



Fairland Electric (China) Limited

Room 2315-2317, No.69, Xianlie Road Central Guangzhou,
P.R.China 510095

Tel: 0086-20-87321933 Fax: 0086-20-87327767 E-mail: sales@fairland.com.cn Web: www.fairland.com.cn



1st
FULL-INVERTER



AVERAGE COP 11.5 at 50% capacity
AVERAGE 10 times quieter

(Air 26°C/ Water 26°C/ Humidity 80%)

CONTENTS

ABOUT FAIRLAND

P.06-P.07
History

P.08-P.09
Global Partners

P.10-P.11
Quality Control

P.12-P.13
Energy Rating

FAIRLAND NEW

P.14-P.17

FULL-INVERTER

P.19-P.21
What's Full-inverter Technology

P.22-P.27
Inverter-plus

P.28-P.29
Inverter-plus Vertical

P.30-P.31
Inverter-plus Commercial

P.32-P.33
Inverter-plus Dehumidifier

P.34-P.35
Inverter-pro

COMFORTLINE INVERTER

P.36-P.39

APPENDIX

P.40-P.43

PRODUCT FAMILY



ABOUT FAIRLAND

Fairland positioned itself as a heat pump specialist since foundation in 1999. Fairland has been focusing on developing innovative HP technology and pursuing high quality HP products.

In the past 7 years, Fairland has been the 1st one who developed the Full-inverter technology and leading the trend of global inverter pool heat pump market. Fairland believes the Full-inverter technology will create maximum value for smart pool.

Fairland continues providing satisfactory service and more innovative products to benefit the markets, the partners and the pool families.

Strive for Customer Centricity
— Serve the Needs of Customer

MISSION

One Swimming Pool
One Inverter

PHILOSOPHY

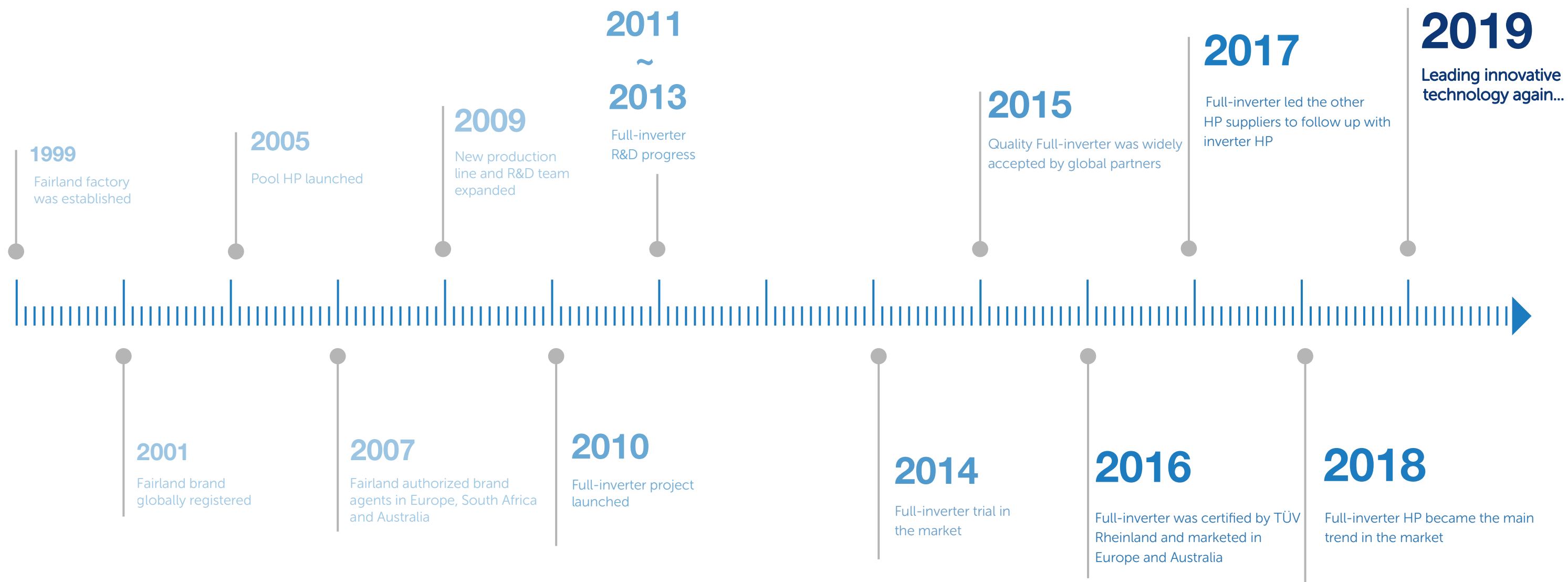
Simple & Focus

POSITION

Heat Pump Specialist

HISTORY

In the past 20 years, Fairland has kept innovating the HP technology for end users' satisfaction and partners' value.



GLOBAL PARTNERS



Thanks to the trust of our global partners, Fairland's products & service has extended to more than 60 countries and areas.

Europe



America



Oceania



Asia



Africa



QUALITY CONTROL

Global failure rate < 1%



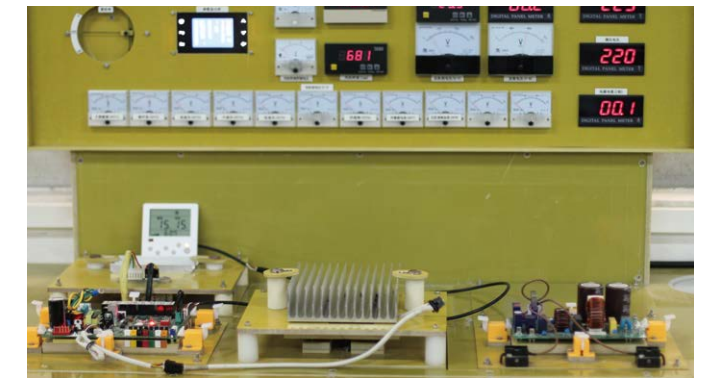
Q/C SYSTEMS

Fairland not only respects the international standard, but also insists in the strict quality control in HP industry. The Q/C system works strictly before production, during production and after production.

Fairland people believe High Technology, Quality Components and Strict Quality Control create Quality HPs.

BEFORE PRODUCTION

- ◆ Persist in adopting high-quality components for 20 years
- ◆ 8 hours high-temp aging running and then 100% QC on whole control system
- ◆ High-rate random inspection for all components



DURING PRODUCTION

- ◆ Silver welding (5% silver) for more reliable refrigerant circuit system
- ◆ 3 times refrigerant leakage test
- ◆ Complete electrical safety test



AFTER PRODUCTION

- ◆ 45mins running test for every unit
- ◆ Drying/cleaning/anti-rust treatment for every unit
- ◆ 1% random inspection for mass production in the lab



EU-Efficiency-Class A⁺


$$\text{COP} = \frac{\text{Heating Capacity}}{\text{Power Consumption}}$$

IPH70

Swimming Pool Heat Pump

AVERAGE COP

11.5



Type Approved
Safety
Regular Production
Surveillance
www.tuv.com
ID 1419056398

Heating capacity kw	27.5
COP	16.2~6.5
COP at 50% capacity	11.5
(Air 26°C / Water 26°C / Humidity 80%)	

Heating capacity kw	18.0
Rated input power kw	0.53~3.8
COP	8.5~4.8
COP at 50% capacity	7.0
(Air 15°C / Water 26°C / Humidity 70%)	

Sound pressure at 1m dB(A)	43.5~54.9
Sound pressure of 50% capacity at 1m dB(A)	48.4
Sound pressure at 10m dB(A)	23.5~34.9

