

Type **TK7 CNG**

Fuelling nozzle according to NZ standard

for CNG refuelling of cars with NZ block (Ø 11 mm)

temporarily approved



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PLEASE NOTE

Dear Customer!

Thank you for deciding to use a WEH® Product.

The WEH® Fuelling nozzle TK7 CNG has been developed for refuelling CNG cars with NZ block.

Each delivery must contain:

- a) A delivery note
- b) An original WEH test report (this does not apply to spare parts).
- c) WEH operating instructions

For missing documents please contact WEH.

Our 'General Terms and Conditions' apply.

Read these operating 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 operating instructions will result in a loss of warranty and in addition the WEH GmbH will accept no liability for consequential damage caused to persons or property.

1 GENERAL SAFETY INSTRUCTIONS

For your own safety, please observe the following instructions.

- 1.1** A copy of these operating instructions should be provided to each person responsible for installation, operation and maintenance of the WEH® Product.
- 1.2** 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.
- 1.3** If instructions are not completely understood by operators, contact WEH before attempting use of the 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. The product should only be dismantled by WEH.
- 1.6** The WEH GmbH is not responsible for any damage resulting from factors outside their control.
- 1.7** Transportation and storage facilities suitable for protection of the product must be used at all times.
- 1.8** WEH® Products may only be repaired by WEH. Please contact us.
- 1.9** 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 standards applicable.

2 APPLICATION

The application is defined in the catalogue and in the accompanying product documentation. Please check that 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.

Attention: No self-service operation!

2.1 Safety instructions for application

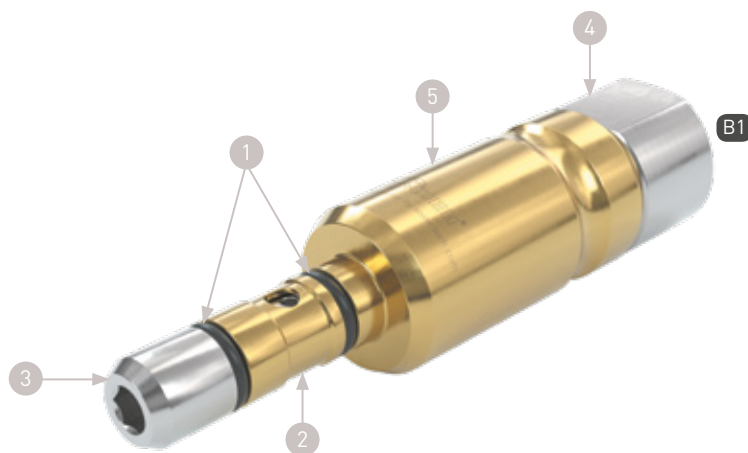
- 2.1.1** Ensure the proper use: The product may be used only if the specified operating pressure and temperature are not exceeded and the design criteria and media defined in the order are complied with. Please check that the product documentation supplied corresponds to the product marking.
- 2.1.2** Ensure that the connection sizes comply with those of the fuelling nozzle. 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 a component, material, temperature, pressure range as well as proper installation, operation and maintenance are the responsibility of the customer.
- 2.1.4** Do not use this system for media other than gaseous, compressed natural gas up to a **maximum operating pressure of 300 bar, but not below 20 bar** and a temperature range of -40 °C to +85 °C.
- 2.1.5** **Note:** The WEH® Fuelling nozzle is not fitted with an internal shut-off valve and will not prevent loss of media when disconnecting. Only disconnect under absolutely safe conditions.
- 2.1.6** 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

Pos.	Description
1	Front seals
2	Sleeve
3	Tensile axis
4	Piston
5	Housing

Definition ports

B1 Media inlet



3.1 Safety instructions for installation

- 3.1.1** Please check that the product marking, delivery note and test report comply with the application.
- 3.1.2** Do only connect the WEH® Fuelling nozzle to faultless ports.
- 3.1.3** Check the ports and the WEH® Fuelling nozzle for impurities and damage.
- 3.1.4** Check the product for any damage in transit.
- 3.1.5** Ensure that the system is depressurized. Installation must only be effected in depressurized condition.
- 3.1.6** The torques given are maximum values, only valid for components delivered by WEH. The customer is responsible to check if his components withstand the torques determined by WEH as maximum values.

3.2 Installation

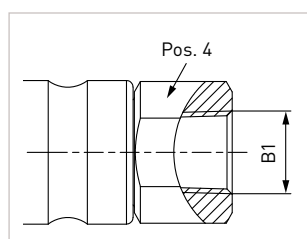


Figure 1

- 3.2.1** Connect the filling hose end pressure-tight to inlet 'B1' (figure 1) whilst exerting counter pressure on the spanner flat of the piston (Pos. 4) with an open-ended spanner.
- 3.2.2** Please proceed as follows for assembly of the NPT threads:
Apply teflon tape (1.5 layer) to the tapered fitting, screw in handtight and tighten it according to the specifications in the table below.
- 3.2.3** Check total function (leaktightness, correct function) and observe chapter 8 'Maintenance'.

