

O. E. Frank Heater and Engineering Co., Inc.

Associated with FARRAR & TREFTS, Inc.
BUFFALO, N. Y.

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O. E. F. products consist of a complete line of heaters for every hot water need. Storage Heaters for hot water service in either U-tube or Straight tube type. Instantaneous Heaters for hot water service, heating systems, power plants. Complete information on materials, construction, service and our guarantee on request.

Large stocks of tanks, castings and tubes insure prompt shipments.

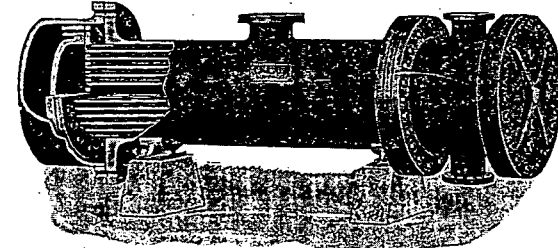
Capacities and General Dimensions O. E. F. Instantaneous Heaters, Heating Water from 50 to 180° F. with Steam at 212° F.

Gals. per Hr.	Size	Approx. Overall Dimensions						Gals. per Hr.	Size	Approx. Overall Dimensions					
		Width	Length Hor. Type	Height Ver. Type	Max. Steam	Max. Water	Drain			Width	Length Hor. Type	Height Ver. Type	Max. Steam	Max. Water	Drain
200	1H-7	15 1/2"	7'-5"	8'-1 1/2"	3"	3"	1"	2000	1H-60	21 3/4"	8'-8 1/2"	9'-8 1/4"	4"	5"	1 1/4"
300	1H-11	15 1/2"	7'-5"	8'-1 1/2"	3"	3"	1"	2500	1H-76	25 1/2"	8'-11"	9'-10"	6"	6"	2"
400	1H-14	15 1/2"	7'-5"	8'-1 1/2"	3"	3"	1"	3000	1H-90	25 1/2"	8'-11"	9'-10"	6"	6"	2"
500	1H-15	18"	8'-7"	9'-8"	3"	4"	1 1/2"	4000	1H-120	26 1/2"	9'-13 1/2"	10'-4 1/4"	8"	8"	3"
600	1H-18	18"	8'-7"	9'-8"	3"	4"	1 1/2"	5000	1H-150	26 1/2"	9'-13 1/2"	10'-4 1/4"	8"	8"	3"
800	1H-24	18"	8'-7"	9'-8"	3"	4"	1 1/2"	6000	1H-162	26 1/2"	9'-13 1/2"	10'-4 1/4"	8"	8"	3"
1000	1H-30	18"	8'-7"	9'-8"	3"	4"	1 1/2"	7000	1H-189	30 1/2"	10'-3 1/2"	11'-4 1/4"	10"	8"	3"
1250	1H-38	18"	8'-7"	9'-8"	3"	4"	1 1/2"	8000	1H-216	30 1/2"	10'-3 1/2"	11'-4 1/4"	10"	8"	3"
1500	1H-45	21 1/2"	8'-8 1/2"	9'-8 1/2"	4"	5"	1 1/2"	9000	1H-243	30 1/2"	10'-3 1/2"	11'-4 1/4"	10"	8"	3"
1800	1H-54	21 1/2"	8'-8 1/2"	9'-8 1/2"	4"	5"	1 1/2"	10000	1H-270	30 1/2"	10'-3 1/2"	11'-4 1/4"	10"	8"	3"

Capacities and General Dimensions O. E. F. Feed Water Heaters, Heating Feed Water from 50 to 200° F. with Steam at 212° F.

