



Muelink & Grol



0432

EEC-DECLARATION OF CONFORMITY

Herewith, the manufacturer:

MUELINK & GROL B.V.
Duinkerkenstraat 27
P.O.Box 509
NL 9700 AM Groningen

declares that, in accordance with EEC-Construction Products Directive 89/106/EEC, the

Product with the name:

MUGRO PP(s) -System Chimneys
Rigid and flexible

Production location:

MUELINK & GROL B.V.
Duinkerkenstraat 27
P.O.Box 509
NL 9700 AM Groningen

meets the requirements as stated in EN 14471 and meets the criteria to affix the CE-marking according to Annex ZA from EN 14471. Methods as stated in table ZA.3a are used to assess conformity.

The Factory Production Control has been assessed by:

MPA NRW 
Materialprüfungsamt Nordrhein-Westfalen
Marsbruchstraße 186
D-44287 Dortmund
(ID- Nr. 0432)

and the Factory Production Control certificate with number:

0432-BPR-220556

has been granted dated September 04, 2006, with a duration of 5 years.

Groningen, September 04, 2006


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General Manager



Declaration of conformity and product information

Requirements for chimneys with plastic flue liners

Chimneys - System chimney with plastic flue liners, EN 14471

Manufacturer: MUELINK & GROL B.V.
 Duinkerkenstraat 27
 P.O. Box 509
 NL 9700 AM Groningen

Product name: MUGRO PP(s) System chimneys

Name and position of the responsible person: W.T.M. Straver, General Manager

Name of the notified body: Materialprüfungsamt Nordrhein-Westfalen

Number of certificate/Year: 0432-BPR-220556/ 2005

Product name in accordance with EN 14471

0.1	System chimney	EN 14471	T120	P1	W	1/2	O(30)	I	C/E	L
0.2	System chimney	EN 14471	T120	P1	W	1/2	O(30)	E	E	L
0.3	System chimney	EN 14471	T120	P1	W	1/2	O(00)	E	C/E	L0
0.4	System chimney	EN 14471	T120	P1	W	1/2	O(30)	I	C/E	L

Product description _____

Standard number _____

Temperature level _____

Pressure level _____

Condensate resistance _____

Corrosion resistance (durability against corrosion) _____

Soot fire resistance _____

Distance to combustible material (in mm) _____

Classes for location _____

Classes for reaction to fire PPs/PP _____

Enclosures classes _____



Ser. NO	Feature and requirement acc. to EN 14471 Annex ZA.1	Values / Classes	Initial type test number	Additional Information
1.0	Dimensions: Para. 5	Wall thickness \geq Manufacturer's specifications Internal and external diameter ± 5 mm from nominal diameter.	Manufacturer's specifications	
1.1	System 0.1	50,60,70,80,90,100,110,130,150,180,200,250,300		Refer to annex A
1.2	System 0.2	50,60,70,80,90,100,110,130,150,180,200,250,300		
1.3	System 0.3	60/100,60/125,70/110,70/150,80/125,80/150,100/150,100/170,130/200,150/220		
1.4	System 0.4 flexible	45,60,70,80,90,100,110,130,150		
2.0	Material of outer liner			
2.1	System 0.1, 0.2 and 0.4	are single-walled systems.		
2.2	System 0.3	Galvanized sheet steel or aluminium acc. to EN AW - 4047A, EN AW - 1200A, EN AW - 6060 acc. to EN 573-3 or stainless steel acc. to material number 1.4301 or better. The nominal thickness is: 0.4 – 1.0 mm. Minimum thickness is 0.3 mm.	Manufacturer's specifications	
3.0	Thermal insulation:: System 0.3	The annular gap can also be used as thermal insulation.	Manufacturer's specifications	
4.0	Seals			
4.1	Flue system 0.1 till 0.4	Brown Viton, for corrosion resistance class: 2	DIBT Certification No. Z-7.4-3014 No. Z-7.4-3243	
		Black EPDM, only for corrosion resistance class: 1	DIBT Certification No. Z-7.4-1636 No. Z-7.4-3015 No. Z-7.4-3241	
		Blue silicone, only for corrosion resistance class: 1	DIBT Certification No. . Z-7.4-1291 No. Z-7.4-1694 No. Z-7.4-3162	
4.2	Inlet air system 0.3	Clamp with silicone sleeve, cellular rubber or EPDM as seal, or individual seal directly in air tube of EPDM, TPE or silicone	Manufacturer's specifications	



