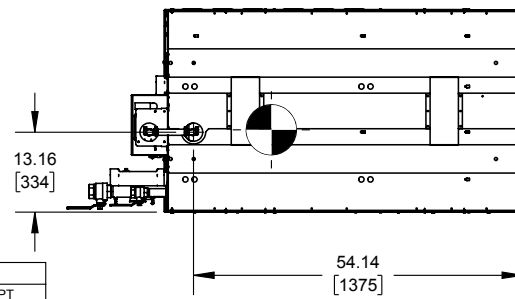
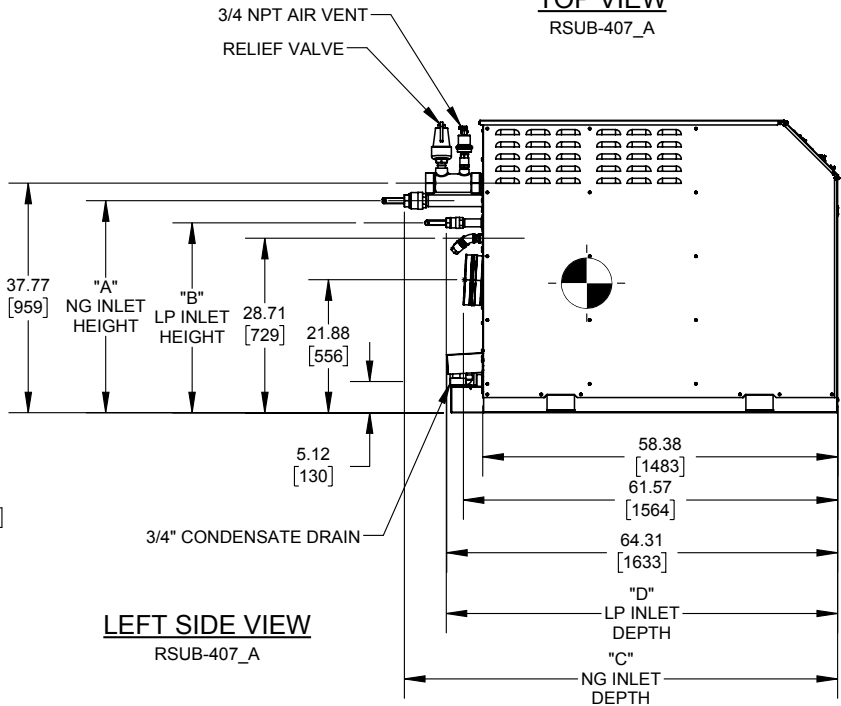
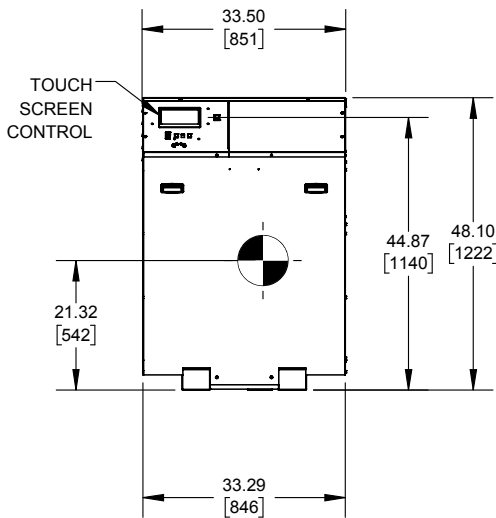
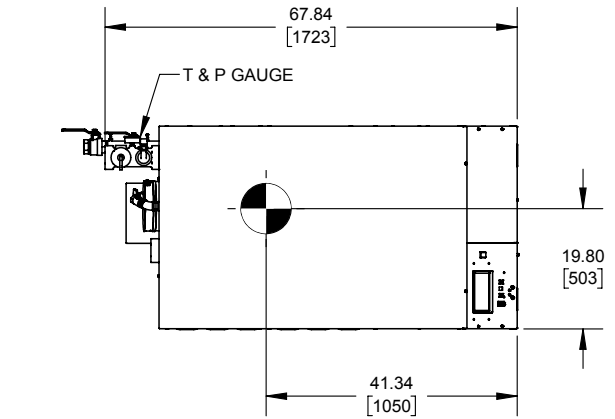
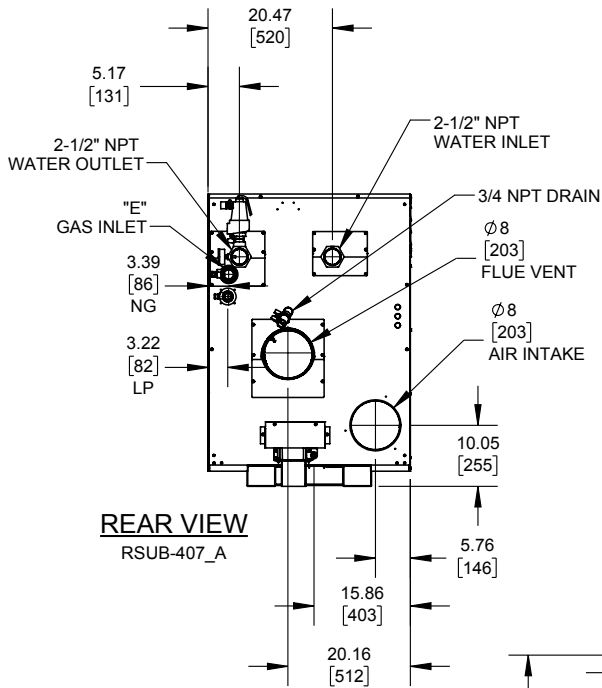


