

Subtype Ecodan Zubadan 23

Certificate Holder	Mitsubishi Electric Air Conditioning Systems Europe LTD
Address	Nettlehill Road, Houston Industrial Estate
ZIP	EH54 5EQ
City	Livingston
Country	GB
Certification Body	SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise)
Subtype title	Ecodan Zubadan 23
Registration number	037-0057-20
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	7.7 kg
Certification Date	09.04.2020
Testing basis	HP Keymark scheme rules rev. no. 7

Model PUAZ-SHW230YKA2 + EHSE-*M*C

Model name	PUAZ-SHW230YKA2 + EHSE-*M*C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	164 %	127 %
Prated	25 kW	23 kW
SCOP	4.18	3.25
Tbiv	-10 °C	-10 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	22.1 kW	20.3 kW
COP Tj = -7°C	3.4	2.1
Cdh Tj = -7 °C	0.95	0.95
Pdh Tj = +2°C	13.5 kW	12.4 kW
COP Tj = +2°C	3.8	3.02
Cdh Tj = +2 °C	0.95	0.95
Pdh Tj = +7°C	12 kW	11.2 kW
COP Tj = +7°C	5.32	4.54
Cdh Tj = +7 °C	0.95	0.95
Pdh Tj = 12°C	14.6 kW	13.7 kW
COP Tj = 12°C	6.68	5.79
Cdh Tj = +12 °C	0.95	0.95
Pdh Tj = Tbiv	25 kW	23 kW
COP Tj = Tbiv	2.19	1.85

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25 kW	23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.85
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 kW	0 kW
Annual energy consumption Qhe	12351 kWh	14615 kWh

Model PUAZ-SHW230YKA2 + EHSE-M*C

Model name	PUAZ-SHW230YKA2 + EHSE-M*C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	164 %	127 %
Prated	25 kW	23 kW
SCOP	4.18	3.25
Tbiv	-10 °C	-10 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	22.1 kW	20.3 kW
COP Tj = -7°C	3.4	2.1
Cdh Tj = -7 °C	0.95	0.95
Pdh Tj = +2°C	13.5 kW	12.4 kW
COP Tj = +2°C	3.8	3.02
Cdh Tj = +2 °C	0.95	0.95
Pdh Tj = +7°C	12 kW	11.2 kW
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Pdh Tj = Tbiv	25 kW	23 kW
COP Tj = Tbiv	2.19	1.85

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	25 kW	23 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.85
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 kW	0 kW
Annual energy consumption Qhe	12351 kWh	14615 kWh

Model PUAZ-SHW230YKA2 + ERSE-*M*C

Model name	PUAZ-SHW230YKA2 + ERSE-*M*C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	165 %	128 %
Prated	25 kW	23 kW
SCOP	4.21	3.28
Tbiv	-10 °C	-10 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	22.1 kW	20.3 kW
COP Tj = -7°C	3.4	2.1
Cdh Tj = -7 °C	0.95	0.95
Pdh Tj = +2°C	13.5 kW	12.4 kW
COP Tj = +2°C	3.8	3.04
Cdh Tj = +2 °C	0.95	0.95
Pdh Tj = +7°C	12 kW	11.2 kW
COP Tj = +7°C	5.32	4.54
Cdh Tj = +7 °C	0.95	0.95
Pdh Tj = 12°C	14.6 kW	13.7 kW
COP Tj = 12°C	6.68	5.79
Cdh Tj = +12 °C	0.95	0.95
Pdh Tj = Tbiv	25 kW	23 kW

COP $T_j = T_{biv}$	2.19	1.85
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	25 kW	23 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.19	1.85
WTOL	60 °C	60 °C
P _{off}	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 kW	0 kW
Annual energy consumption Q _{he}	12270 kWh	14485 kWh

Model PUHZ-SHW230YKA2 + ERSE-M*C

Model name	PUHZ-SHW230YKA2 + ERSE-M*C
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	165 %	128 %
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Tbiv	-10 °C	-10 °C
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Pdh Tj = -7°C	22.1 kW	20.3 kW
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COP Tj = 12°C	6.68	5.79
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Pdh Tj = Tbiv	25 kW	23 kW

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$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	25 kW	23 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.19	1.85
WTOL	60 °C	60 °C
P _{off}	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 kW	0 kW
Annual energy consumption Q _{he}	12270 kWh	14485 kWh

Model PUHZ-SHW230YKA2(-BS) + EHSE-*M*D

Model name	PUHZ-SHW230YKA2(-BS) + EHSE-*M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)
Sound power level outdoor	75 dB(A)	75 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	164 %	127 %
Prated	25 kW	23 kW
SCOP	4.18	3.25
Tbiv	-10 °C	-10 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	22.1 kW	20.3 kW
COP Tj = -7°C	3.4	2.1
Cdh Tj = -7 °C	0.98	1
Pdh Tj = +2°C	13.5 kW	12.4 kW
COP Tj = +2°C	3.8	3.02
Cdh Tj = +2 °C	0.95	1
Pdh Tj = +7°C	12 kW	11.2 kW
COP Tj = +7°C	5.32	4.54
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PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	12351 kWh	14615 kWh

Model PUHZ-SHW230YKA2(-BS) + EHSE-M*D

Model name	PUHZ-SHW230YKA2(-BS) + EHSE-M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water

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Defrost test	passed
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Model name	PUAZ-SHW230YKA2(-BS) + ERSE-*M*D
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Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

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Off-peak product	n/a

Outdoor Air/Water

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Annual energy consumption Q _{he}	12270 kWh	14485 kWh

Model PUAZ-SHW230YKA2(-BS) + ERSE-M*D

Model name	PUAZ-SHW230YKA2(-BS) + ERSE-M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
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Outdoor Air/Water

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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 kW	0 kW
Annual energy consumption Q _{he}	12270 kWh	14485 kWh