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TERMS AND CONDITIONS

- FREIGHT:** Freight charges will be collect, point of delivery, unless otherwise specified by customer.
- PAYMENT:** Should be made to the office from which invoice is issued, in funds free of exchange or collection charges.
- DESIGN:** Ransome reserves the right to make minor alterations in design without notice.
- SHIPMENTS:** All statements of date of shipment are estimated. Best efforts will expended to ship within time specified.
- AGREEMENTS:** Are contingent upon strikes, accidents and other delays beyond the control of Ransome.
- CLAIMS:** Must be made within ten days after receipt of goods.
- CANCELLATIONS:** Firm orders which have been accepted are subject to changes in specifications only on the basis of Ransome's being reimbursed for costs incurred against the order in its original form. Cancellation charges are 50% for special ordered items are 25% for stock items.
- RETURNS:** Returned materials will be accepted only if accompanied by a Material Return Authorization (MRA). All pertinent information regarding the goods in question must be supplied in order that their proper disposition may be affected. No goods returned on C.O.D. will be accepted.
- CREDITS:** For properly authorized returned or exchanged goods, credit will be issued within thirty days of Ransome's acceptance and receipt of goods. In issuing credit for returned material. Ransome reserves the right to deduct handling and restocking charges.

WARNING

1. Burners should be installed and used in accordance with Federal, State or local codes, rules, laws or regulations and/or in accordance with the current edition of NFPA pamphlet 54.
2. Only qualified personnel should install or service burners and burner systems.
3. Installation permits to assure compliance with local codes should be obtained from the local enforcing entity.
4. Use correct gas pressure for the burner, and be sure the firebox and vent flue is of proper size before operating.

IMPORTANT

When ordering burners, it is important you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

Suggested uses of Atmospheric Vapor Burners for LP-Gas, Natural Gas and Manufactured Gas

- | | |
|--|--|
| B1 Small straight shot burners, pilots. | S5S Intermediate size pot heaters, tar pots, bottom fired kettles and vats, air heaters. |
| B2 Small Straight shot burners, small heaters, furnaces, rivet heaters. | S8S Bottom fired kettles and vats, air heaters, driers, process stills, crab cookers. |
| B3 Straight shot burners, heaters, furnaces, preheating. | S12S Large driers, air heaters, large process stills, coil heaters, lead melters, boilers, grain and nut driers. |
| B4, 4-B5 Straight shot burners, immersion tubes, large heaters, sidefired ore roasting ovens, preheating small sand and aggregate driers, small horizontal boilers. | IM4, etc. For most small intermediate size immersion tube heaters. |
| S4S Small tar pots, heaters, commercial stoves, ovens. | P8, etc. Small utility burners; can be used singly or manifolded for heat input for many uses. Used mostly as pilots with "B" and "S" type burners. |
| S5 Small nut and grain driers, kilns. | |

A few uses of Ransome Torches, Plumbers Furnaces and Portable Outfits

- | | | | |
|------------------------------|------------------------------|--------------------------|----------------------------------|
| • Preheating Before Welding | • Silver Soldering | • Sterilizing: | • Glue Heating |
| • Spot Heating | • Soldering - Open Flame | Poultry House | • Babbit Melting |
| • Pipe Bending and Heating | • Electrical Work | Dairy Barns | • Heating Sewer Pipe Compound |
| • Forging Small Parts | • Singeing Chickens and Hogs | Cattle Cars | • Lead Melting |
| • Fender Repairing | • Drying Foundry Cores | Gymnasium | • Paint Burning |
| • Rivet Heating | • Aluminum Welding | Swimming Pools | • Tinsmiths and Sheetmetal Shops |
| • Thawing Frozen Water Pipes | • Destroying Insects | Locker Rooms | • Railway Shop |
| • Streamline Fitting Work | • Asphalt Melting | Public Comfort Rooms | • Dental Laboratories |
| • Rebabbiting Bearings | • Road Clearing | • Back-Firing in Forests | • Public Utilities |
| • Melting Out Lead Joints | • Brush and Weed Burning | • Roofing Repairs | • Hot Waxing Skis |

BURNERS

VENTURI

APPLICATION: Ransome venturis are designed for use with Ransome burners, but many customers and other burner head manufacturers also use them with their products.

DESCRIPTION: Each venturi is sold as a complete unit which includes: venturi, spud, orifice and locking ring. Sizes are by pipe size connection. All venturis will be shipped with blank orifices unless drill size is specified with order.

V050S



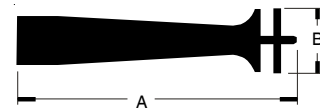
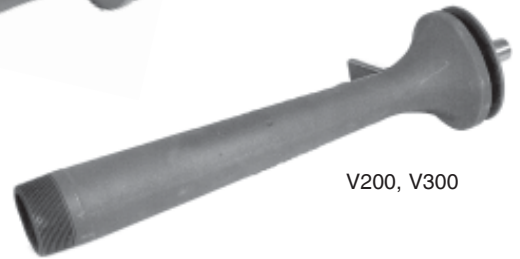
V050B



V050, V075, V100, V125, V150



V200, V300



MODEL NUMBER	DIMENSIONS INCHES		ORIFICE SIZE	GAS CONNECTION	VENTURI CONNECTION	WT. LBS.
	A	B				
V050	5	1-7/8	1/4 - 28 MNPS	1/8" MNPS	1/2" MNPS	9-1/2 oz.
V050S	2-3/8	1-7/8	1/4 - 28 MNPS	1/8" MNPS	1/2" MNPS	9-1/2 oz.
V050B	1-1/2	2-5/8	1/4 - 28 MNPS	1/8" MNPS	1/2" MNPS	9 oz.
V075	6-3/4	2-3/8	5/16 - 32 MNPS	1/4" MNPS	3/4" MNPS	14 oz.
V100	6-1/8	3	7/16 - 27 MNPS	1/2" MNPS	1" MNPS	1-3/4
V125	7-1/8	3	7/16 - 27 MNPS	1/2" MNPS	1-1/4" MNPS	1-3/4
V150	11-7/8	3-5/8	7/16 - 27 MNPS	1/2" MNPS	1-1/2" MNPS	4
V200	15-1/4	4-1/8	7/16 - 27 MNPS	1/2" MNPS	2" MNPS	6
V300	18-1/8	5-1/4	5/8 - 27 MNPS	3/4" MNPS	3" MNPS	11

TORCH-TYPE STRAIGHT FLAME BURNERS

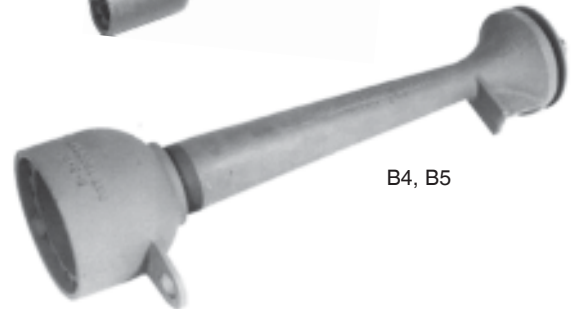
APPLICATION: Torch type straight flame burners are used in a variety of applications. Some of their more popular uses include pilots, heaters, furnaces, rivet heating, immersion tubes, preheating, ore roasting ovens, sand and aggregate driers, tunnel driers and horizontal boilers.

DESCRIPTION: The heads of these burners are cylindrical in shape. The grid is designed to produce a relatively long tapering flame. The larger sized B4 and B5 are equipped with integrally cast brackets, designed for mounting pilots. These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.

B1, B2, B3



B4, B5



BURNER	AIR SHUTTER	SPUD	VENTURI
B1	AS200	SP12L	V050
B2	AS300	SP50L	V100
B3	AS300	SP50L	V125
B4	AS362	SP50L	V150
B5	AS412	SP50L	V200

NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES			BURNER BTU CAPACITIES												WT. LBS.	
				LP-GAS						NATURAL GAS							
	A	B	C	ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI		10 PSI
B1	8-1/2	1-3/8	1-7/8	69	5,900	9,700	13,900	21,600	30,700	43,000	60	3,900	10,900	15,200	---	---	---
											58	---	---	---	26,100	37,800	
B2	10-1/2	2-1/4	2-3/4	64	9,000	14,800	20,900	33,200	46,700	66,400	52	9,800	27,600	38,500	---	---	4
											51	---	---	---	66,900	95,200	
B3	12	3-1/4	2-3/4	50	34,200	55,300	77,500	123,000	175,900	246,000	35	29,900	81,400	115,600	---	---	7
											30	---	---	---	250,200	356,400	
B4	17	3-3/4	3-3/8	43	53,000	89,800	126,700	200,500	286,600	403,400	28	48,900	133,100	188,450	---	---	---
											24	---	---	---	347,600	495,300	
B5	21	5	4-1/8	33	89,800	145,200	205,400	324,700	462,400	649,400	23	58,700	159,200	225,400	---	---	15
											20	---	---	---	389,100	554,900	

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

BURNERS

TORCH-TYPE UPSHOT FLAME BURNERS

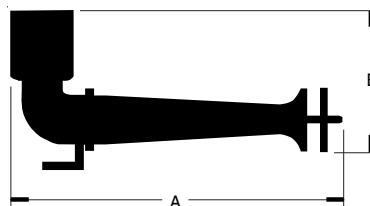
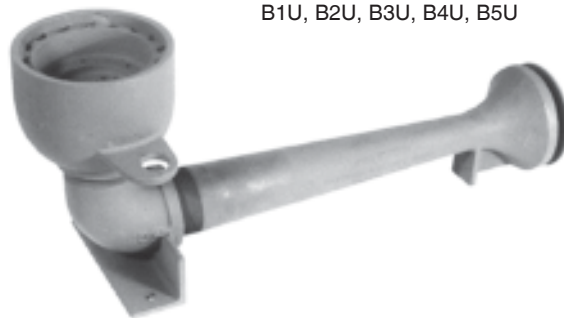
APPLICATION: Torch type upshot burners can be effectively employed under lead, metal or glue pots where a usually limited area of heat transfer is available. If efficiency is to be attained in such installations, the hottest portion of the flame must be concentrated upon the melting pot or other heat transfer surface, and not allowed to spread and become dissipated.

DESCRIPTION: This type of burner is used to advantage where a hot flame is desired to be localized and concentrated at a point. The heads of these burners are cylindrical in shape. The grid is designed to produce a relatively long tapering flame.

The larger sized B4U and B5U burners are equipped with integrally cast brackets designed for mounting pilots.

These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.

