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

Summary of	Ecodan Power Inverter 5-170D Packaged	Reg. No.	037-0030-20
Certificate Holder	Certificate Holder		
Name	Mitsubishi Electric Air Conditioning Systems Euro	pe 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	SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise)		
Subtype title	Ecodan Power Inverter 5-170D Packaged		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass Of Refrigerant	2 kg		
Certification Date	22.06.2020		
Testing basis	HP Keymark scheme rules rev. no. 6		

# Model: PUZ-WM50VHA(-BS) + EHPT17X-VM\*D

General Data	
Power supply	1x230V 50Hz

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	5.00 kW
El input	1.00 kW	1.62 kW
СОР	5.00	3.08
Indoor water flow rate	0.86 m³/h	0.54 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	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	183 %	129 %
Prated	5.00 kW	5.00 kW
SCOP	4.66	3.31
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.40 kW	4.40 kW
COP Tj = -7°C	3.17	2.04
Cdh	0.99	0.99
Pdh Tj = +2°C	2.70 kW	2.70 kW
COP Tj = +2°C	4.58	3.29
Cdh	0.98	0.98
Pdh Tj = +7°C	1.90 kW	1.70 kW
COP Tj = +7°C	6.55	4.47
Cdh	0.95	0.96

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Teracea by the rin Renn	
1.80 kW	1.80 kW
8.57	6.67
0.93	0.94
4.40 kW	4.40 kW
3.17	2.04
3.50 kW	3.50 kW
1.75	1.75
60 °C	60 °C
15 W	15 W
15 W	15 W
15 W	15 W
0 W	o w
electricity	electricity
0.81 kW	0.81 kW
2113 kWh	3014 kWh
	1.80 kW 8.57 0.93 4.40 kW 3.17 3.50 kW 1.75 60 °C 15 W 15 W 0 W electricity 0.81 kW

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	61 dB(A)	61 dB(A)





#### EN 14825

	Low temperature	Medium temperature
η <sub>s</sub>	226 %	129 %
Prated	5.00 kW	5.00 kW
SCOP	5.73	4.00
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.00 kW	5.00 kW
COP Tj = +2°C	3.68	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.20 kW	3.20 kW
$COP Tj = +7^{\circ}C$	4.92	3.30
Cdh	0.98	0.98
Pdh Tj = 12°C	1.90 kW	1.80 kW
COP Tj = 12°C	7.92	5.81
Cdh	0.94	0.95
Pdh Tj = Tbiv	4.40 kW	4.40 kW
COP Tj = Tbiv	2.99	1.93
Pdh Tj = TOL	3.50 kW	3.50 kW
COP Tj = TOL	1.66	1.66
WTOL	60 °C	60 °C



Poff	15 W	15 W
PTO	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	1111 kWh	1616 kWh

### Domestic Hot Water (DHW)

# **Average Climate**

EN 16147	
Declared load profile	L
Efficiency ηDHW	120 %
СОР	2.84
Heating up time	2:07 h:min
Standby power input	39.0 W
Reference hot water temperature	55.5 °C
Mixed water at 40°C	236 I





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EN 16147		
Declared load profile	L	
Efficiency ηDHW	135 %	
СОР	3.19	
Heating up time	2:32 h:min	
Standby power input	36.0 W	
Reference hot water temperature	55.5 °C	
Mixed water at 40°C	236 I	



# Model: PUZ-WM50VHA(-BS) + EHPT17X-YM\*D

General Data	
Power supply	3x400V 50Hz

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	5.00 kW
El input	1.00 kW	1.62 kW
СОР	5.00	3.08
Indoor water flow rate	0.86 m³/h	0.54 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

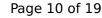
## **Average Climate**



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	183 %	129 %
Prated	5.00 kW	5.00 kW
SCOP	4.66	3.31
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.40 kW	4.40 kW
COP Tj = -7°C	3.17	2.04
Cdh	0.99	0.99
Pdh Tj = +2°C	2.70 kW	2.70 kW
COP Tj = +2°C	4.58	3.29
Cdh	0.98	0.98
Pdh Tj = +7°C	1.90 kW	1.70 kW
COP Tj = +7°C	6.55	4.47
Cdh	0.95	0.96

