

**DRAWING / PROJECT APPROVAL**

REVISE AS NOTED AND RETURN FOR APPROVAL

APPROVED FOR CONSTRUCTION AS DRAWN

PLEASE INDICATE ABOVE, SIGN AND RETURN

RETURNED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

It is the sole responsibility of the purchaser to assure that this drawing fully complies with any / all specifications and conditions of service when approving for construction. Approval for construction is an agreement that this system, as presented in this drawing fully complies.

Material procurement and construction will NOT begin until we receive your final drawing approved for construction without pending changes. Quoted delivery lead times are based from the end of the drawing approval process. If you require procurement to begin prior to drawing approval, make commitments and arrangements with your sales person.

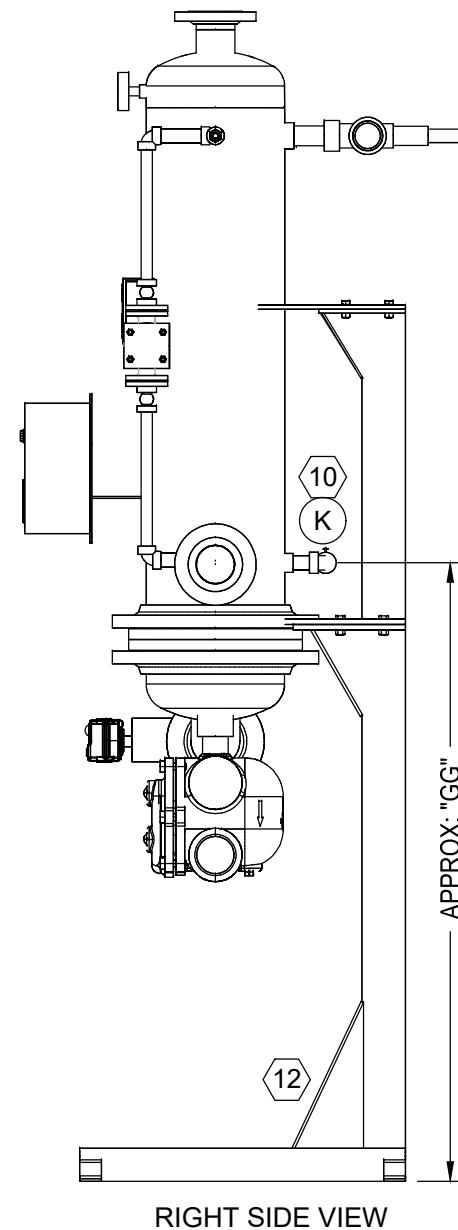
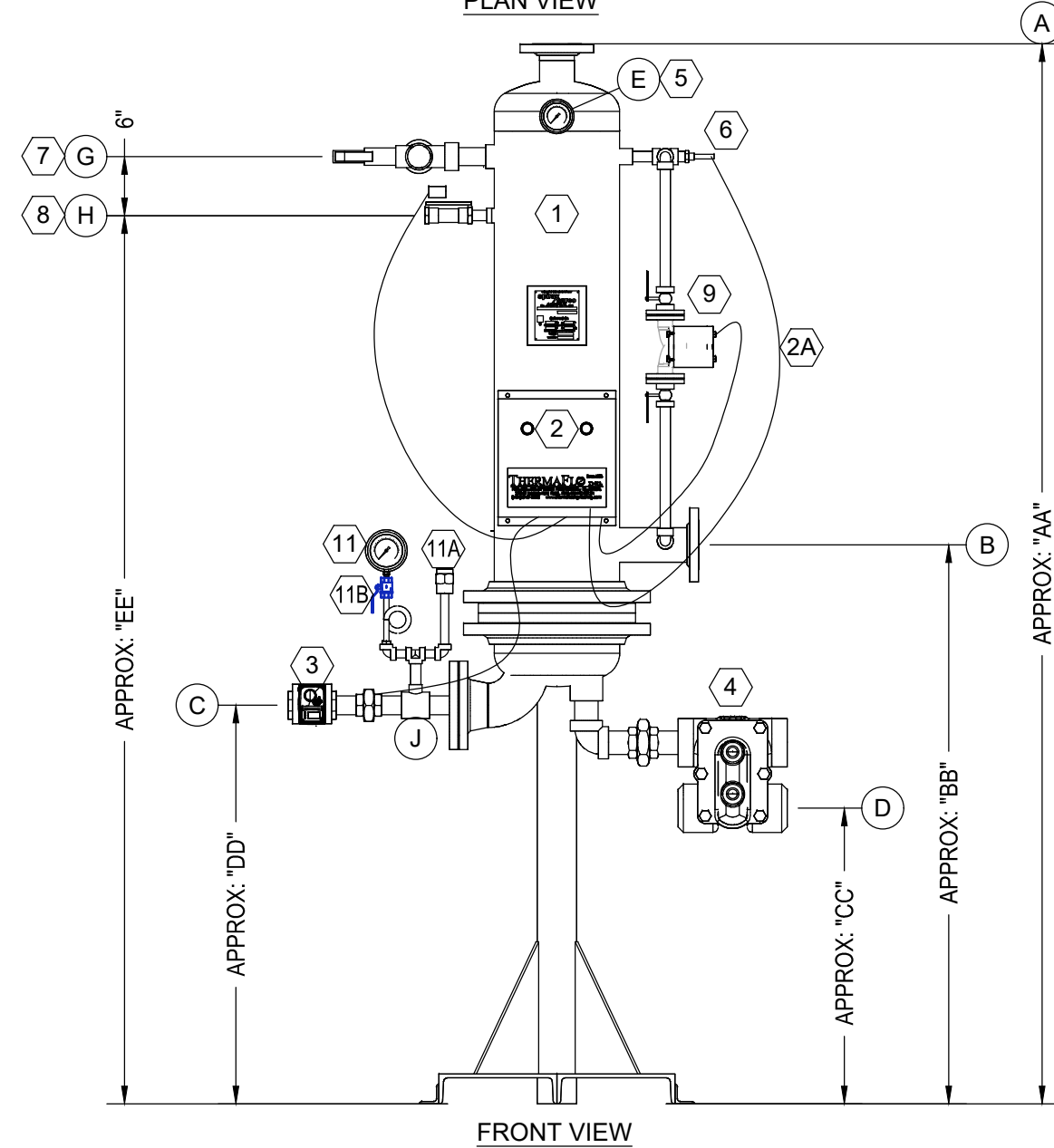
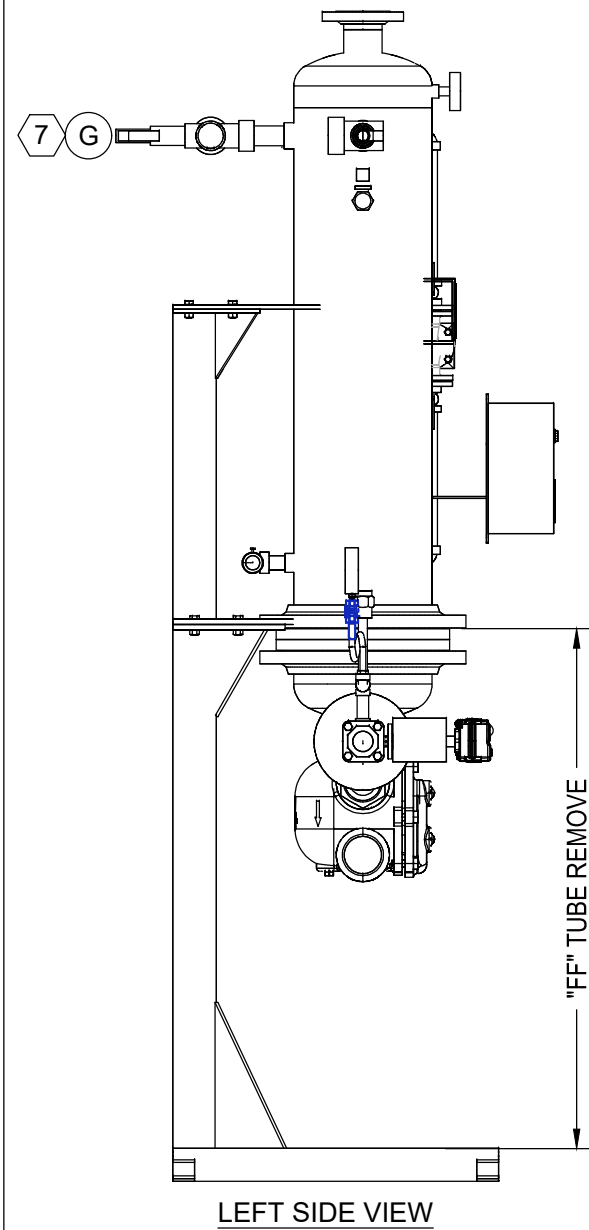
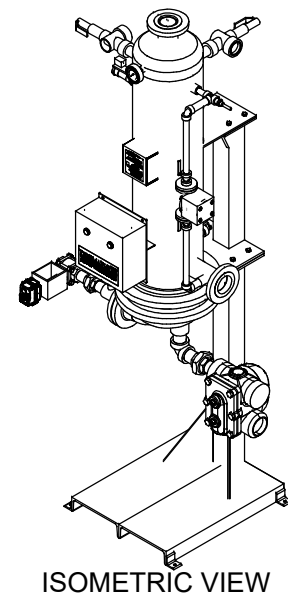
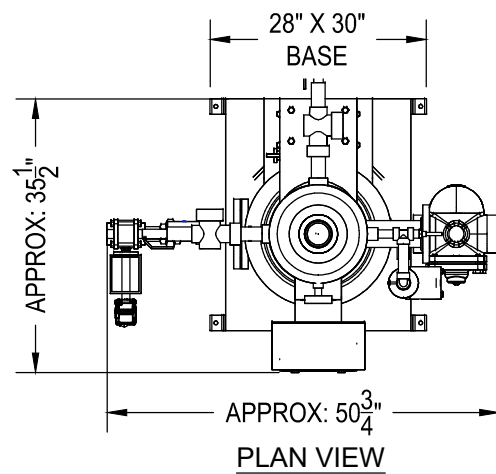
**GENERAL NOTES:**

