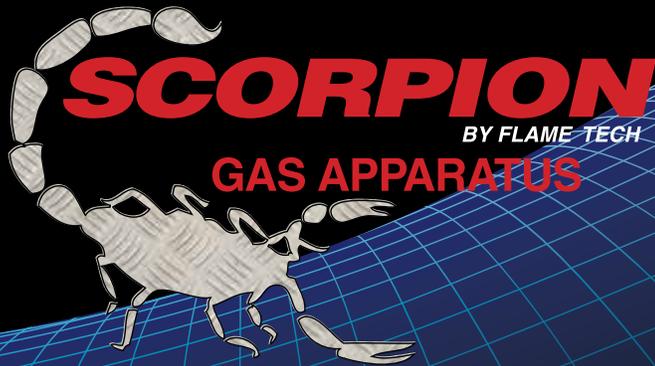


FLAME TECH[®]



SCORPION

BY FLAME TECH

GAS APPARATUS



EQUIPMENT CATALOG

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Updated 07/19/22.

The purpose of this document is to be informative, and as such is not guaranteed to be error-free. Final part numbers and pricing will be stated on your order acknowledgement. Flame Technologies, Inc. takes steps to ensure that our information is correct and as error-free as is reasonable. Please let us know if you believe you found a typo or error. Product details subject to change without notice.

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FLAME TECH[®]

Innovators of High-Production,
Cost Efficient Gas Equipment

Certificate of Quality

Meeting and exceeding customer expectations with quality products and services while constantly focusing on continuous improvements are Flame Technologies, Inc. commitments to our valued partners. Our quality goal is continuously improving our business processes, including our production processes to be more efficient, and produce reliable products. Our senior management works to enhance the satisfaction of all parties.

Quality and cost consciousness have been complementary considerations in the development of our company since 1980. These processes begin with quality raw materials from ISO 9000 and UL approved vendors. The production is managed with integrated manufacturing software system by 26-year-old metals industry vendor. Seamless systems to meet the users' demands are absolutely mandatory instruments to this goal.

The Flame Technologies quality management system follows a strict business process approach and is logically structured with the quality relevant activities. One of the most important principles in our system is to manufacture product quality and 100% testing of all products for warranty. We give priority to preventing and avoiding defects. The necessary information for efficient quality management is taken from company database systems, systematically analyzed and evaluated. The effectiveness of the system is verified by internal audits. Safety, agility, reliability and increased efficiency are what Flame Technologies, Inc. builds into our complete line of gas apparatus products. Customer satisfaction is the gauge of success for the quality of our products.

Founded 1980

President: Michael "Shawn" Toops

703 Cypress Creek Road

Cedar Park, Texas 78613

Web: www.flametechnologies.com

**Quality inspected and certified by Steve Dodge,
Vice President of Operations**



Direct Replacement Cutting Tips



Currently there is no standard method among Original Equipment Manufacturers (OEM) to designate tip sizes. The following charts are designed to provide operational data for the user, regardless of OEM, by utilizing the common denominators, "Oxygen Orifice Drill Size" and "Metal Thickness." Using information you have available, the following charts can help find information you need.

You Know the Tip Size: Use the Cross Reference Chart to find drill size of OEM tip to be used, and then refer to Operation and Performance Chart to determine operating parameters. Check "Metal Thickness" column to be sure tip is correct size for the cut.

You Know the Metal Thickness: Use the Operational and Performance Chart to determine drill size needed to cut specific thickness of metal. Select OEM tip and size from Cross Reference Chart.

STANDARD PRESSURE TIP SIZE CROSS-REFERENCE (OEM SIZE TO OXYGEN ORIFICE DRILL SIZE)

O.E.M.	TIP STYLES	OXYGEN ORIFICE DRILL SIZES																				
		74	71	68	64	62	60	58	56	54	52	50	48	44	39	31	28	25	19	13		
Airco®	144			00		0			1	2	3		4	5	6							
	164			00		0			1	2	3		4	5	6	8	9		10			
	261	00		0			1		2	3				5	7	8			10			
	263				0		1		2			4		5	7	8				10		
	AFS			68	65		60		56	54	52		49	44	38	31	29			19		
	Stinger 200 Series		00	0		1			2	3	4		5		6	7					8	
Harris®	NX			000	00		0		1		2		3	4	5	6	7	8				
	NFF							1	2	3		4		5	6							
	NH														5	6	7	8				
	6290, 2490			00	00		0		1		2		3	4								
	6290S, 2490S								1		2		3	4	5	6						
Koike®	103			00		0	1			2	3		4	5	6		7		8			
	106			00		0	1			2	3		4	5	6		7		8			
	107			00		0	1			2	3		4	5	6		7		8			
Meco®	LM					0			1	2	3		4		5							
Oxweld®	1502			3			4			6			8	10	12					16		
	1534	2		3			4			5			8	10	12				16	20		
	1564						4				6			8		10			12			
	1567	1/8		1/4	1/2		3/4			1	2	3				10			14			
Purox®	4202			3			4			5		7		9		13						
	4213			3			4			5		7	8	10								
	4216			3			4				6		8		10	12						
Rego®	KX105			68		62			56	53	51		46	42	35	30			25	18		
Flame Tech® Scorpion®	All Styles	5/0	4/0	000	00	00½	0	0½	1	1½	2	2½	3	4	5	6	7	8	9	10		
Smith®	SC40, 50, 60, 90			00		0			1	2	3			4	5	6	7		8			
Victor®	GP (N, P)		000	00		0			1	2		3	3	4	5	6	7		8	10		
	BT (N, P)													4	5	6						
	HP (N, P)								1	2		3	3	4	5	6	7		8	10		
	3GP (N, P)		000	00		0			1	2		3	3	4	5							
	1-101		000	00		0			1		2		3	4	5	6	7	8				
	3-101, 303M			00		0			1		2		3	4	5	6						

HIGH PRESSURE (DIVERGED) TIP SIZE CROSS-REFERENCE (OEM SIZE TO OXYGEN ORIFICE DRILL SIZE)

O.E.M.	TIP STYLES	OXYGEN ORIFICE DRILL SIZES																			
		74	71	68	64	62	60	58	56	54	52	50	48	44	42	39					
Airco®	361	0		1	2				3	4	6		8								
	363						1		2	3	4		5	6							
	AFH			68	65		60		56	54	52		49	44	38						
	Stinger (375)			0		1			1	2	3	4		5							
Harris®	VVC	5/0		4/0	000		0	0½	1	1½	2	2½	3	4	5	5½					
Koike®	103D7		00	0	1					2	3	4	5	6		7	8				
	106D7		00	0	1					2	3	4	5	6		7	8				
	107D7		00	0	1					2	3	4	5	6		7	8				
Oxweld®	1535			31			4	43	47	52	60		80		100	120					
	1566			1/2	3/4		1		1½	2	4		5	8	10	14					
Rego®	KX205			68			60				53										
Flame Tech® Scorpion®	All Styles	5/0	4/0	000	00	00½	0	0½	1	1½	2	2½	3	4	5	6					
Smith®	SC12A	00		0	1				2	3	4		6	6	8						
Victor®	MTH (N, P)		000	00			0			1		2		3	4	5					

*** MAPP gas is no longer produced. Flame Tech does not make MAPP specific tips. Propylene tips may be used if needed. ***

GENERAL OPERATION AND PERFORMANCE DATA FOR FLAME TECH® TIPS

STANDARD PRESSURE

METAL THICKNESS INCHES	TIP SIZE		DRILL CLEANER SIZE	WYPO CLEANER NUMBER	OXYGEN		** FUEL GAS P.S.I.	* SPEED I.P.M.	KERF WIDTH INCHES
	NUMBER	CUTTING OXYGEN ORIFICE			CUTTING P.S.I.	PREHEAT P.S.I.			
1/8	5/0	74	75	7	20-30	5-9	2-5	18-26	0.035
3/16	4/0	71	72	8	30-40	5-9	2-5	18-25	0.04
1/4	000	68	69	10	30-40	5-9	3-5	17-24	0.05
3/8	00	64	65	14	35-45	5-10	3-5	17-23	0.06
1/2	1/2	62	63	15	35-45	5-10	3-6	16-22	0.06
5/8	0	60	61	15	35-45	5-10	3-6	15-20	0.07
3/4	1/2	58	59	17	35-50	5-10	3-6	15-19	0.07
1	1	56	57	18	35-50	5-10	3-6	14-18	0.08
1 1/2	1 1/2	54	55	22	40-55	10-17	4-8	12-16	0.09
2	2	52	53	24	40-55	10-17	4-8	10-14	0.1
2 1/2	2 1/2	50	51	26	40-55	10-17	5-9	9-13	0.11
3	3	48	49	28	45-60	10-17	6-10	8-11	0.11
4	4	44	45	32	50-65	10-17	6-10	7-10	0.13
5	4	44	45	32	50-65	10-17	6-10	6-9	0.13
6	5	39	36	42	60-75	10-17	8-12	5-8	0.15
8	6	31	32	44	60-85	30-43	9-15	4-6	0.19
10	7	28	29		30-60	30-43	9-15	3-5	0.22
12	8	25	26		25-55	30-43	9-15	3-4	0.24
14	9	19	20		25-55	30-43	9-15	2-3	0.26
15	10	13	14		25-50	30-43	10-18	2-3	0.34
16	11	9	10		25-50	30-43	10-18	1 1/2-2 1/2	0.37
18	12	5	6		25-45	30-43	10-18	1-2	0.4

The highlighted sizes will cover most applications.

** Acetylene not to exceed 15 P.S.I.

HIGH PRESSURE (DIVERGED)

METAL THICKNESS INCHES	TIP SIZE		DRILL CLEANER SIZE	WYPO CLEANER NUMBER	OXYGEN		FUEL GAS P.S.I.	SPEED I.P.M.	KERF WIDTH INCHES
	NUMBER	CUTTING OXYGEN ORIFICE			CUTTING P.S.I.	PREHEAT P.S.I.			
1/8	5/0	74	75	7	40-50	5-10	2-5	24-30	0.035
3/16	4/0	71	72	8	50-60	5-10	2-5	23-29	0.04
1/4	000	68	69	10	70-80	8-15	2-5	21-28	0.045
3/8	00	64	65	14	80-90	8-15	3-5	19-26	0.05
5/8	1/2	62	63	15	80-90	8-15	3-5	19-26	0.05
3/4	0	60	61	15	80-100	8-15	3-5	18-26	0.055
7/8	1/2	58	59	17	80-100	8-15	3-5	17-25	0.06
1	1	56	57	18	80-100	8-15	3-6	16-24	0.06
1 1/2	1	56	57	18	80-100	8-15	3-6	15-20	0.06
2	1 1/2	54	57	18	80-100	8-15	3-6	12-16	0.06
2 1/2	1 1/2	54	55	22	80-100	10-20	4-8	10-15	0.07
3	2	52	55	22	80-100	10-20	4-8	9-13	0.07
4	2	52	53	24	80-100	15-25	4-8	9-12	0.08
5	2 1/2	50	53	24	80-100	15-25	4-8	8-11	0.08
5 1/2	2 1/2	50	51	26	80-100	15-25	5-9	8-11	0.09
6	3	48	49	28	80-100	15-25	6-10	8-10	0.1
8	4	44	45	32	80-100	20-30	8-12	6-8	0.11
9	5H	42	43	34	80-100	25-35	8-12	5-7	0.13
10	6H	39	40	37	80-100	25-40	9-15	4-6	0.17

* NOTE: If using propylene, use high side range of this chart. If using natural gas use low side of range.

NOTE: Data was compiled using mild steel as test material. This data should be used as a guide only. Your specific job may require slightly different pressures and speeds. However, the data will provide you with an excellent starting point if you begin on the low side and work up to the optimum speeds for maximum production. For thin plate through 3/8", slightly feathered or carburizing preheat flames are recommended. For heavy plate cutting, strong oxidizing preheat flames are recommended for piercing or starting the cut.

The data on this chart was gathered using a 3-hose torch. All pressures were measured at the regulator using 25' of 1/4" diameter hose for sizes 5/0 through 5 and 25' of 3/8" hose for sizes 6 and larger. For hose lengths longer than 25', the drop is about 3 PSI per 25'. Therefore, pressures at the regulator must be adjusted accordingly.

Values shown are for optimum results with FLAME TECH® tips. Check for the actual requirements of your torch in that they vary for equal pressure versus injector type design and from one OEM to another.

Classic, Contractor and Cutter Kits

- Economical and beautiful box
- Easy and sturdy stacking
- Converts to display mode
- Parts protected by clear plastic shell while on display
- Content details on both top and front for stocking short or tall

Display boxes not available for FTPTK-18 or FTVD-18CS.



Closed Kit



Displayed Kit with Protective Shell Removed (for photograph)



Displayed Kit with Protective Clear Shell (close-up)

**Don't see what you're looking for?
Call us today to discuss custom kit options!**

CLASSIC KITS

FTVHD-21
(CGA 510)
STANDARD

FTVHD-21-300
(CGA 300)



COMPLETE HEAVY DUTY CUTTING, WELDING & HEATING OUTFIT

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 8", welds up to 3" steel with optional larger tips

CONTAINS

- Heavy duty acetylene (VHAR-21) and oxygen (VHOR-21) regulators
- Heavy duty torch handle (VTHH-21) and cutting attachment (VCAH-21)
- Cutting tip (1-1-101) cuts up to 3/4"
- Heating head (8-MFA)
- Welding nozzles (1-W, 3-W, 5-W) welds up to 1/2" with largest tip
- 15' of 1/4" twin "T" grade hose with CGA "B" fittings
- Tip cleaner, Glasses, Spark lighter & Check valves



FTVSP-23
(CGA 510)
STANDARD

FTVSP-23-300
(CGA 300)



COMPLETE MEDIUM/HEAVY DUTY CUTTING, WELDING & HEATING OUTFIT

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 6", welds up to 3" steel with optional larger tips

CONTAINS

- Medium/heavy duty acetylene (ARSP-23) and oxygen (ORSP-23) regulators
- Heavy duty torch handle (VTHH-21) and cutting attachment (VCAH-21)
- Cutting tip (1-1-101) cuts up to 3/4"
- Welding nozzle (2-W) welds up to 1/8"
- 15' of 1/4" twin "T" grade hose with CGA "B" fittings
- Tip Cleaner, Glasses, Spark Lighter & Check Valves



FTVMD-22
(CGA 510)
STANDARD

FTVMD-22-300
(CGA 300)



COMPLETE MEDIUM DUTY CUTTING, WELDING & HEATING OUTFIT

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 5", welds up to 1.25" steel with optional larger tips

CONTAINS

- Medium duty acetylene (VMAR-22) and oxygen (VMOR-22) regulators
- Medium duty torch handle (VTHM-22) and cutting attachment (VCAM-22)
- Cutting tip (0-3-101) cuts up to 1/2"
- Heating head (8-MFA-1)
- Welding nozzles (0-W-1, 2-W-1, 4-W-1) welds up to 1/4" with largest tip
- 15' of 1/4" twin "T" grade hose with CGA "B" fittings
- Tip cleaner, Glasses, Spark Lighter & Check Valves



Available in clamshell. Add "CS" to end of part number.

FTVMDUK-20
(CGA 510)
STANDARD

FTVMDUK-20-300
(CGA 300)



MEDIUM DUTY UTILITY KIT FOR CUTTING & WELDING

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 5", welds up to 1.25" steel with optional larger tips

CONTAINS

- Medium duty acetylene (VMAR-22) and oxygen regulators (VMOR-22)
- Medium duty torch handle (VTHM-22) and cutting attachment (VCAM-22)
- Cutting tip (0-3-101) cuts up to 1/2"
- Welding nozzle (0-W-1) welds up to 1/8"
- 12.5' of 3/16" twin "T" grade hose with CGA "B" fittings
- Glasses, Spark Lighter & Check valves





FTPTK-18
 (ACET: CGA 200)
 (OXY: CGA 540)



PORTABLE TORCH KIT ***CYLINDERS NOT INCLUDED***
 COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 4", welds up to 1.25" steel with optional larger tips

CONTAINS

- Light duty acetylene (VLAR-18) and oxygen (VLOR-18) rear mount regulators
- Medium duty torch handle (VTHM-22) and cutting attachment (VCAM-22)
- Cutting tip (O-3-101) cuts up to 1/2"
- Welding nozzle with mixer (O-W-1) welds up to 5/64"
- 12.5' of 3/16" twin "T" grade hose with CGA "B" fittings
- Glasses, Spark Lighter & Check Valves
- ***Cylinders not included***

PORTABLE TOTE

Order the tote *only* as part number **PT-18**

FTVLD-18CS
 (ACET: CGA 510)
 (OXY: CGA 540)



MEDIUM/LIGHT DUTY KIT FOR CUTTING & WELDING

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 4", welds up to 1.25" steel with optional larger tips

CONTAINS

- Light duty acetylene (VLAR-18S) and oxygen (VLOR-18S) side-mount regulators
- Medium duty torch handle (VTHM-22) and cutting attachment (VCAM-22)
- Cutting tip (O-3-101) cuts up to 1/2"
- Welding nozzle with mixer (O-W-1) welds up to 5/64"
- 12.5' of 3/16" twin "T" grade hose with CGA "B" fittings
- Goggles, Spark Lighter & Check valves



FTHSP-30
(CGA 510)
STANDARD

FTHSP-30-300
(CGA 300)



COMPLETE HEAVY DUTY CUTTING & WELDING OUTFIT

COMPATIBLE WITH HARRIS® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 6", welds up to 3" steel with optional larger tips

CONTAINS

- Heavy duty acetylene (HHAR-30) and oxygen (HHOR-30) regulators
- Heavy duty torch handle (HHTH-30) and cutting attachment (HHCA-30)
- Cutting tip (6290-1) cuts up to 3/4"
- Welding nozzle with mixer (23-A-90-3) welds up to 1/8"
- 15' of 3/16" twin "T" grade hose with CGA "B" fittings
- Tip Cleaner, Glasses, Spark Lighter & Check Valves

CONTRACTOR KITS

FTVHD-A1
(CGA 510)
STANDARD

FTVHD-A1-300
(CGA 300)



HEAVY DUTY CONTRACTOR KIT

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 8" with optional tips, can weld up to 3" steel with optional nozzles

CONTAINS

- Heavy duty acetylene (VHAR-21) and oxygen (VHOR-21) regulators
- Heavy duty torch handle (VTHH-21) and cutting attachment (VCAH-21)
- Cutting tip (1-1-101) cuts up to 3/4"
- Check valves

FTVHD-F1
(CGA 510)
STANDARD



HEAVY DUTY CONTRACTOR KIT

COMPATIBLE WITH VICTOR® PRODUCTS | **ALT. FUEL GASES**

CAPACITY

- Cuts up to 8" with optional tips, can weld up to 3" steel with optional nozzles

CONTAINS

- Heavy duty alternative fuel gas (VHFR-21) and oxygen (VHOR-21) regulators
- Heavy duty torch handle (VTHH-21) and cutting attachment (VCAH-21)
- Cutting tip (1-GPN) cuts up to 3/4"
- Check valves

FTVMD-A1
(CGA 510)
STANDARD

FTVMD-A1-300
(CGA 300)



MEDIUM DUTY CONTRACTOR KIT

COMPATIBLE WITH VICTOR® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 5" with optional tips, can weld up to 1.25" steel with optional nozzles

CONTAINS

- Medium duty acetylene (VMAR-22) and oxygen (VMOR-22) regulators
- Medium duty torch handle (VTHM-22) and cutting attachment (VCAM-22)
- Cutting tip (0-3-101) cuts up to 1/2"
- Check valves

FTHHD-A1
(CGA 510)
STANDARD

FTHHD-A1-300
(CGA 300)



HEAVY DUTY CONTRACTOR KIT

COMPATIBLE WITH HARRIS® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 6" with optional tips, can weld up to 3" steel with optional nozzles

CONTAINS

- Heavy duty acetylene (HHAR-30) and oxygen (HHOR-30) regulators
- Heavy duty torch handle (HHTH-30) and cutting attachment (HHCA-30)
- Cutting tip (6290-1) cuts up to 3/4"
- Check valves

FTHHD-F1
(CGA 510)
STANDARD



HEAVY DUTY CONTRACTOR KIT

COMPATIBLE WITH HARRIS® & VICTOR® PRODUCTS | **ALT. FUEL GASES**

CAPACITY

- Cuts up to 8" with optional tips, can weld up to 3" steel with optional nozzles

CONTAINS

- Heavy duty alternative fuel gas (VHFR-21) and oxygen (VHOR-21) regulators *
- Heavy duty torch handle (HHTH-30) and cutting attachment (HHCA-30)
- Cutting tip (6290-1NX) cuts up to 3/4"
- Check valves

* Harris® compatible alternative fuel gas regulators are not available.

