ISO 9001:2015 CERTIFIED

Hazloc Heaters™

Safe heat when you need it!

c UL us

Neptune

WCH1

Washdown/Corrosion Resistant Unit Heater For Severe-Duty Locations

www.HazlocHeaters.com

Hazloc Heaters™ *is a manufacturer of industrial-grade unit heaters suitable for hazardous and severe-duty locations.*

The **WCH1 Neptune** series of washdown/corrosion resistant electric air heaters are designed to meet the most demanding requirements of industry. The harsh operating conditions require heating equipment that is safe, reliable, dependable, and available when you need it. **WCH1** unit heaters are designed to provide primary or supplementary heating of people or equipment in non-hazardous environments where moisture and corrosion exist. The watertight construction can even be hosed down without disconnecting the heater.

Designed for severe-duty locations!

All ***Hazloc Heaters™*** **WCH1** models are **designed to meet U.S. and Canadian certification standards.** The two housing sizes of WCH1 heaters are available in **78 model choices** of voltage and heat output combinations to meet your specific requirements. An optional secondary manual reset overtemperature cutout is also available to meet **U.S. Coast Guard** requirements.

The rugged and versatile **WCH1** heater incorporates high quality stainless steel tubular elements, high performance fan and motor assembly, sturdy 16 GA type 304 stainless steel housing and inlet/outlet grilles, and a powder-coated aluminum fan blade. It also includes a large non-metallic control enclosure that won't rust and which also meets NEMA 4X hose-down requirements.

Applications!

WCH1 heaters are suitable for a wide variety of applications that include, but are not limited to, wastewater treatment plants, power generation stations, cement plants, dairies, steel mills and foundries, food processing plants, car washes, mining, as well as marine and offshore applications.

Rugged design, but easily maintained!

WCH1 heaters are designed for industrial applications with all features being heavy-duty to meet your most demanding environments and long-life expectations. Even with heavy-gauge stainless steel construction used throughout the heater, it does not inhibit maintenance of the product since it has been designed for easy installation and field servicing. All components and motor are factory-wired to a single terminal block for field wiring, eliminating the chance for field error and reducing installation costs.

Maximum durability… rugged finned tubular elements!

The **WCH1 Neptune** series of heaters uses industrial grade, type 316 stainless steel tubular elements with stainless steel fins for **maximum durability, resistance to corrosion, and longer life** in your demanding applications. For even greater resistance to corrosion, Monel finned tubular elements and epoxy painted stainless steel parts are also available as options.

Dedicated to Performance and Reliability!

Industrial grade, type 316 stainless steel tubular elements with stainless steel fins. Monel elements available for added corrosion protection

Watertight construction can be hosed down without disconnecting the heater

Type 304 stainless steel swivel mounting bracket can be used either for wall or ceiling mounting

Totally enclosed, epoxy coated, motor with permanently lubricated ball bearings for longer life

Type 304, 16-gauge stainless steel housing construction for durability. Optional epoxy painted stainless steel parts available

Powder coated aluminum fan blade suitable for corrosive salt spray environments

Adjustable, type 304 stainless steel, louvered outlet grille can be rotated 90° to direct airflow up, down, left or right

Type 304, heavy gauge, stainless steel rear grille protects against accidental contact with fan blade

NEMA 4X non-metallic enclosure houses element terminals & built-in controls

7/8" conduit opening for control wires

Optional red, "heater on" pilot light

Conduit opening for power wire

Line Amps	Power Conduit Opening - in. (mm)
0 - 16A	0.875 (22.2)
16.1 - 44A	1.093 (27.8)
44.1 - 48A	1.360 (34.5)

Optional door interlocking disconnect switch with lockout feature

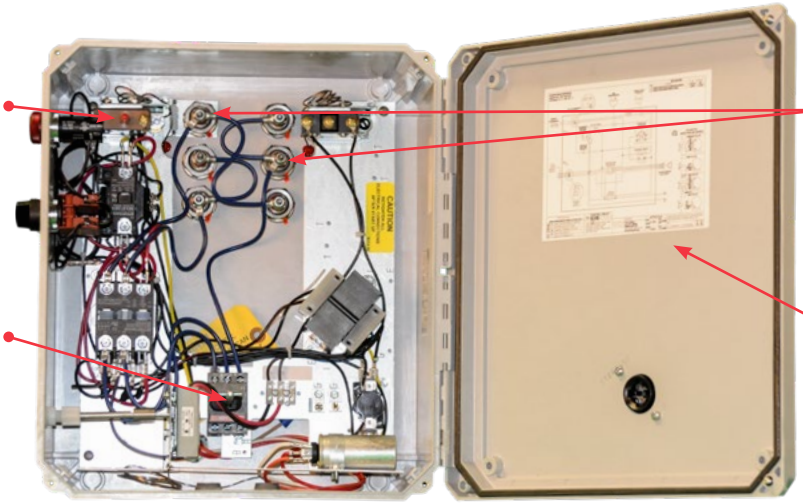
Optional 3-position selector switch (On-Standby-Fan)

