Information requirements for heat pump space heaters and heat pump combination heaters - Commission Regulation (EU) No 813/2013

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|---|---|
| Indoor Model | ***Vitocal 222-A AWOT-M-E 221.A13*** |
| Outdoor Model | ***Vitocal 200-A AWO-M-E 201.A13*** |
| Air-to-water heat pump | *yes* |
| Water-to-water heat pump | *no* |
| Brine-to-water heat pump | *no* |
| Low-temperature heat pump | *no* |
| Equipped with a supplementary heater | *yes* |
| Heat pump combination heater | *yes* |

| | |
|---|---|
| Application | ***Low temperature*** |
| Climate conditions | ***Average*** |

| **Rated heat output** | *Prated* | 10 | kW |
|---|---|---|---|
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| $T_j$ = - 7 °C | *Pdh* | 8.8 | kW |
| $T_j$ = + 2 °C | *Pdh* | 5.7 | kW |
| $T_j$ = + 7 °C | *Pdh* | 8.9 | kW |
| $T_j$ = + 12 °C | *Pdh* | 6.6 | kW |
| $T_j$ = bivalent temperature | *Pdh* | 8.8 | kW |
| $T_j$ = operation limit temperature | *Pdh* | 8.1 | kW |
| $T_j$ = - 15 °C (if TOL < -20 °C) | *Pdh* | | kW |
| Bivalent temperature | $T_{biv}$ | -7 | °C |
| Cycling interval capacity for heating | *Pcych* | | kW |
| Degradation coefficient | *Cdh* | 0.98 | |
| Power consumption in modes other than active mode | | | |
| Off mode | $P_{OFF}$ | 0.031 | kW |
| Thermostat-off mode | $P_{TO}$ | 0.000 | kW |
| Standby mode | $P_{SB}$ | 0.025 | kW |
| Crankcase heater mode | $P_{CK}$ | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, indoors/outdoors | $L_{WA}$ | 39/56 | dB |
| Annual energy consumption | $Q_{HE}$ | 4607 | kWh |

| **Seasonal space heating energy efficiency** | $\eta_s$ | 175 | % |
|---|---|---|---|
| Declared coefficient of performance for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| $T_j$ = - 7 °C | $COP_d$ | 3.2 | |
| $T_j$ = + 2 °C | $COP_d$ | 4.3 | |
| $T_j$ = + 7 °C | $COP_d$ | 5.6 | |
| $T_j$ = + 12 °C | $COP_d$ | 7.6 | |
| $T_j$ = bivalent temperature | $COP_d$ | 3.2 | |
| $T_j$ = operation limit temperature | $COP_d$ | 2.9 | |
| $T_j$ = - 15 °C (if TOL < -20 °C) | $COP_d$ | | |
| Operation limit temperature | TOL | -10 | °C |
| Cycling interval efficiency | COPcyc | | |
| Heating water operating limit temperature | WTOL | 60 | °C |
| Supplementary heater | | | |
| Rated heat output | Psup | 9.0 | kW |
| Type of energy input | | Electric | |
| Rated air flow rate, outdoors | | 4500 | $m^3/h$ |

For heat pump combination heater

| **Declared load profile** | | L | | **Water heating energy efficiency** | $\eta_{wh}$ | 117 | % |
|---|---|---|---|---|---|---|---|
| Daily electric consumption | $Q_{elec}$ | 4.234 | kWh | Daily fuel consumption | $Q_{fuel}$ | | kWh |
| Annual electricity consumption | *AEC* | 904 | kWh | Annual fuel consumption | *AFC* | | kWh |
| Standby cylinder heat loss | | 1200 | Wh/day | Reference hot water temperature | | 52.5 | °C |
| | | | | DHW volume accounted for in test | | 290 | l |

| | |
|---|---|
| Application | ***Medium temperature*** |
| Climate conditions | ***Average*** |

| **Rated heat output** | *Prated* | 10 | kW |
|---|---|---|---|
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| $T_j$ = - 7 °C | *Pdh* | 8.9 | kW |
| $T_j$ = + 2 °C | *Pdh* | 5.9 | kW |
| $T_j$ = + 7 °C | *Pdh* | 5.4 | kW |
| $T_j$ = + 12 °C | *Pdh* | 6.4 | kW |
| $T_j$ = bivalent temperature | *Pdh* | 8.9 | kW |
| $T_j$ = operation limit temperature | *Pdh* | 8.6 | kW |
| $T_j$ = - 15 °C (if TOL < -20 °C) | *Pdh* | | kW |
| Bivalent temperature | $T_{biv}$ | -7 | °C |
| Cycling interval capacity for heating | *Pcych* | | kW |
| Degradation coefficient | *Cdh* | 0.98 | |
| Power consumption in modes other than active mode | | | |
| Off mode | $P_{OFF}$ | 0.031 | kW |
| Thermostat-off mode | $P_{TO}$ | 0.000 | kW |
| Standby mode | $P_{SB}$ | 0.025 | kW |
| Crankcase heater mode | $P_{CK}$ | 0.000 | kW |
| Other items | | | |
| Capacity control | | variable | |
| Sound power level, indoors/outdoors | $L_{WA}$ | 39/56 | dB |
| Annual energy consumption | $Q_{HE}$ | 6161 | kWh |

| **Seasonal space heating energy efficiency** | $\eta_s$ | 130 | % |
|---|---|---|---|
| Declared coefficient of performance for part load at indoor temperature 20 °C and outdoor temperature Tj | | | |
| $T_j$ = - 7 °C | $COP_d$ | 2.3 | |
| $T_j$ = + 2 °C | $COP_d$ | 3.2 | |
| $T_j$ = + 7 °C | $COP_d$ | 4.2 | |
| $T_j$ = + 12 °C | $COP_d$ | 5.7 | |
| $T_j$ = bivalent temperature | $COP_d$ | 2.3 | |
| $T_j$ = operation limit temperature | $COP_d$ | 2.0 | |
| $T_j$ = - 15 °C (if TOL < -20 °C) | $COP_d$ | | |
| Operation limit temperature | TOL | -10 | °C |
| Cycling interval efficiency | COPcyc | | |
| Heating water operating limit temperature | WTOL | 60 | °C |
| Supplementary heater | | | |
| Rated heat output | Psup | 9.0 | kW |
| Type of energy input | | Electric | |
| Rated air flow rate, outdoors | | 4500 | $m^3/h$ |

For heat pump combination heater

| **Declared load profile** | | L | | **Water heating energy efficiency** | $\eta_{wh}$ | 117 | % |
|---|---|---|---|---|---|---|---|
| Daily electric consumption | $Q_{elec}$ | 4.234 | kWh | Daily fuel consumption | $Q_{fuel}$ | | kWh |
| Annual electricity consumption | *AEC* | 904 | kWh | Annual fuel consumption | *AFC* | | kWh |
| Standby cylinder heat loss | | 1200 | Wh/day | Reference hot water temperature | | 52.5 | °C |
| | | | | DHW volume accounted for in test | | 290 | l |

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