- 100% FACTORY TESTED BEFORE SHIPMENT
- SINGLE SEATED SEGMENTED V CONTROL VALVE FOR DEAD TIGHT SHUTOFF ON NO LOAD CONDITIONS. 300:1 TURNDOWN
- 316L STAINLESS STEEL SHELL CONSTRUCTION
- FULL SELF TUNING PID DIGITAL CONTROLS
- DOUBLE SAFETY SOLENOID SAFETY HIGH LIMIT SYSTEM FAIL SAFE TEMPERATURE CONTROLLER AND CONTROL VALVE
- MOUNTING FRAME INCLUDED

**INSTALLATION NOTES:**

1. BLEND VALVE RECOMMENDED WITH 140F OR HIGHER SET POINT.
2. ALL DIMENSIONS TO HAVE  $\pm 1/2$ " TOLERANCE
3. WHEN USING A FLOAT & THERMOSTATIC STEAM TRAP, THE CONDENSATE MUST DRAIN BY GRAVITY TO A VENTED RECEIVER, NO CONDENSATE LIFT OR BACK PRESSURE ALLOWED FROM TRAP OUTLET.
4. PROPERLY SIZED STRAINER WITH 100 MESH SCREEN MUST BE INSTALLED WITHIN 3FT OF THE CONTROL VALVE.
5. PIPE NOZZLES "G", "H", AND "K" TO A SUITABLE DRAIN BY OTHERS.
6. NOZZLES WILL NOT SUPPORT EXTERNAL LOADINGS. FIELD SUPPORT BY OTHERS.
7. CONTROL VALVE, STEAM TRAP AND GAUGES, SHIPPED LOOSE FIELD INSTALLED BY OTHERS.
8. STEAM SUPPLY TO THE CONTROL VALVE SHOULD BE SIZED FOR NO MORE THAN 10,000 FPS TO AVOID HIGH PRESSURE DROPS.
9. MAIN DRIP STEAM TRAP MUST BE LOCATED DIRECTLY AT THE CONTROL VALVE INLET.
10. CONTROL VALVE MUST BE INSTALLED, AS SHOWN, ON ITS SIDE. VALVE CONTROL ELECTRONICS ARE NOT INSULATED.

| MODEL SELECTION | MODEL            | "AA"   | "BB"  | "CC"  | "DD"  | "EE"  | "FF"  | "GG"  | SHIPPING  | DRY | FLOODED | SHIPPING |
|-----------------|------------------|--------|-------|-------|-------|-------|-------|-------|-----------|-----|---------|----------|
|                 | 1436 SINGLE WALL | 97.00  | 44.75 | 19.00 | 29.50 | 76.25 | 36.00 | 44.75 | 4'X8'X4'  | 766 | 933     | 991      |
|                 | 1436 DOUBLE WALL | 97.00  | 44.75 | 18.00 | 28.50 | 76.25 | 36.00 | 44.75 | 4'X8'X4'  | 831 | 998     | 1056     |
|                 | 1448 SINGLE WALL | 109.00 | 56.75 | 31.00 | 41.50 | 88.25 | 48.00 | 56.75 | 4'X10'X4' | 786 | 953     | 1011     |
|                 | 1448 DOUBLE WALL | 109.00 | 56.75 | 30.00 | 40.50 | 88.25 | 48.00 | 56.75 | 4'X10'X4' | 851 | 1018    | 1076     |



