

N-CNG P30 / P36

CSA/ANSI NGV 1-2017 + ISO 14469:2017



CNG NOZZLE INSTALLATION AND OPERATING MANUAL

english

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Please read this manual carefully before installation or operation of the nozzle.

Be sure all instructions are understood. Correct installation, use and maintenance are essential. In case of doubt or question, please contact your service contractor or the manufacturer.

DESCRIPTION

The N-CNG nozzle is designed for CNG refuelling of vehicles equipped with receptacles to NGV1 or ISO 14469.

The nozzle either comes with a Service Pressure rating B200/P30 = 207 bar/3000 psi (EU Standard) or B250/P36 = 250 bar/3600 psi (US Standard).

The pressure rating is marked on the nozzle connector and can also be identified by the pressure color code ring: blue = B200/P30 (EU Standard) and yellow = B250/P36 (US Standard). The N-CNG is a so-called 'Type 1' nozzle and is used by pulling the lever. It also integrates an automatic venting and swivel function, suitable for public and private CNG refuelling stations. The nozzle is designed to only allow gas to flow when it is correctly coupled and to not allow uncoupling from the vehicle refuelling receptacle when the nozzle is pressurised.

APPROVALS / OPERATING CONDITIONS

The N-CNG nozzle is designed and tested to CSA/ANSI NGV 1-2017 and ISO 14469:2017 for the use of CNG refuelling of Natural Gas Vehicles with B200/P30 and B250/P36 receptacles.

Each nozzle is factory tested and labeled with the prescribed marking.

Media compatibility	CNG, Natural Gas, Methane, Biogas
Cv	1.1
Service pressure	B200/P30 (207 bar/3000 psi) oder B250/P36 (250 bar/3600 psi)
Working pressure (max.)	312,5 bar
Test Pressure	375 bar
Weight	1,6 kg
Media temperature range	-40° C (-40° F) to 65° C (149° F)
Ambient temperature	-40° C (-40° F) to 85° C (185° F)
Connection to hose	Swivel connection to fill line (FL): 9/16"-18 JIC 37° // 9/16"-18 SAE (with / without adapter) Swivel connection to vent line (VL): 7/16"-20 JIC 37° // 7/16"-20 SAE (with / without adapter)
Dimensions (max.)	Width: 63 mm
	Length: 356 mm
	Height: 133 mm

GENERAL INFORMATION ABOUT CNG / WARNINGS

- CNG is compressed natural gas that is transported and stored under high pressure. It is lighter than air. Commercial CNG is odourised to enable detection by its sulfurous smell. Small leakages typically cannot be seen and merely detected by its smell. When exposed to the atmosphere it has an expanding factor proportional to the Service Pressure, e.g. 1:207 at a Service Pressure of 207 bar: one liter of compressed gas corresponds to 207 liter of flammable gas.

High pressure gas and gas equipment can cause serious harm to both infrastructure and personnel if safety precautions are not followed

- **A small gas release upon uncoupling is normal – but uncontrolled gas release to the atmosphere must be avoided. If you suspect a leakage: stop refuelling immediately, use the emergency button to shut off the dispenser, immediately evacuate the area and inform station personnel.**



- CNG/Natural Gas is extremely flammable:

- **Open fires, smoking, sources of static electricity and the use of mobile phones or other electric devices is prohibited in the area of gas transfer. Turn off vehicle engine before refuelling.**



- Failure or improper use of this product can cause death, personal injury and property damage.

- **CNG is extremely cold when released to the air (depressurised).**

INSTALLATION

High pressure gas and gas equipment can cause serious harm to both infrastructure and personnel if safety precautions are not followed.

