Subtype Bosch CS3000 AWP 53/59	
Certificate Holder	Bosch Thermotechnik GmbH
Address	Junkersstraße 20 - 24
ZIP	73249
City	Wernau
Country	DE
Certification Body	ICIM S.p.A.
Subtype title	Bosch CS3000 AWP 53/59
Registration number	ICIM-PDC-000181
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	17.5 kg
Certification Date	04.11.2022
Testing basis	Heat Pump KEYMARK V10

Model CS3000AWP 53	
Model name	CS3000AWP 53
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	78.37 kW	75.56 kW
El input	18.57 kW	29.87 kW
COP	4.22	2.53

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	166 %	125 %
Prated	53.4 kW	58.2 kW
SCOP	4.22	3.2
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	47.21 kW	47.66 kW
COP Tj = -7°C	2.70	1.96
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.76 kW	29.59 kW
COP Tj = +2°C	4.30	3.12

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.04 kW	39.10 kW
COP Tj = +7°C	5.39	4.42
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.87 kW	33.21 kW
COP Tj = 12°C	6.74	6.07
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	47.21 kW	49.09 kW
COP Tj = Tbiv	2.70	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	44.78 kW	45.04 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.59 kW	12.98 kW
Annual energy consumption Qhe	25852 kWh	36978 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	110 %
Prated	48.11 kW	57.26 kW
SCOP	3.77	2.83
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	28.89 kW	35.07 kW
COP Tj = -7°C	3.19	2.21
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.23 kW	27.2 kW
COP Tj = +2°C	5.04	3.93
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	32.98 kW	31.06 kW
COP Tj = +7°C	5.83	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.06 kW	34.62 kW

COP Tj = 12°C	6.6	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	39.25 kW	42.19 kW
COP Tj = Tbiv	2.08	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	31.92 kW	39.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.58	1.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	48.11 kW	57.26 kW
Annual energy consumption Qhe	31462 kWh	49913 kWh
Pdh Tj = -15°C (if TOL	39.25	42.19
COP Tj = -15°C (if TOL	2.08	1.79
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	211 %	154 %
Prated	64.53 kW	58.46 kW
SCOP	5.35	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	64.53 kW	58.46 kW
COP Tj = +2°C	3.25	2.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	41.62 kW	36.56 kW
COP Tj = +7°C	4.96	3.2
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36 kW	33.33 kW
COP Tj = 12°C	6.5	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	64.53 kW	58.46 kW
COP Tj = Tbiv	3.25	2.2

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	64.53 kW	58.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.25	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	16214 kWh	19936 kWh

Model CS3000AWP 53 P	
Model name	CS3000AWP 53 P
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	78.37 kW	75.56 kW
El input	18.57 kW	29.87 kW
COP	4.22	2.53

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	166 %	125 %
Prated	53.4 kW	58.2 kW
SCOP	4.22	3.2
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	47.21 kW	47.66 kW
COP Tj = -7°C	2.70	1.96
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.76 kW	29.59 kW
COP Tj = +2°C	4.30	3.12

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.04 kW	39.10 kW
COP Tj = +7°C	5.39	4.42
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.87 kW	33.21 kW
COP Tj = 12°C	6.74	6.07
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	47.21 kW	49.09 kW
COP Tj = Tbiv	2.70	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	44.78 kW	45.04 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.59 kW	12.98 kW
Annual energy consumption Qhe	25852 kWh	36978 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	148 %	110 %
Prated	48.11 kW	57.26 kW
SCOP	3.77	2.83
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	28.89 kW	35.07 kW
COP Tj = -7°C	3.19	2.21
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.23 kW	27.2 kW
COP Tj = +2°C	5.04	3.93
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	32.98 kW	31.06 kW
COP Tj = +7°C	5.83	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.06 kW	34.62 kW

COP Tj = 12°C	6.6	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	39.25 kW	42.19 kW
COP Tj = Tbiv	2.08	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	31.92 kW	39.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.58	1.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	48.11 kW	57.26 kW
Annual energy consumption Qhe	31462 kWh	49913 kWh
Pdh Tj = -15°C (if TOL	39.25	42.19
COP Tj = -15°C (if TOL	2.08	1.79
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	211 %	154 %
Prated	64.53 kW	58.46 kW
SCOP	5.35	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	64.53 kW	58.46 kW
COP Tj = +2°C	3.25	2.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	41.62 kW	36.56 kW
COP Tj = +7°C	4.96	3.2
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36 kW	33.33 kW
COP Tj = 12°C	6.5	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	64.53 kW	58.46 kW
COP Tj = Tbiv	3.25	2.2

