

## SCREW THREAD DENOMINATIONS AND THEIR SIGNIFICANCE FOR METRIC THREADS

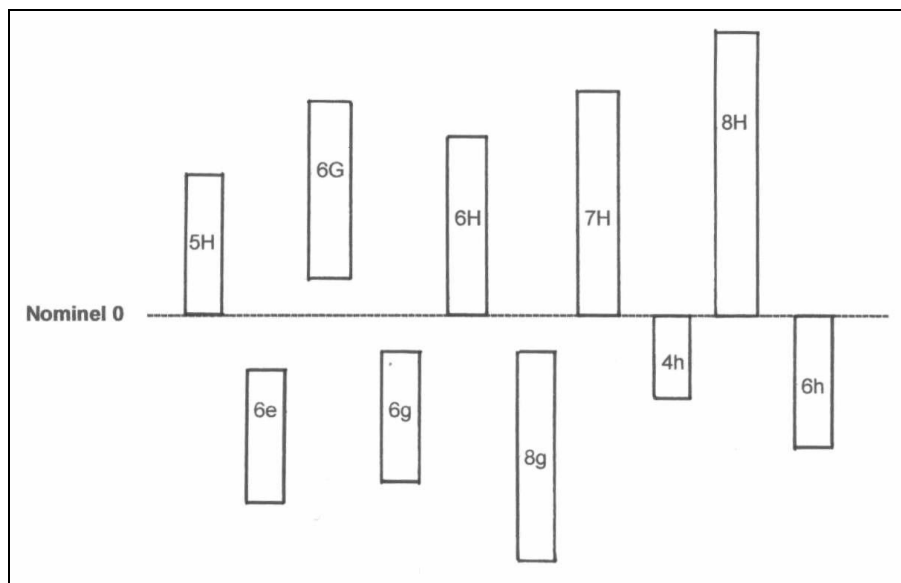
Metric threads have the same tolerance build-up as with axles and holes but with a few exceptions. The number and the letter are reversed. The number for a thread gives a significantly larger tolerance than for a comparable hole or axle. The tolerance is also larger for a nut than for a screw – even with the "same" letter. Nuts (internal threads) always use a capital letter and screws (external threads) always use a small letter.

If a drawing states **M36x4-6H/6g**, then this means that the nut is to be **M36x4-6H**, and the screw **M36x4-6g**. This means that the nut's minimum pitch diameter size shall equal the nominal pitch diameter, and the screw's max. pitch diameter size shall be a few hundredths of a millimetre under nominal pitch diameter.

### M36x4-6H & M36x4-6g

**M** means **Metric**, **36** is the thread's major diameter (**D/d**), **x4** means a **4 mm pitch**, **6** is the tolerance size and the letter (**H** or **g**) gives the tolerance's position in relation to the nominal pitch diameter. An **H** on a nut tolerance means that the minimum pitch diameter dimension on a nut will be equal to the nominal pitch diameter. An **h** on a screw tolerance means that the maximum pitch diameter dimension on a screw will be equal to the nominal pitch diameter. The letter **g** on a screw means that the largest pitch diameter on a screw will always have clearance to a nut with an **H** tolerance.

Nut  $D_2$



Screw  $d_2$

When a thread is to be surface coated it should be specified (apart from coating thickness) thread pitch diameter tolerances for both before and after surface coating – especially is the machining and surface coating is carried out by two different companies.

**Note that a surface coating of for example 10 $\mu$ m (0,010mm), will change the pitch diameter on a 60° flank angle by approximately 40 $\mu$ m (0,040mm) as all four thread flanks will be coated.**