



SEIT 1928

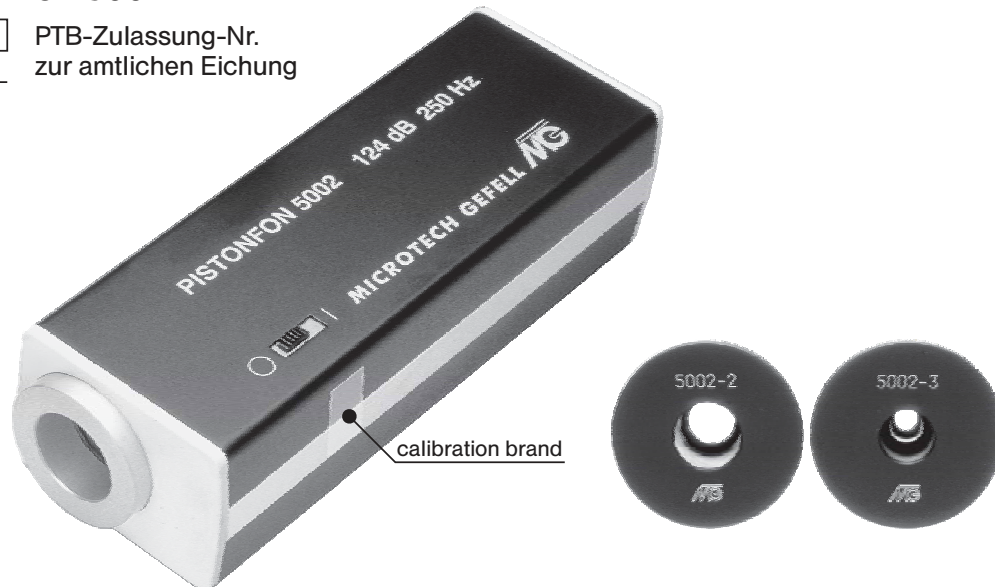
KONDENSATORMIKROFONE
FÜR STUDIO - UND MESSTECHNIK

MICROTECH GEFELL



Pistonfon 5002

21.51 PTB-Zulassung-Nr.
00.03 zur amtlichen Eichung



Application

The 5002 Pistonphone is a compact mains-independent precision sound pressure source of **class 1L according to DIN IEC 942 (1990)** for fast and precise calibration of sound level meters and complete sound measuring systems. It provides an easy and quick method for calibration and requires only low maintenance. The 5002 Pistonphone enables to calibrate measuring microphones with capsule diameters of 1", 1/2" and 1/4" as well. Using 1/2" and 1/4" capsules, corresponding adapter rings being part of delivery are required. In addition to the microphone capsules offered by the manufacturer Microtech Gefell, microphone capsules of other make can be used provided they have the same diameter. Should the equivalent microphone volume deviate, this has to be taken into account by means of a correction factor.

Construction and Operating Principle

A low noise DC motor moves two pistons by means of a cam disk in a pressure chamber. A steady-state sinusoidal alternating sound pressure is produced by oscillating pistons in the pressure chamber, closed by the microphone to be calibrated. The generated sound pressure level of 124 dB is so high that surrounding noise does not effect its operation. The high sound pressure level allows the calibration of 1/4" measuring microphones. The revolutions per minute of the motor and thus the frequency of the sound pressure level is kept constant by a quartz-stabilized circuit independent from the battery voltage. The faultless operation of 250 Hz is shown by a green LED. Should the operation voltage decreases below the allowable limit, a red LED starts shining. The unit is powered from seven 1,5 V primary cells of the type LR 6. Further it can be powered from an external DC source with a voltage range from 8 to 45 V, 100 mA, e.g. from a customary in trade plug power supply with 2,5 mm jack connector - positive pole to center contact. Because the generated sound pressure level depends on the static barometric pressure the pistonphone is supplied complete with a barometer having special scale on which the corresponding level correction values can be read directly. The 5002 Pistonphone and its accessories as well are supplied in an eye-catching case made of luxury wood.

PTB ... Physical Technical Federal Laboratory



Sound pressure calibrator
Class 1L DIN IEC 942 (1990)
Class 0L with suitable external barometer

CE Certificate

Delivery

Pistonfon 5002 in a wooden case Order-No. 313003
L x B x H 310 x 125 x 70 mm with
Adaptor for 1/2" microphones 5002 - 2
Adaptor for 1/4" microphones 5002 - 3
Correction Barometer 5002 - 4

Accessories, optional

Holder for both 1/2" and 1/4" measuring microphone 5002 - 5 Order-No. 303004

Specifications Pistonfon 5002

Nominal sound pressure level	124 dB
Nominal frequency	250 Hz
Tolerance of sound pressure level	± 0,3 dB
Tolerance of frequency	≤ 0,1 %
Total harmonic distortion	≤ 3 %
Ambient conditions:	
Pressure	850 hPa ... 1080 hPa
Temperature, operating	- 10°C ... + 50°C
Temperature, storage	- 40°C ... + 70°C
Relative humidity	max 95 %
Power supply	Batteries: 7 x 1,5V IEC Type LR6 ("AA" size) or external 8 V ... 45 V =
Livetime with alkaline batteries at 20°C	> 30 h
Degree of protection	IP 30
Dimensions	64 mm x 48 mm x 180 mm
Weight with batteries	670 g
complete with wooden case	1530 g



We reserve the right to improve quality, application and economy of our products without advance notice.