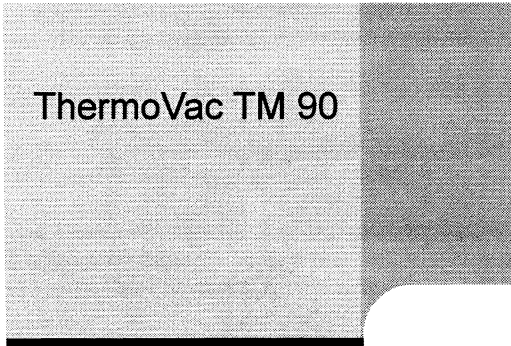


# OPERATING INSTRUCTIONS

GA 09.224



ThermoVac TM 90

## VACUUM GAUGE



Cat.-No.  
230 076  
230 077



**PLEASE NOTE:** We do sell the related products within this literature but we are not connected in any way with the manufacture of your product. We provide this literature for the products we sell and service. They are intended to provide users with the manufactures instructions to operate the equipment in a safe manner.

[www.idealvac.com](http://www.idealvac.com)

**Leybold**  
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The ThermoVac TM90 is a digital gauge designed to accurately measure vacuum levels during evacuation of air conditioning and refrigeration systems from atmosphere down to 1 micron (0.01 mbar, 1 Pa). It utilizes Leybold Vacuum's proprietary "Pirani" sensor, the most accurate vacuum sensor in its class.

## OPERATING INSTRUCTIONS

1. Remove the battery access cover and install the 9-volt battery. An indicator on the display will turn on when the battery needs to be replaced.

**Warning:** Pressures greater than 150 psi can damage the sensor.

2. Turn the TM90 on by pressing the On/Off button. Readings greater than 1500 will be displayed as 3 digits followed by the  $\times 1000$  indicator. For example, a reading of 100,000 is displayed as 100  $\times 1000$ .
3. The TM90 will turn off automatically after 15 minutes of use. When the TM90 is restarted after auto shutdown, the last reading before shut down will flash on the display for 5 seconds before normal readings resume.

**Note:** The last reading before shutdown will only be displayed for 5 seconds when the unit is turned back on. It can't be retrieved after that.

## VACUUM UNITS SELECTION

The TM90 can be set to display vacuum in units of microns, mbar, or Pa. Turn the TM90 on by holding down the power button for 5 seconds. The indicator for the active units will flash. Briefly press the power button to select the desired units. Press and hold the power button for 5 seconds until the unit indicator remains on steady.

## SPECIFICATIONS

Usage .....	Indoor or Outdoor	Pollution degree .....	2
Humidity .....	95% RH NC Max.	Overvoltage category ....	2
Battery: .....	One 9 Volt alkaline	Altitude .....	2000 m
Battery Life .....	20 hours	Weight .....	7.25 oz.
Operating temperature...	0°C to 50°C	Storage temperature ..	-10°C to +60°C
Pressure range ...	atm. to 1 micron	Accuracy.....	<2000 microns 5% >2000 microns 10%

## DECLARATION OF CONFORMITY

This is to certify that this equipment, designed and manufactured by Leybold Vacuum, Bonner Strasse 498 (Bayenthal), D-50968 Köln, Deutschland, meets the essential safety requirements of the European Union and is placed on the market accordingly. It has been constructed in accordance with good engineering practice in safety matters in force in the Community and does not endanger the safety of persons, domestic animals or property when properly installed and maintained and used in applications for which it was made.

Equipment Description ..... TM90 Vacuum Gauge  
Applicable Directives..... 73/23/EEC as amended by 93/68/EEC  
89/336/EEC as amended by 93/68 EEC  
Applicable Standards ..... EN 61010-1: 1993  
EN 61326: 2000-11, EMC Cl A, Immunity Criteria B  
CE Implementation Date ..... August 2005

## WARRANTY

Leybold Vacuum warrants your TM90 Vacuum Gauge to be free from defects of materials or workmanship for one year from the date of purchase. Leybold Vacuum does not warrant items that deteriorate under normal use, including power cells and sensors. Leybold Vacuum does not warranty any instrument that has been subjected to misuse, negligence, or accident, or has been repaired or altered by anyone other than Leybold Vacuum.

This warranty is a replacement warranty for one-year. Leybold Vacuum will not repair a unit within the warranty period. Out of warranty repair can be arranged by returning the unit to your local distributor.