VINDSOL

Harnessing the nature's energy for you

Air Source Heat Pump

Complete Water Heating Solutions

DOMESTIC HEAT PUMPS

COMMERCIAL HEAT PUMPS

SPA - POOL HEAT PUMPS

SWIMMING POOL HEAT PUMPS

VINDSOL

VINDSOL Energy Systems & Solutions

The Company Profile

VINDSOL Energy Solutions & Systems supplies a wide range of efficient and reliable heat pumps for Domestic, Commercial & Swimming pool hot water requirements

VINDSOL always focuses on providing cost effective & environmental friendly solutions to the problem of rising energy costs.

Our Mission is to have Reliable & Quality Design, Be Customer Centric, Provide Technology for future and to be Environmentally responsible.

Reliable & Quality Design

VINDSOL Air Source Heat Pumps are manufactured from the highest quality materials and designed not just to meet, but to exceed all relevant performance and environmental standards.

After Sales Support

Backed by highly efficient administration and warranty schemes, the Company is also focused on providing an exceptional after-sales service for all of its customers.

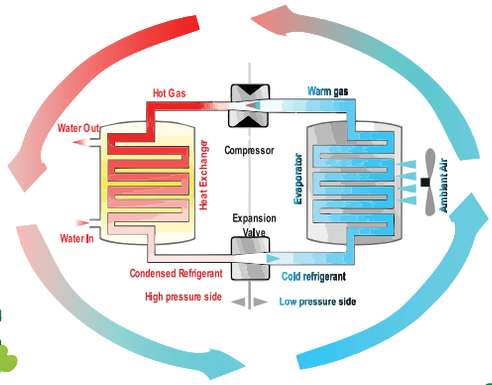
Customer Centric

VINDSOL understands the customer requirements and provides solutions in terms of technical and commercial aspects. When you order any of our heat pump you can feel secure in the knowledge that you are purchasing the best quality and most reliable product.

A Brighter Future with Green Technology

There is a growing awareness that we all need to do more to reduce our dependency on fossil fuels. With this in mind VINDSOL has focused in bringing out a wide range of renewable energy based heat pump products

VINDSOL signifies nature's energy. "VIND" represent the wind energy and "SOL" represent Solar Energy, thereby it represents our total commitment to the customers we serve with latest and environmental friendly products.



Introduction – Heat Pump Technology

Heat pump converts the sensible heat in the ambient natural air into heat energy and uses to heat the water. In this aspect, this system can be classified as a Renewable Energy source as the heat in the ambient air is replenished by the Sun.

History Behind Heat Pump

The theory of heat extraction using gas was founded in 1805 by Oliver Evans, with the first domestic fridge appearing around 1890. Heat pump is derived from there and is similar to air conditioner. With such a vast history, air source heat pump technology is a proven and reliable concept for hot water application.

How Do Heat Pump Works ?

Hot Water Heat Pumps work on a similar principal to a refrigerator; they are able to absorb energy from the surrounding outdoor air and transfer this energy into a refrigerant. The heat energy is upgraded using a refrigerant cycle and this renewable energy is transferred into the water.

The refrigerant used in VINDSOL Hot Water Heat Pumps has zero ozone depletion potential. This refrigerant allows useful heat energy to be absorbed even when the outdoor conditions drop below freezing.




BENEFITS

Constant hot water supply
of 55^0-60^0 C irrespective of the season outside.

All Seasons working
Heat pumps can operate all day every day all season. Including overcast & rainy days.

Energy saving of 60-75 %
is outstanding compared to conventional electrical heating systems with quick payback period.

Environmental protection
Eco friendly refrigerants emit much lower CO_2 footprint than other heating equipments, without burning any fossil fuels.

Very low maintenance
Long service life and low maintenance cost, with stable equipment performance its service life can reach over 10-15 years

Convenient and Easy installation
Using our qualified service and installation teams. It can be installed in any place, such as roof and floor etc.

HIGH reliability
Designed specifically for the outlasting harsh climatic conditions and last longer than other heating methods.

Self Diagnostic function
Errors are automatically detected by the system with specific code. Each code designate an error for easy understanding and troubleshooting.

CORE COMPONENTS

SCROLL / ROTARY COMPRESSOR

Highest durable and reliable compressor in the market

EMERSON Copeland Panasonic

Fully protected (High/low temp. and pressure. over current, phase protection) Anti liquid impact.

4 WAY REVERSING VALVE

Design ensures instantaneous changeover with minimal pressure drop. The valves are equipped with a mechanism that prevents incomplete changeover.

