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SMART SAVING

Mr. Smart Inverter pool heat pump



Mr. Smart



Stepless DC Inverter

Mr.Smart adopts Stepless DC Inverter compressor and DC brushless fan motor. The speed can be adjusted one by one, may it be hertz or RPM, which provides amazing energy saving performance and extreme silence.



Dedicated Inverter Control System

With a control system is especially designed for pool heating. Mr. Smart can adjust the heating capacity precisely according to different heating loss in a pool season. The design philosophy is to achieve fast heating with high speed at the beginning of the season, and better energy saving in the rest through the season by middle and low speed.

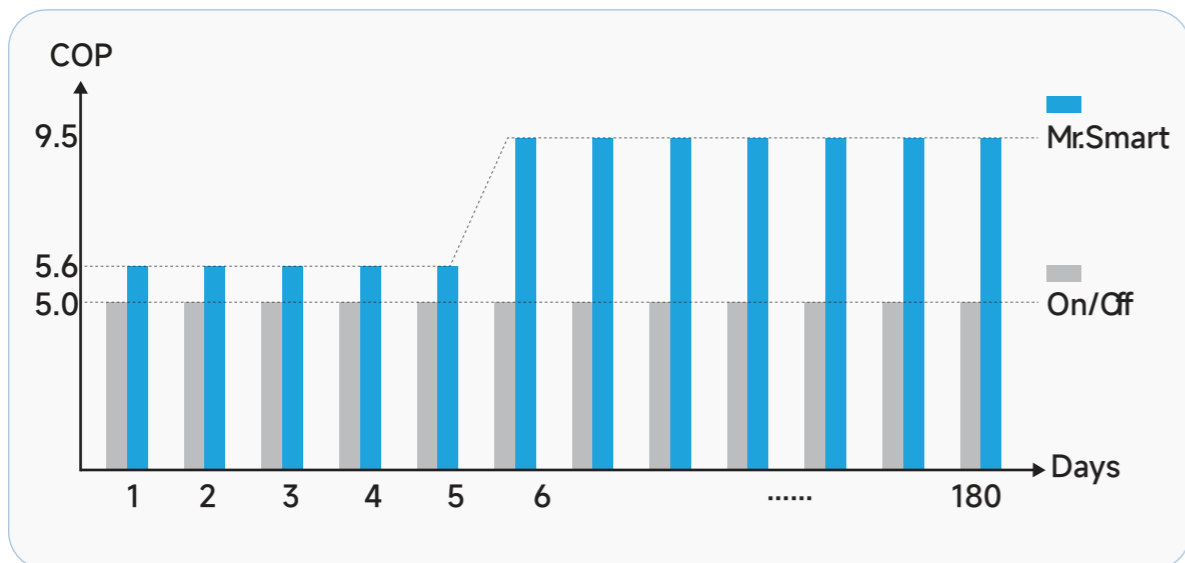


Intelligent Protection

Mr. Smart can adapt to wide voltage range and adjusts the system in different tough condition. For example, if there is electricity peak or poor ventilation, the system can slow down intelligently to achieve comfortable operation. Thus, it brings longer life span than traditional On/Off heat pump.

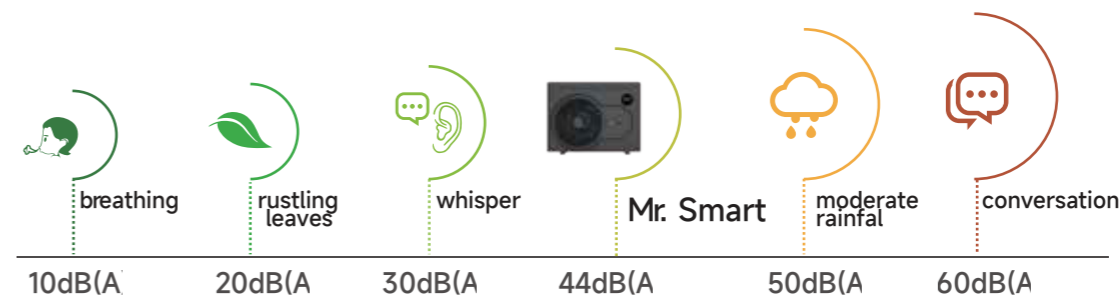
1 Average-COP 9.5 (air 27°C / water 27°C)

