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#### This information was generated by the HP KEYMARK database on 18 Mar 2022

#### **Login**

Summary of	Aquarea Monobloc 9-12 kW T-CAP (H Series)	Reg. No.	011-1W0206	
Certificate Holder				
Name	Panasonic Marketing Europe GmbH			
Address	Hagenauer Strasse 43, Wiesbaden	Zip	65203	
City	Wiesbaden	Country	Germany	
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	Aquarea Monobloc 9-12 kW T-CAP (H Series)			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410A			
Mass of Refrigerant	2.3 kg			
Certification Date	08.01.2020			
Testing basis	is HP KEYMARK certification scheme rules V8			



# Model: WH-MXC09H3E5

Configure model		
Model name	WH-MXC09H3E5	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	9.00 kW	9.00 kW	
El input	1.86 kW	3.06 kW	
СОР	4.84	2.94	

# **Average Climate**





#### EN 14825

	Low temperature	Medium temperature
$\eta_{S}$	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
$COP Tj = -7^{\circ}C$	2.75	2.11
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = $+2^{\circ}$ C	4.70 kW	4.80 kW
$COP Tj = +2^{\circ}C$	4.57	3.24
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.00 kW	4.60 kW
$COP Tj = +7^{\circ}C$	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				
	Low temperature	Medium temperature		
Sound power level indoor	dB(A)	dB(A)		
Sound power level outdoor	65 dB(A)	65 dB(A)		

## Warmer Climate

EN 14825		
Low temperature Medium temperature		
$\eta_s$	235 %	158 %
Prated	9.00 kW	9.00 kW





SCOP	5.95	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.90 kW	9.00 kW
COP Tj = +2°C	3.49	2.39
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	5.70 kW	5.70 kW
COP Tj = +7°C	5.49	3.33
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.30 kW
COP Tj = 12°C	7.29	5.35
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	8.90 kW	9.00 kW
COP Tj = Tbiv	3.49	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.90 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.49	2.39
WTOL	55 °C	55 °C
Poff	3 W	3 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.10 kW	0.00 kW
Annual energy consumption Qhe	2020 kWh	2991 kWh

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	dB(A)	dB(A)		
Sound power level outdoor	65 dB(A)	65 dB(A)		

## Colder Climate

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	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	





This information was general		
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
$COP Tj = +7^{\circ}C$	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
РТО	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 Qhe	6651 kWh	8468 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.20	8.90





COP Tj = -15°C (if TOL $<$ -20°C)	2.48	1.93
Cdh Tj = -15 °C	1.000	1.000

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	dB(A)	dB(A)	
Sound power level outdoor	65 dB(A)	65 dB(A)	

# Cooling

EN 14511-2			
	+7°C/+12°C	+18°C/+23°C	
El input	kW	kW	
Cooling capacity			
EER			



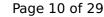
# **Model: WH-MXC12H9E8**

Configure model		
Model name	WH-MXC12H9E8	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

## **Average Climate**

EN 14825		
Low temperature	Medium temperature	
170 %	130 %	
12.00 kW	12.00 kW	
4.32	3.32	
-10 °C	-10 °C	
-10 °C	-10 °C	
10.70 kW	10.80 kW	
2.84	2.03	
1.000	1.000	
6.70 kW	6.10 kW	
3.96	3.19	
0.990	0.990	
	Low temperature  170 %  12.00 kW  4.32  -10 °C  -10 °C  10.70 kW  2.84  1.000  6.70 kW  3.96	





Pdh Tj = $+7^{\circ}$ 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
РТО	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	n/a	
Supplementary Heater: PSUP	0.00 kW	0.30 kW
Annual energy consumption Qhe	5745 kWh	7466 kWh



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	dB(A)	dB(A)	
Sound power level outdoor	65 dB(A)	65 dB(A)	

### Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	231 %	158 %
Prated	12.00 kW	12.00 kW
SCOP	5.86	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.90 kW	11.70 kW
COP Tj = +2°C	3.18	2.15
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.60 kW	7.80 kW
COP Tj = +7°C	5.25	3.33
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	5.90 kW	5.70 kW
COP Tj = 12°C	7.33	5.39



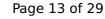


Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.90 kW	11.70 kW
COP Tj = Tbiv	3.18	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.90 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.15
WTOL	55 °C	55 °C
Poff	3 W	3 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	n/a	
Supplementary Heater: PSUP	0.10 kW	0.30 kW
Annual energy consumption Qhe	2738 kWh	3990 kWh

EN 12102-1				
Low temperature Medium temperature				
Sound power level indoor	dB(A)	dB(A)		
Sound power level outdoor	65 dB(A)	65 dB(A)		

