

## Subtype Aquarea Monobloc 12-16 kW STD (H Series)

Certificate Holder	Panasonic Marketing Europe GmbH
Address	Hagenauer Strasse 43, Wiesbaden
ZIP	65203
City	Wiesbaden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Aquarea Monobloc 12-16 kW STD (H Series)
Registration number	011-1W0509
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.1 kg
Certification Date	08.12.2021
Testing basis	HP KEYMARK certification scheme rules rev. 9

## Model WH-MDC12H6E5

Model name	WH-MDC12H6E5
Application	Heating (medium temp)
Units	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 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

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Application	Heating (medium temp)
Units	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 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	190 %	128 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.25
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	4.85
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh