Neo™ HEAT PUMP

Eco Friendly Heating & Cooling for Cleaner Tomorrow

BSOR
CONTROLS TECHNICAL SERVICES

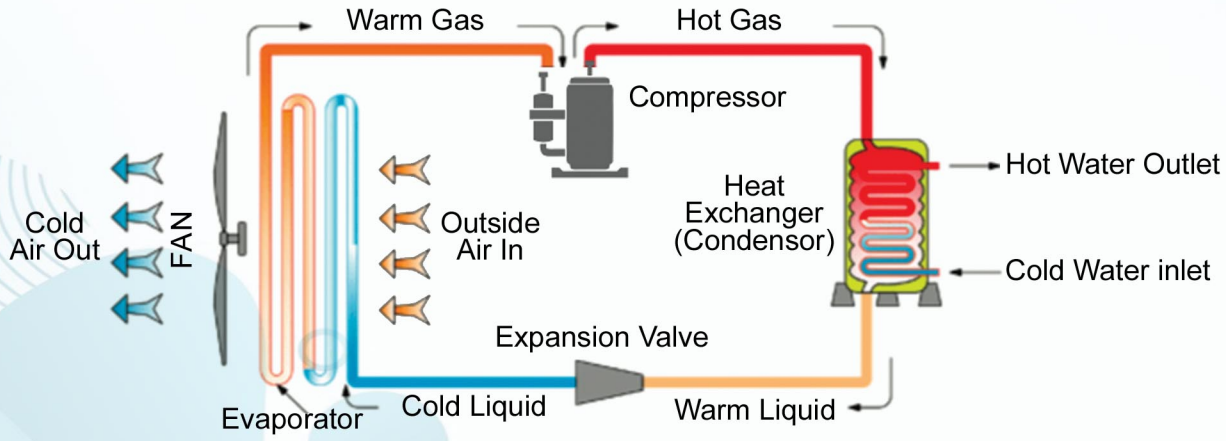
MAKE IN INDIA · ECO FRIENDLY · SINCE 2012 · CE · CERTIFIED ISO 9001

INTRODUCTION

OBSOR has been established in the UAE market since 2021, focusing on energy optimization and energy-saving solutions. Backed by a team of engineers with over 15 years of regional experience, we have built a strong understanding of the UAE's unique climatic and operational challenges.

OBSOR offers energy-efficient hot/cold water solutions powered by advanced heat pump technology, ideal for a variety of applications including domestic hot water supply, swimming pool heating/cooling, and laundry drying systems. The system is manufactured by Sai Heating & Cooling Solutions under the brand name NEO an emerging brand with successful field installations in select regional markets, known for delivering dependable and energy-efficient heat pump technology.Engineered for residential, commercial, and industrial applications, the OBSOR's heat pump range includes Water Heaters, Swimming Pool Heaters and Heat Pump Dryers. With its compact footprint, reduced operating cost, and proven performance in demanding climates, this solution offers a smart, sustainable alternative to conventional heating systems—ideally suited for the UAE.

WORKING PRINCIPLE



An air source to water heat pump extracts thermal energy from ambient air and transfers it to water through a closed refrigeration cycle. The system operates using four key components: an evaporator, compressor, condenser, and expansion valve. Ambient air passes over the evaporator, causing the refrigerant to absorb heat and evaporate. The vapor is then compressed to a higher temperature and pressure. In the condenser, this thermal energy is transferred to the water, effectively heating it. The refrigerant then passes through the expansion valve, reducing its pressure and temperature, and the cycle repeats. This highly efficient process enables significant energy savings compared to traditional electric or gas or other water heaters.

FEATURES

- WiFi Enabled
- Modbus Communication
- Reduced CO2 emission
- Phase failure protection
- Outdoor weather proof cabinet
- Advanced control unit
- Dual pressure protection
- Built-in freeze protection

PRECISION. RELIABILITY. EFFICIENCY.

EXPERTISE & QUALITY

Leverage our team's regional experience and trust in high-performance solutions

OPTIMIZED PERFORMANCE

Achieve precise hot and cold water control with integrated, energy-efficient systems tailored for demanding climates.

SOLAR INTEGRATION READY

Our heat pump systems can seamlessly integrate with existing solar water heaters to maximize energy savings.

SUSTAINABLE SAVINGS

Cut operational costs, reduce energy consumption, and contribute to environmental sustainability through low-carbon heating and cooling.

SMART & TAILORED SOLUTIONS

Enjoy fully customized, intelligently managed systems from design to implementation-meeting your unique application needs.

SMART & TAILORED SOLUTIONS

Rely on proactive service and ongoing support from a team dedicated to your long-term success.