B1U, B2U, B3U, B4U, B5U



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES		BURNER BTU CAPACITIES												WT. LBS.	
			LP-GAS						NATURAL GAS							
			ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI		10 PSI
B1U	8-1/2	4-1/2	69	5,900	9,700	13,900	21,600	30,700	43,000	60	3,900	10,900	15,200	---	---	1-3/4
			58	---	---	---	---	---	---	---	---	---	26,100	37,800		
B2U	10-1/2	5-7/8	64	9,000	14,800	20,900	33,200	46,700	66,400	52	9,800	27,600	38,500	---	---	4
			51	---	---	---	---	---	---	---	---	66,900	95,200			
B3U	12	6-1/2	50	34,200	55,300	77,500	123,000	175,900	246,000	35	29,900	81,400	115,600	---	---	7
			30	---	---	---	---	---	---	---	---	250,200	356,400			
B4U	17	8	43	53,000	89,800	126,700	200,500	286,600	403,400	28	48,900	133,100	188,450	---	---	8
			24	---	---	---	---	---	---	---	---	347,600	495,300			
B5U	21	9-1/2	33	89,800	145,200	205,400	324,700	462,400	649,400	23	58,700	159,200	225,400	---	---	15
			20	---	---	---	---	---	---	---	---	389,100	554,900			

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

IMMERSION TUBE BURNERS

APPLICATION: Immersion tube burners are used for most small to intermediate sized immersion tube heaters.

DESCRIPTION: The heads of these burners are cylindrical in shape, with brackets that attach directly to your immersion tube. The grid is designed to produce a long sharp flame.



IM4, IM5, IM6



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES		BURNER BTU CAPACITIES												WT. LBS.	
			LP-GAS						NATURAL GAS							
			ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI		10 PSI
IM4	10-1/2	5	45	47,000	77,500	109,400	172,200	246,000	344,400	30	41,100	111,200	157,800	250,200	356,400	6
IM5	15	5-5/8	45	47,000	77,500	109,400	172,200	246,000	344,400	30	41,100	111,200	157,800	250,200	356,400	8-1/4
IM6	16	6-3/4	43	55,300	89,800	126,700	200,500	286,600	403,400	25	55,300	150,500	212,300	336,000	478,500	11-1/4

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

BURNERS

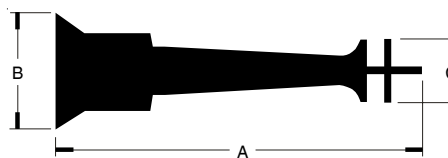
SPREAD HEAD STRAIGHT SHOT FLAME BURNERS

APPLICATION: Spread head straight shot flame burners are used for large heaters, sidefired ore roasting ovens, preheating small driers, small horizontal boilers, etc.

DESCRIPTION: The heads of these burners are cylindrical in shape, tapering out at the top. The grid is designed to produce a wide relatively short flame. The larger sized S5 and S8 burners are equipped with integrally cast brackets, designed for mounting pilots. These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.



S4V050, S4V075, S5, S8



NOTE: See page 18 for flame characteristics.

BURNER	AIR SHUTTER	SPUD	VENTURI
S4V050	AS200	SP12L	V050
S4V075	AS237	SP25L	V075
S5	AS300	SP50L	V150
S8	AS412	SP50L	V200

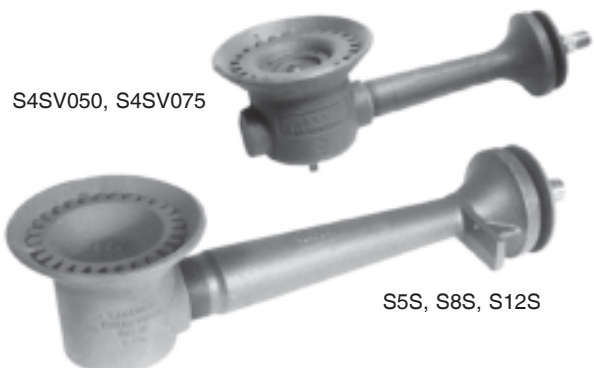
MODEL NUMBER	DIMENSIONS INCHES			BURNER BTU CAPACITIES													WT. LBS.
				LP-GAS							NATURAL GAS						
				ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	
S4V050	10	4-1/4	3	62	10,100	16,300	23,300	36,900	51,600	73,800	48	14,300	37,100	52,300	---	---	2-1/4
				47	---	---	---	93,800	133,800	---	---						
S4V075	11	4-1/4	3	55	18,800	30,700	43,000	67,600	97,100	136,500	43	19,600	53,100	74,900	---	---	2-3/4
				42	---	---	---	132,300	188,300	---	---						
S5	17-1/2	5-1/2	4-5/8	37	75,500	123,000	174,600	275,500	391,000	552,200	24	57,000	155,600	219,600	---	---	9
				15	---	---	---	487,300	694,600	---	---						
S8	24	8	5-1/2	26	151,000	252,100	356,700	565,800	806,600	1,129,000	12	82,200	240,000	339,600	---	---	24
				1	---	---	---	785,500	1,107,000	---	---						

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

SPREAD HEAD SIDE ENTRY FLAME BURNERS

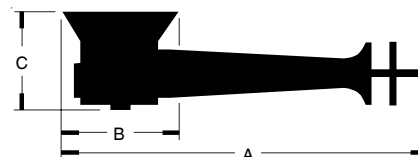
APPLICATION: Side head side entry flame burners are used for intermediate sized pot heaters, bottom fired kettles and vats, air heaters, driers, process tills, crab cookers, etc. The larger sized S12S burners are also used for lead melters, boilers and very large driers.

DESCRIPTION: The heads of these burners are cylindrical in shape, tapering out at the top. The grid is designed to produce a wide relatively short flame. The larger sized S5S, S8S and S12S burners are equipped with integrally cast brackets, designed for mounting pilots. These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.



S4SV050, S4SV075

S5S, S8S, S12S



NOTE: See page 18 for flame characteristics.

BURNER	AIR SHUTTER	SPUD	VENTURI
S4SV050	AS200	SP12L	V050
S4SV075	AS237	SP25L	V075
S5S	AS300	SP50L	V150
S8S	AS412	SP50L	V200
S12S	AS525	SP75L	V300

MODEL NUMBER	DIMENSIONS INCHES			BURNER BTU CAPACITIES													WT. LBS.
				LP-GAS							NATURAL GAS						
				ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	
S4SV050	10	4-1/4	3	62	10,100	16,300	23,300	36,900	51,600	73,800	48	14,300	37,100	52,300	---	---	2-1/4
				47	---	---	---	93,800	133,800	---	---						
S4SV075	11	4-1/4	3	55	18,800	30,700	43,000	67,600	97,100	136,500	43	19,600	53,100	74,900	---	---	2-3/4
				42	---	---	---	132,300	188,300	---	---						
S5S	17-1/2	5-1/2	4-5/8	37	75,500	123,000	174,600	275,500	391,000	552,200	24	57,000	155,600	219,600	---	---	9
				15	---	---	---	487,300	694,600	---	---						
S8S	24	8	5-1/2	26	151,000	252,100	356,700	565,800	806,600	1,129,000	12	82,200	240,000	339,600	---	---	24
				1	---	---	---	785,500	1,107,000	---	---						
S12S	30-1/2	12	6-1/2	7/32	340,000	626,000	883,100	1,339,700	1,974,100	1,798,200	3/8"	320,000	945,500	1,338,300	---	---	51
				7/16"	---	---	---	2,880,200	4,073,100	---	---						

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

BURNERS

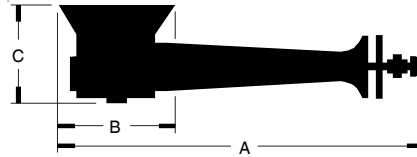
SPREAD HEAD SIDE ENTRY FLAME BURNERS - TWO VENTURIS

APPLICATION: Spread head side entry flame burners with two venturis are used for bottom fired kettles and vats, air heaters, large process stills, crab cookers, coil heaters, lead melters, boilers, large driers, etc. These burners are recommended for applications that require more heat than the one venturi burner can provide.

DESCRIPTION: The heads of these burners are cylindrical in shape, tapering out at the top. The grid is designed to produce a wide relatively short flame. Both the S8ST and the S12S2V burners are equipped with integrally cast brackets, designed for mounting pilots. These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.



S8ST, S12S2V



NOTE: See page 18 for flame characteristics.

BURNER	AIR SHUTTER	SPUD	VENTURI
S8S2V	AS412	SP50L	V200
S12S2V	AS525	SP75L	V300

MODEL NUMBER	DIMENSIONS INCHES			BURNER BTU CAPACITIES												WT. LBS.	
				LP-GAS						NATURAL GAS							
				ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI		10 PSI
S8S2V	30	8	5-1/2	2 @ 30	230,600	376,300	533,800	846,200	1,205,400	1,687,500	2 @ 10	183,100	504,100	712,800	1,127,300	1,592,800	34
S12S2V	36-1/2	12	6-1/2	2 @ 7/32"	340,000	1,089,700	1,539,900	2,447,700	3,477,700	4,883,100	2 @ 3/8"	640,000	1,891,000	2,676,600	4,247,600	5,993,200	70

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

SPREAD HEAD SIDE ENTRY FLAME BURNERS - FOR AIR STREAMS

APPLICATION: These ported spread head side entry flame burners are designed to be mounted in an air system. These burners are used for nut driers, grain driers, aggregate driers, etc.

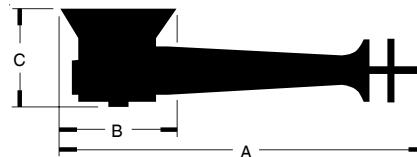
DESCRIPTION: The large secondary port allows a much more rapid mixing of secondary air at the burner head, thus reducing overall length. This allows the burner system to be mounted to a squirrel cage air induction opening. Available heat is much more efficiently drawn into the system while the flame is kept safely away from bearings motors, etc. These burners are all equipped with integrally cast brackets designed for mounting pilots. These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.



S8STO, S12SO

S8ST2VO, S12S2VO

BURNER	AIR SHUTTER	SPUD	VENTURI
S8SO	AS412	SP50L	V200
S12SO	AS525	SP75L	V300
S8S2VO	AS412	SP50L	V200
S12S2VO	AS525	SP75L	V300



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES			BURNER BTU CAPACITIES												WT. LBS.	
				LP-GAS						NATURAL GAS							
				ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI		10 PSI
S8SO	24	8	5-1/2	26	151,000	252,100	356,700	565,800	805,600	1,129,000	12	82,200	240,000	339,600	---	---	24
S12SO	30-1/2	12	6-1/2	15/64"	340,000	626,000	838,100	1,339,700	1,974,100	2,798,300	3/8"	320,000	945,500	1,338,300	---	---	51
											7/16"	---	---	---	2,880,200	4,073,100	
S8S2VO	30	8	5-1/2	2 @ 30	230,600	376,300	533,800	846,200	1,205,400	1,687,500	2 @ 10	183,100	504,200	712,800	1,127,300	1,592,800	34
S12S2VO	36-1/2	12	6-1/2	2 @ 7/32"	340,000	1,089,700	1,539,900	2,447,700	3,447,700	4,883,100	2 @ 3/8"	640,000	1,891,000	2,676,600	4,247,600	5,993,200	70

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

BURNERS

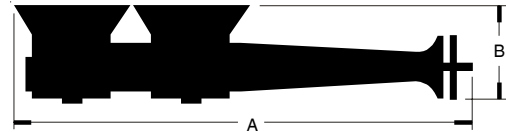
SPREAD HEAD SIDE ENTRY FLAME BURNERS - MULTIPLE HEADS

APPLICATION: Spread head side entry flame burners with multiple head assemblies are used for intermediate sized pot heaters, bottom fired kettles and vats, air heaters, driers, process stills, crab cookers, etc.