Energy

Swimming Pool Heat Pump

Model BPN17

More Efficient

A

B

C

D

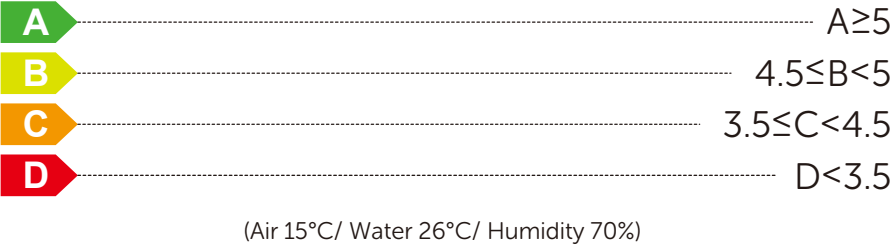
Less Efficient

A

9.1

AVERAGE COP

(Air 26°C / Water 26°C / Humidity 80%)	
Heating capacity kw	16.5
COP	10.5~5.7
COP at 50% capacity	9.1
(Air 15°C / Water 26°C / Humidity 70%)	
Heating capacity kw	11.5
Rated input power kw	0.56~2.7
COP	6.2~4.2
COP at 50% capacity	6.2
Europe Norm EN 14511	
Sound pressure at 1m dB(A)	45.2~56.3
Sound pressure of 50% capacity at 1m dB(A)	48.7
Sound pressure at 10m dB(A)	25.2~36.3




TÜV Rheinland Certification

The COP, heating capacity & sound pressure of Fairland Full-inverter heat pumps are certified by TÜV Rheinland in accordance with European standard EN14511 & EN12102.

CERTIFICATE of Conformity

EC Council Directive 2014/30/EU

Electromagnetic Compatibility



Registration No.:

AE 50362859 0001

Report No.:

16080138 001

Holder:

FAIRLAND ELECTRIC CO., LTD
Gaocun Ind. Zone, Beijiao Town
Shunde District
Foshan, Guangdong 528311
P.R. China

Product:

Thermal Heat Pump
(Swimming Pool Heat Pump)

Identification:

IPH45

Serial No.:

n.a.

Remark:

Refer to test report 16080138 001 for details.

Tested acc. to:

EN 55014-1:2006+A1+A2
EN 55014-2:1997+A1+A2
EN 55014-2:2015
EN 61000-3-2:2014
EN 61000-3-3:2013

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex III of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the s.m. Directive.

Date

20.12.2018

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may only be used if all relevant and effective EC Directives are complied with.



CERTIFIED

Type Approved
Safety
Regular Production
Surveillance

www.tuv.com
ID 1419056395



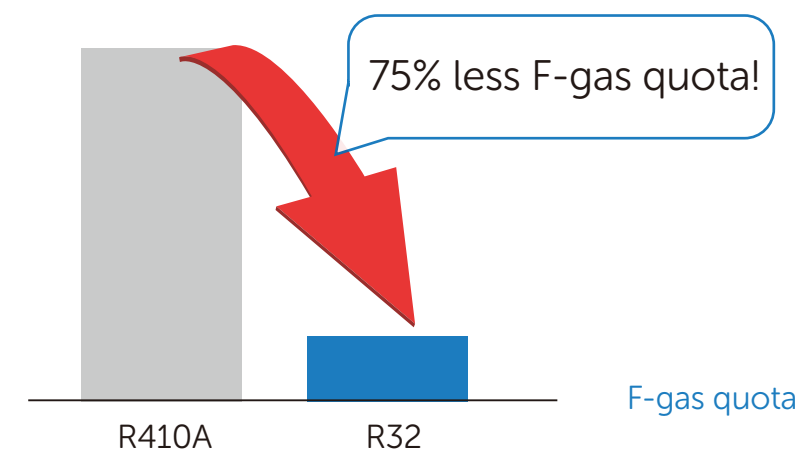
Fairland
new



Fairland **R32** Full-inverter Pool Heat Pump is **READY!**

R32, More Eco-friendly

R32 HP is a low GWP refrigerant of 675, it can reduce 75% of global warming gas emissions, providing a lower carbon release than most other HFCs.



Spend Less, Save More

WIFI

1. Service support with one click
2. Real-time monitoring
3. Control anytime anywhere

Touch Controller

—LIVE running speed & pool temp



Full-inverter

What's Full-inverter Technology?



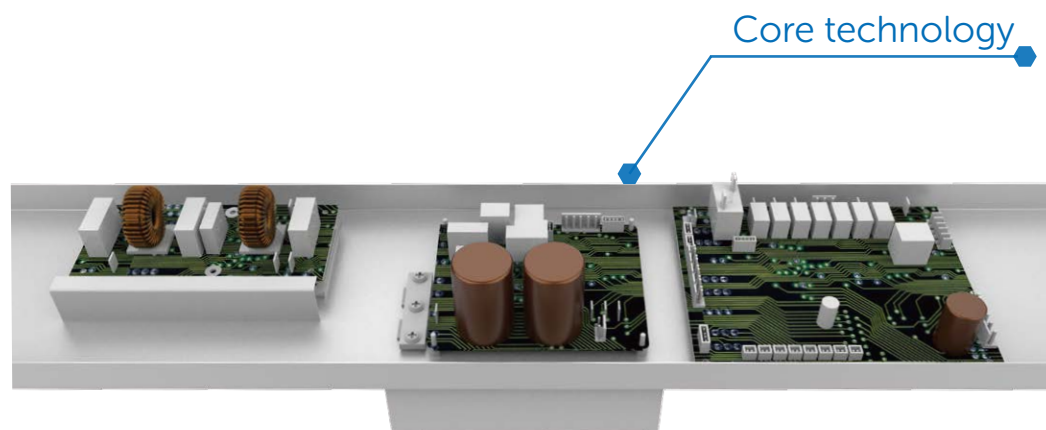
AVERAGE PERFORMANCE TALKS

Full-inverter HP brings you half running cost and 10 times quieter swimming environment based on AVERAGE performance. When season starts, the Full-inverter HP runs at 100% capacity to heat up the pool in the first few days. After that, the Full-inverter HP runs at AVERAGE 50% capacity to maintain the desired pool temperature.

Normally, the pool temperature drops 0.5~1.5 °C daily, 50% capacity of a Full-inverter HP is sufficient to heat up the pool by 1.5~2.2 °C in 15 hours running with the right model selection. The AVERAGE COP 11.5 leads to half running cost compared with an On/Off HP. Meanwhile, the AVERAGE sound pressure of a Full-inverter HP is 45.2 dB(A) at 1m, which is 10 times quieter than an On/Off HP and even can be negligible.

The Core of Full-inverter Technology is Full-inverter Control System

◆ Original & Unique Full-inverter Control System



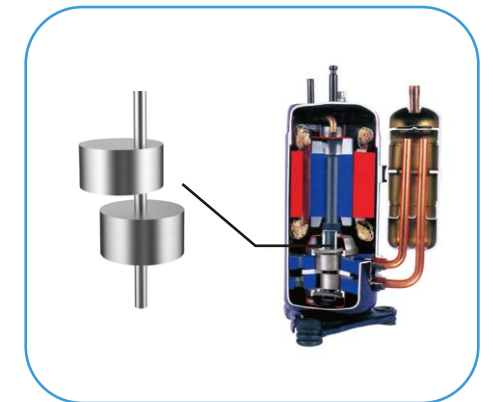
The Full-inverter Control System controls the compressor and fan motor speed to reach optimized performance.

Only Full-inverter Control System can drive the DC-inverter Compressor Hz by Hz and DC-inverter Fan Motor round by round, which leads to the stepless running of the whole system, and brings the most comfortable, healthy & silent environment.

