

PRD N° 004 B





#### Certificazione di Prodotto

#### **Product Certification**

Certificato N. Certificate No.

ICIM-PDC-000179-00

TITOLARE DEL CERTIFICATO / CERTIFICATE HOLDER

#### **Bosch Thermotechnik GmbH**

Junkersstraße 20 - 24 73249 Wernau - Germany

UNITÀ PRODUTTIVE / PRODUCTION SITES

2022101401DB - IT

PRODOTTI / PRODUCT

# POMPE DI CALORE HEAT PUMPS

PRODOTTO-TIPO PRODUCT TYPE

Aria/Acqua
Air/Water

**BRAND** 

**Bosch** 

SOTTO-TIPO SUBTYPE

CS3000 AWP 16/19/24

MODELLI MODEL(S) CS3000AWP 16; CS3000AWP 16 MB; CS3000AWP 16 P CS3000AWP 16 S; CS3000AWP 19; CS3000AWP 19 MB CS3000AWP 19 P; CS3000AWP 19 S; CS3000AWP 24 CS3000AWP 24 MB; CS3000AWP 24 P; CS3000AWP 24 S

CONFORMEMENTE ALLA NORMA ED AL DOCUMENTO NORMATIVO ICIM IN COMPLIANCE WITH THE STANDARD AND WITH ICIM NORMATIVE DOCUMENT

EN 14511:2018, EN 14825:2018, EN 12102-1:2017, KEYMARK Certification Scheme for Heat Pumps, ICIM 0440CS

Il presente Certificato autorizza il titolare all' utilizzo del marchio di conformità KEYMARK insieme al numero di registrazione specificato. Si veda il database KEYMARK per le informazioni dettagliate - Per verificare la validità del certificato si consulti www.icim.it

This certificate entitles the holder to use the KEYMARK mark of conformity in conjunction with the specified registration number. See HP KEYMARK database for detailed information - To check the validity of this certificate please visit www.icim.it

Vincenzo Delacqua

Rappresentante Direzione / Management Representative

ICIM S.p.A.

PRIMA EMISSIONE FIRST ISSUE EMISSIONE CORRENTE CURRENT ISSUE DATA DI SCADENZA EXPIRING DATE

04/11/2022

04/11/2022

03/11/2032



Testing basis

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#### This information was generated by the HP KEYMARK database on 19 Dec 2022

<u>Login</u>				
Summary of	Bosch CS3000 AWP 16/19/24	Reg. No.	ICIM-PDC-000179	
Certificate Holder		'		
Name	Bosch Thermotechnik GmbH	Bosch Thermotechnik GmbH		
Address	Junkersstraße 20 - 24	Zip	73249	
City	Wernau	Country	Germany	
Certification Body	ICIM S.p.A.			
Subtype title	Bosch CS3000 AWP 16/19/24			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32	R32		
Mass of Refrigerant	7.9 kg			
Certification Date	04.11.2022			

Heat Pump KEYMARK V10

# **Model: CS3000AWP 16**

Configure model		
Model name	CS3000AWP 16	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

#### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	25.38 kW	23.06 kW
El input	5.81 kW	9.04 kW
СОР	4.37	2.55

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 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	173 %	127 %
Prated	19.42 kW	16.78 kW
SCOP	4.41	3.24
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	17.18 kW	13.04 kW
COP Tj = -7°C	2.63	1.93
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = $+2$ °C	11.61 kW	9.5 kW
COP Tj = +2°C	4.63	3.25
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = $+7^{\circ}$ C	12.42 kW	11.1 kW
COP Tj = +7°C	5.49	4.4
Cdh Tj = +7 °C	0.98	0.98



Pdh Tj = 12°C	14.75 kW	13.45 kW
COP Tj = 12°C	6.87	6.15
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	17.18 kW	14.2 kW
COP Tj = Tbiv	2.63	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.67 kW	9.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	1.35
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.76 kW	7.63 kW
Annual energy consumption Qhe	9104 kWh	10709 kWh



# Model: CS3000AWP 16 MB

Configure model		
Model name	CS3000AWP 16 MB	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

#### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	25.38 kW	23.06 kW
El input	5.81 kW	9.04 kW
СОР	4.37	2.55

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	173 %	127 %
Prated	19.42 kW	16.78 kW
SCOP	4.41	3.24
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	17.18 kW	13.04 kW
COP Tj = -7°C	2.63	1.93
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = $+2$ °C	11.61 kW	9.5 kW
COP Tj = +2°C	4.63	3.25
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = $+7^{\circ}$ C	12.42 kW	11.1 kW
COP Tj = +7°C	5.49	4.4
Cdh Tj = +7 °C	0.98	0.98



Pdh Tj = 12°C	14.75 kW	13.45 kW
COP Tj = 12°C	6.87	6.15
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	17.18 kW	14.2 kW
COP Tj = Tbiv	2.63	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.67 kW	9.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	1.35
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.76 kW	7.63 kW
Annual energy consumption Qhe	9104 kWh	10709 kWh



# Model: CS3000AWP 16 P

Configure model		
Model name	CS3000AWP 16 P	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

#### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	25.38 kW	23.06 kW
El input	5.81 kW	9.04 kW
СОР	4.37	2.55

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 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	173 %	127 %
Prated	19.42 kW	16.78 kW
SCOP	4.41	3.24
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	17.18 kW	13.04 kW
COP Tj = -7°C	2.63	1.93
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = $+2$ °C	11.61 kW	9.5 kW
COP Tj = +2°C	4.63	3.25
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = $+7^{\circ}$ C	12.42 kW	11.1 kW
COP Tj = +7°C	5.49	4.4
Cdh Tj = +7 °C	0.98	0.98



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Pdh Tj = 12°C	14.75 kW	13.45 kW
COP Tj = 12°C	6.87	6.15
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	17.18 kW	14.2 kW
COP Tj = Tbiv	2.63	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.67 kW	9.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	1.35
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.76 kW	7.63 kW
Annual energy consumption Qhe	9104 kWh	10709 kWh



# Model: CS3000AWP 16 S

Configure model		
Model name	CS3000AWP 16 S	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

#### Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	25.38 kW	23.06 kW	
El input	5.81 kW	9.04 kW	
СОР	4.37	2.55	

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



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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	0 dB(A)	0 dB(A)	
Sound power level outdoor	75 dB(A)	75 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	173 %	127 %
Prated	19.42 kW	16.78 kW
SCOP	4.41	3.24
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	17.18 kW	13.04 kW
COP Tj = -7°C	2.63	1.93
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = $+2$ °C	11.61 kW	9.5 kW
COP Tj = +2°C	4.63	3.25
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = $+7^{\circ}$ C	12.42 kW	11.1 kW
COP Tj = +7°C	5.49	4.4
Cdh Tj = +7 °C	0.98	0.98



	-	
Pdh Tj = 12°C	14.75 kW	13.45 kW
COP Tj = 12°C	6.87	6.15
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	17.18 kW	14.2 kW
COP Tj = Tbiv	2.63	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.67 kW	9.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.55	1.35
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.76 kW	7.63 kW
Annual energy consumption Qhe	9104 kWh	10709 kWh



# **Model: CS3000AWP 19**

Configure model		
Model name CS3000AWP 19		
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

#### Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	30 kW	27.7 kW		
El input	6.88 kW	11.49 kW		
СОР	4.36	2.41		

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



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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	0 dB(A)	0 dB(A)	
Sound power level outdoor	78 dB(A)	78 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	126 %
Prated	22.5 kW	19.53 kW
SCOP	4.36	3.22
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	19.9 kW	15.95 kW
COP Tj = -7°C	2.6	1.94
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	12.43 kW	10.8 kW
COP Tj = +2°C	4.52	3.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.42 kW	11.47 kW
COP Tj = +7°C	5.46	4.41
Cdh Tj = +7 °C	0.98	0.98



Pdh Tj = 12°C	14.76 kW	13.8 kW
COP Tj = 12°C	6.85	6.14
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	19.9 kW	16.52 kW
COP Tj = Tbiv	2.6	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.28 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.21 kW	9.53 kW
Annual energy consumption Qhe	10646 kWh	12512 kWh