Ser. NO	Feature and requirement acc. to EN 14471 Annex ZA.1	Values / Classes	Initial type test number	Additional Information
5.0	Performance requirements Para. 6			
5.1	Resistance to the combination of mechanical and thermal load Para. 6.2.1	Nominal temperature $\leq 120^{\circ}\text{C}$: Test according 7..2 fulfilled.	GW1 Test report 11584	
5.2	Mechanical load System 0.1 till 0.4	Maximum overall height 24 m.	TGM test report VA KU 19 888/1 of 7 October 2003	
5.3	Characterisation flue liner Para. 6.7.2 System 0.1 till 0.4	Melt temperature $163 \pm 5^{\circ}\text{C}$ Tensile strength at yield $\geq 24,0 \text{ N/mm}^2$ Elongation at yield $> 8,5 \%$ Flexural modulus $\geq 900 \text{ N/mm}^2$ Density $0,920 \pm 0,02 \text{ g/cm}^3$ Ring stiffness at 5% deformation (System 04) $\geq 0,020 \text{ N/mm}^2$	MPA test report no. 22000460-01 till 03 and MPA test report no. 220000556-05-1	
6.0	Mechanical behaviour and stability, only system 0.1 , 0.2 and 0.3 Para. 6.2.2	The maximum length of the horizontal part is not limited. One wall bracket should be used per chimney section.	Manufacturer's specifications	
7.0	Long-term resistance to thermal load Para. 6.7.3	Requirements fulfilled.	MPA test report no. 220969 6 96 01 and 02	
8.0	Long-term resistance to condensate exposure Para 6.7.4	Requirements fulfilled.	MPA test report no. 220969 6 96 01 and 02	
9.0	Resistance to wet/dry cycling Para. 6.7.5	Requirements fulfilled.	MPA test report No. 22 0405 3 97-02	
10.0	Wind load Para. 6.3 only system 0.2 and 0.3	Stability is assured when assembled on the outer wall and at a wind load of 135 km/h and a wind pressure of 1 kN/m^2 at a height of 25 m. When assembled on the outer wall, wall brackets should be used per chimney section. The height above the last bracket: 2 m.	TGM test report VA KU 19 888/1 of 7 October 2003	Dowel forces max. 800 N at S10, Fischer Co. Wall clearances, Refer to annex A
	Non vertical installation			
11.0	Maximum deflection to the vertical			
11.1	System 0.1 , 0.2 and 0.3	The maximum deflection is 87° .	Manufacturer's specifications	
11.2	System 0.4	The maximum deflection is 60° .	Manufacturer's specifications	
12.0	Gas tightness Para. 6.5.1	The gas tightness of pressure class P1, was checked at a test pressure of 1000 Pa; this exceeds the pressure stipulated in EN 1859 Para. 6.3.1.	MPA test report no. 220004895-1 till 3	
13.0	Distance to combustible material Para. 6.2			
13.1	System 0.1	O(30) 3 cm, ventilated over the entire length, without casing	M&G report No. 632	
13.2	System 0.2	O(30) 3 cm, ventilated over the entire length, without casing	M&G report No. 632	
13.3	System 0.3	O(00) 0 cm, ventilated over the entire length, without casing	M&G report No. 632	
13.3	System 0.4	O(30) 3 cm, ventilated over the entire length, without casing	M&G report No. 632	

