



High Performance 3 Pass Commercial / Industrial Units

Field Erected / Factory Packaged



The latest engineered design utilizing the long proven multi-pass fire tube platform

Highest operating efficiencies –ASME Design—UL Listed as factory packaged or field erected

STANDARD FEATURES and equipment, ASME

Section IV steam:

- Oversized, engineered steam space
- Opposed longitudinal reversing flow steam separator
- Quadrant damper
- U.S made, 2.5" SA178 Grade "A" boiler tubes; .120 wall (11 GA.)
- 2" insulated jacket with painted finish
- High temperature paint front and rear
- ASME relief valve(s)
- 6" steam gauge
- Makeup water meter

STANDARD FEATURES and equipment, ASME

Section IV water:

- 250 degree F / 30 PSI design (optional pressures to 160 PSI)
- U.S made, 2.5" SA178 Grade "A" boiler tubes; .120 wall (11 GA.)
- Quadrant damper
- 2" insulated jacket with painted finish
- 6" Combination pressure / temperature gauge
- High temperature paint front and rear
- ASME relief valve(s)

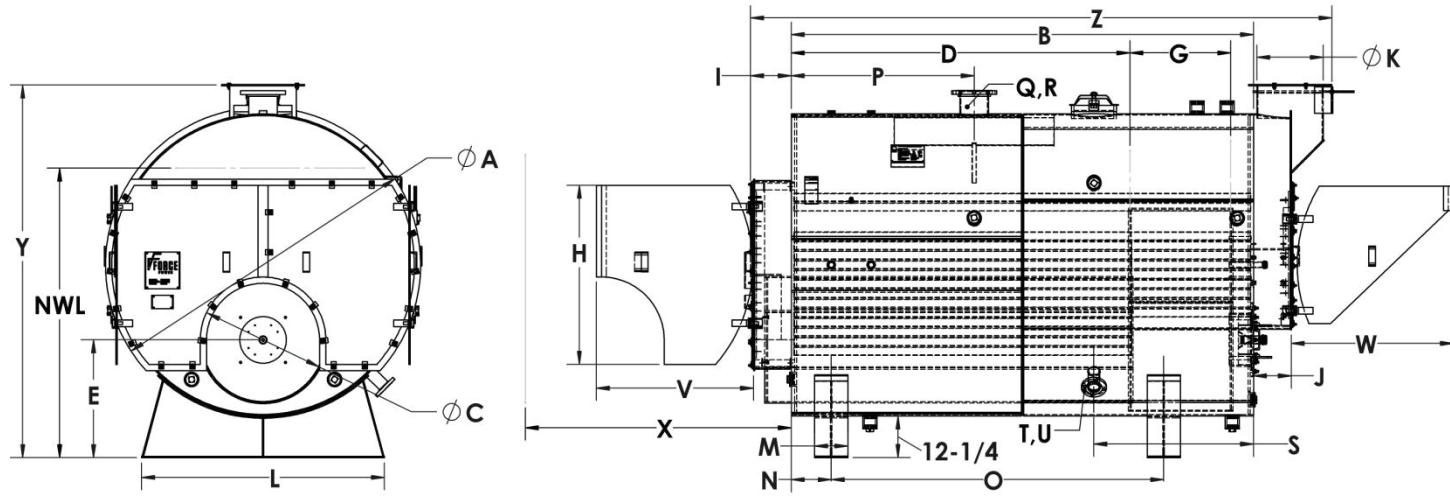
OPTIONAL (steam / water)

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| <ul style="list-style-type: none"> • Fuel burner (gas, oil or combination of oil and gasses) • Operating control • High limit control M/R • Modulating control • Combination LWCO / PC • Domestic hot water coil | <ul style="list-style-type: none"> • Valves (supply, return, blow down) • Potable water storage tanks (cement lined) • Fuel storage tanks • Feed systems • Chemical shot feeders • Blow down systems |
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www.forceboiler.com





FORCE POWER MODEL TCS BOILERS	60	70	80	90	100	125	150	200	250	300	
A	SHELL ID	55	55	55	55	63	63	63	90	90	90
B	SHELL LENGTH	105	122	137	153	121	150	178	127	139	165
C	FURNACE ID	27	27	27	27	30	30	30	37-1/4	37-1/4	37-1/4
D	FURNACE LENGTH	79-1/4	95-3/8	111-1/2	127-5/8	95-1/4	124-1/2	152-1/2	88-1/4	100-1/4	126-1/4
E	FURNACE C.L.	30-3/4	30-3/4	30-3/4	30-3/4	32-7/8	32-7/8	32-7/8	36	36	36
F	REVERSING CHAMBER ID	38-1/4	38-1/4	38-1/4	38-1/4	43-3/8	43-3/8	43-3/8	60-3/8	60-3/8	60-3/8
G	REVERSING CHAMBER LENGTH	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	18-3/4	29-3/4	29-3/4	29-3/4
H	FRONT SB HEIGHT	32	32	32	32	33	33	33	52	52	52
I	FRONT SB DEPTH	12	12	12	12	12	12	12	12	12	12
J	REAR SB DEPTH	12	12	12	12	12	12	12	12	12	12
K	VENT DIAMETER	16	16	16	16	16	16	16	20	20	20
L	SADDLE LENGTH	44-1/4	44-1/4	44-1/4	44-1/4	50-3/8	50-3/8	50-3/8	73	73	73
M	SADDLE WIDTH	10	10	10	10	10	10	10	10	10	10
N	FRONT SADDLE C.L. LOCATION	10	10	10	20	10	10	20	12	12	12
O	SADDLE SPACING	80	96	112	108	86	110	114	88	100	126
P	SUPPLY LOCATION	42	42	42	42	42	42	42	55	55	55
Q	STEAM SUPPLY SIZE (NPS)	8	8	8	8	8	8	8	8	8	8
R	WATER SUPPLY SIZE (NPS)	4	4	4	4	4	6	6	6	6	8
S	RETURN LOCATION	42	42	42	42	48	48	48	48	48	48
T	STEAM RETURN SIZE (NPS)	3	3	3	3	3	3	3	3	3	4
U	WATER RETURN SIZE (NPS)	4	4	4	4	4	6	6	6	6	8
V	FRONT SB DOOR SWING	29	29	29	29	33	33	33	49	49	49
W	REAR SB DOOR SWING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	49	49	49
X	TUBE PULL	102	119	134	150	118	147	175	124	136	162
Y	BOILER HEIGHT - OVERALL	79	79	79	79	86	86	86	116	116	116
Z	BOILER LENGTH - OVERALL	137	154	169	185	153	182	210	161	173	189
NWL	NORMAL WATER LINE	61	61	61	61	64	64	64	79	79	79

