# Declaration of Performance (DOP)

No. 9174 046 DOP 2018-01-08

1. Unique identification code of the product-type:

   **Multi-wall metal system chimney type DW-ECO-TITAN-AL 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, positive pressure system chimney type DW-ECO-TITAN-AL with 25 mm heat insulation[1)]**

   | | | |
   |---|---|---|
   | **Model 1** | **DN (80- 600)** | **T120 – P1 – W – V2 – L99050 – O00 (with EPDM gasket)** |
   | **Model 2** | **DN (80- 600)** | **T120 – N1 – W – V2 – L99050 – O00 (with EPDM gasket)** |
   | **Model 3** | **DN (80- 600)** | **T200 – P1 – W – V2 – L99050 – O00 (with silicone gasket)** |
   | **Model 4** | **DN (80- 600)** | **T200 – N1 – W – V2 – L99050 – O00 (with silicone gasket)** |

   [1)] Manufacturer product identification DW-ECO-TITAN-AL

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 12(2):

   **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 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 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 046 of the factory production control.**

8. Declared performance:

<table>
<tr><th></th><th>Essential Characteristics</th><th>Performance</th><th>Harmonized technical specification</th></tr>
<tr><td>8.1</td><td>Compressive strength<br><br>Chimney sections, fittings and supports</td><td><u>Sections and fittings:</u><br>Model 1 to 4 DN ( 80- 300): up to 15 m<br>Model 1 to 4 DN (350- 450): up to 10 m<br>Model 1 to 4 DN (500- 600): up to 10 m<br>For further information see the installation instruction DW-ECO-TITAN-AL</td><td>EN 1856-1:2009</td></tr>
<tr><td>8.2</td><td>Resistance to fire</td><td>(Resistance to fire from inside to outside)<br>Model 1 to 2 DN (80- 600): T120 – O00<br>Model 3 to 4 DN (80- 600): T200 – O00<br>Tested without cover, with back ventilated ceiling duct.</td><td>EN 1856-1:2009</td></tr>
<tr><td>8.3</td><td>Gas tightness/ leakage</td><td>Model 1 DN (80- 600): P1<br>Model 2 DN (80- 600): N1<br>Model 3 DN (80- 600): P1<br>Model 4 DN (80- 600): N1</td><td>EN 1856-1:2009</td></tr>
<tr><td>8.4</td><td>Flow resistance of chimney sections fittings and terminals</td><td>According to EN 13384-1<br><table><tr><th>component:</th><th>ζ (Zeta-value) single resistances</th></tr><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>hurrican:</td><td>0.1</td></tr></table></td><td>EN 1856-1:2009</td></tr>
<tr><td>8.5</td><td>Thermal resistance</td><td>Model 1 to 4 DN (80- 600):>0.26 m²K/W calculated for 200°C*<br>* The thermal resistance is dependent on the nominal diameters of inner tubes see product information and mounting instructions.</td><td>EN 1856-1:2009</td></tr>
<tr><td>8.6<br><br>8.7</td><td>Thermal shock resistance<br><br>Sootfire resistance<br><br>Thermal performance under normal operating conditions</td><td>Model 1 to 4 DN (80- 600): No [2)]<br>[2)] because designated O<br><br>Model 1 to 2 DN (80- 600): T120<br>Model 3 to 4 DN (80- 600): T200</td><td>EN 1856-1:2009</td></tr>
<tr><td>8.8</td><td>Flexural tensile strength<br><br>(only for means of connection for chimney sections and fittings)</td><td>Model 1 to 4 DN ( 80- 300): up to 9 m<br>Model 1 to 4 DN (350- 450): n.p.d.<br>Model 1 to 4 DN (500- 600): n.p.d.</td><td>EN 1856-1:2009</td></tr>
<tr><td>8.9</td><td>Non vertical installation</td><td>Model 1 to 4 DN (80- 600):<br>Maximum offset between supports 3 m at 90°<br>Inclined run: maximum distance between two fixations, supports at non vertical installation</td><td>EN 1856-1:2009</td></tr>
</table>

