Declaration of Performance (DOP)

No. 9174 004 DOP 2016-01-18

1. Unique identification code of the product-type:

   Single wall chimney system type EW-KL 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 EW-KL, installation in stack[1)]

Model 1	**DN (60-1000)**	**T200 – P1 – W – V2 – L50060 – O00**
Model 2	**DN (60- 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 2	**DN (650-1000)**	**T200 – H1 – W – V2 – L50060 – O200**
Model 3	**DN (60- 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 3	**DN (650-1000)**	**T400 – N1 – D – V2 – L50060 – G200**
Model 4	**DN (60- 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 4	**DN (650-1000)**	**T400 – P1 – W – V2 – L50060 – O200**
Model 5	**DN (60- 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 5	**DN (650-1000)**	**T450 – H1 – W – V2 – L50060 – O200**
Model 6	**DN (60- 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 6	**DN (650-1000)**	**T600 – N1 – D – V3 – L50060 – G280**
Model 7	**DN (60- 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 7	**DN (650-1000)**	**T600 – P1 – W – V2 – L50060 – O400**
Model 8	**DN (60- 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**
Model 8	**DN (650-1000)**	**T600 – H1 – W – V2 – L50060 – G400**

[1)] Manufacturer product identification EW-KL in stack

3. Intended use or uses of the construction product, in accordance with the applicable harmonised 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):

   jeremias GmbH
   Opfenrieder Straße 11-14
   DE-91717 Wassertrüdingen
   Tel.: +49 9832 68 68 0
   Fax: +49 9832 68 68 68
   Email: info@jeremias.de

5. Where applicable, name and contact address of the authorised 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 9174 004 of the factory production control.

8. Declared performance:

	Essential Characteristics	Performance	Harmonized technical specification
8.1	Compressive strength Chimney sections, fittings and supports	Sections and fittings: Model 1 to 8 DN (60- 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** Model 1 to 8 DN (650-1000): **n.p.d.** Supports: n.p.d. For further information see the installation instruction EW-KL	EN 1856-1:2009
8.2	Resistance to fire	(Resistance to fire from inside to outside) Model 1 DN (60-1000): T200 – **O00** Model 2 DN (60- 300): T200 – **O50** Model 2 DN (350- 450): T200 – **O75** Model 2 DN (500- 600): T200 – **O100** Model 2 DN (650-1000): T200 – **O200** Model 3 DN (60- 300): T400 – **G50** Model 3 DN (350- 450): T400 – **G75** Model 3 DN (500- 600): T400 – **G100** Model 3 DN (650-1000): T400 – **G200** Model 4 DN (60- 300): T400 – **O50** Model 4 DN (350- 450): T400 – **O75** Model 4 DN (500- 600): T400 – **O100** Model 4 DN (650-1000): T400 – **O200** Model 5 DN (60- 300): T450 – **O50** Model 5 DN (350- 450): T450 – **O75** Model 5 DN (500- 600): T450 – **O100** Model 5 DN (650-1000): T450 – **O200** Model 6 DN (60- 300): T600 – **G70** Model 6 DN (350- 450): T600 – **G105** Model 6 DN (500- 600): T600 – **G140** Model 6 DN (650-1000): T600 – **G280** Model 7 DN (60- 300): T600 – **O100** Model 7 DN (350- 450): T600 – **O150** Model 7 DN (500- 600): T600 – **O200** Model 7 DN (650-1000): T600 – **O400** Model 8 DN (60- 300): T600 – **G100** Model 8 DN (350- 450): T600 – **G150** Model 8 DN (500- 600): T600 – **G200** Model 8 DN (650-1000): T600 – **G400** Tested without cover, with back ventilated ceiling duct.	EN 1856-1:2009
8.3	Gas tightness/ leakage	Model 1 DN (60-1000): **P1** Model 2 DN (60-1000): **H1** Model 3 DN (60-1000): **N1** Model 4 DN (60-1000): **P1** Model 5 DN (60-1000): **H1** Model 6 DN (60-1000): **N1** Model 7 DN (60-1000): **P1** Model 8 DN (60-1000): **H1**	EN 1856-1:2009

