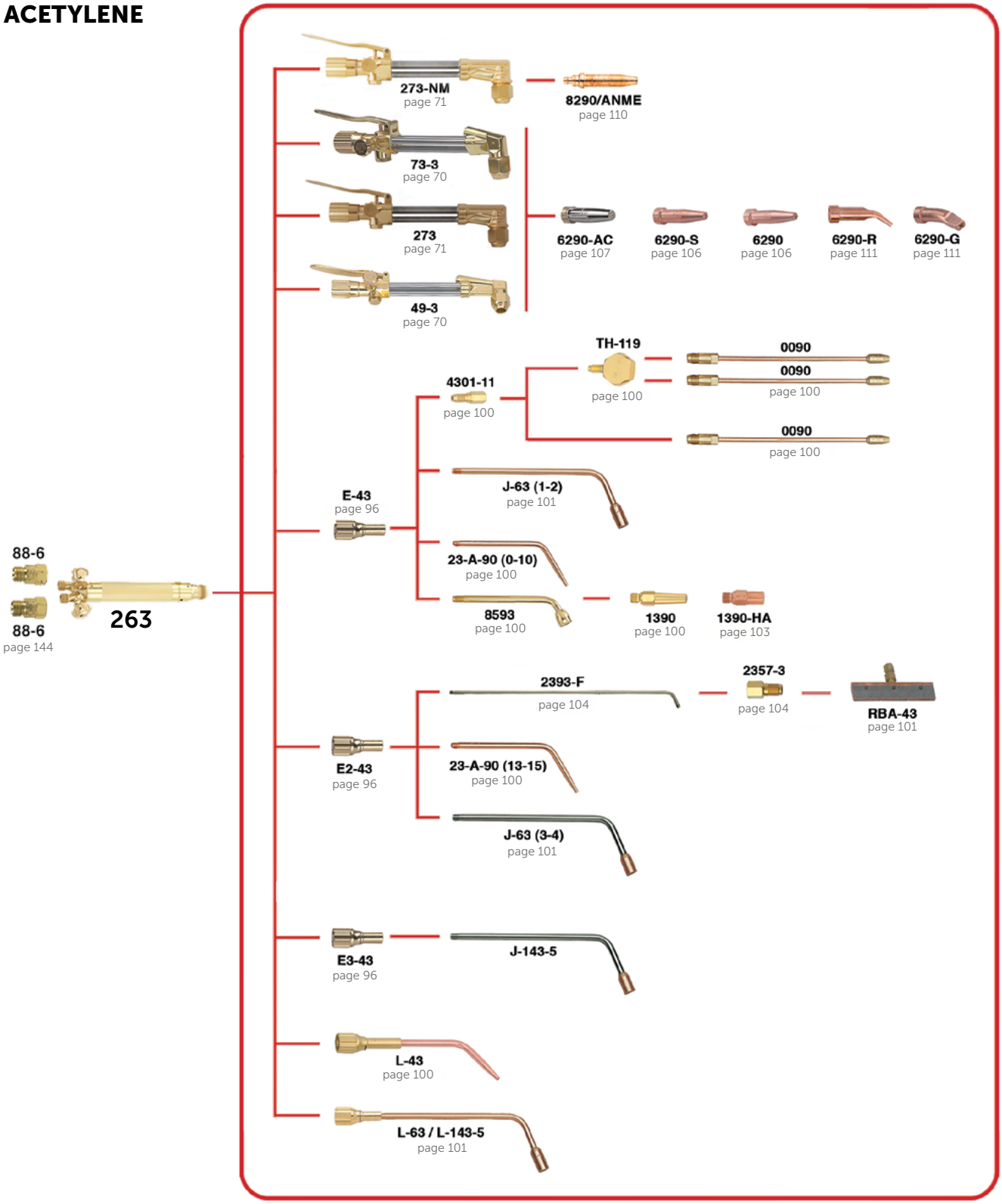
HIGH CAPACITY COMBINATION HANDLE

MODEL SHOWN: 263

FEATURES:

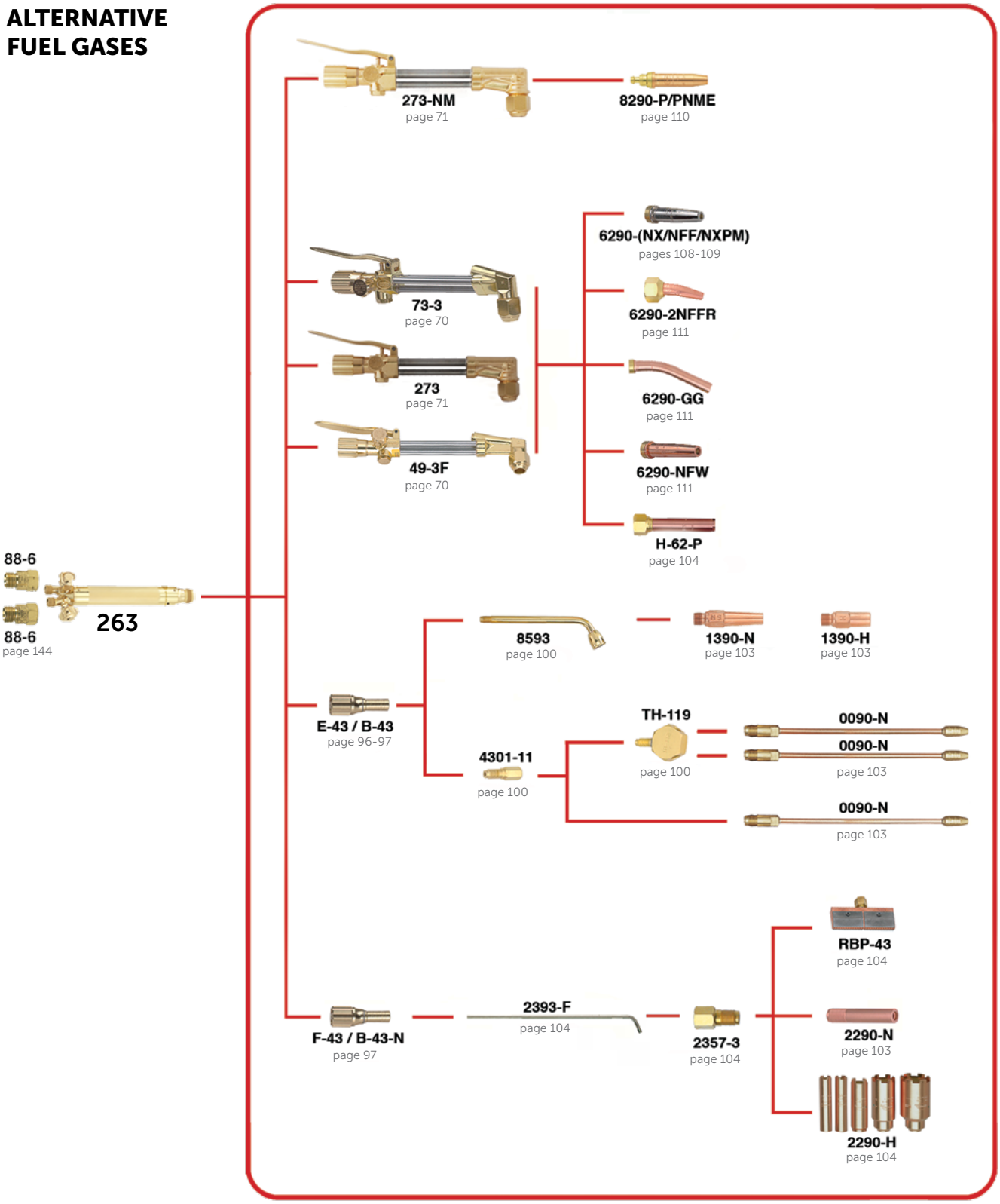
- Welds up to 50 mm
- Cuts up to 150 mm
- For acetylene or alternative fuel gases
- High precision ball valves
- Two separate gas tubes
- Brass handle

ACETYLENE



PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
263	49-3; 59-3; 73-3; 273	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,550	208
263-GB	49-3; 59-3; 73-3; 273	G 3/8" A-RH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	0,558	208

ALTERNATIVE FUEL GASES



9

543 MODEL

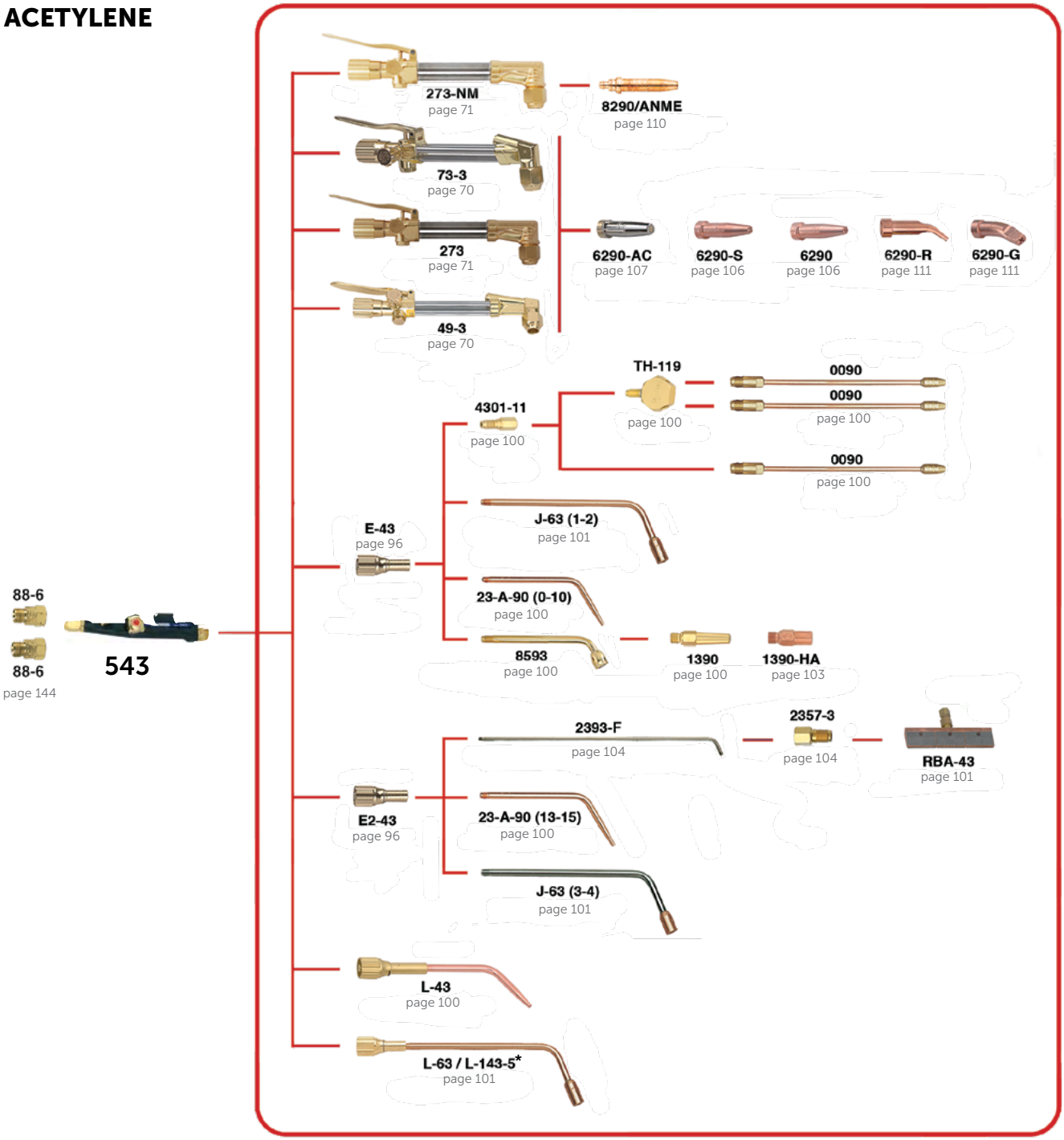
ERGONOMIC COMBINATION HANDLE

MODEL SHOWN: 543

FEATURES:

- Welds up to 50 mm
- Cuts up to 150 mm
- For acetylene or alternative fuel gases
- Ergonomic design with front valves
- Forged aluminium alloy body
- High precision ball valves
- Coated with tough black polyurethane for longer life

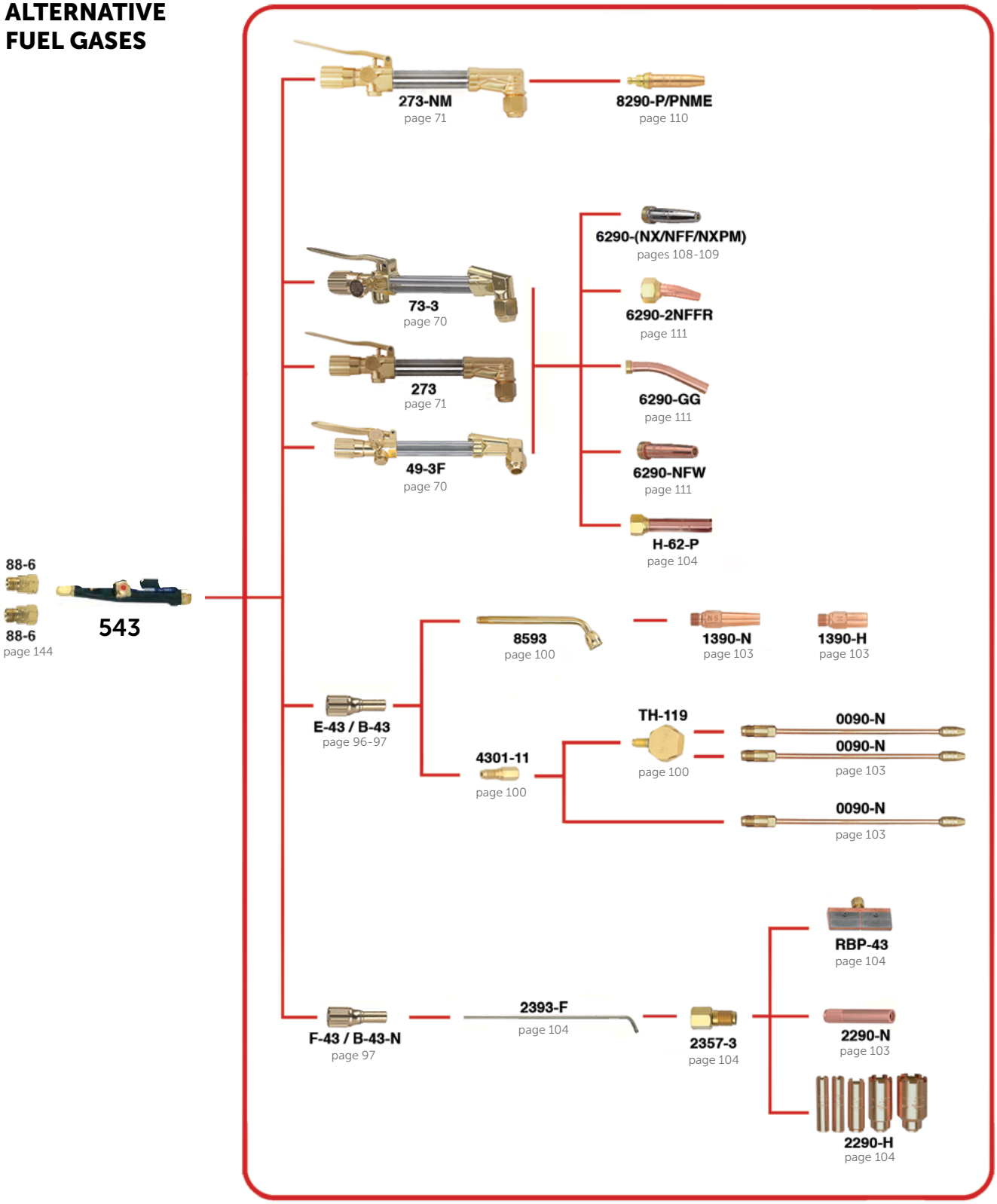
ACETYLENE



* Caution: exceeds the withdrawal capacity of the one standard acetylene cylinder

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
543	49-3; 59-3; 73-3; 273	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,502	211
543D	49-3; 59-3; 73-3; 273	G 1/4" A-RH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	0,503	211
543GB	49-3; 59-3; 73-3; 273	G 3/8" A-RH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	0,507	211

ALTERNATIVE FUEL GASES



85 MODEL

MEDIUM DUTY COMBINATION HANDLE

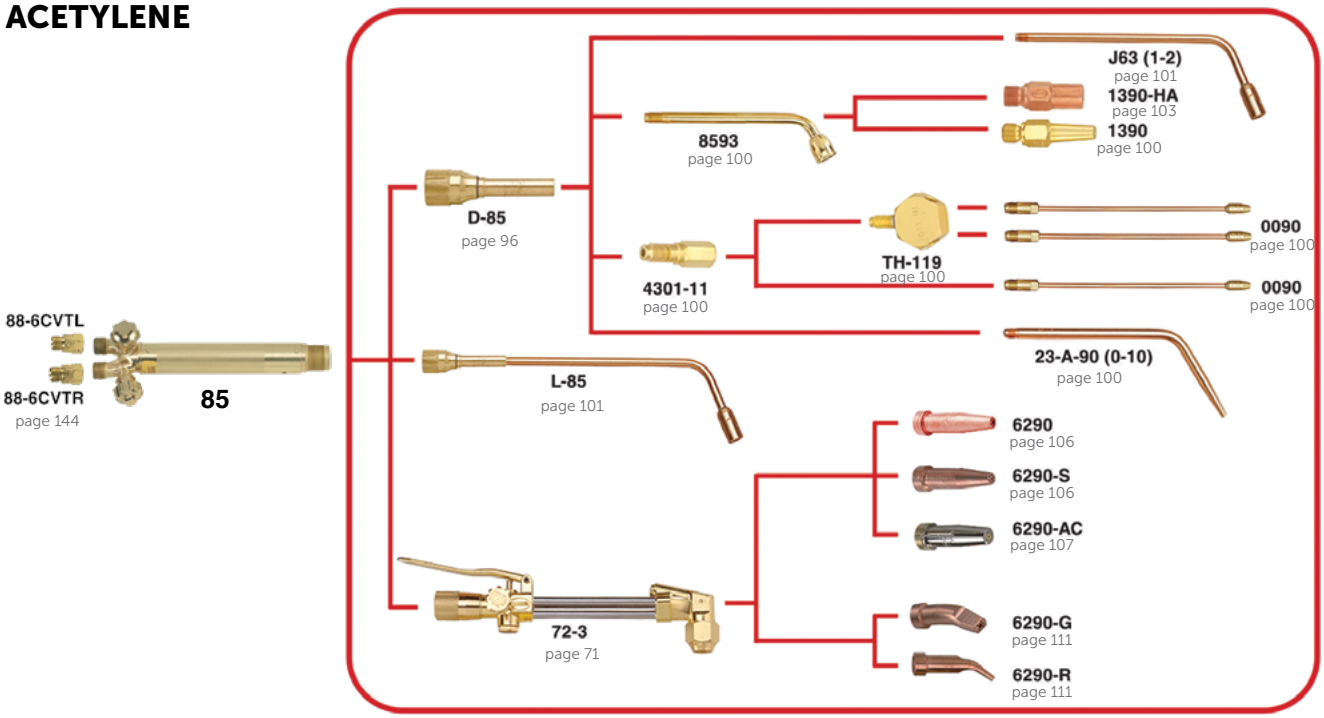
MODEL SHOWN: **85**

FEATURES:

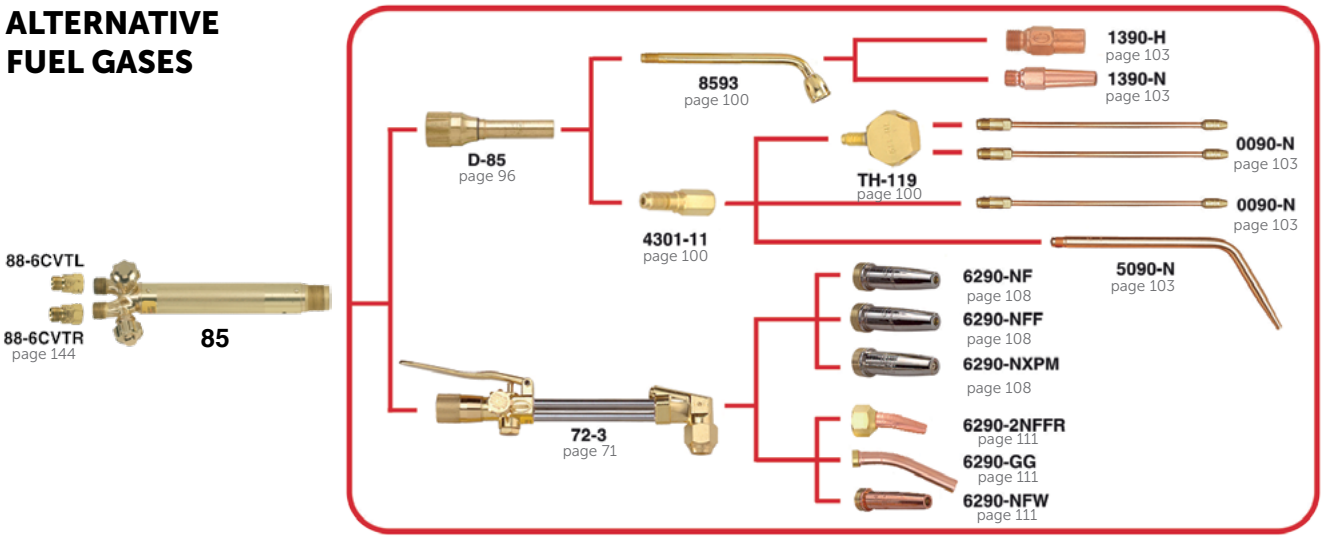
- Welds up to 20 mm
- Cuts up to 100 mm
- For acetylene or alternative fuel gases
- Brass torch handle
- Silver brazed twin tube construction for safety and durability
- Ball valve for fast and accurate flame adjustment

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
85	72-3	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,362	183

ACETYLENE



ALTERNATIVE FUEL GASES



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 450°C (840°F) 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 450°C (840°F).

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.

50 MODEL

AUTOMATIC TORCH HANDLE FOR WELDING AND BRAZING

MODEL SHOWN: **50**

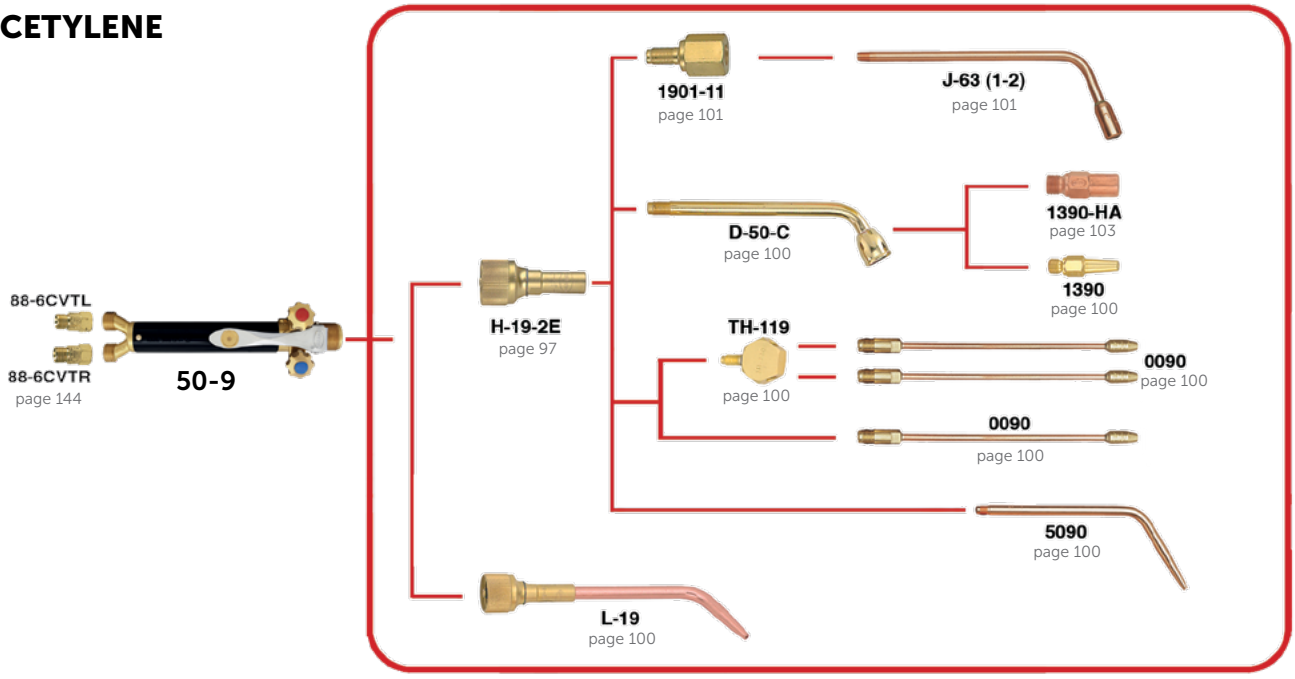
The Harris 50-9 and 50-10 automatic torch handles feature unique gas control systems to reduce operating time and improve safety and convenience. The thumb operated gas control on/off and adjustable pilot light eliminate relighting and flame readjustment each time the torch is used. The on/off feature can be used for cutting, brazing, and welding with all oxy fuel gases. The pilot flame light feature is not recommended when using cutting attachments or heating tips.