DESCRIPTION: The multiple head assembly burner is advantageous on applications that require burner heat over a large area than the single burner can provide. The heads of these burners are cylindrical in shape, tapering out at the top. The grid is designed to produce a wide relatively short flame. The larger sized S5 and S8 burners are equipped with integrally cast brackets, designed for mounting pilots. These burners do not come with pilots as standard units, consequently if a pilot is desired, your order should so state.



S4075X2, S5125X2



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES		BURNER BTU CAPACITIES													WT. LBS.
			LP-GAS							NATURAL GAS						
			ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	
S4075X2	*	3-3/4	57	12,900	21,000	29,500	---	---	---	46	16,300	43,600	68,800	---	---	10
			56	---	---	---	53,300	78,700	110,700	44	---	---	---	98,100	139,600	
S4075X3	*	3-3/4	55	18,800	30,700	43,000	---	---	---	43	19,600	53,100	74,900	---	---	13
			54	---	---	---	75,000	105,700	148,800	42	---	---	---	132,300	188,300	
S5125X2	*	4	34	86,200	141,500	199,200	---	---	---	14	81,200	223,200	316,200	---	---	14
			32	---	---	---	344,400	492,000	688,800	12	---	---	---	539,400	759,700	
S5125X3	*	4	32	94,000	153,800	217,700	---	---	---	9	94,100	258,800	366,400	---	---	20
			30	---	---	---	423,100	602,700	843,800	8	---	---	---	596,100	843,200	

* DIMENSION VARIES WITH CUSTOMER SPECIFICATIONS.

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

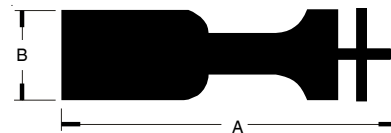
PILOT BURNERS

APPLICATION: Pilot burners are small burners used to light large burners when spark ignition or pilot lights are too "cold". Burning constantly or lighted prior to the main burners, they provide a long pointed or short and wide flame pattern depending on the application.

DESCRIPTION: The B1S and B1SSC, with a long pointed flame are used on straight short flame burners and immersion tube burners. P8S and P8SSC, with a wide relatively short flame, are used on spread head and large straight shot flame burners. The "SC" denotes "Single Coupled", that is, the burner head is drilled and tapped to allow for a thermocouple with 7/16 - 27 male connection.

Burners and/or pilot assemblies placed in an air stream must use a P8SSCA pilot burner. The "A" denotes an air shutter which is cupped over the venturi end so the pilot flame will not be blown out.

IMPORTANT: Whenever ordering pilots always specify the type of burner it will be used with and the type of gas and pressure to be used. In addition, because flame height is critical for good pilot burner operation and safety, a separate needle valve should always be used in the pilot burner gas supply line.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS * INCHES		ORIFICE **				DESCRIPTION	WT. LBS.
			HIGH PRESSURE		LOW PRESSURE			
			LPG	N.G.	LPG	N.G.		
B1S	5-1/4	2	77	66	77	66	Consists of a separate burner head and venturi. Comes complete with orifice, air shutter and locking.	13 oz.
B1SSC	4-3/4	2-3/4	77	66	77	66	Same as above except burner head is a side entry venturi type to allow for 7/16" - 27 male thermocouple connection.	1
P8S	5-1/4	2-3/4	76	65	76	65	Produces a wide flame.	1-1/2
P8SSC	10-3/4	3-1/2	76	65	76	65	Produces a wide flame and provides thermocouple connection.	2-1/2
P8SSCA	10-3/4	3-1/2	76	65	76	65	Produces a wide flame, has thermocouple connection and cupped air shutter.	2-1/2

* Pilot burner dimensions may vary upon application.

** Pilot burner gas supply line should incorporate a needle valve to regulate flame height.

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

BURNERS

SMALL UTILITY BURNERS

APPLICATION: Small utility burners, when used individually, serve effectively for industrial pilots, coffee urns, steam tables and many other applications.

DESCRIPTION: The head of the B1S and P21A burners are cylindrical in shape. The heads of the P8V050, P8V050S, P8S, P8-1 and P9B burners are oval shaped. The grids of these burners are designed to produce a wide medium length flame. The P8S burner can also be used as a pilot burner.

B1S



P8-1



P8S



P8V050S



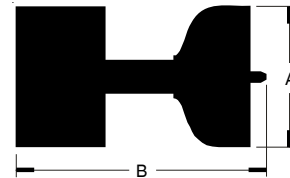
P9B



P21A



P8V050



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES		BURNER BTU CAPACITIES													WT. LBS.
			LP-GAS							NATURAL GAS						
			ORIFICE	11" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	20 PSI	ORIFICE	7" W.C.	1 PSI	2 PSI	5 PSI	10 PSI	
B1S	1-7/8	5	74	2,900	5,700	8,200	---	---	---	60	3,900	10,900	15,200	---	---	1-1/4
			77	---	---	---	8,100	11,500	16,200	62	---	---	---	21,800	30,500	
P8-1	2-7/8	5	74	2,900	5,700	8,200	---	---	---	60	3,900	10,900	15,200	---	---	2
			76	---	---	---	8,100	11,500	16,200	65	---	---	---	18,100	26,100	
P8S	2-5/8	5-1/4	73	3,300	6,500	9,200	---	---	---	60	3,900	10,900	15,200	---	---	1-3/4
			76	---	---	---	10,000	14,200	20,000	65	---	---	---	18,100	26,100	
P8V050	2-5/8	7-3/4	69	4,900	9,200	14,000	---	---	---	56	5,200	14,500	20,300	---	---	1-1/2
			72	---	---	---	16,000	22,500	32,000	58	---	---	---	26,100	37,800	
P8V050S	2-5/8	5	72	4,600	7,100	10,000	---	---	---	58	4,300	11,900	16,700	---	---	1-1/4
			75	---	---	---	13,000	18,400	25,800	60	---	---	---	24,000	34,100	
P9B	3-1/4	5-1/2	74	2,900	5,700	8,200	---	---	---	60	3,900	10,900	15,200	---	---	1-1/4
			76	---	---	---	10,000	14,200	20,000	65	---	---	---	18,100	26,100	
P21A	2-1/4	5-3/4	66	6,300	12,500	17,500	---	---	---	54	7,300	19,600	27,600	---	---	1-3/4
			69	---	---	---	21,600	30,700	43,000	56	---	---	---	32,700	46,500	

IMPORTANT: When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

SMALL UTILITY BURNERS MANIFOLD

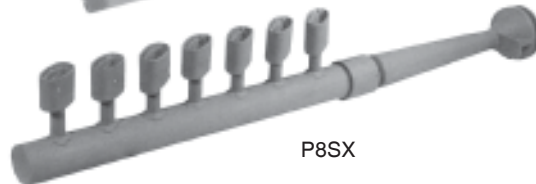
APPLICATION: Small utility burners can be manifolded together in many ways to obtain the required BTU input and type of flame pattern desired. The manifolded burners are used for core ovens, bake ovens, ceramic ovens, furnaces, metal melters, vats, tanks and many other applications.

DESCRIPTION: The two types of manifolds are (1) individual venturi burners which are mounted to a pipe tapped for a 1/8" MNPT connection. (2) Single venturi manifold burner systems where burner heads are mounted to a pipe and fed by a single venturi. This type of manifold draws primary combustion air from outside the firebox. When manifolding burners, they should be spaced close enough together so that one burner will immediately ignite the one next to it.

P8X



P8SX



MODEL NUMBER	DESCRIPTION
P8X	Individual venturi burner manifold system (consult factory for required data)
P8SX	Single venturi burner manifold system (consult factory for required data)

IMPORTANT: All manifold assemblies are available on a custom order basis. All manifold prices will be quoted upon request. When ordering burners, it is important that you specify the type of gas to be used as well as the gas pressure(s) at which the burners may be operated. For manufactured gas, state the BTU quality and specific gravity.

TORCHES

UTILITY TORCHES

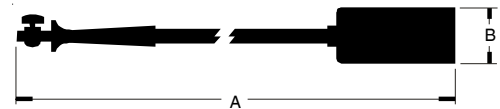
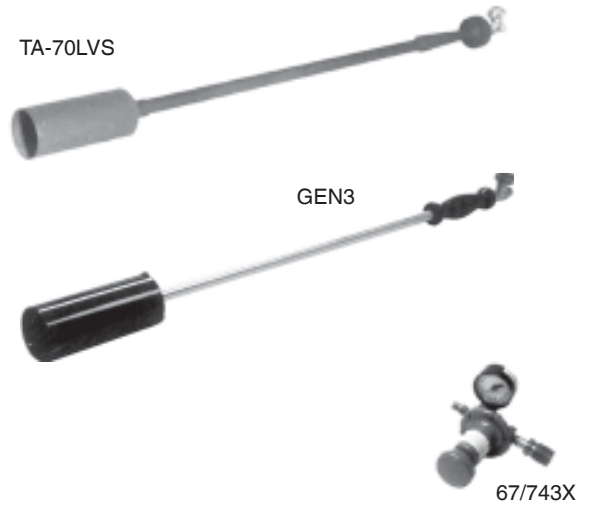
APPLICATION: The TA70LVS is a lightweight easy to use, general utility torch. This model is commonly used in foundries, machine shops, garages, etc. to perform such tasks as thawing, melting, drying and disinfecting. It is also used by ranchers and farmers for weed burning.

DESCRIPTION: This torch features outstanding flame stability and perfect operation in close quarters without flame suffocation. Flame is not extinguished by drafts or high winds. The convenient venturi handle provides the best air/gas mixture while producing a strong, blue flame.

IMPORTANT: The (TA70LVS) torch listed in the specifications table below is a complete assembly.

NOTE: A Fisher 67/743 high pressure regulator is required for use with the (TA70LVS) torch.

REPLACEMENT: The "Genie III" (part no. GEN3) torch is offered as a replacement for the TA70LVS torch.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES		TORCH BTU CAPACITIES (LPG)							WT LBS	
	A	B	ORIFICE	1 LB	2-1/2 LB	5 LB	10 LB	20 LB	30 LB		
TA-70LVS	33-3/4	2-1/4	54	33,200	52,275	75,000	105,700	148,800	182,000	3-1/4	
GEN3	30-3/4	2-1/8	56	Pressure varies with tank size.							2-1/2

IMPORTANT: All torches are shipped for use with LP-Gas. For manufactured gas, state the type of gas, BTU quality and specific gravity.

