HARNITEK

HEAT PUMPS

- Exceptional Efficiency ERP Rated A+++
- Seasonal COP (SCOP) 4.7
- Simple Installation Package
- Performance Hub Gateway online support
- UK Training and Technical Support
- Lightweight outdoor unit
- Quiet operation 38dBa

Mono Smart Hub System
Combi Smart Hub System

Infinity Innovations

HARNITEK HEAT PUMP

New Generation of Smart control heat pumps supported by UK training and technical support experts,

essential components are pre-integrated for fast and consistent installations every time.

Our planet now requires action to combat climate change. The new design of Harnitek Heat pumps are a genuine alternative to fossil fuel boilers.

Simple to install, quiet operation, incredible efficiency and online monitoring support are all exceptional features of these units. Harnitek systems are a quick installation package for the UK market.

Harnitek Smart Monitoring System

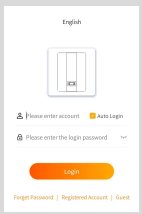
Harnitek Heat Pump

Connecting

Harnitek Heat Pump Wifi Kit

Data Transfer

Harnitek MyHeatPump APP



Harnitek Web Platform

Infinity Innovations

The Harnitek range of heat pumps are:

- Simple fast installation

- ERP Rated A+++ Efficiency

- Lightweight and easy to handle

- Performance Hub Gateway full system access and support

- UK Training and Technical Support Experts

- Smart Hub integrating key components and wiring centre

What the Harnitek Heat pumps offer:

Next Generation Efficiency

Introducing Harnitek's range of A+++ R32 Heat pumps. All units are fully accredited at Low and medium heat outputs. Market leading SCOP of 4.7 meaning exceptional year round performance and faster recovery times.

Performance Hub Gateway

All Harnitek Smart Hub units can be linked to the internet through the integrated Modem. The online Performance Hub Gateway gives end users and installers a fully programmable platform for programming the system and optimising efficiency of performance.

Touch Screen LED

Harnitek Smart Hub units have a large simple to use touch screen LED controller. Basic quick functions and extended system analysis can be carried out directly through the screen.

Lightweight units

Lightweight outdoor units makes handling and installing the outdoor units manageable for 2 engineers. Suitable for easy wall mounting options without the need for heavy lifting equipment.

Quiet functionality

Harnitek heat pumps are exceptionally quiet, rated at only 38db at 2.1m. It is hard to define how quiet something is, but we are confident you will be astonished at the performance. Settings allow additional 'quiet mode' for the most sensitive locations.

UK Technical Support and training

Harnitek heat pumps are supported by a UK based training and support centre. Harnitek installations should be successful first and every time, with system support carried out remotely using the Performance Hub Gateway.

Hybrid Compatible.

Harnitek heat pumps also control any secondary heating source. Simply connect to the Smart Hub to allow secondary sources to contribute to your overall heating demand.

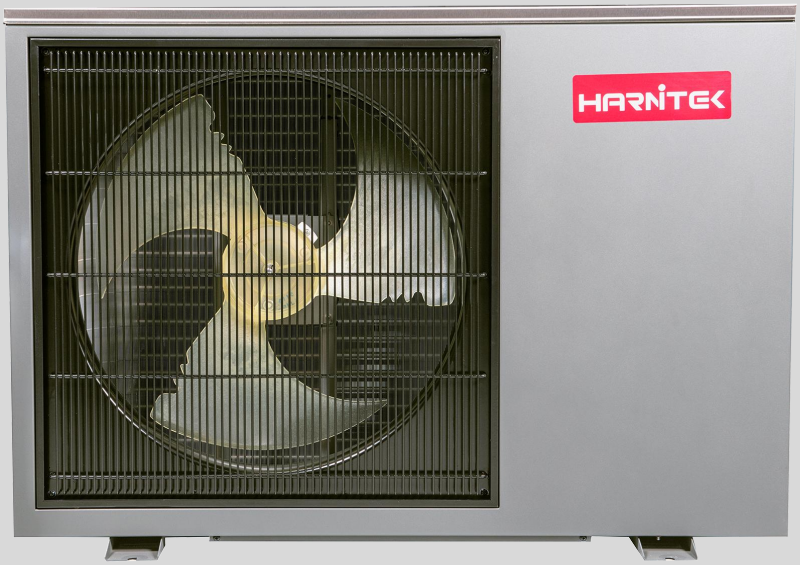
Simple installation

Harnitek heat pumps have simplicity of installation & maintenance at the core of their design. Many of the technical aspects of heat pump installation are pre-assembled into the Smart Hub, saving installation time and allowing all key components to be monitored via the Performance Hub Gateway.

