

Declaration of Performance



No. 91323 013 DoP 2015-02-23 · Declaration of Performance (DoP)

1. Unique identification code of the product-type:
Single wall chimney system type TEC-EW-COMPLETE 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):

Single wall "conical sealed" chimney system type TEC-EW-COMPLETE, installation in stack¹⁾

Model 1	DN (80- 600)	T200 – P1 – W – V2 – L50060 – O00
Model 2	DN (80- 300)	T200 – H1 – W – V2 – L50060 – O50
Model 2	DN (350- 450)	T200 – H1 – W – V2 – L50060 – O75
Model 2	DN (500- 600)	T200 – H1 – W – V2 – L50060 – O100
Model 3	DN (80- 300)	T400 – N1 – D – V2 – L50060 – G50
Model 3	DN (350- 450)	T400 – N1 – D – V2 – L50060 – G75
Model 3	DN (500- 600)	T400 – N1 – D – V2 – L50060 – G100
Model 4	DN (80- 300)	T400 – P1 – W – V2 – L50060 – O50
Model 4	DN (350- 450)	T400 – P1 – W – V2 – L50060 – O75
Model 4	DN (500- 600)	T400 – P1 – W – V2 – L50060 – O100
Model 5	DN (80- 300)	T450 – H1 – W – V2 – L50060 – O50
Model 5	DN (350- 450)	T450 – H1 – W – V2 – L50060 – O75
Model 5	DN (500- 600)	T450 – H1 – W – V2 – L50060 – O100
Model 6	DN (80- 300)	T600 – N1 – D – V3 – L50060 – G70
Model 6	DN (350- 450)	T600 – N1 – D – V3 – L50060 – G105
Model 6	DN (500- 600)	T600 – N1 – D – V3 – L50060 – G140
Model 7	DN (80- 300)	T600 – P1 – W – V2 – L50060 – O100
Model 7	DN (350- 450)	T600 – P1 – W – V2 – L50060 – O150
Model 7	DN (500- 600)	T600 – P1 – W – V2 – L50060 – O200
Model 8	DN (80- 300)	T600 – H1 – W – V2 – L50060 – G100
Model 8	DN (350- 450)	T600 – H1 – W – V2 – L50060 – G150
Model 8	DN (500- 600)	T600 – H1 – W – V2 – L50060 – G200

¹⁾ 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 013 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 8 DN (80- 300): up to 28 m Model 1 to 8 DN (350- 450): up to 22 m Model 1 to 8 DN (500- 600): up to 16 m For further information see the installation instruction TEC-EW-COMLETE	EN 1856-1:2009
8.2	Resistance to fire	(Resistance to fire from inside to outside) Model 1 DN (80- 600): T200 – O00 Model 2 DN (80- 300): T200 – O50 Model 2 DN (350- 450): T200 – O75 Model 2 DN (500- 600): T200 – O100 Model 3 DN (80- 300): T400 – G50 Model 3 DN (350- 450): T400 – G75 Model 3 DN (500- 600): T400 – G100 Model 4 DN (80- 300): T400 – O50 Model 4 DN (350- 450): T400 – O75 Model 4 DN (500- 600): T400 – O100 Model 5 DN (80- 300): T450 – O50 Model 5 DN (350- 450): T450 – O75 Model 5 DN (500- 600): T450 – O100 Model 6 DN (80- 300): T600 – G70 Model 6 DN (350- 450): T600 – G105 Model 6 DN (500- 600): T600 – G140 Model 7 DN (80- 300): T600 – O100 Model 7 DN (350- 450): T600 – O150 Model 7 DN (500- 600): T600 – O200 Model 8 DN (80- 300): T600 – G100 Model 8 DN (350- 450): T600 – G150 Model 8 DN (500- 600): T600 – G200 Tested without cover, with back ventilated ceiling duct	EN 1856-1:2009
8.3	Gas tightness/ leakage	Model 1 DN (80- 600): P1 Model 2 DN (80- 600): H1 Model 3 DN (80- 600): N1 Model 4 DN (80- 600): P1 Model 5 DN (80- 600): H1 Model 6 DN (80- 600): N1 Model 7 DN (80- 600): P1 Model 8 DN (80- 600): H1	EN 1856-1:2009

