BFT Production Brazing Burner Systems

BFT burners are designed to operate on compressed air/gas. Compressed air should be supplied at 1.4-3.5 Kg/sq.cm, 20-50 psi.
Industrial Fuel Gases that can be employed include Coal Gas, Natural Gas (methane), Propane, Butane or any mixture of these gases.

Gas	Formula	Approx. Calorific Value		Maximum Flame Speed Of Air/Gas Mixtures*
		BTU/cu.ft	Kcal/cu.m	
Coal Gas	Mixed	500	4450	200cm (6.6ft)/sec
Methane	CH_4	1000	8900	67cm (2.2ft)/sec
Propane	$C_3 H_8$	2500	22240	82cm (2.7ft)/sec
Butane	$C_4 H_{10}$	3300	29350	82cm (2.7ft)/sec

*as measured in 1 in.dia.glass tube

Brazing Equipment; Complete equipment is available to connect the air and gas supplies to the burner and to provide precise control.

Method 1; A built-up injector/needle valve rig is connected to piped air and gas supplies.

Method 2; Duplex double needle valve and injector units are clamped to 1/2".BSP or 1 in.BSP barrels.

Needle Valves; BFT Needle Valves give the precise control needed for efficient air/gas usage. Methane, Propane and butane all have narrow ranges of inflammation, whilst the volumetric demand is smaller for the higher calorific value gases-hence the need for particularly fine flow control.

Injectors; It is essential at all times correctly to relate injector capacity to burner demands. BFT manufacture accurate and scientifically designed injectors and will prescribe safe/suitable equipment on receipt of the following information-

I. I. I. A. Type and quantity of burners to be served by each injector (if unable to identify burners state total quantity and size of burner orifices to be served).

B. Available air pressure (1.4-3.5 kg/sq.cm, 20/50 psi preferred).

C. Type of gas(es) to be used and normal line pressure.

D. Oxygen pressure if applicable (0.7 kg/sq.cm, 10 psi is a suitable line pressure).

BFT Production Brazing Systems (Cont)

Mixture Manifolds; Standardised 2-way, 4-way, 6way or specially designed mixture manifolds are available with 1/4"BSP or 3/8"BSP connections to give distribution of the air/gas mixture to the burners.

Coupled Flexible Hose; Wired plastic or armoured braided hose is supplied with 1/4"BSP or 3/8"BSP connections in lengths from 300mm (12") to 1200mm (48"). It is generally in advisable to use longer hose connections without seeking our specific advice.

Swivel Clamp Stems/Boss Head Clamps/Ball Ends/Flanged Posts; BFT precision fittings give versatile mounting methods for positioning burners.

Brazing Burners; An extensive range of BFT burners high intensity air/gas burners can be supplied to suit any requirement for the transfer of heat by direct flame infringement. These details cover only a typical selection.

Model reference	Nominal Heat Flow Rating (Methane)*		Flame Geometry					
			Width		Length			
					Blue Cone		Semi-luminous Envelope	
	BTU/hr	Kca/hr	mm	ins	mm	ins	mm	ins
SN 14 Marshall	6500	1640	29	1 1/8	32	1 1/4	75	3
DN 13 Marshall	12000	3020	29	1 1/8	29	1 1/8	100	4
DN 9 Marshall	6500	1640	19	3/4	22	7/8	100	4
FTN 9 Fishtail	2000	500	19	3/4	16	5/8	35	1 3/8
NIGROG 53 Pinpoint	1500	380	Fine Conical		75	3	125	5
NICROG 60 Pinpoint	700	175	Fine Conical		57	2 1/4	83	3 1/4
BB250/12 Blast Burner	6500	1640	Conical		50	2	150	6

*an improvement of approx. 10% is obtainable from Propane and Butane

SAFETY NOTES;

Downstream Circuits (i.e. the flexible connection between the injector and burner)

— **NO COCKS OR REGULATING VALVES SHOULD EVER BE FITTED TO THE DOWN STREAM MIXTURE LINE**

— **AVOID SHARP BENDS, CONSTRICTIONS OR HOSE LENGTHS EXCEEDING 1200mm (48 inches).**