

VIEW FOR ROUGH MACHINED FORGING

TOOL LIST		
IT.NO.	TOOL NO.	DESCRIPTION
001	1607650	DRILL JIG FOR 8 X Ø13 @ PCD 330
001	1607630	ID GROOVING TOOL FULL ROUND R2, AP = 4MM AR=2MM INDEXABLE
001	1408585	PIN GAUGE 261, 142-0.05/0
001	1408586	SNAP GAUGE 292 +0.004/+0.036
001	1408587	OFFSET PIN GAUGE 273, 1+0.05/0
001	1408588	PIN GAUGE 280, 7/260, 8

- NOTES:-**
1. MATERIAL OF ITEM-001 TO BE AA19333 EXCEPT FOR THE MECHANICAL PROPERTIES WITH SHALL CONFORM TO IS:2004 CLASS 4 TABLE-2
 2. REMOVE ALL SHARP CORNERS
 3. ALL UNTOLERATED DIMENSIONS TO BE ±0.25
 4. ALL UNTOLERATED ANGLES TO BE ±0°-30'
 5. MACHINE ALL OVER $\frac{1}{4}$ EXCEPT WHEREVER SHOWN.
 6. ALL CORNERS RADI SHALL BE 0.5 ϕ TO AVOID SHARPNES EXCEPT WHEREVER STATED.
 7. SAMPLE Ø25X60 LONG AS PER 11.2 OF AA19333 TO BE SUPPLIED FOR TESTING OF ITEM 001.
 8. TEMPORARY RUST PREVENTIVE (TRP) TO BE APPLIED ALL OVER AS PER AA5152.
 9. ALTERNATIVE MATERIAL TO BE USED FOR IT. 001 IS AA10108 (SIZE 68TK, X Ø362).

REV.	QTY	VAR. NO.	ITEM NO.	DESCRIPTION	QTY.	UNIT WT.	NO. OF VAR.
001	64	01	001	BEARING HOUSING	7.40		

ADDITIONAL INFORMATION
REF. DRG. NO.-14391553006
STATUS OF DRAWING

DISTRIBUTION OF PRINTS
TIME-1, TMM-3,
TXN-1



BHARAT HEAVY ELECTRICALS LTD.
BHOVAL

NAME	SIGN	DATE	NO. OF VAR.
DRN. A-JHARIA		12.12.19	
CHD. MOHIT P.		12.12.19	
APPD. MOHIT P.		12.12.19	01

TYPE OF PRODUCT
OR
NAME OF CUSTOMER/PROJECT
IM4504AZ

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE
03	16.12.20	ASADAM	MADH	MADH	03
02	26.11.20	ASADAM	MADH	MADH	02
01	29.05.20	ASADAM	MADH	MADH	01

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE
01	29.05.20	ASADAM	MADH	MADH	01

DEPT.	TIME	UNTOL. DIMS. GR.	SCALE	WEIGHT (K.G.)
405	MI	AA0230208	N.T.S.	7.40

DRAWING NO.	REF. TO ASSY. DRG.	ITEM NO.	NO. OF REV.
2 445 15 91 076	1 445 15 91 076	002	001
01	01	01	03

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE
03	16.12.20	ASADAM	MADH	MADH	03
02	26.11.20	ASADAM	MADH	MADH	02
01	29.05.20	ASADAM	MADH	MADH	01

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE
03	16.12.20	ASADAM	MADH	MADH	03
02	26.11.20	ASADAM	MADH	MADH	02
01	29.05.20	ASADAM	MADH	MADH	01

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE
03	16.12.20	ASADAM	MADH	MADH	03
02	26.11.20	ASADAM	MADH	MADH	02
01	29.05.20	ASADAM	MADH	MADH	01

