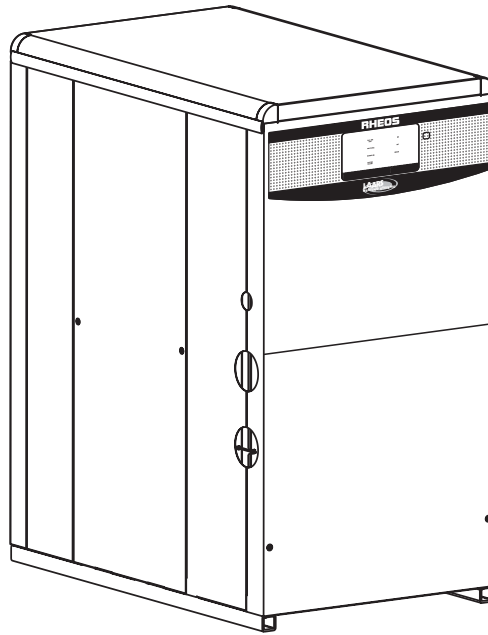


RHEOS™



Boiler and Water Heater

RHCH	Hydronic Boiler
RHCV	Volume Water Heater

Submittal Data **LAARS** Heating Systems

Specifications

Model (Size)	1200		1600		2000		2400	
Input, High Fire	1,200,000 BTU/h	352 kW	1,600,000 BTU/h	469 kW	2,000,000 BTU/h	586 kW	2,400,000 BTU/h	703 kW
Output, High Fire	1,044,000 BTU/h	306 kW	1,392,000 BTU/h	408 kW	1,740,000 BTU/h	510 kW	2,088,000 BTU/h	612 kW
Input, Low Fire	600,000 BTU/h	176 kW	800,000 BTU/h	234 kW	1,000,000 BTU/h	293 kW	1,200,000 BTU/h	352 kW
Output, Low Fire	522,000 BTU/h	153 kW	696,000 BTU/h	204 kW	870,000 BTU/h	255 kW	1,044,000 BTU/h	306 kW
Vent Size (Cat. IV)	6"	15 cm	6"	15 cm	7"	18 cm	10"	25 cm
Combustion Air Size	6"	15 cm	8"	20 cm	8"	20 cm	8"	20 cm
Electrical Req's	120V / single phase / 20A		120V / single phase / 20A		120V / single phase / 20A		120V / single phase / 20A	
Shipping Weight	1220 lbs.	554 kg	1265 lbs.	574 kg	1295 lbs.	588 kg	1350 lbs	613 kg

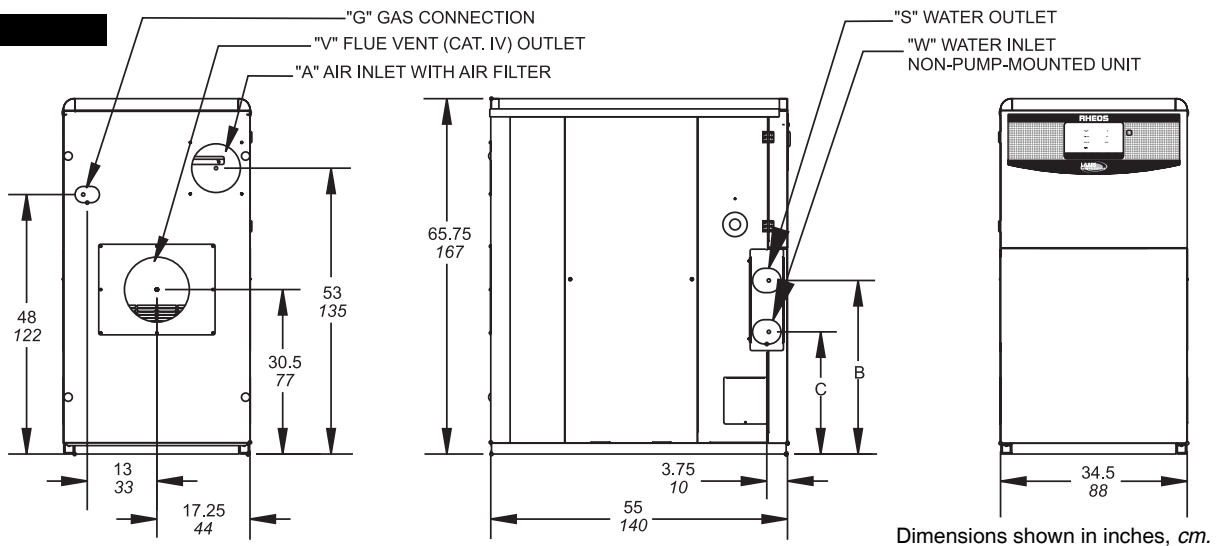
Standard Equipment

- Water flow switch
- Low water cutoff with test light and manual reset button
- Manual reset high limit
- ASME CSD-1
- Manual firing valve
- Leak test valve
- High gas pressure switch
- Modulation capabilities down to 50% of full fire
- ASME 160 lb. w.p. heat exchanger
- Less than 10ppm NOx
- Low gas pressure switch
- Air pressure switch
- Pump time delay
- Low-fire start time delay
- 75 psi pressure relief valve (RHCH)
- 125 psi pressure relief valve (RHCV)
- Temperature and pressure gauge
- Indicator/status lights for: Power On, Call for Heat; Pre-Purge; Burner On; Ignition Failure
- Pump time delay (adjustable 0.1 to 10 min.)
- Selector switch for internal or external (0-10VDC) control
- 87% Efficiency