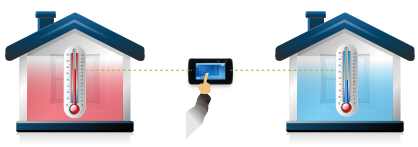
The ThermoAIR plus

The ThermoAIR plus R32 air source heat pumps, are the next generation of domestic air to water heat pumps. This class leading heat pump uses R32 refrigerant for exceptional cold weather performance and efficiency.

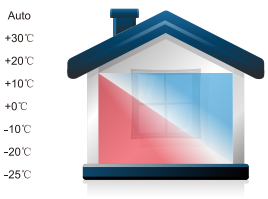
The new ThermoAIR plus R32 heat pump is built for exceptional efficiency & reliability, capable of low or higher flow temperatures, making it the ideal choice for new and existing heating systems. It is incredibly quiet at just 38dBa when in use. This means the ThermoAIR plus can be installed close to adjacent properties, opening up renewable heating and hot water to almost all properties. The lightweight design of the outdoor units offers flexible installation options.



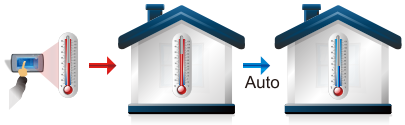
Room Temperature Control Function



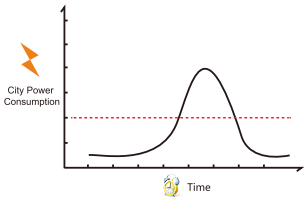
Room Temperature Compensation Function



Auto Heat/Cool Switch-over Mode



Smart Grid Ready



HARNITEK Smart HUB

The SmartHUB concept, provides a platform for simple, efficient and consistent air source installations.

- Flexible installation options
- Hybrid system ready
- Easily control Multiple heat sources
- Smart monitoring & remote control
- Weather compensation
- System sensors to monitor, flow return and buffer tank temperatures
- 3kw back up heater
- PRV and pressure gauge
- Circulation pump
- LCD touch screen controls
- Thermostatic mixing valve
- Diverter valve
- Wiring centre
- AutoLegionella protection
- No F-gas required

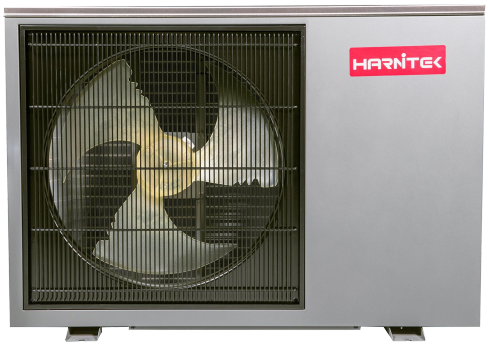
These internal units make installation simple and efficient. Much of the complex installation work of a traditional heat pump has been manufactured into these indoor units. Saving time, money and disruption for the end user. The Smart HUB system makes combining renewable heating with other thermal technologies simple. For example a gas boiler can be wired directly into the Smart HUB, allowing it to operate seamlessly with your new air source, giving a unprecedented level of control and further broadening the application of air source heating technology.

Harnitek Mono Package

Available in 6kW, 9kW and 12kW heat output

For a more flexible solution smartHUB mono can be installed with a heatpump hot water cylinder. The smartHUB mono is also prewired with all the relevant sensors, including cylinder temperature sensor and diverter valve. The unit has an inbuilt direct electric backup heater as well as separate flow connections for space heating and hot water circuits, further simplifying installation.

