



POWER PLATE WATER HEATING SYSTEM

NST
NILES
STEEL
TANK
SINCE 1898™

Performance -

The Niles Power Plates water heating system is a performance driven water heating package that comes with your choice of water storage tanks up to 2,500 gallons. The unique Power Plate heat exchanger design provides high rates of heat transfer requiring less surface area than conventional shell and tube heat exchangers. Couple that performance with our Ultonium lined or stainless steel alloy storage tanks for the ultimate heating domestic water delivery package.

Capacity -

Storage tanks up to 2,500 gallons **

Power Plate up to 300 GPM and 1,100 Sq. Ft. of heating surface.

Connections -

Grooved connections for easy boiler hook-up come standard.

Construction Codes (Heat Exchanger) -

UL, CRN, ASME Sec VIII Div 1 "U" Stamp,
ASME Sec III "N" Stamp,
Pressure Equipment Directive (97/23EC),
China ML, Korean KGS, Brazilian NR-13.

Configuration -

Heat Exchanger:

- Single wall or double wall designs.
- Heat Exchanger and Piping Insulated (optional)

Storage Tanks Standard:

- ASME Sec IV part HLW (Standard)
- Jacketed and Insulated
- 125 PSI (Standard)
- Vertical

Options:

- Horizontal
- Ultonium Glass Lined
- Double Ultonium Glass Lined with 10 yr warranty
- Niles Defender Epoxy
- 316L Passivated Stainless Steel
- Passivated Duplex Stainless Steel
- Topcoat Spray-on Insulation

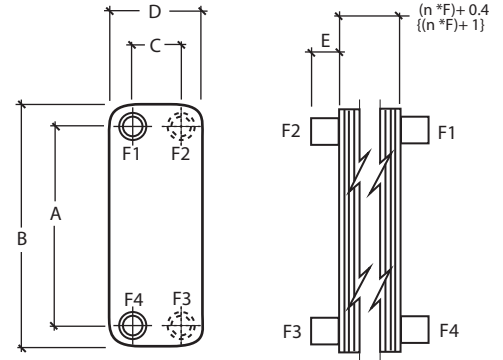


Double Wall Protection - The Power Plate heat exchanger offers the highest level of leak protection, safety, thermal efficiency and durability in a compact, low cost design.

True double-wall construction, including port regions
Double-wall plate design with unique air vent leak paths.
Complete peripheral braze for additional strength
Four dedicated leak ports for quick and easy leak detection
Excellent performance for domestic water applications.
Dependable protection of fresh water streams from cross contamination.

POWER PLATE PERFORMANCE DATE

Single Wall							
Cold Water				Boiler Water 180°F			
Model	Flow (GPM)	Flow (GPH)	Temperature In/Out	Delta P (psi)	Flow(GPM)	Boiler Return Temperature	Delta P (psi)
PPS-300	5	300	40-140°F	0.63	5	79	0.91
PPS-600	10	600	40-140°F	0.9	10	79	1.12
PPS-900	15	900	40-140°F	1.37	15	79	1.4
PPS-1200	20	1200	40-140°F	1.38	20	79	1.59
PPS-1500	25	1500	40-140°F	1.4	25	79	1.57
PPS-1800	30	1800	40-140°F	1.53	30	79	1.7
PPS-2400	40	2400	40-140°F	1.55	40	79	1.67
PPS-3000	50	3000	40-140°F	1.66	50	79	1.77
PPS-3600	60	3600	40-140°F	1.77	60	79	1.87
PPS-4200	70	4200	40-140°F	1.88	70	79	1.97



Double Wall							
Cold Water				Boiler Water 180°F			
Model	Flow (GPM)	Flow (GPH)	Temperature In/Out	Delta P (psi)	Flow(GPM)	Boiler Return Temperature	Delta P (psi)
PPD-300	5	300	40-140°F	0.3	5	79	0.35
PPD-600	10	600	40-140°F	0.33	10	79	0.36
PPD-900	15	900	40-140°F	0.38	15	79	0.39
PPD-1200	20	1200	40-140°F	0.41	20	79	0.42
PPD-1500	25	1500	40-140°F	0.44	25	79	0.44
PPD-1800	30	1800	40-140°F	0.47	30	79	0.47
PPD-2400	40	2400	40-140°F	0.51	40	79	0.51
PPD-3000	50	3000	40-140°F	0.58	50	79	0.58
PPD-3600	60	3600	40-140°F	1.04	65	87	1.19
PPD-4200	70	4200	40-140°F	0.92	72	82	0.96

Typical Connection Locations:
Steam to Liquid

Boiler Supply	F1
Boiler Return	F2
Cold Inlet	F3
Cold Outlet	F4

Heat Exchanger Data (Standard Design)

Design Pressure (All Models)	Design Temperature (All Models)
435 PSIG	-310 F min 450 F max
Package Rated for 125 PSI	

Standard Materials:
 Cover Plates - 316L Stainless Steel
 Channel Plates - 316L Stainless Steel
 Brazing Material - Copper
 Connection - From 1/2" to 4" 316L Stainless Steel
 Capacity - Up to 300 GPM
 Construction Codes - UL, CRN, ASME

DIMENSIONS

Model	INCHES					Single Wall	Double Wall	MNPT Connection	Volume Gal/ Channel	Surface Area per plate sq. ft.	Shipping Weight Lbs	
	A	B	C	D	E						F	F
PPD-300	20.4	24.3	3.6	7.5	1.9	1.4	2.2	2" Grooved	0.07	1.06	25.4	33.2
PPD-600	20.4	24.3	3.6	7.5	1.9	2.4	3.8	2" Grooved	0.07	1.06	35.2	48.9
PPD-900	20.4	24.3	3.6	7.5	1.9	2.9	5.2	2" Grooved	0.07	1.06	40.0	62.5
PPD-1200	20.4	24.3	3.6	7.5	1.9	3.6	6.6	2" Grooved	0.07	1.06	47.0	76.3
PPD-1500	20.4	24.3	3.6	7.5	1.9	4.4	8.0	2" Grooved	0.07	1.06	54.8	90.0
PPD-1800	20.4	24.3	3.6	7.5	1.9	5.0	9.4	2" Grooved	0.07	1.06	60.7	103.8
PPD-2400	20.4	24.3	3.6	7.5	1.9	6.6	12.4	2" Grooved	0.07	1.06	76.3	133.2
PPD-3000	20.4	24.3	3.6	7.5	1.9	8.0	15.2	2" Grooved	0.07	1.06	90.0	160.5
PPD-3600	20.4	24.3	3.6	7.5	1.9	9.4	12.6	2" Grooved	0.07	1.06	103.8	135.1
PPD-4200	20.4	24.3	3.6	7.5	1.9	10.4	17.2	2" Grooved	0.07	1.06	117.5	180.2