

# Can Gages



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# Can Gages



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# Can Gages



## Overview

Mahr Federal Inc. furnishes a wide variety of dimensional gaging for the can manufacturing industry.

Drawing on the knowledge and experience gained through over sixty years of precision gage making, Federal can provide the right gaging to satisfy all your can gaging needs - - from simple dial indicator gages to more sophisticated, higher accuracy air and electronic gages. The examples listed on the following pages, unless otherwise noted, are modifications of regular catalog gages.

Can manufacturers we have provided with gaging include: American Can Company, Apache Container Company, Campbell Equipment, Crown Cork & Seal, Kaiser Aluminum, Metal Container Corporation, National Can Company, Reynolds Metals, Schlitz Brewing Company and Valley Farms, Inc.

# Can Punch Gages

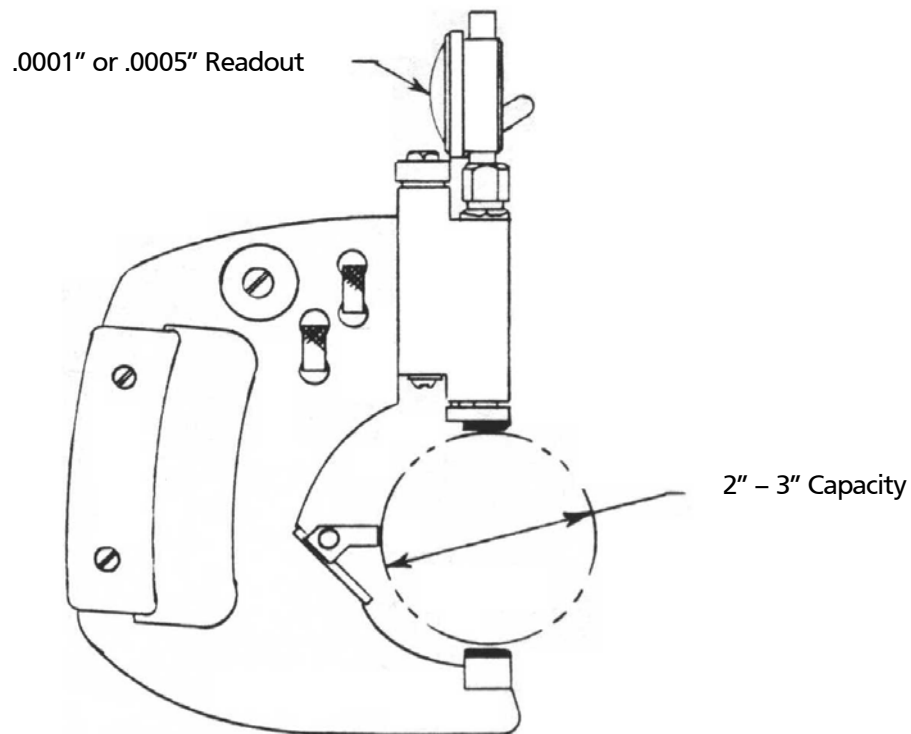


## Punch O.D. Measurements

The following illustrates and describes various Air Ring combinations for checking Punch O.D.'s. Punch O.D's usually have a slight forward taper (Draft Angle). That is why most of this gaging is built to check the O.D.'s in Multiple Planes.