Clearances

Appliance Surface	Clearance From Combustible Material	Suggested Service Clearance
Piping Side	1" 2.5 cm	18" 46 cm
Opposite Side	1" 2.5 cm	1" 2.5 cm
Top	1" 2.5 cm	24" 61 cm
Back	1" 2.5 cm	36" 91 cm
Front	1" 2.5 cm	36" 91 cm
Vent	Per UL1738 venting system supplier's instructions	

Dimensions



Model Vent	V Air Inlet Connection		A Inlet Connection		W Outlet Water Conn.	S Water Conn.	B		C		G - Gas Connections		
	in.	cm	in.	cm	NPT	NPT	in.	cm	in.	cm	Std&Control Packs A,C,D,F,G Nat / LP	Control Packs B&E Nat	Control Packs B&E LP
1200	6	15	6	15	2-1/2"	2-1/2"	34-1/4	87	27-3/4	70	1"	1-1/2"	1-1/2"
1600	6	15	8	20	2-1/2"	2-1/2"	34-1/4	87	25-1/2	65	1-1/2"	2"	2"
2000	7	18	8	20	3"	3"	34-1/4	87	24-3/4	63	1-1/2"	2"	1"
2400	10	25	8	20	3"	3"	32	81	22-1/2	57	1-1/2"	2"	2"

RHCH (Boiler)

Water Flow Requirements

Model Size	Temperature Rise in Degrees											
	20°F		11°C		25°F		14°C		30°F		17°C	
	Flow gpm	H/L feet	Flow lpm	H/L m	Flow gpm	H/L feet	Flow lpm	H/L m	Flow gpm	H/L feet	Flow lpm	H/L m
1200	104	18	394	5.5	84	12	318	3.7	70	8.0	265	2.4
1600	139	22	527	6.7	111	14	422	4.3	93	9.7	351	3.0
2000	174	20	659	6.1	139	13	527	4.0	116	8.8	439	2.7
2400	209	18	790	5.5	167	12	632	3.7	139	8.0	527	2.4

NOTE: Maximum temperature rise is 30°F (17°C), as shown. Headloss is for boiler's heat exchanger only.

RHCV (Water Heater)

Model Size	Hard Water						Normal Water						Soft Water					
	Flow gpm	H/L feet	Temp Rise °F	Flow lpm	H/L m	Temp Rise °C	Flow gpm	H/L feet	Temp Rise °F	Flow lpm	H/L m	Temp Rise °C	Flow gpm	H/L feet	Temp Rise °F	Flow lpm	H/L m	Temp Rise °C
1200	104	18	20	395	5.5	11	84	12	25	316	3.7	14	70	8.0	30	264	2.4	17
1600	164	29	17	620	8.8	9	133	20	21	502	6.1	12	90	8.9	31	340	2.7	17
2000	183	22	19	693	6.7	11	151	15	23	573	4.6	13	99	6.6	35	376	2.0	19
2400	209	18	20	791	5.5	11	167	12	25	632	3.7	14	139	8.0	30	527	2.4	17

NOTE: Soft water: 1 to 7.5 grains per gallon. Normal water: 7.6 to 17 grains per gallon. Hard water: More than 17 grains per gallon.

Recovery Table

GPH L/h Delivered
REQUIRED WATER TEMPERATURE RISE °F / °C

Model Size	40°F 22°C	50°F 28°C	60°F 33°C	70°F 39°C	80°F 44°C	90°F 50°C	100°F 56°C	120°F 67°C	140°F 78°C
	GPH L/h	GPH L/h	GPH L/h	GPH L/h	GPH L/h	GPH L/h	GPH L/h	GPH L/h	GPH L/h
1200	3133 11843	2507 9476	2089 7896	1790 6766	1567 5923	1393 5266	1253 4736	1044 3946	895 3383
1600	4178 15793	3342 12633	2785 10527	2387 9023	2089 7896	1857 7019	1671 6316	1393 5266	1194 4513
2000	5222 19739	4178 15793	3481 13158	2984 11280	2611 9870	2321 8773	2089 7896	1741 6581	1492 5640
2400	6267 23689	5013 18949	4178 15793	3581 13536	3133 11843	2785 10527	2507 9476	2089 7896	1790 6766



Waterpik Technologies, Inc.

6000 Condor Drive, Moorpark, CA 93021 • 805.529.2000 • FAX 805.529.5934

20 Industrial Way, Rochester, NH 03867 • 603.335.6300 • FAX 603.335.3355

480 S. Service Road West, Oakville, Ontario, Canada L6K 2H4 • 905.844.8233 • FAX 905.844.2635

www.laars.com

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