

MWS

Water and Water/Glycol System

- Heat Water and Water/Glycol Solutions to 300°F (150°C)
- 50 - 800 kW
- 240 V, 480 V and 600 V, 3 -Phase, 60 Hz
- Compact Footprint for Installation
- 150# Welded Steel Construction
- Long Life 0.475 in. (12.1 mm) dia. Copper Sheath Heating Elements
- High Temperature Centrifugal Pump - rated to 300°F (150°C)
- Electronic Digital Temperature and Process Control
- Discharge Pressure Gauge
- UL NEMA 12 Electrical Enclosure Complete with Contactors, Temperature Safety Limit, Transformers and Pilot Light(s)
- External Cold Expansion Tank (Optional)
- External Heat Exchanger (Optional)



Description

Chromalox MWS - Mid-Size Water/Glycol System - is engineered to operate to 300°F (150°C) with either water or water/glycol fluids. Its electric heating core assures responsive and precise temperature control in a space saving package. The system is suitable for a large range of heating needs with a compact design. The MWS operates in a closed loop system using a cold expansion tank (optional).

Applications

Chromalox MWS system is great for applications such as reactors, evaporators, dryers, platen presses, heat exchangers, roll heating, or any jacketed kettles / vessels / tanks.

Hot water systems can be used in a variety of industries such as chemical, plastics, cosmetics, automotive, rubber, refining, pharmaceutical, non-woven / textiles/ fibers, aerospace, or any other industrial market.

Construction

Chromalox MWS systems are ruggedly constructed for industrial applications. The heavy-duty, steel support base features channel grooves for forklift transport. The heater chamber is fully welded and houses Chromalox brand, long-lasting heating elements. The panel is fully UL-listed and assembled in-house. The pump is air-cooled with a mechanical seal, rated to 300°F (150°C). The final assembly is fully-shop tested prior to shipment.

WARNING — In hazardous areas, pipe surfaces could achieve temperatures high enough to cause auto-ignition of the hazardous material present. Consult Article 500 of the National Electric Code for further information on the maximum allowable temperature for a specific application.

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14955 W. Bell Rd #9423

Surprise, AZ 85374

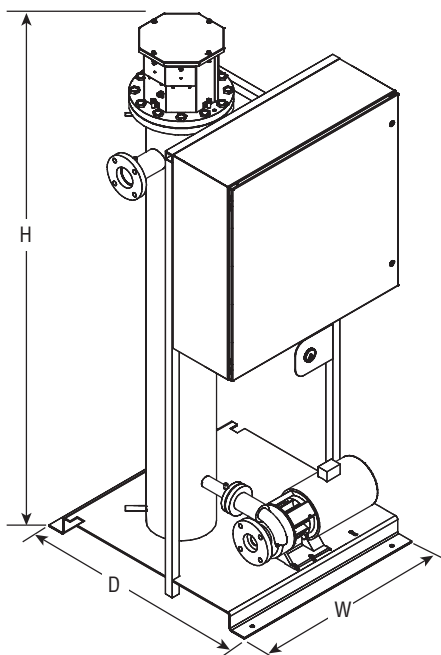
(602) 373-9663

sales@watt.solutions

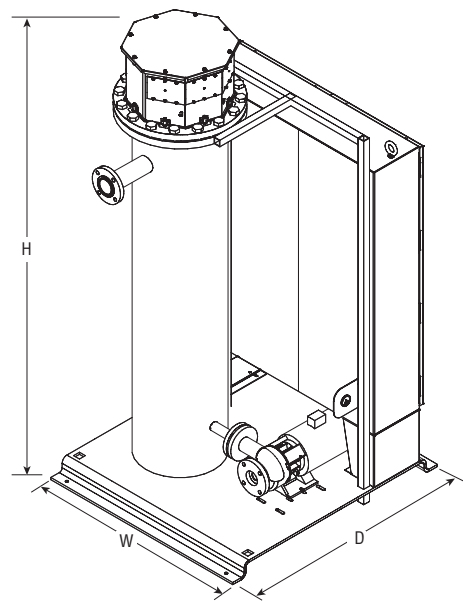
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MWS

Water and Water/Glycol System *(cont'd.)*



MWS 50-250 kW Unit
(Front View)



MWS 300-600 kW Unit
(Rear View)

