



TEJAS



**GAS, OIL OR COMBINATION GAS OR OIL
SIZES 80 THROUGH 800**

WILLIAMS & DAVIS BOILERS, INC.

972-225-2356
1-800-8BOILER
E-mail: w-dboilers@dhc.net

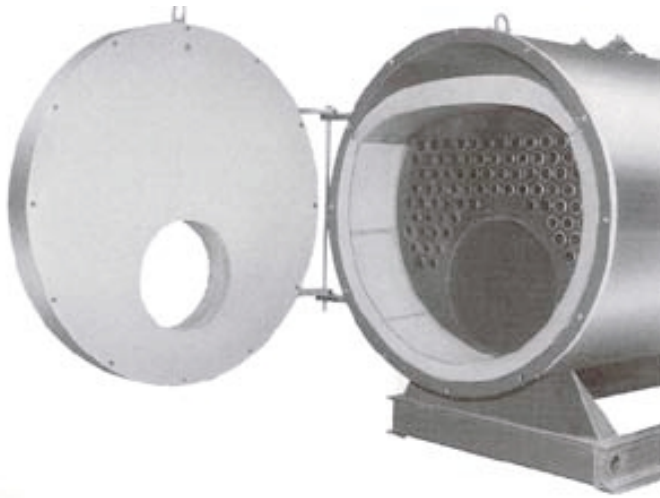


P.O. BOX 539
HUTCHINS, TX 75141
FAX 972-225-5739



Package Scotch Marine Low or High Pressure Boilers

A.S.M.E., National Board stamped and insurance inspected. Welded construction for pressure to 350 psig steam or 160 psig water. All tubes expanded and beaded. No tubes are welded on standard units.



COMBUSTION CHAMBER:

This large combustion area is lined with quality refractory material for longer life and economical operation. The rear door is hinged. This type of construction enables fast, easy, and economical inspection of the combustion chamber and rear tube sheet. The rear doors have a long life air tight seal for more efficient operation. An 18" inspection door is standard. Each rear door has a pyrex sight glass for checking the burner combustion.



All units are completely wired and piped for service connections, and are fire-tested to MAXIMUM operating pressure prior to shipment. Boilers are constructed in compliance with A.S.M.E. Code, insurance inspected, and National Board registered. Factory Mutual (FM), Industrial Risk Insurance (IRI), NFPA-8501 and municipal code compliance is available per customer requirements.



TWO HEAVY LIFTING LUGS ON ALL BOILERS.

1" SURFACE BLOW DOWN OPENING IS STANDARD.

MANHOLE 12" X 16" SUPPLIED ON HIGH PRESSURE BOILERS AND SIZE 125 AND LARGER ON LOW PRESSURE FOR INTERNAL INSPECTION AND CLEANOUT.

STEAM OUTLET 300 # FLANGE ON SIZE 125 AND LARGER. THREADED (NPT) ON SMALLER SIZES. 150# FLGS. ON LOW PRESSURE BOILERS.

PUMP AND LOW-WATER CUT-OFF CONTROL SUPPLIED, PIPED, AND ELECTRICALLY WIRED. SECOND PROBE TYPE LOW-WATER CONTROL STANDARD.

SAFETY RELIEF VALVE(S) WITH SIDE OUTLET SUPPLIED AS STANDARD EQUIPMENT.

EXHAUST OF FUMES FROM THE 80% PLUS EFFICIENT, TWO PASS BOILER IS THROUGH A ROUND STACK CONNECTION.

STACK THERMOMETER IS SUPPLIED. STACK TEMPERATURE ON W & D SCOTCH MARINE BOILERS IS GUARANTEED NOT TO EXCEED 100 DEGREES FARENHEIT. NET READINGS ABOVE STEAM TEMPERATURE.

DIAGONAL STAYS WELDED TO HEADS AND SHELL.

LARGE STEAM AREA ASSURES DRY STEAM WITH RESERVE FOR PEAK LOADS.

CURVED ARCH AND LARGE REFRACTORY LINED COMBUSTION CHAMBER, DRY BACK DESIGN. QUALITY REFRACTORY INSTALLED AT FACTORY AIDS COMBUSTION AND CONTAINS HEAT, INCREASING THE OVERALL EFFICIENCY. THERE ARE NO HOT SPOTS ON TWO PASS DESIGN.

2" GLASS AND ROCK WOOL BLOCK TYPE INSULATION ASSURES ECONOMICAL OPERATION AND COOLER BOILER ROOM. INSULATION IS COVERED WITH 20 GAUGE GALVANIZED STEEL JACKET FOR ITS PROTECTION.

