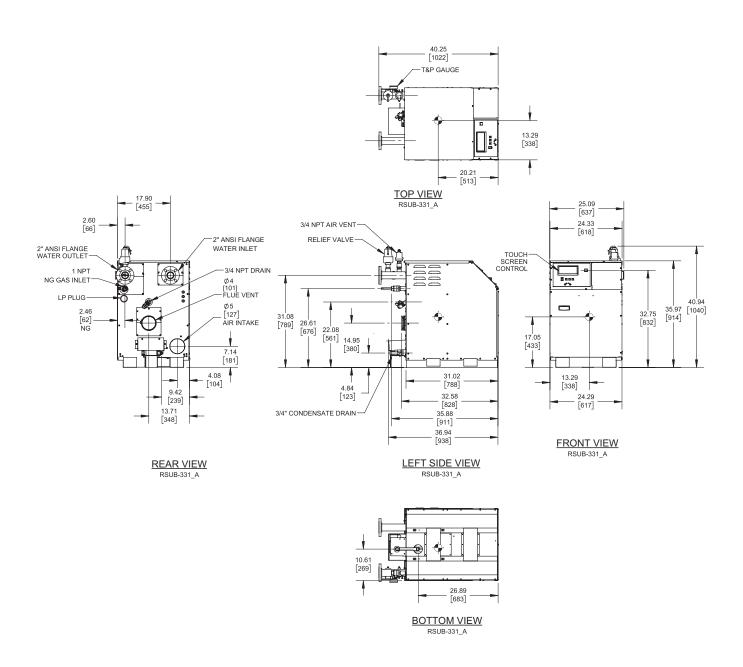
Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	300,000 / 87.92 kW	Boiler HP	8.69
Output BTU/hr.	291,000 / 85.28 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
	•	Operating Weight	406.93 lbs / 184.58 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	
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi	

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			ow ite	Pressure Dro		e Drop
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	a l	GPM	L/s	Ff	t	kPa
29.1	1.8	6.3	18.8	19.4	1.2	2.9	8.6		14.6	0.9	1	7	5.0
Flo	ow GPM (Bo	oiler)	Temp	. Rise (°F)	(Boiler**)	Vent	Vent Length (Equiv. Ft.) Air Inlet L			let Leng	gth (Ec	μιίν. Ft.)	
Min		Max	Min	Max		Min	Min N		Max	Min			Max
14.6		29.1	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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
882	3335	588	2224	441	1668	353	1334	294	1112	252	953

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	
30.5	1.9	6.9	20.6	40.6	2.6	12.1	36.3	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 300

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

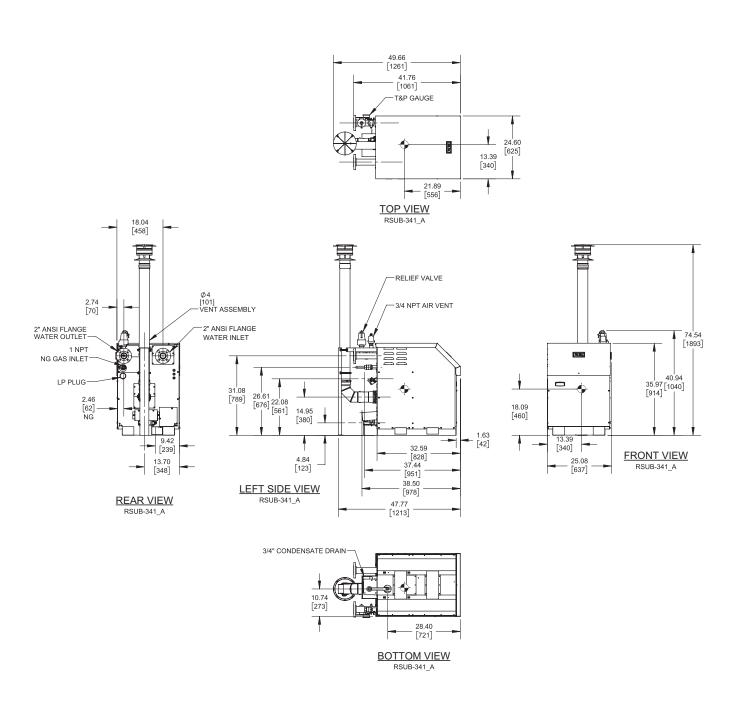


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	300,000 / 87.92 kW	Boiler HP	8.69
Output BTU/hr.	291,000 / 85.28 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	432.37 lbs / 196.12 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
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi

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/		40°F / 22.2°C					
	ow ate	Pressur	re Drop	Flow Rate Pr		Pressure Drop			Flow Rate		Pressure Drop	
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft		kPa
29.1	1.8	6.3	18.8	19.4	1.2	2.9	8.6	14.6	0.9	1.7		5.0
		•										
Flo	Flow GPM (Boiler) Temp. Rise (°F) (Boiler**)			oiler**)	Vent Length (Equiv. Ft.)			Air Inlet Length (Equiv. Ft.)				
Min		Max	Min		Max	Min		Max	Min		Λ	Лах
14.6		29.1	20		40	Fa	actory Supi	tory Supplied 0				

