## G螺纹（G Thread）

G是55度非密封圆柱管螺纹，属惠氏螺纹家族，是英制非密封圆柱螺纹的特征代号。另外螺纹中的1/4、1/2、1/8标记是指管子的通径，单位是英寸．行内人通常用分来称呼螺纹尺寸，一英寸等于8分，1/4 英寸就是2分，如此类推．

**G is a 55-degree non-sealed cylindrical pipe thread, which belongs to the Wyeth thread family, and is the characteristic code of the inch non-sealed cylindrical thread. In addition, the 1/4, 1/2, and 1/8 marks in the thread refer to the diameter of the pipe, and the unit is inch. Insiders usually use points to refer to the thread size, one inch equals 8 points, 1/4 inch equals 2 points, and so on.**

对英制非密封圆柱内螺纹，其中径公差等级代号省略不标；而英制非密封圆柱外螺纹的中径公尺等级代号分别为A和B。左旋螺纹的旋向代号为LH；右旋螺纹的旋向代号省略不标。当表示英制非[密封管螺纹](https://baike.baidu.com/item/%E5%AF%86%E5%B0%81%E7%AE%A1%E8%9E%BA%E7%BA%B9/8880640%22%20%5Ct%20%22_blank)的螺纹副时，仅标注外螺纹的标记代号。

示例：

尺寸代号为2的右旋圆柱内螺纹的标记为G 2;

尺寸代号为3的A级右旋圆柱外螺纹的标记为G 3 A;

尺寸代号为4的B级左旋圆柱外螺纹的标记为G 4 B.

**For inch non-sealed cylindrical internal threads, the codes for the tolerance grades of the middle diameter are omitted and not marked; while the codes for the pitch diameter and metric grades of the inch non-sealed cylindrical external threads are A and B respectively. The code for the direction of rotation of the left-hand thread is LH; the code of the direction of rotation for the right-hand thread is omitted and not marked. When it indicates the thread pair of the imperial unsealed pipe thread, only the marking code of the external thread is marked.**

**Example:**

**The right-handed cylindrical internal thread with the size code of 2 is marked as G 2；**

**The grade A right-handed cylindrical external thread with the size code of 3 is marked as G 3 A；**

**The B-level left-handed cylindrical external thread with the size code of 4 is marked as G 4 B.**

当螺纹为左旋时，应在外螺纹的公差等级代号或内螺纹的尺寸代号之后加注“LH”。

示例：

尺寸代号为2的左旋圆柱内螺纹的标记为G 2 L H

尺寸代号为3的A级左旋圆柱外螺纹的标记为G 3 A-LH

尺寸代号为4的左旋圆柱内螺纹的标记为G 4 B-LH

**When the thread is left-handed, "LH" should be added after the tolerance class code of the external thread or the size code of the internal thread.**

**Example:**

**The left-handed cylindrical internal thread with size code 2 is marked as G 2 L H；**

**Grade A left-handed cylindrical external thread with size code 3 is marked as G 3 A-LH；**

**The left-handed cylindrical internal thread with size code 4 is marked G 4 B-LH.**

表示螺纹副时，仅需标注外螺纹的标记代号。

**When indicating the thread pair, only the marking code of the external thread needs to be marked.**

G螺纹尺寸测量方法

**G thread Size Measurement Method**

**The general detection method is to use a stop-through thread gauge. The through-gauge requires that all the threads to be tested can pass; the stop-gauge can only enter the tested thread with 1-2 teeth. Such a thread is a thread that meets the requirements.**

1.螺纹夹角的测量
螺纹夹角也叫牙型角。螺纹夹角的测量可通过测量侧面角来实现，螺纹侧面角是螺纹侧面与螺纹轴线的垂直面之间的夹角。螺纹牙的近似轮廓在螺纹两侧直线段采样，对采样点进行直线最小二乘拟合。

**1. Measurement of thread included angle**

**The thread angle is also called the tooth angle. The measurement of the thread included angle can be achieved by measuring the flank angle. The thread flank angle is the included angle between the thread flank and the vertical plane of the thread axis. The approximate contour of the thread is sampled on the straight line segments on both sides of the thread, and the linear least squares fitting is performed on the sampling points.**
 2.螺距的测量

螺距是指螺纹上某一点至相邻螺纹牙上对应点之间的距离。测量时必须平行于螺纹轴线。

1. **Measurement of pitch**

**The pitch refers to the distance from a point on a thread to the corresponding point on the adjacent thread. The measurement must be parallel to the thread axis.**

1. 螺纹中径的测量

螺纹中径是中径线沿垂直于轴线距离，中径线是一个假想的线。

**3. Thread pitch measurement**

**The pitch diameter of the thread is the distance along the pitch line perpendicular to the axis, and the pitch line is an imaginary line.**

4. 螺纹大径的测量

外径（大径），与外螺纹牙顶或内螺纹牙底相重合的假想圆柱体直径。螺纹的公称直径即大径。

**4. Measurement of the major diameter of the thread**

**Outer diameter , the diameter of an imaginary cylinder that coincides with the crest of the external thread or the bottom of the internal thread. The nominal diameter of the thread is the major diameter.**

**5.**螺纹小径的测量

内径（小径），与外螺纹牙底或内螺纹牙顶相重合的假想圆柱体直径。

**5. Thread diameter measurement**

**Inner diameter (minor diameter), the diameter of an imaginary cylinder that coincides with the bottom of the external thread or the top of the internal thread.**