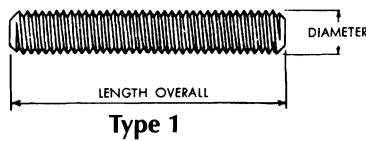
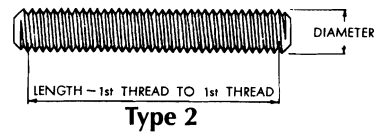


TYPES OF STUDS

CONTINUOUS THREAD STUDS



Type 1



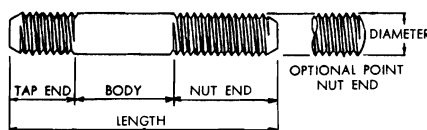
Type 2

Continuous-thread studs are threaded from end to end and are often used for flange bolting with two nuts applied.

Type 1—General purpose. The length of this type is measured from end to end. Threads are UNRC-2A.

Type 2—Studs for temperature-pressure piping. These studs are made to the dimensional standard requirements of ANS B16.5 and have a length measurement requirement different from all other studs, i.e., the length is measured from first thread to first thread, exclusive of points. Points are flat and chamfered. Threads are UNRC-2A for all sizes 1" and under and 8UNR-2A for all sizes over 1".

TAP-END STUDS



Tap-end studs have a short thread on one end called the tap end which is threaded to a Class NC5 or Class UNRC-3A fit. This end is for screwing into a tapped hole. The other or nut end is threaded with a Class UNRC-2A fit. Length of the stud is measured overall. The tap end has a chamfered point, but the nut end may have either a chamfered or round point, at the manufacturer's option. Tap-end studs are available in four types, as follows:

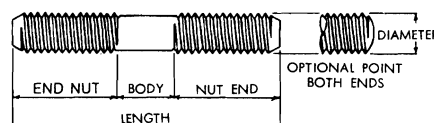
Type 1—Unfinished, have a full diameter but no standard body tolerances.

Type 2—Finished, having either an undersize body with rolled threads or a full-size body with cut threads, at the manufacturer's option. The body portion will be finished to a minimum Class 2A pitch diameter or maximum basic major diameter of the nut-end thread.

Type 3—Finished full-body, having tolerances equal to that on major diameter of Class 2A threads.

Type 4—Finished close-body, milled or ground to tolerances specified by the user.

DOUBLE-END STUDS



Double-end studs have equal-length threads on each end to accommodate a nut and are threaded to a Class 2A fit. Length of stud is measured overall. Both ends have chamfered points, but round points may be furnished on either or both ends at the manufacturer's option. This style is furnished in the same four types listed for tap-end studs. Double-end studs are used for flange bolting or other applications where torquing from both ends is necessary or desirable.

Most steel grades not heat treated or quenched and tempered can be furnished on special order for production quantities. Only the Type 2 continuous thread studs made to specification ASTM A193 grade B7 are stocked in a full range of sizes.