ECLA EUROPEAN CLASSIFICATION

G01B MEASURING LENGTH, THICKNESS OR SIMILAR LINEAR DIMENSIONS; MEASURING ANGLES; MEASURING AREAS; MEASURING IRREGULARITIES OF SURFACES OR CONTOURS [N: (measuring human body, see the relevant places, where such exist, e.g. A41H1/00, A43D1/02, A61B5/103; measuring appliances combined with walking-sticks A45B3/08; sorting according to dimensions B07; tool-setting or drawing instruments not specially modified for measuring B23B49/00, B23Q15/00 to B23Q17/00, B43L; combinations of measuring devices with writing-appliances B43K29/08; geodetical, nautical or aeronautical measuring, surveying, rangefinding G01C; photogrammetry G01C11/00; measuring force or stress, in general G01L1/00; investigating or analysing particle size, investigating or analysing surface area of porous material G01N; measuring position, distance or direction, in general, by reception or emission of radiowaves or other waves and based on propagation effects, e.g. Doppler effect, propagation time, direction of propagation G01S; geophysical measuring G01V; measuring length or roll diameter of film in cameras or projectors G03B1/60; combinations of measuring devices with means for controlling or regulating G05; methods or arrangements for converting the position of a manually-operated writing or tracing member into an electrical signal G06K11/00; measuring elapsed travel of recording medium in recording and playback equipment, sensing diameter of record in autochange gramophones G11B; means structurally associated with electric rotary current collectors for indicating brush wear H01R39/58; indicating consumption of electrodes in arc lamps H05B31/34)]

Note

1. This subclass covers measuring of position or displacement in terms of linear or angular dimensions.
2. In this subclass, the groups are distinguished by the means of measurement which is of major importance. Thus the mere application of other means for giving a final indication does not affect the classification.
3. Attention is drawn to the Notes following the title of class G01.
4. Machines operated on similar principles to the hand-held devices specified in this subclass are classified with these devices.
5. Measuring arrangements or details thereof covered by two or more of groups G01B3/00-G01B17/00 are classified in group G01B21/00 if no single other group can be selected as being predominantly applicable.

G01B1/00 Measuring instruments characterised by the selection of material therefor

G01B3/00 Instruments as specified in the subgroups and characterised by the use of mechanical measuring means (arrangements for measuring particular parameters G01B5/00; devices of general interest specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material B65H75/34) [C9511]

G01B3/00B . [N: Details]

G01B3/00B1 . . [N: Scales; Graduations]
G01B3/00B1B . . . [N: having both coarse and fine graduation]
G01B3/00B2 . . [N: Arrangements for controlling the measuring force]

G01B3/02 . Rulers or tapes with scales or marks for direct reading
G01B3/04 . . rigid
G01B3/06 . . . folding
G01B3/08 . . . extensible
G01B3/10 . . [N: flexible, [N: e.g. tape measures] [N0109]

Note
Group G01B3/10A takes precedence over groups G01B3/10B to G01B3/10Z] [N0109]

G01B3/10A . . . [N: Tape measures without casings] [N0109]
G01B3/10B . . . [N: Braking or locking members, i.e. means for preventing rotation or the tape or for holding the tape at a certain position; Damping means, i.e. means for absorbing shock due to rewinding of the tape; Winding mechanisms, e.g. springs, electrical motors, crank-handles] [N0109]
G01B3/10C . . . [N: Casings, i.e. structures to contain the tape] [N0109]
G01B3/10H . . . [N: End-hooks; Attachment of end-hooks to the tape; Distal and proximal ends of the tape] [N0109]
G01B3/10R . . . [N: Means for reading or displaying length measurement] [N0109]
G01B3/10S . . . [N: External support or attachment means, i.e. not provided in the tape measure itself] [N0109]
G01B3/10T . . . [N: Details of the tape per se, e.g. scale structure, indicia on scale, particular material for the tape] [N0109]
G01B3/10Z . . . [N: Particular applications of tape measures or special adaptations thereto] [N0109]

G01B3/11 . Chains for measuring length

G01B3/12 . Measuring wheels

G01B3/14 . Templates for checking contours [N: (templates for mounting doors or windows E04F21/00B)]

G01B3/16 . Compasses, i.e. with a pair of pivoted arms
G01B3/16B . . [N: without measuring scale]
G01B3/16C . . [N: provided with a measuring scale]

