

# OXY-GAS BURNER

## Group A-1 Oxy-Gas Tip

Range: Series 8. piloted type  
Single flameport

Manufactured from stainless steel and producing a very precise and well defined needlepoint flame, this industry standard burner tip is widely used in applications such as:  
EDGE MELTING, CRACKING OFF and BEADING in the GLASSWARE and TUBING INDUSTRY.  
SILVER BRAZING of METAL COMPONENTS.



Supply pressure requirements to the venturi mixer and needle valve unit.

Natural gas: 20 - 70 mbar

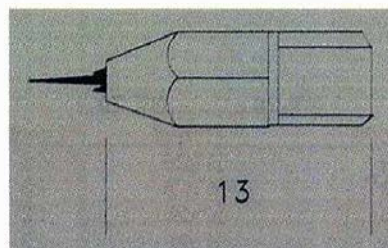
Propane gas: 20 - 70 mbar

Oxygen: 250 - 1000 mbar

Cat.No.	Type	# Drill	Cat.No.	Type	mm Drill
A001	8-80	80	A012	8M-0.34	0.34
A002	8-79	79	A013	8M-0.36	0.36
A003	8-78	78	A014	8M-0.40	0.40
A004	8-75	75	A015	8M-0.52	0.52
A005	8-73	73	A016	8M-0.60	0.60
A006	8-70	70	A017	8M-0.70	0.70
A007	8-68	68	A018	8M-0.79	0.79
A008	8-65	65	A019	8M-0.90	0.90
A009	8-63	63	A020	8M-0.94	0.94
A010	8-60	60	A021	8M-1.00	1.00
A011	8-58	58	A022	8M-1.05	1.05

Thread size = 1/4" BSF

Thread size = M6 x 1



To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-gas burners must operate from a suitably sized venturi mixer and compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection of either new or existing venturi mixers.

Refer to product information sheets: J-1....H-1....H-2....H-3....H-4....H-5 for selection data on venturi mixers and needle valves.

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# OXY-GAS BURNER

.....Single Port/Piloted Type.....

**Group A-1 rev. Oxy-Gas Tip**

Range: Series 1142.....1300

Series OX-10....OX-70

Manufacturing, Repair and Process applications include:

Production Brazing machines

Handtorch Brazing

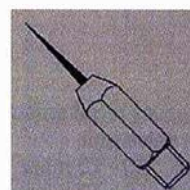
High speed/volume production of glass components in the Light Source industry

Television Tubes

Pharmaceutical Containers

Batteries

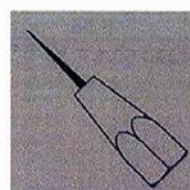
Scientific and Laboratory Glassware



## 1142.....1300

Cat.No.	Type.	#Drill.	Thread.	Length.	Kcal/hr.	Material.
A030	1300-A	55	1/8" ext.	32	1500	Brass
A031	1300-AM	55	1/8" ext.	32	1500	Stainless
A032	1300-B	56	1/8" ext.	32	1400	Brass
A033	1300-BM	56	1/8" ext.	32	1400	Stainless
A034	1301-A	49	1/8" ext.	32	2500	Brass
A035	1301-AM	49	1/8" ext.	32	2500	Stainless
A036	1301-B	31	1/8" ext.	32	5500	Brass
A037	1301-BM	31	1/8" ext.	32	5500	Stainless
A038	** 1300-AB	70 x 4	1/8" ext.	32	1700	Brass
A039	** 1301-G	63 x 4	1/8" ext.	32	2500	Brass
A040	1142-A	58	1/8" ext.	32	1200	Brass
A041	1142-AM	58	1/8" ext.	32	1200	Stainless
A042	1142-C	58	1/8" int.	25	1200	Brass
A043	1142-CM	58	1/8" int.	25	1200	Stainless

\*\* = a cluster of 4 flameports which produces a short, bushy flame for brazing applications.



## OX-10.....OX-70

Cat.No.	Type.	#Drill.	Thread.	Length.	Kcal/hr.	Material.
A050	OX-10	70	1/4"x28	23	400	Brass
A051	OX-10SS	70	1/4"x28	23	400	Stainless
A052	OX-20	65	1/4"x28	23	550	Brass
A053	OX-20SS	65	1/4"x28	23	550	Stainless
A054	OX-30	56	1/4"x28	23	1150	Brass
A055	OX-30SS	56	1/4"x28	23	1150	Stainless
A056	OX-40	53	1/4"x28	23	1900	Brass
A057	OX-40SS	53	1/4"x28	23	1900	Stainless
A058	OX-50	50	1/4"x28	23	2300	Brass
A059	OX-50SS	50	1/4"x28	23	2300	Stainless
A060	OX-60	45	1/4"x28	23	3000	Brass
A061	OX-60SS	45	1/4"x28	23	3000	Stainless
A062	OX-70	40	1/4"x28	23	4000	Brass
A063	OX-70SS	40	1/4"x28	23	4000	Stainless

Other thread sizes available are: 1/4" x 26 tpi. 1/4" x 40tpi. M6 x 1.0. all with internal thread form.

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# OXY-GAS BURNER

.....Single Port/Piloted Type.....

Supply pressures to the venturi mixer and needle valve unit.

Natural gas: 20 - 350 mbar

Propane gas: 20 - 350 mbar

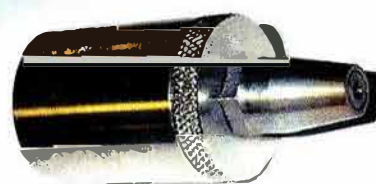
Oxygen: 500 - 1000 mbar

Also available as an unpiloted burner for pre-mix Hydrogen and Oxygen at high pressure.

Popular with the professional glassblower for its low decibel rating and fast rate of heat transfer, this burner is highly recommended for the production of laboratory and scientific glassware on either the bench or the lathe.

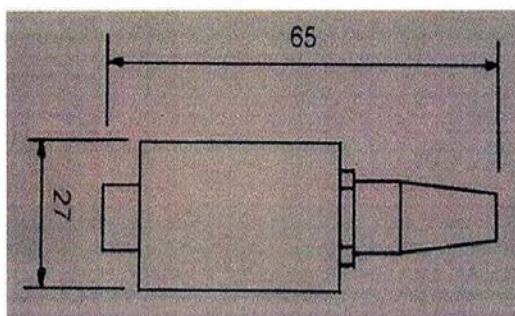
Suitable for piercing operations on borosilicate ovenware.

Multi-jetted pepperpot burner heads are also available to order



Cat.No.	Type.	Flameport diameter.
A070	PMQ-2.0	2.0 Jet only
A071	PMQ-2.5	2.5 Jet only
A072	PMQ-3.0	3.0 Jet only
A073	PMQ-3.5	3.5 Jet only
A074	PMQ-AD	burner adaptor
A075	PMQ-BO	burner body
A076	PMQ-TBM	twin burner manifold
A077	PPB-19	Jet only

Burner inlet thread size = 1/8" bsp. internal taper.



To ensure that accurate and constant flame settings are maintained, all pre-mix oxy-gas burners must operate from a suitably sized venturi mixer with compatible needle type flow control valves. If necessary, contact the Rapidflame technical department for assistance or advice on the selection of either new or existing venturi mixers.

Refer to the following product group information sheets for selection data on venturi mixers and flow control needle valves.

J-1.....J-4.....J-5.....H-1.....H-2.....H-3.....H-4.....H-5.....H-6.

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# OXY-GAS BURNER

.....double ring pilot flame.....

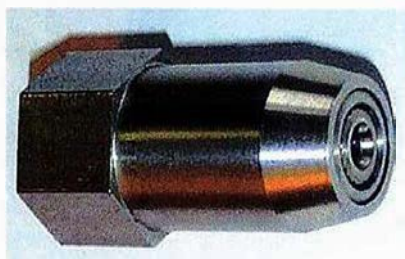
**GROUP A-2 rev. Oxy-Gas Tip.**

Range: **HVOB**

high velocity.  
stainless steel.

## -Applications-

glassworking lathe mounted burner manifolds  
glassworking lathe hand-held torches  
hand-held torch burner jet conversions  
high velocity copper brazing  
suitable for use with propane...natural gas.....oxygen



Cat.No.	Type	Jet diameter	Thread size
A080	HVOB-34	2.80.....#34	1/4"BSP.PL.
A081	HVOB-34M	2.80.....#34	M12 x 1.50
A082	HVOB-29	3.50.....#29	1/4"BSP.PL.
A083	HVOB-29M	3.50.....#29	M12 x 1.50
A084	HVOB-25	3.80.....#25	1/4"BSP.PL.
A085	HVOB-25M	3.80.....#25	M12 x 1.50

other connecting thread sizes are available on a special order basis

# OXY-GAS BURNER

.....two piece construction.....

**GROUP A-2 rev. Oxy-Gas Tip.**

Range: **ASB**

stainless steel.  
conical slotted pilot flames.

## -Applications-

ampoule filling and sealing machines  
glass tube piercing operations  
localised glass welding



Cat.No.	Type	Jet diameter	Thread size
A090	ASB-5M	0.50	M6x 1.0 ext.
A091	ASB-5F	0.50	M6x0.75 int.
A092	ASB-6M	0.60	M6x 1.0 ext.
A093	ASB-6F	0.60	M6x0.75 int.
A094	ASB-7M	0.70	M6x 1.0 ext.
A095	ASB-7F	0.70	M6x0.75 int.
A096	ASB-8M	0.80	M6x 1.0 ext.
A097	ASB-8F	0.80	M6x0.75 int.

int. = internal thread form.

ext. = external thread form.



# OXY-GAS BURNER

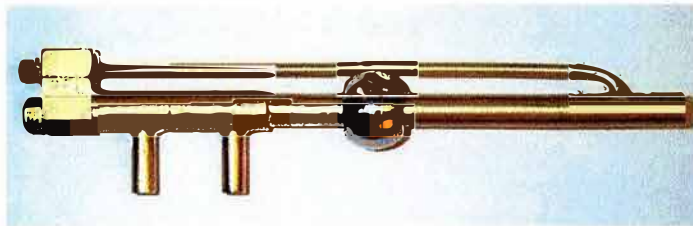
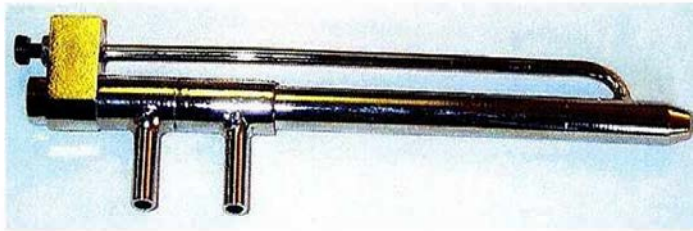
.....Single port/Unpiloted type.....

## GROUP A-3 Pencil Burner.

Pre-mix and Nozzle mix type.

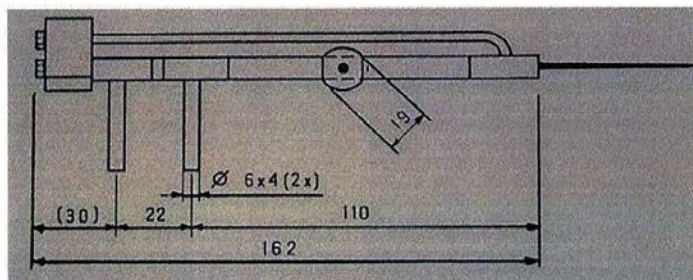
Long inner flame cone.

-Applications-  
cutting and sealing of GLS lamps.  
rim glazing and spot heating of tableware.  
glass component welding and fusing.  
glass to metal seals.



Separate nozzle mix oxygen valve.

Cat. No.	Type	Flame Diameter
A100	PFB-1	1.70
A101	PF-1	1.70
A102	PF-2	2.50
A103	PF-3	2.90



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# OPENFLAME BURNER

Manufactured from Stainless Steel (JM1-7only) and designed for operating with a highly stable flame and a wide turn-down ratio, this burner offers excellent resistance when used in a corrosive environment or atmosphere. Mainly used with either Natural or Propane gas, the pre-mixing with combustion air is achieved with a fan assisted or a compressed air supply to the venturi mixer. An ideal assembly when combined with the Rapidflame RAM. & VM. range of Venturi Mixers and Flow Control Valves.



**JM-1 to 7**

Typical Applications include:

RADIATOR ASSEMBLY and REPAIR.....HEAT EXCHANGERS.....SOLDER POT HEATING.  
PRESSURE DIECASTING.....FOUNDRIES.....HEAT TREATMENT.....GLASS FORMING....  
BRAZING MACHINES.....PLATE GLAZING.....PRE-HEATING.....PILOT BURNER UNITS....

## GROUP B-1 single-jet.

Range: **JM.1 - 15**

Pre-Mix. Air-Gas.



**JM-9 to 15**

Cat No.	Type.	Inlet.	Jet Diameter.	Kcal/Hr.*	Burner Dimensions. Diameter. Height.	
B001	JM-1-I	1/8"int.	4.00	1800	22	28
B002	JM-1-E	1/8"ext.	4.00	1800	22	28
B003	JM-1-UT	3/8x32int.	4.00	1800	22	28
B004	JM-2-E	1/4"ext.	4.50	2000	22	28
B005	JM-3-I	1/8"int.	5.30	4750	28	40
B006	JM-3-UT	3/8"x32int.	5.30	4750	28	40
B007	JM-3-E	1/4"ext.	5.30	4750	28	40
B008	JM-4-I	3/8"int.	11.00	10800	33	50
B009	JM-4-E	1/2"ext.	11.00	10800	33	50
B010**	JM-4-IF	3/8"int.	11.00	10800	33	50
B011	JM-5-I	1/2"int.	13.00	14500	48	54
B012	JM-5-E	3/4"ext.	13.00	14500	48	54
B013	JM-7-I	3/4"int.	16.50	24500	56	65
B014	JM-7-E	1"ext.	16.50	24500	56	65
B015***	JM-9-I	1"int.	23.00	45000	56	48
B016***	JM-11-I	1 1/4"int.	27.00	66000	70	65
B017***	JM-13-I	1 1/2"int.	34.00	97000	88	75
B018***	JM-15-I	2"int.	38.00	120000	100	90

\* 150mm.w.c.mixture pressure. \*\* flared burner head for handtorch assembly. \*\*\*carbon steel only.

Type=Ordering Ref.No. int= internal (female) thread. ext= external (male) thread. All threads are BSPT form.

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# OPENFLAME BURNER

.....Spear Point Flame.....

**GROUP B-3** single jet.

Range: SPF.6 to 75 [¼" to 3"]

Pre-Mix. Air-Gas.

Manufactured from Stainless Steel and designed for operating with a highly stable spearpoint shaped flame with a wide turn-down ratio, this burner nozzle offers excellent resistance when used in a corrosive environment or high temperature atmosphere. Pre-mixing with combustion air is complete with a fan, blower or compressed air supply to the venturi mixer. Mainly used with either Natural or Propane gas this type of nozzle provides an ideal assembly when combined with the Rapidflame RAM and VM range of Venturi Mixers and control valves.

Typical applications include:

Immersion tube firing.....Kilns.....Ovens.....Preheating lances.

Foundry ladle heating.....Pilot burner assemblies.....Cremators.....Furnaces.

**SPF-38M**



## External thread connection

Cat. No.	Type.	Thread size	Overall length	Kcal/Hr. nominal
B030	SPF-6M	¼"	bsp 40	1250
B031	SPF-9M	3/8"	bsp 72	2500
B032	SPF-12M	½"	bsp 76	7500
B033	SPF-19M	¾"	bsp 76	15000
B034	SPF-25M	1"	bsp 90	22000
B035	SPF-32M	1 ¼"	bsp 107	45300
B036	SPF-38M	1 ½"	bsp 120	71500
B037	SPF-50M	2"	bsp 160	113000
B038	SPF-63M	2 ½"	bsp 165	220000
B039	SPF-75M	3"	bsp 165	375000

Available in carbon steel to special order.

## Internal thread connection

Cat. No.	Type.	Thread size	Overall length	Kcal/Hr. nominal
B040	SPF-6F	¼"	bsp 40	1250
B041	SPF-9F	3/8"	bsp 72	2500
B042	SPF-12F	½"	bsp 76	7500
B043	SPF-19F	¾"	bsp 76	15000
B044	SPF-25F	1"	bsp 90	22000
B045	SPF-32F	1 ¼"	bsp 107	45300
B046	SPF-38F	1 ½"	bsp 120	71500
B047	SPF-50F	2"	bsp 160	113000
B048	SPF-63F	2 ½"	bsp 165	220000
B049	SPF-75F	3"	bsp 165	375000

Available in carbon steel to special order.

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# OXY-GAS BURNER

.....Machine Mounting.....  
Oxygen-Gas flame with Air addition

## GROUP C-6 Multi-hole

Range: AMPS type 6 pre-mix  
Ampoule Burner  
Slotted pilot flame

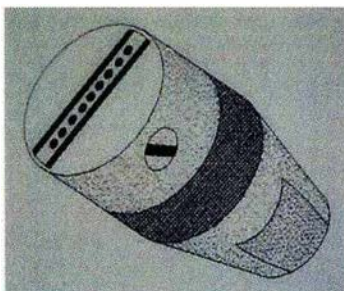
Typical applications include:

Ampoules and Vials produced on Rotary Index or Carousel Motion machinery.

Lamps and Lighting component parts.

Production Brazing machines.

Thermometers, Laboratory glassware and tubular glass containers produced on Walking Beam machines.

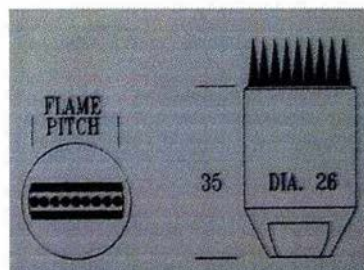


Cat. No.	Type.	# of Ports	Port Dia.	Flame Pitch
C071	AMPS-6	9	0.8	18
C072	AMPS-6A	9	0.6	18
C073	AMPS-6B	9	1.0	18
C074	AMPS-6C	9	0.7	18
C075	AMPS-6D	9	0.9	18
C076	AMPS-6E	9	1.2	18
C077	AMPS-6F	7	1.2	13.5
C078	AMPS-6G	7	1.0	13.5

Inlet thread = 1/8" BSP.

C079	AMPSM-6	9	0.8	18
C080	AMPSM-6A	9	0.6	18
C081	AMPSM-6B	9	1.0	18
C082	AMPSM-6C	9	0.7	18
C083	AMPSM-6D	9	0.9	18
C084	AMPSM-6E	9	1.2	18
C085	AMPSM-6F	7	1.2	13.5
C086	AMPSM-6G	7	1.0	13.5

Inlet thread = M10 x 1.0



To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-air-gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves.

If necessary, contact the Rapidflame technical office for assistance or advice on the selection or change of either new or existing venturi mixers.

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# GRID BURNER

.....Machine Mounting.....

Oxygen-Gas flame with Air addition

Used almost exclusively on machinery for the production of Lamp and Light source components, this industry standard burner is made from brass with either 1 or 2 rows of flame ports. Within the two main burner body shapes, a wide variety of non standard flame patterns are available. These patterns will suit the heat requirements of the many different sizes of filament mount assemblies.

Stainless steel inserts are made to order.

Rotary Index stem machine.  
Autopress and Automount index machine.

## GROUP C-8 grid burner

Range: Oxy - Gas

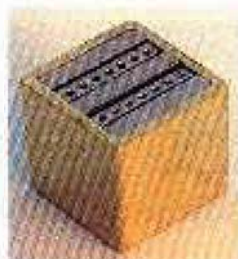
Angle body: AGO

Cube body: CGO



Cat. No.	Type.	Fuel Mix	Angle body		No. of ports	Flame pattern
			Rows of ports	Dia. of ports		
C380	AGO-1P	oxy-gas	2	0.95	14	pyramid
C381	AGO-2P	oxy-gas	2	1.20	14	pyramid
C382	AGO-3P	oxy-gas	1	1.20	7	pyramid
C383	AGO-4P	oxy-gas	1	0.95	7	pyramid
C384	AGO-1C	oxy-gas	1	0.95	7	centre
C385						
C386						
C387						

All oxy - gas angle grid burners will tolerate a low flow admix of air



Cat. No.	Type.	Fuel Mix	Cube body		No. of ports	Flame pattern
			Rows of ports	Dia. of ports		
C390	CGO-1P	oxy-gas	2	0.95	14	pyramid
C391	CGO-2P	oxy-gas	1	0.95	7	pyramid
C392	CGO-3P	oxy-gas	2	0.95	10	pyramid
C393	CGO-1C	oxy-gas	1	0.95	7	centre
C394	CGO-1PL	oxy-gas	2	0.85	14	parallel
C395						
C396						
C397						

All oxy - gas cube grid burners will tolerate a low flow admix of air

To ensure that accurate and constant flame settings are maintained, all pre-mix oxy-gas burners must operate from a correctly sized venturi mixer with compatible needle type flow control valves. If necessary, contact the Rapidflame technical department for assistance or advice on the selection of either new or existing venturi mixers to suit the burner or the process application.

Refer to the following product group information sheets for selection data on venturi mixers and needle valves, J-1.....J-4.....J-5.....H-1.....H-2.....H-3.....H-4.....H-5.....H-6.

Refer to information sheet C-8 rev. for dimensional burner details and matching assembly components.

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Group C-8 rev.

## Selection of grid burner mounting spigots





## BRAZING BURNER

Natural and Propane gas  
at 20 mbar min. supply pressure.  
Air at 60 mbar min. pressure supply  
dependant upon mixing method.

This type of burner was developed to produce a high intensity flame pattern for many localised heating processes. Two standard sizes are available and can be used either individually or manifold mounted in cluster and linear format to suit the application. Made from Brass, the burner is fully serviceable by Rapidflame and is interchangeable with previously installed burner bodies. It can be supplied as a complete burner unit or as a front assembly only.

**GROUP D -1 Multi-hole Burner**  
**Premix Air-Fuel Gas. Type BB.**

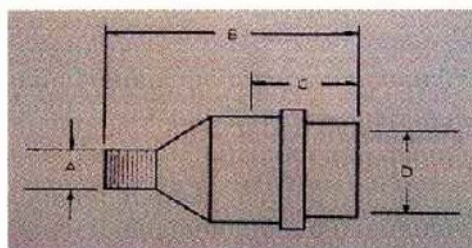


Typical Applications include:

ROTARY INDEX and SHUTTLE TYPE BRAZING MACHINES....FUSE TUNNELS....  
PREHEATING....SHAPING....ANNEALING of GLASS COMPONENTS....

