

JIS

JAPANESE INDUSTRIAL STANDARD

Newton Gauges

JIS B 7433—1989

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by

Japanese Standards Association

**In the event of any doubt arising,
the original Standard in Japanese is to be final authority.**

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1. Scope

This Japanese Industrial Standard specifies the Newton gauges to be used as reference of sphericity and radius of curvature of surfaces of optical parts.

Remark: The Newton gauges to be used as reference of flatness of optical parts treat the plane surface as spherical surface with infinitely large radius of curvature.

2. Classification

The Newton gauges shall be classified into the following three classes according to the division of use.

- (1) Calibrating Newton Gauge The calibrating Newton gauge, hereinafter, referred to as calibrating gauge, is a pair of concave and convex Newton gauges with shape and dimensions, sphericity and radius of curvature specified in 3.(1), 4.1 (1) and 4.2 (1) and shall be used as reference for comparative measurement of sphericity and radius of curvature or for calibration of measuring instrument.

Further, the designation of calibrating gauge (R_0) shall be 8 kinds of 10, 20, 50, 100, 200, 500, 1000 and ∞ .

- (2) Basic Newton Gauge The basic Newton gauge, hereinafter, referred to as basic gauge, is a pair of concave and convex Newton gauges whose sphericity and radius of curvature have been measured by comparative measurement with calibrating gauge and whose precision of measurement for the value of radius of curvature is clearly indicated and is used as reference for manufacture or inspection of normal-use Newton gauges.

Remark: The basic gauges may be used as calibrating gauges in the case where they satisfy the conditions of 2.(1).

- (3) Normal-use Newton Gauges The normal-use Newton gauge, hereinafter, referred to as "normal gauge", is a Newton gauge with size suiting to the surface of optical part as the object of inspection whose sphericity and radius of curvature have been calibrated by basic gauge and is used in the manufacture and inspection of optical parts.

Applicable Standards:

JIS B 7430-Optical Flats

JIS B 7541-Standard Scales