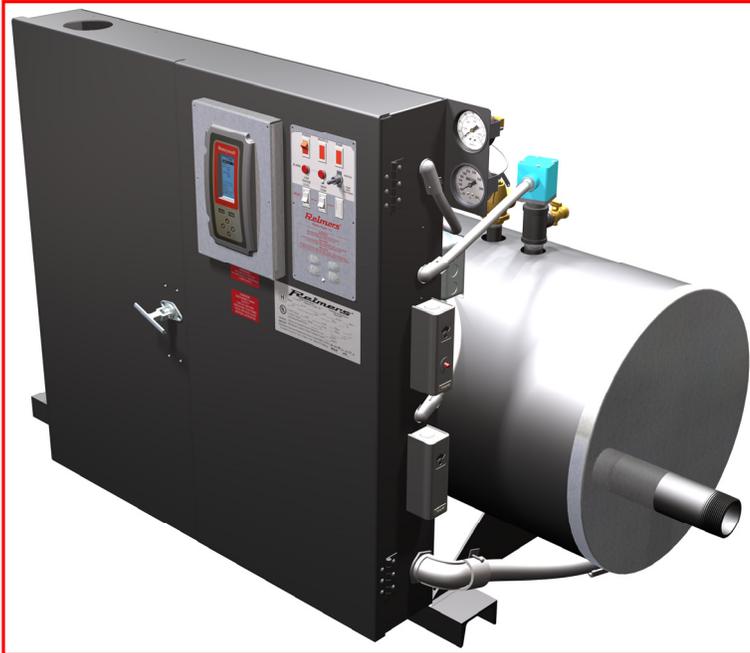


HLR120 – HLR180 Hot Water Boiler Series



Features

- Maximum pressure 100psi
- Maximum temperature 250°F
- All boilers are manufactured in accordance with the requirements of the A.S.M.E. Boiler and Pressure Vessel Code and A.S.M.E CSD-1. Each boiler bears the National Board Stamp "H".
- Shell fiberglass insulation thickness minimum 2"
- Power range 120kW - 180kW with up to 6 heating stages, depending on model
- Heating stages controlled by Honeywell T775 series boiler controller

Applications:

- Space heating
- Tank heating
- Water source heat pumps
- Swimming pools
- Bio-Diesel reactors
- De-icing

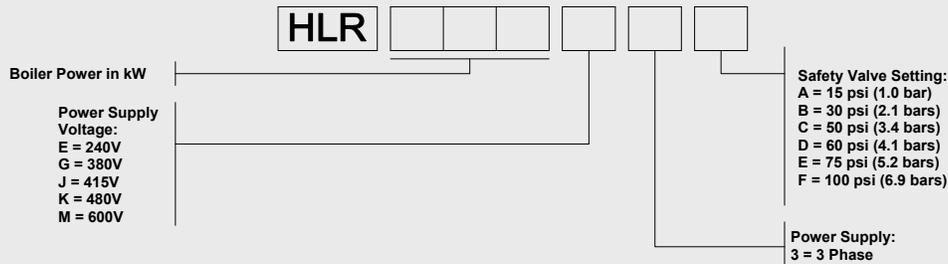
Standard equipment of each boiler includes: One (1) low water cutoff control with manual reset, one (1) high temperature cutoff control with automatic reset, one (1) high temperature cutoff control with manual reset, Honeywell T775 series boiler controller, pressure and temperature gauge and safety valve.

HLR120 – HLR180 Models

MODEL	Capacity		NO. OF STEPS	VOLTS* 3ph 50/60Hz	PHASE	INLET & OUTLET SIZE	20° F RISE WATER FLOW G.P.M.	WATER CAP. GAL. BOILER	DIMENSIONS W-L-H INCHES	APPROX. SHIPPING WEIGHT LBS.
	BTU/H	KW								
HLR-120	409,440	120	4	240/380/415/480/600	3	2-1/2"	42.6	33	30.90	910
HLR-150	511,800	150	5	240/380/415/480/600	3	2-1/2"	53.3	33	63.1	930
HLR-180	614,160	180	6	240/380/415/480/600	3	2-1/2"	64	33	38.5	940

* Each boiler model requires two (2) power supplies: Heating power and control voltage. Nominal control voltage is 120V AC. Boiler models rated for 380V and 415V are equipped with control voltage transformers that require 220/240V applied to their primary side in order to provide the 120V AC control voltage to the boiler. As an option, all boiler models can be equipped with control voltage transformers so that only the heating power supply needs to be connected to the boiler.

