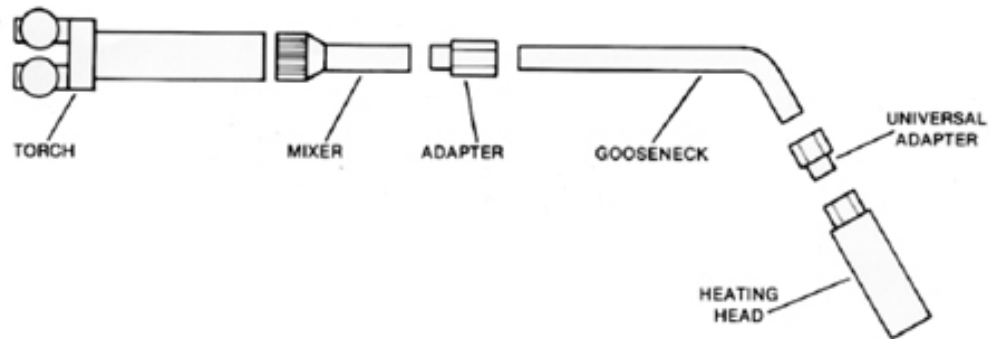


Heating & Welding/Brazing Components

HEATING HEADS



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 above 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	
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	
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. (see BTU info)
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

Butane=3374	Methane=1000	Natural Gas=1000	Propane=2498	Propylene=2371
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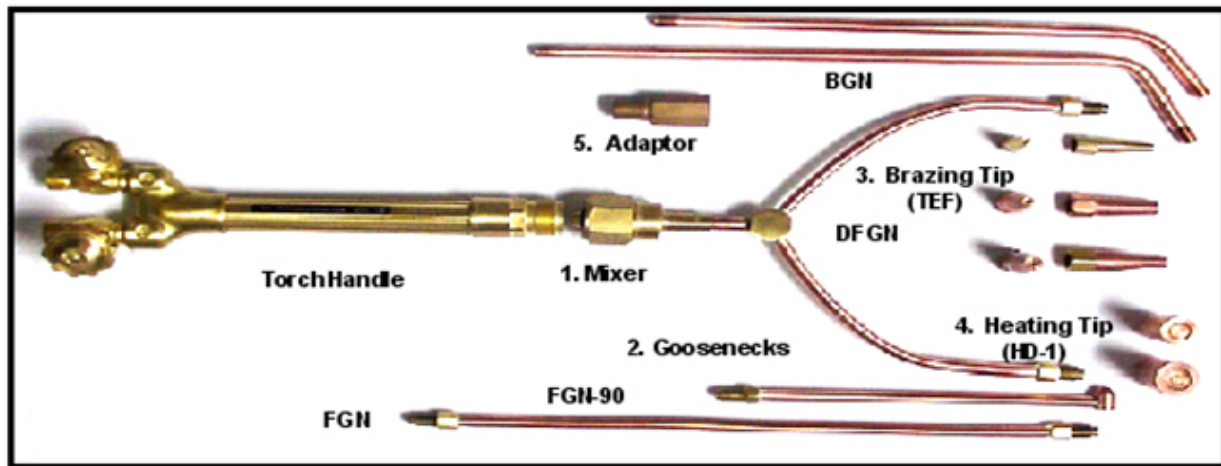
GOOSENECKS FOR HEATING HEADS

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

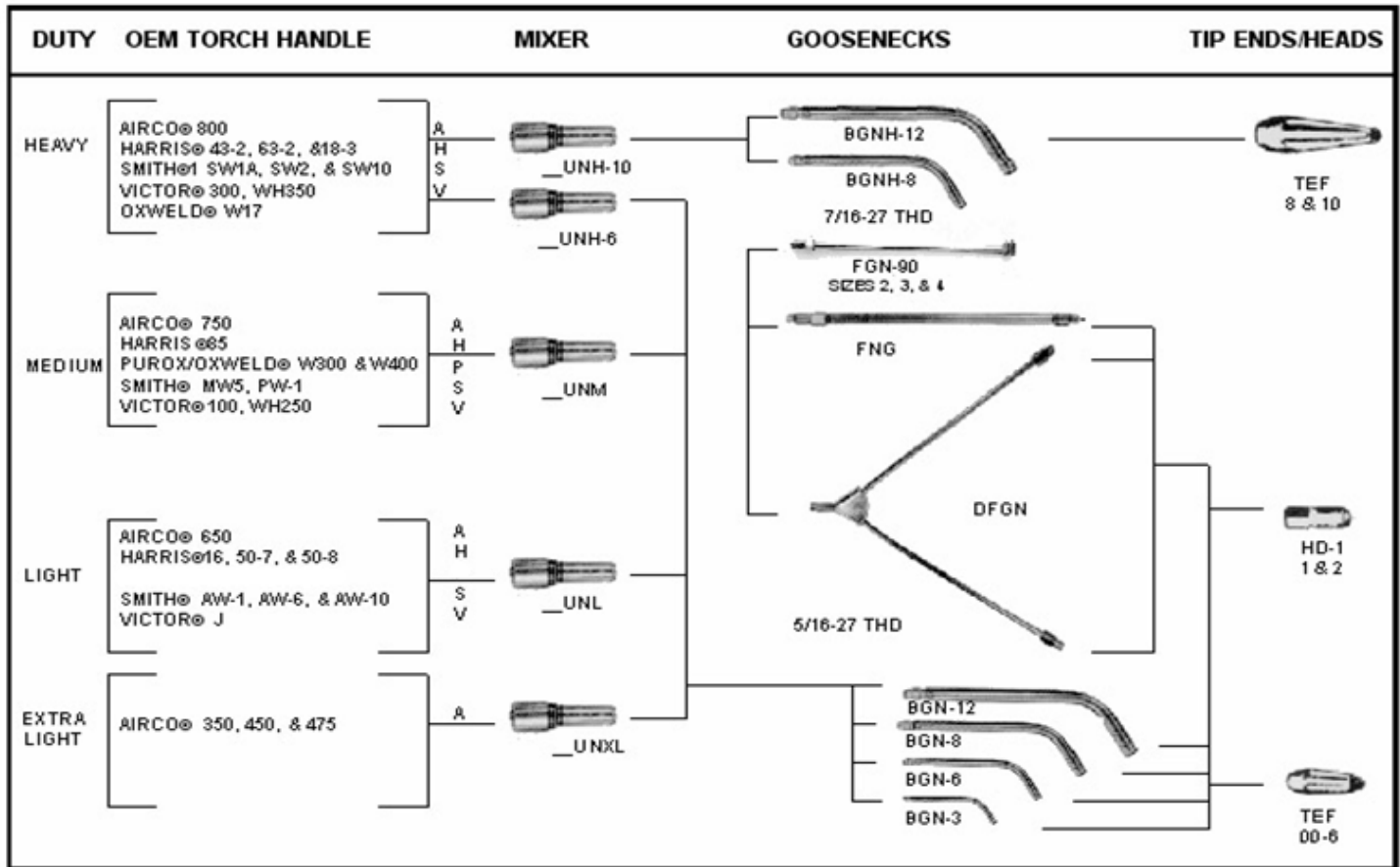


This brazing & heating equipment enhances the use of fuel gas for applications that previously required acetylene. The same philosophy we use for our heavy duty heating equipment is used in the design of this equipment. The special fuel gas mixers, designed for use with all the popular OEM torch handles, 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: 6"
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.