Cat. No.	Type.	Insert Dia.D.	Kcal/Hr. Air-Gas	A	B	C	Rows of Ports.
D150	BB-1-8	31.75	3600	1/8"	63	30	1
D151	BB-1-4	31.75	3600	1/4"	63	30	1
D152	BB-1-FA	31.75	3600	Front Assembly only.		30	1
D153	BB-B8			1/8"	Body only.		
D154	BB-B4			1/4"	Body only.		
D155	BB-2-8	31.75	4500	1/8"	63	30	2
D156	BB-2-4	31.75	5000	1/4"	63	30	2
D157	BB-2-FA	31.75	5000	Front Assembly only.		30	
D160	BB-1-8S	22	2800	1/8"	63	35	1
D161	BB-1-4S	22	3000	1/4"	63	35	1
D162	BB-1SFA	22	3000	Front Assembly only.		35	1
D163	BB-BS8			1/8"	Body only.		
D164	BB-BS4			1/4"	Body only.		
D165	BB-2-8S	22	4000	1/8"	63	35	2
D166	BB-2-4S	22	4200	1/4"	63	35	2
D167	BB-2-SFA	22	4200	Front Assembly only.		35	2

All body inlet threads are British Standard Pipe Taper form.



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# AIR-GAS BURNER

.....Machine Mounting.....

Air-Gas flame with Oxygen addition

## GROUP D-2 Multi-hole

Range: AMP type 4 pre-mix

Ampoule Burner

Ribbon pilot flame

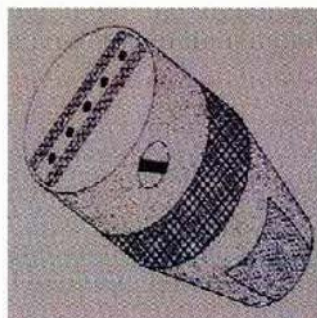
Typical applications include:

Ampoules and Vials produced on Rotary Index or Carousel Motion machinery.

Lamps and Lighting component parts.

Production Brazing machines.

Thermometers, Laboratory glassware and tubular glass containers produced on Walking Beam machines.



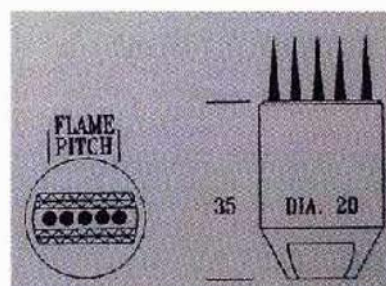
Cat. No.	Type	# of Ports	Port Dia.	Flame Pitch	Cat. No.	Type	# of Ports	Port Dia.	Flame Pitch
D013	AMP-4	5	0.8	10	D030	AMPM-4	5	0.8	10
D014	AMP-4A	5	0.8	10	D031	AMPM-4A	5	0.8	10
D015	AMP-4B	1	1.0	0	D032	AMPM-4B	1	1.0	0
D016	AMP-4C	6	0.8	10	D033	AMPM-4C	6	0.8	10
D017	AMP-4D	5	1.2	10	D034	AMPM-4D	5	1.2	10
D018	AMP-4E	5	1.0	10	D035	AMPM-4E	5	1.0	10
D019	AMP-4F	5	0.7	10	D036	AMPM-4F	5	0.7	10
D020	AMP-4G	5	0.9	10	D037	AMPM-4G	5	0.9	10
D021	AMP-4H	6	1.0	10	D038	AMPM-4H	6	1.0	10
D022	AMP-4J	3	1.2	4.5	D039	AMPM-4J	3	1.2	10
D023	AMP-4K	6	0.6	10	D040	AMPM-4K	6	0.6	10
D024	AMP-4L	6	0.5	10	D041	AMPM-4L	6	0.5	10
D025	AMP-4M	4	0.8	7.5	D042	AMPM-4M	4	0.8	7.5
D026	AMP-4N	4	1.0	7.5	D043	AMPM-4N	4	1.0	7.5
D027	AMP-4O	3	0.8	7.5	D044	AMPM-4O	3	0.8	7.5
D028	AMP-4P	4	0.6	10	D045	AMPM-4P	4	0.6	10
D029	AMP-4R	4	0.5	10	D046	AMPM-4R	4	0.5	10

Inlet thread = 1/8" BSP

Inlet thread = M10 X 1.0

To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-air-gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection or change of either new or existing venturi mixers.

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# AIR-GAS BURNER

.....Machine Mounting.....

Air-Gas flame with Oxygen addition

## GROUP D-3 Multi-hole

RANGE: AMP type 5 pre-mix

Ampoule Burner

Ribbon pilot flame

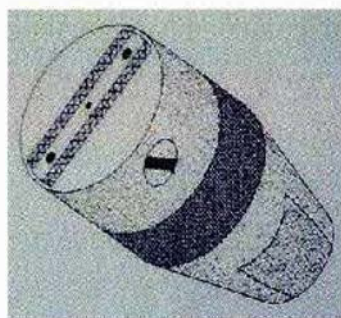
Typical applications include:

Ampoules and Vials produced on Rotary Index or Carousel Motion machinery.

Lamps and Lighting component parts.

Production Brazing machines.

Thermometers, Laboratory glassware and tubular glass containers produced on Walking Beam machines.



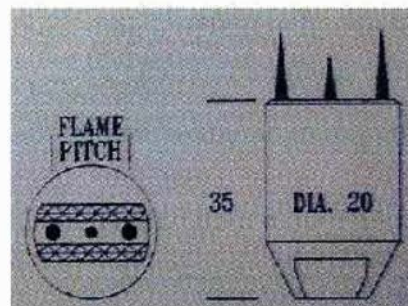
Cat. No.	Type.	Port Dia's	Flame Pitch	Cat. No.	Type.	Port Dia's	Flame Pitch
D047	AMP-5	1-8-1	10	D059	AMPM-5	1-8-1	10
D048	AMP-5A	8-8-8	10	D060	AMPM-5A	8-8-8	10
D049	AMP-5B	1-8-1	8	D061	AMPM-5B	1-8-1	8
D050	AMP-5C	8-8-8	8	D062	AMPM-5C	8-8-8	8
D051	AMP-5D	6-5-6	10	D063	AMPM-5D	6-5-6	10
D052	AMP-5E	7-5-7	10	D064	AMPM-5E	7-5-7	10
D053	AMP-5F	7-5-7	8	D065	AMPM-5F	7-5-7	8
D054	AMP-5G	6-5-6	10	D066	AMPM-5G	6-5-6	10
D055	AMP-5H	6-5-6	8	D067	AMPM-5H	6-5-6	8
D056	AMP-5J	9-7-9	10	D068	AMPM-5J	9-7-9	10
D057	AMP-5K	9-7-9	8	D069	AMPM-5K	9-7-9	8
D058	AMP-5L	8-8-8	8	D070	AMPM-5L	8-8-8	8

Inlet thread = 1/8" BSP.

Inlet thread = M10 X 1.0

Maximum Port Diameter is 1.0mm

To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-air-gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection or change of either new or existing venturi mixers.



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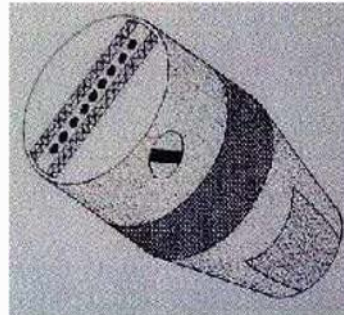


# AIR-GAS BURNER

.....Machine Mounting.....  
Air-Gas flame with Oxygen addition

**GROUP D-4 Multi-hole**  
Range: AMP type 6 pre-mix  
Ampoule Burner  
Ribbon pilot flame

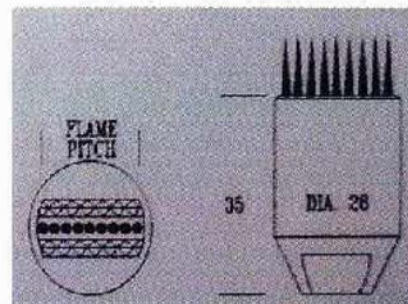
Typical applications include:  
Ampoules and Vials produced on Rotary Index or Carousel Motion machinery.  
Lamps and Lighting component parts.  
Thermometers, Laboratory glassware and tubular glass containers produced on Walking Beam machines.



Cat. No.	Type.	# of Ports	Port Dia.	Flame Pitch.
D071	AMP-6	8	0.8	18
D072	AMP-6A	9	0.6	18
D073	AMP-6B	9	1.0	18
D074	AMP-6C	9	0.7	18
D075	AMP-6D	9	0.9	18
D076	AMP-6E	8	1.2	18
D077	AMP-6F	7	1.2	13.5
D078	AMP-6G	7	1.0	13.5
<u>Inlet thread = 1/8" BSP.</u>				
D079	AMPM-6	8	0.8	18
D080	AMPM-6A	9	0.6	18
D081	AMPM-6B	9	1.0	18
D082	AMPM-6C	9	0.7	18
D083	AMPM-6D	9	0.9	18
D084	AMPM-6E	8	1.2	18
D085	AMPM-6F	7	1.2	13.5
D086	AMPM-6G	7	1.0	13.5

Inlet thread = M10 x 1.0

To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-air-gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection or change of either new or existing venturi mixers.



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# AIR-GAS BURNER

.....Machine Mounting.....

Air-Gas flame with Oxygen addition

## GROUP D-5 Multi-hole

Range: AMP type 7 & 8 pre-mix

Ampoule Burner

Ribbon pilot flame

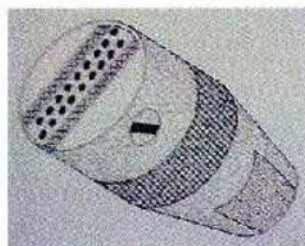
Typical applications include:

Ampoules and Vials produced on Rotary Index or Carousel Motion machinery.

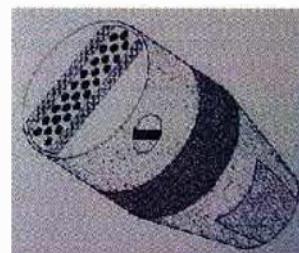
Lamps and Lighting component parts.

Production Brazing machines.

Thermometers, Laboratory glassware and tubular glass containers produced on Walking Beam machines.

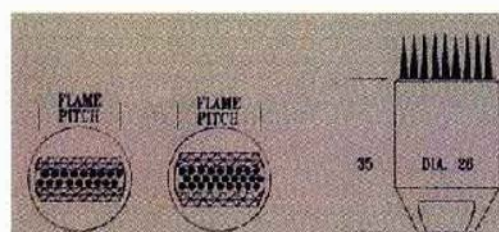


TYPE 7 - 2 ROW



TYPE 8 - 3 ROW

2 ROW					
Cat. No.	Type.	# of Ports	Port Dia.	Flame Pitch	Inlet Size
D091	AMP-7	9+9	1.0	17	1/8" BSP
D092	AMP-7A	4+4	1.0	7	1/8" BSP
D093	AMP-7B	8+8	0.8	15	1/8" BSP
D094	AMPM-7	9+9	1.0	17	M10x1.0
D095	AMPM-7A	4+4	1.0	7	M10x1.0
D096	AMPM-7B	8+8	0.8	15	M10x1.0
3 ROW					
D097	AMP-8	9+10+9	1.0	18	1/8" BSP
D098	AMP-8A	4+5+4	1.0	8	1/8" BSP
D099	AMPM-8	9+10+9	1.0	18	M10x1.0
D100	AMPM-8A	4+5+4	1.0	8	M10x1.0



To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-air-gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection or change of either new or existing venturi mixers.

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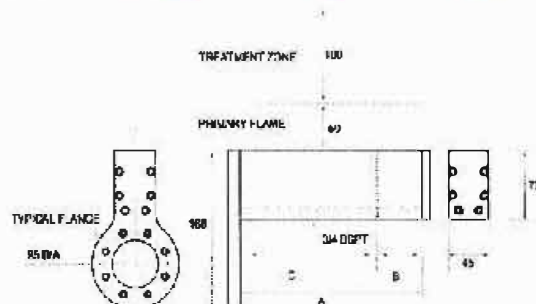


# FLAME TREATMENT BURNER

**GROUP D-6**
**RANGE: HIGH VELOCITY, MONOPLEX, DUPLEX**

## Introduction

This burner is applied mainly in flame plasma surface treatment of plastic components prior to painting. It is specially designed to generate high velocity flames for high speed flame treatment when mounted on multi axis robot manipulators. Its light weight body, through 'wrist' small bore connections, multiple flame zone construction and protected ignition electrode ensure reliable, flexible and fully programmable flame treating of car bumper bars, mouldings and complex shapes in continuous production processes.



## Specification

Designed to operate with compressed air and natural or LP gas, duplex (two zone) and monoplex (one zone) burners are manufactured from aluminium with special flame port patterns for seamless multi zone operation with a high velocity flame. Burners are fitted with a customer specified robot arm connection flange.

Air-gas connections are at the back of the burner body and burners can be supplied complete with light weight connecting fittings and small bore hoses for connection to the burner control system.

Complete air-gas mixing control panels, including residual oxygen level and firing rate control systems for each zone can be supplied with this burner (see data sheet V-3, V-4). The Ignition - flame sensing electrode can be mounted in an optional casing for greater protection or side mounted.

Zone B and C dimensions can be specified on order to suit product shape

Catalogue #	Part #	A mm	B mm minimum	C mm maximum	Rating Kcal/hr
D-180	Monoplex 150-M	150	-	-	25,000.00
D-182	Monoplex 200-M	200	-	-	34,000.00
D-184	Monoplex 250-M	250	-	-	42,000.00
D-186	Monoplex 300-M	300	-	-	50,000.00
D-181	Duplex 150-D	150	50	100	25,000.00
D-183	Duplex 200-D	200	50	150	34,000.00
D-185	Duplex 250-D	250	50	200	42,000.00
D-187	Duplex 300-D	300	50	250	50,000.00

All gas safety equipment or products must be installed and used in full compliance with applicable safety standards and industry codes of practice. Consult Rapidflame sales department for advice if in doubt.

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# GRID BURNER

.....Machine Mounting.....

Air-Gas flame with Oxygen addition

Used almost exclusively on machinery for the production of Lamp and Light source components, this industry standard burner is made from brass with either 1 or 2 rows of flame ports. Within the two main burner body shapes a wide variety of non standard flame patterns are available. These patterns will suit the heat requirements of the many different sizes of filament mount assemblies.

Stainless steel inserts are made to order.

Rotary index stem machine.

Autopress and Automount index machine.

## GROUP D-7 grid burner

Range: Air - Gas

Angle body: **AGA**

Cube body: **CGA**



Cat. No.	Type.	Fuel Mix	Angle body		No. of ports	Flame pattern
			Rows of ports	Dia. of ports		
D200	AGA-1P	air-gas	2	0.95	14	pyramid
D201	AGA-2P	air-gas	1	1.00	7	pyramid
D202	AGA-3P	air-gas	2	1.00	14	pyramid
D203	AGA-4P	air-gas	1	1.20	7	pyramid
D204	AGA-5P	air-gas	2	0.90	12	pyramid
D205						
D206						
D207						

All air - gas angle grid burners will tolerate a low flow admix of oxygen



Cat. No.	Type.	Fuel Mix	Cube body		No. of ports	Flame pattern
			Rows of ports	Dia. of ports		
D215	CGA-1P	air-gas	2	0.95	14	pyramid
D216	CGA-2P	air-gas	1	1.20	7	pyramid
D217	CGA-3P	air-gas	2	1.2	14	pyramid
D218						
D219						
D220						

All air - gas cube grid burners will tolerate a low flow admix of oxygen

To ensure that accurate and constant flame settings are maintained, all pre-mix air-gas burners must operate from a correctly sized venturi mixer with compatible needle type flow control valves. If necessary, contact the Rapidflame technical department for assistance or advice on the selection of either new or existing venturi mixers to suit the burner or the process application.

Refer to the following product group information sheets for selection data on venturi mixers and needle valves.

J-1.....J-4.....J-5.....H-1.....H-2.....H-3.....H-4.....H-5.....H-8.

Refer to information sheet D-7rev. for dimensional burner details and matching assembly components.

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# FISHTAIL BURNER

.....Machine Mounting.....

## GROUP E-1 Fishtail Burner.

Range: Air-Gas. Pre-Mix.  
Piloted flame type.

Brass.....Stainless Steel  
NS SM



420



81



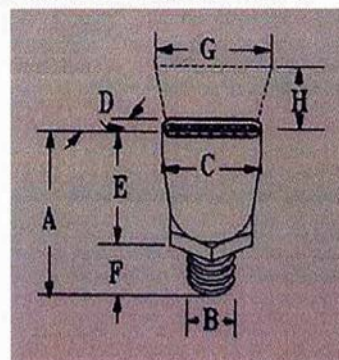
228

Cat. No.	Type.	No. of Holes	# Drill	Kcal/hr nominal	A	B	C	D	E	F	G	H
E001	228-NS	4	64	327	25	1/4 x 26	15	8	19	5.5	13	50
E002	228-NSM	4	64	327	25	1/4 x 26	15	8	19	5.5	13	50
E003	228-FNS	5	71	213	25	1/4 x 26	15	8	19	5.5	5	75
E004	228-FNSM	5	71	213	25	1/4 x 26	15	8	19	5.5	5	75
E005	81-ANS	9	64	454	35	1/8 BSP	22	9.5	27	8	19	57
E006	81-ANSM	9	64	454	35	1/8 BSP	22	9.5	27	8	19	57
E007	81-BNS	8	64	529	35	1/8 BSP	22	9.5	27	8	11	100
E008	81-BNSM	8	64	529	35	1/8 BSP	22	9.5	27	8	11	100
E009	81-QNS	6	59	529	35	1/8 BSP	22	9.5	27	8	15	83
E010	81-QNSM	6	59	529	35	1/8 BSP	22	9.5	27	8	15	83
E011	81-WNS	5	60	503	35	1/8 BSP	22	9.5	27	8	15	83
E012	81-WNSM	5	60	503	35	1/8 BSP	22	9.5	27	8	15	83
E013	104-NS	7	54	860	37	1/4 BSP	26	9.5	27	9.6	30	64
E014	104-NSM	7	54	860	37	1/4 BSP	26	9.5	27	9.6	30	64
E015	332-NS	12	64	635	37	1/4 BSP	26	9.5	27	9.6	25	57
E016	332-NSM	12	64	635	37	1/4 BSP	26	9.5	27	9.6	25	57
E017	332-DNS	8	60	693	37	1/4 BSP	26	9.5	27	9.6	15	89
E018	332-DNSM	8	60	693	37	1/4 BSP	26	9.5	27	9.6	15	89
E019	332-FNS	10	61	595	37	1/4 BSP	26	9.5	27	9.6	28	50
E020	332-FNSM	10	61	595	37	1/4 BSP	26	9.5	27	9.6	28	50
E021	420-BNS	9	54	912	38	1/4 BSP	33	10.5	28	9.6	23	56
E022	420-BNSM	9	54	912	38	1/4 BSP	33	10.5	28	9.6	23	56
E023	420-CNS	9	54	912	38	1/4 BSP	33	10.5	28	9.6	32	57
E024	420-CNSM	9	54	912	38	1/4 BSP	33	10.5	28	9.6	32	57
E025	420-DNS	14	64	868	38	1/4 BSP	33	10.5	28	9.6	32	54
E026	420-DNSM	14	64	868	38	1/4 BSP	33	10.5	28	9.6	32	54
E027	420-RNS	14	68	868	38	1/4 BSP	33	10.5	28	9.6	38	57
E028	420-RNSM	14	68	868	38	1/4 BSP	33	10.5	28	9.6	38	57
E029	420-SNS	9	53	840	38	1/4 BSP	33	10.5	28	9.6	38	57
E030	420-SNSM	9	53	840	38	1/4 BSP	33	10.5	28	9.6	38	57

Also available with National Pipe Thread (NPT).

Type	Flame Pattern	Type	Flame Pattern
228-NS	Divergent	332-DNS	Parallel
228-FNS	Parallel	332-FNS	Divergent
81-ANS	Divergent	420-BNS	Parallel
81-BNS	Parallel	420-CNS	Divergent
81-QNS	Parallel	420-DNS	Divergent
81-WNS	Parallel	420-RNS	Divergent
104-NS	Divergent	420-SNS	Divergent
332-NS	Divergent		

To ensure that accurate and constant flame settings are achieved, all pre-mix Air-Gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection of either new or existing venturi mixers.

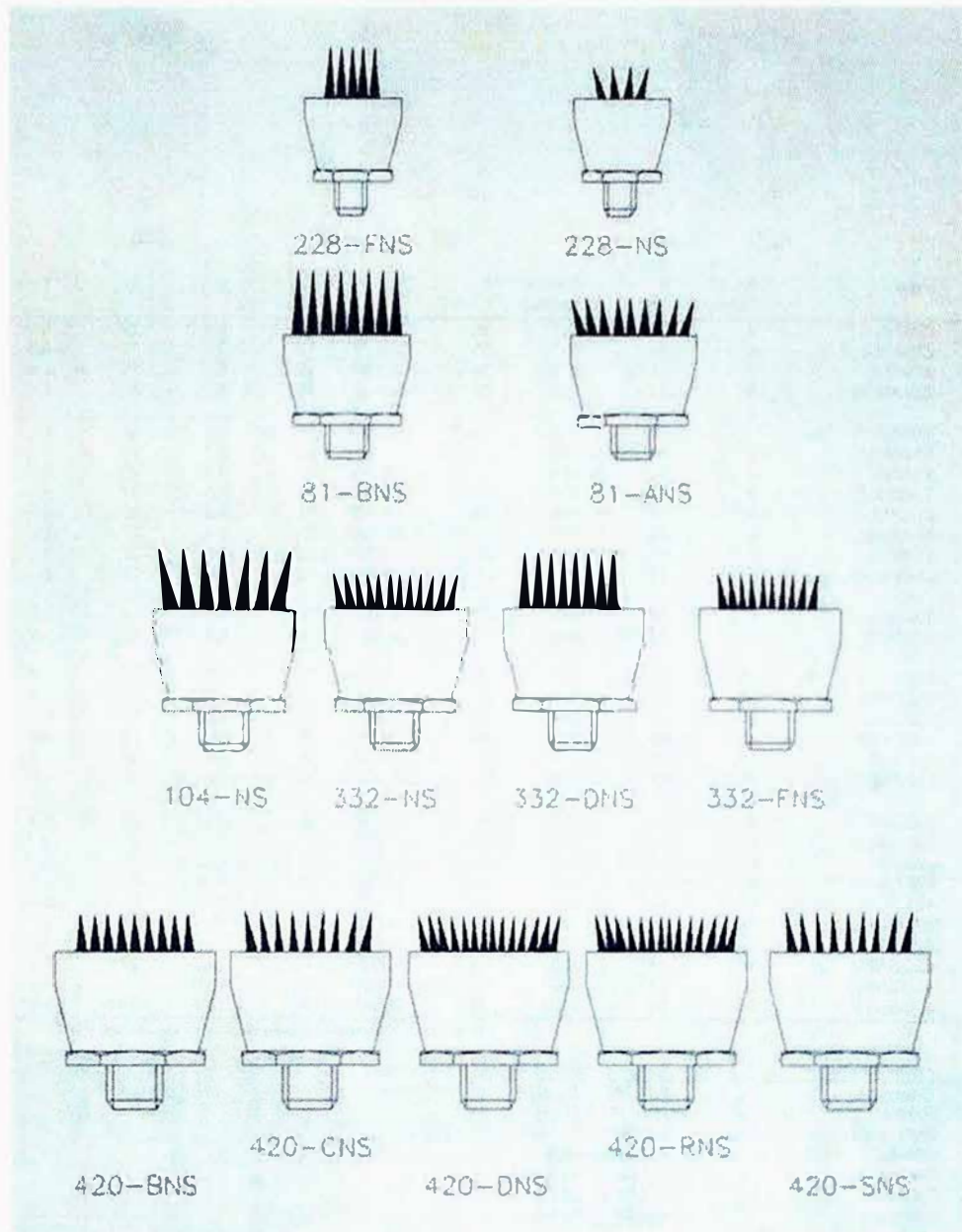


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**GROUP E-1 rev.**  
Flame Pattern Range.