# TORUS 1501 DUAL FUEL

## Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

## INDOOR UNIT



| GAS OPTION | "A"    | "B"    | "C"    | "D"    | "E"       |
|------------|--------|--------|--------|--------|-----------|
| NG         | 34.88" | -      | 78.27" | -      | 1-1/4 NPT |
| LP         | -      | 31.25" | -      | 64.39" | 1 NPT     |

### Notes:

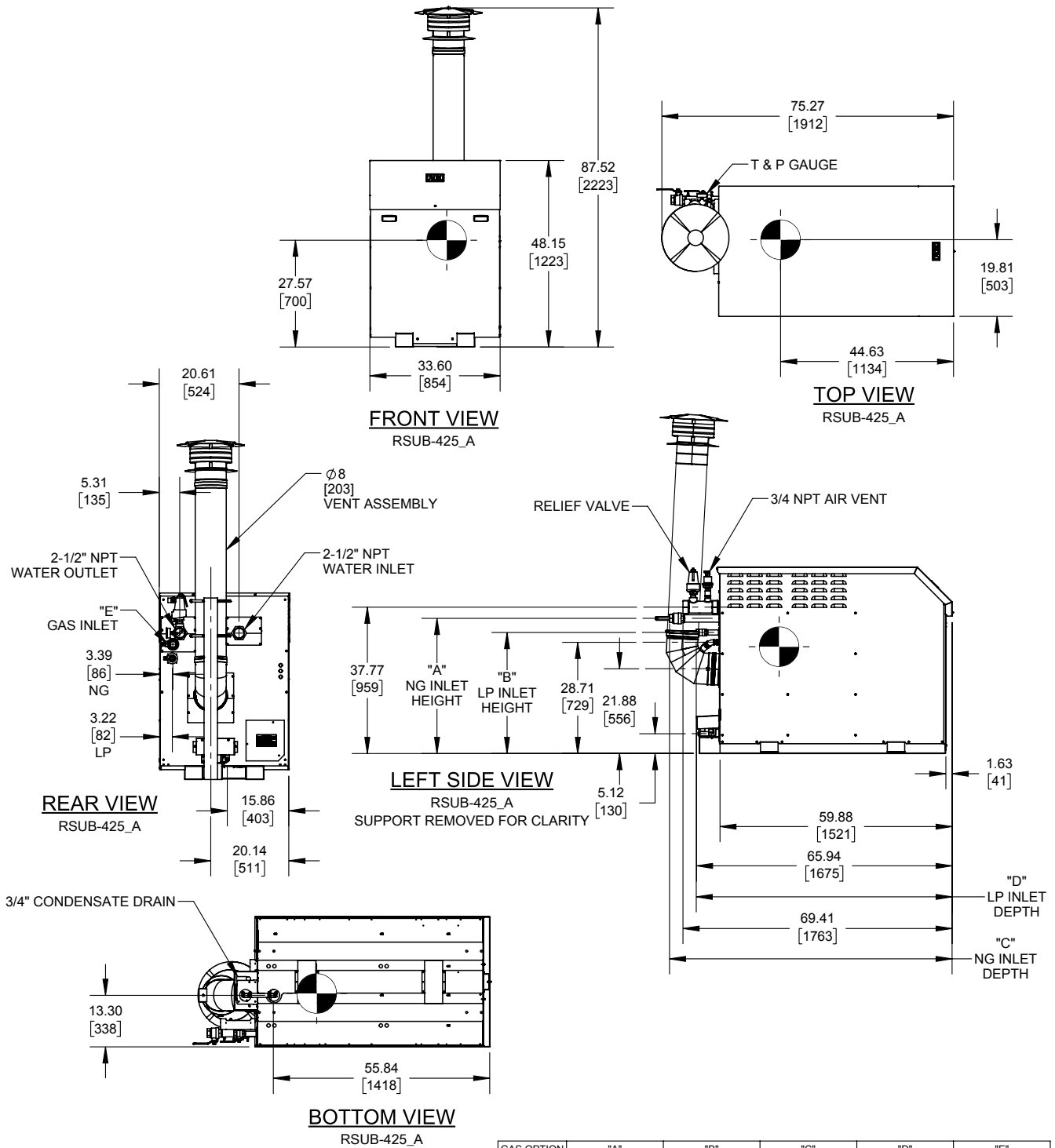
1. Dimensions are approximate and should not be used to "rough-in" equipment.
2. Dimensions are subject to change without notice.
3. All dimensions are in inches (mm).
4.  Symbol indicates center of gravity.

