

## Subtype Hi-Therma Integra 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 Integra 10 12
Registration number	011-1W0663
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.8 kg
Certification Date	29.11.2023
Testing basis	European KEYMARK Scheme for Heat Pumps Version 12 (2023-03)

**Model AHW-100HCDS1/AHS-100HCDSAA-23**

Model name	AHW-100HCDS1/AHS-100HCDSAA-23
Application	Heating + DHW + low 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 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	126 %
COP	3.06
Heating up time	2:26 h:min
Standby power input	36.6 W
Reference hot water temperature	48.7 °C
Mixed water at 40°C	260 l

**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 indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	190 %	140 %
Prated	8.50 kW	8.00 kW
SCOP	4.83	3.58
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.54 kW	7.08 kW
COP Tj = -7°C	3.02	2.18
Cdh Tj = -7 °C	0.900	0.900

Pdh Tj = +2°C	4.58 kW	4.30 kW
COP Tj = +2°C	4.83	3.44
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.89 kW	2.89 kW
COP Tj = +7°C	6.54	4.83
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.59 kW	2.67 kW
COP Tj = 12°C	6.06	6.75
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.54 kW	7.08 kW
COP Tj = Tbiv	3.02	2.18
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.21 kW	7.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.79	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	9 W	9 W
PSB	5 W	5 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.29 kW	0.09 kW
Annual energy consumption Qhe	3645 kWh	4617 kWh

**Model AHW-100HEDS1/AHS-100HEDSAA-23**

Model name	AHW-100HEDS1/AHS-100HEDSAA-23
Application	Heating + DHW + low 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 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	124 %
COP	2.98
Heating up time	2:24 h:min
Standby power input	49.5 W
Reference hot water temperature	48.7 °C
Mixed water at 40°C	260 l

**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 indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	190 %	140 %
Prated	8.50 kW	8.00 kW
SCOP	4.83	3.58
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.54 kW	7.08 kW
COP Tj = -7°C	3.02	2.18
Cdh Tj = -7 °C	0.900	0.900

Pdh Tj = +2°C	4.58 kW	4.30 kW
COP Tj = +2°C	4.83	3.44
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.89 kW	2.89 kW
COP Tj = +7°C	6.54	4.83
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.59 kW	2.67 kW
COP Tj = 12°C	6.06	6.75
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.54 kW	7.08 kW
COP Tj = Tbiv	3.02	2.18
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.21 kW	7.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.79	1.73
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	9 W	9 W
PSB	5 W	5 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.29 kW	0.09 kW
Annual energy consumption Qhe	3645 kWh	4617 kWh

**Model AHW-120HCDS1/AHS-120HCDSAA-23**

Model name	AHW-120HCDS1/AHS-120HCDSAA-23
Application	Heating + DHW + low 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 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	126 %
COP	3.06
Heating up time	2:26 h:min
Standby power input	36.6 W
Reference hot water temperature	48.7 °C
Mixed water at 40°C	260 l

**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 indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	187 %	135 %
Prated	9.50 kW	9.10 kW
SCOP	4.76	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.07 kW
COP Tj = -7°C	3.16	2.11
Cdh Tj = -7 °C	0.900	0.900

Pdh Tj = +2°C	5.12 kW	4.78 kW
COP Tj = +2°C	4.52	3.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.22 kW	3.29 kW
COP Tj = +7°C	6.44	4.89
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.52 kW	2.64 kW
COP Tj = 12°C	7.13	6.14
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.40 kW	8.07 kW
COP Tj = Tbiv	3.16	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.07 kW	8.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	1.69
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	9 W	9 W
PSB	5 W	5 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.43 kW	0.41 kW
Annual energy consumption Qhe	4125 kWh	5448 kWh

**Model AHW-120HEDS1/AHS-120HEDSAA-23**

Model name	AHW-120HEDS1/AHS-120HEDSAA-23
Application	Heating + DHW + low 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 16147 | Average Climate**

Declared load profile	XL
Efficiency $\eta_{DHW}$	124 %
COP	2.98
Heating up time	2:24 h:min
Standby power input	49.5 W
Reference hot water temperature	48.7 °C
Mixed water at 40°C	260 l

**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 indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	187 %	135 %
Prated	9.50 kW	9.10 kW
SCOP	4.76	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.07 kW
COP Tj = -7°C	3.16	2.11
Cdh Tj = -7 °C	0.900	0.900



Pdh Tj = +2°C	5.12 kW	4.78 kW
COP Tj = +2°C	4.52	3.27
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.22 kW	3.29 kW
COP Tj = +7°C	6.44	4.89
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.52 kW	2.64 kW
COP Tj = 12°C	7.13	6.14
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.40 kW	8.07 kW
COP Tj = Tbiv	3.16	2.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.07 kW	8.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	1.69
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	65 °C	65 °C
Poff	5 W	5 W
PTO	9 W	9 W
PSB	5 W	5 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.43 kW	0.41 kW
Annual energy consumption Qhe	4125 kWh	5448 kWh