

HOT H₂ SHOT

Electric Inline Water Heater



**HOT
H₂ SHOT**
INSTANTANEOUS WATER HEATER

**PROCESS
TECHNOLOGY**

HCT SPECIFICATIONS

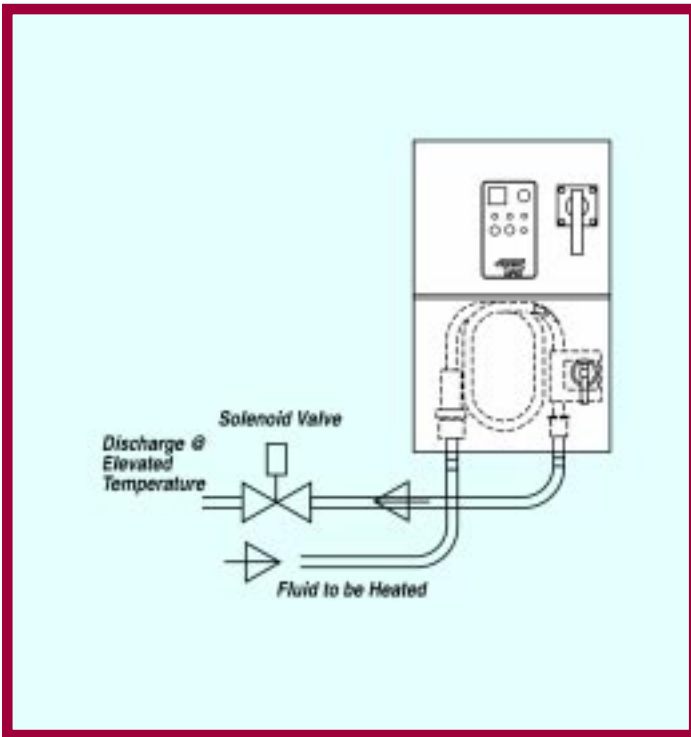
HEATER	Patented heating system with axial flow elements
SIZES	3,000 watts to 144,000 watts
VOLTAGES	208 volt to 600 volt, three phase (single phase available) Consult factory for specific wattage/voltage combinations available
TEMPERATURE CONTROL	PID microprocessor based digital thermostat
TEMPERATURE LIMIT	185° F (85° C), depending on operating conditions
TEMPERATURE ACCURACY	+ / - 1° F, depending on operating conditions
MINIMUM FLOW RATE	3-48 kW: 1 GPM (3.8 LPM), 54-144 kW: 4 GPM (15 LPM)
PRESSURE RATING	100 PSIG
EFFICIENCY	> 99%
WETTED SURFACES	Titanium elements, PFA tubing (pilot lines), stainless steel pilot line fittings, seals made of Viton®
INLET/OUTLET	3/4" MNPT
STANDARD SAFETY FEATURES	<ul style="list-style-type: none"> • EMO emergency stop button • Fluid overtemperature detection (J type thermocouple) • Element overtemperature detection (redundant bi-metallic snap switches) • Flow verification • Overcurrent protection (circuit breaker with lock out) • Control fusing (primary and secondary circuits) • Surge/Transient protection (RC and MOV networks) • Ground fault protection (standard for up to 110 amp service)
HOUSING	NEMA 12 rated, painted metal enclosure
DIMENSIONS	<ul style="list-style-type: none"> • 3-48kW: 20" (508mm) W x 8.75" (222mm) D x 32.13" (816mm) H • 54-144kW: 20" (508mm) W x 19.25" (489mm) D x 30" (762mm) H
CERTIFICATIONS	cUL (3-48kW)
OPTIONS	<ul style="list-style-type: none"> • CE compliance • Semi S2 and S3 standards • Flanged/sanitary fluid connections • High temperature models • High flow models • Multi-flow models • Stainless steel housings • RS 232, RS 485, 4-20 mA, or 0-10 V interface • Ground fault protection (54-144 kW) • Recirculating systems for indirect heating (with air cooled SSRs) • Distributive zero crossing SSRs