# Can Punch Gages

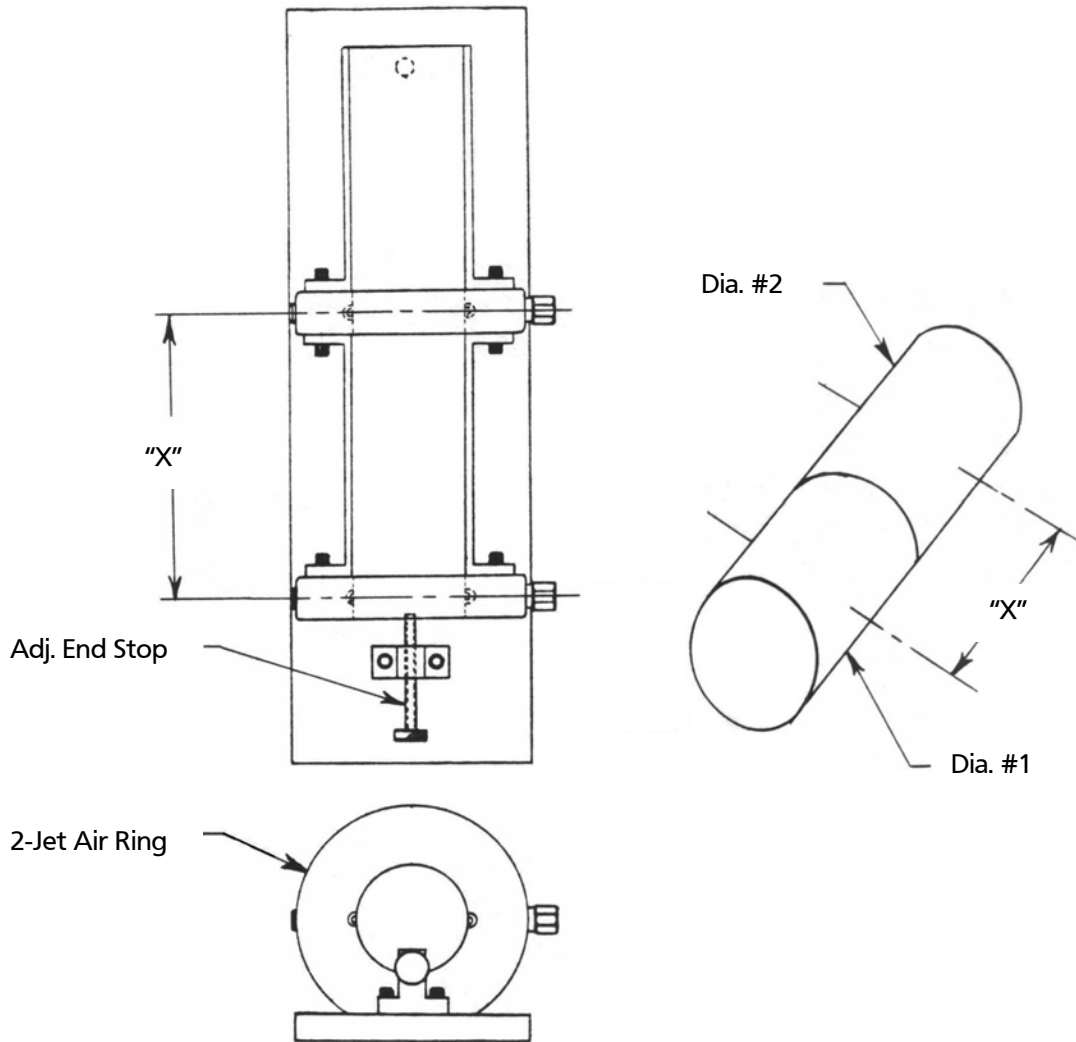
## Punch, O.D. Measurements



<u>MODEL NO.</u>	<u>DESCRIPTION</u>
300P-3 Snap Gage (Modified) per W-21230.	300P-3 with C2I Ind., .020" range, 1 inch adj. range, .0001 min. grad., 0-10 clockwise dial and 39/64 sq. T.C. anvils (catalog).
or	
300P-3 Snap Gage (Modified) per W-11534.	300P-3 with C1/2K Ind., .010" range, 1 inch adj. range, .00005" min. grad., 0-2-0 bal. dial and 39/64 sq. T.C. anvils (catalog).
301P-3 Snap Gage (Stock Model).	301P-3 with B2I Ind., .020" range, 1 inch adj. range, .0001" min. grad., 0-5-0 bal. dial & 39/64 sq. T.C. anvils (catalog) and lifting lever.