8. Declared performance:

	Essential Characteristics	Performance	Harmonized technical specification
8.4	Flow resistance of chimney sections, fittings and terminals	According to EN 13384-1 **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 hurrican: 0.1	EN 1856-1:2009
8.5	Thermal resistance	Model 1 to 5 and 7 to 8 DN (60-1000): **0 m²K/W** (without insulation, optional with insulation, values see Model 6)* Model 6 DN (60-1000): **>0.26 m²K/W calculated for 200°C** (with 25 mm insulation)* * The thermal resistance is dependent on the nominal diameters of inner tubes see product information and mounting instruction EW-KL	EN 1856-1:2009
8.6	Thermal shock resistance Sootfire resistance	Model 1 DN (60-1000): **No** [2)] Model 2 DN (60-1000): **No** [2)] Model 3 DN (60-1000): **Yes** Model 4 DN (60-1000): **No** [2)] Model 5 DN (60-1000): **No** [2)] Model 6 DN (60-1000): **Yes** Model 7 DN (60-1000): **No** [2)] Model 8 DN (60-1000): **Yes** [2)] Because designated O	EN 1856-1:2009
8.7	Thermal performance under normal operating conditions	Model 1 DN (60-1000): **T200** Model 2 DN (60-1000): **T200** Model 3 DN (60-1000): **T400** Model 4 DN (60-1000): **T400** Model 5 DN (60-1000): **T450** Model 6 DN (60-1000): **T600** Model 7 DN (60-1000): **T600** Model 8 DN (60-1000): **T600**	
8.8	Flexural tensile strength (only for means of connection for chimney sections and fittings)	Model 1 to 8 DN (60-1000): **n.p.d.**	EN 1856-1:2009
8.9	Non vertical installation	Model 1 to 8 DN (60- 600): Maximum offset between supports **4 m at 90°** Model 1 to 8 DN (650-1000): Maximum offset between supports **n.p.d.** (inclined run: maximum distance between two fixations, supports at non vertical installation)	EN 1856-1:2009

8. Declared performance:

	Essential Characteristics	Performance	Harmonized technical specification
8.10	Components subject to wind load	Model 1 to 8 **DN (60- 350):** Free standing height **1.5 m** above last support. Model 1 to 8 **DN (400-1000):** Maximum spacing between lateral supports: **n.p.d.**	EN 1856-1:2009
	Durability:		
8.11	Water and vapour diffusion resistance	Model 1 DN (60-1000): **Yes** Model 2 DN (60-1000): **Yes** Model 3 DN (60-1000): **No** Model 4 DN (60-1000): **Yes** Model 5 DN (60-1000): **Yes** Model 6 DN (60-1000): **No** Model 7 DN (60-1000): **Yes** Model 8 DN (60-1000): **Yes**	
8.12	Condensate penetration resistance	Model 1 DN (60-1000): **Yes** Model 2 DN (60-1000): **Yes** Model 3 DN (60-1000): **No** Model 4 DN (60-1000): **Yes** Model 5 DN (60-1000): **Yes** Model 6 DN (60-1000): **No** Model 7 DN (60-1000): **Yes** Model 8 DN (60-1000): **Yes**	EN 1856-1:2009
8.13	Against corrosion	Model 1 DN (60-1000): **V2** Model 2 DN (60-1000): **V2** Model 3 DN (60-1000): **V2** Model 4 DN (60-1000): **V2** Model 5 DN (60-1000): **V2** Model 6 DN (60-1000): **V3** (with 25 mm insulation) Model 7 DN (60-1000): **V2** Model 8 DN (60-1000): **V2**	
8.14	Freeze thaw resistance	Model 1 to 8 DN (60-1000): **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:

Wassertrüdingen, 18th January 2016

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Stefan Engelhardt CEO

Product information

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

Manufacturer´s identification:

Jeremias GmbH
Opfenrieder Str. 11-14
91717 Wassertrüdingen
Tel.: +49 (0) 9832 / 68 68-50
Fax: +49 (0) 9832 / 68 68-68
Internet: www.jeremias.de
E-Mail: info@jeremias.de