- Flexible installation options
- Multiple flow temps
- Hybrid system ready
- Easily control Multiple heat sources
- In built monitoring & remote control
- In built weather compensation
- Inbuilt system sensors to monitor, flow return and buffer tank temperatures
- Inbuilt 3kw back up heater
- Inbuilt PRV and pressure guage
- Circulation pump
- LCD touch screen controls
- In bult thermostatic mixing valve
- In built diverter valve
- In built wiring centre
- In built Legionella protection
- No F-gas required



- A+++ Rated
- Ultra quiet 38dba
- Lightweight, 2 person lift
- High quality finish
- Flow Temperatures of up to 60c
- SCOP 4.3
- Available in 6kw, 9kw & 12kw heat outputs
- Weather compensation

SmartHub Mono6

SmartHub Mono9

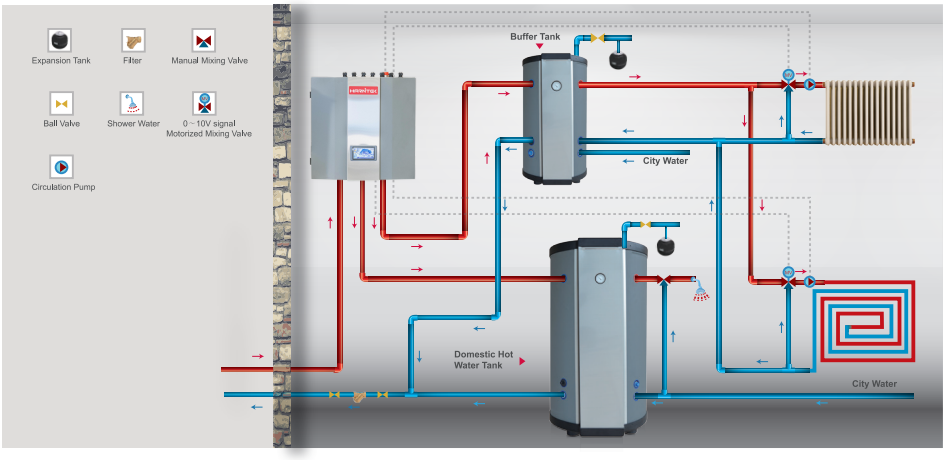
SmartHub Mono12

Harnitek Mono Package

Linking directly to the A+++ 6,9 and 12kw Harnitek heat pumps the Mono Smart Hub removes installation variables by incorporating controlling key components.

Application

outdoor **indoor**



These units are installed alongside new or existing hot water cylinders.

- The Harnitek Wiring Centre significantly simplifies the electrical installation. Installers now only need to bring in and connect the relevant power supply. Clearly labelled and simple connection allows existing heating controls to be connected, secondary heat sources and other external connections.

- Simple in and out water connections.

- Integrated electronic 3 way valve. Instant upgrade from mechanical units, this is already integrated into the Mono Smart Hub.

- Integrated circulation pump ensure the correct pump unit is pre-assembled into the system.

- Inbuilt 3kw Immersion heater again removes component variables and installation time.

- Inbuilt expansion vessel and PRV again removes component and installation variables providing consistency and efficiency to all installations

- 2 separate flow temperatures allow the heating and hot water to be automatically run at separate temperatures

- Integrated Modem allows either wifi connection or hardwire connection from every unit to connect to the Performance Hub Gateway.