# Can Punch Gages

## Punch, Two-Point Measurement



**MODEL NO.**

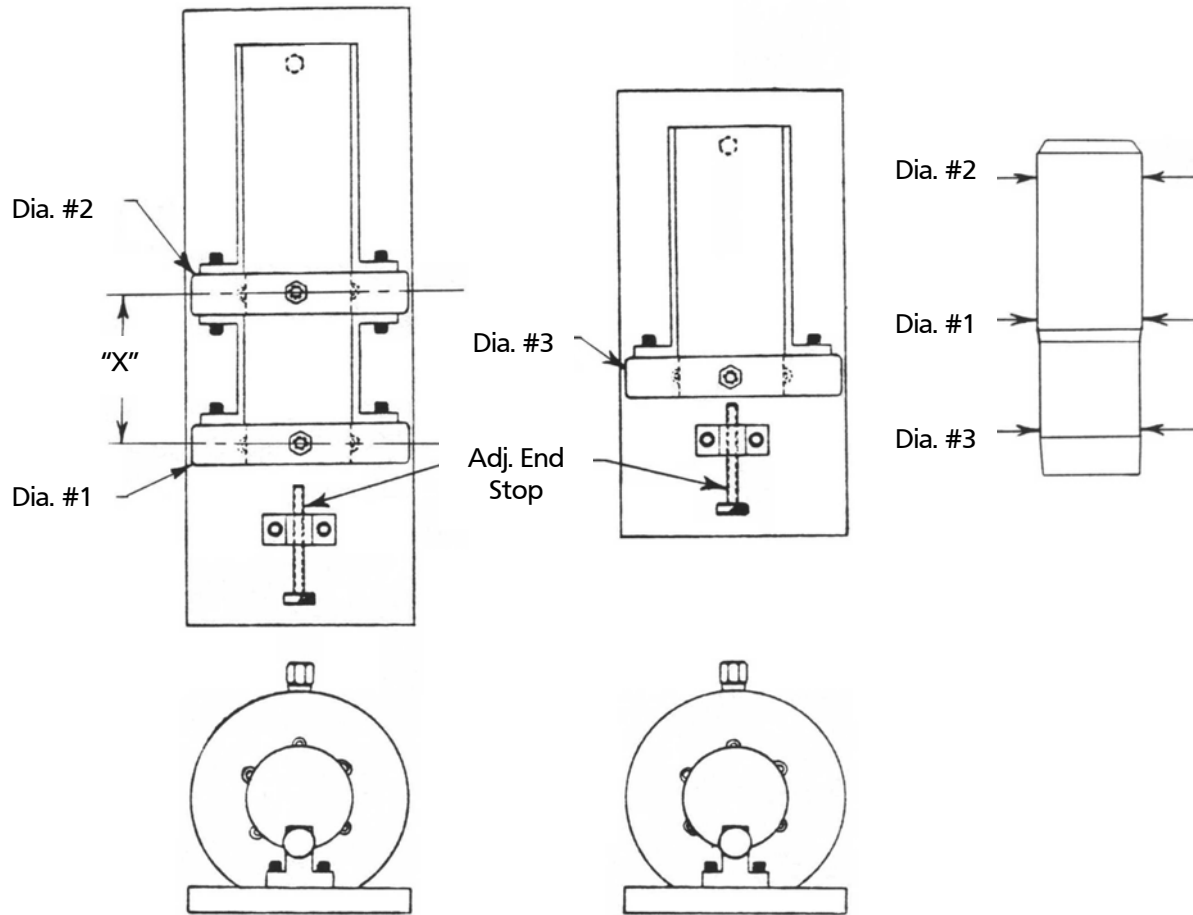
D2-1250 Dimensionair with AFL-24 Oil & Water Trap, AHO-1 Plastic Hose, and DRS-DUAL-1 Dual Air Ring.

**DESCRIPTION**

1250:1 magnification ratio, .0001" min. grads., .006" total measuring range, with dual air ring fixture consisting of (2) air rings each having (2) jets with guide chutes at entrance, and in between, mounted on a common base with an adj. stop.