# FISHTAIL BURNER

.....Machine Mounting.....

## Group F-1 Fishtail Burner.

Range: Oxy-Gas. Pre-Mix.  
Piloted flame type.  
Stainless Steel.

Typical applications include:  
Vials and Ampoules on Rotary Index  
and Walking Beam Machines.  
Shaping and Forming of Lamps and  
Lighting components.  
Laboratory Glassware manufacturing.  
Automated and low volume production  
of Tabletop Glassware and Containers.  
Steel heat treatment and Metal Joining  
processes.



1081

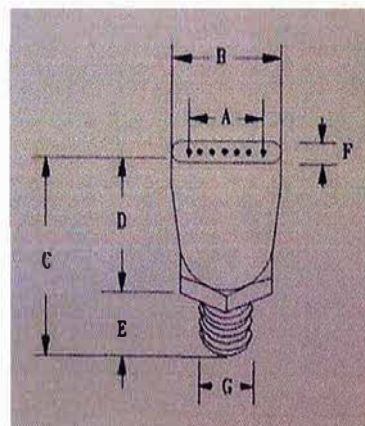


1012

Cat.No.	Type.	No. of Holes	# Drill	Kcal/hr nominal	A	B	C	D	E	F	G
F001	1012	4	64	1575	6.7	14.5	22	16	6.4	6.4	1/4X26 tpi
F002	1012-B	4	74	525	6.7	14.5	22	16	6.4	6.4	1/4X26 tpi
F003	1012-C	6	78	394	6.7	14.5	22	16	6.4	6.4	1/4X26 tpi
F004	1012-E	5	78	370	5.2	14.5	22	16	6.4	6.4	1/4X26 tpi
F005	1012-F	5	71	920	5.2	14.5	22	16	6.4	6.4	1/4X26 tpi
F006	1012-G	4	64	1706	5.2	14.5	22	16	6.4	6.4	1/4X26 tpi
F007	1012-H	5	78	370	5.2	14.5	22	16	6.4	6.4	1/4X26 tpi
F008	1012-J	6	70	1312	5.6	14.5	22	16	6.4	6.4	1/4X26 tpi
F009	1081	9	62	3000	15.5	20.5	33	20.5	9.5	7.9	1/8BSPint.
F010	1081-A	9	62	3000	15.5	20.5	33	20.5	9.5	7.9	1/4BSPext.
F011	1081-B	9	62	3200	13	20.5	33	20.5	9.5	7.9	1/4BSPext.
F012	1081-C	9	74	3200	15	20.5	33	20.5	9.5	7.9	1/4BSPext.
F013	1081-E	5	62	2300	15.5	20.5	33	20.5	9.5	7.9	1/4BSPext.
F014	1081-F	10	71	1600	15.5	20.5	33	20.5	9.5	7.9	1/4BSPext.
F015	1081-BD	9	62	3000	15.5	20.5	33	20.5	9.5	7.9	1/8 int. x 1/4 ext.

Type 1012 is also available with M6x1 ext. thread and 1/4x27 tpi ext thread. Type 1081 is also available with NPT ext. thread.

Type	Flame Pattern	Type	Flame Pattern
1012	Divergent	1081	Divergent
1012-B	Divergent	1081-A	Divergent
1012-C	Parallel	1081-B	Parallel
1012-E	Parallel	1081-C	Divergent
1012-F	Parallel	1081-E	Divergent
1012-G	Parallel	1081-F	Divergent
1012-H	Divergent		
1012-J	Parallel		



To ensure that accurate and constant flame settings are achieved, all pre-mix Oxy - Gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection of either new or existing venturi mixers.



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# FISHTAIL BURNER

.....Machine Mounting.....

Used as an intense but highly concentrated flame, this low velocity unpiloted fishtail burner range is suitable for many glassworking applications such as:  
Rod and Tube cracking off, cutting or edge glazing and other general forming operations.

## GROUP F-2 Fishtail Burner.

Range: Oxy-Gas. Pre-Mix.

Unpiloted flame type.

Stainless Steel.

Types: 15...1253...1368...1381

1621.....1633.....1801



1368



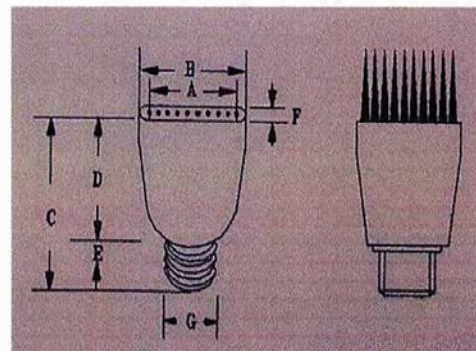
1253



15

Cat. No.	Type.	No. of Ports	# Drill	Kcal/hr. nominal	A	B	C	D	E	F	G
F020	15	5	71	1050	6.3	10.3	16	11	4.8	3	1/4x26tpi
F021	15-A	2	71	260	6.3	10.3	16	11	4.8	3	1/4x26tpi
F022	15-B	2	58	865	6.3	10.3	16	11	4.8	3	1/4x26tpi
F023	15-C	3	71	525	3	10.3	16	11	4.8	3	1/4x26tpi
F024	15-D	5	80	290	6.3	10.3	16	11	4.8	3	1/4x26tpi
F025	15-E	3	80	230	6.3	10.3	16	11	4.8	3	1/4x26tpi
F026	15-F	2	80	163	6.3	10.3	16	11	4.8	3	1/4x26tpi
F027	15-G	5	77	315	6.3	10.3	16	11	4.8	3	1/4x26tpi
F028	15-H	4	71	920	6.3	10.3	16	11	4.8	3	1/4x26tpi
F029	15-K	3	71	525	6.3	10.3	16	11	4.8	3	1/4x26tpi
F035	1253	10	71	1312	15.5	18.5	30	20	9.5	2.4	1/8BSPext.
F036	1253-A	20	2 ROW 71	2100	15.5	23	33	24	9.5	5.5	1/8BSPext.
F037	1253-C	6	71	920	15.5	18.5	33	20	9.5	2.4	1/8BSPext.
F038	1253-D	4	71	515	15.5	18.5	33	20	9.5	2.4	1/8BSPext.
F039	1253-F	12	71	1700	15	18.5	33	20	9.5	2.4	1/8BSPext.
F045	1368	15	71	1890	25	33	36	27	9.5	2.4	1/4BSPext.
F046	1381	9	62	2000	17	20	36	27	9.5	2.4	1/4BSPext.
F049	1621	22	71	2750	38	42.5	40	32	9.5	3	1/4BSPext.
F050	1633	27	71	3390	46.5	53	39	30	9.5	3	1/4BSPext.
F051	1801	31	71	4250	48	53	59	54	9.5	3	1/4BSPext.

Type	Flame Pattern	Type	Flame Pattern
15	Parallel	1253	Parallel
15-A	Parallel	1253-A	Parallel
15-B	Parallel	1253-C	Parallel
15-C	Parallel	1253-D	Parallel
15-D	Parallel	1253-F	Parallel
15-E	Parallel	1368	Parallel
15-F	Parallel	1381	Divergent
15-G	Parallel	1621	Parallel
15-H	Divergent	1633	Parallel
15-K	Parallel	1801	Parallel



To ensure that accurate and constant flame settings are achieved, all pre-mix oxy-gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves.

If necessary, contact the Rapidflame technical office for assistance or advice on the selection of either new or existing venturi mixers.

The Rapidflame policy is one of continuous development and improvement, we therefore reserve the right to change any specification or design without prior notice.



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# FISHTAIL BURNER

.....Machine Mounting.....



**420**



**228**

## GROUP G-1 Fishtail Burner.

Range: Oxy-Air-Gas. Pre-Mix.

Piloted flame type.

Brass.....Stainless Steel

OS

SM

Cat. No.	Type.	No. of Ports	# Drill	Kcal/hr nominal	A	B	C	D	E	F	G	H
G001	228-OS	4	64	180	22	1/4 x 26	14	6.3	16.5	5.5	13	50
G002	228-OSM	4	64	180	22	1/4 x 26	14	6.3	16.5	5.5	13	50
G003	228-FOS	5	71	425	22	1/4 x 26	14	6.3	16.5	5.5	8	75
G004	228-FOSM	5	71	425	22	1/4 x 26	14	6.3	16.5	5.5	8	75
G005	81-AOS	9	64	400	33	1/8 BSP	20	7	25	8	20	57
G006	81-AOSM	9	64	400	33	1/8 BSP	20	7	25	8	20	57
G007	81-BOS	7	64	350	33	1/8 BSP	20	7	25	8	11	100
G008	81-BOSM	8	64	350	33	1/8 BSP	20	7	25	8	11	100
G009	81-WOS	5	60	310	33	1/8 BSP	20	7	25	8	16	89
G010	81-WOSM	5	60	310	33	1/8 BSP	20	7	25	8	16	89
G011	104-OS	7	54	340	35	1/4 BSP	24	6.3	25	9.5	30	64
G012	104-OSM	7	54	340	35	1/4 BSP	24	6.3	25	9.5	30	64
G013	332-OS	12	64	375	35	1/4 BSP	24	6.3	25	9.5	25	57
G014	332-OSM	12	64	375	35	1/4 BSP	24	6.3	25	9.5	25	57
G015	420-COS	9	54	350	37	1/4 BSP	31	8	27	9.5	32	57
G016	420-COSM	9	54	350	37	1/4 BSP	31	8	27	9.5	32	57
G017	420-DOS	14	64	425	37	1/4 BSP	31	8	27	9.5	32	54
G018	420-DOSM	14	64	425	37	1/4 BSP	31	8	27	9.5	32	54

Also available with National Pipe Thread (NPT).

### Type Flame Pattern

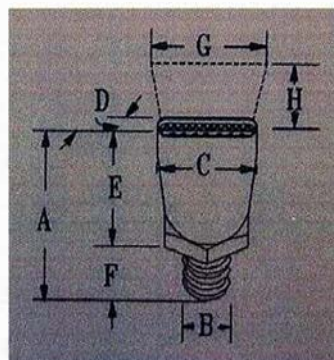
228-OS Divergent  
228-FOS Parallel

81-AOS Divergent  
81-BOS Parallel  
81-WOS Parallel  
81-WNS Parallel

104-OS Divergent

332-OS Divergent

420-COS Divergent  
420-DOS Divergent



To ensure that accurate and constant flame settings are achieved, all pre-mix Oxy-Air-Gas burners must operate from a correctly sized venturi mixer, together with compatible needle type flow control valves. If necessary, contact the Rapidflame technical office for assistance or advice on the selection of either new or existing venturi mixers.

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# NEEDLE VALVE

Available in straight through and right angled flow styles these Rapidflame Valves are precision machined and assembled from solid Brass bar stock. This positive action valve is suitable for the high pressure flow control of all commercial fuel gases....oxygen and compressed air. For maximum corrosion resistance the full range features Stainless Steel Needle Stems and Teflon Sealing Washers.

Typical Applications include:

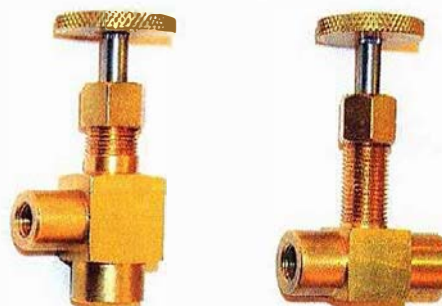
INDUSTRIAL COMBUSTION SYSTEMS....

BENCH BURNER INSTALLATIONS....

VENTURI MIXER ASSEMBLIES.... GLASS COMPONENT PRODUCTION MACHINERY....

PLASTIC FLAME TREATMENT UNITS....METAL JOINING PRODUCTION MACHINES....

ROTARY INDEX and WALKING BEAM MACHINES for MEDICAL GLASS COMPONENTS.



## GROUP H-1 Needle Valve.

Series: STANDARD F-F

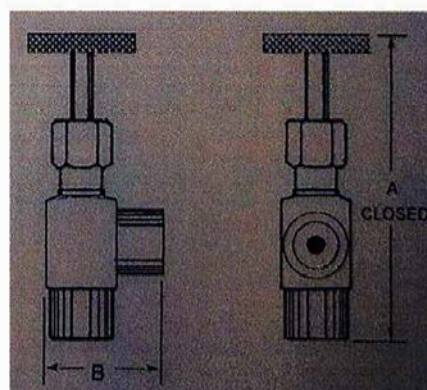
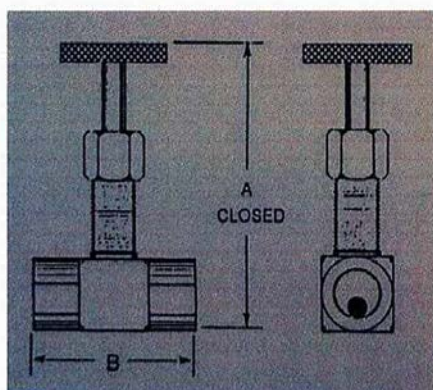
Range: 1/8" up to 1 1/2" pipe.

Cat. No.	Type	Body Style	Inlet	Outlet	Flowhole Dia.mm.	A	B	Stem Thread Form
H011	F18F	S	1/8"	1/8"	5.00	76	44.5	5/16"x40 tpi
H012	18A	A	1/8"	1/8"	5.00	83	32	5/16"x40 tpi
H013	F14F	S	1/4"	1/4"	5.00	76	44.5	5/16"x40 tpi
H014	14A	A	1/4"	1/4"	5.00	83	32	5/16"x40 tpi
H015	F38F	S	3/8"	3/8"	7.00	76	57	3/8"x32 tpi
H016	38A	A	3/8"	3/8"	7.00	86	44.5	3/8"x32 tpi
H017	F12F	S	1/2"	1/2"	9.00	96	57	7/16"x28 tpi
H018	12A	A	1/2"	1/2"	9.00	86	44.5	7/16"x28 tpi
H019	F34F	S	3/4"	3/4"	12.7	120	76	1/2"x28 tpi
H020	34A	A	3/4"	3/4"	12.7	127	57	1/2"x28 tpi
H021	F100F	S	1"	1"	14.3	135	101	5/8"x28 tpi
H022	100A	A	1"	1"	14.3	152	72	5/8"x28 tpi
H023	F125F	S	1 1/4"	1 1/4"	22.2	203	127	1 1/8"x20 tpi
H024	F150F	S	1 1/2"	1 1/2"	22.2	203	127	1 1/8"x20 tpi

A = Angle. S = Straight Through. tpi = Threads Per Inch internal form. Type = Ordering Ref.No.

All Inlet and Outlet Threads are BSPT form Rc.

ALL VALVES ARE AVAILABLE WITH LOCKNUTS FOR PANEL OR CABINET MOUNTING.



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# NEEDLE VALVE

## GROUP H-2 Needle Valve.

Series: KA angle style.  
Fine-stem + Blunt-stem.

Series: MW angle style.  
Panel Mount + Fine-stem.

Available in a right angled flow style this Rapidflame Valve is precision machined and assembled from solid Brass bar stock. This positive action valve is suitable for the high pressure flow control of all commercial fuel gases...oxygen...and compressed air. For maximum corrosion resistance the full range features Stainless Steel Needle Stems and Teflon Sealing Washers. They are compatible with Rapidflame Venturi Mixers.

Typical Applications include:

INDUSTRIAL COMBUSTION SYSTEMS..BENCH BURNER INSTALLATIONS..VENTURI MIXER ASSEMBLIES  
GLASS COMPONENT PRODUCTION MACHINERY.. PLASTIC FLAME TREATMENT UNITS..  
METAL JOINING PRODUCTION MACHINES.. ROTARY INDEX and WALKING BEAM MACHINES for  
MEDICAL GLASS COMPONENTS.

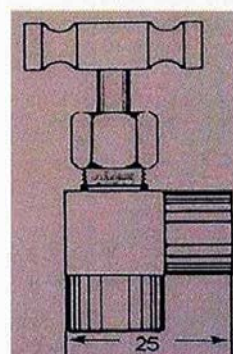
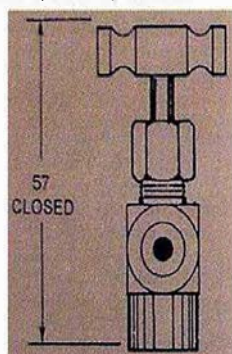
### KA Series

Cat. No.	Type	Body Style	Inlet 'A'	Outlet 'B'	Flowhole Dia.mm.
H030	K1A	angle	1/8"int.	1/8"int.	4.00 Blunt-stem
H031	K3A	angle	1/8"ext.	1/8"int.	4.00 Blunt-stem
H032	K5A	angle	1/8"int.	1/8"int.	1.40 Fine-stem
H033	K8A	angle	1/8"ext.	1/8"int.	1.40 Fine-stem

int = internal (female) thread.

ext = external (male) thread.

All threads are BSPT form Rc.

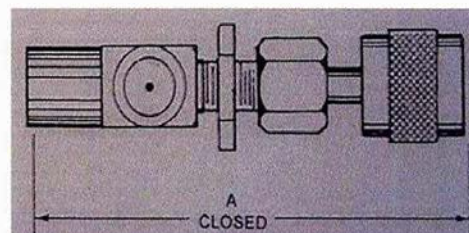
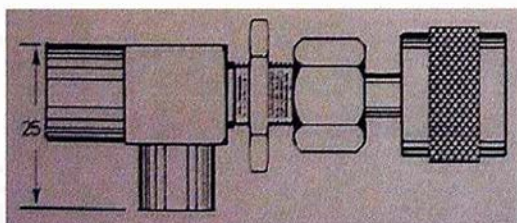


### MW Series Panel Mount

Cat. No.	Type	Body Style	Inlet 'C'	Outlet 'A' 'D'	'B'	Flowhole Dia.mm.
H040	MW18F3AP	angle	1/8"int.	1/8"int. 84	25	1.50
H041	MW14F3AP	angle	1/4"int.	1/4"int. 84	25	1.50

int = internal (female) thread.

All threads are BSPT form Rc.



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# NEEDLE VALVE

## GROUP H-3 Needle Valve

Series: Angle + Fine-stem.  
Angle + Blunt-stem.

Available in right angled flow style this Rapidflame Valve is precision machined and assembled from solid Brass bar stock. This positive action valve is suitable for the high pressure flow control of all commercial fuel gases...oxygen...and compressed air. For maximum corrosion resistance the full range features Stainless Steel Needle Stems and Teflon Washers. They are compatible with Rapidflame Venturi Mixers.

Typical Applications include:

INDUSTRIAL COMBUSTION SYSTEMS..BENCH BURNER INSTALLATIONS..VENTURI MIXER ASSEMBLIES  
GLASS COMPONENT PRODUCTION MACHINERY..PLASTIC FLAME TREATMENT UNITS..  
METAL JOINING PRODUCTION MACHINES..ROTARY INDEX and WALKING BEAM MACHINES for  
MEDICAL GLASS COMPONENTS.

### Fine-stem. 1.50 mm. Flowhole.

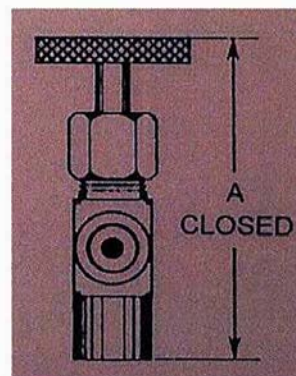
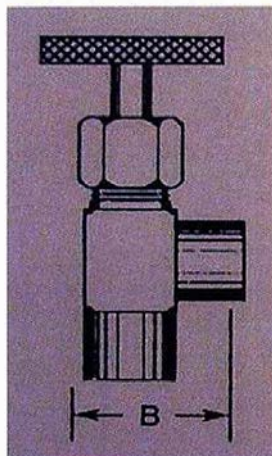
Cat.No.	Type	Inlet	Outlet	'A'	'B'	Body Size
H050	60K	1/8"ext.	1/8"ext.	54	44	14.30
H051	61K	1/4"ext.	1/4"ext.	54	44	14.30
H052	62K	1/8"int.	1/8"int.	54	44	14.30
H053	63K	1/4"int.	1/4"int.	54	44	16.00
H054	64K	1/8"int.	1/8"ext.	54	44	14.30
H055	65K	1/8"ext.	1/8"int.	54	44	14.30
H056	66K	1/4"int.	1/4"ext.	54	44	16.00
H057	602K	1/4"ext.	1/4"int.	54	44	16.00

Type= Ordering Ref.No

int= internal(female) thread.

ext=external(male) thread.

All threads are BSPT form Rc.



### Blunt-stem. 4.30 mm. Flowhole.

Cat.No.	Type	Inlet	Outlet	'A'	'B'	Body Size
H060	70K	1/8"ext.	1/8"ext.	54	44	14.30
H061	71K	1/4"ext.	1/4"ext.	54	44	14.30
H062	72K	1/8"int.	1/8"int.	54	44	14.30
H063	73K	1/4"int.	1/4"int.	54	44	16.00
H064	74K	1/8"int.	1/8"ext.	54	44	14.30
H065	75K	1/8"ext.	1/8"int.	54	44	14.30
H066	76K	1/4"int.	1/4"ext.	54	44	16.00
H067	702K	1/4"ext.	1/4"int.	54	44	16.00

Type=Ordering Ref.No.

int= internal(female) thread.

ext= external(male) thread.

