

PIRANHA™ series

All-In-One Heat Pump for Wastewater Heat Recovery and Cooling



The PIRANHA is a specialized water-to-water heat pump that recovers energy directly from wastewater and uses this source energy to produce hot water. The hot water produced through the unit is typically used for potable domestic hot water (DHW) purposes, however it can also be used for hydronic heating or alternate hot water demand purposes.

The PIRANHA features a specially designed evaporator to recover and transfer energy directly from wastewater into a refrigeration circuit, paired with an NSF-372 rated double-wall vented brazed plate heat exchanger (condenser) to transfer the energy directly into potable water.



INTERESTED IN REBATES?
CONTACT US!

★ KEY FEATURES

- All-in-one unit, includes custom heat exchanger inside
- Odor-free
- Simple maintenance & service
- Simultaneous Heating and Cooling (HC model)
- Long life span
- Remotely monitored and managed
- Quiet operation
- Multiple units can be installed in parallel
- Optimized for multi-family residential & light commercial applications
- Does not require macerator or prefiltration
- Designed to utilize black and grey water
- Programmable to use energy off peak hours
- Fits through double doors to support retrofitting

BEST SUITED FOR

MEDIUM-SIZED HEAT TRANSFER APPLICATIONS



COMMERCIAL HOSPITALS, MICRO-BREWERIES & DISTILLERIES, COMMERCIAL LAUNDRY, COMMUNITY ACTIVITY CENTERS



MULTI-FAMILY 50-350 UNIT APARTMENTS/CONDOS, STUDENT HOUSING, SENIOR/ ASSISTED LIVING, COMMUNITY HOUSING



WHY PIRANHA?

Intelligently recover heat energy using wastewater to greatly reduce new energy consumption and CO₂ emissions

Consistent year-round performance

Compact, small footprint heat pump powerhouse

Reduce cooling costs

Fully-automated

*combined heating and cooling efficiencies, HC Model ONLY

PIRANHA MODEL	PIRANHA T5	PIRANHA T10	PIRANHA T15	PIRANHA T5 HC	PIRANHA T10 HC	PIRANHA T15 HC
TYPE OF PROCESS	BATCH FLOW					
WATER HEATING	YES					
WATER COOLING	NO					
SPACE COOLING	NO			YES		
DESIGN WASTEWATER FLOWRATE	100 GPM					
	6.3 L/s					
MINIMUM WASTEWATER STORAGE*	750 GAL	1,500 GAL	2,250 GAL	750 GAL	1,500 GAL	2,250 GAL
DESIGN DOMESTIC WATER FLOWRATE	12 GPM	24 GPM	36 GPM	12 GPM	24 GPM	36 GPM
	0.76 L/S	1.5 L/S	2.3 L/S	0.76 L/s	1.5 L/s	2.3 L/s
DESIGN SPACE COOLING SOURCE FLOWRATE	N/A	N/A	N/A	9.6 GPM	19.2 GPM	28.8 GPM
				0.6 L/s	1.21 L/s	1.82 L/s
DESIGN HEATING CAPACITY	60,000 BTU/h	120,000 BTU/h	180,000 BTU/h	60,000 BTU/h	120,000 BTU/h	180,000 BTU/h
	17.5 kW	35 KW	52.5 KW	17.5 KW	35 KW	52.5 KW
DESIGN COOLING CAPACITY	N/A	N/A	N/A	48,000 BTU/h	96,000 BTU/h	144,000 BTU/h
				14 KW	28 KW	42 KW
CABINET WEIGHT (EMPTY)	1,190 lbs	1,950 lbs	3,042 lbs	1,290 lbs	2,050 lbs	3,142 lbs
	540 kg	885 KG	1,380 KG	585 KG	930 KG	1,425 KG
CABINET WEIGHT (FULL)	2,525 lbs	4,929 lbs	8,223 lbs	2,625 lbs	5,029 lbs	8,323 lbs
	1,145 kg	2,236 kg	3,730 kg	1,190 kg	2,281 kg	3,775 kg
CONDENSER PRESSURE DROP	0.97 psi	1.54 psi	0.60 psi	0.97 psi	1.54 psi	0.60 psi
MAX CONDENSER OPERATING PRESSURE	435 psi					
HC EVAPORATOR PRESSURE DROP	N/A	N/A	N/A	1.58 psi	5.0 psi	4.36 psi
MAX EVAPORATOR OPERATING PRESSURE	435 psi					
REFRIGERANT TYPE	R-513a					
REFRIGERANT QUANTITY	7 lbs	20 lbs	32 lbs	9 lbs	26 lbs	41 lbs
AGITATOR	YES					
MAIN COMPONENT	PIRANHA UNIT					
OPTIONAL FEATURES	METERING PACKAGE • MID-GRADE OR BELOW-GRADE PUMP PACKAGE • CONSTANT TEMPERATURE OUTPUT					
AUXILIARY COMPONENTS (SUPPLIED BY OTHERS)	WASTEWATER HOLDING TANK • PRIMARY WASTEWATER SUPPLY PUMP • CIRCULATION PUMPS • DHW PRE-HEAT TANK(S)					

PIRANHA MODEL	T5/T5 HC		T10 / T10 HC				T15 / T15 HC	
POWER	208/230 V, 60 Hz, 3 Phase		208/230 V, 60 Hz, 3 Phase		460 V, 60 Hz, 3 Phase		460 V, 60 Hz, 3 Phase	
COMPONENTS	RLA/FLA (A)	FLA (A)	RLA/FLA (A)	FLA (A)	RLA/FLA (A)	FLA (A)	RLA/FLA (A)	FLA (A)
COMPRESSOR	34.0	155.0	57.0	255.0	29.0	145.0	47.0	215.0
LIFT PUMP - 3 HP**	8.8	44.0	8.8	44.0	4.0	20.0	4.0	20.0
EXTERNAL PUMP - 3 HP	8.8	44.0	8.8	44.0	4.0	20.0	4.0	20.0
CONTROLS	5.0		5.0		2.0		2.0	
NOMINAL LOAD (A)	56.6		79.6		39.0		57.0	
MCA (A)	65.0		94.0		47.0		69.0	
MOCP (A)	90.0		150.0		70.0		110.0	
S.C.R. (kA r.m.s sym)	5.0		5.0		5.0		5.0	

*RECOMMENDED, CONTACT US FOR DETAILS

** STANDARD DESIGN HORSEPOWER

BASE MODULE VALUES ONLY – DOES NOT INCLUDE AUXILIARY EQUIPMENT SUCH SLUDGE PUMP, LOAD SIDE CIRCULATION PUMP(S), COOLING APPLICATION CIRCULATION PUMP(S), ETC.

Contact SHARC to find out more!

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