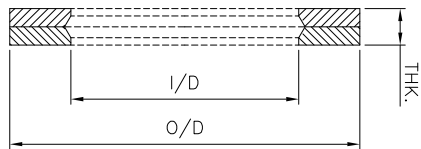
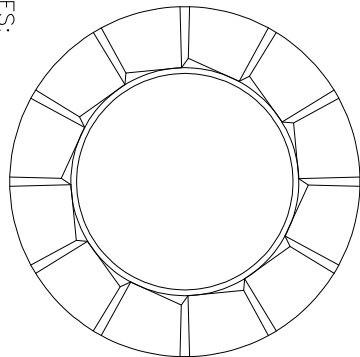


FIRST ANGLE PROJECTION

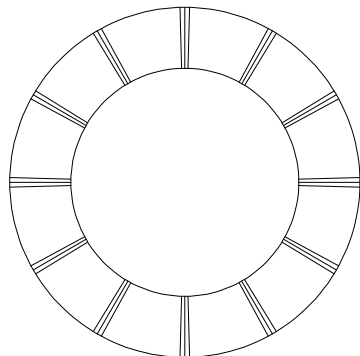
ALL DIMENSIONS ARE IN mm.

10009516374 - 'ON' GRD

CAM ON MATING SURFACE



SEIZING RIDGES ON OUTER SURFACE



NOTES:

- SUPPLIER CAN OFFER THE WASHER AS PER EITHER 'A' OR 'B' AGAINST EACH SERIAL NO. AS MENTIONED IN TABLE 1
- MATERIAL OF SERATED LOCK WASHER SHALL BE CONFORMING TO EITHER OF THE FOLLOWING:
  - ASI 1010: CARBON STEELS
  - EN 1.7182
  - 50Cr V4 TO DIN17222
  - SURFACE COATING-DELTA PROTEKT R BASE COAT (KL100) AND TOP COAT (VH302GZ)
  - ONE SERATED LOCK WASHER COMPRISE OF TWO PARTS ONE UPPER HALF AND ONE LOWER HALF. BOTH HALVES OF WASHER SHALL BE GLUED TOGETHER.
  - PROCUREMENT OF M12 DISC LOCK WASHER FOR TM4303, M3302 SHALL BE AS PER SL NO. 02 OF TABLE-1.
  - WASHER TO BE ZINC-PLATED TO AA0673603 & PASSIVATED TO AA0673604. PLATING THICKNESS TO BE 0.013 TO 0.015 MM.
  - MINIMUM HARDNESS OF THE MATERIAL SHOULD BE 47HRC.

TABLE-1 (ALL DIMENSIONS ARE IN MM)

SL. NO.	SIZE	I/D	O/D	THK.	REF. ASSY. DRG. NO.	ITEM NO.
1	M12	A. 13.00±0.2 B. 12.95±0.2	A. 19.60±0.2 B. 19.60±0.2	A. 2.50±0.25 B. 4.22±0.25	04391531106 04391413001 04391527001 04304581001	014 014 015 015
2	M12	A. 13.00±0.2 B. 12.95±0.2	A. 19.60±0.2 B. 19.60±0.2	A. 2.50±0.25 B. 2.50±0.25	04391580002 04451509051	014 & 037 016
3	M30	A. 31.50±0.2 B. 32.39±0.2	A. 47.00±0.3 B. 47.63±0.3	A. 6.60±0.8 B. 6.73±0.8	04393180001 04393131106 44453109001	011 017 002
4	M36	A. 37.30±0.2 B. 36.32±0.2	A. 55.10±0.3 B. 55.78±0.3	A. 6.60±0.8 B. 5.84±0.8	04393113002 24454305051 24454405051	016 008 012
5	M20	A. 21.3±0.2 B. 20.70±0.2	A. 30.70±0.2 B. 30.70±0.2	A. 3.30±0.25 B. 3.30±0.25	04394001001	010
6	M24	A. 25.40±0.2 B. 25.78±0.2	A. 39.10±0.2 B. 41.30±0.2	A. 3.30±0.25 B. 6.50±0.25	04451509051	015
7	M10	A. 10.55±0.2 B. 10.55±0.2	A. 16.5±0.2 B. 16.5±0.2	A. 2.5±0.25 B. 2.5±0.25	04451509051	015
8	M8	A. 8.60±0.2 B. 8.60±0.2	A. 13.50±0.2 B. 13.50±0.2	A. 2.5±0.25 B. 2.5±0.25	04451509051	015
9	M6	A. 6.60±0.2 B. 6.60±0.2	A. 10.90±0.2 B. 10.90±0.2	A. 1.8±0.25 B. 1.8±0.25	04451509051	015
10	M16	A. 17±0.2 B. 17±0.2	A. 25.4±0.2 B. 25.4±0.2	A. 3.3±0.25 B. 3.3±0.25	04451509051	015
11	M27	A. 28.4±0.2 B. 28.4±0.2	A. 42±0.3 B. 48.5±0.3	A. 5.8±0.25 B. 6.6±0.25	04451509051	015
12	M4	A. 4.4±0.2 B. 4.4±0.2	A. 9.0±0.2 B. 7.6±0.2	A. 1.8±0.25 B. 1.8±0.25	04451509051	015
13	M5	A. 5.4±0.2 B. 5.4±0.2	A. 10.8±0.2 B. 9.0±0.2	A. 1.8±0.25 B. 1.8±0.25	04451509051	015

