

CON DIM

**NOTE :**

1. FLANGE BOLT HOLES STRADDLE NATURAL CENTERLINES OF HEATER
2. SI/METRIC UNITS OF MEASURE ARE FOR REFERENCE ONLY.
3. CAUTION: ENSURE THAT THE LIMIT THERMOCOUPLE IS CONNECTED TO APPROPRIATE LISTED LIMIT CONTROLS.
4. CAUTION : ENSURE THAT INCOMING WIRING IS APPROPRIATELY RATED AND SIZED FOR ANTICIPATED ENCLOSURE TEMPERATURE PER LOCAL CODE.
5. HEATER DESIGNED FOR HORIZONTAL INSTALLATION IN 10 NPS SCH.STD PIPE(10.02" ID)
6. DESIGNED FOR INLET CENTERED 13.125 IN FROM FLANGE FACE @0 AND OUTLET CENTERED 125 IN FROM FLANGE FACE @0.

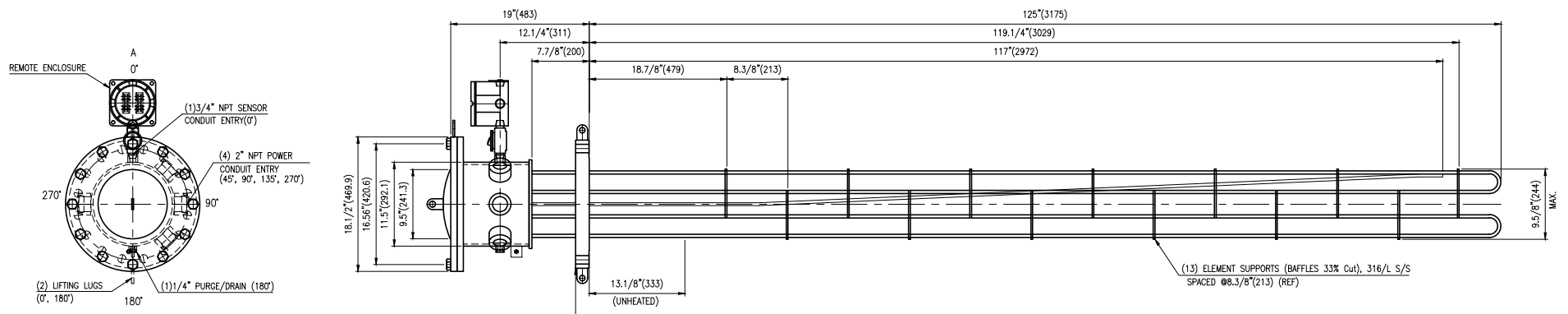
7. ASME FLANGE CALCULATION BASED ON A SPIRAL WOUND LS GASKET WITH SA-193-B7 BOLTING.
8. CONDUIT SEALS (BY OTHERS) TO BE FIELD INSTALLED PER EN50014.
9. HYDROTEST ENCLOSURE @246 psig (16.9 barg) for 10 seconds minimum (not exceeding 60 seconds).
10. DO NOT INSULATE BETWEEN FLANGE AND ENCLOSURE AS UNSAFE ENCLOSURE TEMPERATURES MAY RESULT.

**Watlow**

Model No. \_\_\_\_\_ Date 2013  
 Voltage 250 KW Vrms 440 ph 3  
 CUSTOMER P.O.: \_\_\_\_\_

CAUTION: READ INSTALLATION MANUAL BEFORE POWERING.  
DO NOT OPEN WHEN ENERGIZED.

Hambro, Missouri 63401 USA 673-221-2816  
www.watlow.com

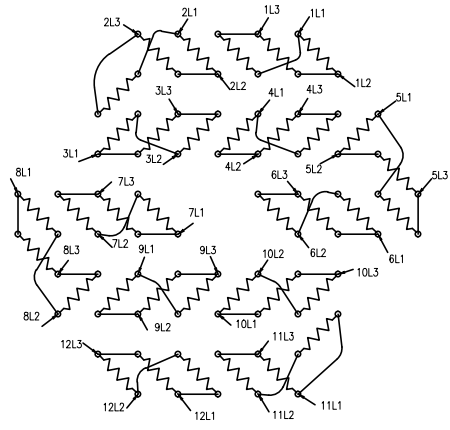


ASME INFORMATION  
 CERTIFIED BY WATLOW PROCESS SYSTEMS  
 SERIAL NUMBER : -  
 MAWP : 399 PSIG @ 374°F  
 MDMT : 32°F  
 YEAR BUILT : 2013



