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 capitol 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.

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 10μm (0,010mm), will change the pitch diameter on a 60° flank angle by approximately 40μm (0,040mm) as all four thread flanks will be coated.