



THE JOHNSON GAGE COMPANY  
AN ISO 9001-2000 COMPANY

## EXTERNAL THREAD INSPECTION SYSTEM SERIES CH/CH-T



- Ideal for Inspection of High-Value Products at the Point of Manufacture
- Range-Adjustable and Fixed-Size Configurations for In and Out-of-Machine Inspection
- Both Functional and Pitch Diameter Rolls Designed for the Inspection of Any Thread Size of Same TPI Regardless of Diameter
- Functional Rolls Far More Versatile than Thread Rings
- Cone and Vee Pitch Diameter Rolls More Accurate and Repeatable than Thread Measuring Wires or Pitch Micrometers
- System Linearity and Versatility Eliminates Need for Special Ring Gages
- Direct Replacement for Both Thread Measuring Wires and Pitch Micrometers
- Detects Three-Point Out-of-Round
- Self-Centralizing and Self-Supporting
- Hardened Bearing and Adjustment Surfaces Assure Accuracy and Long-life
- Additional Thread Sizes Easily Integrated into Basic Design
- Available Alignment Guides Simplify Use and Prevent Cross-Threading
- Various Configurations for Different Applications. New Extended Range Model Offers Expanded Size Capability

### - 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 or Three 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 CX/BX  
External Adjustable  
Extended Range



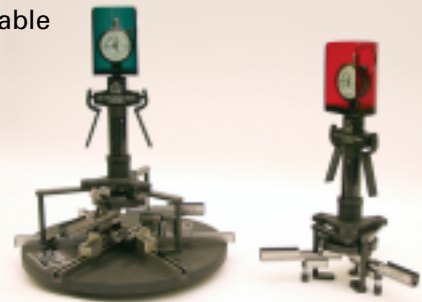
Series CH/CH-S  
External Adjustable



Series GP/GP  
Internal Adjustable



Series GH/GH  
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

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