Inlet B1	Assembly turns NPT thread*
NPT 1/4" internal thread	2.0 - 3.0

* one turn corresponds to 360°

4 OPERATION

4.1 Safety instructions for operation

- 4.1.1 Do not use excessive force when connecting.
- 4.1.2 **Strictly** observe the correct order when connecting and disconnecting the WEH® Fuelling nozzle.
- 4.1.3 Do not connect or disconnect the WEH® Fuelling nozzle in pressurized condition.
- 4.1.4 Operation only by specially trained service personnel!
- 4.1.5 Ensure that the WEH® Fuelling nozzle is inserted in the NZ block of the vehicle until the stop and remains in this position during the whole refuelling process.
- 4.1.6 Check the front seals (Pos. 1) for perfect condition before refuelling.
The WEH® Fuelling nozzle may disconnect due to damaged O-rings!
- 4.1.7 Do not tug at the WEH® Fuelling nozzle or filling hose during refuelling.
- 4.1.8 The WEH® Fuelling nozzle may not be exposed to lateral forces (e.g. lateral pulling of the filling hose)! The front part of the WEH® Fuelling nozzle can be bent due to lateral forces. This can cause leakage or breaking of the tensile axis.



Figure 2



Figure 3



Figure 4

4.2 Operation

Connection

- 4.2.1 Place the WEH® Fuelling nozzle into the NZ block of the vehicle until it stops and align the nozzle (figure 2 and 3).
Non-observance may result in accidental disconnection of the WEH® Fuelling nozzle!
Please note: Align the WEH® Fuelling nozzle, thus preventing damage to the front seals by sharp edges of the NZ block.
- 4.2.2 Apply pressure to inlet 'B1'.
- 4.2.3 Open the valve at the NZ block (figure 4 - Please observe the rotation direction marked on the valve) ➔ filling commences.

Disconnection

- 4.2.4 Close the valve at the NZ block (figure 4 - Please observe the rotation direction marked on the valve).
- 4.2.5 Completely depressurize inlet 'B1'.
- 4.2.6 After complete venting of the WEH® Fuelling nozzle, remove it from the NZ block in a straight position (figure 2). **Please note 4.2.1!**

Attention: Make sure that the system is depressurized before removing the nozzle!

5 EXAMINATION AFTER SEPARATION

In the event of accidental deployment, e.g. driving a vehicle from the dispenser with the nozzle remaining in the vehicle fuel port, the breakaway coupling will separate the connections between dispenser and filling hose sealing both ends.

The following points are to be observed when separation occurs:

- 5.1 The filling hose is to be replaced after each separation.
- 5.2 The fuelling nozzle is to be sent to the manufacturer for inspection.
- 5.3 The breakaway coupling is to be leak tested. If a local leak test is not possible, the breakaway coupling must also be returned to the manufacturer for inspection.
- 5.4 We recommend that the NZ block in the vehicle is checked for damage and proper function by an authorized service station.
- 5.5 Recommissioning of the breakaway coupling is to be carried out according to the instructions of the corresponding operating instructions.
- 5.6 Failure to observe these instructions invalidates warranty resp. liability / right of recourse.

6 ACCESSORIES | SPARE PARTS

Spare parts

The following parts are available for product maintenance:

Part No.	Description
On request	Front seal*
W136538	O-ring picker set (consisting of 3 O-ring pickers, Part No. E98-101969)**
E99-4	WEH® Lubricant (30 g)

* Please send us your inquiry quoting the C1 number engraved on your product!

** **NOTE:** The O-ring picker is manufactured from plastic and has to be considered as a consumable product!

7 STORAGE

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

8 MAINTENANCE

- 8.1** Regularly inspect the product according to the individual operating conditions; at least every 3 months or after 20,000 connections. Inspect for leak tightness and correct operation (free-moving, wear, dirt ingress, damage). The product has to be sent to the manufacturer for refurbishment after 3 years at the latest.
- 8.2** Check the sealing surface of the front seals (O-rings) before each fuelling process. Replace them if tears or damage are visible (see chapter 9 - Replacement of front seals).
- 8.3** WEH recommends to change both front seals (O-rings) after 20,000 connections. Dirt and improper handling may shorten this interval.
- 8.4** WEH® Products may only be repaired by WEH. Please contact us.
- 8.5** Only use original WEH® Spare parts. These fit the application correctly and are subject to strict quality control.
- 8.6** Violation of WEH maintenance instructions specified in this document will result in a loss of warranty and in addition the WEH GmbH will accept no liability for consequential damage caused to persons or property.
- 8.7** Check the condition of the WEH® Fuelling nozzle before each fuelling process. The front part of the WEH® Fuelling nozzle can be bent due to lateral forces. Deformed fuelling nozzles have to be replaced.