SHELL IS PRESSURE VESSEL QUALITY STEEL, WELDED CONSTRUCTION, X-RAYED ON ALL BOILERS.

FURNACE IS PRESSURE VESSEL QUALITY STEEL WELDED CONSTRUCTION X-RAYED IN ALL BOILERS.

BOILER TUBES ARE FULL 12 GAUGE (.110) MATERIAL 2 1/2" DIAMETER FOR FASTER STEAMING AND MORE EFFICIENT OPERATION, DUE TO EVEN DISTRIBUTION OF FUEL TUBES ARE EVENLY SPACED 7/8" OR MORE APART.

HEATMIZERS ARE FUEL-SAVING EQUIPMENT SUPPLIED WITH ALL W & D PACKAGE SCOTCH MARINE BOILERS TO INSURE GREATER ENERGY SAVINGS IN OPERATIONAL COSTS. WARRANTED FOR FIVE (5) YEARS, ENGINEERED FOR EACH BOILER FOR EQUAL HEAT DISTRIBUTION OVER ENTIRE UNIT AND MAXIMUM HEAT TRANSFER.

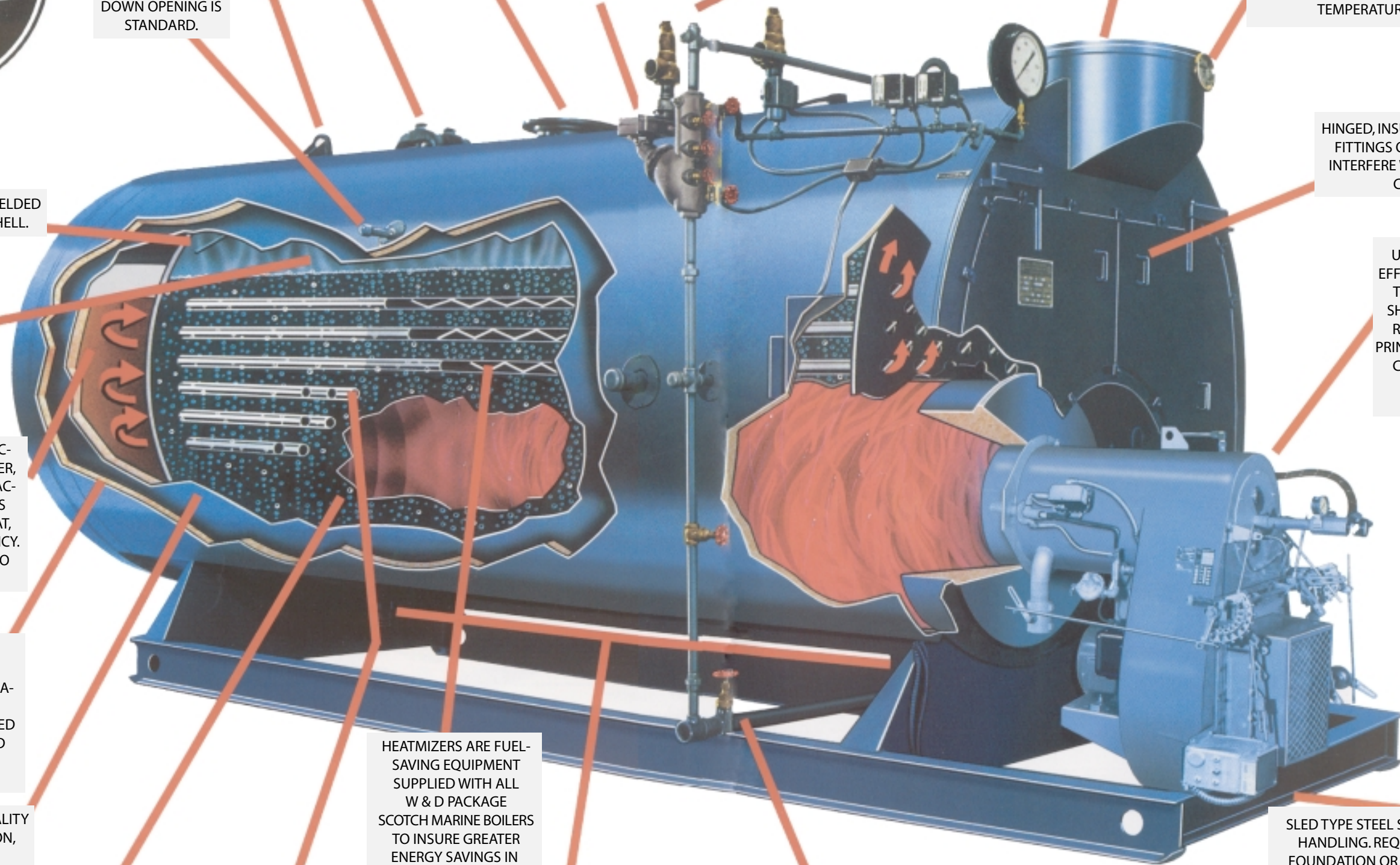
3" X 4" HAND HOLE OPENINGS FOR INSPECTION AND CLEANING OF SHELL AND TUBES. TWO ON BOTTOM OF SHELL AND TWO IN FRONT TUBE SHEET.