G01B3/18 . Micrometers

G01B3/20 . Slide gauges
G01B3/20B . . [N: provided with a counter for digital indication of the measured dimension]

G01B3/22 . Feeler-pin gauges, e.g. dial gauges (for determining profiles G01B5/20)
G01B3/24 . . with open yoke, i.e. calipers
G01B3/26 . . Plug gauges
G01B3/28 . . Depth gauges

G01B3/30 . Bars, blocks, or strips in which the distance between a pair of faces is fixed, although it may be preadjustable, e.g. end measure, feeler strip

G01B3/30B . . [N: pre-adjustable, e.g. by means of micrometerscrew]

G01B3/30B1 . . . [N: with inclined slide plane]

G01B3/32 . . Holders therefor

G01B3/34 . Ring or other apertured gauges, e.g. "go/no-go" gauge

G01B3/36 . . for external screw-threads

G01B3/38 . Gauges with an open yoke and opposed faces i.e. calipers, in which the internal distance between the faces is fixed, although it may be preadjustable

G01B3/40 . . for external screw-threads

G01B3/42 . . of limit-gauge type, i.e. "go/no-go" (G01B3/40 takes precedence)

G01B3/44 . . . preadjustable for wear or tolerance

G01B3/46 . Plug gauges for internal dimensions with engaging surfaces which are at a fixed distance, although they may be preadjustable

G01B3/48 . . for internal screw-threads

G01B3/50 . . of limit-gauge type, i.e. "go/no-go" (G01B3/48 takes precedence)

G01B3/52 . . . preadjustable for wear or tolerance

G01B3/56 . Gauges for measuring angles or tapers, e.g. conical calipers

G01B3/56B . . [N: Protractors (for use in geodesy G01C1/00; protractor heads for drawing machines B43L13/08)] [C9511]

G01B3/56C . . [N: Squares]

G01B5/00 **Measuring arrangements characterised by the use of mechanical means** (instruments of the types covered by group G01B3/00 per se G01B3/00)

G01B5/00B . [N: Arrangements for supporting, fixing or guiding the measuring instrument or the object to be measured]

G01B5/00B1 . . [N: Supports (in general F16M, 116A2C; G01B5/02B takes precedence)]

G01B5/00B2 . . [N: Surface plates] [C9511]

G01B5/00B3 . . [N: Guiding surfaces; Arrangements compensating for non-linearity there-of]

G01B5/00C . [N: Arrangements for eliminating or compensation of measuring errors due to temperature or weight]

G01B5/00C1 . . [N: due to temperature (on machine tools B23Q 11/00B)]

G01B5/00C2 . . [N: due to weight (on machine tools B23Q11/00C)]

G01B5/00E . [N: for measuring key-ways]

G01B5/00F . [N: for measuring the volumetric dimension of an object]

G01B5/00G . [N: Measuring of sport goods, e.g. bowling accessories, golfclubs, game balls]

G01B5/00H . [N: Measuring of vehicle parts (G01B5/00K takes precedence)]

G01B5/00H1 . . [N: Brakes, brakeshoes, clutches]

G01B5/00K . [N: Measuring of motor parts]
G01B5/00K1 . . [N: Valves, actuating devices for valves]

G01B5/00T . [N: Measuring of dimensions of trees] [N9409]

G01B5/00W . [N: Measuring of dimensions of welds] [N9409]

G01B5/004 . for measuring coordinates of points [N9411]
G01B5/008 . . using coordinate measuring machines [N9411]
G01B5/012 . . . Contact-making feeler heads therefor [N9411]
G01B5/016 . . . . Constructional details of contacts [N9411]

G01B5/02 . for measuring length, width or thickness (G01B5/004, G01B5/08 take precedence) [C9411]
G01B5/02B . . [N: Measuring of circumference; Measuring length of ring-shaped articles (G01B5/00T takes precedence)] [N9409]
G01B5/04 . . specially adapted for measuring length or width of objects while moving
G01B5/04B . . . [N: for measuring length]
G01B5/04C . . . [N: for measuring width]
G01B5/06 . . for measuring thickness [C9411]
G01B5/06B . . . [N: height gauges]
G01B5/06B1 . . . . [N: provided with a slide which may be moved along a vertical support by means of a micrometer screw]
G01B5/06B2 . . . . [N: provided with a slide which may be fixed along its vertical support in discrete calibrated position]
G01B5/06C . . . [N: of coating]
G01B5/06D . . . [N: of objects while moving (G01B5/06C takes precedence)]