# TORUS 1501 DUAL FUEL

## Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

## OUTDOOR UNIT



| GAS OPTION | "A"    | "B"    | "C"    | "D"    | "E"       |
|------------|--------|--------|--------|--------|-----------|
| NG         | 34.88" | -      | 72.90" | -      | 1-1/4 NPT |
| LP         | -      | 31.28" | -      | 66.08" | 1 NPT     |

### Notes:

1. Dimensions are approximate and should not be used to "rough-in" equipment.
2. Dimensions are subject to change without notice.
3. All dimensions are in inches (mm).
4. Symbol indicates center of gravity.

## BOILER CERTIFIED RATINGS & CAPACITIES

|                                |                     |                                   |                 |
|--------------------------------|---------------------|-----------------------------------|-----------------|
| <b>Fuel Type</b>               | Natural/Propane Gas | <b>Boiler FLA</b>                 | 14*             |
| <b>Input BTU/hr.</b>           | 1,500,000/440 kW    | <b>Boiler HP</b>                  | 43.9            |
| <b>Output BTU/hr.</b>          | 1,470,000/430 kW    | <b>Min. Gas Pressure Required</b> | 4"W.C.          |
| <b>Electrical Requirements</b> | 120 VAC/60 Hz/1PH   | <b>Max. Gas Pressure Allowed</b>  | 14" W.C.        |
|                                |                     | <b>Operating Weight</b>           | 980 lbs /445 kg |

## BOILER TRIM & CONTROLS

|                                                                           |               |                            |                          |
|---------------------------------------------------------------------------|---------------|----------------------------|--------------------------|
| <b>Main Gas Valve</b>                                                     | Dungs MBC     | <b>Air Switch</b>          | Huba                     |
| <b>Firing Valve</b>                                                       | 1-1/4" Apollo | <b>Flow Switch</b>         | SIKA                     |
| <b>Ignition Control</b>                                                   | Fenwal        | <b>Blocked Flue Switch</b> | Cleveland NS2            |
| <b>Operating Control</b>                                                  | HeatNet®      | <b>Blower Motor</b>        | Ametek                   |
| <b>High Limit</b>                                                         | Jumo          | <b>L.W.C.O.</b>            | Taco                     |
| <b>Main Ball Valve</b>                                                    | 1-1/4" Apollo | <b>Relief Valve (WB)</b>   | 1" x 1-1/4" set @ 50 psi |
| <b>Pump contactor strongly recommended for water heater applications.</b> |               | <b>Relief Valve (WW)</b>   | 1" x 1" set @ 125 psi    |

## A.S.M.E.

|                                            |                             |                     |                         |
|--------------------------------------------|-----------------------------|---------------------|-------------------------|
| <b>ASME Sect IV Fire Side Htg Surface</b>  | 98.6 Sq. Ft. / 9.16 Sq. M.  | <b>Design Data</b>  | Max. 160 psig & 210°F   |
|                                            |                             | <b>Water Volume</b> | 10.5 gal. / 39.7 Liters |
| <b>ASME Sect IV Water Side Htg Surface</b> | 89.33 Sq. Ft. / 8.30 Sq. M. | <b>pH Level</b>     | 6.5-8.5                 |
|                                            |                             |                     |                         |

\* Add circulator amps.

