This information was generated by the HP KEYMARK database on 17 Dec 2020

Summary of	Ecodan Zubadan 14-200D Packaged	Reg. No.	037-0035-20
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) + 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
COP	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	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

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
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	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

Warmer 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	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

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
COP	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	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

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
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	1.39 kW	1.39 kW
Annual energy consumption Qhe	6464 kWh	8591 kWh

Warmer 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	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
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 %
COP	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 l

Warmer Climate

EN 16147

Declared load profile	L
Efficiency ηDHW	152 %
COP	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 l