G01B5/08 . for measuring diameters [N: (G01B5/00T takes precedence; measuring radius of curvature G01B5/213)]
G01B5/10 . . of objects while moving [C9411]
G01B5/12 . . internal diameters

G01B5/14 . for measuring distance or clearance between spaced objects or spaced apertures (G01B5/24 takes precedence)
G01B5/14B . . [N: between holes on a workpiece]
G01B5/14C . . [N: measuring play on bearings]
G01B5/16 . . between a succession of regularly spaced objects or regularly spaced apertures [C9411]
G01B5/16B . . . [N: of screw-threads]
G01B5/16C . . . [N: of gear teeth]

G01B5/18 . for measuring depth

G01B5/20 . for measuring contours or curvatures [C9411]
G01B5/20C . . [N: for measuring roundness]

G01B5/20D . . [N: of gears]
G01B5/20E . . [N: of screw-threads]
G01B5/20F . . [N: of turbine blades or propellers]
G01B5/207 . . using a plurality of fixed, simultaneously operating transducers (G01B5/213 to G01B5/22 take precedence) [N9411]
G01B5/213 . . for measuring radius of curvature [N9411]
G01B5/22 . . Spherometers

G01B5/24 . for measuring angles or tapers; for testing alignment of axes
G01B5/24B . . [N: for measuring conicity]
G01B5/24D . . [N: Sine bars; Sine plates]
G01B5/24E . . [N: for measuring chamfer (see G01B3/56)]
G01B5/245 . . for testing perpendicularity [N9411]
G01B5/25 . . for testing the alignment of axes
G01B5/252 . . . for measuring eccentricity, i.e. lateral shift between two parallel axes [N9411]
G01B5/255 . . for testing wheel alignment

G01B5/26 . for measuring areas, e.g. planimeter (integrators in general G06G)

G01B5/28 . for measuring roughness or irregularity of surfaces
G01B5/28B . . [N: for controlling eveness]

G01B5/30 . for measuring the deformation in a solid, e.g. mechanical strain gauge

G01B7/00 Measuring arrangements characterised by the use of electric or magnetic means

G01B7/00A . [N: Constructional details of gauge heads (G01B7/012 takes precedence)] [N9409]

G01B7/00B . [N: Constructional details of contacts for gauges actuating one or more contacts (G01B7/016 takes precedence)] [C9409]

G01B7/00C . [N: for measuring position, not involving coordinate determination (coordinate measuring G01B7/004)] [N9409]

G01B7/004 . for measuring coordinates of points [N9409]
G01B7/008 . . using coordinate measuring machines [N9409]
G01B7/012 . . . Contact-making feeler heads therefor [N9409]
G01B7/016 . . . . Constructional details of contacts [N9409]

G01B7/02 . for measuring length, width or thickness (G01B7/004, G01B7/12 take precedence) [C9409]
G01B7/02B . . [N: for measuring distance between sensor and object (G01B7/08B and G01B7/10B take precedence)]
G01B7/02D . . [N: for measuring length of cable, band or the like, which has been paid out, e.g. from a reel (measuring length of objects while moving G01B7/04)] [N9409]
G01B7/04 . . specially adapted for measuring length or width of objects while moving
G01B7/04B . . . [N: for measuring length]

G01B7/04B1 . . . . [N: using capacitive means]
G01B7/04B2 . . . . [N: using magnetic means]
G01B7/04C . . . [N: for measuring width]
G01B7/06 . . for measuring thickness [N: (measuring during the manufacture of coatings C23C14/54)] [C9409]
G01B7/06B . . . [N: using piezo-electric resonators]
G01B7/06B1 . . . . [N: for measuring thickness of coating (apparatus or processes for the manufacture of piezo-electric or electrostrictive resonators for obtaining desired frequency H03H3/04)]
G01B7/08 . . . [N: IPC5] using capacitive means
G01B7/08B . . . . [N: Height gauges]
G01B7/08C . . . . [N: for measuring thickness of coating]
G01B7/08D . . . . [N: for measuring of objects while moving (G01B7/08C takes precedence)]
G01B7/10 . . . [N: IPC5] using magnetic means, e.g. by measuring change of reluctance
G01B7/10B . . . . [N: Height gauges]
G01B7/10C . . . . [N: for measuring thickness of coating]
G01B7/10D . . . . [N: for measuring objects while moving (G01B7/10C takes precedence)]

