

Diesel Filter Differential Pressure Test System

LDP 190



Diesel filter differential pressure test system LDP 190

The LDP 190 was developed for testing diesel fuel filters in accordance with ISO 4020/6.3, as well as for checking the tightness of valves. In addition to diesel fuel, diesel substitutes can also be used as the test medium.

A key parameter for characterizing diesel fuel filters is the differential pressure at a specified flow rate. For testing, pressure, flow rate, and temperature of the test medium can be precisely controlled and varied. This enables tests over a wide range of parameters and allows realistic simulation of the diverse operating conditions and environments of diesel-powered machinery. By operating the LDP 190 with different liquids, it is possible to conduct tests on other liquid filters.

Applications

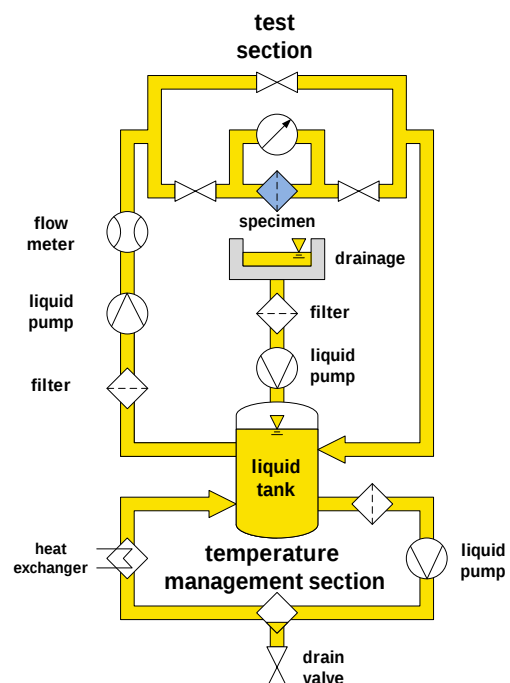
- testing of diesel fuel filters according to ISO 4020/6.3
- determination of differential pressures for liquid filters
- leak testing of valves

Features

- automated testing of differential pressure of diesel liquid filters
- wide flow rate range
- test medium can be heated up to 80°C
- automated venting of test specimen

Principle of operation

The test medium is stored in a liquid tank and pumped into the test section. The flow rate and pressure are adjusted via the pump and valves. The differential pressure is measured using a pressure transmitter upstream and downstream of the filter. After the test medium has flowed through the test specimen, it is returned to the liquid tank.



Operating principle of the LDP 190

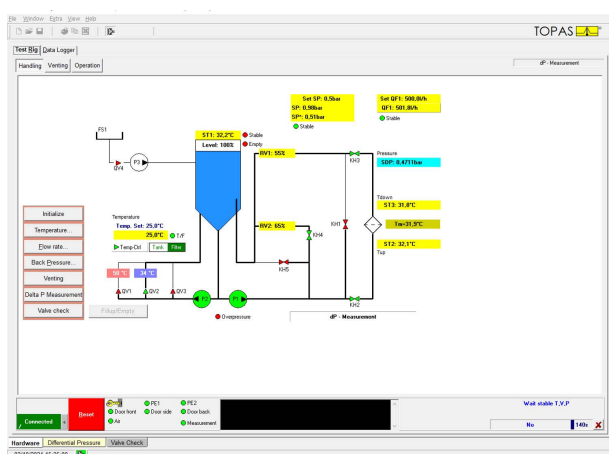


Specifications

The test medium is temperature controlled using two heat exchangers. When changing the test specimen, the test medium can be conditioned simultaneously via a bypass. After changing the test specimen, air may remain in the system. A special venting mode is available to remove the air, which is executed as a fully automated process. A drainage in the test section collects excess test medium and allows it to be returned to the liquid tank. The test system is equipped with a monitored exhaust system designed to prevent the formation of potentially explosive areas (Ex zones). Potentially forming Ex zones are spatially separated. A separate, detailed explosion protection report is available for this purpose.

Details

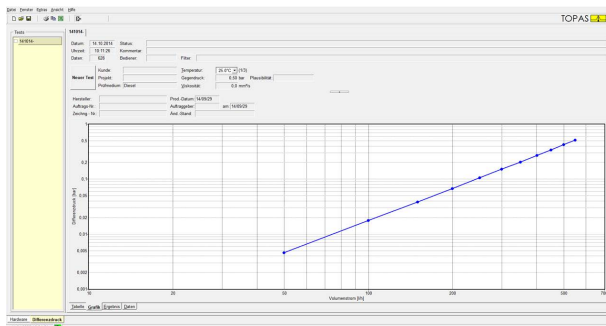
Control, data acquisition, and processing are handled automatically by the LDP190Win software. This includes automated monitoring, of system pressure and exhaust air. A quick-access allows users to load and save test sequences and parameters. The software user interface provides a quick overview of the test system. All key components are displayed along with their set and current parameters.



LDP190Win user interface

For test procedures, the flow rate, temperature, and pressure of the test medium can be adjusted. For filter tests, pressures ranging from 2 to 4 bar can be generated. When testing valves, the pressure can be increased up to 20 bar. Various test specimens can be tested using different adapter sizes.

The use of databases allows for quick access to filter and valve types, test results, and material systems. A side-by-side visualization of results enables quick comparison. Test results can be exported as a report or to an Excel template.



Differential pressure curve of a diesel filter in the LPD190Win

Technical specifications

flow rate	25 ... 2000 l/h
operating pressure	max. 20 bar upstream of the test specimen max. 5 bar downstream of the test specimen
system pressure	max. 20 bar
specimen dimensions	max. 500 x 500 x 500 mm
test medium	diesel, diesel substitutes
temperature test medium	20 ... 80 °C
temperature cooling water	≤ 13 °C
exhaust air	≥ 50 m³/h
power supply	480 V AC / 60 Hz, 10 A or 120 V AC / 60 Hz, 25 A
air supply	7 ... 9 bar
dimensions (w x h x d)	2600 x 2050 x 1300 mm
weight	1.000 kg
normative references	ISO 4020/6.3

© Copyright 2026 Topas GmbH. Specifications are subject to change without notice.



Topas GmbH
Technologie-orientierte
Partikel-, Analysen- und Sensortechnik
Gasanstaltstraße 47 · DE - 01237 Dresden, GERMANY

Telefon +49 [351] 21 66 43 - 0
Fax +49 [351] 21 66 43 55
E-Mail office@topas-gmbh.de
Internet www.topas-gmbh.de