^{**} 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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
882	3335	588	2224	441	1668	353	1334	294	1112	252	953

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	ow Rate Pressure Drop		re Drop	Flow	Rate	Pressure Drop		
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
30.5	1.9	6.9	20.6	40.6	2.6	12.1	36.3	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 300

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)



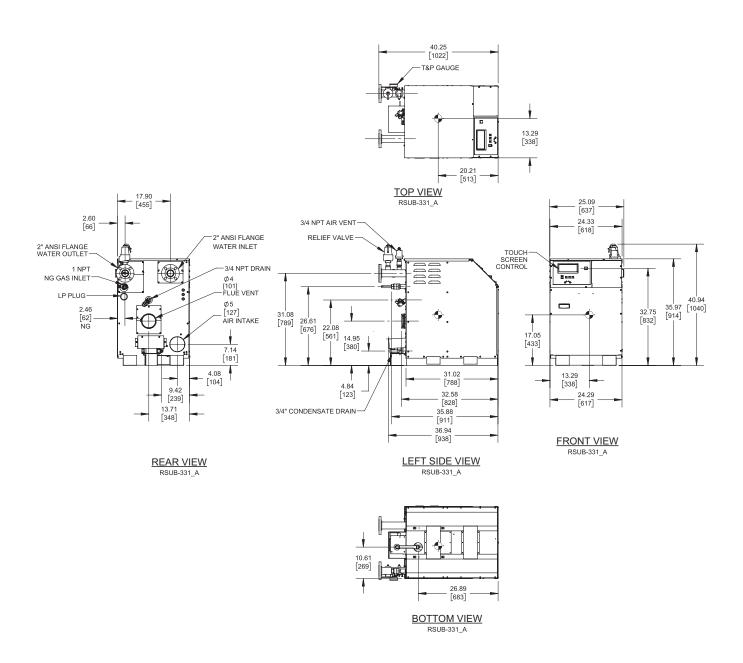
Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	349,000 / 102.28 kW	Boiler HP	10.08
Output BTU/hr.	337,483 / 98.90 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	406.93 lbs / 184.58 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	
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi	

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				
	ow ate	Pressur	e Drop	Flow Rate		Pressure Drop		Flow Rate		Pressure Drop				
GPM	L/s	Ft	kPa	GPN	Л	L/s	Ft	kF	Pa	GPM	L/s	F	t	kPa
33.8	2.1	8.4	25.2	22.5	5	1.4	3.8	11	.4	16.9	1.1	2.	2	6.6
Flo	ow GPM (Bo	w GPM (Boiler) Temp.			Rise (°F) (Boiler**)		Vent Length (Equi		iv. Ft.) Air		nlet Length (Equiv. Ft.)			
Min		Max	Min		Max		Min		Max	Min			Max	
16.9		33.8	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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
1016	3840	677	2560	508	1920	406	1536	339	1280	290	1097

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Flow Rate Pressure Drop		re Drop	Flow	Rate	Pressure Drop		
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
30.2	1.9	6.8	20.3	40.3	2.5	12.0	35.8	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 350

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

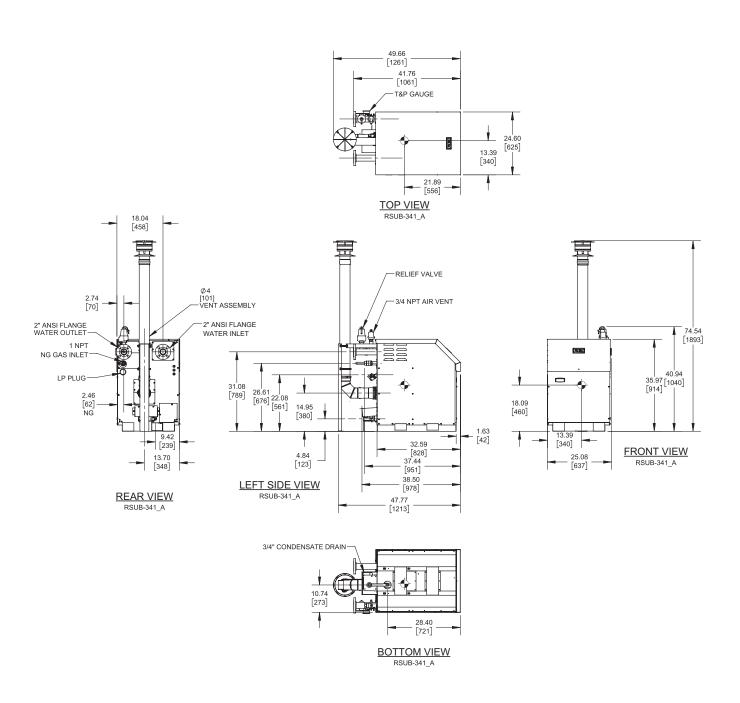


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	349,000 / 102.28 kW	Boiler HP	10.08
Output BTU/hr.	337,483 / 98.90 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	432.37 lbs / 196.12 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	
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi	