CUTTER KITS

FTVHD-CK-F1
(CGA 510)
STANDARD



HEAVY DUTY CUTTER KIT

COMPATIBLE WITH VICTOR® PRODUCTS | **ALT. FUEL GASES**

CAPACITY

- Cuts up to 8" with optional tips

CONTAINS

- Heavy duty acetylene (VHFR-21) and oxygen (VHOR-21) regulators
- 21" straight torch w/90° head (6321-F90)
- Cutting tip (1-GPN) cuts up to 3/4"
- Check valves



FTHHD-CK-A1
(CGA 510)
STANDARD

**FTHHD-CK
-A1-300**
(CGA 300)

HEAVY DUTY CUTTER KIT

COMPATIBLE WITH HARRIS® PRODUCTS | **OXY-ACETYLENE**

CAPACITY

- Cuts up to 6" with optional tips

CONTAINS

- Heavy duty acetylene (HHAR-30 and oxygen (HHOR-30) regulators
- 21" straight torch w/90° head (6221-A90)
- Cutting tip (6290-1) cuts up to 3/4"
- Check valves



Regulation & Flow Control

OEM COMPATIBLE SINGLE STAGE CYLINDER REGULATORS

FEATURES

- Forged brass body & bonnet for maximum strength
- Oxygen with safety relief valve for safe operation
- Sintered metal inlet filter to trap impurities
- Easy to read dual scale gauges with hardy acrylic screw-on lens

DELIVERY PRESSURE

- Acetylene: 2–15 psi
- Alt. Fuel Gas: 2–40 psi
- Oxygen: 5–125 psi

MAX CYLINDER PRESSURE

- Acetylene: 400 psi
- Alt. Fuel Gas: 400 psi
- Oxygen: 4000 psi



BOX PACKAGING



CLAMSHELL PACKAGING

OEM COMPAT.	DUTY	GAS	BOX P/N	BOX P/N (CGA 300)	CLAMSHELL P/N	CLAMSHELL P/N (CGA 300)
Victor®	Heavy	Acetylene	VHAR-21	VHAR-21-300	VHAR-21CS	VHAR-21-300CS
Victor®	Heavy	Alt. Fuel Gas	VHFR-21	n/a	VHFR-21CS	n/a
Victor®	Heavy	Oxygen	VHOR-21	n/a	VHOR-21CS	n/a
Victor®	Medium	Acetylene	VMAR-22	VMAR-22-300	VMAR-22CS	VMAR-22-300CS
Victor®	Medium	Alt. Fuel Gas	VMFR-22	n/a	VMFR-22CS	n/a
Victor®	Medium	Oxygen	VMOR-22	n/a	VMOR-22CS	n/a
Victor®	Med./Heavy	Acetylene	ARSP-23	ARSP-23-300	n/a	n/a
Victor®	Med./Heavy	Oxygen	ORSP-23	n/a	n/a	n/a
Victor®	Light	Acetylene	VLAR-18	n/a	n/a	n/a
Victor®	Light Duty	Oxygen	VLOR-18	n/a	n/a	n/a
Harris®	Heavy	Acetylene	HHAR-30	HHAR-30-300	n/a	n/a
Harris®	Heavy	Oxygen	HHOR-30	n/a	n/a	n/a

OXY-FUEL MEDIUM DUTY REGULATOR SET

FEATURES

- Set of 1 Each Oxygen and Fuel Gas Regulators
- Lower Price Point than Individual Regulators
- Victor® Compatible

SPECIFICATIONS

- VMAR-22 or VMAR-22-300 or VMFR-22
- VMOR-22

PART NUMBERS (CS ONLY)

- VMORAR-CS (acetylene CGA 510)
- VMORAR-300CS (acetylene CGA 300)
- VMORFR-CS (alternative fuel gas CGA 510)



FLOW GAUGE REGULATORS

FEATURES

- Easy to read 2-inch, dual-scale gauges
- Safety relief valve to protect equipment
- Sintered metal inlet filter to trap impurities
- Forged brass body with nickel-chrome plating on bonnet
- Argon cylinder fitting: CGA 580
- CO₂ cylinder fitting: CGA 320

IDEAL FOR

- MIG/TIG operations—where flowmeters are not ideal
- Designed for small to medium operations, with flow of 8–45 SCFH
- Small to medium (.025–.045 Ø) operations

PART NUMBERS

BOX

FTFG-25-AR (Argon)

FTFG-25-CD (CO₂)

CLAMSHELL

FTFG-25-ARCS (Argon)

FTFG-25-CDCS (CO₂)

FLOWMETER REGULATORS

FEATURES

- Economy style combination regulator and flowmeter in one unit
- Preset pressure output at 50 PSI, machined brass body, polycarbonate flow tube and outer cover are impact resistant for maximum durability
- Compact lightweight construction
- Designed for MIG & TIG applications providing accurate regulation of gas flow
- Dual scale gauge with impact resistant polycarbonate lens for durability

SPECIFICATIONS

- 0-60 SCFH Flow, Preset output 50 PSI for Argon & CO₂, Weight 1 lb. 6 oz
- Outlet fitting: 5/8"-18 RH Female CGA "B"

PART NUMBERS

BOX

- 100-FL-AR-60-580 (Argon)
- 100-FL-CD-60-320 (CO₂)

CLAMSHELL

- 100-FL-AR-60-580C (Argon)
- 100-FL-AR-60-580H (Argon—includes 10-foot single hose)



DUAL FLOWMETER REGULATOR

SPECIFICATIONS

- Outlet 5/8"-18RH Female
- Flow Range 10-60 SCFH
- Output Fixed at 50 PSIG
- Comparable to Victor® DFM 150 Series

PART NUMBERS (BOX ONLY)

- 200-FL-AR-60-580



FLOWMETER

SPECIFICATIONS

- Outlet 5/8"-18RH Female
- Flow Range 10-60 SCFH
- Inlet 1/4" NPT Male
- Max Inlet Pressure 50 PSIG
- *Not for Cylinder Use!*

PART NUMBERS (BOX ONLY)

- 50-FM-AR-CD-60



SPECIALTY REGULATORS (BOXED ONLY)**INERT GAS MEDIUM DUTY***Comparable to Victor® TPR250 Series***MDR-IN-350-580**

- 15–350 PSI Delivery
- 1/4" - 37° Flare Outlet
- 2" Guages
- CGA 580 Inlet
- 3,000 PSI Max Inlet

**INERT GAS HIGH PRESSURE***A Flame Tech Classic***HPPR-IN-700-580**

- Piston Style Regulator
- 50–700 PSI Delivery
- 1/4" - 37° Flare Outlet
- 2" Guages
- CGA 580 Inlet
- 3,000 PSI Max Inlet

**INERT GAS HIGH FLOW***Comparable to Victor® SR600 Series***HDR600-IN-350-580** (350 max PSI, CGA 580)**HDR600-IN-350-680** (350 max PSI, CGA 680)

- 1/4" Swagelok Outlet
- 2 1/2" Gauges
- 3,000 PSI Max Inlet

HDR600-IN-550-580 (550 max PSI, CGA 580)**HDR600-IN-550-680** (550 max PSI, CGA 680)

- 1/4" Swagelok Outlet
- 2 1/2" Gauges
- 5,500 PSI Max Inlet

**DELUXE HELIUM BALLOON FILLER****H580BF**

- Cylinder contents gauge
- Rugged all brass body
- "Piston Type" mechanism
- Plastic hand tight CGA 580 inlet connection
- Drilled and tapped for tie hook and string cutter



Torch Handles & Cutting Attachments

VICTOR® COMPATIBLE MEDIUM & HEAVY DUTY



BOX PACKAGING



CLAMSHELL PACKAGING

CUTTING ATTACHMENTS

- Double O-ring to form a perfect gas-tight seal
- Head & body are forged brass for longer life
- Two stainless steel tubes and lever for strength

TORCH HANDLES

- Tough extruded brass handle for durability
- Stainless steel needle valves for accurate adjustment

PART NUMBER	DESCRIPTION	PACKAGING
VCAH-21	Heavy Duty Cutting Attachment	Box
VTHH-21	Heavy Duty Torch Handle	Box
VCAM-22	Medium Duty Cutting Attachment	Box
VTHM-22	Medium Duty Torch Handle	Box
VCAH-21CS	Heavy Duty Cutting Attachment	Clamshell
VTHH-21CS	Heavy Duty Torch Handle	Clamshell
VCAM-22CS	Medium Duty Cutting Attachment	Clamshell
VTHM-22CS	Medium Duty Torch Handle	Clamshell

MEDIUM DUTY TORCH HANDLE & CUTTING ATTACHMENT SET

FEATURES

- Set of 1 Each Medium Duty Torch Handle & Cutting Attachment
- Lower Price Point than Individual Items
- Always Includes Free Size Zero Medium Duty Cutting Tip
- Free Item Included (subject to change)
- Victor® Compatible

SPECIFICATIONS

- VTHM-22 with Check Valves
- VCAH-22
- 0-3-101
- Extra Free Item (subject to change)

PART NUMBERS (CS ONLY)

- VMCATH-CS



HD TORCH HANDLE WITH BUILT-IN FLASHBACK ARRESTORS

FEATURES

- Heavy Duty Torch Handle
- Built-In Flashback Arrestors with Check Valves
- Replaceable FBA/Check Valve Cartridge Set
- Retainer Prevents FBA Cartridges from Backing Out When Removing Hose

SPECIFICATIONS

- Compatible with Victor® Series 1 cutting tips
- Solid Brass Forged Head
- Heavy-Duty Stainless Tubes
- Universal Mixer for Use with Any Fuel Gas
- Replace with Flame Tech flashback arrestor/check valve cartridges *only*.
- DO NOT use other brand cartridges, as they may not seal correctly and cause gas leaks.

PART NUMBERS (BOX ONLY)

- VTHH-21-FBA



Do **NOT** use this torch without the built-in flashback arrestor cartridges!



Use only Flame Tech branded flashback arrestor cartridges!



Flashback Arrestor/Check Valves Cartridges
Fuel: 77100010, Oxygen: 77100020

500,000 BTU PROPANE TORCH

FEATURES

- 6-Pack Floor Display
- Each Torch is Individually Clamshelled for Resale to End Users
- 10' Hose with P.O.L. Safety Valve
- Comfort Grip Handle
- Striker Included
- 500,000 BTU
- CGA 510
- Requires Standard 20 lb. Propane Gas Cylinder (not included)

PART NUMBERS (6-PACK DISPLAY BOX)

- FT-PROP-TORCH

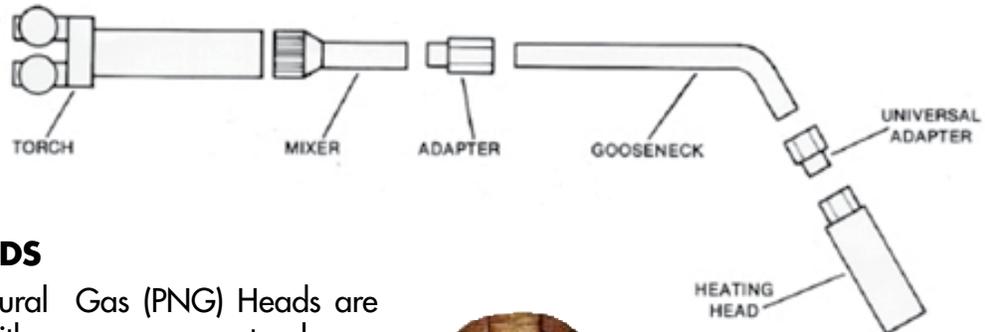


Foam Handle
for Comfort

P.O.L Safety Valve

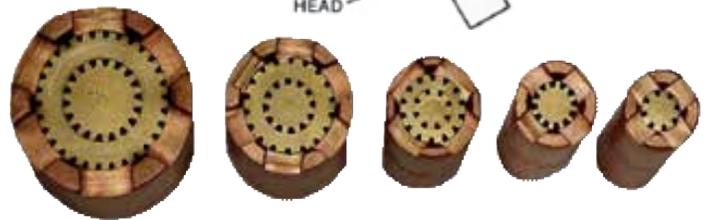
Heating & Welding/Brazing Components

INFERNO™ HEATING EQUIPMENT



PNG HEATING HEADS

Inferno™ Propane, Natural Gas (PNG) Heads are designed to operate with propane or natural gas. Shells are machined from solid copper bar stock. Internals are machined from brass which is press fit and pinned to prevent separation during backfire. A wide selection of sizes delivers from 200,000 to 1,200,000 BTU's.



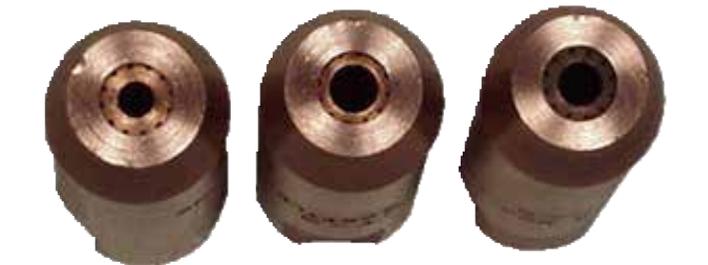
HD HEATING HEADS

Inferno™ Heavy Duty (HD) Heads are designed to operate with MPS gas, propylene, propane and natural gas. A wide selection of sizes delivers from 20,000 to 1,200,000 BTU's. HD heads are machined from solid bar stock. Internals are press fit and pinned with a large brass pin to prevent separation during backfire.



SPOT HEATING HEADS

Inferno™ Spot Heads are designed to operate with MPS gas, propylene, propane and natural gas. Spot heads are designed to provide a very concentrated flame. This new tool is useful for specialized heating, bending and washing applications. A wide selection of sizes delivers from 70,000 to 513,000 BTU's.



MAGNUM MIXERS

Flame Tech Magnum™ mixers are designed for use with Victor®, Harris®, Airco®, Purox®, and Smith® torches. Using the "Magnum" mixer eliminates the need for mixer to gooseneck adapters and provides greater flow than original manufacturers' mixers.



HEATING HEADS

⚠ Large heating assemblies require high volumes of gas to keep flames burning properly. "Starving" the flame will overheat the tip and cause a backfire or flashback (hissing sound inside the head.) If additional flow capacity is required, use a manifold system of sufficient size to supply the necessary gas volume. Consult your gas supplier for withdrawal rates for other fuel gases. Refer to the chart below for recommended pressure settings and consumption data.

IF A FLASHBACK OCCURS, IMMEDIATELY CLOSE THE OXYGEN VALVE FIRST, AND THEN CLOSE THE FUEL VALVE.

* Heating heads marked with an asterisk must be used with 3/8" ID hose and a heavy duty torch handle.

PNG for use with natural gas/propane

MODEL	HEAD SIZE	NATURAL GAS/ PROPANE PRESSURE (PSI) MIN-MAX	OXYGEN PRESSURE (PSI) MIN-MAX	NATURAL GAS/ PROPANE CONSUMPTION (CFH) MIN-MAX	OXYGEN CONSUMPTION (CFH) MIN-MAX	BTU PER HOUR
PNG	10	2-10	30-45	55-110	180-210	CFH (Gas) × BTU per cu. ft. (see BTU info)
PNG	20*	2-12	40-60	90-180	310-330	
PNG	30*	2-15	60-80	170-260	450-600	
PNG	40*	2-10	80-100	240-290	550-800	See BTU chart
PNG	50*	10-25	90-110	280-450	780-980	

HD for use with any commercial fuel gas except acetylene

MODEL	HEAD SIZE	NATURAL GAS/ PROPANE PRESSURE (PSI) MIN-MAX	OXYGEN PRESSURE (PSI) MIN-MAX	NATURAL GAS/ PROPANE CONSUMPTION (CFH) MIN-MAX	OXYGEN CONSUMPTION (CFH) MIN-MAX	BTU PER HOUR
HD	1	5-10	40-60	70-100	100-180	CFH (Gas) × BTU per cu. ft. (see BTU info)
HD	2*	10-15	50-70	100-150	200-300	
HD	3*	15-25	70-100	150-200	350-460	
HD	4*	20-35	90-120	250-350	600-800	See BTU chart
HD	5*	30-50	100-150	400-500	900-1150	

SPOT for use with any commercial fuel gas except acetylene

MODEL	HEAD SIZE	NATURAL GAS/ PROPANE PRESSURE (PSI) MIN-MAX	OXYGEN PRESSURE (PSI) MIN-MAX	NATURAL GAS/ PROPANE CONSUMPTION (CFH) MIN-MAX	OXYGEN CONSUMPTION (CFH) MIN-MAX	BTU PER HOUR
SPOT	1	5-15	40-55	70-150	120-300	CFH (Gas) × BTU per cu. ft.
SPOT	2*	7-20	45-65	80-175	150-350	
SPOT	3*	10-25	50-80	100-200	200-400	

APPROXIMATE GROSS BTUS PER CUBIC FOOT

Natural Gas=1000

Propane=2498

Propylene=2371

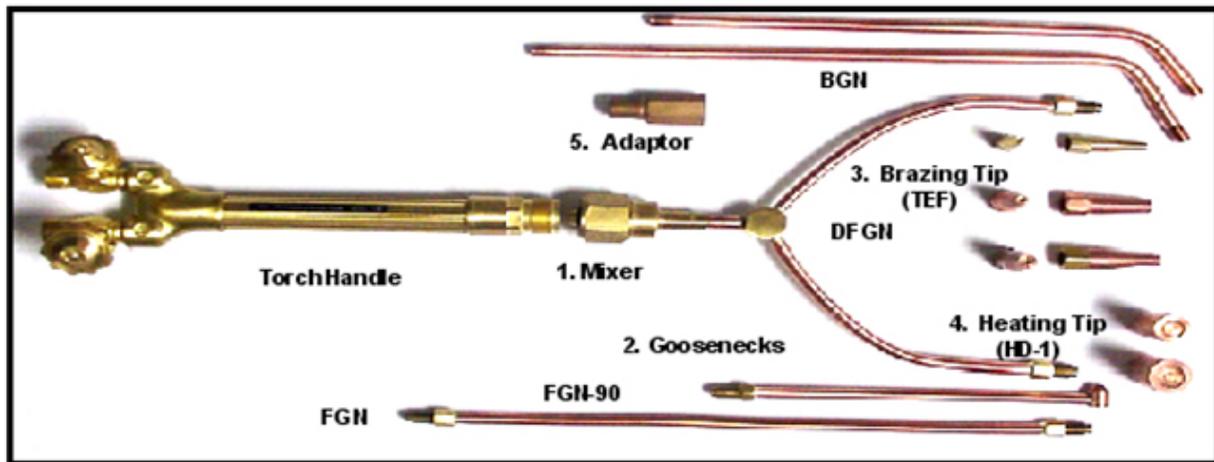
GOOSENECKS FOR HEATING HEADS

Flame Tech® stainless steel goosenecks fit Flame Tech® "Magnum" mixers and Victor® 1/2" mixers without the need for an adaptor. Other OEM mixers will require adaptors. All PNG, HD and SPOT heating heads screw onto the 1/2-20 end of Flame Tech® goosenecks.

