

# **Declaration of Performance (DOP)**

No. 9174 002 DOP 2013-06-17

1. Unique identification code of the product-type:

### Multi-wall chimney system type DW-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):

Double wall "conical" chimney system type DW-KL with 32 mm heat insulation<sup>1)</sup>

```
T200 - P1 - W - V2 - L50060 - O00
Model 1 DN (80-1000)
Model 2 DN ( 80- 300)
                           T200 - H1 - W - V2 - L50060 - O20
Model 2 DN (350- 450)
                           T200 - H1 - W - V2 - L50060 - O30
Model 2 DN (500- 600)
                           T200 - H1 - W - V2 - L50060 - O40
Model 2 DN (650-1000)
                           T200 - H1 - W - V2 - L50060 - O80
Model 3 DN (80-300)
                           T400 - N1 - D - V3 - L50060 - G50
Model 3 DN (350- 450)
                           T400 - N1 - D - V3 - L50060 - G75
Model 3 DN (500- 600)
                           T400 - N1 - D - V3 - L50060 - G100
Model 3 DN (650-1000)
                           T400 - N1 - D - V3 - L50060 - G200
Model 4 DN (80-300)
                           T400 - N1 - W - V2 - L50060 - O20
Model 4 DN (350- 450)
                           T400 - N1 - W - V2 - L50060 - O30
Model 4 DN (500- 600)
                           T400 - N1 - W - V2 - L50060 - O40
Model 4 DN (650-1000)
                           T400 - N1 - W - V2 - L50060 - O80
Model 5 DN (80-300)
                           T400 - P1 - W - V2 - L50060 - O20
Model 5 DN (350- 450)
Model 5 DN (500- 600)
                           T400 - P1 - W - V2 - L50060 - O30
T400 - P1 - W - V2 - L50060 - O40
Model 5 DN (650-1000)
                           T400 - P1 - W - V2 - L50060 - O80
Model 6 DN (80-300)
                           T450 - H1 - W - V2 - L50060 - O50
Model 6 DN (350- 450)
                           T450 - H1 - W - V2 - L50060 - O75
Model 6 DN (500- 600)
                           T450 - H1 - W - V2 - L50060 - O100
                           T450 - H1 - W - V2 - L50060 - O200
Model 6 DN (650-1000)
Model 7 DN (80-300)
                           T600 - N1 - D - V3 - L50060 - G50
Model 7 DN (350- 450)
                           T600 - N1 - D - V3 - L50060 - G75
Model 7 DN (500- 600)
                           T600 - N1 - D - V3 - L50060 - G100
Model 7 DN (650-1000)
                           T600 - N1 - D - V3 - L50060 - G200
Model 8 DN (80-300)
                           T600 - H1 - W - V2 - L50060 - G50
Model 8 DN (350- 450)
                           T600 - H1 - W - V2 - L50060 - G75
Model 8 DN (500- 600)
                           T600 - H1 - W - V2 - L50060 - G100
                           T600 - H1 - W - V2 - L50060 - G200
Model 8 DN (650-1000)
Manufacturer product identification DW-KL
```

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):

Opfenrieder Straße 11-14
DE-91717 Wassertrüdingen
Tel.: +49 9832 68 68 0
Fax: +49 9832 68 68 68

Fax: +49 9832 68 68 68 Email: <u>info@jeremias.de</u>

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

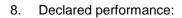
## not applicable

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

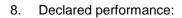
7. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

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 CPD 9174 002 of the factory production control.