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			
	ow ate	Pressur	e Drop	Flow Rate		Pressure Drop		Flow Rate		Pressure Drop		
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	
33.8	2.1	8.4	25.2	22.5	1.4	3.8	11.4	16.9	1.1	2.2	6.6	
Flow GPM (Boiler) Temp. Rise (°F) (Boiler*				Boiler**)	Vent Length (Equiv. Ft.)			Air Inlet Length (Equiv. Ft.)				
Min		Max	Min		Max	Min		Max	Min		Max	
16.9	16.9		20	40		Factory Supplied			0			

^{**} 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
1016	3840	677	2560	508	1920	406	1536	339	1280	290	1097

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Flow Rate Pressure Drop		re Drop	Flow	Rate	Pressure Drop		
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
30.2	1.9	6.8	20.3	40.3	2.5	12.0	35.8	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 350

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)



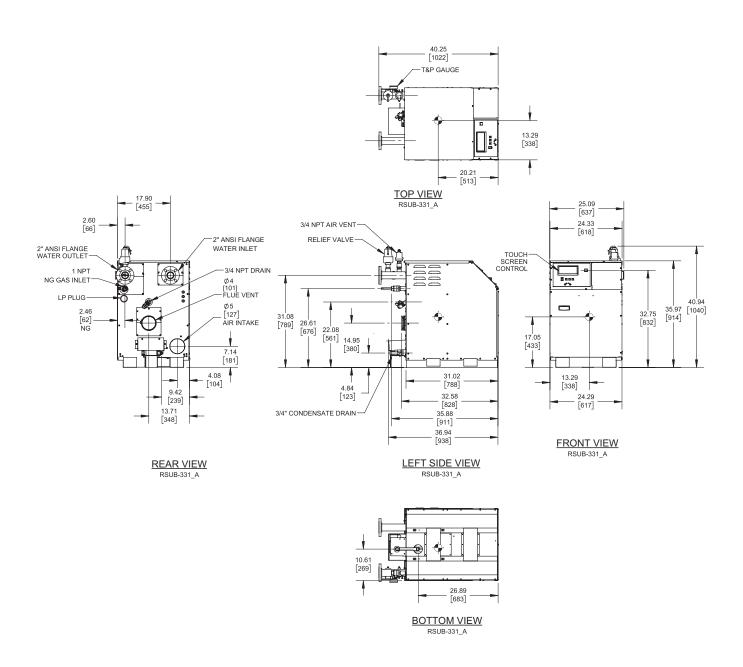
Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT



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

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	406.93 lbs / 184.58 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
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi

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		re Drop	Flow Rate		Pressu	Pressure Drop			ow ate	Pi	ressur	e Drop
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GF	PM	L/s	Ft		kPa
38.5	2.4	10.9	32.7	25.7	1.6	4.9	14.7	19	9.3	1.2	2.8	3	8.4
Flo	ow GPM (Bo	oiler)	Temp	. Rise (°F)	(Boiler**)	Vent	(Equiv. Ft.)	Ft.) Air Inlet Length (Equiv. Ft.			uiv. Ft.)		
Min		Max	Min		Max	Min		Max	Max Min				Max
19.3		38.5	20		40	6		100	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℃	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	Flow Rate Pressu		re 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

TORUS 400

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

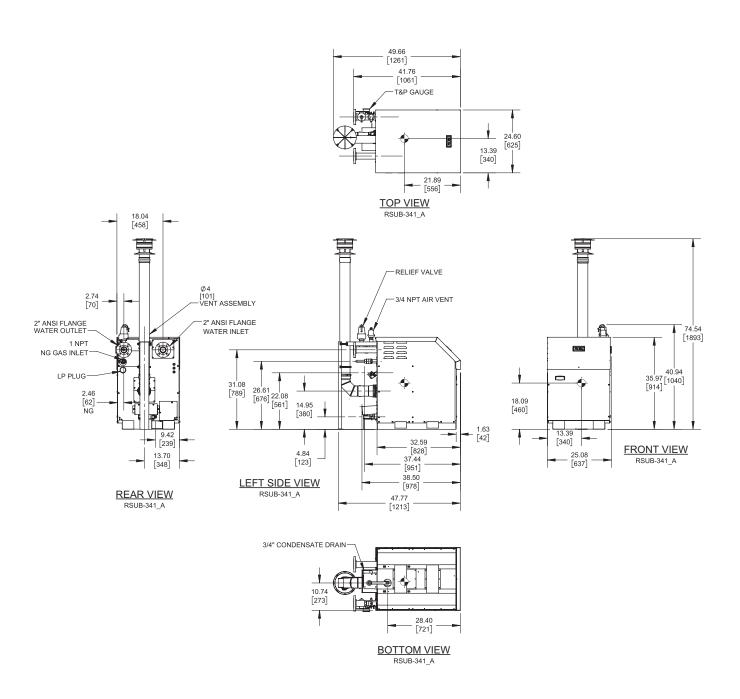


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

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	432.37 lbs / 196.12 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
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi

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	F / 11.1°C		30°F / 16.7°C				40°F / 22.2°C				
	ow ate	Pressur	e 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	
Flo	Flow GPM (Boiler) Temp. Rise (°F) (Boiler				Boiler**)	Vent	Length (Equ	iiv. Ft.)	Air Inlet Length (Equiv. Ft.)			
Min		Max	Min		Max	Min		Max	Min		Max	
19.3	19.3		20	40		Factory Supplied			0			

^{**} 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℃	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	Flow Rate Pressure Drop		re 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

TORUS 400

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)



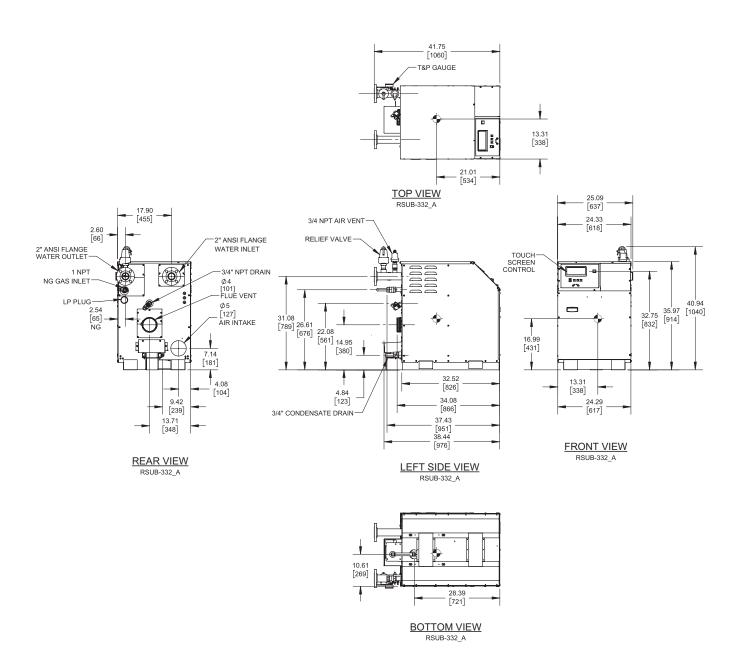
Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	500,000 / 146.54 kW	Boiler HP	14.40
Output BTU/hr.	482,000 / 141.26 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	425.69 lbs / 193.09 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	
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi	

A.S.M.E.

ASME Sect IV Fire Side	39.1 Sq. Ft. / 3.63 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	4.2 gal. / 15.90 Liters
ASME Sect IV Water Side	35.44 Sq. Ft. / 3.29 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 / 2					22.2°C							
	Flow Rate		re Drop	Flow Rate		Pressure Drop		Flow Rate		Pressure Drop		e Drop	
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	a	GPM	L/s	Ft		kPa
48.2	3.0	12.2	36.4	32.1	2.0	5.4	16.2	2	24.1	1.5	3.1		9.1
Flo	ow GPM (Boi	iler)	Temp	. Rise (°F)	(Boiler**)	Vent Length (Equiv. F			/. Ft.)	Air In	let Leng	ıth (Eq	μuiv. Ft.)
Min		Max	Min		Max	Min			Max	Min			Max
24.1		48.2	20		40	6			100	0	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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
1441	5445	960	3630	720	2723	576	2178	480	1815	412	1556

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg					
Flow	Rate	Pressure Drop Flow Rate		Rate	Pressure Drop				
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa		
36.1	2.3	6.8	20.4	48.3	3.0	6.8	20.4		

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 500

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

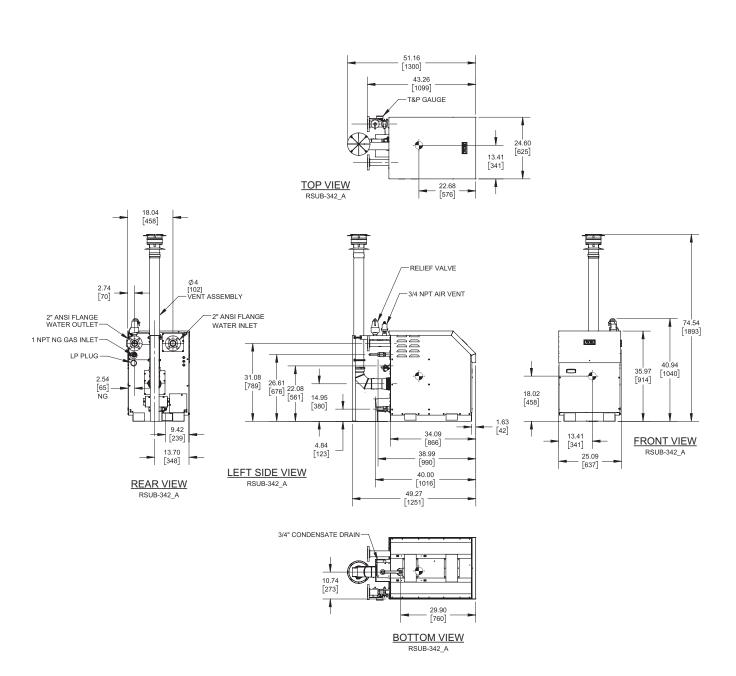


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	500,000 / 146.54 kW	Boiler HP	14.40
Output BTU/hr.	482,000 / 141.26 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	451.76 lbs / 204.91 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
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi

A.S.M.E.