FEATURES:

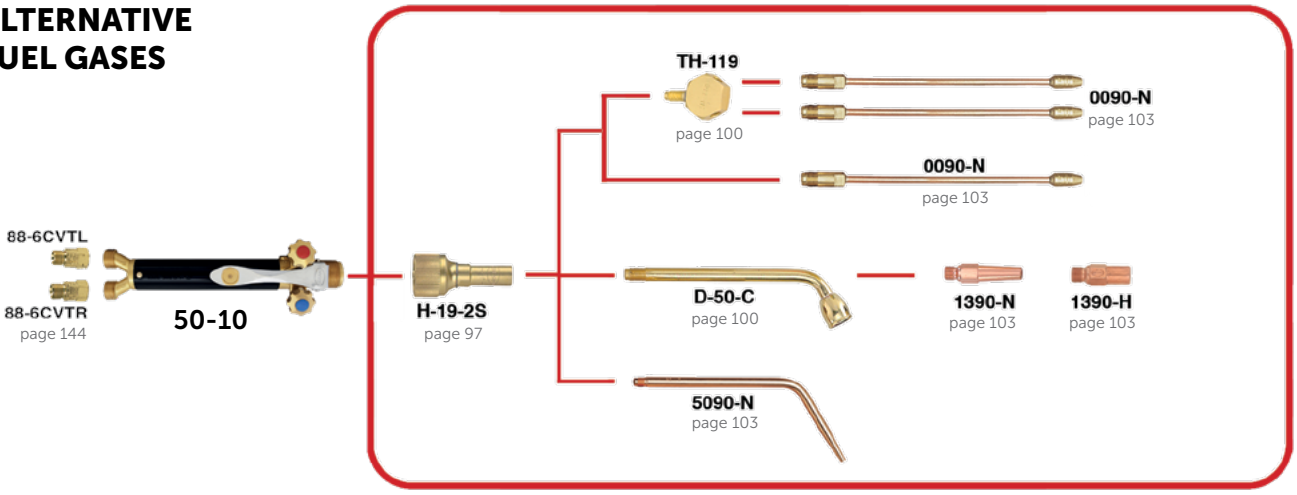
- Welds up to 14 mm
- Automatic on/off gas control
- Adjustable pilot light
- Model 50-9 for acetylene
- Model 50-10 for alternative fuel gases

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
50-9	36-2	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,310	169
50-9-GB	36-2	G 1/4" A-RH-UNI ISO 228	G 1/4" A-LH-UNI ISO 228	0,308	169
50-10	36-2	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,310	169
50-10-GB	36-2	G 1/4" A-RH-UNI ISO 228	G 1/4" A-LH-UNI ISO 228	0,308	169

ACETYLENE



ALTERNATIVE FUEL GASES



Note: For additional welding / brazing equipment see our Brazing and Soldering Guide or Production Brazing Catalogue

19 MODEL

MEDIUM DUTY COMBINATION HANDLE

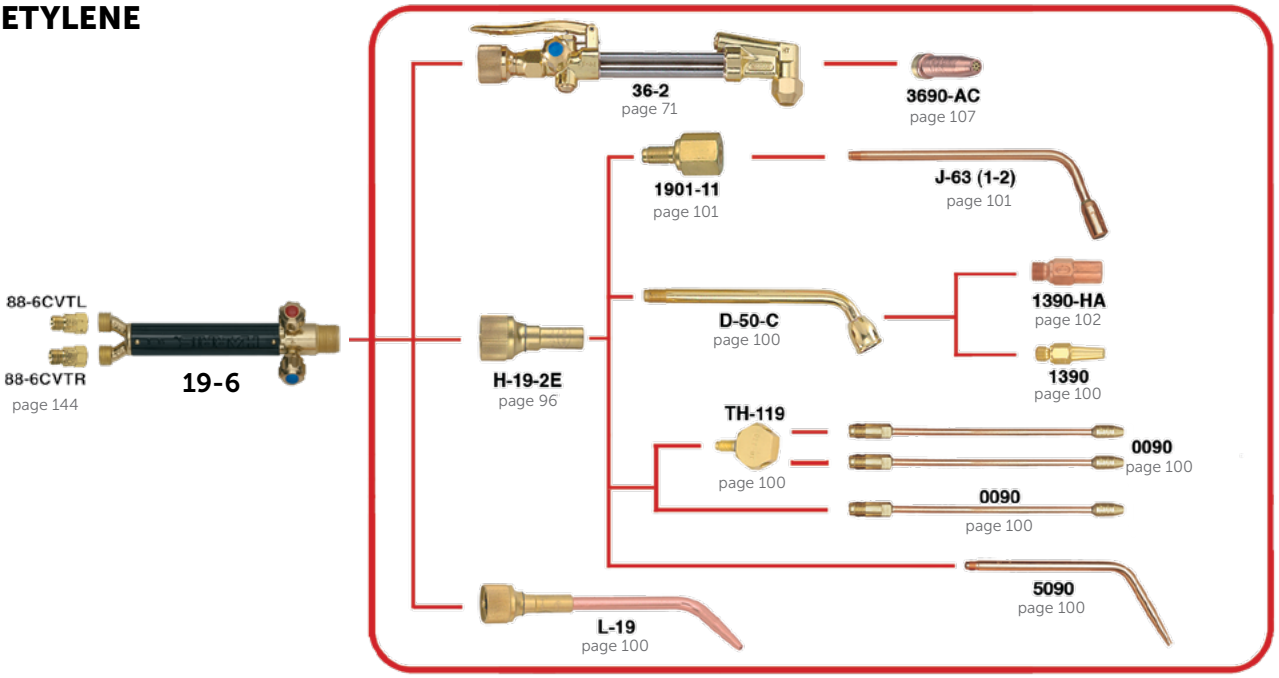
MODEL SHOWN: 19

FEATURES:

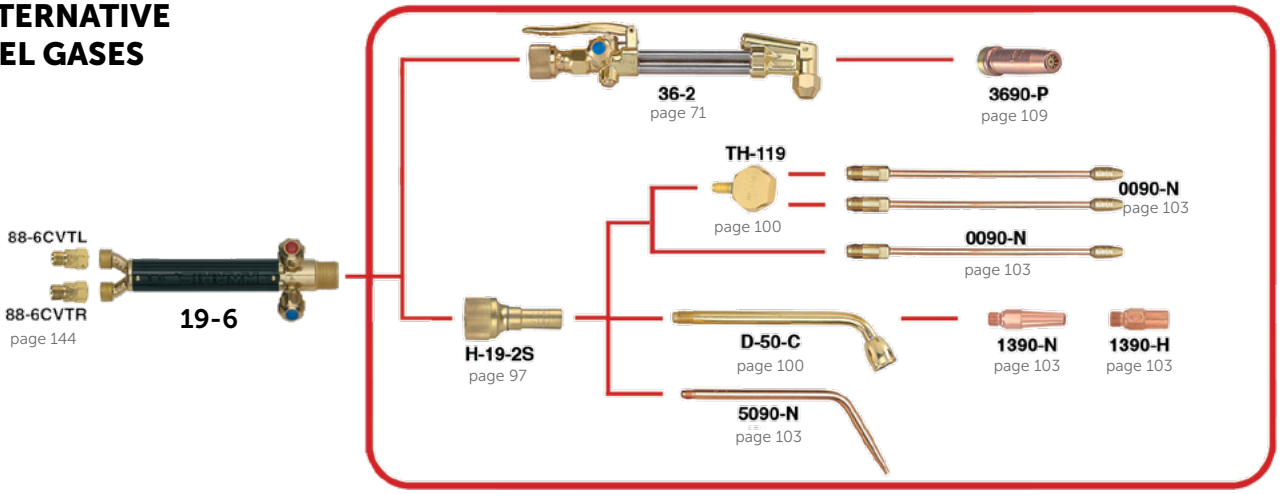
- Welds up to 14 mm
- Cuts up to 75 mm
- For acetylene or alternative fuel gases
- Lightweight handle
- Silver brazed twin tube construction for safety and durability
- Valves located at the front of handle for more precise control while brazing

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
19-6	36-2	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,240	154
19-6-GB	36-2	G 1/4" A-RH-UNI ISO 228	G 1/4" A-LH-UNI ISO 228	0,238	154

ACETYLENE



ALTERNATIVE FUEL GASES



Note: For additional welding / brazing equipment see our Brazing and Soldering Guide or Production Brazing Catalogue

9

15
MODEL

TORCH HANDLE FOR WELDING AND BRAZING

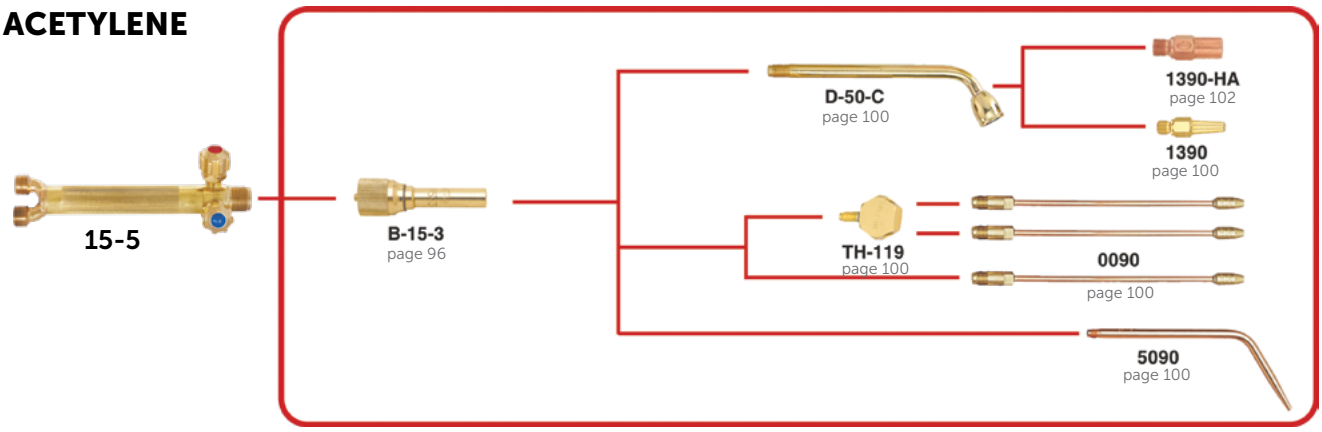
MODEL SHOWN:
15-5

FEATURES:

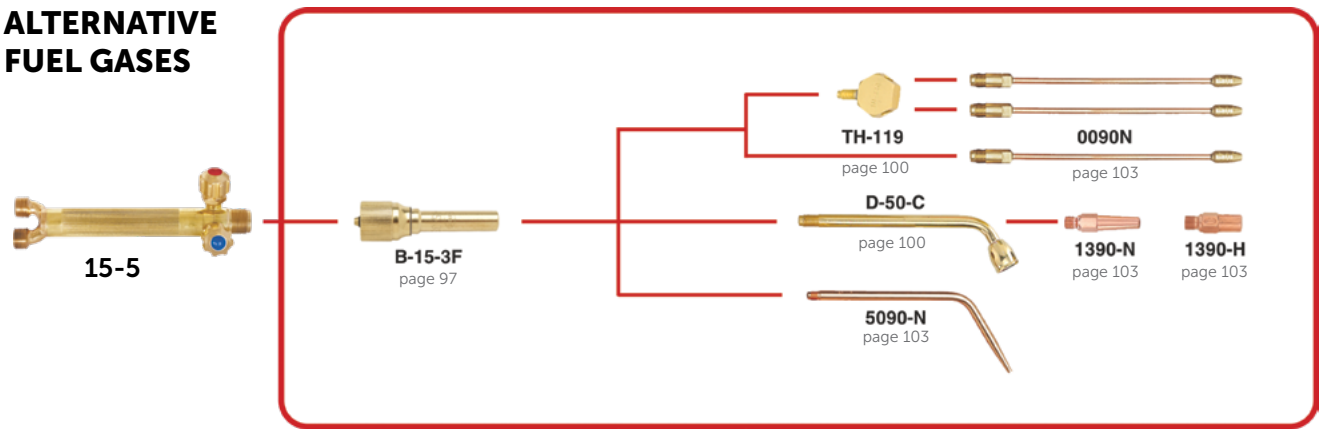
- Welds up to 7,9 mm
- Versatile, for all gasses
- Lightweight and compact design
- Ergonomic
- Front valves for convenient adjustment
- Permits changing flame settings with one hand

PART NO.	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
15-5	3/8" - 24 - UNF	3/8" - 24 - UNF	0,227	146
15-5GB	G 1/4" A-RH-UNI ISO 228	G 1/4" A-LH-UNI ISO 228	0,227	146

ACETYLENE



ALTERNATIVE FUEL GASES



Note: For additional welding / brazing equipment see our Brazing and Soldering Guide or Production Brazing Catalogue

105 MODEL

EXTRA LIGHTWEIGHT TORCH HANDLE FOR WELDING, BRAZING, SOLDERING AND LIGHT HEATING

MODEL SHOWN: 105

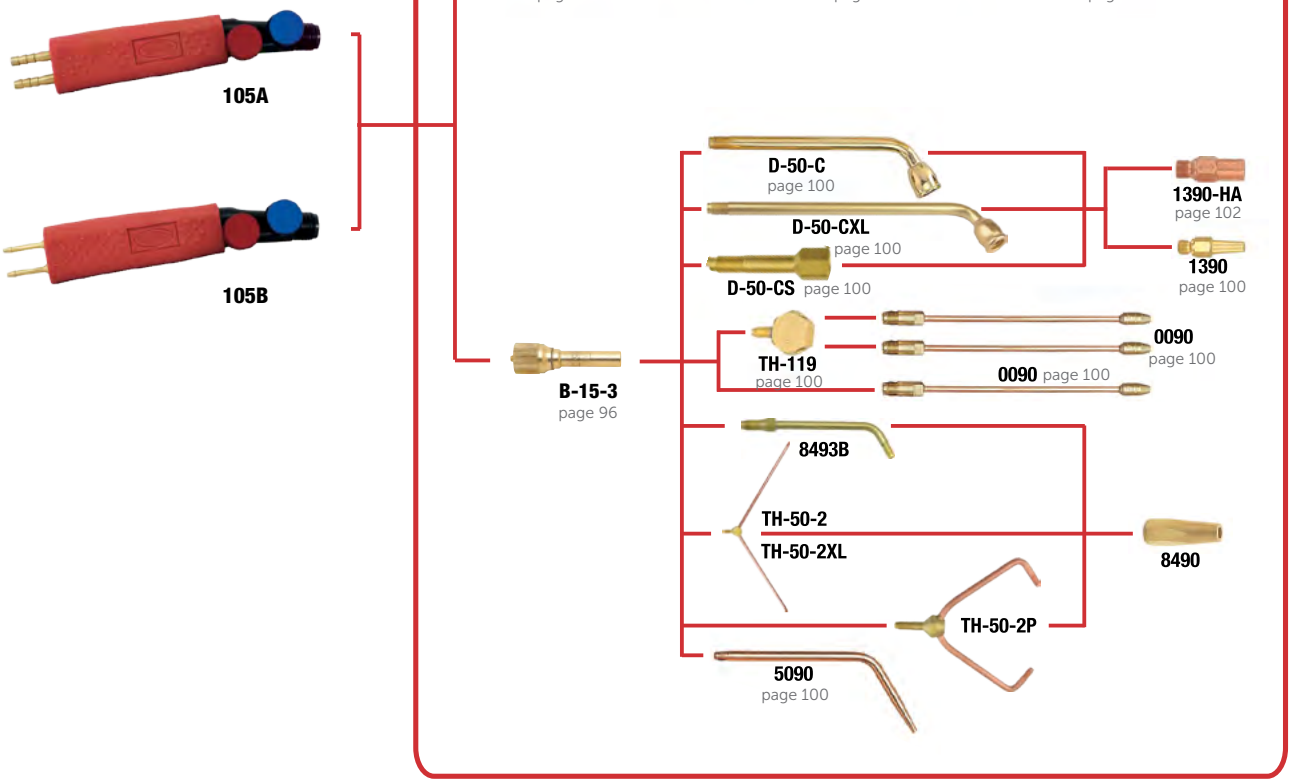
FEATURES:

- Welds up to 6 mm (with acetylene)
- For acetylene or alternative fuel gases
- High flow
- Ergonomic
- Lightweight – only 115 g (105B)
- Compact design
- Length – 150 mm
- Front gas valves allow precise one-hand flame adjustment
- Excellent for production brazing
- Use with 5 mm (105A) or 3,2 mm (105B) internal diameter gas hoses
- In order to use a full range of Harris brazing tips connect the 10501 adapter to the mixer or replace the M105 mixer by B-15-3 (B-15-3F)

105A

105B

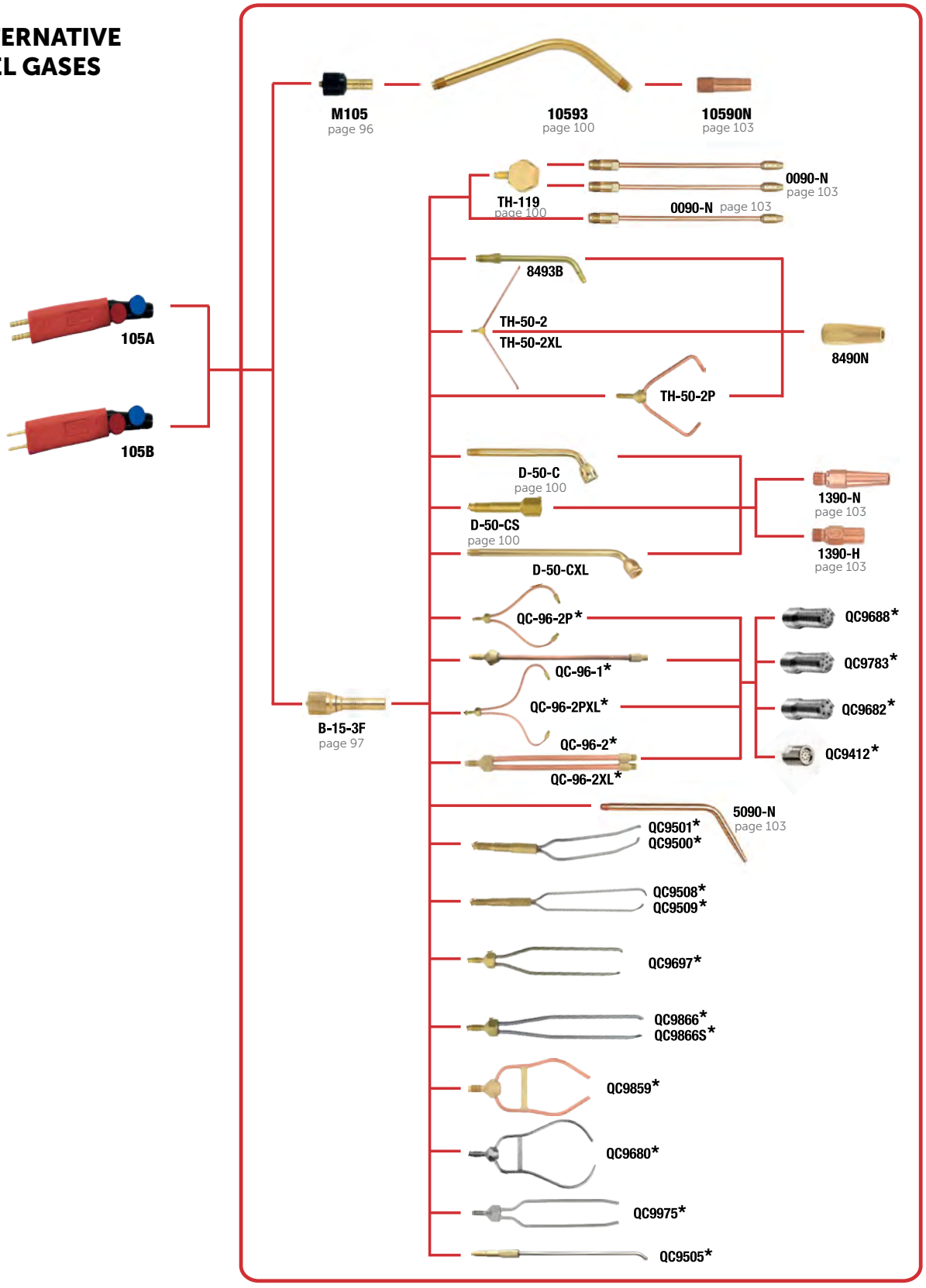
ACETYLENE



Note: For additional welding / brazing equipment see our Brazing and Soldering Guide or Production Brazing Catalogue

PART NO.	HOSE CONNECTION (mm)	FUEL GAS	MIXER	MIXING SYSTEM	TIP TUBE	ACETYLENE WELDING/ BRAZING TIPS	ALTERNATIVE GASES BRAZING TIPS
105A	5	Acetylene, Alternative gases	M105	E	10593	105900, 105901, 105903, 105905, 105906	105900N, 105901N, 105903N, 105905N, 105906N
105B	3,2	Acetylene, Alternative gases	M105	E	10593	105900, 105901, 105903, 105905, 105906	105900N, 105901N, 105903N, 105905N, 105906N

ALTERNATIVE FUEL GASES



*Tips compatible also with handle models: 15, 19 and 50.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HARRIS
A LINCOLN ELECTRIC COMPANY

SPECIAL APPLICATION TORCHES

HARRIS OFFERS SPECIAL APPLICATION TORCHES FOR AUTOMATIC SOLDERING AND HEATING, FLAME STRAIGHTENING AND METAL POWDER SPRAYING.

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QUICK SELECTION GUIDE

SOLDERING AND HEATING ASSEMBLY

189-2 MODEL
TORCH ASSEMBLY
p.90

81-12 MODEL
TIP
p.90

FLAME STRAIGHTENING MULTI-TIP TORCHES

FST3380 MODEL
3 FLAMES
p.91

FST51200 MODEL
5 FLAMES
p.91

METAL POWDER SPRAYING ASSEMBLY

187 MODEL
TORCH ASSEMBLY
p.93

18790 MODEL
TIP
p.93

1878ILT MODEL
POWDER CONTAINER
p.93

MODEL SHOWN:
189-2

OVERVIEW

The 189-2 is an automatic heating and soldering torch designed with attention to details. It can be used with propane or natural gas. The feature that makes it stand out is the adjustable tip that can be positioned in any direction.

TYPICAL APPLICATIONS

- Large area soft soldering
- Preheating castings for welding
- Mould drying
- Metal cleaning

PRO INFO

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

189-2 MODEL

AUTOMATIC SOLDERING AND HEATING ASSEMBLY FOR PROPANE OR NATURAL GAS

MODEL SHOWN:
189-2

The Harris 189-2 heating and soldering torch is designed to operate with natural gas (0,015 bar or more) or propane in combination with 3 to 7 bar of compressed air only.
The 189-2 is completely automatic. Once adjusted to the proper flame, the pilot light can be retained during down time and full flame returned instantly by pressing the hand lever. The pilot light can be enlarged to a full “smoothing on” secondary flame when used for soldering. The tip can be positioned in any direction.

FEATURES:

- Large area soft soldering
- Preheating castings for welding
- Heating pipes in chemical plants
- Mould drying
- Metal cleaning (brewery, vats, rubber mould, etc.)
- Burning paint
- Heating forming dies prior to hard facing
- Stress relieving die shoes
- Annealing copper tubing
- For use with compressed air only

PART NO.	HEATTING TIP	THREAD AIR	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
1892	81-12	9/16"-18-UNF-3A-RH	9/16”-18-UNF-3A-LH	0,85	326
1892GB	81-12	G 3/8” A-RH-UNI ISO 228	G 3/8” A-LH-UNI ISO 228	1,16	342
1892A600	81-12	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-RH	1,25	716

81-12 MODEL

HEATING TIP

MODEL SHOWN:
81-12 TIP

The 81-12 heating tip is a special bell-shaped tip made of heat resistant stainless still.

FEATURES:

- Designed to operate with natural gas or propane in combination with compressed air
- Tip can be swiveled in any direction

PART NO.	HEAT OUTPUT (Kcal/h)	COMPRESSED AIR		FUEL GAS	
		PRESSURE (bar)	FLOW (l/h)	PRESSURE (bar)	FLOW (l/h)
			PROPANE		
81-12	151600	7	32000	0,3	6600
			NATURAL GAS		
81-12	41500	7	32000	0,015	5400

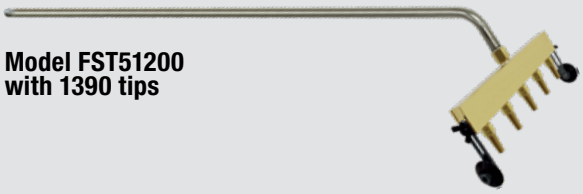
Caution: This torch should never be connected to oxygen or acetylene.

FLAME STRAIGHTENING MULTI-TIP TORCHES

FEATURES:

- For acetylene or alternative fuel gases
- Three or five single flame models
- High heat density in a restricted area
- Rapid heat transfer
- Safe operation
- Wide range of stainless tip tubes lengths from which to select the best for each job
- Equipped with wheel-car for easy movement
- For repairing damaged, distorted steel, nickel, copper, brass, aluminium caused by welding, collisions, fires, etc

Model FST3380
with 1390 tips

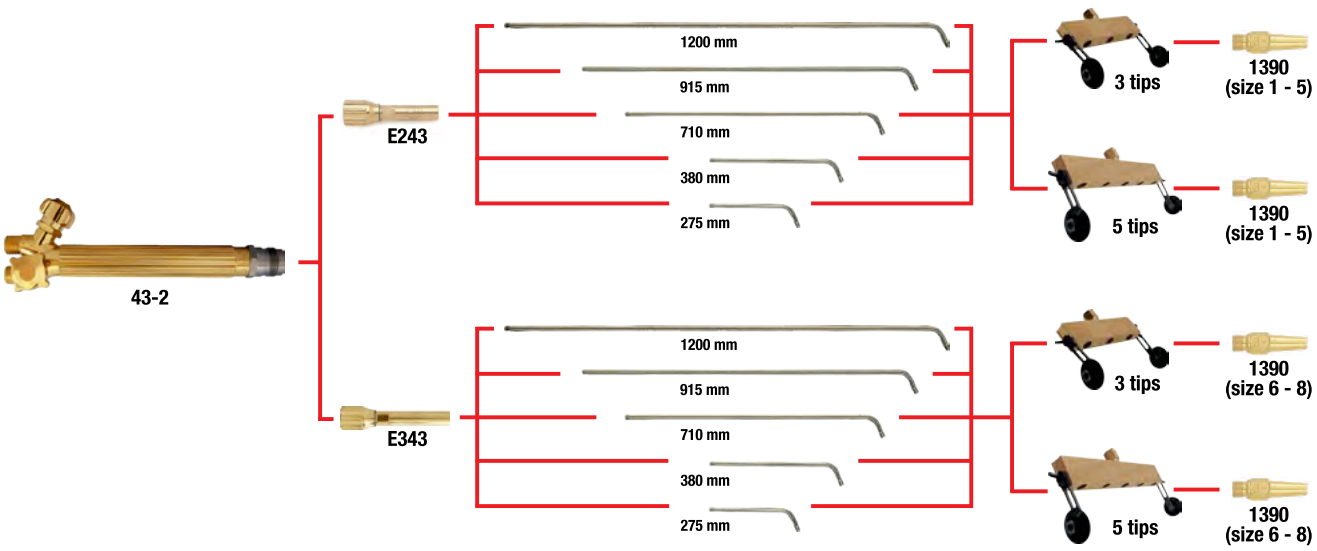


Model FST51200
with 1390 tips

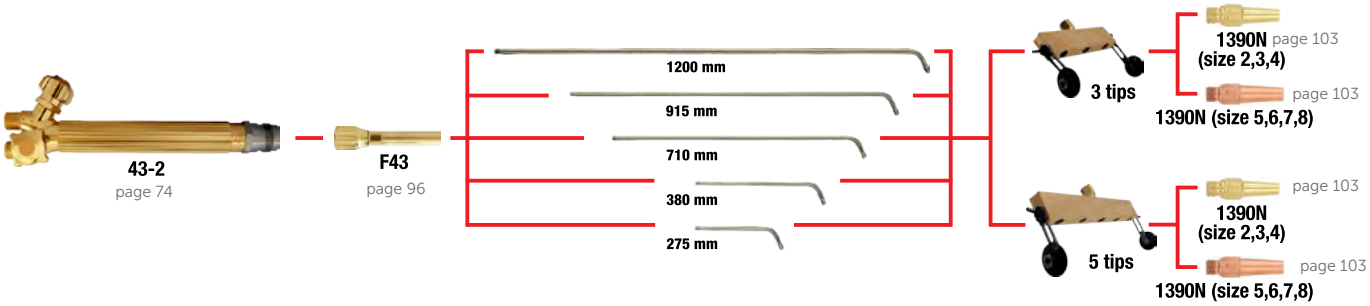
ACETYLENE TIPS PERFORMANCE DATA CHART

TIP MODEL	OXYGEN (bar)	ACETYLENE (bar)	FLOW (l/h) 3 TIP FLAME	HEATING OUTPUT (Kcal/h) 3 TIP FLAME	FLOW (l/h) 5 TIP FLAME	HEATING OUTPUT (Kcal/h) 5 TIP FLAME
1390-00	0,3 - 0,8	0,3 - 0,8	60	730	130	1650
1390-0	0,3 - 0,8	0,3 - 0,8	100	1320	230	2950
1390-1	0,3 - 0,8	0,3 - 0,8	150	1900	330	4300
1390-2	0,3 - 0,8	0,3 - 0,8	230	2950	510	6600
1390-3	0,3 - 0,8	0,3 - 0,8	360	4700	810	10530
1390-4	0,3 - 0,8	0,3 - 0,8	560	7300	1270	16560
1390-5	0,3 - 0,8	0,3 - 0,8	790	10250	1770	23030
1390-6	0,3 - 0,8	0,3 - 0,8	1130	14650	2530	32900
1390-7	0,3 - 0,8	0,3 - 0,8	1580	20500	3550	46070
1390-8	0,3 - 0,8	0,3 - 0,8	2250	29250	5060	65800

Oxy - Acetylene Flame Straightening



Oxy - Alternative Fuels Flame Straightening



ALTERNATIVE FUEL TIPS PERFORMANCE DATA CHART						
TIP MODEL	OXYGEN (bar)	FUEL GAS (bar)	FLOW (l/h) 3 TIP FLAME	HEATING OUTPUT (Kcal/h) 3 TIP FLAME	FLOW (l/h) 5 TIP FLAME	HEATING OUTPUT (Kcal/h) 5 TIP FLAME
1390-2N	0,3 - 1,0	0,3 - 1,0	160	3400	330	7200
1390-3N	0,3 - 1,0	0,3 - 1,0	300	6400	620	13450
1390-4N	0,3 - 1,0	0,3 - 1,0	370	7800	780	16790
1390-5N	0,3 - 1,0	0,3 - 1,0	470	10270	1000	21580
1390-6N	0,3 - 1,0	0,3 - 1,0	580	12550	1220	26380
1390-7N	0,3 - 1,0	0,3 - 1,0	730	15750	1530	33100
1390-8N	0,3 - 1,0	0,3 - 1,0	790	17110	1660	35980

HARRIS® FLAME STRAIGHTENING MULTI-TIPS TORCHES

THE BEST FOR REPAIRING DAMAGED AND DISTORTED METALS

187 MODEL

METAL POWDER SPRAYING ASSEMBLY FOR OXY-ACETYLENE FLAME

MODEL SHOWN:
187

The Model 187 is designed to provide optimum uniform powder flow commensurate with required gas flow and tip size used. Powder recoveries of up to 95% are common, depending on the part being hardfaced and type and grade of powder being used. The torch is lightweight, thereby reducing operator fatigue to a minimum.
The torch is safe to operate. A special safety feature of the torch provides a venturi tube within the hopper that directs blowback outside and not into the hopper. Whether blowback is caused by simple back flushing to clean the powder passages or by accidental backfiring there is little chance of powder blowing into an operator's face or of accumulating mixed gases in the hopper.

