HEAT PUMP

AQVASTAR PRO SERIES

Inverter Heat/ Cool Pump - Residential / Semi commercial

Eco-friendly R32

32% GWP comparing to R410A
25% CO2 carbon consumption
25% quota cost

Smart WIFI Control

With Mr. Silence's smart APP control you can check or control your Mr. Silence anywhere

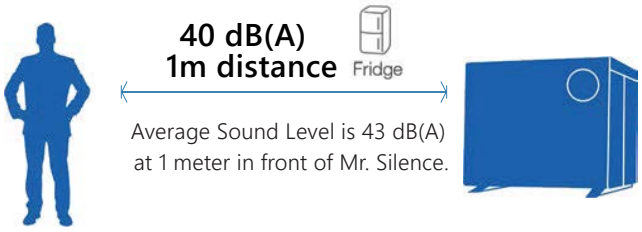
Full Protection on Electrical system

By DC Inverter compressor,
Mr. Silence will start from 0 Amps to rated Amps steadily.
There is no rush to the house electricity system

Wide Voltage Application

Self-adjustment to fit in unstable power supply, therefore voltage range can be 180-260V

12dB(A) lower than traditional on/off HP.



Average Sound Level is 43 dB(A) at 1 meter in front of Mr. Silence.

Features of Mr. Silence

Mitsubishi Twin-Rotary Inverter Compressor

Stepless Comfort Speed Conversion

DC Brushless Fan Motor

EEV	EEV technology: 10 times flexibility to adjust the gas flow and increase the COP by upto 20%
	Hot gas defrosting with Saginomiya 4-way valve for quick & efficient defrosting
	Twisted titanium heat exchanger: 40% higher efficiency than normal titanium heat exchanger

Thanks to the revolutionary air-flow design & stepless DC inverter system of Inverpad technology, the sound level of Mr. Silence is as low as a fridge.

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Inverter Heat/ Cool Pump - Residential / Semi commercial

Technical Specification

Model	AS70I	AS90I	AS110I	AS130I	AS150I	AS170I	AS210I	AS280I	AS280SI	AS350SI
PERFORMANCE CONDITION: Air 27°C/Water 27°C/Humid. 80%										
Heating capacity (kW)	7.0	9.0	11.0	13.0	15.0	17.5	21.0	28.0	28.0	35.2
COP Range	14~7.2	14~7.2	14~7	14.5~7.0	15~7	15.6~7	14.8~7.1	16~7.2	15.8~7.1	15.5~7
Average COP at 50% Speed	10.5	10.5	10.3	10.5	11.0	11.0	11.0	11.1	10.8	10.5
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/Humid. 70%										
Heating capacity (kW)	5.0	6.6	7.7	9.0	10.5	12.5	14.5	19.0	19.0	24.2
COP Range	7.3~4.5	7.5~4.8	7.3~4.7	7.5~5	7.7~4.9	7.7~5.0	7.1~5.0	8~5.0	8~5.0	7.5~5.0
Average COP at 50% Speed	6.5	6.5	6.6	6.4	6.8	6.6	6.6	6.6	6.5	6.6
PERFORMANCE CONDITION: Air 35°C/ Water 28°C/ Humid. 80%										
Cooling capacity (kW)	3.5	4.4	5.4	6.3	7.4	8.0	10.1	11.9	11.9	16.1
TECHNICAL SPECIFICATIONS										
Advised pool volume (m3)*	15~30	20~45	30~55	35~65	40~70	40~80	50~95	60~120	60~120	85~160
Operating air temperature (°C)	-10°C~43°C									
Compressor	Twin-rotary Mitsubishi DC compressor									
Casing	Aluminium Alloy casing									
Heat exchanger	Twisted Titanium Heat Exchanger									
Power supply	230V 1Ph								400V 3Ph	
Rated input power (kW)	0.14~1.12	0.19~1.38	0.22~1.64	0.26~1.8	0.28~2.15	0.33~2.50	0.38~2.90	0.49~3.80	0.49~3.80	0.65~4.84
Input power at 50% Speed (kW)	0.38	0.51	0.58	0.7	0.77	0.95	1.1	1.44	1.46	1.84
Rated input current (A)	0.61~4.83	0.83~5.98	0.96~7.13	1.13~7.83	1.22~9.32	1.44~10.9	1.66~12.7	2.15~16.53	0.71~5.51	0.95~7.01
Maximum input current (A)	7.5	8.5	10	12	13.5	15	17	20	7	10.5
Power cord (mm^2)	3x1.5	3x2.5	3x2.5	3x2.5	3x2.5	3x4	3x4	3x6	5x2.5	5x2.5
Sound level at 1m dB(A)	36.5~46.0	36.8~46.2	36.6~47.9	40.1~48.7	39.3~52	41.1~51.8	38.9~52.2	41.5~52.9	41.5~52.9	40.6~52.6
Sound level 50% at 1m dB(A)	39.2	39.4	41.3	43.7	44	44.5	44.4	46.4	47	46.1
Sound level at 10m dB(A)	16.5~26.0	16.8~26.1	16.6~27.9	20.1~28.7	19.3~32	21.1~31.8	18.9~32.2	21.5~32.9	21.5~32.9	20.6~32.6
Advised water flux (m^3/h)	2~4	2~4	3~5	4~6	5~7	6~8	8~10	10~12	10~12	12~18
Water connection (mm)	50									
Net weight (kg)	52	53	55	57	61	66	72	91	96	135
Net dimension LxWxH (mm)	890*430*657	890*430*657	890*430*657	890*430*657	970*430*657	1060*430*657	1060*430*757	1060*430*957	1060*430*957	1314*512*957