Danfoss SAGINOMIYA

ELECTRONIC EXPANSION VALVE

Effectively controls the temperature & regulates optimum refrigerant flow for best in class C.O.P.

Danfoss SAGINOMIYA EMERSON

Better operating conditions means less faults and consequently a reduction in maintenance costs.

GREEN REFRIGERANT

Various option of Refrigerant liquid as per application that is environmentally friendly, non flammable and non toxic

R410A R417A
R134A R407C

HYDROPHILIC FINNED EVAPORATOR

The hydrophilic coated finned evaporator with enhanced frosting and corrosion resistance. The corrugated louvered fin extend heat exchanging surface, thereby facilitating more contact with inlet air and improved efficiency of the evaporator.

COAXIAL / TUBE IN TUBE HEAT EXCHANGER

Coaxial heat exchanger consist of spiral grooves inner tube and a outer tube. water and refrigerant in counter current flow design. Spiral grooved structure enhance the turbulence intensity, increased heat transfer coefficient.

LARGE AIR FLOW AXIAL FAN

Wide fan blade, low noise, high temperature and abrasion resistant. Large air flow design, means more air into the system, accelerating the heat exchange and improve efficiency.

INTELLIGENT LCD CONTROLLER

One touch intelligent controller with Touch screen design, clear working condition displaying, and self-check function of error.

DOMESTIC HEAT PUMPS

MONOBLOCK TYPE / SPLIT TYPE

Domestic Heat Pumps

Vindsol Domestic heat pump are the most efficient system for hot water generation in a environmental friendly way up-to 55 deg without using any auxiliary heating from electrical element. The residential heat pump range was developed for easy retrofit installation for any existing hot water geyser as well as new installations.

Vindsol domestic heat pumps come in two forms:

Monoblock Type: Compact and efficient heat system with built-in heat exchanger (Copper Tube in tube) and circulating pump in the outdoor unit

Split Type: High efficiency Micro channel heat exchanger wrapped outside the pressurized storage tank itself.

These two models mean that you're able to take advantage of cost saving hot water heating in any environment, day or night. The heat pumps are micro-computer controlled with a timer function, allowing them to automatically and efficiently regulate the water temperature.

Users of Vindsol residential heat pump can therefore: rest assured that their investment will benefit them in savings money as well as energy

FEATURES

Solid Build quality:
The outer cabinet structure is made of Galvanized steel making them more rust resistant & durable.

Very Quiet in operation
And low aesthetic impact. provided with anti vibration mounts.

Auto Restart
System resumes back to its previous setting once the power is restored

Compact Dimension:
Takes up minimal space Compared to industrial solar water heating installations.

Intelligent Auto Defrost
Ensures stable operation even in very low ambient temperatures.

ON off timer
System can be set to turn on/off automatically as per the requirement.

SYSTEM PROTECTIONS

- Under voltage protection
- Over voltage protection
- Phase imbalance Protection
- Anti freeze Protection
- Under current protection
- Over current protection
- Open phase Protection
- Compressor Overload
- Compressor high discharge Temperature protection
- Phase reversal Protection
- Compressor high Pressure protection

Note : These parameters are based on the refrigerant R134a AND R407c as mentioned

Please note that the above specifications may vary slightly from the actual product due to ongoing updates and improvements. Therefore, this information should not be considered as part of any commercial agreement. For accurate details, refer to the product label at the time of purchase or contact us directly. Our company reserves the right to make changes as