9 REPLACEMENT OF FRONT SEALS

Dismantling of the WEH® Fuelling nozzle is not required for replacement of the front seals (O-rings, Pos. 1). **Attention: Never unscrew and remove the tensile axis (Pos. 3)!** Only use the O-ring picker Part No. E98-101969 for removal of the front seals (Pos. 1). Do not mount twisted O-rings!

- 9.1** Remove the front O-ring (Pos. 1, figure 5) using the O-ring picker. The sleeve (Pos. 2) can now be pushed slightly forward. Remove the rear O-ring (Pos. 1, figure 6) by pulling it towards the front over the sleeve (Pos. 2) using the O-ring picker.

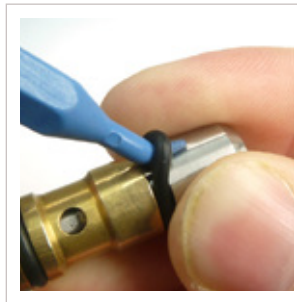


Figure 5

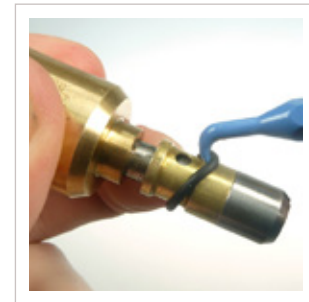


Figure 6

- 9.2** Remove dirt and other residues from the sleeve (Pos. 2) and the areas where the seals are seated. Use a clean and lint-free cloth. The sealing surfaces may not be damaged.
- 9.3** Carefully push the new O-ring (Pos. 1, figure 7) over the tensile axis (Pos. 3). The O-ring may not be damaged. Push the sleeve (Pos. 2) forward towards the remounted O-ring (Pos. 1). Carefully push the rear O-ring (Pos. 1, figure 8) over the tensile axis (Pos. 3) and the sleeve (Pos. 2) and insert it between the sleeve (Pos. 2) and the housing (Pos. 5, figure 9).



Figure 7

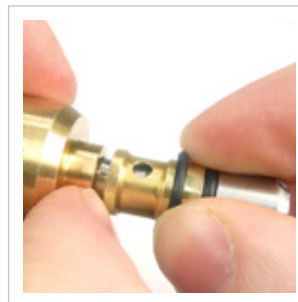


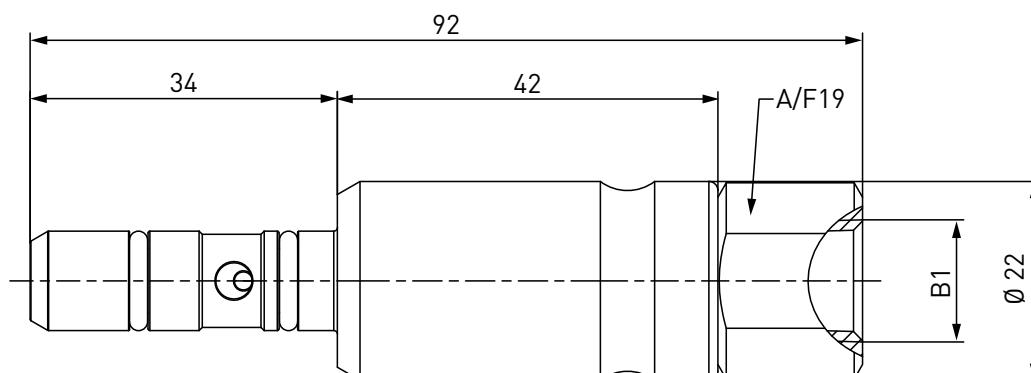
Figure 8



Figure 9

10 DIMENSIONS

approx. dimensions (mm)



Part No.	Description	Pressure (PN)	Inlet B1 (internal thread)	Receptacle profile
C1-135115	TK7 CNG	200 bar	NPT 1/4"	NZ Ø 11.0 mm (e. g. Brasil, Pakistan, Bangladesh, India)

Description	PN* (bar)	PS* (bar)	PT* (bar)
TK7 CNG	200	300	450

* Definition acc. to pressure equipment directive PED97/23/EC
 PN = Nominal pressure referring to a gas temperature of 15 °C
 PS = Max. operating pressure
 PT = Test pressure

» Contacting

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

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