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION																								
8.4	Flow resistance of chimney sections, fittings and terminals	<p>According to EN 13384-1</p> <table border="1" data-bbox="564 414 1174 826"> <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">Terminals: (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>hurricane:</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	Terminals: (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	hurricane:	0.1	EN 1856-1:2009
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8.5	Thermal resistance	<p>Model 1 to 5 and 7 to 8 DN (80- 600): 0 m²K/W (without insulation, optional with insulation, values see Model 6) *</p> <p>Model 6 DN (80- 600): >0.256 m²K/W calculated for 200°C (with 25 mm insulation) *</p> <p>* The thermal resistance is dependent on the nominal diameters of inner tubes see product information and mounting instruction</p>	EN 1856-1:2009																								
8.6	Thermal shock resistance Sootfire resistance	<p>Model 1 DN (80- 600): No ²⁾ Model 2 DN (80- 600): No ²⁾ Model 3 DN (80- 600): Yes Model 4 DN (80- 600): No ²⁾ Model 5 DN (80- 600): No ²⁾ Model 6 DN (80- 600): Yes Model 7 DN (80- 600): No ²⁾ Model 8 DN (80- 600): Yes ²⁾ Because designated O</p>	EN 1856-1:2009																								
8.7	Thermal performance under normal operating conditions	<p>Model 1 DN (80- 600): T200 Model 2 DN (80- 600): T200 Model 3 DN (80- 600): T400 Model 4 DN (80- 600): T400 Model 5 DN (80- 600): T450 Model 6 DN (80- 600): T600 Model 7 DN (80- 600): T600 Model 8 DN (80- 600): T600</p>																									
8.8	Flexural tensile strength (only for means of connection for chimney sections and fittings)	Model 1 to 8 DN (80- 600): n.p.d.	EN 1856-1:2009																								
8.9	Non vertical installation	<p>Model 1 to 8 DN (80- 600): Maximum offset between supports 4 m at 90° (inclined run: maximum distance between two fixations, supports at non vertical installation)</p>	EN 1856-1:2009																								
8.10	Components subject to wind load	<p>Model 1 to 8 DN (80- 350): Free standing height 1.5 m above last support. Model 1 to 8 DN (400- 600): Maximum spacing between lateral supports n.p.d.</p>	EN 1856-1:2009																								

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION
8.11	Durability: Water and vapour diffusion resistance	Model 1 DN (80- 600): Yes Model 2 DN (80- 600): Yes Model 3 DN (80- 600): No Model 4 DN (80- 600): Yes Model 5 DN (80- 600): Yes Model 6 DN (80- 600): No Model 7 DN (80- 600): Yes Model 8 DN (80- 600): Yes	EN 1856-1:2009
8.12	Condensate penetration resistance	Model 1 DN (80- 600): Yes Model 2 DN 80- 600): Yes Model 3 DN (80- 600): No Model 4 DN (80- 600): Yes Model 5 DN (80- 600): Yes Model 6 DN (80- 600): No Model 7 DN (80- 600): Yes Model 8 DN (80- 600): Yes	
8.13	Against corrosion	Model 1 DN (80- 600): V2 Model 2 DN (80- 600): V2 Model 3 DN (80- 600): V2 Model 4 DN (80- 600): V2 Model 5 DN (80- 600): V2 Model 6 DN (80- 600): V3 (with 25 mm insulation) Model 7 DN (80- 600): V2 Model 8 DN (80- 600): V2	
8.14	Freeze thaw resistance	Model 1 to 8 DN (80- 600): Yes	

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, 23rd 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-EW-COMPLETE**
 (Single wall "conical sealed" chimney system, installation in stack)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: Attila Kovacs CEO

