

Report No. K3542008T1
Residential space heating appliances
Initial type testing
DIN EN 14785
Type: **NSAC125-130-135-140-160-220/LSC12**
Company: **Xiang S.p.A.**

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Publication of page 2 is permitted.

The test results presented in this report refer solely to the test object stated.

TÜV Rheinland
Immissionsschutz und Energiesysteme GmbH

Test Laboratory for Energy Appliances

Initial type testing
Residential space heating appliances fired by wood pellets
- Pellet stove -
DIN EN 14785: September 2006

Applicant/contractor: **Xiang S.p.A.**
Via Leogra, 12
I-36030 San Vito di Leguzzano

Type designation: **NSAC125-130-135-140-160-220/LSC12**

Type of appliance: Residential space heating appliance fired by wood pellets including fan assisted flue discharge internal fuel hopper without water parts

Total heat input: 4,75-14,31 kW

Water heat output: -

Space heat output: 4,11-11,79 kW

Max. water pressure: -

Max. water temperature: -

Fuels: Wood pellets

Remarks:-

Test results:

The technical requirements cl. 4-8 of the above mentioned standard are fulfilled. The local applicable installation conditions are to be observed.

The electrical safety cl. 5.9. of the standard was not a part of this initial type testing.

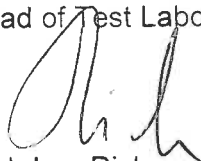
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Expert



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Test Laboratory for
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DIN- und DVGW-Laboratory
Head of Test Laboratory



Dipl.-Ing. Rick

TÜV Rheinland Immissionsschutz und Energiesysteme GmbH

Test Laboratory for Energy Appliances

1. Task

The Test Laboratory for Energy Appliances was instructed to execute the initial type testing on the appliance NSAC125-130-135-140-160-220/LSC12 for the operation with wood pellets according EN 14785:2006, cl. 4-8.

The electric safety cl. 5.9. of the standard was not a part of this initial type testing.

The practical tests were carried in the laboratory in Thiene on 26-27 November 2008.

The (FPC) Factory Production Control was not performed.

2. Description of the appliance

Construction

Residential space heating appliance fired by wood pellets without water heat exchanger for domestic central heating system. The flue discharge for pellet operation is fan assisted. The warm air is fed by one axial ventilator to the front side and two radial ventilators to warm air channels in the backside.

Combustion air

The combustion air is to be taken from the ambience.

2.1 General technical data of the pellet stove

Type:	NSAC125-130-135-140-160-220/LSC12
Nominal power	10 kW
Fuel	Pellets Ø 6 mm, L _{max} 45 mm, max. humidity 8%, Leitinger
Total dimension High x Width x Depths (mm)	1085 x 534 x 582
Diameter, exhaust gas stub	80 mm
Weight	160 kg
Distance of adjacent combustible materials	200 side/200 mm back

For more information see appendix B1

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3. Testing

The tests were carried out in November 2008 in the laboratory of CMC/TÜV Rheinland in Thiene.

3.1 General requirements

Requirement acc. EN 14785	Clause	Tested Acc.	Requirement Complies
Production documentation	4.1		Yes
General construction requirements	4.2		Yes
Flue spigot or socket	4.3		Yes
Combustion control device	4.4		Not applicable
Flue ways	4.5		Yes
Cleaning tools	4.6		Not included in delivery
Fire doors	4.7		Yes
Combustion air supply	4.8		Yes
-Primary air inlet control	4.8.1		Not applicable
-Secondary air inlet control	4.8.2		Not applicable
Internal flue gas diverter	4.9		Not applicable
Retorte	4.10		Yes
Ash pan and ash removal	4.11		Not applicable
Integral boiler	4.12	A 4.9.5	Not applicable
-General construction, material	4.12.1		
-Nominal minimum wall thickness (steel)	4.12.2		
-Welding seams and welding fillers	4.12.3		
-Minimum wall thicknesses (cast iron)	4.12.4		
-Cast iron parts subject to water pressure	4.12.5		
-Venting of water sections	4.12.6		
-Water tightness	4.12.7		
-Water side connections	4.12.8		
-Boiler internal waterways	4.12.9		
- Design of all water boilers	4.12.9.1		
- Boiler waterways used with indirect water systems	4.12.9.2		
- Boiler waterways used with direct water systems	4.12.9.3		
Control of flue gas	4.13		Not applicable
Cleaning of heating surfaces	4.14		Yes

