

Heat

Wave III

Diesel Fired
**Portable
Water
Heater**



HeatWave III

Reliability, value, and simplicity drive ACSI's new Heat Wave III portable diesel fired water heater design. Heat Wave III is a full flow, non-blending, water heater. Its rugged square tubing steel frame construction and heavy-duty large diameter wheels make the Heat Wave III easy to load, unload and transport. A high efficiency heavy-duty ¾ inch schedule 40 heat exchanger enable Heat Wave III to deliver high water flow with minimal pressure drop, at 30 to 50 degrees of temperature rise. The water-resistant ACSI DigiTemp II microprocessor controlled temperature controller is state of the art. The digital controller features a large multi-colored LED readout. The DigiTemp II controller precisely modulates outlet water temperature for unrivaled user comfort. Redundant flow and temperature safety valves teamed with an industrial quality ground fault circuit interrupter power supply cord are among the many safety features found on the Heat Wave III. The diesel fired Heat Wave III comes standard with a 5-gallon heavy-duty removable steel Jerry can fuel tank and quick coupled fuel supply lines for easy refueling. Units are available in 120 VAC and 12 VDC versions. Optional, unit mounted, hydraulic powered Decon chemical solution dosing pump allows for precisely metered solution injection into a dedicated solution outlet stream.



DigiTemp II Control
Delivers unmatched high tech accuracy.

New Larger Control Panel

A new large size enclosure houses Heat Wave's new "DigiTemp II" temperature controls. The unit control panel is a full-contour, gasket-sealed, electric enclosure. Sealed cable grips weatherproof all wiring into and out of the enclosure. Wet or rainy conditions have no impact on the fully sealed water-resistant temperature controller and main switch.

Specifications

| | |
|-------------------------------|-----------------------------|
| Length | 37" |
| Width | 22" |
| Height | 45.5" |
| Min. Input Press. | 20 psi |
| Max Input Press. | 125 PSI |
| Max Output Press. (regulated) | 40 psi |
| Max Output Flow Rate | 10 gal/min |
| Voltage | 120 vac |
| Max. Fuel Consumption | 1.77 gal/hr. |
| Btu/h(140,000 Btuh/gal) | 247,800 |
| Temp. Rise @7gal/min | 50 degs F |
| Temp. Rise @10gal/min | 30 degs F |
| Max Outlet Temp | 92 degs F |
| Fuel Tank Capacity | 5 gal |
| Outlets | 2 male garden hose w/valves |

All New Large Diameter Wheels

ACSI's new resilient wheels are 14" non-marking solid Urethane wheels with double-flanged bearings. Set on a new-heavily reinforced two-piece bolt-on axle. These are the same wheels used on competition wheelchairs and bikes.

When set in place, Heat Wave's unique offset wheel design means the wheels carry no load. Since the entire footprint of the frame is firmly on the ground now there is no chance of creep or shifting. When the operator wants to wheel the machine a simple tug on the handle will do since the heat exchanger coil will now tip and balance the load right over the axle making it easy to transport.

Other heaters on the market sit on the wheels all the time presenting a potential safety problem, for example a slope application where the heater might start to creep or move in



New Wheel Set

The new 14-inch wheels make HW-III easy to move over grass or even steps.

place. The HW- III sits 100 % on the frame preventing any unwanted movement. Another advantage of the balanced design is the weight transfer when the time comes to move it.

