

## Subtype Ecodan Power Inverter 8-170E Packaged R290

|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| 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 8-170E Packaged R290                                        |
| Registration number | 037-0134-23                                                                       |
| Heat Pump Type      | Outdoor Air/Water                                                                 |
| Refrigerant         | R290                                                                              |
| Mass of Refrigerant | 1 kg                                                                              |
| Certification Date  | 31.08.2023                                                                        |
| Testing basis       | HP Keymark scheme rules rev. no. 10                                               |

## Model PUZ-WZ80VAA(-BS) + EHPT17X-\*M\*E

|                                     |                                 |
|-------------------------------------|---------------------------------|
| Model name                          | PUZ-WZ80VAA(-BS) + EHPT17X-*M*E |
| 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 $\eta_{DHW}$         | 120 %      |
| COP                             | 2.87       |
| Heating up time                 | 2:41 h:min |
| Standby power input             | 41 W       |
| Reference hot water temperature | 55.5 °C    |
| Mixed water at 40°C             | 236 l      |

### EN 16147 | Warmer Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 135 %      |
| COP                             | 3.22       |
| Heating up time                 | 2:21 h:min |
| Standby power input             | 40 W       |
| Reference hot water temperature | 55.5 °C    |
| Mixed water at 40°C             | 236 l      |

## 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 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 6 kW            | 6 kW               |
| El input    | 1.28 kW         | 2 kW               |
| COP         | 4.7             | 3                  |

## EN 14511-2 | Cooling

|                  | +7°C/+12°C | +18°C/+23°C |
|------------------|------------|-------------|
| El input         | 1.48 kW    | 1.79 kW     |
| Cooling capacity | 4          | 5           |
| EER              | 2.7        | 2.8         |

### EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 58 dB(A)        | 58 dB(A)           |

### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 174 %           | 138 %              |
| Prated                                              | 8 kW            | 8 kW               |
| SCOP                                                | 4.42            | 3.52               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 7.08 kW         | 7.08 kW            |
| COP Tj = -7°C                                       | 3.04            | 2.19               |
| Cdh Tj = -7 °C                                      | 0.994           | 0.995              |
| Pdh Tj = +2°C                                       | 4.36 kW         | 4.33 kW            |
| COP Tj = +2°C                                       | 4.13            | 3.34               |
| Cdh Tj = +2 °C                                      | 0.986           | 0.988              |
| Pdh Tj = +7°C                                       | 2.81 kW         | 2.78 kW            |
| COP Tj = +7°C                                       | 6.17            | 5                  |
| Cdh Tj = +7 °C                                      | 0.967           | 0.973              |
| Pdh Tj = 12°C                                       | 2.14 kW         | 1.91 kW            |
| COP Tj = 12°C                                       | 7.68            | 6.55               |
| Cdh Tj = +12 °C                                     | 0.946           | 0.949              |
| Pdh Tj = Tbiv                                       | 7.08 kW         | 7.08 kW            |
| COP Tj = Tbiv                                       | 3.04            | 2.19               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.1 kW          | 7.15 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.68            | 1.79               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.994           | 0.996              |
| WTOL                                                | 75 °C           | 75 °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                          | 0.9 kW          | 0.85 kW            |
| Annual energy consumption Qhe                       | 3738 kWh        | 4694 kWh           |

### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 58 dB(A)        | 58 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 226 %           | 159 %              |
| Prated                                              | 8 kW            | 8 kW               |
| SCOP                                                | 5.72            | 4.05               |
| Tbiv                                                | 2 °C            | 2 °C               |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = +2°C                                       | 8 kW            | 8 kW               |
| COP Tj = +2°C                                       | 3.42            | 2.12               |
| Cdh Tj = +2 °C                                      | 0.994           | 0.996              |
| Pdh Tj = +7°C                                       | 5.14 kW         | 5.14 kW            |
| COP Tj = +7°C                                       | 5.26            | 3.26               |
| Cdh Tj = +7 °C                                      | 0.985           | 0.99               |
| Pdh Tj = 12°C                                       | 2.29 kW         | 2.29 kW            |
| COP Tj = 12°C                                       | 7.24            | 5.84               |
| Cdh Tj = +12 °C                                     | 0.953           | 0.962              |
| Pdh Tj = Tbiv                                       | 8 kW            | 8 kW               |
| COP Tj = Tbiv                                       | 3.42            | 2.12               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW            | 8 kW               |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.42            | 2.12               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.994           | 0.996              |
| WTOL                                                | 75 °C           | 75 °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 kW            | 0 kW               |
| Annual energy consumption Qhe                       | 1870 kWh        | 2641 kWh           |

#### EN 14825 | Cooling

|                | +7°C/+12°C | +18°C/+23°C |
|----------------|------------|-------------|
| Pdesignc       | 4 kW       | 5 kW        |
| SEER           | 3.96       | 4.92        |
| Pdc Tj = 35°C  | 4 kW       | 5 kW        |
| EER Tj = 35°C  | 2.7        | 2.8         |
| Cdc Tj = 35 °C | 0.99       | 0.992       |
| Pdc Tj = 30°C  | 2.93 kW    | 3.65 kW     |
| EER Tj = 30°C  | 3.58       | 4.33        |

|                               |         |         |
|-------------------------------|---------|---------|
| Cdc Tj = 30 °C                | 0.982   | 0.982   |
| Pdc Tj = 25°C                 | 2.5 kW  | 3.17 kW |
| EER Tj = 25°C                 | 4.53    | 5.75    |
| Cdc Tj = 25 °C                | 0.973   | 0.973   |
| Pdc Tj = 20°C                 | 2.34 kW | 3.42 kW |
| EER Tj = 20°C                 | 5.38    | 7.38    |
| Cdc Tj = 20 °C                | 0.966   | 0.968   |
| Poff                          | 15 W    | 15 W    |
| PTO                           | 15 W    | 15 W    |
| PSB                           | 15 W    | 15 W    |
| PCK                           | 0 W     | 0 W     |
| Annual energy consumption Qce | 606 kWh | 609 kWh |

## Model PUZ-WZ80VAA(-BS) + ERPT17X-\*M\*E

|                                     |                                 |
|-------------------------------------|---------------------------------|
| Model name                          | PUZ-WZ80VAA(-BS) + ERPT17X-*M*E |
| 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 $\eta_{DHW}$         | 120 %      |
| COP                             | 2.87       |
| Heating up time                 | 2:41 h:min |
| Standby power input             | 41 W       |
| Reference hot water temperature | 55.5 °C    |
| Mixed water at 40°C             | 236 l      |

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|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 135 %      |
| COP                             | 3.22       |
| Heating up time                 | 2:21 h:min |
| Standby power input             | 40 W       |
| Reference hot water temperature | 55.5 °C    |
| Mixed water at 40°C             | 236 l      |

## 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 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 6 kW            | 6 kW               |
| El input    | 1.28 kW         | 2 kW               |
| COP         | 4.7             | 3                  |

## EN 14511-2 | Cooling

|                  | +7°C/+12°C | +18°C/+23°C |
|------------------|------------|-------------|
| El input         | 1.48 kW    | 1.79 kW     |
| Cooling capacity | 4          | 5           |
| EER              | 2.7        | 2.8         |

### EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 58 dB(A)        | 58 dB(A)           |

### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 176 %           | 140 %              |
| Prated                                              | 8 kW            | 8 kW               |
| SCOP                                                | 4.49            | 3.56               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 7.08 kW         | 7.08 kW            |
| COP Tj = -7°C                                       | 3.04            | 2.19               |
| Cdh Tj = -7 °C                                      | 0.994           | 0.995              |
| Pdh Tj = +2°C                                       | 4.36 kW         | 4.33 kW            |
| COP Tj = +2°C                                       | 4.13            | 3.34               |
| Cdh Tj = +2 °C                                      | 0.986           | 0.988              |
| Pdh Tj = +7°C                                       | 2.81 kW         | 2.78 kW            |
| COP Tj = +7°C                                       | 6.17            | 5                  |
| Cdh Tj = +7 °C                                      | 0.967           | 0.973              |
| Pdh Tj = 12°C                                       | 2.14 kW         | 1.91 kW            |
| COP Tj = 12°C                                       | 7.68            | 6.55               |
| Cdh Tj = +12 °C                                     | 0.946           | 0.949              |
| Pdh Tj = Tbiv                                       | 7.08 kW         | 7.08 kW            |
| COP Tj = Tbiv                                       | 3.04            | 2.19               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.1 kW          | 7.15 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.68            | 1.79               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.994           | 0.996              |
| WTOL                                                | 75 °C           | 75 °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                          | 0.9 kW          | 0.85 kW            |
| Annual energy consumption Qhe                       | 3683 kWh        | 4639 kWh           |

### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 40 dB(A)        | 40 dB(A)           |
| Sound power level outdoor | 58 dB(A)        | 58 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 234 %           | 163 %              |
| Prated                                              | 8 kW            | 8 kW               |
| SCOP                                                | 5.93            | 4.15               |
| Tbiv                                                | 2 °C            | 2 °C               |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = +2°C                                       | 8 kW            | 8 kW               |
| COP Tj = +2°C                                       | 3.42            | 2.12               |
| Cdh Tj = +2 °C                                      | 0.994           | 0.996              |
| Pdh Tj = +7°C                                       | 5.14 kW         | 5.14 kW            |
| COP Tj = +7°C                                       | 5.26            | 3.26               |
| Cdh Tj = +7 °C                                      | 0.985           | 0.99               |
| Pdh Tj = 12°C                                       | 2.29 kW         | 2.29 kW            |
| COP Tj = 12°C                                       | 7.24            | 5.84               |
| Cdh Tj = +12 °C                                     | 0.953           | 0.962              |
| Pdh Tj = Tbiv                                       | 8 kW            | 8 kW               |
| COP Tj = Tbiv                                       | 3.42            | 2.12               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW            | 8 kW               |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.42            | 2.12               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.994           | 0.996              |
| WTOL                                                | 75 °C           | 75 °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 kW            | 0 kW               |
| Annual energy consumption Qhe                       | 1803 kWh        | 2575 kWh           |

#### EN 14825 | Cooling

|                | +7°C/+12°C | +18°C/+23°C |
|----------------|------------|-------------|
| Pdesignc       | 4 kW       | 5 kW        |
| SEER           | 3.96       | 4.92        |
| Pdc Tj = 35°C  | 4 kW       | 5 kW        |
| EER Tj = 35°C  | 2.7        | 2.8         |
| Cdc Tj = 35 °C | 0.99       | 0.992       |
| Pdc Tj = 30°C  | 2.93 kW    | 3.65 kW     |
| EER Tj = 30°C  | 3.58       | 4.33        |

|                               |         |         |
|-------------------------------|---------|---------|
| Cdc Tj = 30 °C                | 0.982   | 0.982   |
| Pdc Tj = 25°C                 | 2.5 kW  | 3.17 kW |
| EER Tj = 25°C                 | 4.53    | 5.75    |
| Cdc Tj = 25 °C                | 0.973   | 0.973   |
| Pdc Tj = 20°C                 | 2.34 kW | 3.42 kW |
| EER Tj = 20°C                 | 5.38    | 7.38    |
| Cdc Tj = 20 °C                | 0.966   | 0.968   |
| Poff                          | 15 W    | 15 W    |
| PTO                           | 15 W    | 15 W    |
| PSB                           | 15 W    | 15 W    |
| PCK                           | 0 W     | 0 W     |
| Annual energy consumption Qce | 606 kWh | 609 kWh |