FORCE POWER MODEL TCS BOILERS	HEAT INPUT	INPUT FUEL OIL (NO 2)	HEAT OUTPUT	OPERATING WEIGHT (STEAM)	OPERATING VOLUME (STEAM)	OPERATING WEIGHT (WATER)	OPERATING VOLUME (WATER)	SHIPPING WEIGHT
	MBH	GPH	MBH	LBS	USG	LBS	USG	LBS
60	2450	17.5	2010	12200	580	12800	650	7400
70	2860	20.4	2350	13600	680	14300	760	8000
80	3270	23.4	2680	15100	770	15800	860	8700
90	3680	26.3	3020	16500	860	17300	960	9400
100	4090	29.2	3350	16200	800	17800	1000	9500
125	5110	36.5	4190	19400	1010	21400	1260	11000
150	6130	43.8	5030	22500	1210	24900	1500	12400
200	8170	58.4	6700	28200	1480	34100	2190	15800
250	10210	72.9	8370	30500	1640	37000	2420	16900
300	12250	87.5	10050	35700	1980	43400	2900	19200
350	14290	102.1	11720	40100	2000	48000	2940	23500
400	16330	116.6	13390	44700	2270	53500	3340	25700
450	18370	131.2	15070	49400	2560	59400	3760	28100
500	20420	145.9	16740	59100	3230	69500	4470	32200
600	24500	175	20090	66800	3740	78800	5180	35600
700	28580	204.1	23440	78600	4530	92900	6250	40900
800	32660	233.3	26780	87700	5020	103500	6920	45900
900	36740	262.4	30130	97200	5640	114900	7760	50200
1000	40830	291.6	33480	107300	6300	127000	8660	54800

FORCE POWER MODEL TCS BOILERS	350	400	450	500	600	700	800	900	1000
A	SHELL ID	96	96	96	116	116	116	116	116
B	SHELL LENGTH	164	185	207	170	195	233	257	319
C	FURNACE ID	47	47	47	57	57	57	56-3/4	56-3/4
D	FURNACE LENGTH	125-1/4	146-1/4	168-1/4	125-1/2	150-1/2	188-1/2	212-1/2	242-1/2
E	FURNACE C.L.	38	38	38	46	46	46	46	46
F	REVERSING CHAMBER ID	68-1/4	68-1/4	68-1/4	80	80	80	80	80
G	REVERSING CHAMBER LENGTH	29-3/4	29-3/4	29-3/4	35-1/4	35-1/4	35-1/4	35-1/4	35-1/4
H	FRONT SB HEIGHT	54	54	54	70	70	70	70	70
I	FRONT SB DEPTH	17	17	17	20	20	20	20	20
J	REAR SB DEPTH	17	17	17	20	20	20	20	20
K	VENT DIAMETER	26	26	26	32	32	32	32	32
L	SADDLE LENGTH	76	76	76	94	94	94	94	94
M	SADDLE WIDTH	10	10	10	12	12	12	12	12
N	FRONT SADDLE C.L.	18	18	18	18	18	18	18	35
O	SADDLE SPACING	121	142	164	120	145	183	207	237
P	SUPPLY LOCATION	67	67	67	70	70	70	70	70
Q	STEAM SUPPLY SIZE (NPS)	10	10	10	12	12	12	12	12
R	WATER SUPPLY SIZE (NPS)	8	10	10	10	10	10	12	12
S	RETURN LOCATION	48	48	48	60	60	60	60	60
T	STEAM RETURN SIZE (NPS)	4	4	4	4	4	6	6	6
U	WATER RETURN SIZE (NPS)	8	10	10	10	10	10	12	12
V	FRONT SB DOOR SWING	50	50	50	59	59	59	59	59
W	REAR SB DOOR SWING	50	50	50	59	59	59	59	59
X	TUBE PULL	161	182	204	167	192	230	254	316
Y	BOILER HEIGHT - OVERALL	122	122	122	140	140	140	140	140
Z	BOILER LENGTH - OVERALL	211	232	254	226	251	289	313	375
NWL	NORMAL WATER LINE	85	85	85	103	103	103	103	103

NOTE: ALL DIMENSIONS FOR REFERENCE ONLY