TKST 21

SKF Stethoscope

Simple method to ‘hear’ bearing and machine noise

The TKST 21 captures acoustic data from bearings and other rotating parts – in order to prevent machine failure.

It includes a headset and two probes – 70 mm and 300 mm in length – in a sturdy carrying case. Pre-recorded audio samples of the most common problematic bearing noises are available in the device. The audio samples allow reliable identification of the possible cause of the noise. These sounds are also available on SKF.com.

The sound examples include: an undamaged bearing; a damaged inner ring; a less-damaged inner ring; a damaged outer ring; a damaged ball; and contamination by ashes and cavitation.

Advantages of the TKST 21 include:

- Large, backlit colour display
- User friendliness and easy one-hand operation
- Lightweight and ergonomic design
- Off-line and online pre-recorded demonstration samples
- High quality, noise cancelling headset
- Easily adjustable volume control
  Frequency range of 30 Hz-15 kHz

Noise from rotating machinery is picked up by a stick probe and transmitted to a sensor. This converts into an electrical signal, which is processed and amplified. The amplified signal can be fed to the headset, or to a recorder. Volume is easily adjusted to a comfortable level; the TKST 21 stethoscope can even be muted when needed. The headset is also an approved ear defender.

The device can detect a wide variety of typical problems, such as:

- Damaged bearings
- Valve chatter
- Tappet noise
- Piston slap
- Gear and pump noise



Online sound examples of an undamaged bearing, damaged inner ring, less damaged inner ring, damaged outer ring, damaged ball, contamination by ashes and cavitation.

Handheld instrument for monitoring bearing and machine noise to prevent machine failure

With a large, backlit colour display, a unique feature for this type of device, the TKST 21 is very user friendly. Operators can listen in 'live' mode, or record sounds. These recorded sounds can be replayed and compared with the live sound.
Features of the Settings menu include: changing the display brightness; auto-off timing; turning the SKF library of sound samples ON or OFF; and switching the volume limiter OFF.
The device can be used to detect noise in machine components – including bearing housings, gears, valves, vents and pumps. By monitoring noise, it can help to detect errors at an early stage – to enhance maintenance and help avoid failure.



The TKST 21 can be applied in a variety of industries, including:

- Power plants
- Recycling facilities
- Automotive factories
- Materials handling
- Food/beverage facilities
- Paper mills
- Gear and pump noise





Technical data

Designation	TKST 21
Frequency range	30 Hz– 15 kHz
Operating temperature	–10 to +45 °C (14 to 113 °F)
Output volume	Adjustable in 10 levels
LCD	Color backlit TFT
Sound volume	Up, down and mute
Battery low signal	Yes
Menus and features	Live, Recording, Sounds samples, Settings
Maximum recorder output	250 mV
Headset	32 ohm (right and left merged)
Auto switch off	After 5 or 10 min., or OFF
Battery	2 × AA Alkaline (included)
Battery lifetime	Minimum 10 hours (continuous use)

Dimensions handset	230 x 70 x 38 mm *(9 x 2.8 x 1.5 in)*
Probe length	70 and 300 mm *(2.8 and 11.8 in.)*
Case dimensions	360 × 110 × 260 mm *(14.2 × 4.3 × 10.2 in.)*
Weight	
Total	1660 g *(3.66 lb)*
Instrument	290 g *(0.64 lb)*
Headset	290 g *(0.64 lb)*
Case contents	1 × Instrument 1 × Headset 1 × Probe 70 mm *(2.8 in.)* 1 × Probe 300 mm *(11.8 in.)* 2 × AA Alkaline battery 1 × Instructions for use

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PUB MP/P8 19495 EN · November 2022