Available in 10", 12", 16", 18", 24", 28" & 36" lengths.

Gooseneck heating assemblies are available for many OEMs. Assemblies include a mixer, for the requested OEM type available, an adaptor to the gooseneck (if needed), the gooseneck of specified length and the heating head. Adaptors are available for Flame Tech® heating heads to fit onto many OEM goosenecks. See the price book for more details.

LIGHT DUTY BRAZING

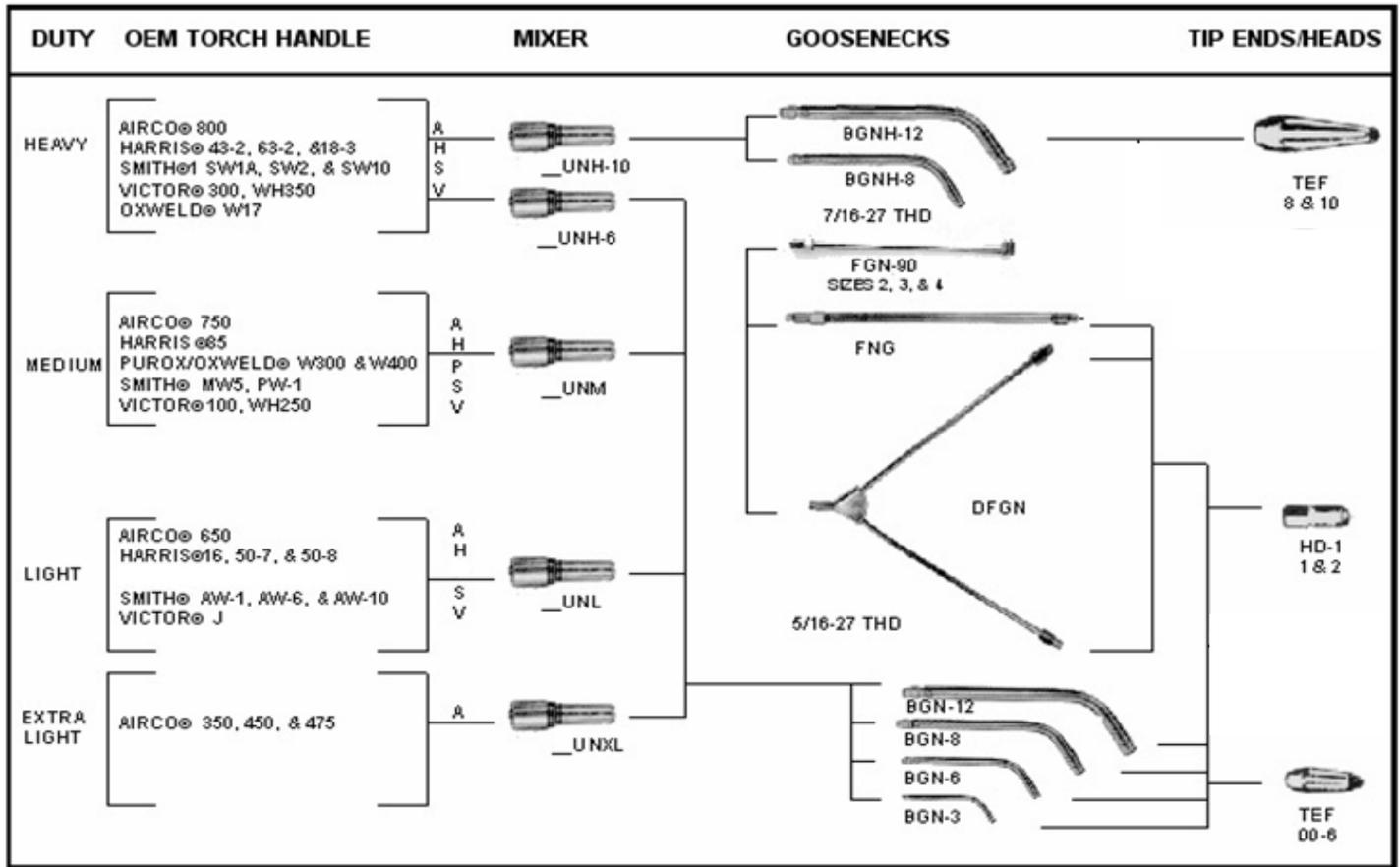


This brazing & heating equipment enhances the use of fuel gas for applications that previously required acetylene. The same philosophy we use for our heavy duty heating equipment is used in the design of this equipment. The special fuel gas mixers, designed for use with all the popular OEM torch handles, utilize the same accessories. This standardizes purchasing, reduces inventory, makes the components more cost effective and gives the craftsman tremendous flexibility. NOT FOR USE WITH ACETYLENE.

1. MIXER – Designed to enhance the performance of all Fuel Gases. Available for all popular torches.
2. GOOSENECKS – The wide variety of gooseneck accessories cover most applications.
3. BRAZING TIPS – The TEF (Tip End Fuel) gas brazing tips were designed to overcome most of the problems encountered while brazing with fuel gases. These TEF tips will flow from 25 to 50 percent more gas than single orifice welding tips designed for acetylene before becoming unstable and blowing away from the tip.
4. HEATING TIPS – The HD-1-1 or HD-1-2 series heating tips allow the use of fuel gases with minimum & light duty torches for heating applications that previously required acetylene. The HD-1-1 or HD-1-2 head will yield from 120,000 to 375,000 BTUs per hour, which covers the smallest to the largest traditional multi-flame acetylene heating assemblies.
5. ADAPTORS – 5/16-27 thread to 1/4" tubing allows for customized goosenecks to fit individual needs.

TORCH HANDLE	MIXERS					ACCESSORIES
	AIRCO	HARRIS	PUROX/OXWELD	SMITH	VICTOR	
Heavy Duty	A-UNH-10	H-UNH-10	O-UNH-10	S-UNH-10	V-UNH-10	BGNH Bent Gooseneck Heavy Duty Lengths: 8" & 12" TEF Tip End Fuel. Sizes: 8 & 10
	A-UNH-6	H-UNH-6	O-UNH-6	S-UNH-6	V-UNH-6	BGN Bent Gooseneck Lengths: 3", 6", 8", 12" TEF Tip End Fuel
Medium Duty	A-UNM	H-UNM	P-UNM	S-UNM	V-UNM	HD-1 Heating Heads. Sizes: 1 & 2 DFGN Dual Flex Gooseneck Length: 6"
Light Duty	A-UNL	H-UNL	(discontinued)	S-UNL	V-UNL	FGN Flexible Gooseneck Length: 11"
Extra Light Duty	A-UNXL	NONE	NONE	NONE	NONE	FGN-90 Flexible Gooseneck with 90°Head. Length: 6"

LIGHT DUTY BRAZING



FLAME TECH TEF (TIP END FUEL GAS) BRAZING AND HEATING NOZZLE CROSS REFERENCE & FLOW DATA

FLAME TECH PART NO.	ACETYLENE EQUIVALENT	DRILL SIZE	TEF SIZE	FUEL GAS (PSI)	OXYGEN (PSI)	FUEL GAS FLOW (CFH)*
TEF-00	000	75 (.022")	00	3-6	3-6	2-7
TEF-0	00	70 (.028")	0	3-6	3-6	4-9
TEF-1	0	65 (.035")	1	3-6	4-8	6-12
TEF-2	1	60 (.040")	2	3-6	5-10	9-18
TEF-3	2	56 (.046")	3	4-8	8-15	10-20
TEF-4	3	53 (.060")	4	5-10	10-25	12-24
TEF-5	4	49 (.073")	5	6-12	15-30	10-40
TEF-6	5	43 (.084")	6	7-14	20-40	30-75
TEF-8	6	36 (.106")	8	9-18	30-50	60-120
TEF-8	7	30 (.128")	8	12-24	40-70	90-180
TEF-10	8	29 (.136")	10	18-36	50-80	160-320
TEF-10	10	27 (.144")	10	20-40	50-80	200-400
HD-1-1	MFA-12	n/a	HD-1-1	5-10	40-60	70-100
HD-1-2	MFA-15	n/a	HD-1-2	10-15	50-70	100-150

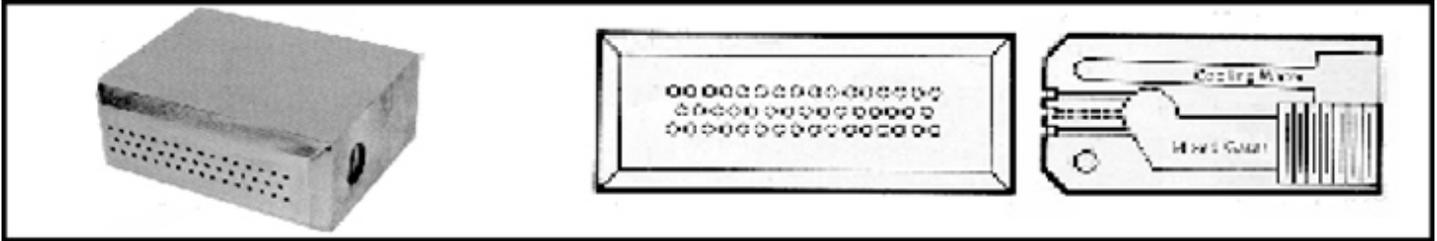
The highlighted sizes will cover most applications.

* Oxygen consumption (CFH) is about 2.0 times the fuel gas under neutral flame conditions.

STANDARD FLAME HARDENING HEADS

WATER-COOLED HEADS FOR FLAME TECH GOOSENECKS

Water is circulated through the head for cooling purposes only. Quenching of the work piece must come from another source. Internal threads are provided at the back of each head for mounting purposes.

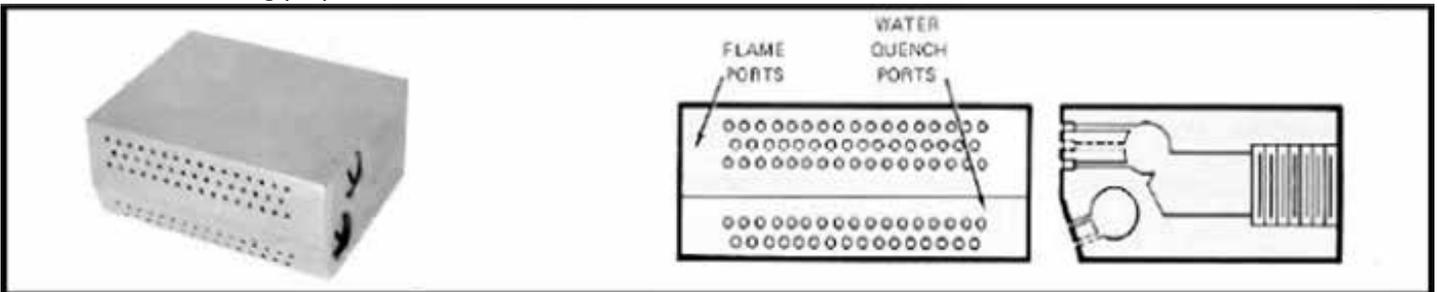


FUEL GAS INLET IS 1/4" NPT – WATER INLET IS 1/8" NPT (NOTE: TO MOUNT ON A FLAME TECH GOOSENECK, USE UAD-10 ADAPTOR.)

ITEM NUMBER	HEATING AREA WIDTH	HEAD SIZE	NUMBER OF FLAME PORTS	OXYGEN FLOW (CFH)	FUEL FLOW (CFH)
WC 10	1"	1 x 2 x 1 3/4"	23	130-155	35-50
WC 15	1 1/2"	1 x 2 x 2 1/4"	35	200-235	50-80
WC 20	2"	1 x 2 x 2 3/4"	47	270-315	70-110
WC 25	2 1/2"	1 x 2 x 3 1/4"	59	340-400	80-135
WC 30	3"	1 x 2 x 3 3/4"	71	400-475	110-165
WC 35	3 1/2"	1 x 2 x 4 1/4"	83	475-560	125-190
WC 40	4"	1 x 2 x 4 3/4"	95	550-640	140-220

WATER-QUENCHING HEADS TO FIT FLAME TECH GOOSENECKS

Water is provided to quench the work piece as well as cooling the head. Internal threads are provided at the back and at each side of the head for mounting purposes.



FUEL GAS INLET IS 1/4" NPT – WATER INLET IS 1/8" NPT (NOTE: TO MOUNT ON A FLAME TECH GOOSENECK, USE UAD-10 ADAPTOR.)

ITEM NUMBER	HEATING AREA WIDTH	HEAD SIZE	NUMBER OF FLAME PORTS	OXYGEN FLOW (CFH)	FUEL FLOW (CFH)
WQ 10	1"	1 x 2 x 1 3/4"	23	130-155	35-50
WQ 15	1 1/2"	1 x 2 x 2 1/4"	35	200-235	50-80
WQ 20	2"	1 x 2 x 2 3/4"	47	270-315	70-110
WQ 25	2 1/2"	1 x 2 x 3 1/4"	59	340-400	80-135
WQ 30	3"	1 x 2 x 3 3/4"	71	400-475	110-165
WQ 35	3 1/2"	1 x 2 x 4 1/4"	83	475-560	125-190
WQ 40	4"	1 x 2 x 4 3/4"	95	550-640	140-220

NON-STANDARD FLAME HARDENING HEADS

Non-standard heads for any flame hardening application and gas are quoted on an individual basis. Submit customer drawing and specifications of head and/or work piece to be hardened. Our on-staff engineering department is available to help design specialty products to meet customer needs.

ABOUT FLAME HARDENING

WHAT IS FLAME HARDENING

Flame hardening includes any process that uses an oxy-fuel gas flame to heat carbon or alloy steel, tool steel, cast iron or a hardenable stainless steel above a certain “critical” temperature. A rapid quench follows, causing the material to harden to some depth below its surface. Flame hardening works in a depth range of 1/64 to 1/4 inch. The success of any flame hardening process depends on several variables, including the type of iron or steel selected, the fuel, the design and operation of the flame head, the quenching medium and how it’s used.

WHY USE FLAME HARDENING

It is a rapid, economical method for selectively hardening specific areas on the surface of a part. The process is applied only to the flame hardenable materials, principally carbon and alloys steels, certain stainless steels and cast irons. Flame hardening differs from other heat treating processes because only the surface, and a thin layer of the work piece below the surface, are hardened.

Flame hardening is more economical than induction hardening, because equipment and maintenance costs are lower. Operating costs are about the same for both methods depending on the size of the production run and work piece configuration. It is also more versatile than induction hardening.

EXAMPLES FOR SELECTING FLAME HARDENING

- Parts are too large for conventional furnace heating and quenching. Typical examples include large gears, machine ways, large dies and mill rolls.
- Only a small segment of a work piece requires heat treatment, because heating the entire part would be detrimental.

DIFFERENT QUENCHING PROCESSES

Cooling speed during the quenching depends on the type and temperature of quenching medium used and how fast it is agitated.

Self-quenching is the slowest method and produces the lowest surface hardness. Self-quenching occurs when a part has a sufficiently large, cool mass to draw heat away from the surface, causing the part to quench itself.

Forced air is a mild quench that rapidly cools the work piece with minimum risk of surface cracking, especially in higher-carbon steels.

Oil and soluble-oil mixtures give relatively high hardness without too severe of a cooling rate.

Water is a severe quenchant, and brine is even more severe. They produce high hardness, but also may cause surface cracking if not used carefully. Water gives a higher hardness than oil when surface cracking is not likely to be a problem—as it is in very high carbon steels.

Heating & Welding/Brazing Assemblies

OXYACETYLENE HEATING NOZZLES

STYLE	SIZE	COMPLETE NOZZLE
MFA For use with Flame Tech® VTHH-21 heavy duty torch handle or Victor® HD handle.	4	4-MFA
	6	6-MFA
	8	8-MFA
	10	10-MFA
	12	12-MFA
	15	15-MFA
MFA-1 For use with Flame Tech® VTHM-22 medium duty torch handle or Victor® MD handle.	2	2-MFA-1
	4	4-MFA-1
	6	6-MFA-1
	8	8-MFA-1
MFA-J For use with J-Torch.	2	2-MFA-J
	4	4-MFA-J
	6	6-MFA-J

STYLE	SIZE	COMPLETE NOZZLE
MFN For use with Flame Tech® VTHH-21 heavy duty torch handle or Victor® HD torch handle. *3/8" hose is required	8	8-MFN
	10	10-MFN
	12*	12-MFN
	15*	15-MFN
MFN-1 For use with Flame Tech® VTHM-22 medium duty torch handle or Victor® MD torch handle.	6	6-MFN-1
	8	8-MFN-1

WARNING: MFN & MFN-1 heating nozzles are for alternative fuel gases only; they are not for use with acetylene.

