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Summary of	Ecodan Zubadan 14-200D Packaged	Reg. No.	037-0035-20	
Certificate Holder	Certificate Holder			
Name	Mitsubishi Electric Air Conditioning Systems Europe LTD			
Address	Nettlehill Road, Houston Industrial Estate	Zip	EH54 5EQ	
City	Livingston	Country	United Kingdom	
Certification Body	SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise)			
Name of testing laboratory	Universität Stuttgart, IGE, Prüfstelle HLK			
Subtype title	Ecodan Zubadan 14-200D Packaged			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32			
Mass Of Refrigerant	3.3 kg			
Certification Date	27.07.2020			
Testing basis	HP Keymark scheme rules rev. no. 6			



Model: PUZ-HWM140VHA(-BS)

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	14.00 kW	14.00 kW	
El input	3.14 kW	5.24 kW	
СОР	4.46	2.67	
Indoor water flow rate	2.41 m³/h	1.51 m³/h	

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

Average 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	67 dB(A)	67 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	178 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	4.51	3.39
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	232 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	5.87	4.13
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



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Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh



Model: PUZ-HWM140VHA(-BS) + EHPT20X-M*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

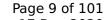


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	176 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	4.47	3.37
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

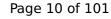
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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

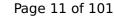
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	227 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



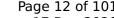


Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278





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EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 I



Model: PUZ-HWM140VHA(-BS) + EHPT20X-VM*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

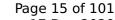


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	176 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	4.47	3.37
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

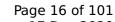
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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

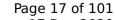
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	227 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



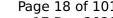


Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278





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EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 I



Model: PUZ-HWM140VHA(-BS) + EHPT20X-YM*D

General Data	
Power supply 1x230V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	14.00 kW	14.00 kW	
El input	3.14 kW	5.24 kW	
СОР	4.46	2.67	
Indoor water flow rate	2.41 m³/h	1.51 m³/h	

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

Average Climate

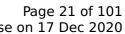


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	176 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	4.47	3.37
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW

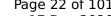
Warmer Climate

Annual energy consumption Qhe

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

6464 kWh

8591 kWh

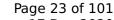




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EN 14825

	Low temperature	Medium temperature
η_{s}	227 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



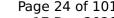


Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 I





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EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278



Model: PUZ-HWM140VHA(-BS) + EHPX-M*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

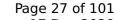


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	176 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	4.47	3.37
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	227 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



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Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh



Model: PUZ-HWM140VHA(-BS) + EHPX-VM*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

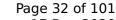


 $$\operatorname{\textit{Page}}\ 31$ of 101$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	176 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	4.47	3.37
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

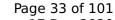
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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	227 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



$$\operatorname{\textit{Page}}\ 34$ of 101$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh



Model: PUZ-HWM140VHA(-BS) + EHPX-YM*D

Gener	General Data	
Power supply	1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

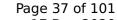


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	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	176 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	4.47	3.37
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

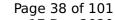
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Theracea by the fill RETT.	
5.70 kW	5.20 kW
7.43	6.24
0.98	0.98
12.40 kW	12.40 kW
2.55	1.98
13.90 kW	13.90 kW
2.40	1.75
60 °C	60 °C
15 W	15 W
15 W	15 W
15 W	15 W
0 W	o w
electricity	electricity
1.39 kW	1.39 kW
6464 kWh	8591 kWh
	7.43 0.98 12.40 kW 2.55 13.90 kW 2.40 60 °C 15 W 15 W 0 W electricity 1.39 kW

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	227 %	132 %
Prated	14.00 kW	14.00 kW
SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



$$\operatorname{\textit{Page}}\ 39$ of 101$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh



Model: PUZ-HWM140VHA(-BS) + ERPT20X-M*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

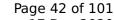


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	178 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	4.51	3.39
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

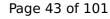
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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	232 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	5.87	4.13
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



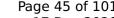


Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	130 %	
СОР	3.07	
Heating up time	1:46 h:min	
Standby power input	38.0 W	
Reference hot water temperature	52.5 °C	
Mixed water at 40°C	278 I	





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EN 16147		
Declared lead profile		
Declared load profile	L	
Efficiency ηDHW	152 %	
СОР	3.58	
Heating up time	1:34 h:min	
Standby power input	35.0 W	
Reference hot water temperature	52.5 °C	
Mixed water at 40°C	278	



Model: PUZ-HWM140VHA(-BS) + ERPT20X-VM*D

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	14.00 kW	14.00 kW	
El input	3.14 kW	5.24 kW	
СОР	4.46	2.67	
Indoor water flow rate	2.41 m³/h	1.51 m³/h	

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

Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 47 of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	178 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	4.51	3.39
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

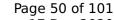
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	40 dB(A)	40 dB(A)	
Sound power level outdoor	67 dB(A)	67 dB(A)	





