

Report No. K 3180 2021 Z1

Residential space heating appliances
Type testing
in accordance with DIN EN 14785
-Renaming-

Models:

00271542

Trademark:

UNICAL, SCHUSTER, WIESBERG, ARIEL

Company:

UNICAL AG S.p.A



Deutsche
Akkreditierungsstelle
D-PL-11120-04-00

This accreditation is valid only for the listed standards as stated in the accreditation annex of D-PL-11120-04-00

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Publication of page 2 is permitted.

The test results presented in this report refer solely to the test object stated as described on page 2. The report does not represent a general statement about the serial production of the test object and gives not an authorization for use of a TÜV Rheinland test- / certification mark.

Type testing
Residential space heating appliances fired by wood pellets
DIN EN 14785: September 2006
Correction 1 DIN EN 14785: October 2007

Applicant/contractor: **UNICAL AG S.p.A**
Via Roma 123
I-43033 Castel D'Ario (MN)

Type of appliances:	Residential room heating appliances fired by wood pellets with water heat exchanger, with fan assisted flue discharge and with internal fuel hopper
Trademarks:	UNICAL, SCHUSTER, WIESBERG, ARIEL
Model designation:	00271542
Total heat input:	5.2 - 14.8 kW
Water heat output	3.8 - 10.5 kW
Space heat output:	1.2 - 3.3 kW
Max. water pressure:	1.5 bar
Max. water temperature:	80.0 °C
Fuel:	Wood pellets Ø 6mm, Lmax 30 mm, max humidity 6,9%, Biopellets
Type of fuel charging:	automatic load

Remarks:

Test basis:

DIN EN 14785: September 2006; Correction October 2007

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.
Additional details are documented in the initial reports K 1195 2013 T1.

Cologne, 01.12.2021
432 /mc

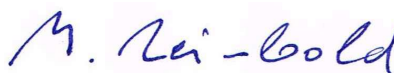
TÜV Rheinland Energy GmbH
Test Centre according to Construction Product
Regulation 305/2011(CPR)
Notified Body: 2456

Assessor:

Report released after review:



Dipl.-Ing. M. Ciccarelli



Dipl.-Ing. M. Reibold

Residential space heating appliances fired by wood pellets, Initial Type Test in accordance with the regulation 305/2011
conformity certification system no. 3

1. Task

The Test Centre for Energy Appliances was instructed to execute a renaming on the above mentioned pellet stoves.

Basic: AMG S.p.A Via delle Arti e dei Mestieri, 1/3 36030 San Vito di Leguzzano - Vicenza Report K 1195 2013 T1	New: UNICAL AG S.p.A Via Roma 123 I-43033 Castel D`Ario (MN) Report K 3180 2021 Z1
Trademark: ---	Trademark: UNICAL, SCHUSTER, WIESBERG, ARIEL
Model: NSAT140	Model: 00271542

2. Testing

The practical tests were carried out in the laboratory CMC Centro Misure Compatibilità S.r.l., Via della Fisica, 20, Thiene (VI) – Italy on 29 May 2013 until 30 May 2013.

The stove **NSAT140** by AMG S.p.A was tested (report K 1195 2013 T1). Unical AG S.p.A ensures that modifications on the above mentioned products were not carried out.

2.1 Resume of test results

00271542		Full	Partial	Requirement
Mass of the test fuel fired hourly	kg/h	3.02	1.07	-
Flue gas mass flow	g/s	8.50	4.29	-
Flue gas temperature	°C	124.84	62.34	-
Flue draught	mbar	0.12	0.10	0,12/0,10 +/-0,02
CO ₂ -concentration	Vol.-%	12.17	8.31	-
O ₂ -concentration	Vol.-%	8.35	12.36	-
CO-concentration	ppm	292.52	258.52	-
CO-emission (at 13%-O ₂)	mg/m ³	230.74	299.18	500/750
CO-emission	mg/kWh	535.17	693.90	-
CO-emission	mg/MJ	148.66	192.75	-
NO _x -concentration	ppm	89.89	57.55	-
NO _x -emission (at 13%-O ₂)	mg/m ³	116.54	109.22	-
NO _x -emission	mg/kWh	270.29	253.32	-
NO _x -emission	mg/MJ	75.08	70.37	-
CnHm-concentration measured acc. CEN/TS 15883	mg/m ³	9.67	8.36	-
CnHm-emission (at 13%-O ₂)	mg/m ³	9.95	12.61	-
CnHm-emission	mg/kWh	23.07	29.25	-
CnHm-emission	mg/MJ	6.41	8.12	-
Dust concentration measured acc. CEN/TS 15883 and EN13284-1	mg	17.90	31.00	-
Dust emission (at 13%-O ₂)	mg/m ³	16.78	41.32	-
Dust emission	mg/kWh	38.93	95.83	-
Dust emission	mg/MJ	10.81	26.62	-
Particulate emission acc. PrEN16510:2012	mg/m ³	18.50	44.64	-
Total heat output	kW	13.84	5.04	-
Water heat output	kW	10.53	3.81	-
Space heat output	kW	3.31	1.22	-
Efficiency	%	93.54	96.29	75/70 (EN14785)