Average-COP 10.7

COP range 16.0-7.0 (air 27°C/water 27°C).

When maintaining pool temperature at 95% of pool season, the HP is running by 50% capacity which leads to the best energy saving performance and most silent pool environment.

THE LOW CARBON FOOTPRINT REDUCE 93% OF YOUR ENERGY BILL

AQUARK®

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HEAT PUMP

AQVASTAR PRO SERIES

Commercial Inverter Heat/ Cool Pump - InverMax

Features

- Reverse Cycle Defrosting
- -10°C~43°C Operation
- Aluminium Alloy Casing
- Mitsubishi Twin-Rotary Inverter Compressor
- EEV Technology - 20% higher efficiency than capillary
- Twisted Titanium Heat Exchanger - 40% higher efficiency
- Gas: Eco-friendly R32

Double energy saving

Energy consumption comparison

Heat pump	InverMax 60kW	On/off HP 60kW
COP (air 27°C/water 27°C)	10.5@50% Capacity	5
Input power	2.86 kW	12 kW
Heating time (for 1°C)	9.67 hours	4.83 hours
Daily consumption	27.66 kWh	57.96 kWh
Yearly consumption (180 days)	4978.8 kWh	10432.8 kWh

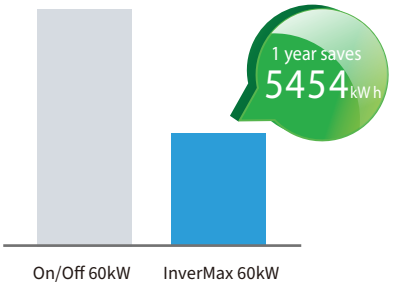
DC Inverter Average C.O.P 10

53dB(A) at 1m Comfort Silence

Wi-Fi Built in

*Formula: kW*h= T *V (m^3)*1.16 250m^3 pool volume

Above calculation is just a reference when maintaining pool temp for well isolated pool under air 27°C/ water27°C



Wi-Fi Built-in Touch Controller

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HEAT PUMP

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Commercial Inverter Heat/ Cool Pump - InverMax

