

# TRAY TYPE DEAERATOR

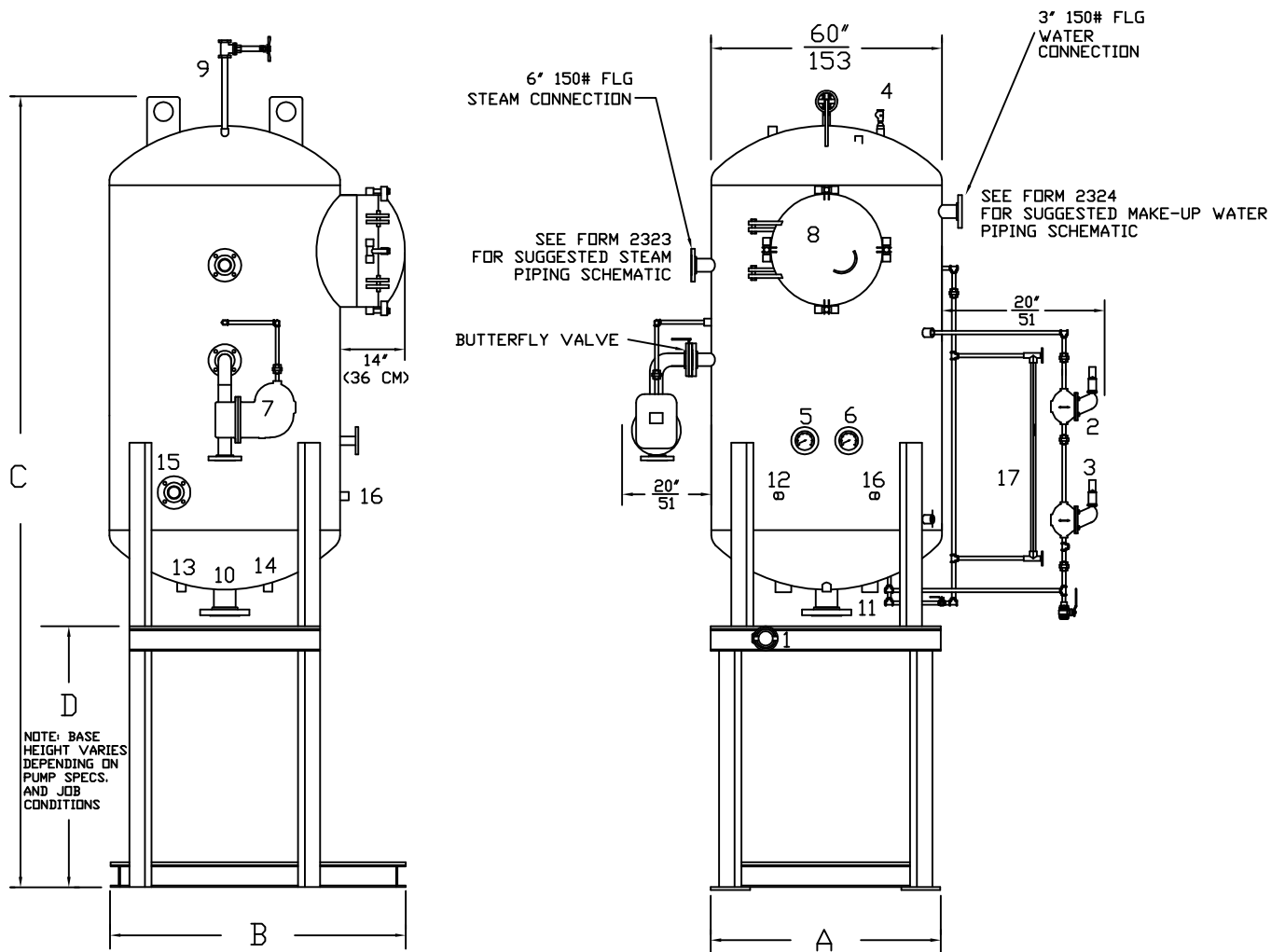
## VERTICAL TANK DESIGN (20,000 PPH – 30,000 PPH)

EFFECTIVE DATE: 5/5/15

REPLACES: 5/11/04

**NOTES:**

1. CONTROL AND PIPING CONFIGURATIONS WILL VARY DEPENDING ON JOB SPECIFICATIONS AND CONDITIONS.
2. DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. CONSULT FACTORY FOR CERTIFIED DIMENSIONS.



NOTE: ALL LEVEL CONTROLS HAVE A BALL VALVE IN THE PIPING TO TEST FOR OPERATION.

- |                          |                              |  |                                |
|--------------------------|------------------------------|--|--------------------------------|
| 1. MAKE-UP WATER CONTROL | 6. PRESSURE GAUGE            | 11. 2" NPT PUMP BYPASS                             | 16. 1" NPT MAGNESIUM ANODE     |
| 2. HIGH LEVEL CONTROL    | 7. 3" FLG OVERFLOW TRAP      | 12. 1" NPT CHEMICAL PORT                           | 17. GAUGE GLASS                |
| 3. LOW LEVEL CONTROL     | 8. 24" DIA. TRAY ACCESS DOOR | 13. 1" NPT DRAIN                                   | 18. RELIEF VALVE **            |
| 4. VACUUM BREAKER        | 9. 1-1/2" NPT VENT           | 14. 1" NPT SAMPLE PORT                             | 19. PRESSURE REDUCING VALVE ** |
| 5. TEMPERATURE GAUGE     | 10. 4" FLG PUMP SUCTION      | 15. 3" 150# FLG HIGH TEMPERATURE CONDENSATE RETURN | 20. MAKE-UP WATER VALVE **     |
- \*\* SHIPPED LOOSE, NOT SHOWN

