**COMMISSION REGULATION (EU) 2016/2281** **AC250KNHPKH / AC250KXAPNH**

**ECODESIGN REQUIREMENTS FOR heat pumps/air conditioners**

## Information requirements

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| Information to identify the model(s) to which the information relates : **AC250KNHPKH / AC250KXAPNH** |
| Outdoor side heat exchanger of heat pump/air conditioners: [select which: air/water/brine] **air** |
| Indoor side heat exchanger of heat pump/air conditioners: [select which: air/water/brine] **air** |
| Indication if the heater is equipped with a supplementary heater: **no** |
| Type: [compressor driven vapour compression or sorption process] **compressor driven vapour compression** |
| If applicable: driver of compressor: [electric motor or fuel driven, gaseous or liquid fuel, internal or external combustion engine] **electric motor** |
| Parameters shall be declared for the average heating season, parameters for the warmer and colder heating seasons are optional. |

| Item | symbol | value | unit |
|---|---|---|---|
| Rated cooling capacity | $P_{rated,c}$ | **25,0** | kW |

| Item | symbol | value | unit |
|---|---|---|---|
| Seasonal space cooling energy efficiency | $\eta_{s,c}$ | **197,0** | % |

| Declared cooing capacity for part load at given outdoor temperatures $T_j$ and indoor 27℃/19℃ (dry/wet bulb) | | | |
|---|---|---|---|
| Tj = 35 ℃ | $P_{dc}$ | **25,0** | kW |
| Tj = 30 ℃ | $P_{dc}$ | **18,5** | kW |
| Tj = 25 ℃ | $P_{dc}$ | **11,8** | kW |
| Tj = 20 ℃ | $P_{dc}$ | **8,2** | kW |
| Degradation co-efficient for air conditioners( **) | $C_{dc}$ | **0,25** | - |

| Declared energy efficiency ratio for part load at given outdoor temperatures Tj | | | |
|---|---|---|---|
| Tj = 35 ℃ | $EER_d$ | **2,6** | - |
| Tj = 30 ℃ | $EER_d$ | **3,9** | - |
| Tj = 25 ℃ | $EER_d$ | **5,9** | - |
| Tj = 20 ℃ | $EER_d$ | **9,1** | - |

| Item | symbol | value | unit |
|---|---|---|---|
| Rated heating capacity | $P_{rated,h}$ | **27,0** | kW |

| Item | symbol | value | unit |
|---|---|---|---|
| Seasonal space heating energy efficiency | $\eta_{s,h}$ | **137,0** | % |

| Declared heating capacity for part load at indoor temperature 20 ℃ and outdoor temperature Tj | | | |
|---|---|---|---|
| Tj = -7 ℃ | $P_{dh}$ | **16,7** | kW |
| Tj = 2 ℃ | $P_{dh}$ | **10,2** | kW |
| Tj = 7 ℃ | $P_{dh}$ | **6,8** | kW |
| Tj = 12 ℃ | $P_{dh}$ | **7,8** | kW |
| $T_{biv}$ = bivalent temperature | $P_{dh}$ | **19,0** | kW |
| $T_{OL}$ = operating limit | $P_{dh}$ | **14,0** | kW |
| For air-to-water heat pumps: Tj= -15℃ (if $T_{OL}$ <-20℃) | $P_{dh}$ | - | kW |
| Bivalent temperature | $T_{biv}$ | **-10** | ℃ |
| Degradation co-efficient heat pumps ( **) | $C_{dh}$ | **0,25** | - |

| Declared coefficient of performance* / Average season, at indoor temperature 20 ℃ and outdoor temperature Tj | | | |
|---|---|---|---|
| Tj = -7 ℃ | $COP_d$ | **2,3** | - |
| Tj = 2 ℃ | $COP_d$ | **3,6** | - |
| Tj = 7 ℃ | $COP_d$ | **3,9** | - |
| Tj = 12 ℃ | $COP_d$ | **5,0** | - |
| Tj = bivalent temperature | $COP_d$ | **2,0** | - |
| Tj = operating limit | $COP_d$ | **1,0** | - |
| For water-to-air heat pumps: Tj= -15℃ (if $T_{OL}$ <-20℃) | $COP_d$ | - | - |
| For water-to-air heat pumps:Operation limit temperature | $T_{ol}$ | - | ℃ |

| Power consumption in modes other than 'active mode' | | | |
|---|---|---|---|
| Off mode | $P_{OFF}$ | **0,030** | kW |
| Thermostat-off mode | $P_{TO}$ | **0,200** | kW |
| Crankcase heater mode | $P_{CK}$ | **0,000** | kW |

| Supplementary heater | | | |
|---|---|---|---|
| Back-up heating capacity | elbu | - | kW |
| Type of energy input | | | |
| Standby mode | $P_{SB}$ | **0,030** | kW |

| Other items | | | |
|---|---|---|---|
| Capacity control | variable | | |
| Sound power level for cooling (indoor/outdoor) | $L_{WA}$ | **72,0/77,0** | dB |
| Sound power level for heating (indoor/outdoor) | $L_{WA}$ | **72,0/79,0** | dB |
| Emissions of nitrogen oxides (if applicable) | Nox (***) | - | mg/kWh fuel input GCV |
| GWP of the refrigerant | | **2088** | $kgCO_2$ eq (100 years) |

| Other items | | | |
|---|---|---|---|
| For air-to-air heat pumps/air conditioners : air flow rate, outdoor measured | - | **12000** | $m^3/h$ |
| For water/brine-to air heat pumps: Rated brined or water flow rate, outdoor side heat exchanger | - | - | $m^3/h$ |

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|---|---|
| Contact details | Samsung Electronics, PO Box 12987, Blackrock, Co. Dublin, Ireland<br>or Blackbushe Business Park, Yateley, Gu46 6GG, UK |

**= If Cd is not determined by measurement then the default degradation coefficient of heat pumps/air conditioners shall be 0,25.

*** From 26 September 2018.

Where information relates to multi-split heat pumps/air conditioners, the test result and performance data may be obtained on the basis of the performance of the out-door unit, with a combination of indoor unit(s) recommended by manufacturer or importer.

For multi-split heat pumps/air conditioners, a list of appropriate indoor units : AC071/090/120MN4PKH, AC071/090/120MN4DKH, AC071/120MNCDKH, AC060/071MNNDKH, AC071MNLDKH, AC060/071/090/120MNMDKH, AC071MNADKH

If you are a professional looking for information on non-destructive disassembly, dismantling and battery removability, please send an email to: erims.sec@samsung.com.