

## STANDARD STEAM TRIM

- Operating & Limit Pressure Control.
- Low Fire Hold Aquastat.
- Modulating Pressure Control (When Applicable).
- Water Column with Gauge Glass Float Type Combination Low Water Cut-Off & Pump Control (Optional).
- Probe Type Auxiliary Low Water Cut-Off Float or Probe with Manual Reset (Optional).
- Water Column Drain Valve.
- Safety Relief Valve(s) Per ASME Code Steam.
- Stack Thermometer.
- Steam Pressure Gauge.

## STANDARD WATER TRIM

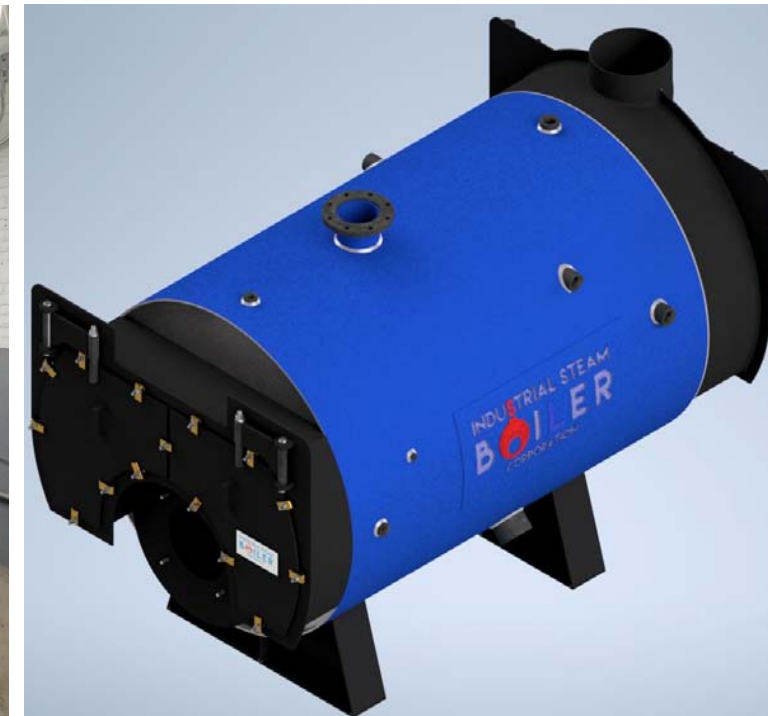
- Operating & Limit Temperature Control.
- Modulating Temperature Control (When Applicable).
- Low Water Cut-Off Control Float or Probe with Manual Reset.
- Combination Pressure, Temperature Gauge.
- Safety Relief Valve(s) Per ASME Code.
- Stack thermometer.

## PACKAGED BOILERS

Industrial Steam Boiler Series ISB3L, Scotch Marine, Horizontal Firetube 3-Pass packaged, combustion systems are manufactured for use in low-pressure steam (15 PSIG) or hot-water (30 to 160 PSIG), maximum 250 °F applications, providing for efficient operation and low-cost maintenance. Complete packaged units piped wired and ready for years of reliable low-cost maintenance efficient operation. ASME & UL approved with many brands different fuels with automatic burners.

## FIELD ERECTED BOILERS

Industrial Steam Boiler Series ISB3L Scotch Marine field erected boilers fill the long-standing need for a quality steel boiler that can be moved into an existing boiler room through available door openings and/or windows. Series ISB3 Three Pass boilers are the industry standard for an Advanced Scotch Marine, full water back design and are built with the same high-quality components, workmanship, generous, proportions and engineering excellence that are synonymous with all our factory-built packaged boilers.



- THREE PASS WATER BACK DESIGN
- LOW PRESSURE STEAM UP TO 15 PSI
- HOT WATER UP TO 160 PSI
- ASME SECTION IV LOW PRESSURE HEATING BOILERS
- CAPACITY FROM 70 TO 600 BHP
- SMALLER SHELL DIAMETER & LARGE STEAM DISENGAGING AREA
- PACKAGED WITH GAS, OIL OR COMBINATION GAS/OIL LONOX BURNERS
- COMPLIES WITH ASME, UL, CSD-1 & ASHRAE STANDARDS
- BEST BOILER WARRANTIES IN THE INDUSTRY

**SERIES ISB3L**

# RATINGS

BOILER SIZE		HP	70	80	90	100	125	150	175	200	250	300	350	400	450	500	600
GROSS OUTPUT	STEAM	LBS/HR	2,415	2,760	3,105	3,450	4,313	5,175	6,038	6,900	8,625	10,350	12,075	13,800	15,525	17,250	20,700
	STEAM/WATER	MBH	2,343	2,678	3,013	3,348	4,184	5,021	5,858	6,695	8,369	10,043	11,716	13,390	15,064	16,738	20,085
NET RATINGS	STEAM	MBH	1,819	2,079	2,339	2,599	3,249	3,898	4,548	5,198	6,497	7,797	9,096	10,396	11,695	12,995	15,594
	WATER	MBH	2,038	2,329	2,620	2,911	3,639	4,366	5,094	5,822	7,277	8,733	10,188	11,643	13,099	14,554	17,465
	STEAM	SQ. FT	7,580	8,663	9,746	10,829	13,536	16,244	18,951	21,658	27,073	32,487	37,902	43,317	48,731	54,146	64,975
FIRING RATE	NATURAL GAS	CFH	2,929	3,348	3,766	4,184	5,230	6,277	7,323	8,369	10,461	12,553	14,645	16,738	18,830	20,922	25,106
	#2 OIL	GPH	20	23	26	29	36	44	51	58	73	87	102	117	131	146	175
	#6 OIL	GPH	19	22	24	27	34	41	48	54	68	82	95	109	122	136	163
FIRESIDE HEATING SURFACE	SQ. FT	350	400	450	500	625	750	875	1,000	1,250	1,500	1,750	2,000	2,250	2,500	3,000	
FURNACE VOLUME	CU. FT	43	48	53	57	67	78	101	113	137	162	150	165	181	270	315	
HEAT RELEASE RATE	MBH/FT <sup>3</sup>	68	70	71	74	78	80	72	74	76	78	98	101	104	77	80	
WATER CONTENTS	GALS.	371	433	484	628	790	924	1,051	1,206	1,314	1,619	2,220	2,545	2,743	3,540	4,261	
APPROX. SHIPPING WEIGHT	LBS	7,151	7,687	9,342	9,524	10,941	12,413	13,526	14,716	17,093	19,533	23,346	25,787	28,228	35,356	39,342	
APPROX. OPERATING WEIGHT	LBS	10,249	11,304	13,383	14,768	17,537	20,127	22,300	24,789	28,068	33,056	41,887	47,041	51,132	64,915	74,917	
APPROX. FLOODED WEIGHT	LBS	12,376	13,737	16,218	17,293	20,647	24,131	25,645	28,584	33,359	39,389	47,623	53,552	59,481	73,566	85,231	