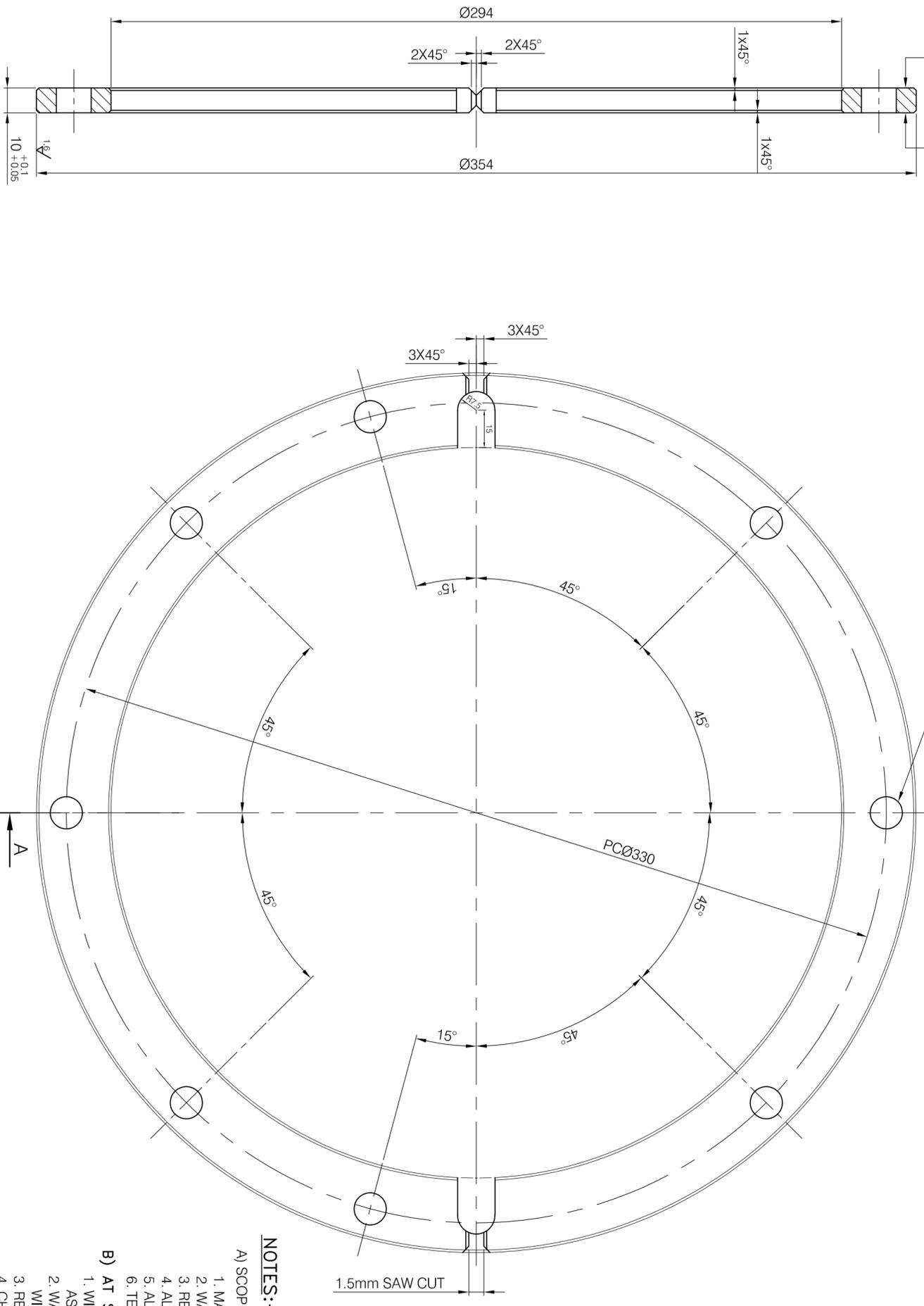
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02	26.11.20	ASADAM	MADH	MADH	02
01	29.05.20	ASADAM	MADH	MADH	01

DEPT.	TIME	UNTOL. DIMS. GR.	SCALE	WEIGHT (K.G.)
405	MI	AA0230208	N.T.S.	7.40

DRAWING NO.	REF. TO ASSY. DRG.	ITEM NO.	NO. OF REV.
2 445 15 91 076	1 445 15 91 076	002	001
01	01	01	03

TOOL LIST

IT.NO.	TOOL NO.	DESCRIPTION
001	1607653	DRILL JIG FOR 8 X Ø13 @ PCD 330



SECTION-AA

NOTES:-

- A) SCOPE OF SUPPLIER:
1. MACHINE ALL OVER.
 2. WASHER NOT TO BE SPLIT INTO 2 HALVES BY THE SUPPLIER.
 3. REMOVE ALL SHARP CORNERS.
 4. ALL UNTOLERATED DIMENSIONS TO BE ±0.25
 5. ALL UNTOLERATED ANGLES TO BE 0°-30°
 6. TEMPORARY RUST PREVENTIVE (TRP) TO BE APPLIED ALL OVER AS PER AA55152.
- B) AT SITE:
1. WIDTH TO BE FINALLY ADJUSTED TO GIVE CORRECT ENDPLAY IN BEARINGS WHEN ASSEMBLED ON TUBE.
 2. WASHER TO BE SPLIT INTO 2 HALVES AS FINAL OPERATION AFTER CORRECT WIDTH HAS BEEN DETERMINED.
 3. REMOVE SHARP EDGES/BURRS AFTER SPLITTING.
 4. CHAMFERS TO BE MACHINED AFTER FINAL ADJUSTMENT.
 5. IT.001 TO BE GRIND AFTER ASSEMBLY.

