

# Declaration of Performance



No. 91323 009 DoP 2015-02-23 · Declaration of Performance (DoP)

1. Unique identification code of the product-type:

**Multi-wall chimney system type TEC-DW-STANDARD according to EN 1856-1:2009**

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4):

**Double wall chimney system type TEC-DW-STANDARD with 25 mm heat insulation<sup>1)</sup>**

<b>Model 1</b>	<b>DN ( 80- 300)</b>	<b>T400 – N1 – W – V2 – L99050 – O30</b>
<b>Model 1</b>	<b>DN (350- 450)</b>	<b>T400 – N1 – W – V2 – L99050 – O45</b>
<b>Model 1</b>	<b>DN (500- 600)</b>	<b>T400 – N1 – W – V2 – L99050 – O60</b>
<b>Model 2</b>	<b>DN ( 80- 300)</b>	<b>T600 – N1 – W – V2 – L99050 – O50</b>
<b>Model 2</b>	<b>DN (350- 450)</b>	<b>T600 – N1 – W – V2 – L99050 – O75</b>
<b>Model 2</b>	<b>DN (500- 600)</b>	<b>T600 – N1 – W – V2 – L99050 – O100</b>
<b>Model 3</b>	<b>DN ( 80- 300)</b>	<b>T600 – N1 – D – V2 – L99050 – G70</b>
<b>Model 3</b>	<b>DN (350- 450)</b>	<b>T600 – N1 – D – V2 – L99050 – G105</b>
<b>Model 3</b>	<b>DN (500- 600)</b>	<b>T600 – N1 – D – V2 – L99050 – G140</b>

<sup>1)</sup> Manufacturer product identification

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

**Convey the products of combustion from heating appliances to the outside atmosphere**

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):

**TECNOVIS GmbH**  
**Lessingstr. 20**  
**DE-63110 Rodgau**

5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

**Not applicable**

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

**System 2+ and System 4**

7. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

**Notified factory production control certification body no. 0036 performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity 0036 CPR 91323 009 of the factory production control.**

