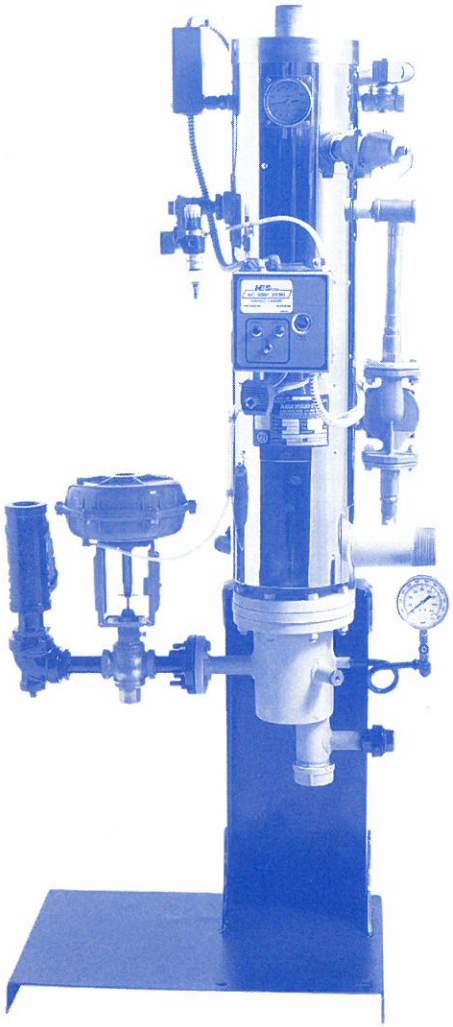
HESCO INC.
INDUSTRIES, INCORPORATED

SEMI-INSTANTANEOUS HI SERIES STEAM WATER HEATERS

ENERGY EFFICIENCY: ASHRAE 90A-1980

With energy costs continuing to rise, energy consuming equipment must be made as efficient as possible. This is especially important because new and more stringent conservation and efficiency standards are being proposed and adopted regularly.

The principal heat losses, which reduce overall efficiency, are radiant losses from the pressure vessel and its flanges. At the factory, we insulate each tank and enclose it with a steel jacket to reduce these radiant losses to less than four (4) watts per square foot of tank surface.



STANDARD EQUIPMENT:

- Modulating Steam Valve with Strainer
- Pneumatic Temperature Controller
- Temperature Demand Anticipator Assembly
- Temperature Gauge
- Steam Pressure Gauge
- ASME Certified T & P Relief Valve
- 2" Insulation with Metal Jacket
- Junction Box with On/Off Switch
- (2) Indicator Lights
- "Y" Strainer
- Vacuum Breaker
- Condensate Trap
- High Limit Temperature Control
- Safety Solenoid Control Circuit
- Bronze Circulation Pump with Copper Pipe
- Copper Tube-Heat Exchanger
- Stainless Steel Tubesheet
- Stainless Steel Tank
- ASME Stamped 150 PSI W.P.
- National Board Registered
- Skid Type Base

OPTIONAL EQUIPMENT:

- Double Solenoid Safety
- Double Wall Heat Exchanger (Copper)
- Stainless Steel Tube-Heat Exchanger
- Pilot (Self) Operated Control Valve
- Hot Water Energy Source
- Boiler Water Inlet Gauge
- Boiler Water Outlet Gauge
- Three (3) Way Control Valve
- Condensate Lift Pump
- Vertical Base Extension
- Ten (10) Year Non-Prorated Warranty

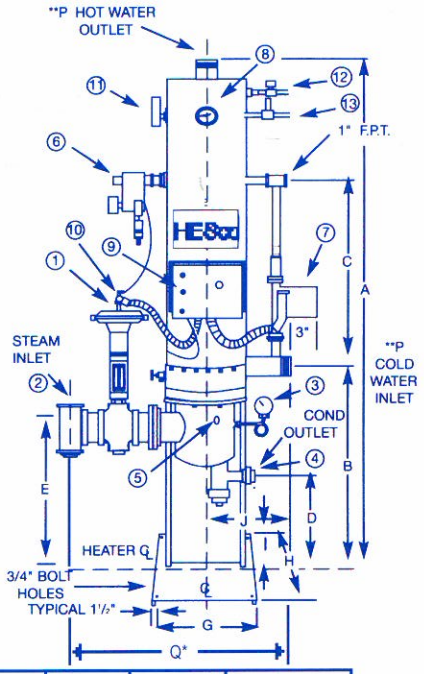
HESco

SINGLE WALL

HEATING MEDIUM STEAM

VERTICAL

1. Steam control valve air operated shown. Steam operated available.
2. Steam strainer location
3. Steam gauge, S.O. cock and siphon.
4. Union orifice trap (install check on outlet).
5. Vacuum breaker.
6. Temperature control air operated shown (20 psig Instr. Air required); steam pilot available.
7. Circulating pump 1" 1/12 HP 120 V, bronze with isolation valves.
8. Temp. gauge 30°F to 240°F with brass well.
9. Control panel with on/off switch, normal and high temperature lights, and high temperature safety thermostat.
10. Safety solenoid valve.
11. A.S.M.E. T & P relief valve.