FEATURES:

- Metal spraying with cobalt, nickel and iron bases, tungsten carbide and tribaloy
- Operates with acetylene
- Lightweight design
- Safety system to avoid powder blowback and mixed gases into the powder container
- Uses standard Model 85 handle

PART NO.	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)	ACCESSORIES INCLUDED
187	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,45	484	18790-45H Tip 18790-48H Tip 18790-53H Tip 18781LT Powder Container

18790 MODEL

TIPS

MODEL SHOWN:
18790-45H

Tip assembly can rotate 360° to allow for spray operations in any desired direction

PART NO.	OXYGEN PRESSURE (bar)		ACETYLENE PRESSURE (bar)		OXYGEN FLOW (l/h)		ACETYLENE FLOW (l/h)		HEATING POWER (Kcal/h)	
18790-45H	3,0	5,0	0,5	0,8	1125	1875	600	1000	13550	183600
18790-48H	2,0	3,5	0,3	0,5	750	1300	400	600	8130	110160
18790-53H	1,5	2,5	0,2	0,4	600	1000	300	500	6780	91870

18781LT MODEL

POWDER CONTAINER

MODEL SHOWN:
18781LT

FEATURES:

- Powder container capacity of 0,45 kg ideal for small jobs
- Powder recoveries of up to 95%

MIXERS

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

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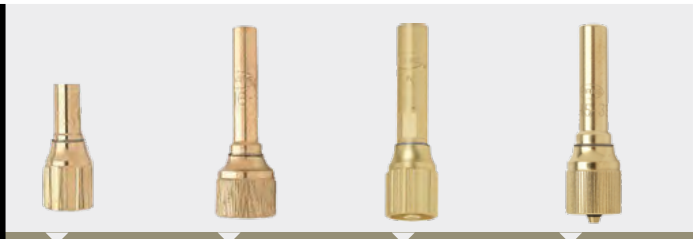
QUICK SELECTION GUIDE

EQUAL PRESSURE

E-43/F-43 MODEL	E-243 MODEL	E3-43 MODEL	D-85 MODEL	H-19-2E MODEL	M105 MODEL	B-15-3 MODEL
p.96	p.96	p.96	p.96	p.96	p.96	p.96

LOW PRESSURE



B-43-N MODEL	H-19-2S MODEL	B-43-1 MODEL	B-15-3F MODEL
p.97	p.97	p.97	p.97

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MODEL SHOWN:
B-15-3

OVERVIEW

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

TYPICAL APPLICATIONS

- Metal fabrication
- Shipbuilding
- Maintenance
- Construction

PRO INFO

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

EQUAL PRESSURE TYPE MIXERS

E-43

E-243

E3-43/F-43

D-85

H-19-2E

M105

B-15-3

PART NO.	FITS HANDLE	GAS	WELDING AND BRAZING TIPS*	HEATING TIPS*	BRAZING TIPS*	FLAME CLEANING TIPS*
M105	105	Oxy-acetylene	1059 size 00, 01, 03, 05, 06	-	-	-
M105	105	Oxy-propane	-	-	1059N size 00, 01, 03, 05, 06	-
B-15-3	15-3, 15-4, 15-4GB, 15-5, 15-5GB, 105	Oxy-acetylene	5090 size 0, 1, 2, 3, 4, 5, 6, 7, 8	1390-HA	-	-
B-15-3	15-3, 15-4, 15-4GB, 15-5, 15-5GB, 105	Oxy-acetylene	1390 size 00, 0, 1, 2, 3, 4, 5, 6, 7, 8	1390-HA	-	-
B-15-3	15-3, 15-4, 15-4GB, 15-5, 15-5GB, 105	Oxy-acetylene	0090 size 1,3, 5, 6, 8	1390-HA	-	-
E-43	43-2, 263, 543	Oxy-acetylene	23A90 size 0,1,3,5,6,8,9,10	J-63 size 1,2	-	-
E-43	43-2, 263, 543	Oxy-acetylene	0090 size 1,3,5,6,8	1390-HA	-	-
E-43	43-2, 263, 543	Oxy-acetylene	1390 size 00,0,1,3,5,6,8,9,10	-	-	-
E-43	43-2, 263, 543	Oxy-propane	-	-	1390-N size 2,3,4,5,6,7,8,9,10	-
E-43	43-2, 263, 543	Oxy-propane	-	-	0090-N size 2,4,6,8	-
E2-43	43-2, 263, 543	Oxy-acetylene	23A90 size 13,15	J-63 size 3,4	-	RBA-43 size 2,4
E3-43	43-2, 263, 543	Oxy-acetylene		J-143-5	-	-
D-85	85	Oxy-acetylene	23A90 size 0,1,3,5,6,8,9,10	J-63 size 1,2	-	-
D-85	85	Oxy-acetylene	0090 size 1,3,5,6,8	1390-HA	-	-
D-85	85	Oxy-acetylene	1390 size 00,0,1,3,5,6,8,9,10	-	-	-
H-19-2E	19-6, 50-9	Oxy-acetylene	5090 size 0,1,3,5,6,8,9,10	J-63 size 1,2	-	-
H-19-2E	19-6, 50-9	Oxy-acetylene	0090 size 1,3,5,6,8	1390-HA	-	-
H-19-2E	19-6, 50-9	Oxy-acetylene	1390 size 00,0,1,3,5,6,8,9,10	-	-	-
H-19-2E	19-6, 50-9	Oxy-acetylene	0090 size 1,3,5,6,8	-	-	-
F-43	43-2, 263, 543	Oxy-propane	-	2290-H size 1,2,3,4,5	2290-N size 13,15,20,30,80	RBP-43 size 2,4,6

* additional information about adapters and tubes selection can be found on pages 100-101

LOW PRESSURE TYPE MIXERS

B-43-N

H-19-2S

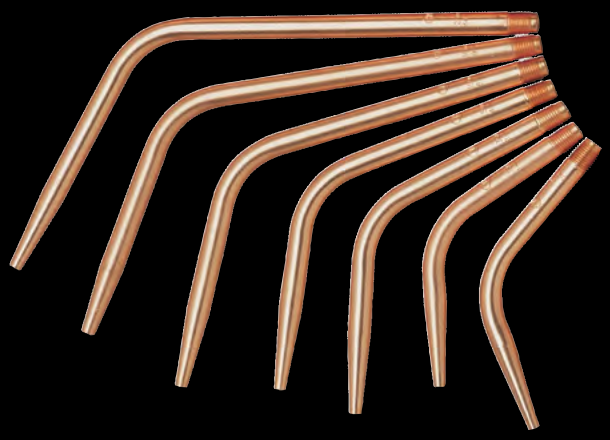
B-43-1/2/3/5/6/8/9/10

B-15-3F

PART NO.	FITS HANDLE	GAS	HEATING TIPS*	BRAZING TIPS*	FLAME CLEANING TIPS*
B-15-3F	15-3, 15-4, 15-4GB, 15-5, 15-5GB	Oxy-propane/ butan		1390N size 2, 3, 4, 5, 6, 7, 8	-
B-15-3F	15-3, 15-4, 15-4GB, 15-5, 15-5GB	Oxy- natural gas / methane		0090N size 2, 4, 6, 8	-
B-43-N	43-2, 263, 543	Oxy-propane	2290-H size 1,2,3,4	2290-N size 13,15,20,30,80	RBP-43 size 2,4,6
B-43-1	43-2, 263, 543	Oxy-propane	-	1390-2N and 0090-2N	-
B-43-3	43-2, 263, 543	Oxy-propane	-	1390-3N/4N and 0090-4N	-
B-43-5	43-2, 263, 543	Oxy-propane	-	1390-5N	-
B-43-6	43-2, 263, 543	Oxy-propane	-	1390-6N/7N and 0090-6N	-
B-43-8	43-2, 263, 543	Oxy-propane	-	1390-8N/H and 0090-8N	-
B-43-9	43-2, 263, 543	Oxy-propane	-	1390-9N	-
B-43-10	43-2, 263, 543	Oxy-propane	-	1390-10N	-
H-19-2S	19-6, 50-10	Oxy-propane	1390-H	1390-N size 2,3,4,5,6,7,8,9,10	-
H-19-2S	19-6, 50-10	Oxy-propane		0090-N size 2,4,6,8	-

* additional information about adapters and tubes selection can be found on pages 100-101

TIPS



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QUICK SELECTION GUIDE

ACETYLENE WELDING AND BRAZING TIPS

23-A-90 MODEL
WELDING THICKNESS
0,2-50MM
p.100

5090 MODEL
WELDING THICKNESS
0,2-20MM
p.100

1390 MODEL
WELDING THICKNESS
0-20MM
p.100

10590 MODEL
WELDING THICKNESS
0,2-6MM
p.100

0090 MODEL
WELDING THICKNESS
0,5-9MM
p.100

ALTERNATE FUEL BRAZING AND HEATING TIPS

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FUEL GAS FLOW
75-500 L/H
p.103

1390-H MODEL
FUEL GAS FLOW
1050 L/H
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5090-N MODEL
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140-375 L/H
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10590-N MODEL
FUEL GAS FLOW
30-275 L/H
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2290-N MODEL
FUEL GAS FLOW
850-2400 L/H
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0090-N MODEL
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ACETYLENE CUTTING TIPS

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CUTTING THICKNESS
0-175MM
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6290-S MODEL
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15-300MM
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6290-AC MODEL
CUTTING THICKNESS
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3690-AC MODEL
CUTTING THICKNESS
0-75MM
p.107

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.

ALTERNATE FUEL CUTTING TIPS

6290-NX MODEL
CUTTING THICKNESS
0-300MM
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6290-NFF MODEL
CUTTING THICKNESS
6-300MM
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6290-NXPM MODEL
CUTTING THICKNESS
5-300MM
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3690-P MODEL
CUTTING THICKNESS
0-75MM
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TIP MIX CUTTING TIPS

8290-ANME MODEL
CUTTING THICKNESS
0-300MM
p.110

2890-F MODEL
CUTTING THICKNESS
0-300MM
p.110

8290-P&PNME MODEL
CUTTING THICKNESS
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CUTTING THICKNESS
0-500MM
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SPECIALTY TIPS

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GOUGING
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6290-NFFR MODEL
RIVET CUTTING
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6290-NFW MODEL
RIVET WASHING
p.111

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ACETYLENE WELDING AND BRAZING CONFIGURATIONS

D-50-C
TIP TUBE

8593
TIP TUBE

4301-11
ADAPTER

TH-119
TWIN TIP HOLDER

10593
TIP TUBE

HANDLE	MIXER	TIP TUBE/ADAPTER	TIP
43-2, 263, 543	E2-43	-	23-A-90 (13-15)
43-2, 263, 543	E-43	8593	1390
43-2, 263, 543	E-43	4301-11+TH-119	0090
43-2, 263, 543	E-43	-	23-A-90 (0-10)
85	D-85	8593	1390
85	D-85	4301-11+TH-119	0090
85	D-85	-	23A-90 (0-10)
19-6, 50-9	H-19-2E	D-50-C	1390
19-6, 50-9	H-19-2E	TH-119	0090
19-6, 50-9	H-19-2E	-	5090
15-5	B-15-3	D-50-C	1390
15-5	B-15-3	TH-119	0090
15-5	B-15-3	-	5090
105	M105	10593	10590

ACETYLENE WELDING AND BRAZING ASSEMBLIES

L-19
(compatible with handles: 19-6 and 50-9)

L-43
(compatible with handles: 43-2, 263, 543)

WELDING / BRAZING				PRESSURE	
ASSEMBLY L-19	ASSEMBLY L-43	FLOW (L/h)	THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
L-19-0	**L-43-0**	45	0,2 - 0,5	2,5	0,015 - 0,2
L-19-1	**L-43-1**	65	0,5 - 1,0	2,5	0,015 - 0,2
L-19-3	**L-43-3**	160	1,0 - 2,0	2,5	0,015 - 0,2
L-19-5	**L-43-5**	350	2,0 - 4,0	2,5	0,015 - 0,2
L-19-6	**L-43-6**	500	4,0 - 6,0	2,5	0,015 - 0,2
L-19-8	**L-43-8**	1000	6,0 - 9,0	2,5	0,015 - 0,2
L-19-9	**L-43-9**	1500	9,0 - 14,0	2,5	0,015 - 0,2
L-19-10	**L-43-10**	2000	14,0 - 20,0	2,5	0,015 - 0,2
-	**L-43-13**	3000	20,0 - 30,0	2,5	0,015 - 0,2
-	**L-43-15**	4000	30,0 - 50,0	2,5	0,015 - 0,2

ACETYLENE WELDING AND BRAZING TIPS

23-A-90

5090

1390

10590

0090

WELDING / BRAZING							EQUAL PRESSURE		LOW PRESSURE	
TIPS 23-A-90	TIPS 5090	FTIPS 1390	FLEXIBLE TIPS 0090	TIPS 10590	FLOW (l/h)	THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)	OXYGEN (bar)	ACETYLENE (bar)
-	**-**	1390-00	-	-	25	-	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-0	**5090-0**	1390-0	-	10590-0	45	0.2 - 0.5	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-1	**5090-1**	1390-1	0090-1	10590-1	65	0.5 - 1.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
-	**5090-2**	1390-2	-	-	100	-	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-3	**5090-3**	1390-3	0090-3	10590-3	160	1.0 - 2.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
-	**5090-4**	1390-4	-	-	250	-	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-5	**5090-5**	1390-5	0090-5	10590-5	350	2.0 - 4.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-6	**5090-6**	1390-6	0090-6	10590-6	500	4.0 - 6.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
-	**5090-7**	1390-7	-	-	700	-	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-8	**5090-8**	1390-8	0090-8	-	1000	6.0 - 9.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-9	**5090-9**	1390-9	-	-	1500	9.0 - 14.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-10	**5090-10**	1390-10	-	-	2000	14.0 - 20.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-13	**-**	-	-	-	3000	20.0 - 30.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2
23-A-90-15	**-**	-	-	-	4000	30.0 - 50.0	0,3 - 0,8	0,3 - 0,8	2,5	0,015 - 0,2

ACETYLENE HEATING TIPS AND ASSEMBLIES

L - 63

1901-11
ADAPTER

J - 63

1390-HA

PART NO.					EQUAL PRESSURE		LOW PRESSURE		FLOW		HEATING OUTPUT (Kcal/h)
HANDLE	TIP-MIXER ASSEMBLY	MIXER	ADAPTER / TIP TUBE	TIP	OXYGEN (bar)	ACETYLENE (bar)	OXYGEN (bar)	ACETYLENE (bar)	OXYGEN (l/h)	ACETYLENE (l/h)	
43-2 263 543	L-63-1	B-43-9		J-63-1			2,5	0,015 - 0,2	600 - 1100	600 - 1000	7450 - 13000
		E-43		J-63-1	0,15 - 0,4	0,15 - 0,4					
	L-63-2	B-43-10		J-63-2			2,5	0,015 - 0,2	900 - 1550	850 - 1400	11100 - 18700
		E-43		J-63-2	0,2 - 0,5	0,2 - 0,5					
	L-63-3	B-43-15		J-63-3			3	0,015 - 0,2	1550 - 2500	1400 - 2250	18500 - 29800
		E2-43		J-63-3	0,3 - 0,6	0,3 - 0,6					
	L-63-4	E2-43		J-63-4	0,6 - 1,0	0,6 - 1,05			2500 - 4300	2250 - 3950	29800 - 52000
	L-143-5	E3-43 / F-43		J-143-5*	0,8 - 1,4	0,6 - 1,05			5000 - 9350	4500 - 8500	59500 - 111500
		E-43	8593	1390-HA	0,35	0,35			1100	1000	
85	L-85-1	D-85		J-63-1	0,15 - 0,4	0,15 - 0,4			600 - 1100	600 - 1000	7450 - 13000
	L-85-2	D-85		J-63-2	0,2 - 0,5	0,2 - 0,5			900 - 1550	850 - 1400	11100 - 18700
		D-85	8593	1390-HA	0,35	0,35			1100	1000	
19-6 50-9		H-19-2E	1901-11	J-63-1	0,15 - 0,4	0,15 - 0,4			600 - 1100	600 - 1000	7450 - 13000
		H-19-2E	1901-11	J-63-2	0,2 - 0,5	0,2 - 0,5			900 - 1550	850 - 1400	11100 - 18700
		H-19-2E	D-50-C	1390-HA	0,35	0,35			1100	1000	
15-4		B-15-3	D-50-C	1390-HA	0,35	0,35			1100	1000	

*Caution: exceeds the withdrawal capacity of the one standard acetylene cylinder

ACETYLENE FLAME CLEANING TIPS

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. Features steel-scraping plate on either side of the tip.

RBA-43

HANDLE	MIXER	TIP TUBE/ADAPTER	TIP
43-2, 263, 543	E2-43	2393+2357-3	RBA-43

Select Model 2393 tip tube and adapter from page 104.

PART NO.	LENGTH (mm)	PRESSURE		FLOW		HEATING OUTPUT (Kcal/h)
		OXYGEN (bar)	ACETYLENE (bar)	OXYGEN (l/h)	ACETYLENE (l/h)	
RBA-43-2	50	0,4 - 0,7	0,4 - 0,7	800 - 1130	700 - 900	9300 - 11900
RBA-43-4	100	0,7 - 0,9	0,7 - 0,9	1550 - 1650	1400 - 1500	18500 - 19900

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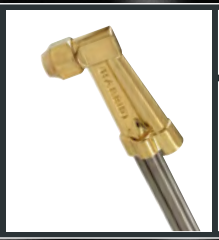
CHANGING TO ALTERNATE FUELS

GET THE RIGHT TORCH

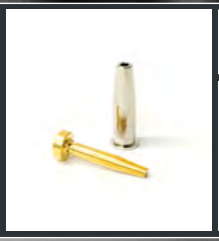
Use an injector style torch to maximize your performance with alternate fuel



1 TORCH

GET THE RIGHT TIP

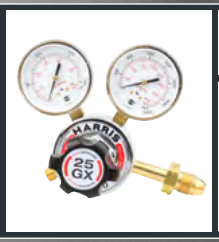
There are tips designed for the alternate fuel of your choice



2 TIP

GET THE RIGHT REGULATOR

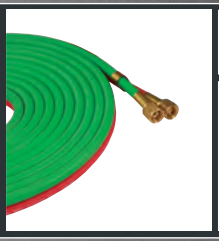
A Harris Model 25GX-50-510P is a great option



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.eu

⚠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/

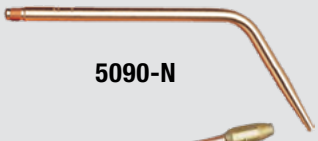
ALTERNATIVE FUEL TIPS

- 1390-N, 5090-N, 0090-N & 10590N Brazing Tips
- 2290-N & 1390-H Heating Tips


1390-N2 to 4

1390-N5 to 10

1390-H


5090-N


10590-N


2290-N


0090-N

HANDLE	MIXER		TIP TUBE	TIP
43-2, 263, 543	E-43	B-43-1	8593	1390-2N
43-2, 263, 543	E-43	B-43-3	8593	1390-3N
43-2, 263, 543	E-43	B-43-3	8593	1390-4N
43-2, 263, 543	E-43	B-43-5	8593	1390-5N
43-2, 263, 543	E-43	B-43-6	8593	1390-6N
43-2, 263, 543	E-43	B-43-6	8593	1390-7N
43-2, 263, 543	E-43	B-43-8	8593	1390-8N/1390-H
43-2, 263, 543	E-43	B-43-9	8593	1390-9N
43-2, 263, 543	E-43	B-43-10	8593	1390-10N
19-6, 50-10	-	H-19-2S	D-50-C	1390-N/1390-H/ 5090-N
15-5	-	B-15-3F	D-50-C	1390-N/1390-H/ 5090-N
105	-	M105	10593	10590-0N-1N-3N-5N-6N

HANDLE	MIXER	ADAPTER	0090-N TIPS
43-2, 263, 543	B-43-1	4301-11	0090-2N
43-2, 263, 543	B-43-3	4301-11	0090-4N
43-2, 263, 543	B-43-6	4301-11	0090-6N
43-2, 263, 543	B-43-8	4301-11	0090-8N
19-6, 50-10	H-19-2S	-	0090-2N-4N-6N-8N
15-5	B-15-3F	-	0090-2N-4N-6N-8N

Select Model 2393 tip tube and adapter from page 104.

HEAVY DUTY HANDLE	MIXER	TIP TUBE	2290-N TIPS
43-2, 263, 543	F-43, B-43-N	2393+2357-3	2290-13N
43-2, 263, 543	F-43, B-43-N	2393+2357-3	2290-15N
43-2, 263, 543	F-43, B-43-N	2393+2357-3	2290-20N
43-2, 263, 543	F-43, B-43-N	2393+2357-3	2290-30N
43-2, 263, 543	F-43, B-43-N	2393+2357-3	2290-80N

PART NO.				LOW PRESSURE		EQUAL PRESSURE		FLOW (l/h)	
				OXYGEN (bar)	FUEL GAS (bar)	OXYGEN (bar)	FUEL GAS (bar)	OXYGEN	FUEL GAS
-	-	-	**10590-0N**	1,0	0,015 - 0,2	0,3 - 1	0,3 - 1	120	30
-	-	-	**10590-1N**	1,0	0,015 - 0,2	0,3 - 1	0,3 - 1	200	50
1390-2N	**0090-2N**	-	-	1,0	0,015 - 0,2	0,3 - 1	0,3 - 1	300	75
1390-3N	-	**5090-3N**	**10590-3N**	1,0	0,015 - 0,2	0,3 - 1	0,3 - 1	550	140
1390-4N	**0090-4N**	-	-	1,4	0,015 - 0,2	0,3 - 1	0,3 - 1	700	175
1390-5N	-	**5090-5N**	**10590-5N**	1,8	0,015 - 0,2	0,3 - 1	0,3 - 1	900	225
1390-6N	**0090-6N**	-	**10590-6N**	1,8	0,015 - 0,2	0,3 - 1	0,3 - 1	1100	275
1390-7N	-	-		2,1	0,015 - 0,2	0,3 - 1	0,3 - 1	1350	345
1390-8N	**0090-8N**	**5090-8N**		2,1	0,015 - 0,2	0,3 - 1	0,3 - 1	1500	375
1390-9N	-	-		2,5	0,015 - 0,2	0,3 - 1	0,3 - 1	1650	415
1390-10N	-	-		2,8	0,015 - 0,2	0,3 - 1	0,3 - 1	2000	500
	2290-13N			1,2	0,015 - 0,2	0,3 - 1	0,3 - 1	3400	850
	2290-15N			1,2	0,015 - 0,2	0,3 - 1	0,3 - 1	4200	1050
	2290-20N			1,2	0,015 - 0,2	0,3 - 1	0,3 - 1	6000	1500
	2290-30N			2,3	0,015 - 0,2	0,3 - 1	0,3 - 1	8000	2000
	2290-80N			2,3	0,015 - 0,2	0,3 - 1	0,3 - 1	9600	2400
	1390-H			3,5	0,5	3,5	0,1 - 0,5	4200	1050

Note: For additional welding / brazing equipment see our Brazing and Soldering Guide or Production Brazing Catalogue

ALTERNATIVE FUEL HEATING TIPS

- 2290-H Heating Tips
- H-62-P Heating Tips

2290-H

H-62-P

	PRESSURE (bar)		FLOW (l/h)		APPROX. HEATING OUTPUT (KCal/h)
PART NO.	OXYGEN	FUEL GAS	OXYGEN	FUEL GAS	
2290-1H	1 - 2	0,5	4000 - 7000	1000 - 2000	22300 - 44600
2290-2H	2 - 3	0,5	5900 - 12800	1500 - 3200	33500 - 71400
2290-3H	2 - 5	1,0	8500 - 22900	2200 - 5700	49000 - 127100
2290-4H	3 - 6	1,0	14000 - 28400	3600 - 7100	80300 - 158000
2290-5H	4 - 8	1,0 - 2,0	17000 - 39700	4300 - 10000	96000 - 223000
H-62-1P	3.0	0,5	4000 - 7000	1000 - 2000	22300 - 44600
H-62-2P	3,5	0,5	5900 - 12800	1500 - 2200	38500 - 71400
H-62-3P	4,0	1,0	8500 - 22900	2200 - 5700	49000 - 127100

H-62-P to be used with cutting attachment and cutting torches

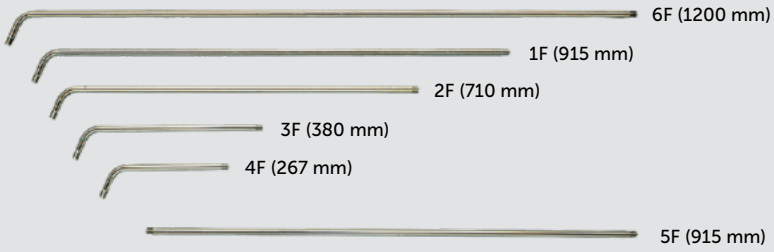
RBP-43 OXY-PROPANE, PROPYLENE BASED & NATURAL GAS FLAME CLEANING HEADS

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.

