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Login

Summary of	Buderus Logatherm WLW-10,12,14 SP AR P3	Reg. No.	011-1W0540	
Certificate Holder				
Name	Bosch Thermotechnik GmbH (Buderus)	Bosch Thermotechnik GmbH (Buderus)		
Address	Sophienstraße 30-32	Sophienstraße 30-32 Zip 35576		
City	Wetzlar	Country	Germany	
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	Buderus Logatherm WLW-10,12,14 SP AR P3			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410A			
Mass of Refrigerant	3.2 kg			
Certification Date	10.06.2022			
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 9 (as of 2021-03)			

Model: WLW166i-10 SP AR P3 T190

Configure model		
Model name	WLW166i-10 SP AR P3 T190	
Application	Heating + DHW + low temp	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	9.98 kW	8.88 kW	
El input	2.09 kW	2.99 kW	
СОР	4.77	2.97	

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

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	45 dB(A)	45 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	228 %	170 %
Prated	12 kW	12 kW
SCOP	5.77	4.32
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.6 kW	9.87 kW
COP Tj = +2°C	3.42	2.61
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.51 kW	7.68 kW
COP Tj = +7°C	5.37	3.74
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	6.17 kW	5.94 kW
COP Tj = 12°C	7.09	5.48
Cdh Tj = +12 °C	0.97	0.98





Pdh Tj = Tbiv	10.24 kW	10.28 kW
COP Tj = Tbiv	3.78	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.6 kW	9.87 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.61
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.4 kW	2.13 kW
Annual energy consumption Qhe	2778 kWh	3712 kWh

Colder Climate

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	45 dB(A)	45 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





155 % 10 kW 3.95	126 % 10 kW 3.23
3.95	
	3.23
-15 °C	-13 °C
-20 °C	-20 °C
6.11 kW	6.12 kW
3.63	2.9
0.99	0.99
4.48 kW	4.23 kW
4.56	3.76
0.98	0.98
5.26 kW	5.01 kW
5.43	4.5
0.98	0.98
6.14 kW	5.97 kW
7.1	5.86
0.97	0.98
7.7 kW	7.71 kW
2.67	2.15
6.2 kW	6.91 kW
	6.11 kW 3.63 0.99 4.48 kW 4.56 0.98 5.26 kW 5.43 0.98 6.14 kW 7.1 0.97 7.7 kW 2.67





		<u> </u>
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10 kW	10 kW
Annual energy consumption Qhe	6248 kWh	7631 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.7	7.39
COP Tj = -15°C (if TOL $<$ -20°C)	2.67	2.07
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	45 dB(A)	45 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





% W C C c kW	135 % 10 kW 3.45 -7 °C -10 °C
C °C	3.45 -7 °C
°C	-7 °C
°C	
	-10 °C
kW	
	8.62 kW
	2.14
	0.99
kW	5.61 kW
1	3.49
	0.99
kW	4.83 kW
,	4.22
1	0.98
kW	5.89 kW
	5.83
	0.98
kW	8.62 kW
1	2.13
	7.71 kW
	kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	o w	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.24 kW	2.29 kW
Annual energy consumption Qhe	4435 kWh	5985 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	138 %	
СОР	3.33	
Heating up time	01:26 h:min	
Standby power input	40 W	
Reference hot water temperature	50.6 °C	
Mixed water at 40°C	255 I	



Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	104 %	
СОР	2.5	
Heating up time	02:08 h:min	
Standby power input	50 W	
Reference hot water temperature	51.6 °C	
Mixed water at 40°C	260 I	

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	120 %	
СОР	2.87	
Heating up time	01:53 h:min	
Standby power input	50 W	
Reference hot water temperature	52.7 °C	
Mixed water at 40°C	264	

Model: WLW166i-10 SP AR P3 E

Configure model			
Model name	WLW166i-10 SP AR P3 E		
Application	Heating (medium temp)		
Units	Indoor + Outdoor		
Climate Zone	Colder Climate + Warmer Climate		
Reversibility	Yes		
Cooling mode application (optional)	n/a		