8. Declared performance:

| | Essential Characteristics | Performance | Harmonized technical specification |
|---|---|---|---|
| 8.10 | Components subject to wind load | Free standing height above last support:<br>Model 1 to 4 **DN ( 80- 300): 3 m** (in wall thickness 0,5 mm)<br>Model 1 to 4 **DN (350- 400): 2.5 m** (in wall thickness 0,5 mm)<br>Model 1 to 4 **DN (450): 2.0 m** (in wall thickness 0,5 mm)<br>Model 1 to 4 **DN (500- 600): 1.6 m** (in wall thickness 0,6 mm)<br>Maximum spacing between lateral supports:<br>Model 1 to 4 DN (80- 600): **4 m** | EN 1856-1:2009 |
| | Durability: | | EN 1856-1:2009 |
| 8.11 | Water and vapour diffusion resistance | Model 1 to 4 DN (80- 600): **Yes** | |
| 8.12 | Condensate penetration resistance | Model 1 to 4 DN (80- 600): **Yes** | |
| 8.13 | Against corrosion | Model 1 to 4 DN (80- 600): **V2** | |
| 8.14 | Freeze thaw resistance | Model 1 to 4 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:

Wassertrüdingen, 08th January 2018

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Stefan Engelhardt CEO

# Product information

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


Manufacturer´s identification:

**Jeremias GmbH**
**Opfenrieder Str. 11-14**
**91717 Wassertrüdingen**
Tel.: +49 (0) 9825 / 68 68-50
Fax: +49 (0) 9825 / 68 68-68
Internet: www.jeremias.de
E-Mail: info@jeremias.de

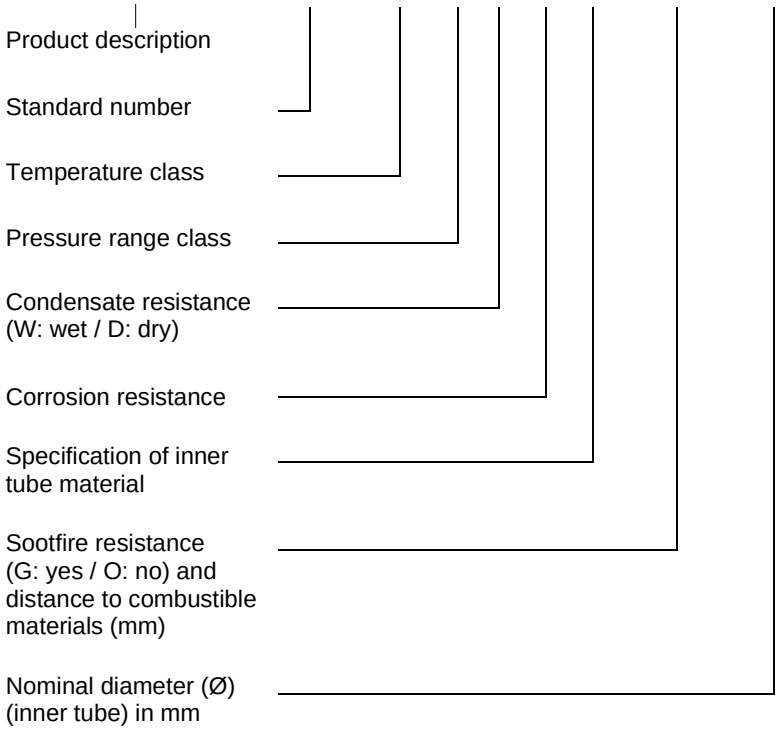

Product trade name: **DW-ECO-TITAN-AL**
(double wall positive pressure chimney system with 25 mm heat insulation)