14.0	Accidental human contact Para. 6.6.1.2			
14.1	System 0.1, 0.2 and 0.4	Temperature of outer wall < 93 °C.	M&G test report 763	National regulations must be adhered to
14.2	System 0.3	Temperature of outer wall < 70 °C.	Gastec test report No. 113697 of 6th March 1997	National regulations must be adhered to
15.0	Thermal resistance Para.6.6.2	The thermal resistance is 0.00 m ² K/W.	TGM test report VA KU 19 888/1 of 7 October 2003	
16.0	Tightness against moisture and condensate Para. 6.6.3	Pressure class P1, requirements fulfilled.		
17.0	Rainwater penetration resistance for insulated chimneys for external installation Para.6.4.6	There is no insulation material in the chimney, requirement based on the construction fulfilled.	Manufacturer's specifications	
18.0	Flow resistance Para. 6.6.5	Flow resistances acc. to with EN 13384-1 (13216-1) for the chimney sections and fittings have been tested and determined.	See the M&G data sheets	
19.0	Fire resistance Para. 6.4	In accordance with EN 14471 : 2005 para. 6.4 : = 0	Manufacturer's specifications	
20.0	Resistance against weathering Para. 6.7.6	Plastic chimney tops, plastic terminals and system 0.2 are UV stabilized.	MPA test report no. 22000556 CE-1	
21.0	Geometrical stability Para 6.7.7	Requirements fulfilled	TGM test report VA KU 21511 of 14 August 2006	
22.0	Reaction to fire Para. 6.7.8	Classification in accordance with EN 13501-1:2002: PPs : C and PP : E	TGM test report VA KU 21562 of 20 September 2006	
		Classification in accordance with ÖNORM B3800 part 1 (DIN 4102): PPs : B1 and PP : B2	TGM test report VA KU 19 888/1 of 20 September 2006	
23.0	Requirements for terminals:			
23.1	Flow resistance Para. 6.6.6.1	The flow resistance values of the terminals are tested and reported. Zeta value in accordance with EN 13216-1: =6,84	M&G test report no. 415	
24.0	Other properties Para. 6.6.6.2			
24.1	Aerodynamic behaviour System 0.1 , 0.3 and 0.4	The terminals have been tested in the lab at various wind speeds and angles for noise accumulation and recirculation. No noise accumulation or recirculation was detected during the test.	M&G test report no.415	
24.2	System 0.1 till 0.3	The roof and wall terminals should be tested together with the appliance.	Test reports of appliances, Type C1,C3 and C5.	
24.3	Resistance to rain	Due to the construction, rainwater can not penetrate, even in cases of gushing lateral winds. The terminal has been designed in such a way that rainwater can not penetrate into the space between the flue liner and the shaft and the back ventilation can flow freely.	Manufacturer's specifications	
24.4	Resistance against icing	The roof-, wall terminals and chimney tops are tested in accordance with prEN 14989-1 at – 15 °C. After the tests the requirements were fulfilled.	Manufacturer's specifications	