ASME Sect IV Fire Side	39.1 Sq. Ft. / 3.63 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	4.2 gal. / 15.90 Liters
ASME Sect IV Water Side	35.44 Sq. Ft. / 3.29 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		re Drop	Flow Rate		Pressure Drop			ow ate	Pressure Drop		rop
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft		kPa
48.2	3.0	12.2	36.4	32.1	2.0	5.4	16.2	24.1	1.5	3.1		9.1
								·				
Flo	ow GPM (Boi	iler)	Temp	o. Rise (°F) (Boiler**)		Vent	Length (Eq	uiv. Ft.)	Air Inlet Length (Equiv. Ft.)			. Ft.)
Min		Max	Min		Max	Min		Max	Min		М	ax
24.1		48.2	20		40	F	actory Supr	lied	d 0			

^{**} 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
1441	5445	960	3630	720	2723	576	2178	480	1815	412	1556

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Rate	Pressur	Pressure Drop Flow Rate		ssure Drop Flow Rate Pressure Drop		re Drop	
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
36.1	2.3	6.8	20.4	48.3	3.0	6.8	20.4	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 500

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)



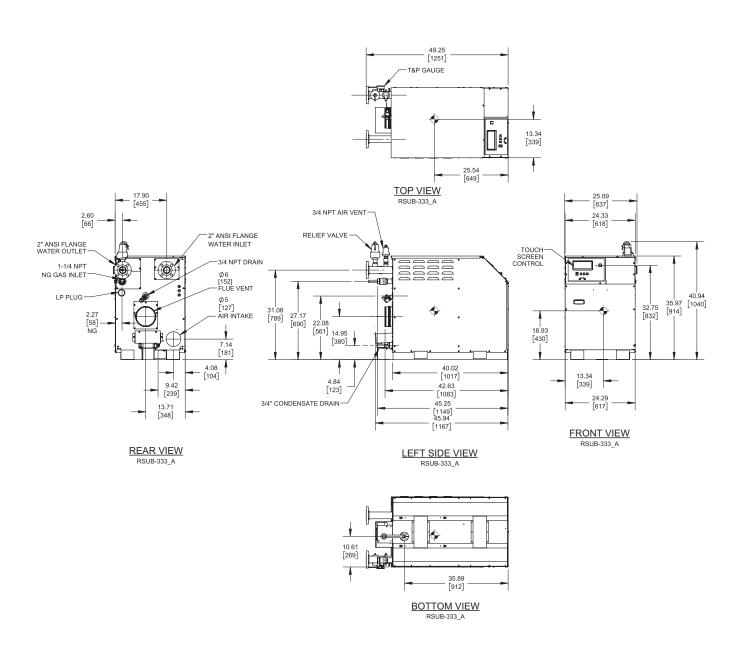
Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	650,000 / 190.49 kW	Boiler HP	18.70
Output BTU/hr.	625,950 / 183.45 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	486.3 lbs / 220.58 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	
Pump contactor strongly recommended for water heater applications.		Relief Valve (WW)	1" x 1" set @ 125 psi	

A.S.M.E.

ASME Sect IV Fire Side	52.2 Sq. Ft. / 4.85 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	5.6 gal. / 21.19 Liters
ASME Sect IV Water Side	47.25 Sq. Ft. / 4.39 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 3					90°F / 16.7°C 40°F / 22.2°C								
	ow ate	Pressui	re Drop	Flow Rate				Pressu	Pressure Dron I		ow ate		Pressure Drop	
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	а	GPM	L/s	Ft	t	kPa	
62.6	4.0	12.2	36.3	41.7	2.6	5.4	16.	.2	31.3	2.0	3.	1	9.2	
								•						
Fl	ow GPM (Boi	iler)	Temp. Rise (°F) (Boiler**)		oiler**)	Vent Length (Equiv. Ft.)		v. Ft.)	Air Inlet Length (Equiv. Ft.)					
Min		Max	Min		Max	Min			Max	Min			Max	
31.3		62.6	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
1892	7153	1262	4768	946	3576	757	2861	631	2384	541	2044

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	w Rate Pressure Drop		re Drop	Flow	Rate	Pressure Drop		
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
48.7	3.1	7.4	22.0	65.0	4.1	13.1	39.2	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 650