All threads are BSPT form Rc.

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# NEEDLE VALVE

## GROUP H-4 Needle Valve.

Series: Straight Through.

Fine-stem.

Straight Through.

Blunt-stem.

Available in a straight through flow style this Rapidflame Valve is precision machined and assembled from solid Brass bar stock. This positive action valve is suitable for the high pressure flow control of all commercial fuel gases...oxygen...and compressed air. For maximum corrosion resistance the full range features Stainless Steel Needle Stems and Teflon Sealing Washers and are compatible with Rapidflame Venturi Mixers.

Typical Applications include:

INDUSTRIAL COMBUSTION SYSTEMS..BENCH BURNER INSTALLATIONS..VENTURI MIXER ASSEMBLIES

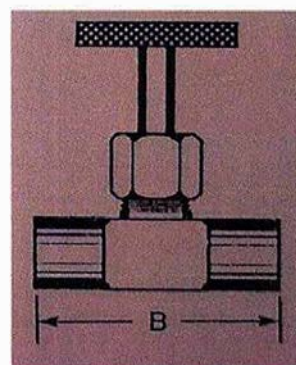
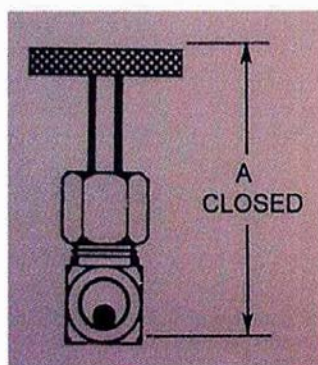
GLASS COMPONENT PRODUCTION MACHINERY..PLASTIC FLAME TREATMENT UNITS.

METAL JOINING PRODUCTION MACHINES..ROTARY INDEX and WALKING BEAM MACHINES for MEDICAL GLASS COMPONENTS

### Fine-stem. 1.50 mm. Flowhole.

Cat.No.	Type	Inlet	Outlet	'A'	'B'	Body Size
H070	80K	1/8"ext.	1/8"ext.	54	44	14.50
H071	81K	1/4"ext.	1/4"ext.	54	44	14.50
H072	82K	1/8"int.	1/8"int.	54	44	14.50
H073	83K	1/4"int.	1/4"int.	54	44	16.00
H074	84K	1/8"int.	1/8"ext.	54	44	14.50
H075	85K	1/8"ext.	1/8"int.	54	44	14.50
H076	86K	1/4"int.	1/4"ext.	54	44	16.00
H077	802K	1/4"ext.	1/4"int.	54	44	16.00

Type = Ordering Ref.No. int. = internal (female) thread. ext. = external (male) thread. All threads are BSPT form Rc



### Blunt-stem. 4.30 mm. Flowhole.

Cat.No.	Type	Inlet	Outlet	'A'	'B'	Body Size
H080	90K	1/8"ext.	1/8"ext.	54	44	14.50
H081	91K	1/4"ext.	1/4"ext.	54	44	14.50
H082	92K	1/8"int.	1/8"int.	54	44	14.50
H083	93K	1/4"int.	1/4"int.	54	44	16.00
H084	94K	1/8"int.	1/8"ext.	54	44	14.50
H085	95K	1/8"ext.	1/8"int.	54	44	14.50
H086	96K	1/4"int.	1/4"ext.	54	44	16.00
H087	902K	1/4"ext.	1/4"int.	54	44	16.00

Type = Ordering Ref.No. int. = internal (female) thread. ext. = external (male) thread. All threads are BSPT form Rc.

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# NEEDLE VALVE

## GROUP H-5 Needle Valve

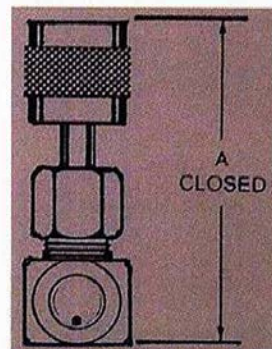
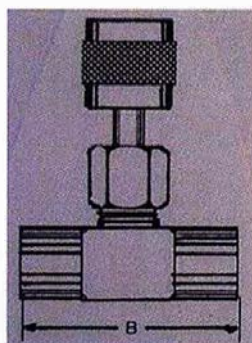
Series: Lo-flow. Angle.

Straight Through

Available in straight through and right angled flow styles these Rapidflame Valves are precision machined and assembled from solid Brass bar stock. This positive action valve is suitable for the high pressure flow control of all commercial fuel gases...oxygen...and compressed air. For maximum corrosion resistance the full range features Stainless Steel Needle Stems and Teflon Sealing Washers. They are compatible with Rapidflame Venturi Mixers.

Typical Applications include:

INDUSTRIAL COMBUSTION SYSTEMS..BENCH BURNER INSTALLATIONS..VENTURI MIXER ASSEMBLIES  
GLASS COMPONENT PRODUCTION MACHINERY..PLASTIC FLAME TREATMENT UNITS..  
METAL JOINING PRODUCTION MACHINES..ROTARY INDEX and WALKING BEAM MACHINES for  
MEDICAL GLASS COMPONENTS.



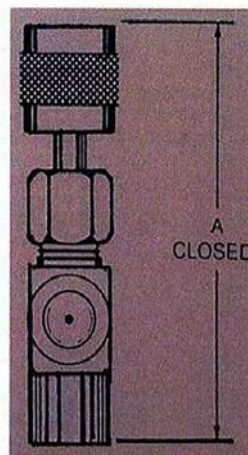
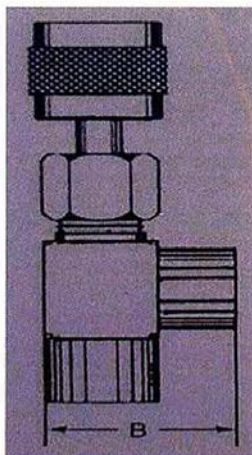
**Fine-stem. 1.50 mm. Flowhole.**

Cat.No.	Type	Inlet	Outlet	'A'	'B'	Body Style
H090	MW18F3	1/8"int.	1/8"int.	59	44	Straight
H091	MW14F3	1/4"int.	1/4"int.	59	44	Straight

Type = Ordering Ref.No.

int. = internal (female thread)

All threads are BSPT form Rc.



**Fine-stem. 1.50 mm. Flowhole.**

Cat.No.	Type	Inlet	Outlet	'A'	'B'	Body Style
H095	MW18F3A	1/8"int.	1/8"int.	76	25	Angle
H096	MW14F3A	1/8"int.	1/8"int.	76	25	Angle

Type = Ordering Ref.No.

int. = internal (female thread)

All threads are BSPT form Rc.

The Rapidflame policy is one of continuous development and improvement, we therefore reserve the right to change any specification or design without prior notice.



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# NEEDLE VALVE

.....Graduated Scale.....

Available in straight through and 90 degree flow patterns these valves are precision machined and nickel plated. This positive action valve is suitable for the shut off and flow control of all commercial fuel gases, oxygen and compressed air.

Rating: 210 bar

Adjustment: micrometer type

Control knob: aluminium - lockable

Temp.range: -20 to +100 'C'

## GROUP H-6 Needle Valve

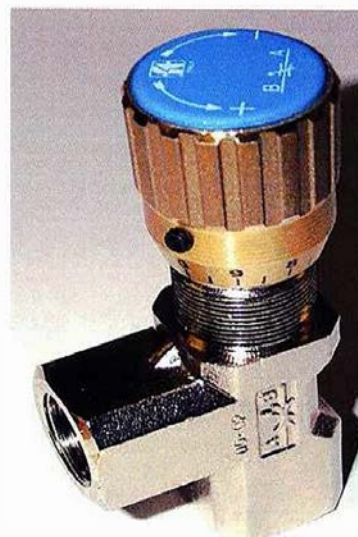
Series: Graduated Flow Scale

Range: 1/8" to 1/2" x 90 deg.

1/8" to 3/4" x 180 deg.

### Angle pattern

Cat. No.	Type.	Size.	Flow rate.
H001	ANV-1	1/8" bsp	10 lts/min
H002	ANV-2	1/4" bsp	20 lts/min
H003	ANV-3	3/8" bsp	30 lts/min
H004	ANV-4	1/2" bsp	50 lts/min



### Straight pattern

Cat. No.	Type.	Size.	Flow rate.
H005	SNV-1	1/8" bsp	02 lts/min
H006	SNV-2	1/8" bsp	10 lts/min
H007	SNV-3	1/4" bsp	20 lts/min
H008	SNV-4	3/8" bsp	30 lts/min
H009	SNV-5	1/2" bsp	50 lts/min
H010	SNV-6	3/4" bsp	90 lts/min



Panel mounting nuts are available for all sizes.

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# VENTURI MIXER

## GROUP J-1 Venturi Mixer

Range: V.M.

For the pressure mixing of:

Oxygen-Fuel Gas

Oxygen-Air-Fuel Gas

Air-Fuel Gas

The recommended application or process line pressures are as follows:

Min. Gas supply pressure of 10 mbar for Hydrogen, Propane, Butane, Natural.

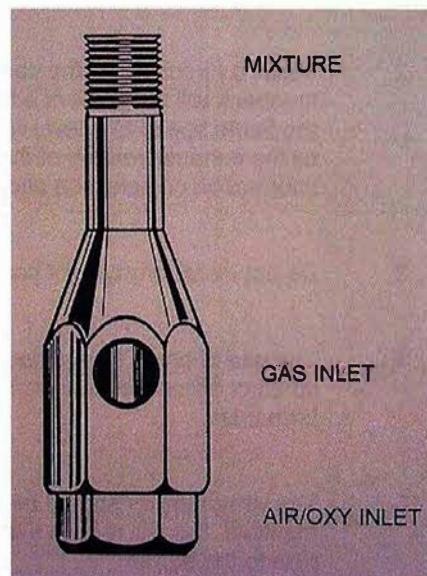
Min. Air supply pressure of 50 mbar.

Min. Oxygen supply pressure of 350 mbar.

An industry standard Venturi Mixer that combines installation flexibility with the efficient mixing of low to medium pressure gases, oxygen, and air. Rapidflame venturi mixers are supplied in pilot drilled condition, but if required, the jet and venturi sizes will be calculated and drilled to suit the user supply pressures and burner port area specification. Refer to the Rapidflame Group H data sheets for compatible needle type flow control valves.

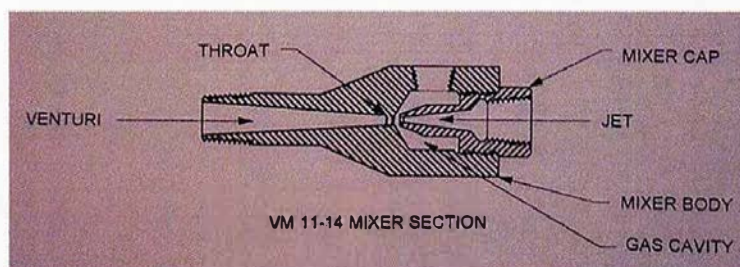
Typical Applications include:

PRODUCTION COMPONENT MACHINERY for BRAZING..LIGHT SOURCES..AMPOULES... BATTERIES..THERMOMETERS..TV TUBES.. PLASTIC FLAME TREATMENT..DIE HEATING.



Cat.No.	Type	Length	Outlet	Gas	Air/Oxy	Max. Kcals/Hr.
J001	VM-11	65	1/8"ext.	1/8"int.	1/8"int	2000
J002	VM-12	86	1/4"ext.	1/4"int.	1/4"int.	5000
J003	VM-13	86	3/8"ext.	1/4"int.	3/8"int.	15000
J004	VM-14	92	1/2"ext.	3/8"int.	3/8"int.	30000

Type = Ordering Ref.No. ext.=external (male) thread. int.=internal (female) thread. All threads are BSP.Tr.



The Rapidflame range of VM venturi mixers combines structural integrity with leakproof service, and are precision machined from hexagon section brass bar stock to ensure the accurate and uniform mixing of all gases.

Refer overleaf for installation checklist.

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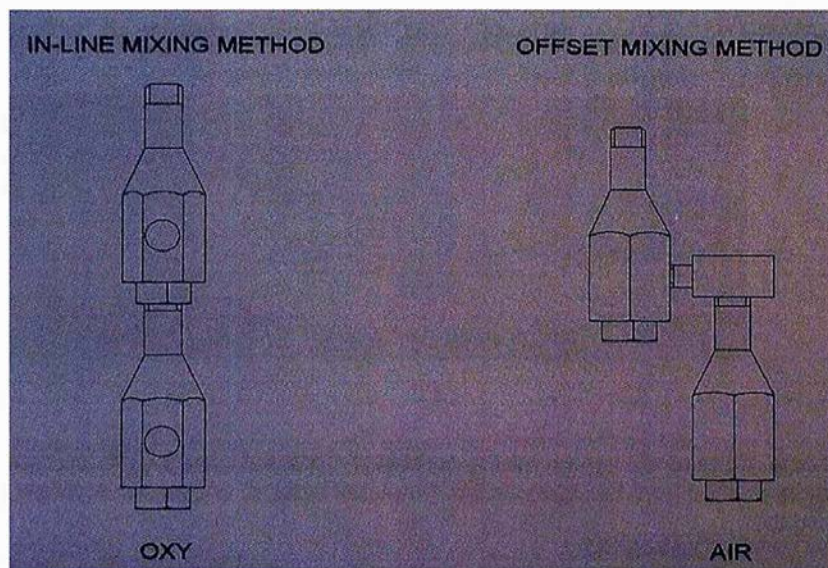


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**GROUP J-1 rev.**  
**Venturi Mixer checklist.****SYSTEM DESIGN and INSTALLATION NOTES**

.....oxy-gas.....oxy-air-gas.....air-gas.....  
when utilising the 'in-line' or 'offset' method  
of venturi mixing

1. Select the most suitable venturi mixer and needle valves for the burner assembly.
2. Install a Firecheck of the correct size downstream of the venturi mixer. Although a firecheck will not prevent a flashback it will, however, retard combustion and reduce the flame speed to a level where the burning mixture is cooled, and then quenched, by the exhaust velocity of the mixture. Refer to the Rapidflame data sheet for detailed information on selection and use.
3. Do not install any type of positive shut-off valve between the mixer and burner.
4. The use of brass fittings and copper tube or pipe directly connected to the burner will conduct excessive heat from the burner, this reduces overheating and extends the burner life.
5. The venturi mixer should be positioned close to either the burner or the multi-burner manifold. this will reduce the volume of a potentially explosive mixture in the supply pipe to the burner.
6. The mixture supply pipe to the burner should be at least equal in size to that of the venturi mixer outlet. Incorrectly sized mixture pipes can cause a flashback during burner shutdown.
7. All burners, fittings and piping must be oil and grease free when used with Oxygen.





# AIR-GAS MIXER

**GROUP J-2 Mixer**  
Range: RAM 15 to 80

Precision machined from high grade aluminium castings this type of mixer is ideally suited for use with fan assisted or blown air and gas. With a gas supply at zero pressure and the gas flow valve set to the process requirements, this mixer will give constant air-gas ratios over a wide thermal output range.



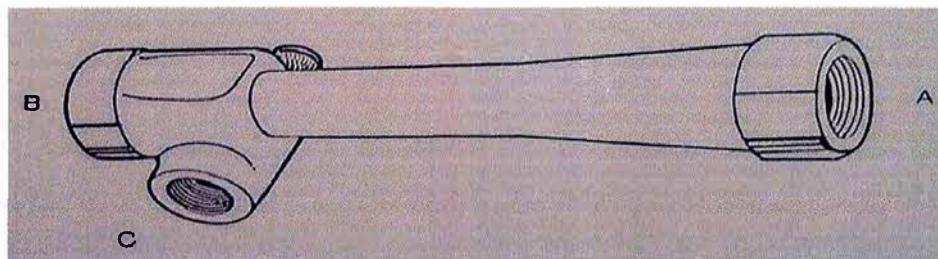
Typical applications include:  
OVENS....FURNACES....KILNS....FOUNDRIES.  
OPEN FLAME PRE-HEATING PROCESSES.  
GLASS TEMPERING LEHRS.

Cat.No.	Type	Mixture A	Air B	Gas C	Overall Length	Kcal / Hr.	
						18 mbar**	70 mbar**
J010	RAM-15	1/2" int.	3/8" int.	1/4" int.	135	2550	5000
J011	RAM-20	3/4" int.	1/2" int.	3/8" int.	175	9550	19000
J012	RAM-25	1" int.	3/4" int.	1/2" int.	215	19000	37500
J013	RAM-32	1 1/4" int.	1" int.	3/4" int.	260	28500	56000
J014	RAM-40	1 1/2" int.	1 1/4" int.	1" int.	320	44500	87500
J015	RAM-50	2" int.	1 1/2" int.	1 1/4" int.	380	76500	150000
J016	RAM-65	2 1/2" int.	2" int.	1 1/2" int.	470	114000	225000
J017	RAM-80	3" int.	3" int.	2" int.	620	191000	375000

Ordering Ref. = Type.

\*\*Air pressure at B.

int. = internal (female) threaded to BSP Taper form.



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# VENTURI MIXER

.....Multi-Flo-Mixer.....

## GROUP J-4 Venturi Mixer.

Range: M.F.M.2

For the pressure mixing of:

Oxygen-Gas: **MFOG**

Air-Gas: **MFAG**

The MFM range of Rapidflame combination type venturi mixer-valve is now an industry standard unit preferred by original machine and equipment designers, machine builders and flame setters for the mixture ratio control of high intensity gas burners. Ampoules...Vials...Incandescent Lamps...Fluorescent tubes...Television monitors Laboratory glassware.....Thermometers.....Tabletop glassware.....are just a few examples of constant quality articles or components which are produced on high speed production machinery.

Other industrial flame control applications include.

Automatic index and manual shuttle silver brazing machines.

Flame hardening and heat treatment of metal components.

Flame plasma surface preparation for the screen printing of plastic components and containers.

Fuel supply pressures

Natural gas: 5 - 350 mbar

Propane gas: 5 - 350 mbar

Air: 300 - 1350 mbar

Oxygen: 350 - 2000 mbar



### MFOG

Multi-Flo-Oxygen-Gas

Cat.No.	Type.	Nominal Kcal / hr.
J050	MFOG-1S	450
J051	MFOG-2S	700
J052	MFOG-3S	1100
J053	MFOG-1M	2200
J054	MFOG-2M	3000
J055	MFOG-3M	4600
J056	MFOG-1L	5800
J057	MFOG-2L	6750
J058	MFOG-3L	9800

### MFAG

Multi-Flo Air-Gas

Cat.No.	Type.	Nominal Kcal / hr.
J060	MFAG-1S	150
J061	MFAG-2S	300
J062	MFAG-3S	400
J063	MFAG-1M	750
J064	MFAG-2M	1000
J065	MFAG-3M	1500
J066	MFAG-1L	2500
J067	MFAG-2L	4000
J068	MFAG-3L	6000

The range chart above provides the designer with specific selection information on the burner heat capacity which is directly related to the most suitable multi-flo mixer type. For optimum performance on a typical manifold or battery, each mixer position must correspond to the Kcal / hr. rating of the burner it is controlling. If a Kcal rating is between the figures stated in the chart, then select a type lower. An oversized mixer injector will promote flame instability and deterioration, especially on very small and precise flame applications. If in doubt, please contact the Rapidflame technical department for confirmation on selection and application limitations.

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**GROUP J-4 rev.**

Range: M.F.M.

Mixer specification.

Manifold design and build.

Oxy-Gas.

Air-Gas.

**Assembly.**

Brass material unions with a nitrile 'o' ring seal are the standard connections used between the multi-flo mixers and the fuel supply manifolds. As all the components [including the mixer] are CNC machined, the fitting of this union ensures that easy and quick bench assembly of the manifold is guaranteed, as is the gas tight security of all mating and threaded joints. For single burner and bench mounted applications, the fuel supply connections are either threaded cone nut seal, rigid pipe or push - on flexible hose connectors.

**M.F.M. Features.**

Compact design.

Removable and replaceable venturi tube.

Interchangeable carburettor.

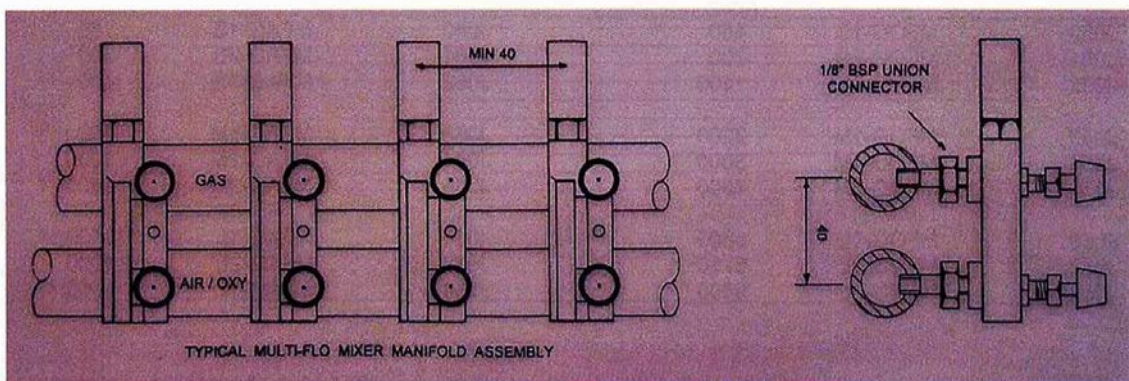
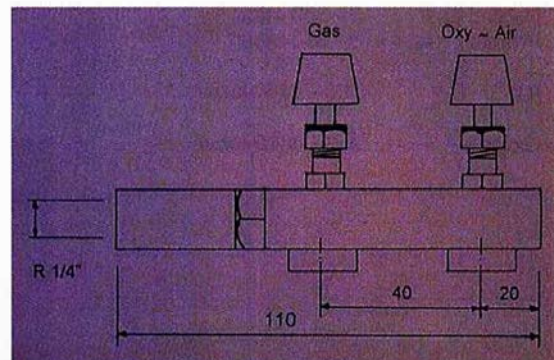
Hot brass pressing.

CZ 122 brass material.

Choice of colour coded valve discs.

Collet type polycarbonate flow setting knobs.

Multi-flo mixers can be fitted to round, square or rectangular section material.



