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

Summary of	Ecodan Zubadan 14-300D AA	Reg. No.	037-0028-20
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	Heat Pump Test Center WPZ		
Subtype title	Ecodan Zubadan 14-300D AA		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass Of Refrigerant	1.7 kg		
Certification Date	06.10.2020		
Testing basis	HP Keymark scheme rules rev. no. 6		

Model: PUD-SHWM140VAA(-BS) + E*ST30D-M*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	12.00 kW
El input	2.55 kW	4.90 kW
COP	4.70	2.45
Indoor water flow rate	2.06 m³/h	1.29 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	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	179 %	134 %
Prated	14.00 kW	14.00 kW
SCOP	4.54	3.43
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.76	2.15
Cdh	1.00	1.00
Pdh Tj = +2°C	7.60 kW	7.50 kW
COP Tj = +2°C	4.34	3.15
Cdh	0.99	0.99
Pdh Tj = +7°C	5.20 kW	6.30 kW
COP Tj = +7°C	6.27	4.96
Cdh	0.98	0.99

Pdh Tj = 12°C	5.40 kW	4.00 kW
COP Tj = 12°C	9.00	6.90
Cdh	0.98	0.97
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	2.69	1.80
Pdh Tj = TOL	9.60 kW	9.60 kW
COP Tj = TOL	1.55	1.55
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	6265 kWh	8315 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	224 %	134 %
Prated	14.00 kW	14.00 kW
SCOP	5.68	3.96
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.05	1.95
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	8.80 kW
COP Tj = +7°C	5.08	3.24
Cdh	0.99	0.99
Pdh Tj = 12°C	5.10 kW	5.50 kW
COP Tj = 12°C	7.18	5.50
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	3.05	1.95
Pdh Tj = TOL	9.60 kW	9.60 kW
COP Tj = TOL	1.55	1.55
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	3236 kWh	4667 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	121 %
COP	2.91
Heating up time	2:15 h:min
Standby power input	42.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

EN 16147

Declared load profile	XL
Efficiency ηDHW	139 %
COP	3.34
Heating up time	2:05 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM140VAA(-BS) + E*ST30D-*M*D

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	12.00 kW
El input	2.55 kW	4.90 kW
COP	4.70	2.45
Indoor water flow rate	2.06 m³/h	1.29 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	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	179 %	134 %
Prated	14.00 kW	14.00 kW
SCOP	4.54	3.43
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.76	2.15
Cdh	1.00	1.00
Pdh Tj = +2°C	7.60 kW	7.50 kW
COP Tj = +2°C	4.34	3.15
Cdh	0.99	0.99
Pdh Tj = +7°C	5.20 kW	6.30 kW
COP Tj = +7°C	6.27	4.96
Cdh	0.98	0.99

Pdh Tj = 12°C	5.40 kW	4.00 kW
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COP Tj = Tbiv	2.69	1.80
Pdh Tj = TOL	9.60 kW	9.60 kW
COP Tj = TOL	1.55	1.55
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	6265 kWh	8315 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	224 %	134 %
Prated	14.00 kW	14.00 kW
SCOP	5.68	3.96
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.05	1.95
Cdh	1.00	1.00
Pdh Tj = +7°C	9.00 kW	8.80 kW
COP Tj = +7°C	5.08	3.24
Cdh	0.99	0.99
Pdh Tj = 12°C	5.10 kW	5.50 kW
COP Tj = 12°C	7.18	5.50
Cdh	0.98	0.98
Pdh Tj = Tbiv	14.00 kW	14.00 kW
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COP Tj = TOL	1.55	1.55
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	3236 kWh	4667 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
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Heating up time	2:05 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM140YAA(-BS) + E*ST30D-M*D

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	12.00 kW
El input	2.55 kW	4.90 kW
COP	4.70	2.45
Indoor water flow rate	2.06 m³/h	1.29 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	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	134 %
Prated	14.00 kW	14.00 kW
SCOP	4.51	3.42
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	12.40 kW	12.40 kW
COP Tj = -7°C	2.76	2.15
Cdh	1.00	1.00
Pdh Tj = +2°C	7.60 kW	7.50 kW
COP Tj = +2°C	4.34	3.15
Cdh	0.99	0.99
Pdh Tj = +7°C	5.20 kW	6.30 kW
COP Tj = +7°C	6.27	4.96
Cdh	0.97	0.98

Pdh Tj = 12°C	5.40 kW	4.00 kW
COP Tj = 12°C	9.00	6.90
Cdh	0.96	0.96
Pdh Tj = Tbiv	14.00 kW	14.00 kW
COP Tj = Tbiv	2.69	1.80
Pdh Tj = TOL	9.60 kW	9.60 kW
COP Tj = TOL	1.55	1.55
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	6265 kWh	8315 kWh

Warmer Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	223 %	134 %
Prated	14.00 kW	14.00 kW
SCOP	5.64	3.94
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	14.00 kW	14.00 kW
COP Tj = +2°C	3.05	1.95
Cdh	1.00	1.00
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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	3236 kWh	4667 kWh

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