G01B7/12 . for measuring diameters
G01B7/12B . . [N: of objects while moving]
G01B7/13 . . Internal diameters [N9409]

G01B7/14 . for measuring distance or clearance between spaced objects or spaced apertures (G01B7/30 takes precedence)
G01B7/14B . . [N: between holes on a workpiece]
G01B7/14C . . [N: Measuring play on bearings]
G01B7/14D . . [N: Measuring on gear teeth]
G01B7/14E . . [N: Measuring on screw threads]
G01B7/15 . . being regularly spaced [N9409]

G01B7/16 . for measuring deformation in a solid, e.g. by resistance strain gauge [C9409]
G01B7/18 . . [N: IPC 5] using change in resistance
G01B7/20 . . . [N: IPC 5] formed by printed-circuit technique
G01B7/22 . . [N: IPC5] using change in capacitance
G01B7/24 . . using change in magnetic properties

G01B7/26 . for measuring depth

G01B7/28 . for measuring contours or curvatures [C9409]
G01B7/28A . . [N: for measuring contour or curvature along an axis, e.g. axial curvature of a pipeline or along a series of feeder rollers] [N9409]
G01B7/28C . . [N: for measuring roundness]
G01B7/28D . . [N: of gears]
G01B7/28E . . [N: of screw-threads]
G01B7/28F . . [N: of propellers or turbine blades]

G01B7/28G . . [N: Spherometers]

G01B7/287 . . using a plurality of fixed, simultaneously operating transducers (G01B7/293 takes precedence) [N9409]

G01B7/293 . . for measuring radius of curvature [N9409]

G01B7/30 . for measuring angles or tapers; for testing the alignment of axes

G01B7/305 . . for testing perpendicularity [N9409]

G01B7/31 . . for testing the alignment of axes

G01B7/312 . . . for measuring eccentricity, i.e. lateral shift between two parallel axes [N9409]

G01B7/315 . . for testing wheel alignment

G01B7/32 . for measuring areas (integrators in general G06G)

G01B7/34 . for measuring roughness or irregularity of surfaces [C1108]

G01B7/34B . . [N: for measuring evenness]

G01B9/00 **Instruments as specified in the subgroups and characterised by the use of optical measuring means** (arrangements for measuring particular parameters G01B11/00) [C9511]

G01B9/02 . Interferometers [N: for determining dimensional properties of, or relations between, measurement objects]

[N: **WARNING**
[N1207]The subgroups G01B9/02C - G01B9/02S are not complete pending completion of a reorganization, provisionally see G01B9/02
]

G01B9/02C . . [N: characterised by manipulating or generating specific radiation properties] [N1204]

G01B9/02C1 . . . [N: Frequency variation] [N1204]

G01B9/02C1A . . . . [N: by using beat frequencies generated by mixing of two or more frequencies] [N1204]

G01B9/02C1B . . . . [N: by using a continuous frequency sweep or scan] [N1204]

G01B9/02C1C . . . . [N: by using discrete frequency stepping or switching] [N1204]

G01B9/02C2 . . . [N: Two or more frequencies or sources used for interferometric measurement (using only beat G01B9/02C1A)] [N1204]

G01B9/02C2A . . . . [N: by using a frequency comb] [N1204]

G01B9/02C2B . . . . [N: by using two or more low coherence lengths using different or varying spectral width] [N1204]

G01B9/02C3 . . . [N: using temporal phase variation] [N1204]

G01B9/02C4 . . . [N: using temporal polarization variation] [N1204]

G01B9/02C5 . . . [N: using temporal intensity variation] [N1204]

G01B9/02C5A . . . . [N: by using pulsed light] [N1204]

G01B9/02D . . [N: characterised by a particular beam path configuration] [N1204]

G01B9/02D1 . . . [N: contacting two or more objects] [N1204]

G01B9/02D2 . . . [N: contacting one object several times] [N1204]

G01B9/02D2A . . . . [N: Multiple-pass interferometer, e.g. double pass] [N1204]

