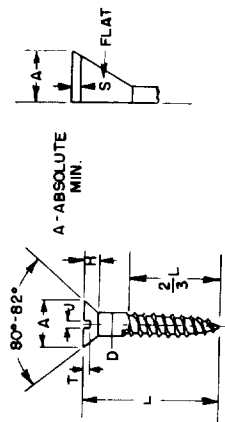


This standard has been approved by the Naval Ship Engineering Center, Department of the Navy, and is mandatory for use by that activity. All other military activities are required to employ this standard where suitable.

P.A. SHIPS Other Cust	TITLE <b>SCREWS, WOOD, SLOTTED, FLAT COUNTERSUNK (82°) HEAD, COPPER-SILICON ALLOY, NONMAGNETIC</b>	MILITARY STANDARD	
PROCUREMENT SPECIFICATION (B) FK-S-111		MS16199(SHIPS)	
SUPERSEDES:	SHEET 1 OF 2		

PROJECT 5305-NO2214



NOMINAL SIZE	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	30
THREADS PER INCH	26	24	22	20	18	16	15	14	13	11	10	9	8	8	7	6
(D) BASIC DIAMETER	0.086	0.099	0.112	0.125	0.138	0.151	0.164	0.177	0.190	0.216	0.242	0.268	0.294	0.320	0.372	0.450
(A) HEAD DIAMETER																
MAX. SHARP	.172	.199	.225	.252	.279	.305	.332	.358	.385	.438	.491	.544	.597	.650	.756	.915
MIN. SHARP	.156	.181	.207	.232	.257	.283	.308	.334	.359	.410	.461	.512	.563	.614	.716	.882
ABSOLUTE																
MIN. WITH FLAT	.147	.171	.195	.220	.244	.268	.292	.316	.340	.389	.437	.485	.534	.582	.679	.869
(H) HEIGHT OF HEAD																
MAX.	.051	.059	.067	.075	.083	.091	.100	.108	.116	.132	.148	.164	.180	.196	.228	.276
MIN.	.040	.048	.055	.062	.069	.076	.084	.091	.098	.112	.127	.141	.155	.170	.198	.228
(J) WIDTH OF SLOT																
MAX.	.031	.035	.039	.043	.048	.048	.054	.054	.050	.067	.075	.075	.084	.084	.094	.102
MIN.	.023	.027	.031	.035	.039	.039	.045	.045	.050	.056	.064	.064	.072	.072	.081	.084
(T) DEPTH OF SLOT																
MAX.	.023	.027	.030	.034	.038	.041	.045	.049	.053	.060	.068	.075	.083	.090	.105	.128
MIN.	.015	.017	.020	.022	.024	.027	.029	.032	.034	.039	.044	.049	.054	.059	.069	.084
(S) FLAT ON MIN. SCREW	.003	.004	.004	.005	.005	.005	.006	.006	.007	.008	.009	.010	.011	.012	.013	.015

## NOTES

1. MATERIAL: MATERIAL SHALL BE COPPER-SILICON ALLOY IN ACCORDANCE WITH QQ-C-591, COPPER ALLOY NO. 651.
2. TENSILE STRENGTH: MINIMUM TENSILE STRENGTH SHALL BE 50,000 P.S.I.
3. DIMENSIONS: ALL DIMENSIONS ARE IN INCHES, UNLESS OTHERWISE SPECIFIED.
4. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS.
5. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

FED. SUP CLASS  
**5305**

APPROVED 8 MAY 1957 REVISED (A) 8 MARCH 1963 REVISED (B) 8 MARCH 1967

This standard has been approved by the Naval Ship Engineering Center,  
Department of the Navy and is mandatory for use by  
that activity. All other military activities are required  
to employ this standard where suitable.

P.A. SHIPS  
Other Cust

PROCUREMENT SPECIFICATION  
FF-3-111

TITLE  
**SCREWS, WOOD, SLOTTED, FLAT COUNTERSUNK  
(82°) HEAD, COPPER-SILICON ALLOY,  
NONMAGNETIC**

SUPERSEDES

**MILITARY STANDARD**

**MS16199(SHIPS)**

SHEET

2

FFD SUP CLASS  
**5305**

SIZE NO.		2		3		4		5		6		7	
LENGTH	LENGTH TOLERANCE	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
1/4		1		6		11		18		24		32	
3/8	+0	2		7		12		19		25		33	
1/2	-1/32	3		8		13		20		26		34	
5/8		4		9		14		21		27		35	
3/4		5		10		15		22		28		36	
7/8		-		-		16		23		29		37	
1	+0	-		-		17		-		30		38	
1-1/4	-3/64	-		-		-		-		31		-	
1-1/2		-		-		-		-		-		-	
SIZE NO.		8		9		10		12		14		16	
LENGTH	LENGTH TOLERANCE	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
1/2	+0	39		48		126		-		-		-	
5/8	-1/32	40		49		56		66		-		-	
3/4		41		50		57		67		-		-	
7/8		42		51		58		68		-		-	
1	+0	43		52		59		69		-		-	
1-1/4	-3/64	44		53		60		70		-		-	
1-1/2		45		54		61		71		-		-	
1-3/4		46		55		62		72		-		-	
2	+0	47		56		63		73		-		-	
2-1/4	-1/16	-		-		64		74		-		-	
2-1/2		-		-		65		75		-		-	
2-3/4		-		-		-		76		-		-	
3		-		-		-		77		-		-	
3-1/2	+0	-		-		-		-		-		-	
4	-3/32	-		-		-		-		-		-	
4-1/2		-		-		-		-		-		-	

SIZE NO.		18		20		24		30	
LENGTH	LENGTH TOLERANCE	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
1-1/2	+0 -3/64	98		107		-		-	
2		99		108		-		-	
2-1/4	+0	100		109		-		-	
2-1/2	-1/16	101		110		-		-	
2-3/4		102		111		-		-	
3		103		112		-		-	
3-1/2		104		113		-		-	
4	+0	105		114		-		-	
4-1/2	-3/32	106		-		-		-	
5		-		-		-		-	
5-1/2		-		-		-		-	
6		-		-		-		-	
7		-		-		-		-	

1/ THESE ARE EXTRA LARGE SCREWS USED IN NONMAGNETIC MINESWEEPER APPLICATIONS.

APPROVED 8 MAY 1957 REVISED FOR CHANGES SEE SHEETS 1 AND 2.