

# Operation Manual

## Diesel Injection Nozzle Tester – 0–600 bar 61476



Illustration similar, may vary depending on model

Read and follow the operating instructions and safety information before using for the first time.

Technical changes reserved!

Due to further developments, illustrations, functioning steps, and technical data can differ insignificantly.

Updating the documentation

If you have suggestions for improvement or have found any irregularities, please contact us.



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WilTec Wildanger Technik GmbH  
Königsbenden 12  
52249 Eschweiler  
Germany

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Returns Department  
WilTec Wildanger Technik GmbH  
Königsbenden 28  
52249 Eschweiler

E-mail: **service@wiltec.info**

Tel: +49 2403 55592-0

Fax: +49 2403 55592-15



## Introduction

Thank you for purchasing this quality product. **To minimise the risk of injury we urge that our clients take some basic safety precautions when using this device. Please read the operation instructions carefully and make sure you have understood its content.**

Keep these operation instructions safe.

## Safety precautions

- Always keep the unit away from open fire and other sources of heat during use to prevent damage and possible injury from fire. Also make sure that the diesel fuel used for testing does not contain any impurities.
- Always wear gloves when using the unit and keep your hands away from the injector opening when it is under pressure. A jet of fuel can penetrate deeply into the finger or hand and injure the skin. If diesel oil enters the bloodstream, it may cause blood poisoning.
- Perform spray nozzle tests only in well-ventilated rooms and avoid skin contact or direct inhalation of diesel mist sprayed from the injector to prevent injury and damage to health.

## Maintenance

- When working with the tester, cleanliness is of the utmost importance; keep both your workplace and the tester free of dust and other contaminants and ensure that only clean fuel is used. Filter the diesel before placing it into the tester to ensure that it does not contain any contaminants. Contaminated fluids should be replaced immediately and should not enter the injectors. The filter element should always be washed in pure fuel.
- It is important that the liquid used for the tests is not contaminated. It is recommended to test the injectors together with the nozzle holders.
- Calibrating fuel must be a high-quality light diesel that has been stored for 48 hours.
- When filling with fuel, filter it with a silk cloth. Do not fill the tank with unfiltered diesel.
- After the measurement, cover the tester with a dust cover.

## Application areas

This tester for injection nozzles of diesel vehicles is used to adjust, calibrate, and check the injection nozzle opening pressure. Ideal adjustment of the injection pressure optimizes the quality of the atomization process, ensuring optimum engine performance and increased economy. This device can be used to test both opening pressure and tightness as well as noise generation.

## Technical data

Measuring range (bar)	Dimensions (mm)	Capacity (ℓ)	Highest tested pressure (bar)	Net weight (kg)
0–60	160 × 100 × 380	1	40	5.8



## Operation

- Fix the injection nozzle tester securely to a flat and stable surface such as a workbench or a table with the aid of the pre-drilled holes in the base plate.
- Make sure that the working area as well as the tester and the gloves you use are clean. Always carry out injection nozzle tests in well-ventilated rooms. Only use pure diesel fuel that is free of contamination.
- When screwing the nozzle into the holder, make sure that the sealing surfaces are clean and undamaged. First press the nozzle against the sealing surface of the holder and then tighten the nut, first by hand and then with a wrench. For holders with fit pins, the spring inside the holder must first be completely loosened.
- Cracking pressure test:  
Slowly push down the pump arm until the nozzle injects with a slight noise. Read the pressure on the device and compare it to the specifications furnished by the manufacturer. The pressure for each engine is specified in the engine manual and must be adjusted according to these specifications. In some cases, the pressure reference is stamped on the nozzle holder. If the deviation from the set pressure is too great, adjust the compression spring until the pressure meets the manufacturer's specifications.
- Leak test:  
Dry the tip of the injection nozzle with a soft cloth dipped in brake cleaner and actuate the pump arm of the nozzle tester to generate a pressure 20 bar below the nozzle opening pressure. No droplets should form at the tip of the nozzle within 10 seconds. If such a drop forms, the tested injection nozzle is leaking.
- Jet pattern:  
The atomization quality of the fuel generally increases with a higher opening pressure. If the injection nozzle is completely intact, a fine, uniform mist should be emitted.

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