So DC-inverter HPs \neq Full-inverter HPs

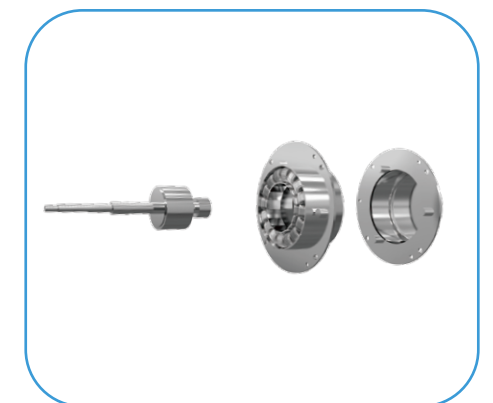
◇ Twin-Rotary DC-inverter Compressor

Full-inverter adopts twin-rotary DC-inverter compressor instead of single rotary compressor, the two rotors operate together to balance the movement of each other for anti-shaking, which is higher efficiency, lower vibration & quieter operation.



◇ DC-inverter Fan Motor

Full-inverter Control System controls DC brushless fan motor directly to ensure it works in the most precise & efficient way, it leads to a much lower noise and less failure rate compare with the normal mechanical brushes fan motor.



INVERTER-PLUS

The Most Efficient Full-inverter Pool HP

AVERAGE COP 11.5 at 50% capacity

AVERAGE 10 times quieter

Certified by TÜV Rheinland



Type Approved
Safety
Regular Production
Surveillance

www.tuv.com
ID 1419056395



HIGHEST AVERAGE COP

in pool heat pump industry

1 HALF Running Cost

AVERAGE COP 11.5 at 50% capacity, COP 16 at 20% capacity

— TÜV Rheinland Certified

(COP means Coefficient of Performance, it is a ratio of heating capacity to power consumption)

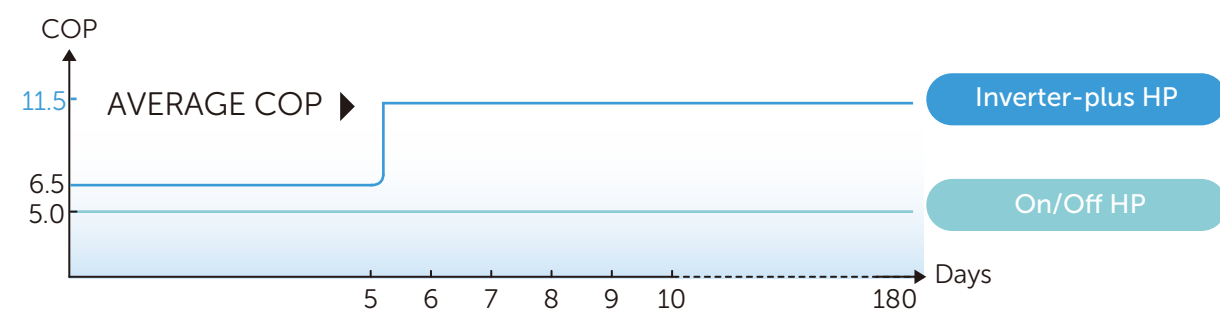
Half running cost (in 180 days swimming season)

In the first 5 days, Inverter-plus HP runs at 100% capacity, and heats up the pool to the set temperature. In the next 175 days, it runs at AVERAGE 50% capacity (AVERAGE COP 11.5) to maintain the desired pool temperature. So the AVERAGE COP is doubled compared with On/Off HP.

AVERAGE COP 11.5 (Air 26 °C / Water 26 °C / Humidity 80%)

Capacity \ Model	IPH15	IPH20	IPH25	IPH30	IPH35	IPH45	IPH55	IPH70	IPH70T	IPH100T
20% capacity	15.8	15.5	16.2	15.6	16.3	16.6	16.1	16.2	16.1	16.5
AVERAGE 50% capacity	11.3	11.2	11.3	10.8	11.2	11.4	11.0	11.5	11.5	11.2
100% capacity	7.4	7.4	7.3	6.0	6.7	6.2	6.0	6.5	6.5	5.8

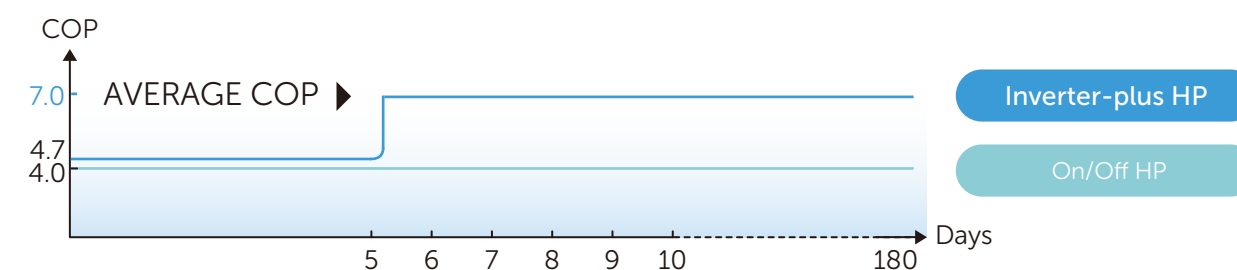
Inverter-plus HP vs On/Off HP (in 180 days swimming season)



AVERAGE COP 7 (Air 15 °C / Water 26 °C / Humidity 70%)

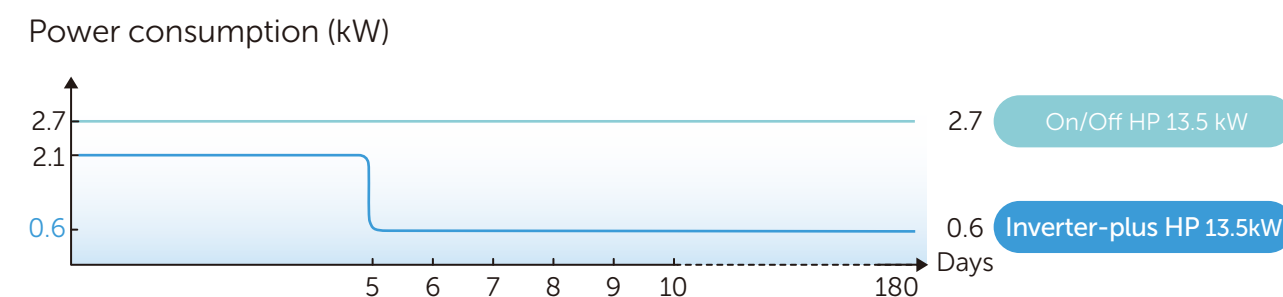
Capacity \ Model	IPH15	IPH20	IPH25	IPH30	IPH35	IPH45	IPH55	IPH70	IPH70T	IPH100T
20% capacity	8.1	7.7	8.1	7.8	8.2	8.2	8.1	8.5	8.5	8.4
AVERAGE 50% capacity	7.0	6.8	7.0	6.5	6.8	6.6	6.5	7.0	7.0	7.2
100% capacity	4.8	5.0	4.8	4.5	4.6	4.5	4.4	4.8	4.8	4.7

Inverter-plus HP vs On/Off HP (in 180 days swimming season)