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION																								
8.1	Compressive strength Chimney sections, fittings and supports	<u>Sections and fittings:</u> Model 1 to 3 DN ( 80- 300): <b>up to 15 m</b> Model 1 to 3 DN (350- 450): <b>up to 10 m</b> Model 1 to 3 DN (500- 600): <b>up to 10 m</b> For further information see the installing instruction TEC-DW-STANDARD	EN 1856-1:2009																								
8.2	Resistance to fire	(Resistance to fire from inside to outside)  Model 1 DN ( 80- 300): T400 – <b>O30</b> Model 1 DN (350- 450): T400 – <b>O45</b> Model 1 DN (500- 600): T400 – <b>O60</b>  Model 2 DN ( 80- 300): T600 – <b>O50</b> Model 2 DN (350- 450): T600 – <b>O75</b> Model 2 DN (500- 600): T600 – <b>O100</b>  Model 3 DN ( 80- 300): T600 – <b>G70</b> Model 3 DN (350- 450): T600 – <b>G105</b> Model 3 DN (500- 600): T600 – <b>G140</b>  Tested without cover, with back ventilated ceiling duct.	EN 1856-1:2009																								
8.3	Gas tightness/ leakage	Model 1 to 3 DN (80- 600): <b>N1</b>	EN 1856-1:2009																								
8.4	Flow resistance of chimney sections fittings and terminals	According to EN 13384-1  <table border="1"> <thead> <tr> <th>component:</th> <th>ζ (Zeta-value) single resistances</th> </tr> </thead> <tbody> <tr> <td>pipe tee 87°:</td> <td>1.14</td> </tr> <tr> <td>pipe tee 45°:</td> <td>0.35</td> </tr> <tr> <td>pipe bend 87°:</td> <td>0.40</td> </tr> <tr> <td>pipe bend 45°:</td> <td>0.28</td> </tr> <tr> <td>pipe bend 30°:</td> <td>0.20</td> </tr> <tr> <td>pipe bend 15°:</td> <td>0.10</td> </tr> <tr> <td colspan="2"><b>Terminals:</b> (only for operation in negative pressure)</td> </tr> <tr> <td>rain cap:</td> <td>1.0</td> </tr> <tr> <td>fin cap type „Hubo“:</td> <td>≤ Ø 140 mm 0.1/ ≥ Ø 150 mm 0.2</td> </tr> <tr> <td>wind deflector:</td> <td>≤ Ø 140 mm 0.1/ ≥ Ø 150 mm 0.2</td> </tr> <tr> <td>hurrican:</td> <td>0.1</td> </tr> </tbody> </table>	component:	ζ (Zeta-value) single resistances	pipe tee 87°:	1.14	pipe tee 45°:	0.35	pipe bend 87°:	0.40	pipe bend 45°:	0.28	pipe bend 30°:	0.20	pipe bend 15°:	0.10	<b>Terminals:</b> (only for operation in negative pressure)		rain cap:	1.0	fin cap type „Hubo“:	≤ Ø 140 mm 0.1/ ≥ Ø 150 mm 0.2	wind deflector:	≤ Ø 140 mm 0.1/ ≥ Ø 150 mm 0.2	hurrican:	0.1	EN 1856-1:2009
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8.5	Thermal resistance	Model 1 to 3 DN (80- 600): <b>&gt;0.256 m²K/W calculated for 200°C*</b> * The calculated values of thermal resistance is dependent on the nominal diameters of inner tubes see product information and mounting instruction	EN 1856-1:2009																								
8.6	Thermal shock resistance Sootfire resistance	Model 1 DN (80- 600): <b>No</b> <sup>2)</sup> Model 2 DN (80- 600): <b>No</b> <sup>2)</sup> Model 3 DN (80- 600): <b>Yes</b> <sup>2)</sup> because designated O	EN 1856-1:2009																								
8.7	Thermal performance under normal operating conditions	Model 1 DN (80- 600): <b>T400</b> Model 2 DN (80- 600): <b>T600</b> Model 3 DN (80- 600): <b>T600</b>																									
8.8	Flexural tensile strength (only for means of connection for chimney sections and fittings)	Model 1 to 3 DN ( 80- 300): <b>up to 9 m</b> Model 1 to 3 DN (350- 450): <b>n.p.d.</b> Model 1 to 3 DN (500- 600): <b>n.p.d.</b>	EN 1856-1:2009																								

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION
8.9	Non vertical installation	Model 1 to 3 DN (80- 600): Maximum offset between supports <b>3 m at 90°</b> (Inclined run: maximum distance between two fixations, supports at non vertical installation)	EN 1856-1:2009
8.10	Components subject to wind load	Maximum spacing between lateral supports: Model 1 to 3 DN (80- 600): <b>4 m</b>  Free standing height above last support: Model 1 to 3 DN ( 80- 300): <b>3 m</b> (wall thickness 0.5 mm) Model 1 to 3 DN (350- 400): <b>2.5 m</b> (wall thickness 0.5 mm) Model 1 to 3 DN (450- 600): <b>1.5 m</b> (wall thickness 0.6 mm)	EN 1856-1:2009
8.11	Durability: Water and vapour diffusion resistance	Model 1 DN (80- 600): <b>Yes</b> Model 2 DN (80- 600): <b>Yes</b> Model 3 DN (80- 600): <b>No</b>	EN 1856-1:2009
8.12	Condensate penetration resistance	Model 1 DN (80- 600): <b>Yes</b> Model 2 DN (80- 600): <b>Yes</b> Model 3 DN (80- 600): <b>No</b>	
8.13	Against corrosion	Model 1 DN (80- 600): <b>V2</b> Model 2 DN (80- 600): <b>V2</b> Model 3 DN (80- 600): <b>V2</b>	
8.14	Freeze thaw resistance	Model 1 to 3 DN (80- 600): <b>Yes</b>	

9. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Rodgau, 23<sup>rd</sup> February 2015

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Attila Kovacs CEO

# Product information



## "Chimneys – Requirements for metal chimneys – Part 1: System chimney products" EN 1856-1:2009

Manufacturer's identification: **TECNOVIS GmbH**  
**Lessingstr. 20**  
**DE-63110 Rodgau**

Product trade name: **TEC-DW-STANDARD** (Double wall chimney system with 25 mm heat insulation)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: Attila Kovacs CEO

Identification of accompanying documentation

0.1	<b>Metal chimney</b>	<b>EN 1856-1</b>	<b>T400</b>	<b>N1</b>	<b>W</b>	<b>V2-L99050</b>	<b>O30</b> <b>O45</b> <b>O60</b>	<b>80 - 300</b> <b>350 - 450</b> <b>500 - 600</b>	Double wall chimney system, moisture resistant with 25 mm insulation, ventilated throughout the whole length, without covering. Operation mode in negative pressure.
0.2	<b>Metal chimney</b>	<b>EN 1856-1</b>	<b>T600</b>	<b>N1</b>	<b>W</b>	<b>V2-L99050</b>	<b>O50</b> <b>O75</b> <b>O100</b>	<b>80 - 300</b> <b>350 - 450</b> <b>500 - 600</b>	Double wall chimney system, moisture resistant with 25 mm insulation, ventilated throughout the whole length, without covering. Operation mode in negative pressure.
0.3	<b>Metal chimney</b>	<b>EN 1856-1</b>	<b>T600</b>	<b>N1</b>	<b>D</b>	<b>V2-L99050</b>	<b>G70</b> <b>G105</b> <b>G140</b>	<b>80 - 300</b> <b>350 - 450</b> <b>500 - 600</b>	Double wall chimney system, sootfire resistant with 25 mm insulation, ventilated throughout the whole length, without covering. Operation mode in negative pressure.

Product description	
Standard number	EN 1856-1
Temperature class	T400
Pressure range class	N1
Condensate resistance (W: wet / D: dry)	W
Corrosion resistance	V2-L99050
Specification of inner tube material	O30 O45 O60
Sootfire resistant (G: yes / O: no) and distance to combustible materials (mm)	O50 O75 O100
Nominal diameter (∅) (inner tube) in mm	80 - 300 350 - 450 500 - 600

### Properties of a multi-wall metal chimney system

#### Compressive strength:

Maximum load (see installing instructions)

#### Flow resistance:

Average roughness: 1.0 mm,  
Zeta-values (see installing instructions)  
according to EN 13384-1

#### Thermal resistance:

>0.256 m<sup>2</sup>K/W

#### Bending strength:

Angular assembly:  
Maximum length between two supports 3 m at 90°

#### Tensile strength:

See installing instructions

#### Wind load: free standing end above last fixation:

≤3 m up to ≤∅300 mm (0.5 mm wall thickness)  
 ≤2.5 m ∅350 – ≤∅400 mm (0.5 mm wall thickness)  
 ≤1.5 m ∅450 – ≤∅600 mm (0.6 mm wall thickness)

#### Maximum distance between vertical supports: 4 m

#### Freeze-thaw resistance: Yes

#### Cleaning:

The chimney system is only allowed to be cleaned with cleaning devices made of plastic or rust-resistant stainless steel

# Declaration of Performance



No. 91323 010 DoP 2015-02-23 · Declaration of Performance (DoP)

1. Unique identification code of the product-type:

**Rigid metal connecting pipe type TEC-DW-STANDARD according to EN 1856-2:2009**

2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4):

