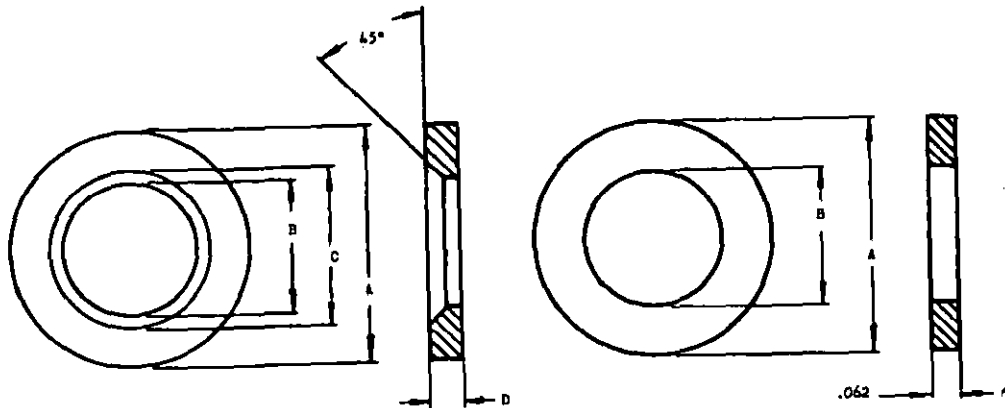


DEF SYMBOLS:  
 ARMY - AY, AV, AG, AO, WC  
 NAVY - NS  
 USAF - 69



COUNTERSUNK WASHER  
 (FOR USE UNDER BOLT HEAD)

PLAIN WASHER  
 (FOR USE UNDER NUT)

\*New/used information is current as of the date of this document.  
 For future consideration of changes to this document, draft circulation  
 should be based on the information in the current edition.

THREAD SIZE	NS PART NO.		A DIA	B DIA		C DIA		D	FLATNESS TOLERANCE MAX
	COUNTERSUNK	PLAIN		MAX	MIN	MAX	MIN		
1/4	NS20002C4	NS20002-4	.531	.260	.252	.344	.334	.078	.007
5/16	NS20002C5	NS20002-5	.593	.324	.315	.406	.396		
3/8	NS20002C6	NS20002-6	.687	.388	.378	.495	.483		
7/16	NS20002C7	NS20002-7	.781	.451	.441	.557	.543	.078	.007
1/2	NS20002C8	NS20002-8	.875	.515	.504	.620	.604		
9/16	NS20002C9	NS20002-9	.968	.579	.568	.687	.667		
5/8	NS20002C10	NS20002-10	1.062	.643	.631	.785	.765	.078	.010
3/4	NS20002C12	NS20002-12	1.250	.770	.757	.910	.890		
7/8	NS20002C14	NS20002-14	1.437	.897	.884	1.035	1.015		
1	NS20002C16	NS20002-16	1.625	1.025	1.010	1.160	1.140	.078	.010
1-1/8	NS20002C18	NS20002-18	1.875	1.150	1.135	1.285	1.265		
1-1/4	NS20002C20	NS20002-20	2.125	1.275	1.260	1.447	1.427		
1-3/8	NS20002C22	NS20002-22	2.313	1.400	1.385	1.572	1.552	.094	.015
1-1/2	NS20002C24	NS20002-24	2.500	1.525	1.510	1.697	1.677		

MATERIAL: ALLOY STEEL, FEDERAL STANDARD NO. 66, STEEL NO. 1330, OR 6130.  
 HEAT TREAT: 125,000 TO 145,000 PSI, SPECIFICATION MIL-H-6875.  
 FINISH: CADMIUM PLATING PER QQ-P-416, TYPE II, CLASS 2. PARTS WITH CLASS 3 PLATING MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL 1 JANUARY 1975

WASHERS SHALL BE FREE FROM ALL HANGING BURRS AND SLIVERS WHICH MIGHT BECOME DISLODGED UNDER USAGE.

WASHER FACES SHALL BE PARALLEL WITHIN .002 INCH.

DIMENSIONS IN INCHES, UNLESS OTHERWISE SPECIFIED. TOLERANCES: DECIMALS  $\pm .010$ , ANGLES  $\pm 1^\circ$ .

THESE WASHERS ARE PRIMARILY FOR USE WITH THE 160,000-PSI INTERNAL WRENCHING BOLTS SHOWN ON NS20004 THROUGH NS20024.

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

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

P.A. Navy - 45  
 Other Comd  
 Army - WC  
 USAF - 69

TITLE  
 WASHER, COUNTERSUNK AND PLAIN, HIGH STRENGTH

MILITARY STANDARD  
**MS20002**

PROCUREMENT SPECIFICATION  
 SUPERSEDED  
 NSAS1A3

SHEET 1 OF 2

APPROVED 85 MAY 53 REVISED (A) 13 JAN 55 (B) 1 APR 57 (C) 16 MAY 61 (D) 6 MARCH 67 (E) 29 DEC 72

SELECT WASHERS FROM THE FOLLOWING INTERCHANGEABILITY TABLE OF THIS STANDARD AS SUBSTITUTIVE PARTS FOR WAS 143.

INACTIVATED PART NOS.	SUBSTITUTIVE PART NOS.	INACTIVATED PART NOS.	SUBSTITUTIVE PART NOS.
WASHER-C SUNK		WASHER-PLAIN	
NAS1A3	MS20002	NAS1A3	MS20002
-4C	C4	-4	-4
-5C	C5	-5	-5
-6C	C6	-6	-6
-7C	C7	-7	-7
-8C	C8	-8	-8
-9C	C9	-9	-9
-10C	C10	-10	-10
-12C	C12	-12	-12
-14C	C14	-14	-14
-16C	C16	-16	-16
-18C	C18	-18	-18
-20C	C20	-20	-20
-22C	C22	-22	-22
-24C	C24	-24	-24

SEE SYMBOL:  
ARMY - EL, GL

REVISION SYMBOL:  
ARMY - AT, AV, RE, MD, WC  
NAVY - AS  
USAF - 69

\*Revision/side information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current '0001's."

This military standard is approved for use by all Departments & Agencies of the Department of Defense. Solicitation for all new engineering and design applications and for replacement use shall be made from this document.

APPROVED 25 JUN 53 REVISED ⑤ FOR CHANGES SEE SHEET 1

P.A. Navy - AB Other Code Army - WC USAF - 69	TITLE WASHER, COUNTERSUNK AND PLAIN, HIGH STRENGTH	MILITARY STANDARD MS20002
PROCUREMENT SPECIFICATION NONE	SUPERSEDES NAS1A3	SHEET 2 OF 2