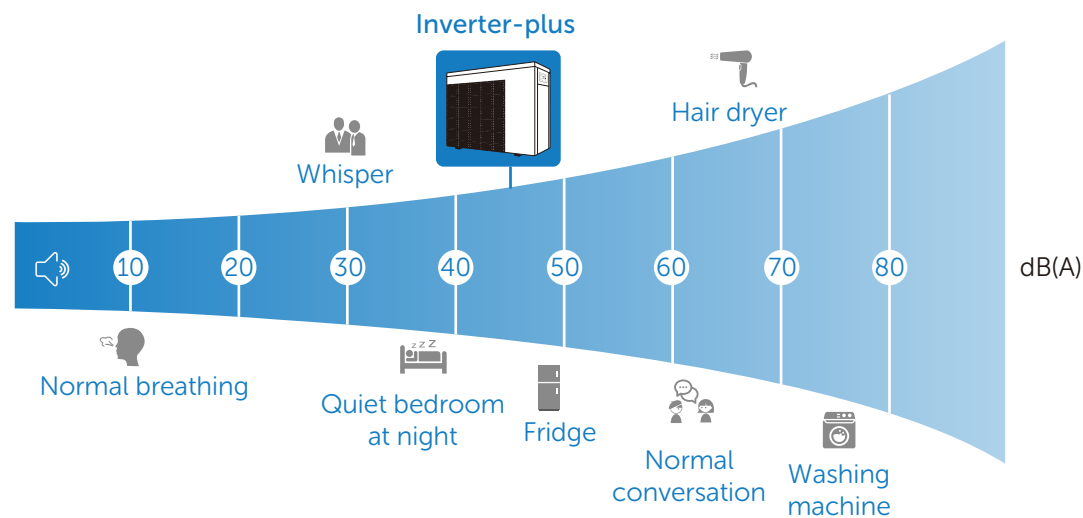
AVERAGE power consumption (in 180 days swimming season)

(e.g. 13.5kW at Air 26°C/ Water 26°C/ Humidity 80%)



2 AVERAGE 10 Times Quieter

When maintaining pool temperature at AVERAGE 50% capacity, AVERAGE sound pressure of a Inverter-plus HP can bring you 10 times quieter swimming environment and more friendly neighborhood than an On/Off HP.



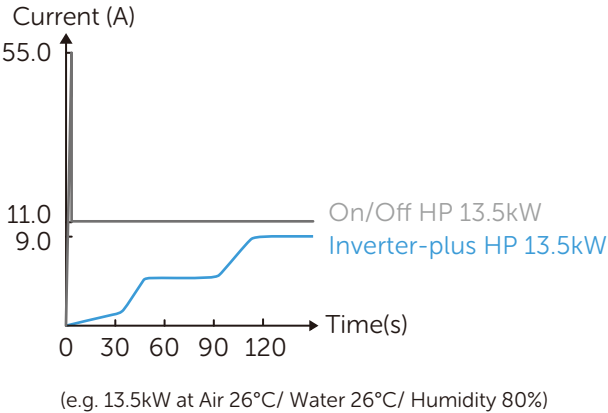
* 1dB lower, 1 time quieter.

AVERAGE sound pressure at 1m dB(A)

Model	IPH15	IPH20	IPH25	IPH30	IPH35	IPH45	IPH55	IPH70	IPH70T	IPH100T
Capacity	15~30	20~40	25~45	30~55	35~65	40~75	50~95	65~120	65~120	90~160
Sound pressure	15.8~7.4	15.5~7.4	16.2~7.3	15.6~6.0	16.3~6.7	16.6~6.2	16.1~6.0	16.2~6.5	16.1~6.5	16.5~5.8
20% capacity	37.8	38.8	38.6	42.1	41.3	43.1	40.9	43.5	43.5	42.6
AVERAGE 50% capacity	40.1	41.4	43.3	45.7	46.0	46.5	46.4	48.4	48.4	45.8
100% capacity	47.2	48.2	49.9	50.7	54.0	53.8	54.2	54.9	54.9	54.7

3 Soft Start Function

When Inverter-plus HP turns on, the current will start from 0 A and go up slowly to rated current in 2 minutes. It will not affect the house electricity system, while the frequent start current of On/Off HP is 5 times of rated current, it is a burden to the electricity system.



THINK BIGGER

When choosing a Inverter-plus HP, we suggest to choose a bigger model so that the HP will run at lower speed more time. It will bring you more benefits:



More silent swimming environment



More energy saving

INVERTER-PLUS HEAT PUMP SPECS (R410A)

Model	IPH15	IPH20	IPH25	IPH30	IPH35	IPH45	IPH55	IPH70	IPH70T	IPH100T
Advised pool volume (m³)	15~30	20~40	25~45	30~55	35~65	40~75	50~95	65~120	65~120	90~160
Operating air temperature (°C)	-7~43									
Performance Condition: Air 26°C / Water 26°C / Humidity 80%										
Heating capacity (kW)	6.5	8.1	10.0	12.1	13.5	17.5	21.0	27.5	27.3	35.5
COP	15.8~7.4	15.5~7.4	16.2~7.3	15.6~6.0	16.3~6.7	16.6~6.2	16.1~6.0	16.2~6.5	16.1~6.5	16.5~5.8
COP at 50% capacity	11.3	11.2	11.3	10.8	11.2	11.4	11.0	11.5	11.5	11.2
Performance Condition: Air 15°C / Water 26°C / Humidity 70%										
Heating capacity (kW)	4.8	6.0	7.0	8.1	9.5	11.5	14.5	18.0	18.0	24.2
COP	8.1~4.8	7.7~5.0	8.1~4.8	7.8~4.5	8.2~4.6	8.2~4.5	8.1~4.4	8.5~4.8	8.5~4.8	8.4~4.7
COP at 50% capacity	7.0	6.8	7.0	6.5	6.8	6.6	6.5	7.0	7.0	7.2
Sound pressure at 1m dB(A)	37.8~47.2	38.8~48.2	38.6~49.9	42.1~50.7	41.3~54.0	43.1~53.8	40.9~54.2	43.5~54.9	43.5~54.9	42.6~54.7
Sound pressure of 50% capacity at 1m dB(A)	40.1	41.4	43.3	45.7	46.0	46.5	46.4	48.4	48.4	45.8
Sound pressure at 10m dB(A)	17.8~27.2	18.8~28.2	18.6~29.9	22.1~30.7	21.3~34.0	23.1~33.8	20.9~34.2	23.5~34.9	23.5~34.9	22.6~34.7
Compressor	Twin-rotary Mitsubishi DC-inverter									
Heat exchanger	Spiral titanium tube in PVC									
Casing	Aluminum-alloy									
Power supply	230V/1 Ph/50Hz								400V/3 Ph/50Hz	
Rated input power at air 15°C (kW)	0.12~0.94	0.16~1.2	0.21~1.4	0.24~1.8	0.27~2.1	0.3~2.6	0.36~3.3	0.53~3.8	0.53~3.9	0.63~5.15
Rated input current at air 15°C (A)	0.52~4.1	0.7~5.2	0.91~6.1	1.04~7.8	1.17~9.1	1.3~11.3	1.57~14.3	2.3~16.5	0.76~5.6	0.91~7.4
Max input current (A)	6.5	7.5	8.5	10.5	11.0	13.0	17.0	20.0	7.0	9.5
Circuit breaker (A)	8.0	9.0	11.0	13.0	13.5	16.0	21.0	24.0	9.0	12.0
Power cord (mm²)	3×1.5	3×1.5	3×2.5	3×2.5	3×2.5	3×2.5	3×4	3×6	5×2.5	5×2.5
Advised water flux (m³/h)	2~4	2~4	3~4	4~6	5~7	6.5~8.5	8~10	10~12	10~12	12~18
Water pipe in-out size (mm)	50									
Net dimension LxWxH (mm)	894×359×648	894×359×648	894×359×648	954×359×648	954×359×648	954×429×648	954×429×755	1084×429×948	1084×429×948	1154×539×948
Net weight (kg)	42	45	49	50	52	63	68	90	93	117
Qty per 20'FT / 40'HQ (sets)	102/216	102/216	102/216	90/198	90/198	78/165	52/165	44/100	44/100	34/72

TÜV Rheinland Certified COP, Heating Capacity & Sound Pressure.

