



CORPORATE STANDARD

A A 716 40 01

REV. No. 03

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WASHERS, SPRING LOCK, SINGLE COIL, RECTANGULAR SECTION, TYPE - A (WITH BENT ENDS) STEEL

1.0 DESIGNATION:

A single coil, rectangular section, spring lock washer, Type -A (with bent ends) for right hand threads, of nominal size 5 mm, and made of steel shall be designated as:

1.1 On Drawings:

- i) Material specification column-AA 716 40 01.
- ii) Description column- WASHER SPRING LOCK SC A 5-ST.

1.2 On Indents:

Washer Spring Lock A 5-AA 716 40 01

1.3 For issuing enquiries and on purchase orders:

While issuing enquiries and purchase orders, delete the corporate standard No. from the above description and add the information given under clause 2.

2.0 COMPLIANCE WITH STANDARDS:

- 2.1 Dimensions, Tolerances : To IS 3063:1994, Type A (Table-1A)
& General Requirements

Revision : Cl. 20.4 of MOM of WG (F)

Approved: INTERPLANT
STANDARDIZATION COMMITTEE-WG (F)

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**2.2 Material:**

Spring steel Gr. 3 to Gr.6 as specified in IS 4072

2.3 Heat Treatment and Hardness:

Spring Lock washer after coiling shall be suitably heat treated, so as to result in the finished washer having a hardness in the range of 430 - 530 HV.

2.4 Finish:

Unplated.

3.0 NOTE:

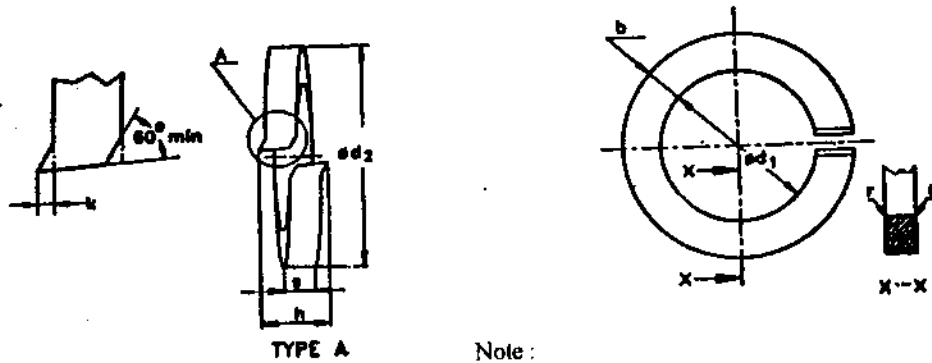
3.1 For washers spring lock (Type - B) refer corporate standard AA 716 40 02.

3.2 Lock washers to this standard would be unplated, divisions wishing to have plated washers would have to get them plated.

3.3 Weights given in this standard are for general reference only and are not meant for commercial transactions.

3.4 When the fasteners are to be tested within BHEL, the following sampling plan shall be followed for physical properties.

LOT SIZE	SAMPLE SIZE	ACCEPTANCE No.
Upto 1000	5	0
1001 - 3000	8	0
3001 - 10000	13	0
10000 - 35000	20	0
Over 35000	32	1



$$b = 2s + 2k$$

TYPE A

FIG. 1

Note :

1. Corporate sub-code Numbers only are shown in Table 1
2. Weights have been shown in kg per 1000 No.

TABLE 1
All dimensions are in 'mm'

Nom. size	Internal Diameter d_1		Outside Dia d_2	Width b		Thickness s		Radius r Nom	Bent End k^*	For Bolt Nut or Screw Size	Sub-code	Weight
	Basic	Tol±		Basic	Tol±	Basic	Tol±					
2	2.1	0.3	4.4	0.9	0.1	0.5	0.1	0.1	-	M2		0.033
2.2	2.3	0.3	4.8	1.0	0.1	0.6	0.1	0.1	-	M2.2		0.050
2.5	2.6	0.3	5.1	1.0	0.1	0.6	0.1	0.1	-	M2.5		0.052
3.0	3.1	0.3	6.2	1.3	0.1	0.8	0.1	0.2	0.15	M3	014	0.11
4.0	4.1	0.3	7.6	1.5	0.1	0.9	0.1	0.2	0.15	M4	022	0.18
5.0	5.1	0.3	9.2	1.8	0.1	1.2	0.1	0.2	0.15	M5	030	0.36
6.0	6.1	0.4	11.8	2.5	0.15	1.6	0.1	0.3	0.2	M6	049	0.83
8.0	8.1	0.4	14.8	3.0	0.2	2.0	0.1	0.5	0.3	M8	057	1.60
10.0	10.2	0.5	18.1	3.5	0.2	2.2	0.15	0.5	0.3	M10	065	2.53
12.0	12.2	0.5	21.1	4.0	0.2	2.5	0.15	1.0	0.4	M12	073	3.82
16.0	16.2	0.8	27.4	5.0	0.2	3.5	0.2	1.0	0.4	M16	081	8.91
20.0	20.2	1.0	33.6	6.0	0.2	4.0	0.2	1.0	0.4	M20	090	15.2
24.0	24.5	1.0	40.0	7.0	0.25	5.0	0.2	1.6	0.5	M24	103	26.2
30.0	30.5	1.2	48.2	8.0	0.25	6.0	0.2	1.6	0.8	M30	111	44.3
36.0	36.5	1.2	58.2	10.0	0.25	6.0	0.2	1.6	0.8	M36		67.3
42.0	42.5	1.2	68.2	12.0	0.25	7.0	0.25	2.0	0.8	M42		111
48.0	49.0	1.5	75.0	12.0	0.25	7.0	0.25	2.0	0.8	M48		123
52.0	53.0	1.5	83.0	14.0	0.25	8.0	0.25	2.0	1	M52		182
56.0	57.0	1.5	87.0	14.0	0.25	8.0	0.25	2.0	1	M56		193
60.0	61.0	1.5	91.0	14.0	0.25	8.0	0.25	2.0	1	M60		203
64.0	65.0	1.5	95.0	14.0	0.25	8.0	0.25	2.0	1	M64	120	218

*The bend "k" shall be made on the last length of the washer's circumference without any sharp angle.

**4.0 Referred Standards : (Latest Publications including amendments)**

AA 7164002

IS 4072

EXPLANATORY NOTE

- This standard was first issued in Apr 1993. It was subsequently revised in Jan. 1997 in line with IS: 3063 -1994.
- The following changes have been incorporated in this revision.
- Hardness range changed from 430 - 450 HV to 430 - 530 HV in line with the latest version of IS: 3063 - 1994.
- New corporate codes have been added in Table 1.
- (Cl 2.0 'Material' has been deleted due to its duplication in Cl 3.2).

Note: The clause numbers given within the brackets refer to the earlier version of the CS.