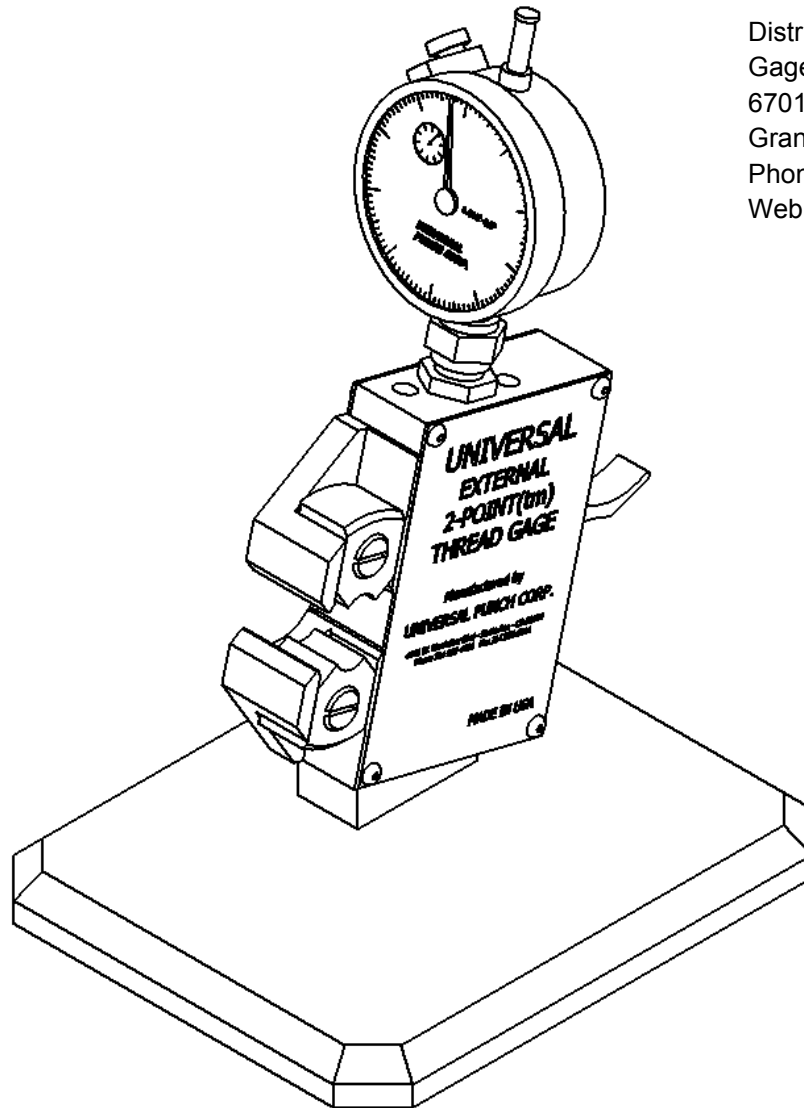


Universal External 2-Point Thread Gage



Distributed by:
Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com

External 2-Point Gage Assembly
Shown with Full Form Segments

OPERATING AND MAINTENANCE MANUAL



Our Product –

Universal Punch Corp.'s External 2-Point Thread Gage System is an accurate and reliable instrument to measure features of externally threaded fasteners. The Gaging system can check Major Diameter, Functional Diameter and Minor Diameter in sizes ranging from #4 (3mm) to 1 ½" (40mm) by simply changing the type and size of Segments. This method of thread gaging generates actual measurements of features allowing qualitative assessment of the inspected characteristic. Knowing the measured value allows operators to make precise adjustments to the machine.

Characteristics –

Gage Range –

The 2-Point Thread Gage system covers a size range from #4 (3mm) to ¾" (20mm) or 13/16" (22mm) thru 1 ½" (40mm)

Gage performance –

The External Thread Gages are easily set-up to use. With an appropriate Thread Setting Plug Gage, adjustment can be made quickly in setting the indicator to the actual size of the master, greatly reducing inspection time.

SPC compatible –

Universal Gages provide the ideal system for data collection. Adjustments can be made at the machine before scrap is created, resulting in improved quality and productivity.

Types of Segments –

The type of measurement required will dictate the type of Segment used in the Gage. Each set of Segment corresponds to a particular thread size. When measuring Major Diameter or Out-Of-Roundness, use our Flat Segments. When measuring Functional Diameter, use our Full Form Segments. When measuring Minor Diameter & Taper, use our Blade Segments.

Mounting Stands –

The Frame Assembly is typically mounted to a Mounting Stand for bench top use. It can also be provided with two units mounted to a single Mounting Stand, or even three units mounted to a single Mounting Stand. Another option provided is to have a Handle inserted into the Frame for hand-held use.