Oxygen - Air - Gas combustion controls and systems must be installed and commissioned in compliance with all of the applicable health and safety executive regulations and within the gas industry codes of practice.

# VENTURI MIXER

.....Multi-Flo-Mixer.....

## GROUP J-5 Venturi Mixer

Range: M.F.M.3

For the pressure mixing of:

Oxygen-Air-Gas: **MFOAG**

Air-Oxygen-Gas: **MFAOG**

The MFM range of Rapidflame combination type venturi mixer-valve is now an industry standard unit preferred by original machine and equipment designers, machine builders and flame setters for the mixture ratio control of high intensity gas burners. Ampoules...Vials...Incandescent lamps...Fluorescent tubes...Television monitors.. Laboratory glassware....Thermometers....Tabletop glassware.....are just a few examples of constant quality articles or components which are produced on high speed production machinery.

Other industrial flame control applications include:

Automatic index and manual shuttle silver brazing machines.

Flame hardening and heat treatment of metal components.

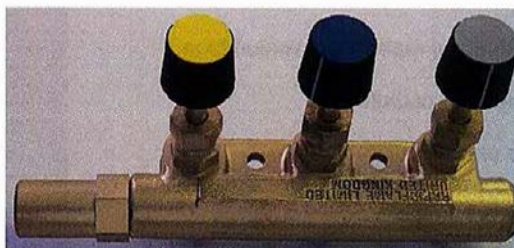
Fuel supply pressures:

Natural gas: 5 - 350 mbar

Propane gas: 5 - 350 mbar

Air: 300 - 1350 mbar

Oxygen: 350 - 2000 mbar



### MFOAG

Multi-Flo-oxygen-air-gas

Cat.No.	Type.	Nominal Kcal / hr.
J070	MFOAG-1S	650
J071	MFOAG-2S	1100
J072	MFOAG-3S	1900
J073	MFOAG-1M	2750
J074	MFOAG-2M	3100
J075	MFOAG-3M	4000
J076	MFOAG-1L	5500
J077	MFOAG-2L	6600
J078	MFOAG-3L	9000

The MFOAG types are selected for the fuel ratio control of **oxy-gas burners** with slight air enrichment. The oxygen pressure to the mixer must therefore be greater than the air pressure.

### MFAOG

Multi-Flo-air-oxygen-gas

Cat.No.	Type.	Nominal Kcal / hr.
J080	MFAOG-1S	450
J081	MFAOG-2S	700
J082	MFAOG-3S	1100
J083	MFAOG-1M	2200
J084	MFAOG-2M	3000
J085	MFAOG-3M	4600
J086	MFAOG-1L	5500
J087	MFAOG-2L	6750
J088	MFAOG-3L	9800

The MFAOG types are selected for the fuel ratio control of **air-gas burners** with slight oxygen enrichment. The air pressure to the mixer must therefore be greater than the oxygen pressure.

The range chart above provides the designer with specific selection information on the burner heat capacity which is directly related to the most suitable multi-flo mixer type. For optimum performance on a typical manifold or battery, each mixer position must correspond to the Kcal / hr. rating of the burner it is controlling. If a Kcal rating is between the figures stated in the chart, then select a type lower. An oversized mixer injector will promote flame instability and deterioration, especially on very small and precise flame applications. If in doubt, please contact the Rapidflame technical department for confirmation on selection and application limitations.

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**GROUP J-5 rev.**

Range: M.F.M.

Mixer specification.

Manifold design and build.

Oxygen-Air-Gas.

Air-Oxygen-Gas.

**Assembly.**

Brass material unions with a nitrile 'o' ring seal are the standard connections used between the multi-flo mixers and the fuel supply manifolds. As all the components [including the mixer] are CNC machined, the fitting of this union ensures that easy and quick bench assembly of the manifold is guaranteed, as is the gas tight security of all mating and threaded joints. For single burner and bench mounted applications, the fuel supply connections are either threaded cone nut seal, rigid pipe or push-on flexible hose connectors

**M.F.M. Features.**

Compact design.

Removeable and replaceable venturi tube.

Interchangeable carburettor.

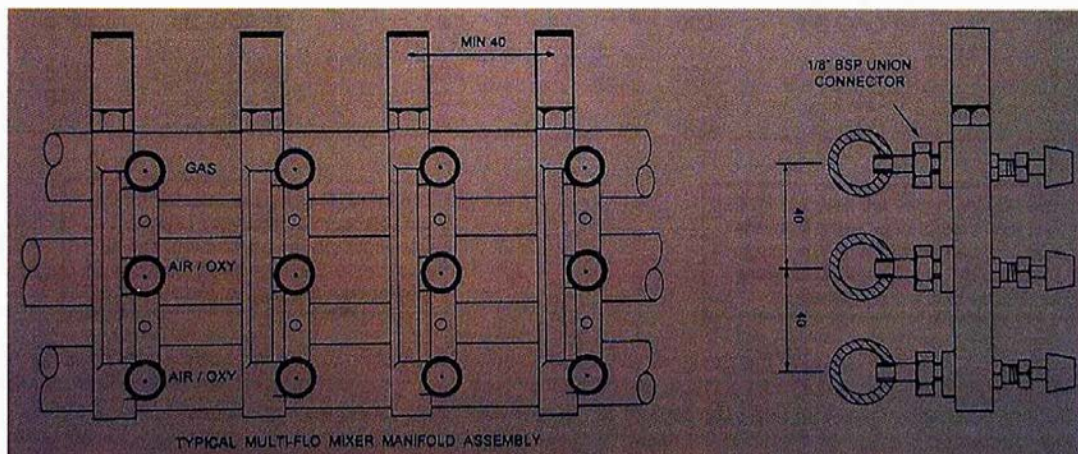
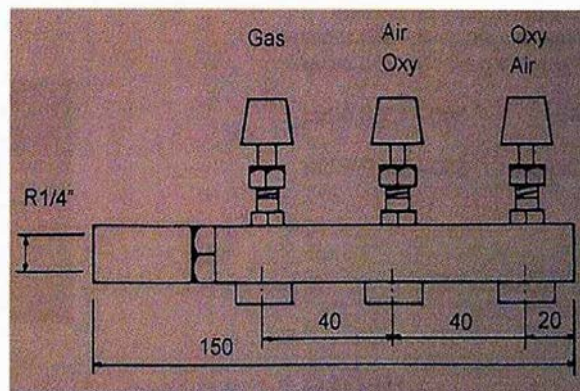
Hot brass pressing.

CZ 122 brass material.

Choice of colour coded valve discs.

Collet type polycarbonate flow setting knobs.

Multi-flo mixers can be fitted to round, square or rectangular section material.



Oxygen - Air - Gas combustion controls and systems must be installed and commissioned in compliance with all of the applicable health and safety executive regulations and within the gas industry codes of practice.

# UNIGAS BURNER

.....Natural and Propane Gas.....

## GROUP K-1 BURNER

Atmospheric Air Type

Industrial and Commercial Applications include:

SOFT METAL MELTING....ROTATIONAL MOULDING....DIE HEATING....DRYING OVENS  
BAKING OVENS....PILOT BURNER....LIGHTING TORCH....PRE-HEATING....ANNEALING.  
MULTI-BURNER MANIFOLDS....TUBULAR HEAT EXCHANGERS....STRESS RELIEVING.  
LOW AND MEDIUM INTENSITY HEATING PROCESSES.

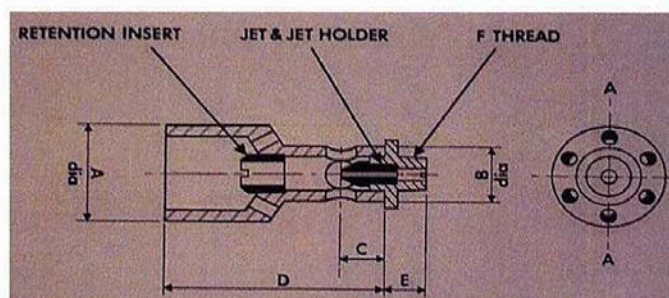


Cat.No.	Kcal/hr. kW.		Gas Jetmm.	A	B	C	D	E	F
1-NG	2500	2.9	1.30	25	14	9.5	50	9.5	1/8"Rc
1-LP	3500	4.1	1.00	25	14	9.5	50	9.5	1/8"Rc
2-NG	11250	13.2	2.80	41.3	20	12	77	9.5	1/4"Rc
2-LP	11250	13.2	1.70	41.3	20	12	77	9.5	1/4"Rc
3-NG	25000	29.3	4.10	57	30	36	120	17.5	3/8"Rc
3-LP	25000	29.3	2.60	57	30	36	120	17.5	3/8"Rc
4-NG	125000	146.5	9.34	89	64	36	228	9.5	1/2" G int.
4-LP	125000	146.5	6.14	89	64	36	228	9.5	1/2" G int.

Kcal/hr. rating/gas pressure.

NG.natural gas at 20 mbar.

LP. propane gas at 30 mbar.



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# SURFACE MIX BURNER

.....Machine Mounting.....

Hydrogen, Natural and Propane gas  
at 1 - 7 bar supply pressure.  
Oxygen at 4 - 12 bar supply pressure.  
Water at 2 - 4 bar supply pressure.

## FOR HIGH PURITY QUARTZ PROCESSING. QUARTZ TUBE RE-SIZING.....WELDING.....POLISHING.

Constructed from Heat Resisting Nickel Alloy and water-cooled  
for zero contamination when operated with the Rapidflo Control  
System.

## GROUP L-1 Square Matrix.

Range: SMPMC.  
Surface or Partial Pre - Mix.  
Oxygen-Gas.



Cat.No.	Type.	kW. (nominal)	A.
L301	PMC-9	40	21.30
L302	PMC-10	50	23.70
L303	PMC-11	60	26.07
L304	PMC-14	150	33.18
L305	PMC-15	200	35.55

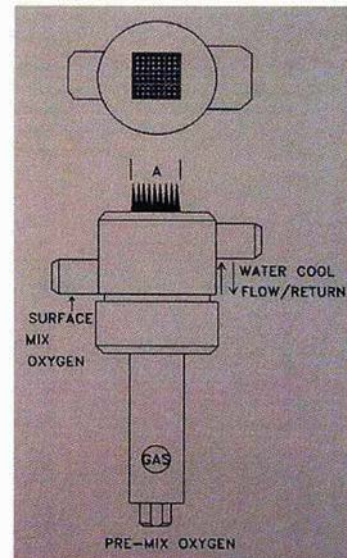
Burner Length = 160

### Supply Thread Connections

GAS: 3/8" BSP. Taper form.

OXYGEN: 1/8" BSP. Taper form (surface mix entry)  
OXYGEN: 3/8" BSP. Taper form (pre-mix entry)

WATER: 1/8" BSP. Taper form. (flow and return)  
Water Flow Rate: 5 - 15 litres per min.



All gas safety equipment and gas burner products must be installed and used in compliance with the applicable health and safety regulations and the gas industry code of practice

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# SURFACE MIX BURNER

Hand.....Bench.....Lathe.....Machine Mounting.

Manufactured from all stainless steel this versatile surface mix burner is available in three circular flame matrix sizes and is suitable for the lathe manipulation of hard glass using natural gas and oxygen. The tapered flame cone design ensures thorough mixing at the burner face with a wide turn down ratio, and no risk of light back when used correctly.

Other applications include:

Fire-flame polishing and edge melting of crystal glass articles. Mould mark removal and Quartz glass working [with hydrogen]

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

Propane gas: 20 - 1000 mbar

Hydrogen gas: 350 - 1000 mbar

Oxygen: 1 - 3 bar

## GROUP L-5 Lathe Burner

Range: SMMMR

Round Flame Matrix

Surface Mix

Oxygen-Gas



Cat.No.	Type	kWh(nominal)	Flame Diameter
L029	SMMMR-12	13	12
L030	SMMMR-19	18	19
L031	SMMMR-25	29	25

Overall length = 300

Feedpipe pitch = 35

Feedpipe size = 1/4" bsp.

Fuel gas and Oxygen flow control valves are available and can be factory fitted to the user specification.

To avoid burner face sooting, liquified natural gas [lng] and propane may need a small injection of process air into the burner feed. If necessary, contact the Rapidflame technical department for assistance or advice on the selection and positioning of venturi mixers and flow control valves.

Gas burners and combustion control equipment must be installed and used in compliance with the applicable health and safety regulations and the gas industry code of practice.

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# SURFACE MIX BURNER

.....Machine Mount.....

Manufactured from stainless steel, this multi-row linear flame pattern burner range is suitable for many heat process or secondary working applications within the Steel or Glass sectors of industry.

Although the standard range covers from 1 to 6 rows of flame ports and up to a length of 250mm special designs and specifications, together with water-cooled versions, are readily available.

Typical applications include:

Fire-flame polishing, edge melting, shaping, forming and annealing during the secondary heating of Glass. Rapid heat treatment of steel sections for re-heating, bending, swaging and pre-heat prior to welding.

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

Propane gas: 20 - 1000 mbar

Hydrogen: 350 - 1000 mbar

Oxygen: 1 - 3 bar

## GROUP L-6 Linear Burner

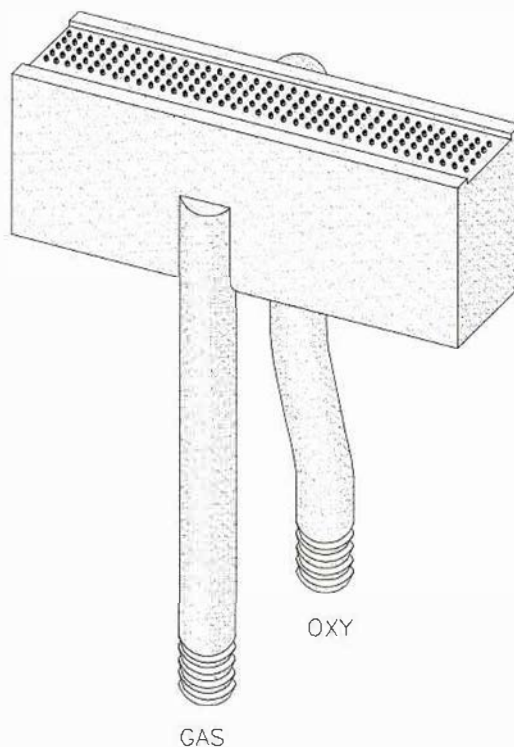
Range: SMSR ( 1 to 6 rows)

Rectangular Flame Matrix

Surface Mix

Oxygen-Gas

**1 ROW.....2 ROW**



### 1 ROW

Cat.No.	Type.	A	B	C	kWh.
L040	SMSR-1-25	25	45	1/8"	2.70
L041	SMSR-1-30	30	50	1/8"	3.20
L042	SMSR-1-40	40	60	1/8"	4.00
L043	SMSR-1-50	50	70	1/8"	5.20
L044	SMSR-1-75	75	95	1/8"	7.60
L045	SMSR-1-100	100	120	1/4"	9.90
L046	SMSR-1-125	125	145	1/4"	12.50
L047	SMSR-1-150	150	170	1/4"	15.00
L048	SMSR-1-175	175	195	1/4"	17.30
L049	SMSR-1-200	200	220	1/4"	20.00
L050	SMSR-1-225	225	245	1/4"	22.20
L051	SMSR-1-250	250	270	1/4"	24.50

Supply thread connections are BSP Taper form ext.

### 2 ROW

Cat.No.	Type.	A	B	C	kWh.
L055	SMSR-2-25	25	45	1/8"	5.20
L056	SMSR-2-30	30	50	1/8"	6.30
L057	SMSR-2-40	40	60	1/8"	8.20
L058	SMSR-2-50	50	70	1/4"	10.40
L059	SMSR-2-75	75	95	1/4"	15.20
L060	SMSR-2-100	100	120	1/4"	20.00
L061	SMSR-2-125	125	145	1/4"	25.20
L062	SMSR-2-150	150	170	1/4"	30.00
L063	SMSR-2-175	175	195	3/8"	35.00
L064	SMSR-2-200	200	220	3/8"	40.00
L065	SMSR-2-225	225	245	3/8"	44.50
L066	SMSR-2-250	250	270	3/8"	50.00

Internal threads and NPT available on request.

To avoid burner face sooting, liquified natural gas (LNG) and propane may need a small injection of process air into the burner gas feed. If necessary, contact the Rapidflame technical department for assistance or advice on the selection and positioning of venturi mixers and flow control valves.

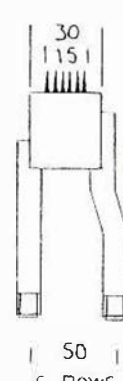
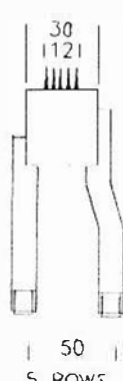
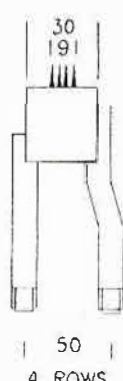
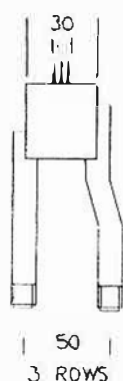
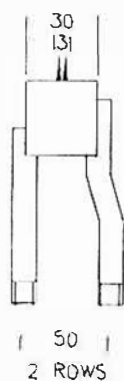
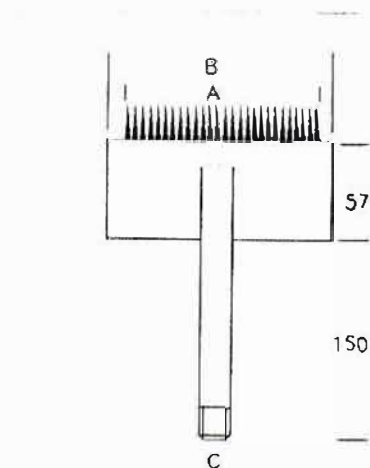
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## SURFACE MIX BURNER

.....Machine Mount.....



## GROUP L-6 rev. Linear Burner

Range: SMSR ( 1 to 6 rows )

Rectangular Flame Matrix

Surface Mix

Oxygen-Gas

3 ROW.....4 ROW

5 ROW.....6 ROW

### 3 ROW

Cat.No.	Type.	A	B	C	kWh.
L070	SMSR-3-25	25	45	1/8"	7.90
L071	SMSR-3-30	30	50	1/8"	9.60
L072	SMSR-3-40	40	60	1/4"	12.30
L073	SMSR-3-50	50	70	1/4"	16.00
L074	SMSR-3-75	75	95	1/4"	23.00
L075	SMSR-3-100	100	120	1/4"	30.00
L076	SMSR-3-125	125	145	3/8"	38.00
L077	SMSR-3-150	150	170	3/8"	45.00
L078	SMSR-3-175	175	195	3/8"	52.00
L079	SMSR-3-200	200	220	3/8"	60.00
L080	SMSR-3-225	225	245	3/8"	67.00
L081	SMSR-3-250	250	270	1/2"	74.00

### 5 ROW

Cat.No.	Type.	A	B	C	kWh.
L100	SMSR-5-25	25	45	1/4"	13.00
L101	SMSR-5-30	30	50	1/4"	16.00
L102	SMSR-5-40	40	60	1/4"	20.00
L103	SMSR-5-50	50	70	1/4"	27.00
L104	SMSR-5-75	75	95	3/8"	38.00
L105	SMSR-5-100	100	120	3/8"	50.00
L106	SMSR-5-125	125	145	1/2"	63.00
L107	SMSR-5-150	150	170	1/2"	75.00
L108	SMSR-5-175	175	195	1/2"	86.00
L109	SMSR-5-200	200	220	1/2"	100.00
L110	SMSR-5-225	225	245	1/2"	111.00
L111	SMSR-5-250	250	270	1/2"	123.00

### 4 ROW

Cat.No.	Type.	A	B	C	kWh.
L085	SMSR-4-25	25	45	1/4"	10.46
L086	SMSR-4-30	30	50	1/4"	13.00
L087	SMSR-4-40	40	60	1/4"	16.50
L088	SMSR-4-50	50	70	1/4"	21.00
L089	SMSR-4-75	75	95	1/4"	30.00
L090	SMSR-4-100	100	120	3/8"	40.00
L091	SMSR-4-125	125	145	3/8"	50.00
L092	SMSR-4-150	150	170	3/8"	60.00
L093	SMSR-4-175	175	195	1/2"	70.00
L094	SMSR-4-200	200	220	1/2"	80.00
L095	SMSR-4-225	225	245	1/2"	90.00
L096	SMSR-4-250	250	270	1/2"	98.00

### 6 ROW

Cat.No.	Type.	A	B	C	kWh.
L115	SMSR-6-25	25	45	1/4"	15.80
L116	SMSR-6-30	30	50	1/4"	19.20
L117	SMSR-6-40	40	60	1/4"	25.00
L118	SMSR-6-50	50	70	3/8"	32.00
L119	SMSR-6-75	75	95	3/8"	46.00
L120	SMSR-6-100	100	120	3/8"	60.00
L121	SMSR-6-125	125	145	1/2"	75.00
L122	SMSR-6-150	150	170	1/2"	90.00
L123	SMSR-6-175	175	195	1/2"	104.00
L124	SMSR-6-200	200	220	1/2"	120.00
L125	SMSR-6-225	225	245	1/2"	133.00
L126	SMSR-6-250	250	270	1/2"	148.00

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# SURFACE MIX BURNER

.....Machine Mount.....

## GROUP L-7 Circular Flame

Range: SMPCD

Round Flame Pattern

Surface Mix

Oxygen-Gas

1 ROW.....2 ROW

Glass industry application:

Profile edge or rim melting of wine / beer / beverage glasses.

Crystal glass stemware.