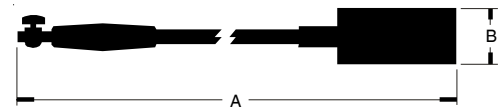
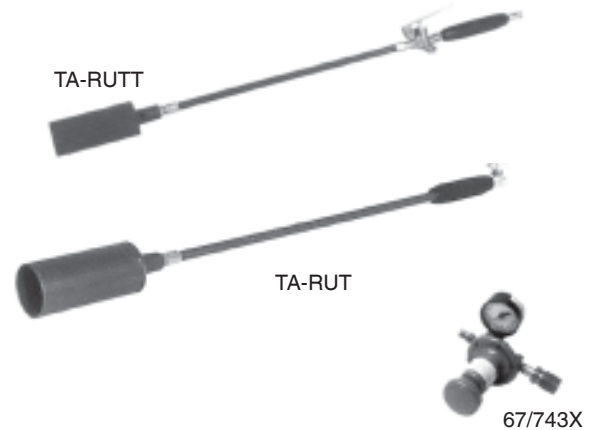
HEATING TORCHES

APPLICATION: The TA-RUT and TA-RUTT are heavy duty torches designed for applications requiring a relatively large and intense flame. The torches are use extensively in machine shops, factories, garages and on farms and ranches. Applications include melting lead, babbitt and white metal: preheating fender repair, pipe bending and burning weeds.

DESCRIPTION: These torches produce an extremely stable, blue pointed flame. Consequently they perform satisfactorily in a draft or strong wind. The amount of flame can be easily controlled via the needle on the TA-RUT or by the trigger valve on the TA-RUTT. Both models come equipped with an easy grip bakelite type handle.

IMPORTANT: The torches listed in the specifications table below are complete assemblies. Be sure to use the photographs as an aid in selecting your torch assembly.

NOTE: A Fisher 67/743 high pressure regulator is required for use with this torch.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DIMENSIONS INCHES		TORCH BTU CAPACITIES (LPG)							WT LBS
	A	B	ORIFICE	1 LB	2-1/2 LB	5 LB	10 LB	20 LB	30 LB	
TA-RUT	32-3/4	2-3/8	54	33,200	52,275	75,000	105,700	148,800	182,000	2-1/4
TA-RUTT	32-3/4	2-3/8	54	33,200	52,275	75,000	105,700	148,800	182,000	2-1/4

IMPORTANT: All torches are shipped for use with LP-Gas. For manufactured gas, state the type of gas, BTU quality and specific gravity.

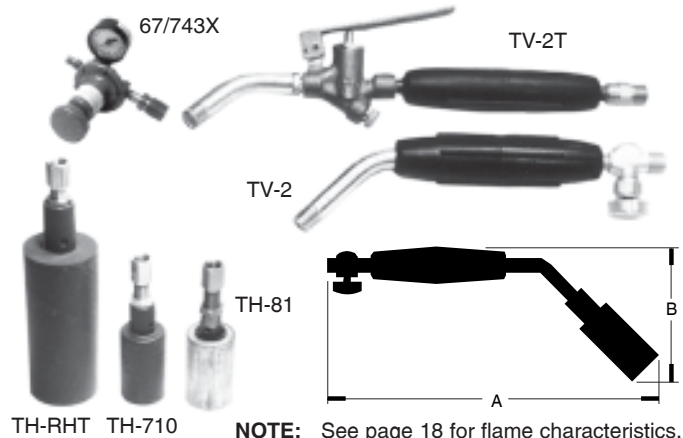
TORCHES

PLUMBING TORCHES

APPLICATION: These lightweight hand torches can handle a variety of jobs in plumbers shops, sheet metal shops, etc. They are used for thawing, melting, heating, drying and many other applications. Plumbers have used these torches for sweating large size streamline fittings.

DESCRIPTION: These units produce a smaller flame than the TA-RUT torches but cover a larger area with more heat than the 77 hand torches. Three different heads are available to produce a varying degree of heat and flame width. All models are available with either needle valve or convenient trigger valve. Both torches come with easy grip bakelite type handle.

NOTE: A Fisher 67/743 high pressure regulator is required for use with this torch.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DESCRIPTION	WEIGHT, POUNDS
TV-2	Plumbing torch, less head	1
TV-2T	Plumbing trigger torch, less head	1

MODEL NUMBER	DIMENSIONS INCHES		TORCH BTU CAPACITIES (LPG)							WT LBS
	A	B	ORIFICE	1 LB	2-1/2 LB	5 LB	10 LB	20 LB	30 LB	
TH-RHT	17-1/2	6-3/4	57	21,000	33,200	46,700	67,600	93,400	114,400	3
TH-81	14-1/2	4-3/4	73	6,500	10,200	14,500	20,900	29,500	35,600	1-3/4
TH-710	14-1/2	4-3/4	73	6,500	10,200	14,500	20,900	29,500	35,600	1-3/4

IMPORTANT: All torches are shipped for use with LP-Gas. For manufactured gas, state the type of gas, BTU quality and specific gravity.
ORDERING: For ordering assembled units, combine torch number dash head number. (e.g. 2-THRHT, 77-TH75X, V9-V9B)

HAND AND SOLDERING TORCHES

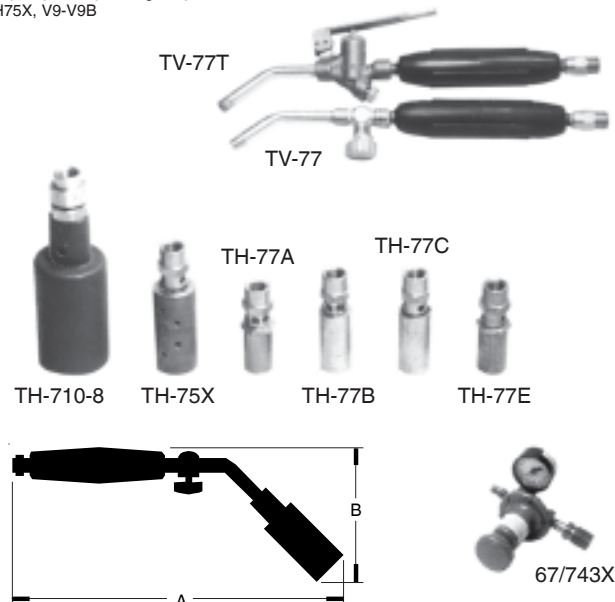
APPLICATION: The TV-77 and TV-77T hand torches are designed for direct flame soldering, light brazing, lead wiping and electrical work. They are light-weight, easy to use, and a favorite with electricians, automobile mechanics, plumbers, sheet metal workers, etc.

DESCRIPTION: TV-77 hand torches are available with either a needle valve or a convenient trigger valve. Six different heads are available depending upon specific requirements. Heads are interchangeable and require only a few moments to change. The following is a description of the flame produced by each head.

- TH-77A: 4" flame, soldering, electrical work and copper tubing.
- TH-77B: 6" flame, soldering, heavy wires and copper tubing.
- TH-77C: 8" flame, broad and soft. Lead conduit work and wiping.
- TH-77E: 4" flame, similar to TH-77A but larger capacity for streamline fittings
- TH-75X: 4" flame, preheating to heavy soldering applications.
- TH-710-8: 4" flame, widest flame head, for larger area heating.

IMPORTANT: All torches are for LP-Gas only.

NOTE: A Fisher 67/743 high pressure regulator is required for use with this torch.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DESCRIPTION	WEIGHT, POUNDS
TV-77	Hand torch, less head	11 oz.
TV-77T	Trigger torch, less head	15 oz.

MODEL NUMBER	DIMENSIONS INCHES		TORCH BTU CAPACITIES (LPG)							WT LBS
	A	B	ORIFICE	1 LB	2-1/2 LB	5 LB	10 LB	20 LB	30 LB	
TH-710-8	14-1/2	5	73	6,500	10,200	14,500	20,900	29,500	35,600	1-3/4
TH-75X	13-1/4	4	.014" diameter	2,000	3,500	5,000	6,900	10,000	11,500	1
TH-77A	13-1/2	4	.004" diameter	170	290	410	580	820	1,000	14 oz.
TH-77B	13-3/4	4-1/8	.006" diameter	390	660	925	1,320	1,850	2,280	14 oz.
TH-77C	13-3/4	4-1/8	.012" diameter	2,000	3,500	5,000	6,900	10,000	11,500	14 oz.
TH-77E	13-1/2	4	.0075" diameter	700	1,200	1,600	2,300	3,200	4,000	14 oz.

ORDERING: For ordering assembled units, combine torch number and dash head number. (e.g. 2-RHT, 77-75X, V9-V9B)

TORCHES

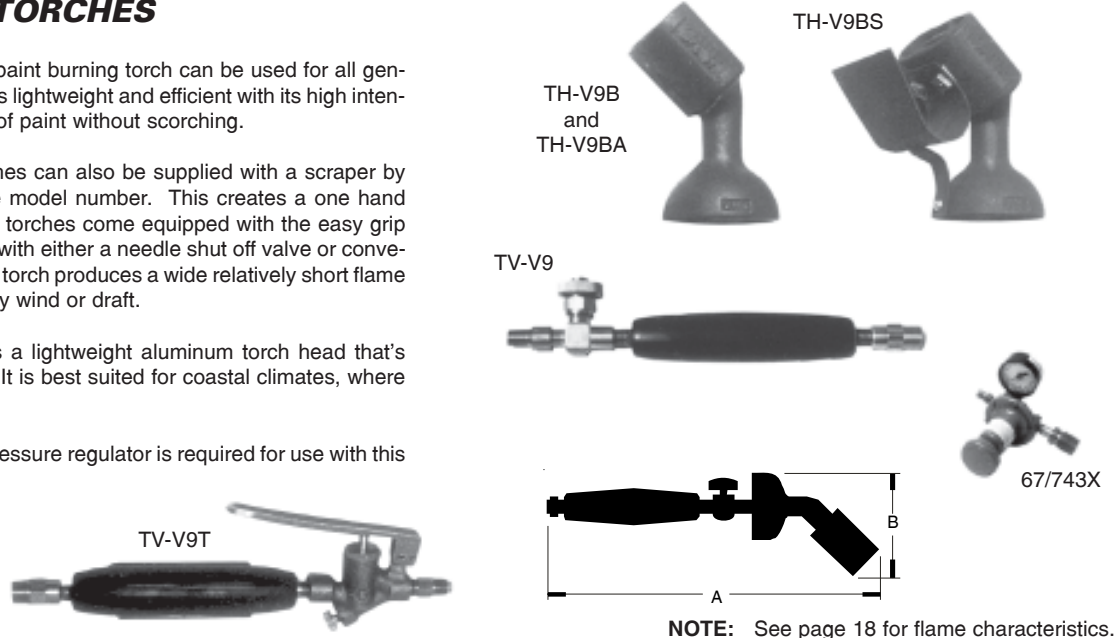
PAINT BURNING TORCHES

APPLICATION: The TH-V9B paint burning torch can be used for all general paint removal purposes. It is lightweight and efficient with its high intensity heat allowing quick raising of paint without scorching.

