



NOMINAL SIZE	D		2 (.086)	4 (.112)	5 (.132)	8 (.164)
THREADS PER INCH			16NC	40NC	48NC	82NC
BODY DIAMETER	D _B	Max Min	.0850 .0870	.1120 .1140	.1320 .1340	.1640 .1660
HEAD DIAMETER	A	Max Min	.120 .122	.150 .152	.180 .182	.220 .222
HEAD HEIGHT	H	Max Min	.045 .048	.068 .070	.078 .080	.096 .098
SLOT WIDTH	J	Max Min	.031 .029	.035 .033	.040 .038	.044 .042
SLOT DEPTH	T	Max Min	.035 .029	.043 .037	.049 .043	.057 .051
RADIUS ON HEAD	F	Nom.	.015	.017	.017	.020
RADIUS UNDER HEAD	R	Max	.010	.011	.012	.013

LENGTH	L	Tolerance	Dash Number	Dash Number	Dash Number	Dash Number
THREADS SHALL EXTEND TO WITHIN 2 THREADS OF THE BEARING SURFACE OF THE HEAD, OR CLOSER IF PRACTICABLE.	1/8		1	11	2	3
	3/16		2	12	3	4
	1/4		3	13	4	5
	5/16		4	14	5	6
	3/8	+0 -1/32	5	15	6	7
	7/16		6	16	7	8
	1/2		7	17	8	9
	5/8		8	18	9	10
	3/4		9	19	10	11
	7/8		10	20	11	12
1-1/4			21	22	23	
1-1/2	+0 -1/32		23			
1-3/4						
2						
Minimum Complete Thread Length of 1-3/4	2-1/2 2-3/4 3	+0 -3/32				

Ⓐ CANCELLED SEE SHEET 2

MATERIAL: Brass, Specification QQ-B-611 or QQ-W-35...
FINISH: Black Oxide, Specification JAI-P-95, type III
THREADS: The threads shall be in accordance with Screw-Thread Standards for Federal Services Handbook

NOTES:
 (1) Referenced documents of issue in effect on date of invitation for bids shall apply.
 (2) In case of conflict with any referenced document, this standard will govern.
 (3) The MS part number consists of the MS number, plus the dash number, both in the order shown.
 (4) All dimensions in inches.

Ⓐ For changes, see sheets 1 and 2

APPROVED FILE 9-1974

P.A. Ord Other Cust. SNIPS	TITLE SCREW, MACHINE, PAN HEAD, SLOTTED, BRASS, BLACK OXIDE FINIS-, NC-2A AND UNC-2A	MILITARY STANDARD MS 35231
PROCUREMENT SPECIFICATION FP-S-22	SUPERSEDES:	SHEET 1 OF 2

NOTE - When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility, nor any obligation whatsoever, and the fact that the Government may have furnished, furnished information in any way superior to that shown on drawings, specifications, or other data, shall not be regarded by implication or otherwise as in any manner increasing the liability of any contractor or manufacturer, or accepting any liability or premium to maintain, use, or sell any patented invention that may in any way be related thereto.

This military standard is approved by the Department of Defense and is mandatory on all activities. Selection for all new engineering design applications and for replacement use shall be made from this document.

1. After the date of issue, this drawing is subject to change without notice. It is the responsibility of the user to check for changes. The user should refer to the latest issue of this drawing for the most current information. The user should also refer to the latest issue of the specification for the latest information. The user should also refer to the latest issue of the drawing for the latest information. The user should also refer to the latest issue of the drawing for the latest information.

NOMINAL SIZE		D	10 (.190)	1/4	5/16	3/8	
THREADS PER INCH			24UNC	20UNC	18UNC	16UNC	
BODY DIAMETER	D _b	Max	.1907	.2500	.3105	.3750	
		Min	.1580	.2127	.2712	.3287	
HEAD DIAMETER	A	Max	.373	.492	.615	.740	
		Min	.357	.473	.595	.716	
HEAD HEIGHT	H	Max	.110	.144	.178	.212	
		Min	.099	.130	.162	.195	
SLOT WIDTH	J	Max	.060	.075	.084	.094	
		Min	.050	.064	.072	.081	
SLOT DEPTH	T	Max	.067	.087	.109	.130	
		Min	.050	.070	.092	.113	
RADIUS ON HEAD	R ₁	Nom	.061	.087	.099	.141	
RADIUS UNDER HEAD	R	Max	.031	.021	.027	.031	
LENGTH	L	Tolerance	Dash Number	Dash Number	Dash Number	Dash Number	
THREADS SHALL EXTEND TO WITHIN 2 THREADS OF THE BEARING SURFACE OF THE HEAD, OR CLOSER IF PRACTICABLE.	1/8	+0 -1/32	58	76	ⓐ CANCELLED SEE NOTE		
	3/16		59				
	1/4		60				
	5/16	61	77	92			
	3/8	62	78	93			
	7/16	63	79	94			
	1/2	64	80	95			107
	5/8	65	81	96			108
	3/4	66	82	97			109
	7/8	67	83	98			110
	1	68	84	99			111
	1-1/4	69	85	100			112
	1-1/2	70	86	101			113
	1-3/4	71	87	102			114
	2	72	88	103			115
Minimum Complete Thread length of 1-3/4	73	89	104	116			
	74	90	105	117			
	75	91	106	118			

NOTE: For illustration, material, finish, and other pertinent data, see sheet 1.

ⓐ CANCELLED AFTER 22 JUN 1962 USE MS35214. INTERCHANGEABILITY RELATIONSHIP - MS35214 can replace the cancelled screws of the same size. The cancelled MS35231 cannot always replace MS35214 and should be used until existing stock is depleted. Then use only the superseding MS screws of the same size for design and replacement.

P.A.	Ord	TITLE	MILITARY STANDARD
Other Cust	Ships	SCREW, MACHINE, PAN HEAD, SLOTTED, BRASS, BLACK OXIDE FINISH, NC-2A AND UNC-2A	MS 35231
PROCUREMENT SPECIFICATION	SUPERSIDES		SHEET 2 OF

APPROVED FEB 9, 1954 REVISED FOR CHANGES BY SHEETS 1 AND 2