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

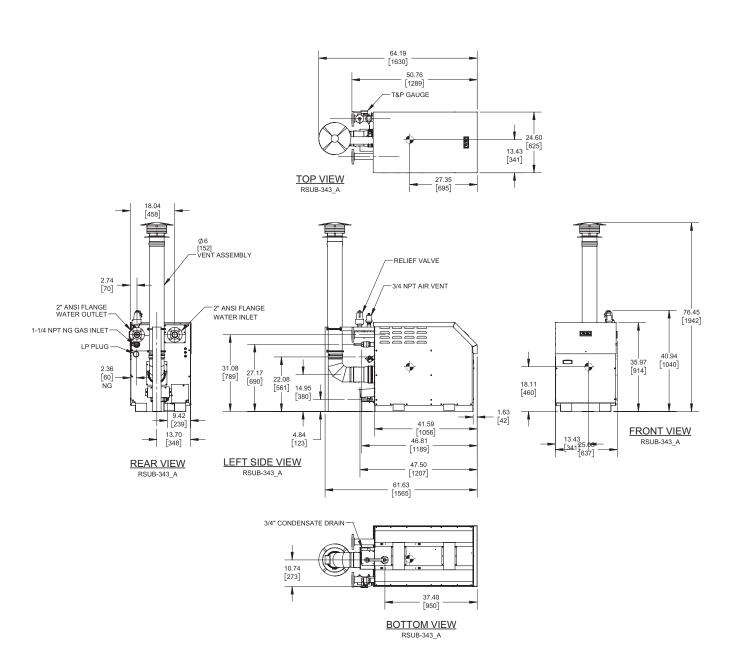


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	650,000 / 190.49 kW	Boiler HP	18.70
Output BTU/hr.	625,950 / 183.45 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	517.71 lbs / 234.83 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
Pump contactor strongly recommended for water heater applications.		Relief Valve (WW)	1" x 1" set @ 125 psi

A.S.M.E.

ASME Sect IV Fire Side	52.2 Sq. Ft. / 4.85 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	5.6 gal. / 21.19 Liters
ASME Sect IV Water Side	47.25 Sq. Ft. / 4.39 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		re Drop	Flow Rate		Pressure Drop			ow ate	Pressure Drop		
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	
62.6	4.0	12.2	36.3	41.7	2.6	5.4	16.2	31.3	2.0	3.1	9.2	
Flo	ow GPM (Boi	ler)	Temp	o. Rise (°F) (Boiler**)		Vent Length (Equiv. F		uiv. Ft.)	Air Inlet Length (Equiv. Ft.)		h (Equiv. Ft.)	
Min		Max	Min		Max	Min		Max	Min		Max	
31.3		62.6	20		40	F	Factory Supplied (0			

^{**} 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
1892	7153	1262	4768	946	3576	757	2861	631	2384	541	2044

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Rate	ate Pressure Drop		Flow	Rate	Pressure Drop		
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
48.7	3.1	7.4	22.0	65.0	4.1	13.1	39.2	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 650

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)



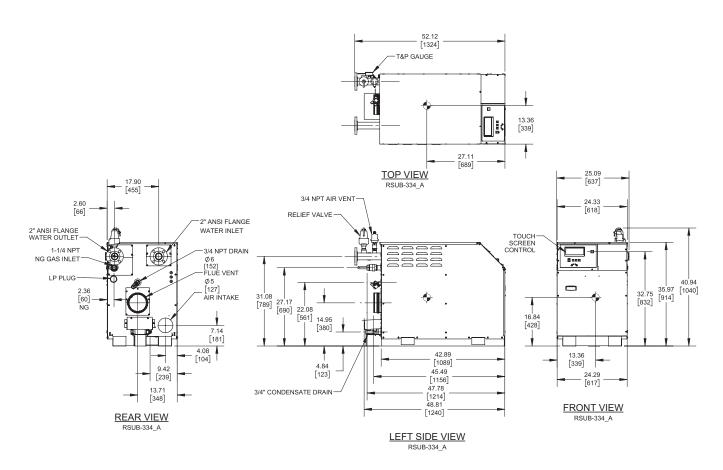
Category IV appliance

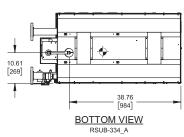
(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT





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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	800,000 / 234.45 kW	Boiler HP	22.97
Output BTU/hr.	768,800 / 225.31 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	523.71 lbs / 237.55 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	
Pump contactor strongly recommended for water heater applications.		Relief Valve (WW)	1" x 1" set @ 125 psi	

A.S.M.E.

ASME Sect IV Fire Side	60.90 Sq. Ft. / 5.65 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	6.6 gal. / 24.98 Liters
ASME Sect IV Water Side	55.12 Sq. Ft. / 5.12 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		re Drop	Flow Rate		Pressure Drop			ow ate	Pressure Drop		
GPM	L/s	Ft	kPa	GPM	l L/s	Ft	kPa	GPM	L/s	Ft	kPa	
76.9	4.9	13.4	39.9	51.3	3.2	5.9	17.8	38.5	2.4	3.4	10.1	
			ı			1			1			
Flo	ow GPM (Bo	oiler)	Temp	o. Rise (°F) (Boiler**)		Vent	Vent Length (Equiv		Air In	let Length	(Equiv. Ft.)	
Min		Max	Min		Max	Min		Max	Min		Max	
38.5		76.9	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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
2329	8803	1553	5869	1164	4402	932	3521	776	2934	665	2515

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Flow Rate		Pressure Drop Flow Rate Pressure D		Pressure Drop		re Drop	
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
61.1	3.9	8.4	25.2	81.3	5.1	14.9	44.6	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 800

