

Test reports

Cosmo – Cozy – Cubic – Mido – Avanti – Trend-line – Fine-line – Soft-line

1. Prøvningsattester
2. Test report



TEST Reg.nr. 300

TEKNOLOGISK INSTITUT

Akkrediteret prøvningsorgan, DANAK-akkreditering nr. 300
Notificeret prøvningsorgan med ID-nr. 1235



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Prøvningsattest II

Uddrag af rapport nr.: **300-ELAB-2313-EN-nom og
bedømmelse vedr. 300-ELAB-1635-NS**

Emne: Cosmo 1147 ver. 2, Cosmo on foot ver. 2, Cosmo 1147 Soapstone ver. 2, Cosmo 1147 soapstone high ver. 2, Cosmo 1147 Ceramic ver. 2, Cosmo 971 steel ver. 2, Cosmo 971 Soapstone ver. 2, Cosmo Classic ver. 2, Cosmo High Soapstone 1 piece, ver. 2, Cosmo 1500 ver. 2, Cosmo 1500 Soapstone ver. 2, Cubic wall ver. 2, Cubic W200 ver. 2, Cubic 109 ver. 2, Cubic 166 ver. 2, Cubic 215 ver. 2, Cubic Corner ver. 2, Mido ver. 2, Mido Soapstone ver. 2, Avanti ver. 2, Trend Line 1 ver. 2, Trend Line 1 full soapstone ver. 2, Trend Line 2 ver. 2, Trend Line 3 ver. 2, Trend Line 3 full soapstone ver. 2, Fine Line 1 ver. 2, Fine Line 1 full soapstone ver. 2, Fine Line 2 full soapstone ver. 2, Soft-Line wall steel top ver. 2, Soft-Line full soapstone ver. 2, Soft-Line full ceramic ver. 2.

Rekvirent: Jydepejsen Denmark A/S
Ahornsvinget 3-7, 7500 Holstebro
CVR nr.: 37675717 P-nr.: 1021408995

Procedure:	X	Prøvning efter DS/EN13240/A2:2004
	X	Prøvning efter NS3058-1 & -2 (partikelmåling)
	X	Emissionsmåling efter CEN/TS 15883 (støv og OGC)

Prøvningsresultater

Akkrediteret prøvning af brændeovn iht. EN 13240 er foretaget med brænde der påfyres manuelt, og følgende resultater blev opnået:

Nominal ydelse:	6.0	kW
CO-emission:	0.06	% - henført til 13 % O ₂
Virkningsgrad:	80	%
Røggastemperatur:	286	°C
Afstand til bagvæg:	-	mm (se vejledning)
Afstand til sidevæg:	-	mm (se vejledning)

Emissioner iht. NS 3058 og/eller CEN/TS 15883:

Partikler efter NS 3058:	2.75	g/kg (tørstof) middelværdi (krav 2015:5 / 2018:4)
Partikler efter NS 3058:	4.01	g/kg (tørstof) maksimalt (krav 2015:10 / 2018:8)
OGC efter CEN/TS 15883:	29	mgC/Nm ³ ved 13% O ₂ (krav 2015:150 / 2018:120)
Støv efter CEN/TS 15883:	6	mg/Nm ³ ved 13% O ₂ (krav 2015:40 / 2018:30)

Bemærk venligst, at de oplyste værdier er et uddrag af prøvningsrapporten.
For yderligere oplysninger henvises til prøvningsrapporten, se nummer ovenfor.

Aarhus, den 21. december 2017 René Lyngsø Hvidberg Senior konsulent	Skorstensfejerpåtegning
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På baggrund af ovennævnte emissioner attesteres det hermed, at fyringsanlægget opfylder emissionskravene i bilag 1 til Bekendtgørelse nr. 1461 af 07/12-2015 om regulering af luftforurening fra fyringsanlæg til fast brændsel under 1 MW, for så vidt:

Krav fra 2015 til januar 2018 opfyldt:	X	Krav efter januar 2018 opfyldt:	X
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Prøvningsattest III**Uddrag af rapport nr.: 300-ELAB-2403-EN-sik, "Assessment of Jydepejsen
Cozy", dateret 26.08.2019.****Emne:** Jydepejsen Cozy, Cozy Steel, Cozy High Steel Cozy Soapstone (med og
uden sideglas)**Rekvirent:** Jydepejsen Denmark A/S
Ahornsvinget 3-7, Nr. Felding, 7500 Holstebro, Denmark**Procedure:**

X	Prøvning efter DS/EN13240/A2:2004
X	Prøvning efter NS3058-1 & -2 (partikelmåling)
X	Emissionsmåling efter CEN/TS 15883 (støv og OGC)