G01B9/02D2B . . . . [N: contacting different points on same face of object] [N1204]
G01B9/02D2C . . . . [N: contacting different faces of object, e.g. opposite faces] [N1204]
G01B9/02D3 . . . [N: contacting one object by grazing incidence] [N1204]
G01B9/02D4 . . . [N: Indirect probing of object, e.g. via influence on cavity or fibre] [N1204]
G01B9/02D5 . . . [N: Measuring in transmission, i.e. light traverses the object] [N1204]
G01B9/02D6 . . . [N: Interference between three or more discrete surfaces] [N1204]
G01B9/02D7 . . . [N: Two or more interferometric channels or interferometers] [N1204]
G01B9/02D7A . . . . [N: Two or more reference or object arms in one interferometer] [N1204]
G01B9/02D8 . . . [N: Combination with non-interferometric systems, i.e. for measuring the object] [N1204]
G01B9/02D8A . . . . [N: With imaging systems] [N1204]
G01B9/02D8B . . . . [N: With non-optical systems, e.g. tactile] [N1204]
G01B9/02D9 . . . [N: generating a spatial carrier frequency, e.g. by creating lateral or angular offset between reference and object beam (shearing interferometers G01B9/02S1)] [N1204]
G01B9/02E . . [N: characterised by particularly shaped beams or wavefronts] [N1204]
G01B9/02E1 . . . [N: Shaping the focal point, e.g. elongated focus] [N1204]
G01B9/02E1A . . . . [N: by using chromatic effects, e.g. a wavelength dependent focal point] [N1204]
G01B9/02E1B . . . . [N: by generating a transverse line focus] [N1204]
G01B9/02E2 . . . [N: Shaping the wavefront, e.g. generating a spherical wavefront] [N1204]
G01B9/02E2A . . . . [N: by matching the wavefront with a particular object surface shape] [N1204]
G01B9/02F . . [N: characterised by particular imaging or detection techniques] [N1204]
G01B9/02F1 . . . [N: Confocal imaging] [N1204]
G01B9/02F2 . . . [N: Imaging of the Fourier or pupil or back focal plane, i.e. angle resolved imaging] [N1204]
G01B9/02F3 . . . [N: Imaging in the frequency domain, e.g. by using a spectrometer] [N1204]
G01B9/02F4 . . . [N: using the Doppler effect] [N1204]
G01B9/02F5 . . . [N: using digital holographic imaging, e.g. lensless phase imaging without hologram in the reference path] [N1204]
G01B9/02F6 . . . [N: Rough and fine measurement] [N1204]
G01B9/02G . . [N: characterised by particular mechanical design details] [N1204]
G01B9/02G1 . . . [N: of probe head] [N1204]
G01B9/02G2 . . . [N: Integrated design, e.g. on-chip or monolithic] [N1204]
G01B9/02G3 . . . [N: Protecting, e.g. shock absorbing, arrangements] [N1204]
G01B9/02G4 . . . [N: Hand held] [N1204]
G01B9/02H . . [N: characterised by error reduction techniques] [N1204]
G01B9/02H1 . . . [N: Passive error reduction, i.e. not varying during measurement, e.g. by constructional details of optics] [N1204]
G01B9/02H1A . . . . [N: by using common path configuration, i.e. reference and object path almost entirely overlapping] [N1204]
G01B9/02H1B . . . . [N: by particular optical compensation or alignment elements, e.g. dispersion compensation] [N1204]
G01B9/02H1C . . . . [N: Reducing effect of parasitic reflections, e.g. cyclic errors] [N1204]

G01B9/02H1D . . . . [N: Reducing or preventing effect of tilt or misalignment, e.g. of object or reference mirror] [N1204]

G01B9/02H2 . . . [N: Active error reduction, i.e. varying with time] [N1204]

G01B9/02H2A . . . . [N: by particular alignment of focus position, e.g. dynamic focussing in optical coherence tomography] [N1204]

G01B9/02H2B . . . . [N: by particular adjustment of coherence gate, i.e. adjusting position of zero path difference in low coherence interferometry] [N1204]

G01B9/02H2B1 . . . . . [N: using a second interferometer before or after measuring interferometer] [N1204]

G01B9/02H2C . . . . [N: by electronic control systems, i.e. using feedback acting on optics or light] [N1204]