Optional room thermostat

NEMA 4X Enclosure

Optional secondary manual reset overtemperature cutout available

Built-in controls include automatic reset overtemperature cutout, fan delay relay, controlling contactor, transformer for 24 VAC control circuit (optional 120 VAC available), terminal block for field wiring and a separate motor contactor (when required)



Element terminals

Wiring diagram label on inside enclosure lid for easy reference

WCH1 Model Coding

Heater Model Code & Option Codes

Model Codes							Option Codes	
WCH	1	-	100	-	480	3	60	VDMT etc.

Option codes are stamped on data plate in alphabetical order

Model Series

Generation
For major revisions

Power Output		
2 kW	020	Small cabinet size
3 kW	030	Small cabinet size
5 kW	050	Small cabinet size
7.5 kW	075	Small cabinet size
9 kW	090	Small cabinet size
10 kW	100	Small cabinet size
12 kW	120	Small cabinet size
12.5 kW	125	Large cabinet size
15 kW	150	Large cabinet size
20 kW	200	Large cabinet size
25 kW	250	Large cabinet size
30 kW	300	Large cabinet size
35 kW	350	Large cabinet size
38.4 kW	384	Large cabinet size
47 kW	470	Large cabinet size

Heater Line Voltage	
120 Volts	120
208 Volts	208
240 Volts	240
277 Volts	277
347 Volts	347
480 Volts	480
600 Volts	600

Replaces standard 24VAC transformer

Housing, inlet/outlet grilles, mounting bracket and hardware (longer lead-time required)

Longer lead-time required

Required for U.S. Coast Guard approved design

Adjustment knob has "warmer" indicator label

Heater installs from ceiling using four 3/8 - 16 customer supplied threaded rods

Factory Built-in Option Codes	
V	120VAC control circuit
C	Yellow epoxy/polyester painted stainless steel parts
D	Disconnect switch
E	Monel finned tubular elements
M	Manual high limit (secondary)
L	Pilot light (heater on)
S	3-position selector switch (On-Standby-Fan)
T*	Thermostat, bulb (40 to 100°F / 5 to 38°C)
B	Delete swivel mounting bracket

Frequency	
60	60Hz

Phase	
1	1 Phase
3	3 Phase

* Thermostat setting should not exceed a room temperature of 80°F (26.7°C).

Model Code Format

When requesting a quote or ordering refer to Page 7 and then please follow the **"Model Code"** format above.

Example:

Model Code: **WCH1-100-480360 VDMT**

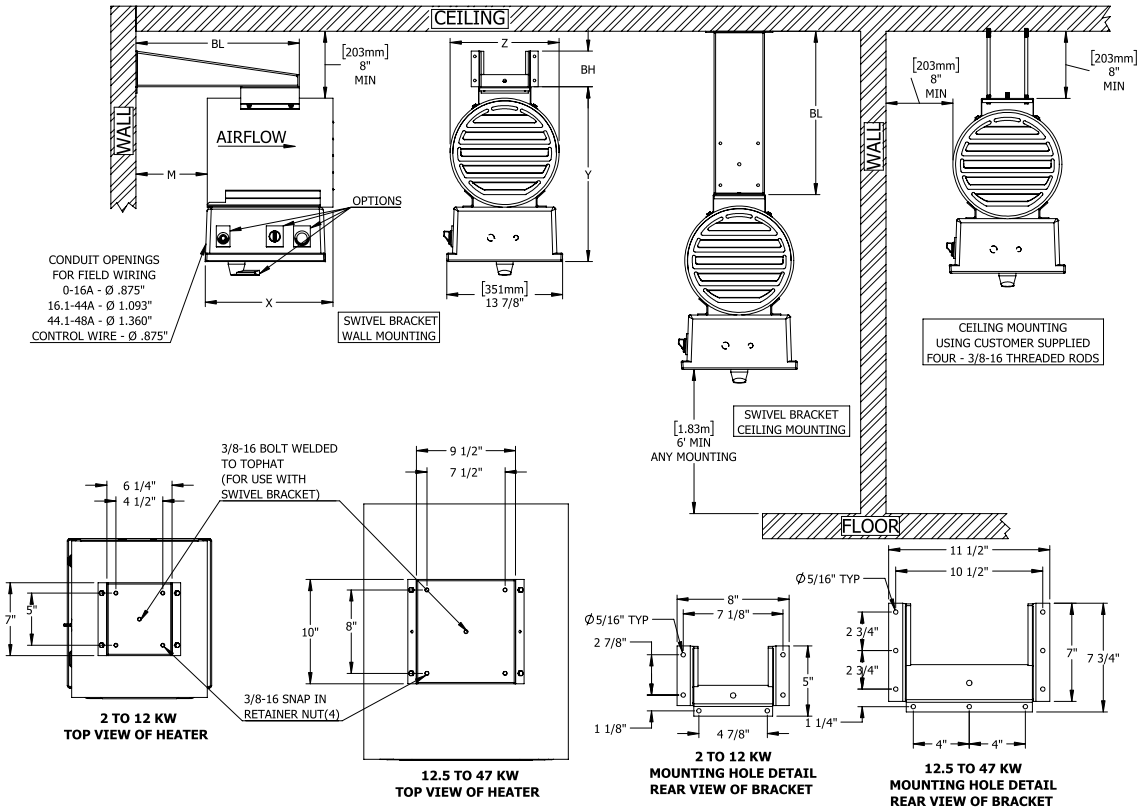
WCH1 Specifications by Model Size

Dimensions, Airflows and Weights		kW		
		2 to 7.5	9 to 12	12.5 to 47
Overall heater dimensions	"X" in. (mm)	15-1/2 (394)	15-1/2 (394)	26 (660)
	"Y" in. (mm)	21-1/2 (546)	21-1/2 (546)	28 (711)
	"Z" in. (mm)	13 (330)	13 (330)	20 (508)
Mounting dimensions	"BH" in. (mm)	4-1/4 (108)	4-1/4 (108)	7-1/8 (181)
	"BL" in. (mm)	19-1/2 (495)	19-1/2 (495)	22-1/4 (565)
	"M" in. (mm)	8-1/2 (216)	8-1/2 (216)	3-1/4 (83)
Airflow characteristics	Air volume cfm (m^3/hr)	700 (1189)	1450 (2463)	2400 (4077)
	Air throw ft. (m)	26 (8)	43 (13)	50 (15)
	Outlet air velocity fpm (m/s)	760 (4)	1575 (8)	1200 (6)
Approximate weight	Net lbs (kg)	56 (25)	56 (25)	115 (52)
	Shipping lbs (kg)	70 (32)	70 (32)	130 (60)
Shipping package dimensions	in. (mm)	23 x 17 x 27 (584 x 432 x 686)	23 x 17 x 27 (584 x 432 x 686)	36 x 20 x 30 (914 x 508 x 762)

Note: Heaters are packed inside cardboard boxes with protective packing material

Recommended Maximum Mounting Height From Floor ft. (m)			
2 to 5 kW	7.5 to 10 kW	12 to 20 kW	25 to 47 kW
10 (3)	15 (4.6)	20 (6.1)	25 (7.6)