General Data		
Power supply	3x400V 50Hz	

Heating

COP

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	9.98 kW	8.88 kW	
El input	2.09 kW	2.99 kW	

2.97

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

Warmer Climate

4.77



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	228 %	170 %
Prated	12 kW	12 kW
SCOP	5.77	4.32
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.6 kW	9.87 kW
COP Tj = +2°C	3.42	2.61
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.51 kW	7.68 kW
COP Tj = +7°C	5.37	3.74
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	6.17 kW	5.94 kW
COP Tj = 12°C	7.09	5.48
Cdh Tj = +12 °C	0.97	0.98





Pdh Tj = Tbiv	10.24 kW	10.28 kW
COP Tj = Tbiv	3.78	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.6 kW	9.87 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.61
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.4 kW	2.13 kW
Annual energy consumption Qhe	2778 kWh	3712 kWh

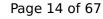
Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





	Low temperature	Medium temperature
η_{s}	155 %	126 %
Prated	10 kW	10 kW
SCOP	3.95	3.23
Tbiv	-15 °C	-13 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.11 kW	6.12 kW
COP Tj = -7°C	3.63	2.9
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.48 kW	4.23 kW
COP Tj = +2°C	4.56	3.76
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.26 kW	5.01 kW
$COP Tj = +7^{\circ}C$	5.43	4.5
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.14 kW	5.97 kW
COP Tj = 12°C	7.1	5.86
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	7.7 kW	7.71 kW
COP Tj = Tbiv	2.67	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.2 kW	6.91 kW

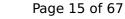




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10 kW	10 kW
Annual energy consumption Qhe	6248 kWh	7631 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.7	7.39
COP Tj = -15°C (if TOL $<$ -20°C)	2.67	2.07
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





	Low temperature	Medium temperature
η_{s}	183 %	135 %
Prated	10 kW	10 kW
SCOP	4.66	3.45
Tbiv	-9 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.84 kW	8.62 kW
COP $Tj = -7$ °C	3.14	2.14
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	5.36 kW	5.61 kW
$COP Tj = +2^{\circ}C$	4.68	3.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = $+7$ °C	5.21 kW	4.83 kW
$COP Tj = +7^{\circ}C$	5.46	4.22
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.20 kW	5.89 kW
COP Tj = 12°C	7.44	5.83
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	9.03 kW	8.62 kW
COP Tj = Tbiv	2.88	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.76 kW	7.71 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	0 W
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.24 kW	2.29 kW
Annual energy consumption Qhe	4435 kWh	5985 kWh

Model: WLW166i-10 SP AR P3 B

Configure model		
Model name	WLW166i-10 SP AR P3 B	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

Heating

COP

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.98 kW	8.88 kW
El input	2.09 kW	2.99 kW

2.97

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

Warmer Climate

4.77



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	228 %	170 %
Prated	12 kW	12 kW
SCOP	5.77	4.32
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.6 kW	9.87 kW
COP Tj = +2°C	3.42	2.61
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.51 kW	7.68 kW
COP Tj = +7°C	5.37	3.74
Cdh Tj = +7 °C	0.98	0.99
Pdh Tj = 12°C	6.17 kW	5.94 kW
COP Tj = 12°C	7.09	5.48
Cdh Tj = +12 °C	0.97	0.98

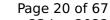




Pdh Tj = Tbiv	10.24 kW	10.28 kW
COP Tj = Tbiv	3.78	2.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.6 kW	9.87 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.42	2.61
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	2.4 kW	2.13 kW
Annual energy consumption Qhe	2778 kWh	3712 kWh

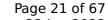
Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