Elaflex recommends the use of personal protective equipment (PPE) when working with high pressured gases (CNG) in accordance to the relevant health and safety regulations:



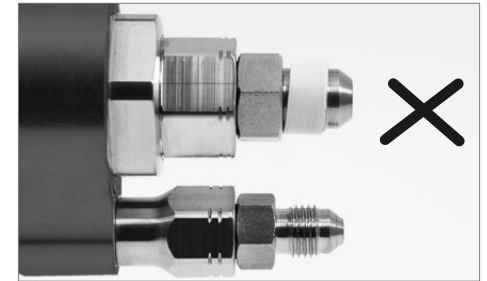
Chaussures de Sécurité Protections Auditives Casque Gants Lunettes de protection

Ensure the system is free of dirt and foreign matter, **vented and isolated** before any installation or servicing work is carried out.

The N-CNG is delivered ready for use. This installation must only be done by an authorised service engineer who is trained to ensure compliance with all relevant national regulatory conditions. The nozzle is designed for the connections as mentioned in 'Approvals / Operating conditions' and must not be used with any NPT or other thread sealing adapters. The designated connections do not require thread sealants.

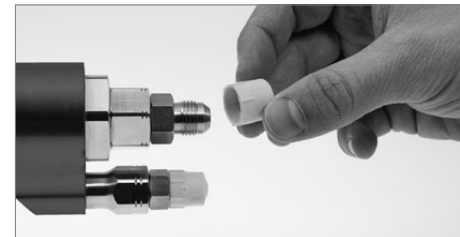
Therefore, **do not use** PTFE sealing tape or liquid seal for any sealing as electrical conductivity may be insufficient and particles of the tape commonly become loose and could clog the nozzle valve or damage vehicle motor parts.

This device complies with CSA/ANSI NGV 1-2017 and ISO 14469:2017. The installation of this device shall conform to the requirements of the authorities having jurisdiction or, in the absence of requirements, to NFPA 52 Standards, Compressed Natural Gas (CNG) Vehicular Fuel Systems, or CAN/CSA-B108, NGV Fuelling Stations Installation Code, as applicable.

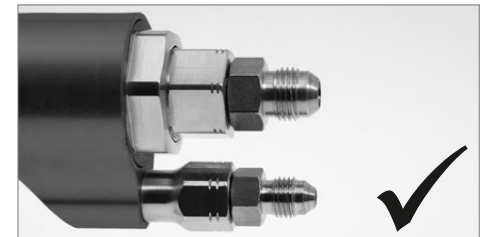


Needed tools:

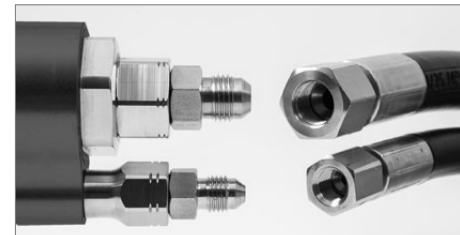
- 2 x Spanner with width of 23 mm / 7/8"
- 2 x Spanner with width of 17 mm / 11/16"
- 1 x Spanner with width of 14 mm / 9/16"
- 1 x Foaming agents or spray bottle with snoop or soapy water



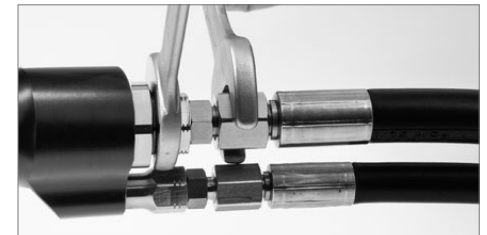
Remove caps from nozzle.



Check sealing surfaces of connections at the nozzle as well as the hose assemblies.

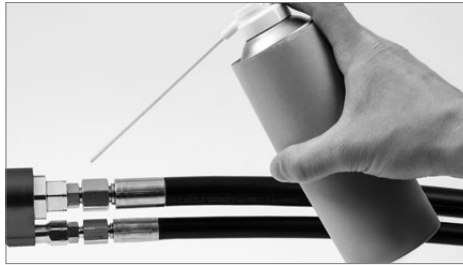


Check if connections correspond in type and size, e.g. JIC 37° 9/16-18" male / female



Connect the hoses to the nozzle. Torque the fill line to 45 Nm and torque the vent line to 35 Nm or as per hose fitting suppliers recommended tightening torque. **Do not use pliers.**

After connecting to the hose assembly, an operational test shall be performed. It is essential to examine that the nozzle, hose connector and swivel are tight under pressure and do not leak – e.g. by external application of foaming agents.