QTY	VAR. NO.	ITEM NO.	DESCRIPTION	DRAWING NO.	IT. NO.	MATL. CODE	MATL. SPECN.	UNIT WT.	NO. OF
001		001	ADJUSTMENT WASHER 16THICKX370 SQ.						

ADDITIONAL INFORMATION
REF. DRG. NO.-14391553011

TYPE OF PRODUCT
OR
NAME OF CUSTOMER/PROJECT

IM4504AZ

DISTRIBUTION OF PRINTS
TIME-1, TQM-3,
TNX-1



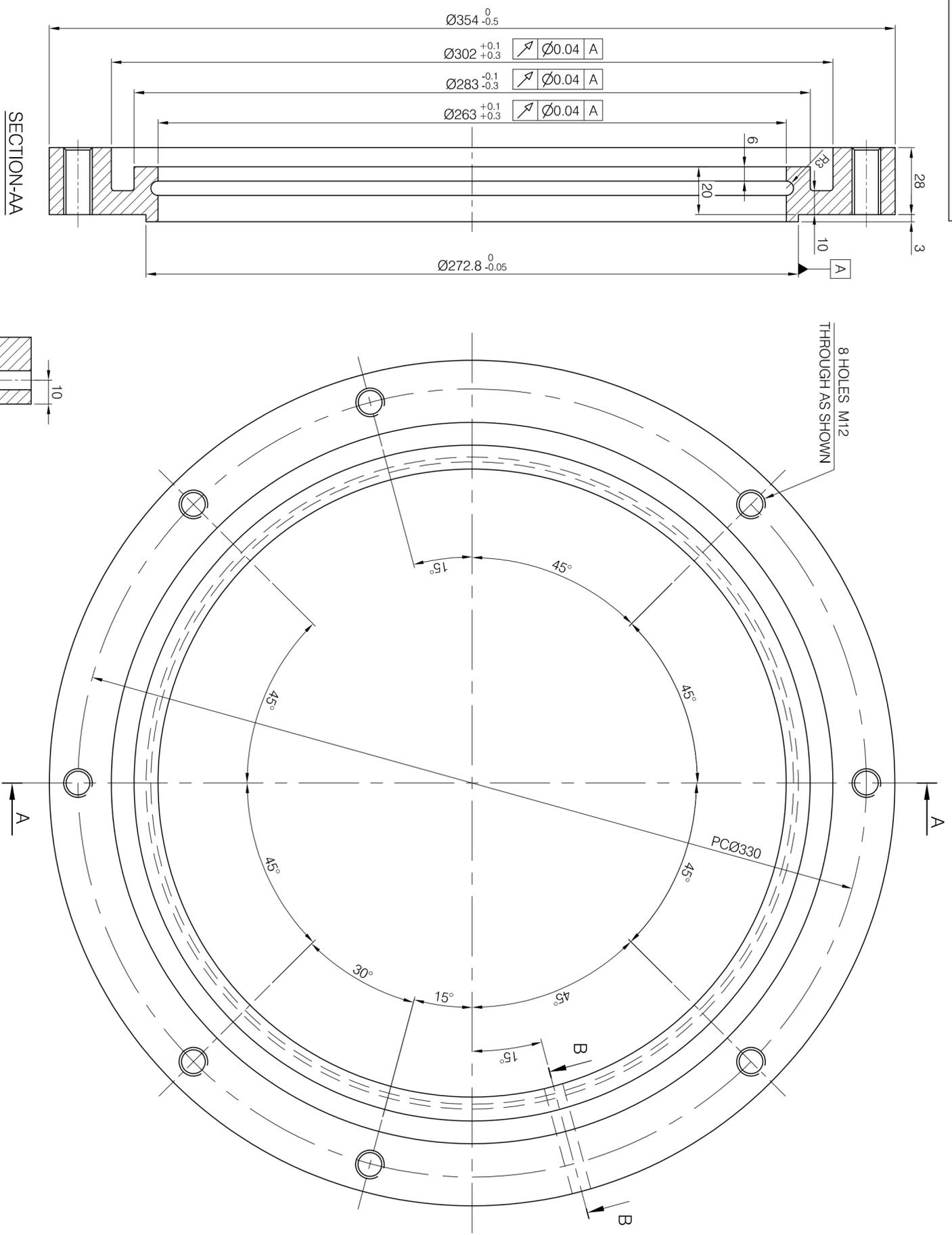
NAME	SIGN	DATE	NO. OF VAR.
DRN. A-JHARIA		12.12.19	
CHD. MOHIT P.		12.12.19	
APPD. MOHIT P.		12.12.19	01

