IMQ primacontrol

Ente Notificato n° 1881
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Pratica N° *File No.* **CS-13-032**

RAPPORTO DI PROVA *TESTING REPORT* ***CPR-13-007***

Secondo la norma *In conformity with standard*	**EN 12815:2001 + EN 12815:2001/A1:2004 + EN 12815:2001/AC:2006 + EN 12815:2001/A1:2004/AC:2006**
Tipo di apparecchio *Type of appliance*	**Residential cooker fired by solid fuel**
Prova *Testing*	**ITT (Initial Type Testing)**
Fabbricante *Manufacturer*	**CORRADI CUCINE S.r.l.** **Via La Croce, 8** **33074 Vigonovo di Fontanafredda (PN) - Italy**
Marchio *Trade mark*	**JCORRADI**
Modello *Model*	**NE60L - NE80L - NE90L - NE125LGE - NE145LGE - NE155LGE**
Materiale pervenuto il *Goods arrival*	20/5/2013
Bolla n° *Document n°*	10299
Esso si costituisce di *It consists of*	34 pages and 1 enclosure
Laboratorio *Laboratory*	**IMQ PRIMACONTROL S.r.l. - I - 31020 Zoppè S.Vendemiano (TV)** **Via dell'Industria, 55 - Tel. 0438 778358 - 470255 - Fax 0438 778360**
Limitazioni *Disclosure*	**La riproduzione di questo rapporto di prova non è autorizzata che sottoforma di fotocopia integrale fac-simile salvo approvazione scritta del laboratorio** **Il presente rapporto di prova riguarda solo l'apparecchio provato nelle condizioni descritte.** *The only reproduction allowed is an integral fac-simile copy, Unless written approvation of the laboratory* *The test report concerns only the appliance tested under the conditions described.*
Data inizio test *Date test's beginning*	2013/06/25
Data fine test *Date test's ending*	2013/08/02
Data di emissione *Issue date*	2013/09/30
Il tecnico delle prove *Technical responsable of test*	Luca Pizzolato
Il responsabile del Laboratorio *Head Approval Department*	Nicola Bottolo

Manufacturer	**CORRADI CUCINE S.r.l.**		
Model	**All models**	Date	2013/09/30
Test report N°	**CPR-13-007**	Technician	Luca Pizzolato

Summary data

Model			*NE 60L*	*NE 80L*	-----
Fuel type			*Wood logs*	*Wood logs*	-----
Solid fuel test chimney Φ			*150*	*150*	-----
Nominal heat output	*Primary air position*		*open*	*5 mm open*	-----
	Secondary air position		*fix*	*fix*	-----
	Bottomgrate position		*fix*	*fix*	-----
	Medium outlet pression	*Pa*	*11*	*12*	-----
	Mass of test fuel hourly	*kg/h*	*1,8*	*2,5*	-----
	Mean flue gas temperature	*°C*	*280*	*241*	-----
	Flue gas mass flow	*g/s*	*7,4*	*10,2*	-----
	Mean content of CO to 13% O_2	*%*	*0,11*	*0,11*	-----
	Heat input	*kW*	*7,8*	*10,7*	-----
	Nominal heat output (declared)	*kW*	*6,02 (6)*	*8,4 (8)*	-----
	Nominal water heat output (declared)	*kW*	-----	-----	-----
	Nominal space heat output (declared)	*kW*	-----	-----	-----
	Efficiency	*%*	*77,6 (77,5)*	*78,6 (78,5)*	-----
	Refuelling interval (declared)	*h*	*1 (1)*	*1 (1)*	-----
Reduced heat output	*Primary air position*		*closed*	*closed*	-----
	Secondary air position		*fix*	*fix*	-----
	Bottomgrate position		*fix*	*fix*	-----
	Medium outlet pression	*Pa*	*11*	*11*	-----
	Mass of test fuel hourly	*kg/h*	*1,2*	*1,4*	-----
	Mean flue gas temperature	*°C*	*220*	*179*	-----
	Flue gas mass flow	*g/s*	*6,1*	*8,7*	-----
	Mean content of CO to 13% O_2	*%*	*0,10*	*0,09*	-----
	Heat input	*kW*	*5,8*	*6,0*	-----
	Nominal heat output (declared)	*kW*	*4,7 (4,5)*	*4,7 (4,5)*	-----
	Nominal water heat output (declared)	*kW*	-----	-----	-----
	Nominal space heat output (declared)	*kW*	-----	-----	-----
	Efficiency	*%*	*81,2 (81)*	*78,5 (78,5)*	-----
	Refuelling interval (declared)	*h*	*0,69 (0,67)*	*0,93 (0,92)*	-----
Appliance is provided with a protection glove			*max*	-----	-----
Electrical power supply (declared)		*W*	-----	-----	-----
Maximum operating pressure		*bar*	-----	-----	-----
Distance to adjacent combustible materials	*- back*	*mm*	*0 + 40 (*)*	*0 + 40 (*)*	-----
	- side	*mm*	*600*	*600*	-----
	- floor under	*mm*	*0*	*0*	
The appliance can be used in a shared flue			*No*	*No*	-----
The appliance is capable of			*Intermittent combustion*	*Intermittent combustion*	-----