| MODEL          | CAPACITY         |                 |                                | DIMENSIONS                |                          |                           |  | INCHES<br>CM |
|----------------|------------------|-----------------|--------------------------------|---------------------------|--------------------------|---------------------------|--|--------------|
|                | LBS/HR<br>Kg/HR  | BOILER HP<br>Kw | (STORAGE)<br>GALLONS<br>LITERS | (A)<br>OVER-ALL<br>LENGTH | (B)<br>OVER-ALL<br>WIDTH | (C)<br>OVER-ALL<br>HEIGHT | (D)<br>OVER-ALL<br>BASE HEIGHT   |              |
| DTV-150-20-4-* | 20,000<br>9072   | 580<br>5,686    | 400<br>1514                    | 60<br>152                 | 72<br>183                | 159<br>404                | BASE DIMENSIONS WILL CHANGE DEPENDING ON PUMP SELECTION AND JOB CONDITIONS. CONSULT FACTORY FOR BASE DIMENSIONS. |              |
| DTV-150-25-5-* | 25,000<br>11,340 | 725<br>7,107    | 500<br>1893                    | 60<br>152                 | 72<br>183                | 167<br>424                |  |              |
| DTV-150-30-6-* | 30,000<br>13,608 | 870<br>8,529    | 600<br>2271                    | 60<br>152                 | 72<br>183                | 175<br>445                |  |              |

**BRYAN STEAM**

783 N. CHILI AVE  
PERU, INDIANA  
46970

FORM NO.:

2006

|   | DTV-20    |          | DTV-25    |          | DTV-30    |          |
|---|-----------|----------|-----------|----------|-----------|----------|
| <b>Deaerator Design</b>                           |           |          |           |          |           |          |
|   | (pph)     | (Kg/Hr)  | (pph)     | (Kg/Hr)  | (pph)     | (Kg/Hr)  |
| Capacity  | 20000     | 9072     | 25000     | 11340    | 30000     | 13608    |
| Number of Tray Columns                            | 2         |          | 2         |          | 2         |          |
| Trays in each Column                              | 5         |          | 5         |          | 7         |          |
| Number of Trays                                   | 10        |          | 10        |          | 10        |          |
| Style of Tray                                     | 46501     |          | 46501     |          | 46501     |          |
| <b>Pressure Vessel</b>                            |           |          |           |          |           |          |
|   | (in.)     | (cm.)    | (in.)     | (cm.)    | (in.)     | (cm.)    |
| Diameter  | 60        | 152.4    | 60        | 152.4    | 60        | 152.4    |
| Shell Length                                      | 63.625    | 161.61   | 71.625    | 181.93   | 79.625    | 202.25   |
| Head Thickness                                    | 0.375     | 0.95     | 0.375     | 0.95     | 0.375     | 0.95     |
| Shell Thickness                                   | 0.375     | 0.95     | 0.375     | 0.95     | 0.375     | 0.95     |
| <b>Connections/Opening</b>                        |           |          |           |          |           |          |
|   | (in.)     | (cm.)    | (in.)     | (cm.)    | (in.)     | (cm.)    |
| Tray Access Door                                  | 24        | 60.96    | 24        | 60.96    | 24        | 60.96    |
| Undeaerated Water Inlet                           | 3         | 7.62     | 3         | 7.62     | 3         | 7.62     |
| Steam Inlet                                       | 6         | 15.24    | 6         | 15.24    | 6         | 15.24    |
| High Temperature Return                           | 3         | 7.62     | 3         | 7.62     | 3         | 7.62     |
| Pump Suction                                      | 4         | 10.16    | 4         | 10.16    | 4         | 10.16    |
| Pump Bypass                                       | 2         | 5.08     | 2         | 5.08     | 2         | 5.08     |
| Overflow  | 3         | 7.62     | 3         | 7.62     | 3         | 7.62     |
| Drain   | 2         | 5.08     | 2         | 5.08     | 2         | 5.08     |
| Sample  | 1         | 2.54     | 1         | 2.54     | 1         | 2.54     |
| <b>Standard Level from Bottom of Storage Tank</b> |           |          |           |          |           |          |
|   | (in.)     | (cm.)    | (in.)     | (cm.)    | (in.)     | (cm.)    |
| Overflow  | 41        | 104.14   | 49        | 124.46   | 57        | 144.78   |
| High Level  | 39        | 99.06    | 47        | 119.38   | 55        | 139.70   |
| Low Level   | 8         | 20.32    | 8         | 20.32    | 8         | 20.32    |
| Head Seam   | 17        | 43.18    | 17        | 43.18    | 17        | 43.18    |
|   | (gallons) | (liters) | (gallons) | (liters) | (gallons) | (liters) |
| Overflow  | 412       | 1559     | 518       | 1961     | 616       | 2332     |
| High Level  | 396       | 1499     | 502       | 1900     | 600       | 2271     |
| Low Level   | 66        | 250      | 66        | 250      | 66        | 250      |
| Head Seam   | 141       | 534      | 141       | 534      | 141       | 534      |