	Additional information:			
25.0	Installation drawing typical of the application		Manufacturer's specifications	Refer to Annex B
26.0	method of jointing the components	The correct method of jointing the components, installation of a section or of a pipe fitting, supports and accessories is explained and shown in the installation instructions. The seals are assembled into the sections and fittings at the factory and must not be removed. The national regulations/laws are to be adhered to regarding the minimum distance of the outer surface of the system chimney and the inner surface of a chimney or shaft constructed of combustible material.	Manufacturer's specifications	Refer to Annex B
27.0	method of installing sections or fittings, supports and accessories.	Refer to 26.0	Manufacturer's specifications	Refer to Annex B
28.0	Direction of flow:	The correct installation of the sections and fittings with regard to the direction of flow is shown in the installation instructions.	Manufacturer's specifications	Refer to Annex B
29.0	Installation method for seals:	Refer to 26.0	Manufacturer's specifications	Refer to Annex B
30.0	individual assembly instructions for any components which are supplied in unassembled conditions		Manufacturer's specifications	Refer to Annex B
31.0	Minimum distance between the outer surface of the system chimney and the inner surface of a shaft constructed of incombustible materials.	For backventilation:2 cm. For combustion air intake purposes the distance must be in accordance with the capacity of the boiler.	National regulations must be adhered to	
32.0	Positions of apertures for cleaning and inspection	The national regulations/laws of the country in question must also be adhered to for the position of apertures for cleaning and inspection.	National regulations must be adhered to	
33.0	Installation of chimney plate to the chimney, cladding or enclosure	The chimney plate must be attached to the system chimney, casing or cladding so that it is clearly visible.	National regulations must be adhered to	
34.0	Enclosure/cladding/specification/limitation	Type of material in accordance with national regulations.	National regulations must be adhered to	
35.0	Specific methods or instruments for cleaning	Flue sections and fittings must be cleaned and must be tested to make that the system chimney is not (partly) blocked and gastight according to the national regulations. Use for cleaning the sections and fittings only a soft brush.	Manufacturer's specifications	Refer to Annex B



36.0	Recommendations on condensate drainage.	A condensate drainage with a U-bend or P-trap water seal made of corrosion resistant material must be connected to the 32 mm outlet of the condenstrap.	National regulations must be adhered to	
37.0	Combination with Muelink & Grol products from aluminium or stainless steel	The sections and fittings made of PP(s) can be combined with sections and fittings made of aluminium and stainless steel according to the approvals of the respective country. Please observe that the maximum flue temperature when combining with PP(s) is 120°C. It is important to refer to annex B to ensure the correct installation, place and material of the condenstrap.	Manufacturer's specifications	Refer to Annex B




0.1


Every system-chimney must be marked clearly visible with this chimney plate.

GB

Single wall PP(s)
Artikel nr.: 86380




MPA NRW.
Materialprüfungsamt Nordrhein-Westfalen
geprüft und überwacht
Nr.: 220556



0432

MUGRO - PP(s)
System Chimneys
ø50 - ø300mm
MUELINK & GROL Groningen NL




Muelink & Grol

Product designation 0.1 EN 14471 T120 P1 W 1/2 O(30) I C/E L

Chimney designation EN 1443:

Nominal-diameter: mm

Distance to combustible material: mm → 

Installer:

Date of installation:


For cleaning: use a soft brush only.

0.2


Every system-chimney must be marked clearly visible with this chimney plate.

GB

Single wall PP(s)
Artikel nr.: 86381




MPA NRW.
Materialprüfungsamt Nordrhein-Westfalen
geprüft und überwacht
Nr.: 220556



0432

MUGRO - PP(s)
System Chimneys
ø50 - ø300mm
MUELINK & GROL Groningen NL




Muelink & Grol

Product designation 0.2 EN 14471 T120 P1 W 1/2 O(30) E E L

Chimney designation EN 1443:

Nominal-diameter: mm

Distance to combustible material: mm → 

Installer:

Date of installation:




For cleaning: use a soft brush only.



0.3

Every system-chimney must be marked clearly visible with this chimney plate.


GB Concentric PP(s)
Artikel nr.: 86382

  0432 MUGRO - PP(s)
System Chimneys
ø60/100 - ø150/220mm
MUELINK & GROLO Groningen NL  **Muelink & GroLO**

Product designation 0.3 EN 14471 T120 P1 W 1/2 O(00) E C/E L0

Chimney designation EN 1443:

Nominal-diameter: mm

Distance to combustible material: mm → 

Installer:




Date of installation:

For cleaning: use a soft brush only.

0.4

Every system-chimney must be marked clearly visible with this chimney plate.