## Colder Climate

#### EN 14825





	Low temperature	Medium temperature
$\eta_{s}$	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
$COP Tj = -7^{\circ}C$	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
$COP Tj = +7^{\circ}C$	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	n/a	
Supplementary Heater: PSUP	3.10 kW	4.10 kW
Annual energy consumption Qhe	8460 kWh	10012 kWh
Pdh Tj = -15°C (if TOL<-20°C)	11.20	10.40
COP Tj = -15°C (if TOL $<$ -20°C)	2.48	1.94
Cdh Tj = -15 °C	1.000	1.000

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

# Heating



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EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.16 kW
СОР	4.74	2.88

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

# Cooling

EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	3.56 kW	1.95 kW
Cooling capacity	10.00	10.00
EER	2.81	5.13



# Model: WH-MXC09H3E8

Configure model		
Model name	WH-MXC09H3E8	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility Yes		
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

## Heating

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

EN 14511-2			
Low temperature Medium temperature			
Heat output	9.00 kW	9.00 kW	
El input	1.86 kW	3.06 kW	
СОР	4.84	2.94	

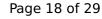
# Average Climate





#### EN 14825

	Low temperature	Medium temperature
$\eta_{S}$	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
$COP Tj = -7^{\circ}C$	2.75	2.11
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = $+2^{\circ}$ C	4.70 kW	4.80 kW
$COP Tj = +2^{\circ}C$	4.57	3.24
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = $+7^{\circ}$ C	5.00 kW	4.60 kW
$COP Tj = +7^{\circ}C$	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
РТО	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	n/a	
Supplementary Heater: PSUP	0.00 kW	0.30 kW
Annual energy consumption Qhe	4049 kWh	5596 kWh

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_s$	235 %	158 %
Prated	9.00 kW	9.00 kW





SCOP	5.95	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.90 kW	9.00 kW
COP Tj = +2°C	3.49	2.39
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	5.70 kW	5.70 kW
COP Tj = +7°C	5.49	3.33
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.30 kW
COP Tj = 12°C	7.29	5.35
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	8.90 kW	9.00 kW
COP Tj = Tbiv	3.49	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.90 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.49	2.39
WTOL	55 °C	55 °C
Poff	3 W	3 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
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Supplementary Heater: Type of energy input	n/a	
Supplementary Heater: PSUP	0.10 kW	0.00 kW
Annual energy consumption Qhe	2020 kWh	2991 kWh

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

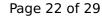
## Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	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





This information was genera	ted by the HE KLIMAI	IN database on 10 Mai 202.
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
$COP Tj = +7^{\circ}C$	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
РТО	12 W	12 W
PSB	12 W	12 W
PCK	33 W	33 W
Supplementary Heater: Type of energy input	n/a	
Supplementary Heater: PSUP	1.20 kW	2.10 kW
Annual energy consumption Qhe	6651 kWh	8468 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.20	8.90
	1	





COP Tj = -15°C (if TOL $<$ -20°C)	2.48	1.93
Cdh Tj = -15 °C	1.000	1.000

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

# Cooling

	EN 14511-2		
	+7°C/+12°C	+18°C/+23°C	
El input	kW	kW	
Cooling capacity			
EER			



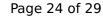
# **Model: WH-MXC12H6E5**

Configure model	
Model name	WH-MXC12H6E5
Application	Heating (medium temp)
Units	Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data		
Power supply	1x230V 50Hz	

## **Average Climate**

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	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
Cdh Tj = +2 °C	0.990	0.990





3		
Pdh Tj = $+7^{\circ}$ C	5.10 kW	4.70 kW
$COP Tj = +7^{\circ}C$	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
РТО	12 W	12 W
PSB	12 W	12 W
РСК	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		
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	231 %	158 %
Prated	12.00 kW	12.00 kW
SCOP	5.86	4.02
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	11.90 kW	11.70 kW
COP Tj = +2°C	3.18	2.15
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = $+7^{\circ}$ C	7.60 kW	7.80 kW
COP Tj = +7°C	5.25	3.33
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	5.90 kW	5.70 kW
COP Tj = 12°C	7.33	5.39





Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.90 kW	11.70 kW
COP Tj = Tbiv	3.18	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.90 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.15
WTOL	55 °C	55 °C
Poff	3 W	3 W
РТО	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 Qhe	2738 kWh	3990 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## Colder Climate

#### EN 14825





<u>-</u>	Low temperature	Medium temperature
$\eta_{s}$	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 = $+7^{\circ}$ C	5.10 kW	4.80 kW
$COP Tj = +7^{\circ}C$	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
РТО	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 Qhe	8460 kWh	10012 kWh
Pdh Tj = -15°C (if TOL<-20°C)	11.20	10.40
COP Tj = -15°C (if TOL<-20°C)	2.48	1.94
Cdh Tj = -15 °C	1.000	1.000

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

## Heating





EN 14511-2			
	Low temperature	Medium temperature	
Heat output	12.00 kW	12.00 kW	
El input	2.53 kW	4.16 kW	
СОР	4.74	2.88	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

# Cooling

EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	3.56 kW	1.95 kW
Cooling capacity	10.00	10.00
EER	2.81	5.13