## BOILER TEMPERATURE RISE / PRESSURE DROP (Based on Full Input)

| 20°F / 11.1°C     |     |               |       | 25°F / 13.9 °C             |     |               |      | 30°F / 16.7°C            |     |               |      | 35°F / 19.5°C                 |     |               |      | 40°F / 22.2°C |     |               |      |
|-------------------|-----|---------------|-------|----------------------------|-----|---------------|------|--------------------------|-----|---------------|------|-------------------------------|-----|---------------|------|---------------|-----|---------------|------|
| Flow Rate         |     | Pressure Drop |       | Flow Rate                  |     | Pressure Drop |      | Flow Rate                |     | Pressure Drop |      | Flow Rate                     |     | Pressure Drop |      | Flow Rate     |     | Pressure Drop |      |
| GPM               | L/s | Ft            | kPa   | GPM                        | L/s | Ft            | kPa  | GPM                      | L/s | Ft            | kPa  | GPM                           | L/s | Ft            | kPa  | GPM           | L/s | Ft            | kPa  |
| 147.1             | 9.3 | 35.5          | 106.2 | 117.6                      | 7.4 | 22.7          | 68.0 | 98.0                     | 6.2 | 15.8          | 47.2 | 84.0                          | 5.3 | 11.6          | 34.7 | 73.5          | 4.6 | 8.9           | 26.6 |
| Flow GPM (Boiler) |     |               |       | Temp. Rise (°F) (Boiler**) |     |               |      | Vent Length (Equiv. Ft.) |     |               |      | Air Inlet Length (Equiv. Ft.) |     |               |      |               |     |               |      |
| Min               |     | Max           |       | Min                        |     | Max           |      | Min                      |     | Max           |      | Min                           |     | Max           |      |               |     |               |      |
| 73.5              |     | 147.1         |       | 20                         |     | 40            |      | 6                        |     | 100           |      | 0                             |     | 100           |      |               |     |               |      |

\*\* Min/Max delta t reflects boiler operation at full input. For applications requiring operation above/below these parameters please consult factory.

## WATER HEATER HOURLY RECOVERY CAPACITY (GPH & LPH)

|      |       |      |       |      |      |       |      |       |      |       |      |
|------|-------|------|-------|------|------|-------|------|-------|------|-------|------|
| 40°F | 22°C  | 60°F | 33°C  | 80°F | 44°C | 100°F | 56°C | 120°F | 67°C | 140°F | 78°C |
| 4466 | 16881 | 2977 | 11254 | 2233 | 8440 | 1786  | 6752 | 1489  | 5627 | 1276  | 4823 |

### Water Heater Min Flow Rates

| Normal (4 to 12) gpg |     |               |      | Hard (12 to 15) gpg |     |               |      |
|----------------------|-----|---------------|------|---------------------|-----|---------------|------|
| Flow Rate            |     | Pressure Drop |      | Flow Rate           |     | Pressure Drop |      |
| gpm                  | L/s | Ft            | kPa  | gpm                 | L/s | Ft            | kPa  |
| 100.0                | 6.3 | 16.4          | 49.0 | 110.0               | 6.9 | 19.9          | 59.5 |

|                     |       |                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REP FIRM</b>     | _____ | <div><b>TORUS 1501 DUAL FUEL</b></div> <div><b>Category II or Category IV Appliance</b><br/>(see Installation and Operation Manual for venting information)</div> <div>  <b>RELIABLE. BOLD. INNOVATIVE.</b> </div> <div>A Division of Mestek, Inc.<br/>Westfield, MA 01085<br/>(833) 265-5371</div> |
| <b>SUBMITTED BY</b> | _____ |                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>JOB NAME</b>     | _____ |                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>ARCHITECT</b>    | _____ |                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>ENGINEER</b>     | _____ |                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>CONTRACTOR</b>   | _____ |                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>DATE</b>         | _____ |                                                                                                                                                                                                                                                                                                                                                                                         |