

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Buderus Logatherm WLW-6,8,10 SP AR	Reg. No.	011-1W0539
Certificate Holder			
	Bosch Thermotechnik GmbH (Buderus)		
	Sophienstraße 30-32		35576
	Wetzlar		Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Buderus Logatherm WLW-6,8,10 SP AR		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass of Refrigerant	1.3 kg		
Certification Date	10.06.2022		
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 9 (as of 2021-03)		

Model: WLW166i-6 SP AR T190

Configure model	
Model name	WLW166i-6 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	6.16 kW	5 kW
El input	1.3 kW	1.92 kW
COP	4.74	2.6

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

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EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	249 %	164 %
Prated	8 kW	8 kW
SCOP	6.31	4.17
Tbiv	4 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.98 kW	6.93 kW
COP Tj = +2°C	3.72	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.93 kW	4.92 kW
COP Tj = +7°C	5.45	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.15 kW
COP Tj = 12°C	8.29	5.59
Cdh Tj = +12 °C	0.97	0.98

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Pdh Tj = Tbiv	6.43 kW	7.28 kW
COP Tj = Tbiv	4.15	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.98 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.02 kW	1.07 kW
Annual energy consumption Qhe	1694 kWh	2563 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	153 %	106 %
Prated	6 kW	6 kW
SCOP	3.89	2.72
Tbiv	-12 °C	-13 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	3.72 kW	3.57 kW
COP Tj = -7°C	3.43	2.28
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.31 kW	2.06 kW
COP Tj = +2°C	4.83	3.44
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.89 kW	2.6 kW
COP Tj = +7°C	6.27	4.47
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	8.11	6.04
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	4.34 kW	4.36 kW
COP Tj = Tbiv	2.74	1.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.11 kW	3.46 kW

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.05	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6 kW	6 kW
Annual energy consumption Qhe	3800 kWh	5439 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.81	3.89
COP Tj = -15°C (if TOL<-20°C)	2.43	1.5
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	182 %	122 %
Prated	6 kW	6 kW
SCOP	4.63	3.11
Tbiv	-6 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.76 kW	5.10 kW
COP Tj = -7°C	2.88	1.86
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	3.16 kW	3.10 kW
COP Tj = +2°C	4.69	3.12
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.86 kW	2.51 kW
COP Tj = +7°C	6.04	4.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.46 kW	3.22 kW
COP Tj = 12°C	8.16	5.83
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	4.69 kW	5.10 kW
COP Tj = Tbiv	2.94	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.46 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.67	1.40
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.54 kW	3.35 kW
Annual energy consumption Qhe	2678 kWh	3981 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	150 %
COP	3.62
Heating up time	02:53 h:min
Standby power input	35.1 W
Reference hot water temperature	53.8 °C
Mixed water at 40°C	275 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	105 %
COP	2.54
Heating up time	02:47 h:min
Standby power input	43.6 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	273 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	124 %
COP	2.99
Heating up time	02:33 h:min
Standby power input	41.5 W
Reference hot water temperature	53.8 °C
Mixed water at 40°C	274 l

Model: WLW166i-6 SP AR E

Configure model	
Model name	WLW166i-6 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	6.16 kW	5 kW
El input	1.3 kW	1.92 kW
COP	4.74	2.6

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

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EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	249 %	164 %
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TOL	2 °C	2 °C
Pdh Tj = +2°C	5.98 kW	6.93 kW
COP Tj = +2°C	3.72	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.93 kW	4.92 kW
COP Tj = +7°C	5.45	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.15 kW
COP Tj = 12°C	8.29	5.59
Cdh Tj = +12 °C	0.97	0.98

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Pdh Tj = Tbiv	6.43 kW	7.28 kW
COP Tj = Tbiv	4.15	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.98 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.02 kW	1.07 kW
Annual energy consumption Qhe	1694 kWh	2563 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	153 %	106 %
Prated	6 kW	6 kW
SCOP	3.89	2.72
Tbiv	-12 °C	-13 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	3.72 kW	3.57 kW
COP Tj = -7°C	3.43	2.28
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.31 kW	2.06 kW
COP Tj = +2°C	4.83	3.44
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.89 kW	2.6 kW
COP Tj = +7°C	6.27	4.47
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	8.11	6.04
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	4.34 kW	4.36 kW
COP Tj = Tbiv	2.74	1.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.11 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.05	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6 kW	6 kW
Annual energy consumption Qhe	3800 kWh	5439 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.81	3.89
COP Tj = -15°C (if TOL<-20°C)	2.43	1.5
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	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	182 %	122 %
Prated	6 kW	6 kW
SCOP	4.63	3.11
Tbiv	-6 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.76 kW	5.10 kW
COP Tj = -7°C	2.88	1.86
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	3.16 kW	3.10 kW
COP Tj = +2°C	4.69	3.12
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.86 kW	2.51 kW
COP Tj = +7°C	6.04	4.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.46 kW	3.22 kW
COP Tj = 12°C	8.16	5.83
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	4.69 kW	5.10 kW
COP Tj = Tbiv	2.94	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.46 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.67	1.40
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.54 kW	3.35 kW
Annual energy consumption Qhe	2678 kWh	3981 kWh

Model: WLW166i-6 SP AR B

Configure model	
Model name	WLW166i-6 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	6.16 kW	5 kW
El input	1.3 kW	1.92 kW
COP	4.74	2.6

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	249 %	164 %
Prated	8 kW	8 kW
SCOP	6.31	4.17
Tbiv	4 °C	3 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.98 kW	6.93 kW
COP Tj = +2°C	3.72	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	4.93 kW	4.92 kW
COP Tj = +7°C	5.45	3.37
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.44 kW	3.15 kW
COP Tj = 12°C	8.29	5.59
Cdh Tj = +12 °C	0.97	0.98

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	6.43 kW	7.28 kW
COP Tj = Tbiv	4.15	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.98 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.72	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	2.02 kW	1.07 kW
Annual energy consumption Qhe	1694 kWh	2563 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	153 %	106 %
Prated	6 kW	6 kW
SCOP	3.89	2.72
Tbiv	-12 °C	-13 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	3.72 kW	3.57 kW
COP Tj = -7°C	3.43	2.28
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.31 kW	2.06 kW
COP Tj = +2°C	4.83	3.44
Cdh Tj = +2 °C	0.98	0.98
Pdh Tj = +7°C	2.89 kW	2.6 kW
COP Tj = +7°C	6.27	4.47
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.43 kW	3.22 kW
COP Tj = 12°C	8.11	6.04
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	4.34 kW	4.36 kW
COP Tj = Tbiv	2.74	1.67
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.11 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.05	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	6 kW	6 kW
Annual energy consumption Qhe	3800 kWh	5439 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.81	3.89
COP Tj = -15°C (if TOL<-20°C)	2.43	1.5
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	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	182 %	122 %
Prated	6 kW	6 kW
SCOP	4.63	3.11
Tbiv	-6 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.76 kW	5.10 kW
COP Tj = -7°C	2.88	1.86
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	3.16 kW	3.10 kW
COP Tj = +2°C	4.69	3.12
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.86 kW	2.51 kW
COP Tj = +7°C	6.04	4.00
Cdh Tj = +7 °C	0.98	0.98
Pdh Tj = 12°C	3.46 kW	3.22 kW
COP Tj = 12°C	8.16	5.83
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	4.69 kW	5.10 kW
COP Tj = Tbiv	2.94	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.46 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.67	1.40
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.54 kW	3.35 kW
Annual energy consumption Qhe	2678 kWh	3981 kWh

Model: WLW166i-8 SP AR T190

Configure model	
Model name	WLW166i-8 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	8.02 kW	6.78 kW
El input	1.71 kW	2.52 kW
COP	4.7	2.69

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	252 %	166 %
Prated	9 kW	9 kW
SCOP	6.39	4.23
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.35 kW	6.93 kW
COP Tj = +2°C	3.47	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.63 kW	5.98 kW
COP Tj = +7°C	5.43	3.4
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.46 kW	3.17 kW
COP Tj = 12°C	8.46	5.77
Cdh Tj = +12 °C	0.97	0.98

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	7.88 kW	7.65 kW
COP Tj = Tbiv	3.88	2.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.35 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.47	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.65 kW	2.07 kW
Annual energy consumption Qhe	1883 kWh	2846 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	153 %	107 %
Prated	7 kW	7 kW
SCOP	3.9	2.75
Tbiv	-14 °C	-11 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	4.42 kW	4.29 kW
COP Tj = -7°C	3.24	2.27
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.58 kW	2.71 kW
COP Tj = +2°C	4.92	3.62
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.86 kW	2.63 kW
COP Tj = +7°C	6.31	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.44 kW	3.23 kW
COP Tj = 12°C	8.2	6.1
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	5.4 kW	4.84 kW
COP Tj = Tbiv	2.4	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.89 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.84	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7 kW	7 kW
Annual energy consumption Qhe	4422 kWh	6273 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.23	3.89
COP Tj = -15°C (if TOL<-20°C)	2.34	1.5
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	185 %	126 %
Prated	8 kW	7 kW
SCOP	4.71	3.22
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.08 kW	5.10 kW
COP Tj = -7°C	2.82	1.86
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	4.39 kW	3.87 kW
COP Tj = +2°C	4.82	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.85 kW	2.60 kW
COP Tj = +7°C	6.33	4.41
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.46 kW	3.18 kW
COP Tj = 12°C	8.51	5.82
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.54 kW	5.78 kW
COP Tj = Tbiv	3.05	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.55 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.51	1.40
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.45 kW	4.40 kW
Annual energy consumption Qhe	3512 kWh	4489 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	150 %
COP	3.62
Heating up time	02:53 h:min
Standby power input	35.1 W
Reference hot water temperature	53.8 °C
Mixed water at 40°C	275 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	105 %
COP	2.54
Heating up time	02:47 h:min
Standby power input	43.6 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	273 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	124 %
COP	2.99
Heating up time	02:33 h:min
Standby power input	41.5 W
Reference hot water temperature	53.8 °C
Mixed water at 40°C	274 l

Model: WLW166i-8 SP AR E

Configure model	
Model name	WLW166i-8 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	8.02 kW	6.78 kW
El input	1.71 kW	2.52 kW
COP	4.7	2.69

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	252 %	166 %
Prated	9 kW	9 kW
SCOP	6.39	4.23
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.35 kW	6.93 kW
COP Tj = +2°C	3.47	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.63 kW	5.98 kW
COP Tj = +7°C	5.43	3.4
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.46 kW	3.17 kW
COP Tj = 12°C	8.46	5.77
Cdh Tj = +12 °C	0.97	0.98

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	7.88 kW	7.65 kW
COP Tj = Tbiv	3.88	2.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.35 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.47	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.65 kW	2.07 kW
Annual energy consumption Qhe	1883 kWh	2846 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	153 %	107 %
Prated	7 kW	7 kW
SCOP	3.9	2.75
Tbiv	-14 °C	-11 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	4.42 kW	4.29 kW
COP Tj = -7°C	3.24	2.27
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.58 kW	2.71 kW
COP Tj = +2°C	4.92	3.62
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.86 kW	2.63 kW
COP Tj = +7°C	6.31	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.44 kW	3.23 kW
COP Tj = 12°C	8.2	6.1
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	5.4 kW	4.84 kW
COP Tj = Tbiv	2.4	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.89 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.84	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7 kW	7 kW
Annual energy consumption Qhe	4422 kWh	6273 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.23	3.89
COP Tj = -15°C (if TOL<-20°C)	2.34	1.5
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	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	185 %	126 %
Prated	8 kW	7 kW
SCOP	4.71	3.22
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.08 kW	5.10 kW
COP Tj = -7°C	2.82	1.86
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	4.39 kW	3.87 kW
COP Tj = +2°C	4.82	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.85 kW	2.60 kW
COP Tj = +7°C	6.33	4.41
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.46 kW	3.18 kW
COP Tj = 12°C	8.51	5.82
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.54 kW	5.78 kW
COP Tj = Tbiv	3.05	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.55 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.51	1.40
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.45 kW	4.40 kW
Annual energy consumption Qhe	3512 kWh	4489 kWh

Model: WLW166i-8 SP AR B

Configure model	
Model name	WLW166i-8 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	8.02 kW	6.78 kW
El input	1.71 kW	2.52 kW
COP	4.7	2.69

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	252 %	166 %
Prated	9 kW	9 kW
SCOP	6.39	4.23
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.35 kW	6.93 kW
COP Tj = +2°C	3.47	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.63 kW	5.98 kW
COP Tj = +7°C	5.43	3.4
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.46 kW	3.17 kW
COP Tj = 12°C	8.46	5.77
Cdh Tj = +12 °C	0.97	0.98