G01B9/02H2C1 . . . . . [N: Auto-alignment of optical elements] [N1204]

G01B9/02H2C2 . . . . . [N: Synchronization of light source or manipulator and detector] [N1204]

G01B9/02H3 . . . [N: Error reduction by correction of the measurement signal based on independently determined error sources, e.g. using a reference interferometer] [N1204]

G01B9/02H3A . . . . [N: by measuring path difference independently from interferometer] [N1204]

G01B9/02H3B . . . . [N: by calibration or testing of interferometer] [N1204]

G01B9/02H3B1 . . . . . [N: of the detector] [N1204]

G01B9/02H4 . . . [N: of particular errors] [N1204]

G01B9/02H4A . . . . [N: Caused by motion] [N1204]

G01B9/02H4A1 . . . . . [N: of the object] [N1204]

G01B9/02H4B . . . . [N: Caused by ambiguity] [N1204]

G01B9/02H4B1 . . . . . [N: Quadrature detection, i.e. detecting relatively phase-shifted signals] [N1204]

G01B9/02H4B1A . . . . . [N: simultaneous quadrature detection, e.g. by spatial phase shifting] [N1204]

G01B9/02H4C . . . . [N: Caused by speckles] [N1204]

G01B9/02J . . [N: characterised by particular signal processing and presentation] [N1204]

G01B9/02J1 . . . [N: Processing in the Fourier or frequency domain when not imaged in the frequency domain] [N1204]

G01B9/02J2 . . . [N: Combining two or more images of different regions] [N1204]

G01B9/02J3 . . . [N: Combining two or more images of the same region] [N1204]

G01B9/02J4 . . . [N: Matching signals with a database] [N1204]

G01B9/02J5 . . . [N: Displaying the signal, e.g. for user interaction] [N1204]

G01B9/02M . . [N: Non-tomographic low coherence interferometers, e.g. low coherence interferometry, scanning white light interferometry, optical frequency domain interferometry or reflectometry] [N1204]

G01B9/02N . . [N: Tomographic low coherence interferometers, e.g. optical coherence tomography] [N1204]

G01B9/02P . . [N: Self-mixing interferometers, i.e. feedback of light from object into laser cavity] [N1204]

G01B9/02Q . . [N: Speckle interferometers, i.e. for detecting changes in speckle pattern] [N1204]

G01B9/02Q1 . . . [N: detecting deformation from original shape] [N1204]

G01B9/02Q2 . . . [N: detecting a contour or curvature] [N1204]

G01B9/02S . . [N: Self-interferometers, i.e. the object beam interfering with a shifted version of itself] [N1204]

G01B9/02S1 . . . [N: shearing interferometers] [N1204]
G01B9/021 . . using holographic techniques
G01B9/023 . . . for contour producing (G01B9/025 to G01B9/029 take precedence)
G01B9/025 . . . Double exposure technique
G01B9/027 . . . in real time
G01B9/029 . . . by time averaging

G01B9/04 . Measuring microscopes (microscopes in general G02B21/00)

G01B9/06 . Measuring telescopes (telescopes in general G02B23/00)

G01B9/08 . Optical projection comparators [C9511]

G01B9/10 . Goniometers for measuring angles between surfaces [C9511]

G01B11/00 **Measuring arrangements characterised by the use of optical means** (instruments of the types covered by group G01B9/00 per se G01B9/00) [C9511]

G01B11/00D . [N: for measuring two or more coordinates]
G01B11/00D1 . . [N: coordinate measuring machines]
G01B11/00D1B . . . [N: feeler heads therefor]