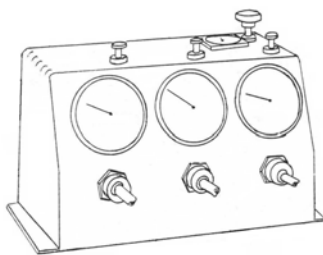
# Can Punch Gages

## Punch, Average O.D. Measurement



**MODEL NO.**

DA-SPEC-122 Special Triple Dimensionair

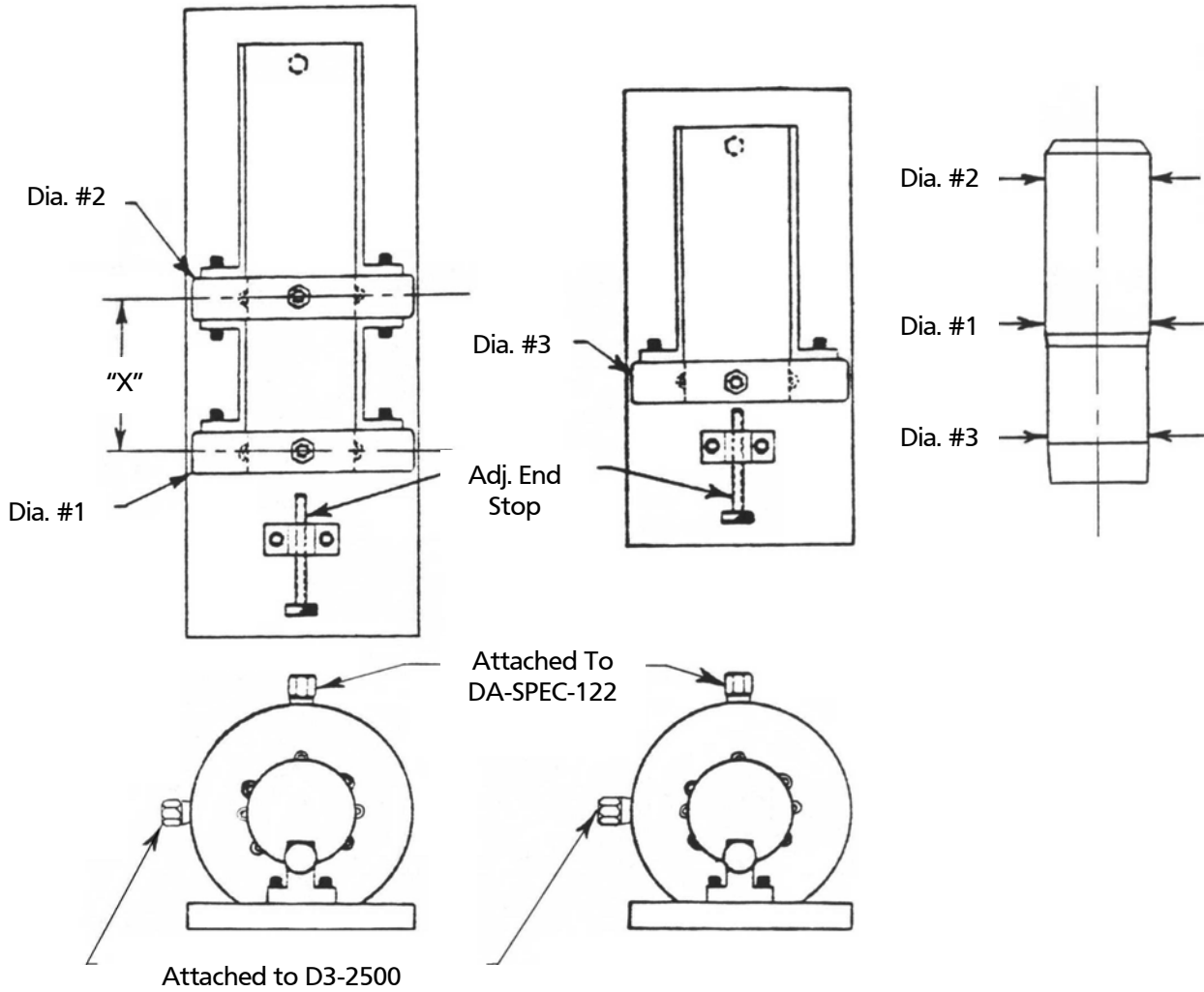


**DESCRIPTION**

2500:1 magnification ratio, .00005" min. grads., .003" total measuring range with one single air ring fixture consisting of one air ring having six jets with guide chute, adj. stop mounted on a common base for Dia. #3 plus one dual air ring fixture consisting of two air rings each having six jets with guide chutes at entrance and in between adj. stop mounted on a common base for Dia. #1 and Dia. #2.