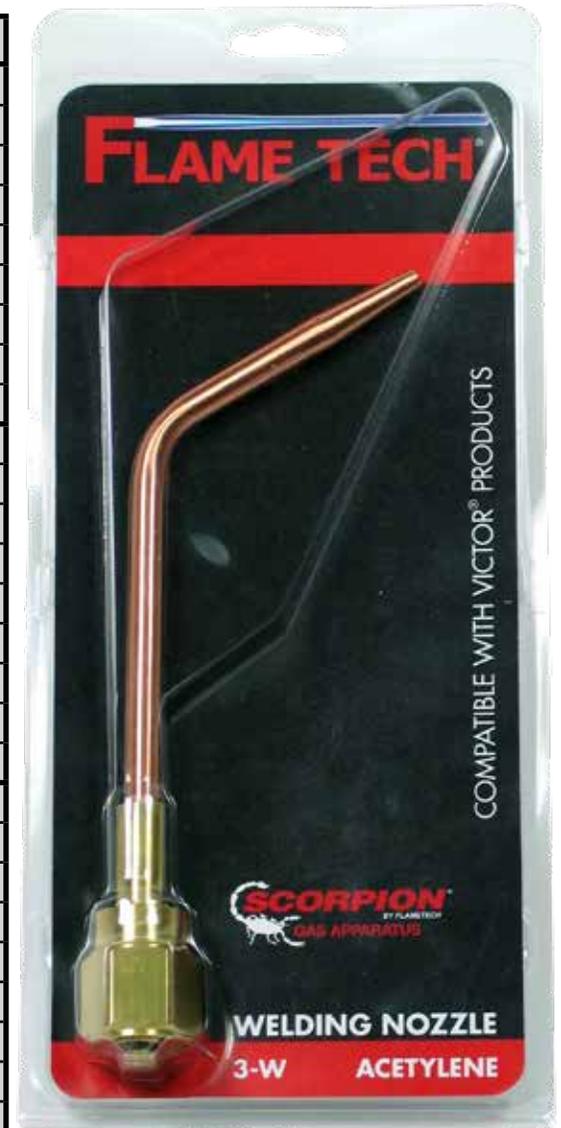


TIP SIZE	OXYGEN PRESSURE (PSI)	ALT. FUEL GAS PRESSURE (PSI)	ACETYLENE PRESSURE (PSI)	OXYGEN CONSUMPTION (SCFH)	ALT. FUEL GAS CONSUMPTION (SCFH)	ACETYLENE CONSUMPTION (SCFH)
2	4-8	—	4-8	3-10	—	3-9
4	8-12	—	6-10	7-22	—	6-20
6	10-15	2-10	8-12	15-44	5.5-20	15-50
8	20-30	10-15	10-15	33-88	10-35	30-80
10	30-40	12-20	12-15	44-110	20-80	40-100
12	50-60	13-25	12-15	66-165	30-160	60-150
15	50-60	13-25	12-15	99-244	50-200	90-220

NOTE: Oxygen consumption (SCFH) is 1.1 times that of acetylene, under neutral flame conditions.
 Oxygen consumption (SCFH) is about 2.0 times that of alt. fuel gases, under neutral flame conditions.

OXYACETYLENE WELDING NOZZLES

STYLE	SIZE	COMPLETE NOZZLE
W For use with Flame Tech® VTHH-21 heavy duty torch handle or Victor® HD handle.	000	000-W
	00	00-W
	0	0-W
	1	1-W
	2	2-W
	3	3-W
	4	4-W
W-1 For use with Flame Tech® VTHM-22 medium duty torch handle or Victor® MD handle.	000	000-W-1
	00	00-W-1
	0	0-W-1
	1	1-W-1
	2	2-W-1
	3	3-W-1
	4	4-W-1
W-J For use with J-Torch.	000	000-W-J
	00	00-W-J
	0	0-W-J
	1	1-W-J
	2	2-W-J
	3	3-W-J
	4	4-W-J
	5	5-W-J
	6	6-W-J



METAL THICKNESS	TIP SIZE	DRILL SIZE	OXYGEN (PSI)	ACETYLENE (PSI)	ACETYLENE (SCFH)
Up to 1/32"	000	75 (.022)	3-5	3-5	1-2
1/16" to 3/64"	00	70 (.028)	3-5	3-5	1.5-3
1/32" to 5/64"	0	65 (.035)	3-5	3-5	2-4
3/64" to 3/32"	1	60 (.040)	3-5	3-5	3-6
1/6" to 1/8"	2	56 (.056)	3-5	3-5	5-10
1/8" to 3/16"	3	53 (.060)	4-7	3-5	8-18
3/16" to 1/4"	4	49 (.073)	5-10	4-7	10-25
1/4" to 1/2"	5	43 (.089)	6-12	5-8	15-35
1/2" to 3/4"	6	36 (.106)	7-14	6-9	25-45

Safety Accessories

WHAT ARE FLASHBACK ARRESTORS

Flashback Arrestors prevent reverse flow of gases with built-in check valves and extinguishes flashback fire with a stainless steel sintered element.

HOW FLASHBACK ARRESTORS WORK



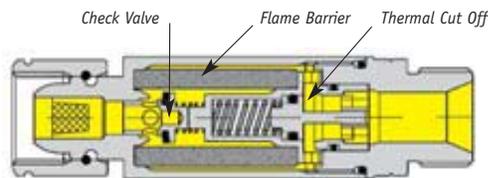
Torch Type (GG)



Regulator Type (DGN)

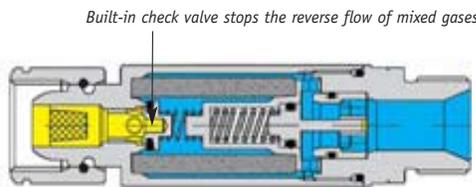


High Volume Type for In-Line and Point of Supply (SIMAX 3 & 5)



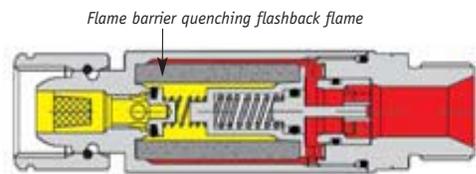
Normal Gas Flow →

Normal gas flow shown in yellow flowing through the flashback arrestor to torch, hose, or pipeline.



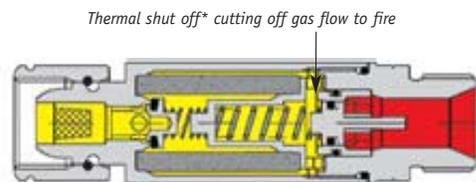
Reverse Gas Flow ←

Here the reverse flow of an explosive mixture of gases depicted in blue is stopped by the flashback arrestor's built in check valve. Reverse flow of gases is often caused by operator error, improper gas pressures, faulty or defective equipment, and/or obstruction at or after the point where gases mixed.



Flashback ←

The next step is the ignition of the mixed gases called a flashback shown here in red. The flashback causes a rapid flame propagation upstream to the equipment and gas supply. Here it is stopped by the flame barrier. Flashback can cause serious personal injury and/or equipment damage.



Hose Burn Back ←

Hose burn back shown here in red is an oxygen enriched fire or fuel gas decomposition in the hose or pipeline which flows back to the equipment and gas supply. In the illustration the hose burn back is stopped by the thermal cut off.

* Regulator and Point of Supply (in line) arrestors only



TORCH & REGULATOR FLASHBACK ARRESTORS

Prevent reverse flow of gases with built-in check valves. Extinguishes flashback fire with sintered element.

FEATURES

- GG/DGN Series: For use up to size 6 cutting tip.
- DG91UA/DG91N Series: For use up to size 12 cutting tip.
- Quality Manufactured – internal valve and spring made from stainless steel for longer life.
- 100% flame tested.
- Conforms to OSHA Regulations

STANDARD FLOW (UP TO SIZE 6 CUTTING TIP)

GG AIRFLOW

INLET PRESSURE (PSI)	AIRFLOW (CFH)
7.3	100.0
14.5	197.0
21.8	309.0
36.3	521.0
72.7	929.0

DGN AIRFLOW

INLET PRESSURE (PSI)	AIRFLOW (CFH)
7.3	141.0
14.5	268.0
21.8	390.0
36.3	651.0
72.7	1153.0



Torch Type (GG)

Regulator Type (DGN)

Chrome plated casing for improved corrosion resistance—longer lasting! (Set only. Individuals not chromed.)

HIGH FLOW (UP TO SIZE 12 TIP)

DG91N & DG91UA AIRFLOW

INLET PRESSURE (PSI)	AIRFLOW (CFH)
7.3	231.0
14.5	465.0
21.8	725.0
36.3	1041.0
72.7	1933.0



Torch Type (DG91UA)



Regulator Type (DG91N)



IN LINE AND POINT OF SUPPLY—DEMAX SERIES

The DEMAX Flame Tech Flash Arrestors are ideal for high volume gas flow applications in pipelines, manifolds and regulators. The DEMAX includes an inlet filter, reverse flow check valve, flame barrier, and thermal cut off in one compact brass body.

APPROVAL & SPECIFICATIONS

- Meets ANSI Z49.1 1999 Safety Guide Lines, OSHA, NFPA Guide Lines.
- UL Listed 23Y5.

SAFETY ELEMENTS

- One Inlet Filter Included (100 micron)
- Reverse Flow Check Valve
- Flame Barrier
- Thermal Cut Off

MATERIALS

- BODY: Brass, Alloy 360
- INTERNALS: Brass
- FLAME BARRIER: Stainless Steel
- ELASTOMERS: Neoprene (NPR)



DEMAX AIR FLOW

INLET PRESSURE (PSI)	AIRFLOW (CFH)
4.6	265
14.6	920
21.9	1593
36	2100
72	4000
109	6125
145	8200
290	13,000

PART NUMBERS

- 0901-7000 Fuel Gas, 1" Female NPT Inlet/Outlet, DEMAX Style
- 0901-7001 Oxygen, 1" Female NPT Inlet/Outlet, DEMAX Style

WORKING PRESSURE

GAS	PSI
ACETYLENE	15
HYDROGEN	50
LPG	50
OXYGEN	143



IN LINE AND POINT OF SUPPLY—SIMAX SERIES

The (SIMAX) Flame Tech Flash Arrestor series provide a full range of dry type (no water or fluid to check or replenish) flashback, gas reverse flow, and hose burn back protection in a compact economical package. SIMAX series flashback arrestors are approved safety devices under ANSI Z49.1999 safety guidelines and help meet OSHA, NFPA, and other strict industry Safety standards (see listings of approvals and specifications below). They are ideal for high volume gas flow applications in pipelines and manifolds. SIMAX units available in sizes 3, 5 & 8 with optional pipe away relief valve assemblies.

APPROVAL & SPECIFICATIONS

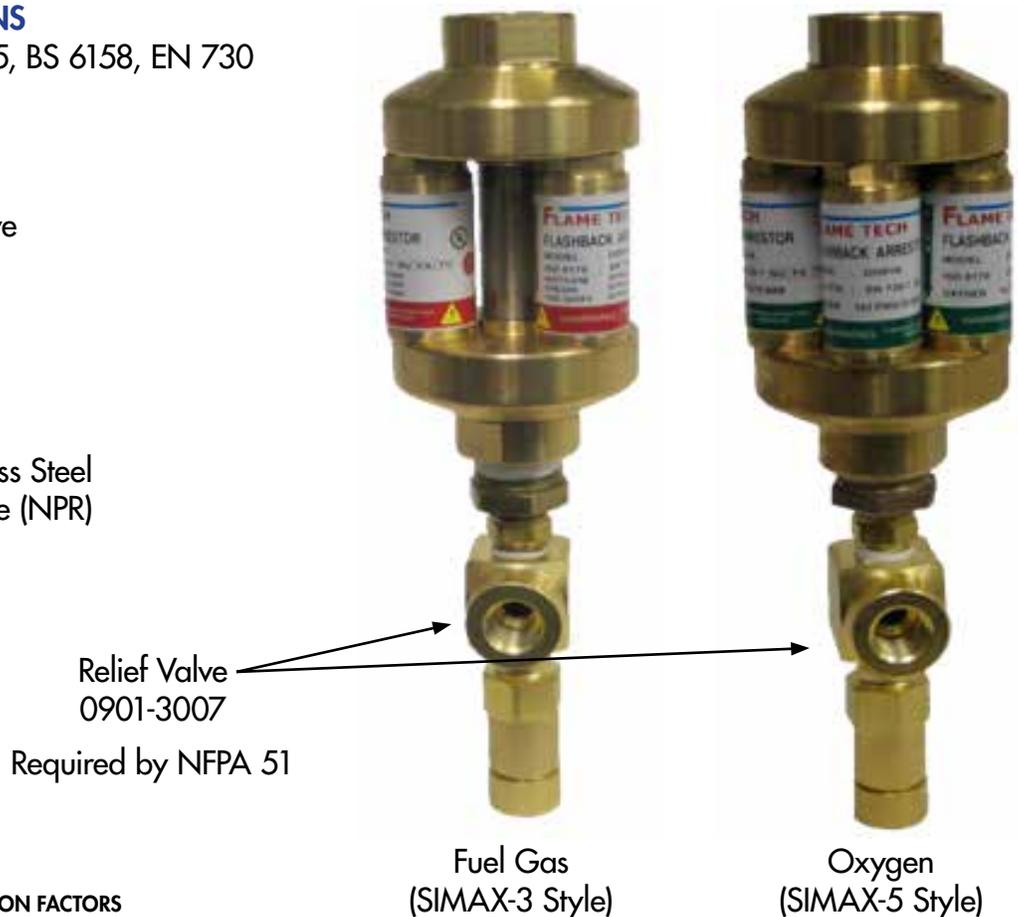
- UL Listed 23Y5, ISO 5175, BS 6158, EN 730 (BAM / DIN), AS 4603

SAFETY ELEMENTS

- Inlet filter (100 micron)
- Reverse Flow Check Valve
- Flame Barrier
- Thermal Cut Off Valve

MATERIALS

- BODY: Brass, Alloy 360
- INTERNALS: Brass
- FLAME BARRIER: Stainless Steel
- ELASTOMERS: Neoprene (NPR)



GAS TYPE CONVERSION FACTORS

GAS TYPE	FACTOR
ACETYLENE	1.05
BUTANE	0.70
HYDROGEN	3.79
PROPYLENE	0.82
METHANE/NATURAL GAS	1.34
OXYGEN	0.95
PROPANE	0.80

AIR FLOW (CFH)

PSI	21.9	36.5	73	145.9	286
BAR	1.5	2.5	5	10	20
SIMAX-3	1904	2618	5202	9860	20400
SIMAX-5	3060	4352	8670	16150	33150
SIMAX-8	5168	5670	13872	26180	53040

QUICK CONNECTORS

FEATURES

- Long lasting stainless steel pin connection
- Automatic gas cut off feature to positively shut off the gas supply when disconnecting
- All brass construction with durable stainless steel coupling pins reduces breakage and wear plus they meet ISO 7289, EN561 standards
- Double O-ring seal
- Color coded for gas service
- Quick connectors available with built-in flashback arrestors

TORCH TYPE QUICK CONNECTORS

DKG/D1 CGA "B" Size, 9/16" UNF. Fuel Gas & Oxygen with Automatic Gas Shut-Off Quick Disconnect System.



Oxygen	0901-8101
Fuel Gas	0901-8100
Oxy-Fuel Set	0901-0092

PINS

For Torches use D1 Pin.
For Regulators use D4 Pin.



D1 Torch D4 Regulator

D1 Pin Oxygen	0901-0008
D1 Pin Fuel Gas	0901-0003
D4 Pin Oxygen	0901-0009
D4 Pin Fuel Gas	0901-0005

GKD/G1 "C" Size, 7/8" UNF.
Fuel Gas & Oxygen with Automatic Gas Shut-Off Quick Disconnect System. For use with 3/8" hose.



GKD/G1 Oxygen	0901-6001
GKD/G1 Fuel Gas	0901-6000
G1 Pin Oxygen	0901-0004
G1 Pin Fuel Gas	0901-0006

Inline Filters

For installation in the oxygen & gas supply lines to protect flash arrestors, regulators and equipment against contaminants. Aids in increasing the service life of downstream fittings and equipment.

Requires complete disconnection from pipe to change cartridges. One replacement cartridge required per filter.

GENERAL DESIGN

- Brass Body
- Exchangeable Sintered Brass Cartridges
- 80 Micron Filtering
- 580 PSI Max Working Pressure
(withstands up to 600 PSI)

CONNECTIONS

- 1" NPTF / 1" NPTF Standard
- Custom connections available

OXYGEN MODEL USABLE GASES

- Oxygen
- Inert

FUEL MODEL USABLE GASES

- Acetylene
- Natural Gas
- Propane
- Alternate Fuel Gases

OXYGEN FILTER

Complete Assembly P/N: 0901-6515
Replacement Cartridge P/N: 0901-6335

FUEL GAS FILTER

Complete Assembly P/N: 0901-6500
Replacement Cartridge P/N: 0901-6330



REPLACEMENT CARTRIDGES FOR DISCONTINUED FILTER MODELS

Replacement Oxygen Cartridge P/N: **0901-5335**
Replacement Fuel Gas Cartridge P/N: **0901-5330**

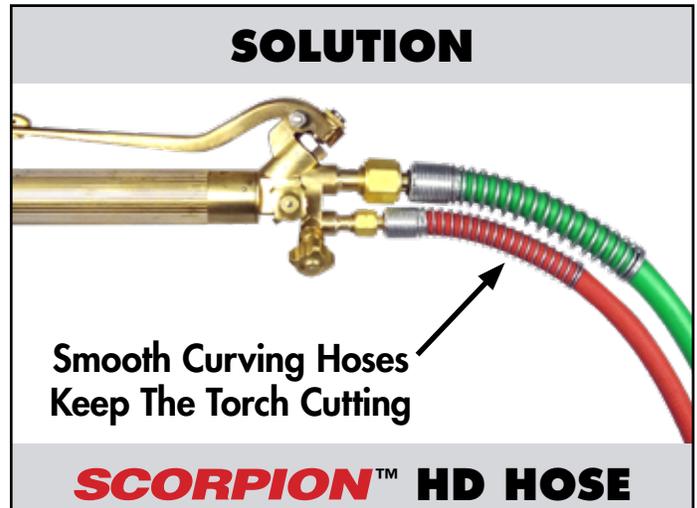
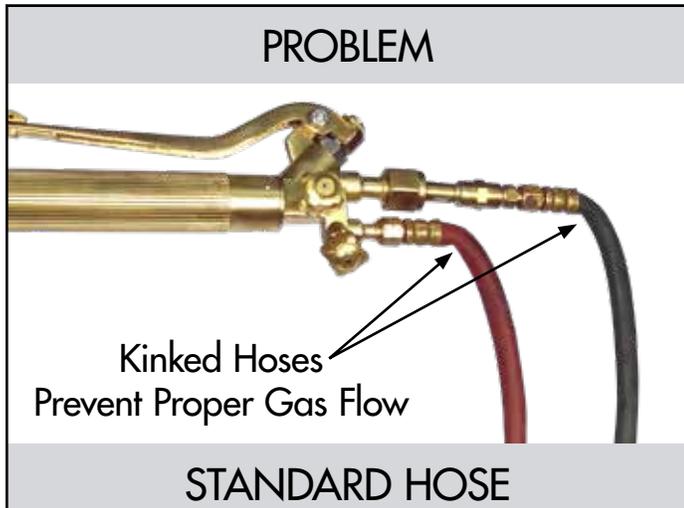
"T" style filter assemblies with removable canisters are discontinued. Replacement cartridges may still be purchased.



Discontinued Models

Heavy Duty T-Grade Hose

STOP STARVING YOUR TORCHES!



Cutting failures occur when hoses are kinked and gases can not flow properly. Extensive kinking shortens hose life by creating cracks and dangerous gas leaks.

Ensure full flow of gases and improve cutting performance with a longer lasting, heavy duty hose. **SCORPION™ HEAVY DUTY HOSES** are tough and won't let you down.