Identification of accompanying documentation

0.1	Metal chimney	EN 1856-1	T200	P1	W	V2-L50060	O00	80 - 600	Single wall chimney system, moisture resistant, installation in stacks / chimneys which meet the requirements for fire protection. Construction with rear ventilation. Operation mode in positive pressure.
0.2	Metal chimney	EN 1856-1	T200	H1	W	V2-L50060	O50 O75 O100	80 - 300 350 - 450 500 - 600	Single wall chimney system, moisture resistant, installation in stacks / chimneys which meet the requirements for fire protection. Construction with rear ventilation. Operation mode in positive / high pressure.
0.3	Metal chimney	EN 1856-1	T400	N1	D	V2-L50060	G50 G75 G100	80 - 300 350 - 450 500 - 600	Single wall chimney system, sootfire resistant, installation in stacks / chimneys which meet the requirements for fire protection. Operation mode in negative pressure.
0.4	Metal chimney	EN 1856-1	T400	P1	W	V2-L50060	O50 O75 O100	80 - 300 350 - 450 500 - 600	Single wall chimney system, moisture resistant, installation in stacks / chimneys which meet the requirements for fire protection. Construction with rear ventilation. Operation mode in positive pressure
0.5	Metal chimney	EN 1856-1	T450	H1	W	V2-L50060	O50 O75 O100	80 - 300 350 - 450 500 - 600	Single wall chimney system, moisture resistant, installation in stacks / chimneys which meet the requirements for fire protection. Construction with rear ventilation. Operation mode in positive / high pressure.
0.6	Metal chimney	EN 1856-1	T600	N1	D	V3-L50060	G70 G105 G140	80 - 300 350 - 450 500 - 600	Single wall chimney system, sootfire resistant with 25mm insulation. Installation in stacks / chimneys which meet the requirements for fire protection. Operation mode in negative pressure.
0.7	Metal chimney	EN 1856-1	T600	P1	W	V2-L50060	O100 O150 O200	80 - 300 350 - 450 500 - 600	Single wall chimney system, moisture resistant, installation in stacks / chimneys which meet the requirements for fire protection. Construction with rear ventilation. Operation mode in positive pressure
0.8	Metal chimney	EN 1856-1	T600	H1	W	V2-L50060	G100 G150 G200	80 - 300 350 - 450 500 - 600	Single wall chimney system, moisture resistant, installation in stacks / chimneys which meet the requirements for fire protection. Construction with rear ventilation. Operation mode in positive / high pressure.

Product description	
Standard number	EN 1856-1
Temperature level	T200
Pressure level	P1
Condensate resistance (W. wet / D: dry)	D
Corrosion resistance	W
Flue liner material specification	V2-L50060
Sootfire resistance (G: yes / O: no) and distance to combustible material (in mm)	O00
Nominal diameter (∅) (inner tube) in mm	80 - 600

Properties of a single wall metal chimney system

Pressure resistance:
 Maximum load (see installation instruction)

Flow resistance:
 Average roughness: 1.0 mm,
 Zeta-values (see installation instruction)
 according to EN 13384-1

Thermal resistance in stack:
 without insulation 0 m²K/W
 with 25 mm insulation >0.256 m²K/W

Flexural strength:
 Angular assembly:
 Maximum length between two supports: 4 m at 90°

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 014 DoP 2017-03-23 · Declaration of Performance (DoP)

1. Unique identification code of the product-type:

Rigid connecting pipe type TEC-EW-COMPLETE 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, single wall, conical sealed metal connecting pipe type TEC-EW-COMPLETE¹⁾

Model 1	DN (60- 600)	T200 – P1 – W – V2 – L50060 – O50 M³⁾
Model 2	DN (60- 600)	T200 – H1 – W – V2 – L50060 – O50 M³⁾
Model 3	DN (60- 120)	T400 – H1 – W – V2 – L50060 – G375 NM²⁾
Model 3	DN (>120-130)	T400 – H1 – W – V2 – L50060 – G390 NM²⁾
Model 3	DN (>130-150)	T400 – H1 – W – V2 – L50060 – G450 NM²⁾
Model 3	DN (60- 600)	T400 – H1 – W – V2 – L50060 – G500 M³⁾
Model 4	DN (60- 600)	T400 – N1 – D – V2 – L50060 – G400 M³⁾ (with radiation protection G300)

¹⁾ Manufacturer product identification connecting pipe

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

³⁾ 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 014 of the factory production control.