RBP-43 Tips

PART NO.	LENGHT (mm)	OXYGEN PRESSURE (bar)	PROPANE PRESSURE (bar)	OXYGEN FLOW (l/h)	PROPANE FLOW (l/h)	HEATING OUTPUT (Kcal/h)
RBP-43-2	50	0,5 - 1,0	0,5	2550 - 3400	700 - 1050	15600 - 23400
RBP-43-4	100	1,0 - 1,5	0,5 - 1,5	6350 - 8500	1850 - 2500	41200 - 55600
RBP-43-6	150	2 - 3	1,0 - 1,5	13900 - 18100	3000 - 4150	66800 - 92300

2393-F TIP TUBES



PART NO.	DESCRIPTION	DESIGN	LENGHT (mm)
1800200	2393-1F 36"	curved	915
1800210	2393-2F 28"	curved	710
1800220	2393-3F 15"	curved	380
1800230	2393-4F 10 1/2"	curved	267
1800240	2393-5F 36"	straight	915
1800207	2393-6F	curved	1200
1800206	2393-6F 48"	straight	1200

HEATING ASSEMBLY CONFIGURATION

MODEL K-43

2357-3
TIP ADAPTER

HANDLE	MIXER	TIP TUBE/ ADAPTER	TIP
43-2, 263, 543	B-43-N, F-43	2393+2357-3	2290-H, RBP-43

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.

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6290 MODEL

GENERAL PREHEAT ONE-PIECE OXY-ACETYLENE TIPS

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

CONSTRUCTION:
One-piece

PREHEAT TYPE:
General

WHERE USED:
Fabrication, maintenance, etc.

CLEANING INSTRUCTIONS:
Use tip cleaner C-9

6290

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE EQUAL PRESSURE (bar)	ACETYLENE LOW PRESSURE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	ACETYLENE FLOW (l/h)
6290-000	0 - 5	1,0 - 2,0	0,3 - 0,8	0,015 - 0,2	600 - 800	280 - 560	260 - 510
6290-00	5 - 10	1,0 - 2,0	0,3 - 0,8	0,015 - 0,2	800 - 1000	280 - 560	260 - 510
6290-0	10 - 15	1,5 - 2,5	0,3 - 0,8	0,015 - 0,2	1000 - 1500	280 - 560	260 - 510
6290-1	15 - 25	2,0 - 3,5	0,3 - 0,8	0,015 - 0,2	1500 - 2500	420 - 560	385 - 515
6290-2	25 - 50	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	4000 - 6000	420 - 560	385 - 515
6290-3	50 - 100	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	5000 - 7000	420 - 560	385 - 515
6290-4	100 - 175	3,5 - 5,5	0,3 - 0,8	0,015 - 0,2	9000 - 14000	420 - 560	385 - 515

6290-S MODEL

HEAVY PREHEAT ONE-PIECE OXY-ACETYLENE TIPS

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

CONSTRUCTION:
One-piece

PREHEAT TYPE:
Heavy

WHERE USED:
Demolition, maintenance, repair, etc.

CLEANING INSTRUCTIONS:
Use tip cleaner C-9

6290-S

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE EQUAL PRESSURE (bar)	ACETYLENE LOW PRESSURE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	ACETYLENE FLOW (l/h)
6290-1S	15 - 25	2,0 - 3,5	0,3 - 0,8	0,015 - 0,2	1500 - 2500	560 - 1130	510 - 1030
6290-2S	25 - 50	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	4000 - 6000	560 - 1130	510 - 1030
6290-3S	50 - 100	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	5000 -7000	560 - 1130	510 - 1030
6290-4S	100 - 175	3,5 - 5,5	0,3 - 0,8	0,015 - 0,2	9000 - 14000	560 - 1130	510 - 1030
6290-5S	175 - 250	4,5 - 5,5	0,3 - 0,8	0,015 - 0,2	13000 - 16000	990 - 1700	900 - 1540
6290-6S	250 - 300	5,0 - 6,5	0,3 - 0,8	0,015 - 0,2	15000 - 19000	990 - 1700	900 - 1540

AC 6290 MODEL

HEAVY PREHEAT TWO-PIECE OXY-ACETYLENE TIPS

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

CONSTRUCTION:

Two-piece, plated shell

PREHEAT TYPE:

Heavy

WHERE USED:

Demolition, maintenance, acetylene machine cutting

CLEANING INSTRUCTIONS:

Use tip cleaner E-9

6290-AC

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE EQUAL PRESSURE (bar)	ACETYLENE LOW PRESSURE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	ACETYLENE FLOW (l/h)
6290-00AC	5 - 10	1,0 - 2,0	0,3 - 0,8	0,015 - 0,2	800 - 1000	280 - 560	260 - 510
6290-0AC	10 - 15	1,5 - 2,5	0,3 - 0,8	0,015 - 0,2	1000 - 1500	280 - 560	260 - 510
6290-1AC	15 - 25	2,0 - 3,5	0,3 - 0,8	0,015 - 0,2	1500 - 2500	560 - 1130	510 - 1030
6290-2AC	25 - 50	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	4000 - 6000	560 - 1130	510 - 1030
6290-3AC	50 - 100	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	5000 - 7000	560 - 1130	510 - 1030
6290-4AC	100 - 175	3,5 - 5,5	0,3 - 0,8	0,015 - 0,2	9000 - 14000	560 - 1130	510 - 1030
6290-5AC	175 - 250	4,5 - 5,5	0,3 - 0,8	0,015 - 0,2	13000 - 16000	990 - 1700	900 - 1540
6290-6AC	250 - 300	5,0 - 6,5	0,3 - 0,8	0,015 - 0,2	15000 - 19000	990 - 1700	900 - 1540

AC 3690 MODEL

OXY-ACETYLENE TIPS

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

CONSTRUCTION:

Two-piece, unplated shell

PREHEAT TYPE:

Heavy

WHERE USED:

HVAC, maintenance, metal art, etc.

CLEANING INSTRUCTIONS:

Use tip cleaner E-9

3690-AC

PART NO.	METAL THICKNESS (mm)	OXYGEN (bar)	ACETYLENE EQUAL PRESSURE (bar)	WHERE USED
3690-00AC	0 - 6	1,0 - 2,0	0,3 - 0,8	36-2 cutting attachment
3690-0AC	6 - 13	1,5 - 2,5	0,3 - 0,8	36-2 cutting attachment
3690-1AC	13 - 25	2,0 - 3,5	0,3 - 0,8	36-2 cutting attachment
3690-2AC	25 - 75	3,0 - 4,5	0,3 - 0,8	36-2 cutting attachment

TWO-PIECE OXY-ACETYLENE CUTTING TIPS

Commonly one-piece tips are used for oxy-acetylene cutting and two-piece tips are used for cutting with alternative 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.

NX 6290 MODEL

GENERAL PREHEAT OXY-PROPANE, NATURAL GAS TIPS

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

CONSTRUCTION:

Two-piece, plated shell

PREHEAT TYPE:

General

WHERE USED:

Steel fabricating, demolition, shipbuilding, etc.

CLEANING INSTRUCTIONS:

Use tip cleaner E-9

6290-NX

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS EQUAL PRESSURE (bar)	FUEL GAS LOW PRESSURE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	PROPANE FLOW (l/h)	HEATING POWER (Kcal/h)
6290-000NX	0 - 5	1,0 - 2,0	0,3 - 0,8	0,015 - 0,2	650 - 870	870	210	4683
6290-00NX	5 - 10	1,5 - 2,0	0,3 - 0,8	0,015 - 0,2	870 - 1080	1000	270	6021
6290-0NX	10 - 15	2,0 - 3,0	0,3 - 0,8	0,015 - 0,2	1080 - 1600	1080	270	6021
6290-1NX	15 - 25	2,5 - 3,5	0,3 - 0,8	0,015 - 0,2	1600 - 2700	1080	270	6021
6290-2NX	25 - 50	3,0 - 4,0	0,3 - 0,8	0,015 - 0,2	4300 - 6500	1200	330	7359
6290-3NX	50 - 75	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	5400 - 7600	1200	330	7359
6290-4NX	75 - 150	3,5 - 5,5	0,3 - 0,8	0,015 - 0,2	9850 - 15150	1500	390	8697
6290-5NX	150 - 200	4,5 - 5,5	0,3 - 0,8	0,015 - 0,2	14100 - 17350	1800	450	10035
6290-6NX	200 - 300	5,0 - 6,5	0,3 - 0,8	0,015 - 0,2	16200 - 20600	2100	540	12042

Note: when using natural gas fuel rates will double (approx.).

NFF 6290 MODEL

HEAVY PREHEAT OXY-PROPANE, NATURAL GAS TIPS

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

CONSTRUCTION:

Two-piece, plated shell

PREHEAT TYPE:

Heavy

WHERE USED:

Demolition, maintenance, etc.

CLEANING INSTRUCTIONS:

Use tip cleaner E-9

6290-NFF

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS EQUAL PRESSURE (bar)	FUEL GAS LOW PRESSURE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	PROPANE FLOW (l/h)	HEATING POWER (Kcal/h)
6290-1NFF	6 - 25	2,5 - 3,5	0,3 - 0,8	0,015 - 0,2	1600 - 2700	2500	700	15600
6290-2NFF	25 - 50	3,0 - 4,0	0,3 - 0,8	0,015 - 0,2	4300 - 6500	3000	800	17800
6290-3NFF	50 - 75	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	5400 - 7600	3600	900	20100
6290-4NFF	75 - 150	3,5 - 5,5	0,3 - 0,8	0,015 - 0,2	9800 - 15200	4100	1000	22300
6290-5NFF	150 - 200	4,5 - 5,5	0,3 - 0,8	0,015 - 0,2	14100 - 17300	4800	1200	26800
6290-6NFF	200 - 300	5,0 - 6,5	0,3 - 0,8	0,015 - 0,2	16300 - 20600	5500	1400	31200

Note: when using natural gas fuel rates will double (approx.)

NXPM

6290

MODEL

OXY-MAPP®* AND OXY-PROPYLENE TIPS

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

CONSTRUCTION:

Two-piece, plated shell

PREHEAT TYPE:

General

WHERE USED:

Fabrication, shipbuilding, etc.

CLEANING INSTRUCTIONS:

Use tip cleaner E-9

6290-NXPM

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS EQUAL PRESSURE (bar)	FUEL GAS LOW PRESSURE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	FUEL GAS FLOW (l/h)
6290-000NXPM	0 - 5	1,0 - 2,0	0,3 - 0,8	0,015 - 0,2	10 - 13	13,3	5,0
6290-00NXPM	5 - 10	1,5 - 2,0	0,3 - 0,8	0,015 - 0,2	13 - 17	13,3	5,0
6290-0NXPM	10 - 15	2,0 - 3,0	0,3 - 0,8	0,015 - 0,2	17 - 25	14,2	5,5
6290-1NXPM	15 - 25	2,5 - 3,5	0,3 - 0,8	0,015 - 0,2	25 - 42	15,0	5,8
6290-2NXPM	25 - 50	3,0 - 4,0	0,3 - 0,8	0,015 - 0,2	67 - 100	15,8	6,0
6290-3NXPM	50 - 75	3,0 - 4,5	0,3 - 0,8	0,015 - 0,2	83 - 117	16,7	6,3
6290-4NXPM	75 - 150	3,5 - 5,5	0,3 - 0,8	0,015 - 0,2	150 - 233	18,3	7,0
6290-5NXPM	150 - 200	4,5 - 5,5	0,3 - 0,8	0,015 - 0,2	217 - 267	19,2	7,3
6290-6NXPM	200 - 300	5,0 - 6,5	0,3 - 0,8	0,015 - 0,2	250 - 317	20,0	7,7

3690-P

MODEL

3690-P OXY-PROPANE, NATURAL GAS TIPS

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

CONSTRUCTION:

Two-piece, unplated shell

PREHEAT TYPE:

General

WHERE USED:

HVAC, metal art, maintenance, etc.

CLEANING INSTRUCTIONS:

Use tip cleaner E-9

3690-P

PART NO.	METAL THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)	WHERE USED
3690-00P	0-6	1,0 - 2,0	0,3 - 0,8	36-2 cutting attachment
3690-0P	6-13	1,5 - 2,5	0,3 - 0,8	36-2 cutting attachment
3690-1P	13-25	2,0 - 3,5	0,3 - 0,8	36-2 cutting attachment
3690-2P	25-75	3,0 - 4,5	0,3 - 0,8	36-2 cutting attachment

**MAPP® is a registered trademark of Messer Group GmbH

ANME 8290 MODEL

ANME OXY-ACETYLENE TIP MIX CUTTING TIPS

8290

PART NO.	SIZE	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	ACETYLENE FLOW (l/h)	WHERE USED
8290-ANME-1	1	0 - 6	1,5	0,5	850	310 - 510	280 - 480	242NM NM-250 980-NM cutting torches
8290-ANME-2	2	6 - 12	2,0	0,5	1850	340 - 620	340 - 570	
8290-ANME-3	3	12 - 75	3,0	0,5	4530	420 - 800	400 - 710	
8290-ANME-4	4	75 - 150	3,0	1,0	7080	570 - 850	510 - 800	
8290-ANME-5	5	150 - 200	4,0	1,0	10620	850 - 1220	800 - 1100	273 NM cutting attachment
8290-ANME-6	6	200 - 250	4,5	1,0	14720	1080 - 1560	990 - 1420	
8290-ANME-7	7	250 - 300	5,5	1,0	24070	1280 -1560	1130 - 1420	

2890-F MODEL

OXY-ACETYLENE TIP MIX CUTTING TIPS

2890-F

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)	WHERE USED
2890-1F	0 - 10	1,0 - 1,5	0,2	28-2 H28 28-2L cutting torches
2890-2F	10 - 50	1,5 - 2,5	0,3	
2890-3F	50 - 100	3,0 - 4,5	0,5	
2890-4F	100 - 125	5,0 - 5,5	0,7	
2890-5F	125 - 150	5,5 - 6,0	0,7	
2890-6F	150 - 200	6,0 - 6,5	0,7	
2890-7F	200 - 300	7,0 - 9,0	1,0	

P & PNME 8290 MODEL

OXY-PROPANE, LPG & MAPP®*TWO PIECE TIP MIX CUTTING TIPS

8290-PNME

PART NO.	SIZE	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)	CUTTING OXYGEN FLOW (l/h)	PREHEAT OXYGEN FLOW (l/h)	PROPANE FLOW (l/h)	WHERE USED
8290-PNME-1	1	0 - 6	1,5	0,5	850	680 - 1360	170 -340	242NM NM-250 980-NM cutting torches
8290-PNME-2	2	6 - 12	2,0	0,5	1840	910 - 1360	220 - 340	
8290-PNME-3	3	12 - 75	3,0	0,5	4810	1360 - 2490	340 - 620	
8290-PNME-4	4	75 - 150	3,0	1,0	7360	1590 - 2550	450 - 620	
8290-PNME-5	5	150 - 200	4,0	1,0	9900	1810 - 2550	620 - 900	273 NM cutting attachment
8290-PNME-6	6	200 - 250	4,5	1,0	14720	2550 - 3680	710 - 900	
8290-PNME-7	7	250 - 300	5,5	1,0	21240	2830 - 3680	990 - 1080	

Note: when using natural gas fuel rates will double (approx.)

2890-P MODEL

OXY-PROPANE, LPG & MAPP®* TWO PIECE TIP MIX CUTTING TIPS

2890-P

PART NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)	WHERE USED
2890-0P	0 - 10	1,5 - 2,0	0,2	28-2 H28 28-2L cutting torches
2890-1P	10 - 25	2,0 - 2,5	0,4	
2890-2P	25 - 50	2,0 - 3,0	0,4	
2890-3P	50 - 75	2,5 - 3,0	0,4	
2890-4P	75 - 100	3,0 - 4,0	0,5	
2890-5P	100 - 200	3,0 - 5,0	0,5	
2890-6P	200 - 300	5,0 - 7,0	0,6	
2890-7P	300 - 400	6,0 - 7,0	0,7	
2890-8P	400 - 500	7,0 - 8,0	0,8	

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G & R

6290

MODEL

OXY-ACETYLENE SPECIALTY TIPS

Acetylene 6290 specialty 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.

DUTY:

Heavy*

WHERE USED:

Metalworking, gouging, rivet cutting

CLEANING INSTRUCTIONS:

Use tip cleaner C-9

6290-G 6290-R

PART NO.	APPLICATION	OXYGEN (bar)	ACETYLENE EQUAL PRESSURE (bar)	ACETYLENE LOW PRESSURE (bar)	WHERE USED
6290-1G	Gouging 3 x 6 mm wide	2,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-2G	Gouging 5 x 10 mm wide	3,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-3G	Gouging 6 x 13 mm wide	3,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-R	Rivet cutting	3,0	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches

G G
NFFR
NFW

6290

MODEL

OXY-PROPANE, PROPYLENE, NATURAL GAS & MAPP®** GAS SPECIALTY TIP

Model 6290 alternate fuel specialty tips are designed to allow additional performance from Harris 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 alternative fuels (not for use with acetylene). Especially useful where storage space is at a premium.

DUTY:

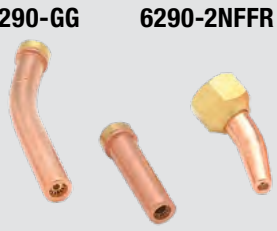
Heavy*

WHERE USED:

Metalworking, beam cutting and weld repair etc.

CLEANING INSTRUCTIONS:

Use tip cleaner C-9



6290-GG 6290-2NFFR

6290-NFW

PART NO.	APPLICATION	OXYGEN (bar)	FUEL GAS EQUAL PRESSURE (bar)	FUEL GAS LOW PRESSURE (bar)	WHERE USED
6290-1GG	Gouging 3 x 6 mm wide	2,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-2GG	Gouging 5 x 10 mm wide	3,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-3GG	Gouging 6 x 13 mm wide	3,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-4GG	Gouging 10 x 19 mm wide	4,0	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-2NFFR	Rivet cutting	3,0	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches
6290-NFW	Rivet washing	3,5	0,3 - 0,8	0,015 - 0,2	Recommended for straight cutting torches

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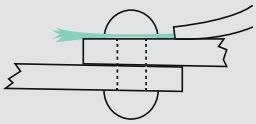
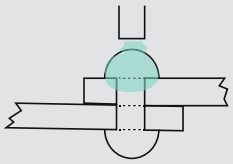
CUTTING.
WASHING.
GOUGING.

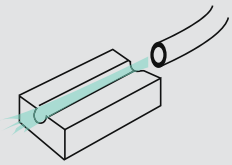
RIVET CUTTING



RIVET WASHING



GOUGING



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 Flashback Arrestor 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.

VH31 MODEL

VICTOR®* COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
VH31

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 tube-within-a-tube construction and is O-ring sealed for greater strength and higher capacity.

FEATURES:

- Welds up to 50 mm
- Cuts up to 200 mm
- Tough extruded brass handle

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
VH31	VH24	9/16”-18-UNF-RH	9/16”-18-UNF-LH	0,751	283

VH24 MODEL

VICTOR®* COMPATIBLE CUTTING ATTACHMENT

MODEL SHOWN:
VH24

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 the attachment seat and the cutting oxygen valve has an ease-on feature for more precise control.

FEATURES:

- Cuts up to 200 mm
- Spiral mix system
- Designed for maximum operator safety
- Stainless steel tubes
- Use with 1-101-HV and GPN tips (see page 88)

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
VH24	90°	1-101-HV & GPN	VH31	0,855	253

*Victor® is registered trademark owned by Victor Technologies, Inc.

VH10
MODEL

VICTOR®* COMPATIBLE COMBINATION HANDLE

MODEL SHOWN:
VH10

The Model VH10 is a Victor®* compatible medium duty combination handle for welding, brazing, heating and cutting. The handle is designed with tube-within-a-tube construction and is O-ring sealed for greater strength and higher capacity.

FEATURES:

- Welds up to 12,7 mm
- Cuts up to 75 mm
- Tough extruded brass handle

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
VH10	VH13	9/16"-18-UNF-2A-RH	9/16"-18-UNF-2A-LH	0,42	217

VH13
MODEL

VICTOR®* COMPATIBLE CUTTING ATTACHMENT

MODEL SHOWN:
VH13

The Model VH13 is a Victor®* compatible medium 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 the attachment seat and the cutting oxygen valve has an ease-on feature for more precise control.

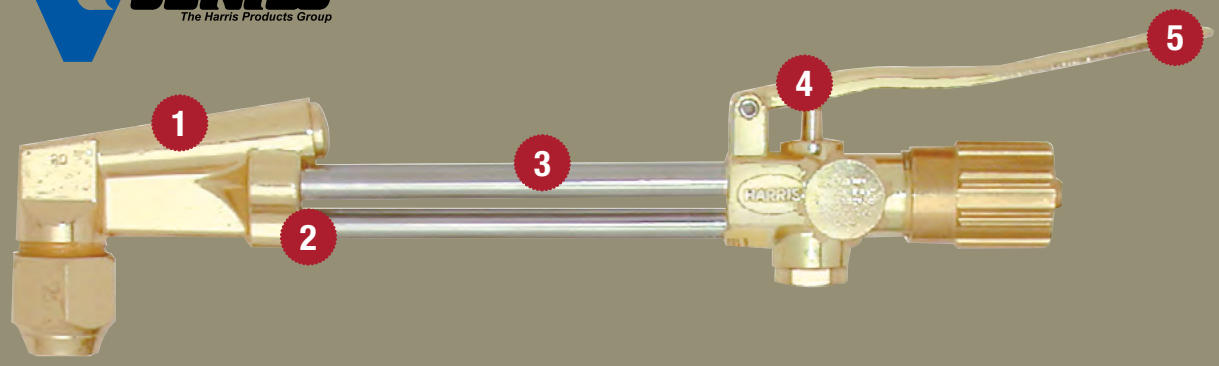
FEATURES:

- Cuts up to 75 mm
- Spiral mix system
- Designed for maximum operator safety
- Stainless steel tubes
- Use with 3-101 and 3-GPN tips

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
VH13	90°	1-101-HV,GPN	VH10	0,40	200

*Victor® is registered trademark owned by Victor Technologies, Inc.

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

V242

MODEL

VICTOR®* COMPATIBLE HAND CUTTING TORCH FOR USE WITH ALL FUEL GASES

MODEL SHOWN:
V242

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.

FEATURES:

- Cuts up to 200 mm
- Head mixing and equal pressure design for maximum operator safety
- Triangular tube design
- Brazed tube connections
- Use with 1-101-HV and GPN tips (see page 118)

V242 EQUAL PRESSURE TORCHES (FOR ACETYLENE AND ALTERNATIVE FUELS)

90°HEAD		70°HEAD		LENGTH (mm)
PART NO.	WEIGHT (kg)	PART NO.	WEIGHT (kg)	
V242-2	1,30	**V242-2A**	1,30	470
V242-2L	1,35	**V242-2A-L**	1,35	530
V242-2L-36	1,70	**V242-2A-L-36**	1,70	900

V-SERIES CUTTING ATTACHMENTS

Models V273, V-2460, V49-3F are Victor® compatible classicly Harris designed cutting attachments. The brazed triangular stainless steel tubes, makes it lightweight 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.

FEATURES:

- Cuts up to 150 mm
- Triangular tube design
- Brazed tube connections

Model V273

Model V-2460

Model V49-3F

PART NO.	HEAD ANGLE	COMPATIBLE CUTTING TIPS	COMPATIBLE HANDLE	WEIGHT (kg)	LENGTH (mm)
Equal pressure "E" cutting attachment (for acetylene and alternative fuels)					
V273-2	90°	**GPN, 1101- HV**	**V-315-CH, V263**	0,500	220
V2460	90°	**GPN, 1101- HV**	**V-315-CH, V263**	0,658	225
Low pressure "F" cutting attachment (for alternative fuels)					
V49-3F	90°	**6290**	**V-315-CH, V263**	0,678	248
V2460F	90°	**GPN**	**V-315-CH, V263**	0,638	227
V2460AF	70°	**GPN**	**V-315-CH, V263**	0,638	227

*Victor® is registered trademark owned by Victor Technologies, Inc.

V-SERIES HANDLES

Models V-315C and V236 are Victor®* compatible combination handles for welding, brazing, heating and cutting. These heavy-duty handles are compatible with all fuel gases and feature tube-within-a-tube construction. Model V-315-CH features a tough extruded brass handle with stainless steel ball valves. Model V236 features high precision ball valves and is made of high quality brass.

FEATURES:

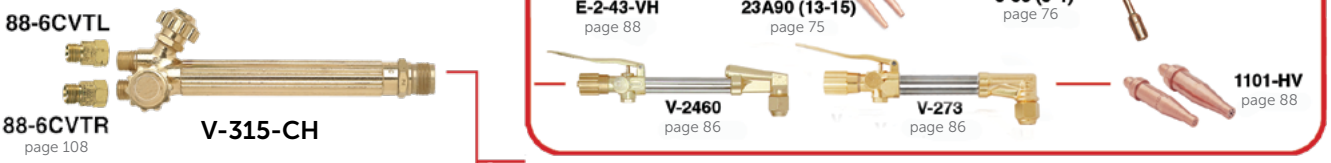
- Welds up to 50 mm
- Cuts up to 150 mm

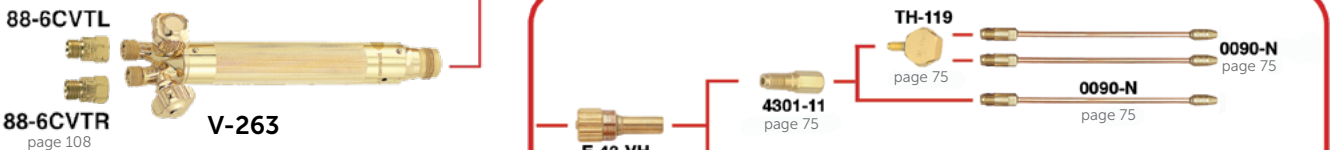
Model V-315-CH

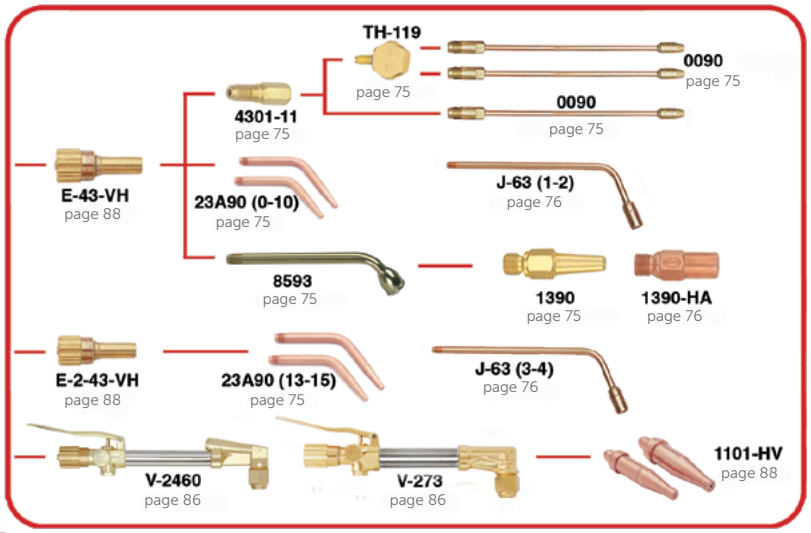
Model V263

PART NO.	COMPATIBLE CUTTING ATTACHMENT	THREAD OXYGEN	THREAD FUEL GAS	WEIGHT (kg)	LENGTH (mm)
V-315-CH	V273, V-2460, V2460 F, V2460 AF, V493 F	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,552	205
V263	V273, V-2460, V2460 F, V2460 AF, V493 F	9/16"-18-UNF-3A-RH	9/16"-18-UNF-3A-LH	0,506	219

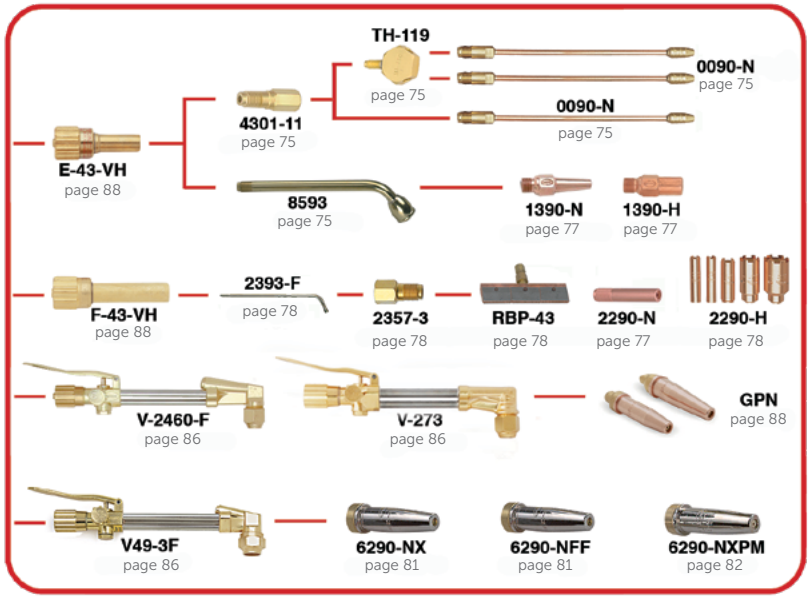
ACETYLENE







ALTERNATIVE FUEL GASES



*Victor® is registered trademark owned by Victor Technologies, Inc.