HEAT TRANSFER

Options

- Electronic Solid State (SCR) Trim Power Control
- Strainer
- Powder Coated or Stainless Steel Side Coverings
- Dedicated Fill Connection
- NEMA 4 or 4X (Stainless) Construction
- Class 1, Div 2 Hazardous Area Rating (with purge)
- Panel Disconnect Switch
- Heater On/Off Switch
- Suction Pressure Gauge
- Inlet / Outlet 150# Gate Valves
- Drain / Bleed Valves
- Digital Overtemperature Controller
- Relief Valve
- ASME Design & Certified, Section VIII, for 100 psi (7 bar) at 300°F (150°C)
- High Flow Pump (300 GPM, 450-800 kW only)
- Heat Exchanger (shipped loose for customer installation)
- Expansion Tank (shipped loose for customer installation)
- Liquid Level Switch for Expansion Tank

Unit Proportions

Unit Size	Weight (Lbs.)	Width (In.)	Depth (In.)	Height (In.)	Flow Rate ¹ GPM	Pressure ¹ TDH	Motor HP	Inlet/Outlet Connection	System Capacity (Gal.)
50 - 150 kW	900	36	42	96	60	100	3	2", 150#	25
175 - 250 kW	1400	36	42	96	120	100	5	3", 150#	35
300 - 400 kW	2000	48	54	96	200	100	10	3", 150#	55
450 - 600 kW	2600	48	54	96	200 ²	100 ²	10 ²	3", 150# ²	65
650 - 800 kW	3600	61	54	99	200 ²	100 ²	10 ²	3", 150# ²	85

¹ Refer to Pump Graph in instruction manual for full operating range.

² Option for 300 GPM 15 HP pump with 4", 150# inlet/outlet.

Standard Features

Electronic Process Control..... Precise process control
 Element Overtemperature Protection Protect elements and fluid from overheating
 Air-Cooled Mechanical Seal..... No external cooling needed
 Insulated Heating Chamber.....Maximize efficiency by minimizing heat loss
 Discharge Pressure Gauge.....Confirm pump operating performance
 Compact Footprint Space saving design
 Fully Pre-wired & Tested Ready to operate on site
 Centrifugal PumpMinimize piping configuration
 Temperature rating to 300°F (150°C).....Covers most applications
 150# ANSI Flange Connection..... Easy fit up to installed piping
 Start / Stop buttons with Motor Starter..... Complete operating system
 Pilot Lights for Power, Heater, & Pump..... Visual indication of system operation

Benefits

MWS

Water and Water/Glycol System *(cont'd.)*

Ordering Information

To Order — Complete the Model Number using the Matrix provided.

MWS Mid-Size Water and Water Glycol System											
Code		Unit Temperature Rating ¹									
300		300°F (150°C)									
Code		Kilowatts									
50	50 kW	150	150 kW	300	300 kW	550	500 kW				
75	75 kW	175	175 kW	350	350 kW	600	600 kW				
100	100 kW	200	200 kW	400	400 kW	800	800 kW				
125	125 kW	250	250 kW	500	500 kW						
Code		Enclosure Types									
E1		General Purpose									
E4		Moisture Resistant									
E4X		Moisture / Corrosion Resistant (Stainless Steel)									
E4NP		Class 1, Div 2 rating - Nitrogen Purge (by customer)									
Code		Option									
(Blank)		No Options									
ST		SCR Trim									
SR		Strainer ²									
GV		I/O Gate Valves ²									
FC		Dedicated Fill Connection ²									
DB		Drain / Bleed Valves									
PD		Panel Disconnect									
HW		Heater On/Off Switch									
SG		Suction Pressure Guage									
DT		Digital Overtemp Control									
SV		Safety Relief Valve - 125psi									
PC		Power Coated Skins									
SS		Stainless Skins									
AE		ASME Designed & Certified									
HF		300 GPM Pump ³									
XX		Custom Feature									
Code		Voltage									
240		240 V (only available for 50 and 75 kW units)									
480		480 V									
600		600 V									
Code		Phase									
3P		Three-Phase									
Code		Kilowatts									
150		kW									
g Complexity											
MWS	-	300	-	150P	-	E4	GV	480V	3P	150kW	Typical Model No.

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Example of Final Model Description: MWS-300-150P-E4GV 480V 1-3P 150kW

¹ Unit operating temperature based on 104°F (40°C) max. ambient, indoor environment

² When ordering more than one of these options, some items will be shipped loose to avoid damage during shipment. Simple assembly will be required for installation.

³ 300 GPM option comes with 15 HP motor and 4", 150# inlet/outlet connections.