

, QVWDQWDQHRXV :DWHU +HDWHU
6HULHV '(& 3 \$ & . μ

6WDQGDUG) HDWXUHV (TXLSP

/ 6WDLQOHVV 6WHHO 7XEH %XQGOH
&RQWURO 9DOYH
6HOI RSHUDWHG
3LORW RSHUDWHG
\$LU RSHUDWHG
U(LFH RSHUDWHG

7ULP

\$ 6 0 (:DWHU 5HOLHI 9DOYH
9DFXP %UHDNHU
+RW :DWHU 7KHUPRPHWHU
7KHUPDO ,QVXODWLRQ
0HWDO -DFNHW

2SWLRQDO) HDWXUHV

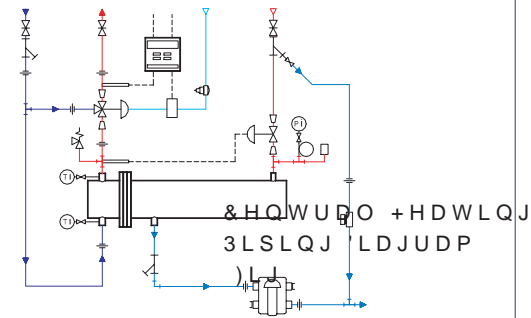
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7KUHH :D\ 9DOYH
&XVWRP 'HVLJQH &RQILJXUDWLRQV
2WKHU /LTXLGV 0DWHULDORV

\$OVWURP 3(FR 3DFN' :DWHU +HDWHU UHSUHVHQV D SURYHQ HFRQRPLFDO VROXWLRQ
6WHDP FRQGHQVHV LQ WKH VKHOO DQG ZDWHU LV KHDWHG LQ WKH WXEHV 'XH WR V
LQVWDQGDQHRXV\ WR ZDWHU IORZ IOXFWXDWLRQV
8QLTXH VWDQG GHVLJQ SHUPLWV YHUWLFDO RU KRULJRWDO LQVWODDWRQ GHSHQ
6LQJOH RU 'RXEH 7XEHVKHHW PRGOV SURYLGH HQJLQHULQJ VROXWLRQ IRU PRV

6HUylFH :DWHU
8VXDOO\ FLW\ ZDWHU LV KHDWHG WR) IRU GRPH\WKLFK RPHRQV GHPSHURV XDP\ QGULVH
RWKHU VHUylFH DSSOLFDWLRQV ,Q RUHU WR SUHYHQW RULRULVRIORR WKH KHDWHU EX
WXEH EXQGOH DQG KHDG DUH PDQXIDFWXUH IURP VWDQGHXV VLQFH FORVHG KHDWLQ
9DULRXV W\SHV RI WHPSHUDWXUH UHJXODWRUV DUHQRYDUHQDEOHXWFKORPHHVDFRQV
DFKHLYHG E\ XVH RI DGGLWLRQDO WHPSHULQJ YDOYXEHJKHHW PD\ EH XVHG 7KUHH Z
7KLW V\WHP UHTXLUHV WKDW FRQLQXRXV UXQQLOHUHVWQZDWHUYALDO ERQRLXGHV
FLW\ ZDWHU EHIRUH HQWHULQJ WHPSHULQJ YDOYH 6DOYH SVRQVWHVGHWHURIEOHKQPS
FRQILUP WKDW WKH RXWJRLQJ WHPSHUDWXUH LV PDLQWDLQH LQ WKH UDQJH RI)
\$66(6WDQGDUG 3HUIRUPDQFH UHTXLUHPHQW IRU 7HPSHUDWXUH \$FWXDWHG OL[L
IRU 3ULPDU\ 'RPHVWLF 8VH

3URFHVV 6WHDP
RULRULVRIORR WKH KHDWHU EX
KHDWLQ
DFRQV
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KQPS
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OL[L