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	64.53 kW	58.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.25	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	16214 kWh	19936 kWh

Model CS3000AWP 53 S	
Model name	CS3000AWP 53 S
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	78.37 kW	75.56 kW
El input	18.57 kW	29.87 kW
COP	4.22	2.53

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	166 %	125 %
Prated	53.4 kW	58.2 kW
SCOP	4.22	3.2
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	47.21 kW	47.66 kW
COP Tj = -7°C	2.70	1.96
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.76 kW	29.59 kW
COP Tj = +2°C	4.30	3.12

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.04 kW	39.10 kW
COP Tj = +7°C	5.39	4.42
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.87 kW	33.21 kW
COP Tj = 12°C	6.74	6.07
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	47.21 kW	49.09 kW
COP Tj = Tbiv	2.70	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	44.78 kW	45.04 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.59 kW	12.98 kW
Annual energy consumption Qhe	25852 kWh	36978 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	148 %	110 %
Prated	48.11 kW	57.26 kW
SCOP	3.77	2.83
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	28.89 kW	35.07 kW
COP Tj = -7°C	3.19	2.21
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.23 kW	27.2 kW
COP Tj = +2°C	5.04	3.93
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	32.98 kW	31.06 kW
COP Tj = +7°C	5.83	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.06 kW	34.62 kW

COP Tj = 12°C	6.6	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	39.25 kW	42.19 kW
COP Tj = Tbiv	2.08	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	31.92 kW	39.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.58	1.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	48.11 kW	57.26 kW
Annual energy consumption Qhe	31462 kWh	49913 kWh
Pdh Tj = -15°C (if TOL	39.25	42.19
COP Tj = -15°C (if TOL	2.08	1.79
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	211 %	154 %
Prated	64.53 kW	58.46 kW
SCOP	5.35	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	64.53 kW	58.46 kW
COP Tj = +2°C	3.25	2.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	41.62 kW	36.56 kW
COP Tj = +7°C	4.96	3.2
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36 kW	33.33 kW
COP Tj = 12°C	6.5	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	64.53 kW	58.46 kW
COP Tj = Tbiv	3.25	2.2

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	64.53 kW	58.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.25	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	16214 kWh	19936 kWh

Model CS3000AWP 53 MB

Model name	CS3000AWP 53 MB
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	78.37 kW	75.56 kW
El input	18.57 kW	29.87 kW
COP	4.22	2.53

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	166 %	125 %
Prated	53.4 kW	58.2 kW
SCOP	4.22	3.2
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	47.21 kW	47.66 kW
COP Tj = -7°C	2.70	1.96
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.76 kW	29.59 kW
COP Tj = +2°C	4.30	3.12

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.04 kW	39.10 kW
COP Tj = +7°C	5.39	4.42
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.87 kW	33.21 kW
COP Tj = 12°C	6.74	6.07
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	47.21 kW	49.09 kW
COP Tj = Tbiv	2.70	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	44.78 kW	45.04 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.40	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.59 kW	12.98 kW
Annual energy consumption Qhe	25852 kWh	36978 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	148 %	110 %
Prated	48.11 kW	57.26 kW
SCOP	3.77	2.83
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	28.89 kW	35.07 kW
COP Tj = -7°C	3.19	2.21
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.23 kW	27.2 kW
COP Tj = +2°C	5.04	3.93
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	32.98 kW	31.06 kW
COP Tj = +7°C	5.83	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.06 kW	34.62 kW

COP Tj = 12°C	6.6	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	39.25 kW	42.19 kW
COP Tj = Tbiv	2.08	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	31.92 kW	39.02 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.58	1.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	48.11 kW	57.26 kW
Annual energy consumption Qhe	31462 kWh	49913 kWh
Pdh Tj = -15°C (if TOL	39.25	42.19
COP Tj = -15°C (if TOL	2.08	1.79
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	211 %	154 %
Prated	64.53 kW	58.46 kW
SCOP	5.35	3.92
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	64.53 kW	58.46 kW
COP Tj = +2°C	3.25	2.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	41.62 kW	36.56 kW
COP Tj = +7°C	4.96	3.2
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36 kW	33.33 kW
COP Tj = 12°C	6.5	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	64.53 kW	58.46 kW
COP Tj = Tbiv	3.25	2.2

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	64.53 kW	58.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.25	2.2
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	16214 kWh	19936 kWh

Model CS3000AWP 59	
Model name	CS3000AWP 59
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	87.4 kW	85.9 kW
El input	22.35 kW	35.06 kW
COP	3.91	2.45

