

Technical Data Sheet

DW+ Indirect Fired Double-Wall Water Heater

The AERCO DW+ water heater is designed to satisfy potable water heating needs in commercial and institutional environments. The packaged system incorporates real-time, load tracking and responsive controls to maintain accurate hot water temperatures under diversified loads and can be fueled using steam.

Packaged with either electronic or pneumatic controls, the heater maintains outstanding temperature control when operated under constant load conditions with variances held to $\pm 2.2^{\circ}\text{C}$ under normal load changes of up to 25% of water heater capacity. An integrated load monitoring system and high turndown control valve deliver accurate temperature control without the need for storage tanks, blending valves or other temperature averaging components. When packaged with the electronic control system, the heater can be remotely monitored and/or fully integrated with BAS software.

The DW+ is constructed of double-wall tubing — two distinct, copper tube walls separate the potable water from the heat transfer medium via a vented air gap. This continuous air path is atmospherically vented through a clearly labeled, visible, leak detection port. Unit construction meets all double-wall heat exchanger requirements as set forth by BOCA (National Plumbing Code), IAPMO (Uniform Plumbing Code) and NAPHCC (National Standard Plumbing Code) the three national associations which reference double-wall requirements. All water wetted parts are 304 stainless steel, virgin Teflon, copper or copper alloy – the best materials available for longevity in even the most aggressive potable water supplies.

The unit's semi-instantaneous design (steam in tubes and water in shell) is compatible with low or high steam pressures or Low Temperature Boiler Water (LTBW). And installation is easy because of its small footprint (0.37 m^2) and doorway size. Tight temperature control, low maintenance, longevity and overall reliability make the AERCO DW+ the most logical choice for any commercial or institutional water heating installation.

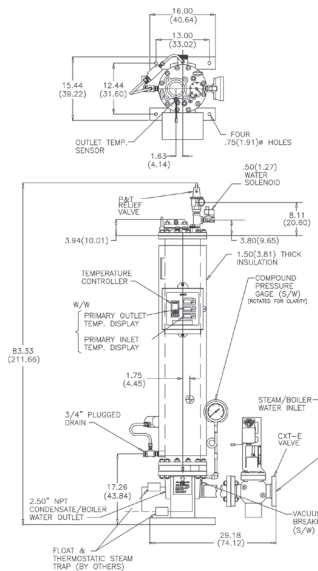


Features

- Accurate temperature control $\pm 2.2^{\circ}\text{C}$
- Choice of electronic or pneumatic controls
- Compact foot print $< 0.37\text{ m}^2$
- Fully modulating variable primary input
- All stainless, TFE, copper or copper alloy wetted surfaces
- UL-listed as Double-wall Heat Exchanger for potable hot water use
- ASME- B&PV Code Sec. VIII, Div. 1 Stamped
- 20-year warranty on pressure vessel and integral demand anticipator
- Supports a variety of applications
 - 0.34 to 10.34 bar steam supply
 - Set point range 10°C to 96°C
 - Single or multiple installation
 - Ideal for new or retrofit
 - ASME Working Pressure Certified
 - 12.8 bar for DW-24 & DW-68
 - 12.4 bar for DW-4

Dimensions

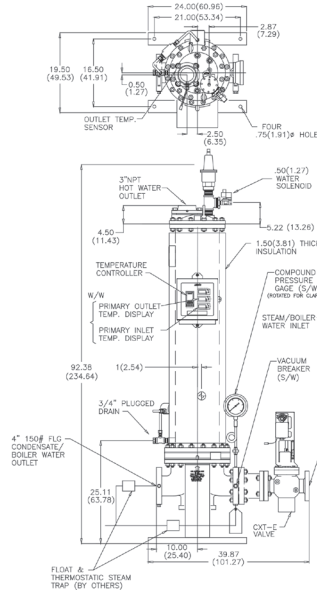
MODEL DW-24 / / EC
(SW/WW) (VALVE SIZE)



HEAT EXCHANGER DESIGN STANDARDS			
	MAX. WORKING PRESS. BAR	MAX. TEMP. °F(°C)	TEST PRESS. BAR
SHELL SIDE	12.76	400(204)	19.10
TUBE SIDE	17.24	400(204)	34.47
ASME CODE CERTIFICATION STAMP U			

MATERIALS OF CONSTRUCTION	
SHELL	304 S.S., SA-240, SCH.10S
HEADS	UPPER, BRONZE SB-82 LOWER, CAST DUCTILE IRON SA-395
TUBES	COPPER SB-111 D.W. OUTER, 19.05 mm x 1.24 mm WALL INNER, 15.88 mm x 0.64 mm WALL
TUBESHEET	UPPER TUBESHEET: 12.7 mm, 304 S.S., SA-249 PASSIVATED PER QQ-P-35, TYPE V LOWER TUBESHEET: 31.75 mm SA-315, GR.70 C.S.