V-SERIES EQUAL PRESSURE “E” TYPE MIXERS

E2-43-VH

F3-43-VH

PART NO.	FITS HANDLE	GAS	WELDING TIPS	HEATING TIPS	BRAZING TIPS	FLAME CLEANING TIPS
E-43-VH	V-315-CH, V-263	Oxy-acetylene	23A90 tips 0,1,3,5,6,8,9,10	J-63 tips 1,2	-	-
E-43-VH	V-315-CH, V-263	Oxy-acetylene	0090 tips 1,3,5,6,8 (+adapter 4301-11+TH-119)	1390-HA (+tube 8593)	-	-
E-43-VH	V-315-CH, V-263	Oxy-acetylene	1390 tips 00,0,1,3,5,6,8,9,10 (+tube 8593)	-	-	-
E-43-VH	V-315-CH, V-263	Oxy-propane	-	-	1390-N tips 2,3,4,5,6,7,8,9,10 (+tube 8593)	-
E-43-VH	V-315-CH, V-263	Oxy-propane	-	-	0090-N tips 2,4,6,8 (+adapter 4301-11+TH-119)	-
E2-43-VH	V-315-CH, V-263	Oxy-acetylene	23A90 tips 13,15	J-63 tips 3,4	-	RBA-43 tips 2,4 (+tube 2393+2357-3)
F-43-VH	V-315-CH, V-263	Oxy-propane	-	2290-H tips 1,2,3,4,5 (+tube 2393+2357-3)	2290-N tips 13,15,20,30,80 (+tube 2393+2357-3)	RBP-43 tips 2,4 (+tube 2393+2357-3)

ACETYLENE HAND CUTTING TIPS

General preheat one-piece V-series hand cutting tips

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

Model 1-101-HV

CONSTRUCTION:
One-piece

PREHEAT TYPE:
General

WHERE USED:
Metal fabrication, shipbuilding

CLEANING INSTRUCTIONS:
Use tip cleaner C-9 Tip

PART NO.	PLATE THICKNESS (mm)	TIP SIZE	OXYGEN (bar)	ACETYLENE (bar)
1-101-000HV	0 - 3	000	1,4 - 1,7	0,20 - 0,35
1-101-00HV	3 - 8	00	1,4 - 1,7	0,20 - 0,35
1-101-0HV	8 - 15	0	1,7 - 2,4	0,20 - 0,35
1-101-1HV	15 - 25	1	2,1 - 2,4	0,20 - 0,35
1-101-2HV	25 - 50	2	2,4 - 3,1	0,20 - 0,50
1-101-3HV	50 - 75	3	2,8 - 3,4	0,30 - 0,70
1-101-4HV	75 - 100	4	2,8 - 3,4	0,35 - 0,70
1-101-5HV	100 - 150	5	3,1 - 3,8	0,50 - 0,90
1-101-6HV	150 - 200	6	3,1 - 3,8	0,50 - 1,00

PROPANE / NATURAL GAS HAND CUTTING TIPS

General preheat two-piece V-series hand cutting tips

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

Model GPN

CONSTRUCTION:
Two-piece

PREHEAT TYPE:
General

WHERE USED:
Metal fabrication, shipbuilding, construction

CLEANING INSTRUCTIONS:
Use tip cleaner E-9

PART NO.	PLATE THICKNESS (mm)	TIP SIZE	OXYGEN (bar)	FUEL GAS (bar)
GPN-000	0 - 3	000	1,4 - 1,7	0,15 - 0,35
GPN-00	3 - 8	00	1,4 - 1,7	0,15 - 0,35
GPN-0	8 - 15	0	1,7 - 2,4	0,20 - 0,35
GPN-1	15 - 25	1	2,1 - 2,4	0,20 - 0,40
GPN-2	25 - 50	2	2,4 - 3,1	0,20 - 0,55
GPN-3	50 - 75	3	2,8 - 3,4	0,30 - 0,60
GPN-4	75 - 100	4	2,8 - 3,4	0,40 - 0,60
GPN-5	100 - 150	5	3,1 - 3,8	0,40 - 0,70
GPN-6	150 - 200	6	3,1 - 3,8	0,40 - 0,80

*Victor® is registered trademark owned by Victor Technologies, Inc.

AIRCO®* COMPATIBLE EQUIPMENT

MODEL NO.	DESCRIPTION	WEIGHT (kg)	LENGTH (mm)
242-2NM	Cutting torch, head angle 90°	1,250	460 (for 530 mm length please add “L” to the model number)
242-2NMA	Cutting torch, head angle 70°	1,250	470 (for 530 mm length please add “L” to the model number)
263	Handle	0,500	220
273-2NM	Cutting attachment	0,800	230

8290ANME

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
8290-1	0 - 6	1,5	0,5
8290-2	6 - 12	2,0	0,5
8290-3	12 - 75	3,0	0,5
8290-4	75 - 150	3,0	1,0
8290-5	150 - 200	4,0	1,0

8290PNME

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)
8290-P1	0 - 6	1,5	0,5
8290-P2	6 - 12	2,0	0,5
8290-P3	12 - 75	3,0	0,5
8290-P4	75 - 150	3,0	1,0
8290-P5	150 - 200	4,0	1,0

OXWELD®** COMPATIBLE EQUIPMENT

MODEL NO.	DESCRIPTION	WEIGHT (kg)	LENGTH (mm)
242-2P	Cutting torch, head angle 90°	1,250	460 (for 530 mm length please add “L” to the model number)
242-2PA	Cutting torch, head angle 70°	1,250	470 (for 530 mm length please add “L” to the model number)
263P	Handle	0,500	220
273-2P	Cutting attachment	0,800	230

CT1502

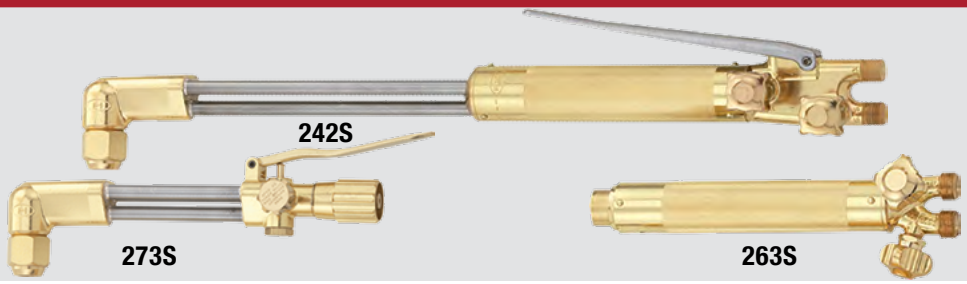
MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
CT1502-2	0 - 5	2,5	0,4
CT1502-3	5 - 10	2,5	0,4
CT1502-4	10 - 20	3,0	0,4
CT1502-6	20 - 50	3,0	0,4
CT1502-8	50 - 130	4,0	0,6
CT1502-10	130 - 200	5,0	0,7

CT1503

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)
CT1503-4	10 - 20	2,5	0,45
CT1503-6	20 - 50	3,0	0,45
CT1503-8	50 - 130	3,5	0,45
CT1503-10	130 - 200	4,5	0,80

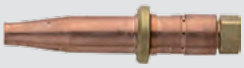
* AIRCO® is a registered trademark of Airco Welding Products Div. of BOC Group.
** OXWELD® is a registered trademarks of ESAB Welding & Cutting Products.

SMITH®* COMPATIBLE EQUIPMENT



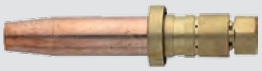
MODEL NO.	DESCRIPTION	WEIGHT (kg)	LENGTH (mm)
242S	Cutting torch, head angle 90°	1,200	460 (for 530 mm length please add “L” to the model number)
242SA	Cutting torch, head angle 70°	1,200	470 (for 530 mm length please add “L” to the model number)
263S	Handle	0,600	220
273S	Cutting attachment	0,800	250

CTSC12



MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
CTSC12-0	0 - 10	2,5	0,30
CTSC12-1	10 - 20	3,0	0,30
CTSC12-2	20 - 35	3,5	0,30
CTSC12-3	35 - 60	3,5	0,35
CTSC12-4	60 - 120	4,0	0,35
CTSC12-5	120 - 200	5,0	0,40

CTSC50A



MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)
CTSC50A-0	0 - 10	2,5	0,35
CTSC50A-1	10 - 20	3,0	0,40
CTSC50A-2	20 - 35	3,5	0,40
CTSC50A-3	35 - 60	3,5	0,45
CTSC50A-4	60 - 120	4,0	0,45
CTSC50A-5	120 - 200	5,0	0,50

CIGWELD®** COMPATIBLE EQUIPMENT

MODEL NO.	DESCRIPTION	WEIGHT (kg)	LENGTH (mm)
242-2HC	Cutting torch, head angle 90°	1,350	470 (for 530 mm length please add “L” to the model number)
242-2HCA	Cutting torch, head angle 70°	1,350	480 (for 530 mm length please add “L” to the model number)
263HC	Handle	0,500	230
273-2HC	Cutting attachment	0,850	250

CT41

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
CT41-6	0 - 6	2,0	1,0
CT41-8	6 - 12	2,0	1,0
CT41-12	12 - 20	2,5	1,0
CT41-15	25 - 75	3,5	1,0
CT41-20	100 - 125	4,5	1,0
CT41-24	150 - 200	5,0	1,0

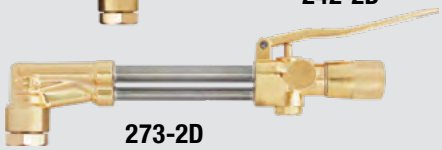
CT44

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)
CT44-6	0 - 6	2,0	1,0
CT44-8	6 - 12	2,0	1,0
CT44-12	12 - 20	2,5	1,0
CT44-15	25 - 75	3,5	1,0
CT44-20	100 - 125	4,5	1,0
CT44-24	150 - 200	5,0	1,0

* SMITH® is a registered trademark of Illinois Tool Works.
** CIGWELD® is a registered trademark of ESAB Welding & Cutting Products.

MESSER®* COMPATIBLE EQUIPMENT

242-2D



273-2D

543HCD17

MODEL NO.	DESCRIPTION	WEIGHT (kg)	LENGTH (mm)
242-2D	Cutting torch, head angle 90°	1,300	460 (for 530 mm length please add “L” to the model number)
242-2DA	Cutting torch, head angle 70°	1,300	470 (for 530 mm length please add “L” to the model number)
543HCD17	Handle	0,500	220
273-2D	Cutting attachment	0,800	250

AB 

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
AB1	3 - 10	3,0	0,5
AB2	10 - 25	3,5	0,5
AB3	25 - 40	4,0	0,5
AB4	40 - 60	4,5	0,5
AB5	60 - 100	5,0	0,5
AB6	100 - 200	6,0	0,5

SAF®** COMPATIBLE EQUIPMENT

980G1

273-2G1

242-2G1

543G1

MODEL NO.	DESCRIPTION	WEIGHT (kg)	LENGTH (mm)
980G1	Cutting torch, head angle 90°	1,100	480 (for 530 mm length please add “L” to the model number)
242-2G1	Cutting torch, head angle 90°	1,300	470 (for 530 mm length please add “L” to the model number)
242-2G1A	Cutting torch, head angle 70°	1,300	480 (for 530 mm length please add “L” to the model number)
543 G1	Handle	0,500	220
273-2G1	Cutting Attachment	0,800	230

G1A 

G1P 

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	ACETYLENE (bar)
G1A-7	3 - 10	2 - 3	0,5
G1A-10	10 - 25	2 - 3	0,5
G1A-12	25 - 50	2 - 3	0,5
G1A-16	50 - 80	3 - 5	0,5
G1A-20	80 - 120	3 - 5	0,5
G1A-25	120 - 200	5 - 8	0,5

MODEL NO.	PLATE THICKNESS (mm)	OXYGEN (bar)	FUEL GAS (bar)
G1P-7	3 - 10	2 - 3	0,5
G1P-10	10 - 25	2 - 3	0,5
G1P-12	25 - 50	2 - 3	0,5
G1P-16	50 - 80	3 - 5	0,5
G1P-20	80 - 120	3 - 5	0,5
G1P-25	120 - 200	5 - 8	0,5

* MESSER® is a registered trademark of Messer Group GmbH.
** SAF® is a registered trademark of SAF Welding and Cutting Products.

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 MORE ECONOMICALLY.

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QUICK SELECTION GUIDE

MACHINE CUTTING TORCHES & TIPS

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198 MODEL
HEAVY DUTY
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6290VVC MODEL
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PORTABLE CUTTING SYSTEMS

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MANUAL CUTTING TORCH
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MODEL SHOWN:
133

MODEL SHOWN:
6290VVC

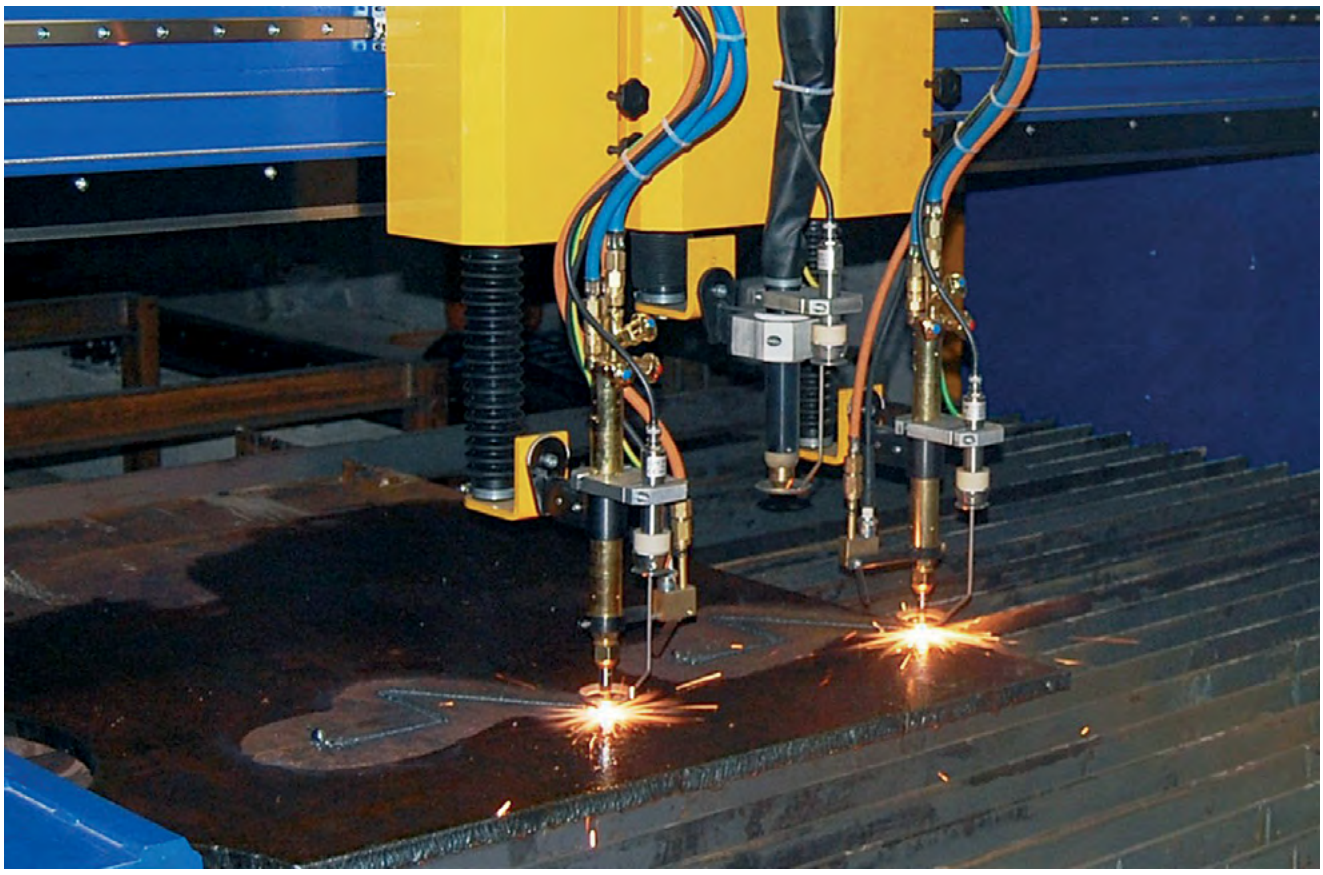
SHAPE CUTTING

BEVEL CUTTING

STRAIGHT CUTTING

HAVING THE RIGHT TOOLS FROM HARRIS WILL RESULT IN

A JOB WELL DONE, EVERY TIME



MODEL
133/198/98

MACHINE CUTTING TORCHES

Harris® machine cutting torches are designed to handle all types of machine cutting applications.
Rugged and dependable, these torches provide up to 380 mm cutting capacity. Harris machine cutting torches are available in two-tube and three-tube design for all fuel gases at pressures as low as 0,015 bar.

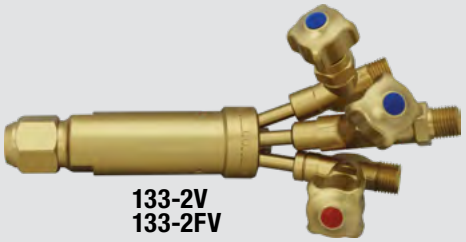
GENERAL FEATURES:

- Solid head for maximum strength
- Standard 32 mm or 35 mm diameter barrel
- All torches have inlet threads 9/16"-18-UNF
- Use with 6290 machine cutting tips (see pages 126-127)

133-2
133-2F

MODEL 133-2/133-2F FEATURES:

- Three-tube valveless design for pipe bevelling, multiple bevelling and similar applications
- Cutting capacity up to 200 mm



133-2V
133-2FV

MODEL 133-2V/133-2FV FEATURES:

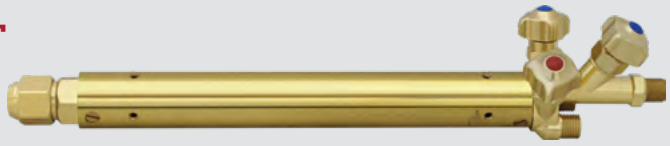
- Three-tube with three valves
- Cutting capacity up to 200 mm

LOW PRESSURE "F" INJECTOR TYPE TORCHES (FOR MAXIMUM PERFORMANCE WITH ALTERNATIVE FUEL)				
PART NO.	STYLE	WEIGHT (kg)	LENGTH (mm)	BARREL Ø (mm)
133-2F	3 tube	0,68	65	30
133-2F-28	3 tube	0,63	65	28
133-2FV	3 tube	1,07	65	30
133-2FV-28	3 tube	1,02	65	28

LOW PRESSURE TORCHES (FOR ACETYLENE)				
PART NO.	STYLE	WEIGHT (kg)	LENGTH (mm)	BARREL Ø (mm)
133-2	3 tube	0,68	65	30
133-2-28	3 tube	0,62	65	28
133-2V	3 tube	1,05	65	30
133-2V-28	3 tube	1,02	65	28

MODEL 198-2T/198-2TR/198-2TF
FEATURES:

- Quick opening cutting oxygen valve for immediate full flow
- Separate preheat and cutting oxygen valves for high and low preheat control
- Cutting capacity up to 380 mm
- Use with 6290 cutting tips (see pages 126-127)



198-2T
198-2TF

MODEL 198-2/198-2F
FEATURES:

- Cutting capacity up to 200 mm
- One inlet connection for oxygen and cutting oxygen

198-2
198-2F

MODEL 198-4/98-4
FEATURES:

- Same characteristics as 198-2T, but valveless

198-2TR
(with rack)

198-4
98-4

EQUAL PRESSURE "E" TYPE TORCHES (FOR ACETYLENE AND ALTERNATIVE FUELS)

PART NO.	STYLE	WEIGHT (kg)	LENGTH (mm)	BARREL Ø (mm)
198-2E	2-tube	1,30	250	32
198-2E-35	2-tube	1,41	250	35
198-2E-35R	2-tube & rack	1,47	250	35
198-2ER	2-tube	1,34	250	32
198-2TAE	3-tube	1,67	450	32
198-2TAE-30	3-tube	1,55	450	30
198-2TAE-35	3-tube	1,68	450	35
198-2TE	3-tube	1,33	250	32
198-2TE-30	3-tube	1,20	250	30
198-2TE-30R	2-tube & rack	1,26	250	30
198-2TE-35	3-tube	1,43	250	35
98-4BE	3-tube	0,73	200	35

LOW PRESSURE TORCHES (FOR ACETYLENE)

PART NO.	STYLE	WEIGHT (kg)	LENGTH (mm)	BARREL Ø (mm)
198-2	2-tube	1,30	250	32
198-2-30	2-tube	1,18	250	30
198-2-35	2-tube	1,39	250	35
198-2-35R	2-tube & rack	1,44	250	35
198-2A	2-tube	1,62	460	32
198-2T	3-tube	1,32	250	32
198-2T-30	3-tube	1,20	250	30
198-2T-30R	3-tube & rack	1,29	250	30
198-2TA	3-tube	1,67	460	32
198-2TA-30	3-tube	1,55	460	30
198-2TA-35	3-tube	1,78	460	35
198-2TA-35R	3-tube & rack	1,90	460	35
198-2TAR	3-tube & rack	1,75	460	32
198-2TR	3-tube & rack	1,38	250	32
198-4	3-tube	0,65	110	32
198-4B	3-tube G 1/4"	0,65	110	32
98-4	3-tube	0,73	110	35
98-4B	3-tube G 1/4"	0,73	110	35

LOW PRESSURE "F" INJECTOR TYPE TORCHES (FOR MAXIMUM PERFORMANCE WITH ALTERNATIVE FUELS)

PART NO.	STYLE	WEIGHT (kg)	LENGTH (mm)	BARREL Ø (mm)
198-2F	2-tube	1,28	250	32
198-2F-35	2-tube	1,38	250	35
198-2F-35R	2-tube & rack	1,44	250	35
198-2FR	2-tube & rack	1,34	250	32
198-2TAF	3-tube	1,64	460	32
198-2TAF-30	3-tube	1,55	460	30
198-2TAF-35	3-tube	1,78	460	35
198-2TAF-35R	3-tube & rack	1,90	460	35
198-2TAFR	3-tube & rack	1,76	460	32
198-2TF	3-tube	1,33	250	32
198-2TF-30	3-tube	1,20	250	30
198-2TF-30R	3-tube & rack	1,25	250	30
198-2TF-35	3-tube	1,43	250	35
198-2TF-35R	3-tube & rack	1,49	250	35
198-2TFR	3-tube & rack	1,39	250	32
198-4BF	3-tube	0,65	110	32
198-4F	3-tube	0,65	110	32
98-4BF	3-tube G 1/4"	0,73	110	35
98-4F	3-tube	0,73	110	35

VVC
NH
6290
MODEL

MACHINE CUTTING TIPS

FEATURES:

- High-speed oxy-alternative fuel gas cutting tips
- Minimalize kerf
- Increased cutting speeds, reduced heat input
- High quality machine cuts, reduces afterwork
- Use with low cost fuel gases
- 6290-VVC plated shell, 6290-NH unplated

6290-VVC

6290-NH

OXY-PROPANE CUTTING

PART NO.	PLATE THICKNESS (mm)	CUTTING SPEED (mm/min)	CUTTING OXY PRESSURE (bar)	PREHEAT OXY PRESSURE (HIGH[1] - LOW) (bar)	CUTTING OXY FLOW (l/h)	PREHEAT OXY FLOW (HIGH - LOW) (l/h)	PREHEAT FUEL FLOW (HIGH - LOW) (l/h)	HEATING POWER (HIGH - LOW) (Kcal/h)	KERF WIDTH (mm)
6290-5/0VVC	1 - 4	750 - 550	4,0	0,7 - 0,4	650	1410 - 900	350 - 230	7800 - 5100	1,3
6290-4/0VVC	4 - 6	700 - 520	2,5	1,0 - 0,5	1130	1410 - 900	350 - 230	7800 - 5100	1,5
6290-3/0VVC	6 - 9	650 - 480	5,0	2,5 - 0,7	2260	2800 - 1200	700 - 300	15600 - 6700	1,8
6290-00VVC	9 - 12,5	630 - 450	5,0	2,5 - 0,7	2540	2800 - 1200	700 - 300	15600 - 6700	1,8
6290-0VVC	12,5 - 20	600 - 400	6,0	2,5 - 0,7	3530	2800 - 1200	700 - 300	15600 - 6700	2,0
6290-0½VVC	20 - 35	550 - 360	7,0	2,5 - 0,7	4000	2800 - 1200	700 - 300	15600 - 6700	2,0
6290-1VVC	35 - 60	480 - 220	7,0	2,5 - 0,7	5560	2800 - 1200	700 - 300	15600 - 6700	2,3
6290-1½VVC	60 - 75	310 - 200	6,5	2,5 - 0,7	7070	2800 - 1200	700 - 300	15600 - 6700	2,8
6290-2VVC	75 - 125	280 - 190	7,0	2,5 - 0,7	8000	2800 - 1300	700 - 330	15600 - 7400	3,0
6290-2½VVC	125 - 150	200 - 160	6,5	2,5 - 0,7	11170	2800 - 1300	700 - 330	15600 - 7400	3,3
6290-3VVC	150 - 175	180 - 150	7,0	2,5 - 0,7	12000	2800 - 1300	700 - 330	15600 - 7400	3,5
6290-4VVC	175 - 200	180 - 150	6,5	2,5 - 0,7	14850	3000 - 1300	750 - 330	16700 - 7400	4,0
6290-5VVC	200 - 225	150 - 130	6,0	2,8 - 0,7	16410	3000 - 1510	750 - 380	16700 - 8500	5,0
6290-5½VVC	225 - 250	130 - 110	6,0	2,8 - 0,7	16980	3000 - 1630	750 - 410	16700 - 9100	6,4
6290-5NH	225 - 250	130 - 110	4,0	2,8 - 0,7	16980	3000 - 1880	750 - 470	16700 - 10500	6,4
6290-6NH	250 - 275	130 -110	4,0	2,8 - 0,7	19520	3000 - 1880	750 - 470	16700 - 10500	6,4
6290-7NH	275 - 300	120 - 100	4,5	3,5 - 0,7	23340	3580 - 2510	900 - 630	20100 - 14000	6,4
6290-8NH	300 - 380	110 - 90	4,5	3,5 - 0,7	26170	3580 - 2510	900 - 630	20100 - 14000	7,6

OXY-METHANE AND NATURAL GAS CUTTING

PART NO.	PLATE THICKNESS (mm)	CUTTING SPEED (mm/min)	CUTTING OXY PRESSURE (bar)	PREHEAT OXY PRESSURE (HIGH[1] - LOW) (bar)	CUTTING OXY FLOW (l/h)	PREHEAT OXY FLOW (HIGH - LOW) (l/h)	PREHEAT FUEL FLOW (HIGH - LOW) (l/h)	HEATING POWER (HIGH - LOW) (Kcal/h)	KERF WIDTH (mm)
6290-5/0VVC	1 - 4	610 -510	3,0	1,0 - 0,6	420	1410 - 850	710 - 430	6200 - 3700	1,3
6290-4/0VVC	4 - 6	560 - 510	3,5	1,0 - 0,7	1130	1410 - 1000	710 - 500	6200 - 4400	1,5
6290-3/0VVC	6 - 9	560 - 450	5,0	2,5 - 0,7	2260	2540 - 1000	1270 - 500	11000 - 4400	1,8
6290-00VVC	9 - 12,5	510 - 460	5,0	2,5 - 0,7	2540	2540 - 1000	1270 - 500	11000 - 4400	1,8
6290-0VVC	12,5 - 20	460 - 330	6,5	2,5 - 0,7	3530	2540 - 1000	1270 - 500	11000 - 4400	2,0
6290-0½VVC	20 - 35	410 - 350	7,0	2,5 - 0,9	4000	2540 - 1130	1270 - 570	11000 - 5000	2,0
6290-1VVC	35 - 60	380 - 330	7,0	2,5 - 0,9	5560	2540 - 1130	1270 - 570	11000 - 5000	2,3
6290-1½VVC	60 - 75	300 - 230	7,0	2,5 - 0,9	7070	2540 - 1130	1270 - 570	11000 - 5000	2,8
6290-2VVC	75 - 100	300 - 180	7,0	2,5 - 0,9	9000	2540 - 1130	1270 - 570	11000 - 5000	3,0
6290-2½VVC	125 - 150	200 - 150	7,0	2,5 - 0,9	11170	2540 - 1130	1270 - 570	11000 - 5000	3,3
6290-3VVC	150 - 175	180 - 125	7,0	2,5 - 0,9	12000	2830 - 1130	1420 - 570	12400 - 5000	3,5
6290-4VVC	175 - 200	180 - 125	7,0	2,5 - 0,9	14850	2830 - 1130	1420 - 570	12400 - 5000	4,0
6290-5VVC	200 - 225	150 - 100	6,5	2,8 - 1,2	16410	2830 - 1510	1420 - 760	12400 - 6600	5,0
6290-5½VVC	225 - 250	125 - 100	6,5	2,8 - 1,3	16980	2830 - 1630	1420 - 820	12400 - 7100	6,4
6290-5NH	225 - 250	125 - 100	4,0	2,8 - 1,5	16980	2830 - 1880	1420 - 940	12400 - 8200	6,4
6290-6NH	250 - 275	120 - 100	4,0	2,8 - 1,5	19520	2830 - 1880	1420 - 940	12400 - 8200	6,4
6290-7NH	275 - 300	110 - 100	4,5	3,5 - 2,0	23340	2830 - 2510	1420 - 1260	12400 - 11000	6,4
6290-8NH	300 - 380	100 - 75	4,5	3,5 - 2,0	26170	2830 - 2510	1420 - 1260	12400 - 11000	7,6

[1] For a fast start, necessary when performing piercing and / or cutting thicknesses over 200 mm, use “high preheat”.
For thickness up to 200 mm, switch from high to low preheat - just cut, it has started
All pressures are measured at torch inlet
Use minimum 0,3 (bar) fuel gas pressure for equal pressure torches
Use maximum 0,2 (bar) fuel gas pressure for injector equipment.