Model Number Key



Example: HLR180K3B = HLR-Series hot water boiler, 180kW heating power, power supply 480V, 3ph, safety valve set to 30psi.

Construction

Electrical Enclosure:
12gauge carbon steel
black painted

Water Outlet:
2-1/2" NPT

Shell Wrapper:
16gauge carbon steel
black painted

Heating Elements:
304 stainless steel sheathing
standard; INCOLOY[®] sheathing
optional
(Order #OPT-INCOLOY[®]);
2" class 150# carbon steel
flanges

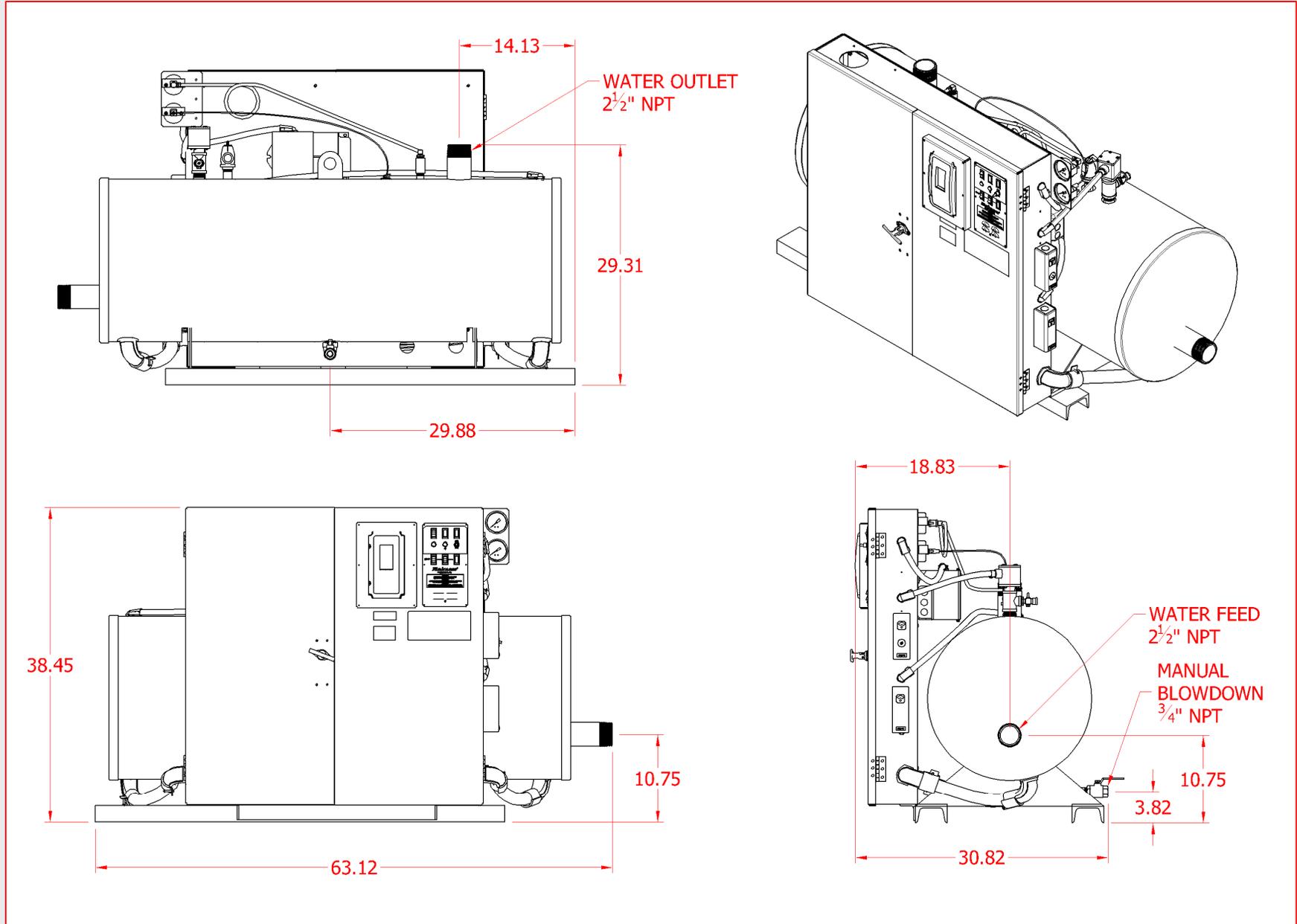


Pressure Vessel:
Manufactured from low carbon
steel to comply under the "H"
symbol of the A.S.M.E. Code and
are individually inspected.

Shell Insulation:
Fiberglass
Minimum 2" thick

Water Inlet:
2-1/2" NPT

Overall Dimensions (approximate)



Detailed Technical Specifications

Boiler Controller

- Max. boiler operating temperature: 240.0°F (115.6°C)
- One sensor operation – sensor A controls boiler temperature
- One sensor operation with outdoors reset – sensor A in boiler, sensor B outdoor sensor
- Two sensor operation (differential temperature control) – sensor A in boiler, sensor C in return line
- Two sensor operation (differential temperature control) – sensor A in boiler, sensor C in return line, sensor B outdoors sensor
- Set point time scheduling with two events per day possible

Thermal and Mechanical Specifications

Model	Output Capacity	Inlet and Outlet Size	20° F Rise Water Flow	Water Cap. (Gal.)	Dimensions L x H x W	Approx. Shipping Weight