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3.2 Safety

Requirement acc. EN 14785	Clause	Tested Acc.	Requirement Complies
Temperatures of adjacent combustible materials	5.1	A.4.7- A.4.9	Yes
Operating tools	5.2		Yes
Safety test for spillage of combustion gas and discharge of embers	5.3	A.4.7- A.4.9	Yes
Temperature in the fuel hopper	5.4	A.4.7- A.4.9	Yes
Safety against back burning through the fuel conveyor system	5.5	A.4.9.2	Yes
Safety against overheating the boiler system	5.6	-	Not applicable
Thermal discharge control	5.7	A.4.9.6	Not applicable
Strength and leak tightness of boiler shells	5.8	A.4.9.5 A.4.7	Not applicable
Electrical safety	5.9	EN 50165	Not tested. Examination is conducted by CMC!

3.3 Performance

Requirement acc. EN 14785	Clause	Tested Acc.	Requirement Complies
Flue draught	6.1		Yes
Flue gas temperature	6.2	A.4.7- A.4.8	Yes
Carbon monoxide emissions for pellet stoves	6.3	A.4.7- A.4.8	Yes
Efficient energy utilization	6.4		
-General	6.4.1	A.4.7-	Yes
-Efficiency at nominal heat output and at reduced heat output	6.4.2	A.4.8	Yes
Nominal heat output	6.5	A.4.7	Yes
Reduced heat output	6.6	A.4.8	Yes
Water heating output	6.7	A.4.7	Not applicable
Space heating output	6.8	A.4.7	Yes
Capacity of fuel storage	6.9	A.4.8	Yes
User operations	6.10		Yes

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Test Laboratory for Energy Appliances

3.4 Appliance instructions and marking

Requirement acc. EN 14785	Clause	Tested Acc.	Requirement Complies
General	7.1		Yes
Installation instructions	7.2		Yes
User operating instructions	7.3		Yes
Marking	8.0		Yes

3.5 Evaluation of conformity

Requirement acc. EN 14785	Clause	Requirement Complies
General	9.1	Yes
Type testing	9.2	Yes
-Initial type testing	9.2.1	
-Further type testing	9.2.2	
Factory production control (FPC)	9.3	Not applicable
- General	9.3.1	
- Raw materials and components	9.3.2	
- Control of inspection, meas. and test equipment	9.3.3	
- Process control	9.3.4	
- Product inspection, testing and evaluation	9.3.5	
- Material of construction	9.3.5.1	
- Insulation material	9.3.5.2	
- Seals and sealant materials	9.3.5.3	
- Manufacturing checks	9.3.5.4	
- Construction and dimensions	9.3.5.4.1	
- Other checks	9.3.5.4.2	
- Non conforming products	9.3.6	
- Corrective and preventive action	9.3.7	
- Handling, storage, packaging, preservation and delivery	9.3.8	

3.6 Resume of test results

Type designation		NSAC125-130-135-140-160-220/LSC12		
		Full load	Partial load	
Test fuel		Pellets		
Mass of the test fuel fired hourly	kg/h	2,920	0,970	-
Flue gas mass flow	g/s	9,8	6,0	-
Flue gas temperature	°C	256,2	118,1	-
Flue draught	mbar	12	10	0,12/0,10 +/-0,02
CO ₂ -Content	Vol.-%	10,13	5,37	-
O ₂ -Content	Vol.-%	10,51	15,44	-
CO-emission	ppm	324,0	230,3	-
CO-emission (at 13%-O ₂)	mg/m ³	308,8	414,0	500/750
NOx-content	ppm	83,3	41,4	-
NOx-content (at 13%-O ₂)	mg/m ³	130,3	122,0	-
Dust content (at 13%-O ₂)	mg/m ³	26,9	-	-
Total heat output	kW	11,79	4,11	-
Water heat output	kW	-	-	-
Space heat output	kW	11,79	4,11	-
Efficiency	%	82,41	86,36	75/70
Maximum temperatures at trihedron:				
- Right side	°C	66,6		65K over t _{ambient}
- Back side	°C	28,0		65K over t _{ambient}
- Bottom side	°C	28,5		65K over t _{ambient}
Distances:				
- Backside-Pelletstove	mm	200		
- Side-Pelletstove	mm	200		
Ambient temperature	°C	24,3		
Temp. in fuel hopper	°C	48,8		65K over t _{ambient}
Temp. on pellet screw	°C	57,1		65K over t _{ambient}
Temp. operating tools 1	°C	87,5*		35K over t _{ambient}
Temp. operating tools 2	°C	n.a.		35K over t _{ambient}

* a tool/glow is supplied by the manufacturer

Detailed test results see appendix A 2.

