Type **TN5 H₂**

WEH® Receptacle

for refuelling buses and trucks with hydrogen
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Dear Customer!

Thank you for deciding to use a WEH® Product. The WEH® TN5 H₂ Receptacle is for refuelling buses and trucks with compressed gaseous hydrogen (CGH₂).

Each delivery must contain:
1) a delivery note
2) an original WEH test report (this does not apply to spare parts)
3) WEH installation instructions
4) installation instructions for “Products with double ferrule fitting”

For missing documents please contact WEH.

Our General Terms and Conditions apply.

Read these installation and safety instructions carefully and follow them whilst using the WEH® Product.

The statements in these instructions correspond to the state of knowledge at the time of printing. Failure to observe these instructions may result in a loss of warranty. Any variations to these instructions have to be confirmed by the WEH QA Management in writing.

Violation of WEH GmbH installation instructions will result in a loss of warranty by the customer. In addition, WEH GmbH will accept no liability for consequential damage, in particular for damage caused to other property and/or for personal injury.

1 GENERAL SAFETY INSTRUCTIONS

For your own safety, please observe the following instructions.

1.1 Please conform to any relevant legal directives, such as for instance any national legislation on safety and health at work. Observe the relevant approval standards and directives.

1.2 These installation instructions should be made available to all persons responsible for the installation of the product.

1.3 If these installation instructions are not completely understood by operators, please contact WEH GmbH before attempting to use the product.

1.4 Where dangerous operating conditions exist, appropriate safety measures must be taken.

1.5 In case of damage and queries concerning the proper functioning of the product, do not use the product until clarification has been sought.

1.6 Service personnel as defined by these instructions are persons able to evaluate the work entrusted to them and to recognize possible dangers according to their knowledge and experience and their knowledge of the applicable standards.

1.7 WEH GmbH is not responsible for any damage resulting from factors outside their control.

1.8 Transportation and storage facilities suitable for protection of the product must be used at all times.

1.9 WEH® Products may only be repaired by the manufacturer. Please contact WEH GmbH.

1.10 Observe the torques indicated in these installation instructions. Tightening with a higher torque can result in fracture damage when the system is pressurised.
2 APPLICATION

The application is defined in the catalogue and in the accompanying product documentation. Please check that the specifications in the product marking, delivery note and test report comply with the application. If you are not certain about correct installation please contact us before using the equipment.

2.1 Safety instructions for application

2.1.1 Ensure the proper use. The product is allowed to be used only where the operating pressure, medium, temperatures and the design criteria defined in the order are complied with. Please check that the product documentation supplied corresponds to the product marking.

2.1.2 Ensure that the connection sizes comply with those of the product. Please check that the product documentation supplied corresponds to the product marking.

2.1.3 Suitability for application: When selecting a component, the total system design must be considered to ensure safe, trouble-free performance. The correct selection of components, materials, temperature and pressure data, as well as proper installation, operation and maintenance, are the responsibility of the customer.

2.1.4 Only use the product for compressed gaseous hydrogen (CGH₂) at the permitted pressure (see Chapter 9 – Dimensions) and within a temperature range of -40 °C to +85 °C, under no circumstances for other media or higher pressures.

2.1.5 This WEH® Product is generally and exclusively classified as pressure accessory for piping in accordance with Article 2 (5) of the Pressure Equipment Directive 2014/68/EU. This WEH® Product may not be used (i) as safety accessory or (ii) for vessels as defined by the Pressure Equipment Directive 2014/68/EU. Therefore, the application of this WEH® Product must comply with the classification as pressure accessory for piping. The assessment with regard to a different classification can, however, be made on request.

3 INSTALLATION

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spanner flat</td>
</tr>
<tr>
<td>2</td>
<td>Locking nut</td>
</tr>
<tr>
<td>3</td>
<td>Filter (inside)</td>
</tr>
<tr>
<td>4</td>
<td>Union nut for double ferrule fitting</td>
</tr>
<tr>
<td>5</td>
<td>Front seal</td>
</tr>
<tr>
<td>6</td>
<td>Dust protection cap</td>
</tr>
</tbody>
</table>

Definition ports

B2 Media outlet
3.1 Safety instructions for installation

3.1.1 Please check that the specifications in the product marking, delivery note and test report comply with the application.

3.1.2 Check the product for any damage in transit.

3.1.3 Ensure that the system is depressurised. Installation must only be effected in depressurised condition.

3.1.4 Install the product carefully without exerting any force. The product must not be exposed to any additional mechanical stress. Additional mechanical stress, e.g. lateral forces caused by connected tubes, may lead to leakages and may cause the product to burst.

3.1.5 The assembly data indicated (tightening torques, assembly turns etc.) are max. values and only valid for components delivered by WEH. The customer is responsible for checking whether the counterparts are designed to withstand these max. values determined by WEH GmbH.

3.1.6 The current technical standards must be observed during installation of the product.

3.2 Installation

3.2.1 To be able to install the receptacle in the vehicle, there must be a hole in the body panel. The hole must be located on a flat part so that the locking nut (Pos. 2) and the receptacle have full contact. The hole must have a diameter of 22.5 mm.