PrøvningsresultaterAkkrediteret prøvning af brændeovn iht. EN 13240 er foretaget med brænde der påfyres
manuelt, og følgende resultater blev opnået:

Nominel ydelse: 6.0 kW
CO-emission: 0.06 % - henført til 13 % O₂
Virkningsgrad: 80 %
Røggastemperatur, middel: 286 °C - henført til 20°C rumtemperatur
Afstand til bagvæg: 150/200 mm (m/u isoleret røgrør)
Afstand til sidevæg: 400/350 mm (m/u modeller med sideglas)

Emissioner iht. NS 3058 og/eller CEN/TS 15883:

Partikler efter NS 3058: 2.75 g/kg (tørstof) middelværdi (krav: ≤4)
Partikler efter NS 3058: 4.01 g/kg (tørstof) maksimalt (krav: ≤8)
OGC efter CEN/TS 15883: 29 mgC/Nm³ ved 13% O₂ (krav: ≤120)
Støv efter CEN/TS 15883: 6 mg/Nm³ ved 13% O₂ (krav: ≤30)

Bemærk venligst, at de oplyste værdier er et uddrag af prøvningsrapporten.
For yderligere oplysninger henvises til prøvningsrapporten, se nummer ovenfor.

Aarhus, den 26.08.2019  René Lyngsø Hvidberg Seniorkonsulent	Skorstensfejerpåtegning
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På baggrund af ovennævnte emissioner attesteres det hermed, at fyringsanlægget opfylder
emissionskravene i bilag 1 til Bekendtgørelse nr. 49 af 16/01-2018 om regulering af
luftforurening fra fyringsanlæg til fast brændsel under 1 MW.



Jydepejsen Denmark A/S
Att.: Charlotte Kilsholm
Ahornsvinget 3-7, Nr. Felding
DK-7500 Holstebro

19th of December 2017
REHV/MXB

Assessment of combustion properties of Cosmo 1147, ver. 2 concerning NS 3058/3059 and the Clean Air Act (Smoke Control Area exemption) approval.

Jydepejsen Denmark A/S wishes to relaunch an improved version of the previously tested stove *Cosmo 1147* with the new name *Cosmo 1147, ver.2* regarding its test results for NS3058/59 and Clean Air Act (Smoke Control Area exemption).

Cosmo 1147 was initially tested in 2012 under 300-ELAB-1635 regarding above mentioned tests.

The difference between the new and the old version is an additional set of tertiary holes. Furthermore, the tertiary row is lowered 20mm from the original position.

The new version of the stove has been tested for its improved nominal emissions (regarding measurements required in EN13240) under the report 300-ELAB-2313-EN-nom, dated 19.12.2017.

The results from the emission test compared to the previously tested stove showed an identical or better energy efficiency and CO-emission for the same output. OGC and dust particles were both measured significantly lower than the previously tested version due to its improved afterburner (tertiary supply).

Test reports from DTI used for this assessment:

- 300-ELAB-1635-NS, type test to NS3058/59, the Norwegian particle emission test, dated 25-09-2012.
- 300-ELAB-1635-AEA, type test to the Clean Air Act for Smoke Control Area exemption, dated 19-12-2012.
- 300-ELAB-2313-EN-nom, EN13240 type test regarding its nominal combustion properties, dated 19.12.2017

Jydepejsen A/S has supplied the following documentation for this assessment regarding the different variants this approval influences:

- Cosmo on foot, ver. 2 (drawing 13700500)
- Cosmo 1147 Soapstone, ver. 2 (drawing 13721000)
- Cosmo 1147 soapstone high, ver. 2 (drawing 13702250)
- Cosmo 1147 Ceramic, ver. 2 (drawing 13703500)
- Cosmo 971 steel, ver. 2 (drawing 13700000)
- Cosmo 971 Soapstone, ver. 2 (drawing 13720000)
- Cosmo Classic, ver. 2 (drawing 13703000)
- Cosmo High Soapstone, 1 piece, ver. 2 (drawing 13722000)
- Cosmo 1500, ver. 2 (drawing 13750000)
- Cosmo 1500 Soapstone, ver. 2 (drawing 13755000)
- Cubic wall, ver. 2 (drawing 13100000)

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2017\Assessment of Cosmo 1147, vers. 2, NS and AEA.docx



