

DATA CENTER

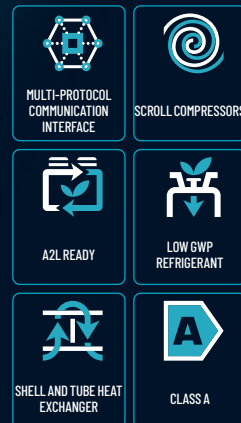
INDUSTRIAL

SERVICES

# PSW

## MULTIPURPOSE WATER-CONDENSED HEAT PUMPS WITH SCROLL COMPRESSORS

294–867 kW



PSW multi-function units are used to produce hot and cold water, **both independently and simultaneously**, to meet the cooling and heating needs of both industrial and commercial applications. PSW units are ideally suited for **use in 4-pipe systems**. All units are available with two refrigerant circuits and shell and tube exchangers, for a high level of unit reliability. The layout of the components allows **easy access during maintenance** while the hydraulic connections all on the same side allow for **easy installation** and reduced installation space requirements.

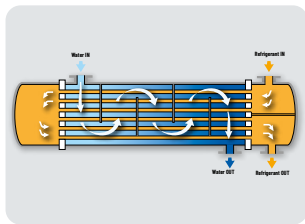
- Electronically controlled expansion valve supplied as standard
- Optional Vic-Taulic hydraulic couplings
- Available in Standard and Low Noise versions
- Programmable electronic control as part of standard equipment
- Smart management of several units in parallel
- Easy access to components for routine maintenance
- Compliance with ERP regulations
- Available in multipurpose version for 4 pipe systems





### Maximum efficiency at partial loads

Accurate selection of the components allows **high efficiency to be obtained at partial loads**; this is thanks above all to the use of Scroll compressors and to the use of electronically controlled electric expansion valves (one for each circuit), **optimised to track refrigerant load trends in all conditions of use**. The shell and tube heat exchanger also ensures low water/refrigerant approach temperatures during operation, **all to the advantage of heat exchange efficiency**.



### Reliability: shell and tube

The use of shell and tube exchangers with water flow on the shell side implies **a lower risk of blocking the flow due to exchanger clogging** - compared to units with plate heat exchangers. This is ascribable to larger throughsections - the exchanged power being the same. Additionally, the dual-pass heat exchanger ensures **high heat exchange efficiency** both in "chiller" and in "heat pump" modes, **with lower consumption figures for the user**.



### Reduced footprint

The PSW series has a **compact layout** thanks to the optimised arrangement of the compressors and heat exchangers. **The power density reaches very high values, exceeding 100kW/m²**. The lower weight compared to units with screw compressors **facilitates installation and maintenance operations**.



### Low noise levels

Thanks to the Scroll compressors used, the PSW units feature lower noise levels than other compressor technologies used for similar applications. Also, thanks to the use of multi-Scroll technology, at partial loads unnecessary compressors are turned off which results in **a further noise reduction**. For extra soundproofing, the **Low Noise version** is available with soundproofed sheet metal enclosures to compartmentalise the compressors.



PSW		324P	374P	444P	484P	506P	566P	646P	706P
<b>Cooling: Utility water temperature 12/7°C, Recovery water temperature 40/45°C</b>									
Cooling capacity	kW	293.7	334	398.6	412	442.4	500.6	579	676.2
Thermal power	kW	370.8	423.9	503.6	521.4	558.1	635.7	730.2	866.6
Total absorbed power	kW	77.1	89.9	105.1	109.4	115.7	135.1	151.2	190.3
TER		8.62	8.43	8.59	8.53	8.65	8.41	8.66	8.11
<b>User water values 12/7°C, 30/35°C source water side</b>									
Cooling capacity	kW	329.3	374.4	445.6	459.9	498.4	561.4	648.7	692
Total absorbed power	kW	61.9	72.1	84	87.2	92.9	108.3	121.1	130.9
EER		5.32	5.2	5.31	5.27	5.34	5.18	5.36	5.29
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COP		4.81	4.72	4.79	4.77	4.82	4.71	4.83	4.55
Sound power [Standard]	dB(A)	89	89	90	90	91	91	91	90
Sound power [Low noise]	dB(A)	85	85	86	86	87	87	87	86
Dimensions [LxHxD]	mm	3500X2100X1800							