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

Propane gas: 20 - 1000 mbar

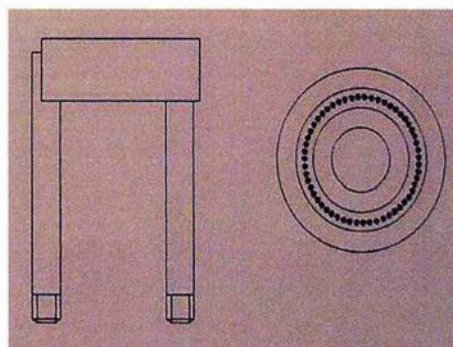
Oxygen: 1 - 4 bar

### 1 ROW

Cat.No.	Type	Flame Diameter
L130	SMPCD-1-40	40
L131	SMPCD-1-45	45
L132	SMPCD-1-50	50
L133	SMPCD-1-55	55
L134	SMPCD-1-60	60
L135	SMPCD-1-65	65
L136	SMPCD-1-70	70
L137	SMPCD-1-75	75
L138	SMPCD-1-80	80
L139	SMPCD-1-85	85
L140	SMPCD-1-90	90
L141	SMPCD-1-95	95
L142	SMPCD-1-100	100
L143	SMPCD-1-105	105
L144	SMPCD-1-110	110
L145	SMPCD-1-115	115
L146	SMPCD-1-120	120

### 2 ROW

L130-2	SMPCD-2-40	40
L131-2	SMPCD-2-45	45
L132-2	SMPCD-2-50	50
L133-2	SMPCD-2-55	55
L134-2	SMPCD-2-60	60
L135-2	SMPCD-2-65	65
L136-2	SMPCD-2-70	70
L137-2	SMPCD-2-75	75
L138-2	SMPCD-2-80	80
L139-2	SMPCD-2-85	85
L140-2	SMPCD-2-90	90
L141-2	SMPCD-2-95	95
L142-2	SMPCD-2-100	100
L143-2	SMPCD-2-105	105
L144-2	SMPCD-2-110	110
L145-2	SMPCD-2-115	115
L146-2	SMPCD-2-120	120



To avoid burner face sooting, liquified natural gas [lng] and propane may need a small injection of process air into the burner gas feed. The Rapidflame technical department will assist and advise on the selection and positioning of venturi mixers and flow control needle valves.

Gas burners and combustion equipment must be installed and used in compliance with all relevant applicable regulations and industry codes of practice.

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# SURFACE MIX BURNER

.....Machine Mounting.....

## GROUP L-9 Split Ring Burner

Range: SMSRB

Semi-circular flame matrix

Surface Mix

Oxygen-Gas

**1 ROW.....2 ROW**

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

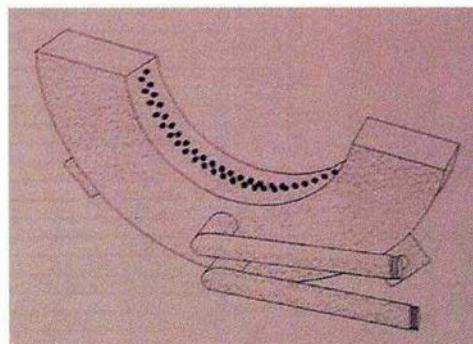
Propane gas: 20 - 1000 mbar

Oxygen: 1 - 3 bar

Typical applications include:

Glass heating on special purpose production machinery.....Rapid heat treatment of steel sections.

The standard burner must be used in a horizontal firing position. For any other localised heating position or application, a water-cooled version is recommended.



### 1 Row Half Circle Burner

Cat.No.	Type	IFD
L160	SRB-1-40	40
L161	SRB-1-50	50
L162	SRB-1-75	75
L163	SRB-1-100	100
L164	SRB-1-110	110
L165	SRB-1-125	125
L166	SRB-1-150	150
L167	SRB-1-200	200
L168	SRB-1-250	250
L169	SRB-1-300	300

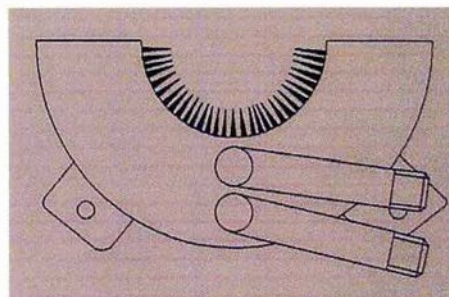
### 2 Row Half Circle Burner

Cat.No.	Type	IFD
L170	SRB-2-40	40
L171	SRB-2-50	50
L172	SRB-2-75	75
L173	SRB-2-100	100
L174	SRB-2-110	110
L175	SRB-2-125	125
L176	SRB-2-150	150
L177	SRB-2-200	200
L178	SRB-2-250	250
L179	SRB-2-300	300

IFD = Internal Flame Diameter

All inlet threads are BSP Taper form.

NPT available on request.



To avoid burner face sooting, liquified natural gas [Lng] and propane may need a small injection of process air into the burner gas feed. If necessary, contact the Rapidflame technical department for assistance or advice on the selection and positioning of venturi mixers and flow control valves.

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# SURFACE MIX BURNER

.....Machine Mounting.....

## GROUP L-10 Split Ring Burner

Range: SMSRB

Semi-circular flame matrix

Surface Mix

Oxygen-Gas

**3 ROW.....4 ROW**

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

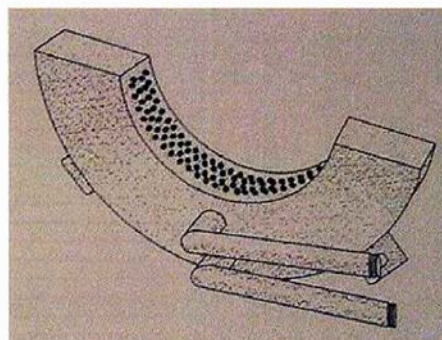
Propane gas: 20 - 1000 mbar

Oxygen: 1 - 3 bar

Typical applications include:

Glass heating on special purpose production machinery.....Rapid heat treatment of steel sections.

The standard burner must be used in a horizontal firing position. For any other localised heating position or application, a water-cooled version is recommended.



### 3 Row Half Circle Burner

Cat.No.	Type	IFD
L180	SRB-3-40	40
L181	SRB-3-50	50
L183	SRB-3-100	100
L184	SRB-3-110	110
L185	SRB-3-125	125
L186	SRB-3-150	150
L187	SRB-3-200	200
L188	SRB-3-250	250
L189	SRB-3-300	300

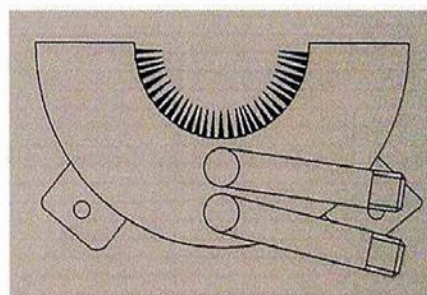
### 4 Row Half Circle Burner

Cat.No.	Type	IFD
L190	SRB-4-40	40
L191	SRB-4-50	50
L192	SRB-4-75	75
L193	SRB-4-100	100
L194	SRB-4-110	110
L195	SRB-4-125	125
L196	SRB-4-150	150
L197	SRB-4-200	200
L198	SRB-4-250	250
L199	SRB-4-300	300

IFD = Internal Flame Diameter

All inlet threads are BSP Taper form.

NPT available on request.



To avoid burner face sooting, liquified natural gas [lng] and propane may need a small injection of process air into the burner gas feed. If necessary, contact the Rapidflame technical department for assistance or advice on the selection and positioning of venturi mixers and flow control valves.

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# SURFACE MIX BURNER

.....Machine Mounting.....

Manufactured from heavy duty stainless steel and featuring high temperature and oxidation resistant flame tubes, this design of burner is well suited for the surface mixing of Hydrogen and Oxygen, and for the partial pre-mixing of LPG or Natural gas, with Oxygen.

Typical applications include:

Fire-flame polishing.....edge melting / glazing and secondary glass forming. Laboratory glassware and Quartz glasslathe working. Localised rapid heating of steel sections for shaping, forming, swaging or reheating.

Supply pressure requirements.

Propane gas: 20 - 1000 mbar

Natural gas: 20 - 1000 mbar

Hydrogen: 350 - 1000 mbar

Oxygen: 1 - 4 bar

## GROUP L-11 Linear Burner

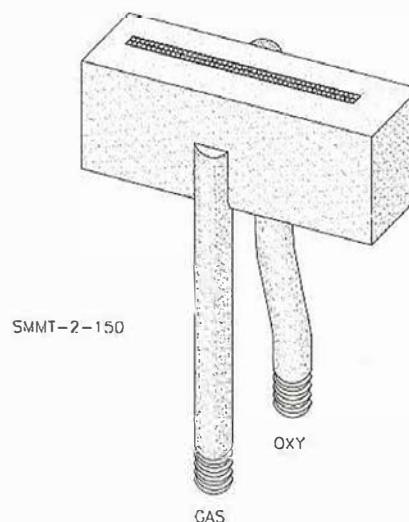
Range: SMMT

Rectangular Flame Matrix

Surface Mix - Partial Pre-Mix

Oxygen-Gas

1 ROW.....2 ROW



1 ROW					
Cat.No.	Type.	A	B	C	D
L200	SMMT-1-25	25	45	-	1/8"
L201	SMMT-1-25wc	25	45	-	1/8"
L202	SMMT-1-50	50	70	-	1/8"
L203	SMMT-1-50wc	50	70	-	1/8"
L204	SMMT-1-75	75	95	-	1/8"
L205	SMMT-1-75wc	75	95	-	1/8"
L206	SMMT-1-100	100	120	-	1/8"
L207	SMMT-1-100wc	100	120	-	1/8"
L208	SMMT-1-150	150	170	-	1/8"
L209	SMMT-1-150wc	150	170	-	1/8"
L210	SMMT-1-200	200	220	-	1/4"
L211	SMMT-1-200wc	200	220	-	1/4"
L212	SMMT-1-250	250	270	-	1/4"
L213	SMMT-1-250wc	250	270	-	1/4"
L214	SMMT-1-300	300	320	-	1/4"
L215	SMMT-1-300wc	300	320	-	1/4"

2 ROW					
Cat.No.	Type.	A	B	C	D
L216	SMMT-2-25	25	45	4.75	1/8"
L217	SMMT-2-25wc	25	45	4.75	1/8"
L218	SMMT-2-50	50	70	4.75	1/8"
L219	SMMT-2-50wc	50	70	4.75	1/8"
L220	SMMT-2-75	75	95	4.75	1/8"
L221	SMMT-2-75wc	75	95	4.75	1/8"
L222	SMMT-2-100	100	120	4.75	1/4"
L223	SMMT-2-100wc	100	120	4.75	1/4"
L224	SMMT-2-150	150	170	4.75	1/4"
L225	SMMT-2-150wc	150	170	4.75	1/4"
L226	SMMT-2-200	200	220	4.75	1/4"
L227	SMMT-2-200wc	200	220	4.75	1/4"
L228	SMMT-2-250	250	270	4.75	1/4"
L229	SMMT-2-250wc	250	270	4.75	1/4"
L230	SMMT-2-300	300	320	4.75	1/4"
L231	SMMT-2-300wc	300	320	4.75	1/4"

All threaded inlet feed pipes are BSP Taper form external.

Internal thread feed pipes and NPT available to customer specification.  
wc = water-cooled type.

To avoid burner face sooting, liquified natural gas [LNG] and propane may need a small injection of process air into the burner gas feed. Partial premixing the fuel gas with Oxygen will significantly increase the heat transfer rate. The Rapidflame technical department will assist and advise on the selection and positioning of venturi mixers and flow control valves.

Gas burners and combustion equipment must be installed and used in compliance with all relevant applicable regulations and industry codes of practice.

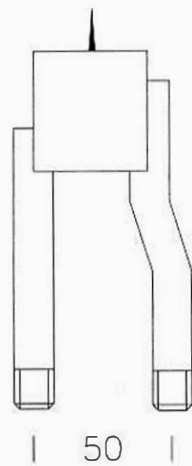
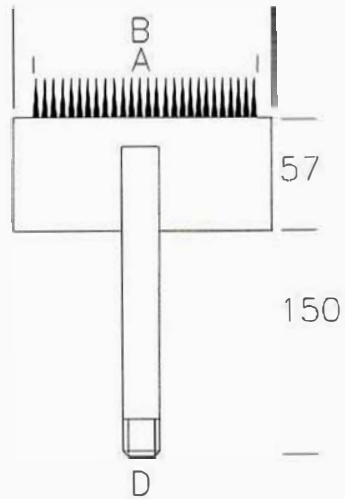
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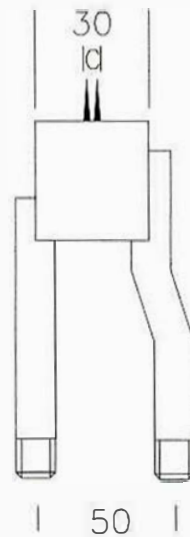
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**GROUP L-11 rev.**  
**Linear Burner dimensions**  
**Range: SMMT**  
**1 row.....2 row**



1 ROW



2 ROWS

# SURFACE MIX BURNER

.....Machine Mounting.....

Manufactured from heavy duty stainless steel and featuring high temperature and oxidation resistant flame tubes, this design of burner is well suited for the surface mixing of Hydrogen and Oxygen, and for the partial pre-mixing of LPG or Natural gas, with Oxygen.

Typical applications include:

Fire-flame polishing.....edge melting / glazing and secondary glass forming. Laboratory glassware and Quartz glasslathe working. Localised rapid heating of steel sections for shaping, forming, swaging or reheating.

Supply pressure requirements.

Propane gas: 20 - 1000 mbar

Natural gas: 20 - 1000 mbar

Hydrogen: 350 - 1000 mbar

Oxygen: 1 - 4 bar

## GROUP L-12 Linear Burner

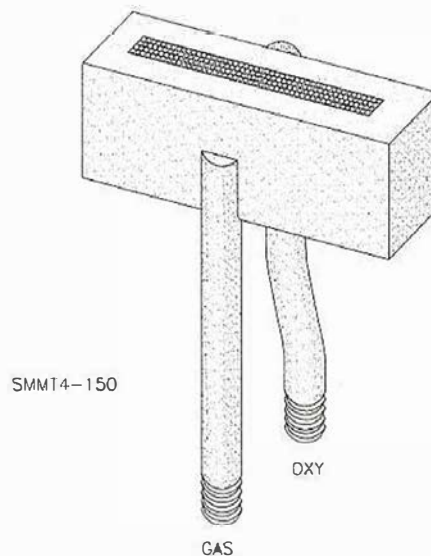
Range: SMMT

Rectangular Flame Matrix

Surface Mix

Oxygen-Gas

3 ROW.....4 ROW



3 ROW					
Cat. No.	Type	A	B	C	D
L232	SMMT3-25	25	45	7.15	1/8"
L233	SMMT3-25wc	25	45	7.15	1/8"
L234	SMMT3-50	50	70	7.15	1/8"
L235	SMMT3-50wc	50	70	7.15	1/8"
L236	SMMT3-75	75	95	7.15	1/4"
L237	SMMT3-75wc	75	95	7.15	1/4"
L238	SMMT3-100	100	120	7.15	1/4"
L239	SMMT3-100wc	100	120	7.15	1/4"
L240	SMMT3-150	150	170	7.15	1/4"
L241	SMMT3-150wc	150	170	7.15	1/4"
L242	SMMT3-200	200	220	7.15	1/4"
L243	SMMT3-200wc	200	220	7.15	1/4"
L244	SMMT3-250	250	270	7.15	3/8"
L245	SMMT3-250wc	250	270	7.15	3/8"
L246	SMMT3-300	300	320	7.15	3/8"
L247	SMMT3-300wc	300	320	7.15	3/8"

All threaded inlet feed pipes are BSPTaper form external.

wc = water-cooled type.

To avoid burner face sooting, liquified natural gas [LNG] and propane may need a small injection of process air into the burner gas feed. Partial premixing the fuel gas with Oxygen will significantly increase the heat transfer rate. The Rapidflame technical department will assist and advise on the selection and positioning of venturi mixers and flow control valves.

Gas burners and combustion equipment must be installed and used in compliance with all relevant applicable regulations and industry codes of practice.

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4 ROW					
Cat. No.	Type	A	B	C	D
L248	SMMT4-25	25	45	9.55	1/8"
L249	SMMT4-25wc	25	45	9.55	1/8"
L250	SMMT4-50	50	70	9.55	1/4"
L251	SMMT4-50wc	50	70	9.55	1/4"
L252	SMMT4-75	75	95	9.55	1/4"
L253	SMMT4-75wc	75	95	9.55	1/4"
L254	SMMT4-100	100	120	9.55	1/4"
L255	SMMT4-100wc	100	120	9.55	1/4"
L256	SMMT4-150	150	170	9.55	1/4"
L257	SMMT4-150wc	150	170	9.55	1/4"
L258	SMMT4-200	200	220	9.55	3/8"
L259	SMMT4-200wc	200	220	9.55	3/8"
L260	SMMT4-250	250	270	9.55	3/8"
L261	SMMT4-250wc	250	270	9.55	3/8"
L262	SMMT4-300	300	320	9.55	3/8"
L263	SMMT4-300wc	300	320	9.55	3/8"

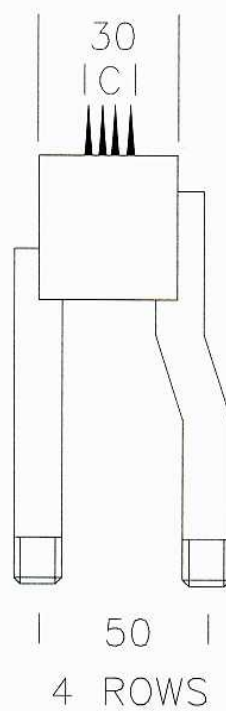
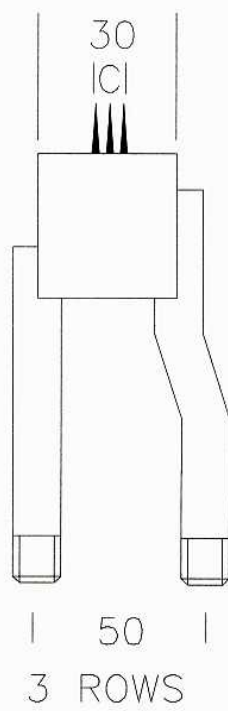
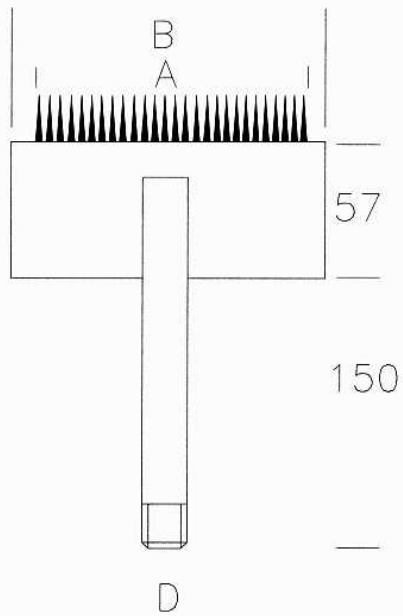
Internal thread feed pipes and NPT available to customer specification



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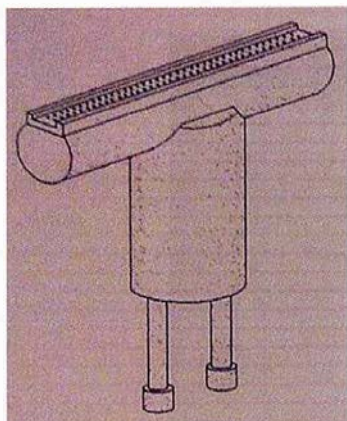


**GROUP L-12 rev.**  
Linear Burner dimensions  
Range: SMMT  
**3 row.....4 row**



# SURFACE MIX BURNER

.....Machine Mounting.....



Typical glass industry applications include: Fire-Flame polishing..... edge or rim melting of wine / beer glasses. Various shaping, forming, and annealing operations during the secondary heating of glass containers and components.

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

Propane gas: 20 - 1000 mbar

Hydrogen: 350 - 1000 mbar

Oxygen: 1 - 4 bar

## GROUP L-13 Linear Burner

Range: SMDT

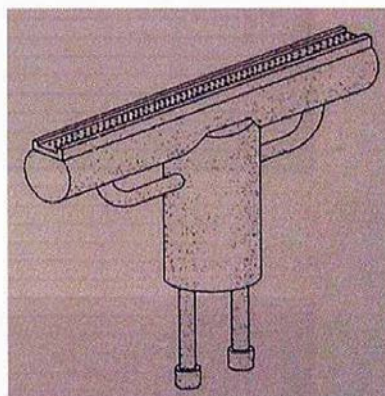
Rectangular Flame Matrix

Surface Mix

Oxygen-Gas

50 - 300 Flame Length

**2...3...4...5 row**



2 ROW						3 ROW					
Cat.No.	Type	A	B	C	kW/hr.	Cat.No.	Type	A	B	C	kW/hr.
L310	SMDT2-50	50	70	1/4"	10.00	L318	SMDT3-50	50	70	3/8"	15.00
L311	SMDT2-75	75	95	1/4"	15.00	L319	SMDT3-75	75	95	3/8"	22.00
L312	SMDT2-100	100	120	1/4"	20.00	L320	SMDT3-100	100	120	3/8"	30.00
L313	SMDT2-150	150	170	1/4"	30.00	L321	SMDT3-150	150	170	3/8"	46.00
L314	SMDT2-200	200	220	1/4"	40.00	L322	SMDT3-200	200	220	3/8"	60.00
L315	SMDT2-250	250	270	1/4"	50.00	L323	SMDT3-250	250	270	1/2"	77.00
L316	SMDT2-300	300	320	1/4"	60.00	L324	SMDT3-300	300	320	1/2"	90.00

4 ROW						5 ROW					
Cat.No.	Type	A	B	C	kW/hr.	Cat.No.	Type	A	B	C	kW/hr.
L326	SMDT4-50	50	70	1/2"	20.00	L334	SMDT5-50	50	70	1/2"	21.00
L327	SMDT4-75	75	95	1/2"	30.00	L335	SMDT5-75	75	95	1/2"	32.00
L328	SMDT4-100	100	120	1/2"	40.00	L336	SMDT5-100	100	120	1/2"	42.00
L329	SMDT4-150	150	170	1/2"	60.00	L337	SMDT5-150	150	170	1/2"	63.00
L330	SMDT4-200	200	220	1/2"	80.00	L338	SMDT5-200	200	220	1/2"	84.00
L331	SMDT4-250	250	270	1/2"	100.0	L339	SMDT5-250	250	270	1/2"	105.0
L332	SMDT4-300	300	320	1/2"	120.0	L340	SMDT5-300	300	320	1/2"	126.0

All threaded inlet feed pipes are BSPTaper form internal.

External thread feed pipes and NPT available to customer specification.

To avoid burner face sooting, liquified natural gas [Ing] and propane may need a small injection of process air into the burner gas feed. Partial premixing of the fuel gas with Oxygen will significantly increase the heat transfer rate. The Rapidflame technical department will assist and advise on the selection and positioning of venturi mixers and flow control valves.

Gas burners and combustion equipment must be installed and used in compliance with all relevant applicable regulations and industry codes of practice.

