

DTP

Very low differential pressure portable calibrator



model shown with VV option

- accuracy 0.07%
- resolution 1/10000 (1.10⁻⁴) or 2/10000 (2.10⁻⁴) depending on range
- DTP10: range 0 to 10 mbar with 0.001mbar resolution (0.1Pa)
- DTD5bi: range -5 to +5 mbar with 0.001mbar resolution (0.1Pa)
- higher ranges available up to 500 mbar
- reference pressure port on front-panel
- pressure relief valve
- front-panel reset
- rugged, stable, cost-effective
- optional dual-action pressure generator
- 8hr autonomy, battery indicator

Applications

- Calibration
- Maintenance
- Field controls

NICHESENSOR

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Represented by

DTP

Very low differential pressure portable calibrator

DESCRIPTION

Accurate field calibration of very low differential or gauge pressure sensors can be a difficult operation generally involving the use of complex, expensive and fragile equipment. The DTP calibrator offers a straightforward option. The DTP calibrator comprises of the following high-quality elements:

- a digital display with red sunlight readable digits
- a DT series differential sensor fitted with "high-resolution" option
- an optional VV variable-volume offering a high-resolution pressure generator. Depending upon the range, two variable volumes are offered.
- a NiCd battery offering 8hr operation
- a charge indicator and an on-off switch

These elements are assembled in an aluminium casing to offer a performance similar to the best field calibrators, at minimal cost. The extreme ruggedness (see the over-pressure capability) of this calibrator makes it the ideal tool for use in field calibration. An orientable handle makes transportation and operation positioning easy.

There are two female M5 pressure ports on the front panel. One is fitted with a pressure relief valve. A reference pressure port is available on the front panel for true differential pressure calibration.

The display reset is simply achieved by pressing the RST key on the display front panel.

RANGES AND PERFORMANCES

model	range	resolution	accuracy*	sensor	over-pressure rating**
DTP10	0 to 10 mbar	0.001 mbar	0.07% (0,7Pa)	DT_ULP	500 mbar
DTP5bi	-5 to +5 mbar	0.001 mbar	0.07% (0,7Pa)	DT_ULP	500 mbar
DTP50	0 to 50 mbar	0.01 mbar	0.07% (4Pa)	DT_LP	3 bar
DTP500	0 to 500 mbar	0.1 mbar	0.07% (0.4mbar)	DT_LP	5 bar

*= non-linearity, repeatability, hysteresis at reference temperature calculated by comparison to the best straight line (BSL)

**= the over pressure that is admissible in either direction requiring eventually a minimal setting if a significant zero shift has occurred.

note: in order to obtain the best results allow a 20 minutes warm-up time; cancel out the possible zero offset by pressing the RESET key

stability with temperature: 0.15% x rdg for temperature between 15 and 30°C

rdg = reading (stability stated after reset)

DISPLAY

DISPLAY	5-digit 12.2mm red sunlight readable adjustable display intensity (autonomy given for luminosity set to 3)
FUNCTIONS	zeroing by Reset key display and program lock-out* programmable calibration parameters (see user instruction)
* = the code to enter programming mode is "1"	
note: entering in programming mode can alter the calibration parameters	

SENSOR

Please refer to the DT_ULP and DT_LP datasheets.

DIMENSIONS

230x85x180mm; weight 2.6kg

OPERATING POSITIONS

The DTP calibrator operates in any position from horizontal to upwards vertical, still offering a 0.1% accuracy. Using the tilt legs or the orientable handle ensures perfect stability.



model shown with VV option



OPTIONAL VARIABLE VOLUME

OPTIONAL VARIABLE VOLUME VV2 - specifications (no external load)
for ranges up to 50 mbar
dual action
maximal relative pressure: 500mbar
coarse setting: 65Pa/turn at zero line pressure
coarse setting: 500Pa/turn at 500mbar line pressure
number of coarse setting turns: 36
fine setting: 3Pa/turn at zero line pressure
fine setting: 20Pa/turn at 500mbar line pressure
number of fine setting turns: 44

OPTIONAL VARIABLE VOLUME VV3 - specifications (no external load)
for ranges up to 500 mbar
simple action
maximal relative pressure: 500mbar
setting capability from 10 to 30 mbar/turn
number of turns: 50

OPTIONAL PRESSURE FITTINGS

The instrument is equipped with M5 female pressure ports. The reference pressure is accessible on the front-panel. Two pressure ports communicate with the measuring pressure, one of them being fitted with the relief valve. We offer as options a broad range of compatible fittings:

A	quick connect for semi-rigid 4 mm OD plastic tubing
B	quick connect for semi-rigid 6 mm OD plastic tubing
C	barbed fitting for 4 mm OD plastic tubing
D	barbed fitting for 6 mm OD plastic tubing
E	1/8 BSPP female brass
F	1/8 NPT female brass
G	Scanivalve TUBN-040 (dia 1.02mm)
H	Scanivalve TUBN-063 (dia 1.59mm)

OPTIONAL TRANSPORTATION CASE

An aluminium case with protection foam is offered as an option for a safe and convenient transportation of the DTP, its charger, and some tubings and pressure fittings



SUPPLY

The DTP calibrator is supplied with a charger and its mains cable. The DTP/VV includes the variable pressure generator.

PRODUCTS RELATED

DTD+ 0.05% fixed calibrators with optional VV
DXD+ and DXP all stainless steel and teflon tubing instruments.