4 Statement of the test results

The appliance **NSAC125-130-135-140-160-220/LSC12**
of the company **Xiang S.p.A.**

comply for the operation with wood pellets with the requirements acc.
EN 14785: September 2006, cl.4-8.

The electrical safety cl. 5.9. of the standard was not a part of this initial type testing.

The test results presented in this report refer solely to the test object stated.

5 Test documents

Appendix	Subject	
A 1	Fuel data	
A 2	Test results	
A 3	Measuring devices	
B1	CE Declaration of conformity	21/10/2008
B2	Essential requirements EN 14785	10/10/2008
B3	Electrical wiring diagram	
B4	List of electrical components	
B5	Instruction Manual	Cod. 000822A-rev.4
B6	Installation manual	Cod. 000819C-rev.4
B7	Type label	
B8	Technical data centrifugal fan	D2E 097
B9	Technical data exhaust gas fan	R2E 150-AN91
B10	Technical data Air pressure switch	C4065/C6065
B11	Technical data thermal cut-out	LS1 6035
B12	Technical data screw motor	FB1102
B13	Technical data heating element	D060287
B14	Technical data seals	
B15	Technical data glass	
B16	Technical data temperature sensor	
B17	Technical data screw motor (Alternative)	YJF6430-FA
B18	Technical data heating element (Alternative)	G1
B19	Technical data Air pressure switch (Alternative)	380 Aria
B20	Technical data exhaust gas fan (Alternative)	R2E 152-0020A79
C1	Overview construction drawings (pieces 44)	

Appendix A 1
Fuel data

 Verbrennungsrechnung aus der Elementaranalyse
 nach DIN EN 304 Teil 2, Ausgabe 08/1998
 nach DIN 4702 Teil 2, Ausgabe 3/1990

 Brennstoffanalyse vom 05.12.2008
 Brennstoff: wood pellets

Bestandteil im Brennstoff	Stoffanteil	Sauerstoffbedarf		Abgasbestandteile aus Brennstoff in Nm ³ /kg Brennstoff								
		in Nm ³ je kg Bestandteil	in Nm ³ je kg Brennstoff	CO ₂		SO ₂		H ₂ O		N ₂		
			Stoffanteil x Sauerstoff- Bedarf	in Nm ³ je kg Bestandteil	in Nm ³ je kg Brennstoff	in Nm ³ je kg Bestandteil	in Nm ³ je kg Brennstoff	in Nm ³ je kg Bestandteil	in Nm ³ je kg Brennstoff	in Nm ³ je kg Bestandteil	in Nm ³ je kg Brennstoff	
	Gew. %											
c	47,600	1,860	0,885	1,850	0,8806	-	-	-	-	-	-	-
s	0,070	0,700	0,000	-	-	0,680	0,0005	-	-	-	-	-
h	5,710	5,550	0,317	-	-	-	-	11,100	0,6338	-	-	-
n	0,100	-	-	-	-	-	-	-	-	0,80	0,0008	-
o	40,310	-0,700	-0,282	-	-	-	-	-	-	-	-	-
wasser	5,900	-	-	-	-	-	-	1,240	0,0732	-	-	-
asche	0,280	-	-	-	-	-	-	-	-	-	-	-
summe	99,970	O min =	0,921	V CO ₂ =	0,8806	V SO ₂ =	0,0005	V W =	0,7070	V N ₂ =	0,0008	

Luftbedarf	L min =	4,3837 Nm ³ /kg Brennstoff
trockene stöchiometrische Abgasmenge	V A Ir min =	4,3442 Nm ³ /kg Brennstoff
Max. Kohlenstoffdioxid-Anteil	CO ₂ max =	20,2706 Vol.-%
Wasserdampfmenge	V w =	0,7070 Nm ³ /kg Brennstoff
	V A Ir min/ L min =	0,9910
Heizwert, wf	Hu =	18904 kJ/kg
		5,251 kWh/kg

