

# COMPACT TEMPERED WATER UNITS

## MWG Series

### SPECIFICATIONS

The MWG Series is designed to maintain the process temperature with circulated water that has been heated or cooled to the required set point.

- Incoloy heaters
- Silicon carbide pump seals
- Easy to use microprocessor controls
- Tool-free access panels for fast removal



Water Temperature Control Unit

### DESCRIPTION

Direct injection, closed circuit or isolated circuit process heating and cooling. Single-zone and dual-zone configurations. Pump sizes to 7.5 hp per zone. Heaters to 48 kW per zone. Process temperatures to 250°F.

Dual-zone models can control two process temperatures at different locations in a process. Two-zone models have common cooling water manifolds and electrical connections for convenience.

Isolated circuit units keep the process fluid separated from the cooling water, allowing you to use a glycol mixture as the process fluid.

### FEATURES

- **State-of the Art Controls**  
Microprocessor controls with auto-tuning of PID control parameters offer uniform temperature control, regardless of external loading.
- **High-Efficiency Pumps**  
Pump sizes range from 3/4 to 7.5 Hp. All feature silicon carbide seals, seal flush lines and sediment traps for extended pump seal life. Drip covers are included to protect the motor from water damage.
- **Incoloy Heaters**  
Standard on all models, incoloy heaters resist damage from high temperature and chemicals.
- **3 Year Warranty**  
Three full years on all MWG Series models.



## HEAT EXCHANGE AND TRANSFER, INC.

500 Superior Street • Carnegie, PA 15106

Phone 412-276-3388 • Fax 412-276-3397

E-mail: [sales@heat-inc.com](mailto:sales@heat-inc.com) • Web: [www.heat-inc.com](http://www.heat-inc.com)

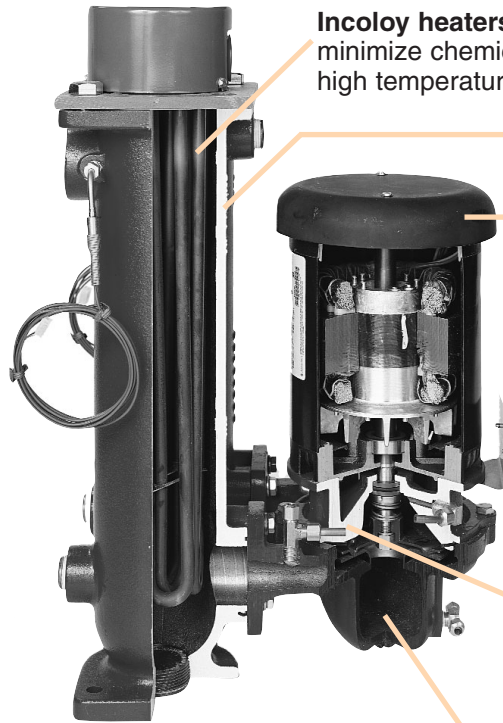
# CONSTRUCTION FEATURES & OPTIONS



**Microprocessor controls and pressure gauges**



**Two-zone models** allow independent control of dual cooling zones with the convenience of common cooling water manifolds and electrical connections.



**Incoloy heaters** minimize chemical and high temperature damage

**Two-piece cast construction** eliminates potential leak points.

**Motor drip cover** protects motor windings from moisture damage.

**High efficiency pumps** from 3/4 to 7.5 Hp. Stainless steel impellers on 3/4 to 2 Hp pumps. cast iron impellers on 3 Hp to 7.5 Hp models.

**Silicon carbide pump seals** standard on all models.

**Pump seal flush line** continuously cleans the pump seal for extended life.

**Built-in sediment trap** settles contaminants away from the pump seals.

## OPTIONS



### Motorized Cooling Valve

The slow open/close cycle time eliminates thermal shock and water hammer from your process circuit.



### Alarm packages

Call attention to alarm conditions with a bell, strobe light or horn.



### Compressed Air Purge Valve

Quickly evacuates fluid from the process circuit, allowing for faster, cleaner disconnection of the temperature control unit from process equipment.

### Corrosion Resistance Package

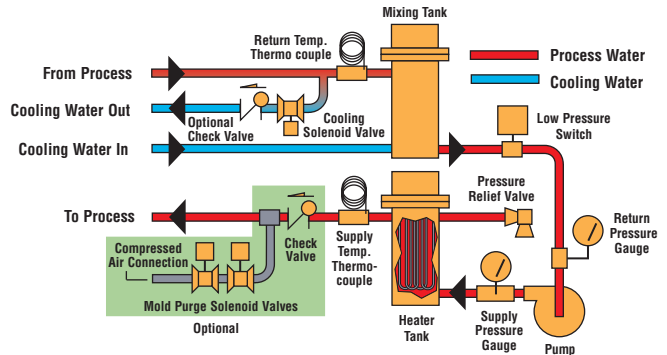
Protect components from damage with bronze external fittings, non-ferrous pump impellers, and Teflon coating on all interior fluid surfaces, including heater tanks and pump volute.

# CIRCUIT FLOW DIAGRAMS

*Select the right model for your application:*

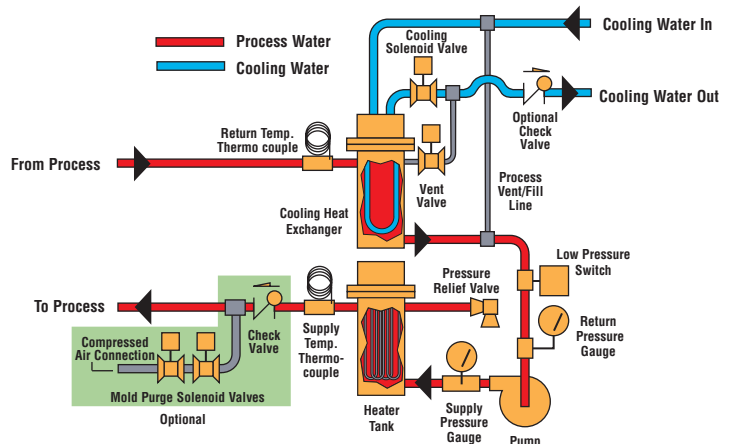
## Direct Injection (DI) models

admit cooling water directly into the process loop upon demand. Recommended for process temperatures up to 250° F. Use only with chilled water or properly treated and filtered cooling tower water.



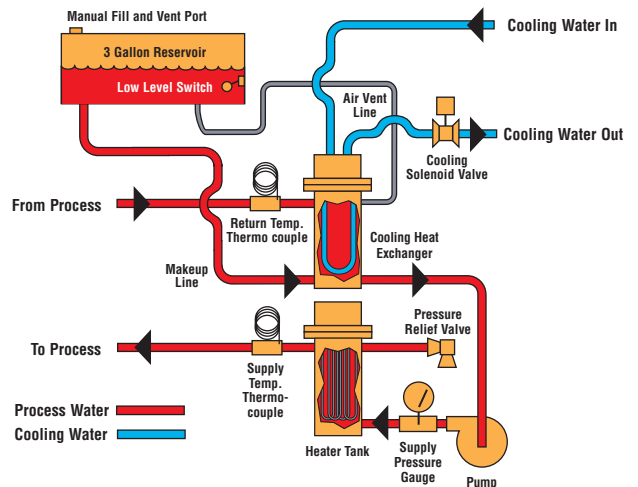
## Closed Circuit (CC) models

admit cooling water into the process loop only during the initial filling or when make-up water is needed. Recommended when the water source is contaminated and process temperatures range to 250° F.



## Isolated Circuit (IC) models

separate the cooling water from the process fluid, which is held in a 3-gallon reservoir. Recommended when the process fluid is very pure water or a glycol mixture and process temperatures are no more than 180° F.



