

Large Diameter Gages

LARGE DIAMETER Fixed Dimension I.D. or O.D.

Technical Data

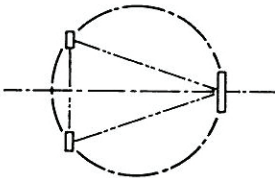
Model 4000 Series Straight Frame

Large Diameter gages are primarily "single dimension" gages, to record inside and outside dimensions of cylindrical products at one unique application. Their uniform component design, modification ability and selection of frames, contacts and rests, make unlimited variations.

These gages are dial indicating comparators and reference masters should be on hand for quick calibration. The setmasters are as important as the gage itself and should be given the appropriate consideration.

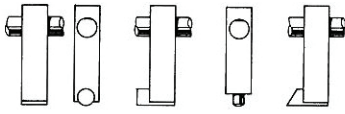
Although not always required, Kent advises that gaging situations using this type of gage be built specifically for the inspection dimension, from part print. However, the standardization of components allows for ordering by model number alone when specifications for the dimension, ID or OD, depth, and contact point is indicated.

Three point rest system.



Common to all Large diameter gages (except the pin gage) for absorbing gage pressures and leaving the contact points suspended for sensitivity.

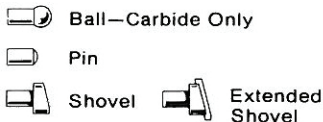
Rest Design



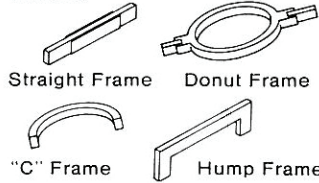
Dowel Extended Dowel Pin Shovel

Other rests engineered to fit the application.

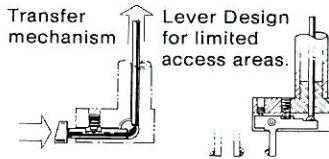
Gaging Contacts



Frames



Lever Design

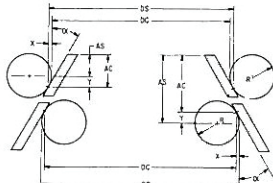


Precision 90 precision cam transfer allowing 1:1 transfer. Stop screw for pin travel restriction and constant return.

Calculating Formulas

Formula for setting gage when checking cone ID, OD, and Depth when using Ball.

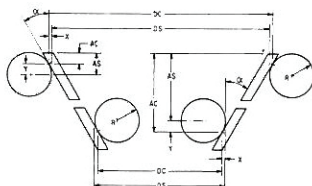
$$\begin{matrix} AS = AC + Y & X = R(1 - \cos \alpha) & AS = AC - Y & X = R(1 - \cos \alpha) \\ DS = DC - 2X & Y = R \sin \alpha & DS = DC + 2X & Y = R \sin \alpha \end{matrix}$$



$$\begin{matrix} AC = \text{DEPTH CHECK} & DC = \text{DIAMETER CHECK} \\ AS = \text{DEPTH SET} & DS = \text{DIAMETER SET} \end{matrix}$$

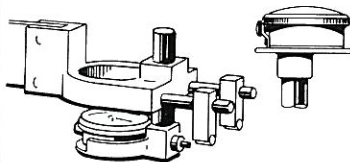
Formula for setting gage when checking inverted cone ID, OD, Depth when using ball.

$$\begin{matrix} AS = AC - Y & X = R(1 - \cos \alpha) & AS = AC + Y & X = R(1 - \cos \alpha) \\ DS = DC - 2X & Y = R \sin \alpha & DS = DC + 2X & Y = R \sin \alpha \end{matrix}$$



END MODIFICATIONS

Modified End Direct reading Perpendicular indicators.



A straight frame gage designed specifically as a "single dimension" gage for high production use where no interference is encountered. Pictured on its counterpart Setmaster Model 5000. (See Setmasters).

It is available in three gaging depth ranges; 0-1", 1-2" or 2-3" depending on the need, and is furnished with a dial indicator with .0005" graduations. Other indicators are available by request. Pictured on its counterpart Setmaster Model 5000. (See Setmasters).

Gaging contacts normally utilized are: pin, steel or carbide; shovel, steel or carbide; ball, carbide only.

MODEL	CHECK DIAMETER
4000-1	6-12
4000-2	12-18
4000-3	18-24
4000-4	24-30
4000-5	30-36
4000-6	36-42
4000-7	42-48
4000-8	48-54
4000-9	54-60

Models over 60" are available upon request.