



Application Software
CETA Soft 2G for free!



Deutsche
Akkreditierungsstelle
D-K-19566-01-00

Leak Tester CETATEST 525

The CETATEST 525 with differential pressure sensor is a full automatically working leak tester for the detection of untight parts within the cycle time of the production process. The differential pressure method is used here. This is based on comparing the pressures in the test part volume and in a leak-tight reference volume. The use of fast-switching solenoid valves in combination with a very small internal measuring circuit volume makes the CETATEST 525 particularly suitable for very short test processes. The CETATEST 525 is available in two different types:

The type "pressure decay measurement PD" can be used for leak tests of very small test parts in high speed production.

The configuration "sealed components - high resolution SC HR" can be used for test parts which cannot be filled, so called "sealed components". It is possible to detect very small ratios of test part volumes ($0.03 \text{ ml} < \Delta V < 1.0 \text{ ml}$).

System architecture

Industrial PC: Quad Core CPU, 1.8 GHz,
4 GB RAM, 128 GB SSD,
Micro-controller system for the test
process control: 32-bit ARM μC / 84 MHz

Signal processing

Fast 24-bit A/D converter, real-time
processing of measurement signals

Valve type

Multifunctional block

System features

Low intrinsic volume of the measuring
circuit, Volume minimisation for the
purpose of resolution optimisation,
Integrated security functions

Pressure sensors

Gauge pressure sensor
Differential pressure sensor

Measurement ranges

$\pm 500.0 \text{ Pa}$ / $\pm 5,000 \text{ Pa}$
(internal resolution: effectively 0.01 Pa)

Result units

Pa, hPa, PSI, Pa/s, hPa/s, PSI/s, mbar • l/s,
ml/min, ml/h, l/min, l/h, mmHg, mmWs, Torr

Pressure ranges

-1 bar, 200 mbar, 1 bar, 6 bar,
negative and positive gauge pressure
ranges can be combined
(e.g. -1 bar / +1 bar)
other pressure ranges on request

Maximum Deviations

Gauge pressure: 1 % *
Specification for combined devices based
on positive gauge pressure
Differential pressure: 0.5 %
referred to measuring range

Test modes

Type PD Standard: pressure decay,
Optional: dynamic pressure, pressure
steps, sealed component
Type SC HR Standard: pressure decay,
sealed component - high resolution

Additional functions

Standard: nominal pressure optimisation,
prefill, pulsing, smooth filling, variable zero
point

Optional: program series, temperature
compensation, te66st repetition, free
programmable control valves

Operation

Touch screen, dual jog dial,
separate start / stop buttons,
password protected user levels

Display

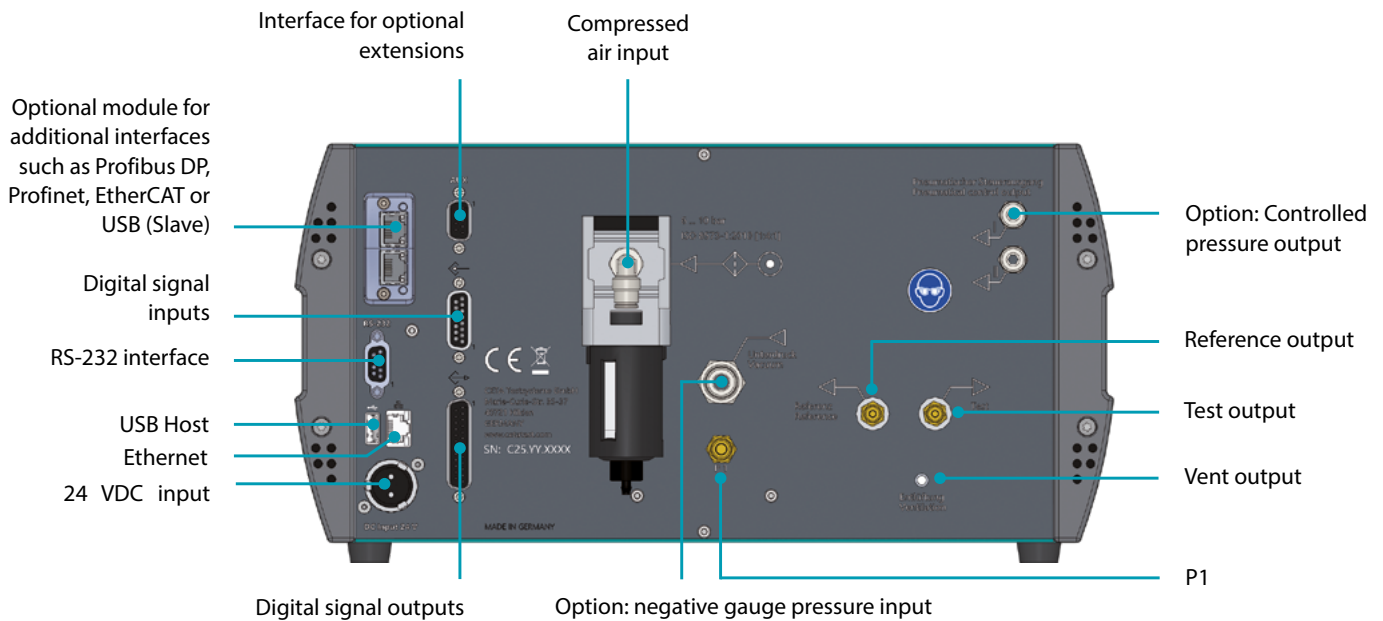
7-inch color screen, various graphical
diagrams (measurement curves, histo-
gram, measurement series overview),
list of results