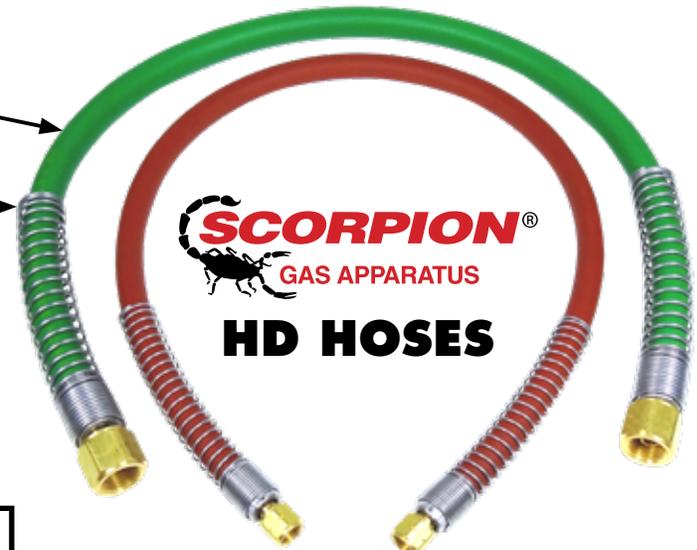


Outer sleeve available for protection against high temperatures and extreme conditions.

Ask your sales rep!

Heavy Duty Mill Grade Material
Hoses Last 2-3x Longer

Strain Relief Devices
Prevent Kinking & Cracking



Readily available lengths: 25', 50', 100'
Readily available sizes: 1/4" twin, 3/8" twin, 3/8" single oxygen or fuel, 1/2" single oxygen or fuel

Ask Us About Custom Lengths & Bulk Hose

SCORPION™ HD HOSE

Stock Sizes (custom available)

				NO OUTER SLEEVE	 WITH OUTER SLEEVE
LENGTH	GAS TYPE	CONNECTION	DISC. CODE	PART NO.	PART NO.
TWIN HOSE T-GRADE 1/4"					
25 ft.	Oxy/Fuel	CGA B RH/LH	F	71801425	71801425-S
50 ft.	Oxy/Fuel	CGA B RH/LH	F	71801450	71801450-S
100 ft.	Oxy/Fuel	CGA B RH/LH	F	71814100	71814100-S
SINGLE HOSE T-GRADE 3/8"					
25 ft.	Oxygen	CGA B RH	F	71838251	71838251-S
25 ft.	Fuel	CGA B LH	F	71838250	71838250-S
50 ft.	Oxygen	CGA B RH	F	71838501	71838501-S
50 ft.	Fuel	CGA B LH	F	71838500	71838500-S
100 ft.	Oxygen	CGA B RH	F	71838100	71838100-S
100 ft.	Fuel	CGA B LH	F	71800384	71800384-S
TWIN HOSE T-GRADE 3/8"					
25 ft.	Oxy/Fuel	CGA B RH/LH	F	71800027	71800027-S
50 ft.	Oxy/Fuel	CGA B RH/LH	F	71800032	71800032-S
100 ft.	Oxy/Fuel	CGA B RH/LH	F	71800385	71800385-S
SINGLE HOSE T-GRADE 1/2"					
25 ft.	Oxygen	CGA C RH	F	71800028	71800028-S
50 ft.	Oxygen	CGA C RH	F	71812500	71812500-S
100 ft.	Oxygen	CGA C RH	F	71800121	71800121-S

**All hoses above include strain relief devices.*

Custom hose sizes/lengths available.

Outer sleeves are resistant to high temperatures, fire, abrasion and chemicals.

Please call Flame Tech for availability and pricing of custom hoses.

Machine Cutting Torches



MCT200 SERIES

FT MODEL #	BARREL LENGTH	QTY HOSES	GEAR RACK LENGTH	CUTTING RANGE	DESCRIPTION
MCT200-5A	5-1/2"	2	n/a	8"	Acetylene Only
MCT200-5F	5-1/2"	2	n/a	8"	Alternative Fuel Gas
MCT200-5AR	5-1/2"	2	4-1/2"	8"	Acetylene Only
MCT200-5FR	5-1/2"	2	4-1/2"	8"	Alternative Fuel Gas
MCT200-10A	10"	2	n/a	8"	Acetylene Only
MCT200-10F	10"	2	n/a	8"	Alternative Fuel Gas
MCT200-10AR	10"	2	7"	8"	Acetylene Only
MCT200-10FR	10"	2	7"	8"	Alternative Fuel Gas



MCT300 SERIES

FT MODEL #	BARREL LENGTH	QTY HOSES	GEAR RACK LENGTH	CUTTING RANGE	DESCRIPTION
MCT300-10A	10"	3	n/a	12"	Acetylene Only
MCT300-10F	10"	3	n/a	12"	Alternative Fuel Gas
MCT300-10AR	10"	3	7"	12"	Acetylene Only
MCT300-10FR	10"	3	7"	12"	Alternative Fuel Gas
MCT300-18A	18"	3	n/a	12"	Acetylene Only
MCT300-18F	18"	3	n/a	12"	Alternative Fuel Gas
MCT300-18AR	18"	3	15"	12"	Acetylene Only
MCT300-18FR	18"	3	15"	12"	Alternative Fuel Gas

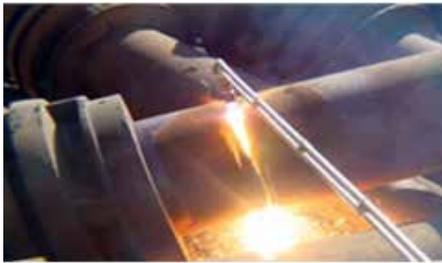
Heavy Duty Hand Cutting Torches

Designed for rugged environments and customized the way you want it. Hand cutting torches suggested for scrap yards, mills and foundries.



6500 SERIES CUTS UP TO 8" OF STEEL

7500 SERIES CUTS UP TO 14" OF STEEL



8600 SERIES CUTS UP TO 36" OF STEEL

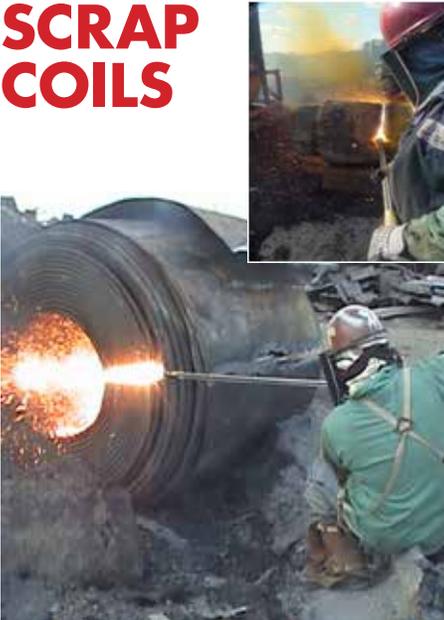


9600 SERIES CUTS UP TO 48" OF STEEL



LADLE SKULLS

SCRAP COILS



HC48L SERIES CUTS UP TO 48" OF STEEL

SAFER, LIGHTER & STRONGER



See our complete selection of acetylene & alternate fuel gas tips. Ask about our famous Scorpion® Tips!

2621-90 TORCH CUTS UP TO 8", FOR USE WITH ANY GAS

COMPATIBLE WITH VICTOR® SERIES 1 CUTTING TIPS



Flame Tech's Scorpion 2621-90 torch is designed for heavy duty hand held applications for the fabshop, foundry or scrap yard environment where up to 8" cutting is required. Universal mixer provides optimal performance with any fuel gas.

BUILT-IN FLASHBACK ARRESTORS & CHECK VALVES

- Replace with Flame Tech flashback arrestor/check valve cartridges *only*.
- **DO NOT** use other brand cartridges, as they may not seal correctly and cause gas leaks.

SOLID BRASS FORGED HEAD

- Forged brass head for long life
- Maximum service with minimum maintenance

UNIVERSAL MIXER

- Provides optimal performance with any fuel gas

OEM COMPATIBILITY

- Compatible with Victor® Series 1 cutting tips

HEAVY DUTY, STAINLESS TUBES

Do **NOT** use this torch without the built-in flashback arrestor cartridges!



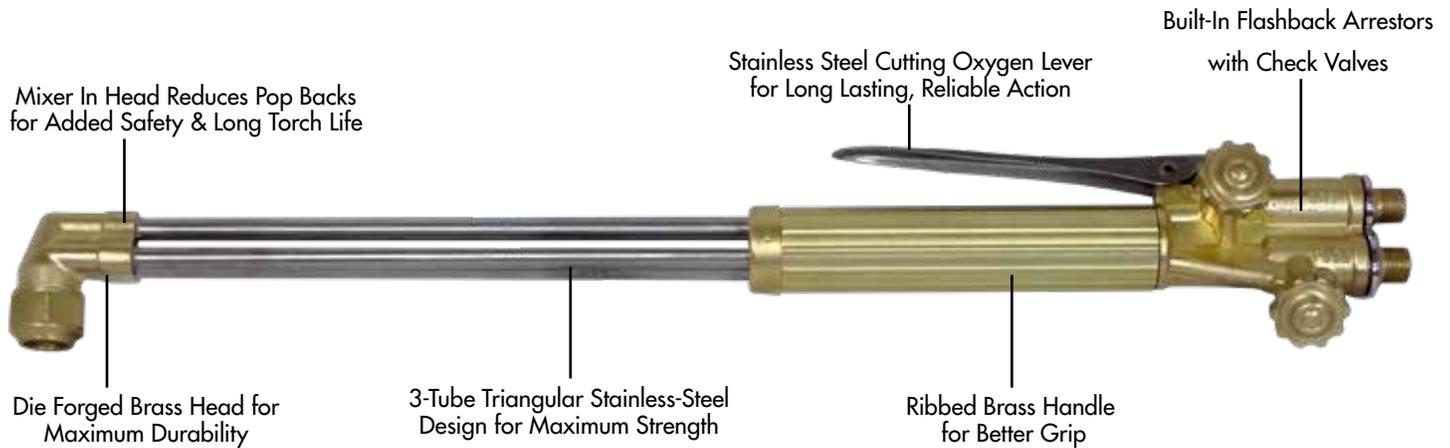
Use only Flame Tech branded flashback arrestor cartridges!



Flashback Arrestor/Check Valves Cartridges
Fuel: 77100010, Oxygen: 77100020

921-90 TORCH CUTS UP TO 5", FOR USE WITH ANY GAS

COMPATIBLE WITH VICTOR® SERIES 1 CUTTING TIPS



Flame Tech's Scorpion 921-90 torch is designed for heavy duty hand held applications for the fabshop, foundry or scrap yard environment where up to 5" cutting is required. Universal mixer provides optimal performance with any fuel gas.

BUILT-IN FLASHBACK ARRESTORS & CHECK VALVES

- Replace with Flame Tech flashback arrestor/check valve cartridges *only*.
- **DO NOT** use other brand cartridges, as they may not seal correctly and cause gas leaks.

SOLID BRASS FORGED HEAD

- Forged brass head for long life
- Maximum service with minimum maintenance

UNIVERSAL MIXER

- Provides optimal performance with any fuel gas

OEM COMPATIBILITY

- Compatible with Victor® Series 1 cutting tips

HEAVY DUTY, STAINLESS TUBES

Do **NOT** use this torch without the built-in flashback arrestor cartridges!



Use only Flame Tech branded flashback arrestor cartridges!



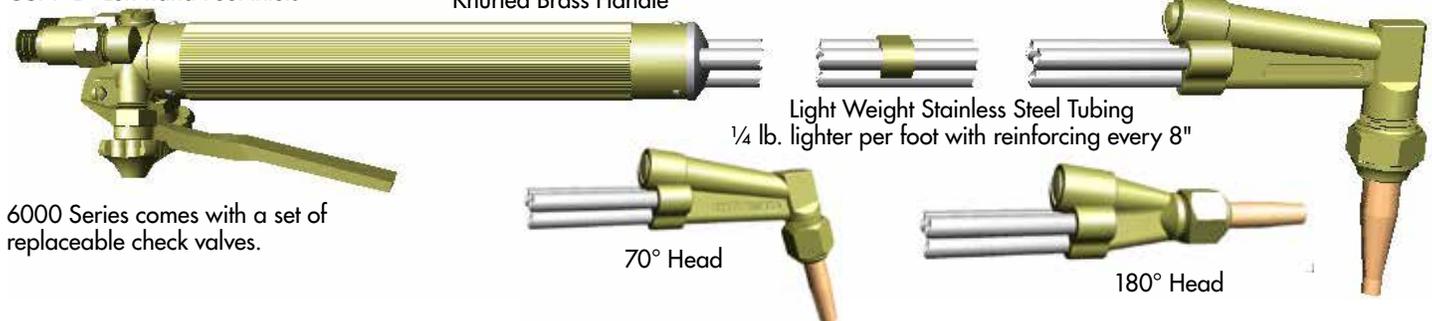
Flashback Arrestor/Check Valves Cartridges
Fuel: 77100010, Oxygen: 77100020

6000 SERIES—CUTS UP TO 8", GAS TYPE IS MODEL DEPENDENT (SEE BELOW)

CGA "B" Oxygen &
CGA "B" Left-hand Fuel Inlets

Knurled Brass Handle

Solid Bronze Forged Head



6000 Series comes with a set of replaceable check valves.

SOLID BRONZE FORGED HEAD

- Long life, resists distortion from abuse
- Maximum service with minimum maintenance

INJECTOR/MIXER

- Mixer in head to reduce burn back in tubes
- Safer than tube mixing designs

EXTERNAL CHECK VALVES

- Easily replaced on the job & prevents reverse flow.
- Flame Tech® recommends flash arrestors style GG/DGN
See check valves & flash arrestors section in this catalog.

LIGHT WEIGHT, STAINLESS TUBES

- Maximum design strength—1/4 lb. per foot lighter

MODELS & SIZES

Flame Tech's 6000 series torches are designed for heavy duty hand held applications for the steel mill, foundry or scrap yard environment where up to 8" cutting is required. These torches come in 21, 27, 36, 48, 72, 96, & 120 inch lengths. Custom lengths are also available upon request. See our 7000, 8000 and 9000 series for 14", 36" & 48" cutting capabilities. These torches have built-in mixers, and as such must be ordered according to the gas type to be used. Different gas usage requires a different torch. See "Part Numbering Example."

ORDERING & PART NUMBERS

Flame Tech® uses an identification system that consists of numbers and letters to identify the manufacture model, size, gas, and style head on our torches. Below are examples for our Heavy Duty Hand Torches. See our price list for complete offering.

OEM COMPATIBILITY

- 6200 Series—Compatible with Harris® Seat
- 6300 Series—Compatible with Victor® Seat
- 6400 Series—Compatible with Oxweld® Seat



PART NUMBERING EXAMPLE

- 6321-A90 = "63" indicates the series of torch you are ordering (Victor® compatible torch)
- 6321-A90 = "21" indicates the length of torch you are ordering (21" long)
- 6321-A90 = "A" indicates Acetylene gas
"F" indicates alternate Fuel gases only (not for acetylene) for maximum performance
- 6321-A90 = "90" indicates the degree of the head (70°, 90°, or 180°* available)

*Flame Tech does not offer 180° heads for use with with acetylene.

» SEE PAGE 45 FOR SCRAPER TIP INFORMATION

6500 SERIES—CUTS UP TO 8", USES ACETYLENE OR ALT. FUEL GASES

6500 Series comes with a set of replaceable check valves.



CGA "B" Oxygen &
CGA "B" Left-hand Fuel Inlets

FEATURES

- Solid Bronze Head
- Heavy Duty Tip-Mixing Torch
- Three Stainless Tubes in Triangular Format
- Light Weight Multi-Tasking Torch

BENEFITS

- Safety First – Reduced Flashback
- Maximum Strength, Greater Rigidity
- Low Maintenance, Longer Lasting
- Ease of Operation

CAPABILITIES

Flame Tech's 6500 Hand Cutting Torch is a heavy duty torch designed for rugged environments. This torch features a safe, tip-mix design. The 6500 series torch uses Flame Tech's "A-Scrapper" or Airco® compatible cutting tips, and is ideal for heavy cutting in scrap yards and steel mill operations. This heavy duty torch when using these tips can hand cut up to 8" of steel.

- Can be used with any Fuel Gas
- Single lever actuated torch control
- Uses common CGA "B" size oxygen supply and LH CGA "B" size fuel supply to minimize the hose and regulator requirements.

PART NUMBERING EXAMPLE

- 6548-70 = "65" indicates the torch series you are ordering
- 6548-70 = "48" indicates the length of the torch you are ordering (48" long)
- 6548-70 = "70" indicates the degree of the head (70°, 90°, or 180°)

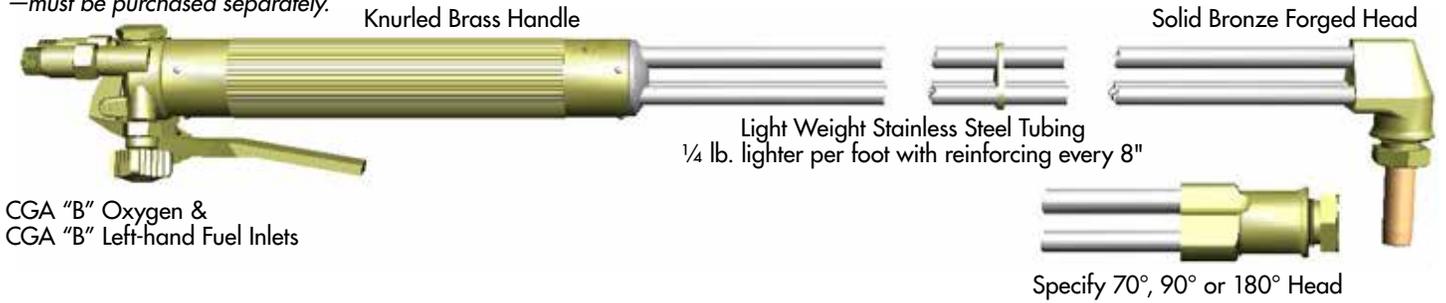
Standard lengths are 21, 27, 36, 48, 60, 72, 96 & 120 inches. Custom lengths available. 70°, 90° or 180° available.

» **SEE PAGE 45 FOR SCRAPER TIP INFORMATION**



7500 SERIES—CUTS UP TO 14", USES ACETYLENE OR ALT. FUEL GASES

Check valves are recommended
—must be purchased separately.



FEATURES

- Solid Bronze Head
- Heavy Duty Nozzle Mixing Torch
- Three Stainless Tubes in Triangular Format
- Light Weight Multi-Tasking Torch

BENEFITS

- Safety First – Reduced Flashback
- Maximum Strength, Greater Rigidity
- Low Maintenance, Longer Lasting
- Ease of Operation

CAPABILITIES

Flame Tech’s 7500 Hand Cutting Torch is a heavy duty torch designed for rugged environments. This torch features a safe, tip-mix design. The 7500 series torch uses Flame Tech’s “A-Scrapper” or Airco® compatible cutting tips, and is ideal for heavy cutting in scrap yards and steel mill operations. This heavy duty torch when using these tips can hand cut up to 14" of steel.

