



# Tapping Machine TM01 Technical Data Sheet

## TM01 - THE TAPPING MACHINE DESIGNED BY ACOUSTICIANS

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### PARTNERSHIP

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01dB has joined with the British company **Sound Solutions Products Limited** to offer its customers its new simple and reliable tapping machine: **TM01**. A subsidiary of a long established Acoustic Consultancy Practice, **Acoustic Associates Sussex Ltd**, **Sound Solutions Products Limited** aims at offering products designed by acousticians for acousticians. After many field measurements, as the tapping machines available on the market did not meet their expectations, the acoustic engineers at Sound Solutions Products Ltd have developed their own tapping machine, the main features of which are reliability, quality and efficiency.

As a worldwide exclusivity, 01dB now offers this new tapping machine, **TM01**, to all its French and international customers and authorised distributors. This new accessory is an addition to the products of the 01dB range dedicated to building acoustics measurements: SOLO Black Edition, dBATI software, GDB-S source...



### KEY FEATURES

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The TM01 tapping machine includes the following technical features:

- Light and robust
- 2 hours of continuous operating life (integrated battery)
- Verification through an optical system of the hammers' impact rate and sequence
- Visual (LED) and sound (change of rate) information in case of non standardised impact frequency
- No lubrication required for the hammers
- Drop height adjustment gauge fixed on the machine for simple and easy check
- Programmable continuous operating time (5 or 20 min)
- Remote operating through (provided) remote control or using the SOLO Black Edition sound level meter combined with its SWT001 module

### MAIN APPLICATIONS

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The **TM01** tapping machine is designed to carry out impact sound measurements in accordance with current regulations and standards. Applications include:

- Building acoustics
- On-site measurement of impact noise level
- Laboratory measurement of impact noise level

## GENERAL DESCRIPTION

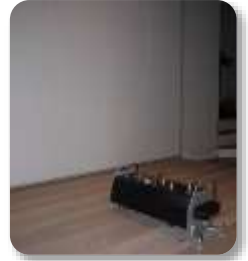
The **TM01** tapping machine consists of an aluminium frame standing on 3 rubber feet, the height of which can be adjusted. It includes a camshaft that drives 5 hammers with a mass of 500g each, set 10 cm apart one from another. The **TM01** machine allows for the hammers falling from a 40-mm effective height with a time interval of 100 ms between the drop of each hammer.

The **TM01** machine includes a lead-acid gel battery that allows for an optimum and standardised continuous operation time of 2 hours.

A pushbutton is used to manage the operation of the machine. Depending on the length of time the button is pressed, the following actions can be achieved:

- Power-up of the machine: Short push (< 850 ms)
- Operating for 5 min: Short push
- Operating for 20 min: Long push (850-2,500 ms)
- Turn-off of the machine: Long push (> 2,500 ms)

The **TM01** machine is supplied with a radio frequency remote control that allows for remote start and stop. The remote control is effective through the walls and floors normally built in residential and office buildings (the emitter's range in direct field is greater than 100 m).



## LISTEN TO YOUR MACHINE

The **TM01** tapping machine includes an electronic speed controller that integrates an optical unit for information feedback. This system allows for the validation of the proper impact rate for the hammers.

If the battery is too low to ensure the proper rate, the **TM01** tapping machine delivers visual information through a red LED. Furthermore, the **TM01** machine changes the impact rate so that it becomes irregular. This feature is particularly useful when the user is in the receiving room. He/she will then be able to remotely diagnose a dysfunction of the machine.



## INTEGRATION INTO THE 01dB RANGE

The **TM01** tapping machine is fully integrated into the 01dB product range dedicated to building acoustics. Using the **SWT001** module, the **SOLO Black Edition** sound level meter can indeed automatically start and stop the **TM01** machine when doing impact noise receiving measurements.

Using the **dBSOLO-B** software installed on a PC tablet, the user can control both the **SOLO** sound level meter and the **TM01** tapping machine.