GB Flexible PP(s)
Artikel nr.: 86383

  0432 MUGRO - PP(s)
System Chimneys
ø45 - ø150mm
MUELINK & GROLO Groningen NL  **Muelink & GroLO**

Product designation 0.4 EN 14471 T120 P1 W 1/2 O(30) I C/E L

Chimney designation EN 1443:

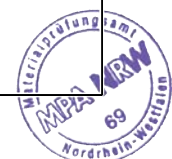
Nominal-diameter: mm

Distance to combustible material: mm → 

Installer:

Date of installation:

For cleaning: use a soft brush only.



CE marking on the product or on the packaging



CE conformity marking, consisting of the
"CE"-symbol given in directive 93/68/EEC.

Identification number of the notified body
(where relevant)

Name or identifying mark and registered
address of the manufacturer

Number of European Standard

Appropriate designation according to clause
4

Product-adhesive:





Specific marking for single wall sections:

For System 0.1: **CE** 0432 | M&G | 0.1 EN 14471 T120 P1 W 1/2 O(30) I C/E L

For System 0.2: **CE** 0432 | M&G | 0.2 EN 14471 T120 P1 W 1/2 O(30) E E L

For System 0.4: **CE** 0432 | M&G | 0.4 EN 14471 T120 P1 W 1/2 O(30) I C/E L

CE marking information on the accompanying documents

 0432 06
 Muelink & Grol Muelink & Grol B.V. P.O.Box 509 NL 9700 AM Groningen – Holland 0432-BPR-220556
EN 14471 System chimney with plastic flue liner 0.1 T120 P1 W 1/2 O(30) I C/E L 0.2 T120 P1 W 1/2 O(30) E E L 0.3 T120 P1 W 1/2 O(00) E C/E L0 0.4 T120 P1 W 1/2 O(30) I C/E L Mechanical load Maximum load: 24 m Wind load Free standing height: 2,0 m above last support Thermal resistance 0 m ² K/W Fire resistance from external to external 0 Maximum inclination For rigid: 87° , for flexible: 60° Flow resistance Mean roughness for rigid : r = 0,005 mm Mean roughness for flexible , r = 0,01 till 0,14 mm

CE conformity marking, consisting of the "CE"-symbol given in directive 93/68/EEC.

Identification number of the notified body

Last two digits of the year in which the marking was affixed

Name or identifying mark and registered address of the manufacturer

Certificate number

Number of European Standard

Definition of the product

And appropriate designation according to clause 4

Information on mandated characteristics not included in the designation or threshold values to be given (see Table ZA.1a)



In addition to any specific information relating to dangerous substances shown above, the product should also be accompanied, when and where required and in the appropriate form, by documentation listing any other legislation on dangerous substances for which compliance is claimed, together with any information required by that legislation. NOTE European legislation without national derogations need not be mentioned.

**MATERIALPRÜFUNGSAMT NORDRHEIN-WESTFALEN
CERTIFICATE OF FACTORY PRODUCTION CONTROL****0432 – BPR – 220556**

In compliance with the Directive 89/106/EEC of the Council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (Construction Products Directive - CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction product

**MUGRO PP(s)-system chimneys
rigid and flexible**

produced by the manufacturer

**Muelink & Grol B.V.
Duinkerkenstraat 27
P.O. Box 509
NL 9700 AM Groningen- Holland**

in the factory

**Muelink & Grol B.V.
Duinkerkenstraat 27
P.O. Box 509
NL 9700 AM Groningen- Holland**

is submitted by the manufacturer

- to the initial type-testing of the product and
- a factory production control

and that the approved body –**MPA NRW**– has performed

- the initial inspection of the factory and of the factory production control and
- performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of factory production control described in Annex ZA of the standard

EN 14471

were applied.

This certificate was first issued on 04.09.2006 and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

Dortmund, 04. September 2006



Dr. Krasch
Head of Certification Department

The products meet current national and international standards



Muelink & Grol

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