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**Product Name :**  
Crack Detection In Rotating Shaft Kit

**Product Code :**  
LBNY-0005-10100030



#### **Description :**

The crack influences the vibration behaviour of the shaft by changing its rigidity. Using suitable analysis software, this change can be registered and inspection of the machine organised in good time. In the experiment, the crack is simulated by an asymmetric flange joint. Cracks due to material fatigue are very dangerous for rotating machines. Early detection of any crack is therefore essential before permanent rupture and often fatal consequences can occur. The accessory set-up includes two shafts of different lengths: one short and one long. The short shaft simulates a protruding shaft end, and is loaded with the belt drive. Variable tightening of the flange bolts produces a temporary gaping of the butt joint, which closely approximates to the behaviour of a crack.

#### **Technical Specification :**

Investigation of the vibration behaviour of a cracked shaft  
4 Different sized cracks can be simulated  
Short shaft to simulate a protruding shaft end  
Simulation of the crack by opening bolt joints  
Accessory set-up for machinery diagnostic training system  
Long shaft to simulate an elastic rotor  
Crack adapter in flange form  
Stackable box for all components.

#### **Technical Data:**

6 Hexagon flange bolts M8x20  
Flange diameter: D=90mm

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#### Shafts

Diameter:  $D=20\text{mm}$

Long shaft:  $L=200\text{mm}$

Short shaft:  $L=85\text{mm}$

Max. Permissible bending torques

Long shaft for mass disk:  $3,9\text{Nm}$

Short shaft for belt pulley:  $15,9\text{Nm}$

Dimensions and Weight of Crack Detection in Rotating Shaft Kit

$l \times w \times h$ :  $600 \times 400 \times 120\text{mm}$  (box)

Weight: approx.  $3\text{kg}$ .



**Laboratory Instrument India**