



Guidance Note: Thread Gauging, Not-go Allowance – 10/07.

Amendment 01 – 09/11.

The names of gauges indicate their purpose. A “Go” gauge should screw all the way to the full extent of the number of threads to be engaged. A “Not Go” gauge should engage with the thread but it should not be possible to screw it in/on at all.

However, in many industries, for parallel threads, a “custom and practice” allowance of 1½ - 2 threads engaged on the “Not Go” gauge is often considered acceptable to account for post manufacture wear and tear. Such additional “tolerances” are **not** found in thread manufacturing standards.

In the mid 1980’s Luxfer UK addressed the question of how many threads could be allowed to be engaged on a “Not-go” gauge when used on an aluminium cylinder containing a G³/₄” (BS EN ISO 228) neck thread. At that time, by experimentation, a determination was made that, if the valve stem comprised 11 threads and all other factors were satisfactory, then the “Not-go” gauge could be allowed to “go” by up to a maximum of four full turns, leaving sufficient strength in the connection to adequately withstand the forces on the valve stem. This represents 36% of the thread.

This became widely accepted, and formed the basis on which the original ASSET guidance was given.

However, since then, other parallel thread forms have become common, making the original guidance unsuitable. Since the 1990’s Scuba cylinders, manufactured in Europe, have been manufactured with either 25 x 2mm or 18 x 1.5mm threads. Additionally, other threads, such as “DIN” 200 bar and “DIN” 300 bar regulator connections, must be considered. All of these have fewer threads than the G³/₄”.

Guidance

The first action must be to visually inspect both the cylinder neck and valve stem threads to ensure they are free from corrosion and mechanical defects.

Then the “Go” gauge must go all the way in/on for at least the number of threads to be engaged.

Finally, attempt to screw in the “Not-go” gauge. **The gauge can be allowed to go by one turn for every four full threads to be engaged.** This is slightly more conservative than the previous guidance, at 25% of the threads engaged, but it has the advantage of providing a universal procedure for every thread size and style.

Note: This is the total number for the combination of both male and female threads. Therefore, for example, if the allowance was determined to be three turns on the Not-go gauge and the “Not Go” gauge entered the cylinder neck by two turns then only one turn can be allowed on the valve stem thread.

For a list of recommended thread gauge types, see the Appendices of the ASSET Dive Industry Technician’s or Cylinder Tester’s Handbook Pt 1.

This guidance is offered in good faith and is believed to be correct to the best of our knowledge. Nothing contained herein shall be deemed to override good practice, manufacturers’ policies, the relevant Standards and the Law.

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