TECHNICAL SPECIFICATION

Model		VDHP 3000 MB	VDHP 4500 MB	VDHP 6000 MB	VDHP 7500 MB	VDHP 9000 MB	VDHP 11000 MB
DUTY CONDITIONS	**Outlet Temperature**	**Hot water Flow Rate (Lph)**	**Hot water Flow Rate (Lph)**	**Hot water Flow Rate (Lph)**	**Hot water Flow Rate (Lph)**	**Hot water Flow Rate (Lph)**	**Hot water Flow Rate (Lph)**
Heating Capacity(1)	W	3.2	4.4	6.0	7.6	8.8	10.2
	Btu/h	10797	15072	20471	26021	29868	34717
Rated heated water output (Inlet water @ 20 ℃ , Amb Temp @ 25 ℃)1	55 ℃	80	110	145	187	215	250
	60 ℃	65	95	125	164	185	210
Rated heated water output (Inlet water @ 15 ℃ , Amb Temp @ 20 ℃)2	55 ℃	65	90	120	164	175	200
	60 ℃	55	80	105	146	155	180
Rated outlet water temp.	℃	65 ℃	65 ℃	65 ℃	55 ℃	65 ℃	55 ℃
Rated Input Power	W	0.70	0.96	1.30	1.70	1.88	2.70
Rated Input Current	A	3.9	5.5	6.1	7.5	10.9	14.0
Power Supply		220V/1N/50Hz					
Compressor	Type	Fully closed Rotary Type					
	Make	PANASONIC/HIGHLY /GMCC					
	Start Mode	Direct Start					
	Quantity (Nos)	1					
Water Proof Grade		IP X4					
Electric Shock Protection Type		Grade I					
Heat Exchanger	Type	High efficiency tube in shell heat exchanger					
	Quantity (Nos)	1					
Evaporter	Fin Type	Hydrophillic Aluminium					
	Tube Type	Inner Groove Tube					
Refrigerant	Throttle Type	Saginomya/ Sanhua Electronic expansion valve					
	Type	R134a	R134a	R134a	R407c	R134a	R407c
Water Side	Cycle Flow (lpm)	10	16	22	22	40	40
	Pipe Size (mm)	Rc3/4(DN20)					
Fan	Type	Low noise high efficiency axial type					
	Input Power (W)	35	35	54	54	54	54
	Speed (rpm)	880	880	880	880	880	880
	Direction	Horizontal					
	Quantity (Nos)	1					
Protections		Under / Over voltage protection, Under /Over current protection, Open phase, Phase reversal, Phase imbalance, Compressor high discharge temperature protection, Compressor high discharge pressure protection, Compressor overload, Anti-Freeze protection.					
Noise DB(A)		≤55dB(A)					
Net Weight		58	62	64	64	70	70
Cabinet		Stainless steel / Powder coated steel					
Dimension	Length (mm)	930	930	930	930	1000	1000
	Width (mm)	280	280	280	280	300	300
	Height (mm)	560	560	560	560	620	620

[1] [2] Standard conditions for hot water heating

Note : These parameters are based on the refrigerant R134a AND R407c as mentioned

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COMMERCIAL HEAT PUMPS

Commercial Heat Pumps

Large heat pumps for commercial applications are being used more and more for commercial and other non-domestic premises including schools, sports centres, hotels, hospitals, factories, shops and offices. It is estimated that around 40% of CO2 emissions can come from commercial heating alone and finding new and innovative ways to heat premises is at the top of the list for many businesses.

The heat pump system works with many advantages like safety, convenient usage, energy saving and environment friendly and assures 24 hours comfortable hot water for users widely.

The commercial heat pumps are extremely versatile and can be configured and equipped for installation in commercial projects and in apartment blocks of virtually any size.

The heat pump units of the Vindsol are available as air-water or water-water heat pumps for reliable heating and cooling.

The heat pumps of the commercial series come with advanced technology which meet the highest quality standard. This means that they are not only extremely reliable and highly efficient in partial load mode, but also easier to regulate.

FEATURES

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TECHNICAL SPECIFICATION

Model		VCHP-1013	VCHP-1720	VCHP-2528	VCHP-3640	VCHP-4248	VCHP-5258	VCHP-7076	VCHP-8999
Heating Capacity	kW	11.4	19.3	25.6	39.5	46.3	57.8	75.6	95.5
	Btu/h	38912	65877	87381	134826	158037	197291	258048	325974
Rated heated water output	L/hr	245	415	550	850	990	1240	1620	2050
Rated outlet water temp.	□	55 □							
Max outlet water temp.	□	60 □							
Rated Input Power	kW	2.7	4.5	6	9.2	10.8	13.5	17.7	22.4
Rated Input Current	A	12.3	9	12	18	21	26.3	34.5	43.6
Power Supply		380V/3N/ 50Hz							
Compressor	Type	Scroll							
	Make	Copeland USA							
	Start Mode	Direct Start							
	Quantity (Nos)	1	1	2	2	2	2	2	2
Heat Exchanger	Type	High efficiency tube in tube heat exchanger							
	Quantity (Nos)	1	1	2	2	2	2	2	2
Evaporter	Fin Type	Hydrophillic Aluminium							
	Tube Type	Inner Groove Tube							
Refrigerant	Throttle Type	Emerson Thermal Expansion Valve / electronic Expansion valve							
	Type	R417A/R410A/R407C							
Water Side	Head Outlet (mm)								
	Cycle Flow (m3)	2.5	4	5	8	9.5	12	15.5	19.5
	Pipe Size (mm)	Rc1(DN25)			Rc1-1/2(DN40)			Rc2(DN50)	
Fan	Type	Low noise high efficiency axial type							
	Input Power (W)	90	250	250	250	550	550	750	750
	Speed (rpm)	850	880	880	880	880	910	940	940
	Direction	Vertical							
	Quantity (Nos)	1	1	2	2	2	2	2	2
Protections		Under / Over voltage protection, Under /Over current protection, Open phase, Phase reversal, Phase imbalance, Compressor high discharge temperature protection, Compressor high discharge pressure protection, Compressor overload, Anti-Freeze protection.							
Noise DB(A)		55	58	60	63	66	66	68	68
Net Weight		105	155	170	300	350	400	650	750
Cabinet		Galvanized powder coated steel/Stainless steel							
Dimension	Length (mm)	840	1095	1095	1180	1180	1180	1865	2025
	Width (mm)	810	775	775	770	845	845	1005	1165
	Height (mm)	710	855	855	1540	1550	1550	2000	2010

