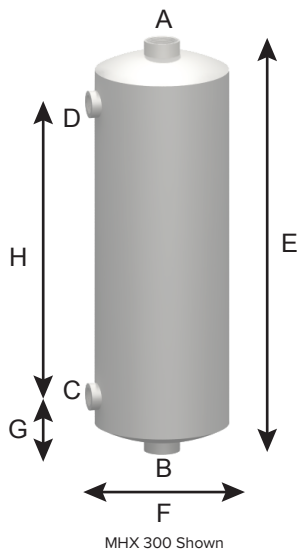
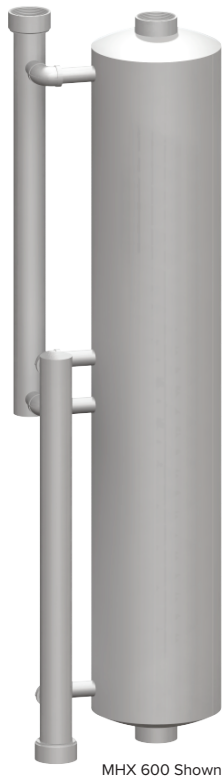


HEAT EXCHANGER MHX STAINLESS STEEL

The MHX line of heat exchangers is manufactured from 316L S/Steel and is further pickled and passivated for superior longevity and corrosion resistance these exchangers are ideal for SPA's, hot tubs, swimming pool, snow melt applications, solar heating.

*Caution s/steel should **not be** used on SALT WATER pools, spa's, hot tubs. You will need to use titanium or marine alloy for these applications.



Overall Dimensions	MHX 150	MHX 200	MHX 300	MHX 400	MHX 600	MHX 900	MHX 1200
E	14 3/4"	15 3/4"	24 3/4"	31 1/2"	47"	68 1/2"	89 1/4"
F	8"	8"	8"	8"	8"	8"	8"
G	3 1/4"	3 1/4"	3 1/4"	3 1/4"	26 1/4"	48"	68 1/2"
H	8 1/4"	9"	18"	24 3/4"	20 3/4"	20 1/2"	20 3/4"

Connections	Type	MHX 150	MHX 200	MHX 300	MHX 400	MHX 600	MHX 900	MHX 1200
A - Cold Water inlet	NPT coupling.	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
B - Hot Water outlet	NPT coupling.	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
C - Supply from boiler	NPT coupling.	3/4"	1"	1"	1"	2"	2"	2"
D - Return to boiler	NPT coupling.	3/4"	1"	1"	1"	2"	2"	2"

FEATURES:

- ★ Spirally-wound high quality stainless steel 0.049" wall coil and 14ga. 316L stainless steel shell.
- ★ Passivated stainless steel finish.
- ★ Counter flow design to maximize heat transfer capability.
- ★ All connections are female couplings for quick and simple installation.

Model	Shell Volume US Gal	Heating Surface Sq.ft	Coil Length ft.	Coil P.D. at boiler flow rate ft. Head	Shipping Weight lbs.
MHX 150	2.4	1.96	10	9	15
MHX 200	2.2	2.62	10	13	20
MHX 300	3.8	5.24	20	13	30
MHX 400	4.7	7.33	28	13	40
MHX 600	7.5	10.47	40	13	70
MHX 900	11.4	15.71	60	13	100
MHX 1200	15.1	20.94	80	13	130

PERFORMANCE

Boiler Supply temp = 200 °F		MHX 150	MHX 200	MHX 300	MHX 400	MHX 600	MHX 900	MHX 1200
Boiler flow rate	GPM	15	20	30	40	60	90	120
Pool outlet temp.	°F	80	80	80	80	80	80	80
Pool flow rate	GPM	30	30	40	40	80	90	120
Output	Btu/hr	150,000	200,000	300,000	400,000	600,000	900,000	1,200,000



INDIRECT SWIMMING POOL HEATING

Application: Using house boiler to heat pool/hot tub

Sizing consideration

Need to know

How many Gallons of water to heat, temperature rise, and time allotted for temp rise.