# Can Punch Gages

## Punch, Average O.D. And 2-Point Roundness

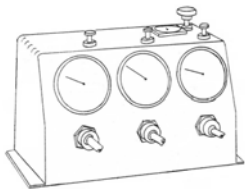


**MODEL NO.**

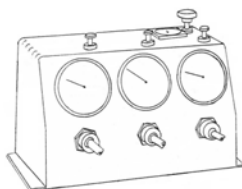
- (1) DA-SPEC-122 and
- (1) D3-2500 Dimensionair used together with special
- (8) Jet Air Rings.

**DESCRIPTION**

This gaging equipment consists of everything included in the Punch, Average O.D. Measurement Gage (see previous gage). In addition to the DA-SPEC-122 which is attached to each of the three 6-Jet Air Rings, for average diameters; a D3-2500 is attached to an additional 2-Jets which have been added to the 6-Jet Rings. This is to read the roundness as the punch is rotated.



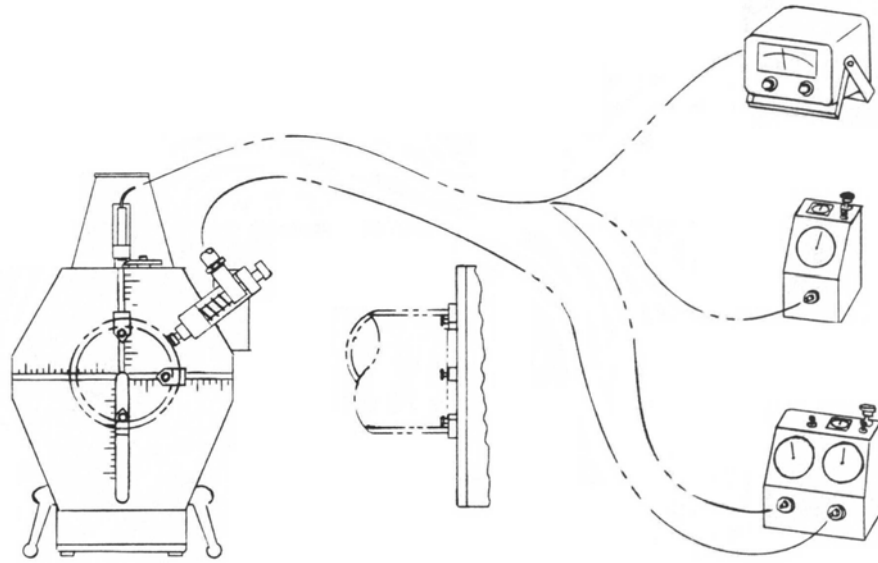
DA-SPEC-122



D3-2500

# Can Die Gages

## Die, I.D. And Die, I.D. And Concentricity



DIE I.D.

**MODEL NO.**

**DESCRIPTION**

E36B-20 Elec. Bench Comparator per W-19602. (Base unit is 36B-20).

The capacity with JW-9 Jaws: I.D. .750" - 7.75", O.D. .250" - 8.75", Ref. Plate 9" x 10 1/8", Adj. Jaw Height .031" - .750", EHE-1101 ±.010"/±250mm range, ±0.5% linearity and Amplifier EAS-1391 with ±.004 - ±.0001 range, .0002" - .000005" min. grads.

Consists of:

- 36B-20 Comparator
- EHE-1101 Probe
- EAS-1391 Amplifier
- JW-9 Jaw Set

A36B-40 Air Bench Comparator with D-2500 Dimensionair and JW-9 Jaws. (Base unit is 36B-10).

