

Page 1 of 25

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| Summary of | Ecodan Zubadan 6/8-300D AA | Reg. No. | 037-0026-20 |
|---------------------|---|---|----------------|
| Certificate Holder | Certificate Holder | | |
| Name | Mitsubishi Electric Air Conditioning Systems Europe LTD | | |
| Address | Nettlehill Road, Houston Industrial Estate | Nettlehill Road, Houston Industrial Estate Zip EH54 5EQ | |
| City | Livingston | Country | United Kingdom |
| Certification Body | SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise) | | |
| Subtype title | Ecodan Zubadan 6/8-300D AA | | |
| Heat Pump Type | Outdoor Air/Water | | |
| Refrigerant | R32 | | |
| Mass of Refrigerant | 1.4 kg | | |
| Certification Date | 30.11.2020 | | |
| Testing basis | HP Keymark scheme rules rev. no. 6 | | |



Model: PUD-SHWM60VAA(-BS) + E*ST30D-*M*D

| Configure model | | |
|--|--------------------------|--|
| Model name PUD-SHWM60VAA(-BS) + E*ST30D-*M*D | | |
| Application | Heating + DHW + low temp | |
| Units | Indoor + Outdoor | |
| Climate Zone n/a | | |
| Reversibility No | | |
| Cooling mode application (optional) n/a | | |

| General Data | | |
|--------------------------|--|--|
| Power supply 1x230V 50Hz | | |

Heating

| EN 14511-2 | | |
|------------------------------------|------|---------|
| Low temperature Medium temperature | | |
| Heat output | 5 kW | 5 kW |
| El input | 1 kW | 1.89 kW |
| СОР | 4.99 | 2.65 |

| EN 14511-4 | |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |
| Defrost test | passed |
| Starting and operating test | passed |



| EN 12102-1 | | |
|---------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 55 dB(A) | 55 dB(A) |

| EN 14825 | | |
|------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| η_{s} | 178 % | 134 % |
| Prated | 6 kW | 6 kW |
| SCOP | 4.52 | 3.41 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 5.3 kW | 5.3 kW |
| COP Tj = -7°C | 3.29 | 2.14 |
| Cdh Tj = -7 °C | 0.99 | 0.99 |
| Pdh Tj = $+2$ °C | 4.7 kW | 4.3 kW |
| COP Tj = +2°C | 4.45 | 3.23 |
| Cdh Tj = +2 °C | 0.98 | 0.99 |
| Pdh Tj = +7°C | 5.1 kW | 5.3 kW |
| COP Tj = +7°C | 5.67 | 4.91 |
| Cdh Tj = +7 °C | 0.98 | 0.99 |





| Pdh Tj = 12°C | 3.2 kW | 3.1 kW |
|---|-------------|-------------|
| COP Tj = 12°C | 7.8 | 6.89 |
| Cdh Tj = +12 °C | 0.96 | 0.97 |
| Pdh Tj = Tbiv | 6 kW | 6 kW |
| COP Tj = Tbiv | 3.21 | 2.02 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6 kW | 6 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.21 | 2.02 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| РТО | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | o w | o w |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0 kW | 0 kW |
| Annual energy consumption Qhe | 2743 kWh | 3631 kWh |
| | | |

Domestic Hot Water (DHW)



| EN 16147 | | |
|---------------------------------|-------------|--|
| Declared load profile | XL | |
| Efficiency ηDHW | 121 % | |
| СОР | 2.93 | |
| Heating up time | 02:49 h:min | |
| Standby power input | 39 W | |
| Reference hot water temperature | 52.5 °C | |
| Mixed water at 40°C | 417 | |



Model: PUD-SHWM60VAA(-BS) + E*ST30D-M*D

| Configure model | | |
|---|--|--|
| Model name PUD-SHWM60VAA(-BS) + E*ST30D-M*D | | |
| Application Heating + DHW + low temp | | |
| Units Indoor + Outdoor | | |
| Climate Zone n/a | | |
| Reversibility No | | |
| Cooling mode application (optional) n/a | | |

| General Data | | |
|--------------------------|--|--|
| Power supply 1x230V 50Hz | | |