Testing Condition : Heating Ambient temp. (DB/WB): 20ºC/15ºC, water temp. (input/put): 15ºC/55ºC. The above data is only for reference: specific data is subject to the product

SPA - POOL
HEAT PUMPS

Spa / Pool Heat Pumps

Heat pump technology has been widely adopted in the pool industry due to its significant cost savings. In fact most pool heat pumps can save owners 70% or more in heating costs.

Until now most spa owners were stuck with standard electric heaters. However, electricity is becoming more and more expensive and will continue this upper trend.

A Vindsol® Spa Heat Pump for your spa is an ideal choice
for heating both small pools and spas and backyard residential swimming pools.

A pool heater or a pool heat pump are the most common heating solutions that allow you to extend your swimming season. Both enable energy-efficient heating for every budget, and there are various factors to consider when determining which is the best heating solution for your pool.

Designed to extend the usable season for your spa or even provide year-round comfort, Vindsol® pool heaters are unmatched in features and benefits.

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TECHNICAL SPECIFICATION

Model		VSP-010SP	VSP-015SP	VSP-020SP	VSP-030SP
Heating Capacity	kW	4.5	7	9	13.5
	Btu/h	15360	23893	30720	46080
COP		5.62	5.38	5.62	5.62
Rated outlet water temp.	℃	45℃			
Max outlet water temp.	℃	50℃			
Rated Input Power	kW	0.8	1.3	1.6	2.4
Rated Input Current	A	3.7	6	7.3	11
Power Supply		220V/1N50Hz			
Compressor	Type	Rotary			Scroll
	Make	Panasonic			Copeland USA
	Start Mode	Direct Start			
	Quantity (Nos)	1	1	1	1
Heat Exchanger	Type	Titanium in PPR / Titanium in stainless steel			
	Quantity (Nos)	1	1	1	1
Evaporter	Fin Type	Hydrophillic Aluminium			
	Tube Type	Inner Groove Tube			
Refrigerant	Throttle Type	Japan Saginomya Electronic expansion valve			
	Type	R417A/R410A/R407C			
Water Side	Cycle Flow (lpm)	1.7 ~ 2.5	2.2 ~ 3.3	2.9 ~ 4.4	3.5 ~ 5.2
	Pipe Size (mm)	Rc1-1/2(DN40)			
Fan	Type	Low noise high efficiency axial type			
	Input Power (W)	28	28	28	90
	Speed (rpm)	850			
	Direction	Horizontal			
	Quantity (Nos)	1	1	1	1
Protections		Under / Over voltage protection, Under /Over current protection, Open phase, Phase reversal, Phase imbalance, Compressor high discharge temperature protection, Compressor high			
Noise DB(A)		≤48dB(A)		≤54dB(A)	
Net Weight		45	50	60	66
Cabinet		Stainless steel / Powder coated steel / Plastic			
Dimension	Length (mm)	1000	1000	1000	1110
	Width (mm)	365	365	365	470
	Height (mm)	560	560	560	680

Testing Condition: Heating Ambient temp. (DB/WB): 24°C/19°C, 62.5% RH, Inlet Water Temp: 26°C The above data is only for reference: specific data is subject to the product

