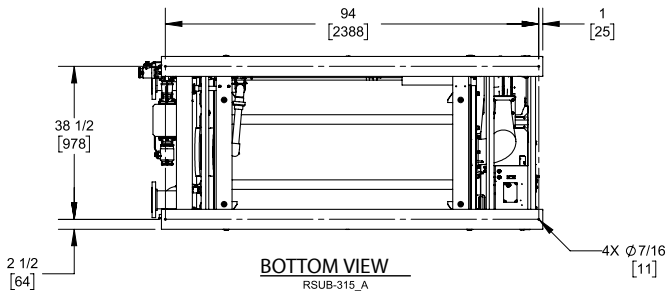
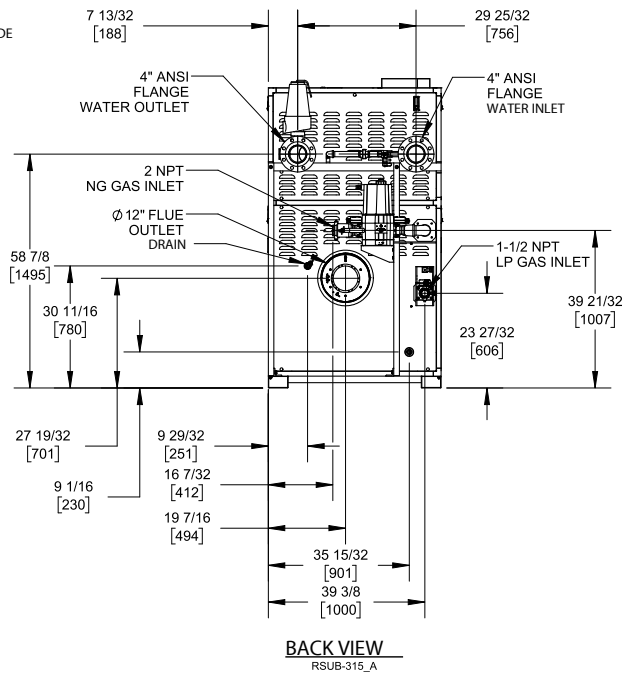
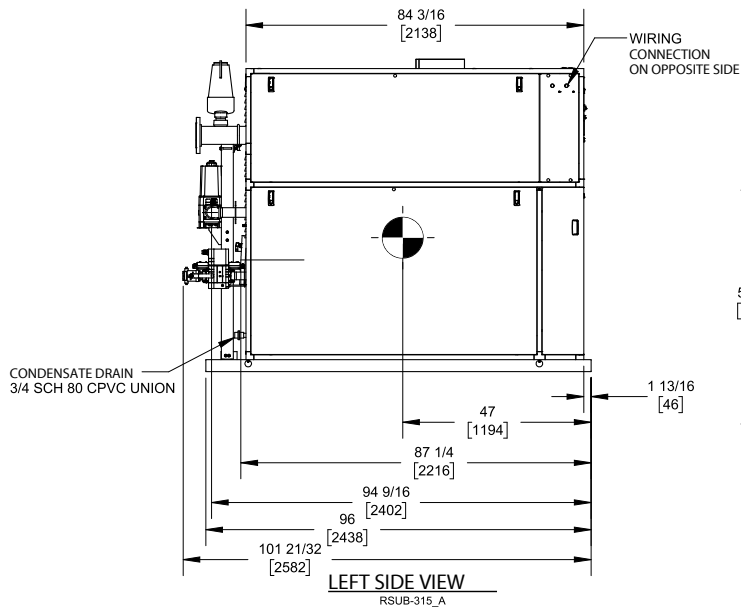
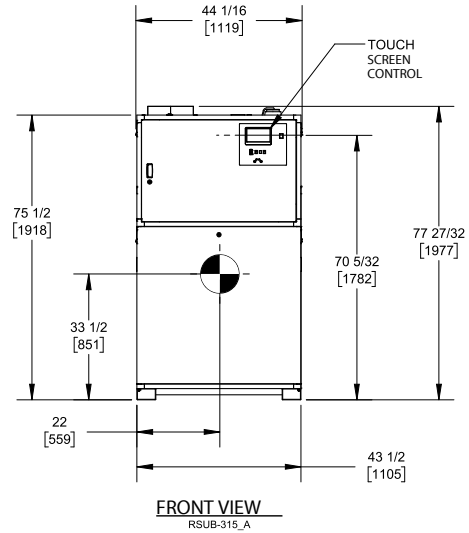
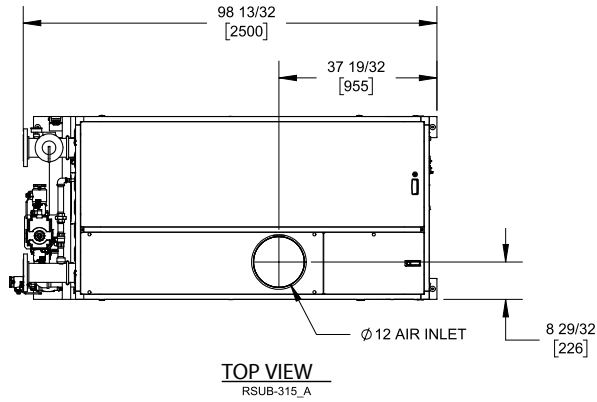