155 % 10 kW 3.95	126 % 10 kW 3.23
3.95	
	3.23
-15 °C	-13 °C
-20 °C	-20 °C
6.11 kW	6.12 kW
3.63	2.9
0.99	0.99
4.48 kW	4.23 kW
4.56	3.76
0.98	0.98
5.26 kW	5.01 kW
5.43	4.5
0.98	0.98
6.14 kW	5.97 kW
7.1	5.86
0.97	0.98
7.7 kW	7.71 kW
2.67	2.15
6.2 kW	6.91 kW
	6.11 kW 3.63 0.99 4.48 kW 4.56 0.98 5.26 kW 5.43 0.98 6.14 kW 7.1 0.97 7.7 kW 2.67





This information was genera	ited by the HP KEYMA	RK database on 23 Jun 2022
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.99
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	10 kW	10 kW
Annual energy consumption Qhe	6248 kWh	7631 kWh
Pdh Tj = -15°C (if TOL<-20°C)	7.7	7.39
COP Tj = -15°C (if TOL $<$ -20°C)	2.67	2.07
I The state of the		

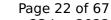
Average Climate

Cdh Tj = -15 $^{\circ}$ C

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

0.99

0.99





	Low temperature	Medium temperature
η_{s}	183 %	135 %
Prated	10 kW	10 kW
SCOP	4.66	3.45
Tbiv	-9 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.84 kW	8.62 kW
COP Tj = -7° C	3.14	2.14
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.36 kW	5.61 kW
$COPTj = +2^{\circ}C$	4.68	3.49
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.21 kW	4.83 kW
$COP Tj = +7^{\circ}C$	5.46	4.22
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.20 kW	5.89 kW
COP Tj = 12°C	7.44	5.83
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	9.03 kW	8.62 kW
COP Tj = Tbiv	2.88	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.76 kW	7.71 kW



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This information was generated by the HP KEYMARK database on 23 Jun 2022

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.24 kW	2.29 kW
Annual energy consumption Qhe	4435 kWh	5985 kWh



Model: WLW166i-12 SP AR P3 T190

Configure model		
Model name	WLW166i-12 SP AR P3 T190	
Application	Heating + DHW + low temp	
Units	Indoor + Outdoor	
Climate Zone Colder Climate + Warmer Climate		
Reversibility Yes		
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	11.6 kW	10.80 kW	
El input	2.58 kW	3.75 kW	
СОР	4.5	2.88	

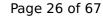
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	229 %	168 %
Prated	13 kW	13 kW
SCOP	5.79	4.27
Tbiv	3 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	10.9 kW	11.3 kW
COP Tj = +2°C	3.28	2.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.66 kW	8.67 kW
$COPTj = +7^{\circ}C$	5.22	3.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.15 kW	5.97 kW
COP Tj = 12°C	7.13	5.51
Cdh Tj = +12 °C	0.97	0.98

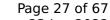




Pdh Tj = Tbiv	11.3 kW	11.57 kW
COP Tj = Tbiv	3.46	2.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.9 kW	11.3 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	0 W	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.1 kW	1.7 kW
Annual energy consumption Qhe	2999 kWh	4068 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





	Low temperature	Medium temperature
η_{s}	156 %	126 %
Prated	11 kW	11 kW
SCOP	3.97	3.23
Tbiv	-15 °C	-13 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.96 kW	6.95 kW
$COP Tj = -7^{\circ}C$	3.61	2.76
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.5 kW	4.44 kW
COP Tj = +2°C	4.6	4.02
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	5.28 kW	5.01 kW
$COP Tj = +7^{\circ}C$	5.56	4.54
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.97 kW
COP Tj = 12°C	7.09	5.89
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	9.57 kW	8.16 kW
COP Tj = Tbiv	2.45	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.15 kW

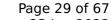




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.05	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11 kW	11 kW
Annual energy consumption Qhe	6834 kWh	8388 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.57	7.78
COP Tj = -15°C (if TOL $<$ -20°C)	2.45	1.96
Cdh Tj = -15 °C	0.99	0.99

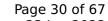
Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





