

Subtype Aquarea Monobloc 9-12 kW T-CAP (H Series)

Certificate Holder	Panasonic Marketing Europe GmbH
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City	Wiesbaden
Country	DE
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	Aquarea Monobloc 9-12 kW T-CAP (H Series)
Registration number	011-1W0206
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.3 kg
Certification Date	08.01.2020
Testing basis	HP KEYMARK certification scheme rules V8

Model WH-MXC09H3E5

Model name	WH-MXC09H3E5
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder 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 indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	181 %	130 %
Prated	9.00 kW	9.00 kW
SCOP	4.59	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.50 kW	7.70 kW
COP Tj = -7°C	2.75	2.11
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.70 kW	4.80 kW
COP Tj = +2°C	4.57	3.24
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.00 kW	4.60 kW
COP Tj = +7°C	5.89	4.17
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.10 kW	5.50 kW
COP Tj = 12°C	7.67	5.74
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	9.00 kW	8.70 kW

COP Tj = Tbiv	2.71	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.71	2.00
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.30 kW
Annual energy consumption Qhe	4049 kWh	5596 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	125 %
Prated	11.00 kW	11.00 kW
SCOP	4.08	3.20
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	6.70 kW	6.50 kW
COP Tj = -7°C	3.28	2.56
Cdh Tj = -7 °C	0.990	1.000
Pdh Tj = +2°C	4.30 kW	4.00 kW
COP Tj = +2°C	4.99	3.91
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.00 kW	4.80 kW
COP Tj = +7°C	6.29	4.99
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.80 kW	5.70 kW
COP Tj = 12°C	7.45	6.32
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	9.20 kW	8.90 kW
COP Tj = Tbiv	2.48	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.80 kW	8.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.85	1.52
WTOL	55 °C	55 °C
Poff	3 W	3 W

PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.20 kW	2.10 kW
Annual energy consumption Q _{he}	6651 kWh	8468 kWh
P _{dh} T _j = -15°C (if TOL	9.20	8.90
COP T _j = -15°C (if TOL	2.48	1.93
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	235 %	158 %
Prated	9.00 kW	9.00 kW
SCOP	5.95	4.02
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	8.90 kW	9.00 kW
COP T _j = +2°C	3.49	2.39
C _{dh} T _j = +2 °C	1.000	1.000
P _{dh} T _j = +7°C	5.70 kW	5.70 kW
COP T _j = +7°C	5.49	3.33
C _{dh} T _j = +7 °C	0.990	0.990
P _{dh} T _j = 12°C	6.00 kW	5.30 kW
COP T _j = 12°C	7.29	5.35
C _{dh} T _j = +12 °C	0.990	0.990
P _{dh} T _j = T _{biv}	8.90 kW	9.00 kW
COP T _j = T _{biv}	3.49	2.39
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	8.90 kW	9.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.49	2.39
WTOL	55 °C	55 °C
P _{off}	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.00 kW
Annual energy consumption Q _{he}	2020 kWh	2991 kWh

Model WH-MXC12H9E8

Model name	WH-MXC12H9E8
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder 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 indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	12.00 kW	12.00 kW
SCOP	4.32	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.80 kW
COP Tj = -7°C	2.84	2.03
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.70 kW	6.10 kW
COP Tj = +2°C	3.96	3.19
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.10 kW	4.70 kW
COP Tj = +7°C	5.93	4.38
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.70 kW
COP Tj = 12°C	7.88	5.89
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	12.00 kW	11.70 kW

COP Tj = Tbiv	2.56	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.95
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input		
Supplementary Heater: PSUP	0.00 kW	0.30 kW
Annual energy consumption Qhe	5745 kWh	7466 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	125 %
Prated	14.00 kW	13.00 kW
SCOP	4.08	3.20
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.40 kW	7.90 kW
COP Tj = -7°C	3.20	2.54
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.00 kW	4.10 kW
COP Tj = +2°C	5.09	3.97
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.10 kW	4.80 kW
COP Tj = +7°C	6.61	4.89
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.90 kW	5.60 kW
COP Tj = 12°C	7.99	6.00
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	11.20 kW	10.40 kW
COP Tj = Tbiv	2.48	1.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.90 kW	8.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.92	1.50
WTOL	55 °C	55 °C
Poff	3 W	3 W

PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input		
Supplementary Heater: PSUP	3.10 kW	4.10 kW
Annual energy consumption Q _{he}	8460 kWh	10012 kWh
P _{dh} T _j = -15°C (if TOL	11.20	10.40
COP T _j = -15°C (if TOL	2.48	1.94
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	231 %	158 %
Prated	12.00 kW	12.00 kW
SCOP	5.86	4.02
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.90 kW	11.70 kW
COP T _j = +2°C	3.18	2.15
C _{dh} T _j = +2 °C	1.000	1.000
P _{dh} T _j = +7°C	7.60 kW	7.80 kW
COP T _j = +7°C	5.25	3.33
C _{dh} T _j = +7 °C	0.990	0.990
P _{dh} T _j = 12°C	5.90 kW	5.70 kW
COP T _j = 12°C	7.33	5.39
C _{dh} T _j = +12 °C	0.990	0.990
P _{dh} T _j = T _{biv}	11.90 kW	11.70 kW
COP T _j = T _{biv}	3.18	2.15
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.90 kW	11.70 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.18	2.15
WTOL	55 °C	55 °C
P _{off}	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input		
Supplementary Heater: PSUP	0.10 kW	0.30 kW
Annual energy consumption Q _{he}	2738 kWh	3990 kWh

Model WH-MXC09H3E8

Model name	WH-MXC09H3E8
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder 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 indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	181 %	130 %
Prated	9.00 kW	9.00 kW
SCOP	4.59	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.50 kW	7.70 kW
COP Tj = -7°C	2.75	2.11
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	4.70 kW	4.80 kW
COP Tj = +2°C	4.57	3.24
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.00 kW	4.60 kW
COP Tj = +7°C	5.89	4.17
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.10 kW	5.50 kW
COP Tj = 12°C	7.67	5.74
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	9.00 kW	8.70 kW

COP $T_j = T_{biv}$	2.71	2.00
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	9.00 kW	8.70 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.71	2.00
WTOL	55 °C	55 °C
P _{off}	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input		
Supplementary Heater: PSUP	0.00 kW	0.30 kW
Annual energy consumption Q _{he}	4049 kWh	5596 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	125 %
Prated	11.00 kW	11.00 kW
SCOP	4.08	3.20
T_{biv}	-15 °C	-15 °C
TOL	-22 °C	-22 °C
$P_{dh} T_j = -7^{\circ}C$	6.70 kW	6.50 kW
COP $T_j = -7^{\circ}C$	3.28	2.56
$C_{dh} T_j = -7^{\circ}C$	0.990	1.000
$P_{dh} T_j = +2^{\circ}C$	4.30 kW	4.00 kW
COP $T_j = +2^{\circ}C$	4.99	3.91
$C_{dh} T_j = +2^{\circ}C$	0.990	0.990
$P_{dh} T_j = +7^{\circ}C$	5.00 kW	4.80 kW
COP $T_j = +7^{\circ}C$	6.29	4.99
$C_{dh} T_j = +7^{\circ}C$	0.980	0.990
$P_{dh} T_j = 12^{\circ}C$	5.80 kW	5.70 kW
COP $T_j = 12^{\circ}C$	7.45	6.32
$C_{dh} T_j = +12^{\circ}C$	0.980	0.990
$P_{dh} T_j = T_{biv}$	9.20 kW	8.90 kW
COP $T_j = T_{biv}$	2.48	1.93
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	9.80 kW	8.90 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	1.85	1.52
WTOL	55 °C	55 °C
P _{off}	3 W	3 W

PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input		
Supplementary Heater: PSUP	1.20 kW	2.10 kW
Annual energy consumption Q _{he}	6651 kWh	8468 kWh
P _{dh} T _j = -15°C (if TOL	9.20	8.90
COP T _j = -15°C (if TOL	2.48	1.93
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	235 %	158 %
Prated	9.00 kW	9.00 kW
SCOP	5.95	4.02
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	8.90 kW	9.00 kW
COP T _j = +2°C	3.49	2.39
C _{dh} T _j = +2 °C	1.000	1.000
P _{dh} T _j = +7°C	5.70 kW	5.70 kW
COP T _j = +7°C	5.49	3.33
C _{dh} T _j = +7 °C	0.990	0.990
P _{dh} T _j = 12°C	6.00 kW	5.30 kW
COP T _j = 12°C	7.29	5.35
C _{dh} T _j = +12 °C	0.990	0.990
P _{dh} T _j = T _{biv}	8.90 kW	9.00 kW
COP T _j = T _{biv}	3.49	2.39
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	8.90 kW	9.00 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.49	2.39
WTOL	55 °C	55 °C
P _{off}	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input		
Supplementary Heater: PSUP	0.10 kW	0.00 kW
Annual energy consumption Q _{he}	2020 kWh	2991 kWh

Model WH-MXC12H6E5

Model name	WH-MXC12H6E5
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder 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 indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	170 %	130 %
Prated	12.00 kW	12.00 kW
SCOP	4.32	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.70 kW	10.80 kW
COP Tj = -7°C	2.84	2.03
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.70 kW	6.10 kW
COP Tj = +2°C	3.96	3.19
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.10 kW	4.70 kW
COP Tj = +7°C	5.93	4.38
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.70 kW
COP Tj = 12°C	7.88	5.89
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	12.00 kW	11.70 kW

COP Tj = Tbiv	2.56	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.95
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.30 kW
Annual energy consumption Qhe	5745 kWh	7466 kWh

EN 12102-1 | Colder Climate

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

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	125 %
Prated	14.00 kW	13.00 kW
SCOP	4.08	3.20
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.40 kW	7.90 kW
COP Tj = -7°C	3.20	2.54
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.00 kW	4.10 kW
COP Tj = +2°C	5.09	3.97
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.10 kW	4.80 kW
COP Tj = +7°C	6.61	4.89
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	5.90 kW	5.60 kW
COP Tj = 12°C	7.99	6.00
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	11.20 kW	10.40 kW
COP Tj = Tbiv	2.48	1.94
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.90 kW	8.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.92	1.50
WTOL	55 °C	55 °C
Poff	3 W	3 W

PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.10 kW	4.10 kW
Annual energy consumption Q _{he}	8460 kWh	10012 kWh
P _{dh} T _j = -15°C (if TOL	11.20	10.40
COP T _j = -15°C (if TOL	2.48	1.94
C _{dh} T _j = -15 °C	1.000	1.000

EN 12102-1 | Warmer Climate

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

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η _s	231 %	158 %
Prated	12.00 kW	12.00 kW
SCOP	5.86	4.02
T _{biv}	2 °C	2 °C
TOL	2 °C	2 °C
P _{dh} T _j = +2°C	11.90 kW	11.70 kW
COP T _j = +2°C	3.18	2.15
C _{dh} T _j = +2 °C	1.000	1.000
P _{dh} T _j = +7°C	7.60 kW	7.80 kW
COP T _j = +7°C	5.25	3.33
C _{dh} T _j = +7 °C	0.990	0.990
P _{dh} T _j = 12°C	5.90 kW	5.70 kW
COP T _j = 12°C	7.33	5.39
C _{dh} T _j = +12 °C	0.990	0.990
P _{dh} T _j = T _{biv}	11.90 kW	11.70 kW
COP T _j = T _{biv}	3.18	2.15
P _{dh} T _j = TOL or P _{dh} T _j = T _{designh} if TOL < T _{designh}	11.90 kW	11.70 kW
COP T _j = TOL or COP T _j = T _{designh} if TOL < T _{designh}	3.18	2.15
WTOL	55 °C	55 °C
P _{off}	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.30 kW
Annual energy consumption Q _{he}	2738 kWh	3990 kWh