



MINIMARINE 1.0 HEAT EXCHANGER

WATER TO WATER TITANIUM HEAT EXCHANGER FOR USE IN ALL AQUATIC CHILLING/HEATING APPLICATIONS



Aquatic (process) Flow (GPM)

BTU PERFORMANCE CHART - 4 GPM @ 5 PSID							
Δ T OF AQUATIC WATER & HYDRONIC LOOP							
	10	15	20	25	30	35	40
10	2 500	4 000	6 000	7 000	8 500	9 000	11 000
20	3 000	6 500	7 000	10 000	11 000	13 000	15 000
30	4 500	7 500	9 000	12 000	13 500	15 000	18 000
40	6 000	8 000	10 000	12 000	15 500	18 000	20 000
50	6 875	8 750	10 000	13 750	16 250	18 750	20 625

*BTU performance based on 4 GPM process flow @ 5 PSID

*Increase in flow, or delta-T will increase BTU output

*Max Aquatic side PSID at 50 GPM is 3 PSI

*Derating factors for 45F Propylene Glycol solutions: (20% PG - 0.96), (30% PG - 0.94), refer to PG tables for other oper temps & solutions.

Aquatic (process) Flow (GPM)

BTU PERFORMANCE CHART - 6 GPM @ 10 PSID							
Δ T OF AQUATIC WATER & HYDRONIC LOOP							
	10	15	20	25	30	35	40
10	3 500	5 000	7 000	8 000	9 500	10 000	12 500
20	5 500	7 000	10 000	11 000	14 000	15 000	17 000
30	6 000	9 000	12 000	13 500	15 000	16 500	19 500
40	7 000	10 000	13 000	15 000	18 000	20 000	23 000
50	7 500	12 500	13 750	16 250	20 000	22 500	25 000

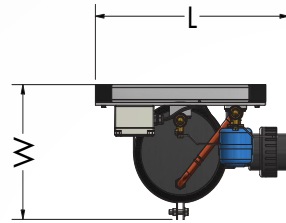
*BTU performance based on 6 GPM process flow @ 10 PSID

*Increase in flow, or delta-T will increase BTU output

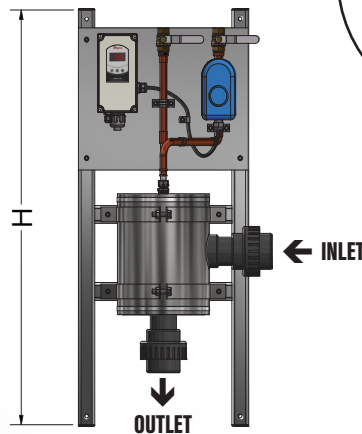
*Max Aquatic side PSID at 50 GPM is 3 PSI

*Derating factors for 45F Propylene Glycol solutions: (20% PG - 0.96), (30% PG - 0.94), refer to PG tables for other oper temps & solutions.

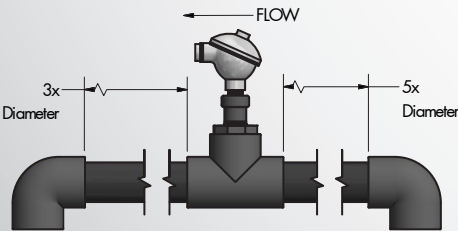
DIMENSIONS					
Aquatic Connection Size	Process Connection Size	Length (L)	Width (W)	Max. Height (H)	Weight (lbs)
1 1/2"	3/4"	18"	12"	35"	18



PLAN VIEW



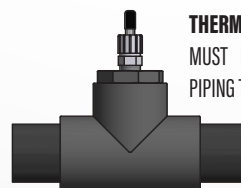
FRONT VIEW



FIELD INSTALLED FLOW SWITCH
OPTIONAL

FLOW SWITCH NOTE:

FLOW SWITCH MUST BE INSTALLED HORIZONTALLY ON INLET OF HEAT EXCHANGER, WITH MINIMUM STRAIGHT PIPE DISTANCES BEFORE AND AFTER AS SHOWN IN DRAWING. OPTIONAL FACTORY MOUNT & WIRE.



THERMOWELL
INCLUDED

THERMOWELL NOTE:

MUST BE INSTALLED ON INLET PIPING TO HEAT EXCHANGER.

TEMPERATURE CONTROL
+/- 0.1°F ACCURACY

BRASS 3/4" BALL VALVES
PROCESS CONNECTIONS

2-WAY VALVE
PUMP OR SOLENOID
VALVE

0.50" CLOSED CELL
INSULATION WITH
GALVALUM JACKET

LIGHT WEIGHT 1.5"
FRAME MARINE
GRADE AL T6061

1 1/2" AQUATIC
CONNECTIONS



OPTIONAL BASE FEET
FOR FLOOR MOUNTING

NOTES:

- Gr.2 TITANIUM TUBE HEAT EXCHANGER COIL
- INSULATED SCH40 PVC SHELL
- FRP SUPPORTS W/ 316SS HARDWARE
- TEMPERATURE CONTROLLER CAN BE SET +/- 0.1° F/C
- 120v CONTROLLER AND 2-WAY BALL-VALVE

OPTIONS:

- FACTORY MOUNTED & WIRED FLOW SWITCH
- SCH 80 CPVC SHELL CONSTRUCTION (Recommended for Heating)
- LIMIT SAFETY SOLENOID VALVE
- FLOOR MOUNT BASE FEET
- FLOW SWITCH ASSEMBLY
- HW/CW FLOW METER
- PUMP OR SOLENOID FLOW CONTROL
- 2" UNION CONNECTIONS



Delta
Hydronics

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