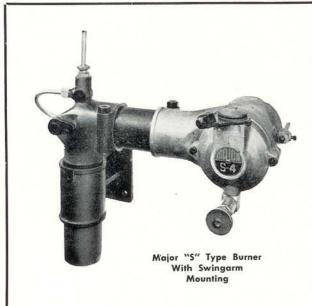
# LIQUID FUEL (OIL) BURNERS



#### "S" TYPE BURNER



"Major" S type burners are non-rotary, low pressure air atomizing, fuel oil burners fitted with separate air and oil controls. They are designed for applications where manual operation is desirable, or where it is advantageous to use the most simple and robust type of equipment.

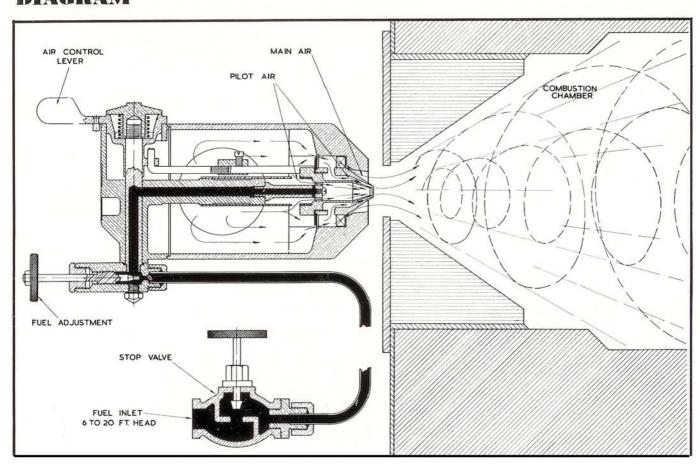
Having separate air and oil controls, it is possible to instantly produce oxidising, neutral or reducing atmospheres at any setting throughout the adjustable range of the burner.

As with the UNI-control type, air flow through the burner is controlled by means of a sliding valve located in the outlet nozzle so as to maintain high air velocities at the point of atomization. This arrangement provides maximum turn-down of capacity and ensures efficient atomization over the whole range of adjustment.

In common with other "Major" burners, the spray angle of the S burners can be changed to suit a wide range of applications. The air valve nozzle incorporates vanes for swirling the main or outer air supply and tangential holes for swirling the pilot or inner air supply.

The valves are available with vanes at various angles, each angle of vane having matching tangential holes so that it is possible to effect a change of both main fire and pilot fire spray angle by the replacement of only one component.

### DIAGRAM



## "S" TYPE-APPLICATIONS

The most common applications for "Major" S type burners are the firing of furnaces of all kinds and small steam boilers in cases where automatic control of burner operation is not necessary or desirable.

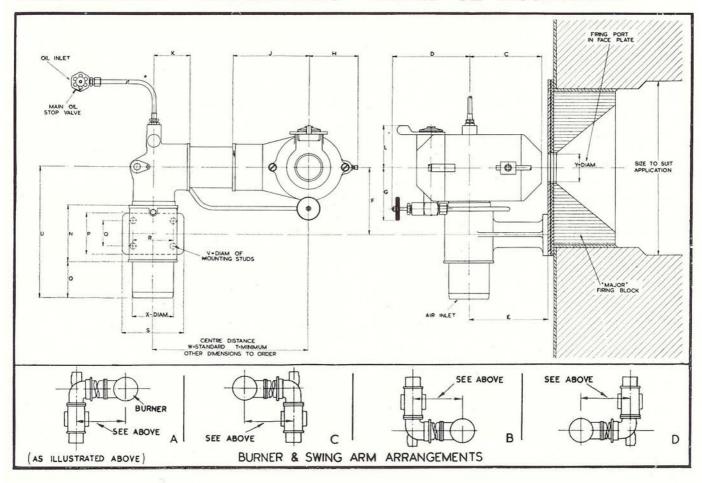
S burners are not suitable for the firing of furnaces or heat exchangers requiring automatic control of temperature. For these applications, the UNI-control burners, in conjunction with pneumatic or electric control motors and suitable control

instruments, should be used. For this type, refer to Technical Data Sheets Nos. 5 and 7.

For large steam boilers, either manually or automatically controlled, the B.L.P. type burners (refer to Data Sheets Nos. 6 and 7), are preferable.

Hot water boiler applications usually call for semi or full automatic control, and the burner should be either the UNIcontrol or the G.A. type. The latter is described in Data Sheet No. 4.

## **DIMENSIONS – CAPACITIES – HAND OF ASSEMBLY**



BURNER SIZE CODE	NOMINAL BURNING RATE (Gallons per hour)																			AIR REQUIRED BY BURNER						
	Maximum Min.		Min.	DIMENSIONS															BI BURNER							
	Against Slight Back-Fres- sure (Furnaces)	With Extra Air Induced By Stack (Boilers)	Pilot Fire	[In Inches]																Pressure	Volume					
				С	D	E	F	G	н	J	K	L	N	0	P	Q	R	s	т	U	٧	w	x	Y	ins. W.G.	C.F.M.
S1	1	2	0.13	21	43	27	3,5	28	21	28	21	2	31	2	41	31	11	14	5	67	38	6	111	1.5 1.6	12	30
<b>S2</b>	2	4	0.25	31	5]	4	41	3	21	33	21	21	41	21	51	4	13	3	63	98	38	8	28	14	12	60
S4	4	8	0.5	5	7	51	51	33	31	6	31	31	41	21	51	4	13	3	91	101	38	12	3	13	12	120
S8	8	16	1.0	7	73	78	61	51	41	71	35	41	51	31	4	21	4	6	111	123	1 2	15	4	23	12	240
S16	16	32	2.0	83	10	91	71	61	51	93	51	51	73	5	5	27	51	71	15 <u>l</u>	171	1 2	18	51	31	12	480
S32	32	64	4.0	117	11 11				67			51						61	16	28		18			12	960

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## **Major Furnace**

100 Fairbank Road Clayton, Victoria Australia, 3169

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