Heating

| EN 14511-2 | | |
|------------------------------------|------|---------|
| Low temperature Medium temperature | | |
| Heat output | 5 kW | 5 kW |
| El input | 1 kW | 1.89 kW |
| СОР | 4.99 | 2.65 |

| EN 14511-4 | | |
|--|--------|--|
| Shutting off the heat transfer medium flow | passed | |
| Complete power supply failure | passed | |
| Defrost test | passed | |
| Starting and operating test | passed | |





| EN 12102-1 | | |
|---------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 55 dB(A) | 55 dB(A) |

| EN 14825 | | |
|----------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| η_{s} | 178 % | 134 % |
| Prated | 6 kW | 6 kW |
| SCOP | 4.52 | 3.41 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 5.3 kW | 5.3 kW |
| COP Tj = -7°C | 3.29 | 2.14 |
| Cdh Tj = -7 °C | 0.99 | 0.99 |
| Pdh Tj = +2°C | 4.7 kW | 4.3 kW |
| COP Tj = +2°C | 4.45 | 3.23 |
| Cdh Tj = +2 °C | 0.98 | 0.99 |
| Pdh Tj = +7°C | 5.1 kW | 5.3 kW |
| COP Tj = +7°C | 5.67 | 4.91 |
| Cdh Tj = +7 °C | 0.98 | 0.99 |
| | · | |





| Pdh Tj = 12°C | 3.2 kW | 3.1 kW |
|---|-------------|-------------|
| COP Tj = 12°C | 7.8 | 6.89 |
| Cdh Tj = +12 °C | 0.96 | 0.97 |
| Pdh Tj = Tbiv | 6 kW | 6 kW |
| COP Tj = Tbiv | 3.21 | 2.02 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6 kW | 6 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.21 | 2.02 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| РТО | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | o w | o w |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0 kW | 0 kW |
| Annual energy consumption Qhe | 2743 kWh | 3631 kWh |
| | | |

Domestic Hot Water (DHW)



| EN 16147 | |
|---------------------------------|-------------|
| Declared load profile | XL |
| Efficiency ηDHW | 121 % |
| СОР | 2.93 |
| Heating up time | 02:49 h:min |
| Standby power input | 39 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 417 |

Model: PUD-SHWM80VAA(-BS) + E*ST30D-*M*D

| Configure model | | |
|-------------------------------------|-----------------------------------|--|
| Model name | PUD-SHWM80VAA(-BS) + E*ST30D-*M*D | |
| Application | Heating + DHW + low temp | |
| Units | Indoor + Outdoor | |
| Climate Zone | n/a | |
| Reversibility | No | |
| Cooling mode application (optional) | n/a | |

| General Data | | |
|--------------|-------------|--|
| Power supply | 1x230V 50Hz | |

Heating

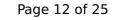
| EN 14511-2 | | | |
|------------------------------------|---------|---------|--|
| Low temperature Medium temperature | | | |
| Heat output | 6 kW | 6 kW | |
| El input | 1.19 kW | 2.26 kW | |
| СОР | 5.03 | 2.65 | |

| EN 14511-4 | | |
|--|--------|--|
| Shutting off the heat transfer medium flow | passed | |
| Complete power supply failure | passed | |
| Defrost test | passed | |
| Starting and operating test | passed | |



| EN 12102-1 | | |
|---------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

| EN 14825 | | |
|----------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| η_{s} | 181 % | 135 % |
| Prated | 8 kW | 8 kW |
| SCOP | 4.6 | 3.45 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 7.1 kW | 7.1 kW |
| COP Tj = -7°C | 3.11 | 2.14 |
| Cdh Tj = -7 °C | 0.99 | 1 |
| Pdh Tj = +2°C | 4.7 kW | 4.3 kW |
| COP Tj = +2°C | 4.43 | 3.23 |
| Cdh Tj = +2 °C | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.1 kW | 5.3 kW |
| COP Tj = +7°C | 6 | 4.91 |
| Cdh Tj = +7 °C | 0.98 | 0.99 |
| | · | |





| This information was generated by the HP KEYMARK database on 18 Mar 20 | | |
|--|-------------|-------------|
| Pdh Tj = 12°C | 3.2 kW | 3.1 kW |
| COP Tj = 12°C | 8.21 | 7.05 |
| Cdh Tj = +12 °C | 0.96 | 0.97 |
| Pdh Tj = Tbiv | 8 kW | 8 kW |
| COP Tj = Tbiv | 3.09 | 1.97 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW | 8 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.09 | 1.97 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| PTO | 15 W | 15 W |
| PSB | 15 W | 15 W |
| PCK | o w | o w |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0 kW | 0 kW |
| | | |

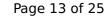
Domestic Hot Water (DHW)

Annual energy consumption Qhe

Average Climate

3597 kWh

4793 kWh





| EN 16147 | | |
|---------------------------------|-------------|--|
| Declared load profile | XL | |
| Efficiency ηDHW | 121 % | |
| СОР | 2.93 | |
| Heating up time | 02:49 h:min | |
| Standby power input | 39 W | |
| Reference hot water temperature | 52.5 °C | |
| Mixed water at 40°C | 417 | |



