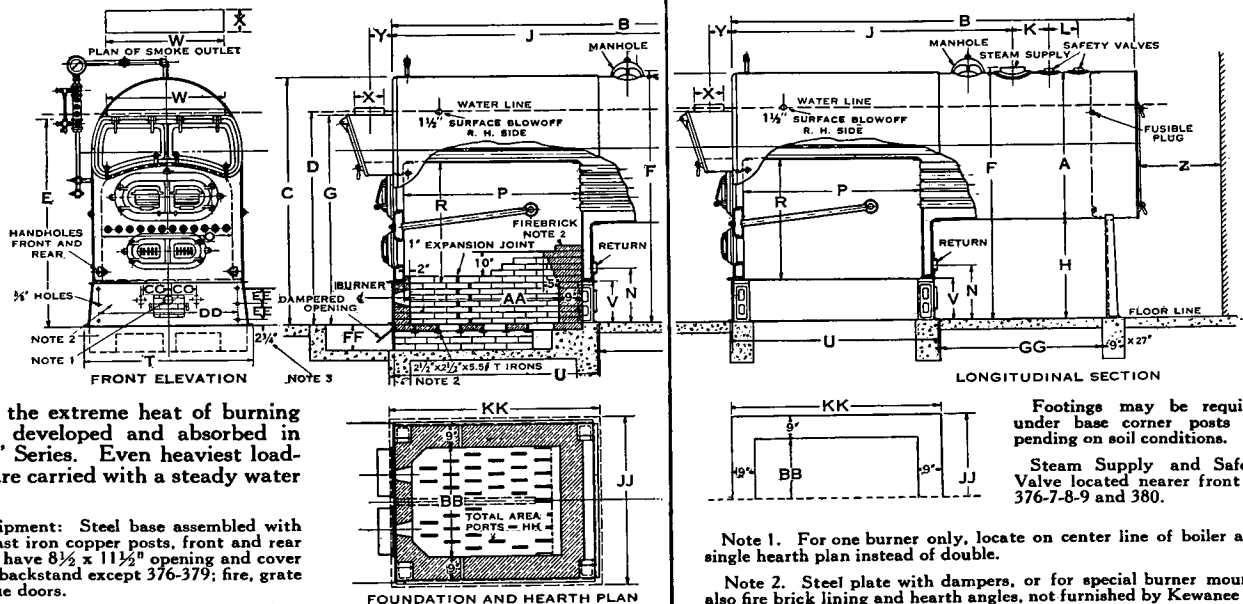


# KEWANEE Down-Draft Firebox Boiler "300" Series For Oil, Gas or Stoker



All the extreme heat of burning oil is developed and absorbed in "300" Series. Even heaviest loadings are carried with a steady water line.

Equipment: Steel base assembled with four cast iron copper posts, front and rear panels have 8 1/2 x 11 1/2" opening and cover plate; backstand except 376-379; fire, grate and flue doors.

Also flue and tube cleaners with handles, socket wrench.

Manhole furnished on boiler numbers 380 and larger.

Trimings for Steam only: Safety valve, steam gauge with syphon and cock, water column with water gauge, glass and cocks.

**For Cut-away View  
"300" Series Oil or  
Gas, see page 24.**

Footings may be required under base corner posts depending on soil conditions.  
Steam Supply and Safety Valve located nearer front on 376-7-8-9 and 380.

Note 1. For one burner only, locate on center line of boiler and use single hearth plan instead of double.

Note 2. Steel plate with dampers, or for special burner mountings, also fire brick lining and hearth angles, not furnished by Kewanee Boiler Corporation.

Note 3. This dimension 1 1/4" on boiler numbers 376-381 inclusive.

Note 4. Average Firebox Height is computed by dividing the firebox volume by the plan area. On stoker fired boilers 385 to 390 additional furnace height and volume for S.H.B.I. standard may be provided in base. Or extended water leg may be ordered, and two firedoors.