# Model: CS3000AWP 19 MB

Configure model		
Model name CS3000AWP 19 MB		
Application	Heating (medium temp)	
Units Outdoor		
Climate Zone n/a		
Reversibility Yes		
Cooling mode application (optional) n/a		

General Data		
Power supply 3x400V 50Hz		

#### Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	30 kW	27.7 kW	
El input	6.88 kW	11.49 kW	
СОР	4.36	2.41	

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



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EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	0 dB(A)	0 dB(A)	
Sound power level outdoor	78 dB(A)	78 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	126 %
Prated	22.5 kW	19.53 kW
SCOP	4.36	3.22
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	19.9 kW	15.95 kW
COP Tj = -7°C	2.6	1.94
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	12.43 kW	10.8 kW
COP Tj = +2°C	4.52	3.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.42 kW	11.47 kW
COP Tj = +7°C	5.46	4.41
Cdh Tj = +7 °C	0.98	0.98



Pdh Tj = 12°C	14.76 kW	13.8 kW
COP Tj = 12°C	6.85	6.14
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	19.9 kW	16.52 kW
COP Tj = Tbiv	2.6	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.28 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.21 kW	9.53 kW
Annual energy consumption Qhe	10646 kWh	12512 kWh



# Model: CS3000AWP 19 P

Configure model		
Model name CS3000AWP 19 P		
Application Heating (medium temp)		
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional) n/a		

General Data		
Power supply 3x400V 50Hz		

#### Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	30 kW	27.7 kW	
El input	6.88 kW	11.49 kW	
СОР	4.36	2.41	

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



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EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	0 dB(A)	0 dB(A)	
Sound power level outdoor	78 dB(A)	78 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	126 %
Prated	22.5 kW	19.53 kW
SCOP	4.36	3.22
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	19.9 kW	15.95 kW
$COPTj = -7^{\circ}C$	2.6	1.94
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	12.43 kW	10.8 kW
COP Tj = +2°C	4.52	3.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.42 kW	11.47 kW
COP Tj = +7°C	5.46	4.41
Cdh Tj = +7 °C	0.98	0.98



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Pdh Tj = 12°C	14.76 kW	13.8 kW
COP Tj = 12°C	6.85	6.14
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	19.9 kW	16.52 kW
COP Tj = Tbiv	2.6	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.28 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.21 kW	9.53 kW
Annual energy consumption Qhe	10646 kWh	12512 kWh



# Model: CS3000AWP 19 S

Configure model		
Model name	CS3000AWP 19 S	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data	
Power supply 3x400V 50Hz	

#### Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	30 kW	27.7 kW
El input	6.88 kW	11.49 kW
СОР	4.36	2.41

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	78 dB(A)	78 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	126 %
Prated	22.5 kW	19.53 kW
SCOP	4.36	3.22
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	19.9 kW	15.95 kW
COP Tj = -7°C	2.6	1.94
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = $+2^{\circ}$ C	12.43 kW	10.8 kW
COP Tj = +2°C	4.52	3.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.42 kW	11.47 kW
COP Tj = +7°C	5.46	4.41
Cdh Tj = +7 °C	0.98	0.98



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Pdh Tj = 12°C	14.76 kW	13.8 kW
COP Tj = 12°C	6.85	6.14
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	19.9 kW	16.52 kW
COP Tj = Tbiv	2.6	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	17.28 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.3
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.21 kW	9.53 kW
Annual energy consumption Qhe	10646 kWh	12512 kWh



# Model: CS3000AWP 24

Configure model		
Model name	CS3000AWP 24	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

#### Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	35.78 kW	32.64 kW
El input	8.75 kW	14.01 kW
СОР	4.09	2.33

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	78 dB(A)	78 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	169 %	124 %
Prated	25.5 kW	22.97 kW
SCOP	4.31	3.18
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	22.6 kW	18.82 kW
COP Tj = -7°C	2.6	1.89
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	13.25 kW	12.44 kW
COP Tj = +2°C	4.41	3.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.44 kW	11.48 kW
COP Tj = +7°C	5.44	4.4
Cdh Tj = +7 °C	0.98	0.98



