CETA®

Mass Flow Tester CETATEST 615 - *for the leak test of large volume parts*

The CETATEST 615 is a fully automated mass flow tester for the detection of small leaks in large volume test parts. The measurement method is based on the principle of the thermal mass flow measurement.

By using a previously pressurised reservoir volume leakages can be measured without the disturbing effects of a pressure regulation. Temperature effects are automatically compensated. The mass flow caused by the leakage is displayed directly for standard conditions, which can be parameterised.

Operating methods

One channel operation

Signal processing

Fast 24-bit-A/D-Converter
Real-time processing of the measurement signals

Processing

Real time microcontroller system,
16-bit µC / 40 MHz

Sensors

Gauge pressure sensor
Thermal mass flow sensor

Measurement ranges

Sensor type 1:
0 - 10 ml/min, 0 - 25 ml/min, 10 - 600 ml/min
Sensor type 2: -20 to +20 ml/min
(displayed resolution: 0.01 ml/min),
other ranges on request

Result units

Nml/min, Nml/h, Nl/min, Nl/h,
scc/min, scc/h, sl/min, sl/h, mbar*l/s

Pressure ranges

200 mbar, 1 bar, 2 bar, 6 bar, 10 bar, negative and positive gauge pressure ranges can be combined (e.g.
-1 bar / +1 bar), other pressure ranges and mechanical pressure regulator on request

Maximum Deviations

Gauge pressure: 1 % *
Specification for combined devices based on positive gauge pressure
Mass flow sensor type 1: 1 % *
Mass flow sensor type 2:
   Forward direction:
     0.2 - 5.0   ml/min: 0.5% *
  > 5.0 - 20.0 ml/min: 2% **
   Backward direction:
     0.2 - 2.0   ml/min: 0.5% *
  > 2.0 - 20.0 ml/min: 5% **

Test options

Program series

System control

Control of the compressed air supply, consecutive zero results

Programmable test phases

Delay, reservoir filling, flooding , filling, stabilising, measuring, venting

Test mode specific limits
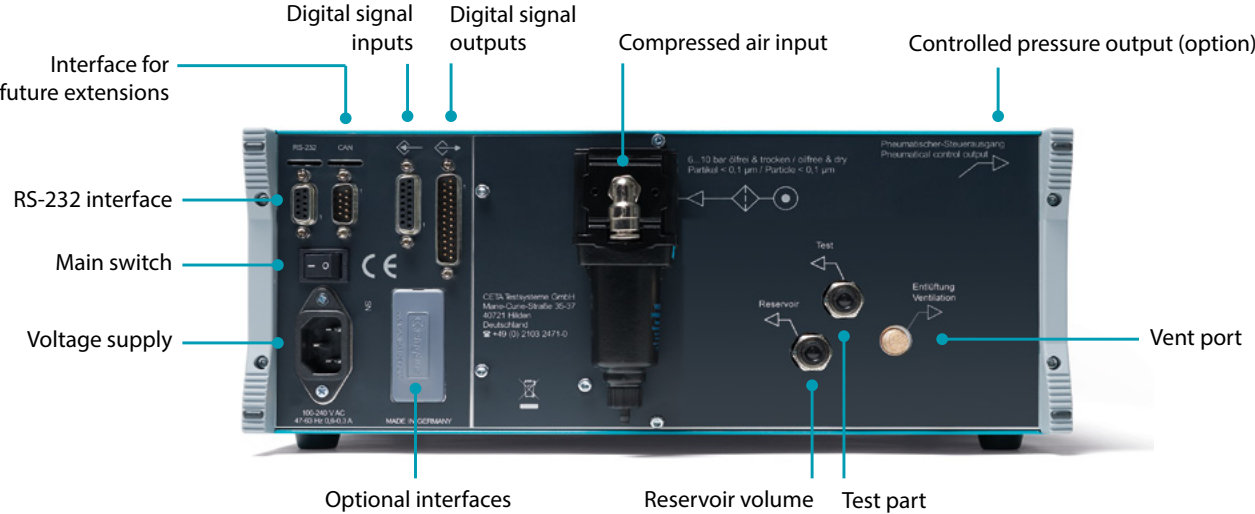
Reservoir pressure, test pressure, test part specific reject and rework levels

Handling

Intuitive menu including password protected user levels

Parameter memory

64 individually parameterizable test programs with alpha-numeric program names, parameters of the test programs can be exported resp. imported via the test device interfaces or by usage of a USB storage device.

* referred to full scale value   ** referred to measuring value

Interface for future extensions — Digital signal inputs — Digital signal outputs — Compressed air input — Controlled pressure output (option)

RS-232 interface — Main switch — Voltage supply

Optional interfaces — Reservoir volume — Test part — Vent port

Interfaces		Start / Stop / Reset	Program selection	Device status / system errror	Evaluation (Pass / Fail)	Parameterization	Measurement results	Measurement curve	Phase information in real time	Error messages
Standard	Digitale I/O	■	■	■	■					
	RS-232	■	■	■	■	■	■	■	■	■
	USB Host (Front)				■	■	■	■		
Option (one selectable)	Profibus DP	■	■	■	■	■	■	■	■	■
	Profinet	■	■	■	■	■	■	■	■	■
	Ethernet	■	■	■	■	■	■		■	■
	EtherCAT	■	■	■	■	■	■	■	■	■

Further interfaces (e.g. Bluetooth, WiFi & USB Slave) on request.

Further functions

Result statistics, indicator for service intervals, registration of parameter change, recording of measurement series and measurement curves, Dynamic Link Library (DLL) for RS-232 interface programming

Power supply / power consumption

100 - 240 V AC, 47 – 63 Hz, 0.6 - 0.3 A, depending on stage of expansion max. 60 W

Compressed air supply

6 - 10 bar and 0.5 bar above test pressure (ISO 8573-1:2010 [1:4:1]).

Pneumatic connections

Input (compressed air supply):
6 mm plug-in fitting

Port for test part: 8 x 1 mm fitting
Port for reservoir: 8 x 1 mm fitting
Up to three pneumatically driven outputs (option)

Dimensions and weight

W x H x D: 345 mm x 145 mm (3 U) x 435 mm
Weight: approx. 10 kg

Scope of delivery

Special packaging, power cord, documentation on CD, calibration certificate, EU declaration of conformity, D-Sub-plug including cable for inputs and outputs (PLC-communication), spare sealing caps and spare caps for union nuts coupling

Warranty

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

Accessories (optional)

Filter combination, standard leak, leaktight 3/2-way valve, RS-232 / Ethernet adapter, application software CETA Soft 2G, scanner interface, more in the CETA accessories catalogue.