Technical Data

Model			YHPK- 06V1TBA	YHPK- 09V1TBA	YHPK- 12V1TBA
Power Supply / Refrigerant		V/Hz/Ph	220-240/50/1-R32	220-240/50/1-R32	220-240/50/1-R32
Max Heating Capacity (1)		KW	6.5	9.2	11.6
C.O.P (1)		W/W	4.61	4.38	4.3
Heating Capacity Min./Max(1)		KW	3.5 / 6.5	4.3 / 9.2	5.5 / 11.6
Heating Power Input Min./Max(1)		W	758 / 1410	927 / 2097	1107 / 2683
C.O.P Min./Max(1)		W/W	4.5 / 4.7	4.38 / 4.71	4.3 / 4.9
Max Heating Capacity (2)		KW	6	8.6	11.2
C.O.P (2)		W/W	3.46	3.37	3.45
Heating Capacity Min./Max(2)		KW	3.15 / 6	3.9 / 8.6	4.9 / 11.2
Heating Power Input Min./Max(2)		W	943 / 1732	1162 / 2550	1401 / 3263
C.O.P Min./Max(2)		W/W	3.34 / 3.56	3.37 / 3.58	3.3 / 3.5
Max Cooling Capacity (3)		KW	7.45	9.5	9.8
E.E.R (3)		W/W	4.05	4.23	3.9
Cooling Capacity Min./Max.(3)		KW	6.22 / 7.45	6.7 / 9.5	- / 9.8
Cooling Power Input Min./Max(3)		W	1400 / 1863	1679 / 2242	- / 2510
E.E.R Min./Max(3)		W/W	4.05 / 4.45	4.0 / 4.6	- / 3.8
Max Cooling Capacity (4)		KW	4.5	7.2	6.5
E.E.R (4)		W/W	2.7	2.8	2.7
Cooling Capacity Min./Max.(4)		KW	3.5/ 4.5	4.9/ 7.2	4.9/ 6.5
Cooling Power Input Min./Max(4)		W	1.33 / 1.68	1451 / 2366	1358 / 2444
E.E.R Min./Max(4)		W/W	2.5 / 2.74	2.8 / 3.1	2.6 / 3.5
Compressor	Type-Quantity/System		Twin Rotary - 1	Twin Rotary - 1	Twin Rotary - 1
Fan	Quantity		1	1	1
	Airflow	m^3/h	2500	3150	3150
	Rated power	W	34	45	45
Noise Level	Indoor/Outdoor	dB(A)	44 / 52	44 / 53	44 / 52
Water Side	Type		Plate Heat Exchanger	Plate Heat Exchanger	Plate Heat Exchanger
Heat Exchanger	Water Pressure Drop	kPa	26	26	26
	Piping Connection	Inch	G1″	G1″	G1″
Allowable Water Flow	Min./Rated./Max	L/S	0.21 / 0.29 / 0.35	0.26 / 0.43 / 0.52	0.34 / 0.57 / 0.68
Net Dimension(LxDxH)	Indoor Unit	mm	570x550x255	570x550x255	570x550x255
	Outdoor Unit	mm	1010x370x7000	1165x370x845	1165x370x845
Net Weight	Indoor Unit	Kg	25	25	25
	Outdoor Unit	Kg	65	78	85

Note:

(1) Heating condition: water inlet/outlet temperature: 30°C/35°C, Ambient temperature: DB TCNVB 6°C;

(2) Heating condition: water inlet/outlet temperature: 40°C/45°C, Ambient temperature: DB 7°CNVB 6°C;

(3) Cooling condition: water inlet/outlet temperature: 23°C/18°C, Ambient temperature: DB 35°C/VVB 24°C;

(4) Cooling condition: water inlet/outlet temperature: 12°C/7°C, Ambient temperature: DB 35°C/VVB 24°C;

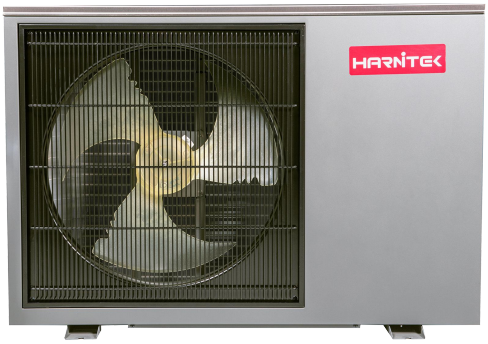
(5) The specifications are subject to change without prior notice. For actual specifications of unit, please refer to the stickers on the unit.

Harnitek Combi Package

Available in 6kW, 9kW and 12kW heat output

The SmartHUB combi, contains an integrated 250 litre hot water cylinder, pump, expansion vessels and back up heaters. The system is pre-wired, to further assist in a consistent and quick installation and no Fgas certification is required. ThemoAIR plus and SmartHUB combi installation can be completed in a single day. Minimising disruption and cost for the end user.

- 250l of Hot water storage
- Hybrid system ready
- Easily control Multiple heat sources
- Multiple flow temps
- Smart monitoring & remote control
- Weather compensation
- Sensors to monitor, flow return and buffer tank temperatures
- 6kw back up heater
- Expansion vessel
- PRV and pressure gauge
- Circulation pump
- LCD touch screen controls
- Thermostatic mixing valve
- Diverter valve
- Wiring centre
- Legionella protection
- No F-gas required



- A+++ Rated
- Ultra quiet 38dba
- Lightweight, 2 person lift
- High quality finish
- Flow Temperatures of up to 60c
- SCOP 4.3
- Available in 6kw, 9kw & 12kw heat outputs
- Weather compensation