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION														
8.1	Compressive strength	Model 1 to 4 DN (60- 300): up to 28 m Model 1 to 4 DN (350- 450): up to 22 m Model 1 to 4 DN (500- 600): up to 16 m	EN 1856-2:2009														
8.2	Tensile strength	Model 1 to 4 DN (60- 600): n.p.d.															
8.3	Non vertical installation	Model 1 to 4: Horizontal 3 m between supports* *Please pay attention to the mounting instructions, an incline, all incline has to be arranged where applicable.															
8.4	Resistance to fire	(Resistance to fire from inside to outside) Model 1 DN (60- 600): O50 M Model 2 DN (60- 600): O50 M Model 3 DN (60- 120): G375 NM Model 3 DN (>120-130): G390 NM Model 3 DN (>130-150): G450 NM Model 3 DN (60- 600): G500 M Model 4 DN (60- 600): G400 M (with radiation protection G300)	EN 1856-2:2009														
8.5	Gas tightness/ leakage	Model 1 DN (60- 600): P1 Model 2 DN (60- 600): H1 Model 3 DN (60- 120): H1 Model 3 DN (>120-130): H1 Model 3 DN (>130-150): H1 Model 3 DN (60- 600): H1 Model 4 DN (60- 600): N1	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 (60- 600): No ²⁾ Model 2 DN (60- 600): No ²⁾ Model 3 DN (60- 120): Yes Model 3 DN (>120-130): Yes Model 3 DN (>130-150): Yes Model 3 DN (60- 600): Yes Model 4 DN (60- 600): Yes ²⁾ because designated O	EN 1856-2:2009														
8.8	Thermal performance under normal operating conditions	Model 1: T200* Model 2: T200* Model 3: T400* Model 4: T400* *(Heating strain at nominal operating temperature)															

8. Declared performance:



	ESSENTIAL CHARACTERISTICS	PERFORMANCE	HARMONIZED TECHNICAL SPECIFICATION
8.9	Durability: Water and vapour diffusion resistance	Model 1 DN (60- 600): Yes Model 2 DN (60- 600): Yes Model 3 DN (60- 120): Yes Model 3 DN (>120-130): Yes Model 3 DN (>130-150): Yes Model 3 DN (60- 600): Yes Model 4 DN (60- 600): No	EN 1856-2:2009
8.10	Condensate penetration resistance	Model 1 DN (60- 600): Yes Model 2 DN (60- 600): Yes Model 3 DN (60- 120): Yes Model 3 DN (>120-130): Yes Model 3 DN (>130-150): Yes Model 3 DN (60- 600): Yes Model 4 DN (60- 600): No	
8.11	Against corrosion	Model 1 DN (60- 600): V2 Model 2 DN (60- 600): V2 Model 3 DN (60- 120): V2 Model 3 DN (>120-130): V2 Model 3 DN (>130-150): V2 Model 3 DN (60- 600): V2 Model 4 DN (60- 600): V2	
8.12	Freeze thaw resistance	Model 1 to 4 DN (60- 600): Yes	