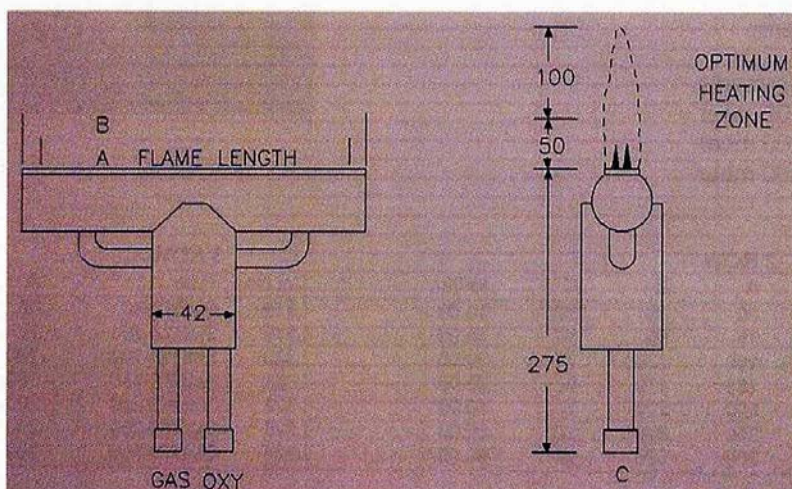
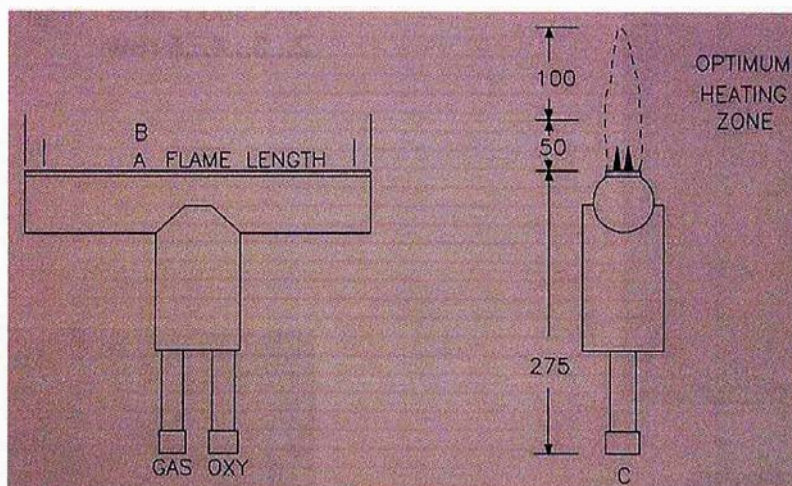
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**GROUP L-13 rev. Linear Burner**  
**Range: SMDT dimensions**  
**2...3...4...5 row**



# SURFACE MIX BURNER

.....Machine Mounting.....

Typical glass industry applications include:  
Fire - Flame Polishing and Edge/Rim glazing  
of all tabletop and beer glasses.  
Various shaping, forming and annealing  
operations during the secondary heating of  
glass articles, containers and components.

Supply pressure requirements.

Natural gas: 20 - 1000 mbar

Propane gas: 20 - 1000 mbar

Hydrogen: 350 - 1000 mbar For Hardglass working.

Oxygen: 1 - 4 bar

## GROUP L-14 Linear Burner

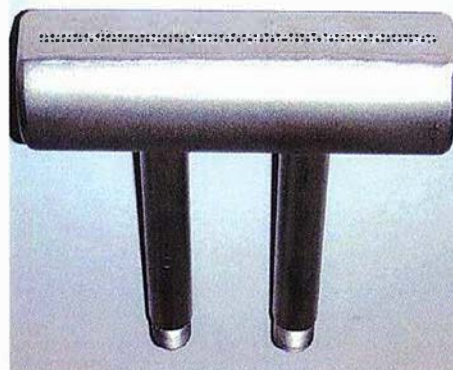
Range: SMDJ

Rectangular Flame Matrix.

Surface Mix.

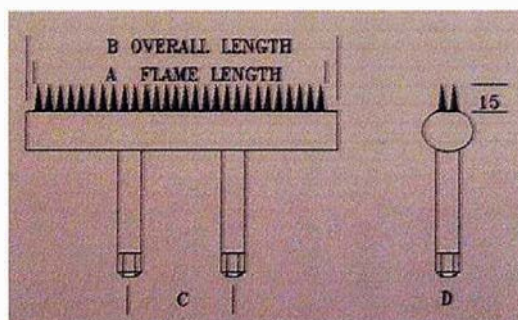
Oxygen-Gas.

50 - 200 Flame Length x 2 Row



Cat.No.	Type.	A	B	C	D - Inlet Size.	kW/hr.
L350	SMDJ-50	50	57	25	1/8"BSP	9.95
L351	SMDJ-75	75	82	40	1/8"BSP	14.90
L352	SMDJ-100	100	107	50	1/8"BSP	19.50
L353	SMDJ-150	150	157	75	1/4"BSP	29.50
L354	SMDJ-200	200	207	100	1/4"BSP	39.30

Gas and Oxygen flow control valves are available as an optional extra.



To avoid burner face sooting, liquified natural gas [Ing] and propane may need a small injection of process air into the burner gas feed. Partial pre-mixing the fuel gas with oxygen will significantly increase the heat transfer rate. The Rapidflame technical department will assist and advise on the selection and positioning of venturi mixers and flow control valves.

Gas burners and combustion equipment must be installed and used in compliance with all relevant applicable regulations and industry codes of practice.

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# SURFACE MIX BURNER

Style EF [end feeds]  
Style EB [end back feeds]

## GROUP L-15 Linear Burner

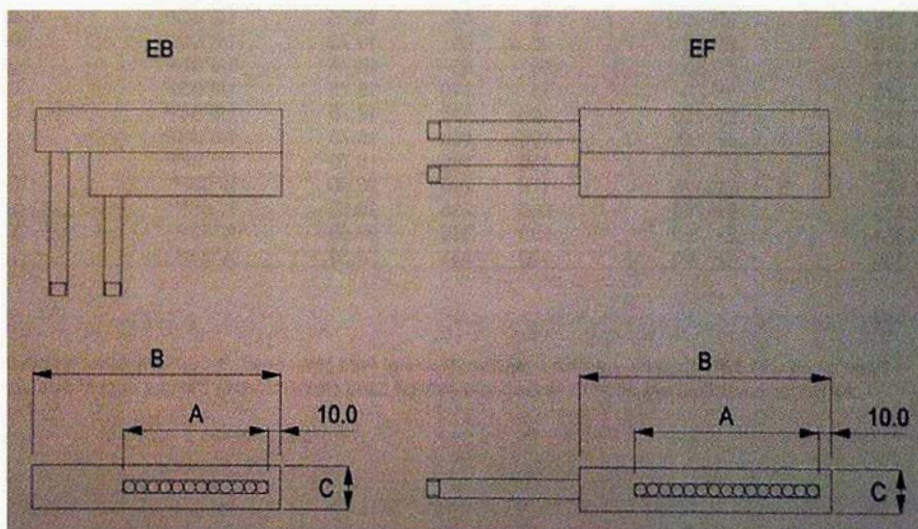
Range: SMTL  
Surface Mix - Partial Pre-Mix  
Oxygen - Gas  
**1 ROW** of flameports

Manufactured from heavy wall stainless steel pipe this industry standard burner is available in 3 basic styles and with any length from 10 - 300 mm. in a continuous line of well defined flame. For special applications the burner can be 'no flame' sectioned to suit the process heating requirements and coupled with a high turn-down ratio will operate without the risk of light - back. Both styles are suitable for bench fixing, machine mounting or hand held operation

Typical Glass industry applications:  
Lathe Manipulation of Borosilicate and Quartz using Hydrogen or Natural gas with Oxygen.  
Edge melting of tabletop glassware.  
Beading and sealing of television tubes and monitors.

Supply pressure requirements.  
Natural gas: 20 - 1000 mbar  
Propane gas: 20 - 1000 mbar  
Hydrogen: 350 - 1000 mbar

Oxygen: 1 - 4 bar



### Application and operating suggestions.

To avoid burner face sooting, liquified natural gas [LNG] and propane [LPG] may need a small injection of process air into the burner gas feed. Partial pre-mixing of the fuel gas with oxygen together with surface mix oxygen, will significantly increase the heat transfer rate. The Rapidflame technical department will assist and advise on the selection and positioning of venturi mixers and flow control valves for partial pre-mix operation. An extensive range of needle type and graduated scale flow valves are available for self selection from our standard product information sheets. Group H.

All gas burners with related combustion and safety equipment must be installed and used in compliance with all relevant and applicable regulations and industry codes of safe working practice.

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# SURFACE MIX BURNER

**GROUP L-15 rev.** Linear Burner

Range: SMTL

Surface Mix - Partial Pre-Mix

Oxygen - Gas

**1 ROW** of flameports

## STYLE EB

Cat.No.	Type	A	B	C	Inlet Thread	kW/hr.
L360	EB-10	10	45	16.75	1/8"BSP	0.07
L361	EB-25	25	60	16.75	1/8"BSP	0.14
L362	EB-50	50	85	16.75	1/8"BSP	0.28
L363	EB-75	75	110	16.75	1/8"BSP	0.42
L364	EB-100	100	135	16.75	1/8"BSP	0.56
L365	EB-125	125	160	16.75	1/8"BSP	0.70
L366	EB-150	150	185	16.75	1/8"BSP	0.84
L367	EB-175	175	210	26.50	1/4"BSP	0.98
L368	EB-200	200	235	26.50	1/4"BSP	1.12
L369	EB-250	250	285	26.50	1/4"BSP	1.40
L370	EB-300	300	335	26.50	1/4"BSP	1.68

## STYLE EF

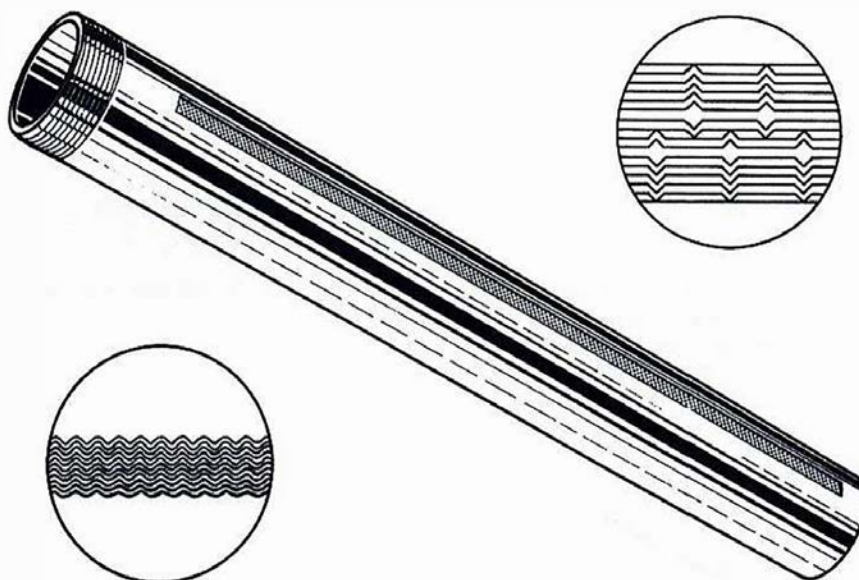
Cat.No.	Type	A	B	C	Inlet Thread	kW/hr.
L375	EF-10	10	45	16.75	1/8"BSP	0.07
L376	EF-25	25	60	16.75	1/8"BSP	0.14
L377	EF-50	50	85	16.75	1/8"BSP	0.28
L378	EF-75	75	110	16.75	1/8"BSP	0.42
L379	EF-100	100	135	16.75	1/8"BSP	0.56
L380	EF-125	125	160	16.75	1/8"BSP	0.70
L381	EF-150	150	185	16.75	1/8"BSP	0.84
L382	EF-175	175	210	26.50	1/4"BSP	0.98
L383	EF-200	200	235	26.50	1/4"BSP	1.12
L384	EF-250	250	285	26.50	1/4"BSP	1.40
L385	EF-300	300	335	26.50	1/4"BSP	1.68

Feed pipes with NPT threads are also available. Nominal feed pipe length is 150, any other length to order.  
All kW/hr capacities are nominal and should only be used for calculating the gas supply pipe size.



# RIBBON BURNERS

**GROUP N-1**  
**RANGE: STEEL TUBE**



## Introduction

Ribbon burners are manufactured from standard steel tubing milled with a narrow slot and fitted with stainless steel crimped ribbon packs to form linear flame burners of any length and heat output with very uniform flame pattern and heating effect.

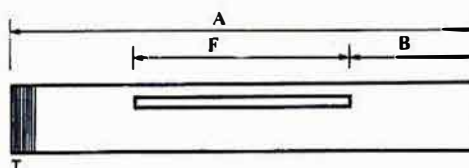
The crimped ribbon pack interlocks to form small low velocity flames to stabilise the main flame ports which are constructed in standard arrangements to form different port area patterns for different applications and heat release. Operation with a RAM air-gas mixer, venturi mixer or atmospheric injector is recommended for efficient supply of air-gas mix to the ribbon burner.

Ignition and flame detection electrodes and water cooling channels can be fitted for automatic operation in high temperature processes. All ribbon burners can be supplied with air-gas flow controls and complete with fully automatic flame ignition and detection equipment mounted in a combustion control panel.

## Specification

Heat output typical range up to 700Kcal/hr/cm or 85,000 BTU/hr/inch. Operation on Natural gas, L.P. gas and town gas. See reverse for construction options

## Dimensions



**A – Overall burner length, B – Distance to blank end, F – Flame length. T – Pipe thread size.**

All gas safety equipment or products must be installed and used in full compliance with applicable safety standards and industry codes of practice. Consult Rapidflame sales department for advice if in doubt.

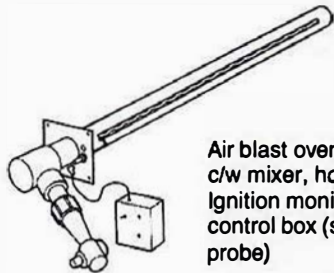
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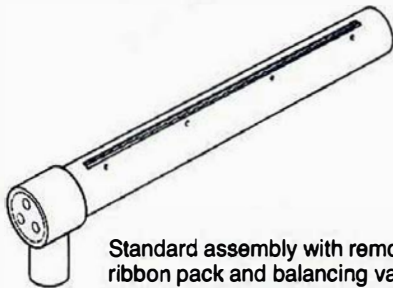
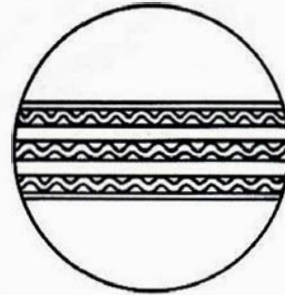
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# RIBBON BURNER APPLICATIONS

**GROUP N-1 rev.**  
**RANGE: STEEL TUBE**



Air blast oven assembly  
c/w mixer, holding plate,  
ignition monitoring electrode,  
control box (single or twin  
probe)



Standard assembly with removable  
ribbon pack and balancing valve for adjusting  
heat release along the burner



Multi-zone burner, internally partitioned

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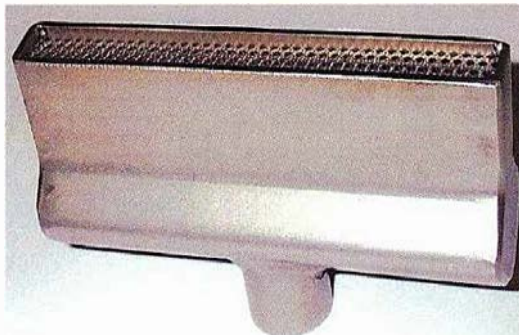


# RIBBON BURNERS

## GROUP P-1 Air-Gas RANGE: CRB

### Introduction

This industry standard all stainless steel linear flame burner is compact, robust and light weight. It is a versatile general purpose air gas burner designed for applications which require a continuous and evenly balanced flame using Natural gas or LPG with air.

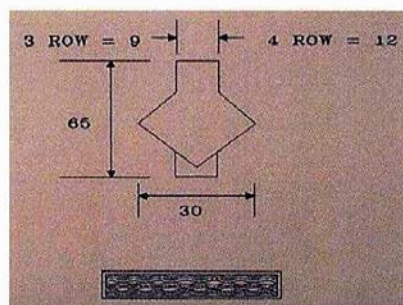


### Applications

Flame Plasma surface treatment of plastic containers, cable and pipe prior to printing and coating. Edge melting and forming of glass tubing, plate and table ware. Heating of wire and metal sections for heat treatment, forming and metal joining.

### Specification

50 – 500 mm flame length.  
Standard design 3 and 4 rows ports.  
Ignition / flame sense electrodes are available fitted options with complete automatic control panels.  
See data sheets V-2, V-3  
Compressed air- gas mixer required as minimum control equipment for correct operation. See data sheets J-1, J-4.



3 ROW				
Cat.No.	Type.	Flame Length	Kcal/hr. nominal	Inlet Size
P100	CRB3-50	50	2500	3/8" BSP
P101	CRB3-75	75	3750	3/8" BSP
P102	CRB3-100	100	5000	3/8" BSP
P103	CRB3-150	150	7500	3/8" BSP
P104	CRB3-200	200	10000	1/2" BSP
P105	CRB3-250	250	12500	1/2" BSP
P106	CRB3-300	300	15000	1/2" BSP
P107	CRB3-350	350	17500	1/2" BSP
P108	CRB3-400	400	20000	1/2" BSP
P109	CRB3-450	450	22500	1/2" BSP
P110	CRB3-500	500	25000	1/2" BSP
4 ROW				
P115	CRB4-50	50	3000	3/8" BSP
P116	CRB4-75	75	4500	3/8" BSP
P117	CRB4-100	100	6000	3/8" BSP
P118	CRB4-150	150	9000	1/2" BSP
P119	CRB4-200	200	12000	1/2" BSP
P120	CRB4-250	250	15000	1/2" BSP
P121	CRB4-300	300	18000	1/2" BSP
P122	CRB4-350	350	21000	1/2" BSP
P123	CRB4-400	400	24000	1/2" BSP
P124	CRB4-450	450	27000	1/2" BSP
P125	CRB4-500	500	30000	1/2" BSP

Mounting brackets for ignition and flame monitoring electrodes are available to specification.

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# UNITORCH

Natural and Propane gas  
at 20 mbar min. supply pressure.  
Air at 350 mbar min. supply pressure.

This Air-Gas Handtorch has been developed for the user who requires operational balance and flame versatility. The mixture nozzle is fully rotational and will lock in any comfortable position. It features an integral air-gas mixer with sensitive flow control valves and is suitable for use with a wide variety of burner jets. The standard burner jet range, as detailed below, enables the operator to obtain flame shapes from a needlepoint up to a large brush fire.

Typical Applications include:  
SILVER BRAZING....SOFT SOLDERING.  
RADIATOR BUILD + REPAIR SHOPS.  
LOW TEMP. HEAT TREATMENT....  
DENTAL + LABORATORY TECHNICIANS.  
PLASTIC PRODUCT DE-FLASHING....  
GLASS ARTICLE MANUFACTURING....

Nickel Plated finish with Anodised Control Valve  
Knobs. RED (gas) GREEN (air)  
Length: 300mm.  
Net weight: 350 gms.

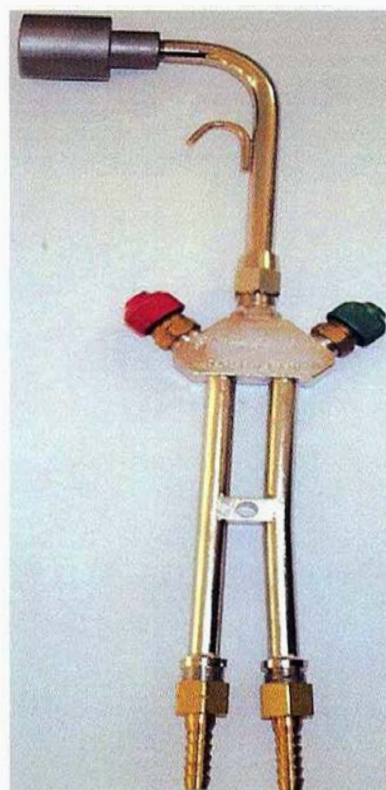
Standard UNITORCH range of Burner Jets			
CAT.No.	TYPE.	Kcal/Hr.	Material.
Q010	A-J00	200	Brass
Q011	A-J0	950	Brass
Q012	A-J01	1300	Brass
Q013	A-JM1	1875	St.Steel
Q014	A-JM3	4500	St.Steel

Special order Nozzles are available up to 600mm. long.  
90 degree nozzle working angle.  
Adaptors to fit other burner types.  
Handtorch (ref. Q-A) and burners can be ordered separately.  
GAS SAVER (economiser) and metal braided flexible hoses available.

## GROUP Q-A HANDTORCH

Air-Fuel Gas Type  
50 degree std. nozzle

90 degree nozzle is available



### Standard range of AIR-GAS Burner Jets



A-J00



A-J0



A-J01



A-JM1



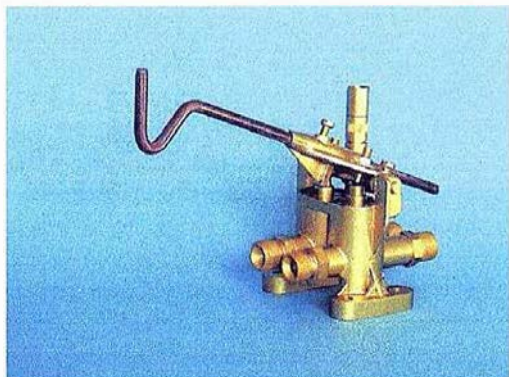
A-JM3

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**Gas Economiser and Quick Shut-Off Valve****Group Q-EC**

With Blowpipe Support Arm and Pilot Light

- Make the Workplace Safer
- Reduce Accidents
- Increase Efficiency
- Save Operator Time
- Save Gas!

- The Rapidflame Gas Economiser and Quick Shut-Off Valve is a quick, simple and inexpensive method of improving workplace safety, productivity and efficiency.
- The valve incorporates two pre-set valves which, when required can be closed simultaneously by the use of the hand lever or blowpipe rest arm depending on the model.
- With the economiser valves closed the gas is shut off without having to adjust the blowpipe controls.
- Pilot light models provide for easy lighting of the blowpipe immediately after lifting it from the rest arm.
- 3/8" BSP connections as standard, 1/4" optional.



With Hand Operated Lever

**For use with:**

Oxygen  
Acetylene  
Hydrogen (No pilot light)  
Natural Gas  
Propane  
Shield Gases

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# FIRECREST

## Group Q-FC



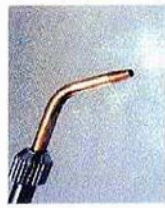
### Micro-Blowpipe

Fine flame stability is achieved with the precision gas control valves which, in conjunction with the Firecrest range of micro-bore nozzles, allows a wide variety of flame settings and sizes to be achieved, giving optimum conditions for each application.