TECHNICAL PARAMETERS

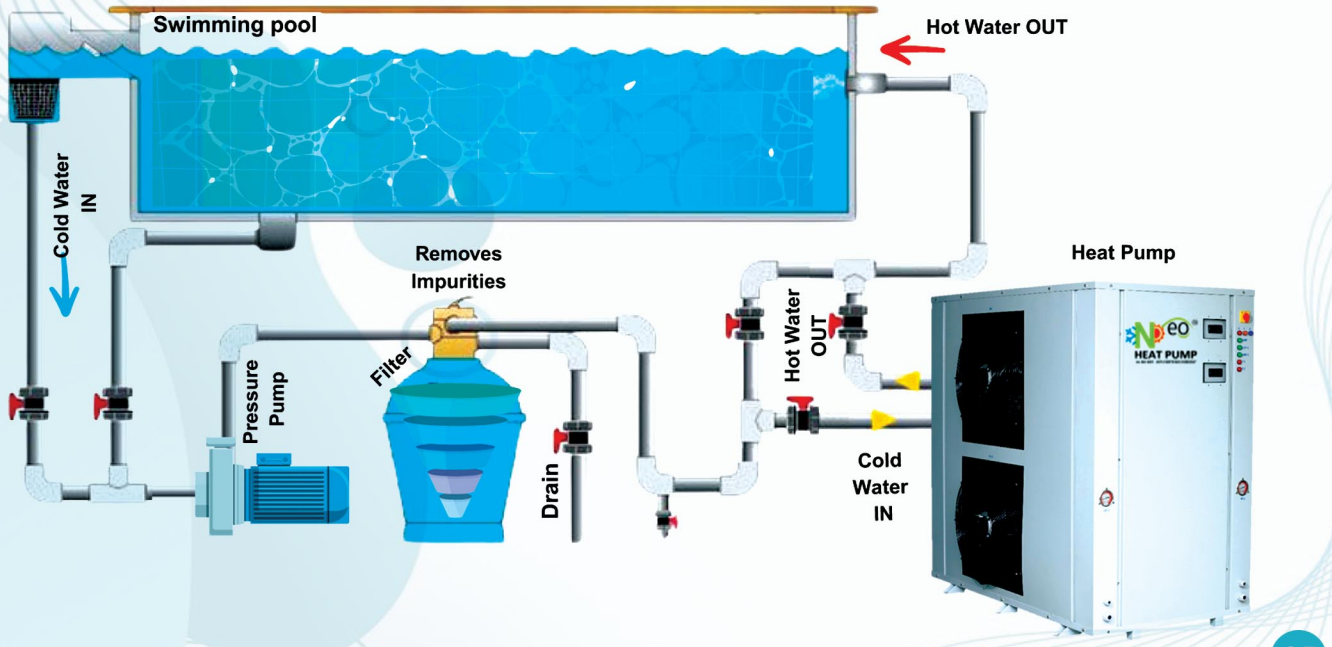
Model		Neo-R4	Neo-R6	Neo-R8.2
		Heating Capacity		
Rated Heating Capacity (KW)		4	6	8.8
Rated Power Input (KW)		1	1.6	2.2
COP		4	4	4
Input Current (A)		4.5	6.8	10
		Specifications		
Power Supply		230V 1Ph 50Hz AC		
Evaporator		Copper Coil with Aluminium Fins		
Compressor Type		Rotary		
Heat Exchanger		Coil in shell		
Expansion Valve		Thermostatic expansion valve		
Fan Type		Axial Suction Fan		
Fan Direction		Vertical		
Fan Quantity		1		
Circulation Pump		230V 0.4Hp (In Built)		
Controller		In Built		
Modbus Communication		Yes (Optional)		
Wifi Communication		Yes (Optional)		
Refrigerant		R417a		
Ambient Temperature(^{0}C)		(-)10^{0}C to 50^{0}C		
Maximum Temperature(^{0}C)		55^{0}C to 70^{0}C		
Protections		High Pressure I Low Pressure I Over Load Protection I Antifreeze I Overload I Dry Run Protection		
Enclosure		Powder Coated Galvanized Iron		
Connection Size (In & Out)(Inches)		0.45		
Color		RAL 7035		
Noise(dB)		≤56	≤56	≤57
Application		Outdoor		
Dimension (mm)	H	610	610	610
	W	860	860	860
	L	550	550	550
Net Weight in kg (Approx.)		68	75	98

KEY HIGHLIGHTS

- Comfort & Convenience
- 24x7 Hot / Cold water service round the clock
- Eco friendly
- Fully automatic
- No human intervention