	Essential Characteristics	Performance	Harmonized technical specification
8.1	Compressive strength Chimney sections, fittings and supports	Sections and fittings:  Model 1 to 8 DN ( 80- 300): up to 38 m  Model 1 to 8 DN (350- 450): up to 32 m  Model 1 to 8 DN (500- 600): up to 21 m  Model 1 to 8 DN (650-1000): up to 9 m  Supports: n.p.d.  For further information see the installation instruction DW-KL	EN 1856-1:2009
8.2	Resistance to fire	(Resistance to fire from inside to outside)  Model 1 DN ( 80-1000): T200 – <b>O00</b> Model 2 DN ( 80- 300): T200 – <b>O20</b> Model 2 DN (350- 450): T200 – <b>O30</b> Model 2 DN (500- 600): T200 – <b>O40</b> Model 2 DN (650-1000): T200 – <b>O80</b> Model 3 DN ( 80- 300): T400 – <b>G50</b> Model 3 DN ( 80- 300): T400 – <b>G75</b> Model 3 DN (500- 600): T400 – <b>G200</b> Model 3 DN (650-1000): T400 – <b>G200</b> Model 4 DN (80- 300): T400 – <b>O20</b> Model 4 DN (80- 300): T400 – <b>O30</b> Model 4 DN (500- 600): T400 – <b>O40</b> Model 4 DN (650-1000): T400 – <b>O40</b> Model 5 DN (650-1000): T400 – <b>O30</b> Model 5 DN (80- 300): T400 – <b>O30</b> Model 5 DN (650-1000): T400 – <b>O40</b> Model 5 DN (650-1000): T400 – <b>O40</b> Model 5 DN (650-1000): T400 – <b>O40</b> Model 6 DN (500- 600): T400 – <b>O40</b> Model 6 DN (650-1000): T450 – <b>O50</b> Model 6 DN (500- 600): T450 – <b>O50</b> Model 6 DN (650-1000): T450 – <b>O50</b> Model 7 DN (80- 300): T600 – <b>G50</b> Model 7 DN (500- 600): T600 – <b>G50</b> Model 8 DN (80- 300): T600 – <b>G200</b> Model 8 DN (80- 300): T600 – <b>G50</b> Model 8 DN (650-1000): T600 – <b>G200</b> Tested without cover, with back ventilated ceiling duct	EN 1856-1:2009
8.3	Gas tightness/leakage	Model 1 DN (80-1000): P1 Model 2 DN (80-1000): H1 Model 3 DN (80-1000): N1 Model 4 DN (80-1000): N1 Model 5 DN (80-1000): P1 Model 6 DN (80-1000): H1 Model 7 DN (80-1000): N1 Model 8 DN (80-1000): H1	EN 1856-1:2009





	Essential Characteristics	Performance	Harmonized technical specification
8.4	Flow resistance of chimney sections fittings and terminals	According to EN 13384-1  component: $\zeta$ (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": $\leq \varnothing$ 140 mm 0.1/ $\geq \varnothing$ 150 mm 0.2 wind deflector: $\leq \varnothing$ 140 mm 0.1/ $\geq \varnothing$ 150 mm 0.2 hurrican: 0.1	EN 1856-1:2009
8.5	Thermal resistance	Model 1 to 8 DN (80-1000): <b>0.501 m²K/W tested at 200°C</b>	EN 1856-1:2009
8.6	Thermal shock resistance Sootfire resistance  Thermal performance under normal operating conditions	Model 1 DN (80-1000): No <sup>2)</sup> Model 2 DN (80-1000): No <sup>2)</sup> Model 3 DN (80-1000): Yes Model 4 DN (80-1000): No <sup>2)</sup> Model 5 DN (80-1000): No <sup>2)</sup> Model 6 DN (80-1000): No <sup>2)</sup> Model 7 DN (80-1000): Yes Model 8 DN (80-1000): Yes Model 8 DN (80-1000): Yes <sup>2)</sup> because designated O  Model 1 DN (80-1000): T200 Model 2 DN (80-1000): T200 Model 3 DN (80-1000): T400 Model 4 DN (80-1000): T400 Model 5 DN (80-1000): T450 Model 6 DN (80-1000): T450 Model 7 DN (80-1000): T600 Model 8 DN (80-1000): T600	EN 1856-1:2009
8.8	Flexural tensile strength  (only for means of connection for chimney sections and fittings)	Model 1 to 8 DN ( 80- 300): <b>up to 16 m</b> Model 1 to 8 DN (350- 450): <b>up to 13 m</b> Model 1 to 8 DN (500- 600): <b>up to 13 m</b> Model 1 to 8 DN (650-1000): <b>n.p.d.</b>	EN 1856-1:2009
8.9	Non vertical installation	Model 1 to 8 DN (80-1000):  Maximum offset between supports 3 m at 90°  (inclined run: maximum distance between two fixations, supports at non vertical installation)	EN 1856-1:2009
8.10	Components subject to wind load	Model 1 to 8 <b>DN ( 80- 600)</b> : Free standing height <b>3 m</b> above last support.  Maximum spacing between lateral supports: <b>4 m</b> .  Model 1 to 8 <b>DN (650-1000)</b> : Free standing height <b>1.5 m</b> above last support.  Maximum spacing between lateral supports: <b>4 m</b> .	EN 1856-1:2009