FEATURES and BENEFITS

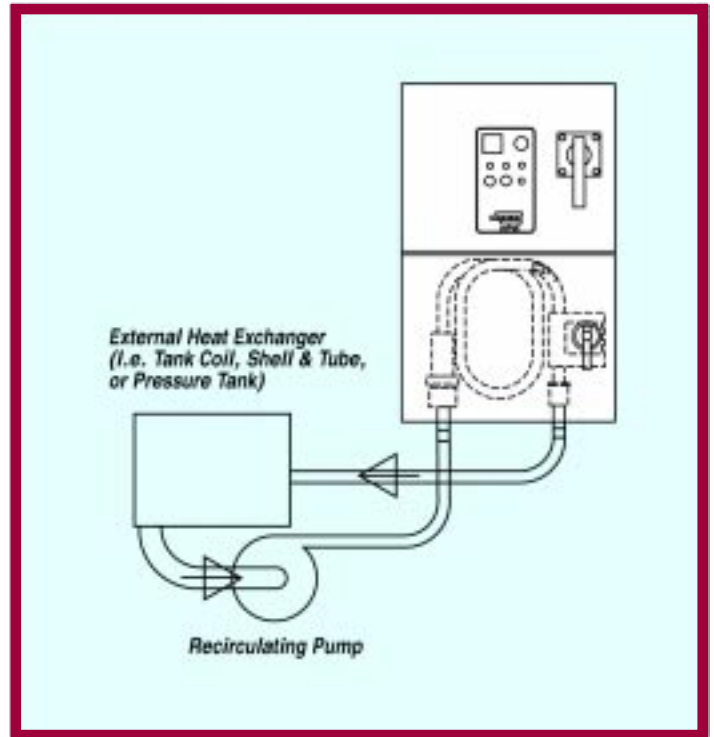
- **Hot DI Water:** Heated DI water improves cleaning effectiveness and reduces rinse time in most processes
- **Highly Efficient:** >99% efficiency means low cost of ownership (COO) and excellent return on investment (ROI)
- **Outstanding Cleanliness:** Clean performance is achieved through the use of titanium or stainless steel heating elements; no stagnant zones; no TOC growth (Detailed contamination report available upon request)
- **Patented Construction:** Axial flow element construction maximizes heat transfer and minimizes both holdup volume and residence time
- **Outstanding Temperature Responsiveness and Stability:** Process consistency improved through excellent temperature accuracy
- **Reliable:** Greatly enhanced service life achieved through the use of proven heater technology
- **Minimal Preventative Maintenance:** Long-life element designed for minimal disruption to the process
- **Rapid Installation:** Minimal facility requirements; heater is factory preset to your specifications; only power and plumbing connections required
- **Compact Configuration:** Space-conscious design minimizes footprint requirements