TECHNICAL PARAMETERS

Model		Neo-P13.5	Neo-P18	Neo-P27	Neo-P45	Neo-P54	Neo-P90	Neo-P108	Neo-P162	Neo-P216
		Heating Capacity								
Rated Heating Capacity (KW)		13.5	18	27	45	54	90	108	162	216
Rated Power Input (KW)		2.4	3.5	5	7.5	10	15	20	30	40
COP		5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Input Current (A)		11	5.6	8.5	12	16	24	32	48	64
		Cooling Capacity								
Rated Cooling Capacity (KW)		8.2	10.5	17.5	26.37	35	52.5	70	105.5	140
Rated Power Input (KW)		2.4	3.5	5	7.5	10	15	20	30	40
EER		3.4	3	3.5	3.5	3.5	3.4	3.5	3.5	3.5
Input Current (A)		3.7	9.2	12.6	16.8	25	36	38	48	56
		Specifications								
Power Supply		400V 3PH 50Hz AC								
Evaporator		Copper Coil Aluminium Fins								
Compressor Type		Scroll Compressor								
Heat Exchanger Type		Coaxial Titanium Heat Exchanger								
Expansion Valve		Thermostatic Expansion Valve								
Fan Type		Axial Suction Fan								
Fan Quantity		1	1	1	2	2	4	4	8	12
Fan Direction		Vertical								
Controller		Yes								
Modbus Communication		Yes								
Wifi Communication		Yes (Optional)								
Refrigerant		R407c/R417a								
Ambient Temperature (^{0}C)		(-)10^{0}C to 52^{0}C								
Maximum Temperature (^{0}C)		28^{0}C to 32^{0}C								
Protections		High & Low Pressure I High Temperature I High T (Low Flow) I Antifreeze I Overload I Phase Failure I Phase Reversal I Dry Run Protection								
Enclosure		Powder Coated Galvanized Iron								
Connection Size(in&Out) (Inches)		1.5								
Color		RAL 7035								
Noise (dB)		≤54	≤56	≤58	≤58	≤60	≤65	≤71	≤75	≤75
Water Flow Volume (m3/h)		4	4.5	6	13	25	33	42	51	51
Application		Outdoor								
Dimensions(mm)	H	610	720	780	780	1460	1460	1700	1930	1930
	W	550	630	670	720	935	935	1350	1600	1600
	L	860	860	1020	1020	1560	1560	1950	2100	2100
Net Weight in kg (Approx.)		110	135	145	195	265	320	360	410	470



TECHNICAL PARAMETERS

Model		Neo-P13.5	Neo-P18	Neo-P27	Neo-P45	Neo-P54	Neo-P90
		Heating Capacity					
Rated Heating Capacity (KW)		8.8	12	22	30	44	60
Rated Power Input (KW)		2.2	3	5.5	7.5	11	15
COP		4	4	4	4	4	4
Input Current (A)		3.7	5	9.28	12.6	16.88	25
Rated Hot Water Recovery Rate (l/h)		188	309	616	925	1228	1534
Rated Hot Water Output Temp (^{0}C)		60^{0}C					
Max. Hot Water Output Temp (^{0}C)		70^{0}C to 70^{0}C					
		Specification					
Power Supply		400V 3PH 50Hz AC					
Evaporator		Copper Coil With Aluminium fins					
Compressor Type		Scroll Compressor					
User Side Heat Exchanger	Type	Coaxial Heat Exchanger					
	Water Flow (m3/h)@ΔT=3	2.3	3.8	7.5	10.3	15.2	18.3
	Water Flow (m3/h)@ΔT=5	1.4	2.3	4.5	6.5	9.1	11
	Water Pressure Drop (kpa)	≤30	≤30	≤40	≤40	≤50	≤50
Heat Source Side Heat Exchanger	Type	Shell and Tube Heat Exchanger					
	Water Flow (m3/h)@ΔT=3	1.8	2.9	5.7	8	11.3	13.7
	Water Flow (m3/h)@ΔT=5	1	1.7	3.4	4.8	6.5	8.2
	Water Pressure Drop (kpa)	≤30	≤30	≤40	≤40	≤50	≤50
Expansion Valve		Thermostatic Expansion Valve / Electronic Expansion Valve					
Fan Type		Axial Suction Fan					
Fan Quantity		1	1	2	2	4	4
Fan Direction		Vertical					
Controller		Yes					
Modbus Cummunication		Yes					
Wifi Cummunication		Yes(Optional)					
Refrigerant		R-134a					
Ambient Temperature(^{0}C)		(-)10^{0}C to 52^{0}C					
Maximum Temperature(^{0}C)		70^{0}C to 80^{0}C					
Protections		High & Low Pressure I High Temperature I HighΔT(Low Flow) I Antifreeze I Overload I Phase Failure I Phase Reversal I Dry Run Protection					
Starter		Hard Starter (Inverter) / Soft Start (Non- Inverter)					
Enclosure		Powder Coated Galvanized Iron					
Connection Size (In & Out) (Inches)		1					
Color		RAL 7035					
Water Flow Volume (m3/h)		1.5	2	3.9	5	7.5	10
Noise(dB)		≤53	≤56	≤60	≤60	≤63	≤63
Application		Outdoor					
Dimentions(mm)	H	610	720	780	780	1460	1460
	W	550	630	670	720	935	935
	L	860	860	1020	1020	1560	1560
Net Weight in kg (Approx.)		98	120	145	165	300	320

