

TORUS 400 DUAL FUEL

Category II or Category IV Appliance

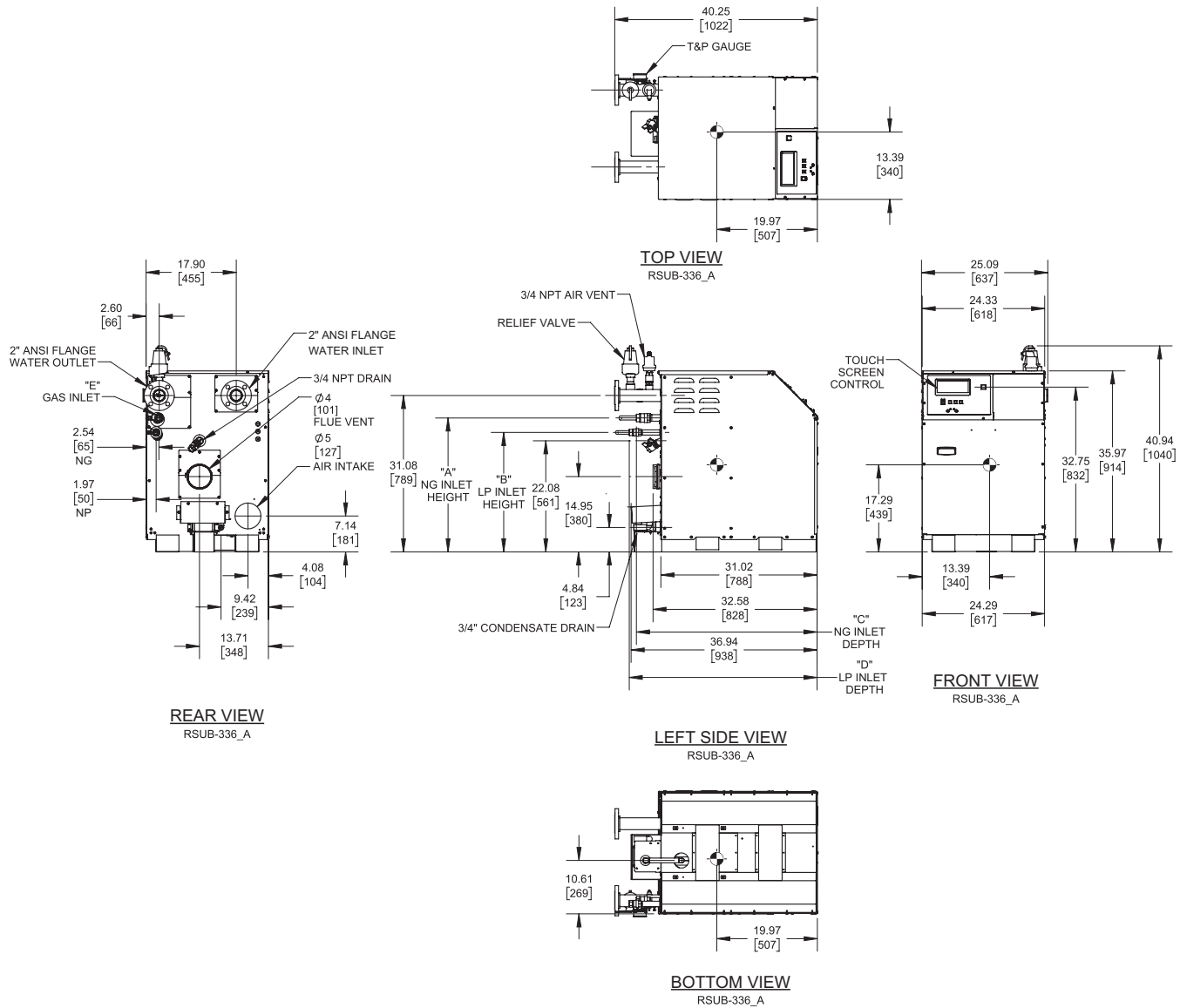
(see Installation and Operation Manual for venting information)

CODE OPTIONS

CSD-1

FIRMWARE W/REMOTE
TEST MANUAL RESET LWCO
High and Low Gas Pressure Switches

INDOOR UNIT



GAS OPTION	"A"	"B"	"C"	"D"	"E"
NG	27.17	-	35.88	-	1 NPT
LP	-	23.16	-	37.31	3/4 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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	399,000 / 116.93 kW	Boiler HP	11.50
Output BTU/hr.	385,035 / 112.84 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	418.20 lbs / 189.69 kg

BOILER TRIM & CONTROLS

Main Gas Valve	Dungs MBC	Air Switch	Huba
Firing Valve	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	Apollo	Relief Valve (WB)	3/4" x 3/4" set @ 50 psi
		Relief Valve (WW)	1" x 1" set @ 125 psi

Pump contactor strongly recommended for water heater applications.

A.S.M.E.