	Low temperature	Medium temperature
η_{s}	179 %	136 %
Prated	11 kW	11 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	10.22 kW	9.51 kW
$COP Tj = -7^{\circ}C$	3.02	2.10
Cdh Tj = -7 °C	0.99	1
Pdh Tj = $+2$ °C	6.14 kW	6.06 kW
COP Tj = +2°C	4.56	3.52
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = $+7^{\circ}$ C	5.22 kW	5.01 kW
$COP Tj = +7^{\circ}C$	5.46	4.35
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.17 kW	5.97 kW
COP Tj = 12°C	7.21	5.69
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	10.76 kW	9.51 kW
COP Tj = Tbiv	2.62	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.76 kW	8.89 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.93
This information was generated by the HP RETMARK database on 23 Juli 20		

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.93
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	2.11 kW
Annual energy consumption Qhe	4983 kWh	6527 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	138 %	
СОР	3.33	
Heating up time	01:26 h:min	
Standby power input	40 W	
Reference hot water temperature	50.6 °C	
Mixed water at 40°C	255 I	



Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	104 %	
СОР	2.5	
Heating up time	02:08 h:min	
Standby power input	50 W	
Reference hot water temperature	51.6 °C	
Mixed water at 40°C	260 I	

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	120 %	
СОР	2.87	
Heating up time	01:53 h:min	
Standby power input	50 W	
Reference hot water temperature	52.7 °C	
Mixed water at 40°C	264	



Model: WLW166i-12 SP AR P3 E

Configure model		
Model name	WLW166i-12 SP AR P3 E	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	11.6 kW	10.80 kW	
El input	2.58 kW	3.75 kW	
СОР	4.5	2.88	

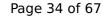
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	229 %	168 %
Prated	13 kW	13 kW
SCOP	5.79	4.27
Tbiv	3 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	10.9 kW	11.3 kW
COP Tj = +2°C	3.28	2.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.66 kW	8.67 kW
$COPTj = +7^{\circ}C$	5.22	3.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.15 kW	5.97 kW
COP Tj = 12°C	7.13	5.51
Cdh Tj = +12 °C	0.97	0.98





Pdh Tj = Tbiv	11.3 kW	11.57 kW
COP Tj = Tbiv	3.46	2.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.9 kW	11.3 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	0 W	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.1 kW	1.7 kW
Annual energy consumption Qhe	2999 kWh	4068 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





	Low temperature	Medium temperature
η_{s}	156 %	126 %
Prated	11 kW	11 kW
SCOP	3.97	3.23
Tbiv	-15 °C	-13 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	6.96 kW	6.95 kW
$COP Tj = -7^{\circ}C$	3.61	2.76
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	4.5 kW	4.44 kW
COP Tj = +2°C	4.6	4.02
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.28 kW	5.01 kW
COP Tj = +7°C	5.56	4.54
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.97 kW
COP Tj = 12°C	7.09	5.89
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	9.57 kW	8.16 kW
COP Tj = Tbiv	2.45	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.15 kW

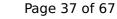




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.05	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11 kW	11 kW
Annual energy consumption Qhe	6834 kWh	8388 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.57	7.78
COP Tj = -15°C (if TOL $<$ -20°C)	2.45	1.96
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





This information was gene	Low temperature	Medium temperature
η_{s}	179 %	136 %
Prated	11 kW	11 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	10.22 kW	9.51 kW
COP Tj = -7 °C	3.02	2.10
Cdh Tj = -7 °C	0.99	1
Pdh Tj = $+2$ °C	6.14 kW	6.06 kW
$COP Tj = +2^{\circ}C$	4.56	3.52
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = $+7^{\circ}$ C	5.22 kW	5.01 kW
$COPTj = +7^{\circ}C$	5.46	4.35
Cdh Tj = $+7$ °C	0.98	0.98
Pdh Tj = 12°C	6.17 kW	5.97 kW
COP Tj = 12°C	7.21	5.69
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	10.76 kW	9.51 kW
COP Tj = Tbiv	2.62	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.76 kW	8.89 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.93
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	2.11 kW
Annual energy consumption Qhe	4983 kWh	6527 kWh