G01B11/02 . for measuring length, width or thickness (G01B11/08 takes precedence)
G01B11/02B . . [N: by means of tv-camera scanning]
G01B11/02C . . [N: by means of diode-array scanning]
G01B11/02D . . [N: by measuring distance between sensor and object (G01B11/06B takes precedence)]
G01B11/02F . . [N: by measuring lateral position of a boundary of the object (G01B11/02B, G01B11/02C, G01B11/04 take precedence)]
G01B11/03 . . by measuring coordinates of points [N0505]
G01B11/04 . . specially adapted for measuring length or width of objects while moving
G01B11/04B . . . [N: for measuring length]
G01B11/04C . . . [N: for measuring width]
G01B11/06 . . for measuring thickness, e.g. of sheet material (thickness measurement by thermal means G01B21/08K) [C0503]
G01B11/06B . . . [N: Height gauges]
G01B11/06C . . . [N: of coating]
G01B11/06C2 . . . . [N: with measurement of absorption or reflection] [N0308]
G01B11/06C2B . . . . . [N: using one or more discrete wavelengths] [N0308] [C0503]
G01B11/06C4 . . . . [N: with measurement of polarization] [N0308]
G01B11/06C4B . . . . . [N: using one or more discrete wavelengths] [N0308] [C0503]
G01B11/06C6 . . . . [N: with measurement of emissivity or reradiation] [N0308]
G01B11/06C8 . . . . [N: using an exciting beam and a detection beam including surface acoustic waves (SAW)] [N0308] [C0503]
G01B11/06C10 . . . . [N: using interferometry] [N0308]
G01B11/06C12 . . . . [N: measurement during deposition or removal of the layer] [N0308]

G01B11/06D . . . [N: of objects while moving (G01B11/06C takes precedence)]

G01B11/08 . for measuring diameters

G01B11/10 . . of objects while moving

G01B11/10B . . . [N: using photoelectric detection means]

G01B11/12 . . internal diameters

G01B11/14 . for measuring distance or clearance between spaced objects or spaced apertures (G01B11/26 takes precedence; rangefinders G01C)

G01B11/16 . for measuring the deformation in a solid, e.g. optical strain gauge

G01B11/16B . . [N: by interferometric means] [N0009]

G01B11/16B2 . . . [N: by speckle- or shearing interferometry] [N0009]

G01B11/16B4 . . . [N: by holographic interferometry] [N0009]

G01B11/16C . . [N: by means of a grating deformed by the object] [N0009]

G01B11/16F . . [N: by projecting a pattern on the object] [N0009]

G01B11/16P . . [N: by means of polarisation] [N0009]

G01B11/18 . . [N: IPC5] using photoelastic elements

G01B11/20 . . [N: IPC5] using brittle lacquer

G01B11/22 . for measuring depth

G01B11/24 . for measuring contours or curvatures

G01B11/24C . . [N: for measuring roundness]

G01B11/24D . . [N: of gears (optical projection profile comparators G01B9/08)] [C9511]

G01B11/24E . . [N: of screw-threads]

G01B11/24G . . [N: for measuring outlines by shadow casting] [N9702]

G01B11/24H . . [N: using interferometry] [N9702]

G01B11/245 . . using a plurality of fixed, simultaneously operating transducers ([N: G01B11/24C to G01B11/24E,] G01B11/255 take precedence) [N0110]

G01B11/25 . . by projecting a pattern, e.g. [N: one or more lines,] moirè fringes on the object (G01B11/255 takes precedence; image analysis for depth or shape recovery G06T7/00R) [N0110] [C1106]

G01B11/25B . . . [N: Calibration devices] [N0110]

G01B11/25C . . . [N: Color coding] [N0110]

G01B11/25D . . . [N: with several lines being projected in more than one direction, e.g. grids, patterns] [N0110]

G01B11/25F . . . [N: Projection by scanning of the object] [N0110]

G01B11/25F2 . . . . [N: the position of the object changing and being recorded] [N0110]

G01B11/25F4 . . . . [N: with phase change by in-plane movement of the patern] [N0110]

G01B11/25G . . . [N: using several gratings, projected with variable angle of incidence on the object, and one detection device] [N0110]

G01B11/25K . . . [N: using several gratings with variable grating pitch, projected on the object with the same angle of incidence] [N0110]

G01B11/25M . . . [N: Projection of a pattern, viewing through a pattern, e.g. moirè] [N0110]

G01B11/25T . . . [N: with one projection direction and several detection directions, e.g. stereo]

N0206]

G01B11/255 . . for measuring radius of curvature [N: (measuring diameter G01B11/08)] [N0110]

G01B11/26 . for measuring angles or tapers; for testing the alignment of axes

G01B11/27 . . for testing the alignment of axes [N: (means for centering or aligning a light guide within a ferrule G02B6/38D6D)] [C1204]

G01B11/27B . . . [N: using photoelectric detection means]

G01B11/275 . . for testing wheel alignment

G01B11/275B . . . [N: using photoelectric detection means]