Technical specification

Model	AS600SI	AS1100SI
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%		
Heating capacity(kW)	60.0	115.0
COP Range	6.2~15.0	6.3~15.0
Average COP at 50% speed	10.5	10.8
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%		
Heating capacity (kW)	40.1	85.0
COP Range	4.7~7.7	4.8~8.0
Average COP at 50% speed	6.8	7.0
PERFORMANCE CONDITION: Air 35°C/ Water 28°C/ Humid. 80%		
Cooling capacity (kW)	24.0	45.0
TECHNICAL SPECIFICATIONS		
Advised pool volume (m^3)	125~260	250~520
Operating air temperature (°C)	-10°C ~ 43°C	
Compressor	DC Inverter Compressor	
Heat exchanger	Twisted Titanium Heat Exchanger	
Fan direction	Vertical	
Power supply	400V/3 Ph/50Hz	
Rated input power (kW)	2.13~8.53	4.43~17.7
Rated input current (A)	3.08~12.36	6.42~25.65
Sound level at 1m dB(A)	53.0~61.0	55.0~64.0
Sound level 50% at 1m dB(A)	55	58
Sound level at 10m dB(A)	33.0~41.0	35.0~44.0
Advised water flux (m^3/h)	20~25	40~50
Water connection (mm)	75	110
Net dimension LxWxH (mm)	1023x1110x1260	2100×1090×1280
Net Weight (kg)	212	459

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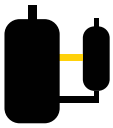
HEAT PUMP

AQVASTAR PRO SERIES

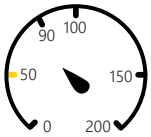
Invermax PRO

Dual Inverter Heating Systems
Dual Power, Double Saving

InverMax Pro adopts the industry's leading efficient Stepless DC Inverter control system. With smart conversion of compressor and fan motor, it provides amazing energy saving performance.



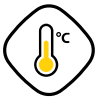
Mitsubishi twin-rotary inverter compressor



Stepless comfort speed conversion

DC Brushless Fan Motor

COP up to 15



-15°C~43°C Operation

Stainless Steel Casing

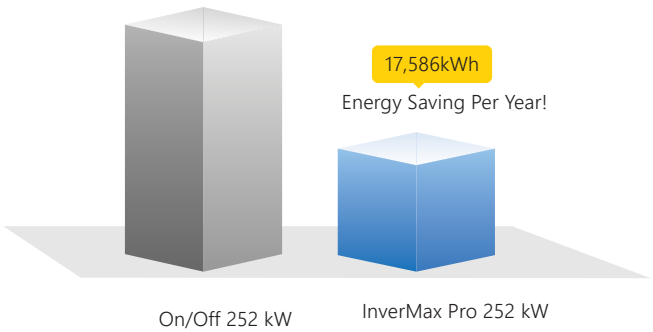
350~750 m³ Pool Available

Double Energy Saving
Energy consumption comparison

Formula: kW*h= T *V (m^3)*1.16 500 m^3 pool volume
Above calculation is just a reference when maintaining pool temperature for well isolated pool under air 27°C/ water 27°C

Heat Pump	InverMax Pro 252 kW	On/off HP 252 kW
COP (air 27°C/ water 27°C)	11.0 @50% capacity input power	5.7
Input power	11.46 kW	44.21 kW
Heating time (for 1°C)	4.61 hours	2.30 hours
Daily consumption	52 kWh	101 kWh
Yearly consumption (360 days)	19,018 kWh	36,604 kWh

Use a 252 kW InverMax Pro inverter pool heat pump instead of a 252 kW On/Off heat pump to heat up a 500 m^3 pool by 1°C and save 17,586 kWh of energy consumption every year. It is nearly double energy saving!



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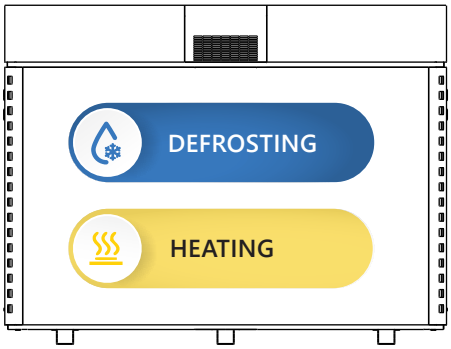
Invermax PRO

