Subtype Aquarea Monobloc 16 kW T-CAP (J Series) + TD23	
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 16 kW T-CAP (J Series) + TD23
Registration number	011-1W0563
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.8 kg
Certification Date	22.12.2022
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 10 (as of 2022-06)

Model WH-MXC16J9E8 + PAW-TD23B6E5	
Model name	WH-MXC16J9E8 + PAW-TD23B6E5
Application	Heating + DHW + low 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	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water	
EN 16147 | Average Climate	
Declared load profile	L
Efficiency ηDHW	87 %
COP	2.00
Heating up time	0:48 h:min
Standby power input	80.0 W
Reference hot water temperature	47.9 °C
Mixed water at 40°C	232 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	81 %
COP	1.88
Heating up time	1:09 h:min
Standby power input	120.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	388 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	134 %
COP	3.23
Heating up time	1:17 h:min
Standby power input	40.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	390 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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	16.00 kW	16.00 kW
El input	3.54 kW	5.59 kW
COP	4.52	2.86

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
ηs	176 %	129 %
Prated	13.00 kW	16.00 kW
SCOP	4.46	3.31
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	14.20 kW
COP Tj = -7°C	2.70	1.86
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.00 kW	8.60 kW
COP Tj = +2°C	4.43	3.30
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	8.00 kW	7.90 kW
COP Tj = +7°C	5.68	4.31
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	9.30 kW	9.20 kW
COP Tj = 12°C	7.28	5.55
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	13.00 kW	16.00 kW
COP Tj = Tbiv	2.70	1.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	16.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.67
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	12 W	12 W
PTO	14 W	14 W
PSB	12 W	12 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	6018 kWh	9984 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	150 %	125 %
Prated	19.00 kW	18.00 kW
SCOP	3.83	3.20
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.50 kW	10.90 kW
COP Tj = -7°C	2.69	2.57
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.10 kW	6.80 kW
COP Tj = +2°C	5.04	3.97
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	8.00 kW	7.90 kW
COP Tj = +7°C	6.35	5.04
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	9.10 kW	9.00 kW
COP Tj = 12°C	7.59	6.31
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	15.50 kW	14.70 kW
COP Tj = Tbiv	2.42	1.83
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.30 kW	13.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.91	1.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	12 W	12 W
PTO	14 W	14 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.70 kW	4.60 kW
Annual energy consumption Qhe	12233 kWh	13870 kWh
Pdh Tj = -15°C (if TOL	15.50	14.70
COP Tj = -15°C (if TOL	2.42	1.83

Cdh Tj = -15 °C	0.900	0.900

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	232 %	160 %
Prated	16.00 kW	16.00 kW
SCOP	5.88	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	16.00 kW	16.00 kW
COP Tj = +2°C	2.96	2.03
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	10.30 kW	10.30 kW
COP Tj = +7°C	5.32	3.56
Cdh Tj = +7 °C	0.990	1.000
Pdh Tj = 12°C	9.10 kW	8.90 kW
COP Tj = 12°C	7.25	5.21
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	16.00 kW	16.00 kW
COP Tj = Tbiv	2.96	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.00 kW	16.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	2.03
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	12 W	12 W
PTO	14 W	14 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3634 kWh	5230 kWh