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	7.88 kW	7.65 kW
COP Tj = Tbiv	3.88	2.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.35 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.47	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	1.65 kW	2.07 kW
Annual energy consumption Qhe	1883 kWh	2846 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	153 %	107 %
Prated	7 kW	7 kW
SCOP	3.9	2.75
Tbiv	-14 °C	-11 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	4.42 kW	4.29 kW
COP Tj = -7°C	3.24	2.27
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.58 kW	2.71 kW
COP Tj = +2°C	4.92	3.62
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.86 kW	2.63 kW
COP Tj = +7°C	6.31	4.58
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.44 kW	3.23 kW
COP Tj = 12°C	8.2	6.1
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	5.4 kW	4.84 kW
COP Tj = Tbiv	2.4	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.89 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.84	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	7 kW	7 kW
Annual energy consumption Qhe	4422 kWh	6273 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.23	3.89
COP Tj = -15°C (if TOL<-20°C)	2.34	1.5
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	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	185 %	126 %
Prated	8 kW	7 kW
SCOP	4.71	3.22
Tbiv	-5 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.08 kW	5.10 kW
COP Tj = -7°C	2.82	1.86
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	4.39 kW	3.87 kW
COP Tj = +2°C	4.82	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.85 kW	2.60 kW
COP Tj = +7°C	6.33	4.41
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.46 kW	3.18 kW
COP Tj = 12°C	8.51	5.82
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.54 kW	5.78 kW
COP Tj = Tbiv	3.05	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.55 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.51	1.40
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	2.45 kW	4.40 kW
Annual energy consumption Qhe	3512 kWh	4489 kWh

Model: WLW166i-10 SP AR T190

Configure model	
Model name	WLW166i-10 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	8.92 kW	7.87 kW
El input	1.91 kW	2.89 kW
COP	4.68	2.72

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	255 %	169 %
Prated	10 kW	9.6 kW
SCOP	6.46	4.3
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.85 kW	6.93 kW
COP Tj = +2°C	3.38	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.92 kW	6.31 kW
COP Tj = +7°C	5.57	3.51
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.19 kW
COP Tj = 12°C	8.72	5.87
Cdh Tj = +12 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	8.41 kW	7.65 kW
COP Tj = Tbiv	3.77	2.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.85 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.38	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.15 kW	2.67 kW
Annual energy consumption Qhe	2069 kWh	2980 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	154 %	107 %
Prated	8 kW	7.8 kW
SCOP	3.93	2.74
Tbiv	-14 °C	-10 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	4.74 kW	4.82 kW
COP Tj = -7°C	3.2	2.27
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.98 kW	2.84 kW
COP Tj = +2°C	5.01	3.64
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.71 kW	2.65 kW
COP Tj = +7°C	6.11	4.7
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.44 kW	3.23 kW
COP Tj = 12°C	8.24	6.15
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.15 kW	5.08 kW
COP Tj = Tbiv	2.49	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.4 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.94	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8 kW	7.8 kW
Annual energy consumption Qhe	5012 kWh	7014 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.95	3.89
COP Tj = -15°C (if TOL<-20°C)	2.43	1.5
Cdh Tj = -15 °C	0.99	0.99

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	178 %	125 %
Prated	9 kW	8 kW
SCOP	4.53	3.21
Tbiv	-6 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.79 kW	5.10 kW
COP Tj = -7°C	2.81	1.86
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	4.78 kW	4.58 kW
COP Tj = +2°C	4.35	3.35
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.89 kW	2.57 kW
COP Tj = +7°C	6.47	4.29
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.53 kW	3.20 kW
COP Tj = 12°C	8.72	5.96
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	7.03 kW	6.10 kW
COP Tj = Tbiv	2.91	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.20 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.50	1.40
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.80 kW	5.40 kW
Annual energy consumption Q_{he}	4103 kWh	5147 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	150 %
COP	3.62
Heating up time	02:53 h:min
Standby power input	35.1 W
Reference hot water temperature	53.8 °C
Mixed water at 40°C	275 l

Colder Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	105 %
COP	2.54
Heating up time	02:47 h:min
Standby power input	43.6 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	273 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	124 %
COP	2.99
Heating up time	02:33 h:min
Standby power input	41.5 W
Reference hot water temperature	53.8 °C
Mixed water at 40°C	274 l

Model: WLW166i-10 SP AR E

Configure model	
Model name	WLW166i-10 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	8.92 kW	7.87 kW
El input	1.91 kW	2.89 kW
COP	4.68	2.72

