

# Series 4F-40 FORCED DRAFT FIREBOX GENERATOR

## RATINGS AND DATA

4F - 40 Boiler Models		63	78	92	107	127	154	180	209	240	277	311	345	360A	450A	563A	675A
Gross Output	MBH	527	653	770	896	1,063	1,289	1,506	1,749	2,009	2,318	2,603	2,887	3,015	3,770	4,720	5,657
	BHP	15.7	19.5	23.0	26.8	31.8	38.5	45.0	52.2	60.9	69.2	77.8	86.2	90.1	112.6	141.0	169.0
	Lbs. Stm/Hr	543	673	794	923	1,096	1,328	1,553	1,803	2,070	2,389	2,683	2,975	3,108	3,885	4,864	5,832
Net Rating - Steam	MBH	409	507	598	695	825	1,000	1,169	1,357	1,559	1,799	2,020	2,240	2,340	2,926	3,663	4,390
	Sq. Ft.	1,705	2,115	2,490	2,895	3,445	4,165	4,870	5,655	6,495	7,495	8,415	9,335	9,750	12,190	15,265	18,295
Net Rating - Water MBH		458	568	670	780	925	1,121	1,310	1,522	1,748	2,017	2,265	2,512	2,623	3,280	4,106	4,922
Firing Rate - Gas	MBH	659	816	963	1,120	1,329	1,611	1,883	2,186	2,511	2,898	3,254	3,609	3,769	4,713	5,900	7,071
Firing Rate - Light Oil	GPH*	4.7	5.8	6.9	8.0	9.5	11.5	13.5	15.6	17.9	20.7	23.2	25.8	26.9	33.7	42.1	50.5
	Heavy Oil GPH*	-	-	-	-	-	-	-	-	-	-	-	-	23.1	31.4	39.3	47.1
Heating Surface Sq. Ft.	Fireside	59	73	86	101	120	145	168	194	224	257	289	320	360	450	563	675
	Waterside	63	78	92	107	127	154	180	209	240	277	311	345	398	497	622	746
Furnace Volume Cu. Ft.		8.8	10.7	12.6	14.6	18.3	21.9	25.3	29.1	34.7	39.7	44.4	49.1	58.9	68.0	89.3	104.7
Heat Release MBH/Cu. Ft.		74.9	76.3	76.4	76.7	72.6	73.6	74.4	75.1	72.4	73.0	73.3	73.5	64.0	69.3	66.1	67.5
Water Content Gal.	Steam	65	81	94	110	133	145	172	198	214	245	274	302	470	551	663	788
	Water	90	112	132	153	168	196	232	268	288	329	369	408	569	666	881	951
Approx. Dry Weight Lbs.		1,700	1,900	2,100	2,600	2,700	3,100	3,300	3,600	4,200	4,400	5,300	5,600	6,710	8,700	9,300	10,400
Approx. Full Weight Lbs.	Steam	2,240	2,570	3,090	3,510	3,800	4,300	4,730	5,250	5,980	6,435	7,575	8,110	10,615	13,290	14,825	16,970
	Water	2,450	2,835	3,195	3,870	4,095	4,735	5,235	5,830	6,595	7,140	8,365	8,995	11,495	14,255	15,975	18,325

Ratings based on 4 square feet of heating surface per boiler horsepower

\*Light oil—140,000 BTU/GAL

\*\*Heavy oil,—150,000 BTU/GAL

## Instantaneous Hot Water Heating Coils

RATED CAPACITY — GALLONS HEATED  
40° TO 140°F BOILER WATER TEMP.

COIL NUMBER	*FOR USE IN THE FOLLOWING BOILER SIZES SUBJECT TO CAPACITY LIMITATION OF BOILER	108°F GPM	108°F GPH	212°F GPH
INA-210	All Sizes	3.5	210	325
INA-300	All Except 4F-63	5.0	300	466
INA-360	All Sizes	6.0	360	560
INA-450	All Except 4F-63	7.5	450	700
INA-600	4F-154 and Larger, Also 4F-107	10.0	600	933
INA-750	4F-154 and Larger, Also 4F-107	12.5	750	1,165
INA-900	4F-92 and Larger	15.0	900	1,400
INA-1125	4F-154 and Larger	18.7	1,125	1,750
INA-1350	4F-277 and Larger, Also 4F-209	22.5	1,350	2,100
INA-1500	4F-345 and Larger	25.0	1,500	2,330

\*Two coils of any size or combination of sizes may be installed in 4F-1157 and larger