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	164 %	123 %
Prated	58.9 kW	62.63 kW
SCOP	4.19	3.16
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	52.08 kW	51.45 kW
COP Tj = -7°C	2.65	1.92
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.80 kW	31.11 kW
COP Tj = +2°C	4.25	3.09

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.08 kW	40.31 kW
COP Tj = +7°C	5.32	4.34
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.91 kW	34.24 kW
COP Tj = 12°C	6.65	5.96
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	52.08 kW	53.00 kW
COP Tj = Tbiv	2.65	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	50.14 kW	48.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.73 kW	14.01 kW
Annual energy consumption Qhe	28792 kWh	40478 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	145 %	109 %
Prated	54.28 kW	62.74 kW
SCOP	3.69	2.79
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	31.73 kW	37.94 kW
COP Tj = -7°C	3.04	2.18
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.33 kW	27.18 kW
COP Tj = +2°C	4.97	3.91
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	33.14 kW	31.06 kW
COP Tj = +7°C	5.76	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.2 kW	34.62 kW

COP Tj = 12°C	6.49	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	44.28 kW	46.23 kW
COP Tj = Tbiv	2.02	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	35.94 kW	42.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.55	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	54.28 kW	62.74 kW
Annual energy consumption Qhe	36277 kWh	55405 kWh
Pdh Tj = -15°C (if TOL	44.28	42.94
COP Tj = -15°C (if TOL	2.02	1.52
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	208 %	154 %
Prated	71.2 kW	64.1 kW
SCOP	5.27	3.94
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	71.2 kW	64.1 kW
COP Tj = +2°C	3.1	2.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	45.2 kW	40.3 kW
COP Tj = +7°C	4.85	3.32
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36.03 kW	33.33 kW
COP Tj = 12°C	6.43	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	71.2 kW	64.1 kW
COP Tj = Tbiv	3.1	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	71.2 kW	64.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.1	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	18041 kWh	21759 kWh

Model CS3000AWP 59 P	
Model name	CS3000AWP 59 P
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	87.4 kW	85.9 kW
El input	22.35 kW	35.06 kW
COP	3.91	2.45

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	164 %	123 %
Prated	58.9 kW	62.63 kW
SCOP	4.19	3.16
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	52.08 kW	51.45 kW
COP Tj = -7°C	2.65	1.92
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.80 kW	31.11 kW
COP Tj = +2°C	4.25	3.09

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.08 kW	40.31 kW
COP Tj = +7°C	5.32	4.34
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.91 kW	34.24 kW
COP Tj = 12°C	6.65	5.96
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	52.08 kW	53.00 kW
COP Tj = Tbiv	2.65	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	50.14 kW	48.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.73 kW	14.01 kW
Annual energy consumption Qhe	28792 kWh	40478 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	145 %	109 %
Prated	54.28 kW	62.74 kW
SCOP	3.69	2.79
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	31.73 kW	37.94 kW
COP Tj = -7°C	3.04	2.18
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.33 kW	27.18 kW
COP Tj = +2°C	4.97	3.91
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	33.14 kW	31.06 kW
COP Tj = +7°C	5.76	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.2 kW	34.62 kW

COP Tj = 12°C	6.49	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	44.28 kW	46.23 kW
COP Tj = Tbiv	2.02	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	35.94 kW	42.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.55	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	54.28 kW	62.74 kW
Annual energy consumption Qhe	36277 kWh	55405 kWh
Pdh Tj = -15°C (if TOL	44.28	42.94
COP Tj = -15°C (if TOL	2.02	1.52
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	208 %	154 %
Prated	71.2 kW	64.1 kW
SCOP	5.27	3.94
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	71.2 kW	64.1 kW
COP Tj = +2°C	3.1	2.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	45.2 kW	40.3 kW
COP Tj = +7°C	4.85	3.32
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36.03 kW	33.33 kW
COP Tj = 12°C	6.43	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	71.2 kW	64.1 kW
COP Tj = Tbiv	3.1	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	71.2 kW	64.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.1	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	18041 kWh	21759 kWh

Model CS3000AWP 59 S	
Model name	CS3000AWP 59 S
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	87.4 kW	85.9 kW
El input	22.35 kW	35.06 kW
COP	3.91	2.45

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	164 %	123 %
Prated	58.9 kW	62.63 kW
SCOP	4.19	3.16
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	52.08 kW	51.45 kW
COP Tj = -7°C	2.65	1.92
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.80 kW	31.11 kW
COP Tj = +2°C	4.25	3.09