# 8. Declared performance:



	Essential Characteristics	Performance	Harmonized technical specification
	Durability:		
8.11	Water and vapour diffusion resistance	Model 1 DN (80-1000): Yes Model 2 DN (80-1000): Yes Model 3 DN (80-1000): No Model 4 DN (80-1000): Yes Model 5 DN (80-1000): Yes Model 6 DN (80-1000): Yes Model 7 DN (80-1000): No Model 8 DN (80-1000): Yes	
8.12	Condensate penetration resistance	Model 8 DN (80-1000): Yes  Model 1 DN (80-1000): Yes  Model 2 DN (80-1000): Yes  Model 3 DN (80-1000): No  Model 4 DN (80-1000): Yes  Model 5 DN (80-1000): Yes  Model 6 DN (80-1000): Yes  Model 7 DN (80-1000): No  Model 8 DN (80-1000): Yes	EN 1856-1:2009
8.13	Against corrosion	Model 1 DN (80-1000): V2  Model 2 DN (80-1000): V2  Model 3 DN (80-1000): V3  Model 4 DN (80-1000): V2  Model 5 DN (80-1000): V2  Model 6 DN (80-1000): V2  Model 7 DN (80-1000): V3  Model 8 DN (80-1000): V2	
8.14	Freeze thaw resistance	Model 1 to 8 DN (80-1000): <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:

Wassertrüdingen, 17<sup>th</sup> June 2013

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

Stefan Engelhardt CEO

Tel.: +49 (0) 9832 / 68 68-50 Fax: +49 (0) 9832 / 68 68-68 Internet: <u>www.jeremias.de</u> E-Mail: info@jeremias.de

Product trade name: DW-KL (Double wall "conical" chimney system with 32 mm heat insulation)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person:

Identification of accompanying documentation

5

Р1 ი 1 Metal chimney EN 1856-1 T200 w V2-L50060 000 80 - 1000 Double wall chimney system, moisture resistant, with 32 mm heat insulation, ventilated through the whole length, without covering. Locking band necessary. Operation mode in positive pressure up to 200 Pa. 0.2 Metal chimney EN 1856-1 T200 H1 w V2-L50060 020 80 - 300 Double wall chimney system, moisture resistant, with 32 mm heat insulation, ventilated through the whole length, without covering. O30 350 - 450 Locking band necessary. Operation mode in positive pressure 040 500 - 600 high pressure up to 5000 Pa. 080 650 - 1000 0.3 Metal chimney EN 1856-1 T400 N1 D V3-L50060 G50 80 - 300 Double wall chimney system, sootfire resistant, with 32 mm heat 350 - 450 insulation, ventilated through the whole length, without covering. **G75** G100 500 - 600 Locking band necessary. Operation mode in negative pressure. G200 650 - 1000 0.4 Metal chimney EN 1856-1 T400 N1 W V2-L50060 020 80 - 300 Double wall chimney system, moisture resistant, with 32 mm heat O30 350 - 450 insulation, ventilated through the whole length, without covering. Locking band necessary. Operation mode in negative pressure. O40 500 - 600 080 650 - 1000 EN 1856-1 T400 Р1 w V2-L50060 020 80 - 300 0.5 Metal chimney Double wall chimney system, moisture resistant, with 32 mm heat insulation, ventilated through the whole length, without covering. O30 350 - 450 Locking band necessary. Operation mode in positive pressure up 040 500 - 600 080 650 - 1000 Metal chimney EN 1856-1 T450 Н1 W V2-L50060 O50 80 - 300 Double wall chimney system, moisture resistant, with 32 mm heat 350 - 450 insulation, ventilated through the whole length, without covering. 075 Locking band necessary. Operation mode in positive pressure / 500 - 600 O100 high pressure up to 5000 Pa. O200 650 - 1000 0.7 Metal chimney EN 1856-1 T600 N1 D V3-L50060 G50 80 - 300 Double wall chimney system, sootfire resistant, with 32 mm heat G75 350 - 450 insulation, ventilated through the whole length, without covering. Locking band necessary. Operation mode in negative pressure. G100 500 - 600 G200 650 - 1000 Metal chimney EN 1856-1 T600 Н1 w V2-L50060 80 - 300 Double wall chimney system, moisture resistant or sootfire 0.8 G50 resistant, with 32 mm heat insulation, ventilated through the whole G75 350 - 450 length, without covering. Locking band necessary. Operation G100 500 - 600 mode in positive pressure / high pressure up to 5000 Pa. G200 650 - 1000