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** | **T120** | **P1** | **W** | **V2-L99050** | **O00** | **80 - 600** | Double wall chimney system **with EPDM gasket**, moisture resistant, with 25 mm insulation, ventilated throughout the whole length, without covering. Locking band necessary. Operation mode in positive pressure. |
| 0.2 | **Metal chimney** | **EN 1856-1** | **T120** | **N1** | **W** | **V2-L99050** | **O00** | **80 - 600** | Double wall chimney system **with EPDM gasket**, moisture resistant, with 25 mm insulation, ventilated throughout the whole length, without covering. No gasket necessary. Locking band necessary. Operation mode in negative pressure. |
| 0.3 | **Metal chimney** | **EN 1856-1** | **T200** | **P1** | **W** | **V2-L99050** | **O00** | **80 - 600** | Double wall chimney system **with silicone gasket**, moisture resistant, with 25 mm insulation, ventilated throughout the whole length, without covering. Locking band necessary. Operation mode in positive pressure. |
| 0.4 | **Metal chimney** | **EN 1856-1** | **T200** | **N1** | **W** | **V2-L99050** | **O00** | **80 - 600** | Double wall chimney system **with silicone gasket**, moisture resistant, with 25 mm insulation, ventilated throughout the whole length, without covering. No gasket necessary. Locking band necessary. Operation mode in negative pressure. |




Properties of a multi-wall metal chimney system

**Compressive strength:**
Maximum load (see installing instructions)

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

**Thermal resistance:** 0.26 m²K/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 ≤Ø300 mm (0.5 mm wall thickness) |
| ≤2.5 m | Ø350 – ≤Ø400 mm (0.5 mm wall thickness) |
| ≤2.0 m | Ø450 mm (0.5 mm wall thickness) |
| ≤1.6 m | Ø500 – ≤Ø600 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 (DOP)

No. 9174 053 DOP 2015-08-05

1. Unique identification code of the product-type:

   **Rigid metal connecting pipe type DW-ECO-TITAN-AL 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 DW-ECO-TITAN-AL with 25 mm heat insulation[1)]**

| | | |
|---|---|---|
| **Model 1** | **DN (80- 600)** | **T120 – P1 – W – V2 – L99050 – O00 M [3)] (with EPDM gasket)** |
| **Model 2** | **DN (80- 600)** | **T120 – N1 – W – V2 – L99050 – O00 M [3)] (with EPDM gasket)** |
| **Model 3** | **DN (80- 600)** | **T200 – P1 – W – V2 – L99050 – O00 M [3)] (with silicone gasket)** |
| **Model 4** | **DN (80- 600)** | **T200 – N1 – W – V2 – L99050 – O00 M [3)] (with silicone gasket)** |

   [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 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):

**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 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 9174 053 of the factory production control.**

8. Declared performance:

| | Essential Characteristics | Performance | Harmonized technical specification |
|---|---|---|---|
| 8.1 | Compressive strength | Model 1 to 4 DN (80- 600): **up to 10 m** | EN 1856-2:2009 |
| 8.2 | Tensile strength | Model 1 to 4 DN (80- 300): **up to 9 m**<br>Model 1 to 4 DN (>300- 600): **n.p.d.** | |
| 8.3 | Non vertical installation | Model 1 to 4 DN (80- 600): Horizontal **3 m between supports***<br>*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 to 4 DN (80- 600): **O00 M** | EN 1856-2:2009 |
| 8.5 | Gas tightness/ leakage | Model 1 DN (80- 600): **P1**<br>Model 2 DN (80- 600): **N1**<br>Model 3 DN (80- 600): **P1**<br>Model 4 DN (80- 600): **N1** | EN 1856-2:2009 |
| 8.6 | Flow resistance of chimney sections and fittings | According to EN 13384-1<br>**component:** / **ζ (Zeta-value) single resistances**<br>pipe tee 87°: 1.14<br>pipe tee 45°: 0.35<br>pipe bend 87°: 0.40<br>pipe bend 45°: 0.28<br>pipe bend 30°: 0.20<br>pipe bend 15°: 0.10 | EN 1856-2:2009 |
| 8.7 | Sootfire resistance | Model 1 to 4 DN (80- 600): **No** [2)]<br>[2)] because designated O | EN 1856-2:2009 |
| 8.8 | Thermal performance under normal operating conditions | Model 1 to 2 DN (80- 600): **T120***<br>Model 3 to 4 DN (80- 600): **T200***<br>*(Heating strain at nominal operating temperature) | |
| | Durability: | | EN 1856-2:2009 |
| 8.9 | Water and vapour diffusion resistance | Model 1 to 4 DN (80- 600): **Yes** | |
| 8.10 | Condensate penetration resistance | Model 1 to 4 DN (80- 600): **Yes** | |
| 8.11 | Against corrosion | Model 1 to 4 DN (80- 600): **V2** | |
| 8.12 | Freeze thaw resistance | Model 1 to 4 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:

Wassertrüdingen, 05th August 2015

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Stefan Engelhardt CEO

# Product information

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

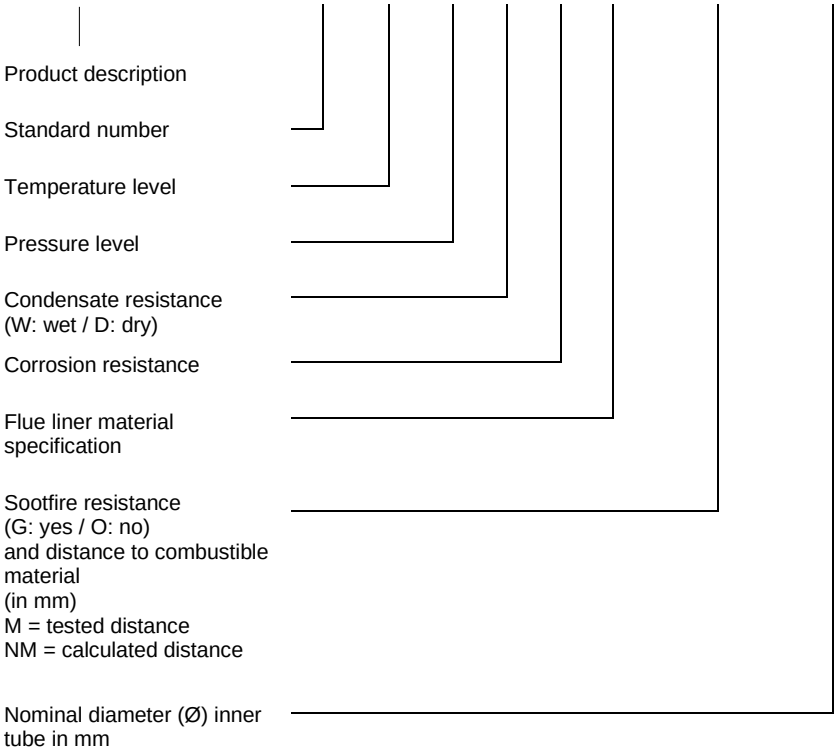

Product trade name: **DW-ECO-TITAN-AL connecting pipe**
(rigid, double wall connecting pipe with 25mm insulation)

Certification office: TÜV SÜD Industrie Service GmbH

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

Identification of accompanying documentation

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **rigid double wall connecting pipe DW-ECO-TITAN-AL** | **0.1** | **EN 1856-2** | **T120** | **P1** | **W** | **V2-L99050** | **O00 M** | **80 - 600** | Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements **with EPDM gasket**, 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** | **T120** | **N1** | **W** | **V2-L99050** | **O00 M** | **80 - 600** | Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements **with EPDM gasket**, ventilated along the whole length, without covering. No gasket necessary. Locking band necessary. Operation mode in negative pressure (oil, gas). |
| | **0.3** | **EN 1856-2** | **T200** | **P1** | **W** | **V2-L99050** | **O00 M** | **80 - 600** | Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements **with silicone gasket**, ventilated along the whole length, without covering. Locking band necessary. Operation mode in positive pressure up to 200 Pa (oil, gas). |
| | **0.4** | **EN 1856-2** | **T200** | **N1** | **W** | **V2-L99050** | **O00 M** | **80 - 600** | Double wall, moisture resistant connecting pipe, composed of rigid pipes and elements **with silicone gasket**, ventilated along the whole length, without covering. No gasket necessary. Locking band necessary. Operation mode in negative pressure (oil, gas). |




Rigid connecting pipe of metal

**Compressive strength:**

>10 m over the modules and connections of the elements

**Flexural strength:**

No vertical installation: ≤ 3 m between two supports, fixations or brackets

**Coefficient for flow resistance:**

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

**Maximal distance between vertical supports:**

≤ 4 m between two supports

**Thermal resistance:**

> 0.26 m²K/W

**Sootfire resistance:**

No

**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.