Model: PUD-SHWM80VAA(-BS) + E*ST30D-M*D

| Configure model | | |
|---|--|--|
| Model name PUD-SHWM80VAA(-BS) + E*ST30D-M*D | | |
| Application Heating + DHW + low temp | | |
| Units Indoor + Outdoor | | |
| Climate Zone n/a | | |
| Reversibility No | | |
| Cooling mode application (optional) n/a | | |

| General Data | | |
|--------------------------|--|--|
| Power supply 1x230V 50Hz | | |

Heating

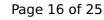
| EN 14511-2 | | | |
|------------------------------------|---------|---------|--|
| Low temperature Medium temperature | | | |
| Heat output | 6 kW | 6 kW | |
| El input | 1.19 kW | 2.26 kW | |
| СОР | 5.03 | 2.65 | |

| EN 14511-4 | |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure | passed |
| Defrost test | passed |
| Starting and operating test | passed |



| EN 12102-1 | | |
|---------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

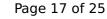
| EN 14825 | | |
|----------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| η_{s} | 181 % | 135 % |
| Prated | 8 kW | 8 kW |
| SCOP | 4.6 | 3.45 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 7.1 kW | 7.1 kW |
| COP Tj = -7°C | 3.11 | 2.14 |
| Cdh Tj = -7 °C | 0.99 | 1 |
| Pdh Tj = +2°C | 4.7 kW | 4.3 kW |
| COP Tj = +2°C | 4.43 | 3.23 |
| Cdh Tj = +2 °C | 0.99 | 0.99 |
| Pdh Tj = +7°C | 5.1 kW | 5.3 kW |
| COP Tj = +7°C | 6 | 4.91 |
| Cdh Tj = +7 °C | 0.98 | 0.99 |





| Pdh Tj = 12°C | 3.2 kW | 3.1 kW |
|---|-------------|-------------|
| COP Tj = 12°C | 8.21 | 7.05 |
| Cdh Tj = +12 °C | 0.96 | 0.97 |
| Pdh Tj = Tbiv | 8 kW | 8 kW |
| COP Tj = Tbiv | 3.09 | 1.97 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW | 8 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.09 | 1.97 |
| WTOL | 60 °C | 60 °C |
| Poff | 15 W | 15 W |
| РТО | 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 kW | 0 kW |
| Annual energy consumption Qhe | 3597 kWh | 4793 kWh |
| | | |

Domestic Hot Water (DHW)





| EN 16147 | | |
|---------------------------------|-------------|--|
| Declared load profile | XL | |
| Efficiency ηDHW | 121 % | |
| СОР | 2.93 | |
| Heating up time | 02:49 h:min | |
| Standby power input | 39 W | |
| Reference hot water temperature | 52.5 °C | |
| Mixed water at 40°C | 417 | |

Model: PUD-SHWM80YAA(-BS) + E*ST30D-*M*D

| Configure model | | |
|--|--|--|
| Model name PUD-SHWM80YAA(-BS) + E*ST30D-*M*D | | |
| Application Heating + DHW + low temp | | |
| Units Indoor + Outdoor | | |
| Climate Zone n/a | | |
| Reversibility No | | |
| Cooling mode application (optional) n/a | | |

| General Data | | | |
|--------------|--------------------------|--|--|
| Power supply | Power supply 3x400V 50Hz | | |

Heating

| EN 14511-2 | | | |
|------------------------------------|---------|---------|--|
| Low temperature Medium temperature | | | |
| Heat output | 6 kW | 6 kW | |
| El input | 1.19 kW | 2.26 kW | |
| СОР | 5.03 | 2.65 | |

| EN 14511-4 | | |
|--|--------|--|
| Shutting off the heat transfer medium flow | passed | |
| Complete power supply failure | passed | |
| Defrost test | passed | |
| Starting and operating test | passed | |



| EN 12102-1 | | |
|---------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