Horse Power	Size	Lbs. per Hour	Approximate Overall Dimensions			Maximum Steam	Maximum Water	Drain
			Width	Length Horiz. Type	Height Vertical Type			
50	FW-9	1500	15 1/2"	7'-5"	8'-1 1/2"	3"	3"	1"
75	FW-13	2250	15 1/2"	7'-5"	8'-1 1/2"	3"	3"	1"
100	FW-17	3000	15 1/2"	7'-5"	8'-1 1/2"	3"	3"	1"
150	FW-26	4500	18"	8'-7"	9'-8"	3"	4"	1 1/2"
200	FW-35	6000	18"	8'-7"	9'-8"	3"	4"	1 1/2"
250	FW-43	7500	21 1/2"	8'-8 1/2"	9'-8 1/2"	4"	5"	1 1/2"
300	FW-52	9000	21 1/2"	8'-8 1/2"	9'-8 1/2"	4"	5"	1 1/2"
350	FW-61	10500	21 1/2"	8'-8 1/2"	9'-8 1/2"	4"	5"	1 1/2"
400	FW-69	12000	21 1/2"	8'-8 1/2"	9'-8 1/2"	4"	5"	1 1/2"
450	FW-78	13500	25 1/2"	8'-11"	9'-10"	6"	6"	2"
500	FW-87	15000	25 1/2"	8'-11"	9'-10"	6"	6"	2"
600	FW-104	18000	25 1/2"	8'-11"	9'-10"	6"	6"	2"
700	FW-121	21000	26 1/2"	9'-1 1/4"	10'-4 1/4"	8"	8"	2"
800	FW-136	24000	26 1/2"	9'-1 1/4"	10'-4 1/4"	8"	8"	2"
900	FW-156	27000	26 1/2"	9'-1 1/4"	10'-4 1/4"	8"	8"	2"
1000	FW-160	30000	26 1/2"	10'-1 1/4"	11'-4 1/4"	8"	8"	2"
1100	FW-165	33000	26 1/2"	10'-1 1/4"	11'-4 1/4"	8"	8"	2"
1200	FW-180	36000	26 1/2"	10'-1 1/4"	11'-4 1/4"	8"	8"	2"
1300	FW-195	39000	30 1/2"	10'-3 1/2"	11'-8 1/4"	10"	8"	3"
1400	FW-210	42000	30 1/2"	10'-3 1/2"	11'-8 1/4"	10"	8"	3"
1500	FW-225	45000	30 1/2"	10'-3 1/2"	11'-8 1/4"	10"	8"	3"
1800	FW-270	54000	30 1/2"	10'-3 1/2"	11'-8 1/4"	10"	8"	3"
2000	FW-300	60000	34 1/2"	11'-0 1/4"	12'-0 1/4"	10"	10"	3"
2500	FW-375	75000	34 1/2"	11'-0 1/4"	12'-0 1/4"	10"	10"	3"
3000	FW-450	90000	39 1/2"	11'-6 1/4"	12'-6 1/4"	10"	12"	3"
4000	FW-600	12000	39 1/2"	11'-6 1/4"	12'-6 1/4"	10"	12"	3"

O. E. F. Feed Water Heaters and Instantaneous Heaters are designed for a maximum working pressure of 125 lbs. on the water spaces and 50 lbs. on the steam spaces.



O. E. F. Instantaneous Heaters are constructed of heavy close grain castings with rolled steel tube sheets and eighteen gauge Admiralty Metal tubes. Admiralty Metal tubes are unexcelled for feed-water service. Write us about them.

O. E. F. Instantaneous Heater for General Hot Water Service, Feed Water, Bleeder Turbines and Forced and Gravity Hot Water Heating Systems. Also Vertical Type. Steam opening may be located on top or either side of shell to suit requirements.

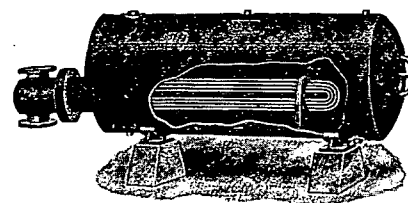


Fig. 1. O. E. F. U-Tube Storage Heater

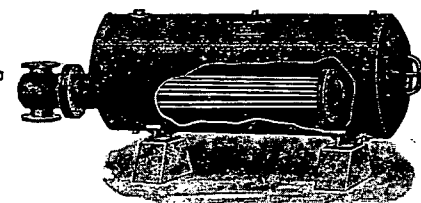


Fig. 7. O. E. F. Straight Tube Storage Heater

O. E. F. Storage Heaters are made of best quality flange steel, have rolled steel tube sheets, and sixteen gauge copper tubes. Chemical analysis and physical test of all steel used furnished on request. O. E. F. Heaters are doubly guaranteed by O. E. Frank Heater & Engineering Company and Farrar & Trefts, Inc.