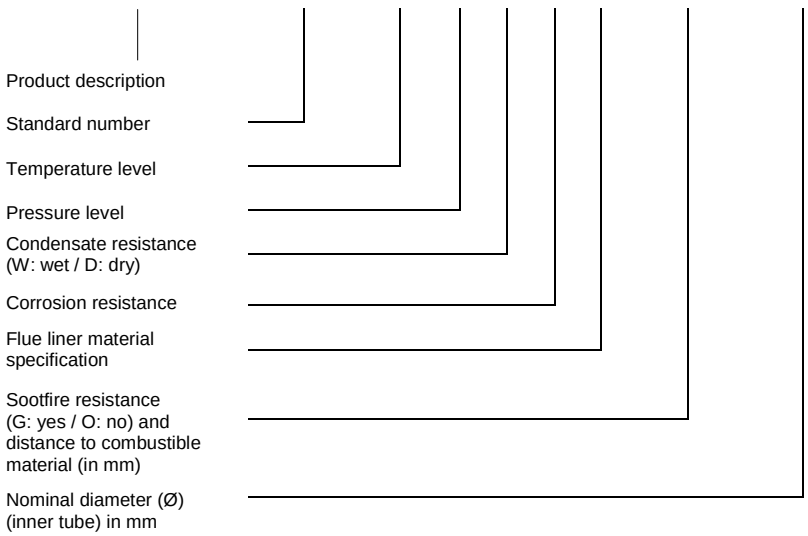
Product trade name: **EW-KL** (Single wall "conical sealed" chimney system, installation in stack)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: **Stefan Engelhardt** CEO

Identification of accompanying documentation

0.1	**Metal chimney**	**EN 1856-1**	**T200**	**P1**	**W**	**V2-L50060**	**O00**	**60 -1000**	Single wall chimney system, moisture resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Construction with rear ventilation. Locking band optional. Operation mode in positive pressure.
0.2	**Metal chimney**	**EN 1856-1**	**T200**	**H1**	**W**	**V2-L50060**	**O50** **O75** **O100** **O200**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, moisture resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Construction with rear ventilation. Locking band optional. Operation mode in positive / high pressure.
0.3	**Metal chimney**	**EN 1856-1**	**T400**	**N1**	**D**	**V2-L50060**	**G50** **G75** **G100** **G200**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, sootfire resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Locking band optional. Operation mode in negative pressure.
0.4	**Metal chimney**	**EN 1856-1**	**T400**	**P1**	**W**	**V2-L50060**	**O50** **O75** **O100** **O200**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, moisture resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Construction with rear ventilation. Locking band optional. Operation mode in positive pressure.
0.5	**Metal chimney**	**EN 1856-1**	**T450**	**H1**	**W**	**V2-L50060**	**O50** **O75** **O100** **O200**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, moisture resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Construction with rear ventilation. Locking band optional. Operation mode in positive / high pressure.
0.6	**Metal chimney**	**EN 1856-1**	**T600**	**N1**	**D**	**V3-L50060**	**G70** **G105** **G140** **G280**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, sootfire resistant, with 25mm insulation. Installation in stacks / chimneys, which meet the requirements for fire protection. Locking band optional. Operation mode in negative pressure.
0.7	**Metal chimney**	**EN 1856-1**	**T600**	**P1**	**W**	**V2-L50060**	**O100** **O150** **O200** **O400**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, moisture resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Construction with rear ventilation. Locking band optional. Operation mode in positive pressure.
0.8	**Metal chimney**	**EN 1856-1**	**T600**	**H1**	**W**	**V2-L50060**	**G100** **G150** **G200** **G400**	**60 - 300** **350 - 450** **500 - 600** **650 -1000**	Single wall chimney system, moisture resistant, installation in stacks / chimneys, which meet the requirements for fire protection. Construction with rear ventilation. Locking band optional. Operation mode in positive / high pressure.



Properties of a single wall metal chimney system

Pressure resistance:

Maximum load (see installing instructions)

Flow resistance:

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

Thermal resistance in stack:

without insulation 0 m²K/W
with 25 mm insulation ≥0.26 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 (DOP)

No. 9174 042 DOP 2015-07-20

1. Unique identification code of the product-type:

   Rigid connecting pipe type EW-KL according to EN 1856-2:2009

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

   Rigid, single wall, conical sealed metal connecting pipe type EW-KL[1)]