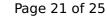
| EN 14825 | | |
|-------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| η_{S} | 179 % | 134 % |
| Prated | 8 kW | 8 kW |
| SCOP | 4.55 | 3.42 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 7.1 kW | 7.1 kW |
| COP Tj = -7°C | 3.11 | 2.14 |
| Cdh Tj = -7 °C | 0.99 | 0.99 |
| Pdh Tj = $+2$ °C | 4.7 kW | 4.3 kW |
| COP Tj = +2°C | 4.44 | 3.23 |
| Cdh Tj = +2 °C | 0.98 | 0.98 |
| Pdh Tj = $+7^{\circ}$ C | 5.1 kW | 5.3 kW |
| COP Tj = +7°C | 6 | 4.91 |
| Cdh Tj = +7 °C | 0.97 | 0.98 |





| Pdh Tj = 12°C | 3.2 kW | 3.1 kW |
|---|-------------|-------------|
| COP Tj = 12°C | 8.21 | 7.05 |
| Cdh Tj = +12 °C | 0.94 | 0.95 |
| Pdh Tj = Tbiv | 8 kW | 8 kW |
| COP Tj = Tbiv | 3.09 | 1.97 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW | 8 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.09 | 1.97 |
| WTOL | 60 °C | 60 °C |
| Poff | 22 W | 22 W |
| РТО | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | o w | o w |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0 kW | 0 kW |
| Annual energy consumption Qhe | 3632 kWh | 4832 kWh |

Domestic Hot Water (DHW)





| EN 16147 | | |
|---------------------------------|-------------|--|
| Declared load profile | XL | |
| Efficiency ηDHW | 121 % | |
| СОР | 2.93 | |
| Heating up time | 02:49 h:min | |
| Standby power input | 39 W | |
| Reference hot water temperature | 52.5 °C | |
| Mixed water at 40°C | 417 | |



Model: PUD-SHWM80YAA(-BS) + E*ST30D-M*D

| Configure model | | |
|-------------------------------------|----------------------------------|--|
| Model name | PUD-SHWM80YAA(-BS) + E*ST30D-M*D | |
| Application | Heating + DHW + low temp | |
| Units | Indoor + Outdoor | |
| Climate Zone | n/a | |
| Reversibility | No | |
| Cooling mode application (optional) | n/a | |

| General Data | | |
|--------------|-------------|--|
| Power supply | 3x400V 50Hz | |

Heating

| EN 14511-2 | | | |
|-------------|-----------------|--------------------|--|
| | Low temperature | Medium temperature | |
| Heat output | 6 kW | 6 kW | |
| El input | 1.19 kW | 2.26 kW | |
| СОР | 5.03 | 2.65 | |

| EN 14511-4 | | |
|--|--------|--|
| Shutting off the heat transfer medium flow | passed | |
| Complete power supply failure | passed | |
| Defrost test | passed | |
| Starting and operating test | passed | |



| EN 12102-1 | | |
|---------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| Sound power level indoor | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 56 dB(A) | 56 dB(A) |

| EN 14825 | | |
|-------------------------|-----------------|--------------------|
| | Low temperature | Medium temperature |
| η_{S} | 179 % | 134 % |
| Prated | 8 kW | 8 kW |
| SCOP | 4.55 | 3.42 |
| Tbiv | -10 °C | -10 °C |
| TOL | -28 °C | -28 °C |
| Pdh Tj = -7°C | 7.1 kW | 7.1 kW |
| COP Tj = -7°C | 3.11 | 2.14 |
| Cdh Tj = -7 °C | 0.99 | 0.99 |
| Pdh Tj = $+2$ °C | 4.7 kW | 4.3 kW |
| COP Tj = +2°C | 4.44 | 3.23 |
| Cdh Tj = +2 °C | 0.98 | 0.98 |
| Pdh Tj = $+7^{\circ}$ C | 5.1 kW | 5.3 kW |
| COP Tj = +7°C | 6 | 4.91 |
| Cdh Tj = +7 °C | 0.97 | 0.98 |





| Pdh Tj = 12°C | 3.2 kW | 3.1 kW |
|---|-------------|-------------|
| COP Tj = 12°C | 8.21 | 7.05 |
| Cdh Tj = +12 °C | 0.94 | 0.95 |
| Pdh Tj = Tbiv | 8 kW | 8 kW |
| COP Tj = Tbiv | 3.09 | 1.97 |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8 kW | 8 kW |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.09 | 1.97 |
| WTOL | 60 °C | 60 °C |
| Poff | 22 W | 22 W |
| РТО | 22 W | 22 W |
| PSB | 22 W | 22 W |
| PCK | o w | 0 W |
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP | 0 kW | 0 kW |
| Annual energy consumption Qhe | 3632 kWh | 4832 kWh |
| | | |

Domestic Hot Water (DHW)



| EN 16147 | |
|---------------------------------|-------------|
| Declared load profile | XL |
| Efficiency ηDHW | 121 % |
| СОР | 2.93 |
| Heating up time | 02:49 h:min |
| Standby power input | 39 W |
| Reference hot water temperature | 52.5 °C |
| Mixed water at 40°C | 417 |