- Cubic W200, ver. 2 (drawing 13104000)
- Cubic 109, ver. 2 (drawing 13101000)
- Cubic 166, ver. 2 (drawing 13102000)
- Cubic 215, ver. 2 (drawing 13103000)
- Cubic Corner, ver. 2 (drawing 13106000)
- Mido, ver. 2 (drawing 14201000)
- Mido Soapstone, ver. 2 (drawing 14205000)
- Avanti, ver. 2 (drawing 119-00001-00)
- Trend Line 1, ver. 2 (drawing 013-00001-00)
- Trend Line 1 full soapstone, ver. 2 (drawing 013-00005-00)
- Trend Line 2, ver. 2 (drawing 013-00002-00)
- Trend Line 3, ver. 2 (drawing 013-00003-00)
- Trend Line 3 full soapstone, ver. 2 (drawing 013-00004-00)
- Fine Line 1 full soapstone, ver. 2 (drawing 010-00001-00)
- Fine Line 1, ver. 2 (drawing 010-00002-00)
- Fine Line 2 full soapstone, ver. 2 (drawing 010-00005-00)
- Soft-Line wall steel top, ver. 2 (drawing 012-00001-00)
- Soft-Line full soapstone, ver. 2 (drawing 012-00002-00)
- Soft-Line full ceramic, ver. 2 (drawing 012-00003-00)

All of the above-mentioned variants are based on identical or insignificantly different type of combustion chamber, air supply and flue ways.

Based on the improved test results regarding report 300-ELAB-2313-EN-nom for both its OGC- and dust particle emissions, DTI assesses that *Cosmo 1147, ver. 2* and the associated variants with the improved air supply have identical or better combustion properties than the previously tested version *Cosmo 1147* regarding its NS3058 type test combustion properties and the particle emissions properties for the UK Clean Air Act (Smoke Control Area Exemption).

The documentation material is provided as separate digitally signet .pdf document.

Best regards
Danish Technological Institute
Stoves & Boiler test lab

René Lyngsø Hvidberg
Senior Consultant

TEST REPORT

Report no.:
300-ELAB-2313-EN-nom



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Page 1 of 12
Init.: REHV/MXB
Order no.: 787856
No. of appendices: 1

Requested by: Contact person: Kennet Rand
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Address: Ahornsvinget 3
Postcode/town: 7500 Holstebro
Country: Denmark
Email: kra@jydepejsen.dk
Telephone: +45 9610 1200

Product: Solid fuel stove Type: Cosmo 1147 steel, ver. 2

Sample: Receipt at DTI, Aarhus: 05.12.2017, sampled by Jydepejsen Denmark

Test period: Date of testing: 05.12.2017 - 06.12.2017

Procedure Testing of a solid fuel stove in accordance with DS/EN 13240:2003 and DS/EN 13240/A2:2004. Emission measurements are in accordance with DS/CEN/TS 15883 and FprEN 16510-1 See paragraph 5. The uncertainty of the measurements meets the requirements of DS/EN 13240 paragraph A3, and relevant parts of DS/CEN/TS 15883 and FprEN 16510-1.

Result: The stove meets the requirements of EN 13240 with regards to nominal testing. Safety test is not accomplished.

Remarks: See paragraph 2 - Remarks.

Terms: Accredited testing was carried out in compliance with the current guidelines laid down by DANAK (The Danish Accreditation), cf. www.danak.dk, and the general terms and conditions of The Danish Technological Institute. The test results apply to the tested products only. This test report may be reproduced in extract only if the laboratory has approved the extract in writing. Danish Technological Institute is Notified Body with identification number 1235 and DIN Certco test laboratory, PL 168.

Issued: Date 19.12.2017, Danish Technological Institute, Aarhus, Energy Laboratory

Signature:

René Lyngsø Hvidberg
Senior Consultant

Max Bjerrum
Quality Assurance



 **DANAK**
Test reg. no. 300



6. Test results

6.1. Nominal test in accordance with EN 13240 A.4.7 with birch wood as test fuel

Parameter	Value			Requirement	Unit
	1 st charge	2 nd charge	3 rd charge		
No. of wood logs per charge	2	2	2	-	pcs
Weight per charge	1.42	1.43	1.42	-	kg
Fuel moisture	14	14	14	16 ± 4	%
Lower calorific value	15.4	15.4	15.4	-	MJ/kg
Test duration	0.83	0.79	0.73	Min. 0.75h (in one charge)	h
Fuel consumption per hour	1.72	1.82	1.95	-	kg/h
Mean ambient temperature	27	27	26	-	°C
Flue gas temp. at 20 °C ambient temp.	285	286	287	-	°C
CO ₂ , mean value	10.5	10.7	10.6	-	%
CO, mean value	0.07	0.10	0.06	-	%
THC, mean value	60	75	59	-	ppmC
NO _x , mean value	56	54	58	-	ppm
Dust at actual O ₂	12	9	10	-	mg/m ³ _n
Flue draught, mean value	12	12	12	12 ± 2	Pa
Heat conduction system					
Water flow	-	-	-	-	m ³ /h
Water temperature – inlet	-	-	-	-	°C
Water temperature – outlet	-	-	-	-	°C