ASME Sect IV Fire Side	34.8 Sq. Ft. / 3.23 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	3.8 gal. / 14.38 Liters
ASME Sect IV Water Side	31.5 Sq. Ft. / 2.92 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			
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
38.5	2.4	10.9	32.7	25.7	1.6	4.9	14.7	19.3	1.2	2.8	8.4

Flow GPM (Boiler)		Temp. Rise (°F) (Boiler**)		Vent Length (Equiv. Ft.)		Air Inlet Length (Equiv. Ft.)	
Min	Max	Min	Max	Min	Max	Min	Max
19.3	38.5	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
1174	4436	782	2957	587	2218	469	1774	391	1479	335	1267

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
30.7	1.9	7.0	20.9	41.0	2.6	12.4	37.0

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

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A Division of Mestek, Inc.
 Westfield, MA 01085
 (413) 564-5515

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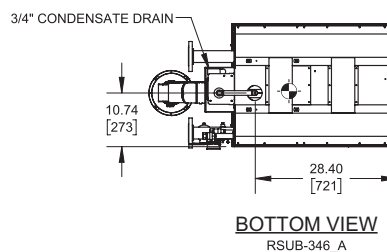
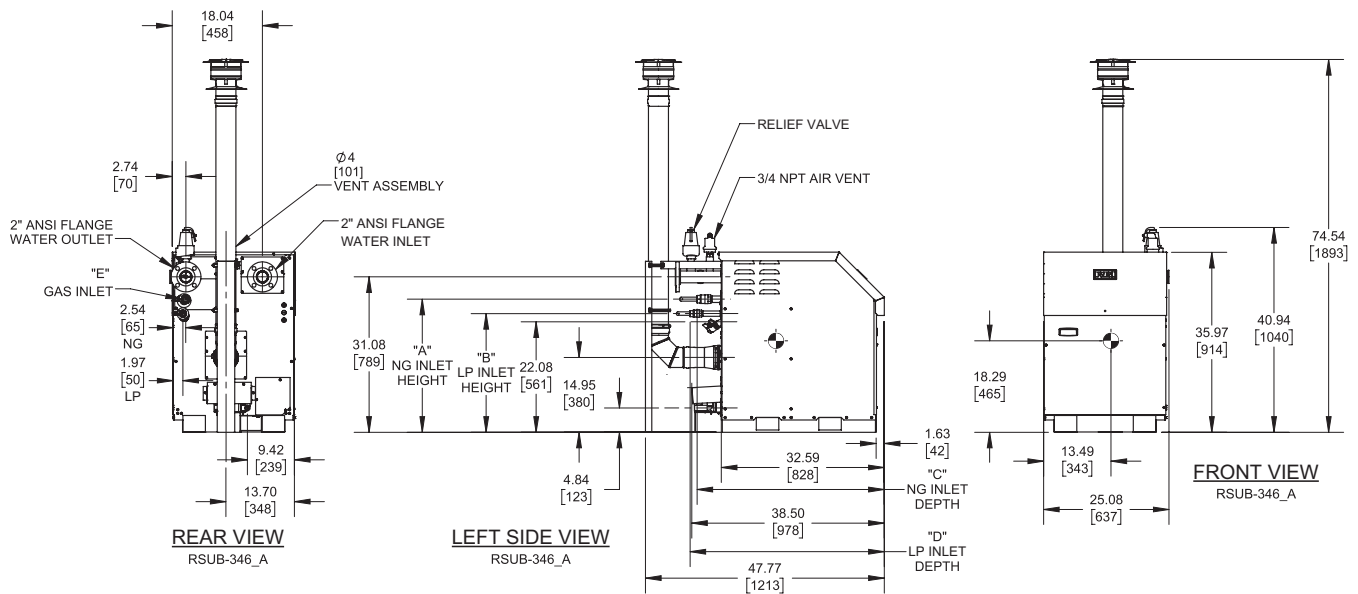
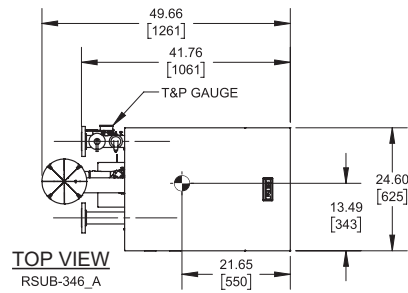
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FIRMWARE W/REMOTE
TEST MANUAL RESET LWCO
High and Low Gas Pressure Switches

OUTDOOR UNIT



GAS OPTION	"A"	"B"	"C"	"D"	"E"
NG	26.61	-	37.47	-	1 NPT
LP	-	27.72	-	38.84	3/4 NPT

Notes:

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Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	443.69 lbs / 201.25 kg

BOILER TRIM & CONTROLS

Main Gas Valve	Dungs MBC	Air Switch	Huba
Firing Valve	Apollo	Flow Switch	SIKA
Ignition Control	Fenwal	Blocked Flue Switch	Cleveland NS2
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Flow GPM (Boiler)		Temp. Rise (°F) (Boiler**)		Vent Length (Equiv. Ft.)		Air Inlet Length (Equiv. Ft.)					
Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		
19.3	38.5	20	40	Factory Supplied		0					

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