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;
* The final specs will be in accordance with the specs on the product.



INVERTER-PLUS VERTICAL

Classic Aluminum-alloy Design



BOOSTER Function

20% higher heating performance than its labeled capacity

One button for fast heating

HALF Running Cost

COP up to 15.8, AVERAGE COP is 10.6 (Air 26°C / Water 26°C / Humidity 80%)

Half running cost saving

AVERAGE 6 Times Quieter Running

When maintaining pool temp at AVERAGE 50% capacity, it brings quieter swimming environment with twin-rotary DC-inverter compressor and unique ventilation system



INVERTER-PLUS VERTICAL HEAT PUMP SPECS (R410A)

Model	IPH13V	IPH17V	IPH21V
Advised pool volume (m³)	35~65	40~75	50-95
Operating air temperature (°C)	-7~43		
Performance Condition: Air 26°C / Water 26°C / Humidity 80%			
Heating capacity (kW)	13.5	17.5	21.0
COP	15.5~6.7	15.8~6.2	15.3~6.0
COP at 50% capacity	10.6	10.8	10.5
Performance Condition: Air 15°C / Water 26°C / Humidity 70%			
Heating capacity (kW)	9.5	12.1	15.2
COP	7.8~4.6	7.8~4.5	7.7~4.5
COP at 50% capacity	6.5	6.3	6.3
Sound pressure at 1m dB(A)	43.9~54.0	46.2~57.3	46.3~58.1
Sound pressure of 50% capacity at 1m dB(A)	49.5	49.7	50.6
Sound pressure at 10m dB(A)	23.9~34.0	26.2~37.3	26.3~38.1
Heat exchanger	Spiral titanium tube in PVC		
Casing	Aluminum-alloy		
Power supply	230V/1 Ph/50Hz		
Rated input power at air 15°C (kW)	0.28~2.07	0.33~2.69	0.40~3.38
Rated input current at air 15°C (A)	1.21~9.00	1.43~11.7	1.74~14.7
Max input current (A)	11.0	13.5	17.5
Circuit breaker (A)	13.0	16.0	21.0
Power cord (mm²)	3×2.5	3×2.5	3×4
Advised water flux (m³/h)	5~7	6.5~8.5	8~10
Water pipe in-out size (mm)	50		
Net dimension LxWxH (mm)	652×689×640	652×689×740	652×689×740
Net weight (kg)	72	80	90
Qty per 20'FT / 40'HQ (sets)	63/135	42/135	42/135

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;

* The final specs will be in accordance with the specs on the product.



INVERTER-PLUS COMMERCIAL

Possibly the Biggest Full-inverter Pool HP



● HALF Running Cost

AVERAGE COP 10 (Air 26 °C / Water 26 °C / Humidity 80%)
Half running cost saving.

● AVERAGE 10 Times Quieter

When maintaining pool temp at AVERAGE 50% capacity, it brings a quieter swimming environment with twin-rotary DC-inverter compressor and unique ventilation system.

● LONGER Working Life

Low speed running philosophy extends working life.

INVERTER-PLUS COMMERCIAL HEAT PUMP SPECS (R410A)

Model	IPH150T	IPH300T
Advised pool volume (m³)	130~260	260~520
Operating air temperature (C)	-7~43	
Performance Condition: Air 26°C / Water 26°C / Humidity 80%		
Heating capacity (kW)	60.0	110.0
COP at 50% capacity	10.1	10.0
Performance Condition: Air 15°C / Water 26°C / Humidity 70%		
Heating capacity (kW)	40.0	81.0
COP at 50% capacity	6.8	6.8
Compressor	DC-inverter	
Heat exchanger	Spiral titanium tube in PVC	
Casing	Aluminum-alloy	
Fan direction	Vertical	
Power supply	400V/3 Ph/50Hz	
Rated input power at air 15°C (kW)	2.20~8.05	4.69~17.6
Rated input current at air 15°C (A)	3.17~12.0	6.77~25.4
Max input current (A)	20.0	40.0
Circuit breaker (A)	25.0	48.0
Advised water flux (m³/h)	20~25	40~50
Water pipe in-out size (mm)	75	110
Net dimension LxWxH (mm)	1000x1110x1260	2100×1090×1280
Net weight (kg)	212	459
Qty per 20'FT / 40'HQ (sets)	8/18	4/9

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;

* The final specs will be in accordance with the specs on the product.



INVERTER-PLUS DEHUMIDIFIER

The 1st Full-inverter Dehumidifier



- ◆ 10 times quieter than traditional dehumidifier
- ◆ Double energy saving
- ◆ Stainless-steel and plastic coating casing
- ◆ Environment friendly refrigerant

INVERTER-PLUS DEHUMIDIFIER SPECS (R32)

Model	IDHR48	IDHR72	IDHR96
Advised pool surface (m ²)	≤20	≤30	≤40
Operating air temperature (°C)	10~38		
Capacity (l/h) (Air 30°C/ RH 80%)	2.0	3.0	4.0
DER (l/h.kW) (Air 30°C/ RH 80%)	4.52~2.80	4.53~2.85	4.50~2.75
Heat recovered (kW)	2.4	3.3	4.4
Electric heating optional (kW)	2.0	2.0	2.0
Rated power (kW)	0.11~0.71	0.17~1.05	0.22~1.45
Rated current (A)	0.48~3.09	0.74~4.57	0.96~6.30
Max input current (A)	5.5	7.5	9.5
Circuit breaker (A)	8.0	10.0	13.0
Power Cord (mm ²)	3x1.5	3x2.5	3x4
Power supply	230V/1 Ph/50Hz		
Sound pressure at 1 m dB(A)	35.3~45.6	35.6~46.1	35.9~46.4
Sound pressure of 50% capacity at 1m dB(A)	38.2	40.1	40.3
Air flow (m ³ /h)	600	800	1000
Net Dimension LxWxH (mm)	855x286x860	855x286x860	1155x286x860
Net weight (kg)	52	55	70
Qty per 20'FT / 40'HQ (sets)	74/158	74/158	58/120

* The final specs will be in accordance with the specs on the product.



INVERTER-PRO

The Most Economical Full-inverter Pool HP



Full-inverter Control System

The Full-inverter Control System manipulate the compressor and fan motor speed to reach optimized performance.

HALF Running Cost

COP up to 13.8, AVERAGE COP 10 (Air 26 C / Water 26 C / Humidity 80%) saves half running cost.

AVERAGE 8 Times Quieter

When maintaining pool temp at AVERAGE 50% capacity, it brings a quieter swimming environment with twin-rotary DC-inverter compressor and unique ventilation system.

