
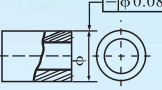



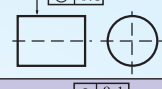
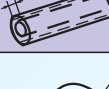
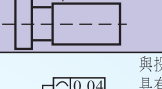





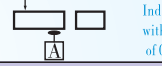

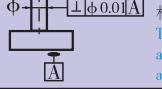




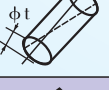
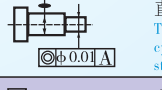

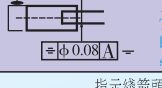

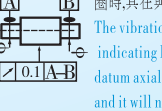

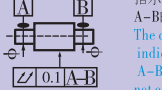


幾何公差的圖示方法

Illustration method of geometric tolerance

◆幾何學公差的種類和記號 Type and mark(s) of geometric tolerance

公差的種類 Type of tolerance	記號 Mark	公差的域的定義 Definition of tolerance zone	圖示例的解釋 Note to illustration
形狀公差 Form tolerance	真直度公差 Straightness	 表示公差域的數值前方,附有代號 ϕ 時,是指此一公差域,直徑的圓筒中的領域。 When there is symbol ϕ in front of the numerical value that expresses tolerance zone, it means this tolerance zone, the area in the cylinder with diameter of t .	 表示圓筒直徑的尺寸加有公差的截框時,其圓筒軸線須是在直徑0.08mm的圓筒內。 If the tolerance frame is after the diameter of the cylinder, it means the axial line of the cylinder could have 0.08mm tolerance
	平面度公差 Flatness	 公差域是夾持的相距距離之兩個平均的平面間的領域 Tolerance zone: area enclosed by two average planes with a distance of t	 此一表面須在相距的二個平行的平面之間。 This surface must be between two parallel planes with a distance of t
	真圓度公差 Roundness	 對象的平面的公差域是相距距離的2個同心圓之間的領域。 Object plane's tolerance zone is area which two concentric circles with a distance of t	 任意軸直角斷面的外周必須是在同一平面上相距的兩個同心圓之間。 The circumference of right-angle section of any axis must be between two concentric circles with a distance of t in the same plane
	圓筒度公差 Cylindricity	 公差域是相距的二個同軸圓筒面間的領域 Tolerance zone is area in which two coaxial cylinder plane with a distance of t	 對象面必須在相距0.1mm的二個同軸圓筒面之間 Object plane must be between two coaxial cylinder surfaces with a distance of 0.1mm
	線的輪廓度公差 Line profile	 公差域是中心位于理論上正確輪廓線上,直徑(圓)的二個包圍線之間,所夾持的領域。 Tolerance zone is area enclosed by two profile lines of a circle with a diameter of t when the center is in the theoretically correct contour line	 與投影面平行的任意截面上對象的輪廓必須是中心位于具有理論上正確輪廓面上,直徑0.04mm圓的二個包圍線之間。 The contour of the object in any section that is parallel with projective surface must be between two profile lines of a circle with a diameter of 0.04mm when the center is in the theoretically correct contour plane.
	面的輪廓度公差 Surface profile	 公差域是中心位于理論上正確輪廓面上,直徑(球體)的二個包圍面之間,所夾持的領域。 Tolerance zone is area enclosed by two profile planes of a sphere with a diameter of t when the center is in the theoretically correct contour plane	 對象的面必須是在中心位于理論上具有正確輪廓面上,直徑0.02mm球體之二個包圍面之間 Object plane must be between two profile planes of a sphere with a diameter of 0.02mm when the center is in the theoretically correct contour plane
姿勢公差 Orientation tolerance	平行度公差 Parallelism	 公差域是與已知(datum)平面平行、相距的二個平行平面間所夾持的領域。 Tolerance zone is area enclosed by two parallel planes with a distance of t and parallel with datum plane	 指示線箭頭的指示面,必須是與已知平面的平行,而且在指示線箭頭方向相距0.01mm二個平面之間。 Indication surface of indicating line arrow must be parallel with datum surface, and be between two planes with a distance of 0.01mm in the direction of indicating line arrow
	垂直度公差 Perpendicularity	 表示公差數值前方加有代號 ϕ 時,此一公差域是與已知平面垂直,直徑的圓筒內的領域。 When there is symbol ϕ in front of the numerical value that expresses tolerance zone, this tolerance zone is area in the cylinder with a diameter of t that is perpendicular with the datum plane	 指示線箭頭指示的圓筒軸線,必須是與已知平面相垂直,直徑0.01mm的圓筒內。 The cylinder axis indicated by indicating line arrow must be perpendicular with datum surface and in the cylinder with a diameter of 0.01mm.
