

STUD FITS AND TOLERANCES
(STEEL IN ALUMINUM OR MAGNESIUM ALLOYS)

Issued 7-1-43
Revised

Page 1 of 3 pages

NOM SIZE	NO. OF THDS	HOLE			STANDARD STUD				
		* TAP DRILL +.005 -.002	PITCH DIA	PITCH DIA TOLER	OD D +.000 -.006	PITCH DIA	PITCH DIA TOLER	FIT (TIGHT)	PD LEAD THDS 1 MIN 3 MAX
.2500	20	N0.7(.201)	.2198	+.0023	.2500	.2221	+.0000	.0046	.2165
			.2175	-.0000	.2440	.2208	-.0013	.0010	.2145
.3125	18	F(.257)	.2789	+.0025	.3125	.2814	+.0000	.0050	.2754
			.2764	-.0000	.3065	.2799	-.0015	.0010	.2734
.3750	16	.3125	.3370	+.0026	.3750	.3396	+.0000	.0052	.3334
			.3344	-.0000	.3690	.3380	-.0016	.0010	.3314
.4375	14	U(.368)	.3939	+.0028	.4375	.3967	+.0000	.0056	.3901
			.3911	-.0000	.4315	.3949	-.0018	.0010	.3881
.5000	13	.4219	.4529	+.0029	.5000	.4558	+.0000	.0058	.4490
			.4500	-.0000	.4940	.4539	-.0019	.0010	.4470
.5625	12	.4844	.5114	+.0030	.5625	.5144	+.0000	.0060	.5074
			.5084	-.0000	.5565	.5124	-.0020	.0010	.5054
.6250	11	.5312	.5691	+.0031	.6250	.5722	+.0000	.0062	.5650
			.5660	-.0000	.6190	.5701	-.0021	.0010	.5630

DIMENSIONS FOR PITCH DIAMETERS OF STUDS ARE BEFORE PLATING

* OPTIONAL DRILL SIZES TO PRODUCE APPROXIMATELY 75% FULL THREAD MAY BE USED

A LEAD OF ONE THREAD MINIMUM AND THREE THREADS MAXIMUM MAY BE PROVIDED ON ENTERING END OF STUD (OPTIONAL). PITCH DIAMETER SHOWN IN TABLE

IT IS PREFERRED THAT THE STUDDED END OF STUD BE STRAIGHT, ALTHOUGH A TAPER OF .001 PER INCH MAXIMUM IS PERMITTED. THE SMALLER END BEING THE ENTERING END

TO AVOID OVERSTRESSING A STUD WHEN ASSEMBLING, IT IS NECESSARY TO CONTROL THE TORQUE SO THAT THE STRESS WILL BE LOWER THAN THE YIELD POINT OF THE MATERIAL USED. PRESS FITS GIVING THE REQUIRED TORQUE MAY BE OBTAINED BY SELECTING A STUD AND TAPPING THE HOLE TO SUIT, WITHIN THE LIMITS OF THE PITCH DIAMETERS LISTED IN THE TABLE. TORQUE VALUES SHOULD BE DETERMINED BY EACH MANUFACTURER ACCORDING TO INDIVIDUAL STUD REQUIREMENTS

THE OUT OF ROUNDNESS OF THE PITCH DIAMETER OF THE STUDDED END SHALL NOT EXCEED .0003

LEAD ERRORS AND ERRORS DUE TO ANGULARITY SHALL BE WITHIN CLASS 4 TOLERANCE

IF STUDS ARE CADMIUM PLATED, THE THICKNESS SPECIFIED IN AMS 2400-1 SHALL BE FOLLOWED

SURFACE ROUGHNESS : ROLLED OR GROUND THREADS NOT TO EXCEED 40 R M S MICRO-INCHES; DIE-CUT THREADS NOT TO EXCEED 130 R M.S MICRO-INCHES

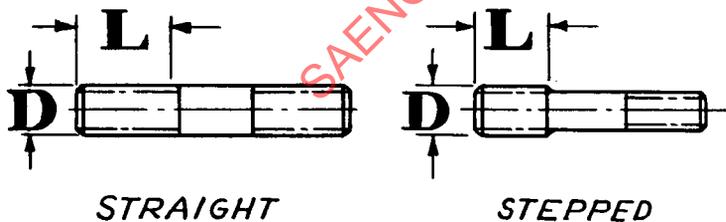
A SUITABLE LUBRICANT SHOULD BE USED FOR DRIVING STUDS

ALUMINUM AND MAGNESIUM MAY BE DIVIDED INTO THREE CLASSES FOR HARDNESS DESIGNATION - BRINELL 45-65, 65-105, 105-160, AND THE RANGE OF PRESS FITS SHALL BE AS FOLLOWS:

FROM 45 - 65, THE PRESS FIT SHOULD BE FROM THE MEAN TO THE HIGH LIMIT

FROM 65 - 105, THE PRESS FIT SHOULD BE APPROXIMATELY THE MEAN

FROM 105 - 160, THE PRESS FIT SHOULD BE FROM THE LOW LIMIT TO THE MEAN



STUD TYPE	ENGAGEMENT L	
	ALUMINUM	MAGNESIUM
STRAIGHT	2 D	2.5 D
STEPPED	1.5 D	2 D

*MATERIAL AMS 6317 OR EQUIVALENT
ROCKWELL C26-32*