DigiTemp II Temperature Controller

Heat Wave III boasts a new DigiTemp II temperature control. It consists of a microprocessor controlled advanced logic temperature controller with factory set “non-tamper” and non-volatile memory type settings, and a redundant high-limit controller. Unlike mechanical temperature mixing valves, it has no moving parts, and samples the water temperature 10 times each second. Also, the temperature controller directly controls the burner by cycling the firing, so the unit only fires when modulating temperature. This design contrasts with mechanical mixing valves that fire the burner continuously and then simply blend cold water to keep it from getting too hot. This means that Heat Wave delivers better fuel efficiency compared with blending water heaters using conventional mechanical valves. The DigiTemp II controller also displays both the target and the current temperature with instantaneous digital accuracy. DigiTemp II is many times more accurate and reliable than slowly reacting mechanical thermometers. The redundant high-limit control is an independent secondary controller that provides another tier of safety having its own power supply and temperature probe. Should the primary controller ever fail, the entire burner shuts down by design. Also, a problem requires manual reset, alerting the operator of the safety issue. Because of its inherent redundancy, the DigiTemp II control is Factory Mutual compliant. Mechanical valves, sometimes called mechanical mixing valves, or blending valves, take too long to react to changes in temperature. They are slower and more sluggish. Mechanical valves have as many as 20 or 30 moving parts to fail; whereas our digital model has one, and even when compromised it continues to work. Hard water is common, and when you heat hard water you now have rapid scale buildup in mechanical valves and all those moving parts. ACSI’s DigiTemp II control remains unaffected long after other units need service.

Heavy-duty T&P Valve

Temp & Pressure Relief Valve (T&P valve) – ACSI’s industrial-duty T&P relief valve provides an additional layer of redundant mechanical safety to protect both operator and the unit.

Standard Water Connections

Heat Wave III uses any connectors you wish, you choose. Fire Hose connectors (NST) or Cam-Lock connectors are available. However, for simplicity the Heat Wave III comes with common garden hose connections from the factory. While Heat Wave supports Cam-Lock connectors, garden hose connectors are more common. Proprietary type connectors burden the owner with less common availability. Also, the Heat Wave III uses standard



Garden Hose Fittings

For inlet and outlet connections are standard and are easily sourced.

off-the-shelf garden hoses, so replacements are easy to source and less costly too.



Unique Non-blending Design

Heat Wave III is the industry's only non-blending heater. This means that all water flows through the 3/4" heater coil with a minimum pressure drop. This dramatically reduces parts count and unit complexity. Plumbing is simple and reliable. Typically, 50 to 75 percent fewer moving parts exist in a Heat Wave III compared with other Decon water heaters in its class. Heat Wave III's outlet pressure regulator limits the exit pressure to the commercial standard of 40 PSI. The outlet pressure regulator keeps delivery pressure at a standard factory rate and helps to protect all connected equipment from high spike pressures.

Low-Pressure Works Just Fine

Heat Wave performs well with low water pressure making it ideal for use with residential water pressure or hydrant pressure. There is no need to supply this Decon water heater with expensive booster or fire pumps. While other products need this amount of energy to overcome internal pressure drop through the unit, Heat Wave III performs with much more modest, readily available water pressure.

Blending vs. Non-Blending Heaters

HW-III's entire flow is processed through the heat exchanger in one step! Blending heaters on the other hand split the flow and send only a small portion of the flow through the exchanger and then re-constitute the stream. Blending heaters are more complex. Best applications call for rapid temperature rise and high flow rate with nominal available

(residential) water pressure. Made in the USA by ACSI. Uses include abatement, personal comfort and emergency decontamination.

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Portable Decon Showers

A perfect application for HW-III



Diesel Fuel Supply

The Heat Wave III fuel filter design allows cleaning rather than replacement. Many times replaceable filters are a liability since lack of a replacement disables the heater. The fuel filter housing is also metallic as opposed to many of the plastic bowled filters on the market.

Fuel Connections

Our quick-connect fuel lines attach in foolproof fashion meaning each fuel hose end couples to either tank supply nipple. The operator cannot get it wrong.

Fuel Tank

Our heavy-duty fuel tank, a military style steel Jerry can, is easy to transport and refill. The tank mounts at the most accessible point on the unit and has its own fitted carrying tray to hold it securely in place during transport.

Ground Fault Interrupter

Industrial quality heavy-duty ground fault interrupter for maximum safety and reliability comes standard on the Heat Wave III.