DESCRIPTION: TH-V9B torches can also be supplied with a scraper by adding an "S" to the end of the model number. This creates a one hand operation for paint removal. All torches come equipped with the easy grip bakelite type handle. Available with either a needle shut off valve or convenient trigger valve. The TH-V9B torch produces a wide relatively short flame which cannot be extinguished by wind or draft.

OPTIONAL: The TH-V9BA is a lightweight aluminum torch head that's easy to use in any application. It is best suited for coastal climates, where rust is a factor.

NOTE: A Fisher 67/743 high pressure regulator is required for use with this torch.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DESCRIPTION	WEIGHT, POUNDS
TV-V9	Paint burning torch, less head	10 oz.
TV-V9T	Paint burning trigger torch, less head	10 oz.

MODEL NUMBER	DIMENSIONS INCHES		TORCH BTU CAPACITIES (LPG)							WT LBS
	A	B	ORIFICE	1 LB	2-1/2 LB	5 LB	10 LB	20 LB	30 LB	
TH-V9B	13-1/4	2-1/2	76	4,550	7,000	10,000	14,200	20,100	24,600	1-1/4
TH-V9BS	13-1/4	3	76	4,550	7,000	10,000	14,200	20,100	24,600	1-1/4

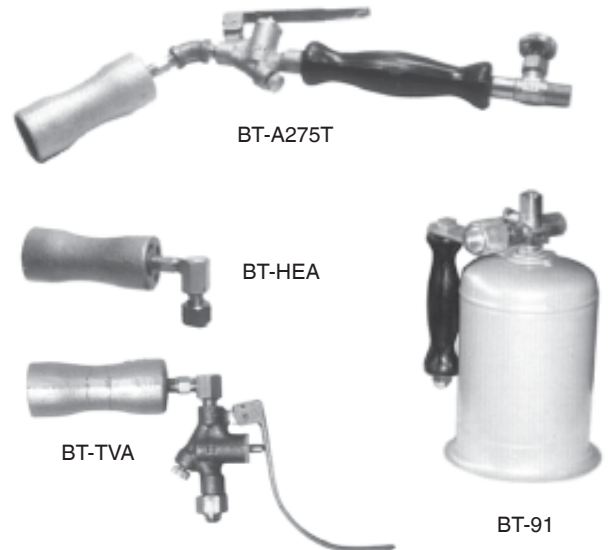
IMPORTANT: All torches are shipped for use with LP-Gas. For manufactured gas, state the type of gas, BTU quality and specific gravity.

BLOW TORCHES

APPLICATION: Blow torches are used for spot heating, burning, sterilizing, heating & removing asphalt tile, melting, repair work, maintenance work and many other applications.

DESCRIPTION: The torches are lightweight, and easy to grip. They are available with either a needle shutoff valve or a convenient trigger valve. These torches produce a strong, blue flame.

NOTE: See page 14 for torch accessories.



NOTE: See page 18 for flame characteristics.

MODEL NUMBER	DESCRIPTION	WEIGHT, POUNDS
BT-HEA	Torch head assembly	1-1/4
BT-TVA	Trigger valve assembly	1-1/4
BT-A275T	Hand trigger torch, complete (requires LPG hose)	1-3/4
BT-91	Cylinder with valve	2-3/4

IMPORTANT: All torches are shipped for use with LP-Gas. For manufactured gas, state the type of gas, BTU quality and specific gravity.

FURNACES

SHEETMETAL FURNACES

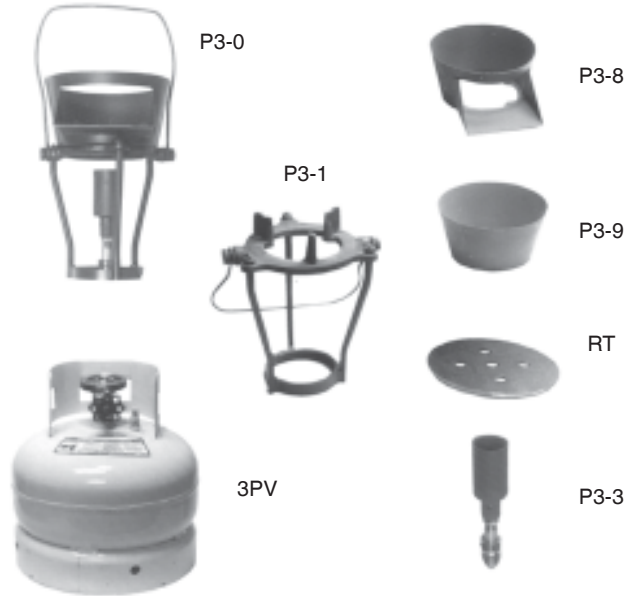
APPLICATION: The Ransome Model "P3-0" Sheetmetal Furnace is a light-weight, compact, self-contained and very portable furnace designed for heating furnace type soldering irons and lead melting.

DESCRIPTION: Furnace frame assemblies are steel, three legged with a cast iron grid. A torch type, straight shot flame is supplied by the cast iron burner. The standard shield has a large iron opening with a support shelf and will accommodate up to a 7" lead melting pot.

Ten, twenty-five and fifty pounds of lead can be melted in eight, fifteen and twenty minutes respectively. Each gallon of propane will burn six hours at 10 psi.

Cylinders are D.O.T. approved for LP-Gas, have a separate 10% bleed valve and come with a Fisher Plumbers Pot Valve installed. Vapor output beyond 212 CFH at 100 psi inlet snaps the excess flow in the pot valve shut to a bleed position for added safety in the event of tipover or breakage. This eliminates the need for a regulator and allows the cylinder to double as a torch connection.

IMPORTANT: Sheetmetal furnace accessories include: The closed shield for more efficient lead melting, the tinner's lid to enclose the shield for rapid and economical iron heating, lead melting pots and ladles.



MODEL NUMBER	DESCRIPTION
P3-0	Sheetmetal furnace, consisting of: BP3-1, BP3-3, BP3-8, (BP3-9 furnished upon request), less cylinder.
3PV	Cylinder, 12 lb. with pot valve.
P3-1	Top frame assembly, less shield.
P5-1	Top casting with bail.
P3-3	Burner head and spud assembly.
TH-710M	710 head only.

MODEL NUMBER	DESCRIPTION
P3-5	Spud with orifice assembly.
BP32-6	Pot valve with bleeder.
BP32-7	Pot valve, without bleeder.
P3-8	Shield with iron opening.
P3-9	Closed shield.
RT	Tinner's lid.

IMPORTANT: Use these selection tables below when ordering. Order all parts using individual part numbers.

SHEETMETAL FURNACES

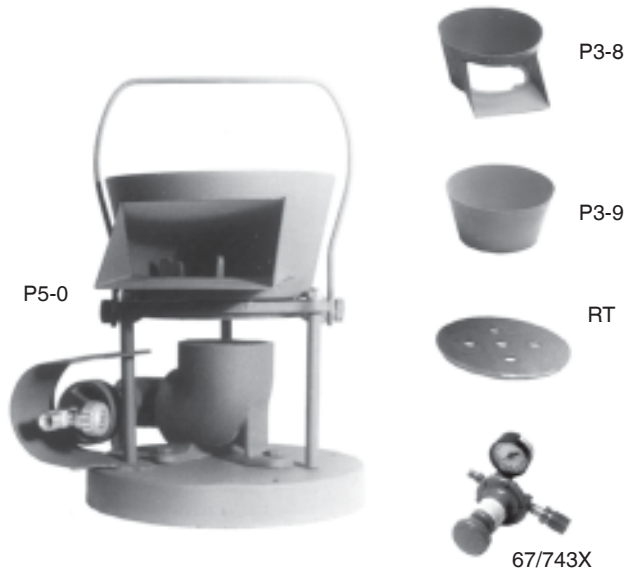
APPLICATION: The Ransome Model "P5-0" Sheetmetal Furnace is a free standing bench top unit which requires a separate regulated gas supply source and hose connection. It is designed for those shops where a self contained furnace is not practical, or where an existing gas source is to be tapped.

DESCRIPTION: The furnace burner utilizes a side entry venturi producing a straight shot, torch type flame. This fires into an oversized cast iron elbow to direct the flame upward, while reducing overall flame length and the "hot spot" associated with burners of this type. Added stability when melting lead is also an advantage of the units low profile.

The furnace base with iron opening and shelf, standard shield, support legs, valve guard and bail are steel. The burner, elbow and top frame grid are cast iron. This furnace will accommodate up to a 7" lead melting pot.

Ten, twenty-five and fifty pounds of lead can be melted in eight, fifteen and twenty minutes respectively. Each gallon of propane will burn six hours at 10 psi.

IMPORTANT: Sheetmetal furnace accessories include: The closed shield for more efficient lead melting, the tinner's lid to enclose the shield for rapid and economical iron heating, lead melting pots and ladles.



MODEL NUMBER	DESCRIPTION
P5-0	Sheetmetal furnace, complete.
P5-1	Top casting with bail.
P5-2	Base with supports and guard.
P5-4	Valve, adaptor and orifice.
P5-5	Supports.
P5-6	Burner and venturi assembly.

NOTE: A Fisher 67743 high pressure regulator is required.

MODEL NUMBER	DESCRIPTION
P5-7	Elbow.
P3-8	Shield with iron opening.
P3-9	Closed shield. (Optional)
1325	#25 Needle valve.
RT	Tinner's lid. (Optional)

IMPORTANT: Use these selection tables below when ordering. Order all parts using individual part numbers.

FURNACES

PLUMBERS FURNACES

APPLICATION: The Ransome Model "P32-0" Plumbers Furnace is a large, heavy duty model self-contained furnace. It is designed specifically for melting and supporting large quantities of lead.

DESCRIPTION: Furnace frame assemblies are steel, four legged with a heavy duty cast iron grid. A torch type, straight shot flame is supplied by the cast iron burner. The standard shield, which also has a soldering iron opening, will accommodate up to a 7" lead melting pot. Ten, twenty-five and fifty pounds of lead can be melted in eight, fifteen and twenty minutes respectively. Each gallon of propane will burn six hours at 10 psi.

Cylinders are D.O.T. approved for LP-Gas, have a separate 10% bleed valve and come with a Fisher Plumbers Pot Valve installed. Vapor output beyond 212 CFH at 100 psi inlet snaps the excess flow in the pot valve shut to a bleed position for added safety in the event of tipover or breakage. This eliminates the need for a regulator and allows the cylinder to double as a torch connection.