Model 1	**DN (60- 600)**	**T200 – P1 – W – V2 – L50060 – O50 M [3)]**
Model 2	**DN (60- 600)**	**T200 – H1 – W – V2 – L50060 – O50 M [3)]**
Model 3	**DN (60- 120)**	**T400 – H1 – W – V2 – L50060 – O375 NM [2)]**
Model 3	**DN (>120-130)**	**T400 – H1 – W – V2 – L50060 – O390 NM [2)]**
Model 3	**DN (>130-150)**	**T400 – H1 – W – V2 – L50060 – O450 NM [2)]**
Model 3	**DN (60- 600)**	**T400 – H1 – W – V2 – L50060 – O500 M [3)]**
Model 4	**DN (60- 600)**	**T400 – N1 – D – V2 – L50060 – G400 M [3)] (with radiation protection G300)**

   [1] Manufacturer product identification
   [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 harmonised 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):

jeremias GmbH
Opfenrieder Straße 11-14
DE-91717 Wassertrüdingen
Tel.: +49 9832 68 68 0
Fax: +49 9832 68 68 68
Email: info@jeremias.de

5. Where applicable, name and contact address of the authorised 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 9174 042 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**	
8.2	Tensile strength	Model 1 to 4 DN (60- 600): **n.p.d.**	EN 1856-2:2009
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 for 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): **O375 NM** Model 3 DN (>120-130): **O390 NM** Model 3 DN (>130-150): **O450 NM** Model 3 DN (60- 600): **O500 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 **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
8.7	Sootfire resistance	Model 1 DN (60- 600): **No** [2)] Model 2 DN (60- 600): **No** [2)] Model 3 DN (60- 120): **No** [2)] Model 3 DN (>120-130): **No** [2)] Model 3 DN (>130-150): **No** [2)] Model 3 DN (60- 600): **No** [2)] 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
	Durability:		EN 1856-2:2009
8.9	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): **No** Model 4 DN (60- 600): **Yes**	
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): **No** Model 4 DN (60- 600): **Yes**	
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:

Wassertrüdingen, 20th July 2015

.....

Stefan Engelhardt CEO

Product information

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

Manufacturer´s identification:

Jeremias GmbH
Opfenrieder Str. 11-14
91717 Wassertrüdingen
Tel.: +49 (0) 9832 / 68 68-50
Fax: +49 (0) 9832 / 68 68-68
Internet: www.jeremias.de
E-Mail: info@jeremias.de

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

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: **Stefan Engelhardt** CEO

Identification of accompanying documentation

Single wall rigid connecting pipe EW-KL	**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. Installation ventilated along the whole length. Locking band necessary. Operation mode in high pressure up to 5000Pa. (oil, gas).
	0.3	**EN 1856-2**	**T400**	**H1**	**W**	**V2-L50060 L50080 L50100**	**O375 NM O390 NM O450 NM O500 M**	**60 - 120 ≤130 ≤150 60 - 600**	Single wall connecting pipe, moisture resistant, conical sealed coupling. Installation ventilated along the whole length. Locking band necessary. Operation mode in high pressure up to 5000Pa (Oil, gas). **For temperature levels > T400 or when necessary to have shorter distances to combustible materials, the double wall connecting pipes dw-kl with the following Certificate Nr. are to be used: 0036 CPD 9174 041**
	0.4	**EN 1856-2**	**T400**	**N1**	**D**	**V2-L50060 L50080 L50100**	**G400 M[1]**	**60 - 600**	Single wall connecting pipe, sootfire resistant, to connect with solid fuels' heat appliances for vertical flue systems. Installation ventilated along the whole length. Locking band necessary. 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 dw-kl, dw-fu, dw-vision, dw-eco, dw-eco-titan of the following Certificate Nrs. are to be used: 0036 CPD 9174 041 /…047/…048/…049 or …054**

Standard number

Temperature level

Pressure level

Condensate resistance (W: wet / D: dry)

Corrosion resistance

Flue liner material specification

Sootfire resistance (G: yes / O: no) and distance to combustible material (in mm) **without radiation protection**
M = tested distance
NM = calculated distance

Nominal diameter (Ø) inner tube in mm

Rigid connecting pipe of metal

Compressive strength:

>10 m above the connections of the elements

Not 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 DIN 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.

[1]With radiation protection, the distance to the combustible materials for all nominal diameters of type 0.3: "T400 N1 D V2- L50060 G400"can be established to 300 mm