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, 23rd March 2017

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Attila Kovacs CEO

Product information



"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

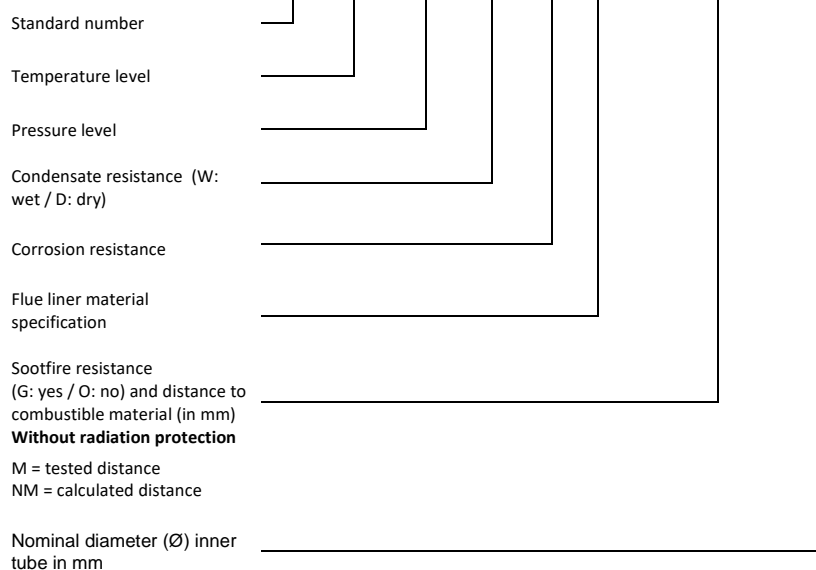
Product trade name: **TEC-EW-COMPLETE Connecting pipe**
 (rigid, single wall conical sealed connecting pipe)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: Attila Kovacs CEO

Identification of accompanying documentation

Single wall rigid connecting pipe TEC-EW-COMPLETE	0.1	EN 1856-2	T200	P1	W	V2-L50060 L50080 L50100	O50 M	60 - 600	Single wall connecting pipe, moisture resistant, conical sealed coupling. Installation ventilated along the whole length. Locking band necessary. Operation mode in positive pressure up to 200Pa. (oil, gas).
	0.2	EN 1856-2	T200	H1	W	V2-L50060 L50080 L50100	O50 M	60 - 600	Single wall connecting pipe, moisture resistant, conical sealed coupling with instep locking band, installation ventilated along the whole length. Operation mode in high pressure up to 5000Pa. (oil, gas).
	0.3	EN 1856-2	T400	H1	W	V2-L50060 L50080 L50100	G375 NM G390 NM G450 NM G500 M	60 - 120 ≤130 ≤150 60 - 600	Single wall connecting pipe, moisture resistant or sootfire resistant, conical sealed coupling with instep locking band. Installation ventilated along the whole length. Operation mode in high pressure up to 5000Pa. (oil, gas or solid fuels). For temperature levels >T400 or when necessary to have shorter distances to combustible materials, the double wall connecting pipes TEC-DW-COMPLETE with the following Certificate Nr. are to be used: 0036 CPR 91323 004
	0.4	EN 1856-2	T400	N1	D	V2-L50060 L50080 L50100	G400 M ¹	60 - 600	Single wall connecting pipe, soot fire resistant, to connect with solid fuels' heat appliances for vertical flue systems. Installation ventilated along the whole length. Operation mode in negative pressure (solid fuels). For temperature levels >T400 or when necessary to have shorter distances to combustible materials, the double wall connecting pieces TEC-DW-CLASSIC, TEC-DW-COMPLETE, TEC-DW-DESIGN, TEC-DW-STANDARD of the following Certificate Nr. are to be used: 0036 CPR 91323 002 / ...004/ ...008/...010



Rigid connecting pipe of metal

Compressive strength:

>10 m above the connections of the elements

Non vertical installation:

Maximum allowed distance between two brackets, supports or fixings ≤ 3 m

Maximal distance between vertical supports:

≤ 4 m between two supports

Sootfire resistance: Yes

Coefficient for flow resistance:

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

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.

¹With radiation protection, the distance to the combustible materials for all nominal diameters of type 0.4: „T400 N1 D V2-L50060 G400“ can be established to 300 mm.