INVERTER-PRO HEAT PUMP SPECS (R410A)

Model	IVP06	IVP08	IVP10	IVP13	IVP17	IVP21	IVP25
Advised pool volume (m³)	15~30	20~40	25~45	30~60	40~75	50~90	60~110
Operating air temperature (°C)	-5~43						
Performance Condition: Air 26°C/ Water 26°C/ Humidity 80%							
Heating capacity (kW)	6.5	8.2	9.6	13.0	16.5	20.5	25.3
COP	13.2~5.6	13.2~5.3	13.3~5.5	13.5~5.7	13.5~5.9	13.6~5.8	13.8~5.9
COP at 50% capacity	9.4	9.0	9.1	9.9	9.8	9.5	9.8
Performance Condition: Air 15°C/ Water 26°C/ Humidity 70%							
Heating capacity (kW)	4.5	6.1	7.2	9.0	11.3	14.0	17.2
COP	6.9~4.1	7.0~4.1	7.1~4.3	7.1~4.1	7.2~4.4	7.1~4.3	7.3~4.2
COP at 50% capacity	6.3	6.2	6.4	6.2	6.5	6.4	6.5
Sound pressure at 1m dB(A)	39.4~51.3	40.3~51.0	40.0~52.4	41.9~52.9	44.3~56.1	44.5~57.0	44.9~57.8
Sound pressure of 50% capacity at 1m dB(A)	43.4	43.3	45.5	48.0	48.2	49.3	49.7
Sound pressure at 10m dB(A)	19.4~31.3	20.3~31.0	20.0~32.4	21.9~32.9	24.3~36.1	24.5~37.0	24.9~37.8
Heat exchanger	Spiral titanium tube in PVC						
Casing	ABS Casing						
Power supply	230V/1 Ph/50Hz						
Rated input power at air 15°C (kW)	0.18~1.09	0.25~1.49	0.29~1.67	0.37~2.20	0.46~2.57	0.56~3.26	0.68~4.10
Rated input current at air 15°C (A)	0.78~4.74	1.08~6.48	1.26~7.26	1.61~9.56	2.00~11.2	2.43~14.2	2.96~17.8
Max input current (A)	6.5	8.5	9.5	12.5	15.0	19.5	21.5
Circuit breaker (A)	8.0	10.0	11.5	15.0	18.0	23.0	25.0
Power cord (mm²)	3×1.5	3×1.5	3×2.5	3×2.5	3×4	3×4	3×6
Advised water flux (m³/h)	2~4	2~4	3~4	4~6	6~8	8~10	10~12
Water pipe in-out size (mm)	50						
Net dimension LxWxH (mm)	872×349×654	872×349×654	872×349×654	872×349×654	962×349×654	962×349×754	1092×420×958
Net weight (kg)	42	46	47	49	60	68	90
Qty per 20'FT / 40'HQ (sets)	102/216	102/216	102/216	102/216	90/198	60/198	44/100

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;

* The final specs will be in accordance with the specs on the product.



COMFORTLINE INVERTER

The Most Economical
DC-inverter Pool HP



What is Comfortline Inverter ?

Comfortline Inverter is powered by DC-inverter compressor, it can adjust heating capacity from 20% to 100% intelligently according to different heating demands.

When season starts and heating demand is high, the Comfortline Inverter runs at 100% compressor & fan speed for fast heating.

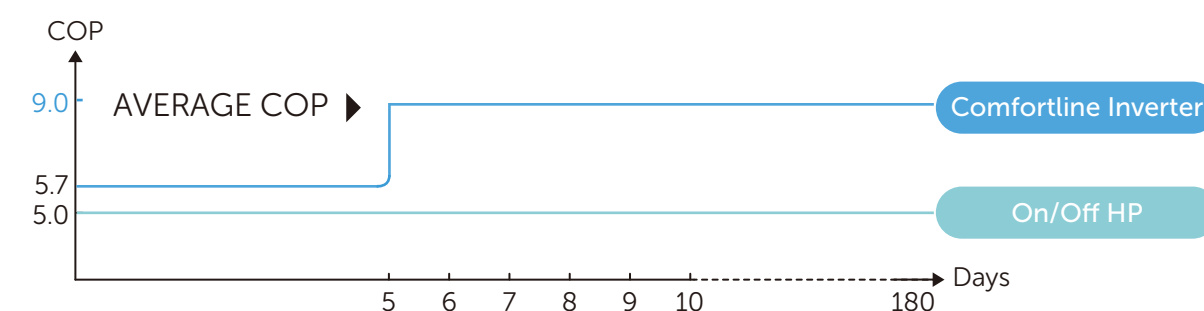
When maintaining the pool temperature, the Comfortline Inverter runs at low speed for energy saving with higher COP.

1 AVERAGE COP 9 (Air 26°C / Water 26°C / Humidity 80%)

Comfortline Inverter AVERAGE COP is 9 (Air 26°C/ Water 26°C/ Humidity 80%), which means 1kW electricity consumption can provide up to 9kW heat in return. While On/Off HP can only provide 5kW heat as its COP is just around 5.

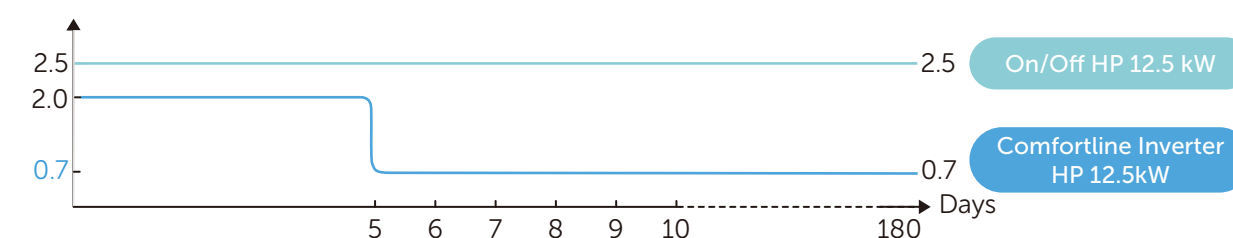
Capacity \ Model	BPN06	BPN08	BPN09	BPN13	BPN17	BPN21	BPN25
20% capacity	10.0	9.5	10.0	11.0	10.5	11.2	10.6
AVERAGE 50% capacity	8.8	8.2	8.6	9.5	9.1	9.2	9.0
100% capacity	5.8	5.6	5.7	5.9	5.7	5.6	5.8

Comfortline Inverter vs On/Off HP (in 180 days pool season)



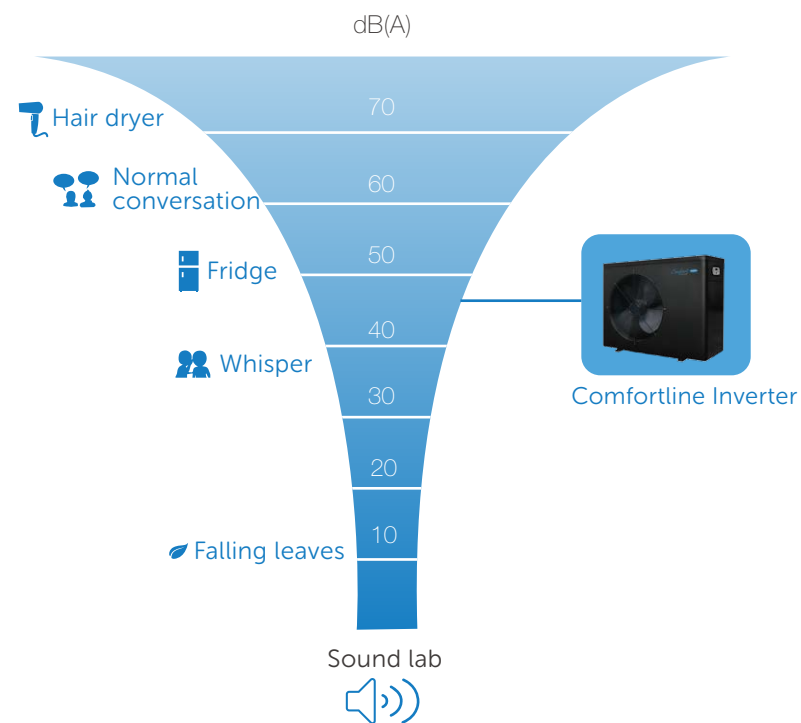
AVERAGE power consumption (in 180 days pool season)
(e.g. 12.5kW at Air 26°C/ Water 26°C/ Humidity 80%)

Power consumption (kW)



2 7 Times Quieter

Thanks to quiet DC-inverter compressor, low-speed running philosophy of compressor & fan motor, Comfortline Inverter can offer you super quiet operation by 7dB(A) lower sound pressure at AVERAGE 50% capacity.