Berechnungen zum Versuchszeitpunkt


wasser zum Versuchszeitpunkt	w =	5,900 Gew. %
Heizwert, roh zum Versuchszeitpunkt	Hu	17645 kJ/kg

Appendix A 2

Test results

Report-No. TÜV-order-No. Manufacture Type Model	K3542008T1 21210428 Xiang S.p.A. NSAC125-130-135-140-160-220/L Room heater for wood pellets with internal fuel hopper and flue gas fan without water parts combustion air is taken from the room			
Specifics	Canalization 11			
Nominal heat output				
Test place Test date Type of test	Thiene 26.11.2008 Test at nominal load acc. EN 14785			
		1. test	2. test	Average
Test date		26 11 2008	26 11 2008	
Time		9:31-12:31	12:40-15:40	
Ambient:				
Barometric pressure	mbar	1013	1013	1013
Temperature of combustion air	°C	20,8	24,3	22,6
Ambient rel. humidity	%	40	40	40
Ambient temperature (room)	°C	20,8	24,3	22,6
Fuel:				
Type of fuel		wood pellets	wood pellets	-
Number of fuel loadings		1	1	1
Total weight of appliance at start	kg	177,63	185,44	182,04
Weight of additional loads	kg	168,92	177,63	173,28
Total weight of appliance at end	kg	0,00	0,00	0,00
Fuel consumption, calculated of the difference	kg	8,71	8,81	8,76
Test duration	sec	10800	10800	10800
Fuel consumption "E"	kg/h	2,903	2,937	2,920
Combustible constituents in material passing through the grate "b": analyse	Gew %	0,0	0,0	0,0
Residue passing through the grate "R"	kg	0,000	0,000	0,000
Residue passing through the grate "R"	Gew %	0,00	0,00	0,0
Carbon content of the residue passing through the grate "C" depending of 1 kg fuel	Gew %	0,11	0,11	0,11
Water part (average values)				
flow temperature	°C	0,0	0,0	0,0
return temperature	°C	0,0	0,0	0,0
delta-T	K	0,0	0,0	0,0
Cold water entrance temperature	°C	0,0	0,0	0,0
Cold water flow	kg/h	0,0	0,0	0,0
Additional energy of the pump	kW	0,000	0,000	0,000
Flue, average				
Flue gas temperature	°C	253,4	258,9	256,2
Flue gas draught	Pa	12,0	12,0	12,0
O ₂ - concentration, calculated	Vol-%	10,61	10,41	10,51
CO ₂ - concentration (measurement)	Vol-%	10,03	10,22	10,13
lambda value, λ	-	2,012	1,975	1,993
CO - concentration (measurement)	ppm	310,0	338,0	324,0
CO - concentration (measurement)	Vol-%	0,031	0,034	0,032
CO - concentration (measurement)	mg/m ³	387,5	422,5	405,0
CO - concentr. (at reference - O ₂)	Vol-%	0,024	0,026	0,02
CO - concentr (at reference - O ₂)	mg/m ³	298,3	319,2	308,8
CO - concentration rel to fuel input	mg/kWh	694,1	742,7	718,4
CO - concentration rel to fuel input	mg/MJ	192,8	206,3	199,6
NOx - concentration (measurement)	ppm	84,1	82,5	83,3
NOx - concentration (measurement)	mg/m ³	172,4	169,1	170,8
NOx - concentr (at reference - O ₂)	mg/m ³	132,7	127,8	130,3
NOx - concentration rel to fuel input	mg/kWh	308,8	297,3	303,1
NOx - concentration rel to fuel input	mg/MJ	85,8	82,6	84,2
CnHm - concentration (measurement)	mg/m ³	8,7	8,6	8,7
CnHm concentr (at reference - O ₂)	mg/m ³	6,7	6,5	6,6
CnHm - concentration (total C) rel to fuel input	mg/kWh	15,6	15,1	15,4
CnHm - concentration (total C) rel to fuel input	mg/MJ	4,3	4,2	4,3
Dust (measurement*)	mg	24,4	0,0	24,4
Dust concentration (measurement*)	mg/m ³	35,2	0,0	35,2
Dust (at reference - O ₂)*	mg/m ³	26,9	0,0	26,9
Dust* rel to fuel input	mg/kWh	62,6	0,0	62,6
Dust* rel to fuel input	mg/MJ	17,4	0,0	17,4
Calculation				
"Qa" loss free heating flue gas	kJ/kg	3044,0	3020,9	3032,5
"qa" loss flue gas	%	17,25	17,12	17,19
"Qb" loss fix heating in flue gas	kJ/kg	34,5	36,9	35,7
"qb" loss fix heating in flue gas	%	0,20	0,21	0,20
"Qr" losses due to combustible constituents in the residue passing through the grate	kJ/kg	0,0	0,0	0,0
"qr" losses due to combustible constituents in the residue passing through the grate	%	0,20	0,20	0,20
"m" flue gas mass flow	g/s	9,8	9,8	9,8
cpm, acc. DIN 4702-2, version 03 90 for dry flue gas	kJ/(m ³ K)	1,36	1,36	1,36
cpm-H ₂ O	kJ/(m ³ K)	1,53	1,53	1,53
"eta" Efficiency (direct), to consider only water heating output P _w	%	entfällt	entfällt	entfällt
"eta" Efficiency (indirect)	%	82,35	82,47	82,41
Heating input	kW	14,23	14,39	14,31
"P _h " heating output, total	kW	11,72	11,87	11,79
"P _w " water heating output	kW	0,00	0,00	0,00
Space heating output P _{stH} = P - P _w	kW	11,72	11,87	11,79
Space heating output, relating to heat input	%	82,35	82,47	82,41
Water heating output, relating to heat input	%	0,00	0,00	0,00
Settings				
-	see sep sec sheet	see sep sec sheet		
-	0	0		
-	0	0		
-	0	0		
Fire doors	open/closed	closed	closed	