EN 14825

	Low temperature	Medium temperature
η_{s}	232 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	5.87	4.13
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



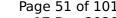


Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3252 kWh	4593 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278





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EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278



Model: PUZ-HWM140YHA(-BS)

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

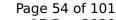


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	177 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	4.51	3.39
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

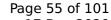
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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6491 kWh	8618 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	231 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	5.86	4.13
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



$$\operatorname{\textit{Page}}\xspace$ 56 of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	22 W	22 W
РТО	22 W	22 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	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh



Model: PUZ-HWM140YHA(-BS) + EHPT20X-VM*D

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

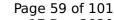


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	4.46	3.36
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

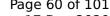
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	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6491 kWh	8618 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

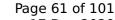




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EN 14825

	Low temperature	Medium temperature
η _s	225 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	5.69	4.04
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



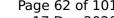


Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278





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EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278



Model: PUZ-HWM140YHA(-BS) + EHPT20X-YM*D

General Data	
Power supply 3x400V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

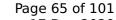
Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	4.46	3.36
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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-	
5.70 kW	5.20 kW
7.43	6.24
0.98	0.98
12.40 kW	12.40 kW
2.55	1.98
13.90 kW	13.90 kW
2.40	1.75
60 °C	60 °C
22 W	22 W
22 W	22 W
22 W	22 W
o w	o w
electricity	electricity
1.39 kW	1.39 kW
6491 kWh	8618 kWh
	7.43 0.98 12.40 kW 2.55 13.90 kW 2.40 60 °C 22 W 22 W 0 W electricity 1.39 kW

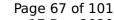
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	225 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	5.69	4.04
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



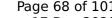


Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 I





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EN 16147		
Declared lead profile		
Declared load profile	L	
Efficiency ηDHW	152 %	
СОР	3.58	
Heating up time	1:34 h:min	
Standby power input	35.0 W	
Reference hot water temperature	52.5 °C	
Mixed water at 40°C	278	



Model: PUZ-HWM140YHA(-BS) + EHPT20X-M*D

General Data		
Power supply	3x400V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

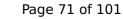


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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	40 dB(A)	40 dB(A)	
Sound power level outdoor	67 dB(A)	67 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
η_{s}	175 %	131 %	
Prated	14.00 kW	14.00 kW	
SCOP	4.46	3.36	
Tbiv	-7 °C	-7 °C	
TOL	-28 °C	-28 °C	
Pdh Tj = -7°C	12.40 kW	12.40 kW	
COP Tj = -7°C	2.55	1.98	
Cdh	1.00	1.00	
Pdh Tj = +2°C	7.50 kW	7.50 kW	
COP Tj = +2°C	4.41	3.25	
Cdh	0.99	0.99	
Pdh Tj = +7°C	4.90 kW	5.10 kW	
COP Tj = +7°C	6.28	4.64	
Cdh	0.98	0.99	

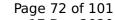
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This information was generated by the first factor and actual as the first factor and the factor				
5.70 kW	5.20 kW			
7.43	6.24			
0.98	0.98			
12.40 kW	12.40 kW			
2.55	1.98			
13.90 kW	13.90 kW			
2.40	1.75			
60 °C	60 °C			
22 W	22 W			
22 W	22 W			
22 W	22 W			
o w	o w			
electricity	electricity			
1.39 kW	1.39 kW			
6491 kWh	8618 kWh			
	7.43 0.98 12.40 kW 2.55 13.90 kW 2.40 60 °C 22 W 22 W 0 W electricity 1.39 kW			

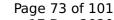
EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	40 dB(A)	40 dB(A)		
Sound power level outdoor	67 dB(A)	67 dB(A)		





EN 14825

	Low temperature	Medium temperature
η_{s}	225 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	5.69	4.04
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



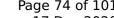


Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278





 $$\operatorname{\textit{Page}}\ 74$ of $101$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 I



Model: PUZ-HWM140YHA(-BS) + EHPX-M*D

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate



 $$\operatorname{\textit{Page}}\ 76$$ of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	4.46	3.36
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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Pdh Tj = 12° C 5.70 kW 5.20 kW $COP Tj = 12^{\circ}C$ 7.43 6.24 Cdh 0.98 0.98 12.40 kW 12.40 kW Pdh Tj = Tbiv2.55 1.98 COP Tj = TbivPdh Tj = TOL13.90 kW 13.90 kW 1.75 COPTj = TOL2.40 WTOL 60 °C 60 °C Poff 22 W 22 W PTO 22 W 22 W

22 W

0 W

electricity

1.39 kW

6491 kWh

22 W

0 W

electricity

1.39 kW

8618 kWh

Warmer Climate

Supplementary Heater: PSUP

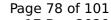
Annual energy consumption Qhe

Supplementary Heater: Type of energy input

PSB

PCK

	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η _s	225 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	5.69	4.04
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



$$\operatorname{\textit{Page}}\ 79$ of $101$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	22 W	22 W
РТО	22 W	22 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	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh



Model: PUZ-HWM140YHA(-BS) + EHPX-VM*D

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

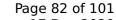


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	4.46	3.36
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

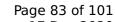
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-	
5.70 kW	5.20 kW
7.43	6.24
0.98	0.98
12.40 kW	12.40 kW
2.55	1.98
13.90 kW	13.90 kW
2.40	1.75
60 °C	60 °C
22 W	22 W
22 W	22 W
22 W	22 W
o w	o w
electricity	electricity
1.39 kW	1.39 kW
6491 kWh	8618 kWh
	7.43 0.98 12.40 kW 2.55 13.90 kW 2.40 60 °C 22 W 22 W 0 W electricity 1.39 kW

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η _s	225 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	5.69	4.04
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
$COP Tj = +7^{\circ}C$	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



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Poff	22 W	22 W
РТО	22 W	22 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	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh



Model: PUZ-HWM140YHA(-BS) + EHPX-YM*D

General Data		
Power supply 3x400V 50Hz		

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate

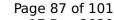


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	4.46	3.36
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6491 kWh	8618 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	225 %	131 %
Prated	14.00 kW	14.00 kW
SCOP	5.69	4.04
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



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Poff	22 W	22 W
РТО	22 W	22 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	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh



Model: PUZ-HWM140YHA(-BS) + ERPT20X-M*D

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	14.00 kW	14.00 kW	
El input	3.14 kW	5.24 kW	
СОР	4.46	2.67	
Indoor water flow rate	2.41 m³/h	1.51 m³/h	

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

Average Climate

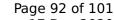


 $$\operatorname{\textit{Page}}\xspace$ 91 of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	177 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	4.51	3.39
Tbiv	-7 °C	-7 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.55	1.98
Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
COP Tj = +7°C	6.28	4.64
Cdh	0.98	0.99

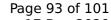
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Pdh Tj = 12°C	5.70 kW	5.20 kW
COP Tj = 12°C	7.43	6.24
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.40 kW	12.40 kW
COP Tj = Tbiv	2.55	1.98
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	2.40	1.75
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o w	o w
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.39 kW	1.39 kW
Annual energy consumption Qhe	6491 kWh	8618 kWh

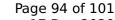
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

	Low temperature	Medium temperature
η_{s}	231 %	133 %
Prated	14.00 kW	14.00 kW
SCOP	5.86	4.13
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.15	1.94
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	9.00 kW
COP Tj = +7°C	5.10	3.25
Cdh	0.99	1.00
Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



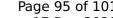


Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3288 kWh	4629 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	130 %
СОР	3.07
Heating up time	1:46 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278





$$\operatorname{\textit{Page}}\xspace$ 95 of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	L
Efficiency ηDHW	152 %
СОР	3.58
Heating up time	1:34 h:min
Standby power input	35.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278



Model: PUZ-HWM140YHA(-BS) + ERPT20X-VM*D

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	14.00 kW
El input	3.14 kW	5.24 kW
СОР	4.46	2.67
Indoor water flow rate	2.41 m³/h	1.51 m³/h

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

Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 97 of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	177 %	133 %
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Tbiv	-7 °C	-7 °C
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Cdh	1.00	1.00
Pdh Tj = +2°C	7.50 kW	7.50 kW
COP Tj = +2°C	4.41	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	4.90 kW	5.10 kW
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5.70 kW	5.20 kW		
7.43	6.24		
0.98	0.98		
12.40 kW	12.40 kW		
2.55	1.98		
13.90 kW	13.90 kW		
2.40	1.75		
60 °C	60 °C		
22 W	22 W		
22 W	22 W		
22 W	22 W		
o w	o w		
electricity	electricity		
1.39 kW	1.39 kW		
6491 kWh	8618 kWh		
	7.43 0.98 12.40 kW 2.55 13.90 kW 2.40 60 °C 22 W 22 W 0 W electricity 1.39 kW		

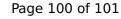
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	67 dB(A)	67 dB(A)





EN 14825

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TOL	-28 °C	-28 °C
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Pdh Tj = 12°C	5.50 kW	5.20 kW
COP Tj = 12°C	7.43	5.91
Cdh	0.98	0.98
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COP Tj = Tbiv	3.15	1.94
Pdh Tj = TOL	13.90 kW	13.90 kW
COP Tj = TOL	3.14	1.94
WTOL	60 °C	60 °C



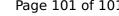


Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
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 $$\operatorname{\textit{Page}}\xspace$ 101 of 101 This information was generated by the HP KEYMARK database on 17 Dec 2020

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Heating up time	1:34 h:min	
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