



OPTIONAL DESIGNS

TABLE I

DASH NO. *	NOM SIZE	A INSIDE DIA		B OUTSIDE DIA		C THICKNESS		DASH NO. *	NOM SIZE	A INSIDE DIA		B OUTSIDE DIA		C THICKNESS	
		MAX	MIN	MAX	MIN	MAX	MIN			MAX	MIN	MAX	MIN	MAX	MIN
51 <del>52</del> <del>53</del>	.112	.123	.115	.475 <del>.510</del> <del>.610</del>	.460 <del>.495</del> <del>.560</del>	.021 <del>.021</del> <del>.021</del>	.016 <del>.017</del> <del>.017</del>	72 73 74 <del>75</del>	.3125	.332	.320	.900 <del>.985</del> <del>1.070</del> <del>1.155</del>	.865 <del>.965</del> <del>1.045</del> <del>1.130</del>	.040 <del>.045</del> <del>.050</del> <del>.052</del>	.032 <del>.037</del> <del>.042</del> <del>.042</del>
54 <del>55</del> <del>56</del>	.138	.150	.141	.510 <del>.630</del> <del>.690</del>	.495 <del>.580</del> <del>.670</del>	.028 <del>.028</del> <del>.028</del>	.023 <del>.023</del> <del>.023</del>	76 77 78 79	.375	.394	.364	.985 <del>1.070</del> <del>1.155</del> <del>1.260</del>	.965 <del>1.045</del> <del>1.130</del> <del>1.220</del>	.045 <del>.050</del> <del>.050</del> <del>.050</del>	.037 <del>.042</del> <del>.042</del> <del>.042</del>
57 58 59	.164	.176	.168	.610 .690 .760	.580 .670 .740	.034 .034 .034	.028 .028 .028	<del>60</del> <del>61</del> <del>62</del> <del>63</del>	<del>.4375</del>	<del>.464</del>	<del>.440</del>	<del>1.070</del> <del>1.155</del> <del>1.260</del> <del>1.335</del>	<del>1.045</del> <del>1.130</del> <del>1.220</del> <del>1.290</del>	<del>.050</del> <del>.050</del> <del>.055</del> <del>.055</del>	<del>.042</del> <del>.042</del> <del>.047</del> <del>.047</del>
60 61 62 63	.190	.204	.195	.610 .690 .760 .900	.580 .670 .740 .880	.034 .040 .040 .040	.028 .032 .032 .032	84 <del>85</del> 86 87			.512	1.260 <del>1.335</del> 1.410 1.620	1.220 <del>1.290</del> 1.380 1.590	.055 <del>.055</del> .060 .067	.047 <del>.047</del> .052 .059
<del>64</del> <del>65</del> <del>66</del> <del>67</del>	<del>.216</del>	<del>.231</del>	<del>.221</del>	<del>.690</del> <del>.760</del> <del>.900</del> <del>.965</del>	<del>.670</del> <del>.725</del> <del>.860</del> <del>.945</del>	<del>.040</del> <del>.040</del> <del>.040</del> <del>.045</del>	<del>.032</del> <del>.032</del> <del>.032</del> <del>.037</del>	<del>68</del> <del>69</del> <del>70</del> <del>71</del>	<del>.500</del>	<del>.530</del>	<del>.512</del>	<del>1.335</del> <del>1.430</del> <del>1.620</del> <del>1.830</del>	<del>1.290</del> <del>1.380</del> <del>1.590</del> <del>1.797</del>	<del>.055</del> <del>.060</del> <del>.067</del> <del>.067</del>	<del>.047</del> <del>.052</del> <del>.059</del> <del>.059</del>
92 93 <del>94</del> <del>95</del>	.250	.257	.256	.760 .900 .985	.725 .880 .963	.040 .040 .045	.032 .032 .037	96 97 <del>98</del> <del>99</del>	.625	.661	.640	1.410 1.620 <del>1.830</del> <del>1.975</del>	1.380 1.590 <del>1.797</del> <del>1.935</del>	.060 .067 <del>.067</del> <del>.067</del>	.052 .059 <del>.059</del> <del>.059</del>

NOTES:

- MATERIAL:** Carbon steel in accordance with Fed. Std. No. 66, AISI 1050 to 1064.
- PROTECTIVE COATING:** Cadmium plated in accordance with QQ-P-416, Type II, Class 3.
- DIMENSIONS:** All dimensions in Table I are in inches.  
All dimensions in Table II are in millimetres.
- PART NUMBER:** The MS part number consists of the MS number, plus the dash number.  
Example: MS45904-51.
- Referenced documents shall be of the issue in effect on date of invitations for bid.
- For design feature purposes, this standard takes precedence over procurement documents referenced herein.
- Dash numbers 1 through 45 are canceled after 26 June 1968 and superseded by dash numbers 51 through 95, respectively.
- Lined-out washers are inactive for new design.

(B)

(B) For changes see sheets 1 and 2.

REVIEWER: AV, IS, NU, NS  
(SER: AS, AT, SH, VT, YD

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

P.A. VC Other Code 05 82	TITLE WASHER, LOCK, INTERNAL AND EXTERNAL TOOTH	MILITARY STANDARD MS 45904
PROCUREMENT SPECIFICATION FF-W-100	SUPERSEDES: BEA8B	SHEET 1 OF 2

APPROVED 8 MAR 61 REVISED 26 JUN 68 6 FEB 1974