Model: WLW166i-12 SP AR P3 B

Configure model		
Model name	WLW166i-12 SP AR P3 B	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	11.6 kW	10.80 kW
El input	2.58 kW	3.75 kW
СОР	4.5	2.88

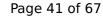
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	229 %	168 %
Prated	13 kW	13 kW
SCOP	5.79	4.27
Tbiv	3 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	10.9 kW	11.3 kW
COP Tj = +2°C	3.28	2.48
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.66 kW	8.67 kW
$COPTj = +7^{\circ}C$	5.22	3.61
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.15 kW	5.97 kW
COP Tj = 12°C	7.13	5.51
Cdh Tj = +12 °C	0.97	0.98

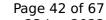




Pdh Tj = Tbiv	11.3 kW	11.57 kW
COP Tj = Tbiv	3.46	2.61
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.9 kW	11.3 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.28	2.48
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	2.1 kW	1.7 kW
Annual energy consumption Qhe	2999 kWh	4068 kWh

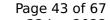
Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





	Low temperature	Medium temperature
η_{s}	156 %	126 %
Prated	11 kW	11 kW
SCOP	3.97	3.23
Tbiv	-15 °C	-13 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7° C	6.96 kW	6.95 kW
$COPTj = -7^{\circ}C$	3.61	2.76
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	4.5 kW	4.44 kW
COP Tj = +2°C	4.6	4.02
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.28 kW	5.01 kW
$COPTj = +7^{\circ}C$	5.56	4.54
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.97 kW
COP Tj = 12°C	7.09	5.89
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	9.57 kW	8.16 kW
COP Tj = Tbiv	2.45	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.9 kW	7.15 kW

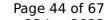




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.05	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	11 kW	11 kW
Annual energy consumption Qhe	6834 kWh	8388 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.57	7.78
COP Tj = -15°C (if TOL $<$ -20°C)	2.45	1.96
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





This information was gene	Low temperature	Medium temperature
η_{s}	179 %	136 %
Prated	11 kW	11 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	10.22 kW	9.51 kW
COP Tj = -7 °C	3.02	2.10
Cdh Tj = -7 °C	0.99	1
Pdh Tj = $+2$ °C	6.14 kW	6.06 kW
$COP Tj = +2^{\circ}C$	4.56	3.52
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = $+7^{\circ}$ C	5.22 kW	5.01 kW
$COPTj = +7^{\circ}C$	5.46	4.35
Cdh Tj = $+7$ °C	0.98	0.98
Pdh Tj = 12°C	6.17 kW	5.97 kW
COP Tj = 12°C	7.21	5.69
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	10.76 kW	9.51 kW
COP Tj = Tbiv	2.62	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.76 kW	8.89 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.93
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	1
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	2.11 kW
Annual energy consumption Qhe	4983 kWh	6527 kWh



Model: WLW166i-14 SP AR P3 T190

Configure model		
Model name WLW166i-14 SP AR P3 T190		
Application	Heating + DHW + low temp	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	14.58 kW	12.70 kW	
El input	3.41 kW	4.54 kW	
СОР	4.28	2.80	

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

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	229 %	168 %
Prated	14 kW	14 kW
SCOP	5.79	4.27
Tbiv	3 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.2 kW	11.85 kW
COP Tj = +2°C	3.16	2.38
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.88 kW	9.05 kW
COP Tj = +7°C	5.21	3.58
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.16 kW	5.97 kW
COP Tj = 12°C	7.19	5.56
Cdh Tj = +12 °C	0.97	0.98

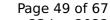




	1	
Pdh Tj = Tbiv	12.6 kW	12.3 kW
COP Tj = Tbiv	3.33	2.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.2 kW	11.85 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.16	2.38
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.8 kW	2.15 kW
Annual energy consumption Qhe	3228 kWh	4384 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	45 dB(A)	45 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





j 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Low temperature	Medium temperature
η_{s}	155 %	122 %
Prated	12 kW	12 kW
SCOP	3.96	3.12
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.62 kW	7.48 kW
$COPTj = -7^{\circ}C$	3.56	2.68
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	4.53 kW	4.64 kW
$COPTj = +2^{\circ}C$	4.64	3.86
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.26 kW	5.01 kW
$COP Tj = +7^{\circ}C$	5.43	4.57
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.98 kW
COP Tj = 12°C	7.13	5.91
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	10.18 kW	8.85 kW
COP Tj = Tbiv	2.42	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.69 kW	7.37 kW

