

Subtype Hi-Therma Monobloc 14 16

Certificate Holder	Qingdao Hisense Hitachi Air-conditioning Systems Co.,Ltd.
Address	Qianwangang Road
ZIP	266555
City	Qingdao, Shandong
Country	CN
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Hi-Therma Monobloc 14 16
Registration number	011-1W0662
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

Model name	AHZ-140HCDS1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer, Warmer Climate
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	14.00 kW	13.00 kW
El input	2.91 kW	4.26 kW
COP	4.80	3.05

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	181 %	132 %
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
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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	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
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

Model AHZ-140HEDS1

Model name	AHZ-140HEDS1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer, Warmer Climate
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	14.00 kW	13.00 kW
El input	2.91 kW	4.26 kW
COP	4.80	3.05

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	181 %	132 %
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
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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	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
COP Tj = Tbiv	5.50	3.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.56 kW	13.68 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.56	2.48
$Cd_h T_j = TOL$ or $Pd_h T_j = T_{designh}$ if $TOL < T_{designh}$	0.900	0.900
WTOL	65 °C	65 °C
P _{off}	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 Q _{he}	2896 kWh	4348 kWh

Model AHZ-160HCDS1

Model name	AHZ-160HCDS1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer, Warmer Climate
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	15.00 kW
El input	3.48 kW	5.08 kW
COP	4.60	2.95

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	176 %	131 %
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
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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825 | Warmer Climate

	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
COP Tj = Tbiv	5.56	3.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.88 kW	13.80 kW

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	3.48	2.45
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.900	0.900
WTOL	65 °C	65 °C
P _{off}	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 Q _{he}	2980 kWh	4320 kWh

Model AHZ-160HEDS1

Model name	AHZ-160HEDS1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer, Warmer Climate
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	15.00 kW
El input	3.48 kW	5.08 kW
COP	4.60	2.95

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	176 %	131 %
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
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

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825 | Warmer Climate

	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
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