WCH1 Physical Dimensions



WCH1 General Specifications

Approvals	Certification	cULus - Certified to Canadian and U.S. standards.
	Offshore	Meets U.S Coast Guard requirements when secondary manual reset overtemperature cutout, option code (M), is ordered.
Cabinet	Housing material	16-gauge (0.060 in.) (1.5 mm) type 304 stainless steel. For yellow epoxy/polyester powder coated stainless steel, select option code (C).
	Inlet grille	16-gauge (0.060 in.) (1.5 mm) type 304 stainless steel. Protects against accidental contact with fan blade.
	Outlet grille	Adjustable 16-gauge (0.060 in.) (1.5 mm) type 304 stainless steel louvers can be rotated 90° to direct airflow up, down, left or right.
	Fasteners	Stainless steel for corrosion resistance.
	Enclosure	Non-metallic. Houses element terminals and built-in controls that are all connected to the same branch circuit. Single terminal block for field wiring. Meets NEMA 4X hose-down requirements.
	Mounting bolt/holes	One 3/8-16 bolt for use with swivel wall/ceiling mounting bracket and four 3/8-16 diameter snap-in retainer nuts for field-supplied threaded rod mounting option. All are located on the top face of heater.
	Mounting bracket	Heater comes complete with a type 304 stainless steel swivel mounting bracket which can be used either for wall or ceiling mounting. If heater is to be installed from ceiling using four field-supplied 3/8-16 threaded rods, select option code (B) to delete factory swivel mounting bracket.
Motor/Fan	Motor type	1625 rpm, totally enclosed, epoxy coated, with permanently lubricated ball bearings.
	Fan blade	Powder-coated, aluminum suitable for corrosive salt spray environments.
Heating Elements	Material	Industrial grade, type 316 stainless steel tubular elements with stainless steel fins. For added corrosion protection select Monel finned tubular elements option code (E).
Protection	Temperature high limits	One automatic reset overtemperature cutout. Secondary manual reset overtemperature cutout, option code (M), is available to meet U.S. Coast Guard requirements.
Controls	Control circuit	Fan delay relay, controlling contactor, transformer for 24VAC control, terminal block for field wiring and a separate motor contactor (when required). For 120 VAC control circuit select option code (V).
Factory Built-in Options	120 VAC control circuit	Replaces 24VAC control circuit. Select option code (V).
	Epoxy paint	Yellow epoxy/polyester painted stainless steel housing, inlet/outlet grilles, and mounting bracket for additional corrosion protection. Select option code (C).
	Monel elements	For added corrosion protection. Replaces stainless steel elements. Select option code (E).
	3-Position selector switch	Position markings: On-Standby-Fan. Select option code (S).
	Room thermostat	Knob with "Warmer" and arrow indicating direction. Range: 40 to 100°F (5 to 38°C). Select option code (T).
	Disconnect switch	Main supply power disconnect located on door of non-metallic control enclosure. Select option code (D).
	Pilot light	Built-in “Heater on” red pilot light. Select option code (L).
	Secondary high limit	Manual reset overtemperature cutout. Required to meet U.S. Coast Guard requirements. Select option code (M).
	Delete swivel mounting bracket	Heater installs from the ceiling with field-supplied 3/8-16 threaded rods. Select option code (B).
Operating Limits	Ambient temperature	Operating and Storage: -22°F to 80°F (-30°C to 26.7°C). These air heaters are designed for comfort heating and should not be used in ambient temperatures exceeding the maximum limit.

TF115-001 Remote Room Thermostat

Part #: 1004328

1-stage, fluid filled stainless steel coil.

NEMA 4X, SPDT, resistive ratings: 25 amps @ 120-240V, 22 amps at 277V, 125VA Pilot Duty.

Temperature Adjustment Range: 40 to 110°F (4 to 43°C).

Differential: Fixed 3°F

Dimensions: 3.1" W x 6.5" H x 2.5" D (78.7mm x 165.1mm x 63.5mm)

