

# AN thread

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The **AN thread** is a particular type of fitting used to connect flexible hoses and rigid metal tubing that carry fluid. It is a US military-derived specification stemming from a joint standard agreed upon by the Air Force and Navy, hence AN.

AN sizes range from -2 (dash two) to -32 in irregular steps, with each step equating to the OD (outside diameter) of the tubing in 1/16" increments.

Therefore, a -8 AN size would be equal to 1/2" OD tube ( $8 \times 1/16 = 1/2$ ).

However, this system does not specify the ID (inside diameter) of the tubing because the tube wall can vary in thickness. Each AN size also uses its own standard thread size.

AN fittings are a [flare fitting](#), using 37° [flared](#) tubing to form a metal-metal seal. They are similar to other 37° flared fittings, such as [JIC fittings](#), which is their industrial variant. The two are interchangeable in theory, though this is typically not recommended due to the exacting specifications and demands of the aerospace industry. The differences between them relate to thread class (how tight a fit the threads are) and the metals used.

Note that 37° AN and 45° SAE fittings and tooling are not interchangeable due to the different flaring angles. Mixing them can cause leakage at the flare.

## [\[edit\]](#) Size comparison

AN Size	- 2	- 3	- 4	- 5	- 6	- 8	- 10	- 12	- 16	- 20	- 24	- 28	- 32
Tube	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-	1-	1-	2"

<b>OD</b>										1/4"	1/2"	3/4"	
<b>SAE Thread Size</b>	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	3/4-16	7/8-14	1-1/16-12	1-5/16-12	1-5/8-12	1-7/8-12	2-1/4-12	2-1/2-12
<b>Pipe Thread Size (NPS)</b>		1/8-27	1/4-18		3/8-18	1/2-14		3/4-14					