IMPORTANT: Plumbers furnace accessories include: The tall closed shield for more efficient lead melting, lead melting pots and ladles.



MODEL NUMBER	DESCRIPTION
P32-0	Sheetmetal furnace, consisting of: BP32-1, BP32-3, BP32-8, (BP32-9 furnished upon request), less cylinder.
3PV	Cylinder, 12 lb. with pot valve.
P32-1	Top frame assembly, less shield.
P32-2	Top casting with bail.
P3-3	Burner head and spud assembly.

MODEL NUMBER	DESCRIPTION
TH-710M	710 head only.
P3-5	Spud with orifice assembly.
BP32-6	Pot valve with bleeder.
BP32-7	Pot valve, without bleeder.
P32-8	Shield with iron opening.
P32-9	Closed shield.

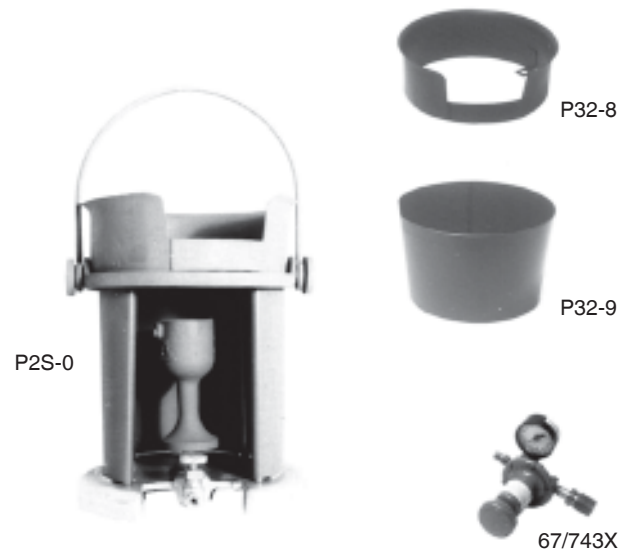
IMPORTANT: Use these selection tables below when ordering. Order all parts using individual part numbers.

PLUMBERS FURNACES

APPLICATION: The Ransome Model "P2S-0" Plumbers Furnace is a free standing bench top unit which requires a separate regulated gas supply source and hose connection. It is designed for those shops where a self contained furnace is not practical, or where an existing gas source is to be tapped.

DESCRIPTION: The furnace base is cast aluminum with four steel support legs for the grid. A flame skirt is wrapped around three sided of the burner. This furnace will accommodate up to a 7" lead melting pot. With the shield removed the furnace will easily support a 10" or 12" lead melting pot. Ten, twenty-five and fifty pounds of lead can be melted in eight, fifteen and twenty minutes respectively. Each gallon of propane will burn six hours at 10 psi.

IMPORTANT: Plumbers furnace accessories include: The tall closed shield for more efficient lead melting, lead melting pots and ladles.



MODEL NUMBER	DESCRIPTION
P2S-0	Plumbers furnace, complete.
P21A	P21A Burner Assembly.
P32-2	Top casting with bail.
P2S-5	Supports.
P2S-6	Flame skirt.
SP25S	SP1/4S spud.

NOTE: A Fisher 67/743 high pressure regulator is required.

MODEL NUMBER	DESCRIPTION
RP0533	5/16-32 orifice.
P2S-9	Aluminum base #P26T.
1315	#152 needle valve.
P32-8	Shield with iron opening.
P32-9	Closed shield. (Optional)

IMPORTANT: Use these selection tables below when ordering. Order all parts using individual part numbers.

BURNER ACCESSORIES

ELECTRICALLY CONTROLLED MANIFOLDS

ON/OFF TYPE: ECMO

Ransome's electrically controlled on/off manifold provides temperature control through the use of a solenoid valve in the main gas line.

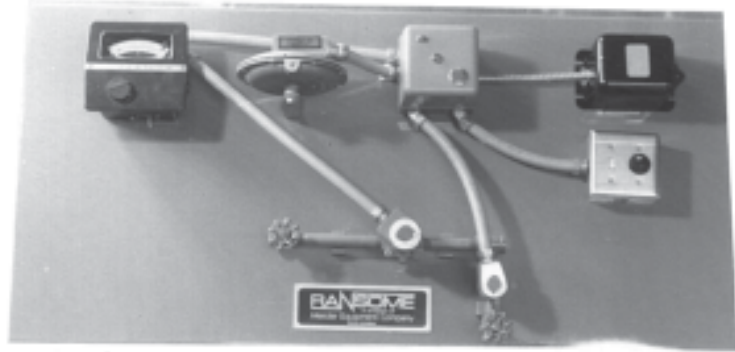
HIGH/LOW TYPE: ECMH

Ransome's electrically controlled high/low manifold provides temperature control through the use of two solenoid valves operating in parallel.

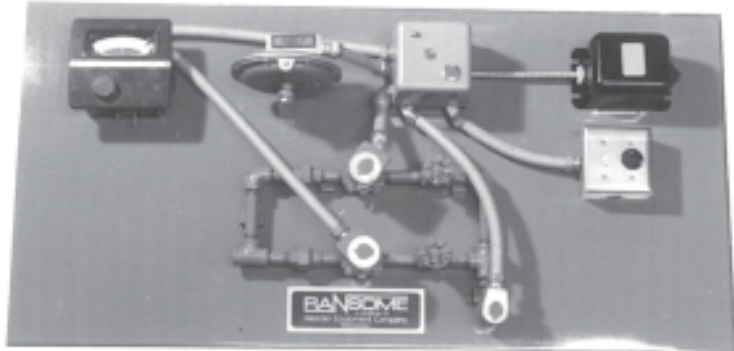
MODULATING TYPE: ECMM

Ransome's electrically controlled manifold provides fully automatic proximal temperature control through the use of a solenoid valve in the main burner gas line and a modulating control valve to supply gas to the main burners. These units also provide automatic ignition and flame safeguards for commercial heating and process burners systems using natural or propane gas.

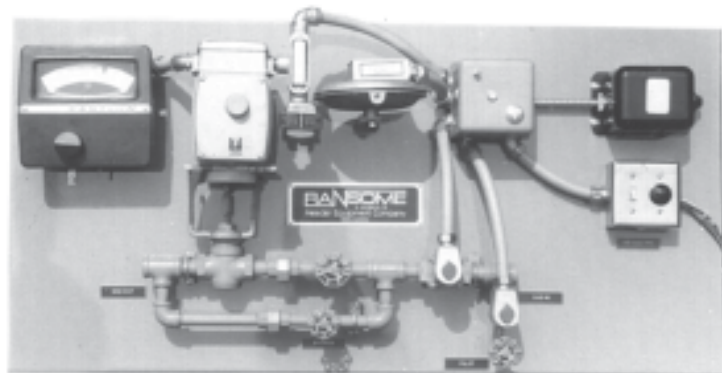
DESCRIPTION: Shipped fully assembled and ready for simple installation, each unit is sold complete with all wiring, connectors, tubing and fittings. A five foot long capillary type thermal sensing unit is supplied with the temperature controller standard, however, any desired length up to twenty-five feet overall length is available. Each unit also provides a gas "limp mode" so that manual burner operation is possible in the event of a control system failure. Please contact Ransome Manufacturing to determine the proper valve sizing required before ordering.



ECMO



ECMH

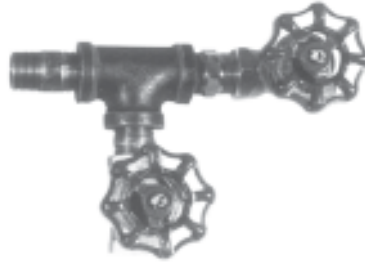


ECMM

MODEL NUMBER	DIMENSIONS, IN.		DESCRIPTION	WEIGHT, POUNDS
ECMO	48	24	Electrically Controlled ON/OFF manifold	90
ECMH	48	24	Electrically controlled HIGH/LOW manifold	90
ECMM	48	24	Electrically controlled MODULATING manifold	100

BURNER ACCESSORIES

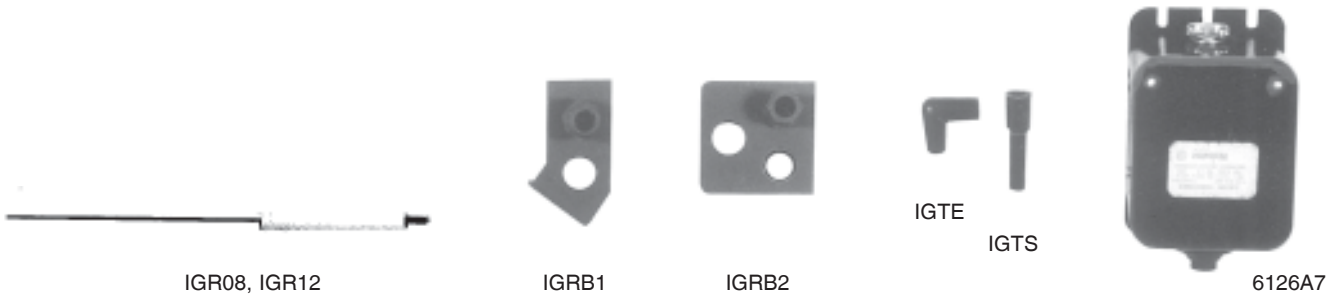
INJECTORS



MODEL NUMBER	DESCRIPTION
IN05	1/2" MNPT Air Injector

INJECTOR DEVICES

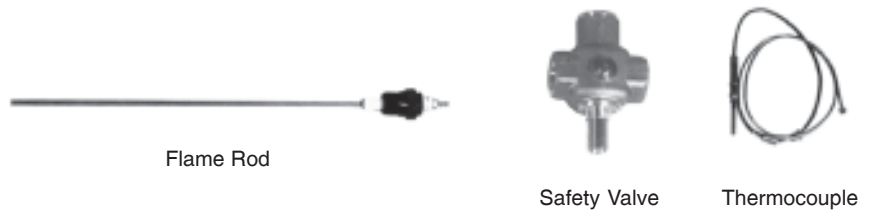
NOTE: Other Controls available, consult factory.



MODEL NUMBER	DESCRIPTION
6126A7	Ignition Transformer
IGR08	8" Ignition Rods
IGR12	12" Ignition Rods
IGRB1	Single Ignition Rod Bracket
IGRB2	Double Ignition Rod Bracket
IW	Ignition Wire (Available in even ft. lengths)
IGTS	Straight Ignition Terminal
IGTE	90 degree Elbow Ignition Terminal

SAFETY DEVICES

NOTE: Other Controls available, consult factory.