NOTE: OVERALL EFFICIENCY CAN GO AS HIGH AS 86%.

# DIMENSIONS

BOILER SIZE		70	80	90	100	125	150	175	200	250	300	350	400	450	500	600
A	INSIDE DIAMETER-SHELL	55	55	55	63	63	63	72	72	72	72	84	84	84	96	96
B	INSIDE DIAMETER-FURNACE	27	27	27	30	30	30	37-1/4	37-1/4	37-1/4	37-1/4	37-1/4	37-1/4	37-1/4	47	47
C	BOILER WIDTH-OVERALL	59-7/8	59-7/8	59-7/8	67-7/8	67-7/8	67-7/8	76-7/8	76-7/8	76-7/8	76-7/8	88-7/8	88-7/8	88-7/8	100-7/8	100-7/8
D	BOILER HEIGHT-OVERALL	72-3/4	72-3/4	72-3/4	81-3/4	81-3/4	81-3/4	90-3/4	90-3/4	90-3/4	90-3/4	102-3/4	102-3/4	102-3/4	114-3/4	114-3/4
E	BOILER LENGTH-OVERALL	137-7/8	152-7/8	167-7/8	145-7/8	171-7/8	198-7/8	174	193	231	270	231	256	281	282	326
F	LENGTH OF SHELL	104	119	134	112	138	165	139	158	196	235	185	210	235	229	273
G	LENGTH OF FURNACE	86	101	116	94	120	147	121	140	178	217	154	179	204	198	242
H	NORMAL WATER LINE	58	58	58	63-1/4	63-1/4	63-1/4	73	73	73	73	80	80	80	88	88
I	C.L OF FURNACE	28-7/8	28-7/8	28-7/8	31	31	31	34-5/8	34-5/8	34-5/8	34-5/8	34-15/16	34-15/16	34-15/16	41-11/16	41-11/16
J	LENGTH-REVERSING CHAMBER	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	32	32	32	32	32
K	HEIGHT-FRONT SMOKE BOX	56-7/8	56-7/8	56-7/8	62-1/16	62-1/16	62-1/16	72-1/4	72-1/4	72-1/4	72-1/4	78-15/16	78-15/16	78-15/16	86-13/16	86-13/16
L	RETURN LOCATION	35	35	35	42	42	42	52	52	52	52	52	52	52	55	55
M	SUPPLY LOCATION	37	37	37	42	42	42	42	42	42	42	60	60	60	67	67
N	STEAM SUPPLY SIZE (NPS)	6	6	6	8	8	8	8	8	10	10	10	10	10	12	12
O	WATER SUPPLY SIZE (NPS)	4	4	4	4	4	6	6	6	6	6	6	8	8	8	8
P	STEAM RETURN SIZE (NPS)	4	4	4	4	4	4	4	4	4	4	6	6	6	6	6
Q	WATER RETURN SIZE (NPS)	4	4	4	4	4	6	6	6	6	6	6	8	8	8	8
R	FRONT DOOR SWING	28	28	28	32	32	32	37	37	37	37	43	43	43	49	49
S	REAR DOOR SWING	16	16	16	21	21	21	26	26	26	26	33	33	33	34	34
T	LENGTH OF SADDLE	40	40	40	48	48	48	56	56	56	56	62	62	62	76	76
U	WIDTH OF SADDLE	7	7	7	8	8	8	8	8	8	8	10	10	10	12	12
V	VENT DIAMETER	18	18	18	18	18	18	20	20	20	20	26	26	26	32	32
W	TUBE PULL	104	119	134	112	138	165	139	158	196	235	185	210	235	229	273

## OPTIONAL TANKLESS DOMESTIC HOT WATER COIL

FAMILIES OR BATH	8	12	16	24	34	42	50	60	70	90	100	120	130	140	150	160	180	200	225	250	300	350	400
RATING GPH 40F TO 140F WITH B.W AT 180	400	480	560	640	720	840	960	1080	1200	1400	1600	1800	2000	2200	2400	2600	2880	3160	3440	3720	4000	4400	4800

### NOTES: -

- ALL DIMENSIONS ARE IN INCHES CERTIFIED DRAWINGS ARE AVAILABLE UPON REQUEST.
- DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.
- DESIGNED AND BUILT IN STRICT ACCORDANCE WITH ASME.
- BOILERS ARE AVAILABLE AS COMPLETE PACKAGES OR FIELD ERECTED.
- TRIM PACKAGE SUBJECT TO CHANGE WITHOUT NOTICE.

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