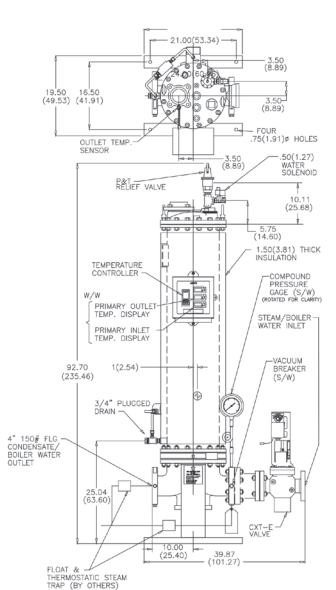
MODEL DW-45 / / EC
(SW/WW) (VALVE SIZE)



HEAT EXCHANGER DESIGN STANDARDS			
	MAX. WORKING PRESS. BAR	MAX. TEMP. °F(°C)	TEST PRESS. BAR
SHELL SIDE	12.41	250(121)	18.62
TUBE SIDE	17.24	400(204)	34.47
ASME CODE CERTIFICATION STAMP U			

MATERIALS OF CONSTRUCTION	
SHELL	304 S.S., SA-240, SCH.10S
HEADS	UPPER, BRONZE SB-82 LOWER, CAST DUCTILE IRON SA-395
TUBES	COPPER SB-111 D.W. OUTER, 19.05 mm x 1.24 mm WALL INNER, 15.88 mm x 0.64 mm WALL
TUBESHEET	UPPER TUBESHEET: 12.7 mm, 304 S.S., SA-249 PASSIVATED PER QQ-P-35, TYPE V LOWER TUBESHEET: 31.75 mm SA-315, GR.70 C.S.

MODEL DW-68 / / EC
(SW/WW) (VALVE SIZE)



HEAT EXCHANGER DESIGN STANDARDS			
	MAX. WORKING PRESS. BAR	MAX. TEMP. °F(°C)	TEST PRESS. BAR
SHELL SIDE	12.76	350(177)	19.10
TUBE SIDE	17.24	400(204)	34.47
ASME CODE CERTIFICATION STAMP U			

MATERIALS OF CONSTRUCTION	
SHELL	304 S.S., SA-240, SCH.10S
HEADS	UPPER, BRONZE SB-82 LOWER, CAST DUCTILE IRON SA-395
TUBES	COPPER SB-111 D.W. OUTER, 19.05 mm x 1.24 mm WALL INNER, 15.88 mm x 0.64 mm WALL
TUBESHEET	UPPER TUBESHEET: 12.7 mm, 304 S.S., SA-249 PASSIVATED PER QQ-P-35, TYPE V LOWER TUBESHEET: 31.75 mm SA-315, GR.70 C.S.

Specifications

w/ Electronic Controls

- Shell Side Pressure Drop: 0.48 bar @ max. rated flow
- Ambient Operating Temperature: -18°C to 55°C
- Electrical Requirements: 120/1/60 5 Amp / 220/1/50 5 Amp
- Standby Amperage Draw: 2.5 Amp
- High Limit "Tripped" Amperage Draw: 3.0 Amp
- Max. Continuous Water Flow Rate
 - DW-24: 473 LPM
 - DW-45 or DW-68: 473 LPM
- Max. Intermittent Flow Rate
 - DW-24: 681 LPM
 - DW-45 or DW-68: 946 LPM

Weight

- DW-24: 340 kg (dry); 376 kg (wet)
- DW-45: 522 kg (dry); 576 kg (wet)
- DW-68: 612 kg (dry); 689 kg (wet)
- Max. Allowable Working Pressure (tube side): 10.34 bar
- Max. Shell Side Operating Pressure: 11.72 bar*
- Adjustable Temperature Control: up to 96°C
- Adjustable High Limit Control: up to 121°C
- Water Connection Outlet/Inlet
 - DW-24: 76.2 mm MNPT / 76.2 mm MNPT
 - DW-45 & DW-68: 76.2 mm MNPT / 76.2 mm MNPT

*Standard 10.3bar, 99°C P&T relief valve supplied; consult AERCO representative for higher settings.

Available Options

- Dry contacts for remote "High Limit Tripped Status" indication
- Pressure Relief Valves set up to 12.4 bar for high rise installations



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