

This information was generated by the HP KEYMARK database on 22 Aug 2023

Summary of	Hi-Therma Monobloc 14 16	Reg. No.	011-1W0662
Certificate Holder			
Name	Qingdao Hisense Hitachi Air-conditioning Systems Co.,Ltd.		
Address	Qianwangang Road	ZIP	266555
City	Qingdao, Shandong	Country	China
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Hi-Therma Monobloc 14 16		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass of Refrigerant	2 kg		
Certification Date	10.08.2023		
Testing basis	HP KEYMARK certification scheme rules V12		

Model: AHZ-140HCDS1

Configure model	
Model name	AHZ-140HCDS1
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	13.00 kW
El input	2.91 kW	4.26 kW
COP	4.80	3.05

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

This information was generated by the HP KEYMARK database on 22 Aug 2023

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	170 %
Prated	13.70 kW	14.10 kW
SCOP	6.33	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.56 kW	13.68 kW
COP Tj = +2°C	3.56	2.48
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.81 kW	9.07 kW
COP Tj = +7°C	5.50	3.80
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.11 kW	3.90 kW
COP Tj = 12°C	7.95	5.41
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.81 kW	9.07 kW

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COP Tj = Tbiv	5.50	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.56 kW	13.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.56	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.14 kW	0.42 kW
Annual energy consumption Qhe	2896 kWh	4348 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	181 %	132 %

This information was generated by the HP KEYMARK database on 22 Aug 2023

Prated	11.50 kW	11.50 kW
SCOP	4.59	3.37
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.20 kW	10.18 kW
COP Tj = -7°C	3.01	2.21
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.22 kW	6.20 kW
COP Tj = +2°C	4.38	3.23
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.15 kW	4.11 kW
COP Tj = +7°C	6.26	4.45
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.72 kW	3.59 kW
COP Tj = 12°C	6.93	5.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.20 kW	10.18 kW
COP Tj = Tbiv	3.01	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.01 kW	11.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900

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WTOL	60 °C	60 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.49 kW	0.45 kW
Annual energy consumption Qhe	5191 kWh	7047 kWh

Model: AHZ-140HEDS1

Configure model	
Model name	AHZ-140HEDS1
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	13.00 kW
El input	2.91 kW	4.26 kW
COP	4.80	3.05

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

This information was generated by the HP KEYMARK database on 22 Aug 2023

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	170 %
Prated	13.70 kW	14.10 kW
SCOP	6.33	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.56 kW	13.68 kW
COP Tj = +2°C	3.56	2.48
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.81 kW	9.07 kW
COP Tj = +7°C	5.50	3.80
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.11 kW	3.90 kW
COP Tj = 12°C	7.95	5.41
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.81 kW	9.07 kW

This information was generated by the HP KEYMARK database on 22 Aug 2023

COP Tj = Tbiv	5.50	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.56 kW	13.68 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.56	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.14 kW	0.42 kW
Annual energy consumption Qhe	2896 kWh	4348 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	181 %	132 %

This information was generated by the HP KEYMARK database on 22 Aug 2023

Prated	11.50 kW	11.50 kW
SCOP	4.59	3.37
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.20 kW	10.18 kW
COP Tj = -7°C	3.01	2.21
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.22 kW	6.20 kW
COP Tj = +2°C	4.38	3.23
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.15 kW	4.11 kW
COP Tj = +7°C	6.26	4.45
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.72 kW	3.59 kW
COP Tj = 12°C	6.93	5.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.20 kW	10.18 kW
COP Tj = Tbiv	3.01	2.21
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.01 kW	11.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	1.82
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900

This information was generated by the HP KEYMARK database on 22 Aug 2023

WTOL	60 °C	60 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.49 kW	0.45 kW
Annual energy consumption Qhe	5191 kWh	7047 kWh

Model: AHZ-160HCDS1

Configure model	
Model name	AHZ-160HCDS1
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	15.00 kW
El input	3.48 kW	5.08 kW
COP	4.60	2.95

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

This information was generated by the HP KEYMARK database on 22 Aug 2023

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	172 %
Prated	14.10 kW	14.10 kW
SCOP	6.34	4.37
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.88 kW	13.80 kW
COP Tj = +2°C	3.48	2.45
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.09 kW	9.08 kW
COP Tj = +7°C	5.56	3.72
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.14 kW
COP Tj = 12°C	7.98	5.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.09 kW	9.08 kW

This information was generated by the HP KEYMARK database on 22 Aug 2023

COP Tj = Tbiv	5.56	3.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.88 kW	13.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.48	2.45
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.22 kW	0.30 kW
Annual energy consumption Qhe	2980 kWh	4320 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	176 %	131 %

This information was generated by the HP KEYMARK database on 22 Aug 2023

Prated	13.00 kW	12.50 kW
SCOP	4.47	3.35
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	11.07 kW
COP Tj = -7°C	2.95	2.28
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.84 kW	6.69 kW
COP Tj = +2°C	4.19	3.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.37 kW	4.38 kW
COP Tj = +7°C	6.25	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.88 kW
COP Tj = 12°C	6.80	5.98
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	11.07 kW
COP Tj = Tbiv	2.95	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.80 kW	11.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.76
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900

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WTOL	60 °C	60 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	0.51 kW
Annual energy consumption Qhe	6003 kWh	7712 kWh

Model: AHZ-160HEDS1

Configure model	
Model name	AHZ-160HEDS1
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	15.00 kW
El input	3.48 kW	5.08 kW
COP	4.60	2.95

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate

This information was generated by the HP KEYMARK database on 22 Aug 2023

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	172 %
Prated	14.10 kW	14.10 kW
SCOP	6.34	4.37
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.88 kW	13.80 kW
COP Tj = +2°C	3.48	2.45
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.09 kW	9.08 kW
COP Tj = +7°C	5.56	3.72
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.14 kW	4.14 kW
COP Tj = 12°C	7.98	5.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.09 kW	9.08 kW

This information was generated by the HP KEYMARK database on 22 Aug 2023

COP Tj = Tbiv	5.56	3.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.88 kW	13.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.48	2.45
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.22 kW	0.30 kW
Annual energy consumption Qhe	2980 kWh	4320 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	176 %	131 %

This information was generated by the HP KEYMARK database on 22 Aug 2023

Prated	13.00 kW	12.50 kW
SCOP	4.47	3.35
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	11.07 kW
COP Tj = -7°C	2.95	2.28
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	6.84 kW	6.69 kW
COP Tj = +2°C	4.19	3.12
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.37 kW	4.38 kW
COP Tj = +7°C	6.25	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.80 kW	3.88 kW
COP Tj = 12°C	6.80	5.98
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	11.07 kW
COP Tj = Tbiv	2.95	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.80 kW	11.99 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.76
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900

This information was generated by the HP KEYMARK database on 22 Aug 2023

WTOL	60 °C	60 °C
Poff	10 W	10 W
PTO	13 W	13 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	0.51 kW
Annual energy consumption Qhe	6003 kWh	7712 kWh