VAX
VPM
NHM

6290

MODEL

MACHINE CUTTING TIPS

FEATURES:

- High-speed oxy-fuel gas cutting tips
- Minimalize kerf
- Increased cutting speeds, reduced heat input
- High quality machine cuts, reduces afterwork
- 6290-VAX & 6290-VPM plated shell, 6290-NHM unplated

6290-VAX

6290-VPM

6290-NHM

OXY-ACETYLENE CUTTING

PART NO.	PLATE THICKNESS (mm)	CUTTING SPEED (mm/min)	CUTTING OXY PRESSURE (bar)	CUTTING OXY FLOW (l/h)	PREHEAT OXY FLOW (l/h)	ACETYLENE FLOW (l/h)	HEATING POWER (Kcal/h)
6290-1VAX	0 - 8	650	2,5 - 4,0	850 - 1250	400	350	4740
6290-2VAX	8 - 15	600	5,0	2400	450	420	5690
6290-3VAX	15 - 35	550	7,0	4000	500	440	5960
6290-4VAX	35 - 75	450	7,0	5000	580	500	6780
6290-5VAX	75 - 150	300	5,0	9000	660	600	8130
6290-6VAX	150 - 200	150	6,5	13500	600	800	10840

Use maximum 0,2 bar fuel gas pressure for injector equipment.
Use minimum 0,3 bar fuel gas pressure for equilibrated pressure torches.

OXY-MAPP©*, TETRENE AND PROPYLENE CUTTING

PART NO.	PLATE THICKNESS (mm)	CUTTING SPEED (mm/min)	CUTTING OXY PRESSURE[1] (bar)	PREHEAT OXY PRESSURE (HIGH - LOW) (bar)	PREHEAT OXY FLOW (LOW PRESSURE) (l/h)	CUTTING OXY FLOW (l/h)	PREHEAT FUEL FLOW[2] (l/h)	HEATING POWER (LOW) (Kcal/h)	KERF WIDTH (mm)
6290-0VPM	1 - 4	750	3,0	0,8 - 0,5	600	810	300	6300	1,3
6290-1VPM	4 - 8	700	3,5	0,8 - 0,5	1200	810	300	6300	1,5
6290-2VPM	8 - 15	620	5,0	1,7 - 0,5	2400	840	330	6930	1,8
6290-3VPM	15 - 35	550	7,0	1,7 - 0,5	4200	900	360	7560	2,0
6290-4VPM	35 - 75	450	7,0	1,7 - 0,7	5100	1020	400	8390	2,5
6290-5VPM	75 - 150	300	7,0	1,7 - 0,7	8400	1080	420	8820	3,0
6290-6VPM	150 - 200	150	7,0	2,0 - 0,7	14400	1140	450	9450	4,0
6290-7NHM	200 - 300	125	4,0	0,7 - 2,5	22300	1140	450	9450	6,9

[1] Cutting oxygen pressure are measured at torch inlet.
[2] Preheat flows are calculated for propylene / oxygen at 2.6 / 1 ratio.
Use minimum 0,3 bar fuel gas pressure for equal pressure torches.
Use maximum 0,2 bar fuel gas pressure for injector equipment.
* MAPP© is a registered trademark of Messer Group GmbH.

E-9

Machine cutting tips cleaning instructions: The wire brush included with tip cleaner E-9 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.

E9 Tip Cleaner

TH-98 TWIN TIP ADAPTER

Adjustable twin adapter for two cuts simultaneously using one torch. Adjust from 30 mm to 305 mm wide (special widths available upon request), O-ring sealed, large capacity (up to 200 mm to each tip).

S-98-C ADJUSTABLE TIP ADAPTER

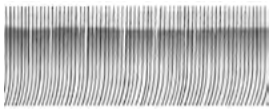
Allows adjustment of tip to any angle without moving the sealed torch O-ring, large capacity (up to 200 mm), calibrated to 90°.

BV-98-2 BEVELLING HEAD

Use with natural gas or propane only. Increases speed and quality of bevel cuts. 6290 cutting tips can be used. Use specially designed 1390-3H replacement heating tip for optimum results.

MACHINE CUTTING GUIDE

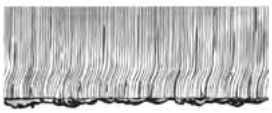
CORRECT CUTS



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.

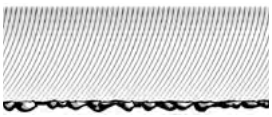
PRODUCTION CUT - Moderately sloping drag lines and a reasonably smooth surface characterize a production cut. For production operations a cut of this type represents the best combination of quality and economy.

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.

HARRIS SUPER

MODEL

HARRIS PORTABLE CUTTING SYSTEM

Harris Super is an innovative machine with a body structure systematized for different types of oxy-fuel cutting and automatic welding work.

FEATURES

- Straight line and circle cutting or welding
- Double Cone Stepless Drive System, maintaining constant travel speed even with high temperatures and allowing greater speed control
- Plate Rider Torch Option, automatically maintains torch distance during cutting
- Modular straight 1800 mm rail sections (to be ordered separately)
- Circle rail Ø 40-360 mm and Ø 1150-2400 mm (to be ordered separately)
- Speed meter dial indication with conversion scale
- Cutting torch unit for square or V-bevel cutting, equipped with the Harris cutting torch Model 198-4
- Double or triple cutting torch unit available on request

PACKAGE INCLUDES

- Cutting machine with connecting lead and rubber connection hose from machine to cutting torch
- Harris cutting torch model 198 with 3 tips
- Tool set
- Operation manual

Model shown with additional accessories to be ordered separately

MODEL NO.	DESCRIPTION	NOTE
PCS-SUPER-110F	Harris Super 110 V	Propane
PCS-SUPER-220F	Harris Super 220 V	
PCS-SUPER-110	Harris Super 110 V	Acetylene
PCS-SUPER-220	Harris Super 220 V	
PCS RAIL	Straight rail 1800 mm	To be ordered separately
PCS CIRRAIL	Circle rail	

SPECIFICATIONS	
Cutting Thickness	Up to 300 mm
Cutting Speed	80-800 mm/min
Speed Control	Single cone speed system, mechanical regulation
Power Source	110 V, 220 V AC
Weight	11 kg
Overall Measurement	430 mm (L) x 170 mm (W) x 215 mm (H)
Cutting Torch	Propane: 198-4F Acetylene: 198-4
Cutting Tips*	Propane: 6290-VVC (size 5/0 to 5½) - 6290-NH (size 6-7) Acetylene: 6290-VAX (size 1 to 6)

* See pages 126-127

HARRIS PLUS

MODEL

HARRIS PORTABLE CUTTING SYSTEM

Harris Plus is a more portable version of the Harris Super, designed with the same precision and capabilities.

FEATURES

- Straight line and circle oxy fuel cutting
- Stepless Drive System, maintaining constant travel speed even with high temperatures and ensuring stable, trouble-free cutting
- Light weight - 9,5 kg - easy to carry and use
- Modular straight 1800 mm rail sections (to be ordered separately)

PACKAGE INCLUDES

- Cutting machine with connecting lead and rubber connection hose from machine to cutting torch
- Harris cutting torch Model 198 with 3 tips
- Tool set
- Operation manual

Model shown with additional accessories to be ordered separately

MODEL NO.	DESCRIPTION	NOTE
PCS-PLUS-110F	Harris Plus 110 V	Propane
PCS-PLUS-220F	Harris Plus 220 V	
PCS-PLUS-110	Harris Plus 110 V	Acetylene
PCS-PLUS-220	Harris Plus 220 V	
PCS RAIL	Straight rail 1800 mm	To be ordered separately

SPECIFICATIONS	
Cutting Thickness	3-150 mm
Cutting Speed	150-800 mm/min
Speed control	Single cone speed system, mechanical regulation
Power Source	110 V, 220 V AC
Weight	9,5 kg
Overall Measurement	360 mm (L) x 140 mm (W) x 175 mm (H)
Cutting Torch	Propane: 198-4F Acetylene: 198-4
Cutting Tips*	Propane: 6290-VVC (size 5/0 to 2½) Acetylene: 6290-VAX (size 1 to 5)

* See pages 126-127

HARRIS HA

MODEL

PORTABLE HAND CUTTING SYSTEM

Harris HA is a portable, hand cutting machine with integrated drive system. It is suitable as a hand-held cutter as well as an automated cutting machine. It allows the operator to cut all kinds of profiles in a simple and accurate manner. Because it is lightweight, Harris HA can be simply used as an ordinary hand cutting torch.

PART NO.	DESCRIPTION	NOTE
PCS-HAF	HARRIS HA 220 V	Propane
PCS-HA	HARRIS HA 220 V	Acetylene

SPECIFICATIONS	
Cutting thickness	3 - 30 mm
Running speed	200 - 700 mm/min
Input voltage	110V, 220V AC
Speed control	Transistor control
Overall length	500 mm
Weight	2,7 kg
Standard wheel	Attaches to machine body
Cutting Tips	Propane: HS106 (sizes 0 to 2) Acetylene: HS102 (sizes 0 to 2)

OUTFITS AND ACCESSORIES

HARRIS HAS EVERYTHING THAT IS NEEDED FOR INDUSTRIAL GAS APPLICATIONS. COMPLETE KITS, SAFETY DEVICES, HOSES, GAUGE GUARDS AND MORE.

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QUICK SELECTION GUIDE

14


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A LINCOLN ELECTRIC COMPANY

NEED A SPECIAL TORCH?

THE INFERNO
PROPANE TORCH

MAKING HOME, FARM, INDUSTRIAL AND CONSTRUCTION WORK EASIER.

APPLICATIONS:

- Repairing road surfaces
- Removing paint
- Burning brush, weeds and stumps
- Melting snow and ice

FEATURES:

- Powerful 126 000 Kcal/h output
- Intense heat ideal for many projects
- Excess flow and shut off safety valve
- Brass valve for flame adjustment
- Includes 3 m propane gas hose and flint striker
- Equipped with quick shut-off valve for safety

LIGHT DUTY OXY-ACETYLENE KITS

Compact and lightweight, ideal for plumbers, DIY projects and small workshops

FEATURES:

- Model 19-6 handle with front valves for easy regulation
- Model 36-2 cutting attachment with triangular stainless steel tube construction for maximum strength
- Protected O-ring on cutting attachment, mixer and welding assembly
- Vast choice of accessories depending on kit version
- Packed in durable and portable steel case

19/36-S

19/36-SU

19/36-STD-UP

19/36-STD-EP2

CUTS UP TO 75 mm (EQUAL PRESSURE); WELDS UP TO 14 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING TIPS	HEATING TIP	ACCESSORIES	PACKAGING
19/36-S	19-6	H-19-2E	38-L3/R3	36-2	3690-0AC/1AC/2AC	5090-0/3/5/9	J-63-1	Wrench (I-62-X), Circle Cutting Attachment (I-69-7), Tip cleaner (C-9), Connector (1901-11)	Steel case (1943-K) Plastic Internal (1949-P)

CUTS UP TO 75 mm (EQUAL PRESSURE); WELDS UP TO 14 mm (ACETYLENE, LOW PRESSURE)

PART NO.	HANDLE	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING ASSEMBLIES	ACCESSORIES	PACKAGING
19/36-SU	19-6	38-L3/R3	36-2	3690-0AC/1AC/2AC	L-19-1/3/5/6/9	Wrench (I-62-X), Circle Cutting Attachment (I-69-7), Tip cleaner (C-9)	Steel case (1943-K) Plastic Internal (1949-PUA))
19/36-STD-UP	19-6	38-L3/R3	36-2	3690-0AC/1AC/2AC	L-19-1/3/5/6/9	Wrench (I-62-X), Tip cleaner (C-9)	Steel case (1943-K) Plastic Internal (1949-PL)

CUTS UP TO 75 mm (EQUAL PRESSURE); WELDS UP TO 4 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING TIPS	HEATING TIP	ACCESSORIES	PACKAGING
19/36-STD-EP2	19-6	H-19-2E	38-L3/R3	36-2	3690-0AC/2AC	5090-0/3/5 0090-3	J-63-1	Wrench (I-62-X), Connector (1901-11)	Steel case (1943-KSR) Plastic Internal (1949-PSA))

HEAVY DUTY OXY-ACETYLENE KITS

Professional equipment designed for maximum safety and long life. Ideal for industry, workshops, shipyards, construction sites and oil industry.

FEATURES:

- Model 43-2 handle in forged brass with connection piece in stainless steel
- Cutting attachment with triangular stainless steel tube construction for maximum strength
- Head mixing for operator safety
- Flat-seat cutting tips for longer life
- Vast choice of accessories depending on kit version
- Packed in durable and portable steel case

43/73-STD-EP

43/49-STD-UP

43/49-SAC

43/49-SUAC

CUTS UP TO 50 mm (EQUAL PRESSURE); WELDS UP TO 9 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING TIPS	ACCESSORIES	PACKAGING
43/73-STD-EP	43-2	E-43	38-L2/R2	73-3	6290-2AC	23-A-90-3/5/8	Wrench I-62-X	Steel case (1943-K) Plastic Internal (4349-P)

CUTS UP TO 50 mm (LOW PRESSURE); WELDS UP TO 9 mm (ACETYLENE, LOW PRESSURE)

PART NO.	HANDLE	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING ASSEMBLIES	ACCESSORIES	PACKAGING
43/49-STD-UP	43-2	38-L2/R2	49-3	6290-2AC	L-43/3/5/8	Wrench I-62-X	Steel case (1943-K) Plastic Internal (4349-PS)

CUTS UP TO 150 mm (LOW PRESSURE); WELDS UP TO 20 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING TIPS	HEATING TIP	ACCESSORIES	PACKAGING
43/49-SAC	43-2	E-43	38-L2/R2	49-3	6290-0AC/2AC/4AC	23-A-90-3/5/6/10	J-63-2	Wrench I-62-X. Twin wheel circle cutting attachment (I-69-6)	Steel case (1943-K) Plastic Internal (4349-P)

CUTS UP TO 150 mm (LOW PRESSURE); WELDS UP TO 20 mm (ACETYLENE, LOW PRESSURE)

PART NO.	HANDLE	HOSE CONNECTIONS	CUTTING ATTACHMENT	CUTTING TIPS	WELDING ASSEMBLIES	ACCESSORIES	PACKAGING
43/49-SUAC	43-2	38-L2/R2	49-3	6290-0AC/2AC/4AC	L-43-3/5/6/9/15	Wrench I-62-X. Twin wheel circle cutting attachment (I-69-6)	Steel case (1943-K) Plastic Internal (4349-PI)

MASTERLINE KITS

FEATURES:

- Fully equipped combination kits for welding, brazing, cutting and heating with acetylene
- Brass handle with large flow capacity for heavy duty applications
- Cutting attachment with triangular stainless steel tube design
- Equal pressure mixer for maximum safety
- Regulators with improved quality, performance and durability
- Kits complete with goggles, lighter with flints and 6 m long twin hose with fittings
- Carrying bag included

CUTS UP TO 150 mm (EQUAL PRESSURE); WELDS UP TO 9 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	CUTTING ATTACHMENT	CUTTING TIPS	WELDING TIPS	HEATING TIPS	SINGLE STAGE OXYGEN REGULATOR	SINGLE STAGE FUEL GAS REGULATOR	ACCESSORIES
MASTERLINE DIAMOND	43-2	E-43	73-3	6290-2	23A90-3/5/8	J-63-2	94-10-0X	94-1,5-AC	6 m hose (4300591), Goggles (APS010), Lighter (26S), Flints (26L)
MASTERLINE PLATINUM	43-2	E-43	73-3	6290-2	23A90-3/5/8	J-63-2	25GX-10-0X	25GX-1.5-AC	

CUTS UP TO 150 mm (EQUAL PRESSURE); WELDS UP TO 4 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	CUTTING ATTACHMENT	CHECK VALVES	CUTTING TIPS	WELDING TIPS	SINGLE STAGE OXYGEN REGULATOR	SINGLE STAGE FUEL GAS REGULATOR	ACCESSORIES
MASTERLINE GOLD	43-2	E-43	73-3	886-CVTR 886-CVTL	6290-1	23A90-5	94-10-0X	94-1,5-AC	6 m hose (4300591), Goggles (APS010), Lighter (26S), Flints (26L)
MASTERLINE SILVER	263	E-43	73-3	886-CVTR 886-CVTL	6290-1	23A90-5	25GX-10-0X	25GX-1.5-AC	

CUTS UP TO 100 mm (EQUAL PRESSURE); WELDS UP TO 4 mm (ACETYLENE, EQUAL PRESSURE)

PART NO.	HANDLE	MIXER	CUTTING ATTACHMENT	CHECK VALVES	CUTTING TIPS	WELDING TIPS	SINGLE STAGE OXYGEN REGULATOR	SINGLE STAGE FUEL GAS REGULATOR	ACCESSORIES
MASTERLINE BRONZE	85	D-85	72-3	886-CVTR 886-CVTL	6290-1	23A90-5	801-10-0X	801-1,5-AC	6 m hose (4300591), Goggles (APS010), Lighter (26S), Flints (26L)
FLAMEPOWER	85	D-85	72-3	-	6290-1AC	23A90-5	601-10-0X	601-1,5-AC	

IRONWORKER KITS

FEATURES:

- Fully equipped combination kits for cutting and welding with acetylene
- Compatible with VICTOR® equipment
- Spiral mix system
- Heavy duty S45 regulators
- Kit complete with goggles, lighter with flints and 6 m hose
- Carrying bag included

CUTS UP TO 150 mm; WELDS UP TO 20 mm

PART NO.	HANDLE	MIXER	CUTTING ATTACHMENT	CHECK VALVES	CUTTING TIPS	WELDING TIPS	SINGLE STAGE OXYGEN REGULATOR	SINGLE STAGE FUEL GAS REGULATOR	ACCESSORIES
IRONWORKER HEAVY DUTY	VH31	E-43HV	VH24	188SHTL 188SHTR	1-101-1 HV	23A90-3	S45-10-0X	S45-1,5-AC	6 m hose (4300591), Goggles (4304482), Lighter (26S), Flints (26L)
IRONWORKER MEDIUM DUTY	VH10	V-W1	VH13	Included	1-V3-101	23A90-5	801-10-0X	801-1,5-AC	6 m hose (4300591), Goggles (4304482), Lighter (26S), Flints (26L)

MASTERCUTTER KIT

FEATURES:

- Fully equipped cutting kit for cutting up to 300 mm with propane
- Cost effective low pressure injector mixing system
- Tough and solid Model 62-5F torch
- Heavy duty Model 25GX regulators
- Portable outer box
- Kit complete with goggles, lighter with flints and 6 m hose

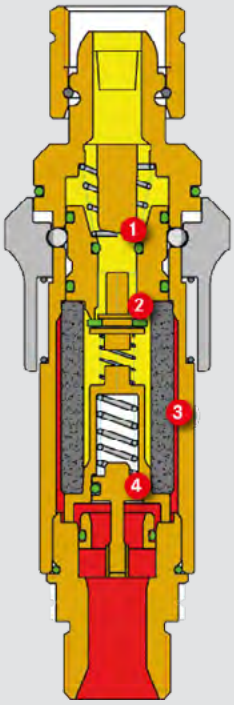
CUTS UP TO 300 mm (PROPANE, LOW PRESSURE)

PART NO.	CUTTING TORCH	CHECK VALVES	CUTTING TIPS	WELDING TIPS	SINGLE STAGE OXYGEN REGULATOR	SINGLE STAGE FUEL GAS REGULATOR	ACCESSORIES
MASTERCUTTER	62-5F	886-CVTR/ CVTL	6290-1NX/2NX	25GX-10-0X	25GX-4-LP	25GX-4-LP	6 m hose (4300533), Goggles (APS010), Lighter (26S), Flints (26L)

*Victor® is registered trademark owned by Victor Technologies, Inc.

SAFETY FUNCTIONS:

Each flashback arrestor is equipped with safety functions which vary between models. Below you can find a short description of every function that is available for Harris safety devices.



1. **PV - pressure-sensitive gas cut-off valve**
   The pressure-operated cut-off valve feature prevents the continuous gas flow in the event of rapid pressure change.

2. **NV - gas non-return valve**
   The gas non-return valve prevents the sudden return of air or oxygen in the distribution line or single cylinders.

3. **FA - flame arrestor**
   A sintered stainless steel flame arrestor prevents flashback from the gas outlet side and cools the flame down to below the ignition temperature, so that the gas cannot re-ignite on the inlet side.

4. **TV - thermal cut-off valve**
   In the case of excessive temperatures in the safety device due to flashbacks or burnbacks, the valve closes automatically and cuts off the gas flow.

FLASHBACK ARRESTOR TESTING INSTRUMENT

The 188-PG instrument can be used for testing:
- pressure sensitive gas cut-off (PV),
- gas non-return valve (NV),
- flow rate.

This testing unit can accommodate flashback arrestors with a maximum lenght of 200 mm and a diameter up to 50 mm; other sizes need special adapters.
188-PG is capable of testing flashback arrestors with a maximum flow rate of 20m^3/h at a inlet pressure of 0.15 MPa (1,5 bar).

Each safety device should be tested annually for gas tightness, gas flow and gas return.

FLASHBACK ARRESTORS

- Prevent reverse flow of gases with built-in check valve
- Extinguish flashback fire with sintered metal filter
- Thermal cut-off which positively shuts off the gas in case of hose fire, burn or repeated flashbacks (only "T" version)
- Pressure operated cut-off which positively shuts off the gas when outlet pressure exceeds inlet pressure (only "3T" version)

How to read the product label:

1	Serial number	A0,15H0,35MP0,5MP
2	Manufacturer/Distributor	Harris Calorific
3	Flow direction	↓
4	Type of gas	Acetylene/Hydrogen/PM
5	Number of applicable standard*	ISO 5175-1
6	Model designation	188L
7	Operating pressure	1,5/3,5/5 bar
8	Description of safety functions (see next page)	FA NV

*Specific models may be object of other certifications such as: BAM and/or UL. For more information please contact our customer service.

Selection:

Choose the proper size device, paying particular attention to required equipment gas flow rates and the flow information supplied with the flashback arrestors like P charts. Features like thermal shut offs may also influence device selection.
The aggregate number of safety devices in a system can also create an issue. Each safety device used creates a restriction in flow, so always follow the equipment manufacturer's recommendations.