REV.	DATE	ALTERED	CHECKED	APPROVED
02	16.12.20	WAS	WAS	WAS
01	29.05.20	WAS	WAS	WAS

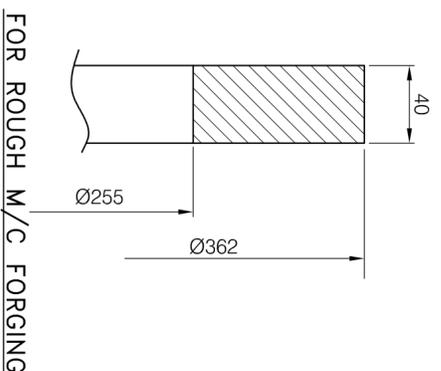
REV.	DATE	ALTERED	CHECKED	APPROVED
01	29.05.20	WAS	WAS	WAS

DEPT. CODE	TIME	UNTOL. DIMS. GR.	SCALE	WEIGHT (K.G.)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF REV.
405		AA0230208	N.T.S.	2.35	1 445 15 91 076	005	001

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IT.NO.	TOOL NO.	DESCRIPTION
001	1607651	DRILL JIG FOR 8 X M12 @ PCD 330
001	1607631	GROOVE GAUGE 9.5 X 18
001	1607632	ID GROOVING TOOL LH & RH FULL ROUND
001	1607633	FACE GROOVING TOOL INDEXABLE FIG-3 & 4 OF SK-7/45 AP = 8-9.5, AR ≥ 18
001	1408566	PIN GAUGE 263-0.1/+0.3
001	1408567	SNAP GAUGE 273-0.05/0
001	1408568	SNAP GAUGE 283+0.1/+0.3



FOR ROUGH M/C FORGING

NOTES:-

- MATERIAL OF ITEM 001 TO BE AA19333 EXCEPT FOR THE MECHANICAL PROPERTIES WITH SHALL CONFORM TO IS:2004 CLASS 4 TABLE-2
- REMOVE ALL SHARP CORNERS.
- ALL UNTOLERATED DIMENSIONS TO BE ±0.25
- ALL UNTOLERATED ANGLES TO BE ±0°-30°
- MACHINE ALL OVER 1/8" EXCEPT WHEREVER SHOWN.
- ALL CORNERS RADIUS SHALL BE 0.5" TO AVOID SHARPNESS EXCEPT WHEREVER STATED.
- SAMPLE 029X600 LONG AS PER 11.2 OF AA19333 TO BE SUPPLIED FOR TESTING OF ITEM 001.
- TEMPORARY RUST PREVENTIVE (TRP) TO BE APPLIED ALL OVER AS PER AA56152.
- ALTERNATIVE MATERIAL TO BE USED FOR IT. 001 IS AA10108 (SIZE 40TK x 0362).

REV.	DATE	ALTERED BY	CHECKED BY	REMARKS	VAR. NO.	ITEM NO.	DESCRIPTION	QTY.	UNIT WT.	NO. OF ZONE
001	64	65	75	76	79	25	27	29		
001	59	64	65	75	76	79	25	27	29	

ADDITIONAL INFORMATION
REF. DRG. NO.-14391553008
STATUS OF DRAWING

DISTRIBUTION OF PRINTS
TIME-1, TMM-3, TNX-1



BHARAT HEAVY ELECTRICALS LTD.
BHOVAL

REV.	DATE	ALTERED BY	CHECKED BY	REMARKS	VAR. NO.	ITEM NO.	DESCRIPTION	QTY.	UNIT WT.	NO. OF ZONE
01	29.05.20			TOOL LIST ADDED. (TOM356)						
02	26.11.20			IN TOOL LIST, TOOL NOS. 1408566 TO 1408568 ADDED. (TOM-356)						
03	16.12.20			DIM. Ø272.8 ⁰ / _{-0.05} WAS Ø273 ⁰ / _{-0.5}						