- ▶ welds a wide range of materials, joining the tiniest of elements with ease.
- ▶ applications include:- jewellery, metal sculpture, glass work, electronics, plastics, hobby and craft
- ▶ lightweight, the Firecrest is easily manoeuvred around delicate and intricate shapes.
- ▶ fine flame control is possible with the sensitive control valves and precision nozzles.



Straight nozzle



60o bent nozzle



Twin tip nozzle



Acetylene-air nozzle



In-Line nozzles

Oxygen-fuel gas nozzles are available in 5 sizes. Sizes 1 – 4 are fitted with industrial ruby tip inserts to achieve the very small and precise orifice sizes for accurate gas flow and flame characteristics. All nozzles are flame tested. Acetylene nozzles for use with compressed air are also available. These give a softer flame and avoid the use of compressed oxygen.

### Application Guide

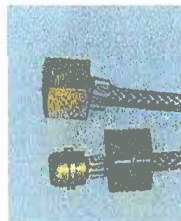
Nozzle size	Orifice Size		O2 Pressure		Fuel Gas Pressure		Material Thickness Guide	
	inch	mm	psi	bar	psi	bar	Inch	mm
1	.004	.10	2	.15	2	.15	.002-.005	.05-.12
2	.006	.15	3	.20	3	.20	.005-.010	.12-.25
3	.009	.48	3	.20	3	.20	.010-.020	.25-.50
4	.020	.51	3	.20	3	.20	.020-.040	.50-1.00
5	.029	.74	4	.35	4	.35	.040-.064	1.00-1.50

### For use with:

acetylene,  
propane,  
hydrogen  
and natural gas



colour coded gas  
control valves



colour coded hoses for  
safety, RED for fuel gas,  
BLUE for oxygen. Hose  
connections 3/8" BSP  
male left and right hand.

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# NON RETURN VALVE

## GROUP T-1 Safety Valve

Range: ½" ¾" 1"  
Dirt Filter element  
Brass body

.....Install in any position.....

.....Protected pipeline gases include.....

**natural gas...propane...butane...coal gas**

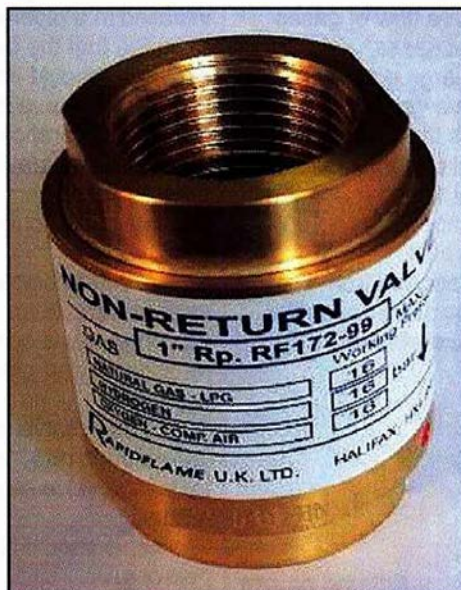
Minimum inlet pressure = 03 mbar

Maximum inlet pressure = 10 bar

**hydrogen...oxygen...high pressure air**

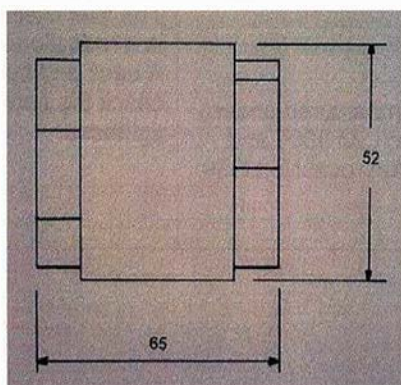
Minimum inlet pressure = 03 mbar

Maximum inlet pressure = 16 bar



Cat.No.	Type.	Inlet size.	Outlet size	Air flow at 16 bar
T001	RF170-99	½" Rp.	½" Rp	1900 m3/hr.
T002	RF171-99	¾" Rp.	¾" Rp	1900 m3/hr.
T003	RF172-99	1" Rp.	1" Rp	1900 m3/hr.

Larger pipe sizes and other industrial types are available on request.



For correct installation please refer to the 'operating instruction leaflet', a copy is available on request.

All gas safety equipment or products must be installed and used in compliance with the relevant and applicable regulations and the gas industry codes of safe working practice.

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**GROUP T-1 rev. Safety Valve  
non - return valve**

**Description**

The non - return valve is designed for use in pipelines to prevent the reverse flow of gases. Models are available for most gases. The valve design features a large diameter spring loaded diaphragm valve which is not affected by gravity and allows the valve to be installed in either a horizontal or vertical position. The opening pressure is only 10 mbar and the valve is protected from dirt damage by a 100 micron mesh filter at the gas inlet. The standard valve is manufactured from brass. For use with high purity or corrosive gases the same specification valve is available in 316L stainless steel.

**Type RF170 - FF [all sizes]**

Is a similar valve but fitted with a sintered bronze flame filter. This surrounds the diaphragm and protects the valve from damage in the event of a flame entering the arrestor from downstream pipework.

**Quality**

All non - return valves are manufactured under a Quality Assurance System to ISO 9001 and are approved by the DGVW. Approval No.LG39

**Installation guide**

The RF 170 range of non - return valves are installed in a pipeline as required, always ensuring that the direction of gas flow is correct. Provision should be made for the removal of the non - return valve for testing or replacement. Since the operation of the valve is not dependant on gravity it may be installed in any plane. The valve may only be fitted to clean and tested pipelines. Check that all connecting threads and seating surfaces are clean and without damage. All components coming into contact with Oxygen must be oil and grease free to avoid the risk of explosion. An isolation valve should be fitted to the pipeline before each non - return valve. Install the valve as close as possible to the burner. The valve should only be repaired by qualified persons.

**Maintenance**

The valve does not require routine maintenance. The inlet filter should be checked for dirt if there is a reduction in flow. A back pressure should be applied annually to check the non - return valve function and leak tightness.



# FIRECHECK

Firechecks are a necessary line restriction on all burner installations where oxygen is being used, or where the possibility of a flashback (or backfire) is considered a hazard. Their purpose is to prevent a flame from travelling beyond a predetermined point in the mixture line following a flashback.

Firechecks do not prevent flashback, nor do they stop the resulting concussion. They simply retard combustion and reduce the flame speed to a level where the burning mixture is cooled and then quenched, by the exhaust velocity of the mixture.

## GROUP T-2 Firecheck

Range: 1/8" to 1 1/4" pipe thread

Mixture: oxy-gas.....oxy-air-gas



Cat.No.	Type	Thread	Length	Diameter	Capacity M3/Hr.
J030	FC-30	1/8" int.	64	22 Hex	1.70
J031	FC-40	1/4" int.	64	22 Hex	1.70
J032	FC-75	3/8" int.	70	48	7.40
J033	FC-80	1/2" int.	70	48	7.40
J034	FC-300	3/4" int.	100	73	15.7
J035	FC-400	1" int.	100	73	15.7
J036	FC-500	1 1/4" int.	100	73	15.7

All threads are BSP Taper form

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## **GROUP T-2 rev.**

### **Firecheck description**

The principles of operation are simple: the mixture is fed into the Firecheck and must pass through four coils of corrugated stainless steel ribbon before being returned to the line. The total area of the openings in each coil through which the mixture passes is slightly larger than the total area of the outlet. This provides a free flow of mixture with a minimum of pressure drop during operation. If you look into a Firecheck by holding it up to a light source you will see light passing through, but will notice that you do not have a direct line of sight.

When a flashback occurs, the flame burns at an explosive rate through the mixture line unobstructed until it reaches the Firecheck. At this point, the flame enters the cavity of the Firecheck and experiences a pressure drop as it comes into contact with the first coil of stainless steel ribbon. The flame front is forced to burn through the grating formed by the coils and this action retards the flame speed of the burning mixture. This reoccurs at each successive coil. A considerable amount of heat is absorbed by the coils which cool the fire. Their subsequent expansion serves to further restrict the passage of flame through the Firecheck until the flame speed is exceeded by the exhaust velocity of the mixture and the fire is extinguished.

Proper selection of a Firecheck is based upon the mixer size. A Firecheck should be of equal size to the outlet of your mixer. Do not install any valves, gas cocks, or any restrictions other than the Firecheck between burners and mixers.

A Firecheck can be installed from either direction.

Maintenance involves inspection following any major backfire to be sure that the coils have not been damaged, which would restrict the normal flow of mixture to the burners. Here again, you simply hold the Firecheck up to a light source and view the condition of the coils and the passage of light. The coils closest to the burners will naturally be the ones to inspect, and in severe enough cases the stainless steel will actually be burned beyond recognition and the Firecheck should be replaced. Continued operation of Firechecks damaged to this degree will result in a serious safety hazard. Minor flashbacks do not as a rule fuse the coils. In these cases you simply turn off your supply lines feeding the problem zone, then relight the system as you do at start up. If you are unable to return to "normal" operation, then inspect the Firecheck.

The capacity chart is based on a 2 1/2" (6.25 mbar) pressure drop. Firechecks operate at higher throughput capacities, understanding that the pressure drop will be higher. The use of oversized Firechecks or dual Firechecks is not recommended.



# PRESSURE SWITCH

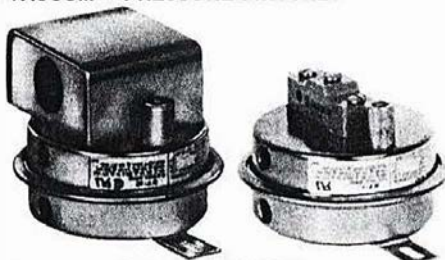
.....Air.....Gas.....

**GROUP U-5 distributor product**  
Antunes safety control.

## AIR DIFFERENTIAL • VACUUM • PRESSURE SWITCHES

### SMD/SML

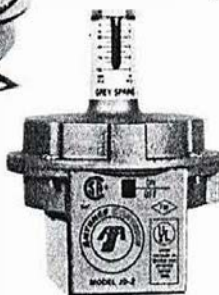
- .05" W.C. TO 12" W.C.
- Customer Specified Mounting Bracket
- Conduit opening on either side of switch



### JD-2 For DIFFERENTIAL, VACUUM, or PRESSURE

#### RANGES:

- BLUE Spring** – Adjustable from .07" W.C. to 1.7" W.C. metric scale (2mm. W.C. to 43mm. W.C.)
- PURPLE Spring** – Adjustable from 0.1" W.C. to 10" W.C. metric scale (3mm. W.C. to 250mm. W.C.)
- GREY Spring** – Adjustable from 0.1" W.C. to 4" W.C. metric scale (3mm. W.C. to 102mm. W.C.)
- RED Spring** – Adjustable from 0.1" W.C. to 24" W.C. metric scale (3mm. W.C. to 600mm. W.C.)



### SMV

- Air Switch
- .2" - 6" W.C.
- Vacuum only
- Set point adjustable



### SMR

- Manual Reset Air Switch
- .05" W.C. to 12" W.C.
- Pressure rise or fall
- Set point adjustable

## SINGLE GAS PRESSURE SWITCHES (MODEL-A)

#### Model Numbers

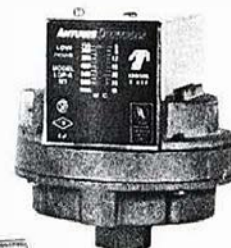
- |       |         |                         |
|-------|---------|-------------------------|
| Reset | Recycle |                         |
| LGP-A | RLGP-A  | Single Unit Lo-Pressure |
| HGP-A | RHGP-A  | Single Unit Hi-Pressure |

#### HIGH GAS PRESSURE

- |         |    |                 |
|---------|----|-----------------|
| Inch    | mm | W.C.            |
| 2 - 16  |    | W.C. - 50-400   |
| 5 - 28  |    | W.C. - 125-700  |
| 10 - 50 |    | W.C. - 250-1250 |

#### LOW GAS PRESSURE

- |         |    |                 |
|---------|----|-----------------|
| Inch    | mm | W.C.            |
| 1 - 6   |    | W.C. - 26-150   |
| 1 - 35  |    | W.C. - 25-875   |
| 2 - 14  |    | W.C. - 50-350   |
| 6 - 24  |    | W.C. - 150-600  |
| 10 - 50 |    | W.C. - 250-1250 |



## DOUBLE GAS PRESSURE SWITCHES (MODEL-A)

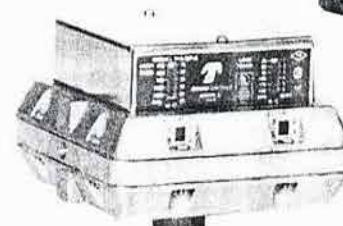
#### MODEL NUMBERS

- |         |                                      |
|---------|--------------------------------------|
| HLGP-A  | High-Low Gas Switch with Reset Lever |
| RHLGP-A | High-Low Gas Switch Recycle Type     |

To order: For example, if you wanted a switch with a low pressure cutoff at 4 inches, reset type, you would order Model LGP-A 1-6". If you wanted a combination switch with a high pressure cutoff at 40" w.c. and a low pressure cut off at 8" w.c. In Recycle type, you would order Model RHLGP-A 10-50", 2-14".

## SPECIFICATIONS

- Maximum Surge Pressure: 10 p.s.i.
- Maximum Ambient Temperature: 140°F/60°C
- Minimum Ambient Temperature: -40°F/-40°C



## SINGLE GAS PRESSURE SWITCHES (MODEL-H)

#### Model Numbers

- |       |         |                           |
|-------|---------|---------------------------|
| Reset | Recycle |                           |
| LGP-H | RLGP-H  | Single Units, Lo-Pressure |
| HGP-H | RHGP-H  | Single Units, Hi-Pressure |

#### Ranges Available

- |   |  |
|---|--|
| <b>High Gas Pressure</b><br>(HGP-H, RHGP-H) | <b>Low Gas Pressure</b><br>(LGP-H, RLGP-H) |
| 1 to 7 P.S.I.                               | 1 to 7 P.S.I.                              |
| 6 to 15 P.S.I.                              | 6 to 15 P.S.I.                             |

## SPECIFICATIONS

- Maximum Surge Pressure: 35 p.s.i.
- Maximum Ambient Temperature: 140°F/60°C
- Minimum Ambient Temperature: -40°F/-40°C



## SINGLE GAS PRESSURE SWITCHES (MODEL-D)

#### Model Numbers

- |       |         |                           |
|-------|---------|---------------------------|
| Reset | Recycle |                           |
| LGP-D | RLGP-D  | Single Units, Lo-Pressure |
| HGP-D | RHGP-D  | Single Units, Hi-Pressure |

#### HIGH GAS PRESSURE

- |               |           |
|---------------|-----------|
| W.C.          | mm        |
| 5"-28" W.C.   | -125-700  |
| 10" -50" W.C. | -250-1250 |

#### LOW GAS PRESSURE

- |               |           |
|---------------|-----------|
| W.C.          | mm        |
| 2"-14 W.C.    | 50-350    |
| 10" -50" W.C. | -250-1250 |

## SPECIFICATIONS

- DPDT Elec. Switch
- Maximum Surge Pressure: 10 p.s.i.
- Maximum Ambient Temperature: 140°F/60°C
- Minimum Ambient Temperature: -40°F/-40°C



Gas and Air combustion controls must be installed and used in compliance with all of the applicable regulations and gas industry codes of practice.

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# IGNITION DETECTION SYSTEM

GROUP :V-2  
RANGE: IDS-100 IDS-200



## Introduction

This range of gas burner flame failure control units has been developed to satisfy the safety and process control requirements of manufacturing Industry for small and medium sized air-gas burners. A wide range of internal plug-in circuit boards are available to suit burner configuration and ignition options. The standard unit and several versions are certified by BG Technology as satisfying the requirements of BSEN 298.

The IDS 100/200 can be used in conjunction with suitable gas and air control devices in burner control systems to conform to BSEN-746-2, Industrial Thermoprocessing Equipment - Fuel Handling Systems. Typical applications include – low temperature ovens, dryers, kilns, furnaces, pre-heaters and flame treatment processes.

## Specification

Catalogue number	Part number	Voltage	Ignition
V-015	IDS-100	110v	Integral coil with auto re-ignition
V-016	IDS-200	230v	Integral coil with auto re-ignition

- Heavy duty steel enclosure to IP55
- Plug-in internal circuit board for simple maintenance
- Two stage valve operation
- Approved to EN 298
- LED display –flame on, power on, lock-out.
- External ignition transformer (optional)
- Customer colour and language (optional)

All gas safety equipment or products must be installed and used in full compliance with applicable safety standards and Industry codes of practice. Consult Rapidflame sales department for advice if in doubt.

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**GROUP V-2 rev.  
RANGE: IDS-100  
IDS-200****Operation**

The IDS-100 and IDS-200 units use solid state electronics for sequenced burner start-up and flame monitoring functions. On start up the IDS unit carries out a self check on all critical safety components. After start-up check the controller initiates its start up procedure and a purge timer will initiate. After purging the pilot gas valve and ignition coil terminals are energised for a pre-set ignition safety time. If a flame is detected within the safety time the ignition coil is de-energised and the main gas terminals are energised. The flame is monitored by means of 'flame ionisation detection' through the flame electrode.

Power 'on', main flame 'on' and 'lock-out' status is indicated by LED on the IDS front plate.

In the event of flame loss, the standard unit will initiate a short re-ignition attempt for the duration of the safety time. If the flame does not restore then lock-out will occur requiring a manual reset. Special versions of the unit are available with no re-ignition function.

**Electrical ratings**

Parameter	IDS-100	IDS-200
Power consumption	15VA at 110V 50 Hz	5 VA at 230V 50Hz
Switching capacity	1 amp	1 amp
Flame signal minimum	0.9 micro amps	0.45 micro amps
Ambient temperature maximum	-10 to +65 deg. C	-10 to +65 deg. C
Mounting position	any	any
Life expectancy	500,000 ops.	50,000 ops
Protection class	IP55	IP55
Internal fuse	5 amp surge	5 amp surge

For circuit diagrams see data sheet V-1 and consult Rapidflame sales department.

**Options**

- \* Custom engraved legends to customer specification and language
- \* Customer specified enclosure and colour

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# COMPACT AUTOMATIC BURNER CONTROL SYSTEM

**GROUP V-3**  
**RANGE: 100**  
**200**



## Introduction

Compact burner control units are supplied fully assembled for automatic operation of premixed air-gas flame treatment burners.

The partitioned gas panel contains compressed air and fuel gas controls complying with EN-746-2 providing safe operation for a range of flame treating burners with fixed or adjustable flame width up to 300mm as standard with automatic ignition and flame detection circuits.

Electrical controls are hard wired, fail safe and include electronic burner controller, ignition transformer, flame signal meter, warning lamps and isolator.

Rapidflame  
air-gas burner  
CRB 3/150  
Data sheet P-1



## Features

Fully engineered for operation with compressed air and Natural or LP Gas and 110v or 240v power.  
 Supplied prewired and assembled with flexible connection hoses and burner connection leads.  
 Steel control panel to IP55  
 Inlet / outlet connections 1/2" BSPT  
 Flame on, lockout outputs and remote start facility.  
 Single electrode for ignition and flame detection.  
 Supplied with installation and operating manual.  
 Compact units can be custom designed for multiple burner operation and with automatic flame setting for repeatable operation on different products.

## Applications

Flame treating of plastic cups, lids and containers before printing, painting, labelling or coating.  
 Removal by melting of sharp edges and flashing on moulded products.  
 Loose fibre burn off on clutch plates, brake pads and textiles.  
 Narrow width continuous web treating applications.  
 Flame treating extruded plastic pipe, tube, cable and sleeving.

## Specification

Catalogue Number	Type	Voltage	Gas Rating 20 mbar inlet	Air Supply 4 -6 bar	Dimensions mm	Weight kg
V031	COMPACT 100	110v 50Hz	25,000 kcal/hr	28 m3/hr max output	h 900, w 400 300 deep	30
V032	COMPACT 200	240v 50Hz	25,000 kcal/hr	28 m3/hr max output	h 900, w 400 300 deep	30

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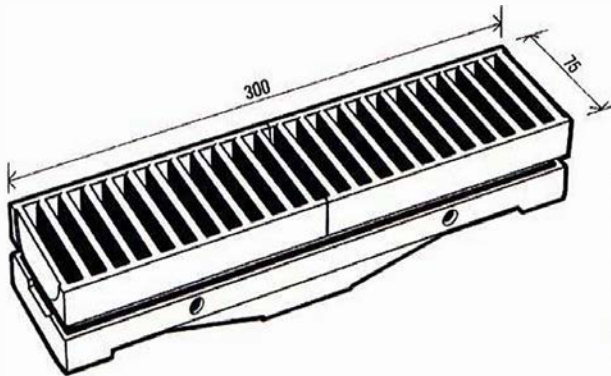
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# RADIANT LINE BURNER

GROUP W-1

RANGE: RL-130



## Introduction

Manufactured from heat resisting cast iron or pressed steel with 100% ceramic radiant front face. This line burner is ideally suited for the many different Infra red heating applications calling for a robust Industrial radiant burner capable of simple operation and control and assembled from easily replaceable components for long operating life. The open ended design ensures reliable cross ignition when burners are mounted in a line arrangement where long continuous heating systems are needed.

Applications include conveyor belt and web heating applications, glass preheating and annealing systems, rapid metal heating and general purpose use in low temperature ovens and heating plant where Infra red heating is desirable.

A range of add on components are available including electrodes and brackets for automatic spark ignition and flame detection. An air-gas mixer unit is required for this burner. Consult our sales department for advice on suitable mixers and control systems.

## Specification

Catalogue Number	Part Number	Length mm	Width mm	Height mm	Back-plate material	Rating Kcal/hr	Pipe thread connection
W-070	RL130-A X Closed end- Heavy duty	300	75	110	Cast Iron	10,000	1/4" male
W-071	RL130-A Open end Heavy duty	300	75	110	Cast Iron	10,000	1/4" male
W-072	RL130-ASX Open end Light duty	300	75	110	Pressed steel	10,000	1/4" male
W-073	RL130-AS Closed end Light duty	300	75	110	Pressed steel	10,000	1/4" male

Fuel gas: Natural or L.P. gas premixed with low pressure air. Other gases may be suitable but consult sales department for advice. Closed end standard design. Open end designs for cross lighting manifolds. Thread connections can be supplied 3/8" or 1/2" male thread for low pressure drop and high output duty

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