

102044.37A - Restricted

# Test report

## Morsø 7300 / 7400

NS-EN 13240 Roomheaters fired by solid fuel – Requirements and test methods

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NS-EN 13240 Roomheaters fired by solid fuel – Requirements and test methods

<b>KEYWORDS</b> Enclosed wood heater NS-EN 13240 Nominal output Safety	<b>VERSION</b> 2	<b>DATE</b> 2013-12-11
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	<b>PROJECT NO.</b> 102044.37	<b>NUMBER OF PAGES/APPENDICES</b> 26 incl. 5 appendices
	<b>TEST OBJECT</b> Enclosed wood heater	<b>TEST OBJECT RECEIVED</b> 2013-05-02
	<b>TEST PROGRAM</b> EN 13240 with attitional measurements acc. DINplus	<b>TEST LOCATION</b> Trondheim
		<b>DATE OF TEST</b> 2013-05-14 to 2013-05-22

### ABSTRACT

Morsø 7300 / 7400 fulfils the requirements in EN 13240.

Carbon monoxide (CO) at 13 % O<sub>2</sub>: 0.11 %,  
Organic gaseous compound (OGC) at 13 % O<sub>2</sub>: 48 mg/Nm<sup>3</sup>  
Flue gas mass flow: 5.9 g/s  
Efficiency at nominal heat output, 6.7 kW: 78 %

For both stoves the distance to combustibile wall shall be minimum 20 cm to the back. The distance to the back can be reduced to minimum 10 cm if the flue pipe is insulated or shielded. The distance from side of stove to combustibile wall shall be minimum 40 cm for the 7300 and minimum 45 cm for the 7400.


The test results relate only to the items tested

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**REPORT NO.**  
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SIGNATURE



SIGNATURE



CLASSIFICATION

Restricted

## A Test results according to certification programme DINplus

Table 6 presents measured and calculated values after performance testing at nominal heat output according to EN 13240 with addition measurement according to DINplus. Mean values are the calculated average from all three test periods. Leakage measurements made before and after test are presented in Table 7.

Table 6: Test results DINplus

Parameter	Charge 1	Charge 2	Charge 3	Requirement
Duration, h	0.77	0.78	0.77	≥ 0.75
Pieces of test fuel, pcs	2	2	2	-
Weight of test fuel, kg	1.44	1.35	1.33	-
Draught in chimney, Pa	12	12	12	12 ± 2
CO <sub>2</sub> -content, mean value, %	10.5	12.6	12.4	-
CO- content, mean value, %	0.11	0.17	0.08	-
Flue gas temperature, mean value, °C	272	297	301	-
Ambient temperature, mean value, °C	22	23	23	-
THC, ppm	18.3	44.2	24.6	-
Dust mg/Nm <sup>3</sup> at 13 % O <sub>2</sub>	3.2	13.2	6.4	-
<b>Mean value calculated of the basis of 3 charges</b>				
Flue gas temperature, mean value, °C	290			-
Ambient temperature, mean value, °C	22			-
CO <sub>2</sub> -content, mean value, %	11.9			-
CO, % at 13 % O <sub>2</sub>	0.08			-
CO, mg/Nm <sup>3</sup> at 13 % O <sub>2</sub>	996			≤ 1250
OGC, mg/Nm <sup>3</sup> at 13 % O <sub>2</sub>	35			≤ 120
Dust, mg/Nm <sup>3</sup> at 13 % O <sub>2</sub>	7.6			≤ 40
NO <sub>x</sub> , mg/Nm <sup>3</sup> at 13 % O <sub>2</sub>	78			≤ 200
Efficiency, %	78.4			≥ 78
Total heat output, average, kW	6.4			-
Flue gas mass flow, average, g/s	5.5			-

Table 7: Additional leakage measurement for DIN plus.

		Value			Unit
Pressure		5	10	15	Pa
Before test	Leakage reading	5	8	10.5	m <sup>3</sup> /h
	Calculated leakage at 10 Pa	8			m <sup>3</sup> /h
After test	Leakage reading	5.3	9	11.7	m <sup>3</sup> /h
	Calculated leakage at 10 Pa	9			m <sup>3</sup> /h
Increased leakage		1			m <sup>3</sup> /h