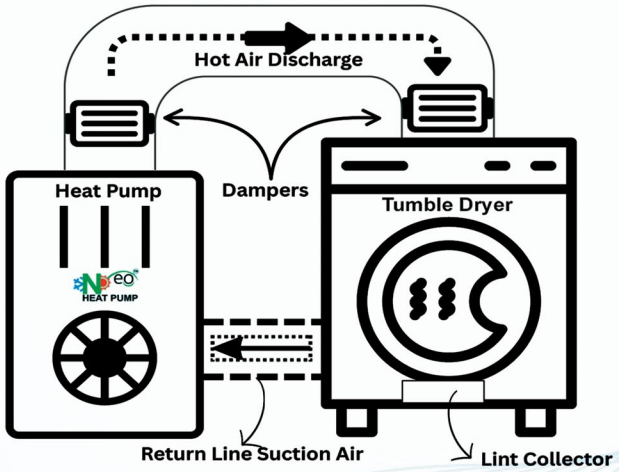
- Diesel
- Gas
- Solar + Electric Backup
- Commercial electrical heater
- 70-80% energy savings lower your energy/bills

TECHNICAL PARAMETERS

Model		Neo-P13.5	Neo-P18	Neo-P27	Neo-P45	Neo-P54
		Heating Capacity				
Rated Heating Capacity(KW)		15	20	24	32	40
Rated Power Input(KW)		3.5	5	6	8	10
Load Capacity(kg)		10-15	30	30	50	50
COP		4	4	4	4	4
Time (min)		60	60	45	60	45
Input Current (A)		6.5	9	10.5	12.5	16.8
		Specifications				
Power Supply		400V 3Ph 50Hz AC				
Evaporator		Copper Coil With Aluminium Fins				
Compressor Type		Scroll Type				
Heat Exchanger		Copper Coil With Aluminium Fins				
Expansion Valve		Thermostatic Expansion Valve				
Fan Type		Axial Suction Fan				
Fan Quantity		2				
Fan Direction		Vertical Hot Air, Horizontal Cold Air				
Blowing		Vertical (Ducting Type - Top Flow To Tumble Dryer)				
Hot Air Circulation Axial Fan Diameter (mm)		350	450	500	650	750
Evaporator Fan Diameter(mm)		250	350	350	500	500
Controller		Yes				
Modbus Communication		Yes				
Wifi Communication		Yes(Optional)				
Refrigerant		R134a				
Ambient Temperature (^{0}C)		(-)10^{0}C to 52^{0}C				
Max. Temperature (^{0}C)		80	80	80	80	80
Return Temperature (^{0}C)		55	55	55	55	55
Protections		High & Low Pressure I High Temperature I HighΔT(Low Flow) I Antifreeze I Overload I Phase Failure I Phase Reversal I Dry Run Protection				
Starter		DOL Strength With Fixed Speed				
Enclosure		Powder Coated Galvanized Iron				
Color		RAL 7035				
Noise		≤57	≤57	≤57	≤65	≤70
Inlet Duct Diameter (mm)		350	450	500	650	750
Outlet Duct Diameter (mm)		350	450	500	650	750
Air Flow Volume (CFM)		150	170	170	230	230
Application		Indoor				
Dimensions (mm)	H	780	1180	1180	1180	1180
	W	720	680	680	680	680
	L	1020	1800	1800	1800	1800
Net Weight in kg (Approx)		145	300	300	300	300

KEY HIGHLIGHTS

- Preservation of Colors
- Reduced shrinkage
- Reduced wrinkling
- Eco Friendly
- Energy Efficient
- Lower Utility Bills
- Higher Safety
- Reduced Carbon Footprint



NEO - MAJOR PROJECTS

JSW Steel

NATIONAL LAW SCHOOL OF INDIA UNIVERSITY
BENGALURU

RAMAIAH Memorial Hospital

Sun.n.Sand MUMBAI

THE ART OF LIVING
INTERNATIONAL CENTER
BENGALURU

VIVANTA
HOTELS & RESORTS
BY TAJ

MangoMist resorts

KLE Technological University
Creating Value
Leveraging Knowledge

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