

## Subtype Split Heat Pump 12 14 16 kW

Certificate Holder	Zhejiang Zhongguang Electrical Co., Ltd.
Address	No. 96 Yunjing Road Shuige Industry Area, Lishui
ZIP	323000
City	Zhejiang
Country	CN
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Split Heat Pump 12 14 16 kW
Registration number	011-1W0643
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.84 kg
Certification Date	16.06.2023
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 11 (as of 2022-09)

## Model Outdoor unit AHbS12VR3H/O and indoor unit AHbS16VR3H/IP

Model name	Outdoor unit AHbS12VR3H/O and indoor unit AHbS16VR3H/IP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.10 kW	11.90 kW
El input	2.44 kW	3.84 kW
COP	4.95	3.10

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	189 %	135 %
Prated	12.10 kW	11.60 kW
SCOP	4.80	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.72 kW	10.23 kW
COP Tj = -7°C	3.04	2.21
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.63 kW	6.59 kW
COP Tj = +2°C	4.40	3.07

Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	4.22 kW	4.30 kW
COP Tj = +7°C	6.97	5.07
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	4.74 kW	4.45 kW
COP Tj = 12°C	10.40	7.68
Cdh Tj = +12 °C	0.970	0.970
Pdh Tj = Tbiv	10.72 kW	10.23 kW
COP Tj = Tbiv	3.04	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.86 kW	8.27 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	17 W	17 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.15 kW	3.33 kW
Annual energy consumption Qhe	5210 kWh	6944 kWh

## Model Outdoor unit AHbS14VR3H/O and indoor unit AHbS16VR3H/IP

Model name	Outdoor unit AHbS14VR3H/O and indoor unit AHbS16VR3H/IP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	14.50 kW	13.80 kW
El input	2.99 kW	4.60 kW
COP	4.85	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	140 %
Prated	13.90 kW	12.10 kW
SCOP	4.75	3.56
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.29 kW	10.74 kW
COP Tj = -7°C	2.82	2.20
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	8.32 kW	6.95 kW
COP Tj = +2°C	4.36	3.24

Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.57 kW	4.28 kW
COP Tj = +7°C	7.09	5.21
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	4.63 kW	4.44 kW
COP Tj = 12°C	10.48	8.08
Cdh Tj = +12 °C	0.960	0.970
Pdh Tj = Tbiv	12.29 kW	10.74 kW
COP Tj = Tbiv	2.82	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.45 kW	8.23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.85	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	17 W	17 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.54 kW	3.87 kW
Annual energy consumption Qhe	6040 kWh	7035 kWh

## Model Outdoor unit AHbS16VR3H/O and indoor unit AHbS16VR3H/IP

Model name	Outdoor unit AHbS16VR3H/O and indoor unit AHbS16VR3H/IP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	16.00 kW	16.00 kW
El input	3.44 kW	5.52 kW
COP	4.65	2.90

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	141 %
Prated	15.00 kW	13.00 kW
SCOP	4.75	3.60
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.31 kW	11.48 kW
COP Tj = -7°C	2.75	2.21
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	8.41 kW	7.17 kW
COP Tj = +2°C	4.38	3.28

Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.55 kW	4.73 kW
COP Tj = +7°C	7.24	5.29
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	4.43 kW	4.41 kW
COP Tj = 12°C	9.68	8.28
Cdh Tj = +12 °C	0.960	0.970
Pdh Tj = Tbiv	13.31 kW	11.48 kW
COP Tj = Tbiv	2.75	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.52 kW	8.22 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.81	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °C
Poff	16 W	16 W
PTO	17 W	17 W
PSB	16 W	16 W
PCK	43 W	43 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.48 kW	4.78 kW
Annual energy consumption Qhe	6547 kWh	7440 kWh

## Model Outdoor unit AHbS12VR3X/O and indoor unit AHbS16VR3X/IP

Model name	Outdoor unit AHbS12VR3X/O and indoor unit AHbS16VR3X/IP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.10 kW	11.90 kW
El input	2.44 kW	3.84 kW
COP	4.95	3.10

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	189 %	139 %
Prated	12.00 kW	11.60 kW
SCOP	4.81	3.55
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.62 kW	10.22 kW
COP Tj = -7°C	3.18	2.21
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	7.47 kW	6.75 kW
COP Tj = +2°C	4.37	3.28



Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	4.19 kW	4.25 kW
COP Tj = +7°C	6.94	4.97
Cdh Tj = +7 °C	0.970	0.980
Pdh Tj = 12°C	4.70 kW	4.43 kW
COP Tj = 12°C	10.17	7.74
Cdh Tj = +12 °C	0.960	0.970
Pdh Tj = Tbiv	10.62 kW	10.22 kW
COP Tj = Tbiv	3.18	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.35 kW	8.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.44	1.81
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.65 kW	3.47 kW
Annual energy consumption Qhe	5158 kWh	6732 kWh

## Model Outdoor unit AHbS14VR3X/O and indoor unit AHbS16VR3X/IP

Model name	Outdoor unit AHbS14VR3X/O and indoor unit AHbS16VR3X/IP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	14.50 kW	13.80 kW
El input	2.99 kW	4.60 kW
COP	4.85	3.00

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	140 %
Prated	13.90 kW	12.10 kW
SCOP	4.75	3.59
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.25 kW	10.68 kW
COP Tj = -7°C	2.77	2.23
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	8.44 kW	7.08 kW
COP Tj = +2°C	4.41	3.29

Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.51 kW	4.24 kW
COP Tj = +7°C	7.08	5.11
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	4.65 kW	4.41 kW
COP Tj = 12°C	10.50	8.07
Cdh Tj = +12 °C	0.960	0.970
Pdh Tj = Tbiv	12.25 kW	10.68 kW
COP Tj = Tbiv	2.77	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.57 kW	8.13 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.69	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.33 kW	3.97 kW
Annual energy consumption Qhe	6029 kWh	6956 kWh

## Model Outdoor unit AHbS16VR3X/O and indoor unit AHbS16VR3X/IP

Model name	Outdoor unit AHbS16VR3X/O and indoor unit AHbS16VR3X/IP
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	16.00 kW	16.00 kW
El input	3.44 kW	5.52 kW
COP	4.65	2.90

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	142 %
Prated	15.00 kW	13.00 kW
SCOP	4.74	3.62
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.23 kW	11.46 kW
COP Tj = -7°C	2.83	2.21
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	8.19 kW	7.30 kW
COP Tj = +2°C	4.34	3.33

Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.48 kW	4.70 kW
COP Tj = +7°C	7.22	5.20
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	4.38 kW	4.41 kW
COP Tj = 12°C	9.59	8.35
Cdh Tj = +12 °C	0.960	0.970
Pdh Tj = Tbiv	13.23 kW	11.46 kW
COP Tj = Tbiv	2.83	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.49 kW	8.12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.83
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	38 W	38 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.51 kW	4.88 kW
Annual energy consumption Qhe	6514 kWh	7384 kWh