→ **NOTE: Pressurise system gradually while checking for leaks.**

Always put back the nozzle into the nozzle holder.



→ **ATTENTION: Do not drop. Do not leave on the floor**

TROUBLESHOOTING

• If the lever cannot be pulled back

→ Check the correct seating of the nozzle to the vehicle coupling. Make sure you push the nozzle straight and aligned towards the receptacle. A safety feature prevents operation of the nozzle if the connection is misaligned. If you have any doubts or questions, please contact the station personnel.

→ **Never force operation of the nozzle.** If the connection process does not work smoothly, disconnect and re-connect nozzle as indicated under 'Operation Instructions'.

• Leakage (escaping gas)

→ A small gas release upon uncoupling is normal. **If uncontrolled and / or permanent gas release to the atmosphere occurs, immediately stop fuelling.** If the leakage continues, push emergency button of dispenser, leave area and inform station personnel.

→ If area is safe, check tight connection between vehicle connection and the N-CNG nozzle. Check seals of vehicle connection and the N-CNG. If the problem persists, notify the station personnel or the service contractor.

• If the latching does not work:

→ Disconnect and re-connect nozzle as indicated under 'Operation Instructions'.

→ If it continues to not work properly or you have any doubts or questions, please contact the station personnel.

• If the nozzle cannot be disconnected after refuelling:

→ Connect nozzle once again as indicated under chapter 'Operation Instructions'. Then try to disconnect and take off the N-CNG.

→ Never force operation of the nozzle. If the disconnection process does not work smoothly, inform station personnel.

If self-service is not possible, please contact a service company specialised and certified in CNG Service Station installations.

OPERATING INSTRUCTIONS

Please follow any additional or deviating operating instructions displayed at the dispenser.



Turn off vehicle engine.



Ensure that all coupling parts, seals and sealing surfaces of nozzle and vehicle filling point are clean and undamaged.



Take nozzle from dispenser. Align nozzle with vehicle sided fill point as shown.



Push nozzle firmly onto the vehicle filling point.



In that position, pull the lever. If the nozzle is correctly coupled, a green indicator ring appears on the coupling part.



Hold the lever pulled and lock the hold-open latch as shown to open the nozzle valve. Release the lever and it will stay in the open position. **Do not lean on / tilt the nozzle.**



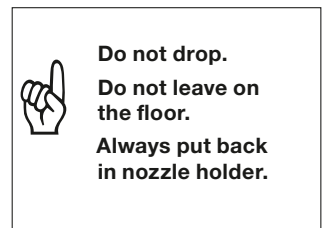
Fuelling should start automatically OR has to be activated at the dispenser. Please follow operating instructions displayed at the dispenser.



On completion of refuelling, squeeze and release lever. Latch will automatically release.



Remove nozzle and put back in dispenser nozzle holder.



FILL POINT ADAPTERS

The use of fill point adapters is strictly prohibited.

MAINTENANCE

The N-CNG nozzle is a mechanical device that may become inoperative due to wear, corrosion and ageing of components. Regular inspections and maintenance are essential for a safe operation.

Daily visual inspections of the nozzle by trained personnel should be carried out to ensure proper function. The nozzle coupling shall be clean and not show any signs of damage (e.g. dents, sharp edges, blocked lever, swivel non-rotating). Especially check the inner area of the front coupling part of the nozzle to confirm there is no dirt or mechanical damage. If there are issues with latching, it is an indication that the gating latch must be replaced. If the operation of the nozzle handle is excessively tight, or requires more force to actuate than normal after a period of use, a trained personnel is required to re-lubricate the nozzle with grease as per the servicing instructions.

The nozzle condition shall be thoroughly checked during the annual pump maintenance by competent personnel. Applicable laws, regulations and Codes of Practice have to be followed. Nozzles in unfit condition for use must be immediately replaced. The nozzle should be inspected for damage or leaks every 20,000 cycles or one year, whichever happens first. In case of an abnormality it should be serviced by the manufacturers authorized service centre. In addition, it should be serviced by the manufacturers authorized service centre after every 40,000 filling cycles as per ISO 14469:2017 or every four years, whichever ever happens first.