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

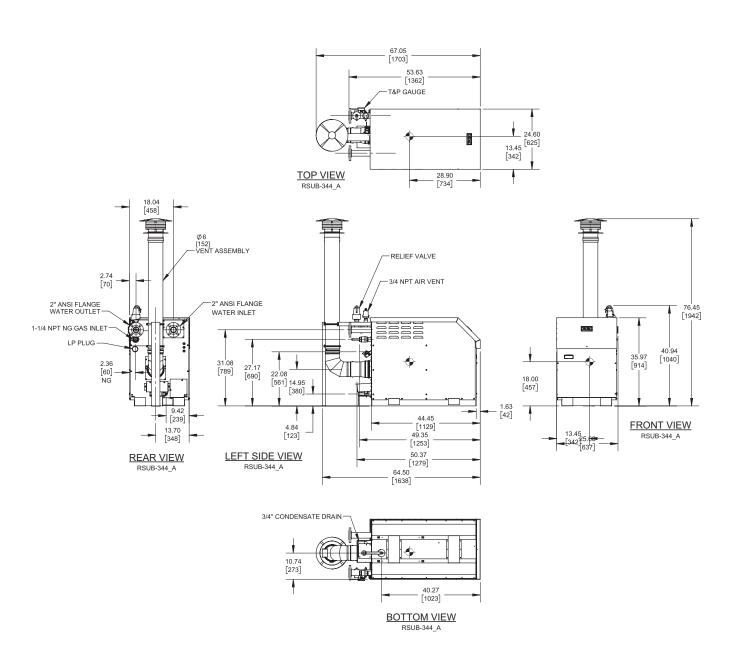


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	800,000 / 234.45 kW	Boiler HP	22.97
Output BTU/hr.	768,800 / 225.31 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	556.28 lbs / 252.32 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	
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi	

A.S.M.E.

ASME Sect IV Fire Side	60.90 Sq. Ft. / 5.65 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	6.6 gal. / 24.98 Liters
ASME Sect IV Water Side	55.12 Sq. Ft. / 5.12 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		re Drop	Flow Rate		Pressure Drop		Flow Rate		Pressure Drop		e Drop
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	:	kPa
76.9	4.9	13.4	39.9	51.3	3.2	5.9	17.8	38.5	2.4	3.4	1	10.1
								Ť				
Flo	ow GPM (Boi	ler)	Temp	o. Rise (°F) (Bo	Rise (°F) (Boiler**)			uiv. Ft.)	Air In	Air Inlet Length (Equiv. Ft.)		
Min		Max	Min		Max	Min		Max	Min			Max
38.5		76.9	20		40	F:	actory Suppl	ied	0			

^{**} 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
2329	8803	1553	5869	1164	4402	932	3521	776	2934	665	2515

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Rate	Pressure Drop Flow Rate		Rate	Pressure Drop			
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
61.1	3.9	8.4	25.2	81.3	5.1	14.9	44.6	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 800

Category IV Appliance

(see Installation and Operation Manual for venting information)



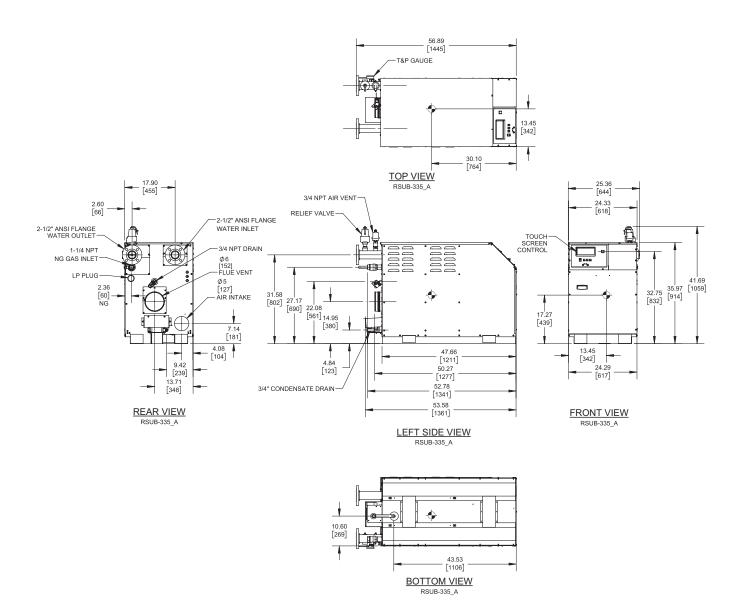
Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches

INDOOR UNIT



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	999,000 / 292.77 kW	Boiler HP	28.65
Output BTU/hr.	959,040 / 281.067 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	607.28 lbs / 275.46 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 1" set @ 50 psi	
Pump contactor strongly recommended for	water heater applications.	Relief Valve (WW)	1" x 1" set @ 125 psi

A.S.M.E.