I	
Product description	
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)	
Nominal diameter (Ø) (inner tube) in mm	

Properties of a multi-wall metal chimney system

#### Compressive strength:

Maximum load (see installation instructions)

#### Flow resistance:

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

Thermal resistance: 0.501 m<sup>2</sup>K/W

#### Flexural strength:

Angular assembly:

Maximum length between two supports: 3 m at 90°

**Tensile strength:** See installation instructions

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

≤ 3 m up to Ø600 mm (see installation instructions) ≤ 1.5 m Ø650 – Ø1000mm (see installation instructions)

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 (DOP)**

No. 9174 041 DOP 2013-06-17

1. Unique identification code of the product-type:

### Rigid connecting pipe type DW-KL 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 "conical" metal connecting pipe type DW-KL<sup>1)</sup>

Model 1	DN (80- 600) T200 - P1 - W - V2 - L50060 - O00 M <sup>3)</sup>
Model 2	DN (80- 600) T200 - H1 - W - V2 - L50060 - O20 M <sup>3)</sup>
Model 3	DN (80- 600) T450 - H1 - W - V2 - L50060 - O50 M <sup>3)</sup>
Model 4	DN (80- 600) T600 – N1 – D – V3 – L50060 – G100 M $^{3)}$
Model 5	DN (80- 600) T600 - H1 - W - V2 - L50060 - G100 M 3)

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

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):

# <mark>jeremias</mark> 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:

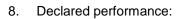
### System 2+

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 CPD 9174 041 of the factory production control

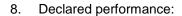
<sup>&</sup>lt;sup>2]</sup> Not Measured (NM) means 3 times the Nominal Diameter with a minimum of 375 mm

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





	Essential Characteristics	Performa	nce	Harmonized technical specification
8.1	Compressive strength	Model 1 to 5 DN ( 80- 300): <b>up to 3</b> : Model 1 to 5 DN (350- 450): <b>up to 3</b> : Model 1 to 5 DN (500- 600): <b>up to 2</b> :		
8.2	Tensile strength	Model 1 to 5 DN (80- 600): <b>n.p.d.</b>		EN 1856-2:2009
8.3	Non vertical installation	Model 1 to 5: Horizontal <b>4 m between</b> * Please pay attention to the mounting instr to be arranged for where applicable.	• •	
8.4	Resistance to fire	(Resistance to fire from inside to outsi Model 1 DN (80- 600): <b>000 M</b> Model 2 DN (80- 600): <b>020 M</b> Model 3 DN (80- 600): <b>050 M</b> Model 4 DN (80- 600): <b>G100 M</b> Model 5 DN (80- 600): <b>G100 M</b>	ide)	EN 1856-2:2009
8.5	Gas tightness/ leakage	Model 1 DN (80- 600): P1 Model 2 DN (80- 600): H1 Model 3 DN (80- 600): H1 Model 4 DN (80- 600): N1 Model 5 DN (80- 600): H1		EN 1856-2:2009
8.6	Flow resistance of chimney	According to EN 13384-1		
	sections and fittings	component:	ζ (Zeta-value) ingle resistances	
		pipe tee 87°: pipe tee 45°: pipe bend 87°: pipe bend 45°: pipe bend 30°: pipe bend 15°:	1.14 0.35 0.40 0.28 0.20 0.10	EN 1856-2:2009
8.7	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>No</b> <sup>2)</sup> Model 4 DN (80- 600): <b>Yes</b> Model 5 DN (80- 600): <b>Yes</b> <sup>2)</sup> because designated O		EN 1856-2:2009
8.8	Thermal performance under normal operating conditions	Model 1 DN (80- 600): <b>T200*</b> Model 2 DN (80- 600): <b>T200*</b> Model 3 DN (80- 600): <b>T450*</b> Model 4 DN (80- 600): <b>T600*</b> Model 5 DN (80- 600): <b>T600*</b> *(Heating strain at nominal operating temper	erature)	