# MWG Series

# SPECIFICATIONS

## MODEL DESIGNATIONS

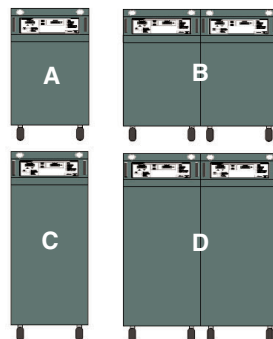
Direct Injection (DI)  
Closed Circuit (CC)  
Isolated Circuit (IC)



PERFORMANCE CHARACTERISTICS -			
MODELS	MWG-DI	MWG-CC	MWG-IC
Minimum Setpoint Temperature °F	32	32	32
Maximum Setpoint Temperature °F	250	250	180
Minimum Operating Temperature °F	Approximately 20° above the cooling water inlet temperature		
Standard Cooling Valve Size inches	1/4	3/4	3/4
Available pump sizes	0.75, 1, 2, 3, 5 or 7.5 Hp		
Available heater sizes	9, 12, 18, 24, 36 or 48 kW	9, 12, 18 or 24 kW	

PUMP PERFORMANCE -						
PUMP	3/4 HP	1 HP	2 HP	3 HP	5 HP	7.5 HP
Nominal Flow gpm	40	45	55	80	100	115
Pressure@ Nominal Flow psi	17	18	31	35	43	51

CABINET STYLE REFERENCE			
Heater	Voltage Selection	Single Zone	Dual Zone
<b>Direct Injection (DI)</b>			
9, 12, 18 or 24 kW	208, 230, 460, 575	A	B
36 kW	208 or 230	C	D
36 kW	460 or 575	A	B
48 kW	208, 230, 460, 575	C	D
<b>Closed Circuit (CC)</b>			
9 or 12 kW	208, 230, 460, 575	A	B
18 or 24 kW	208, 230, 460, 575	C	D
<b>Isolated Circuit (IC)</b>			
9, 12, 18 or 24 kW	208, 230, 460, 575	C	D



WATER CONNECTIONS	
All models	
NPT inches (female)	
To/From process	1.25
Cooling water in/out	0.75

Dimensions in.				
Cabinet Style	A	B	C	D
Height	28.0	28.0	43.0	43.0
Depth	22.5	22.5	31.5	31.5
Width	13.75	27.5	14.0	28.0

SHIPPING WEIGHT RANGES lb						
Pump	Single Zone				Dual Zone	
	Min		Max		Min	Max
	0.75 HP	240	300	480	600	
1 HP	240	300	480	600		
2 HP	250	310	500	620		
3 HP	260	320	520	640		
5 HP	270	330	540	660		
7.5 HP	280	340	560	680		

TOTAL full load amps per zone																										
All voltages are 3 phase, 60 Hz.																										
Heater	9 kW				12 kW				18 kW				24 kW				36 kW				48 kW					
	Voltage	208V	230V	460V	575V	208V	230V	460V	575V	208V	230V	460V	575V	208V	230V	460V	575V	208V	230V	460V	575V	208V	230V	460V	575V	
<b>Pump</b>																										
0.75 HP	28.9	26.2	13.1	10.5	37.3	33.8	16.9	13.5	54.0	48.8	24.4	19.5	70.7	64.0	32	25.6	104.0	94.0	47.0	37.6	137.0	124.0	62.1	49.7		
1 HP	29.4	26.6	13.3	10.6	37.8	34.2	17.1	13.7	54.4	49.2	24.6	19.7	71.2	64.4	32.2	25.8	104.3	94.4	47.2	37.8	137.7	124.6	62.3	49.6		
2 HP	31.8	28.8	14.4	11.5	40.2	36.4	18.2	14.6	56.8	51.4	25.7	20.6	73.6	66.6	33.3	26.6	106.7	96.6	48.3	38.6	140	126.8	63.4	50.7		
3 HP	34.7	31.4	15.7	12.6	43.1	39.0	19.5	15.6	59.7	54.0	27.0	21.6	76.5	69.2	34.6	27.7	109.6	99.2	49.6	39.7	143	129.4	64.7	51.8		
5 HP	38.5	34.8	17.4	13.9	46.9	42.4	21.2	17.0	63.4	57.4	28.7	23	80.2	72.6	36.3	29.0	113.4	102.6	51.3	41.0	146.7	132.8	66.4	53.1		
7.5 HP	45.7	41.4	20.7	16.6	54.1	49.0	24.5	19.6	70.7	64.0	32.0	25.6	87.5	79.2	39.6	31.7	120.7	109.2	54.6	43.7	154	139.4	69.7	55.8		