SWIMMING POOL HEAT PUMPS

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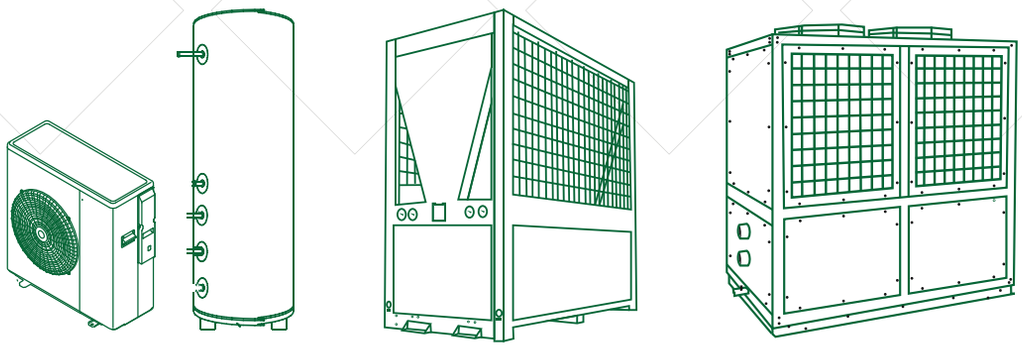
SWIMMING POOL HEAT PUMPS

TECHNICAL SPECIFICATION

Model		VCSP-030SP	VCSP-050SP	VCSP-100SP	VCSP-150SP	VCSP-200SP	VCSP-250SP	VCSP-300SP	VCSP-400SP
Heating Capacity	kW	13.5	22.8	45.7	68.6	91.5	114.5	145	190
	Btu/h	46080	77824	155989	234155	312320	390827	494934	648534
COP		5.62	5.7	5.71	5.7	5.71	5.72	5.7	5.8
Heatng Input Power	Kw	2.4	4	8.2	12	16	20	25.4	32.7
Heating Input Current	A	11	7.6	15.2	22.8	30.5	38	48	62
Cooling Capacity	kW	8.2	13.5	30	45	60	75	90	120
	Btu/h	27989	46080	102400	153600	204800	256000	307200	409600
EER		3.04	3.14	3.13	3	3	3	3.05	3.07
Cooling Input Power	kW	2.7	4.3	9.6	15	20	25	29.5	39
Cooling Input Current	A	12.3	9.8	17.6	30.7	41.8	50.8	59.2	85
Power Supply		220V/1N/50H	380V/3N/ 50Hz						
Compressor	Type	Scroll							
	Make	Copeland USA							
	Start Mode	Direct Start							
	Quantity (Nos)	1	1	2	2	2	2	4	4
Heat Exchanger	Type	Titanium in PVC							
	Quantity (Nos)	1	1	2	2	2	2	4	4
Evaporter	Fin Type	Hydrophillic Aluminium							
	Tube Type	Inner Groove Tube							
Refrigerant	Throttle Type	Emerson Thermal Expansion Valve / electronic Expansion valve							
	Type	R417A/R410A/R407C							
Water Side	Head Outlet (mm)								
	Cycle Flow (m3)	4	6	13	19	25	33	41	54
	Pipe Size (mm)	50	50	63	63	90	90	110	110
Fan	Type	Low noise high efficiency axial type							
	Input Power (W)	90	250	250	550	750	750	750	750
	Speed (rpm)	750	850	850	910	940	940	940	940
	Direction	Horizontal	Vertical						
	Quantity (Nos)	1	1	2	2	2	2	4	4
Protections		Under / Over voltage protection, Under /Over current protection, Open phase, Phase reversal, Phase imbalance, Compressor high discharge temperature protection, Compressor high discharge pressure protection, Compressor overload, Anti-Freeze protection.							
Noise DB(A)		<54	<56	<60	<65	<66	<68	<71	<72
Net Weight		68	125	270	460	650	750	900	1100
Cabinet		Galvanized powder coated steel/Stainless steel							
Dimension	Length (mm)	1110	855	1550	1585	2000	2010	1700	2000
	Width (mm)	470	775	845	850	1005	1165	1585	2000
	Height (mm)	680	1095	1180	1525	1865	2025	1525	1865

Testing Condition : 1. Heating Condition: Outdoor temp. (DB/WB): 24ºC/19ºC, 62.5%RH, inlet water temp: 26ºC The above data is only for reference: specific data is subject to the product
2. Cooling Condition: Outdoor temp. (DB/WB): 35ºC/24ºC, 68%RH, inlet water temp: 30ºC The above data is only for reference: specific data is subject to the product



VINDSOL

Harnessing the nature's energy for you

Mechzephyr Engineering Pvt. Ltd.

Factory & Registered Office
Shed No: A 70 , KSSIDC
Bommasandra Industrial Area
Bangalore - 560 099.

Office Landline : 080 - 2990 7077
Mobile : +91 73385 69998
sales@vindsol.in
www.vindsol.in

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App Store

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the NEXT generation

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