- Can be used with any Fuel Gas
- Single lever actuated torch control
- Uses common CGA “B” size oxygen supply and LH CGA “B” size fuel supply to minimize the hose and regulator requirements

PART NUMBERING EXAMPLE

- 7548-70 = “75” indicates the torch series you are ordering
- 7548-70 = “48” indicates the length of the torch you are ordering (48" long)
- 7548-70 = “70” indicates the degree of the head (70°, 90° or 180°)

Standard lengths are 21, 27, 36, 48, 60, 72, 96 & 120 inches. Custom lengths available. 70°, 90° or 180° available.

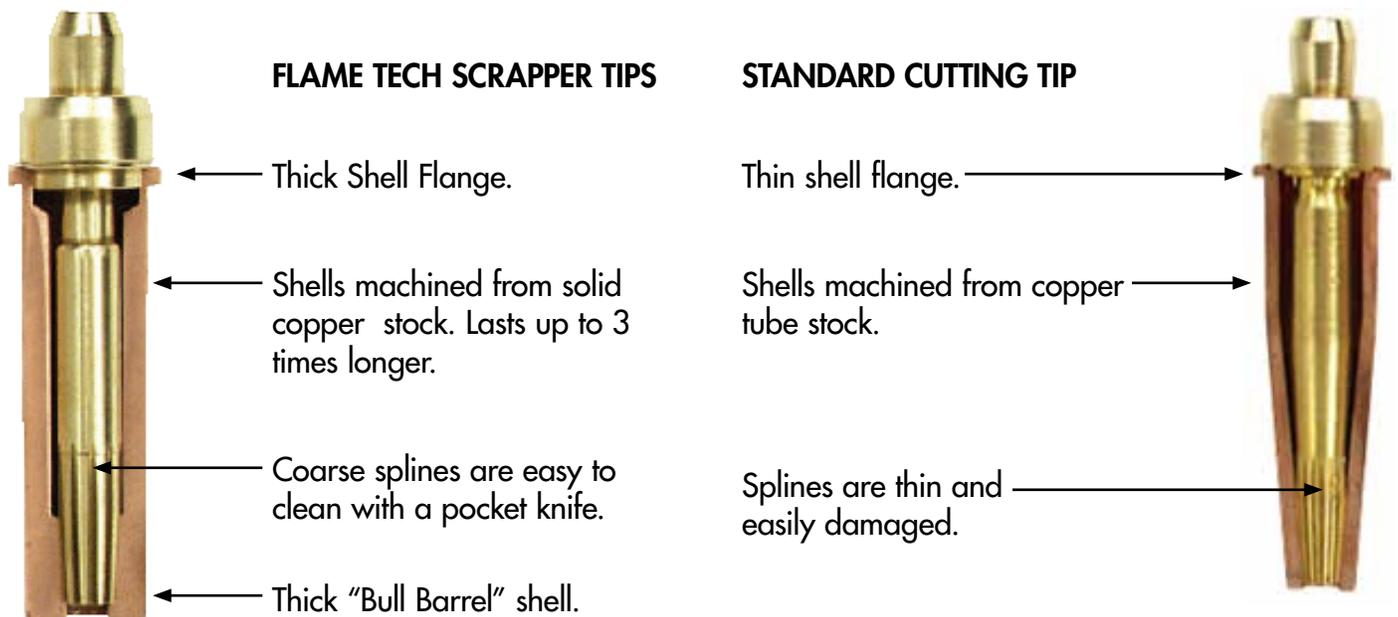
» SEE PAGE 45 FOR SCRAPER TIP INFORMATION



FLAME TECH® SCRAPPER TIPS—2621-90, 6000, 6500 & 7500 SERIES TORCHES

SEE THE DIFFERENCE YOURSELF WITH FLAME TECH'S FAMOUS "SCRAPPER" CUTTING TIPS

- Larger preheats reduce start time and help to "maintain the cut."
- Coarse "V" internal splines do not clog easily and can be cleaned with a pocket knife.
- Ideal for working on rusty, scaly, painted surfaces.
- Compatible with standard OEM torches.



METAL THICKNESS (INCHES)	TIP SIZE	DRILL SIZE	CUTTING OXYGEN		FUEL GAS		SPEED IPM	KERF WIDTH
			PSI	SCFH	PSI	SCFH		
2	2	52	40-50	150-200	6-12	12-65	10-14	.10
2½	2½	50	40-50	150-200	6-12	12-65	9-13	.105
3	3	48	40-50	150-200	6-12	12-65	8-11	.11
4	4	44	40-50	210-250	6-12	12-65	7-10	.13
6	5	39	45-55	300-360	6-12	12-65	5-8	.15
8	6	31	55-65	450-500	6-12	12-65	4-6	.19
9	7	28	55-65	450-500	6-12	22-110	3-5	.22
10	8	25	60-70	750-850	10-18	22-110	3-4	.24
12	10	13	45-60	1000-1200	10-18	22-110	2-3	.34
14	12	5	40-55	1150-1350	10-18	22-110	1-2	.40

8600 SERIES—CUTS UP TO 36", USES BI-METAL & TRI-METAL TIP SERIES

Check valves are recommended
—must be purchased separately.



CGA "C" Oxygen &
CGA "B" Left-hand Fuel Inlets

FEATURES

- Solid Bronze Head
- Heavy Duty Nozzle Mixing Torch
- Three Stainless Tubes in Triangular Format
- Uses Flame Tech® Designed BI-METAL or TRI-METAL 80 Series Tip-Mixing Nozzles
- Light Weight Multi-Tasking Torch

BENEFITS

- Safety First – Reduced Flashback
- Maximum Strength, Greater Rigidity
- Low Maintenance, Longer Lasting
- Ease of Operation

CAPABILITIES

Flame Tech’s 8600 Hand Cutting Torch is a heavy duty torch designed for rugged environments. This torch features a safe, tip-mix design. The 8600 series torch uses Flame Tech’s proprietary BI-METAL or TRI-METAL cutting nozzles, and is ideal for heavy cutting in scrap yards and steel mill operations. This heavy duty torch, when using the BI-METAL or TRI-METAL 80 series nozzles, can hand cut up to 36" of steel.

- Single lever actuated torch control.
- Uses CGA "C" size oxygen supply and LH CGA "B" size fuel supply to minimize the hose and regulator requirements.
- For alternative fuel only – NOT FOR ACETYLENE.

PART NUMBERING EXAMPLE

- 8648-70 = "86" indicates the torch series you are ordering
- 8648-70 = "48" indicates the length of the torch you are ordering (48" long)
- 8648-70 = "70" indicates the degree of the head (70°, 90° or 180°)

Standard lengths are 36, 48, 60, 72, 96 & 120 inches. Custom lengths available. 70°, 90° or 180° available.

» SEE PAGE 47 FOR 80 SERIES BI-METAL & TRI-METAL TIP INFORMATION



80 SERIES BI-METAL & TRI-METAL TIP-MIX CUTTING NOZZLES



HOSE & REGULATOR REQUIREMENTS

When cutting over 20", use 1/2" ID hose.

Oxygen supply and oxygen regulator must be capable of flows mentioned on cutting tip chart shown below.



← Brass seat for longer life and better structural integrity. Brass increases quality over copper in the drilling of the seat mixer.

← Copper barrel for better transference and dissipation of heat away from the cutting zone.

← Stainless wear ring for longer life.

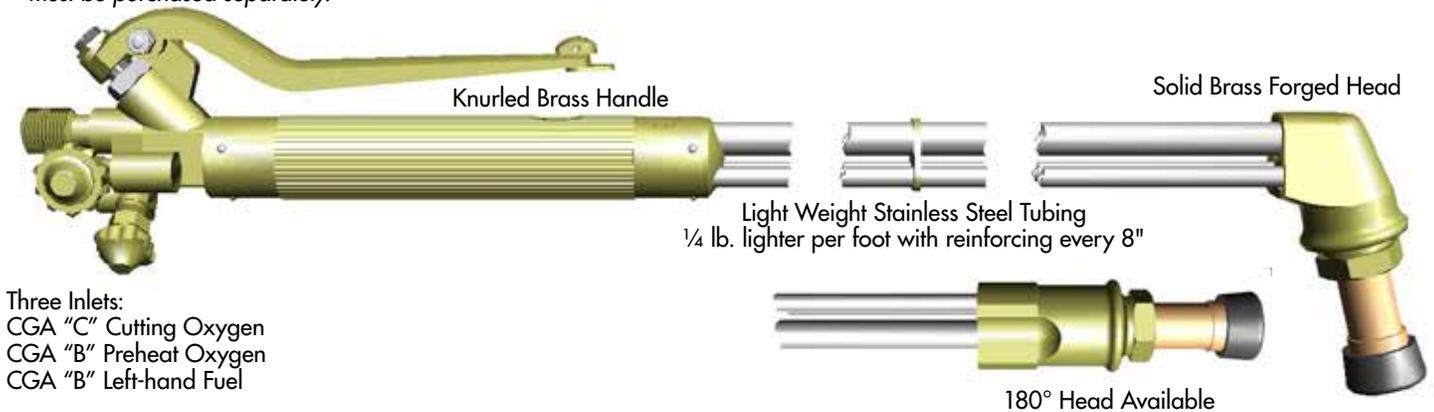


CAUTION
 ALWAYS USE
FLASHBACK ARRESTORS
 (purchased separately)

80 SERIES NOZZLES				GAS PRESSURE (PSI)		GAS CONSUMPTION (CFH)	
SIZE	BI-METAL P/N	TRI-METAL P/N	METAL THICKNESS	OXYGEN	FUEL GAS	OXYGEN	FUEL GAS
12	BM80-12	TM80-12	10-12	60-100	5-15	750-1650	80-120
16	BM80-16	TM80-16	12-16	60-100	5-15	1000-1950	80-120
20	BM80-20	TM80-20	16-20	60-100	5-15	1600-2500	100-160
24	BM80-24	TM80-24	20-24	60-100	5-15	1800-3000	100-160
36	BM80-36	TM80-36	24-36	60-100	5-15	2100-3600	100-160

9600 SERIES—CUTS UP TO 48", USES BI-METAL & TRI-METAL TIP SERIES

Check valves are recommended
—must be purchased separately.



FEATURES

- Solid Brass Head
- Heavy Duty Nozzle Mixing Torch
- Three Stainless Tubes in Triangular Format
- Uses Flame Tech® Designed BI-METAL or TRI-METAL 90 Series Tip-Mixing Nozzles
- Light Weight Multi-Tasking Torch

BENEFITS

- Safety First – Reduced Flashback
- Maximum Strength, Greater Rigidity
- Low Maintenance, Longer Lasting
- Ease of Operation

CAPABILITIES

Flame Tech’s 9600 Hand Cutting Torch is a heavy duty torch designed for rugged steel mill environments. This heavy duty torch features a safe, tip-mix design. The 9600 series torch uses the Flame Tech’s BI-METAL or TRI-METAL nozzles can hand cut up to 48" of steel.

- Three hose input into tail body.
- Uses common CGA "C" cutting oxygen supply , CGA "B" preheat oxygen, LH CGA "B" fuel inlets.
- Single lever actuated torch control.
- For alternative fuel only – NOT FOR ACETYLENE

PART NUMBERING EXAMPLE

- 9648-70 = 96 indicates the torch series you are ordering
- 9648-70 = 48 indicates the length of the torch you are ordering (48" long)
- 9648-70 = 70 indicates the degree of the head (70° or 180°)

Standard lengths are 36, 48, 60, 72, 96 & 120 inches. Custom lengths available. 70° and 180° only.

» SEE PAGE 49 FOR 90 SERIES BI-METAL & TRI-METAL TIP INFORMATION



90 SERIES BI-METAL & TRI-METAL TIP-MIX CUTTING NOZZLES



HOSE & REGULATOR REQUIREMENTS

When cutting over 20", use 1/2" ID hose.

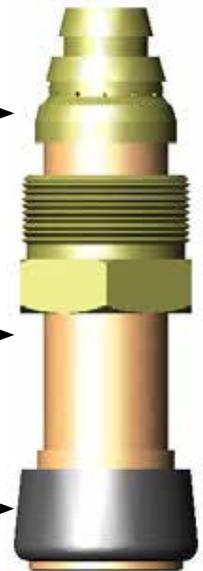
Oxygen supply and oxygen regulator must be capable of flows mentioned on cutting tip chart shown below.



← Brass seat for longer life and better structural integrity. Brass increases quality over copper in the drilling of the seat mixer.

← Copper barrel for better transference and dissipation of heat away from the cutting zone.

← Stainless wear ring for longer life.

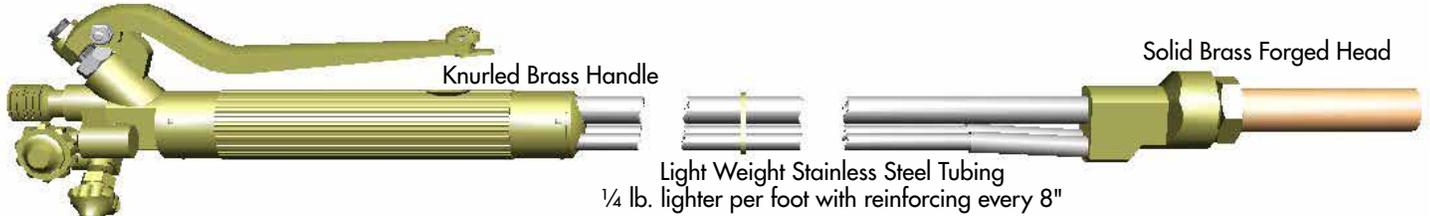


CAUTION
 ALWAYS USE
FLASHBACK ARRESTORS
 (purchased separately)

90 SERIES NOZZLES				GAS PRESSURE (PSI)			GAS CONSUMPTION (CFH)	
SIZE	BI-METAL P/N	TRI-METAL P/N	METAL THICKNESS	OXYGEN	PRE-HEAT OXYGEN	FUEL GAS	OXYGEN	FUEL GAS
24	BM90-24	TM90-24	18-24	25-45	25-50	13-25	2200-3400	80-160
30	BM90-30	TM90-30	24-30	20-40	25-50	13-25	2200-3800	80-160
36	BM90-36	TM90-36	30-36	20-40	25-50	13-25	2300-4400	80-160
48	BM90-48	TM90-48	36-48	15-35	25-50	13-25	2400-5000	80-160

HC48 HIGH CAPACITY SCRAPER TORCH—CUTS UP TO 48"

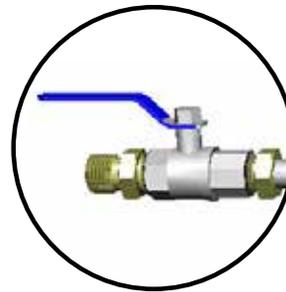
Check valves are recommended
—must be purchased separately.



Three Inlets:
CGA "C" Cutting Oxygen
CGA "B" Preheat Oxygen
CGA "B" Left-hand Fuel

FEATURES

- Three Stainless Tubes in Triangular Format
- Separate cutting & preheat oxygen—decreases preheat time and increases cutting speed
- Suitable replacement for Victor® HC 1500
- Cuts up to 48 inches of steel with 2-285 series cutting nozzles (alternate fuel gases)
- *Not for use with acetylene!*



AVAILABLE WITH BALL VALVE
For ball valve style, remove "L" from part number (see below.)

HIGH CAPACITY HAND CUTTING TORCH FOR VICTOR® COMPATIBLE 2-285N NOZZLES

Flame Tech's HC series hand cutting torch is designed for rugged, heavy duty applications in foundries, scrap yards and steel mills. It is ideal for emergency billet cutting, removes skulls and risers or any heavy hand cutting requirements. Off-set 180° head allows the operator to widen the cut kerf by rotating the head and deepening the cut.

ORDERING INFORMATION

- HC48L-60-180 = 60" long, 180° Head with Lever
- HC48-60-180 = 60" long, 180° Head with Ball Valve

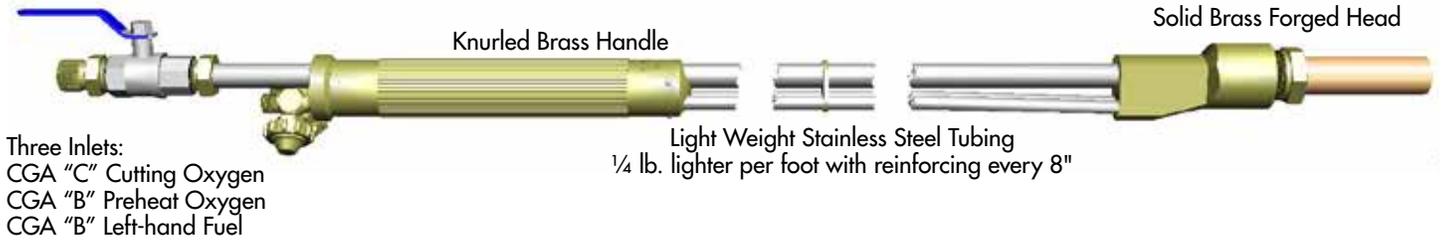
Standard length is 60 inches. Custom lengths available. 180° only.

» **SEE PAGE 52 FOR HIGH CAPACITY CUTTING NOZZLES**



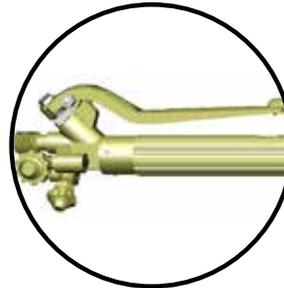
HC60 HIGH CAPACITY SCRAPER TORCH—CUTS UP TO 48"

Check valves are recommended
—must be purchased separately.



FEATURES

- Three Stainless Tubes in Triangular Format
- Separate cutting & preheat oxygen—decreases preheat time and increases cutting speed
- Suitable replacement for Oxweld® C-63
- Cuts up to 48 inches of steel with Oxweld® C-63 1808 style cutting nozzles (propane/NG)
- *Not for use with acetylene!*



AVAILABLE WITH LEVER
For lever style, add "L" to part number (see below.)

HIGH CAPACITY HAND CUTTING TORCH FOR ESAB® AND VICTOR® COMPATIBLE 1808 NOZZLES

Flame Tech's HC series hand cutting torch is designed for rugged, heavy duty applications in foundries, scrap yards and steel mills. It is ideal for emergency billet cutting, removes skulls and risers or any heavy hand cutting requirements. Off-set 180° head allows the operator to widen the cut kerf by rotating the head and deepening the cut.

ORDERING INFORMATION

- HC60L-60-180 = 60" long, 180° Head with Lever
- HC60-60-180 = 60" long, 180° Head with Ball Valve

Standard length is 60 inches. Custom lengths available. 180° only.