Distributed by:
Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com

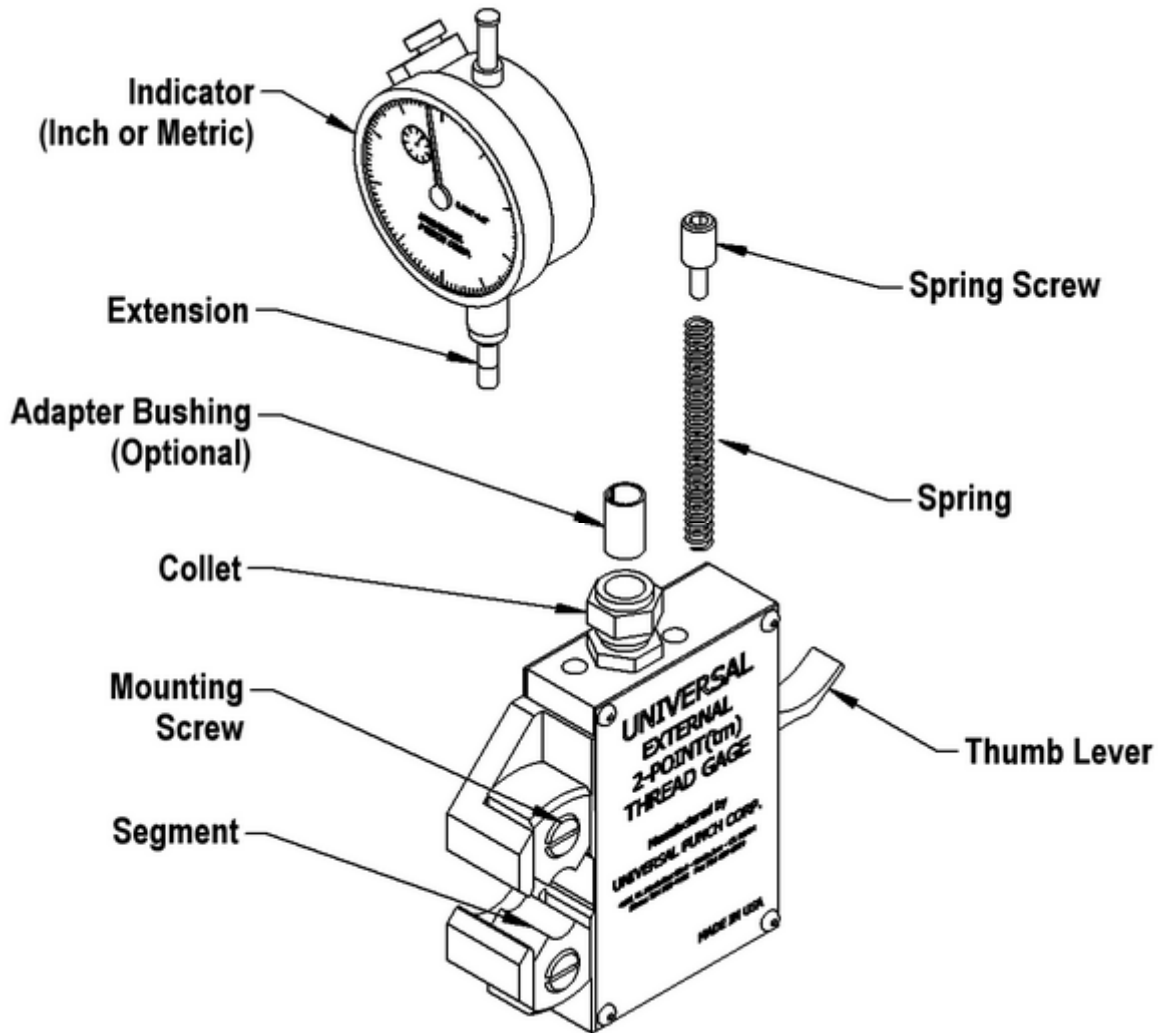
The Gaging System –

Distributed by:
Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com

The Gage System consists of 4 major features:

- 1) Mounting Stand (multiple units) or Handle
- 2) Frame Assembly
- 3) Segments
- 4) Mechanical Dial or Digital Indicator

Note: All Figures used are for illustration purposes only and may not represent exact configuration.



Installing Gage Elements to Frame –

1. Clean mating surfaces of Frame and Segments using a rag or cotton swab and Isopropyl Alcohol to allow proper seating.

Note: Segments are manufactured as matched pairs and must be stored and used together. The Segments are interchangeable from top to bottom within a matched set.