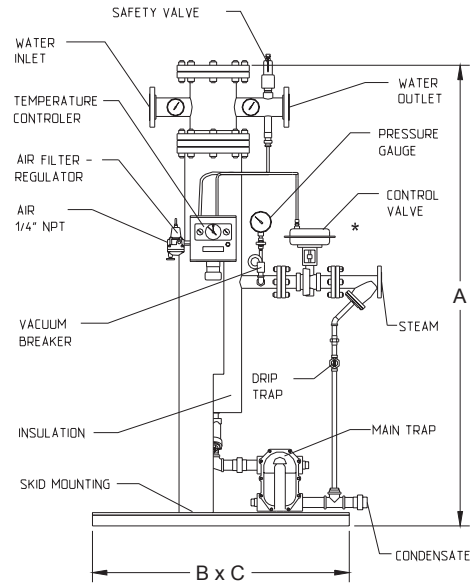
6HUylFH :DWHU
3LSLQJ 'LDJUDP
)LJ



HEATER DIMENSIONS IN INCHES				OPENING SIZE BASED ON FLOW VELOCITY	
MODEL NO.	A	B	C	GPM	OPENING SIZE
EP - A	85	48	24	73	2 1/2
	85	48	24	49	2
	85	48	24	50	2
EP - B	86	48	24	186	4
	86	48	24	126	3
	86	48	24	98	3
	86	48	24	80	2 1/2
	86	48	24	47	2
EP - C	90	54	30	299	5
	90	54	30	259	5
	90	54	30	132	3
	90	54	30	134	3
	90	54	30	102	3
EP - D	90	54	30	480	6
	90	54	30	295	5
	90	54	30	350	5
	90	54	30	120	3

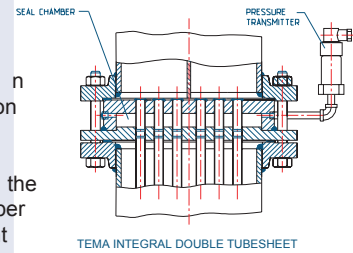
Control valve, type and size, is selected per job specification

MAX. VELOCITY - 6 ft/sec



**Optional Double Tubesheet
Leak Elimination Construction**

This TEMA recommended design eliminates possible contamination of either tube or shell side fluid with at tube-to-tubesheet joint leakage. Should a leak occur, the liquid flows into the seal chamber filled with inert liquid. This event will be reported via pressure transmitter to system control or can be visually detected by pressure gauge reading. Meanwhile, the leak will stop due to equal pressure in the seal chamber and leakage part. Seal welding of tubes to the external tube sheet and quality expansion in to the double grooved inner tube sheet provides sufficient time for replacement.



SELECTION TABLES											
STEAM LINE PRESSURE	2	5	10	15	25	40	50	75	100	150	
STEAM PRESSURE IN ELEMENT	0	2	5	10	15	25	30	50	65	100	
STEAM FACTOR - K	0.516	0.52	0.523	0.528	0.534	0.543	0.548	0.55	0.567	0.583	
MODEL NO	TUBE BUNDLE SELECTION IN GPM										
TEMP. RANGE 40° 110°	EP - A	23	25	28	31	35	39	43	47	52	73
	EP - B	68	75	82	90	99	109	120	132	146	186
	EP - C	122	134	144	151	159	167	175	184	193	299
	EP - D	160	176	184	194	203	261	271	282	296	480
TEMP. RANGE 40° 120°	EP - A	19	21	23	24	26	27	28	31	33	49
	EP - B	51	60	66	71	75	79	85	89	94	126
	EP - C	104	106	118	132	148	163	168	178	184	259
	EP - D	144	155	179	189	201	241	265	273	287	295
TEMP. RANGE 40° 140°	EP - A	14	15	17	19	21	24	26	27	30	50
	EP - B	36	36	42	46	54	57	60	63	72	98
	EP - C	51	56	59	66	69	83	89	106	109	132
	EP - D	102	113	127	153	180	223	238	245	275	350
TEMP. RANGE 40° 160°	EP - B	30	35	36	40	46	51	55	58	66	80
	EP - C	50	60	72	84	88	91	93	112	128	134
TEMP. RANGE 40° 180°	EP - B	10	10	13	16	19	27	30	38	44	47
	EP - C	20	23	28	35	41	51	56	72	80	102
EP - D	36	42	51	63	72	82	91	102	115	120	

STEAM RATE (Ms) lbs/hour = STEAM FACTOR (K) • GPM • (T₂ - T₁)

CUSTOM DESIGNS AVAILABLE FOR VARIOUS CONDITIONS
PLEASE PROVIDE MAX LENGTH AND PRESSURE DROP

