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Login

Summary of	Buderus Logatherm WLW-12,14 SP AR	Reg. No.	011-1W0541		
Certificate Holder	Certificate Holder				
Name	Bosch Thermotechnik GmbH (Buderus)	Bosch Thermotechnik GmbH (Buderus)			
Address	Sophienstraße 30-32	Zip	35576		
City	Wetzlar	Country	Germany		
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH				
Subtype title	Buderus Logatherm WLW-12,14 SP AR				
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-12 SP AR T190

Configure model			
Model name	WLW166i-12 SP AR 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	1x230V 50Hz	

Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	12.12 kW	9.15 kW		
El input	2.98 kW	3.62 kW		
СОР	4.07	2.53		

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}	223 %	149 %
Prated	11 kW	11 kW
SCOP	5.65	3.81
Tbiv	2 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.8 kW	9.82 kW
COP Tj = +2°C	2.87	2.07
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.48 kW	7.12 kW
$COP Tj = +7^{\circ}C$	5.09	3.26
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.12 kW	5.73 kW
COP Tj = 12°C	7.02	4.91
Cdh Tj = +12 °C	0.98	0.98





		The database on 25 juli 2022
Pdh Tj = Tbiv	10.8 kW	10.45 kW
COP Tj = Tbiv	2.87	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.8 kW	9.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	1.18 kW
Annual energy consumption Qhe	2599 kWh	3857 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
ης	132 %	102 %
Prated	10 kW	10 kW
SCOP	3.37	2.64
Tbiv	-15 °C	-13 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	6.34 kW	6.3 kW
COP Tj = -7°C	3.25	2.28
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.45 kW	4.17 kW
$COP Tj = +2^{\circ}C$	4.21	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	5.22 kW	4.98 kW
$COPTj = +7^{\circ}C$	5.15	4.14
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.12 kW	5.95 kW
COP Tj = 12°C	7.02	5.52
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.04 kW	7.21 kW
COP Tj = Tbiv	2.06	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.04 kW	6.63 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	o w	0 W
PSB	20 W	20 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10 kW	10 kW
Annual energy consumption Qhe	7311 kWh	9349 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.04	6.63
COP Tj = -15°C (if TOL $<$ -20°C)	2.06	1.52
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)	





This information was gene	Low temperature	Medium temperature
η_{s}	166 %	119 %
Prated	11 kW	10.3 kW
SCOP	4.23	3.06
Tbiv	-8 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.10 kW	8.29 kW
$COP Tj = -7^{\circ}C$	2.48	1.73
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2$ °C	6.07 kW	6.10 kW
$COPTj = +2^{\circ}C$	4.36	3.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.25 kW	4.84 kW
$COPTj = +7^{\circ}C$	5.22	3.90
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.89 kW
COP Tj = 12°C	6.59	5.22
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	9.85 kW	8.29 kW
COP Tj = Tbiv	2.42	1.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.32 kW	6.25 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	o w	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.68 kW	4.05 kW
Annual energy consumption Qhe	5371 kWh	6961 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	128 %	
СОР	3.09	
Heating up time	01:33 h:min	
Standby power input	41.7 W	
Reference hot water temperature	51.9 °C	
Mixed water at 40°C	264	



Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	79 %	
СОР	1.93	
Heating up time	02:03 h:min	
Standby power input	51.2 W	
Reference hot water temperature	52.3 °C	
Mixed water at 40°C	266 I	

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	104 %	
СОР	2.52	
Heating up time	01:46 h:min	
Standby power input	48.3 W	
Reference hot water temperature	52.5 °C	
Mixed water at 40°C	265 I	

Model: WLW166i-12 SP AR E

Configure model		
Model name	WLW166i-12 SP AR 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 1x230V 50Hz		

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.12 kW	9.15 kW
El input	2.98 kW	3.62 kW
СОР	4.07	2.53

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}	223 %	149 %
Prated	11 kW	11 kW
SCOP	5.65	3.81
Tbiv	2 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.8 kW	9.82 kW
COP Tj = +2°C	2.87	2.07
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	7.48 kW	7.12 kW
$COP Tj = +7^{\circ}C$	5.09	3.26
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.12 kW	5.73 kW
COP Tj = 12°C	7.02	4.91
Cdh Tj = +12 °C	0.98	0.98





Pdh Tj = Tbiv	10.8 kW	10.45 kW
COP Tj = Tbiv	2.87	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.8 kW	9.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	1.18 kW
Annual energy consumption Qhe	2599 kWh	3857 kWh

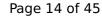
Colder Climate

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
ης	132 %	102 %
Prated	10 kW	10 kW
SCOP	3.37	2.64
Tbiv	-15 °C	-13 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	6.34 kW	6.3 kW
COP Tj = -7°C	3.25	2.28
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.45 kW	4.17 kW
$COP Tj = +2^{\circ}C$	4.21	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	5.22 kW	4.98 kW
$COPTj = +7^{\circ}C$	5.15	4.14
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.12 kW	5.95 kW
COP Tj = 12°C	7.02	5.52
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.04 kW	7.21 kW
COP Tj = Tbiv	2.06	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.04 kW	6.63 kW

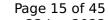




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	o w	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	10 kW	10 kW
Annual energy consumption Qhe	7311 kWh	9349 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.04	6.63
COP Tj = -15°C (if TOL $<$ -20°C)	2.06	1.52
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}	166 %	119 %
Prated	11 kW	10.3 kW
SCOP	4.23	3.06
Tbiv	-8 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.10 kW	8.29 kW
$COP Tj = -7^{\circ}C$	2.48	1.73
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2$ °C	6.07 kW	6.10 kW
$COPTj = +2^{\circ}C$	4.36	3.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.25 kW	4.84 kW
$COPTj = +7^{\circ}C$	5.22	3.90
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.89 kW
COP Tj = 12°C	6.59	5.22
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	9.85 kW	8.29 kW
COP Tj = Tbiv	2.42	1.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.32 kW	6.25 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.68 kW	4.05 kW
Annual energy consumption Qhe	5371 kWh	6961 kWh

Model: WLW166i-12 SP AR B

Configure model		
Model name	WLW166i-12 SP AR 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	12.12 kW	9.15 kW
El input	2.98 kW	3.62 kW
СОР	4.07	2.53

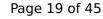
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

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}	223 %	149 %
Prated	11 kW	11 kW
SCOP	5.65	3.81
Tbiv	2 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	10.8 kW	9.82 kW
COP Tj = +2°C	2.87	2.07
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	7.48 kW	7.12 kW
COP Tj = +7°C	5.09	3.26
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.12 kW	5.73 kW
COP Tj = 12°C	7.02	4.91
Cdh Tj = +12 °C	0.98	0.98

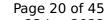




Pdh Tj = Tbiv	10.8 kW	10.45 kW
COP Tj = Tbiv	2.87	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.8 kW	9.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	o w	o w
PSB	20 W	20 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0 kW	1.18 kW
Annual energy consumption Qhe	2599 kWh	3857 kWh

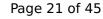
Colder Climate

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
ης	132 %	102 %
Prated	10 kW	10 kW
SCOP	3.37	2.64
Tbiv	-15 °C	-13 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	6.34 kW	6.3 kW
COP Tj = -7°C	3.25	2.28
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.45 kW	4.17 kW
$COP Tj = +2^{\circ}C$	4.21	3.36
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	5.22 kW	4.98 kW
$COPTj = +7^{\circ}C$	5.15	4.14
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.12 kW	5.95 kW
COP Tj = 12°C	7.02	5.52
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	8.04 kW	7.21 kW
COP Tj = Tbiv	2.06	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.04 kW	6.63 kW

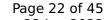




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.06	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	10 kW	10 kW
Annual energy consumption Qhe	7311 kWh	9349 kWh
Pdh Tj = -15°C (if TOL<-20°C)	8.04	6.63
COP Tj = -15°C (if TOL $<$ -20°C)	2.06	1.52
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}	166 %	119 %
Prated	11 kW	10.3 kW
SCOP	4.23	3.06
Tbiv	-8 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.10 kW	8.29 kW
$COP Tj = -7^{\circ}C$	2.48	1.73
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2^{\circ}$ C	6.07 kW	6.10 kW
$COPTj = +2^{\circ}C$	4.36	3.15
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.25 kW	4.84 kW
$COPTj = +7^{\circ}C$	5.22	3.90
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.89 kW
COP Tj = 12°C	6.59	5.22
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	9.85 kW	8.29 kW
COP Tj = Tbiv	2.42	1.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.32 kW	6.25 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.26	1.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.68 kW	4.05 kW
Annual energy consumption Qhe	5371 kWh	6961 kWh



Model: WLW166i-14 SP AR T190

Configure model		
Model name	WLW166i-14 SP AR 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 1x230V 50Hz		

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	13.81 kW	9.15 kW
El input	3.68 kW	3.62 kW
СОР	3.75	2.53