1-cubic ft water = 7.48US Gal
1 gallon water weighs 8.34 lbs.

Sizing formula (initial raising of water temperature)

Gallons of water = Pool (width x length x average depth) x 7.48 (gal. Per cu.ft)

Gallons of water x 8.34 x temp. rise / hours to heat pool = btuh

Example:

Pool (40' x 20' x 5' average)

With initial pool water of 55 F to be raised to 75 F

Allowing 48 hours to raise temperature.

40'L x 20'W x 5'Deep x 7.48g per c/ft = 29,920 gallons water

29,920galls x 8.34lbs x 20temp rise / 48hrs = 103,972 BTUH

(I=B=R net ratings)

GPM flow required

Pool flow = 1st law (btu/hr) / delta T (temp raise) / 500 =GPM
(eg; 103,972 / 20 / 500 = 10.397gpm)

Boiler side flow = 1st law (btu/hr) / (500 x boiler temp difference)=GPM
(eg; 103,972 / 10000 =10.397gpm)

Heat loss from pool surface

Temperature difference	10	15	20	25	30
BTUH/persq.ft	105	158	210	263	368

Assumed wind velocity 3.5 mph

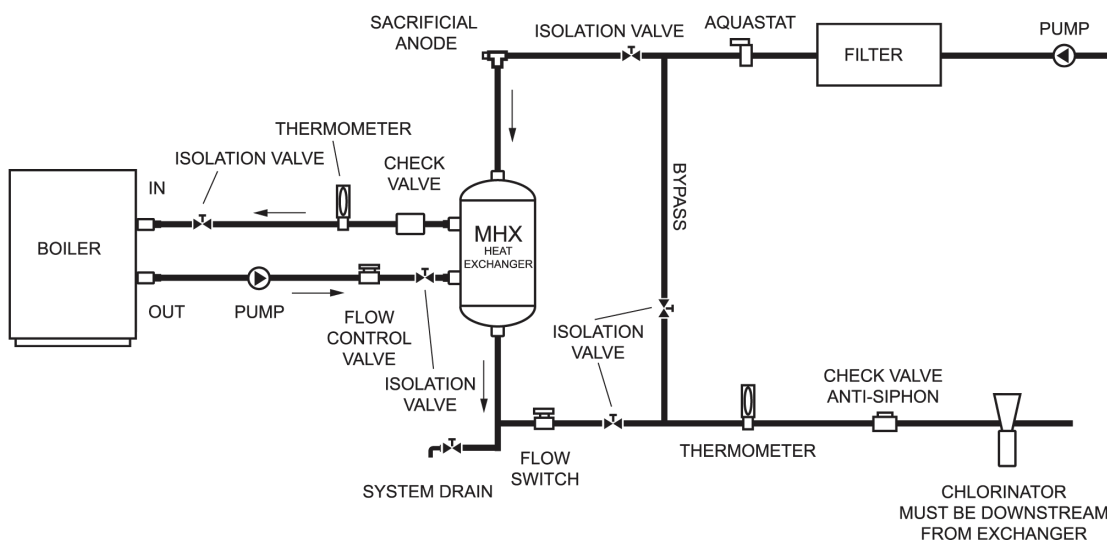
Wind velocity of 5mph multiply BTUH by 1.25

Wind velocity of 10mph multiply BTUH by 2.00

Temperature Difference: Ambient air and desired water temperature

Maintaining pool temperature when outside air is 20 to 30F lower than pool water may require a larger boiler.

SCHEMATIC FOR POOLS & MHX HEAT EXCHANGERS



NOTES:

This drawing is meant to show system piping concept only. Installer is responsible for all equipment & detailing required by local codes.

MAXIMUM
OPERATING
PRESSURE

SHELL 150 PSI
COIL 150 PSI

LIMITED
WARRANTY

2 YEARS
RESIDENTIAL
1 YEAR
COMMERCIAL