# $$\operatorname{\textit{Page}}\xspace$ 28 of 37 This information was generated by the HP KEYMARK database on 19 Dec 2022

Pdh Tj = 12°C	14.77 kW	13.82 kW
COP Tj = 12°C	6.83	6.12
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	22.6 kW	19.44 kW
COP Tj = Tbiv	2.6	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.38 kW	11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.25
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.17 kW	11.97 kW
Annual energy consumption Qhe	12250 kWh	14935 kWh



# Model: CS3000AWP 24 MB

Configure model		
Model name	CS3000AWP 24 MB	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

#### Heating

EN 14511-2		
Low temperature Medium temperature		Medium temperature
Heat output	35.78 kW	32.64 kW
El input	8.75 kW	14.01 kW
СОР	4.09	2.33

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	78 dB(A)	78 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	169 %	124 %
Prated	25.5 kW	22.97 kW
SCOP	4.31	3.18
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	22.6 kW	18.82 kW
COP Tj = -7°C	2.6	1.89
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	13.25 kW	12.44 kW
COP Tj = +2°C	4.41	3.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.44 kW	11.48 kW
COP Tj = +7°C	5.44	4.4
Cdh Tj = +7 °C	0.98	0.98



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Pdh Tj = 12°C	14.77 kW	13.82 kW
COP Tj = 12°C	6.83	6.12
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	22.6 kW	19.44 kW
COP Tj = Tbiv	2.6	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.38 kW	11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.25
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.17 kW	11.97 kW
Annual energy consumption Qhe	12250 kWh	14935 kWh



# Model: CS3000AWP 24 P

Configure model		
Model name	CS3000AWP 24 P	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

#### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	35.78 kW	32.64 kW
El input	8.75 kW	14.01 kW
СОР	4.09	2.33

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	78 dB(A)	78 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	169 %	124 %
Prated	25.5 kW	22.97 kW
SCOP	4.31	3.18
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	22.6 kW	18.82 kW
COP Tj = -7°C	2.6	1.89
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	13.25 kW	12.44 kW
COP Tj = +2°C	4.41	3.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.44 kW	11.48 kW
COP Tj = +7°C	5.44	4.4
Cdh Tj = +7 °C	0.98	0.98



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	1	
Pdh Tj = 12°C	14.77 kW	13.82 kW
COP Tj = 12°C	6.83	6.12
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	22.6 kW	19.44 kW
COP Tj = Tbiv	2.6	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.38 kW	11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.25
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.17 kW	11.97 kW
Annual energy consumption Qhe	12250 kWh	14935 kWh



# Model: CS3000AWP 24 S

Configure model		
Model name CS3000AWP 24 S		
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	n/a	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

#### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	35.78 kW	32.64 kW
El input	8.75 kW	14.01 kW
СОР	4.09	2.33

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	78 dB(A)	78 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	169 %	124 %
Prated	25.5 kW	22.97 kW
SCOP	4.31	3.18
Tbiv	-7 °C	-6 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	22.6 kW	18.82 kW
COP Tj = -7°C	2.6	1.89
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	13.25 kW	12.44 kW
COP Tj = +2°C	4.41	3.15
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	12.44 kW	11.48 kW
COP Tj = +7°C	5.44	4.4
Cdh Tj = +7 °C	0.98	0.98



# $$\operatorname{\textit{Page}}\xspace$ 37 of 37 This information was generated by the HP KEYMARK database on 19 Dec 2022

Pdh Tj = 12°C	14.77 kW	13.82 kW
COP Tj = 12°C	6.83	6.12
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	22.6 kW	19.44 kW
COP Tj = Tbiv	2.6	1.96
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.38 kW	11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.6	1.25
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.9	0.9
WTOL	60 °C	60 °C
Poff	50 W	50 W
РТО	100 W	80 W
PSB	50 W	50 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.17 kW	11.97 kW
Annual energy consumption Qhe	12250 kWh	14935 kWh