



THE JOHNSON GAGE COMPANY  
AN ISO 9001-2000 COMPANY

## EXTERNAL THREAD INSPECTION SYSTEM SERIES BX/CX



- Adjustable System, Ideal for Applications Demanding a Versatile and Economic Thread Inspection Solution
- Additional Thread Sizes Easily Integrated into Basic Design
- Various Configurations for Different Applications
- Functional Segment Helical Profile Identical in Design to the GO Thread Ring Gage
- Detects both Two and Three Point Out-of-Round Errors
- Cone and Vee Pitch Diameter Rolls More Accurate and Repeatable than Thread Measuring Wires or Pitch Micrometers
- System Versatility Eliminates Need for Special Ring Gages
- Direct Replacement for Thread Ring Gages, Pitch Micrometers, and Thread Measuring Wires
- Dual-Mode Size or Limit Capability Provides Both Data for Process Control and Non-abrasive Inspection of Plated or Coated Parts
- Runout to a Datum Thread Easily Added to the Basic Inspection System
- Adaptable for the Inspection of Virtually Any Part Profile Beyond Basic Thread Inspection

### - GENERAL SYSTEMS BENEFITS -

**Verifies Thread Conformance as Required by AS8879, MIL-S-8879, MIL-S-7742, GM X120, Ford Q101, and ASME Systems 21 and 22**

**Strict conformance to gage design requirements of FED-STD H/28 and ASME B1.2**

**Simple and Less Frequent Calibration than Alternative Inspection Methods**

**Superior Gage Life and Faster Inspection Time**

**Objective and Uniform Results Free from Operator Influence**

**Real-Time Process Control at Point of Manufacture**

**Available with a Wide Range of Analog and Digital Indicators**

**Compatible with most Process Control Software**

**Analysis of both Thread Size and Form: Isolates and Detects Angle Error, Lead Error, Non-Uniform Helix, Taper and Two Point Out-of-Round**

**Hardened Bearing and Adjustment Surfaces Assure Accuracy and Long-Life**

**Available for Inspection of UN, UNJ, Metric, Metric J, Acme, Buttress and other Thread Forms**

Series BC3  
External Dedicated



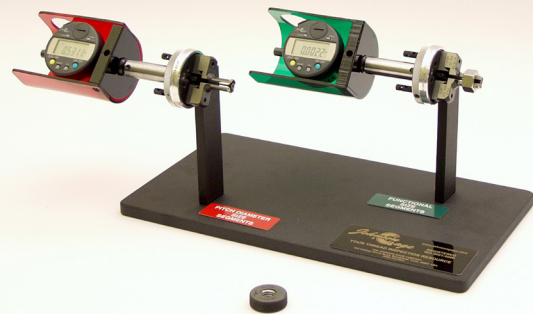
Series CX/BX-ER  
External Adjustable  
Extended Range



Series CX/CX  
External Adjustable



Series GJ/GJ  
Internal Adjustable



## UNDERSTANDING THE SCREW THREAD

Safe and reliable threaded connections depend on the dimensional conformance of both Pitch Diameter Size and Functional Size. Pitch Diameter, as the Minimum Material Limit of External and Internal Threads, is the primary datum for isolating size, form and profile variation. Functional Size, the Maximum Material Limit of External and Internal threads, includes variation in Size, Angle, Lead (including Uniformity of Helix), Taper, and Roundness. This differential inspection of Functional and Pitch Diameter Size assures dimension conformance, reveals the magnitude of thread form error in the manufacturing process, and is the key to both efficient production and ultimate performance. Combined with process targeting based in measured data, control of the differential will minimize process error, optimize initial set-up and production, and assure maximum flank-to-flank engagement in any threaded connection.

## MUCH MORE THAN JUST INSPECTION SOLUTIONS

External Inspection Systems • Internal Inspection Systems • FIM/Thread Related Features  
GO-NOT GO Attribute Gages • Solid Work Rings with Johnson Pro-Step Setting Plugs  
Calibration and Certification Service • Complete Gage Rebuilding: All Makes and Models  
Educational Seminars: Regional and In-House • Contract Part Inspection  
Dimensional and Thread Manufacturing Consulting • Process Control Integration  
Thread Dimensional Software