Siddons Solarstream

HEAT PUMP WATER HEATING SYSTEMS

HPWH - COMMERCIAL APPLICATIONS

For many light commercial applications a Solarstream Heat Pump Water Heater (HPWH) makes very good economic sense. For companies looking at environmental (Green) buildings these Heat Pump Water Heating systems offer prospective clients, tenants or owners a viable competitive edge with their building stock and operational costs.

Low installation costs, high energy savings, and abundant storage capacity helps manage any peak consumption demands across a wide variety of industries and business applications. Solarstream units can be single units or coupled together in many combinations from 3~6 units for energy efficient light commercial installations.

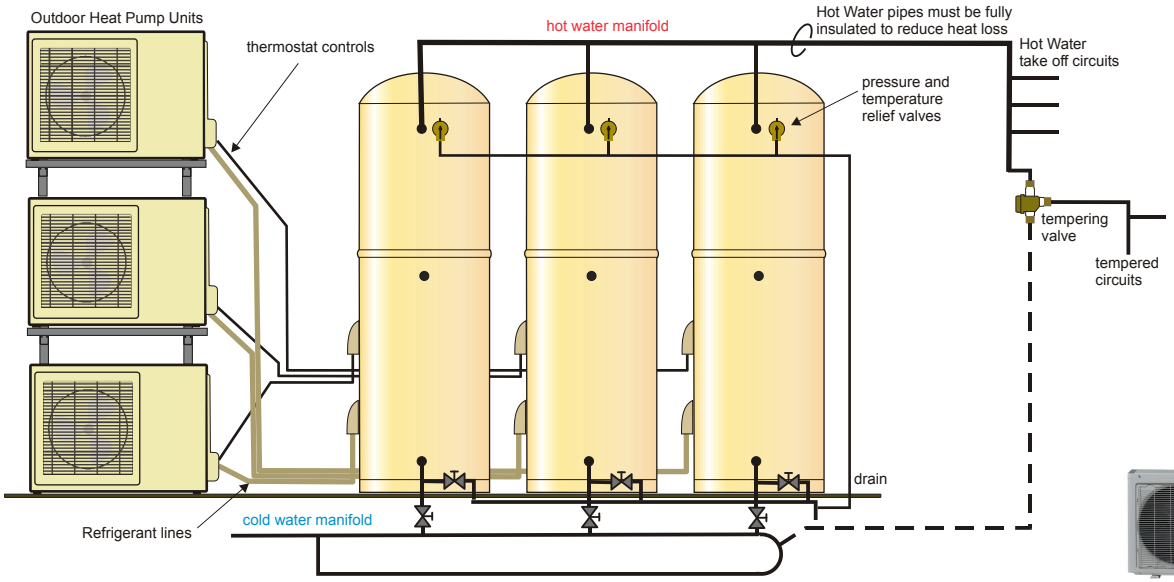
Typical Commercial Examples Are:

- Gymnasiums, Fitness Centres, Health Spas
- Aged Care Facilities, Medical Centres, Hair Salons
- Kindergartens, Day Care Centres, Play Centres
- Hostels, Backpackers, Motels Complexes, Caravan Parks
- Manufacturing Facilities, Commercial Buildings, Bars, Restaurants

HEAT PUMP WATER HEATING

- Save 75% on hot water energy costs
- Superior performance day and night
- Long life stainless steel water tank
- Helps reduce greenhouse gas emissions
- Light weight, easy to transport and install
- No unsightly solar equipment on roof
- No electric heating elements
- High hot water recovery rates

TYPICAL LIGHT COMMERCIAL INSTALLATION ~ 3 UNITS



Typical Applications:
Laundries
Kitchens
Spa baths
Commercial Glass or Dishwasher
Hydronic heating

Bathroom
Shower
Wash basins

Actual Unit - model 327SSAD

In This Example:

980 litres of base load hot water storage
Up to approximately 300 litres / hr recovery to 60°C @ 20°C ambient air
Maximum power connection 3x1.4 Kw =4.2Kw (18 amps)

- Single phase & single circuit electrical connection (3x10 amp socket outlets)
- Low installation costs
- Exceptional energy efficiency - high REC's
- No booster elements
- Back-up security of 3 separate units
- Total outdoor Installation
- Heat capacity ~ 15 kWh output
- Heat capacity ~53MJ output

Performance Guide ~ Operating 10 hours / day

Worse case system recovery rate (litres / hour)	252
Average system recovery rate (litres / hour)	297
Total daily hot water supply (litres /day)	3,000
Storage (litres)	981
Temperature rise	43°C
System efficiency COP	330%
Energy savings	70%
Average energy load (heating hot water) kWh /day	150
Solar contribution (energy saved) kWh /day	105
Purchased energy kWh /day	45
Purchased energy MJ /day	163

The Solarstream Heat Pump Water Heater (HPWH) offers tremendous advantages over other commercial hot water systems, with very low power and electrical requirements. Each unit draws only 4~6 amps when running, so three units needs only a maximum of 18 amps (single phase) A similar electric element system would need a minimum of 18kW's or 75 amps. This would require 3 phase power, expensive electric installation and controls. With Solarstream, simple electrical controls can be installed to manage power and demand requirements for even greater energy savings.

Solarstream Heat Pump Water Heaters can be used in many varied water heating applications.
For more technical information on Solarstream commercial applications, REC's and installations contact:

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