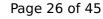
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	217 %	147 %
Prated	13 kW	13 kW
SCOP	5.5	3.75
Tbiv	3 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.38 kW	9.82 kW
COP Tj = +2°C	2.77	2.07
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	8.1 kW	8.48 kW
COP Tj = +7°C	4.9	3.2
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.12 kW	5.73 kW
COP Tj = 12°C	7.02	4.91
Cdh Tj = +12 °C	0.98	0.98
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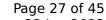




	, -	The database on 25 july 2022
Pdh Tj = Tbiv	11.74 kW	10.99 kW
COP Tj = Tbiv	2.93	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.38 kW	9.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.62 kW	3.18 kW
Annual energy consumption Qhe	3158 kWh	4627 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)





	Low temperature	Medium temperature
η_{s}	131 %	103 %
Prated	11 kW	11 kW
SCOP	3.36	2.64
Tbiv	-15 °C	-12 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7°C	6.25 kW	6.75 kW
COP Tj = -7°C	3.21	2.24
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	4.45 kW	4.22 kW
$COP Tj = +2^{\circ}C$	4.26	3.43
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	5.19 kW	4.99 kW
$COP Tj = +7^{\circ}C$	4.88	4.17
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.12 kW	5.96 kW
COP Tj = 12°C	7.02	5.55
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	9.35 kW	7.76 kW
COP Tj = Tbiv	2.02	1.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.35 kW	6.92 kW

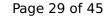




2.02	1.53
0.99	0.99
60 °C	60 °C
20 W	20 W
o w	o w
20 W	20 W
o w	o w
Electricity	Electricity
11 kW	11 kW
8067 kWh	10280 kWh
9.35	6.92
2.02	1.53
0.99	0.99
	0.99 60 °C 20 W 0 W 20 W 0 W Electricity 11 kW 8067 kWh 9.35 2.02

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)





	1	1
η_{s}	166 %	117 %
Prated	11.6 kW	12 kW
SCOP	4.23	3
Tbiv	-9 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	10.10 kW	8.29 kW
COP Tj = -7 °C	2.48	1.73
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2$ °C	6.07 kW	6.40 kW
$COP Tj = +2^{\circ}C$	4.36	3.08
Cdh Tj = $+2$ °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.25 kW	4.93 kW
$COP Tj = +7^{\circ}C$	5.22	4.03
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.91 kW
COP Tj = 12°C	6.59	5.40
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	10.51 kW	8.80 kW
COP Tj = Tbiv	2.25	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.24 kW	6.25 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.18	1.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	o w	o w
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.36 kW	5.75 kW
Annual energy consumption Qhe	5667 kWh	8259 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	128 %
СОР	3.09
Heating up time	01:33 h:min
Standby power input	41.7 W
Reference hot water temperature	51.9 °C
Mixed water at 40°C	264



Colder Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	79 %
СОР	1.93
Heating up time	02:03 h:min
Standby power input	51.2 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	266 I

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	104 %
СОР	2.52
Heating up time	01:46 h:min
Standby power input	48.3 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	265 I



Model: WLW166i-14 SP AR E

Configure model		
Model name	WLW166i-14 SP AR 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	1x230V 50Hz	

Heating

EN 14511-2		
Low temperature Medium temperature		Medium temperature
Heat output	13.81 kW	9.15 kW
El input	3.68 kW	3.62 kW
СОР	3.75	2.53

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	65 dB(A)	65 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	217 %	147 %
Prated	13 kW	13 kW
SCOP	5.5	3.75
Tbiv	3 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	11.38 kW	9.82 kW
COP Tj = +2°C	2.77	2.07
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.1 kW	8.48 kW
COP Tj = +7°C	4.9	3.2
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.12 kW	5.73 kW
COP Tj = 12°C	7.02	4.91
Cdh Tj = +12 °C	0.98	0.98

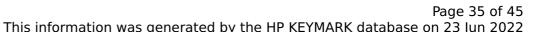




Pdh Tj = Tbiv	11.74 kW	10.99 kW
COP Tj = Tbiv	2.93	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.38 kW	9.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.62 kW	3.18 kW
Annual energy consumption Qhe	3158 kWh	4627 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)





This information was generated by the HP KEYMARK database on 23 Jun		RK database on 23 Jun 20 $^{-}$
	Low temperature	Medium temperature
η_{S}	131 %	103 %
Prated	11 kW	11 kW
SCOP	3.36	2.64
Tbiv	-15 °C	-12 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7° C	6.25 kW	6.75 kW
$COP Tj = -7^{\circ}C$	3.21	2.24
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	4.45 kW	4.22 kW
COP Tj = +2°C	4.26	3.43
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.19 kW	4.99 kW
$COP Tj = +7^{\circ}C$	4.88	4.17
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.12 kW	5.96 kW
COP Tj = 12°C	7.02	5.55
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	9.35 kW	7.76 kW
COP Tj = Tbiv	2.02	1.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.35 kW	6.92 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.02 1.53 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 0.99 0.99 60 °C WTOL 60 °C Poff 20 W 20 W PTO 0 W 0 W **PSB** 20 W 20 W **PCK** 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 11 kW 11 kW 8067 kWh 10280 kWh Annual energy consumption Qhe Pdh Tj = -15°C (if TOL<-20°C) 9.35 6.92