	傾斜度公差 Angularity	 公差域依規定角度,與已知平面呈傾斜,相互間相距距離的二個平行平面間所夾持的領域 Tolerance zone is area enclosed by two parallel planes with a distance of "t" and inclined with datum plane by a specified angle.	 指示線箭頭指示的面,必須是理論上與已知平面A呈正確的40°傾斜,而且是指示線的箭頭方向相距0.08mm距離的二個平行平面間。 The surface indicated by indicating line arrow, must be theoretically 40° inclined from datum plane A, and be between two parallel planes with a distance of 0.08 in the direction of indicating line arrow.
位置公差 Tolerance in position	位置度公差 Position	 公差域以對象點的理想上正確位置(以下稱"正位置")的中心之直徑圓之中或球體內的領域。 Tolerance zone is the area in a circle or sphere with a diameter of t with theoretically correct position (hereinafter referred to as "positive position") as the center.	 指示線箭頭指示的點,必須是與已知直線A相距60mm,已知直線B相距100mm之正位置為中心,直徑0.03mm的圓內 The point indicated by indicating line arrow, must be in the circle with a diameter of 0.03mm with the positive position that is 60mm from datum straight line A and 100mm from datum straight line B as the center.
	同軸度公差及同心度公差 Concentricity	 表示公差數值前方,加有代號 ϕ 時,此一公差域是與已知軸線呈一致細線之直徑的圓筒中的領域 When there is symbol ϕ in front of the numerical value that expresses tolerance zone, this tolerance zone is area in the cylinder with a diameter of that is parallel with the datum axis line	 指示線箭頭指示的軸線,必須是在以已知軸,直線A為軸線,直徑0.01mm的圓筒內。 The axis indicated by indicating line arrow, must be in the cylinder with a diameter of 0.01mm with datum axial straight line A as axis
	對稱度 Symmetry	 公差域是與已知中心平面呈對稱配置,彼此相距的二個平行平面間所夾持的領域。 Tolerance zone is the area symmetry with the datum plane, and enclosed by two parallel planes with a distance of "t".	 指示線箭頭指示的中心面,必須是以已知的中心平面A呈對稱為0.08mm間隔,而且呈平行的二個平面之間。 The center plane indicated by indicating line arrow must be between two parallel planes with a distance of 0.08mm and symmetric with datum center plane A.
振動公差 Vibration tolerance	圓周振動公差 Circular runout	 測定實施表面(測定表面) Measure implementation surface (measure surface) 公差域是與已知軸線呈垂直的任意測定平面上具有與已知軸線一致的中心,並且在半徑方向相距距離的二個同心圓之間的領域。 Tolerance zone is area between two concentric circles with a distance of t in the direction of radius and has the same center with datum axial straight line in any measured plane perpendicular with datum axial straight line	 指示線箭頭指示的圓筒半徑方向的振動,是已知軸線A-B的回轉圓時,其在與已知軸線呈垂直的任意測定平面上,不會超過0.1mm。 The vibration in the direction of cylinder plane radius indicated by indicating line arrow is in any measured plane perpendicular with datum axial straight line when datum straight line A-B rotates a round and it will not exceed 0.1mm
	全振動公差 Total runout	 附公差表面 Tolerance surface attached 公差域是具有與已知軸線一致軸線,在半徑方向相距距離的二個同軸圓筒間的領域 Tolerance zone is area between two coaxial cylinders with a distance of t in the direction of radius and has the same axis with datum axial straight line	 指示線箭頭指示的圓筒半徑方向的完全振動,在已知軸線A-B的回轉圓筒部分時,圓筒表面上的任意點不會超過0.1mm。 The complete vibration in the direction of cylinder plane radius indicated by indicating line arrow, when in datum straight line A-B's rotating cylindrical part, any point on cylinder surface will not exceed 0.1mm

公差域定義欄中使用的線條具有以下意義: The lines used in definition column of tolerance zone have the following meanings

粗實線或虛線:形體 Thick real line or dashed: form

粗一點虛線:既有資料

Thin one-dot dashed: data available

細實線或虛線:公差域

Thin real line or dashed: tolerance zone

細一點虛線:中心線 Thin one-dot dashed: center line

細二點虛線:補足的投影面或切斷面

Thin two-dot dashed: complementary projective surface or section

粗二點虛線:形狀對於補足的投影面或切斷面的投影

Thin two-dot dashed: projection of profile to complementary projective surface or fracture surface