

F R S 3 - 2 1 -SN75- R L - ##

Series	Element Type	Wetted Material	Wattage
F = FRONTIER	R = RESISTIVE STYLE	S = 316 SS (EP)	3 = 3000
	P = PTC STYLE		6 = 6000
			9 = 9000
			12 = 12000
			18 = 18000
			24 = 24000
			36 = 36000

Voltage	Phase	Plumbing Connections (316 SS)
1 = 208V	1 = SINGLE PHASE	SN50 = 1/2" NON THREADED TUBE STUBS
2 = 240V	3 = THREE PHASE	SN75 = 3/4" NON THREADED TUBE STUBS
3 = 380V		SN100 = 1" NON THREADED TUBE STUBS

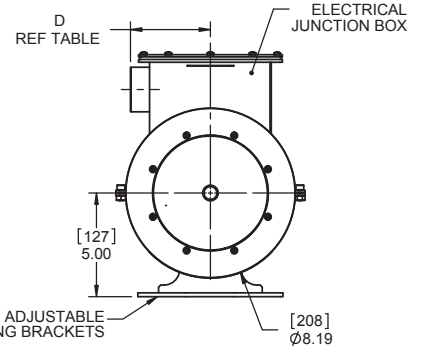
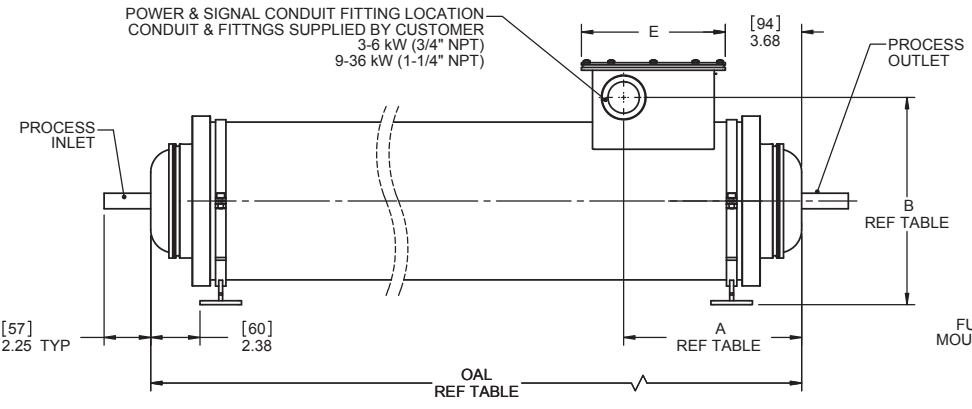
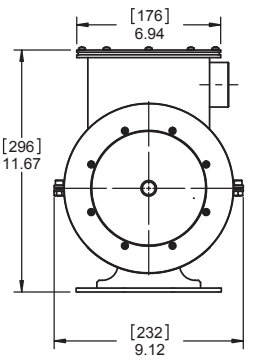
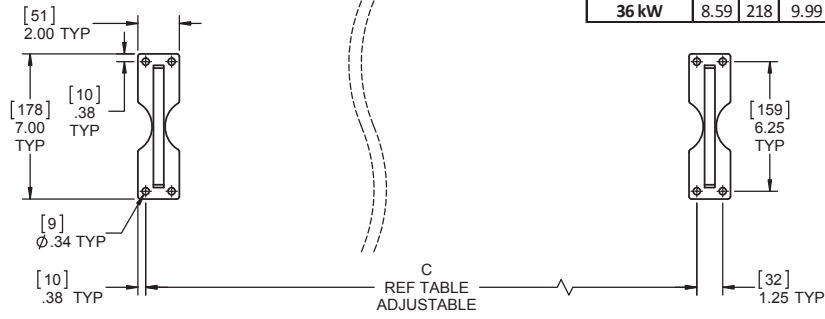
Overtemp Sensor Type	TCO type
K = K-TYPE TC	1 = 232°C TCO. FOR APPLICATIONS UP TO 125°C
E = E-TYPE TC	
H = 100-OHM RTD (2-WIRE)	2 = 288°C TCO. FOR APPLICATIONS BETWEEN 125-200°C
R = 1000-OHM RTD (2-WIRE)	

Flow Configuration
L = LOW FLOW RANGE: (2-30) LPM
M = MEDIUM FLOW RANGE: (20-80) LPM
H = HIGH FLOW RANGE: (60+) LPM

Options
Blank = NO OPTIONS
X__ = CUSTOMER SPECIFIED WIRE LENGTH
NE = NON-ELECTROPOLISHED
= TBD AS NEEDED

HEATER SIZE	A		B		C		D		E		OAL		UNIT WEIGHT (APPROX.)	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
3 - 6 kW	7.34	186	10.24	260	5.88	149	3.61	92	5.19	132	12.63	321	38	17
9 - 12 kW	8.59	218	9.99	254	11.38	289	3.86	98	6.94	176	18.13	461	51	23
18 - 24 kW	8.59	218	9.99	254	22.38	568	3.86	98	6.94	176	29.13	740	86	39
36 kW	8.59	218	9.99	254	33.38	848	3.86	98	6.94	176	40.13	1019	121	55

MOUNTING BRACKET SPACING



- NOTE(S):
1. HEATER WATTAGE AND VOLTAGE PER CUSTOMER SPECIFICATION.
 2. STANDARD WIRE LEAD LENGTH: 10ft [3.0m]
 3. CONSULT FACTORY FOR CUSTOM LEAD LENGTHS OR ALTERNATE CONDUIT LOCATIONS.
 4. MOUNT VERTICALLY WITH PROCESS OUTLET DIRECTLY ABOVE PROCESS INLET.
 5. WETTED COMPONENTS ARE ELECTROPOLISHED 316L SS, PFA, AND PTFE.
 6. BRACKETS, FASTENERS AND OUTER ENCLOSURE ARE STAINLESS.
 7. NON WETTED ENCLOSURE SEALS ARE SILICONE.
 8. 3 THERMAL CUT-OFF DEVICES ARE PROVIDED (BI-METALLIC SWITCHES).
 9. 3 OVERTEMP SENSORS ARE PROVIDED.
 10. PROCESS INLET AND OUTLET CONNECTIONS PER CUSTOMER SPECIFICATION.
 11. WHEN FLOW RANGES OVERLAP THE RANGES FOUND IN THE TABLE ABOVE, DEFER TO THE LOWER FLOW CONFIGURATION.

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ITEM: _____

MATERIAL: _____

UNLESS NOTED TOLERANCES ARE:
 0.00 = ± .25
 0.000 = ± .125
 ANGLES = ± 1°

INCHES
 [mm]
 INCHES

SECONDARY UNIT FOR REFERENCE ONLY

INTERPRET GEOMETRIC DIMENSIONING AND TOLERANCING PER ASME Y14.5M

DRAWN BY: SSM
 DATE: 04/30/13

CONTROLLED DOCUMENT LOCATIONS:

APPROVAL INFORMATION:
 BY: MJM
 DATE: 04/19/16

DESCRIPTION:
SALES, FRONTIER

SIZE: B SCALE: NONE PAGE: 1 OF 1 DRAWING No. **61-0049-2**

REV	BY	DATE	DESCRIPTION
2	TRJ	04/19/16	CONSOLIDATED ALL FRONTIER SALES PRINTS
1	SSM	09/03/13	REMOVED PEP AS WETTED MAT'L & VITON AS ENCLOSURE SEAL
0	SSM	04/30/13	INITIAL RELEASE