3 Other Advantages

General heat exchanger

Spiral titanium heat exchanger
Enlarge 30% heat exchanging surface

Enable COP 20% higher than
On/Off HP in the market

HP-BOOSTER
technology

Fast defrosting

Saginomiya
4-way valve

COMFORTLINE INVERTER HEAT PUMP SPECS (R410A)

Model	BPN06	BPN08	BPN09	BPN13	BPN17	BPN21	BPN25
Advised pool volume (m³)	14~28	20~35	20~40	30~55	35~70	45~85	55~100
Operating air temperature (°C)	0~43						
Performance Condition: Air 26°C/ Water 26°C/ Humidity 80%							
Heating capacity (kW)	6.5	8.0	9.2	12.5	16.5	20.5	25.0
COP	10.0~5.8	9.5~5.6	10.0~5.7	11.0~5.9	10.5~5.7	11.2~5.6	10.6~5.8
COP at 50% capacity	8.8	8.2	8.6	9.5	9.1	9.2	9.0
Performance Condition: Air 15°C/ Water 26°C/ Humidity 70%							
Heating capacity (kW)	4.5	6.0	7.0	9.0	11.5	14.0	17.0
COP	6.1~4.25	6.1~4.1	6.2~4.3	6.1~4.2	6.2~4.2	6.2~4.1	6.2~4.3
COP at 50% capacity	6.0	6.1	5.8	6.0	6.2	5.9	6.0
Sound pressure at 1m dB(A)	39.8~51.2	40.8~51.1	40.6~52.5	42.9~53.0	45.2~56.3	45.3~57.1	45.8~57.8
Sound pressure of 50% capacity at 1m dB(A)	43.8	43.9	45.8	48.5	48.7	49.6	50.1
Sound pressure at 10m dB(A)	19.8~31.2	20.8~31.1	20.6~32.5	22.9~33.0	25.2~36.3	25.3~37.1	25.8~37.8
Heat exchanger	Spiral titanium tube in PVC						
Casing	Metal casing with plastic coating						
Rated input power at air 15°C (kW)	0.35~1.0	0.34~1.4	0.34~1.6	0.36~2.0	0.56~2.7	0.6~3.4	0.68~3.95
Rated input current at air 15°C (A)	1.52~4.4	1.48~6.0	1.48~7.0	1.57~8.7	2.43~11.7	2.6~15.0	2.95~17.1
Max input current (A)	6.5	8.0	9.5	12.5	15.0	19.5	21.5
Circuit breaker (A)	8.0	9.5	11.5	15.0	18.0	23.0	25.0
Power cord (mm²)	3×1.5	3×1.5	3×2.5	3×2.5	3×4	3×4	3×6
Power supply	230V/1 Ph/50Hz						
Advised water flux (m³/h)	2~4	2~4	3~4	4~6	6~8	8~10	10~12
Water pipe in-out size (mm)	50						
Net dimension LxWxH (mm)	744×359×648	864×359×648	864×359×648	864×359×648	954×359×648	954×359×748	1084×429×948
Net weight (kg)	42	46	47	49	60	68	90
Qty per 20'FT / 40'HQ (sets)	114/252	102/216	102/216	102/216	90/198	60/198	44/100

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;

* The final specs will be in accordance with the specs on the product .

APPENDIX

INVERTER-PLUS HEAT PUMP SPECS (R32)

Model	IPHR15	IPHR20	IPHR26	IPHR33	IPHR40	IPHR45	IPHR55	IPHR70	IPHR70T	IPHR100T
Advised pool volume (m³)	15~30	20~40	25~45	30~55	35~65	40~75	50~95	65~120	65~120	90~160
Operating air temperature (°C)	-7~43									
Performance Condition: Air 26°C / Water 26°C / Humidity 80%										
Heating capacity (kW)	6.5	8.5	10.5	13.0	15.0	17.5	20.5	27.5	27.3	35.8
COP	14.7~6.0	14.8~7.4	15.0~7.4	15.4~7.3	15.5~6.7	15.8~6.2	15.3~6.0	15.4~6.5	15.3~6.5	15.6~5.8
COP at 50% capacity	10.5	10.9	11.0	11.0	10.9	11.1	10.7	11.2	11.2	10.9
Performance Condition: Air 15°C / Water 26°C / Humidity 70%										
Heating capacity (kW)	4.8	6.3	7.3	8.7	10.5	11.5	14.0	18.0	18.0	24.5
COP	7.3~4.5	7.4~5.0	7.7~4.8	7.7~4.8	7.8~4.6	7.8~4.5	7.7~4.4	8.1~4.8	8.1~4.8	8.0~4.7
COP at 50% capacity	6.3	6.6	6.8	6.8	6.6	6.4	6.3	6.8	6.8	7.0
Sound pressure at 1m dB(A)	37.8~47.2	38.8~48.2	38.6~49.9	42.1~50.7	41.3~55.0	43.1~53.8	40.9~54.2	43.5~54.9	43.5~54.9	42.6~54.7
Sound pressure of 50% capacity at 1m dB(A)	40.1	41.4	43.3	45.7	46.5	46.5	46.4	48.4	48.4	45.8
Sound pressure at 10m dB(A)	17.8~27.2	18.8~28.2	18.6~29.9	22.1~30.7	21.3~35.0	23.1~33.8	20.9~34.2	23.5~34.9	23.5~34.9	22.6~34.7
Compressor	Twin-rotary Mitsubishi DC-inverter									
Heat exchanger	Spiral titanium tube in PVC									
Casing	Aluminum-alloy									
Power supply	230V/1 Ph/50Hz								400V/3 Ph/50Hz	
Rated input power at air 15°C (kW)	0.13~1.06	0.17~1.2	0.19~1.5	0.23~1.81	0.27~2.2	0.30~2.6	0.36~3.18	0.55~3.8	0.55~3.9	0.61~5.2
Rated input current at air 15°C (A)	0.56~4.60	0.74~5.2	0.83~6.5	1.00~7.87	1.17~9.6	1.3~11.3	1.57~13.8	2.4~16.5	0.79~5.6	0.88~7.4
Max input current (A)	6.5	8.0	9.0	11.5	12.0	13.0	17.0	20.0	7.0	9.5
Circuit breaker (A)	8.0	10.0	11.0	14.0	15.0	16.0	21.0	24.0	9.0	12.0
Power cord (mm²)	3×1.5	3×1.5	3×2.5	3×2.5	3×2.5	3×2.5	3×4	3×6	5×2.5	5×2.5
Advised water flux (m³/h)	2~4	2~4	3~4	4~6	5~7	6.5~8.5	8~10	10~12	10~12	12~18
Water pipe in-out size (mm)	50									
Net dimension LxWxH (mm)	894×359×648	894×359×648	894×359×648	954×359×648	954×359×648	954×429×648	954×429×755	1084×429×948	1084×429×948	1154×539×948
Net weight (kg)	42	45	49	50	52	63	68	90	93	120
Qty per 20'FT / 40'HQ (sets)	102/216	102/216	102/216	90/198	90/198	78/165	52/165	44/100	44/100	34/72

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;
* The final specs will be in accordance with the specs on the product.