ASME Sect IV Fire Side	75.4 Sq. Ft. / 7.00 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	8.1 gal. / 30.66 Liters
ASME Sect IV Water Side	68.24 Sq. Ft. / 6.34 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			
	ow ate	Pressur	e Drop	Flow Rate		Pressu	re Drop		ow ate	I Pressure Dron		
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	
95.9	6.1	16.2	48.3	64.0	4.0	7.2	21.5	48.0	3.0	4.1	12.2	
Flo	ow GPM (Bo	oiler)	Temp	. Rise (°F)	(Boiler**)	Vent	Length ((Equiv. Ft.)	Ft.) Air Inlet Length (Equ		(Equiv. Ft.)	
Min		Max	Min		Max	Min		Max	Min		Max	
48.0		95.9	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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
2908	10993	1939	7329	1454	5497	1163	4397	969	3664	831	3141

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Rate	Pressure Drop		Pressure Drop Flow Rate		Pressur	re Drop	
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
73.4	4.6	9.5	28.3	97.9	6.2	16.8	50.3	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 1000

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

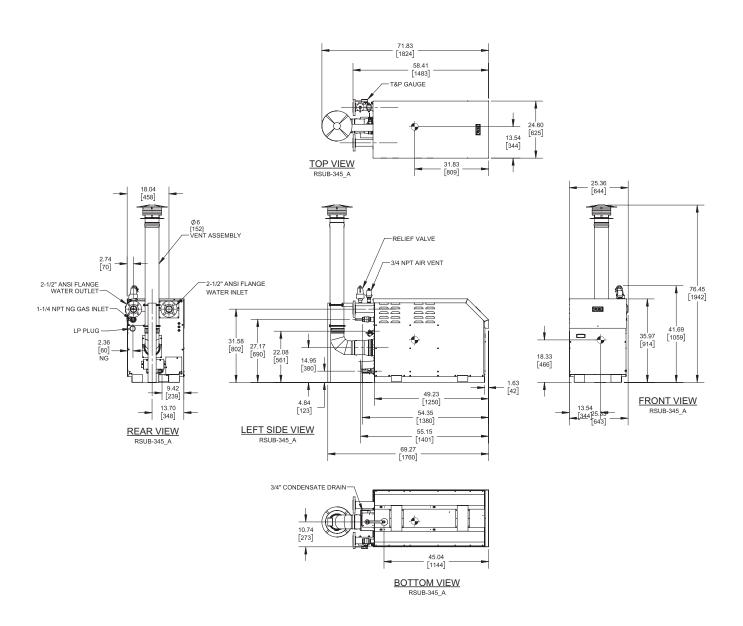


Category IV appliance

(see Installation and Operation Manual for venting information)

CODE OPTIONS

FIRMWARE W/REMOTE CSD-1 TEST MANUAL RESET LWCO High and Low Gas Pressure Switches



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

Fuel Type	Natural/Propane Gas	Boiler FLA	12.0*
Input BTU/hr.	999,000 / 292.77 kW	Boiler HP	28.65
Output BTU/hr.	959,040 / 281.067 kW	Min. Gas Pressure Required	4"W.C.
Electrical Requirements	120 VAC/60 Hz/1PH	Max. Gas Pressure Allowed	14" W.C.
		Operating Weight	641.63 lbs / 291.04 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 1" set @ 50		
Pump contactor strongly recommended for water heater applications.		Relief Valve (WW)	1" x 1" set @ 125 psi	

A.S.M.E.

ASME Sect IV Fire Side	75.4 Sq. Ft. / 7.00 Sq. M.	Design Data	Max. 160 psig & 210°F
Htg Surface		Water Volume	8.1 gal. / 30.66 Liters
ASME Sect IV Water Side	68.24 Sq. Ft. / 6.34 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		re Drop	Flow Rate		Pressure Drop		Flo Ra	I Pressure Dror		эр	
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft		kPa
95.9	6.1	16.2	48.3	64.0	4.0	7.2	21.5	48.0	3.0	4.1		12.2
								·			•	
Fl	ow GPM (Boi	ow GPM (Boiler) Temp. Rise (°F) (B		se (°F) (Boiler**) Vent Length (Equiv			quiv. Ft.)	uiv. Ft.) Air Inlet Length (Equiv. Ft.)			Ft.)	
Min		Max	Min		Max	Min		Max	Min		Max	x
48.0		95.9	20		40	F	actory Supr	olied	ed 0			

^{**} 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℃	80°F	44°C	100°F	56°C	120°F	67°C	140°F	78°C
2908	10993	1939	7329	1454	5497	1163	4397	969	3664	831	3141

Water Heater Min Flow Rates

	Normal (4	to 12) gpg		Hard (12 to 15) gpg				
Flow	Rate	Pressur	Pressure Drop Flow Rate Pressu		re Drop			
gpm	L/s	Ft	kPa	gpm	L/s	Ft	kPa	
73.4	4.6	9.5	28.3	97.9	6.2	16.8	50.3	

REP FIRM

SUBMITTED BY

JOB NAME

ARCHITECT

ENGINEER

CONTRACTOR

DATE

TORUS 1000

Category II or Category IV Appliance

(see Installation and Operation Manual for venting information)