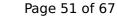




		<u>, </u>
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12 kW	12 kW
Annual energy consumption Qhe	7474 kWh	9483 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.18	8.31
COP Tj = -15°C (if TOL $<$ -20°C)	2.42	1.88
Cdh Tj = -15 °C	0.99	0.99

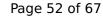
Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





178 % 12 kW 1.53 10 °C 10 °C	138 % 12 kW 3.53 -7 °C -10 °C 10.26 kW
1.53 10 °C 10 °C 10.98 kW	3.53 -7 °C -10 °C
10 °C 10 °C 10.98 kW	-7 °C -10 °C
10 °C L0.98 kW	-10 °C
L0.98 kW	
	10.26 kW
. 70	
2.73	2.10
).99	1
5.71 kW	6.60 kW
4.71	3.59
0.98	0.99
5.26 kW	5.09 kW
5.40	4.48
0.98	0.98
5.11 kW	6.06 kW
5.75	5.60
).98	0.98
11.49 kW	10.26 kW
2.56	2.10
11.49 kW	9.04 kW
55 55 55 55 1.11 1.11	71 kW 71 98 26 kW 40 98 11 kW 75 98 1.49 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	2.96 kW
Annual energy consumption Qhe	5475 kWh	7031 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	138 %	
СОР	3.33	
Heating up time	01:26 h:min	
Standby power input	40 W	
Reference hot water temperature	50.6 °C	
Mixed water at 40°C	255 I	



Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	104 %	
СОР	2.5	
Heating up time	02:08 h:min	
Standby power input	50 W	
Reference hot water temperature	51.6 °C	
Mixed water at 40°C	260 I	

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	120 %	
СОР	2.87	
Heating up time	01:53 h:min	
Standby power input	50 W	
Reference hot water temperature	52.7 °C	
Mixed water at 40°C	264	

Model: WLW166i-14 SP AR P3 E

Configure model		
Model name	WLW166i-14 SP AR P3 E	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	14.58 kW	12.70 kW	
El input	3.41 kW	4.54 kW	
СОР	4.28	2.80	

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

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	229 %	168 %
Prated	14 kW	14 kW
SCOP	5.79	4.27
Tbiv	3 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.2 kW	11.85 kW
COP Tj = +2°C	3.16	2.38
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.88 kW	9.05 kW
$COP Tj = +7^{\circ}C$	5.21	3.58
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.16 kW	5.97 kW
COP Tj = 12°C	7.19	5.56
Cdh Tj = +12 °C	0.97	0.98

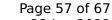




	1	
Pdh Tj = Tbiv	12.6 kW	12.3 kW
COP Tj = Tbiv	3.33	2.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.2 kW	11.85 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.16	2.38
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.8 kW	2.15 kW
Annual energy consumption Qhe	3228 kWh	4384 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





j 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Low temperature	Medium temperature
η_{s}	155 %	122 %
Prated	12 kW	12 kW
SCOP	3.96	3.12
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.62 kW	7.48 kW
$COPTj = -7^{\circ}C$	3.56	2.68
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	4.53 kW	4.64 kW
$COPTj = +2^{\circ}C$	4.64	3.86
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.26 kW	5.01 kW
$COP Tj = +7^{\circ}C$	5.43	4.57
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.98 kW
COP Tj = 12°C	7.13	5.91
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	10.18 kW	8.85 kW
COP Tj = Tbiv	2.42	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.69 kW	7.37 kW