3.2.2 Insert the receptacle into the hole in the body panel and screw on the locking nut (Pos. 2) from the inside. Tightening torque 60 Nm [A/F30]. Caution: When the locking nut (Pos. 2) is being tightened, it can only be countered on the wrench flat (Pos. 1) of the receptacle.

3.2.3 Connect the media hose line pressure-tight to the ‘B2’ media outlet. For tube fittings, please observe the enclosed installation instructions “Products with double ferrule fitting”.

The following tightening torques apply for external threads:

<table>
<thead>
<tr>
<th>Port B2</th>
<th>Tightening torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNF 7/8”-14* external thread</td>
<td>100 Nm</td>
</tr>
</tbody>
</table>

* O-Lok face seal according to SAE J1453

Please note the port size engraved on your product! Others available on request.
4 COMMISSIONING

The ‘B2’ connection and the entire system must be checked for leak tightness before commissioning. We recommend using a foam-producing H₂-compatible leak detection agent. After installation, the receptacle must be pressurised only slowly. For maximum operating pressure, see the markings on the device. The current technical standards and applicable legal requirements must also be observed.

**Note:** Always replace the dust protection cap on the receptacle after the fuelling process. This protects the receptacle from dirt ingress when it is not in use, and extends the service life of the front seal.

5 ACCESSORIES | SPARE PARTS

**Dust protection cap**

Dust protection cap with flap to protect the receptacle from dirt ingress.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E80-134306</td>
<td>Dust protection cap</td>
</tr>
</tbody>
</table>

**Spare parts**

The following parts are available for product maintenance:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E50-125033</td>
<td>Front seal*</td>
</tr>
<tr>
<td>E34-82427</td>
<td>WEH® Assembly tool</td>
</tr>
</tbody>
</table>

* Please note the port size engraved on your product!

6 STORAGE

6.1 Protect the product against damage, dirt ingress, improper storage and excessive temperature fluctuations.

6.2 Store the product, the accessories and spare parts in the original packaging until use.
7 MAINTENANCE

Any violation of WEH GmbH maintenance instructions specified in this document will result in a loss of warranty claims by the customer. In addition, WEH GmbH will accept no liability for consequential damage, in particular for damage caused to property and / or for personal injury.

7.1 Safety instructions for maintenance.

7.1.1 Do not dismantle the product.

7.1.2 WEH® Products may only be repaired by the manufacturer. Please contact WEH GmbH.

7.1.3 Only use original WEH® spare parts. These match the application exactly and are subject to strict quality control.

7.1.4 Do not clean the WEH® Receptacle with soap solutions. Soap solutions may form a layer that can hamper proper operation. Clean the receptacle by blowing dirt off with compressed air, and remove adhering dirt using a damp and soft cloth. Do not use solvents, only clear water!

7.2 Maintenance

7.2.1 Before refuelling, always check the surface of the front seal. Replace the front seal if cracks or damage are visible (see Chapter 8 – Seal replacement).

7.2.2 Even with proper selection and installation, product life may be significantly reduced without a continuing maintenance program. Frequency of maintenance should be determined by the demands of the application and risk potential.

8 SEAL REPLACEMENT

8.1 Insert a suitable repair tool behind the front seal (Pos. 5) and remove it from its recess (Figure 1). Do not use a sharp tool. WEH recommends using the WEH® assembly tool Part No. E34-82427.

Caution: Make sure not to damage the surface of the front seal recess when removing the old front seal. Only the tool recommended by WEH may be used.

8.2 Clean the recess of dirt and other residues.

Please note: Section 7.1.4.

8.3 Verify correct size and material of replacement front seal.

8.4 Insert the new front seal (Pos. 5) into the clean recess. Make sure that the front seal is not twisted and is properly seated in the recess.

Define a regular interval for inspection. The media and environment are decisive factors in establishing this interval to prevent dirt accumulation. Difficulty in operation after continual use indicates that maintenance is required.
9 DIMENSIONS

WEH® TN5 H₂ Receptacle with double ferrule fitting
approx. dimensions (mm)

<table>
<thead>
<tr>
<th>Description</th>
<th>DN</th>
<th>Pressure (PN)</th>
<th>D2</th>
<th>D3</th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>L4</th>
<th>A/F (1)</th>
<th>A/F (2)</th>
<th>A/F (3)</th>
<th>A/F (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN5 H₂</td>
<td>8</td>
<td>350 bar</td>
<td>45</td>
<td>35</td>
<td>22.5</td>
<td>125</td>
<td>116</td>
<td>70</td>
<td>56</td>
<td>22</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>TN5 H₂</td>
<td>10</td>
<td>250 bar</td>
<td>45</td>
<td>35</td>
<td>22.5</td>
<td>125</td>
<td>116</td>
<td>70</td>
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<td>70</td>
<td>56</td>
<td>22</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>TN5 H₂</td>
<td>12</td>
<td>350 bar</td>
<td>45</td>
<td>35</td>
<td>22.5</td>
<td>125</td>
<td>116</td>
<td>70</td>
<td>56</td>
<td>25</td>
<td>30</td>
<td>34</td>
</tr>
</tbody>
</table>

* Double ferrule fitting

Contact
For queries and further information, please do not hesitate to contact us.

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