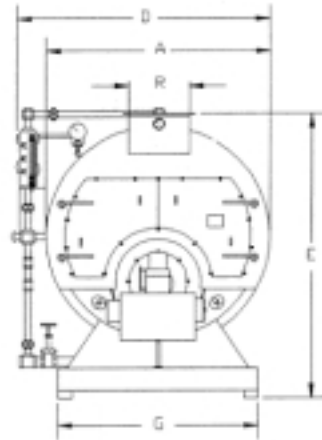
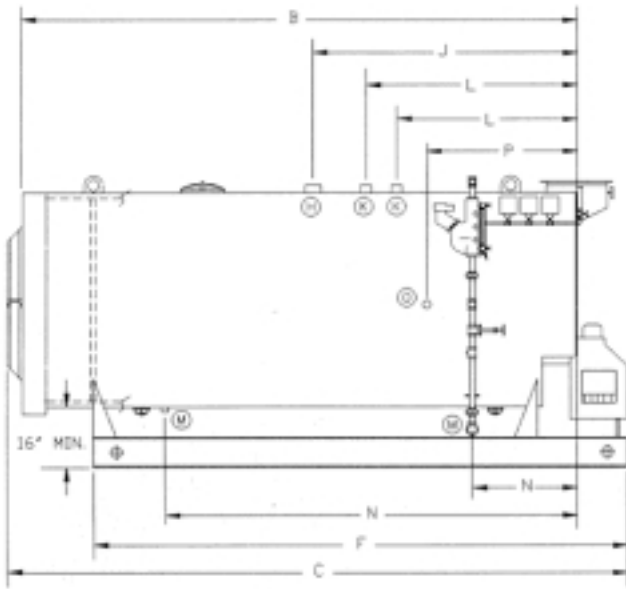
BLOW-OFF VALVE(S) SUPPLIED WITH ALL PACKAGE BOILERS. TWO VALVES ON 125 psig OR HIGHER. A SECOND OPENING IS ON BOTTOM REAR OF ALL SIZE 80 AND LARGER. BLOW-OFF DRAIN FROM WATER LEVEL CONTROL IS PIPED TO MAIN BOILER BLOW-OFF PIPING. (PICTURED IS 15 PSIG BOILER).

HINGED, INSULATED DOORS. NO FITTINGS OR BURNER PARTS INTERFERE WITH OPENING OR CLOSING.

UL LISTED FORCED DRAFT BURNER FOR EFFICIENT TROUBLE FREE OPERATION. ONLY TWO SIMPLE ADJUSTMENTS. SWIRLING SHORT FLAME MAKES MAXIMUM USE OF RADIATION AND FORCED CONVECTION PRINCIPLES. FULL MODULATION. AVAILABLE CONTROLS TO MEET CODE AND INSURANCE REQUIREMENTS, GAS, OIL, OR COMBINATION GAS/OIL BURNERS.

SLED TYPE STEEL SKID BASE FOR EASY HANDLING. REQUIRES NO SPECIAL FOUNDATION OR BOLTING. BOILER IS 16" MIN. OFF FLOOR FOR EASY WORKING CONDITIONS. OPENINGS FOR HOOKS & RIGGING, BOTH ENDS.