**Rigid, double wall connecting pipe type TEC-DW-STANDARD with 25 mm heat insulation<sup>1)</sup>**

<b>Model 1</b>	<b>DN (80- 600)</b>	<b>T450 – N1 – W – V2 – L99050 – O50 M<sup>3)</sup></b>
<b>Model 2</b>	<b>DN (80- 600)</b>	<b>T600 – N1 – D – V2 – L99050 – G100 M<sup>3)</sup></b>
<b>Model 3</b>	<b>DN (80- 600)</b>	<b>T600 – N1 – W – V2 – L99050 – O100 M<sup>3)</sup></b>

<sup>1)</sup> Manufacturer product identification connecting pipe

<sup>2)</sup> Not Measured (NM) means 3 times the Nominal Diameter with a minimum of 375 mm

<sup>3)</sup> Measured (M)

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

**Convey the products of combustion from heating appliances to the chimney**

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):

**TECNOVIS GmbH  
Lessingstr. 20  
DE-63110 Rodgau**

5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

**Not applicable**

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

**System 2+**

7. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

**Notified factory production control certification body no. 0036 performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity 0036 CPR 91323 010 of the factory production control.**

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION														
8.1	Compressive strength	Model 1 to 3 DN (80- 600): <b>up to 10 m</b>	EN 1856-2:2009														
8.2	Tensile strength	Model 1 to 3 DN (80- 300): <b>up to 9 m</b> Model 1 to 3 DN (>300- 600): <b>n.p.d.</b>															
8.3	Non vertical installation	Model 1 to 3 DN (80- 600): <b>Horizontal 3 m between supports*</b> *Please pay attention to the mounting instructions, an incline, all incline has to be arranged for where applicable.															
8.4	Resistance to fire	Model 1 DN (80- 600): <b>O50 M</b> Model 2 DN (80- 600): <b>G100 M</b> Model 3 DN (80- 600): <b>O100 M</b>	EN 1856-2:2009														
8.5	Gas tightness/ leakage	Model 1 to 3 DN (80- 600): <b>N1</b>	EN 1856-2:2009														
8.6	Flow resistance of chimney sections and fittings	According to EN 13384-1 <table border="1"> <thead> <tr> <th>component:</th> <th>ζ (Zeta-value) single resistances</th> </tr> </thead> <tbody> <tr> <td>pipe tee 87°:</td> <td>1.14</td> </tr> <tr> <td>pipe tee 45°:</td> <td>0.35</td> </tr> <tr> <td>pipe bend 87°:</td> <td>0.40</td> </tr> <tr> <td>pipe bend 45°:</td> <td>0.28</td> </tr> <tr> <td>pipe bend 30°:</td> <td>0.20</td> </tr> <tr> <td>pipe bend 15°:</td> <td>0.10</td> </tr> </tbody> </table>	component:	ζ (Zeta-value) single resistances	pipe tee 87°:	1.14	pipe tee 45°:	0.35	pipe bend 87°:	0.40	pipe bend 45°:	0.28	pipe bend 30°:	0.20	pipe bend 15°:	0.10	EN 1856-2:2009
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8.7	Sootfire resistance	Model 1 DN (80- 600): <b>No</b> <sup>2)</sup> Model 2 DN (80- 600): <b>Yes</b> Model 3 DN (80- 600): <b>No</b> <sup>2)</sup> <sup>2)</sup> because designation O	EN 1856-2:2009														
8.8	Thermal performance under normal operating conditions	Model 1 DN (80- 600): <b>T450*</b> Model 2 DN (80- 600): <b>T600*</b> Model 3 DN (80- 600): <b>T600*</b> *(Heating strain at nominal operating temperature)															
8.9	Durability: Water and vapour diffusion resistance	Model 1 DN (80- 600): <b>Yes</b> Model 2 DN (80- 600): <b>No</b> Model 3 DN (80- 600): <b>Yes</b>	EN 1856-2:2009														
8.10	Condensate penetration resistance	Model 1 DN (80- 600): <b>Yes</b> Model 2 DN (80- 600): <b>No</b> Model 3 DN (80- 600): <b>Yes</b>															
8.11	Against corrosion	Model 1 to 3 DN (80- 600): <b>V2</b>															
8.12	Freeze thaw resistance	Model 1 to 3 DN (80- 600): <b>Yes</b>															

9. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Rodgau, 23<sup>rd</sup> February 2015

A handwritten signature in blue ink, appearing to read 'Kovacs Attila', written over a dotted line. The signature is stylized and cursive.