INVENTORY NO.		SIGN. & DATE		REF. DRG. NO.	
REV. DATE		ALTERED BY		CHKD BY	
07 02.09.24		A.S.		A.S.	
ZONE		IN TABLE-1, SL. NO. 10 ADDED.		ZONE	
REV. DATE		ALTERED BY		CHKD BY	
06 25.04.23		A.S.		A.S.	
ZONE		IN TABLE-1, SL. NO. 8 & 9 ADDED.		ZONE	
REV. DATE		ALTERED BY		CHKD BY	
05 25.03.23		A.S.		A.S.	
ZONE		IN TABLE-1, SL. NO. 5 (M20) ADDED.		ZONE	
REV. DATE		ALTERED BY		CHKD BY	
03 23.01.15		A.S.		A.S.	
ZONE		IN TABLE-1, SL. NO. 1, REF. ASSY. DRG. NO. 04304581001 ADDED & SL. NO. 2, REF. ASSY. DRG. NO. 04304581001 DELETED. NOTE-5 ADDED.		ZONE	
REV. DATE		ALTERED BY		CHKD BY	
02 12.07.14		A.S.		A.S.	
ZONE		IN TABLE-1, SL. NO.-5 WAS ON.		ZONE	
REV. DATE		ALTERED BY		CHKD BY	
01 13.07.13		A.S.		A.S.	
ZONE		IN TABLE-1 SL. NO.-5 WAS NOT ON.		ZONE	
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ZONE		IN TABLE-1 SL. NO.-5 WAS NOT ON.		ZONE	
REV. DATE		ALTERED BY		CHKD BY	
01 13.07					

**Duly filled Technical Pre-Qualification Requirements to be submitted along with the offer by vendor**

*For uploading along with enquiry*

Ref No: TME/PQR/IM4303/Washers rev.01

Dated: 06/05/2026

**Technical Pre-Qualification Requirements (PQR) for “Serrated Lock Washers”**

**Vendor should comply with the following clauses (duly filled PQR shall be submitted along with the offer by vendor):**

Cl. No.	Description	Vendor to comment	
		Complied / Not complied	Supporting relevant document to be submitted along with offer
1	Vendor shall supply Serrated Lock Washers as per drawing & details mentioned in the enquiry.	Yes/No	Not Required
2	<p>Vendor should be a manufacturer of Serrated Lock Washers or authorized trader / distributor of Serrated Lock Washers manufacturer.</p> <p>In case vendor is a trader / distributor, vendor to furnish authorization certificate from manufacturer of Serrated Lock Washers for supply of its products.</p> <p><b>Note:</b> One trader/dealer/distributor/agent cannot represent two manufacturers or quote on their behalf in the tender.</p>	Manufacturer/ Trader/ Distributor	In case vendor is a trader/distributor, vendor to furnish authorization certificate from manufacturer of Serrated Lock Washers for supply of its products
3	<p>Vendor should have experience of successfully supplying at least 240 nos. serrated lock washers of size M10 (or above), of minimum hardness 47HRC. in preceding 5 years from enquiry opening date.</p> <p>Vendor to ensure that document submitted against b) &amp; c) shall correlate with the submitted PO copies.</p>	Yes/No	<p>a. PO copies.</p> <p>b. Material TC (showing hardness of the supplied serrated lock washer)</p> <p>c. Supply proof i.e. invoice.</p>

1 of 2

	<b>Note:</b> In case vendor is an authorized trader/distributor of Serrated Lock Washers manufacturer, documents for compliance of this clause shall be of either manufacturer or trader/distributor.		
4	For verification of information furnished by vendor, additional documents proofs etc. may be required by BHEL. Vendor to confirm providing the same.	Yes/No	Not Required

**Note:**

1. Compliance of all the points in above T-PQR is mandatory. In absence of compliance of above, vendor's offer is liable to be rejected.
2. Information / compliance / documents submitted by vendor shall be authentic in all aspects. In case any deviation / false information / forged documents are observed, BHEL is free to initiate appropriate punitive proceeding against the supplier.