TORUS 4000 DUAL FUEL

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

INDOOR UNIT



Notes:

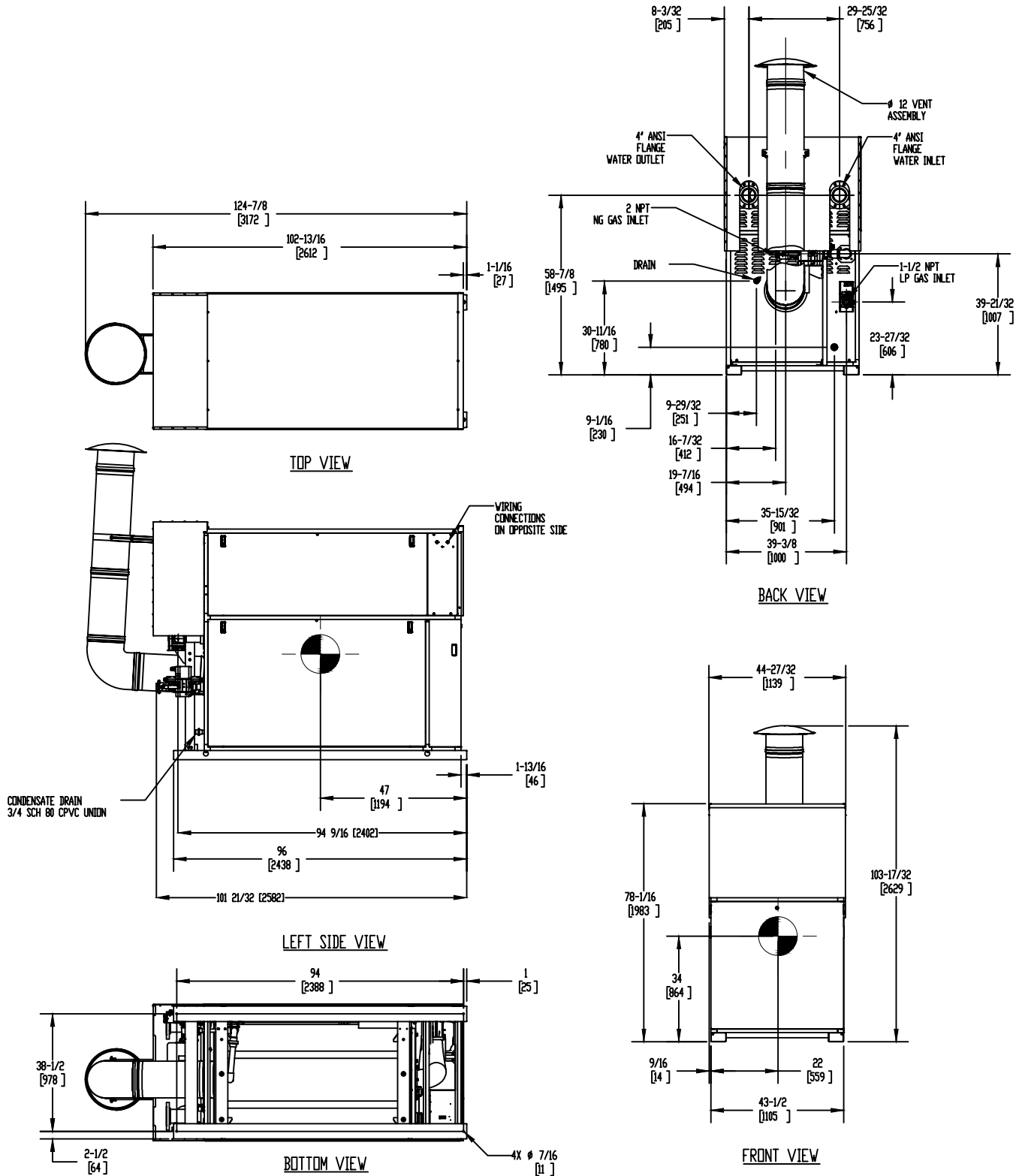
1. Dimensions are approximate and should not be used to "rough-in" equipment.
2. Dimensions are subject to change without notice.
3. All dimensions are in inches (mm).
4. Symbol indicates center of gravity.