MODEL NUMBER	DESCRIPTION
JC-H19RA2C	Pilot Safety Valve; 25 psi (Thermocouple Required - see below)
JC-TC36 36"	
JC-TC48 48"	
JC-TC60 60"	
JC-TC72 72"	
FR12 12"	Thermocouples for H14S Pilot Safety Valves (7/16" - 27 NPS Male Connection)
FR18 18"	
	Flame Rods; Provides Pilot and/or Main Burner Flame; for use w/ Fireeye Control

TORCH ACCESSORIES

REGULATORS



67743X



J502A



R67743

MODEL NUMBER	DESCRIPTION
R67743	High Pressure Regulator (1/4" FNPT)
J502A	0-60 lb. Pressure Gauge

MODEL NUMBER	DESCRIPTION
67743X	Fisher 5-35 psi Regulator w/ Pressure Gauge SR501 & M318 Adaptors

HOSE AND FITTINGS



Y2



Y3



HOSE ASSY.



FH8-4



H8-10

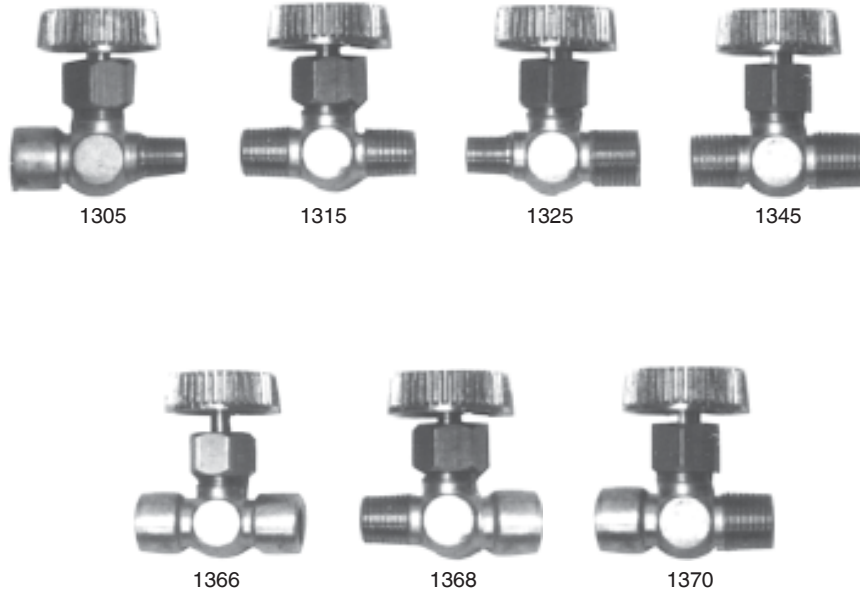
MODEL NUMBER	DESCRIPTION
Y2	2 Connection Assy. (1/4" MNPT x 9/16" LHT Male Flare)
Y3	3 Connection Assy. (1/4" MNPT x 9/16" LHT Male Flare)

MODEL NUMBER	DESCRIPTION
H5	5 ft. long 1/4" LPG Hose Assy. 9/16" LHHC Nut
H10	10 ft. long 1/4" LPG Hose Assy. 9/16" LHHC Nut
H15	15 ft. long 1/4" LPG Hose Assy. 9/16" LHHC Nut
H20	20 ft. long 1/4" LPG Hose Assy. 9/16" LHHC Nut
H25	25 ft. long 1/4" LPG Hose Assy. 9/16" LHHC Nut

MODEL NUMBER	DESCRIPTION
H-FH84	Filler Hose, 4 ft. long, POL x #58 Nut
H-H810	LPG Hose Assy., 10 ft. long, #58 Nut both ends

TORCH ACCESSORIES

NEEDLE VALVES



MODEL NUMBER	DESCRIPTION
1305	1/8" NPT-F x 1/8" NPT-M
1315	9/16" LH-M x 1/4" NPT-M
1325	9/16" LH-M x 1/8" NPT-M
1345	1/4" NPT-M x 1/4" NPT-M
1366	1/8" NPT-F x 1/8" NPT-F
1368	5/8" RH x 1/8" NPT-F
1370	1/4" NPT-F x 1/4" NPT-M

ADAPTORS



MODEL NUMBER	DESCRIPTION
SR501	9/16" LHT x 1/4" MNPT Half Union
SR503	9/16" LHT x 9/16" LHT Gas Hose Union
SR318	Straight MPOL x 1/4" MNPT POL Adaptor
SR320	Straight MPOL x 9/16" LHT POL Adaptor

FURNACE ACCESSORIES

POT VALVES



BP32-6



BP32-7

MODEL NUMBER	DESCRIPTION
BP32-6	POT Valve, w/ Bleeder
BP32-7	POT Valve, w/o Bleeder

CYLINDERS



3PV



C5

MODEL NUMBER	DESCRIPTION
3PV	Cylinder, 12 lb. w/ POT Valve
C5	Cylinder, 12 lb. w/ Service Valve

POTS AND LADLES



LEAD MELTING POT



LADLE

MODEL NUMBER	DESCRIPTION
LMP06	6" Lead Melting Pot
LMP08	8" Lead Melting Pot
LMP10	10" Lead Melting Pot
L03	3" Ladle
L04	4" Ladle
L05	5" Ladle
L06	6" Ladle

INFORMATION

BURNER CAPACITIES

“B” TYPE BURNERS: LPG Capacities in BTU's

MODEL NUMBER	ORIFICE	11" WC	1 #	2 #	5 #	10 #	20 #
B1	69	5,900	9,700	13,900	21,600	30,700	43,000
B2	64	9,000	14,800	20,900	33,200	46,700	66,400
B3	50	34,200	55,300	77,500	123,000	175,900	246,000
B4	43	55,300	89,800	126,700	200,500	286,600	403,400
B5	33	89,800	145,200	205,400	324,700	462,400	649,400

BURNER CAPACITIES

“S” TYPE BURNERS: LPG Capacities in BTU's

MODEL NUMBER	ORIFICE	11" WC	1 #	2 #	5 #	10 #	20 #
S4V050	62	10,100	16,300	23,300	36,900	51,600	73,800
S4V075	55	18,800	30,700	43,000	67,600	97,100	136,500
S5	37	75,500	123,000	174,600	275,500	391,000	552,200
S8	26	151,000	252,100	356,700	565,800	805,600	1,129,000
S8S2V	2 @ 30	230,600	376,300	533,800	846,200	1,205,400	1,687,500
S12SO	7/16	340,000	626,000	883,100	1,339,700	1,974,100	2,798,200
S12S2VO	2 @ 7/32	340,000	1,089,700	1,539,900	2,447,700	3,477,700	4,883,100

BURNER CAPACITIES

“B” TYPE BURNERS: 0.66 Natural Gas Capacities in BTU's

MODEL NUMBER	ORIFICE	7" WC	1 #	2 #	5 #	10 #
B1	60	3,900	10,900	15,200	---	---
	58	---	---	---	26,100	37,800
B2	52	9,800	27,600	38,500	---	---
	51	---	---	---	66,900	95,200
B3	35	29,900	81,400	115,600	---	---
	30	---	---	---	250,200	356,400
B4	28	48,900	133,100	188,300	---	---
	24	---	---	---	347,600	495,300
B5	23	58,700	159,200	225,400	---	---
	20	---	---	---	389,100	554,900

BURNER CAPACITIES

“S” TYPE BURNERS: 0.66 Natural Gas Capacities in BTU's

MODEL NUMBER	ORIFICE	7" WC	1 #	2 #	5 #	10 #
S4V050	48	14,300	37,100	52,300	---	---
	47	---	---	---	93,800	133,800
S4V075	43	19,600	53,100	74,900	---	---
	42	---	---	---	132,300	188,300
S5	24	57,000	155,600	219,600	---	---
	15	---	---	---	487,300	694,600
S8	12	82,200	240,000	339,600	---	---
	1	---	---	---	785,500	1,107,000
S8S2V	2 @ 10	183,100	504,100	712,800	1,127,300	1,592,800
S12SO	3/8	320	945,500	1,338,300	---	---
	7/16	---	---	---	2,880,200	4,073,100
S12S2VO	2 @ 3/8	640,000	1,891,000	2,676,600	4,247,600	5,993,200

INFORMATION

FLAME CHARACTERISTICS

PROPANE

MODEL NUMBER	FLAME LENGTH (OVERALL) INCHES						FLAME LENGTH (BLUE CONE) INCHES					
	11"	1 #	2 #	5 #	10 #	20 #	11"	1 #	2 #	5 #	10 #	20 #
B1	6	8	13	14	14	15-1/2	1/4	1	1-1/2	1-1/2	2	2-1/2
B2	13	9	10	11	12	12	1/2	1/2	1/2	1-1/2	1-1/2	2-1/2
B3	20	21	22	24	29	36	1	1-1/4	1-1/2	2-1/2	2-1/2	3
B4	21	16	29	34	38	43	1	1-1/2	2	3	3	3-1/2
B5	30	17	29	37	46	53	2	1	2-1/2	3	4	4-1/2
S4SV050	6	8	9-1/2	10	12	15	1/2	12	1-1/4	2	2-1/2	3
S4SV075	8	9	13	11	11	10	3/4	2	2-1/2	3	4-1/2	4-1/2
S5S	9	22	34	40	47	48	2-1/2	2	3-1/2	4-1/2	5	5
S8S	10	13	15	18	22	24	1-1/4	2-1/2	3	3	4-1/2	5
S4075X2	4	4	6	7	8	11	1/2	1/2	3/4	1	2	2-1/2
S4075X3	4	5	8	10	9	10	3/4	1/2	1	1-1/4	1-3/4	2
S5125X2	8	14	15	18	20	28	1	2-1/2	2-3/4	3	2-1/8	2
S5125X3	7	10	12	15	20	25	1-1/4	1-3/4	2	2-1/4	2-1/4	2-1/4
B1S	5	6	8	9	12	13	1/4	1/2	3/4	1	1-1/4	1-1/2
P8-1	2	8	12	16	17	19	1/8	1/2	1	1-1/4	1-1/4	1-1/4
P8S	3	7	8-1/2	12	14	18	1/8	1/2	3/4	1	1	1
P8V050	6	6	10	12	15	16	1/4	1/4	1/2	3/4	1	1-1/4
P8V050S	7	8	14	17	20	20	1/4	3/4	1	1	1	1
P9B	4	4-1/2	6-1/2	10	12	14	1/2	1/2	1/2	3/4	3/4	1
P21A	6	11	12	16	17	19	1/2	1	1-1/4	1-1/2	1-3/4	2-1/2
TH-77A		1/4	3/4	2	2-1/2	3		1/4	1/2	1	1/2	1/2
TH-77B		2	3-3/4	6	9-1/2	10		3/4	1-1/2	2	2-1/2	3-1/2
TH-77C		3	6-1/2	10	11	10		1/4	1/2	3/4	3/4	7/8
TH-77E		1	2	4	6	7		1/8	1/2	3/4	1	1-1/4
TH-75X		2-1/2	5-1/2	5-1/2	6	6		0	1-1/4	2	2-1/2	3
TH-710-8		8	9-1/2	10	10-1/2	11		3	4	5	7-1/2	7-1/2
TH-RHT		3-1/2	5-1/2	6	7	8		0	0	0	0	0
TH-81		5	6-1/2	8	8	10		0	6	4	4-1/2	4-1/2
TH-710		7	8-1/2	9-1/2	10	12		2-1/2	4-1/2	5-1/2	6	8
TH-V9B		3	5-1/2	8	10	11		0	1/4	1/2	3/4	1
BT-HEA		10	@ Tank Pressure					3-1/2	@ Tank Pressure			
TA-70LV5		24	30	35	39	42		0	0	2	4	5
TA-RUT		19	20	22	23	27		1-1/2	5	8	15	0