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Pdh Tj = 12°C	1.80 kW	1.80 kW
COP Tj = 12°C	8.57	6.67
Cdh	0.93	0.94
Pdh Tj = Tbiv	4.40 kW	4.40 kW
COP Tj = Tbiv	3.17	2.04
Pdh Tj = TOL	3.50 kW	3.50 kW
COP Tj = TOL	1.75	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	0.81 kW	0.81 kW
Annual energy consumption Qhe	2113 kWh	3014 kWh

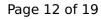
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	61 dB(A)	61 dB(A)





#### EN 14825

	Low temperature	Medium temperature
η <sub>s</sub>	226 %	129 %
Prated	5.00 kW	5.00 kW
SCOP	5.73	4.00
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.00 kW	5.00 kW
COP Tj = +2°C	3.68	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.20 kW	3.20 kW
$COP Tj = +7^{\circ}C$	4.92	3.30
Cdh	0.98	0.98
Pdh Tj = 12°C	1.90 kW	1.80 kW
COP Tj = 12°C	7.92	5.81
Cdh	0.94	0.95
Pdh Tj = Tbiv	4.40 kW	4.40 kW
COP Tj = Tbiv	2.99	1.93
Pdh Tj = TOL	3.50 kW	3.50 kW
COP Tj = TOL	1.66	1.66
WTOL	60 °C	60 °C



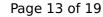


Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1111 kWh	1616 kWh

### Domestic Hot Water (DHW)

# **Average Climate**

EN 16147	
Declared load profile	L
Efficiency ηDHW	120 %
СОР	2.84
Heating up time	2:07 h:min
Standby power input	39.0 W
Reference hot water temperature	55.5 °C
Mixed water at 40°C	236





EN 16147	
Declared load profile	L
Efficiency ηDHW	135 %
СОР	3.19
Heating up time	2:32 h:min
Standby power input	36.0 W
Reference hot water temperature	55.5 °C
Mixed water at 40°C	236

# Model: PUZ-WM50VHA(-BS) + ERPT17X-VM\*D

General Data	
Power supply	1x230V 50Hz

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	5.00 kW	5.00 kW	
El input	1.00 kW	1.62 kW	
СОР	5.00	3.08	
Indoor water flow rate	0.86 m³/h	0.54 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**

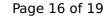


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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	40 dB(A)	40 dB(A)
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	190 %	133 %
Prated	5.00 kW	5.00 kW
SCOP	4.83	3.40
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	4.40 kW	4.40 kW
COP Tj = -7°C	3.17	2.04
Cdh	0.99	0.99
Pdh Tj = +2°C	2.70 kW	2.70 kW
COP Tj = +2°C	4.58	3.29
Cdh	0.98	0.98
Pdh Tj = +7°C	1.90 kW	1.70 kW
COP Tj = +7°C	6.55	4.47
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-	
1.80 kW	1.80 kW
8.57	6.67
0.93	0.94
4.40 kW	4.40 kW
3.17	2.04
3.50 kW	3.50 kW
1.75	1.75
60 °C	60 °C
15 W	15 W
15 W	15 W
15 W	15 W
0 W	o w
electricity	electricity
0.81 kW	0.81 kW
2113 kWh	3014 kWh
	8.57  0.93  4.40 kW  3.17  3.50 kW  1.75  60 °C  15 W  15 W  0 W  electricity  0.81 kW

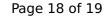
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	40 dB(A)	40 dB(A)	
Sound power level outdoor	61 dB(A)	61 dB(A)	





#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	237 %	133 %
Prated	5.00 kW	5.00 kW
SCOP	6.00	4.13
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	5.00 kW	5.00 kW
COP Tj = +2°C	3.68	1.98
Cdh	0.99	0.99
Pdh Tj = +7°C	3.20 kW	3.20 kW
COP Tj = +7°C	4.92	3.30
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COP Tj = Tbiv	2.99	1.93
Pdh Tj = TOL	3.50 kW	3.50 kW
COP Tj = TOL	1.66	1.66
WTOL	60 °C	60 °C





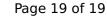
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Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1111 kWh	1616 kWh

# Domestic Hot Water (DHW)

# Average Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	120 %	
СОР	2.84	
Heating up time	2:07 h:min	
Standby power input	39.0 W	
Reference hot water temperature	55.5 °C	
Mixed water at 40°C	236	





EN 16147		
Declared load profile	L	
Efficiency ηDHW	135 %	
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Heating up time	2:32 h:min	
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Reference hot water temperature	55.5 °C	
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