**DESIGN DATA**

|  |                |
|--|----------------|
| <b>ASME CODE SECTION VIII, DIV. 1 STAMP UM</b>   |                |
| SHELL RATED                                      | 150 PSI @ 375F |
| TUBE RATED                                       | 150 PSI @ 375F |
| <b>CONDITION OF SERVICE AND PERFORMANCE DATA</b> |                |
| FLOW RATE (gpm)                                  | GPM            |
| INLET TEMPERATURE (Deg. F)                       | °F             |
| OUTLET TEMPERATURE (Deg. F)                      | °F             |
| INLET STEAM PRESSURE (PSI)                       | PSIG           |
| STEAM CAPACITY REQ. (LBS/HR)                     | LBS/HR         |

**MATERIALS of CONSTRUCTION**

|                                     |                      |
|-------------------------------------|----------------------|
| SHELL                               | 316L STAINLESS STEEL |
| TUBES                               |                      |
| TUBESHEET (OUTER)(DOUBLE WALL ONLY) |                      |
| TUBESHEET (INNER)                   |                      |
| STEAM HEAD                          | CAST IRON            |

**BILL of MATERIALS**

| ITEM | SIZE SELECTION | DESCRIPTION  |
|------|----------------|--|
| 1    | BUNDLE         | 14"Ø X 48" SHELL (ASME CODE STAMPED), 1 1/2" OF GLASS INSULATION & VINYL JACKET  |
| 2    |                | THERMAFLO ELECTRONIC CONTROLLER, UL LISTED, PID ELEC. TEMP. CONTROL, W/ SAFETY SHUTDOWN AND OPERATION INDICATOR LIGHTS |
| 2A   | STANDARD       | 1/2" UL LIQUIDTIGHT FLEXIBLE STEEL CONDUIT, TYPE LFMC  |
| 3    |                | THERMAFLO JVV-VBALL STEAM CONTROL VALVE, STAINLESS, W/FAIL SAFE ACTUATOR   |
| 4    |                | THERMAFLO FLOAT AND THERMOSTATIC STEAM TRAP  |
| 5    | STANDARD       | TEMPERATURE GAUGE, 0-250F, SS WELL   |
| 6    | STANDARD       | 1/2" RTD, 4-20ma OUTPUT FROM CONTROLLER  |
| 7    | STANDARD       | 1-1/2" 18CS424150 PRESSURE & TEMP. RELIEF VALVE, SAT @ 150 PSI @ 210F, RATED @ 6,050,000 BTU.                          |
| 8    | STANDARD       | 3/4" HIGH-TEMP. DUMP SOLENOID  |
| 9    | STANDARD       | 3/4" SHELL RE-CIRCULATION PUMP   |
| 10   | STANDARD       | 1" THERMAFLO 3700 BALL VALVE, FULL PORT, STAINLESS STEEL   |
| 11   | STANDARD       | 4.5" DIAL PRESSURE GAUGE 0-30 PSIG W/ SYPHON   |
| 11A  | STANDARD       | 3/4" THERMAFLO VACUUM BREAKER  |
| 11B  | STANDARD       | 1/4" THERMAFLO 3700 BALL VALVE, FULL PORT, STAINLESS STEEL   |
| 12   | STANDARD       | THERMAFLO CARBON STEEL STAND   |

**NOZZLES & CONNECTIONS**

| ITEM | SIZE (IN) | TYPE     | SERVICE           |
|------|-----------|----------|-------------------|
| A    | 4         | 150# FLG | HOT WATER OUTLET  |
| B    | 4         | 150# FLG | COLD WATER INLET  |
| C    |           | NPT      | STEAM INLET       |
| D    |           | NPT      | CONDENSATE OUTLET |
| E    | 3/4       | NPT      | GAUGE             |
| G    | 1 1/2     | NPT      | RELIEF VALVE      |
| H    | 3/4       | NPT      | DUMP SOLENOID     |
| J    | 3/4       | NPT      | GAUGE             |
| K    | 1         | NPT      | DRAIN             |

**TAG:**

| # | DATE | REVISION | BY |
|---|------|----------|----|
|   |      |          |    |

Since 1986  
**THERMAFLO INC.**  
 Manufacturers Of Steam Fired Specialty Equipment  
 2880 Fair Avenue, Newberry, SC 29108  
 (704) 940-1228 www.thermafloengineering.com

DESCRIPTION: TH750V-14"-EC800-2 STEAM FIRED WATER HEATER

|           |        |       |        |
|-----------|--------|-------|--------|
| CUSTOMER: | JOB #  | QTY.  | DATE:  |
| SCALE:    | DRAWN: | PO #  | PLAN # |
| FILE:     | REV.#  | PAGE: | 1 OF 1 |

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DIM TOL= +/- 1/2"