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APPLICATIONS

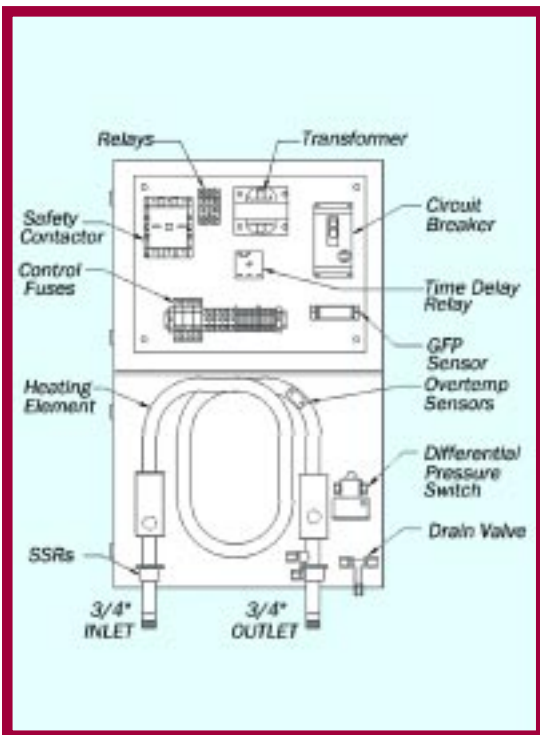


**SINGLE PASS SYSTEM
INLINE HEATING**

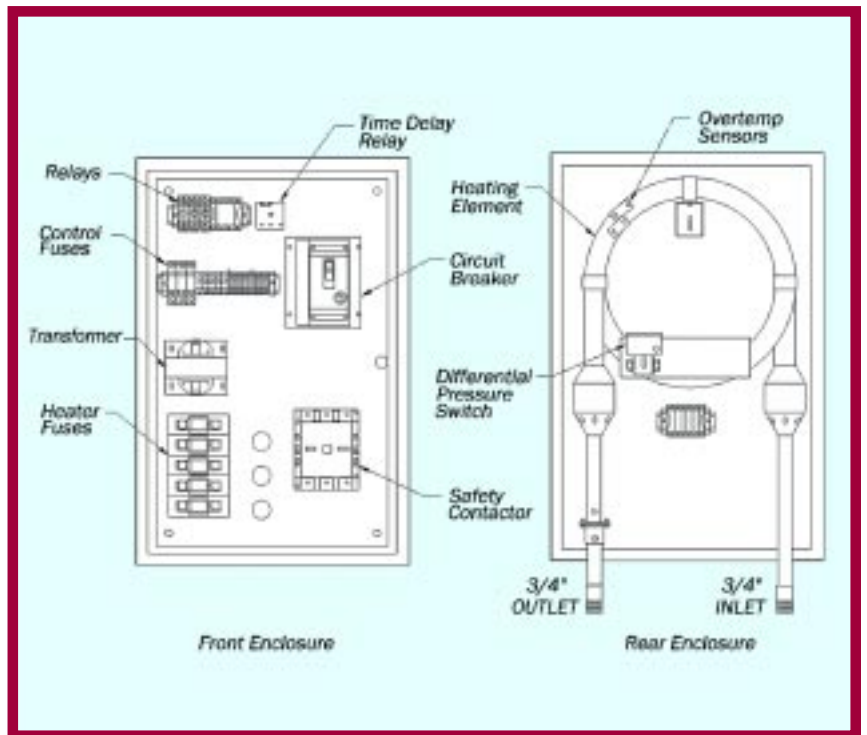


**RECIRCULATING SYSTEM
INDIRECT HEATING**

HEATER LAYOUT



3-48 kW UNIT



54-144 kW UNIT

PROCESS TECHNOLOGY

7010 Lindsay Drive • P.O. Box 660
Mentor, Ohio 44060
Phone: 440-946-9500
Fax: 440-974-9561
Eastern U.S./Canada: 800-621-1998

1991 Whitney Mesa Drive
Henderson, Nevada 89014
Phone: 702-450-7910
Fax: 702-450-7912

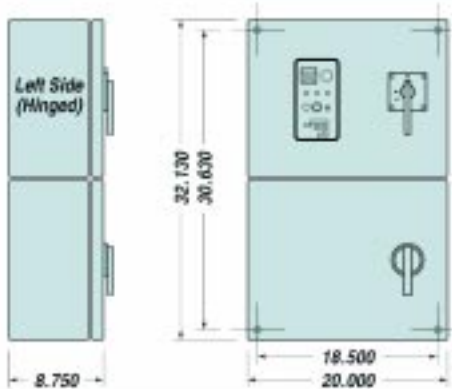
Western U.S./Canada: 800-621-1999
www.process-technology.com

MODEL NUMBERS

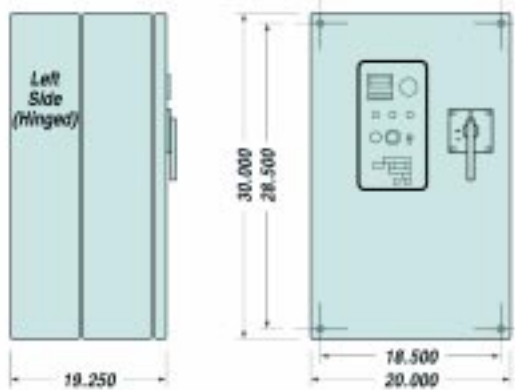
WATTS	VOLTS*	STAINLESS STEEL	TITANIUM
3000	240	HCS32-G	HCT32-G
	480	HCS34-G	HCT34-G
6000	240	HCS62-G	HCT62-G
	480	HCS64-G	HCT64-G
12000	240	HCS122-G	HCT122-G
	480	HCS124-G	HCT124-G
18000	240	HCS182-G	HCT182-G
	480	HCS184-G	HCT184-G
24000	240	HCS242-G	HCT242-G
	480	HCS244-G	HCT244-G
36000	240	HCS362-G	HCT362-G
	480	HCS364-G	HCT364-G
48000	240	N/A	N/A
	480	HCS484-G	HCT484-G
54000	240	HCS542	HCT542
	480	HCS544-G	HCT544-G
72000	240	HCS722	HCT722
	480	HCS724-G	HCT724-G
108000	240	HCS1082	HCT1082
	480	HCS1084	HCT1084
144000	240	N/A	N/A
	480	HCS1444	HCT1444

*Other voltages available upon request. CE compliant version available.

3-48 kW



54-144 kW



SIZING

To determine wattage required, use the following equation:

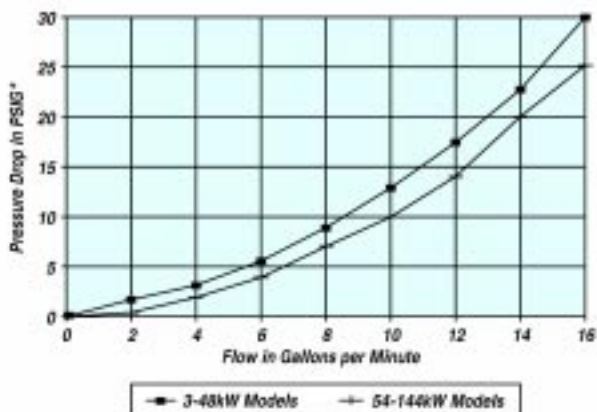
$$\text{GPM} \times \text{TEMP RISE} \times 0.147 = \text{KW REQUIRED}$$

Where GPM is gallons per minute of flow desired, temperature rise is expressed in degrees F. Round results up to select unit.

Example: $2.5 \text{ GPM} \times 95^\circ\text{F} \times 0.147 = 35 \text{ kW}$
Use 36 kW

CONSULT OUR FACTORY FOR DETAILED SIZING INFORMATION AND APPLICATION ASSISTANCE.

PRESSURE VS. FLOW



*Standard Full Flow Model.

FLOW VS. TEMP RISE