FLASHBACK ARRESTORS

188- (L & R)

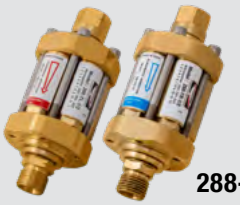
188-2 (L & R)

REGULATOR TYPE												
PART NO.	GAS	MAX FLOW (l/h)	MAX PRESSURE (bar)*				INLET THREAD	OUTLET THREAD	FUNCTIONS			
			OXY	AC	LPG	H_2			NV	FA	TV	PV
188-L	Fuel gas	30 000	-	1,5	5	3,5	9/16"-18-UNF-2B-LH	9/16"-18-UNF-2A-LH	✔	✔		
188-R	Ox	100 000	25	-	-	-	9/16"-18-UNF-2B-RH	9/16"-18-UNF-2A-RH	✔	✔		
188-LGB	Fuel gas	30 000	-	1,5	5	3,5	G 3/8"-LH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	✔	✔		
188-RGB	Ox	100 000	25	-	-	-	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228	✔	✔		
188-2L	Fuel gas	60 000	-	1,5	5	4,0	9/16"-18-UNF-2B-LH	9/16"-18-UNF-2A-LH	✔	✔		
188-2R	Ox	180 000	25	-	-	-	9/16"-18-UNF-2B-RH	9/16"-18-UNF-2A-RH	✔	✔		
188-2AL	Fuel gas	60 000	-	1,5	5	4,0	5/8"-18-UNF-LH	5/8"-18-UNF-LH	✔	✔		
188-2AR	Ox	180 000	25	-	-	-	5/8"-18-UNF-RH	5/8"-18-UNF-RH	✔	✔		
188-2LGB	Fuel gas	60 000	-	1,5	5	4,0	G 3/8"-LH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	✔	✔		
188-2RGB	Ox	180 000	25	-	-	-	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228	✔	✔		
188-GL	Fuel gas	30 000	-	1,5	5	3,5	G 1/4"-LH-UNI ISO 228	G 1/4" A-LH-UNI ISO 228	✔	✔		
188-GR	Ox	100 000	25	-	-	-	G 1/4"-RH-UNI ISO 228	G 1/4" A-RH-UNI ISO 228	✔	✔		
188-FFL	Fuel gas	30 000	-	1,5	5	3,5	M16x1.5-6H-LH	M16x1.5-6g-LH	✔	✔		
188-FFR	Ox	100 000	25	-	-	-	M16x1.5-6H-RH	M16x1.5-6g-RH	✔	✔		

188-T (L & R)

188-3T (LGB & RGB)

REGULATOR TYPE												
PART NO.	GAS	MAX FLOW (l/h)	MAX PRESSURE (bar)*				INLET THREAD	OUTLET THREAD	FUNCTIONS			
			OXY	AC	LPG	H_2			NV	FA	TV	PV
188-TL	Fuel gas	30 000	-	1,5	5	3,5	9/16"-18-UNF-2B-LH	9/16"-18-UNF-2A-LH	✔	✔	✔	
188-TR	Ox	100 000	25	-	-	-	9/16"-18-UNF-2B-RH	9/16"-18-UNF-2A-RH	✔	✔	✔	
188-TAL	Fuel gas	30 000	-	1,5	5	3,5	5/8"-18-UNF-LH	5/8"-18-UNF-LH	✔	✔	✔	
188-TAR	Ox	100 000	25	-	-	-	5/8"-18-UNF-RH	5/8"-18-UNF-RH	✔	✔	✔	
188-TLGB	Fuel gas	30 000	-	1,5	5	3,5	G 3/8"-LH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	✔	✔	✔	
188-TRGB	Ox	100 000	25	-	-	-	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228	✔	✔	✔	
188-2TAL	Fuel gas	60 000	-	1,5	5	4,0	5/8"-18-UNF-LH	5/8"-18-UNF-LH	✔	✔	✔	
188-2TAR	Ox	180 000	25	-	-	-	5/8"-18-UNF-RH	5/8"-18-UNF-RH	✔	✔	✔	
188-2TL	Fuel gas	60 000	-	1,5	5	4,0	9/16"-18-UNF-2B-LH	9/16"-18-UNF-2A-LH	✔	✔	✔	
188-2TR	Ox	180 000	25	-	-	-	9/16"-18-UNF-2B-RH	9/16"-18-UNF-2A-RH	✔	✔	✔	
188-2TLGB	Fuel gas	60 000	-	1,5	5	4,0	G 3/8"-LH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	✔	✔	✔	
188-2TRGB	Ox	180 000	25	-	-	-	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228	✔	✔	✔	
188-3TLGB	Fuel gas	60 000	-	1,5	5	4,0	G 3/8"-LH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	✔	✔	✔	✔
188-3TRGB	Ox	180 000	15	-	-	-	G 3/8"-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228	✔	✔	✔	✔



288-T1/2 (L & R)

288-T1 (L & R)

ULTRA HIGH FLOW												
PART NO.	GAS	MAX FLOW (l/h)	MAX PRESSURE (bar)*				INLET THREAD	OUTLET THREAD	FUNCTIONS			
			OXY	AC	LPG	H_2			NV	FA	TV	DF**
288-TL1/2	Fuel gas	115 000	-	1,5	5	3,0	G1/2" -ISO 228-LH-F	G1/2" -ISO 228-LH-M	✔	✔	✔	✔
288-TR1/2	Ox	440 000	25	-	-	-	G1/2" -ISO 228-RH-F	G1/2" -ISO 228-RH-M	✔	✔	✔	✔
288-TL1	Fuel gas	115 000	-	1,5	5	3,0	G1" -ISO 228-LH-F	G1" -ISO 228-LH-F	✔	✔	✔	✔
288-TR1	Ox	440 000	25	-	-	-	G1" -ISO 228-RH-F	G1" -ISO 228-RH-F	✔	✔	✔	✔

*1 bar=100 kPa

**DF - dirt filter

FLASHBACK ARRESTORS

188-GG (L & R)

188-GB (L6 & R6)

TORCH TYPE

PART NO.	GAS	MAX FLOW (l/h)	MAX PRESSURE (bar)*				INLET THREAD	OUTLET THREAD	FUNCTIONS			
			OXY	AC	LPG	H_2			NV	FA	TV	PV
188-1GBL6	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 1/4"(6 mm)	G 3/8"-LH-UNI ISO 228	✔	✔		
188-1GBR6	Ox	65 000	20	-	-	-	Ø hose 1/4"(6 mm)	G 3/8"-RH-UNI ISO 228	✔	✔		
188-1GBL8	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 5/16"(8 mm)	G 3/8"-LH-UNI ISO 228	✔	✔		
188-1GBR8	Ox	65 000	20	-	-	-	Ø hose 5/16"(8 mm)	G 3/8"-RH-UNI ISO 228	✔	✔		
188-1GL6	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 1/4"(6 mm)	G 1/4"-LH-UNI ISO 228	✔	✔		
188-1GR6	Ox	65 000	20	-	-	-	Ø hose 1/4"(6 mm)	G 1/4"-RH-UNI ISO 228	✔	✔		
188-1L6	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 1/4"(6 mm)	9/16"-18-UNF-2B-LH	✔	✔		
188-1R6	Ox	65 000	20	-	-	-	Ø hose 1/4"(6 mm)	9/16"-18-UNF-2B-RH	✔	✔		
188-1L8	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 5/16"(8 mm)	9/16"-18-UNF-2B-LH	✔	✔		
188-1R8	Ox	65 000	20	-	-	-	Ø hose 5/16"(8 mm)	9/16"-18-UNF-2B-RH	✔	✔		
188-GGAL	Fuel gas	20 000	-	1,5	4	4,0	5/8"-18-UNF-LH	5/8"-18-UNF-LH	✔	✔		
188-GGAR	Ox	65 000	15	-	-	-	5/8"-18-UNF-RH	5/8"-18-UNF-RH	✔	✔		
188-GGGBL	Fuel gas	20 000	-	1,5	4	4,0	G 3/8" A-LH-UNI ISO 228	G 3/8"-LH-UNI ISO 228	✔	✔		
188-GGGBR	Ox	65 000	15	-	-	-	G 3/8" A-RH-UNI ISO 228	G 3/8"-RH-UNI ISO 228	✔	✔		
188-GGGL	Fuel gas	20 000	-	1,5	4	4,0	G 1/4" A-LH-UNI ISO 228	G 1/4"-LH-UNI ISO 228	✔	✔		
188-GGGR	Ox	65 000	15	-	-	-	G 1/4" A-RH-UNI ISO 228	G 1/4"-RH-UNI ISO 228	✔	✔		
188-GGL	Fuel gas	20 000	-	1,5	4	4,0	9/16"-18-UNF-2A-LH	9/16"-18-UNF-2B-LH	✔	✔		
188-GGR	Ox	65 000	15	-	-	-	9/16"-18-UNF-2A-RH	9/16"-18-UNF-2B-RH	✔	✔		

188-1G (L6 & R6)

188- TT (L6 & R6)

HOSE-TO-HOSE TYPE

PART NO.	GAS	MAX FLOW (l/h)	MAX PRESSURE (bar)*				INLET THREAD	OUTLET THREAD	FUNCTIONS			
			OXY	AC	LPG	H_2			NV	FA	TV	PV
188-TTL6	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 1/4"(6 mm)	Ø hose 1/4"(6 mm)	✔	✔		
188-TTR6	Ox	65 000	20	-	-	-	Ø hose 1/4"(6 mm)	Ø hose 1/4"(6 mm)	✔	✔		
188-TTL8	Fuel gas	20 000	-	1,5	4	4,0	Ø hose 5/16"(8 mm)	Ø hose 5/16"(8 mm)	✔	✔		
188-TTR8	Ox	65 000	20	-	-	-	Ø hose 5/16"(8 mm)	Ø hose 5/16"(8 mm)	✔	✔		

*1 bar=100 kPa

CHECK VALVES

PART NO.	GAS	MAX PRESSURE (bar)*				INLET THREAD	OUTLET THREAD
		OXY	AC	LPG	H_2		
88-6SVL	Fuel gas	-	1,5	5	20	G 1/4" A-LH-UNI ISO 228	G 1/4"-LH-UNI ISO 228
88-6SVR	Ox	20	-	-	-	G 1/4" A-RH-UNI ISO 228	G 1/4"-RH-UNI ISO 228
88-4CVL**	Fuel gas	-	1,5	5	20	9/16"-18-UNF-3B-LH	9/16"-18-UNF-2A-LH
88-4CVR**	Ox	20	-	-	-	9/16"-18-UNF-3B -RH	9/16"-18-UNF-2A –RH
88-6AL	Fuel gas	-	1,5	5	20	.622"-18-UN-2A-LH	9/16"-18-UNF-3B-LH
88-6AL1	Fuel gas	-	1,5	5	20	.622"-18-UN-2A-LH	.622"-18-UN-LH
88-6AR	Ox	20	-	-	-	.622"-18-UN-2A-RH	9/16"-18-UNF-3B-RH
88-6AR1	Ox	20	-	-	-	.622"-18-UN-2A-RH	.622"-18-UN-RH
88-6CTL	Fuel gas	-	1,5	5	20	M16x1.5-6g-LH	M16x1.5-H-LH
88-6CTR	Ox	20	-	-	-	M16x1.5-6g-RH	M16x1.5-H-RH
88-6CVTL	Fuel gas	-	1,5	5	20	9/16"-18-UNF-2A-LH	9/16"-18-UNF-2B-LH
88-6CVTR	Ox	20	-	-	-	9/16"-18-UNF-2A-RH	9/16"-18-UNF-2B-RH
88-6FL	Fuel gas	-	1,5	5	20	M16x1.5-6g-LH	9/16"-18-UNF-3B-LH
88-6FR	Ox	20	-	-	-	M16x1.5-6g-RH	9/16"-18-UNF-3B-RH
88-6GBL	Fuel gas	-	1,5	5	20	G 3/8" A-LH-UNI ISO 228	G 3/8"-LH-UNI ISO 228
88-6GBR	Ox	20	-	-	-	G 3/8" A-RH-UNI ISO 228	G 3/8"-RH-UNI ISO 228
88-6GBR1	Ox	20	-	-	-	G 3/8" A-RH-UNI ISO 228	9/16"-18-UNF-3B-RH
88-6GL	Fuel gas		1,5	5	20	G 3/8" A-LH-UNI ISO 228	9/16"-18-UNF-3B-LH
88-6GR	Ox	20	-	-	-	G 1/4" A-RH-UNI ISO 228	9/16"-18-UNF-3B-RH

*1 bar=100 kPa **Regulator type

- Torch type (apart from 88-4CV);
- Help prevent dangerous reverse flow mixing of gas in the hose;
- Compact lightweight design provides extra operator safety.

88-6CVT (L & R)

QUICK ACTION COUPLINGS

- Long lasting stainless steel pin connection;
- Automatic gas cut-off to positively shut off the gas supply when disconnected;
- Durable brass and stainless steel construction.

PINS

PART NO.	TYPE	CONNECTION TYPE
CPL6	for tapping point or in-hose	Hose connection Ø 1/4" (6 mm)
CPR6	for tapping point or in-hose	Hose connection Ø 1/4" (6 mm)
CPL8	for tapping point or in-hose	Hose connection Ø 5/16" (8 mm)
CPR8	for tapping point or in-hose	Hose connection Ø 5/16" (8 mm)
CPL10	for tapping point or in-hose	Hose connection Ø 3/8" (9,5 mm)
CPR10	for tapping point or in-hose	Hose connection Ø 3/8" (9,5 mm)
CPLGB	for torch side installation	Threads G 3/8"-LH-UNI ISO 228
CPRGB	for torch side installation	Threads G 3/8"-RH-UNI ISO 228
CPL	for torch side installation	Threads 9/16"-18-UNF-2B-LH
CPR	for torch side installation	Threads 9/16"-18-UNF-2B-RH

CPL8

CPLGB

QUICK COUPLINGS

PART NO.	TYPE	CONNECTION TYPE
QACL6	for in-hose or torch side connection	Hose connection Ø 1/4" (6 mm)
QACR6	for in-hose or torch side connection	Hose connection Ø 1/4" (6 mm)
QACL8	for in-hose or torch side connection	Hose connection Ø 5/16" (8 mm)
QACR8	for in-hose or torch side connection	Hose connection Ø 5/16" (8 mm)
QACL10	for in-hose or torch side connection	Hose connection Ø 3/8" (9,5 mm)
QACR10	for in-hose or torch side connection	Hose connection Ø 3/8" (9,5 mm)
QACL	for tapping points and pressure regulators	Threads 9/16"-18-UNF-2B-LH
QACR	for tapping points and pressure regulators	Threads 9/16"-18-UNF-2B-LH
QACLGB	for tapping points and pressure regulators	Threads G 3/8"-LH-UNI ISO 228
QACRGB	for tapping points and pressure regulators	Threads G 3/8"-RH-UNI ISO 228

QACLGB

QACL8

FLOWMETERS MODELS 861 & 866

- Measure flow from 0 to 15 / 30 lpm for Ar/CO_2
- Measure flow from 0 to 20 / 50 lpm for forming gas
- Calibrated at 3,5 bar inlet pressure (optional 4 bar)
- Easy-to-read flow tube has virtually unbreakable transparent polycarbonate outer cover for maximum strength and 360° visibility
- Brass body and knob
- Needle valve for accurate flow adjustment
- Simplified choice of outlet connections on the body
- Calibration (bar / PSI)
- Inlet threads 1/4" NPT male (for other inlets refer to the table below)

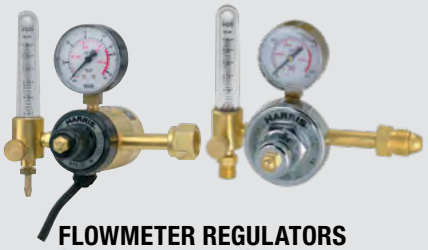
PART NO. 861	PART NO. 866	FLOW (l/m)	GAS	OUTLET THREAD
861-15L-ARC	866-15L-ARC	15	Argon/CO_2	9/16"-18-UNF-2A-RH
861-30L-ARC	866-30L-ARC	30	Argon/CO_2	9/16"-18-UNF-2A-RH
861-15L-ARC-1	866-15L-ARC-1	15	Argon/CO_2	G 3/8" A-RH-UNI ISO 228
861-30L-ARC-1	866-30L-ARC-1	30	Argon/CO_2	G 3/8" A-RH-UNI ISO 228
861-15L-ARC-2	866-15L-ARC-2	15	Argon/CO_2	G 1/4" A-RH-UNI ISO 228
861-30L-ARC-2	866-30L-ARC-2	30	Argon/CO_2	G 1/4" A-RH-UNI ISO 228
861-15L-ARC-3	866-15L-ARC-3	15	Argon/CO_2	.622"-18-UN-RH
861-30L-ARC-3	866-30L-ARC-3	30	Argon/CO_2	.622"-18-UN-RH
861-15L-ARC-5	866-15L-ARC-5	15	Argon/CO_2	Hose connection 1/4" (6 mm)
861-30L-ARC-5	866-30L-ARC-5	30	Argon/CO_2	Hose connection 1/4" (6 mm)
861-15L-ARC-6	866-15L-ARC-6	15	Argon/CO_2	Hose connection 3/8" (10 mm)
861-30L-ARC-6	866-30L-ARC-6	30	Argon/CO_2	Hose connection 3/8" (10 mm)
861-15L-ARC-7	866-15L-ARC-7	15	Argon/CO_2	Hose connection 5/16" (8 mm)
861-30L-ARC-7	866-30L-ARC-7	30	Argon/CO_2	Hose connection 5/16" (8 mm)
861-15L-ARC-11	866-15L-ARC-11	15	Argon/CO_2	M16x1,5-6g-RH
861-30L-ARC-11	866-30L-ARC-11	30	Argon/CO_2	M16x1,5-6g-RH
861-20L-FG-8	866-20L-FG-8	20	Forming gas	9/16"-18-UNF-2A-LH
861-50L-FG-8	866-50L-FG-8	50	Forming gas	9/16"-18-UNF-2A-LH
861-20L-FG-4	866-20L-FG-4	20	Forming gas	G 3/8" A-LH-UNI ISO 228
861-50L-FG-4	866-50L-FG-4	50	Forming gas	G 3/8" A-LH-UNI ISO 228
861-20L-FG-9	866-20L-FG-9	20	Forming gas	G 1/4" A-LH-UNI ISO 228
861-50L-FG-9	866-50L-FG-9	50	Forming gas	G 1/4" A-LH-UNI ISO 228
861-20L-FG-5	866-20L-FG-5	20	Forming gas	Hose connection 1/4" (6 mm)
861-50L-FG-5	866-50L-FG-5	50	Forming gas	Hose connection 1/4" (6 mm)
861-20L-FG-6	866-20L-FG-6	20	Forming gas	Hose connection 3/8" (10 mm)
861-50L-FG-6	866-50L-FG-6	50	Forming gas	Hose connection 3/8" (10 mm)
861-20L-FG-7	866-20L-FG-7	20	Forming gas	Hose connection 5/16" (8 mm)
861-50L-FG-7	866-50L-FG-7	50	Forming gas	Hose connection 5/16" (8 mm)
861-15L-OX	866-15L-OX	15	Oxygen	9/16"-18-UNF-2A-RH
861-15L-OX-1	866-15L-OX-1	15	Oxygen	G 3/8" A-RH-UNI ISO 228
861-15L-OX-2	866-15L-OX-2	15	Oxygen	G 1/4" A-RH-UNI ISO 228
861-15L-OX-3	866-15L-OX-3	15	Oxygen	.622"-18-UN-RH
861-15L-OX-5	866-15L-OX-5	15	Oxygen	Hose connection 1/4" (6 mm)
861-15L-OX-6	866-15L-OX-6	15	Oxygen	Hose connection 3/8" (10 mm)
861-15L-OX-7	866-15L-OX-7	15	Oxygen	Hose connection 5/16" (8 mm)
861-15L-OX-11	866-15L-OX-11	15	Oxygen	M16x1,5-6g-RH

MODEL 861
90° inlet
& knob

MODEL 866
180° inlet
& knob

ALL PART NUMBERS CAN BE SUPPLIED ALSO WITH THE FOLLOWING INLET / FEATURE		
MODEL	MODEL	INLET THREAD / FEATURE
861A	866A	G 3/8"-UNI ISO 228 (female)
861B	866B	G 1/4"-UNI ISO 228 (female)
861C	866C	622"-18-UN (female)
	866D	Right hand (nameplate and scale at 270° from inlet)
861E	866E	Measuring scale 180° from inlet (standard is 90°)
861F	866F	9/16"-18-UNF-3B (female)
861G	866G	G 1/8"-UNI ISO 228 (male), only for model 601
861P	866P	Dia-index knob
861X	866X	Pressure 4 bar (60 psi)

For inlet connection refer to this table.
Please add the corresponding letter to the PART NO.
(Eg. 861A-15L-ARC for inlet G 3/8"-UNI ISO 228 female)



FLOWMETER REGULATORS
(see pages 25-29)

GAUGES

PART NO.	GAUGE SCALE	GAS	Ø & THREAD
8A-6001	0 - 15 l / min		Ø 63 - 1/4" NPT
8A-6002	0 - 50 l / min		Ø 63 - 1/4" NPT
8A-6003	0 - 30 l / min		Ø 63 - 1/4" NPT
8A-615	0 - 315 bar / 0 - 4568 psi		Ø 63 - 1/4" NPT
8A-615-OX	0 - 315 bar / 0 - 4568 psi	Oxygen	Ø 63 - 1/4" NPT
8A-617-AC	0 - 40 bar / 0 - 580 psi	Acetylene	Ø 63 - 1/4" NPT
8A-619-OX	0 - 16 bar / 0 - 232 psi	Oxygen	Ø 63 - 1/4" NPT
8A-6411-OX	0 - 25 bar / 0 - 362 psi	Oxygen	Ø 63 - 1/4" NPT
8A-686-AC	0 - 2,5 bar / 0 - 36 psi	Acetylene	Ø 63 - 1/4" NPT
8A-617	0 - 40 bar / 0 - 580 psi		Ø 63 - 1/4" NPT
8A-619	0 - 16 bar / 0 - 232 psi		Ø 63 - 1/4" NPT
8A-6411	0 - 25 bar / 0 - 362 psi		Ø 63 - 1/4" NPT
8A-686	0 - 2,5 bar / 0 - 36 psi		Ø 63 - 1/4" NPT
8A-661	0 - 6 bar / 0 - 87 psi		Ø 63 - 1/4" NPT
8E-6001	0 - 15 l / min		Ø 63 - G 1/4"
8E-6002	0 - 50 l / min		Ø 63 - G 1/4"
8E-6003	0 - 30 l / min		Ø 63 - G 1/4"
8E-615	0 - 315 bar / 0 - 4568 psi		Ø 63 - G 1/4"
8E-615-OX	0 - 315 bar / 0 - 4568 psi	Oxygen	Ø 63 - G 1/4"
8E-615K	0 - 30000 kPa		Ø 63 - G 1/4"
8E-615K-OX	0 - 30000 kPa	Oxygen	Ø 63 - G 1/4"
8E-617	0 - 40 bar / 0 - 580 psi		Ø 63 - G 1/4"
8E-617-AC	0 - 40 bar / 0 - 580 psi	Acetylene	Ø 63 - G 1/4"
8E-617K	0 - 4000 kPa		Ø 63 - G 1/4"
8E-617K-AC	0 - 4000 kPa	Acetylene	Ø 63 - G 1/4"
8E-619	0 - 16 bar / 0 - 232 psi		Ø 63 - G 1/4"
8E-619-OX	0 - 16 bar / 0 - 232 psi	Oxygen	Ø 63 - G 1/4"
8E-619K	0 - 1600 kPa		Ø 63 - G 1/4"
8E-619K-OX	0 - 1600 kPa	Oxygen	Ø 63 - G 1/4"
8E-621	0 - 400 bar / 0 - 5800 psi		Ø 63 - G 1/4"
8E-621-OX	0 - 400 bar / 0 - 5800 psi	Oxygen	Ø 63 - G 1/4"
8E-621K	0 - 40000 kPa		Ø 63 - G 1/4"
8E-623	0 - 100 bar / 0 - 1450 psi		Ø 63 - G 1/4"
8E-6411	0 - 25 bar / 0 - 362 psi		Ø 63 - G 1/4"
8E-6411-OX	0 - 25 bar / 0 - 362 psi	Oxygen	Ø 63 - G 1/4"
8E-6411K	0 - 2500 kPa		Ø 63 - G 1/4"
8E-6411K-OX	0 - 2500 kPa	Oxygen	Ø 63 - G 1/4"
8E-661	0 - 6 bar / 0 - 87 psi		Ø 63 - G 1/4"
8E-661-OX	0 - 6 bar / 0 - 87 psi	Oxygen	Ø 63 - G 1/4"
8E-661K	0 - 600 kPa		Ø 63 - G 1/4"
8E-661K-OX	0 - 600 kPa	Oxygen	Ø 63 - G 1/4"
8E-6620	0 - 60 bar / 870 psi		Ø 63 - G 1/4"
8E-6620-OX	0 - 60 bar / 870 psi	Oxygen	Ø 63 - G 1/4"
8E-6620-K	0 - 6000 kPa		Ø 63 - G 1/4"
8E-686	0 - 2,5 bar / 0 - 36 psi		Ø 63 - G 1/4"
8E-686-AC	0 - 2,5 bar / 0 - 36 psi	Acetylene	Ø 63 - G 1/4"
8E-686K	0 - 250 kPa		Ø 63 - G 1/4"
8E-686K-AC	0 - 250 kPa	Acetylene	Ø 63 - G 1/4"

FOR REGULATORS MODEL 802/822

PART NO.	GAUGE SCALE	Ø & THREAD
8A-802-1	0 - 100 bar	Ø 63 - 1/4" NPT
8A-802-2	0 - 10 bar	Ø 63 - 1/4" NPT
8A-802-3	0 - 6 bar	Ø 63 - 1/4" NPT
8A-802-4	0 - 315 bar	Ø 63 - 1/4" NPT

FOR REGULATORS MODEL 601

PART NO.	GAUGE SCALE	GAS	Ø & THREAD
8E-601-1	0 - 315 bar / 0 - 4568 psi		Ø 50 - G 1/8"
8E-601-1-OX	0 - 315 bar / 0 - 4568 psi	Oxygen	Ø 50 - G 1/8"
8E-601-2	0 - 30 l / min		Ø 50 - G 1/8"
8E-601-3	0 - 2,5 bar / 0 - 36 psi		Ø 50 - G 1/8"
8E-601-3-AC	0 - 2,5 bar / 0 - 36 psi	Acetylene	Ø 50 - G 1/8"
8E-601-4	0 - 40 bar / 0 - 580 psi		Ø 50 - G 1/8"
8E-601-4-AC	0 - 40 bar / 0 - 580 psi	Acetylene	Ø 50 - G 1/8"
8E-601-5	0 - 6 bar / 0 - 87 psi		Ø 50 - G 1/8"
8E-601-6	0 - 16 bar / 0 - 232 psi		Ø 50 - G 1/8"
8E-601-6-OX	0 - 16 bar / 0 - 232 psi	Oxygen	Ø 50 - G 1/8"
8E-601-7	0 - 15 l / min		Ø 50 - G 1/8"

- Safety gauge conforms to ISO 5171
- Easy-to-read dual scale gauges with polycarbonate lens for durability
- Steel case protected by oven baked corrosion resistant paint

Rubber Cover

CPR6333

8E-615

8A-802-1

Rubber Cover

CPR63332

for 8A-802... & 8E-601... gauges

8E-601-1

GAUGES

PART NO.	GAUGE SCALE	GAS	Ø & THREAD
8G-6001	0 - 15 l / min		Ø 63 - 1/4" NPT
8G-6002	0 - 50 l / min		Ø 63 - 1/4" NPT
8G-6003	0 - 30 l / min		Ø 63 - 1/4" NPT
8G-615	0 - 315 bar / 0 - 4568 psi		Ø 63 - 1/4" NPT
8G-615-OX	0 - 315 bar / 0 - 4568 psi	Oxygen	Ø 63 - 1/4" NPT
8G-615K	0 - 30000 kPa		Ø 63 - 1/4" NPT
8G-615K-OX	0 - 30000 kPa	Oxygen	Ø 63 - 1/4" NPT
8G-617	0 - 40 bar / 0 - 580 psi		Ø 63 - 1/4" NPT
8G-617-AC	0 - 40 bar / 0 - 580 psi	Acetylene	Ø 63 - 1/4" NPT
8G-617K	0 - 4000 kPa		Ø 63 - 1/4" NPT
8G-617K-AC	0 - 4000 kPa	Acetylene	Ø 63 - 1/4" NPT
8G-619	0 - 16 bar / 0 - 232 psi		Ø 63 - 1/4" NPT
8G-619-OX	0 - 16 bar / 0 - 232 psi	Oxygen	Ø 63 - 1/4" NPT
8G-619K	0 - 1600 kPa		Ø 63 - 1/4" NPT
8G-619K-OX	0 - 1600 kPa	Oxygen	Ø 63 - 1/4" NPT
8G-621	0 - 400 bar / 0 - 5800 psi		Ø 63 - 1/4" NPT
8G-621-OX	0 - 400 bar / 0 - 5800 psi	Oxygen	Ø 63 - 1/4" NPT
8G-621K	0 - 40000 kPa		Ø 63 - 1/4" NPT
8G-623	0 - 100 bar / 0 - 1450 psi		Ø 63 - 1/4" NPT
8G-6411	0 - 25 bar / 0 - 362 psi		Ø 63 - 1/4" NPT
8G-6411-OX	0 - 25 bar / 0 - 362 psi	Oxygen	Ø 63 - 1/4" NPT
8G-6411K	0 - 2500 kPa		Ø 63 - 1/4" NPT
8G-6411K-OX	0 - 2500 kPa	Oxygen	Ø 63 - 1/4" NPT
8G-661	0 - 6 bar / 0 - 87 psi		Ø 63 - 1/4" NPT
8G-661-OX	0 - 6 bar / 0 - 87 psi	Oxygen	Ø 63 - 1/4" NPT
8G-661K	0 - 600 kPa		Ø 63 - 1/4" NPT
8G-661K-OX	0 - 600 kPa	Oxygen	Ø 63 - 1/4" NPT
8G-6620	0 - 60 bar / 870 psi		Ø 63 - 1/4" NPT
8G-6620-OX	0 - 60 bar / 870 psi	Oxygen	Ø 63 - 1/4" NPT
8G-6620-K	0 - 6000 kPa		Ø 63 - 1/4" NPT
8G-686	0 - 2,5 bar / 0 - 36 psi		Ø 63 - 1/4" NPT
8G-686-AC	0 - 2,5 bar / 0 - 36 psi	Acetylene	Ø 63 - 1/4" NPT
8G-686K	0 - 250 kPa		Ø 63 - 1/4" NPT
8G-686K-AC	0 - 250 kPa	Acetylene	Ø 63 - 1/4" NPT