2. Attach Segments to frame using two (2) Mounting Screws provided.

Mechanical Indicator Installation –

The Mechanical Dial Indicator is secured to the Frame with a Locking Collet. The following steps are for installing the Indicator for the first time for each screw size.

1. Loosen the Locking Collet on top of Gage Frame.
2. Insert Dial Indicator into Collet (Use the Adapter Bushing for Metric Indicators with 8mm shafts).
3. With a Master Thread Plug Gage installed in the Segments, push the Indicator downward to preload at least one full revolution and adjust to approximately zero.
4. Tighten the Locking Collet.
5. Zero Indicator dial.
6. Depress the Thumb Lever and carefully remove Master Thread Plug Gage from Segments.

Electronic Indicator Installation –

The Electronic Dial Indicator is secured to the Frame with a Locking Collet. The following steps are for installing the Indicator for the first time for each screw size.

1. Loosen the Locking Collet on top of Gage Frame.
2. Insert Dial Indicator into Collet (Use the Adapter Bushing for Metric Indicators with 8mm shafts).
3. With a Master Thread Plug Gage installed in the Segments, push the Indicator downward to preload approximately $\frac{1}{4}$ ".
4. Tighten the Locking Collet.
5. Zero Indicator dial.
6. Depress the Thumb Lever and carefully remove Master Thread Plug Gage from Segments.

Setting Thread Gage to Master Thread Plug Gage –

Note: The Gage is set with a Master Thread Plug Gage that matches the thread size of the Segments previously installed.

1. Depress the Thumb Lever on rear of Frame until Segments are expanded enough to allow Master Thread Plug Gage to easily insert between the Segments. ALWAYS INSERT THE THREAD PLUG GAGE OR PART FROM THE FRONT OF THE GAGE. DO NOT INSERT THE THREAD PLUG GAGE OR PART FROM THE SIDE OF THE GAGE AS THIS COULD NICK THE SEGMENTS.
2. Release the Thumb Lever to seat Segments onto the Thread Plug Gage.
3. Rotate Thread Plug Gage slightly on Segments to ensure it is properly seated.

Note: Do not turn the Thread Plug Gage any more than necessary to seat the Segments. This will cause the Segments to wear prematurely.

4. Zero the Indicator:
If using a Mechanical type Dial Indicator, adjust the zero point by turning the Bezel on indicator face.
If using an Electronic type Indicator, press the "Zero" key on face.
5. Depress the Thumb Lever and carefully remove the Thread Plug Gage.

Distributed by:
Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com

Measuring Parts –

1. Depress the Thumb Lever enough and inserting the part from the front of the gage.
2. Place part being measured on the Segments.
3. Rotate part slightly on Segments to ensure it is properly seated.
4. Note any variance on indicator.

Note: Do not turn the part any more than necessary to seat the Segments. This will cause the Segments to wear prematurely.

5. If measurements are to be taken along the length of a part, remove the part and reposition it at the new measuring position. **AVOID ROTATING THE PART THROUGH THE SEGMENTS.**

Note: When using a Metric Dial Indicator, an adapter bushing shall be used.

Adjusting Pivot Arm Spring Pressure –

1. Pressure is adjustable over a Limited range by moving the Sprint Screw IN or OUT with appropriate tool.

Note: If the spring pressure cannot be adjusted for your particular application with the adjusting screw, optional springs with alternate spring rate are available. Please contact UNIVERSAL PUNCH CORP. with your specific requirements.

Replacement Parts –

Contact Universal Punch Corp. to obtain an Illustrated Parts Breakdown Drawing for a particular Gage Model. Some replacement parts may be ordered by utilizing the drawing and referencing the appropriate Part Number(s).

Distributed by:
Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com

Warranty

Universal Punch Corporation warrants that within twelve (12) months from date of shipment we will replace or repair, at our option, free of charge, any part(s) which, upon examination, we find to be defective in workmanship or material, provided that the product has been reasonably maintained and has not been subject to abuse. This warranty is in lieu of all other expressed or implied warranties including proper application for a particular purpose. In no event shall UPC be liable for any special, indirect, or consequential damages including, but not limited to, lost profits or other damages from loss of production caused by defective product, or by unsatisfactory performance of the product.

Returns

No returns will be accepted without factory authorization. Standard gage components or units are subject to a 15% restocking charge. Precision units are not subject to return privileges.

Special Orders

Special Gage orders on any parts or equipment such as electronic instruments and / or digital indicators are not returnable.



Universal Punch Corp

Distributed by:
Gage Crib Worldwide Inc
6701 Old 28th St SE, Suite B
Grand Rapids MI 49546 USA
Phone: 001.616.954.6581
Web: www.gagecrib.com