

-AN thread

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 standar agreed upon by the Army and Navy, hence AN. The standar is sometimes mistakenly referred to as "Air Force-Navy", but it dates back to Worl War Two, before there was a separate US Air Force.

AN sizes range from -2 (dash two) to -32 in regular steps, will 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 x 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 standar 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, which is their industrial variant. The two are interchangeable in theory, though this is typically not recommended due to the exacting especifications and demands of the aerospace industry. The differences between them relate to thread class and shape (how tight a fit the threads are), and the metals used.

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

AN size	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	-28	-32
Tube OD (hose ID)	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	1-3/4"	2"
SAE thread size	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	1-5/16-12	1-7/8-12	2-1/4-12	2-1/2-12
Pipe thread size (NPT)		1/8-27	1/4-18		3/8-18	1/2-14	3/4-14						