2.2 Temperatures

00271542			
Maximum temperatures at trihedron:			
- Left side	°C	47.9	65K over t_{ambient}
- Back side	°C	32.1	65K over t_{ambient}
- Floor	°C	51.8	65K over t_{ambient}
- Front	°C	39.9	65K over t_{ambient}
Distances:			
- Backside-Pelletstove	mm	100	
- Side-Pelletstove	mm	200	
Ambient temperature	°C	25.6	
Max. temperature in fuel hopper	°C	64.5	65K over t_{ambient}
Max. temperature of operating tools	°C	118.9	35K over t_{ambient}

3. Statement of the test results

The appliance with the model:

00271542

and trademark:

UNICAL, SCHUSTER, WIESBERG, ARIEL

of the company

UNICAL AG S.p.A

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

The results of the basic initial type test (see reports K 1195 2013 T1) are not affected by the renaming.

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

The presumption of conformity with the relevant European Directives respectively Regulations could only be confirmed by full compliance with Annex ZA.

This statement was given based on the documentation submitted by the manufacturer and the tested sample. The statement is valid only for products / appliances which are manufactured according to the tested specimen.

The test results presented in this report refer solely to the test object stated as described on page 2. The report does not represent a general statement about the serial production of the test object and gives not an authorization for use of a TÜV Rheinland test- / certification mark.

4. Test documents

Appendix	Subject	Reference
A 01	Type labels	
A 02	Declarations of conformity	26.10.2021
A 03	Declarations of equivalence AMG	27.10.2021
A 04	Sales authorization	27.10.2021
A 05	Declarations about manual	15.11.2021
A 06	DoP	03.11.2021

Come da allegato all'attestato inerente il report tecnico

How from annex to the declaration concerning Technical report n° K 3180 2021 Z1 del 03/12/2021

Tel qu'attaché au certificat relatif au rapport technique

e in conformità al punto 9.2.1 della norma EN 14785:2006, l'azienda Unical AG SpA dichiara che gli apparecchi:

and according to sub-clause 9.2.1 of the standard EN 14785:2006, the company Unical AG SpA declare that the appliances:

et conformément au point 9.2.1 de la norme EN 14785:2006, Unical AG SpA déclare que les appareils:

Modelli / Models / Modèles (ID MODEL)	00271542
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sono rappresentativi della famiglia a cui appartengono i seguenti modelli:

are representative of the family to which belong the following models:

ils sont représentatifs de la famille à laquelle appartiennent les modèles suivants:

Marchio commerciale Trade mark Marque	Schuster	
MODELLI / Models / Modèles	00271542	IDRA 14

Firmato a nome e per conto del fabbricante da Nicola Micheletti (Procuratore)

Signed for and on behalf of the manufacturer by Nicola Micheletti (Attorney)

Luogo: Castel d'Ario (MN)

Place: Castel d'Ario (MN)

Data 03/12/2021

Date 03/12/2021

Firma

Sign.

Unical AG S.p.A.
SEDE: Via Roma, 123 - CASTEL D'ARIO (MN)
C.F./P. IVA: 01501350209
DIVISIONE: Viale Giuseppe, 2/5
36033 Gambellara (VI)

Report No. K 3181 2021 Z1

Residential space heating appliances
Type testing
in accordance with DIN EN 14785
-Renaming-

Models:

00271543

Trademark:

UNICAL, SCHUSTER, WIESBERG, ARIEL

Company:

UNICAL AG S.p.A



Deutsche
Akkreditierungsstelle
D-PL-11120-04-00

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Type testing
Residential space heating appliances fired by wood pellets
DIN EN 14785: September 2006
Correction 1 DIN EN 14785: October 2007

Applicant/contractor: **UNICAL AG S.p.A**
Via Roma 123
I-43033 Castel D'Ario (MN)

Type of appliances:	Residential room heating appliances fired by wood pellets with water heat exchanger, with fan assisted flue discharge and with internal fuel hopper
Trademarks:	UNICAL, SCHUSTER, WIESBERG, ARIEL
Model designation:	00271543
Total heat input:	4,1 - 18,1 kW
Water heat output	3,1 – 13,4 kW
Space heat output:	0,9 - 3,7 kW
Max. water pressure:	2.5 bar
Max. water temperature:	80.0 °C
Fuel:	wood pellets Ø 6 mm, Lmax 30 mm, max humidity 5,6%, Krone Gold
Type of fuel charging:	automatic load

Remarks:

Test basis:

DIN EN 14785: September 2006; Correction October 2007

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.

Additional details are documented in the initial reports K 1996 2016 T1.