* = 40mm of insulation material with thermal conductivity of 0,07W/mK at 200°C

Note: *under attestation of comformity system3, the manufacturer, not the laboratory, is responsible for sampling.*

Manufacturer	**CORRADI CUCINE S.r.l.**		
Model	**All models**	Date	2013/09/30
Test report N°	**CPR-13-007**	Technician	Luca Pizzolato

Families appliances

In accordance with paragraph 9.2.1, the whole range of appliances listed in the following table has been grouped in familiy:

NE60L
NE80L
NE90L
NE125LGE
NE145LGE
NE155LGE

To represent the family, it have been tested the appliances with the highest and lowest nominal heat output chosen within a range of appliances having nominal heat outputs not exceeding 1,6:1 as required by paraghraph 9.2.1 of the standard.

In decinding which appliance belongs to a family we take into account the construction and the performance characterisitcs of each appliance and we compare it with the list of table 1 of paragraph 9.2.1.

The other differences have not been considered important to this purpose.

The models chosen for the family are:

NE60L
NE80L

Note: under attestation of comformity system 3 the decision for grouping products into one family is the responsibility of the manufacturer: **CORRADI CUCINE S.r.l.**

Manufacturer **CORRADI CUCINE S.r.l.**
Model **All models** Date 30/9/2013
Test report N° **CPR-13-007** Technician Luca Pizzolato

The fuel used during the test has the following specifications:

Size: **Wood logs**

Carbon content [%]	Hydrogen content [%]	Moisture content [%]	Net lower calorif value (wf) [kJ/kgss]	Net lower calorif value [MJ/kg]
41,4	5,3	13,4	15345	15,34

Residential solid fuel burning appliances - Emission test methods
Annex A A.2 German and Austrain particle test methods

Definition	Notation	Unit			
Model			NE 60L	NE 60L	-----
Testing fuel			Wood logs	Wood logs	-----
Date of test			25/6/2013	27/6/2013	-----
Solid fuel test chimney Φ		mm	150	150	-----
Bottomgrate position			fix	fix	-----
Power selection			Nominal heat output	Reduced heat output	-----
Number of fuel charges			1	1	
Total charged fuel		kg	1,8	0,9	
Test lenght		h	1,0	0,7	
Mass of test fuel hourly		kg/h	1,8	1,3	-----
Medium inlet pression		Pa	10,5	10,5	-----
Room temperature	t_r	°C	26,2	24,3	-----
Declared heat output		kW	6,0	4,5	≤ 50
Sampling period		min	30	-----	15 (30)
Waste gas volume		l	270	-----	135 ± 6,75 (270 ± 13,5)
Sampling system temperature		°C	70	-----	70
Solids portion weight		mg	4	-----	-----
Average DUST content	DUST	mg/Nm^3	14,1	-----	-----
Average O_2 content	O_2	%	13,8	14,9	-----
Average CO_2 content	CO_2	%	6,9	6,0	-----
Average CO content	CO	ppm	949	747	-----
Average CO content	CO	%	0,09	0,07	-----
Average content of CO at 13% O_2	CO	%	0,11	0,10	-----
Average content of CO at 13% O_2	CO	mg/Nm^3	1323	1217	-----
Average content of CO at 10% O_2	CO	mg/Nm^3	1819	1673	-----
Average content of CO at 0% O_2	CO	mg/Nm^3	3473	3194	-----
Average content of CO at 13% O_2	CO	mg/MJ	345	317	-----
Average content of CO at 10% O_2	CO	mg/MJ	474	436	-----
Average content of CO at 0% O_2	CO	mg/MJ	905	833	-----
Average DUST content to 13% O_2	DUST	mg/Nm^3	16	-----	-----
Average DUST content to 10% O_2	DUST	mg/Nm^3	22	-----	-----
Average DUST content to 0% O_2	DUST	mg/Nm^3	41	-----	-----
Average DUST content to 13% O_2	DUST	mg/MJ	4	-----	-----
Average DUST content to 10% O_2	DUST	mg/MJ	6	-----	-----
Average DUST content to 0% O_2	DUST	mg/MJ	11	-----	-----
Carbon content of the residue	C_r	%	0,23	0,23	
Specific wet flue gas	G_w	Nm^3/kg	11,7	13,4	-----
Specif dry flue gas volume	G_D	Nm^3/kg	540,1	468,6	-----
Total hydrocarbon content (methane equivalents)	THC	mg/Nm^3	60	18	-----
Average content of OGC to 13% O_2	OGC	mg/Nm^3	67	23	-----
Average content of OGC to 10% O_2	OGC	mg/Nm^3	92	32	-----
Average content of OGC to 0% O_2	OGC	mg/Nm^3	176	62	-----
Average content of OGC to 13% O_2	OGC	mg/MJ	17	6	-----
Average content of OGC to 10% O_2	OGC	mg/MJ	24	8	-----
Average content of OGC to 0% O_2	OGC	mg/MJ	46	16	-----
Average content of NO_x	NO_x	ppm	32		-----
Conversion factor	f_{NOx}		2,05	2,05	-----
Average content of NO_x to 13% O_2	NOx	mg/Nm^3	73		-----
Average content of NO_x to 10% O_2	NOx	mg/Nm^3	101		-----
Average content of NO_x to 0% O_2	NOx	mg/Nm^3	192		-----
Average content of NO_x to 13% O_2	NOx	mg/MJ	19		-----
Average content of NO_x to 10% O_2	NOx	mg/MJ	26		-----
Average content of NO_x to 0% O_2	NOx	mg/MJ	50		-----

