



Machinery Fault Simulator

Mechanical vibration fault diagnosis and testing platform

Motors, bearings, gears, motors, valves, pumps and
customization of rotating machinery simulation test system.

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PT100 Bearing Fault Simulator

Introduction:

The PT100 is powered by an ABB small three-phase asynchronous motor, regulated in speed through a frequency converter. Various types of bearings, each with distinct faults, are employed to assess the frequency patterns of bearing defects across varying speeds. Testing is performed either individually or in various defect combinations within a secure and manageable setting. Serving as an innovative platform for investigating the fault features of rotating machinery, it effectively fulfills the diverse requirements of both educational simulations and scientific research users.

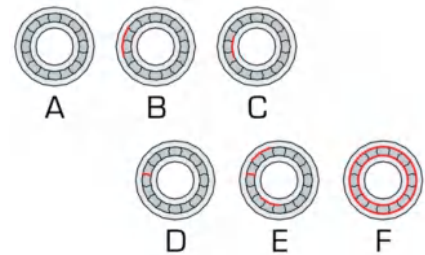


Configuration:

The test bench is mainly composed of a drive motor, a frequency converter, dual support bearings, a shaft, a foundation base, a control unit, etc.

Function:

- Fault bearing simulation: bearing inner ring fault, bearing outer ring fault, bearing rolling element fault, bearing cage fault, and comprehensive bearing fault.
- Common mechanical failures: mechanical looseness, improper testing.
- Identification of bearing fault frequency at different speeds.



Basic technical parameters :

| | |
|---------------------------|--|
| Drive motor power | ABB 370W, 220V |
| Axis size | Diameter 25mm, Chrome plated rust prevention |
| Rolling bearing | PH205 deep groove ball rolling bearing, inner diameter 25mm, integrated bearing assembly with connected seats, convenient replacement of faulty bearings |
| Type of faulty bearing | Inner race fault, outer race fault, cage fault, rolling element fault, comprehensive fault |
| Rotation adjustment range | 0-3500 rpm |
| Size | 730mm*310mm*330mm |