*) Average of 3 samples, based on separate calculation

Report-No. TÜV-order-No. Manufacture Type Model	K3542008T1 21210428 Xiang S.p.A. NSAC125-130-135-140-160-220/L Room heater for wood pellets with internal fuel hopper and flue gas fan without water parts combustion air is taken from the room	 TÜVRheinland® Precisely Right		
Specifics Nominal heat output	Canalization 4			
Test place Test date Type of test	Thiene 27.11.2008 Test at minimum load acc. EN 14785			
		1. test	2. test	Average
Test date Time		27.11.2008 9:45-15:45	-	-
Ambient:				
Barometric pressure	mbar	1013	0	1013
Temperature of combustion air	*C	16,4	0,0	16,4
Ambient rel. humidity	%	40	0	40
Ambient temperature (room)	*C	16,4	0,0	16,4
Fuel:				
Type of fuel		wood pellets	wood pellets	-
Number of fuel loadings		1	0	1
Total weight of appliance at start	kg	181,13	0,00	181,13
Weight of additional loads	kg	175,31	0,00	175,31
Total weight of appliance at end	kg	0,00	0,00	0,00
Fuel consumption, calculated of the difference	kg	5,82	0,00	5,82
Test duration	sec	21600	0	21600
Fuel consumption "B"	kg/h	0,970	0,000	0,970
Combustible constituents in material passing through the grate "b", analyse	Gew. %	0,0	0,0	0,0
Residue passing through the grate, measurement	kg	0,000	0,000	0,000
Residue passing through the grate "R"	Gew. %	0,00	0,00	0,0
Carbon content of the residue passing through the grate "Cr" depending of 1 kg fuel	Gew. %	0,11	0,00	0,11
Water part (average values)				
flow temperature	*C	0,0	0,0	0,0
return temperature	*C	0,0	0,0	0,0
delta-T	K	0,0	0,0	0,0
Cold water entrance temperature	*C	0,0	0,0	0,0
Cold water flow	kg/h	0,0	0,0	0,0
Additional energy of the pump	kW	0,000	0,000	0,000
Flue, average				
Flue gas temperature	*C	118,1	0,0	118,1
Flue gas draught	Pa	10,0	0,0	10,0
O ₂ - concentration, calculated	Vol.-%	15,44	0,00	15,4
CO ₂ - concentration (measurement)	Vol.-%	5,37	0,00	5,4
lambda value, λ		3,750	0,000	3,750
CO - concentration (measurement)	ppm	230,3	0,0	230,3
CO - concentration (measurement)	Vol.-%	0,023	0,000	0,023
CO - concentration (measurement)	mg/m ³	287,9	0,0	287,9
CO - concentr. (at reference - O ₂)	Vol.-%	0,033	0,000	0,03
CO - concentr. (at reference - O ₂)	mg/m ³	414,0	0,0	414,0
CO - concentration rel. to fuel input	mg/kWh	963,2	0,0	963,2
CO - concentration rel. to fuel input	mg/MJ	267,5	0,0	267,5
NOx - concentration (measurement)	ppm	41,4	0,0	41,4
NOx - concentration (measurement)	mg/m ³	84,9	0,0	84,9
NOx - concentr. (at reference - O ₂)	mg/m ³	122,0	0,0	122,0
NOx - concentration rel. to fuel input	mg/kWh	284,0	0,0	284,0
NOx - concentration rel. to fuel input	mg/MJ	78,9	0,0	78,9
