Vibrac®
PRECISION TEST SYSTEMS

Bearing Test Systems

Vibrac Bearing Inspector

The Bearing Inspector is for measuring the torque characteristics of anti-friction bearings and bearing assemblies. Included with the system are a customized computer, monitor and keyboard, and specialized controls for performing a test and processing the results. User-friendly menus enable the operator to rapidly become proficient with the operation of this high-precision system.

Testing Capabilities

Both starting torque and running torque can be measured within the same system, the same tooling and in the same test cycle. From this testing, a variety of bearing problems can be identified, such as:

- Bearing Contamination
- Retainer Hang-Up
- Brinelled or Pitted Raceways
- Poor Geometry
- Structural Defects
- Reporting Options

Customized reports that show only the required information for a particular customer or a specific application can be easily generated, viewed on the screen and outputted to a conventional printer or strip chart printer.

System Description

This state-of-the-art computer and bearing test head makes performing tests as easy as 1, 2, 3.

The **Bearing Inspector System** consists of a state-of-the-art computer and a Standard or High Load, Bearing Test Head. The test head contains a Vibrac Torque Transducer, an Magnetic high-resolution encoder and a Variable Speed Drive. This design enables the system to rotate the bearing at a constant speed (0.5 to 10 rpm) while measuring both torque and position.

Standard Bearing Test System

System:

- Light or High Load Gauge
- Granite Table Top (with High Load version only)
- Adjustable Vertical Positioning
- Precision Inner & Outer Race Tooling Available

Physical Description:

- Dimensions: 15" D x 15.5" W x 30" H (38cm x 40cm x 76cm)
- Weight: 60 lbs.(27kg)
- Speed: 0.5 to 10 rpm standard (higher speed optional)
- Direction: Bi-Directional

1050 Perimeter Road, Suite 600, Manchester, NH 03103 USA - Tel: +1 603 882 6777 - www.vibrac.com

Vibrac®

ES France - Département Bio-Tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 90 - Fax. 01 47 01 16 22 - e-mail: bio@es-france.com - Site Web: www.es-france.com

Operating Specifications

- **Input Power:** 120-240 VAC 50/60 H2
- **Temperature Environment:** 60 to 90° F (15-32° C)
- **Humidity Environment:** Up to 95% non-condensing

Magnectic Encoder:

- **Line Count:** 36,0000
- **Accuracy:** +/- 0.01 degrees

Drive Motor:

The system is supplied with a variable speed synchronous drive with a Speed Range of 0.5 to 10 RPM.

Positive Overload Protection:

Due to the relatively sensitive nature of the Bearing Inspector transducer, positive overload protection is provided.

Software Features

The **Bearing Inspector Computer System** is a customized product from a major commercial supplier and will meet the following minimum specifications:

- Intel Celeron Quad Core Processor
- Windows 10 Pro Platform
- 128 GB Hard Drive (minimum) SSD
- High Resolution Touch Screen (10")
- 101A Keyboard & Optical Mouse
- IP 65 / NEMA 4

Calibration and Tooling

Tooling for Inch Series Bearings

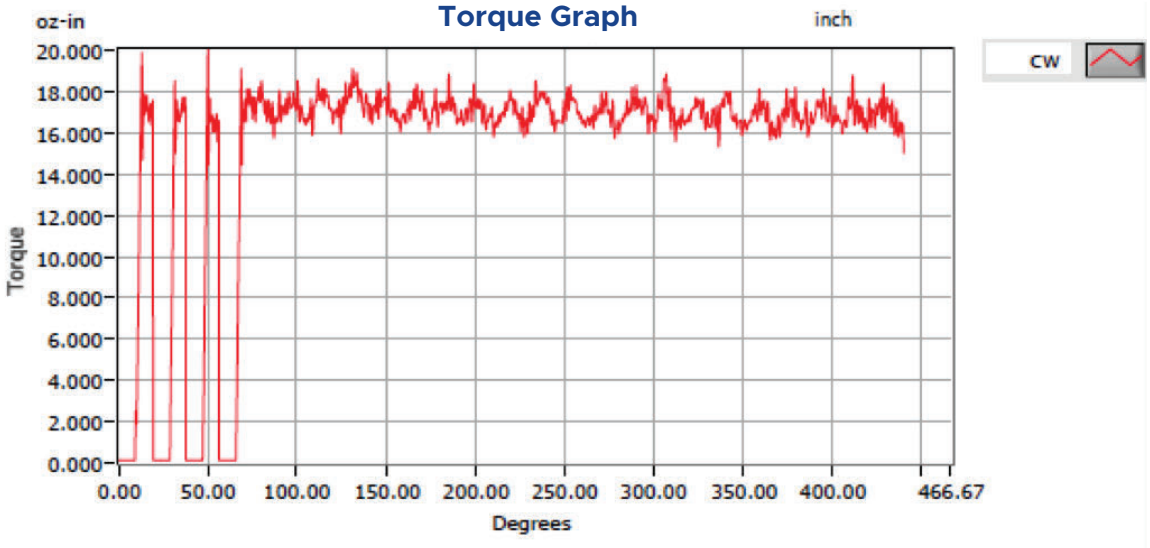
Instrument series bearings are normally tested with a dead weight load that is provided by the weight of the outer race tooling. Instrument bearings less than 0.375" (9.5mm) OD are tested with a 75 gram load. Instrument bearings greater than 0.375" (9.5mm) OD are tested with a 400 gram load.

Bearings requiring a heavy load can be tested using the BRG Heavy Load Gage. This gage applies the axial load with a dead weight system that is actuated with a lever. The weight is mounted under the table and applies the load by pulling down on the inner (or outer) race tool.

Torque Transducer Specifications:

TQ Size	Range (oz -in)	Accuracy % Full Scale
0.05	0.0 - 0.05	+/- 0.5
0.10	0.0 - 0.10	+/- 0.5
0.20	0.0 - 0.20	+/- 0.5
0.50	0.0 - 0.50	+/- 0.25
1.0	0.0 - 1.0	+/- 0.25
5.0	0.0 - 5.0	+/- 0.25
10.0	0.0 - 10.0	+/- 0.25

Note: *Consult factory for other torque values*




```
Vibrac Cap Inspector
Date: 03/23/2017

Profile: Breakaway Multi Test with Run Test
Test Type:  Bearing CW
Torque Units: oz-in
Samples: 3
Sample Start-1  Start-2  Start-3  Start-4 Running
   1:  18.48    19.36    19.04    19.52    18.64
   2:  18.48    19.28    18.80    19.28    19.52
   3:  19.60    18.80    20.00    19.20    19.04

*****************************************
                SUMMARY
*****************************************

     Low:  18.48   18.80   18.80   19.20   18.64
 Average:  18.85   19.15   19.28   19.33   19.07
    High:  19.60   19.36   20.00   19.52   19.52
 Std Dev:   0.53    0.25    0.52    0.14    0.36
   Range:   1.12    0.56    1.20    0.32    0.88

End Of Data!
```