INVERTER-PLUS VERTICAL HEAT PUMP SPECS (R32)

Model	IPHR13V	IPHR17V	IPHR21V
Advised pool volume (m³)	35~65	40~75	50-95
Operating air temperature (℃)	-7~43		
Performance Condition: Air 26℃ / Water 26℃ / Humidity 80%			
Heating capacity (kW)	13.3	17.3	20.8
COP	14.6~6.7	15.1~6.2	14.6~6.0
COP at 50% capacity	10.5	10.6	10.3
Performance Condition: Air 15℃ / Water 26℃ / Humidity 70%			
Heating capacity (kW)	9.5	12.0	15.0
COP	7.3~4.8	7.4~4.5	7.3~4.5
COP at 50% capacity	6.5	6.4	6.2
Sound pressure at 1m dB(A)	43.9~54.0	46.2~57.3	46.3~58.1
Sound pressure of 50% capacity at 1m dB(A)	49.5	49.7	50.6
Sound pressure at 10m dB(A)	23.9~34.0	26.2~37.3	26.3~38.1
Heat exchanger	Spiral titanium tube in PVC		
Casing	Aluminum-alloy		
Power supply	230V/1 Ph/50Hz		
Rated input power at air 15℃ (kW)	0.26~1.98	0.32~2.67	0.40~3.33
Rated input current at air 15℃ (A)	1.13~8.61	1.39~11.6	1.74~14.5
Max input current (A)	11.0	13.5	17.5
Circuit breaker (A)	13.0	16.0	21.0
Power cord (mm²)	3×2.5	3×2.5	3×4
Advised water flux (m³/h)	5~7	6.5~8.5	8~10
Water pipe in-out size (mm)	50		
Net dimension LxWxH (mm)	652×689×640	652×689×740	652×689×740
Net weight (kg)	72	80	90
Qty per 20'FT / 40'HQ (sets)	63/135	42/135	42/135

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;
* The final specs will be in accordance with the specs on the product.



INVERTER-PRO HEAT PUMP SPECS (R32)

Model	IVPR06	IVPR08	IVPR10	IVPR13	IVPR17	IVPR21	IVPR25
Advised pool volume (m³)	15~30	20~40	25~45	30~60	40~75	50~90	60~110
Operating air temperature (°C)	-5~43						
Performance Condition: Air 26°C/ Water 26°C/ Humidity 80%							
Heating capacity (kW)	6.5	8.4	9.8	13.1	16.8	20.8	25.5
COP	12.9~5.6	12.9~5.3	13.0~5.5	13.2~5.7	13.2~5.9	13.3~5.8	13.5~5.9
COP at 50% capacity	9.2	9.0	9.0	9.8	9.7	9.4	9.7
Performance Condition: Air 15°C/ Water 26°C/ Humidity 70%							
Heating capacity (kW)	4.5	6.2	7.5	9.0	11.5	14.2	17.5
COP	6.8~4.1	6.9~4.1	7.0~4.3	7.0~4.1	7.1~4.4	7.0~4.3	7.2~4.2
COP at 50% capacity	6.2	6.2	6.3	6.0	6.4	6.3	6.4
Sound pressure at 1m dB(A)	39.4~51.3	40.3~51.0	40.0~52.4	41.9~52.9	44.3~56.1	44.5~57.0	44.9~57.8
Sound pressure of 50% capacity at 1m dB(A)	43.4	43.3	45.5	48.0	48.2	49.3	49.7
Sound pressure at 10m dB(A)	19.4~31.3	20.3~31.0	20.0~32.4	21.9~32.9	24.3~36.1	24.5~37.0	24.9~37.8
Heat exchanger	Spiral titanium tube in PVC						
Casing	ABS Casing						
Power supply	230V/1 Ph/50Hz						
Rated input power at air 15°C (kW)	0.18~1.09	0.25~1.51	0.29~1.74	0.37~2.20	0.46~2.61	0.56~3.30	0.68~4.17
Rated input current at air 15°C (A)	0.78~4.74	1.08~6.56	1.26~7.56	1.61~9.56	2.00~11.3	2.43~14.3	2.96~18.1
Max input current (A)	6.5	8.5	9.5	12.5	15.0	19.5	21.5
Circuit breaker (A)	8.0	10.0	11.5	15.0	18.0	23.0	25.0
Power cord (mm²)	3×1.5	3×1.5	3×2.5	3×2.5	3×4	3×4	3×6
Advised water flux (m³/h)	2~4	2~4	3~4	4~6	6~8	8~10	10~12
Water pipe in-out size (mm)	50						
Net dimension LxWxH (mm)	872×349×654	872×349×654	872×349×654	872×349×654	962×349×654	962×349×754	1092×420×958
Net weight (kg)	42	46	47	49	60	68	90
Qty per 20'FT / 40'HQ (sets)	102/216	102/216	102/216	102/216	90/198	60/198	44/100

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;
* The final specs will be in accordance with the specs on the product.



COMFORTLINE INVERTER HEAT PUMP SPECS (R32)

Model	BPNR06	BPNR08	BPNR10	BPNR13	BPNR17	BPNR21	BPNR25
Advised pool volume (m³)	14~28	20~35	20~40	30~55	35~70	45~85	55~100
Operating air temperature (°C)	0~43						
Performance Condition: Air 26°C/ Water 26°C/ Humidity 80%							
Heating capacity (kW)	6.0	8.0	9.5	12.5	16.5	20.0	25.0
COP	9.5~5.9	9.1~5.6	9.5~5.7	10.5~5.9	10.0~5.7	10.6~5.6	10.2~5.8
COP at 50% capacity	8.5	8.0	8.3	9.2	8.8	8.9	8.8
Performance Condition: Air 15°C/ Water 26°C/ Humidity 70%							
Heating capacity (kW)	4.3	6.0	7.0	9.0	11.5	14.0	17.0
COP	5.9~4.4	5.9~4.1	6.0~4.3	5.9~4.2	6.0~4.2	6.0~4.1	6.0~4.3
COP at 50% capacity	5.8	5.9	5.6	5.8	6.0	5.8	5.8
Sound pressure at 1m dB(A)	38.8~50.2	40.8~51.1	40.6~52.5	42.9~53.0	45.2~56.3	45.3~57.1	45.8~57.8
Sound pressure of 50% capacity at 1m dB(A)	42.8	43.9	45.8	48.5	48.7	49.6	50.1
Sound pressure at 10m dB(A)	18.8~30.2	20.8~31.1	20.6~32.5	22.9~33.0	25.2~36.3	25.3~37.1	25.8~37.8
Heat exchanger	Spiral titanium tube in PVC						
Casing	Metal casing with plastic coating						
Rated input power at air 15°C (kW)	0.29~1.0	0.34~1.4	0.35~1.6	0.36~2.1	0.57~2.7	0.62~3.4	0.70~3.95
Rated input current at air 15°C (A)	1.26~4.2	1.48~6.0	1.52~7.0	1.57~8.7	2.48~11.7	2.7~15.0	3.04~17.1
Max input current (A)	6.0	8.0	9.5	12.5	15.0	19.5	21.5
Circuit breaker (A)	8.0	9.5	11.5	15.0	18.0	23.0	25.0
Power cord (mm²)	3×1.5	3×1.5	3×2.5	3×2.5	3×4	3×4	3×6
Power supply	230V/1 Ph/50Hz						
Advised water flux (m³/h)	2~4	2~4	3~4	4~6	6~8	8~10	10~12
Water pipe in-out size (mm)	50						
Net dimension LxWxH (mm)	744×359×648	864×359×648	864×359×648	864×359×648	954×359×648	954×359×748	1084×429×948
Net weight (kg)	42	46	47	49	60	68	90
Qty per 20'FT / 40'HQ (sets)	114/252	102/216	102/216	102/216	90/198	60/198	44/100

* The advised pool volume indicated applies under following conditions: Swimming pool is well covered; system runs at least 15 hours per day;
* The final specs will be in accordance with the specs on the product .

