

MWSS

Water and Water/Glycol System

- Heat Water, Deionized Water, Demineralized Water, Distilled 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# 304 Stainless Steel Construction
- Long Life 0.475 in. (12.1 mm) dia. 304 Stainless Steel Sheath Heating Elements
- High Temperature, Stainless Steel 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 MWSS offers internal stainless steel construction and is engineered to operate at 300°F (150°C). The MWSS Series is designed for high purity applications like deionized, demineralized or distilled water. The stainless steel construction provides superior corrosion protection. 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 MWSS operates in a closed loop system using a cold expansion tank (optional).

Applications

Chromalox MWSS 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.

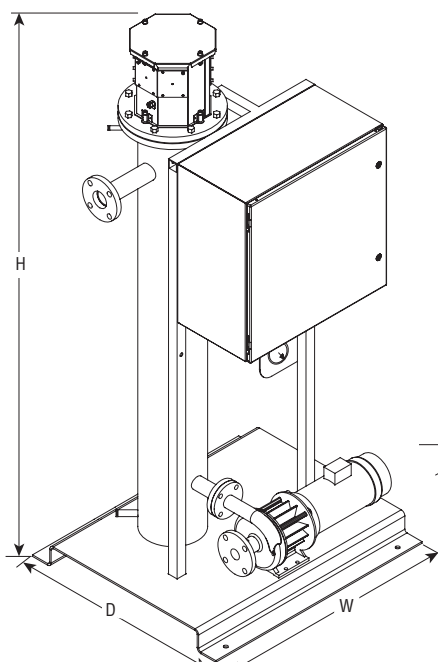
Construction

Chromalox MWSS 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.

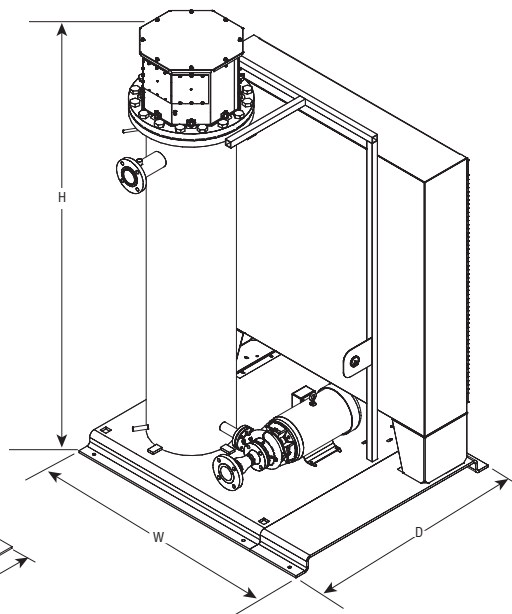
WARNING — In hazardous areas, pipe surfaces could achieve temperatures high enough to cause auto-ignition of the hazardous material present. Consult Article 500 of the National Electric Code for further information on the maximum allowable temperature for a specific application.

MWSS

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



MWSS 50-250 kW Unit
(Front View)



MWSS 300-800 kW Unit
(Rear View)

Options

- Electronic Solid State (SCR) Trim Power Control
- Strainer
- Powder Coated or Stainless Steel Side Coverings
- Dedicated Fill Connection
- NEMA 4 Construction
- NEMA 4X Stainless Steel 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

* All internal & external items will be stainless steel material

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

Benefits

Stainless Steel Construction	Superior corrosion resistance
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 Pump	Minimize 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

MWSS

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

Ordering Information

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

MWSS Stainless Steel Water and Water/Glycol System

Code	Unit Temperature Rating ¹	
300	300°F (150°C)	
Code	Kilowatts	
50	50 kW	175 175 kW
75	75 kW	200 200 kW
100	100 kW	250 250 kW
125	125 kW	300 300 kW
150	150 kW	350 350 kW
400	400 kW	700 700 kW
500	500 kW	750 750 kW
550	500 kW	800 800 kW
600	600 kW	
650	650 kW	
Code	Enclosure Types	
E1	General Purpose	
E4	Moisture Resistant	
E4X*	Moisture / Corrosion Resistant	
E4NP*	Class 1, Div 2 rating - Nitrogen Purge	
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 Gauge	
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	

HEAT TRANSFER

MWSS- 300 - 150P - E4 GV 480V 3P 150 kW Typical Model No.

* E4X & E4NP Options feature all stainless steel construction on both internal and external features.

Example of Final Model Description: MWSS-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.