G01B11/28 . for measuring areas (integrators in general G06G)

G01B11/28B . . [N: using photoelectric detection means]

G01B11/30 . for measuring roughness or irregularity of surfaces

G01B11/30B . . [N: using photoelectric detection means]

G01B11/30C . . [N: for measuring evenness]

G01B13/00 **Measuring arrangements characterised by the use of fluids** [N: (pressure regulation G05D16/00)] [C9511]

G01B13/02 . for measuring length, width or thickness (G01B13/08 takes precedence)

G01B13/03 . . by measuring coordinates of points [N0505]

G01B13/04 . . specially adapted for measuring length or width of objects while moving

G01B13/06 . . for measuring thickness, e.g. of sheet material

G01B13/06B . . . [N: Height gauges]

G01B13/08 . for measuring diameters

G01B13/10 . . internal diameters

G01B13/12 . for measuring distance or clearance between spaced objects or spaced apertures (G01B13/18 takes precedence)

G01B13/14 . for measuring depth

G01B13/16 . for measuring contours or curvatures

G01B13/18 . for measuring angles or tapers; for testing the alignment of axes

G01B13/19 . . for testing the alignment of axes

G01B13/195 . . for testing wheel alignment

G01B13/20 . for measuring areas, e.g. pneumatic planimeter (integrators in general G06G)

G01B13/22 . for measuring roughness or irregularity of surfaces

G01B13/24 . for measuring the deformation in a solid

G01B15/00 **Measuring arrangements characterised by the use of wave or particle radiation** (G01B9/00, G01B11/00 take precedence; [N: by radar technique G01S]) [C9511]

G01B15/02 . for measuring thickness

G01B15/02B . . [N: by measuring absorption]

G01B15/04 . for measuring contours or curvatures

G01B15/04B . . [N: by measuring absorption]

G01B15/06 . for measuring the deformation in a solid

G01B15/08 . for measuring roughness or irregularity of surfaces [N9412]

G01B17/00 **Measuring arrangements characterised by the use of subsonic, sonic or ultrasonic vibrations** [N: (by sonar technique G01S15/00)] [C9511]

G01B17/02 . for measuring thickness

G01B17/02C . . [N: for measuring thickness of coating] [N9501]

G01B17/04 . for measuring the deformation in a solid, e.g. by vibrating string

G01B17/06 . for measuring contours or curvatures [N9412]

G01B17/08 . for measuring roughness or irregularity of surfaces [N9412]

G01B21/00 **Measuring arrangements or details thereof in so far as they are not adapted to particular types of measuring means of the preceding groups**

[N: **Notes**
Measuring arrangements or details thereof covered by two or more of groups G01B3/00-G01B17/00 are classified in this group if no single other group can be selected as being predominantly applicable.
]

G01B21/02 . for measuring length, width, or thickness (G01B21/10 takes precedence)

G01B21/04 . . by measuring coordinates of points

G01B21/04B . . . [N: Calibration or calibration artifacts (G01B3/30, G01B9/02H32 take precedence)] [N1204]

G01B21/04C . . . [N: Correction of measurements (G01B9/02H takes precedence)] [N1204]

G01B21/04D . . . [N: Accessories, e.g. for positioning, for tool-setting, for measuring probes] [N0206]

G01B21/06 . . specially adapted for measuring length or width of objects while moving [N: unwinding or rewinding apparatus incorporating length measuring devices B65H16/02C, B65H18/02C]

G01B21/06B . . . [N: for stretchable materials]

G01B21/08 . . for measuring thickness

G01B21/08K . . . [N: using thermal means] [N9709]

G01B21/10 . for measuring diameters

G01B21/12 . . of objects while moving

G01B21/14 . . internal diameters [N: (of boreholes or wells E21B47/08)]

G01B21/16 . for measuring distance of clearance between spaced objects

G01B21/18 . for measuring depth

G01B21/20 . for measuring contours or curvatures, e.g. determining profile

G01B21/22 . for measuring angles or tapers; for testing the alignment of axes

G01B21/24 . . for testing alignment of axes

G01B21/26 . . for testing wheel alignment

G01B21/28 . for measuring areas (integrators in general G06G)

G01B21/30 . for measuring roughness or irregularity of surfaces

G01B21/32 . for measuring the deformation in a solid