O. E. F. Storage Heaters are furnished in either the U-bend Pattern, per Fig. 1 or the Straight Tube type, per Fig. 7. The shells are of best quality steel plate, the smaller sizes welded and the larger sizes riveted construction. The heating surface consists of 1 1/4 in. OD seamless drawn copper tubes No. 16 or 18 SWG as required. They are properly supported with a tube supporting plate to prevent wear of the tubes due to sagging and rubbing together. The tube sheets are steel, eliminating any possibility of cracks and leaks, which so commonly occur with cast iron tube sheets. The tube nests or bundles are removable from the tank for cleaning or repairing.

Where it is necessary to use both low and high pressure steam, the steam chamber and tubes may be arranged without the necessity of installing a separate tube bundle.

Openings of ample size are provided, and we call your attention to the arrangement of the steam inlet and outlet, making it possible to remove the tube bundle by simply unbolting the flanges and avoiding the necessity of breaking any length of pipe.

All storage heaters, unless otherwise specified, will be furnished for a working pressure of 100 pounds per square inch gage pressure, on both the steam and water spaces.

Storage heaters furnished for higher pressures.

CAPACITIES—O. E. F. U-Tube and Straight Tube Storage Heaters—Heating Given Quantities of Water from 50-180. Deg. Fahr., with Steam at 212 Deg. Fahr.

Storage Capacity	80	93	141	164	188	220	257	294	330	370	423	476	529	576	648	720	792	864	940
Tank Size	18x72	18x84	24x72	24x84	24x96	30x72	30x84	30x96	30x108	36x84	36x96	36x108	36x120	42x96	42x108	42x120	42x132	42x144	48x96
Gallons per Hour	A5	B5	C5	D5	E5	F5	G5	H5	J5	K5	L5	M5	N5	O5	P5	Q5	R5	S5	T5
100	A11	B11	C11	D11	E11	F11	G11	H11	J11	K11	L11	M11	N11	O11	P11	Q11	R11	S11	T11
200	A16	B16	C16	D16	E16	F16	G16	H16	J16	K16	L16	M16	N16	O16	P16	Q16	R16	S16	T16
300	A22	B22	C22	D22	E22	F22	G22	H22	J22	K22	L22	M22	N22	O22	P22	Q22	R22	S22	T22
400	A27	B27	C27	D27	E27	F27	G27	H27	J27	K27	L27	M27	N27	O27	P27	Q27	R27	S27	T27
500	A32	B32	C32	D32	E32	F32	G32	H32	J32	K32	L32	M32	N32	O32	P32	Q32	R32	S32	T32
600	A38	B38	C38	D38	E38	F38	G38	H38	J38	K38	L38	M38	N38	O38	P38	Q38	R38	S38	T38
700	A43	B43	C43	D43	E43	F43	G43	H43	J43	K43	L43	M43	N43	O43	P43	Q43	R43	S43	T43
800	A47	B47	C47	D47	E47	F47	G47	H47	J47	K47	L47	M47	N47	O47	P47	Q47	R47	S47	T47
900	A54	B54	C54	D54	E54	F54	G54	H54	J54	K54	L54	M54	N54	O54	P54	Q54	R54	S54	T54
1000	A61	B61	C61	D61	E61	F61	G61	H61	J61	K61	L61	M61	N61	O61	P61	Q61	R61	S61	T61
1500	A81	B81	C81	D81	E81	F81	G81	H81	J81	K81	L81	M81	N81	O81	P81	Q81	R81	S81	T81
2000	A108	B108	C108	D108	E108	F108	G108	H108	J108	K108	L108	M108	N108	O108	P108	Q108	R108	S108	T108
2500	A136	B136	C136	D136	E136	F136	G136	H136	J136	K136	L136	M136	N136	O136	P136	Q136	R136	S136	T136
3000	A165	B165	C165	D165	E165	F165	G165	H165	J165	K165	L165	M165	N165	O165	P165	Q165	R165	S165	T165
4000	A216	B216	C216	D216	E216	F216	G216	H216	J216	K216	L216	M216	N216	O216	P216	Q216	R216	S216	T216
5000	A270	B270	C270	D270	E270	F270	G270	H270	J270	K270	L270	M270	N270	O270	P270	Q270	R270	S270	T270