To maintain pool temperature for 95% of pool season, Mr. Smart runs at average 50% capacity to provide the best energy saving performance and most silent pool environment. Its average COP at 50% speed is 9.5 at air 27°C / water 27°C, and 6.2 at air 15°C / water 26°C.



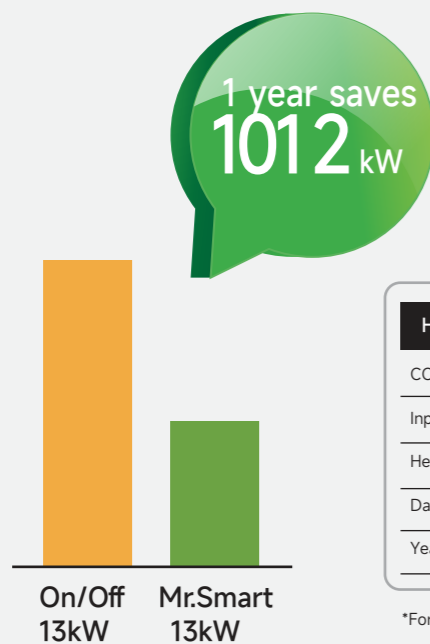
3 Comfort silence

Thanks to Inverquark technology, Stepless DC inverter compressor and DC brushless fan motor, Mr. Smart runs very quietly and provides you a comfortable heating environment.



2 Double energy saving

Use a 13kW Mr. Smart instead of a 13kW On/Off heat pump to heat up a 50m³ pool by 1°C and save 1012kW of energy consumption in one pool season. It is nearly double energy saving.



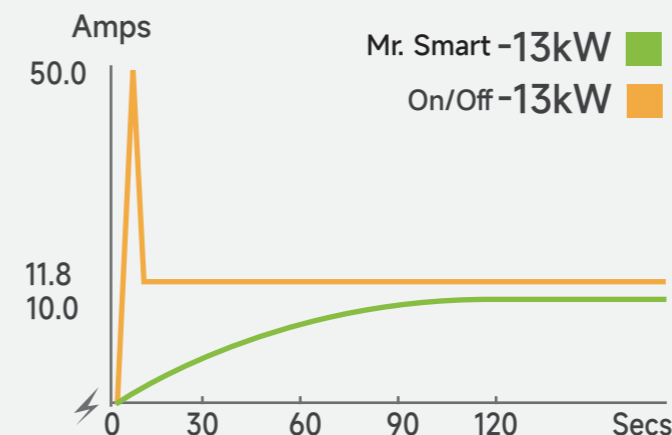
Energy consumption comparison

Heat pump	Mr. Smart 13kW	On/Off 13kW
COP (air 27°C/water27°C)	9.7 @ 50% CAPACITY	5
Input power	0.67 kW	2.6kw
Heating time	8.92 hours	4.46 hours
Daily consumption	5.97 kW	11.59 kW
Yearly consumption (180 days)	1074.6 kW	2086.2 kW

*Formula: Kw*h= T *V (m³)*1.16

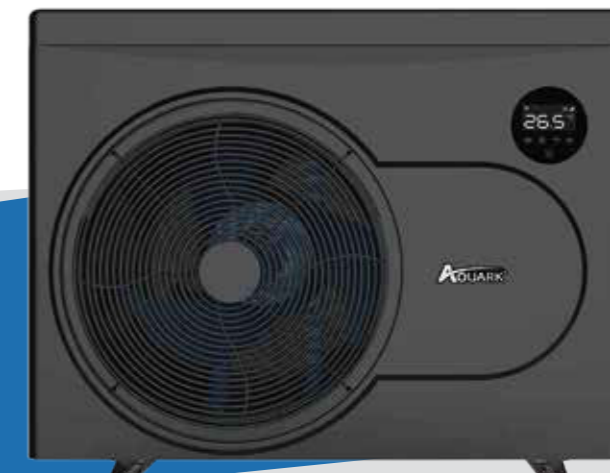
4 Soft start and wide voltage application