FLAME CHARACTERISTICS

NATURAL GAS

MODEL NUMBER	FLAME LENGTH (OVERALL) INCHES					FLAME LENGTH (BLUE CONE) INCHES				
	7"	1 #	2 #	5 #	10 #	7"	1 #	2 #	5 #	10 #
B1	9	11	12	12	12	3/4	1-1/2	1-3/4	2	3
B2	8	11	13	15	16	1/4	1	1/4	1-1/2	2
B3	18	23	26	32	42	1-1/4	2	2-1/2	3	4
B4	22	28	34	40	44	2	2-1/4	2-1/2	2-1/2	3
B5	13	15	16	21	24	2	2	3	3-1/2	4
S4SV050	5	9	13	13	15	3/4	2	1-1/2	1-1/2	1-1/2
S4SV075	9	6	7-1/2	7-1/2	10	1-1/2	3	3-1/4	2-1/2	2-1/2
S5S	10	17	17	17	24	2	2-1/4	3	3-1/2	4
S8S	6	10	11	11	12	3/4	1-1/4	1-1/2	2	3
S12S	50	56	65	72	85	3	4	6	7	8
S4075X2	4	8	9	6	6	1/2	2	2	2-1/4	2-1/2
S4075X3	6	10	13	7	8	3/4	1-3/4	2	2-1/4	2-1/2
S5125X2	8	14	11	17	19	1	1-1/2	2	2-1/4	2-1/4
S5125X3	7	12	19	21	23	1	1-1/2	1-3/4	2	2-1/4
B1S	9	12	13	14	14	3/4	1	1-1/4	1-1/2	2
P8-1	7	9	11	12	15	1/2	3/4	1	1-1/4	1-1/2
P8S	8	11	13	14	15	1/2	3/4	1	1	1-1/4
P8V050	6	9	10	11	13	1/2	3/4	1	1	1-1/4
P8V050S	9	11	13	14	16	1/2	3/4	1	1-1/4	1-1/2
P9B	1	10	11	13	14	1/4	3/4	1	1-1/4	1-3/4
P21A	10	12	15	16	18	1	1-3/4	2	2-1/4	2-1/2

INFORMATION

DETERMINING HEATING REQUIREMENTS

DETERMINING AMOUNT OF HEAT REQUIRED PER DEGREE FAHRENHEIT (BTU/DEG. F):

Multiply the specific heat of the product being heated by the quantity of product in gallons and by the weight of water per gallon (8.33 lbs./gal.). This equation will produce the heat (BTU) required to change this amount of product by one degree Fahrenheit (starting temperature of 60°).

Specific heat x quantity in gallons x weight of water (8.33 lbs./gal.) = heat in BTU to raise this quantity by one degree Fahrenheit.

DETERMINING ACTUAL HEAT REQUIREMENTS:

Multiply the heat required per degree Fahrenheit by the rise above 60° in temperature that is required. This equation will produce the total BTU's required to heat the product to the new temperature. (This is based on 100% efficiency).

Assuming an average efficiency of 80%, divide the total BTU's by 0.8. This will give the actual BTU requirements.

EXAMPLE:

How many BTU's of heat are required to raise the temperature of a 4' x 3' x 2-1/2' crab cooker to boiling? What burner would be used?

The volume of the cooker is 4' x 3' x 2-1/2' = 30 cu. ft. Assuming that this is the volume of water, this represents:

$$30 \text{ cu. ft. of water} \times 7.48 \frac{\text{gals.}}{\text{cu. ft.}} = 224.4 \text{ gals.}$$

$$\text{and } 22.4 \text{ gals.} \times 8.33 \frac{\text{lbs.}}{\text{gal.}} = 1869 \text{ lbs. of water}$$

$$\text{Then the equation specific heat} \times \text{lbs. of water} = \frac{\text{BTU}}{\text{lb.} \cdot \text{°F}} \times 1869 \text{ lbs.} = \frac{1869 \text{ BTU}}{\text{°F}} - \text{starting at a temperature of } 60^\circ \text{ F.}$$

To raise the temperature from 60° F to 212° F (the boiling point of water), multiply:

$$\frac{1869 \text{ BTU}}{\text{°F}} \times \Delta F \quad \text{Where } \Delta F = \text{change in temperature}$$

$$= 212 - 60$$

$$= 152^\circ \text{ F}$$

$$\text{Then } \frac{1869 \text{ BTU}}{\text{°F}} \times 152^\circ \text{ F} = 284,088 \text{ BTU} \quad \text{For an efficiency of 80\%, BTU required is } \frac{284,088}{0.8} = 355,110 \text{ BTU}$$

Looking at page 4 of this catalog, it can be seen that an S8S2V burner can be used at a minimum of 1 lb. Recommend utilizing an S8S2V burner with a regulator set at 2 lbs.

BASIC FACTS

BASED ON 60 DEGREES F.	PROPANE	BUTANE
Formula	C3H8	C4H10
Vaporization Point (degrees F)	-43.7	31.1
Specific Gravity (vapor)	1.522	2.006
Specific Gravity (liquid)	0.508	0.584
Lbs. per Gallon (liquid)	4.23	4.87
BTU per Cubic Foot (vapor)	2,500	3,390
BTU per Lb. (vapor)	21,663	21,308
BTU per Gallon (liquid)	91,000	103,830
Cubic Feet per Lb. (liquid)	8.607	6.53
Cubic Feet of Gas per Gallon (liquid)	36.45	31.8
Octane Number	125	91
Molecular Weight	44.09	58.12

CONVERSIONS OF FLOW CAPACITIES

FLOW CAPACITY (CFH, etc.) IN:	MULTIPLES FOR:	PROPANE	BUTANE	AIR	NATURAL GAS
Natural Gas		0.63	0.55	0.77	---
Air		0.81	0.71	---	1.29
Butane		1.15	---	1.42	1.83
Propane		---	0.87	1.23	1.59

INFORMATION

CONVERSION FACTORS

1 Gallon Water	8.33 Lbs.
1 Gallon Water	.134 Cubic Foot
1 Cubic Foot Water	7.48 Gallons
1 Cubic Foot Water	62.3 Lbs.
1 LB./SQ. Inch	2.31 Feet of Water Column
1 Foot of Water Column	0.433 LB./SQ. Inch
1 Foot of Water Column	5.2 LB./SQ. Foot
1 Cubic Foot Natural Gas	1000 BTU
1 CCF	100 Cubic Foot
1 MCF Natural Gas	1000 Cubic Foot
1 Therm	100,000 BTU
1 MCF Natural Gas	10 Therms
Butane - Gallon	103,830 BTU
Propane - Gallon	91,740 BTU

1 Gallon Propane	27 KWH
1 Lb. Propane	6.35 KWH
# 2 Fuel Oil - Gallon	140,000 BTU
# 4 Fuel Oil - Gallon	145,000 BTU
# 6 Fuel Oil - Gallon	152,000 BTU
Coal Bituminous - Lb.	12,000 BTU
Wood - Lb.	8,400 - 9,900 BTU
MBTU	1,000 BTU
WATT	3.41 BTU
KW	1,000 W
MKW	1,000 KW
KW	3,412 BTU
KW	1.341 HP

COMBUSTION DATA

BASED ON 60 DEGREES F.	PROPANE	BUTANE
Flash Temperature (degrees F)	-156	-101
Ignition Temperature (degree F)	932	896
Maximum Flame Temperature (degree F)	3573	3583
Flammability Higher Limit (% gas in air)	2.37	1.86
Flammability Higher Limit (% gas in air)	9.50	8.41
Air to Burn 1 Cubic Foot (vapor)	23.9	31.1
Oxygen to Burn 1 Cubic Foot (vapor)	5.0	6.5

PRESSURE FACTS

In using LP-Gas, we take advantage of the fact that pressure "ATTEMPTS TO ESCAPE", and use that "ATTEMPT TO ESCAPE" to move gas along a pipe or tube to the appliance burner. Outside temperature greatly affects container pressure. When the container pressure is too low, not enough gas is able to get to the appliance burner. This table shows vapor pressures for different gas mixtures at various outside temperatures.

	VAPOR PRESSURE, PSIG														
	OUTSIDE TEMPERATURE, DEGREES FAHRENHEIT														
	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110
100% Propane	6.8	11.5	17.5	24.5	34	42	53	65	78	93	110	128	150	177	204
70% Propane, 30% Butane	---	4.7	9	15	20.5	28	36.5	46	56	68	82	96	114	134	158
50% Propane, 50% Butane	---	---	3.5	7.6	12.3	17.8	24.5	32.4	41	50	61	74	88	104	122
30% Propane, 70% Butane	---	---	---	2.3	5.9	10.2	15.4	21.5	28.5	36.5	45	54	66	79	93
100% Butane	---	---	---	---	---	---	---	3.1	6.9	11.5	17	23	30	38	47

PRESSURE EQUIVALENTS

Simply stated, pressure is the force exerted by a gas or liquid attempting to escape from a container. It is useful to know how strong this "ATTEMPT TO ESCAPE" is. Pressure can be measured with a manometer or with a pressure gauge. At the lower levels, it is expressed in "INCHES OF WATER COLUMN" i.e., 11" W.C. higher pressures are expressed in terms of the force exerted against a square inch of area. For example, 125 pounds per square inch (125 psi).

1" Water Column	50 OZ./SQ. Inch
11" Water Column	6.35 OZ./SQ. Inch
11" Water Column	4 LB./SQ. Inch
1 LB./SQ. Inch	27.71" Water Column
1 LB./SQ. Inch	2.04" Mercury
1" Mercury	.39 LB./SQ. Inch
1 Standard Atmosphere	14.73 LB./SQ. Inch

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B2	1	IM5	2	P32-0	11	TH-710	8
B2U	2	IM6	2	P32-1	11	TH-710-8	8
B3	1	IN05	13	P32-2	11	TH-710M	10, 11
B3U	2	IW	13	P32-8	11	TH-RHT	8
B4	1			P32-9	11	TH-81	8
B4U	2	K16BA36	13	PG060	14	TH-V9B	9
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		L05	16	S5	3	V050S	1
C5	16	L06	16	S5S	3	V050B	1
				S8	3	V075	1
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