	BTU/H (kW)		gal/min (L/min)	gal (L)	in (mm)	lbs (kg)
HLR-120	409,440	2-1/2"	42.6	33	63.1 x 38.5 x 30.9 (1603 x 978 x 785)	910
HLR-150	511,800	2-1/2"	53.3	33	63.1 x 38.5 x 30.9 (1603 x 978 x 785)	930
HLR-180	614,160	2-1/2"	64	33	63.1 x 38.5 x 30.9 (1603 x 978 x 785)	940

Electrical Specifications

Model	Boiler Models Equipped with 100W/in ² Watt Density Heating Elements							
	Voltage		Amps	No. and Size of Elements	No. and Sizes of Contactors	No. and Sizes of Fuses	Gage of Power Entry Wires	No. and Size of Power Entry Wire Conduits
	Volts	Phase	A				AWG/MCM	
HLR-120	240	3	288.7	4 x 30kW	4 x 93A	12 x 90A, 250V	3 x 500MCM	1 x 3"
	380	3	182.3		4 x 75A	12 x 60A, 600V	3 x 4/0AWG	1 x 2-1/2"
	415	3	166.9		4 x 50A	12 x 50A, 600V	3 x 4/0AWG	1 x 2-1/2"
	480	3	144.3		4 x 50A	12 x 50A, 600V	3 x 3/0AWG	1 x 2"
	600	3	115.5		4 x 50A	12 x 40A, 600V	3 x 3/0AWG	1 x 2"
HLR-150	240	3	360.8	5 x 30kW	5 x 93A	15 x 90A, 250V	6 x 4/0AWG	1 x 2-1/2"
	380	3	227.9		5 x 75A	15 x 60A, 600V	3 x 300MCM	1 x 2-1/2"
	415	3	208.7		5 x 50A	15 x 50A, 600V	3 x 300MCM	1 x 2-1/2"
	480	3	180.4		5 x 50A	15 x 50A, 600V	3 x 4/0AWG	1 x 2-1/2"
	600	3	144.3		5 x 50A	15 x 40A, 600V	3 x 3/0AWG	1 x 2"
HLR-180	240	3	433.0	6 x 30kW	6 x 93A	18 x 90A, 250V	6 x 300MCM	2 x 2-1/2"
	380	3	273.5		6 x 75A	18 x 60A, 600V	3 x 500MCM	1 x 3"
	415	3	250.4		6 x 50A	18 x 50A, 600V	3 x 400MCM	1 x 3"
	480	3	216.5		6 x 50A	18 x 50A, 600V	3 x 4/0AWG	1 x 2-1/2"
	600	3	173.2		6 x 50A	18 x 40A, 600V	3 x 4/0AWG	1 x 2-1/2"