Mean values calculated based on the 2 nd and the 3 rd charges.			
Flue gas temperature at 20 °C ambient temp.	286	-	°C
Flue gas mass flow	5.2	-	g/sec
Efficiency	80	≥50	%
Nominal heat output, total (measured)	6.4	-	kW
Nominal heat output, ambient (measured)	6.4	-	kW
Nominal heat output, water (measured)	-	-	kW
CO ₂ , mean value	10.7	-	%
CO at 13 % O ₂	0.056	≤1.0	%
CO at 13 % O ₂	706	≤12500	mg/m ³ _n
OGC at 13 % O ₂ (carbon equivalents)	29	-	mg/m ³ _n
NO _x at 13 % O ₂ (NO ₂ equivalents)	84	-	mg/m ³ _n
Dust at 13 % O ₂	6	-	mg/m ³ _n



Declared by the manufacturer			
Nominal output stated	6.0	5.6 – 6.4 ¹⁾	kW
Refuelling interval p. charge at the rated output	48	Min. 45	minutes

- ¹⁾ The heat output quoted must be minor than or equal to the measured output - however maximum 15 % below the measured output.



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26th of August 2019
REHV/MGJN

Assessment of Jydepejsen Cozy (and associated variants) for EN13240 properties and NS3058 properties.

Jydepejsen Denmark A/S wishes to add some new variants to their previously tested Cosmo-II series regarding the nominal properties and the NS3058 properties.

The new variants are named Cozy and comes in the following versions,

- Cozy Steel
- Cozy High
- Cozy Soapstone

All above-mentioned variants come both with and without side panes, and furthermore with either a cast iron door or a glass door.

The measurements of the combustion chamber and flue ways are identical with the previously tested Cosmo-II.

The Cozy Sideglass model are fully safety tested regarding EN13240 in report 300-ELAB-2403-EN-sik and furthermore verified for both EN13240 nominal properties and NS3058 PM properties for burn rate 1 performed the 05.04.2019 and 09.04.2019, respectively. For both verifications the results achieved are identical or better than the properties previously tested for Cosmo-II.

Test reports from DTI used for this assessment:

- 300-ELAB-1341-EN, Trendline test to EN13240, with regards to safety testing without side panes, dated 24.09.2009. Incl. the associated documentation.
- 300-ELAB-1635-NS, Cosmo test to NS3058/59, the Norwegian particle emission test, dated 25.09.2012. Incl. the associated documentation.
- 300-ELAB-2313-EN-nom, Cosmo-II type test regarding its nominal combustion properties, dated 05.12.2017. Incl. the associated documentation.
- 300-ELAB-2403-EN-sik, Cozy sideglass regarding safety testing, dated 26.08.2019 incl. associated documents.

Jydepejsen Denmark A/S has supplied the following documentation for this assessment:

- Drawings of models
 - o 13761000, dated 01.07.2019
 - o 13761500, dated 01.07.2019
 - o 13762000, dated 01.07.2019
 - o 13762500, dated 01.07.2019
 - o 13764000, dated 03.07.2019
 - o 13764500, dated 03.07.2019
 - o 13765000, dated 03.07.2019
 - o 13765500, dated 03.07.2019
 - o 13766000, dated 01.07.2019
 - o 13766500, dated 28.03.2019
 - o 13767000, dated 02.07.2019
 - o 13767500, dated 02.07.2019
- CE mark Cozy and Cozy Sideglass
- Cosmo-Mido-Cubic-Cozy Manual August 2019 – DK
- DOP for Cozy and Cozy Sideglass



DTI assesses that the new Jydepejsen Cozy and the named variants have identical or better NS3058 combustion properties than the previously tested and identical or better EN nominal combustion properties than the tested free-standing stove Jydepejsen Cosmo-II. The results from 300-ELAB-1635-NS and 300-ELAB-2313-EN-nom can therefore be transferred to the mentioned variants for its combustion properties. For safety properties, the results from the tested Cozy Sideglass (300-ELAB-2403-ENSik) withstands for variants with side panes, and the side wall distance from the tested Jydepejsen Trendline (300-ELAB-1341-EN) can be transferred for Cozy variants without side panes.

The documentation material is provided as separate digitally signed .pdf document.

Best regards
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