- Safety gauge conforms to ISO 5171
- Easy-to-read dual scale gauges with polycarbonate lens for durability
- Steel case protected by oven baked corrosion resistant paint

8G-686-AC

8G-6411-OX

OUTLET NIPPLES FOR REGULATORS

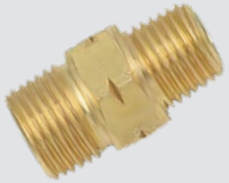
PART NO.	INLET THREAD	OUTLET THREAD	NOTES
957-L	1/4" NPT	9/16"-18-UNF-2A-LH	-
957-R	1/4" NPT	9/16"-18-UNF-2A-RH	-
957-SL	1/4" NPT	G 3/8" A-LH-UNI ISO 228	-
957-SR	1/4" NPT	G 3/8" A-RH-UNI ISO 228	-
957-AA	1/4" NPT	.622"-18-UN-LH	-
957-AO	1/4" NPT	.622"-18-UN-RH	-
F-957-L	1/4" NPT	M16 x 1,5-6g-LH	-
F-957-R	1/4" NPT	M16 x 1,5-6g-RH	-
G-957-1L	1/4" NPT	G 1/4" A-LH-UNI ISO 228	-
G-957-1R	1/4" NPT	G 1/4" A-RH-UNI ISO 228	-
60157-L	M11x1-6g-RH	9/16"-18-UNF-2A-LH	Only for Model 601
60157-R	M11x1-6g-RH	9/16"-18-UNF-2A-RH	Only for Model 601
60157-SL	M11x1-6g-RH	G 3/8" A-LH-UNI ISO 228	Only for Model 601
60157-SR	M11x1-6g-RH	G 3/8" A-RH-UNI ISO 228	Only for Model 601
60157-AA	M11x1-6g-RH	.622"-18-UN-LH	Only for Model 601
60157-AO	M11x1-6g-RH	.622"-18-UN-RH	Only for Model 601
60157-FL	M11x1-6g-RH	M16 x 1,5-6g-LH	Only for Model 601
60157-FR	M11x1-6g-RH	M16 x 1,5-6g-RH	Only for Model 601
60157-AL	M11x1-6g-RH	G 1/4" A-LH-UNI ISO 228	Only for Model 601
60157-AR	M11x1-6g-RH	G 1/4" A-RH-UNI ISO 228	Only for Model 601
60157-L-2	G 1/8" A-RH-UNI ISO 228	9/16"-18-UNF-2A-LH	Only for Model 601 L & flowmeters
60157-R-2	G 1/8" A-RH-UNI ISO 228	9/16"-18-UNF-2A-RH	Only for Model 601 L & flowmeters
60157-SL-2	G 1/8" A-RH-UNI ISO 228	G 3/8" A-LH-UNI ISO 228	Only for Model 601 L & flowmeters
60157-SR-2	G 1/8" A-RH-UNI ISO 228	G 3/8" A-RH-UNI ISO 228	Only for Model 601 L & flowmeters
60157-AA-2	G 1/8" A-RH-UNI ISO 228	.622"-18-UN-LH	Only for Model 601 L & flowmeters
60157-AO-2	G 1/8" A-RH-UNI ISO 228	.622"-18-UN-RH	Only for Model 601 L & flowmeters
60157-FL-2	G 1/8" A-RH-UNI ISO 228	M16 x 1,5-6g-LH	Only for Model 601 L & flowmeters
60157-FR-2	G 1/8" A-RH-UNI ISO 228	M16 x 1,5-6g-RH	Only for Model 601 L & flowmeters
60157-AL-2	G 1/8" A-RH-UNI ISO 228	G 1/4" A-LH-UNI ISO 228	Only for Model 601 L & flowmeters
60157-AR-2	G 1/8" A-RH-UNI ISO 228	G 1/4" A-RH-UNI ISO 228	Only for Model 601 L & flowmeters

957 - L

957 - R

CALIBRATED OUTLET NIPPLES FOR REGULATORS

PART NO.	GAS	MAX FLOW (l/m)	INLET THREAD	OUTLET THREAD	NOTES
957-AO15-ARCD	Argon/CO_2	15	1/4" NPT	.622"-18-UN-RH	
957-AO30-ARCD	Argon/CO_2	30	1/4" NPT	.622"-18-UN-RH	
957-AO50-ARCD	Argon/CO_2	50	1/4" NPT	.622"-18-UN-RH	
957-AR15-ARCD	Argon/CO_2	15	1/4" NPT	G 1/4" A-RH-UNI ISO 228	
957-AR15-N2O-M	Nitrous oxide	15	1/4" NPT	G 1/4" A-RH-UNI ISO 228	Chrome-plated
957-AR15-OX-M	Oxygen	15	1/4" NPT	G 1/4" A-RH-UNI ISO 228	Chrome-plated
957-AR30-ARCD	Argon/CO_2	30	1/4" NPT	G 1/4" A-RH-UNI ISO 228	
957-AR50-ARCD	Argon/CO_2	50	1/4" NPT	G 1/4" A-RH-UNI ISO 228	
957-FR15-ARCD	Argon/CO_2	15	1/4" NPT	M16 x 1,5-6g-RH	
957-FR30-ARCD	Argon/CO_2	30	1/4" NPT	M16 x 1,5-6g-RH	
957-FR50-ARCD	Argon/CO_2	50	1/4" NPT	M16 x 1,5-6g-RH	
957-R15-AIR-M	Oxygen	15	1/4" NPT	9/16"-18-UNF-2A-RH	Chrome-plated
957-R15-N2O-M	Nitrous oxide	15	1/4" NPT	9/16"-18-UNF-2A-RH	Chrome-plated
957-R15-ARCD	Argon/CO_2	15	1/4" NPT	9/16"-18-UNF-2A-RH	
957-R15-OX	Oxygen	15	1/4" NPT	9/16"-18-UNF-2A-RH	
957-R15-OX-M	Oxygen	15	1/4" NPT	9/16"-18-UNF-2A-RH	Chrome-plated
957-R30-ARCD	Argon/CO_2	30	1/4" NPT	9/16"-18-UNF-2A-RH	
957-R50-ARCD	Argon/CO_2	50	1/4" NPT	9/16"-18-UNF-2A-RH	
957-SL-30-FG	Forming gas	30	1/4" NPT	G 3/8" A-LH-UNI ISO 228	
957-SL-50-FG	Forming gas	50	1/4" NPT	G 3/8" A-LH-UNI ISO 228	
957-SL-50-H2	Hydrogen	50	1/4" NPT	G 3/8" A-LH-UNI ISO 228	
957-SR-15-ARCD	Argon/CO_2	15	1/4" NPT	G 3/8" A-RH-UNI ISO 228	
957-SR-15-N2O	Nitrous oxide	15	1/4" NPT	G 3/8" A-RH-UNI ISO 228	
957-SR-15-N2O-M	Nitrous oxide	15	1/4" NPT	G 3/8" A-RH-UNI ISO 228	Chrome-plated
957-SR-15-OX-M	Oxygen	15	1/4" NPT	G 3/8" A-RH-UNI ISO 228	Chrome-plated
957-SR-30-ARCD	Argon/CO_2	30	1/4" NPT	G 3/8" A-RH-UNI ISO 228	
957-SR-50-ARCD	Argon/CO_2	50	1/4" NPT	G 3/8" A-RH-UNI ISO 228	



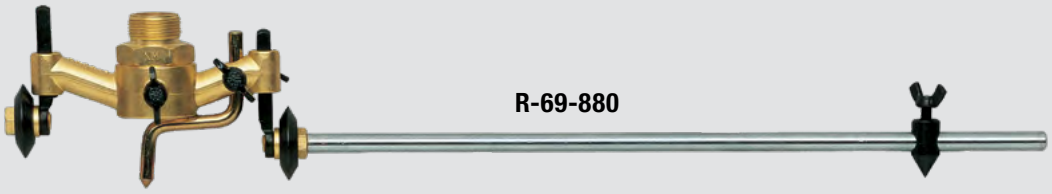
957 - AO15-ARCD

TIP NUTS

PART NO.	CUTTING TORCHES / CUTTING ATTACHMENTS	TIPS
6259B	133, 142, 198, 42-4, 49-3, 62-5, 72-3, 73-3, 242, 273	6290
2859	28, H28	2890
9008437	36-2	3690
4559	59-3, 880-NM, NM-250, 242-NM, 273-NM	8290
9002537	573, 980	6290
9005236	V-Series	1-101-HV
VH24593	VH24	1-101-HV

9002537 **6259B**

ROLLER GUIDES & CIRCLE CUTTING ATTACHMENTS



R-69-880

PART NO.	ANGLE	CONNECTION FOR TIPS	CUTTING ATTACHMENTS / CUTTING TORCHES	NOTES
I-69-4	90°	**6290**	142, 62-5, 42-3, 42-4, 49-3, 572, 72-3, 73-3, 242, 273	Single wheel guide
I-69-5	90°	**3690**	36-2	Single wheel guide
I-69-6	45° - 135°	**6290**	142, 62-5, 42-3, 42-4, 49-3, 572, 72-3, 73-3, 242, 273	
I-69-6-HV	45° - 135°	**1-101-HV**	V-Series	
I-69-7	45° - 135°	**3690**	36-2	
R-69-3B	90°	**6290**	142, 62-5, 42-3, 42-4, 49-3, 572, 72-3, 73-3, 242, 273	
R-69-4C	90°	**8290**	NM-250, 880-NM, 59-3, 242-NM, 273-NM	
R-69-880	90°	**6290**	880, 573	
R-69-A	90°	**2890**	28, H28	

CONVERTERS

PART NO.	FROM (FEMALE)	TO (MALE)
38-2AL	9/16"-18-UNF-3B-LH	.622"-18-UN-LH
38-2AR	9/16"-18-UNF-3B-RH	.622"-18-UN-RH
38-2FL	9/16"-18-UNF-3B-LH	M16 x 1,5-6g-LH
38-2FR	9/16"-18-UNF-3B-RH	M16 x 1,5-6g-RH
38-2GBL	9/16"-18-UNF-3B-LH	G 3/8" A-LH-UNI ISO 228
38-2GBR	9/16"-18-UNF-3B-RH	G 3/8" A-RH-UNI ISO 228
38-2GR	9/16"-18-UNF-3B-RH	G 1/4" A-RH-UNI ISO 228
38-4GL	9/16"-18-UNF-3B-LH	G 1/4" A-LH-UNI ISO 228
38-3FL	M16 x 1,5-4H-LH	9/16"-18-UNF-2A-LH
38-3FR	M16 x 1,5-4H-RH	9/16"-18-UNF-2A-RH
38-5GL	G 1/4"-LH-UNI ISO 228	9/16"-18-UNF-2A-LH
38-5GR	G 1/4"-RH-UNI ISO 228	9/16"-18-UNF-2A-RH
38-6GL	G 3/8"-LH-UNI ISO 228	9/16"-18-UNF-2A-LH
38-6GR	G 3/8"-RH-UNI ISO 228	9/16"-18-UNF-2A-RH

38-2GBL **38-2GBR**

NEEDLE VALVES

- Needle valve for precise flow control can replace outlet nipples on regulators
- Particularly recommended for laboratory installations

PART NO.	GAS	INLET	OUTLET
52-L	Fuel gas	1/4" NPT	9/16"-18-UNF-LH
52-R	Oxygen	1/4" NPT	9/16"-18-UNF-RH
52-DR	Oxygen	1/4" NPT	1/4" NPT

52-L

"Y" PIECES

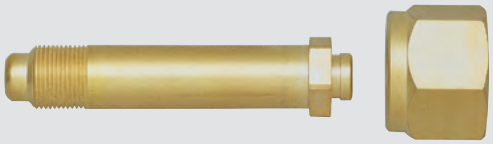
► "Y" piece for attaching two-hose lines to same regulator. Assembly on regulator outlet

PART NO.	GAS	THREADS	NOTES
37-L	Fuel gas	9/16"-18-UNF-LH	with valves
37-R	Oxygen	9/16"-18-UNF-RH	with valves
37-FL	Fuel gas	M16 x 1,5-4H-LH	with valves
37-FR	Oxygen	M16 x 1,5-4H-RH	with valves
37-GBL	Fuel gas	G 3/8"-LH-UNI ISO 228	with valves
37-GBR	Oxygen	G 3/8"-RH-UNI ISO 228	with valves
37-L2	Fuel gas	9/16"-18-UNF-LH	without valves
37-R2	Oxygen	9/16"-18-UNF-RH	without valves
37-SL2	Fuel gas	G 3/8"-LH-UNI ISO 228	without valves
37-SR2	Oxygen	G 3/8"-RH-UNI ISO 228	without valves

37-L

STEMS & NUTS

► Inlet stems and nuts are supplied according to country specification



BRAZING GOGGLES

► Shade 5 glass lenses, color green, optical class 1, in accordance with standards EN166, EN169 and EN175

APS010

WRENCHES

I-62-X

D-1013

KH231

LIGHTER WITH FLINT

IGNITER - 9004486

FLINTS - 9004484

IGNITER & FLINT - 26SL

TIP CLEANERS

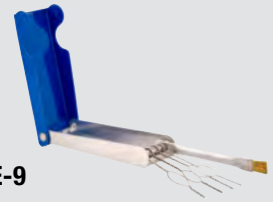
C-9 Standard calibrated tip cleaner

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

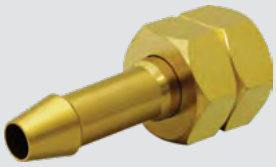
E-9 Two-piece and divergent bore calibrated tip cleaner

CLEANING INSTRUCTIONS: The wire brush included with tip cleaner E-9 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.

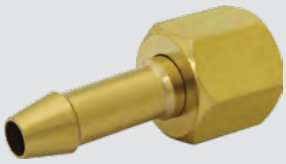


E-9

HOSE CONNECTORS

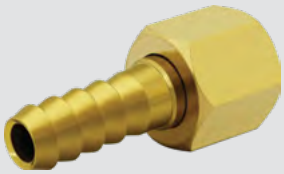


G38L2



G38R2

38L2



38R2

	DESCRIPTION	
PART NO.	NUT	NIPPLE
G38L2	1/4" LH	8 mm
G38R2	1/4" RH	8 mm
G38L4	1/4" LH	6 mm
G38R4	1/4" RH	6 mm
S38L2	3/8" LH	8 mm
S38R2	3/8" RH	8 mm
E38L4	3/8" LH	6 mm
E38R4	3/8" RH	6 mm
38L2	9/16" LH	8 mm
38R2	9/16" RH	8 mm
38L3	9/16" LH	6 mm
38R3	9/16"RH	6 mm
F38L5	M16 x 1.5 LH	8 mm
F38R5	M16 x 1.5 RH	8 mm
F38L4	M16 x 1.5 LH	6 mm
F38R4	M16 x 1.5 RH	6 mm
38L1	9/16'' LH	9,5 mm (3/8") hose
38R1	9/16'' RH	9,5 mm (3/8") hose

* Other types of connections are available upon request.

TWIN HOSE ASSEMBLIES

Twin hoses assembled with fittings for oxygen / fuel gas. They are highly resistant to abrasion and flame.

4300591
1/4” x 1/4” twin hose 6 m with 9/16” fittings (red & green) - “R” grade

4300533
1/4” x 1/4” twin hose 6 m with 9/16” fittings (red & green) - “T” grade

TWIN HOSES

Twin hoses unassembled for oxygen / fuel gas. They are highly resistant to abrasion and flame.

TA8X8 (100 m) 8 mm x 8 mm (red & blue) - complies with ISO 3821

TA6X6 (100 m) 6 mm x 6 mm (red & blue) - complies with ISO 3821

TA8X8LP (100 m) 8 mm x 8 mm (orange & blue) for propane and LPG - complies with ISO 3821

TA6X6LP (100 m) 6 mm x 6 mm (orange & blue) for propane and LPG - complies with ISO 3821

6002531 (100 m) 6 mm x 6 mm (red & green) - "R" grade

6002534 (100 m) 8 mm x 8 mm (red & green) - "R" grade

SINGLE HOSES

Unassembled single hoses are available in 5 mm or 3,2 mm diameter for oxygen (blue), acetylene (red) or propane (orange) gases.

3,2 mm hoses **5 mm hoses**

GAUGE GUARDS

Designed to protect the gauges on Harris® regulators.
The new Harris® Gauge Guards increase safety of user by helping to prevent damage to gauges. Damaged gauges can result in serious gas leakage. Made of shock absorbing ABS plastic Gauge Guards become extremely durable and safe for long periods of time.
Apart from increased safety, Harris® Gauge Guards save on gauge repair or replacement, saving time and money.

ADVANTAGES:

- Made from high impact ABS plastic
- Color coded front rings available in green, red, blue and gray
- Easy installation slip on and tighten with three screws
- For in-plant or job-site use

MODEL NO.	PART NO.	USE WITH REGULATOR MODEL	COLOUR
CPR1A	9007366	825 / 925 & 896	Gray
CPR1B	9007364	825 / 925 & 896	Red
CPR1D	9007367	825 / 925 & 896	Blue
CPR1G	9007365	825 / 925 & 896	Green
CPR2A	9007370	25GX	Gray
CPR2B	9007368	25GX	Red
CPR2D	9007371	25GX	Blue
CPR2G	9007369	25GX	Green
CPR4A	9007625	801 / 901	Gray
CPR4B	9007624	801 / 901	Red
CPR4D	9007623	801 / 901	Blue
CPR4G	9007626	801 / 901	Green

DISPLAY STAND 3

Part Number: 9502536

- Empty stand for displaying Harris products
- Can be fitted per customer's requirements
- Steel construction

WIDTH:

100 cm

DEPTH:

40 cm

HEIGHT:

240 cm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A LINCOLN ELECTRIC COMPANY
CAN'T FIND WHAT YOU ARE LOOKING FOR?
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FOR THE DEVICES THAT HAVE THE FEATURES AND BENEFITS THAT BEST FIT YOUR APPLICATION(S)
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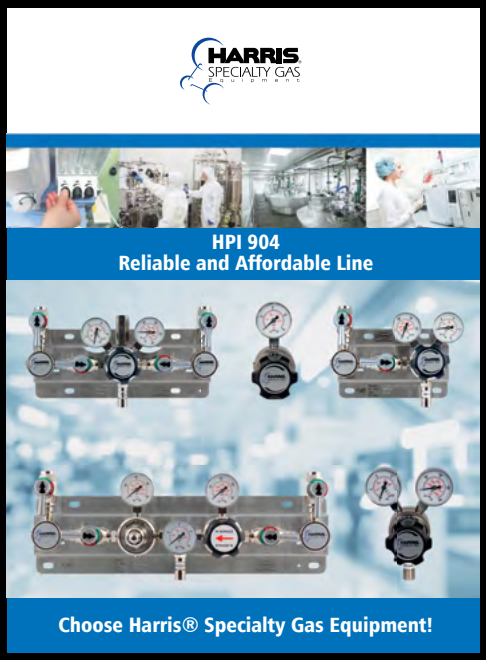
CHECK OUR OTHER CATALOGS:

Download our
Specialty Gas Equipment Catalog
up to 6.0 gas purity



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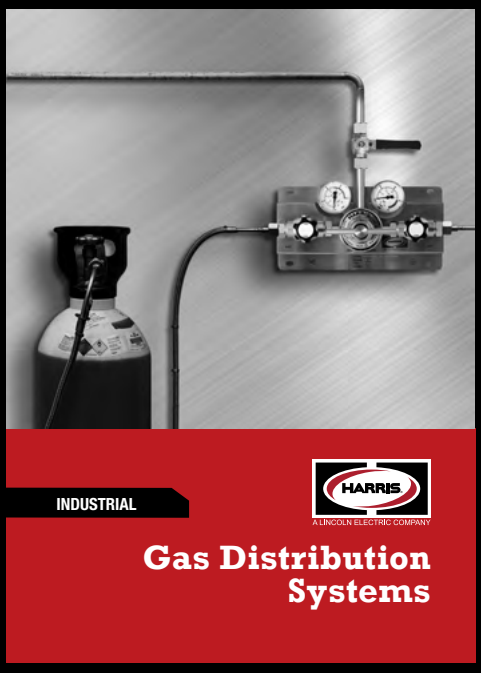
Specialty Gas HPI904 Catalog
up to 5.0 gas purity



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Gas Distribution Systems Catalog

Download our
Brazing & Soldering Guide

Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 1332014**

Certificate Holder: **Harris Calorific International Sp. z o.o.**
ul. Strefowa 8
58-200 Dzierżoniów
Poland

Scope: design and development, production, sale, marketing and service of pressure regulators and flowmeters of industrial gases as well as torches and accessories for gas cutting, welding, brazing and heating

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2021-12-22 until 2024-12-21.
First certification 2012

2021-12-22

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

www.tuv.com

DAkkS Deutsche Akkreditierungsstelle D-ZM-16031-01-00

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Precisely Right.

Certificate

Standard **ISO 14001:2015**

Certificate Registr. No. **01 104 1541910**

Certificate Holder: **Harris Calorific International Sp. z o.o.**
ul. Strefowa 8
58-200 Dzierżoniów
Poland

Scope: design and development, production, sale, marketing and service of pressure regulators and flowmeters of industrial gases as well as torches and accessories for gas cutting, welding, brazing and heating

Proof has been furnished by means of an audit that the requirements of ISO 14001:2015 are met.

Validity: The certificate is valid from 2022-05-03 until 2025-05-02.
First certification 2017

2021-12-22

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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USEFUL DATA – CONVERSION TABLE

VOLUME

	cu in	cu ft	cu yd	cu cm	cu meter	liter	US gal
1 cu in	1	0,00058	0,000021	16,39	0,000016	0,0164	0,0043
1 cu ft	1728	1	0,037	38316	0,0283	28,3168	7,4805
1 cu yd	46656	27	1	764554	0,7646	764,5	202,97
1 cu cm	0,061	0,000035	0,0000013	1	0,000001	0,001	0,00026
1 cu meter	61023,7	35,315	1,3079	1000000	1	1000	264,172
1 liter	61,024	0,0353	0,01307	1000	0,001	1	0,2641
1 gallon (US)	231	0,1337	0,00495	3785,41	0,00378	3,7854	1

PRESSURE

	psi	bar	atm	mm Hg	inch Hg	inch water	kPa
1 psi	1	0,068	0,068	51,713	2,035	27,68	6,895
1 bar	14,504	1	0,986	750,06	29,53	401,47	100
1 atm	14,696	1,013	1	760	29,921	406,8	101,325
1 mm Hg (torr)	0,019	0,001	0,001	1	0,039	0,535	0,133
1 in Hg	0,491	0,033	0,033	25,4	1	13,596	3,386
1 in water	0,036	0,0025	0,00246	1,868	0,0735	1	0,25
1 kPa	0,145	0,01	0,0099	7,5	0,295	4,015	1

WEIGHT

	grain	oz	lb	gram	kg	metric ton	
1 grain	1	0,002	0,00014	0,064	6,48×10-5	6,48×10-8	
1 ounce	437,5	1	0,062	28,35	0,028	2,83×10-5	
1 pound	7000	16	1	453,6	0,453	4,45*10-4	
1 gram	15,43	0,04	0,0022	1	0,001	1*10-6	
1 kilogram	15432	35,274	2,205	1000	1	0,001	
1 metric ton	1,54*107	35273,9	2205	1*106	1000	1	
1 metric ton	-	35,274	2.205	1,102	-	1.000	1

FLOW

	scc/min	lpm	SCFM	l/h	Nm3/h	SCFH
1 scc/min	1	0,001	0,00004	0,06	0,00006	0,002
1 lpm	1000	1	0,035	60	0,06	2,119
1 SCFM	28317	28,37	1	1699	1,699	60
1 l/h	16,667	0,016	0,001	1	0,001	0,035
1 Nm3/h	16667	16,67	0,589	1000	1	35,315
1 SCFH	471,95	0,472	0,0167	28,317	0,028	1

SCFM = Standard Cubic Feet per Minute

SCFH = Standard Cubic Feet per Hour

scc/min = Standard Cubic Centimeters per Minute

lpm = Liter per Minute

Nm3/h = Normal Cubic Meter per Hour

ENERGY

	BTU	cal	watts-hour
1 BTU	1	251,98	0,293
1 cal	3.968x10-3	1	0,0012
1 watts-hour	3,414	859,84	1

AIR ▶ to

	FACTOR	INVERSE
ACETYLENE (C_2H_2)	1,050	0,952
ARGON (Ar)	0,851	1,175
ARGON / CO_2 (75% Ar – 25% CO_2)	0,833	1,200
NITROGEN (N_2)	1,020	0,980
CARBON DIOXIDE (CO_2)	0,808	1,238
SULFUR DIOXIDE (SO_2)	0,660	1,515
BUTANE (C_4H_{10})	0,700	1,429
HELIUM (He)	2,695	0,371
ETHANE (C_2H_6)	0,980	1,020
ETHYLENE (C_2H_4)	1,010	0,990
FORMIER GAS (90% N_2 – 10% H_2)	1,300	0,769
HYDROGEN (H_2)	3,810	0,262
METHANE (CH_4)	1,350	0,741
METHYLAACETYLENE PROPADIENE (MPS – C_3H_4)	1,238	0,808
CARBON OXIDE (CO)	1,020	0,980
NEON (Ne)	1,200	0,833
OXYGEN (O_2)	0,950	1,053
PROPANE (C_3H_8)	0,800	1,250
PROPYLENE (C_3H_6)	1,237	0,808
NITROGEN PROTOXIDE (N_2O)	0,810	1,235

WARRANTY

The Company warrants each new product or part thereof to be free from defects in workmanship and material.
If any part thereof shall prove to be defective in workmanship or material within one year, unless stated otherwise, from the date of purchase by the user, as a result of normal use and service for purposes for which it was intended, as determined by the Company, the Company will replace the part or parts so determined by it to be defective with new parts, at Company's cost and expense.
This warranty is exclusive, and there are no other warranties or representations, expressed or implied.

Industrial regulators

Specialty Gas regulators

Other industrial items

NOTE:

We are constantly improving our products.
We therefore reserve the right to make changes in specifications without notice.
All the images represented in this catalogue are a version of the indicated products.

HARRIS

A LINCOLN ELECTRIC COMPANY

Harris Calorific International Sp. z o.o.
ul. Strefowa 8
58-200 Dzierżoniow, Poland
+48 74 646 23 52 (3)
e-mail: marketingharris@lincolnelectric.eu
https://www.harrisproductsgroup.eu

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