VERTICAL

Recovery Section	A	B	C	D	E	G	H	I	J	P**	Q*	Approx. Ship Wt.
AA	83	40	30	26	31	12	21	9	10	2	36	350
BB	70	34	23	19	24	12	21	11	10	2 1/2	37	400
CC	86	42	32	27	32	12	21	11	11	2 1/2	38	500
DD	76	37	25	20	26	12	21	13	12	3	40	600
DDL	89	44	31	27	33	12	21	13	14	3	42	650
EE	80	39	25	20	26	18	27	14	14	4F	45	900
EEL	93	46	31	27	33	18	27	14	14	4F	45	950
FF	84	42	25	16	26	18	27	15	15	4F	47	1,050
FFL	108	54	37	28	38	18	27	15	15	4F	47	1,175

*'Q' (maximum dimension) - based on maximum 4" valve. Smaller valve size will reduce 'Q' dimension. Contact factory if exact dimension is required for your design.
** Connections 4" IPS and above 150 #ANSI FLG
1) Water, Steam and Condensate Connections shown are **MAXIMUM,** these may change, based on flow & temperature rise requirements.
2) Due to continuous product improvements, Hesco reserves the right to change dimensions shown at any time.

Sample Model Number:

HI-BB-60-SS-80-15-V-SW-A-10-DSS-150

- HI — Hesco Industries
- BB — Recovery Section
- 60 — Gallons Per Minute
- SS — SS= Stainless Steel Tank std.; SST= Stainless Steel tank & tubing (single wall only)
- 80 — Temperature Rise
- 15 — Supply Steam Pressure to the Control Valve
- V — V= Vertical; H= Horizontal
- SW — SW= Single Wall; DW= Double Wall
- A — A= Air Operated; P= Pilot Operated
- 10 — (10) year warranty; (5) year warranty
- DSS — Double Solenoid Safety
- 150 — Design Pressure

CALCULATING STEAM REQUIREMENTS:

Pounds of Steam Per Hour Required = $\frac{\text{Gal/Hr. Water x 8.3 . Temp. Rise}}{\text{Latent Heat of Steam}}$

BTUH's Per Hour = Gal/Hr. Water x 8.3 x Temp. Rise

Gallons of Condensate Per Hr. Produced = $\frac{\text{Pounds Per Hr. of Steam}}{8.33}$

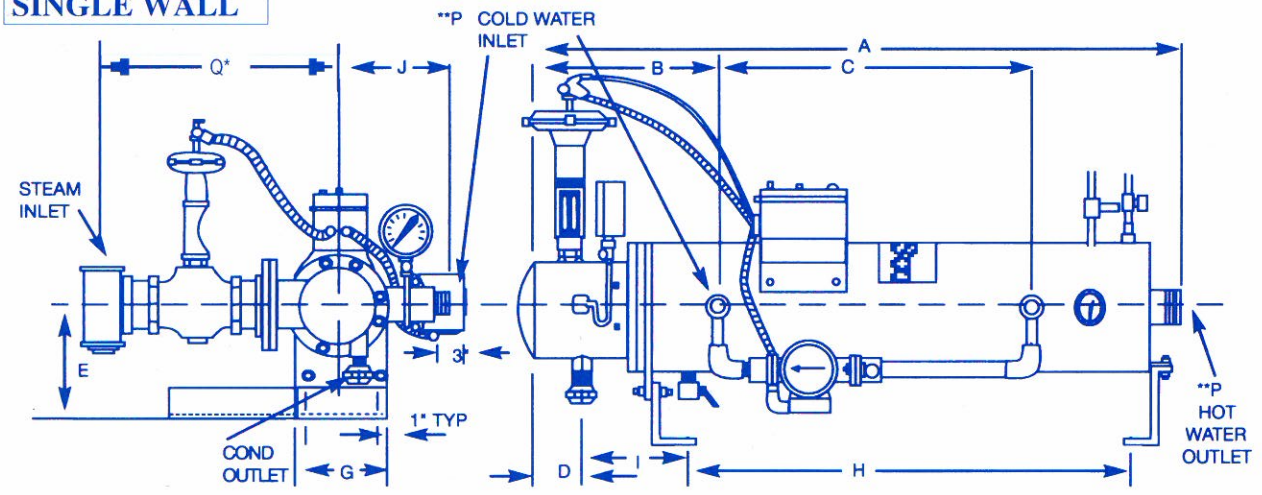
LATENT HEAT OF STEAM

Gauge Pressure	2#	5#	10#	15#	25#	50#	75#	100#
B.T.U. Per Pound	966	960	952	945	933	911	893	881

The horsepower required can be roughly approximated by dividing pounds of steam per hour by 30.