With DC inverter compressor, Mr. Smart starts from 0 amps. Then it increases slowly and steadily. There is no strike to the house electricity system. And with its smart conversion, Mr. Smart can be applied to a wide range of voltage of 180V to 260V.



5 Smart Wi-Fi App

With smart Wi-Fi app, you can see or control Mr. Smart anywhere any time.



Parameters

MORE FEATURES OF MR. SMART



Anti-corrosion, anti-UV ABS casing



EEV technology: 10 times flexibility to adjust the gas flow and increase the COP up to 20% higher.



Twisted titanium heat exchanger: 40% higher efficiency than normal titanium heat exchanger.



Extend the pool season with down to -5°C operation



Hot gas defrosting with Saginomiya 4-way valve for quick and efficient defrosting.



Model	STN50	STN70	STN90	STN130	STN160	STN200	STN240
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%							
Heating capacity (kW)	5.0	7.0	9.0	13.0	16.0	20.2	24.2
COP Range	13.0-6.0	13.0-6.3	13.2-6.4	13.5-6.5	13.5-6.4	13.5-6.3	13.8-6.5
Average COP at 50% speed	9.1	9.0	9.6	9.8	9.5	9.6	9.6
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%							
Heating capacity (kW)	3.5	5.0	6.5	9.0	11.0	14.0	16.0
COP Range	6.8-4.5	6.8-4.6	6.9-4.5	7.0-4.7	7.0-4.5	7.0-4.5	7.2-4.8
Average COP at 50% speed	6.2	6.3	6.3	6.4	6.2	6.2	6.4
TECHNICAL SPECIFICATIONS							
Advised pool volume (m ³) *	5-20	15-30	20-45	35-65	40-75	50-90	60-110
Operating air temperature (°C)	-5°C ~ 43°C						
Heat exchanger	Twisted Titanium Heat Exchanger						
Power supply	230V 1Ph						
Rated input power (kW)	0.17-0.78	0.20-1.09	0.26-1.44	0.34-1.91	0.44-2.44	0.56-3.11	0.60-3.33
Input power at 50% speed (kW)	0.28	0.40	0.52	0.70	0.89	1.13	1.25
Rated input current (A)	0.61-3.39	0.85-4.73	1.13-6.28	1.50-8.33	1.91-10.63	2.43-13.53	2.61-14.49
Maximum input current (A)	6.5	6.5	8.0	12.5	17	19.5	20.5
Power cord (mm ²)	3×1.5	3×1.5	3×2.5	3×2.5	3×4	3 x 6	3×6
Sound level at 1m dB(A)	37.7-49.1	37.8-49.2	39.6-51.5	41.9-52.0	44.2-55.3	44.3-56.1	44.9-56.7
Sound level by 50% speed 1m dB(A)	41.7	41.8	44.8	47.5	47.7	48.6	49.1
Sound level at 10m dB(A)	17.7-29.1	17.8-29.2	19.6-31.5	21.9-32	24.2-35.3	24.3-36.1	24.9-36.7
Advised water flux (m ³ /h)	2-3	2-4	3-5	4-6	6-8	7-10	10-12
Water connection (mm)	50						
Net dimension LxWxH (mm)		903*349*654	903*349*654	903*349*654	991*349*654	991*349*754	991*420*757
Net weight (kg)		42	46	49	60	68	68
Qty per 20FT / 40HQ (sets)		102/216	102/216	102/216	90/198	60/198	50/162

Remarks:

*Advised pool volume applies to a private pool with isothermal cover, from April to September.

*The data above is only for reference. For specific data, please refer to the nameplate on the unit.