TORUS 4000 DUAL FUEL

Category II or Category IV Appliance

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OUTDOOR UNIT



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

Fuel Type	Natural/Propane Gas	Boiler FLA	19.9*
Input BTU/hr.	4,000,000 / 1172kW	Boiler HP	116.52
Output BTU/hr.	3,900,000/ 1143 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	230 VAC/60 Hz/3PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	2866 lbs / 1300 kg

BOILER TRIM & CONTROLS

Main Gas Valve	Dungs MBC	Air Switch	Huba
Firing Valve	2" Apollo	Flow Switch	SIKA
Ignition Control	Fenwal	Blocked Flue Switch	Cleveland NS2
Operating Control	HeatNet®	Blower Motor	Ametek
High Limit	Jumo	L.W.C.O.	800
Main Ball Valve	2" Apollo	Relief Valve (WB)	1" x 1 1/2" set @ 50 psi
Pump contactor strongly recommended for water heater applications.		Relief Valve (WW)	1 1/2" x 1 1/2" set @ 125 psi

A.S.M.E.

ASME Sect IV Fire Side	402.93 Sq. Ft. / 37.43 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	41.3 gal. / 156.3 Liters
ASME Sect IV Water Side	371.25 Sq. Ft. / 34.49 Sq. M.	pH Level	6.5-8.5
Htg Surface			

* Add circulator amps.

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

20°F / 11.1°C				30°F / 16.7°C				40°F / 22.2°C				50°F / 27.8°C				60°F / 33.3°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
390.2	24.6	26.0	77.7	260.1	16.4	11.5	34.5	195.1	12.3	6.5	19.3	156.1	9.8	4.7	14.0	130.1	8.2	3.7	10.9

Flow GPM (Boiler)		Temp. Rise (°F) (Boiler**)		Vent Length (Equiv. Ft.)		Air Inlet Length (Equiv. Ft.)	
Min	Max	Min	Max	Min	Max	Min	Max
130.1	390.2	20	60	12	160	0	160

** 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
11765	44471	7843	29647	5882	22235	4706	17788	3922	14824	3361	12706

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
294.7	18.6	14.8	44.2	392.9	24.8	26.4	78.9

REP FIRM _____
SUBMITTED BY _____
JOB NAME _____
ARCHITECT _____
ENGINEER _____
CONTRACTOR _____
DATE _____

TORUS 4000 DUAL FUEL

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