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	255 %	169 %
Prated	10 kW	9.6 kW
SCOP	6.46	4.3
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.85 kW	6.93 kW
COP Tj = +2°C	3.38	2.34
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.92 kW	6.31 kW
COP Tj = +7°C	5.57	3.51
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.19 kW
COP Tj = 12°C	8.72	5.87
Cdh Tj = +12 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	8.41 kW	7.65 kW
COP Tj = Tbiv	3.77	2.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.85 kW	6.93 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.38	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.15 kW	2.67 kW
Annual energy consumption Qhe	2069 kWh	2980 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	154 %	107 %
Prated	8 kW	7.8 kW
SCOP	3.93	2.74
Tbiv	-14 °C	-10 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	4.74 kW	4.82 kW
COP Tj = -7°C	3.2	2.27
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	2.98 kW	2.84 kW
COP Tj = +2°C	5.01	3.64
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	2.71 kW	2.65 kW
COP Tj = +7°C	6.11	4.7
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.44 kW	3.23 kW
COP Tj = 12°C	8.24	6.15
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.15 kW	5.08 kW
COP Tj = Tbiv	2.49	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.4 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.94	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	8 kW	7.8 kW
Annual energy consumption Qhe	5012 kWh	7014 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.95	3.89
COP Tj = -15°C (if TOL<-20°C)	2.43	1.5
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	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	178 %	125 %
Prated	9 kW	8 kW
SCOP	4.53	3.21
Tbiv	-6 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.79 kW	5.10 kW
COP Tj = -7°C	2.81	1.86
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	4.78 kW	4.58 kW
COP Tj = +2°C	4.35	3.35
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.89 kW	2.57 kW
COP Tj = +7°C	6.47	4.29
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.53 kW	3.20 kW
COP Tj = 12°C	8.72	5.96
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	7.03 kW	6.10 kW
COP Tj = Tbiv	2.91	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.20 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.50	1.40
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.80 kW	5.40 kW
Annual energy consumption Qhe	4103 kWh	5147 kWh

Model: WLW166i-10 SP AR B

Configure model	
Model name	WLW166i-10 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	8.92 kW	7.87 kW
El input	1.91 kW	2.89 kW
COP	4.68	2.72

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

This information was generated by the HP KEYMARK database on 25 Feb 2023

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	255 %	169 %
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Pdh Tj = +7°C	5.92 kW	6.31 kW
COP Tj = +7°C	5.57	3.51
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	3.53 kW	3.19 kW
COP Tj = 12°C	8.72	5.87
Cdh Tj = +12 °C	0.98	0.98

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.38	2.34
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	2.15 kW	2.67 kW
Annual energy consumption Qhe	2069 kWh	2980 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	154 %	107 %
Prated	8 kW	7.8 kW
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Pdh Tj = +2°C	2.98 kW	2.84 kW
COP Tj = +2°C	5.01	3.64
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Pdh Tj = +7°C	2.71 kW	2.65 kW
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Pdh Tj = 12°C	3.44 kW	3.23 kW
COP Tj = 12°C	8.24	6.15
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	6.15 kW	5.08 kW
COP Tj = Tbiv	2.49	1.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.4 kW	3.46 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.94	1.33
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	8 kW	7.8 kW
Annual energy consumption Qhe	5012 kWh	7014 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.95	3.89
COP Tj = -15°C (if TOL<-20°C)	2.43	1.5
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	59 dB(A)	59 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 25 Feb 2023

	Low temperature	Medium temperature
η_s	178 %	125 %
Prated	9 kW	8 kW
SCOP	4.53	3.21
Tbiv	-6 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.79 kW	5.10 kW
COP Tj = -7°C	2.81	1.86
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	4.78 kW	4.58 kW
COP Tj = +2°C	4.35	3.35
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	2.89 kW	2.57 kW
COP Tj = +7°C	6.47	4.29
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.53 kW	3.20 kW
COP Tj = 12°C	8.72	5.96
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	7.03 kW	6.10 kW
COP Tj = Tbiv	2.91	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.20 kW	2.65 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.50	1.40
Cdh $T_j = TOL$ or Pdh $T_j = T_{designh}$ if $TOL < T_{designh}$	1	0.99
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	2.80 kW	5.40 kW
Annual energy consumption Q_{he}	4103 kWh	5147 kWh