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.08 kW	40.31 kW
COP Tj = +7°C	5.32	4.34
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.91 kW	34.24 kW
COP Tj = 12°C	6.65	5.96
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	52.08 kW	53.00 kW
COP Tj = Tbiv	2.65	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	50.14 kW	48.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.73 kW	14.01 kW
Annual energy consumption Qhe	28792 kWh	40478 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	145 %	109 %
Prated	54.28 kW	62.74 kW
SCOP	3.69	2.79
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	31.73 kW	37.94 kW
COP Tj = -7°C	3.04	2.18
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.33 kW	27.18 kW
COP Tj = +2°C	4.97	3.91
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	33.14 kW	31.06 kW
COP Tj = +7°C	5.76	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.2 kW	34.62 kW

COP Tj = 12°C	6.49	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	44.28 kW	46.23 kW
COP Tj = Tbiv	2.02	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	35.94 kW	42.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.55	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	54.28 kW	62.74 kW
Annual energy consumption Qhe	36277 kWh	55405 kWh
Pdh Tj = -15°C (if TOL	44.28	42.94
COP Tj = -15°C (if TOL	2.02	1.52
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	208 %	154 %
Prated	71.2 kW	64.1 kW
SCOP	5.27	3.94
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	71.2 kW	64.1 kW
COP Tj = +2°C	3.1	2.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	45.2 kW	40.3 kW
COP Tj = +7°C	4.85	3.32
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36.03 kW	33.33 kW
COP Tj = 12°C	6.43	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	71.2 kW	64.1 kW
COP Tj = Tbiv	3.1	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	71.2 kW	64.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.1	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	18041 kWh	21759 kWh

Model CS3000AWP 59 MB

Model name	CS3000AWP 59 MB
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

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 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	87.4 kW	85.9 kW
El input	22.35 kW	35.06 kW
COP	3.91	2.45

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	164 %	123 %
Prated	58.9 kW	62.63 kW
SCOP	4.19	3.16
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	52.08 kW	51.45 kW
COP Tj = -7°C	2.65	1.92
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	30.80 kW	31.11 kW
COP Tj = +2°C	4.25	3.09

Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	35.08 kW	40.31 kW
COP Tj = +7°C	5.32	4.34
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	40.91 kW	34.24 kW
COP Tj = 12°C	6.65	5.96
Cdh Tj = +12 °C	0.96	0.97
Pdh Tj = Tbiv	52.08 kW	53.00 kW
COP Tj = Tbiv	2.65	1.98
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	50.14 kW	48.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8.73 kW	14.01 kW
Annual energy consumption Qhe	28792 kWh	40478 kWh

EN 12102-1 | Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

EN 14825 | Colder Climate		
	Low temperature	Medium temperature
ηs	145 %	109 %
Prated	54.28 kW	62.74 kW
SCOP	3.69	2.79
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-15 °C
Pdh Tj = -7°C	31.73 kW	37.94 kW
COP Tj = -7°C	3.04	2.18
Cdh Tj = -7 °C	0.9	0.96
Pdh Tj = +2°C	29.33 kW	27.18 kW
COP Tj = +2°C	4.97	3.91
Cdh Tj = +2 °C	0.96	0.96
Pdh Tj = +7°C	33.14 kW	31.06 kW
COP Tj = +7°C	5.76	4.99
Cdh Tj = +7 °C	0.96	0.96
Pdh Tj = 12°C	36.2 kW	34.62 kW

COP Tj = 12°C	6.49	6.11
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	44.28 kW	46.23 kW
COP Tj = Tbiv	2.02	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	35.94 kW	42.94 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.55	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	54.28 kW	62.74 kW
Annual energy consumption Qhe	36277 kWh	55405 kWh
Pdh Tj = -15°C (if TOL	44.28	42.94
COP Tj = -15°C (if TOL	2.02	1.52
Cdh Tj = -15 °C	0.9	0.9

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	Low temperature	Medium temperature
Sound power level indoor	-99 dB(A)	-99 dB(A)
Sound power level outdoor	71 dB(A)	71 dB(A)

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	Low temperature	Medium temperature
ηs	208 %	154 %
Prated	71.2 kW	64.1 kW
SCOP	5.27	3.94
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	71.2 kW	64.1 kW
COP Tj = +2°C	3.1	2.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	45.2 kW	40.3 kW
COP Tj = +7°C	4.85	3.32
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	36.03 kW	33.33 kW
COP Tj = 12°C	6.43	5.28
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	71.2 kW	64.1 kW
COP Tj = Tbiv	3.1	2.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	71.2 kW	64.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.1	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	110 W	110 W
PTO	200 W	200 W
PSB	110 W	110 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	18041 kWh	21759 kWh