Manufacturer **CORRADI CUCINE S.r.l.**
Model **All models** Date 30/9/2013
Test report N° **CPR-13-007** Technician Luca Pizzolato

The fuel used during the test has the following specifications:

Size: **Wood logs**

Carbon content [%]	Hydrogen content [%]	Moisture content [%]	Net lower calorif value (wf) [kJ/kgss]	Net lower calorif value [MJ/kg]
41,4	5,3	13,4	15345	15,34

Residential solid fuel burning appliances - Emission test methods
Annex A A.2 German and Austrain particle test methods

Definition	Notation	Unit			
Model			NE 80L	NE 80L	-----
Testing fuel			Wood logs	Wood logs	-----
Date of test			23/7/2013	25/7/2013	-----
Solid fuel test chimney Φ		mm	150	150	-----
Bottomgrate position			fix	fix	-----
Power selection			Nominal heat output	Reduced heat output	-----
Number of fuel charges			1	1	
Total charged fuel		kg	2,5	1,3	
Test lenght		h	1,0	0,9	
Mass of test fuel hourly		kg/h	2,4	1,4	-----
Medium inlet pression		Pa	12,0	11,0	-----
Room temperature	t_r	°C	28,2	28,7	-----
Declared heat output		kW	8,0	4,5	≤ 50
Sampling period		min	30	-----	15 (30)
Waste gas volume		l	270	-----	135 ± 6,75 (270 ± 13,5)
Sampling system temperature		°C	70	-----	70
Solids portion weight		mg	9	-----	-----
Average DUST content	DUST	mg/Nm^3	34,4	-----	-----
Average O_2 content	O_2	%	13,7	16,0	-----
Average CO_2 content	CO_2	%	6,7	4,5	-----
Average CO content	CO	ppm	1034	532	-----
Average CO content	CO	%	0,10	0,05	-----
Average content of CO at 13% O_2	CO	%	0,11	0,09	-----
Average content of CO at 13% O_2	CO	mg/Nm^3	1418	1071	-----
Average content of CO at 10% O_2	CO	mg/Nm^3	1950	1473	-----
Average content of CO at 0% O_2	CO	mg/Nm^3	3723	2811	-----
Average content of CO at 13% O_2	CO	mg/MJ	370	279	-----
Average content of CO at 10% O_2	CO	mg/MJ	508	384	-----
Average content of CO at 0% O_2	CO	mg/MJ	971	733	-----
Average DUST content to 13% O_2	DUST	mg/Nm^3	38	-----	-----
Average DUST content to 10% O_2	DUST	mg/Nm^3	52	-----	-----
Average DUST content to 0% O_2	DUST	mg/Nm^3	99	-----	-----
Average DUST content to 13% O_2	DUST	mg/MJ	10	-----	-----
Average DUST content to 10% O_2	DUST	mg/MJ	14	-----	-----
Average DUST content to 0% O_2	DUST	mg/MJ	26	-----	-----
Carbon content of the residue	C_r	%	0,23	0,23	
Specific wet flue gas	G_w	Nm^3/kg	12,1	17,8	-----
Specif dry flue gas volume	G_D	Nm^3/kg	521,2	347,8	-----
Total hydrocarbon content (methane equivalents)	THC	mg/Nm^3	60	18	-----
Average content of OGC to 13% O_2	OGC	mg/Nm^3	66	29	-----
Average content of OGC to 10% O_2	OGC	mg/Nm^3	91	40	-----
Average content of OGC to 0% O_2	OGC	mg/Nm^3	173	76	-----
Average content of OGC to 13% O_2	OGC	mg/MJ	17	8	-----
Average content of OGC to 10% O_2	OGC	mg/MJ	24	10	-----
Average content of OGC to 0% O_2	OGC	mg/MJ	45	20	-----
Average content of NO_x	NO_x	ppm	32		-----
Conversion factor	f_{NOx}		2,05	2,05	-----
Average content of NO_x to 13% O_2	NOx	mg/Nm^3	71		-----
Average content of NO_x to 10% O_2	NOx	mg/Nm^3	98		-----
Average content of NO_x to 0% O_2	NOx	mg/Nm^3	187		-----
Average content of NO_x to 13% O_2	NOx	mg/MJ	19		-----
Average content of NO_x to 10% O_2	NOx	mg/MJ	26		-----
Average content of NO_x to 0% O_2	NOx	mg/MJ	49		-----