# Series 4F-45 FORCED DRAFT FIREBOX GENERATOR

## RATINGS AND DATA

4F - 45 Boiler Models		63	78	92	107	127	154	180	209	240	277	311	345	360A	450A	563A	675A
Gross Output	MBH	469	579	683	797	944	1,145	1,339	1,553	1,784	2,062	2,313	2,568	2,678	3,348	4,251	5,055
	BHP	14	17.3	20.4	23.8	28.2	34.2	40.0	46.4	53.3	61.6	69.1	76.7	80.0	100.0	127.0	151.0
	Lbs. Stm/Hr	483	597	704	821	973	1,180	1,380	1,601	1,839	2,125	2,384	2,646	2,760	3,450	4,380	5,210
Net Rating - Steam	MBH	364	449	530	618	733	889	1,039	1,205	1,384	1,600	1,795	1,993	2,078	2,598	3,299	3,923
	Sq. Ft.	1,515	1,870	2,210	2,575	3,055	3,705	4,340	5,020	5,765	6,665	7,480	8,305	8,660	10,825	13,745	16,345
Net Rating - Water MBH		403	504	594	693	821	996	1,165	1,351	1,552	1,794	2,012	2,234	2,350	2,913	3,698	4,398
Firing Rate - Gas	MBH	586	724	854	996	1,180	1,431	1,674	1,941	2,230	2,578	2,891	3,210	3,348	4,185	5,314	6,319
Firing Rate - Light Oil	GPH*	4.2	5.2	6.1	7.1	8.4	10.2	12.0	13.9	15.9	18.4	20.7	22.9	23.9	29.9	38.0	45.1
Firing Rate - Heavy Oil	GPH*	-	-	-	-	-	-	-	-	-	-	-	-	22.3	27.9	35.4	42.1
Heating Surface Sq. Ft.																	
	Fireside	59	73	86	101	120	145	168	194	224	257	289	320	360	450	563	675
	Waterside	63	78	92	107	127	154	180	209	240	277	311	345	398	497	622	746
Furnace Volume Cu. Ft.		8.8	10.7	12.6	14.6	18.3	21.9	25.3	29.1	34.7	39.7	44.4	49.1	58.9	68.0	89.3	104.7
Heat Release MBH/Cu. Ft.		66.6	67.7	67.8	68.2	64.5	65.3	66.2	66.7	64.3	64.9	65.1	65.4	66.8	61.5	59.5	60.4
Water Content Gal.	Steam	65	81	94	110	133	145	172	198	214	245	274	302	470	551	663	788
	Water	90	112	132	153	168	196	232	268	288	329	369	408	569	666	807	951
Approx. Dry Weight Lbs.		1,700	1,900	2,100	2,600	2,700	3,100	3,300	3,600	4,200	4,600	5,300	5,600	5,900	8,700	9,300	10,400
Approx. Full Weight Lbs.																	
	Steam	2,240	2,570	3,090	3,510	3,800	4,300	4,730	5,250	5,800	6,435	7,575	8,170	10,615	13,290	14,825	16,970
	Water	2,450	2,835	3,195	3,870	4,095	4,735	5,235	5,830	6,585	7,140	8,365	8,995	11,495	14,255	15,975	18,325

FOR REFERENCE ONLY.  
D.O.E. RESTRICTIONS PROHIBIT LABELING 4.0 AND 4.5 SQ. FT. RATINGS FOR HEATING BOILERS. USE THE 3.0 SQ. FT. RATINGS.

4F - 45 Boiler Models		360A-3	450A-4	563A-3	675A-3	827	993	1157	1323	1654	1985	2315
Gross Output	MBH	2,953	3,446	4,188	4,924	6,126	7,388	8,606	9,842	12,302	14,766	17,220
	BHP	88.2	102.9	125.1	147.1	183.0	220.7	257.1	294.0	367.5	441.1	514.4
	Lbs. Stm/Hr	3,044	3,550	4,316	5,075	6,315	7,617	8,872	10,146	12,682	15,223	17,753
Net Rating - Steam	MBH	2,292	2,673	3,250	3,821	4,754	5,733	6,885	7,873	9,546	11,458	13,363
	Sq. Ft.	9,550	11,140	13,540	15,920	19,810	23,890	28,690	32,805	39,775	47,740	55,680
Net Rating - Water MBH		2,569	2,997	3,644	4,284	5,330	6,428	7,487	8,563	10,703	12,846	14,981
Firing Rate - Gas	MBH	3,691	4,306	5,235	6,155	7,658	9,235	10,758	12,303	15,378	18,458	21,525
Firing Rate - Light Oil	GPH*	26.4	30.8	37.4	44.0	54.7	66.0	76.8	87.9	110.0	132.0	154.0
Firing Rate - Heavy Oil	GPH*	24.6	28.7	34.9	41.0	51.0	61.6	71.7	82.0	102.7	123.2	143.7
Heating Surface Sq. Ft.												
	Fireside	397	463	563	662	827	993	1,157	1,323	1,654	1,985	2,315
	Waterside	429	500	608	715	893	1,072	1,250	1,429	1,786	2,143	2,500
Furnace Volume Cu. Ft.		58.9	68.0	89.3	104.7	115.6	139.2	160.7	186.5	234.0	301.6	348.6
Heat Release MBH/Cu. Ft.		62.7	63.3	58.6	58.8	66.2	66.3	66.9	66.0	65.7	61.2	61.7
Water Content Gal.	Steam	421	492	602	712	761	925	1,050	1,227	1,443	1,720	1,979
	Water	519	676	740	875	1,003	1,220	1,330	1,554	1,826	2,147	2,473
Approx. Dry Weight Lbs.		6,900	8,800	9,300	12,400	13,200	14,800	18,300	19,200	23,000	28,000	34,500
Approx. Full Weight Lbs.												
	Steam	10,405	12,900	14,315	16,930	18,970	22,500	27,040	29,415	35,010	42,320	50,970
	Water	11,225	14,430	15,465	18,290	20,325	24,950	28,675	32,140	38,200	45,870	55,085

Ratings based on 4.5 square feet of heating surface per boiler horsepower