SmartHub Combi6

SmartHub Combi9

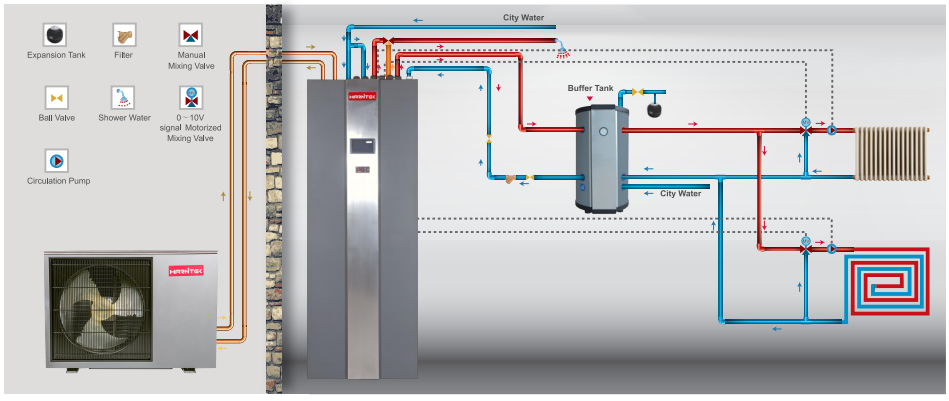
SmartHub Combi12

Harnitek Combi Package

Linking directly to the A+++ 6,9 and 12kw Harnitek heat pumps the Combi Smart Hub removes installation variables by incorporating and managing most of the fixed required components.

Application

outdoor



The Combi Smart Hub units have an integrated 250L water cylinder

- The Harnitek Wiring Centre significantly simplifies the electrical installation. Installers now only need to bring in and connect the relevant power supply. Clearly labelled and simple connection allows existing heating controls to be connected, secondary heat sources and other external connections.

- Simple in and out water connections.

- Integrated electronic 3 way valve. Instant upgrade from mechanical units, this is already integrated into the Mono Smart Hub.

- Integrated circulation pump ensure the correct pump unit is pre-assembled into the system.

- Inbuilt 3kw Immersion heater again removes component variables and installation time.

- Inbuilt expansion vessel and PRV again removes component and installation variables providing consistency and efficiency to all installations

- 2 separate flow temperatures allow the heating and hot water to be automatically run at separate temperatures

- Integrated Modem allows either wifi connection or hardwire connection from every unit to connect to the Performance Hub Gateway.

Technical Data

Model			YHPK-06V1TBA-250L	YHPK-09V1TBA-250L	YHPK-12V1TBA-250L
Power Supply / Refrigerant		V/Hz/Ph	220-240/50/1-R32	220-240/50/1-R32	220-240/50/1-R32
Max Heating Capacity (1)		KW	6.5	9.2	11.6
C.O.P (1)		W/W	4.61	4.38	4.3
Heating Capacity Min./Max(1)		KW	3.5 / 6.5	4.3 / 9.2	5.5 / 11.6
Heating Power Input Min./Max(1)		W	758 / 1410	927 / 2097	1107 / 2683
C.O.P Min./Max(1)		W/W	4.5 / 4.7	4.38 / 4.71	4.3 / 4.9
Max Heating Capacity (2)		KW	6	8.6	11.2
C.O.P (2)		W/W	3.46	3.37	3.45
Heating Capacity Min./Max(2)		KW	3.15 / 6	3.9 / 8.6	4.9 / 11.2
Heating Power Input Min./Max(2)		W	943 / 1732	1162 / 2550	1401 / 3263
C.O.P Min./Max(2)		W/W	3.34 / 3.56	3.37 / 3.58	3.3 / 3.5
Max Cooling Capacity (3)		KW	7.45	9.5	9.8
E.E.R (3)		W/W	4.05	4.23	3.9
Cooling Capacity Min./Max.(3)		KW	6.22 / 7.45	6.7 / 9.5	- / 9.8
Cooling Power Input Min./Max(3)		W	1400 / 1863	1679 / 2242	- / 2510
E.E.R Min./Max(3)		W/W	4.05 / 4.45	4.0 / 4.6	- / 3.8
Max Cooling Capacity (4)		KW	4.5	7.2	6.5
E.E.R (4)		W/W	2.7	2.8	2.7
Cooling Capacity Min./Max.(4)		KW	3.5/ 4.5	4.9/ 7.2	4.9/ 6.5
Cooling Power Input Min./Max(4)		W	1.33 / 1.68	1451 / 2366	1358 / 2444
E.E.R Min./Max(4)		W/W	2.5 / 2.74	2.8 / 3.1	2.6 / 3.5
Compressor	Type-Quantity/System		Twin Rotary - 1	Twin Rotary - 1	Twin Rotary - 1
Fan	Quantity		1	1	1
	Airflow	m^3/h	2500	3150	3150
	Rated power	W	34	45	45
Noise Level	Indoor/Outdoor	dB(A)	44 / 52	44 / 53	44 / 52
Water Side	Type		Plate Heat Exchanger	Plate Heat Exchanger	Plate Heat Exchanger
Heat Exchanger	Water Pressure Drop	kPa	26	26	26
	Piping Connection	Inch	G1″	G1″	G1″
Allowable Water Flow	Min./Rated./Max	L/S	0.21 / 0.29 / 0.35	0.26 / 0.43 / 0.52	0.34 / 0.57 / 0.68
Net Dimension(LxDxH)	Indoor Unit	mm	600x650x1720	600x650x1720	600x650x1720
	Outdoor Unit	mm	1010x370x7000	1165x370x845	1165x370x845
Net Weight	Indoor Unit	Kg	139	140	140
	Outdoor Unit	Kg	57	70	77