System monitoring

Still-Alive-Check with differential pressure
sensor monitoring, automatic function
control (option), consecutive zero results

Memory

For more than 1 million measurement
results, 256 individually parameterisable
test programs with alpha-numeric
program names, export / import of test
programs via device interfaces or by usage
of a USB storage device



Back side of the CETATEST 525 – variant pressure decay

Interfaces

I/O interface for start/stop/reset, program selection, device status, system errors, test results (pass/fail)

RS-232, USB (host), Ethernet and optional interfaces allow additional functions like parameterisation, measurement results, detailed information in real time (e. g. measurement curve), failure messages

An optional module can be used to implement additional interfaces such as Profibus DP, Profinet, EtherCAT or USB (Slave).

The CETATEST 525 is fully interface compatible with the CETATEST 515 and well prepared for Industry 4.0 requirements.

Further functions

Result statistics, cycle counter, recording of measurement series and measurement curves, Dynamic Link Library (DLL) for RS-232 interface programming, integration of test part image / barcode / QR code, user administration, export of test parameters, measurement curves and measurement series to USB storage media

User support

Automatic parameter determination, Leak rate set-up wizard, Teach-in mode, Maintenance monitoring, Overview of parameter changes

Power supply / Power consumption

Test device: 24 VDC / max. 50 W
External power supply (optional)
Input 100 - 240 VAC / 47 - 63 Hz
Output 24 VDC
UL certified power supply unit

Air supply

At least 0.5 bar above test pressure (max. 10 bar) resp. 50 mbar below evacuation pressure
Quality or purity according to ISO 8573-1:2010 [1: 4: 1]

Pneumatic connections

Input (compressed air supply):
6 mm plug-in fitting
Port for test part: clamping ring 3 mm, clamping ring 4 mm (option), up to three pneumatically driven outputs (option)

Dimensions and weight

W x H x D: 367 mm x 183 mm (4 U) x 435 mm
Weight: approx. 12,5 kg

DAkKS-accredited calibration

All leak, mass and flow testers as well as pressure manometers and calibration standards are delivered with a DAkKS-accredited calibration certificate in accordance with DIN EN ISO/IEC 17025 at no extra cost.

DAkKS = German Accreditation Body

Scope of delivery

Special packaging, documentation on device, DAkKS-accredited calibration certificate, EU declaration of conformity, spare sealing caps and spare caps for union nuts coupling or spare clamp rings

Warranty

3 years in case of yearly maintenance, optional prolongation to 5 years

Accessories (optional)

Power supply with UL certification, power cord, filter combination, test leak, D-Sub connector incl. cable for inputs and outputs (PLC communication), leaktight 3/2-way valve, application software CETA Soft 2G, scanner interface, further accessories in the CETA accessories catalogue