Average Climate

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

COP Tj = -15°C (if TOL<-20°C)

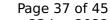
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

2.02

0.99

1.53

0.99





	1	1
η_{s}	166 %	117 %
Prated	11.6 kW	12 kW
SCOP	4.23	3
Tbiv	-9 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	10.10 kW	8.29 kW
COP Tj = -7 °C	2.48	1.73
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2$ °C	6.07 kW	6.40 kW
$COP Tj = +2^{\circ}C$	4.36	3.08
Cdh Tj = $+2$ °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.25 kW	4.93 kW
$COP Tj = +7^{\circ}C$	5.22	4.03
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.91 kW
COP Tj = 12°C	6.59	5.40
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	10.51 kW	8.80 kW
COP Tj = Tbiv	2.25	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.24 kW	6.25 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.18	1.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.36 kW	5.75 kW
Annual energy consumption Qhe	5667 kWh	8259 kWh



Model: WLW166i-14 SP AR B

Configure model	
Model name	WLW166i-14 SP AR 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	13.81 kW	9.15 kW		
El input	3.68 kW	3.62 kW		

2.53

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

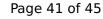
Warmer Climate

3.75



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	65 dB(A)	65 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	217 %	147 %
Prated	13 kW	13 kW
SCOP	5.5	3.75
Tbiv	3 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	11.38 kW	9.82 kW
COP Tj = +2°C	2.77	2.07
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	8.1 kW	8.48 kW
COP Tj = +7°C	4.9	3.2
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	6.12 kW	5.73 kW
COP Tj = 12°C	7.02	4.91
Cdh Tj = +12 °C	0.98	0.98





Pdh Tj = Tbiv	11.74 kW	10.99 kW
COP Tj = Tbiv	2.93	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.38 kW	9.82 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	2.07
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	o w	0 W
PSB	20 W	20 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.62 kW	3.18 kW
Annual energy consumption Qhe	3158 kWh	4627 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	65 dB(A)	65 dB(A)	





	Low temperature	Medium temperature
ης	131 %	103 %
Prated	11 kW	11 kW
SCOP	3.36	2.64
Tbiv	-15 °C	-12 °C
TOL	-15 °C	-15 °C
Pdh Tj = -7° C	6.25 kW	6.75 kW
COP Tj = -7° C	3.21	2.24
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = $+2$ °C	4.45 kW	4.22 kW
COP Tj = +2°C	4.26	3.43
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = $+7^{\circ}$ C	5.19 kW	4.99 kW
$COP Tj = +7^{\circ}C$	4.88	4.17
Cdh Tj = $+7$ °C	0.98	0.98
Pdh Tj = 12°C	6.12 kW	5.96 kW
COP Tj = 12°C	7.02	5.55
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	9.35 kW	7.76 kW
COP Tj = Tbiv	2.02	1.7
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.35 kW	6.92 kW

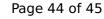




COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.02	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	0 W	0 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	11 kW	11 kW
Annual energy consumption Qhe	8067 kWh	10280 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.35	6.92
COP Tj = -15°C (if TOL $<$ -20°C)	2.02	1.53
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	65 dB(A)	65 dB(A)	





	1	1
η_{s}	166 %	117 %
Prated	11.6 kW	12 kW
SCOP	4.23	3
Tbiv	-9 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7° C	10.10 kW	8.29 kW
COP Tj = -7 °C	2.48	1.73
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2$ °C	6.07 kW	6.40 kW
$COP Tj = +2^{\circ}C$	4.36	3.08
Cdh Tj = $+2$ °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.25 kW	4.93 kW
$COP Tj = +7^{\circ}C$	5.22	4.03
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	6.15 kW	5.91 kW
COP Tj = 12°C	6.59	5.40
Cdh Tj = +12 °C	0.98	0.98
Pdh Tj = Tbiv	10.51 kW	8.80 kW
COP Tj = Tbiv	2.25	1.93
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.24 kW	6.25 kW



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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.18	1.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	1
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	o w	0 W
PSB	20 W	20 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.36 kW	5.75 kW
Annual energy consumption Qhe	5667 kWh	8259 kWh