Dual Inverter Heating Systems
Super Strong Heating Power

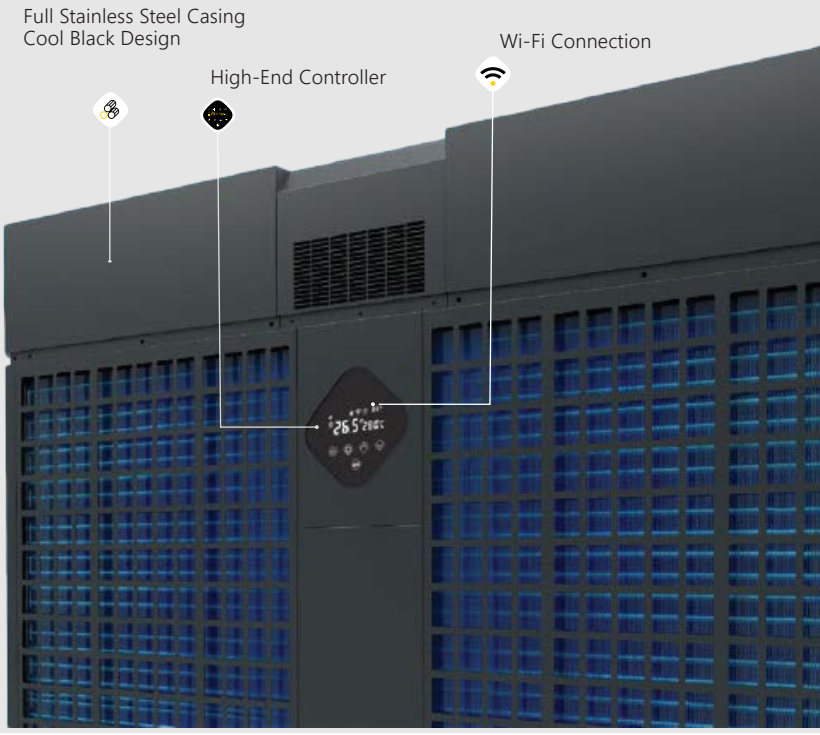
Inverter Heating Systems 2 Sets

- Inverter Control Chipsets 4 Sets
- High-Quality Evaporators 4 Sets
- Mitsubishi Twin-Rotary Inverter Compressors 4 Sets

InverMax Pro has two standalone inverter control systems, each equipped with two sets of compressors and evaporators. During defrosting mode, one system will maintain its normal heating operation to ensure constant output into the swimming pool, providing perfect 4 seasons swimming experience in public or commercial use.



Dual Inverter Heating Systems



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HEAT PUMP

AQVASTAR PRO SERIES

Invermax PRO

Other Features

-15°C~ 43°C Operation

Gas Pressure Monitoring

Heating, Cooling and Automatic Modes

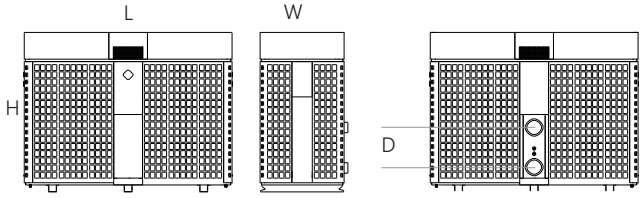
EEV Technology 20% Higher Efficiency Than Capillary

Twisted Titanium Heat Exchanger 40% Higher Efficiency

Parameters of InverMax Pro

Model		AS2500SI
Operating air temperature (°C)		-15°C ~ 43°C
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%		
Power Mode	Heating capacity (kW)	252.0
Perfect Mode	Heating capacity (kW)	205.0
	COP	15.0~7.0
	Average COP	11.0
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%		
Power Mode	Heating capacity (kW)	185.0
Perfect Mode	Heating capacity (kW)	152.0
	COP	8.0~5.5
	Average COP	7.5
PERFORMANCE CONDITION: Air 35°C/ Water 28°C/ Humid. 80%		
Cooling capacity (kW)		110.0
TECHNICAL SPECIFICATIONS		
Compressor		Mitsubishi twin-rotary DC compressor
Casing		Stainless steel casing
Power supply		400V/3 Ph/50Hz
Rated input power (kW)		5.7~35.8
Input power at 50% speed (kW)		10.1
Rated input current (A)		8.3~51.9
Sound level at 1m dB(A)		58.0~72.0
Sound level 50% at 1m dB(A)		65.0
Sound level at 10 m dB(A)		38.0~52.0
Advised water flux (m^3/h)		60~75
Water connection (mm)		110

Maximum input current (A)	68
Breaker rated current (A)	80
Power cord (mm^2)	5*25
R410A Gas Weight (g)	8000×4
Gross Weight (kg)	1260
Packaging dimension LxWxH (mm)	2680*1120*2230



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