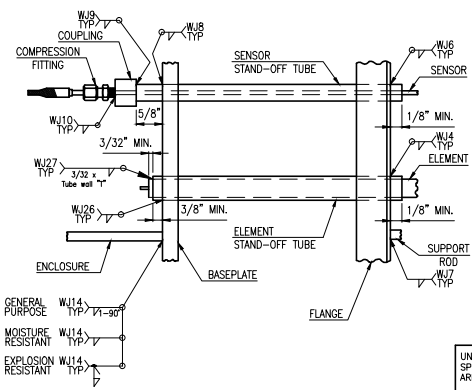
**PRODUCT FEATURES**

<b>IMMERSION HEATER:</b>	
MODEL NO. : -	
<b>ELECTRICAL DATA:</b>	
DUTY : 250 KW, 440 VAC, 3PH	
ELECTRICAL CLASSIFICATION : CLASSIFIED ZONE 1, GROUP IIB+H2	
ELECTRICAL ENCLOSURE : EXPLOSION / MOISTURE RESISTANT-ATEX / IEC Ex'd	
MAX. ANTICIPATED HOUSING TEMP : 104 °F (40 °C)	
ELECTRICAL CONNECTION(S) : (12) 3 PH CIRCUITS 6 AWG MAXIMUM WIRE	
<b>PROCESS DATA:</b>	
MEDIUM : HYDROGEN	MEDIUM STATE : GAS
FLOW RATE : 864.79 LB/HR (392.26 KG/HR)	
INLET TEMP : 32 °F(0 °C)	
OUTLET TEMP : 266 °F (130 °C)	
OPERATING PRESSURE : 353.44 PSIG (25.883 KG/CM2A)	
ESTIMATED SHEATH TEMP. : 369°F (187°C)	
SUGGESTED LIMIT SET TEMP. : 569°F (298°C)	
<b>DESIGN DATA:</b>	
DESIGNED, MANUFACTURED & STAMPED IN ACCORDANCE WITH ASME SECTION VIII, DIV. 1, 2010 EDITION / 2011 ADDENDA	
DESIGN PRESSURE : 399 PSIG (28 KG/CM2C)	
DESIGN TEMP : 374°F (190°C)	
MDMT : 32°F (0°C)	
HYDRO TEST PRESSURE : 571 PSIG (40.14 KG/CM2)	
CORROSION ALLOWANCE : 0.12 INCHES (3.0 mm)	
<b>MATERIAL SPECIFICATIONS:</b>	
FLANGE : 10 NPS CLASS 300, RF BLIND, SA-105	
PER ASME B16.5 EXCEPT 1.87(47.498mm) INCHES THICK INCLUDING RAISED FACE	
HEATING ELEMENTS : ALLOY 800	
ELECTRICAL ENCLOSURE : CARBON STEEL (std)	
ENCLOSURE PAINT : PRIMER ONLY (std CS) COLOR : GREEN/GRAY	
FLANGE PAINT : PRIMER ONLY (std CS) COLOR : GREEN/GRAY	
ELEMENT END SEAL : EPOXY(130°C/266°F)	
<b>HEATER SPECIFICATIONS:</b>	
Q'TY & SIZE OF ELEMENTS : (36) 0.43"(WELDED) DIA. x STD" WALL	
WATT DENSITY / HEAT FLUX : 23 WPSI	
IMMERSED LENGTH (BUNDLE REMOVAL DISTANCE) : 125" (3175 MM)	
ELEMENT SHEATH HIGH LIMIT : (2) TYPE "X" DUAL, UNGROUNDED, WITH REMOTE ENCLOSURE	
FLANGE LIMIT SENSOR : (1) TYPE "X" SINGLE, UNGROUNDED(STD)	
<b>WEIGHTS:</b>	
ESTIMATED HEATER BUNDLE WEIGHT : 640 LB (290 KG)	

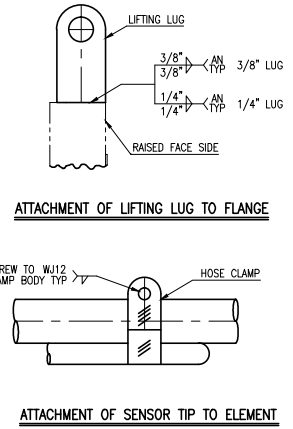


**WIRING DIAGRAM**  
 ((36) ELEMENTS (12) CIRCUITS, 3 PH DELTA PARALLEL)

**RESISTANCE PER CIRCUIT : 16.82 ~ 19.47 OHMS**



**ELEMENT & SENSOR WELD DETAIL**



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		<table border="1"> <tr> <td>DRAWN</td> <td>DATE</td> </tr> <tr> <td>VHM</td> <td>01/14/13</td> </tr> <tr> <td>CHECKED</td> <td></td> </tr> <tr> <td>ENGRG</td> <td></td> </tr> <tr> <td>O.A.</td> <td></td> </tr> </table>	DRAWN	DATE	VHM	01/14/13	CHECKED		ENGRG		O.A.		<b>WATLOW KOREA Co., Ltd.</b> Phone: 02-2628-5770 Fax: 02-2628-5771	
DRAWN	DATE													
VHM	01/14/13													
CHECKED														
ENGRG														
O.A.														
.X = ± 0.1 .XX = ± 0.06 .XXX = ± 0.031 .XXXX = ± 0.050 ANGLES = ± 2 FRACTIONS = ± 1/8		<b>TITLE</b> WATLOW KOREA CUSTOMER P.O. NO. : HEATER BUNDLE GENERAL ARRANGEMENT DRAWING												
WATLOW ELECTRIC MANUFACTURING COMPANY CLAIMS PROPRIETARY RIGHTS IN THE MATERIAL HEREIN DISCLOSED. IT IS SUPPLIED IN CONFIDENCE, WITHOUT PREJUDICE TO ANY PATENT RIGHTS OF WATLOW, AND MAY NOT BE REPRODUCED OR USED TO MANUFACTURE ANYTHING SHOWING THEREON WITHOUT WATLOW'S WRITTEN PERMISSION.		SIZE B	CAGE CODE 2013-300-10-001	DWG NO. 2013-300-10-001	REV 0									
REV. DATE DESCRIPTION 2013.01.14 FOR APPROVAL	DRWN (CHK) APPD (APPD) CLIENT Y.H. KIM Y.H. KIM S.R. KIM	CAD NO. NONE MATL NONE	SCALE NONE PART NO. -	SHEET 1 OF 1	CUSTOMER									