Storage Cap.	1034	1128	1204	1325	1445	1574	1666	1469	1616	1763	1909	2056	2115	2327	2538	2750	2961	3173
Tank Size	48x132	48x144	54x120	54x132	54x144	54x156	54x168	60x120	60x132	60x144	60x156	60x168	72x120	72x132	72x144	72x156	72x168	72x180
Gals. per Hr.	X5	Y5	AX5	BX5	CX5	DX5	FX5	GX5	HX5	KX5	LX5	MX5	NX5	OX5	PX5	QX5	RX5	TX5
100	X11	Y11	AX11	BX11	CX11	DX11	FX11	GX11	HX11	KX11	LX11	MX11	NX11	OX11	PX11	QX11	RX11	TX11
200	X16	Y16	AX16	BX16	CX16	DX16	FX16	GX16	HX16	KX16	LX16	MX16	NX16	OX16	PX16	QX16	RX16	TX16
300	X22	Y22	AX22	BX22	CX22	DX22	FX22	GX22	HX22	KX22	LX22	MX22	NX22	OX22	PX22	QX22	RX22	TX22
400	X27	Y27	AX27	BX27	CX27	DX27	FX27	GX27	HX27	KX27	LX27	MX27	NX27	OX27	PX27	QX27	RX27	TX27
500	X32	Y32	AX32	BX32	CX32	DX32	FX32	GX32	HX32	KX32	LX32	MX32	NX32	OX32	PX32	QX32	RX32	TX32
600	X38	Y38	AX38	BX38	CX38	DX38	FX38	GX38	HX38	KX38	LX38	MX38	NX38	OX38	PX38	QX38	RX38	TX38
800	X43	Y43	AX43	BX43	CX43	DX43	FX43	GX43	HX43	KX43	LX43	MX43	NX43	OX43	PX43	QX43	RX43	TX43
900	X47	Y47	AX47	BX47	CX47	DX47	FX47	GX47	HX47	KX47	LX47	MX47	NX47	OX47	PX47	QX47	RX47	TX47
1000	X54	Y54	AX54	BX54	CX54	DX54	FX54	GX54	HX54	KX54	LX54	MX54	NX54	OX54	PX54	QX54	RX54	TX54
1500	X81	Y81	AX81	BX81	CX81	DX81	FX81	GX81	HX81	KX81	LX81	MX81	NX81	OX81	PX81	QX81	RX81	TX81
2000	X108	Y108	AX108	BX108	CX108	DX108	FX108	GX108	HX108	KX108	LX108	MX108	NX108	OX108	PX108	QX108	RX108	TX108
2500	X134	Y134	AX134	BX134	CX134	DX134	FX134	GX134	HX134	KX134	LX134	MX134	NX134	OX134	PX134	QX134	RX134	TX134
3000	X162	Y162	AX162	BX162	CX162	DX162	FX162	GX162	HX162	KX162	LX162	MX162	NX162	OX162	PX162	QX162	RX162	TX162
3500	X188	Y188	AX188	BX188	CX188	DX188	FX188	GX188	HX188	KX188	LX188	MX188	NX188	OX188	PX188	QX188	RX188	TX188
4000	X215	Y215	AX215	BX215	CX215	DX215	FX215	GX215	HX215	KX215	LX215	MX215	NX215	OX215	PX215	QX215	RX215	TX