

1 Test item

Design-testing: Pellet stoves Sagar Air / Toba Air / Nima Comfortair

2 Client

MCZ . Caminetti e Stufe
Via G. Oberdan 86
I . 33070 Vigonovo di Fontanafredda (PN)

3 Size and placing of the order

The size of the order includes the testing of the pellet stoves Sagar Air, Toba Air and Nima Comfortair according to EN 14785 sResidential space heating appliances fired by wood pellets . Requirements and test methods%o having regard to the agreements according to clause 15a B-VG sSchutzmaßnahmen betreffend Kleinf Feuerungen%(Protective provisions concerning small firing plants) and sEinsparung von Energie%(The economy of energy) as well as to the guidelines for promotion of measures to use renewable energies in the heat market (state 17th February 2010). The testing of the pellet stoves Sagar Air, Toba Air and Nima Comfortair was carried out as a design-testing. For examination of the identicalness of construction and characteristics of the stoves Sagar Air and Toba Air the pellet stove Ego Air (test report VFH-09-004-P) was taken as an object of comparison. For examination of the identicalness of construction and characteristics of the stove Nima Comfortair the pellet stove Suite Multiair (test report VFH-09-005-P) was taken as an object of comparison. The placing of the order occurred in December 2009.

4 Results

	No.	Heat output level	Test results Sagar Air / Toba Air		Test results Nima Comfortair		Grenzwerte		
			mg/MJ	mg/m ³ _N (13%O ₂)	mg/MJ	mg/m ³ _N (13%O ₂)	clause 15a	EN 14785	BAFA ¹
							mg/MJ	mg/m ³ _N (13%O ₂)	mg/m ³ _N (13%O ₂)
CO	1	Nominal	125	198	90	143	500	500	250
	2	Nominal	96	151	117	184			
	3	Lower	196	309	196	309			
NO ₂	1	Nominal	76	121	86	136	150	-	-
	2	Nominal	79	125	83	130			
	3	Lower	61	97	61	97			
OGC	1	Nominal	4	6	5	7	40	-	-
	2	Nominal	2	3	7	9			
	3	Lower	6	8	6	8			
Dust	1	Nominal	11	20	10	17	60	-	50
	2	Nominal	14	24	12	22			
	3	Lower	-	-	-	-			
η (%)	1	Nominal	91,8		90,0		78	75	89
	2	Nominal	91,6		90,5				
	3	Lower	94,1		94,1				

¹ Limit values according to the guidelines for promotion of measures to use renewable energies in the heat market (state 17th February 2010) of the Federal Office for Economy and Export Control (BAFA)

The requirements of EN 14785 are fulfilled as per clause 8.2 of the test report VFH-10-005-EP.

The limit values for emissions of the agreement according to clause 15a B-VG sSchutzmaßnahmen betreffend Kleinf Feuerungen%(Protective provisions concerning small firing plants) for automatically loaded small firing plants are fulfilled. The efficiency as required in the agreement according to clause 15a B-VG %Einsparung von Energie+(The economy of energy) is achieved. The specified nominal heat output is achieved.

The values according to the guidelines for promotion of measures to use renewable energies in the heat market (state 17th February 2010) of the Federal Office for Economy and Export Control (BAFA) are fulfilled.

This short test report is an abstract of the test report VFH-10-005-EP. It is only valid in connection with the test report VFH-10-005-EP. This design-test report is an expert advice out of range of the scope of the accreditation of the %Versuchs- und Forschungsanstalt der Hafner Österreichs%(Research and Testing Center of the Austrian stove-fitters).



Dipl.- Ing. Dr. Thomas Schiffert
Authorized signatory

Vienna, 30.04.2010