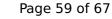




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.7
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	12 kW	12 kW
Annual energy consumption Qhe	7474 kWh	9483 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.18	8.31
COP Tj = -15°C (if TOL $<$ -20°C)	2.42	1.88
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)





178 % 12 kW 1.53 10 °C 10 °C	138 % 12 kW 3.53 -7 °C -10 °C 10.26 kW
1.53 10 °C 10 °C 10.98 kW	3.53 -7 °C -10 °C
10 °C 10 °C 10.98 kW	-7 °C -10 °C
10 °C L0.98 kW	-10 °C
L0.98 kW	
	10.26 kW
. 70	
2.73	2.10
).99	1
5.71 kW	6.60 kW
4.71	3.59
0.98	0.99
5.26 kW	5.09 kW
5.40	4.48
0.98	0.98
5.11 kW	6.06 kW
5.75	5.60
).98	0.98
11.49 kW	10.26 kW
2.56	2.10
11.49 kW	9.04 kW
55 55 55 55 1.11 1.11	71 kW 71 98 26 kW 40 98 11 kW 75 98 1.49 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	o w	o w
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	2.96 kW
Annual energy consumption Qhe	5475 kWh	7031 kWh

Model: WLW166i-14 SP AR P3 B

Configure model		
Model name	WLW166i-14 SP AR P3 B	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	14.58 kW	12.70 kW	
El input	3.41 kW	4.54 kW	
СОР	4.28	2.80	

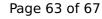
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	229 %	168 %
Prated	14 kW	14 kW
SCOP	5.79	4.27
Tbiv	3 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.2 kW	11.85 kW
COP Tj = +2°C	3.16	2.38
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.88 kW	9.05 kW
COP Tj = +7°C	5.21	3.58
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.16 kW	5.97 kW
COP Tj = 12°C	7.19	5.56
Cdh Tj = +12 °C	0.97	0.98

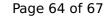




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COP Tj = Tbiv	3.33	2.56
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.16	2.38
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	0 W	0 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.8 kW	2.15 kW
Annual energy consumption Qhe	3228 kWh	4384 kWh

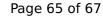
Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





	Low temperature	Medium temperature
η_{s}	155 %	122 %
Prated	12 kW	12 kW
SCOP	3.96	3.12
Tbiv	-15 °C	-12 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.62 kW	7.48 kW
$COP Tj = -7^{\circ}C$	3.56	2.68
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.53 kW	4.64 kW
COP Tj = +2°C	4.64	3.86
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	5.26 kW	5.01 kW
$COP Tj = +7^{\circ}C$	5.43	4.57
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.98 kW
COP Tj = 12°C	7.13	5.91
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	10.18 kW	8.85 kW
COP Tj = Tbiv	2.42	2.03
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.69 kW	7.37 kW

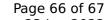




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Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
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PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	12 kW	12 kW
Annual energy consumption Qhe	7474 kWh	9483 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.18	8.31
COP Tj = -15°C (if TOL $<$ -20°C)	2.42	1.88
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	64 dB(A)	64 dB(A)	





	Low temperature	Medium temperature
ης	178 %	138 %
Prated	12 kW	12 kW
SCOP	4.53	3.53
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	10.98 kW	10.26 kW
COP Tj = -7 °C	2.73	2.10
Cdh Tj = -7 °C	0.99	1
Pdh Tj = $+2$ °C	6.71 kW	6.60 kW
$COP Tj = +2^{\circ}C$	4.71	3.59
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = $+7^{\circ}$ C	5.26 kW	5.09 kW
$COP Tj = +7^{\circ}C$	5.40	4.48
Cdh Tj = $+7$ °C	0.98	0.98
Pdh Tj = 12°C	6.11 kW	6.06 kW
COP Tj = 12°C	6.75	5.60
Cdh Tj = $+12$ °C	0.98	0.98
Pdh Tj = Tbiv	11.49 kW	10.26 kW
COP Tj = Tbiv	2.56	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.49 kW	9.04 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.54	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
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PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	2.96 kW
Annual energy consumption Qhe	5475 kWh	7031 kWh