## DELIVERABLES AND OPTIONS

The **TM01** tapping machine is delivered with the following accessories:

- Battery (integrated into the machine)
- Power supply
- Wireless remote control (battery provided and receiver integrated into the machine)
- Antenna for signal reception
- Hammer drop height adjustment gauge
- Wrench for feet adjustment
- Calibration certificate

The following accessories are available from 01dB as optional extras:

- A carrying case **FL01**
- The **SWT001** remote control module for the **SOLO Black Edition** sound level meter



## TECHNICAL SPECIFICATIONS

### Reference standards

ISO140 parts VI, VII and VIII  
ISO 717  
DIN 52210  
BS 5821  
ASTM E-492  
ASTM E-1007

### EC compliance

EN50081-1 and EN50082-1

### Features of the hammers

Number: 5  
Material: Stainless steel  
Weight: 500 g +/- 6 g  
Diameter: 30 mm +/- 0.2 mm  
Separating distance: 100 mm  
Rated drop height: 40 mm  
Rate: 10 impacts per second  
Sequence: 1, 3, 5, 2, 4

### Calibration

Each machine is delivered with its conformance certificate

### Overall dimensions

L x H x D: 650 x 215 x 275 mm (25.6 x 8.6 x 10.8")

### Weight

10.2 kg / 22.5 lb (including battery)

### Stabilising feet

Number: 3  
Adjustable height with provided wrench  
Drop height gauge provided

### Power supply

External charger  
Input: 100-240V CA, 50/60Hz, 1.0A  
Output: 18V 2.22A  
Consumption: 40W max.

### Battery

Type: lead acid gel with no maintenance  
Operating life: > 2 continuous hours (guaranteed impact rate)  
Charging time: about 8 hours

### Multifunction pushbutton

Short push: ON / Operating (5 min) / Pause  
Long push: Operating (20 min)  
Longer push: OFF

### Remote control

Number of keys: 1  
Frequency: 433 MHz, EMC compliant with European standard  
Operating range: 100 m in free field  
L x H x D: 6.7 x 1.7 x 3.6 mm (0.26 x 0.07 x 0.14")  
Weight: 26 g / 0.06 lb

### Temperature

Operation: from -10 to +50° C / 90% RH  
Storage: from -20 to +70° C / 90% RH

### Maintenance

No lubrication required  
Conformance checking is advised every 2 years

### Warranty

2 years for parts and labour

### Available options

FL01 carrying case  
- Weight: < 5 kg  
- Dimensions: 705 x 270 x 350 mm (29.5 x 10.6 x 13.8")  
SWT001 remote control for SOLO sound level meter

## PRODUCT REFERENCES

### Main references

*SDI1004000* Tapping machine TM01  
*SDI3003000* Tapping machine TM01 with carrying case FL01  
*SDI1005000* Carrying case FL01 alone

### Spare parts

*SDI1006000* Power supply  
*SDI1007000* Wireless remote control  
*SDI1008000* Antenna for signal reception  
*SDI1009000* Hammer drop height adjustment gauge  
*SDI1010000* Wrench for feet adjustment  
*SDI1011000* Battery  
*SDI1012000* Optical unit  
*SDI1013000* Speed controller

### Additional products

*KITSM1BAT* SOLO Black Edition Class 1, Building module  
*KITSM2BAT* SOLO Black Edition Class 2 Building module  
*OSO1048000* SOLO option - Building module  
*SSN6005000* dBBATI PC software for SOLO  
*SOL2009000* dBSOLO-B PC/PC tablet software  
*APH1040* SWT001 RF remote control for SOLO  
*SON1001000* GDB-S pink noise source

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- Prevent and control air, noise and vibration pollution
- Increase the productivity and reliability of industrial machinery
- Contribute to the development of effective, robust & noiseless products
- Protect soldiers, sites and vehicles in military theaters of operation

Across the world, ACOEM's 670 employees innovate in the measurement, analysis and control of all environmental parameters through the 01dB, ECOTECH, ONEPROD, FIXTURLASER, MEAX and METRAVIB brands.

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