Attila Kovacs CEO

## "Chimneys – Requirements for metal chimneys - Part 2: Metal flue liners and connecting flue pipes" EN 1856-2:2009

Manufacturer's identification: **TECNOVIS GmbH**  
**Lessingstr. 20**  
**DE-63110 Rodgau**

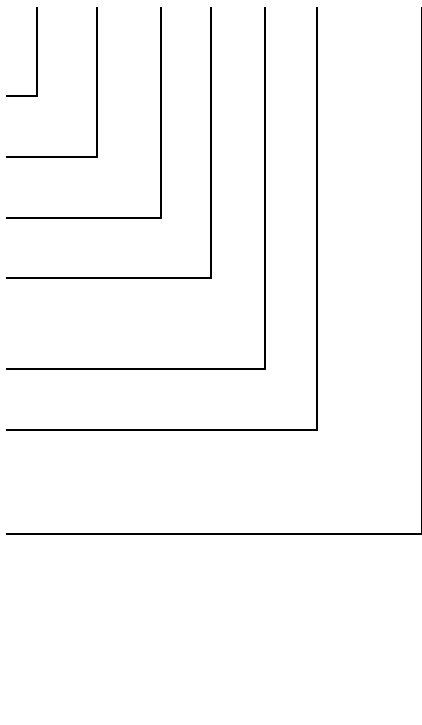
Product trade name: **TEC-DW-STANDARD connecting pipe**  
 (rigid, double wall connecting pipe with 25 mm insulation)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: Attila Kovacs CEO

Identification of accompanying documentation

Rigid double wall Connecting pipe TEC-DW-STANDARD	0.1	EN 1856-2	T450	N1	W	V2-L99050	O50 M	80 - 600	Double wall, moisture resistant connecting pipe, composed of rigid pipes and modules ventilated along the whole length without covering. Operation mode in negative pressure (oil, gas).
	0.2	EN 1856-2	T600	N1	D	V2-L99050	G100 M	80 - 600	Double wall, sootfire resistant connecting pipe, composed of rigid pipes and modules ventilated along the whole length, without covering. Operation mode in negative pressure (solid fuels).
	0.3	EN 1856-2	T600	N1	W	V2-L99050	O100 M	80 - 600	Double wall, moisture resistant connecting pipe, composed of rigid pipes and modules ventilated along the whole length, without covering. Operation mode in negative pressure (oil, gas).

Product description	
Standard number	
Temperature level	
Pressure level	
Condensate resistance (W: wet / D: dry)	
Corrosion resistance	
Flue liner material specification	
Sootfire resistant (G: yes / O: no) and distance to combustible material (in mm) M = tested distance NM = calculated distance	
Nominal diameter (∅) inner tube in mm	

Rigid connecting pipe of metal

**Compressive strength:**

>10 m over the modules and  
the connections of the elements

**Flexural strength:**

Non vertical installation:  
≤ 3 m between two brackets, supports or fixations

**Coefficient for flow resistance:**

Average roughness: 1.0 mm,  
Zeta-values according to EN 13384-1

**Maximum distance between vertical supports:**

≤ 4 m between two supports

**Thermal resistance:**

> 0.256 m<sup>2</sup>K/W

**Sootfire resistance:**

Yes

**Freeze-thaw resistance:**

Yes

**Cleaning:**

The connecting pipe is only allowed to be cleaned with  
cleaning devices made of plastic or rust-resistant  
stainless steel.