The capacity with JW-9 Jaws; I.D. .750" - 5.50", O.D. .250" - 5.00". Ref. Plate 5" x 6" jaw height is adjustable .031" - .750". AA-1-3 Air Probe with .003" range is normally furnished

**DIE, I.D. AND OD CONCENTRICITY**

A36B-40 Air Bench Comparator Per W-20435 with D2-2500 Dimensionair and JW-9 Jaws. (Base unit is 36B-20).

Catalog A36B-40 but special outrigger, with AA-1-3 Air Probe with .003" range and Dimensionair with 2500:1 magnification ratio, .000050" min. grads., and .003" total range. (Optional is separate Dimensionair 4000:1 mag. .000025" min. grads, with Model D-4000).

A36B-50 Air Bench Comparator per W-20435 with D2-2500 Dimensionair and JW-9 Jaws. (Base unit is 36B-20)

Similar to A36B-40 per W-20435 on previous page except capacity of this gage is I.D. .750" - 7.75", O.D. .250" - 8.75", ref. plate 9" x 10 1/8".

# Can Punch & Die Gages

## Punch And Die, Centering

### Application

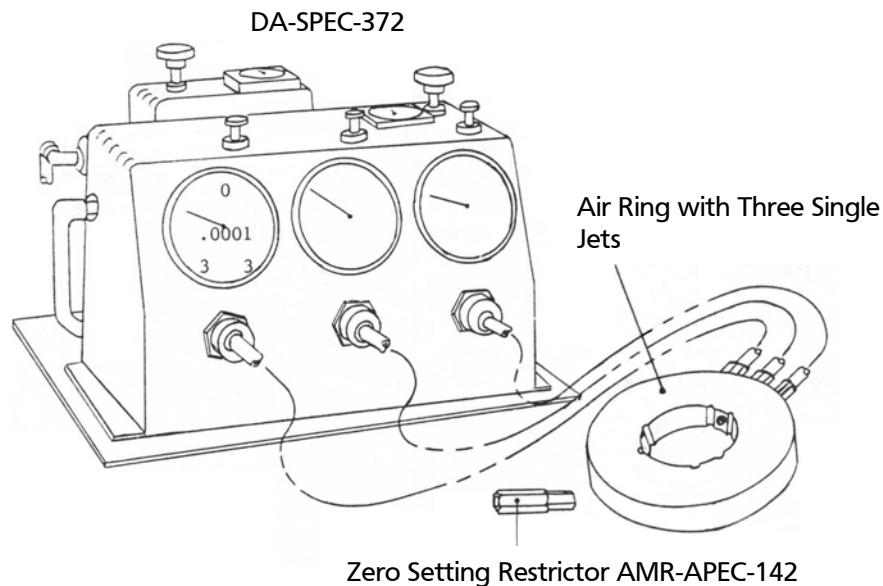
When a can machine is in operation, it produces a great number of cans in a short time. If there is an improper setup, this can lead to a great deal of scrap.

The purpose of Punch Centering to Die (concentricity) is to obtain can wall thickness uniformity. If wall thickness is too thin on one side and too thick on the opposite side the can is scrap.

The special 3 Jet Air Ring has 3 single Jets each of which is connected to one of the three meters on the DA-SPEC-372. The Ring O.D. is 6.0000" +0/- .0003" and is held concentric to the I.D. within .0001" T.I.R.. The Ring I.D. size is determined by the Punch size. The Ring is mounted in the machine to simulate the Die.

The three meters of DA-SPEC-372 are set to zero, using the same AMR-SPEC-142 Restrictor. Hose connections between the three meters and the jets are then completed. Thus, all three Meter and Jet combinations have the same flow characteristics.

The Punch is then moved into the Ring and the Meter readings noted. Adjustments to the machine are then made until all three Meters read the same. These "same" readings will vary from Punch to Punch, depending on Punch O.D. size. When Meter readings are the same, the Punch is centered.



<u>MODEL NO.</u>	<u>DESCRIPTION</u>
DA-SPEC-372 Special Triple Dimensionair.	Triple Dimensionair with 1250:1 magnification with special "0" restrictor. All (3) meters have .006" range. This is used with a special (3) jet air ring with (3) single jets.