Tamperproof: No

Thermometer: No

WCH1 Heater Performance Data

kW (btu/hr)	Line Volts	Phase Ø	Total Current A (†)	Approximate Air Temp. Rise		Motor			Model See Page 4 to complete model coding	Approximate Shipping Lead Time (Δ)
				°F	°C	HP	Volts	Phase		
2 (6824)	120	1	21	9	5	1/4	120	1	WCH1-020-120160*	2 to 3 weeks
	208		12				208		WCH1-020-208160*	
	240		11				240		WCH1-020-240160*	
	277		10				277		WCH1-020-277160*	
	347		7				347		WCH1-020-347160*	
3 (10236)	120	1	29	14	8	1/4	120	1	WCH1-030-120160*	
	208		17				208		WCH1-030-208160*	
	240		15				240		WCH1-030-240160*	
	277		13				277		WCH1-030-277160*	
	347		11				347		WCH1-030-347160*	
	480		8				480		WCH1-030-480160*	
	208	3	11	14	8	1/4	208	1	WCH1-030-208360*	
	240		10				240		WCH1-030-240360*	
	480		5				480		WCH1-030-480360*	
	600		4				600		WCH1-030-600360*	
5 (17060)	208	1	27	24	13	1/4	208	1	WCH1-050-208160*	
	240		23				240		WCH1-050-240160*	
	277		20				277		WCH1-050-277160*	
	347		17				347		WCH1-050-347160*	
	480		12				480		WCH1-050-480160*	
	208	3	16	24	13	1/4	208	1	WCH1-050-208360*	
	240		15				240		WCH1-050-240360*	
	480		8				480		WCH1-050-480360*	
	600		6				600		WCH1-050-600360*	
7.5 (25590)	208	1	39	35	19	1/4	208	1	WCH1-075-208160*	
	240		34				240		WCH1-075-240160*	
	277		29				277		WCH1-075-277160*	
	347		24				347		WCH1-075-347160*	
	480		17				480		WCH1-075-480160*	
	208	3	23	35	19	1/4	208	1	WCH1-075-208360*	
	240		21				240		WCH1-075-240360*	
	480		11				480		WCH1-075-480360*	
	600		9				600		WCH1-075-600360*	
9 (30709)	208	1	46	20	11	1/4	208	1	WCH1-090-208160*	
	240		40				240		WCH1-090-240160*	
	277		35				277		WCH1-090-277160*	
	347		29				347		WCH1-090-347160*	
	480		20				480		WCH1-090-480160*	
	208	3	28	20	11	1/4	208	1	WCH1-090-208360*	
	240		24				240		WCH1-090-240360*	
	480		12				480		WCH1-090-480360*	
	600		10				600		WCH1-090-600360*	
10 (34120)	240	1	44	22	12	1/4	240	1	WCH1-100-240160*	
	277		39				277		WCH1-100-277160*	
	347		32				347		WCH1-100-347160*	
	480		22				480		WCH1-100-480160*	
	208	3	30	22	12	1/4	208	1	WCH1-100-208360*	
	240		27				240		WCH1-100-240360*	
	480		14				480		WCH1-100-480360*	
	600		11				600		WCH1-100-600360*	
12 (40946)	277	1	46	26	14	1/4	277	1	WCH1-120-277160*	
	347		38				347		WCH1-120-347160*	
	480		27				480		WCH1-120-480160*	
	208	3	36	26	14	1/4	208	1	WCH1-120-208360*	
	240		32				240		WCH1-120-240360*	
	480		16				480		WCH1-120-480360*	
	600		13				600		WCH1-120-600360*	
12.5 (42652)	347	1	39	17	9	1/4	347	1	WCH1-125-347160*	
	208	3	37				208		WCH1-125-208360*	
	240		33				240		WCH1-125-240360*	
	480		17				480		WCH1-125-480360*	
	600		14				600		WCH1-125-600360*	
15 (51180)	347	1	47	21	12	1/4	347	1	WCH1-150-347160*	
	208	3	44				208		WCH1-150-208360*	
	240		39				240		WCH1-150-240360*	
	480		20				480		WCH1-150-480360*	
	600		16				600		WCH1-150-600360*	
20 (68240)	480	3	26	28	16	1/4	480	1	WCH1-200-480360*	
	600		21				600		WCH1-200-600360*	
25 (85300)	480	3	32	35	19	1/4	480	1	WCH1-250-480360*	
	600		26				600		WCH1-250-600360*	
30 (102360)	480	3	38	42	23	1/4	480	1	WCH1-300-480360*	
	600		31				600		WCH1-300-600360*	
35 (119420)	480	3	44	48	27	1/4	480	1	WCH1-350-480360*	
	600		35				600		WCH1-350-600360*	
38.4 (131026)	480	3	48	54	30	1/4	480	1	WCH1-384-480360*	
	600		38				600		WCH1-384-600360*	
47 (160371)	600	3	47	64	36	1/4	600	1	WCH1-470-600360*	

(*) Refer to page 4 for Factory Built-in Option Codes and to complete entire model code for ordering.
(†) Total Amps = heating element amps and motor amps.
(Δ) Heaters ordered with custom options subject to longer shipping lead times.
Large quantity orders may also be subject to longer lead times.

Additional Products Available

Hazloc Heaters™ offers a wide variety of steam/hydronic air heaters, explosion-proof electric air heaters, washdown/corrosion resistant air heaters, non-hazardous area air heaters, air sensing thermostats, disconnect switches and other related accessories.

Please visit **www.HazlocHeaters.com** and click on the *Products* link.

Hazloc Heaters™ *"Safe heat when you need it!"*

Quality Mission Statement

Quality is… customers that come back, and products that don't.

Limited Warranty

Hazloc Heaters™ warrants all **WCH1** series of washdown/corrosion-resistant heaters against defects in materials and workmanship under normal conditions of use for a period of eighteen (18) months from date of purchase or twelve (12) months from date the product is first placed into service, whichever period lapses first, based on the following terms:

1. The heater must not be modified in any way.
2. The heater must be stored, installed and used only in accordance with the owner's manual and attached data plate information.
3. Replacement parts will be provided free of charge as necessary to restore any unit to normal operating condition, provided that the defective parts be returned to us freight prepaid and that the replacement parts be accepted freight collect.
4. The complete heater may be returned to our manufacturing plant for repair or replacement (at our discretion), freight charges prepaid.
5. Contamination by dirt, dust, etc. will not be considered as defects.
6. This warranty shall be limited to the actual equipment involved and, under no circumstances, shall include or extend to installation or removal costs, or to consequential damages or losses.

Hazloc Heaters™

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