



By appointment to The Royal Danish Court

morsø

Technical documentation for solid fuel local space heaters according to Regulation (EU) 2015/1185 and Regulation (EU) 2015/1186

Model information

| | |
|-----------------------------------------------|------------------------------------------|
| Wood heater model: | Morsø S81-90 |
| Equivalent wood heater models: | S81 series |
| Test report: | 300-ELAB-1604-EN |
| Test Laboratory: | Danish Technological Institute |
| Harmonized standard applied: | EN 13 240:2001/A2:2004/AC:2007 |
| Other technical standards and specifications: | FprEN 16510-1:2013, DS/CEN/TC 15883:2009 |
| Direct heat output (kW) | 4.4 |
| Indirect heating functionality | No |
| Indirect heat output (kW) | N/A |

Characteristics when operating with the preferred fuel only

| | |
|--------------------------------------------------------|-----|
| Seasonal space heating energy efficiency η_s (%): | 78 |
| Energy Efficiency Index (EEI): | 119 |

| Item | symbol | value | unit |
|----------------------------------|-----------|-------|------|
| Heat Output | | | |
| Normal heat output | P_{nom} | 4.4 | kW |
| Minimum heat output (indicative) | P_{min} | N/A | kW |

| item | Symbol | value | unit |
|-------------------------------------------------------|-----------------|-------|------|
| Useful efficiency (NCV as received) | | | |
| Useful efficiency at nominal heat output | $\eta_{th,nom}$ | 88 | % |
| Useful efficiency at Minimum heat output (indicative) | $\eta_{th,min}$ | N/A | % |

| Item | Symbol | value | unit |
|------------------------------------------------|-------------|-------|------|
| Auxiliary electricity consumption | | | |
| At nominal heat output | $e_{l,max}$ | N/A | kW |
| At minimum heat output | $e_{l,min}$ | N/A | kW |
| In standby mode | $e_{l,SB}$ | N/A | kW |
| Permanent pilot flame power requirement | | | |
| Pilot flame power requirement (if applicable) | P_{pilot} | N/A | kW |

| Type of heat output/room temperature control (select one) | |
|------------------------------------------------------------------|-----|
| Single stage heat output, no room temperature control. | No |
| Two or more manual stages, no room temperature control | Yes |
| With mechanic thermostat room temperature control | No |
| With electronic room temperature control | No |
| With electronic room temperature control plus day timer | No |
| With electronic room temperature control plus week timer | No |
| Other control options (multiple selection possible) | |
| Room temperature control, with presence detection | No |
| Room temperature control, with open window detection | No |
| With distance control option | No |

| Fuel | Preferred fuel (only one): | Other suitable fuel(s): | η_s [%]: | Space heating emissions at nominal heat output (*) | | | | Space heating emissions at minimum heat output (*)(**) | | | |
|--------------------------------------------|----------------------------|-------------------------|---------------|----------------------------------------------------|-----|-----|-----------------|--------------------------------------------------------|-----|-----|-----------------|
| | | | | PM | OGC | CO | NO _x | PM | OGC | CO | NO _x |
| | | | | [x] mg/Nm ³ (13% O ₂) | | | | [x] mg/Nm ³ (13% O ₂) | | | |
| Wood logs with moisture content ≤ 25 % | Yes | Yes | 78 | 4 | 62 | 538 | 137 | N/A | N/A | N/A | N/A |
| Compressed wood with moisture < 12 % | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other woody biomass | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Non-woody biomass | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Anthracite and dry steam coal | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Hard coke | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Low temperature coke | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Bituminous coal | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Lignite briquettes | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Peat briquettes | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Blended biomass and fossil fuel briquettes | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other fossil fuel | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Blended biomass and fossil fuel briquettes | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Other blend of biomass and solid fuel | No | No | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

(*) PM = Particulate matter, OGC = organic gaseous compounds, CO = carbon monoxide, NO_x = nitrogen oxide

(**) Only required if correction factors F(2) or F(3) are applied.

Contact details of the manufacturer or its authorized representative

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|---------------|-------------------------------------------|
| Manufacturer: | Morsø Jernstøberi A/S |
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Nykøbing Mors, January 1, 2022

Peter Normann Nielsen
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