Cologne, 03.12.2021
432 /mc

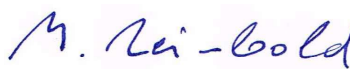
TÜV Rheinland Energy GmbH
Test Centre according to Construction Product
Regulation 305/2011(CPR)
Notified Body: 2456

Assessor:

Report released after review:



Dipl.-Ing. M. Ciccarelli



Dipl.-Ing. M. Reibold

Residential space heating appliances fired by wood pellets, Initial Type Test in accordance with the regulation 305/2011 conformity certification system no. 3

1. Task

The Test Centre for Energy Appliances was instructed to execute a renaming on the above mentioned pellet stoves.

Basic: AMG S.p.A Via delle Arti e dei Mestieri, 1/3 36030 San Vito di Leguzzano - Vicenza Report K 1996 2016 T1	New: UNICAL AG S.p.A Via Roma 123 I-43033 Castel D'Ario (MN) Report K 3181 2021 Z1
Trademark: ---	Trademark: UNICAL, SCHUSTER, WIESBERG, ARIEL
Model: IDRO17	Model: 00271543

2. Testing

The practical tests were carried out in the laboratory in Thiene on the 3rd, on the 4th and on the 05th of October 2016.

The stove **IDRO17** by AMG S.p.A was tested (report K 1996 2016 T1). Unical AG S.p.A ensures that modifications on the above mentioned products were not carried out.

2.1 Resume of test results

00271543		Nominal	Partial	Requirement
Mass of the test fuel fired hourly	kg/h	3,710	0,840	-
Flue gas mass flow	g/s	10,78	3,02	-
Flue gas temperature	°C	102,1	51,1	-
Flue draught	mbar	0,08	0,03	0,12/0,10 +/-0,02
CO ₂ -concentration	Vol.-%	11,4	9,1	-
O ₂ -concentration	Vol.-%	9,4	11,8	-
CO-concentration	ppm	64	318	-
CO-emission (at 13%-O ₂)	mg/m ³	55	345	500/750
CO-emission	mg/kWh	122	766	-
CO-emission	mg/MJ	34	213	-
NO _x -concentration	ppm	92	64	-
NO _x -emission (at 13%-O ₂)	mg/m ³	130	114	-
NO _x -emission	mg/kWh	288	252	-
NO _x -emission	mg/MJ	80	70	-
CnHm-concentration measured acc. CEN/TS 15883	ppm	1	4	-
CnHm-emission (at 13%-O ₂)	mg/m ³	1	6	-
CnHm-emission	mg/kWh	3	13	-
CnHm-emission	mg/MJ	1	4	-
Dust concentration measured acc. CEN/TS 15883 and EN13284-1	mg	7	5	-
Dust emission (at 13%-O ₂)	mg/m ³	15	24	-
Dust emission	mg/kWh	33	52	-
Dust emission	mg/MJ	9	14	-
Particulate emission acc. PrEN16510:2012	mg/m ³	15	26	-
Total heat output	kW	17,1	4,0	-
Water heat output	kW	13,4	3,1	-
Space heat output	kW	3,7	0,9	-
Efficiency	%	95,0	97,5	75/70 (EN14785)

3. Statement of the test results

The appliance with the model:

00271543

and trademark:

UNICAL, SCHUSTER, WIESBERG, ARIEL

of the company

UNICAL AG S.p.A

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

The results of the basic initial type test (see reports K 1996 2016 T1) are not affected by the renaming.

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

The presumption of conformity with the relevant European Directives respectively Regulations could only be confirmed by full compliance with Annex ZA.

This statement was given based on the documentation submitted by the manufacturer and the tested sample. The statement is valid only for products / appliances which are manufactured according to the tested specimen.

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How from annex to the declaration concerning Technical report n° K 3181 2021 Z1 del 03/12/2021

Tel qu'attaché au certificat relatif au rapport technique

e in conformità al punto 9.2.1 della norma EN 14785:2006, l'azienda Unical AG SpA dichiara che gli apparecchi:

and according to sub-clause 9.2.1 of the standard EN 14785:2006, the company Unical AG SpA declare that the appliances:

et conformément au point 9.2.1 de la norme EN 14785:2006, Unical AG SpA déclare que les appareils:

Modelli / Models / Modèles (ID MODEL)	00271543
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sono rappresentativi della famiglia a cui appartengono i seguenti modelli:

are representative of the family to which belong the following models:

ils sont représentatifs de la famille à laquelle appartiennent les modèles suivants:

Marchio commerciale Trade mark Marque	Schuster	
MODELLI / Models / Modèles	00271543	IDRA 18

Firmato a nome e per conto del fabbricante da Nicola Micheletti (Procuratore)

Signed for and on behalf of the manufacturer by Nicola Micheletti (Attorney)

Luogo: Castel d'Ario (MN)

Place: Castel d'Ario (MN)

Data 03/12/2021

Date 03/12/2021

Firma

Sign.

Unical AG S.p.A.
SEDE: Via Roma, 123 - CASTEL D'ARIO (MN)
C.F./P. IVA: 01501350209
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