	Essential Characteristics	Performance	Harmonized technical specification
	Durability:		
8.9	Water and vapour diffusion resistance	Model 1 DN (80- 600): Yes Model 2 DN (80- 600): Yes Model 3 DN (80- 600): Yes Model 4 DN (80- 600): No Model 5 DN (80- 600): Yes	
8.10	Condensate penetration resistance	Model 1 DN (80- 600): Yes Model 2 DN (80- 600): Yes Model 3 DN (80- 600): Yes Model 4 DN (80- 600): No Model 5 DN (80- 600): Yes	EN 1856-2:2009
8.11	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> Model 4 DN (80- 600): <b>V3</b> Model 5 DN (80- 600): <b>V2</b>	
8.12	Freeze thaw resistance	Model 1 to 5 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.

Stefan Engelhardt CEO

Signed for and on behalf of the manufacturer by:

Wassertrüdingen, 17<sup>th</sup> June 2013



# **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: DW-KL connecting pipe

(rigid double wall "conical sealed" connecting pipe with 32 mm insulation)

Certification office: TÜV SÜD Industrie Service GmbH

Name and position of the responsible person: Stefan Engelhardt CEO

Identification of accompanying documentation

)	5
	$\rightarrow$

cting pipe	0.1	EN 1856-2	T200	P1	W	V2-L50060	O00 M	80 - 600	Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements, ventilated along the whole length, without covering. Locking band necessary. Operation mode in positive pressure up to 200 Pa. (oil, gas).
	0.2	EN 1856-2	T200	H1	W	V2-L50060	O20 M	80 - 600	Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements, ventilated along the whole length, without covering. Locking band necessary. Operation mode in high pressure up to 5000 Pa. (oil, gas).
rigid connecting DW-KL	0.3	EN 1856-2	T450	H1	W	V2-L50060	O50 M	80 - 600	Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements, ventilated along the whole length, without covering. Locking band necessary. Operation mode in high pressure up to 5000 Pa. (oil, gas).
Double wall ri	0.4	EN 1856-2	T600	N1	D	V3-L50060	G100 M	80 - 600	Double wall, sootfire resistant connecting pipe, composed of rigid pipes and elements, ventilated along the whole length, without covering. Locking band necessary. Operation mode in negative pressure (solid fuels).
Dout	0.5	EN 1856-2	T600	H1	W	V2-L50060	G100 M	80 - 600	Double wall, sootfire resistant connecting piece or moisture resistant connecting pipe, composed of rigid pipes and elements, ventilated along the whole length, without covering. Locking band necessary. Operation mode in high pressure up to 5000Pa. (oil, gas or solid fuels).

Product de Standard r	•					
Temperature level						
Pressure level						
Condensate resistance (W: wet / D: dry)						
Corrosion resistance						
Flue liner r specification		ıl				
Sootfire re (G: yes / C distance to material (in	o comb n mm)	ind ustible				

protection

M = tested distance

inner tube in mm

NM = calculated distance

Nominal diameter (Ø)

Rigid connecting pipe of metal

# Compressive strength:

>21 m above the connections of the elements

### Flexural strength:

No vertical installation:

≤ 3 m between two fixations or supports.

#### Maximum distance between vertical supports:

≤ 4 m between two supports

#### Flow resistance:

Average roughness: 1.0 mm,

Zeta-values according to DIN EN 13384-1

# Thermal resistance:

0.501 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.

Vers. 2013/06 Page 9 of 9