L	LOCATION OF RELIEF VALVE OPENING	IN	47	48-57	42-55	52-62	55-66	53-62	54-67-108	63-78-129	63-78-93	63-78-93	63-78-93-108	63-78-93-107-121	73-90-106	97-114-130
		cm	119	122-145	107-140	132-157	140-168	135-157	137-170-274	160-198-328	160-198-236	160-198-236	160-198-236-274	160-198-236-272-307	185-229-269	246-290-330
M	SIZE BLOWOFF OPENINGS	IN	2-1 ^{1/2}	2-1 ^{1/2}	2-1 ^{1/2}	2-1 ^{1/2}	2-1 ^{1/2}	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2	2-2
		cm	2-38	2-38	2-38	2-38	2-38	2-51	2-51	2-51	2-51	2-51	2-51	2-51	2-51	2-51
N	LOCATION OF BLOWOFF OPENING	IN	27-91	27-108	29-109	31-109	31-132	31-120	31-151	37-158	37-158	37-151	37-202	37-209	27-223	51-247
		cm	69-231	69-274	74-277	79-277	79-335	79-305	79-384	94-401	94-401	94-384	94-513	94-531	69-566	130-627
O	SIZE WATER FEED OPENING	IN	1 ^{1/2}	1 ^{1/2}	1 ^{1/2}	1 ^{1/2}	1 ^{1/2}	2	2	2	2	2	2	2	2	2 ^{1/2}
		cm	38	38	38	38	38	51	51	51	51	51	51	51	51	63
P	LOCATION OF WATER FEED OPENING	IN	37	39	42	42	44	44	44	50	50	50	50	50	130	130
		cm	94	99	107	107	118	118	118	127	127	127	127	127	330	330
Q	SIZE OF GAS PIPING	IN	2	2	2	2	2 ^{1/2}	2 ^{1/2}	2 ^{1/2}	3	3	3	3	3	3	4
		cm	51	51	51	51	64	64	64	76	76	76	76	76	76	101
R	STACK DIAMETER	IN	16	16	18	20	20	20	20	24	24	24	24	24	24	24
		cm	41	41	46	51	51	51	51	61	61	61	61	61	61	61
	SPACE TO REMOVE TUBES (FRONT)	IN	86	107	102	105	128	113	142	154	154	146	180	188	192	216
		cm	219	272	260	268	326	288	361	391	391	371	457	478	488	549
	SPACE TO REMOVE TUBES (REAR)	IN	84	105	96	103	126	101	132	144	144	136	176	184	188	212
		cm	214	267	244	262	320	257	335	366	366	345	447	467	478	538
	BOXING FOR EXPORT	cu. ft.	692	774	905	1027	1145	1331	1510	1775	1982	2151	2562	2883	3874	4190
		m ³	19 ^{1/2}	22	25 ^{1/2}	29	32 ^{1/2}	37 3/4	42 3/4	50 1/4	56	61	72 1/2	81 3/4	110	119
	WATER CAPACITY OPERATING LEVEL	gal's	521	637	827	969	1161	1228	1534	1737	2087	2171	2718	2893	3550	3981
		Liters	1972	2513	3130	3668	4394	4648	5806	6575	7899	8217	10288	10950	13437	15068
	WATER CAPACITY FLOODED	gal's	604	738	927	1195	1432	1386	1731	2147	2607	2628	3289	3668	5002	5561
		Liters	2286	2793	3509	4523	5420	5246	6552	8126	9867	9947	12449	13883	18932	21048
	APPROX. SHIPPING WT.	15 psi lb.	9000	11000	11900	12700	13900	15000	18000	22000	23900	26000	41000	43000	70000	74000
		1.05 Kg/cm ² Kg	4086	4994	5403	5765	6311	6810	8172	9988	10851	11804	18614	19522	31780	33596
		150 psi lb.	10800	12500	13200	15900	17500	19000	22000	26000	29000	32000	43500	48500	72000	76000
		1.05 Kg/cm ² Kg	4903	5675	5993	7219	7945	8626	9988	11804	13166	14528	19749	22019	32688	34504
BOILER SIZE	No.		80	100	125	150	175	200	250	300	350	400	500	600	700	800

