

Handheld Measuring Instruments

THERMOVAC Sensor TM 90



The THERMOVAC TM 90 is a simple handheld vacuum measuring instrument for occasional use. Its operation is based on the Pirani principle and covers a measurement range from 1×10^{-2} mbar to atmospheric pressure. It is delivered in a rugged plastic box.

Advantages to the User

- Cordless power supply through a standard 9 V battery
- Large 3 1/2 digit 7 segment display
- Pressure unit of measurement selectable between mbar, Torr and Pascal

Typical Applications

- Pressure measurements on refrigerating and air-conditioning systems before filling in the refrigerant
- Pressure measurements during servicing assignments

Technical Data**TM 90**

Weight (including battery)	kg (lbs)	0.2 (0.44)
Power source		9 Volt battery (type 6 LR61)
Battery life	h	< 5
Connection	DN	16 KF or 25 KF
Controls		On/Off/Unit selector
Indicated units of measurement		mbar, microns, Pa
Measurement range		atm. to 1×10^{-2} mbar (atm. to 1 Pa, atm. to 1 micron)
Automatic shutdown		after 15 minutes; last read out is displayed again after restarting
Reading accuracy	mbar microns	< 2 \pm 5%, > 2 \pm 10%, < 20.000 \pm 5%, > 20.000 microns \pm 10%
Resolution		microns: in steps down to 1 micron Pascal: in steps down to 1 Pa mbar: in steps down to 0.01 mbar
Operating temperature	°C	0 to 50
Storage temperature	°C	-10 to +60
Maximum overpressure	bar abs.	10

Ordering Information**TM 90**

TM 90, DN 16 KF	Part No. 230 076
TM 90, DN 25 KF	Part No. 230 077

THERMOVAC Sensor TM 100



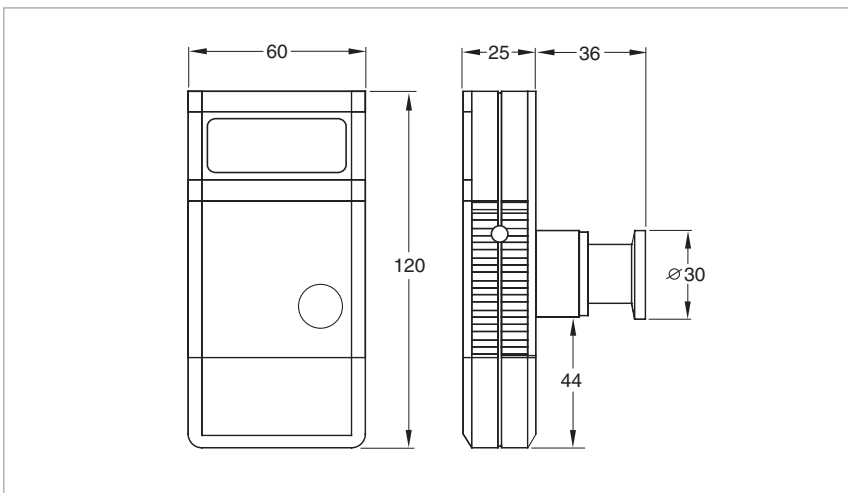
The handheld THERMOVAC TM 100 is capable of measuring pressures within the pressure range of 5×10^{-4} to 1200 mbar. By combining a piezo-resistive pressure sensor for the upper and a Pirani sensor for the lower pressure range, the measurements made by the THERMOVAC TM 100 are independent of the type of gas above pressures of 15 mbar. Especially noteworthy is the exceptionally long battery life.

Advantages to the User

- Cordless power supply through a standard 9 V battery
- Large 4-digit 7-segment display
- Pressure unit of measurement selectable between mbar, Torr and Pascal
- Pressure measurements above 15 mbar are independent of the type of gas
- Protection category IP 40

Typical Applications

- Mobile pressure measurements of all kinds
- Pressure measurements on refrigerating and air-conditioning systems before filling in the refrigerant
- Pressure measurements during servicing of vacuum pumps
- Pressure measurements during the production of gas filled pressurised lamps, respectively refilling



Dimensional drawing for the THERMOVAC TM 100

Technical Data**TM 100**

Measurement principle		Piezo-resistive and thermal conductance Pirani (gas-type Independent)
Measurement range	mbar	1200 to 5×10^{-4}
Maximum overload	bar abs.	2
Measurement uncertainty with reference to full-scale value (at 1200 - 10 mbar)	%	0.4 (full-scale)
measured value (at 10 to 0.01 mbar)	%	10 (full-scale)
Materials in contact with the vacuum		Stainless steel, gold, tungsten, nickel, glass, Viton
Measurement cycle	s	1.6
Settling time	ms	400
Operating temperature	°C	+5 to +50 °C
Storage temperature	°C	-20 to +60 °C
Supply voltage		Rechargeable 9 V battery (type 6LR61) or 12 V AC adaptor (miniature jack, + terminal at the tip)
Power consumption, approx.	mW	110 (clocked)
Operating duration		
Li battery	h	< 100
6 LR61 alkaline	h	< 40
Display		LCD 12 mm
Connection	DN	16 KF
Dimensions (without flange)	mm	60 x 120 x 25
Protection class	IP	40
Weight (including battery)	kg (lbs)	0.23 (0.51)

Ordering Information**TM 100**

TM 100, DN 16 KF	Part No. 230 080
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