

## Subtype Ecodan Power Inverter (TR) 12 + 200D AA

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 Power Inverter (TR) 12 + 200D AA
Registration number	037-0117-23
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.8 kg
Certification Date	26.04.2023
Testing basis	HP Keymark scheme rules rev. no. 9

## Model PUZ-SWM120VAA + EHST20D-\*M\*D

Model name	PUZ-SWM120VAA + EHST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	134 %
COP	3.2
Heating up time	2:09 h:min
Standby power input	43 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	274 l

## Model PUZ-SWM120YAA + EHST20D-\*M\*D

Model name	PUZ-SWM120YAA + EHST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
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 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	134 %
COP	3.2
Heating up time	2:09 h:min
Standby power input	43 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	274 l

## Model PUZ-SWM120VAA + EHSD-\*M\*D

Model name	PUZ-SWM120VAA + EHSD-*M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	1x230V 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	41 dB(A)	41 dB(A)
Sound power level outdoor	58 dB(A)	58 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	177 %	131 %
Prated	12.1 kW	12.1 kW
SCOP	4.49	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.7 kW	10.7 kW
COP Tj = -7°C	2.75	1.87
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.5	3.33
Cdh Tj = +2 °C	0.99	0.992
Pdh Tj = +7°C	5.2 kW	5 kW
COP Tj = +7°C	6	4.65
Cdh Tj = +7 °C	0.983	0.986
Pdh Tj = 12°C	4 kW	3.8 kW
COP Tj = 12°C	7	6.2
Cdh Tj = +12 °C	0.974	0.976
Pdh Tj = Tbiv	10.7 kW	10.7 kW

COP $T_j = T_{biv}$	2.75	1.87
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	10.7 kW	10.7 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.4	1.55
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.997	0.998
WTOL	60 °C	60 °C
P <sub>off</sub>	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	1.4 kW	1.4 kW
Annual energy consumption Q <sub>he</sub>	5566 kWh	7450 kWh

## Model PUZ-SWM120YAA + EHSD-\*M\*D

Model name	PUZ-SWM120YAA + EHSD-*M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
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	41 dB(A)	41 dB(A)
Sound power level outdoor	58 dB(A)	58 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	176 %	131 %
Prated	12.1 kW	12.1 kW
SCOP	4.46	3.34
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.7 kW	10.7 kW
COP Tj = -7°C	2.75	1.87
Cdh Tj = -7 °C	0.994	0.996
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.5	3.33
Cdh Tj = +2 °C	0.985	0.989
Pdh Tj = +7°C	5.2 kW	5 kW
COP Tj = +7°C	6	4.65
Cdh Tj = +7 °C	0.975	0.98
Pdh Tj = 12°C	4 kW	3.8 kW
COP Tj = 12°C	7	6.2
Cdh Tj = +12 °C	0.962	0.964
Pdh Tj = Tbiv	10.7 kW	10.7 kW

COP $T_j = T_{biv}$	2.75	1.87
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	10.7 kW	10.7 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.4	1.55
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.995	0.997
WTOL	60 °C	60 °C
P <sub>off</sub>	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	1.4 kW	1.4 kW
Annual energy consumption Q <sub>he</sub>	5600 kWh	7485 kWh

## Model PUZ-SWM120VAA + ERST20D-\*M\*D

Model name	PUZ-SWM120VAA + ERST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	134 %
COP	3.2
Heating up time	2:09 h:min
Standby power input	43 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	274 l



## Model PUZ-SWM120YAA + ERST20D-\*M\*D

Model name	PUZ-SWM120YAA + ERST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

## General data

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

## Outdoor Air/Water

## EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	134 %
COP	3.2
Heating up time	2:09 h:min
Standby power input	43 W
Reference hot water temperature	51.5 °C
Mixed water at 40°C	274 l

## Model PUZ-SWM120VAA + ERSD-\*M\*D

Model name	PUZ-SWM120VAA + ERSD-*M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

## General data

Power supply	1x230V 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	41 dB(A)	41 dB(A)
Sound power level outdoor	58 dB(A)	58 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	132 %
Prated	12.1 kW	12.1 kW
SCOP	4.54	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.7 kW	10.7 kW
COP Tj = -7°C	2.75	1.87
Cdh Tj = -7 °C	0.996	0.997
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.5	3.33
Cdh Tj = +2 °C	0.99	0.992
Pdh Tj = +7°C	5.2 kW	5 kW
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Pdh Tj = 12°C	4 kW	3.8 kW
COP Tj = 12°C	7	6.2
Cdh Tj = +12 °C	0.974	0.976

Pdh Tj = Tbiv	10.7 kW	10.7 kW
COP Tj = Tbiv	2.75	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.7 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.997	0.998
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	1.4 kW	1.4 kW
Annual energy consumption Qhe	5511 kWh	7395 kWh

## Model PUZ-SWM120YAA + ERSD-\*M\*D

Model name	PUZ-SWM120YAA + ERSD-*M*D
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Heat Source	Outdoor Air
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
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
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## EN 12102-1 | Average Climate

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Sound power level indoor	41 dB(A)	41 dB(A)
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	Low temperature	Medium temperature
$\eta_s$	178 %	132 %
Prated	12.1 kW	12.1 kW
SCOP	4.53	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.7 kW	10.7 kW
COP Tj = -7°C	2.75	1.87
Cdh Tj = -7 °C	0.994	0.996
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.5	3.33
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Pdh Tj = +7°C	5.2 kW	5 kW
COP Tj = +7°C	6	4.65
Cdh Tj = +7 °C	0.975	0.98
Pdh Tj = 12°C	4 kW	3.8 kW
COP Tj = 12°C	7	6.2
Cdh Tj = +12 °C	0.962	0.964

Pdh Tj = Tbiv	10.7 kW	10.7 kW
COP Tj = Tbiv	2.75	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.7 kW	10.7 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.4	1.55
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.995	0.997
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	1.4 kW	1.4 kW
Annual energy consumption Qhe	5520 kWh	7404 kWh