CONDITIONS OF USE

Failure to comply with any warnings, instructions, procedures or any other common sense procedures may result in injury, equipment damage, property damage or poor performance of the equipment.

Elaflex accepts no liability for direct, indirect, incidental, special, or consequential damages resulting from failure to follow any warnings, instructions and procedures in this manual, or any other common sense procedures generally applicable to equipment of this type. The foregoing limitation extends to damages to person or property caused by the unit or damages resulting from the inability to use the unit including loss of profits, loss of products, loss of power supply, the cost of arranging an alternative power supply, and loss of time, whether incurred by the user or their employees, the installer, the commissioner, a service technician, or any third party. The manufacturer reserves the right to change the specifications of its products or the information in this manual without necessarily notifying its users.

Variations in installation and operating conditions may affect the unit's performance. Elaflex has no control over each installation's unique operating environment. Hence, no representations or warranties concerning the performance of the unit under the actual operating conditions prevailing at the installation are made. A technical expert of your choosing should validate all operating parameters for each application.

Elaflex has made every effort to explain all servicing procedures, warnings, and safety precautions as clearly and completely as possible. However, due to the range of operating environments, it is not possible to anticipate every issue that may arise. This manual is intended to provide general guidance. For specific guidance and technical support, contact your authorized supplier or specialist service contractor.

Only approved original parts shall be used and no unauthorised modifications to the hardware shall be made. The use of non-approved parts or modifications will void all warranties and approvals. The use of non-approved parts or modifications may also constitute a safety hazard. Information in this manual shall not be deemed a warranty, representation, or guarantee. For warranty provisions applicable to this unit, please refer to the warranty provided by the supplier.

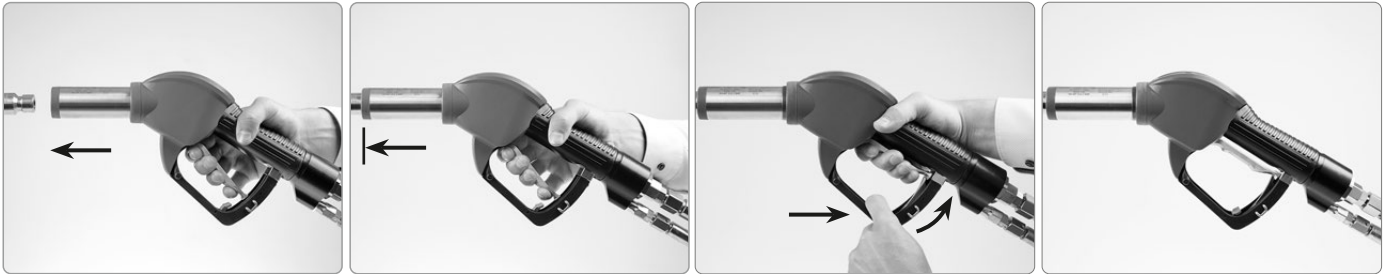
Every effort has been made to ensure the accuracy of this document. However, it may contain technical inaccuracies or typographical errors. Elaflex assumes no responsibility for and disclaims all liability of such inaccuracies, errors or omissions in this.

WARRANTY

Elaflex guarantees against defective materials and manufacturing for 18 months from date of supply. If the delivery date cannot be established, the production date applies. This can be traced back by the serial number on the nozzle bodies.

Excluded are nozzles and parts subjected to wear and tear and damages caused by improper use, for example the use with unsuitable media. Furthermore excluded are indirect damages and costs, such as travelling related to exchange and repair work. We refuse any liability for consequential loss or damage resulting from the use of our nozzle.

START FUELLING



STOP FUELLING



Operating instructions see page 6 (German) / 13 (English) / 20 (French) of this manual.
Follow any additional or deviating instructions displayed at dispenser.