### Specifications and Setting Measurements

Boiler Number	3" Tubes						4" Tubes									
	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	
Rating—Steam Radiation	4250	4860	5470	6080	7290	8500	10330	12150	15180	18220	21250	24290	30360	36430	42500	
Water Radiation	6800	7770	8750	9720	11660	13600	16520	19440	24280	29150	34000	38860	48570	58280	68000	
Btu. per Hour	1020	1166	1313	1459	1750	2040	2479	2916	3643	4373	5100	5830	7286	8743	10200	
Heating Surface (SHBI min.)	250	286	322	358	429	500	608	715	893	1072	1250	1429	1786	2143	2500	
Furnace Volume (SHBI min.)	30.4	34.8	39.1	43.5	52.1	60.8	73.8	86.8	108.5	130.2	151.8	173.5	216.9	260.3	303.6	
Net Furnace Volume, Oil-Gas	56.3	58.3	69.6	72.2	92.1	104.5	119.6	137.5	162.2	170.7	198.2	228.3	260.8	304.4	323.3	
Furnace Vol. Above Mud Ring	49.1	50.7	60.1	62.1	79.5	89.4	97.0	110.4	130.9	137.2	160.2	185.2	207.8	231.9	245.5	
Average Firebox Height (See Note 4)	37.6	37.6	39.3	39.3	44.4	44.4	43.8	43.8	46.6	46.6	49.4	49.5	49.5	51.0	51.0	
Added Furnace Hgt. for Stoker (SHBI)										5	5	5	5	12	12	
Hi-Firebox Volume										151.9	176.4	209.2	258.2	300.2	341.9	
Plan Area	15.7	16.2	18.4	18.9	21.5	24.2	26.6	30.3	33.7	35.3	38.9	44.5	50.4	54.6	57.8	
Breaching Diameter	19	20	21	22	23	24	26	28	30	31	33	35	39	41	43	
Stack Diameter	17	18	19	20	21	22	24	26	28	29	31	33	36	38	40	
Stack Height	45	50	45	50	45	55	50	60	60	70	70	70	85	85	100	
Breaching Diameter, Two Boilers	25	26	27	28	30	31	34	36	40	41	44	47	50	54	56	
Stack Diameter, Two Boilers	23	24	25	26	28	29	32	34	37	38	41	44	47	50	52	
Stack Height, Two Boilers	55	60	55	60	55	65	60	70	70	80	80	80	95	95	110	
Steam Supply Size	6	6	6	6	8	8	8	8	8	8	8	8	10	10	10	
Return Size	3	3	3	3	4	4	4	4	4	4	4	4	6	6	6	
Safety Valve Size	2	2	2	2 1/2	2 1/2	2 1/2	3	3	3	2-2	2-2 1/2	2-2 1/2	2-2 1/2	2-3	2-3	
Shipping Weight	6200	6900	7400	8000	9100	10100	12500	14100	16500	18900	21200	23200	27500	31500	35200	
A—Boiler Diameter	42	42	48	48	54	54	60	60	66	66	72	78	78	84	84	
B—Boiler Length	8-3	9-3	8-7 1/2	9-5	11-2 1/2	12-11	12-8 1/2	14-9	14-11	17-4	16-5	17-0 1/2	20-7 1/2	19-11	22-8	
C—Boiler Height Overall	80	80	86	86	94	94	101	101	107	107	113	115	115	125	125	
D—Water Line	70	70	73	73	78	78	85	85	88 1/2	88 1/2	94 1/2	95	95	107 1/2	107 1/2	
E—Water Column Height	68	68	71	71	76	76	83	83	86 1/2	86 1/2	92 1/2	93	93	105 1/2	105 1/2	
F—Steam Supply Height	82	82	88	88	96	96	103	103	109	109	115	117	117	127 1/2	127 1/2	
G—Breaching Connection Height	70	70	74 1/2	74 1/2	81	81	86	86	89	89	96	97	97	109	109	
H—Rear Stand Height	38	38	38	38	40	40	41	41	41	41	41	41	37	41	41	
J—Steam Supply Location	1-10	2-0	1-10	2-0	2-0	9-8	9-8	10-6	10-8	11-6	11-6	11-8	13-4	13-2	14-0	
K—Safety Valve Location	16	16	16	16	16	15	14	15	15	21	18	21	28	26	36	
L—Safety Valve Location										12	12	12	12	12	12	
N—Return Height	19	19	19	19	19 1/2	19 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	23 1/2	27 1/2	27 1/2	
O—Firebox Width	36	36	42	42	48	48	53	53	59	59	65	71	71	77	77	
P—Firebox Length	62	64	62	64	64	72	72	82	82	86	86	90	102	102	108	
R—Firebox Height	41 1/2	41 1/2	44	44	49	49	49	49	52	52	54 1/2	55	55	57	57	
T—Base Width	47 1/2	47 1/2	53 1/2	53 1/2	59 1/2	59 1/2	66	66	72	72	78	84	84	90 1/2	90 1/2	
U—Base Length	71 1/2	73 1/2	72	74	74	82	83	93	93	97	97	101 1/2	113 1/2	113 1/2	119 1/2	
V—Base Height	14	14	14	14	14	14	17	17	17	17	17	17	17	21	21	
W—Breaching Connection Length	32	32	34	34	40	40	44	44	51	51	54	60	60	64	64	
X—Breaching Connection Width	9	9	11	11	12	12	14	14	15	15	19	18	18	22	22	
Y—Breaching Connection Location	6 1/2	6 1/2	7 1/2	7 1/2	8	8	9	9	9 1/2	9 1/2	11 1/2	11	11	13	13	
Z—Rear Door Clearance	42	42	48	48	30	30	33	33	36	36	39	42	42	45	45	
AA—Furnace Length	53	55	53	55	55	63	63	73	73	77	77	81	93	93	99	
BB—Furnace Width	24	24	30	30	36	36	42	42	48	48	54	60	60	66	66	
CC—Burners Location					8 1/2	8 1/2	9 1/2	9 1/2	11	11	12 1/2	14	14	15	15	
DD—Bolt Centers in Plate	37 1/2	37 1/2	43 1/2	43 1/2	49 1/2	49 1/2	55 1/2	55 1/2	61 1/2	61 1/2	67 1/2	73 1/2	73 1/2	79 1/2	79 1/2	
EE—Bolt Centers in Plate	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	7 1/2	7 1/2	
FF—Pit Depth	9	9	9	9	10	10	10	10	10	10	11	11	12	13	13	
GG—Rear Stand Location					44	57	54	66	69	94	82	82	96	96	114	
HH—Total Area Ports or Openings																
II—Foundation Width	64	73	83	92	110	127	155	182	230	273	320	365	455	545	640	
JJ—Foundation Width	54	54	60	60	65 1/2	65 1/2	70 1/2	70 1/2	76 1/2	76 1/2	82	88	88	94	94	
KK—Foundation Length	72 1/2	74 1/2	73	75	75	83	84	94	94	98	98	102 1/2	114 1/2	114 1/2	120 1/2	
Size of Dampered Openings	6x11	6x12	6x14	6x16	7x16	7x18	7x22	7x26	7x26	7x16	2-8x20	2-8x20	2-9x25	2-10x27	2-10x32	
Number of Fire Brick	375	390	410	425	450	480	575	575	625	680	715	780	835	990	1020	
*Outside Surface to Cover	110	120	130	140	185	210	220	255	280	320	330	360	435	450	510	

\*Front smokebox and front head below smokebox NOT included.