

## Subtype Hi-Therma Monobloc 10 12

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 10 12
Registration number	011-1W0661
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.5 kg
Certification Date	10.08.2023
Testing basis	HP KEYMARK certification scheme rules V12

## Model AHZ-100HCDS1

Model name	AHZ-100HCDS1
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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	193 %	142 %
Prated	9.20 kW	9.20 kW
SCOP	4.90	3.62
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.16 kW	8.18 kW
COP Tj = -7°C	3.14	2.35
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.19 kW	5.15 kW
COP Tj = +2°C	4.65	3.49
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.28 kW	3.36 kW
COP Tj = +7°C	6.59	4.66
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.75 kW	2.64 kW
COP Tj = 12°C	8.48	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.16 kW	8.18 kW
COP Tj = Tbiv	3.14	2.35

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.15 kW	9.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.96
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	0.05 kW	0.15 kW
Annual energy consumption Qhe	3890 kWh	5273 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	62 dB(A)	62 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	265 %	170 %
Prated	9.70 kW	9.50 kW
SCOP	6.70	4.34
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.38 kW	9.50 kW
COP Tj = +2°C	3.78	2.53
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.21 kW	6.08 kW
COP Tj = +7°C	5.67	3.60
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.95 kW	2.74 kW
COP Tj = 12°C	8.85	5.56
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.21 kW	6.08 kW
COP Tj = Tbiv	5.67	3.60
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.38 kW	9.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.78	2.53
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	0.32 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1926 kWh	2915 kWh

## Model AHZ-100HEDS1

Model name	AHZ-100HEDS1
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 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	62 dB(A)	62 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	193 %	142 %
Prated	9.20 kW	9.20 kW
SCOP	4.90	3.62
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.16 kW	8.18 kW
COP Tj = -7°C	3.14	2.35
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.19 kW	5.15 kW
COP Tj = +2°C	4.65	3.49
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.28 kW	3.36 kW
COP Tj = +7°C	6.59	4.66
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.75 kW	2.64 kW
COP Tj = 12°C	8.48	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.16 kW	8.18 kW
COP Tj = Tbiv	3.14	2.35

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.15 kW	9.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.96
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	0.05 kW	0.15 kW
Annual energy consumption Qhe	3890 kWh	5273 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	62 dB(A)	62 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	265 %	170 %
Prated	9.70 kW	9.50 kW
SCOP	6.70	4.34
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.38 kW	9.50 kW
COP Tj = +2°C	3.78	2.53
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.21 kW	6.08 kW
COP Tj = +7°C	5.67	3.60
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.95 kW	2.74 kW
COP Tj = 12°C	8.85	5.56
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.21 kW	6.08 kW
COP Tj = Tbiv	5.67	3.60
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.38 kW	9.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.78	2.53
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	0.32 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1926 kWh	2915 kWh

## Model AHZ-120HCDS1

Model name	AHZ-120HCDS1
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 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	192 %	136 %
Prated	10.20 kW	10.00 kW
SCOP	4.87	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.98 kW	8.87 kW
COP Tj = -7°C	3.15	2.32
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.61 kW	5.34 kW
COP Tj = +2°C	4.64	3.22
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.57 kW	3.47 kW
COP Tj = +7°C	6.48	4.65
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.77 kW	2.66 kW
COP Tj = 12°C	8.11	6.34
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.98 kW	8.87 kW
COP Tj = Tbiv	3.15	2.32



Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.92 kW	10.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.89
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	0.28 kW	0.00 kW
Annual energy consumption Qhe	4309 kWh	5964 kWh

#### EN 12102-1 | Warmer Climate

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

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	259 %	170 %
Prated	10.50 kW	10.50 kW
SCOP	6.56	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.22 kW	10.10 kW
COP Tj = +2°C	3.74	2.47
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.77 kW	6.75 kW
COP Tj = +7°C	5.90	3.62
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.94 kW	2.95 kW
COP Tj = 12°C	8.13	5.69
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.77 kW	6.75 kW
COP Tj = Tbiv	5.90	3.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.22 kW	10.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.47
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	0.28 kW	0.40 kW
Annual energy consumption Q <sub>he</sub>	2145 kWh	3243 kWh

## Model AHZ-120HEDS1

Model name	AHZ-120HEDS1
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 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
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TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.98 kW	8.87 kW
COP Tj = -7°C	3.15	2.32
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.61 kW	5.34 kW
COP Tj = +2°C	4.64	3.22
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.57 kW	3.47 kW
COP Tj = +7°C	6.48	4.65
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.77 kW	2.66 kW
COP Tj = 12°C	8.11	6.34
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.98 kW	8.87 kW
COP Tj = Tbiv	3.15	2.32

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.92 kW	10.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	1.89
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	0.28 kW	0.00 kW
Annual energy consumption Qhe	4309 kWh	5964 kWh

#### EN 12102-1 | Warmer Climate

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

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	259 %	170 %
Prated	10.50 kW	10.50 kW
SCOP	6.56	4.33
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.22 kW	10.10 kW
COP Tj = +2°C	3.74	2.47
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	6.77 kW	6.75 kW
COP Tj = +7°C	5.90	3.62
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.94 kW	2.95 kW
COP Tj = 12°C	8.13	5.69
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.77 kW	6.75 kW
COP Tj = Tbiv	5.90	3.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.22 kW	10.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.74	2.47
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	0.28 kW	0.40 kW
Annual energy consumption Q <sub>he</sub>	2145 kWh	3243 kWh