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SPECIFICATIONS

BOILER SIZE		No.	80	100	125	150	175	200	250	300	350	400	500	600	700	800
HEATING SURFACE (Fire Side)	Sq. ft.		400	500	625	750	875	1000	1250	1500	1750	2000	2500	3000	3500	3950
	m ²		38	47	58	71	85	94	117	140	164	188	235	280	329	376
HEATING SURFACE (Water Side)	Sq. ft.		448	546	682	831	995	1102	1375	1633	1919	2199	2748	3281	3780	4320
	m ²		42	51	64	77	93	103	128	152	178	204	255	305	355	406
STEAM OUTPUT FROM & AT 212° F (100° C)	lbs/hr		2760	3450	4312	5175	6037	6900	8625	10350	12075	13800	17250	20700	24150	27600
	Kg/hr		1252	1565	1955	2347	2738	3129	3912	4694	5476	6258	7823	9388	10964	12530
RADIATION	Sq. ft. Steam EDR		11200	14000	17500	21000	24500	28000	35000	42000	49000	56000	70000	84000	98000	112000
	m ² Steam EDR		1042	1302	1628	1953	2279	2604	3255	3906	4557	5208	6510	7812	9114	10416
RADIATION	Sq. ft. Water EDR		17850	22400	28000	33600	39200	44800	56000	67200	78750	89600	112000	134400	156800	179200
	m ² Water EDR		1660	2083	2604	3125	3646	4166	5208	6250	7314	8333	10415	12499	14582	16666
MBH			2678	3348	4184	5021	5858	6695	8369	10042	11716	13390	16738	20085	23432	26780
	KCAL per Hr	1000	675	844	1054	1265	1476	1687	2109	2531	2952	3374	4218	5061	5905	6749
GAS BURNER	BTU INPUT 1000		3360	4200	5250	6300	7350	8400	10500	12600	14700	16800	21000	25200	29400	33600
	KCAL INPUT 1000		846	1058	1323	1588	1852	2117	2646	3175	3704	4234	5292	6350	7409	8467
MOTOR FAN	3450 RPM HP		2	3	3	5	3	3	5	7.5	7.5	10	15	20	40	40
GAS PRESSURE MAX. INLET TO REG.	psi		1	1	1	1	2	2	2	2	2	2	15	15	15	15
	Kg/Cm ²		0.1	0.1	0.1	0.1	0.14	0.14	0.14	0.14	0.14	0.14	1.06	1.06	1.06	1.06
GAS PRESSURE MANIFOLD (Flowing)	IN W.C.		5.0	6.0	4.4	6.1	6.2	6.2	8.2	8.1	10.9	14.6	12.0	20	20	22
	mm W.C.		127	152	112	155	157	157	208	206	277	371	305	508	508	559
OIL BURNER (No. 2 Oil)*	GPH		24	30	37.5	45	52.5	60	75	90	105	120	150	180	210	240
	IPH		91	114	142	170.5	198	227	284	341	397.5	454	568	681.5	796	910
A DIAMETER OF INSULATED BOILER	IN		59	59	65	71	71	77	77	83	89	96	96	102	114	114
	cm		150	150	165	180	180	196	196	211	226	244	244	259	290	290
B LENGTH OF BROILER	IN		124	145	150	149	172	168	198	213	213	207	253	260	278	302
	cm		315	368	381	378	437	427	503	541	541	526	643	660	706	767
C LENGTH WITH W&D BURNER OVERALL	IN		154	175	178	177	200	206	237	249	249	243	294	300	297	321
	cm		391	445	452	450	508	523	602	632	632	617	747	762	754	815
D WIDTH WITH CONTROLS AND/OR "B" SYSTEM	IN		70	70	76	82	82	88	88	94	100	106	106	112	126	126
	cm		178	178	193	208	208	224	224	239	254	269	269	284	320	320
E HEIGHT (STACK TO FLOOR)	IN		76	76	82	88	88	94	94	100	106	112	112	120	134	134
	cm		193	193	208	224	224	239	239	254	269	284	284	305	340	340
F LENGTH OF SKIDS	IN		129	150	150	153	176	174	205	213	213	206	248	254	295	295
	cm		328	381	381	389	447	442	521	541	541	523	630	645	749	749
G WIDTH OF SKIDS	IN		53	53	59	65	65	70	70	77	83	89	89	95	102	102
	cm		135	135	150	165	165	178	178	196	211	226	226	241	259	259
H SIZE STEAM OUTLET	15psi IN		6	8	8	8	8	8	8	10	10	10	12	12	12	12
	1.05 Kg/cm ² mm		152	203	203	203	203	203	203	254	254	254	304	304	304	304
	150 psi IN		2	2 1/2	3	3	4	4	4	6	6	6	8	8	8	8
	10.5 Kg/cm ² mm		51	64	76	76	102	102	102	153	153	153	204	204	204	204
J LOCATION OF STEAM OUTLET	IN		57	69	69	72	82	75	84	111	110	110	133	136	144	168
	cm		145	175	175	183	208	191	213	282	279	279	338	345	366	427
K	SIZE RELIEF VALVE OPENING		AS REQUIRED BY CODE													

*Oil Pump Motors: 1/2 HP thru Size 150, 1 1/2 HP through size 350, 2 HP through size 600