Note:

(1) Heating condition: water inlet/outlet temperature: 30°C/35°C, Ambient temperature: DB TCNVB 6°C;

(2) Heating condition: water inlet/outlet temperature: 40°C/45°C, Ambient temperature: DB 7°CNVB 6°C;

(3) Cooling condition: water inlet/outlet temperature: 23°C/18°C, Ambient temperature: DB 35°C/VVB 24°C;

(4) Cooling condition: water inlet/outlet temperature: 12°C/7°C, Ambient temperature: DB 35°C/VVB 24°C;

(5) The specifications are subject to change without prior notice. For actual specifications of unit, please refer to the stickers on the unit.

Power XR

The Class leading Harnitek power XR is the ideal high output air source heat pump, for replacing fossil fuel boilers.

- outputs of up to 90kW
- Flow temperatures of up to 60c
- Cascade up to 16 units
- BMS ready control unit
- Simple installation
- Highly efficient A+++ erp rated
- Built in weather compensation
- Cost effective solution

7'' Touch Screen operation panel

Cascade
One operation panel can control up to 16 units

Heating Curve
Adjust outlet water temp. based on ambient temp. automatically

Modbus
Easy to communicate with BMS for smart building

Run in rotation
When two or more units are connected in the system, every unit runs alternately

WIFI module
Remote control, easy for service

Smart defrosting
Maximum 1/3 of the units are allowed to defrost at same time, for stable temperature of the whole system

Two Mixing Circuits
Two mixing circuits control for different heating zones

Emergency Operation
If master unit is off-line, by turning on the emergency switch, eachheat pump unit can work individually according to last working command

The Power XR range has been designed to make the transition from large output fossil fuel systems to a renewable alternative both economical and straightforward.

The in built control system allows for easy integration with other thermal technologies and existing BMS.

It is becoming increasingly important to have a detailed understanding of our energy usage, especially in a commercial environment.
The inbuilt "performance Hub gateway", gives a real time view of system operation and performance, from anywhere in the world.
This Data is logged on our online monitoring platform, keeping an accurate record of performance and energy consumption throughout the year. This information is a powerful tool for optimising and maintaining your heating system.

As with all Harnitek heat pumps the power XR range has simplicity of installation & maintenance as a core design principle. We believe these systems are less time consuming to install & maintain than commercial fossil fuel systems.

Our UK based technical support team are on hand to assist with the set up and maintenance of your equipment.