» **SEE PAGE 52 FOR HIGH CAPACITY CUTTING NOZZLES**



HIGH CAPACITY CUTTING NOZZLES—HC SERIES TORCHES

2-285N CUTTING NOZZLE

2-285N series nozzles are made from two pieces, with a solid copper shell & a brass internal, designed for fast starts and lower gas consumption. For use with alternate fuel gases only. *Not for use with acetylene!*



NOZZLE			GAS PRESSURE (PSI)			GAS CONSUMPTION (CFH)		
CUTTING OXYGEN DIAMETER	P/N	METAL THICKNESS	CUTTING OXYGEN	FUEL GAS	PRE-HEAT OXYGEN	CUTTING OXYGEN	FUEL GAS	PRE-HEAT OXYGEN
.250	.250-2-285N	14"-20"	25-45	15-25	25-50	1500-2400	60-120	250-400
.312	.312-2-285N	20"-26"	25-45	15-25	25-50	2300-3500	60-120	250-401
.375	.375-2-285N	26"-34"	25-45	15-25	25-50	2300-3900	60-121	250-402
.437	.437-2-285N	34"-48"	25-45	15-25	25-50	2400-4500	60-122	250-403

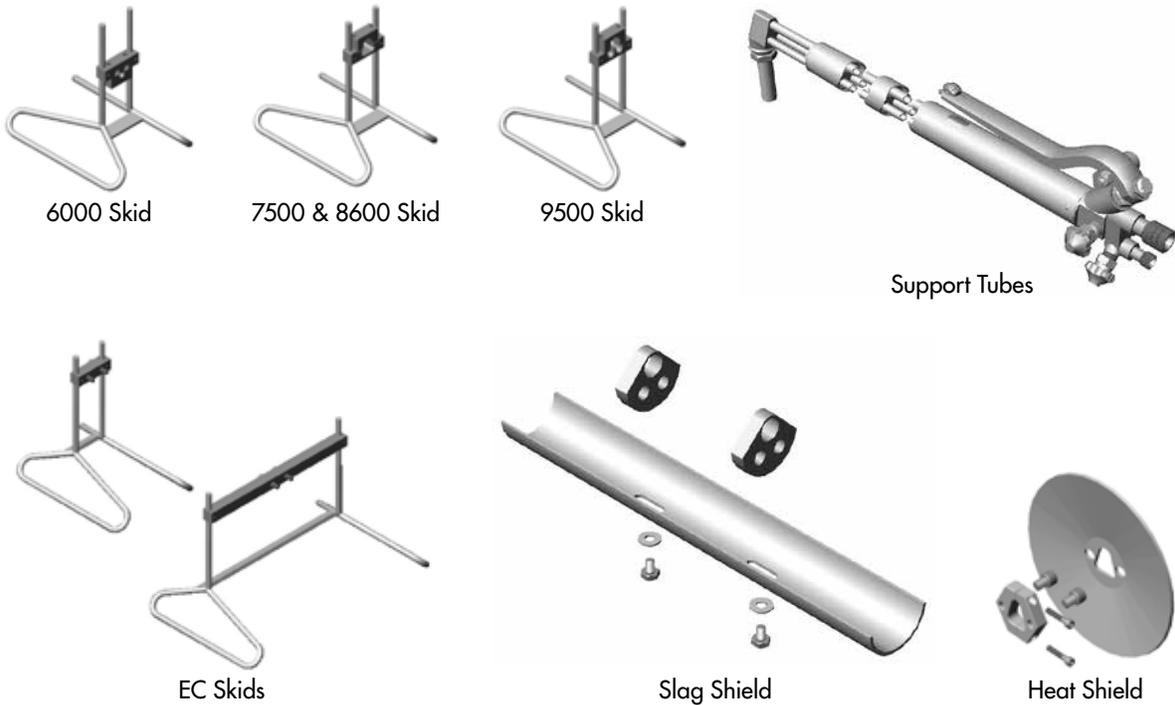
1808 CUTTING NOZZLE

1808 series nozzles are single piece solid copper nozzles. The single piece solid copper design allows for rapid heat transfer and longer rugged life. For use with Propane or Natural Gas only. *Not for use with acetylene!*



NOZZLE			GAS PRESSURE (PSI)		GAS CONSUMPTION (CFH)		CLEANING DRILL SIZE	
SIZE	P/N	METAL THICKNESS	OXYGEN	NATURAL GAS	OXYGEN	NATURAL GAS	PREHEAT	CUTTING
30	1808-30	20"-40"	65	21	5400	330	#50	19/64"
40	1808-40	40"-50"	70	23	7700	360	#49	"X"
50	1808-50	OVER 50"	75	24	9700	375	#47	1/2"

CUTTING TORCH SKID ASSEMBLIES & ACCESSORIES



PART #	DESCRIPTION
84925003	SKID ASSEMBLY FOR 9500 & 9600 SERIES TORCHES
84901011	SKID CLAMP ONLY FOR 9500 & 9600 SERIES TORCHES
84925002	SKID ASSEMBLY FOR 6500, 8600 & 7500 SERIES
84901010	SKID CLAMP ONLY FOR 6500, 8600 & 7500 SERIES TORCHES
84980001	SKID ASSEMBLY FOR 6000 SERIES TORCHES, EXCEPT 6500
84901012	SKID CLAMP ONLY FOR 6000 SERIES TORCHES, EXCEPT 6500
84901005	SKID ONLY FOR 6000, 7500, 8500, 8600, 9500 & 9600 TORCHES
EC-SKID	SKID ASSEMBLY FOR EC SERIES TORCH
84901013	SKID ONLY FOR EC TORCH - WIDE
84901007	CLAMP ONLY FOR EC TORCH - WIDE
EC-L-SKID	SKID ASSEMBLY FOR EC SERIES 34" LONG FOR "I" BEAM BILLETS
84901009	SKID ONLY FOR 34" LONG FOR EC-L TORCH
84901015	CLAMP ONLY FOR EC 34 FOR EC-L TORCH
83900002	SLAG SHIELD
93001129	SUPPORT TUBE
82700005	HEAT SHIELD ASSEMBLY
82700002	HEAT SHIELD CLAMP ONLY FOR 82700005
82700001	HEAT SHIELD ONLY FOR 82700005

Scorpion EZ-CUT

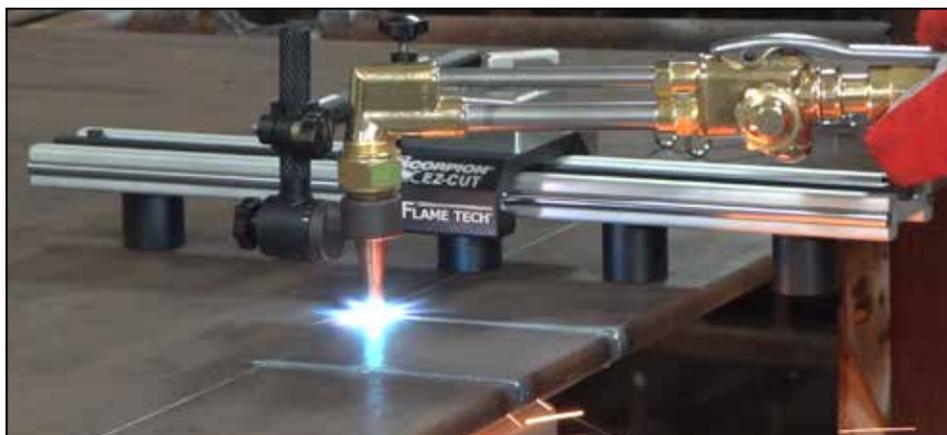
Straight & Clean Torch Cuts. Every Time.



- Consistent push or pull cutting with pre-set mechanized speed controller.
- Reduces grinding and rework.
- Bevel cut up to 60°.
- Strong magnets allow operation on horizontal or vertical surfaces.
- Available in 15"–48" cutting lengths.
- No electricity required.

P/N	DESCRIPTION
FTEZ-15	EZ-CUT Complete Assembly with Case, 15" Cut Length
FTEZ-24T	EZ-CUT Track Section Only, 24" Cut Length
FTEZ-36T	EZ-CUT Track Section Only, 36" Cut Length
FTEZ-48T	EZ-CUT Track Section Only, 48" Cut Length

See the video at <http://www.flametechnologies.com/index.php/products/videos>



Heavy Duty Line & Station Equipment

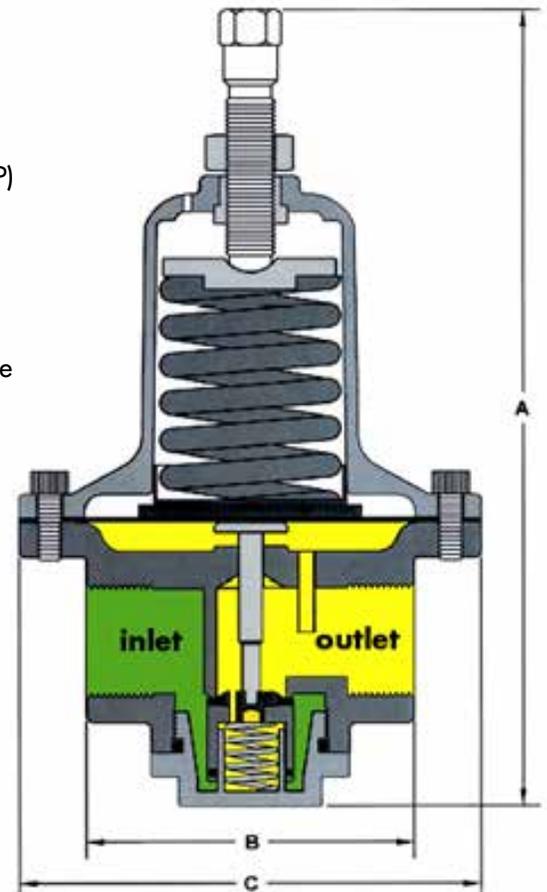
FLAME TECH® LINE REGULATORS (FTLR) SERIES

FTLR regulators provide reliable, precise pressure control in the most demanding applications. Flame Tech's FTLR regulators have a fully balanced design which virtually eliminates delivery pressure fluctuations due to inlet pressure variations. All regulators are 100% factory tested.



MATERIALS

- Body & Spring Chamber: Forged Brass
- Diaphragm: Ethylene Propylene (EP) Rubber Diaphragm
- Adjustment Spring: Color-Coded, Chrome Vanadium
- Valve Spring: 302 Stainless Steel
- Other Valve Parts: Brass
- Seat & O-Rings: Ethylene Propylene (EP) Rubber is standard



FEATURES

Optimized venturi and spring design assures high flow with extremely low droop characteristics.

Solid non-tied diaphragm and all brass construction guarantees leak-free long lasting performance.

Maintains a steady down stream pressure across a range of inlet pressures commonly provided by a cryogenic bulk tank.

Corrosion resistant stainless steel trim.

TECHNICAL DATA

Maximum inlet pressure is 400 PSI.

Effect of inlet pressure variation less than .25 PSI/100 PSI change.

Cleaned per CGA G-4.1 for oxygen service.

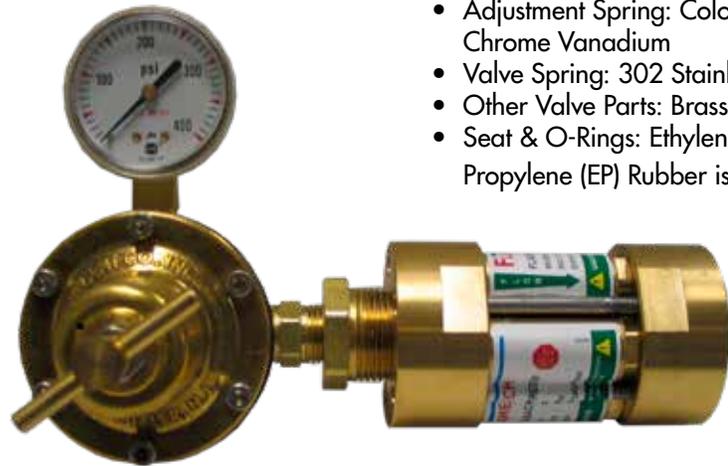
FLAME TECH® STATION REGULATORS (FTSR) SERIES

Flame Tech® Station Regulators (FTSR) series provide reliable, precise pressure control in the most demanding applications. Flame Tech's FTSR regulators have a fully balanced design which virtually eliminates delivery pressure fluctuations due to inlet pressure variations. All regulators are 100% factory tested.

FTSR12-C Heavy Duty Oxygen Station Regulator with CGA "C" Hose Fitting



FTSR12-C Heavy Duty Cutting Oxygen Station Regulator with Flame Tech's High-Flow DEMAX Flashback Arrestor (see safety accessories for DEMAX)



MATERIALS

- Body & Spring Chamber: Forged Brass
- Diaphragm: Ethylene Propylene (EP) Rubber Diaphragm
- Adjustment Spring: Color-Coded, Chrome Vanadium
- Valve Spring: 302 Stainless
- Other Valve Parts: Brass
- Seat & O-Rings: Ethylene Propylene (EP) Rubber is standard

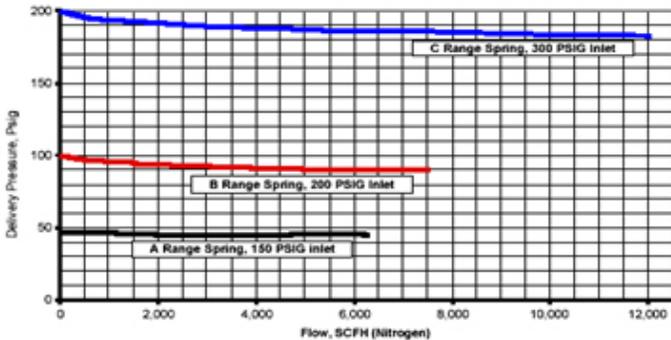
	P/N	DESCRIPTION
Fuel Gas	FTSR12-A	5-55 PSI REGULATOR, 1/2"NPT INLET, LH CGA "B" HOSE FITTING COMPLETE WITH FT5575-GP PRESSURE GAUGE, 1-60 PSI RANGE
Oxygen	FTSR12-B	40-110 PSI REGULATOR, 1/2"NPT INLET, RH CGA "B" HOSE FITTING, COMPLETE WITH FTS1679 PRESSURE GAUGE, 1-200 PSI RANGE
	FTSR12-C	100-200 PSI REGULATOR, 1/2"NPT INLET, RH CGA "C" HOSE FITTING, COMPLETE WITH FT15578-GP PRESSURE GAUGE, 1-400 PSI RANGE

HEAVY DUTY STATION REGULATORS

Flame Tech® Station Regulators (FTSR) series provide reliable, precise pressure control in the most demanding applications. Flame Tech’s FTSR regulators have a fully balanced design which virtually eliminates delivery pressure fluctuations due to inlet pressure variations. All regulators are 100% factory tested.

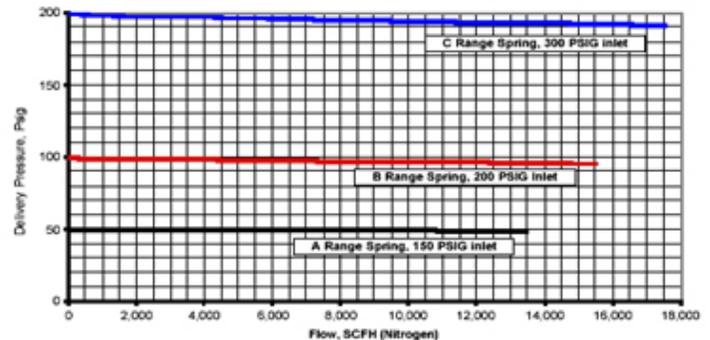
FLOW CURVE

FTLR14 (1/4") & FTLR12 (1/2")



FLOW CURVE

FTLR34 (3/4") & FTLR1 (1")



Dimensional Data

Size	A	B	C	Cv
1/4", 3/8" & 1/2" 2BSPT & 4BSPT	5 - 11/16"	2 - 25/32"	3 - 3/16"	3.6

Cv is stated at maximum inlet pressure and valve full open

Size	A	B	C	Cv
3/4" & 1" 6BSPT & 8BSPT	8 - 7/8"	3 - 11/32"	4 - 11/16"	5.8

ORDERING INFORMATION FTLR SERIES REGULATORS

FLAME TECH	DELIVERY PRESSURE RANGE (PSI)	PRESSURE GAUGE RANGE (PSI)*	GAUGE PART #	INLET & OUTLET (FNPT)
FTLR12A	5-55	1-60	FT5575-GP	1/2"
FTLR12B	40-110	1-200	FTS1679	1/2"
FTLR12C	100-200	1-400	FT15578	1/2"
FTLR34A	5-55	1-60	FT5575-GP	3/4"
FTLR34B	40-110	1-200	FTS1679	3/4"
FTLR34C	100-200	1-400	FT15578	3/4"
FTLR1A	5-55	1-60	FT5575-GP	1"
FTLR1B	40-110	1-200	FTS1679	1"
FTLR1C	100-200	1-400	FT15578	1"

GAUGES

Gauges are sold separately. Order recommended gauge with selected regulator.