CnHm - concentration (measurement)	mg/m ³	10,1	0,0	10,1
CnHm concentr. (at reference - O ₂)	mg/m ³	14,5	0,0	14,5
CnHm - concentration (total C) rel. to fuel input	mg/kWh	33,8	0,0	33,8
CnHm - concentration (total C) rel. to fuel input	mg/MJ	9,4	0,0	9,4
Dust (measurement)	mg	0,0	0,0	0,0
Dust concentration (measurement)	mg/m ³	0,0	0,0	0,0
Dust (at reference - O ₂)	mg/m ³	0,0	0,0	0,0
Dust* rel. to fuel input	mg/kWh	0,0	0,0	0,0
Dust* rel. to fuel input	mg/MJ	0,0	0,0	0,0
Calculation				
"Qa" loss free heating flue gas	kJ/kg	2324,1	0,0	2324,1
"qa" loss flue gas	%	13,17	0,00	13,17
"Qb" loss fix heating in flue gas	kJ/kg	47,8	0,0	47,8
"qb" loss fix heating in flue gas	%	0,27	0,00	0,27
"Qr" losses due to combustible constituents in the residue passing through the grate	kJ/kg	0,0	0,0	0,0
"qr" losses due to combustible constituents in the residue passing through the grate	%	0,20	0,20	0,40
"m" flue gas mass flow	g/s	6,0	0,0	6,0
cpm, acc. DIN 4702-2, version 03.90 for dry flue gas	kJ/(m ³ K)	1,33	0,00	1,33
cpm-H ₂ O	kJ/(m ³ K)	1,51	0,00	1,51
"eta" Efficiency (direct), to consider only water heating output Pw	%	entfällt	entfällt	entfällt
"eta" Efficiency (indirect)	%	86,36	0,00	86,36
Heating input	kW	4,75	0,00	4,75
"P" heating output, total	kW	4,11	0,00	4,11
"Pw" water heating output	kW	0,00	0,00	0,00
Space heating output, P _{STR} = P - Pw	kW	4,11	0,00	4,11
Space heating output, relating to heat input	%	86,36	0,00	86,36
Water heating output, relating to heat input	%	0,00	0,00	0,00
Settings				
-	see sep sec sheet		0	-
-			0	-
-			0	-
-			0	-
Fire doors	open/closed	closed	0	-

The tests were carried out under the conditions of DIN EN 14785:2006

Appendix A 3

**The requirements of the measuring instruments are fulfilled.
 Before each qualified measuring analysers were calibrated with zero gas and
 calibration gas.**

Gas	Principle	Company	Range	Uncertainty	Calibration-gas
CO ₂	Infrared-absorption	Siemens Analyser Ultramat 6E	0 – 3 % 0 - 30 %	± 1% related to final value	8,07 %
CO	Infrared-absorption	Siemens Analyser Ultramat 6E	0 - 300 ppm 0 – 3000 ppm	± 1% related to final value	510 ppm
NO _x	Chemolumineszenz	ECO Physics CLD 700 ED	0 - 100 ppm 0 – 1000 ppm	± 1% related to final value	117 ppm
OGC	FID	H&B Fidas 3E	0 – 50 mgC 0-100 mgC 0-500 mgC 0-1000 mgC	± 1% related to final value	29,8 ppm propane
Dust content	gravimetric	Mettler	0,1 mg - 200 g	± 0,1 mg	-
Temperature	PT 100	Delta Ohm HD9215-TP93I	-50 bis 199°C	0,5°C	SIT certificate 6197.GT

The values were continuously recorded with data logger, Agilent 34970 A. The interval is less than 10s. All related certificates are stored.