Technical Data

Model			YHEPK-30V4MB	YHEPK-45V4MA	YHEPK-90V4MA
IP rating		IPXX	IPX4	IPX4	IPX4
Power Supply					
Power Supply - Outdoor unit	Outdoor Unit	V/ Hz /Ph	400V/50Hz/3Ph	400V/50Hz/3Ph	400V/50Hz/3Ph
	Fuse Outdoor Unit	A	3P/25A/C	3P/40A/C	3p/80A/C
Performance					
Min/Max Heating Capacity (1)		KW	15.2~28.7	13.7~43.7	27.4~89.6
El. Heating Power Input Min/Max (1)		W	3467~7488	3325~12077	6650~24254
C.O.P (1) Min/Max(1)		W/W	3.83~4.43	3.62~4.42	3.68~4.50
Min/Max Heating Capacity (2)		KW	12.2~29.4	13.6~43.2	28.2~89.5
El. Heating Power Input Min/Max (2)		W	3769~9035	4156~14308	8212~28300
C.O.P (1) Min/Max(2)		W/W	3.26~3.43	2.99~3.38	3.16~3.48
SCOP - Average Climate, Low Temperature		W	4.06	4.12	4.2
Energe class			A++	A++	A++
Min/Max Cooling Capacity(3)		KW	15.2~26.8	17.7~32.0	36.4~66.0
El. Cooling Power Input Min/Max(3)		W	3253~8765	3491~11771	6982~23742
E.E.R. Min/Max(3)		W/W	3.06~4.68	2.72~5.09	2.8~5.19
Min/Max Cooling Capacity(4)(A35/W7)		KW	7.3~21.2	11.2~29.9	23.4~61.2
El. Cooling Power Input Min/Max(4)		W	3121~7960	3529~11640	6880~23450
E.E.R. Min/Max(4)		W/W	2.33~2.84	2.57~3.3	2.61~3.4
SEER - Cooling		W			
Min/Max Ambient Working Temp. in Heating Mode		°C	-25-45	-25-45	-25-45
Min/Max Ambient Working Temp. in Cooling Mode		°C	20-45	20-45	20-45
Max Flower Temp. in Heating Mode		°C	60	60	60
Min Flower Temp. in Heating Mode		°C	10	10	10
Min Flower Temp. in Cooling Mode		°C	5	5	5
Sound Power Level	Outdoor Unit	dB(A)	62	66	69
	Indoor Unit	dB(A)	/	/	/
Components					
Compressor Heater		W	30	30	30*2
Fan	Quantity	pcs	1	1	2
	Airflow	m³ /h	5250*2	13500	13500*2
	Rated power	W	93*2	800	800*2
	Blade Diameter	mm	552*2	760	760*2
Plate Heat Excharger	Water Pressure Drop	kPa	60	80	65
	Piping Connection	Inch	1 12" Inner Gorve	2" Inner Gorve	DN65 Flange
Refrigerant	Type	/	R410A	R410A	R410A
	Charge	kg	5.2kg	8kg	8kg*2
Compressor	Type	/	Inverter+EVI	Inverter+EVI	Inverter+EVI
	Compressor Oil	type	FVC68S	FVC68D	FVC68D
	Comp. Oil Volume	L	1.9	2.3	2.3L*2
Hydraulics					
Minimum Water Flow		m³ /h - l/s	2.7m³ /h	5m³ /h	10m³/h
Nominal Water Flow		m³ /h - l/s	5.3m³ /h	8m³ /h	16m³/h
Hydraulics Connections		size	1 12" Inner Gorve	2" Inner Gorve	DN65 Flange
Dimensions and Weight					
Net Dimensions(LxDxH)	Outdoor Unit	mm	1295*455*1450	1010*1160*1650	2160*1200*1650
	Indoor Unit	mm	385*476*150	385*476*150	385x476x150
Brutto Dimensions(LxDxH)	Outdoor Unit	mm	1325*475*1580	1030*1180*1750	2180x1220x1750
	Indoor Unit	mm	400*490*180	400*490*180	400x490x180
Net Weight	Outdoor Unit	kg	180	300	600
	Indoor Unit	kg	9	9	9
Brutto Weight	Outdoor Unit	kg	200	370	680
	Indoor Unit	kg	10	10	10
Included with The Unit					
Temperature Sensors		type	5K,B=3470	5K,B=3470	5K,B=3470
WIFI Module		Yes / No	Yes	Yes	Yes
Communication Cable		m	20	20	20

Note:

(1) Heating condition: water inlet/outlet temperature: 30°C/35°C, Ambient temperature: DB TCNVB 6°C;

(2) Heating condition: water inlet/outlet temperature: 40°C/45°C, Ambient temperature: DB 7°CNVB 6°C;

(3) Cooling condition: water inlet/outlet temperature: 23°C/18°C, Ambient temperature: DB 35°C/VVB 24°C;

(4) Cooling condition: water inlet/outlet temperature: 12°C/7°C, Ambient temperature: DB 35°C/VVB 24°C.

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