- FT5575-GP 0–60 PSI
- FTS1679 0–200 PSI
- FT15578 0–400 PSI

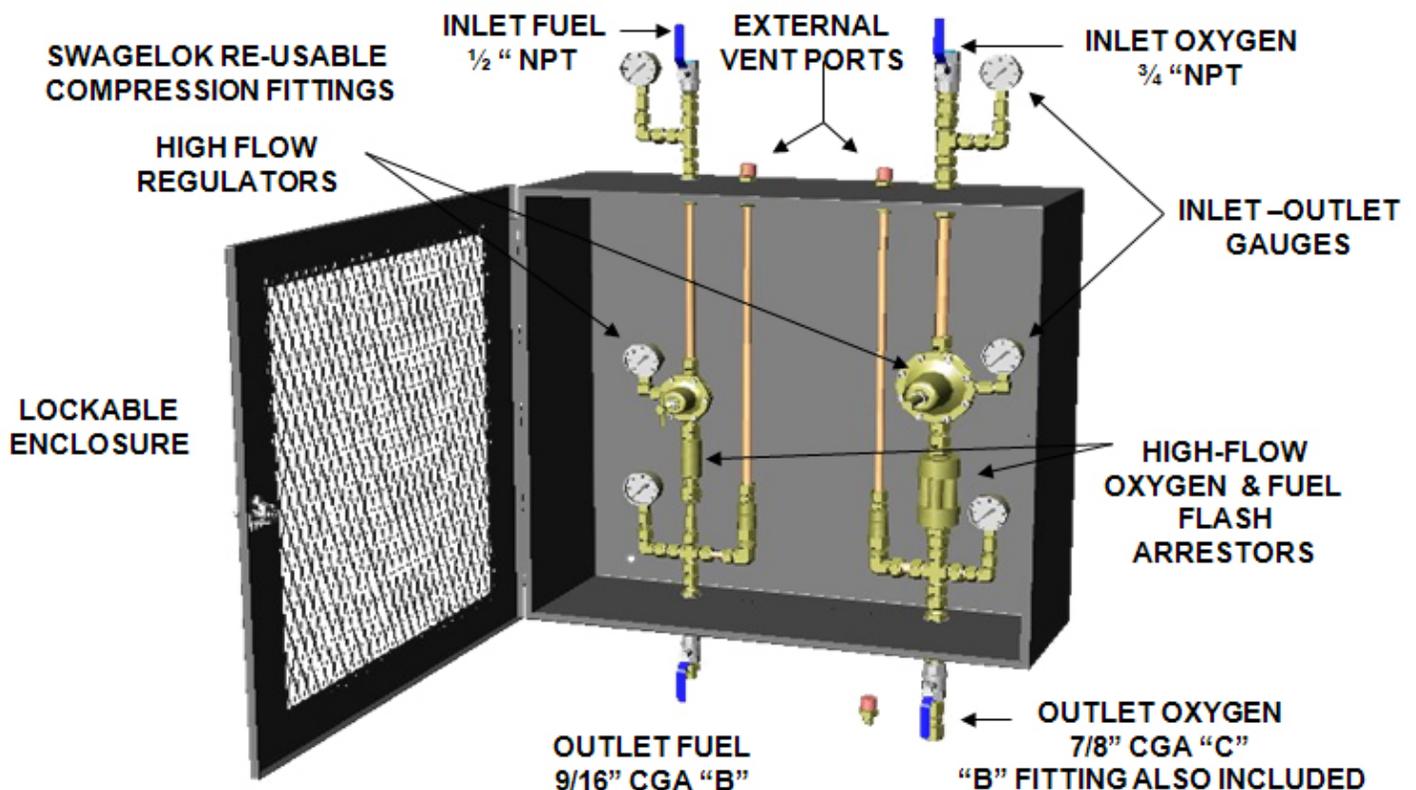


Drop Station Regulator Enclosures

2 HOSE OPERATION (DSE-2)

The DSE-2 contains one high flow preheat/cutting oxygen regulator and one high flow fuel gas regulator. The DSE-2 also contains one DG91N (fuel) and one DEMAX (oxygen) Flash Arrestors as well as shutoff ball valves mounted outside the DSE-2 enclosure. Relief valves with an external vent port are connected to the fuel and oxygen lines. Swagelok re-usable compression fittings are used throughout the system to eliminate Teflon thread tape and to allow quick replacement of failed components. A lockable enclosure with an expanded-metal viewport allows operators to view the pressure gauges while allowing ventilation of the cabinet for safety purposes. Outlet valves come with end caps. The standard connector configuration for the DSE-2 is as follows:

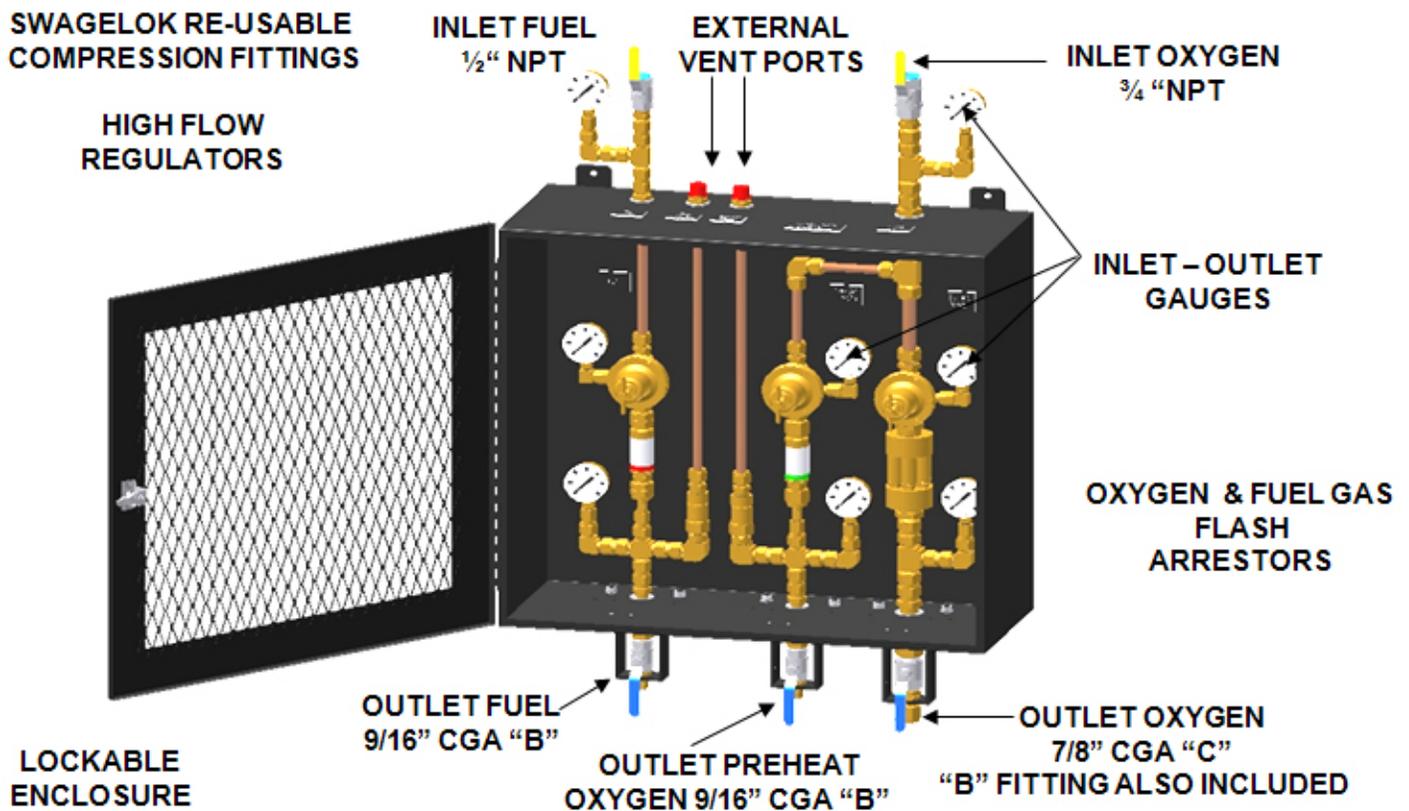
- 3/4" NPT Female oxygen inlet connection
- CGA "B" Male (9/16-18 UNF) oxygen outlet connection
- CGA "C" Male (7/8-14 UNF) adapter fitting is included with the DSE-2 to allow connections to CGA "C" hose fittings.
- 1/2" NPT Female fuel gas inlet connection
- CGA "B" LH Male (9/16-18 LH UNF) fuel gas outlet connection



3 HOSE OPERATION (DSE-3)

The DSE-3 contains one high flow cutting oxygen regulator, one high flow pre-heat oxygen regulator and one high flow fuel gas regulator. The DSE-3 also contains two DG91N Flash Arrestors (one pre-heat oxygen, one fuel) and one each DEMAX Cutting Oxygen Flash Arrestor as well as shutoff ball valves mounted outside the DSE-3 enclosure. Relief valves with external vent ports are connected to the fuel line and pre-heat oxygen lines. Swagelok re-usable compression fittings are used throughout the system to allow quick replacement of failed components. A lockable enclosure with an expanded-metal viewport allows operators to view the pressure gauges while allowing ventilation of the cabinet for safety purposes. Multiple pressure gauges provide readings on supply pressures, regulator pressures, and post-flash arrestor pressures to provide accurate readings throughout the system. The standard connector configuration for the DSE-3 is as follows:

- 3/4" NPT Female oxygen inlet connection
- CGA "C" Male (7/8-14 UNF) cutting oxygen outlet connection
- CGA "B" Male (9/16-18 UNF) pre-heat oxygen outlet connection
- 1/2" NPT Female fuel gas inlet connection
- CGA "B" LH Male (9/16-18 LH UNF) fuel gas outlet connection



INFERNO-X

EXOTHERMIC TORCH ADAPTER



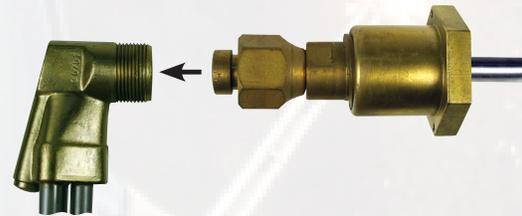
One Torch. Two Applications.

Oxy-Fuel Cutting Torch



1. Remove the cutting tip and tip nut from the oxy-fuel torch.

Exothermic Cutting Torch



2. Insert the Inferno-X adapter into the oxy-fuel torch.

3. Now the oxy-fuel torch becomes an exothermic torch, using the oxy-fuel torch's cutting oxygen.

BENEFITS

Patented Torch Adapter:

Patented adapter allows for existing oxy-fuel torches to be used as an exothermic torch.

Adapter for Most Torches:

Patented adapters are available for H-Style, V-Style, A-Style or S-Style cutting torches.

Cuts through almost anything:

Cut through steel, stainless, iron, brick, concrete, aluminum, and much more.

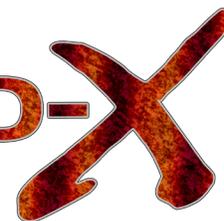
Single O₂ Source—Space Saver:

Using the cutting torch oxygen source eliminates the need for a dedicated oxygen supply, as is required with a conventional exothermic torch.



INFERNO-X

EXOTHERMIC TORCH ADAPTER



Flame Tech's Inferno-X is a patented adapter that allows a standard oxy-fuel cutting torch to be used both as a standard cutting torch using cutting tips *~or~* as an exothermic torch using burning bars.

Inferno-X is a money saver, as it uses existing torches & cutting oxygen tanks. It also saves space, since there is no need to keep additional dedicated torches and oxygen tanks for exothermic cutting applications.

Adapters are available for most major OEM torches and Flame Tech's torches.

DO NOT use battery spark ignition with Inferno-X products. Another torch or tube igniters (sold in boxed quantities) may be used to ignite Inferno-X products.

Inferno-X does not require an additional torch. Flame Tech is able to supply a torch for this product, if you do not already have one. Download our equipment catalog at our web site or contact our customer service department via the toll free numbers listed below for additional details about available torches.

Complete Kits

PN	DESCRIPTION
INF-X-V-KIT	Inferno-X kit to convert V-Style torches
INF-X-A-KIT	Inferno-X kit to convert A-Style torches
INF-X-H-KIT	Inferno-X kit to convert H-Style torches
INF-X-S-KIT	Inferno-X kit to convert S-Style torches

Each of the above kits includes:

1 adapter; 3 collets (3/8", 1/4" & 3/16"); 6 washers for 3/8" & 1/4", 1 washer for 3/16", 1 shield (not shown)

Replacement Parts

PN	DESCRIPTION
78058001	Adapter, V-Style
78058002	Adapter, A-Style
78058003	Adapter, H-Style
78058004	Adapter, S-Style
78058021	Collet, 3/8
78058022	Collet, 1/4
78058023	Collet, 3/16
88058025	Burning Bar Tube Igniter, Box of 6
78058030	Washer, Rubber, 1/4" X 3/8"
78058033	Washer, Rubber, 3/16"
78058041	Inferno-X Adapter Shield
78058051	Buring Bar, 3/16 X 21 3/4" 25 Pieces
78058061	Burning Bar, 1/4" X 21-3/4" 25 Pieces
78058081	Burning Bar, 3/8" X 18" 40 Pieces
78058085	Burning Bar, 3/8" X 36" 20 Pieces
78058091	Burning Bar, 3/8" X 48" 50 Pieces

Carbon Arc Gouging

STORM[™] torch

BY **GOUGE TECH[®]**
a Division of Flame Technologies, Inc.

STORM TORCH (ST4000)

Utilizing superior designs and quality craftsmanship, the Storm Torch[™] is the best choice when choosing an arc gouging torch. Storm Torch[®] works with the normal motions and angles of the wrist and arm to enable easy, comfortable metal removal while arc gouging. This quality tool delivers performance and reliability. Combined with Gouge Tech[®] high performance hollow carbon Lightning Rods[™], the Storm Torch[™] is the optimal performer!



Natural 15° Torch Angle
Greater Operator Comfort

360° Swivel Cable
Less Cable Twist

Positive Grip Handle
Less Strain On Operator

Balanced Weight
Optimum Cable and Torch Weight to Minimize Fatigue

High Quality Cable Hose
Best Quality Cable Hose Offers High Heat and Abrasion Resistance

Rugged Construction
Overall Rugged Construction for the Harsh Environment

STORM[™] torch

ACCEPTS

- Pointed Carbons:
5/32" (4mm) to 1/2" (13mm)
- Flat Carbons:
3/8" (10mm) to 5/8" (16mm)

AMPERAGE

- Maximum 1000 Amps

COMPRESSED AIR

- Pressure:
80 PSI (5.6 Kg/cm²)
- Flow Rate:
28 cfm (0.79 m³/min)

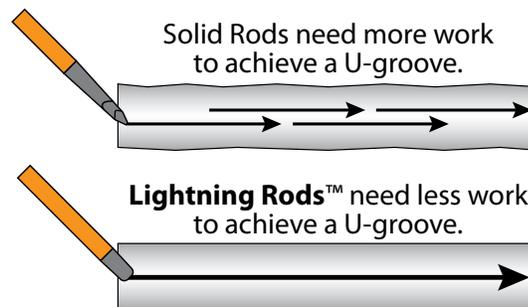
TORCH & CABLE WEIGHT

- 5.4 lbs. (2.4 Kg)

Lightning Rods™

FASTER & MORE EFFICIENT

Compared to solid rods, Lightning Rods can carry a 15–20% increased current due to the **thicker copper coating**, **high-density carbon** and the **hollow core**. This has shown to provide smooth arc stability on all metals and allows 40% faster removal than solid rods. The hollow core design prevents the formation of a fragile pointed tip. Solid rods form this pointed tip, which falls off into the gouge and requires rework to clean up. With Lightning Rods, there is no carbon dropped, so the operator does not need to spend time reworking the metal. Lightning Rods create a smooth U-groove instead of a V-groove, easily making clean looking work.



SAFETY

Lightning Rods are quieter and produce less smoke than standard solid carbon rods. The hollow core is plugged at one end to keep smoke from siphoning back to the operator. Since Lightning Rods are able to operate more quickly and smoothly, operators are less likely to tire from the repetitious movements that are required of standard rods.



The plugged end (shown on the left) is pointed towards the operator, to prevent smoke from blowing back.

LONGER LASTING & MORE EFFICIENT

Lightning Rods use high density carbon surrounded by a thicker layer of copper shell. Standard rods normally contain a more porous carbon—



about 28% less. Lightning Rods provide enhanced arc stability and increased current over the rod for faster metal removal, while consuming the rod at a slower rate. This faster removal process allows the user to make a smooth continuous forward motion, rather than running the rod back and forth, thus saving time.

Jointed Lightning Rods are designed with straight joint connections so that joints fit tighter and allow for more efficient current transfer. Other jointed rods use tapered connections, which fit loosely and have a tendency to heat up and prematurely break off during the gouging process.

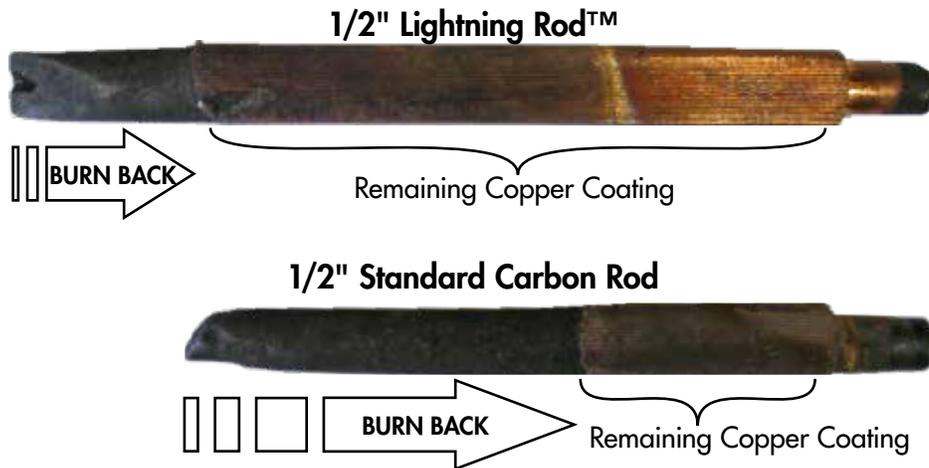
In the graph below, a Lightning Rod and a standard carbon rod were run at the same amperage, for the same length of time. Less of the Lightning Rod was used in the job and less of its copper has burned back, allowing for more efficient use of the remaining length of rod.



"As smooth as silk."



Less Smoke



FULLY AUTOMATIC APPLICATIONS

Lightning Rods operate faster and smoother. This allows machines to operate more efficiently by moving in one continuous direction, rather than wasting time and energy from "scrubbing" repeatedly. The lower smoke production from Lightning Rods can help keep machines a bit cleaner.

MANUAL APPLICATIONS

Lightning Rods burn cleaner and produce less smoke and are quieter than solid carbon rods. The hollow core design allows Lightning Rods to operate faster and smoother than standard copper rods. Less mess and labor allows workers to be more efficient.



Machine Application

LIGHTNING ROD™

CARTONS

Our carbon rods are sold by the carton. Cartons contain multiple shelf-ready boxes of rods.

CASES

Standard rods are available in cases (containing multiple cartons), which are more cost-effective than buying individual cartons. Jointed rods are not available in cartons.

Sizes and Packaging Chart

STANDARD RODS	Part Number	Rods/Box	CARTON PACKAGING			CASE PACKAGING		
			Boxes/ Carton	Rods/ Carton	Weight (lbs.)	Cartons/ Case	Rods/ Case	Weight (lbs.)
5/32" × 12" (4.0mm × 305mm)	GT532X12	100	5	500	9	4	2,000	38
3/16" × 12" (4.8mm × 305mm)	GT316X12	50	5	250	7	8	2,000	55
1/4" × 12" (6.4mm × 305mm)	GT14X12	50	5	250	12	4	1,000	48
5/16" × 12" (7.9mm × 305mm)	GT516X12	50	5	250	16	4	1,000	64
3/8" × 12" (9.5mm × 305mm)	GT38X12	50	5	250	17	2	500	39
1/2" × 12" (12.7mm × 305mm)	GT12X12	50	5	250	39	Not Available		

JOINTED RODS	Part Number	Rods/Box	CARTON PACKAGING			CASE PACKAGING		
			Boxes/ Carton	Rods/ Carton	Weight (lbs.)	Cartons/ Case	Rods/ Case	Weight (lbs.)
3/8" × 17" (9.5mm × 431mm)	GTJ38X17	50	6	300	44	Not Available		
1/2" × 17" (12.7mm × 431mm)	GTJ12X17	50	4	200	48			
3/4" × 17" (19.1mm × 431mm)	GTJ34X17	Discontinued	Discontinued					

Flame Tech Warranty

This warranty is extended solely to the original purchaser.

If a **Flame Tech**® product fails because of defect in material or workmanship under normal use and maintenance within one year from date of shipment by us, we will, at our option and after inspection, repair or replace the defective product or repay the full purchase price you paid us.

In order for this warranty to apply, you must return the defective product to us within one year from the date we shipped it to you. Please be sure to properly identify the complaint regarding the returned product. All products must receive an (RMA) Return Material Authorization number from the factory prior to the return. Products will not be accepted without an RMA.

FLAME TECH[®]

*Innovators of High Production,
Cost Effective Gas Equipment*

For customer support or to place an order

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