- ❑ **All Units Require 115/1/60 Electrical Connection For Pump.**
- ❑ **Consult Factory For Glycol, Double Wall Or Other Temperature Selections.**
- ❑ **Condensate Trap Size Does Not Determine The Condensate Return Line Size! Consult With Project Engineer For Proper Line Size.**
- ❑ **Do Not Lift Condensate!!**

SINGLE WALL



HORIZONTAL

Recovery Section	A	B	C	D	E	G	H	I	J	P**	Q*	Approx. Ship Wt.
AA	57	14	30	4	14	8	41	8	10	2	28	275
BB	50	14	23	4	15	9	34	8	10	2 1/2	29	350
CC	58	14	32	4	16	10	42	8	11	2 1/2	29	450
DD	55	16	25	4	19	12	37	8	12	3	29	550
DDL	61	55	31	4	19	12	43	8	12	3	30	600
EE	58	17	25	5	22	15	38	9	14	4F	33	750
EEL	64	17	31	5	22	15	44	10	14	4F	33	800
FF	65	23	25	7	27	17	39	13	15	4F	34	950
FFL	77	23	37	7	27	17	51	13	15	4F	34	1,050

NOTE: 'Q' & 'J' Dimensions must be added together to produce the maximum dimensions

NOTE: ALL DIMENSIONS ARE IN INCHES

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Recovery Section	Steam Press To Valve	HEATED POTABLE WATER OUTPUT - GPM											
		40° F INLET				50° F INLET				60° F INLET			
		OUTLET TEMPERATURES											
		120° F	140° F	160° F	180° F	120° F	140° F	160° F	180° F	120° F	140° F	160° F	180° F
AA	40 PSIG	24	18	11	9	28	19	12	9	32	22	13	10
BB		35	26	16	12	40	28	17	13	46	32	18	13
CC		65	47	30	23	75	51	32	24	86	57	35	26
DD		91	66	41	30	105	71	43	32	120	81	47	33
DDL		112	80	54	37	129	86	57	39	148	98	62	41
EE		153	116	73	52	176	125	77	55	202	142	84	58
EEL		200	153	94	63	230	165	100	66	235	187	108	70
FF		238	174	109	76	274	188	116	80	314	212	125	84
FFL		341	254	160	112	392	274	170	118	450	310	184	124
AA	50 PSIG	25	19	12	9	29	21	13	9	33	23	14	10
BB		36	27	17	13	41	29	18	14	48	33	20	14
CC		69	50	31	24	79	54	33	25	91	61	36	27
DD		93	68	42	31	107	73	45	33	123	83	48	34
DDL		115	83	55	38	132	90	58	40	150	101	63	42
EE		156	119	75	54	179	129	80	57	206	145	86	60
EEL		204	157	96	66	235	170	102	69	235	192	110	73
FF		145	180	112	79	282	194	119	83	323	220	129	88
FFL		350	262	165	117	403	283	175	123	462	320	190	130
AA	75 PSIG	26	20	13	10	30	22	14	11	34	24	15	11
BB		38	28	18	14	44	30	19	15	50	34	21	16
CC		71	52	33	26	82	56	35	27	94	63	38	29
DD		99	73	46	34	114	79	49	36	131	89	53	38
DDL		122	88	60	42	140	95	64	44	150	107	69	47
EE		166	127	82	59	191	137	87	62	219	155	94	65
EEL		216	168	104	72	248	181	110	76	235	205	120	80
FF		260	192	121	86	299	207	128	90	343	234	139	95
FFL		372	280	177	128	428	302	188	134	491	342	204	142
AA	100 PSIG	29	22	14	10	33	24	15	11	38	27	16	11
BB		42	31	19	15	48	33	20	16	55	38	22	17
CC		77	57	36	29	89	62	38	30	102	70	41	32
DD		108	80	51	38	124	86	54	40	143	98	59	42
DDL		133	97	65	46	150	105	69	48	150	118	75	51
EE		180	140	90	66	207	151	95	69	235	171	104	73
EEL		235	184	114	80	270	199	121	84	NA	224	131	89
FF		282	210	134	96	324	227	142	101	372	256	154	107
FFL		405	306	196	142	466	330	208	149	535	373	225	158

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