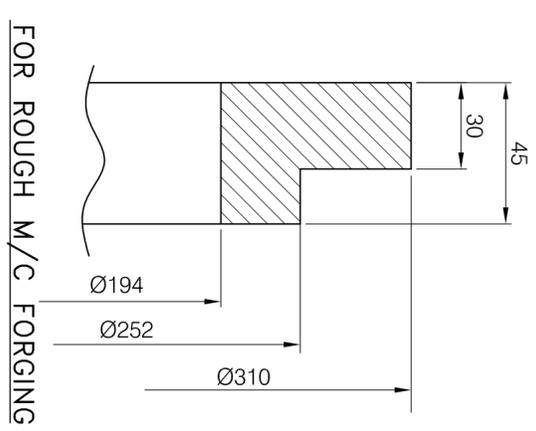
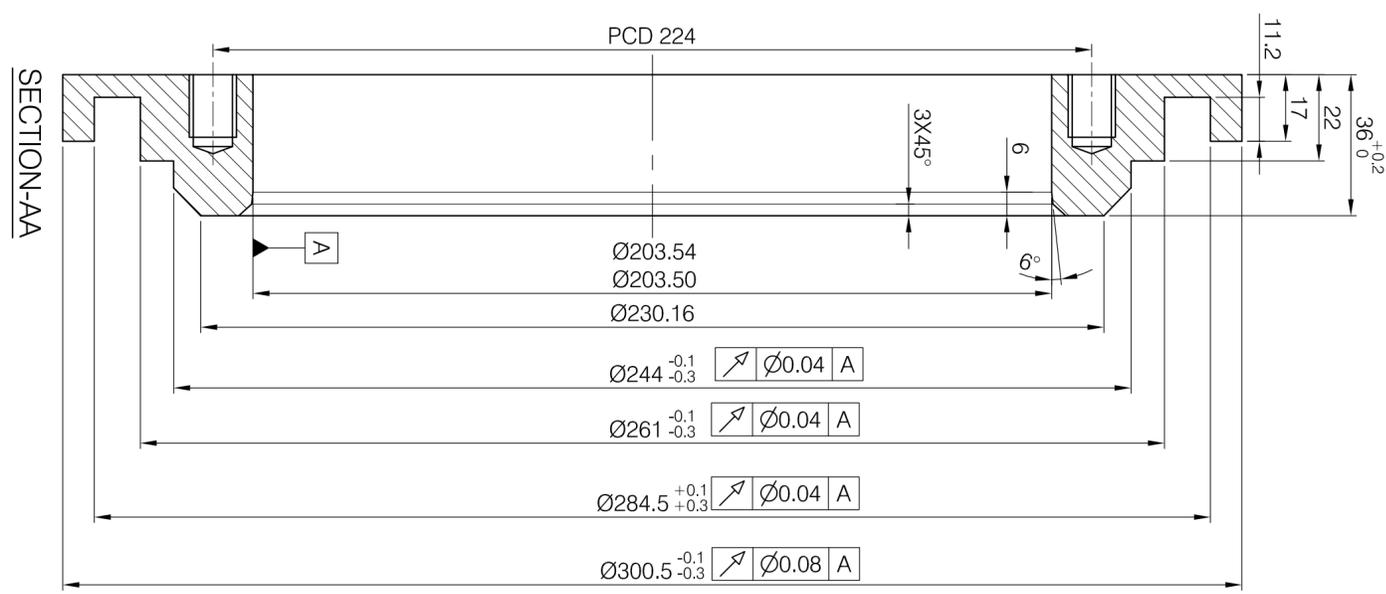
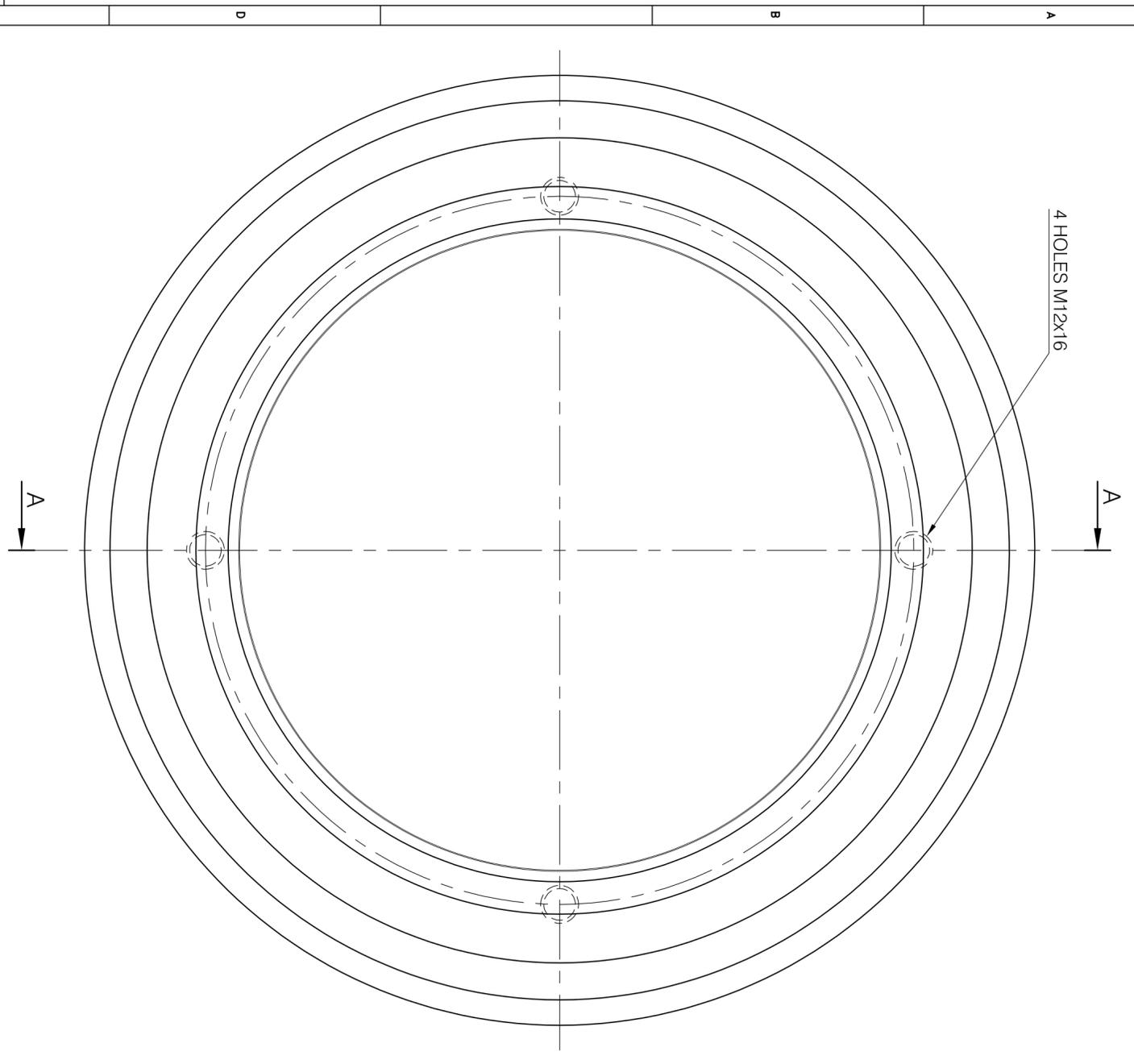
REV.	DATE	ALTERED BY	CHECKED BY	REMARKS	VAR. NO.	ITEM NO.	DESCRIPTION	QTY.	UNIT WT.	NO. OF ZONE
01	29.05.20			TOOL LIST ADDED. (TOM356)						
02	26.11.20			IN TOOL LIST, TOOL NOS. 1408566 TO 1408568 ADDED. (TOM-356)						
03	16.12.20			DIM. Ø272.8 ⁰ / _{-0.05} WAS Ø273 ⁰ / _{-0.5}						

DEPT.	TIME	UNTOL. DIMS. GR.	SCALE	WEIGHT (K.G.)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF VAR.
405	M	AA0230208	N.T.S.	7.9	1 445 15 91 076	002	001

END COVER (RWE)
(CNC MACHINED)

DRAWING NO.	REV.
2 445 15 91 078	03

IT.NO.	TOOL NO.	DESCRIPTION
001	1607654	DRILL JIG FOR 4 X M12 @ PCD 224
001	1607636	PIN GAUGE 284.62848
001	1607637	FACE GROOVING TOOL INDEXABLE FIG-1 & 2 OF SK-745 AP = 8-10 AR ≥ 12
001	1607638	GROOVE GAUGE 11.5 X 16.2
001	1607639	PIN GAUGE 203.50/203.54
001	1607640	CALPER GAUGE 261.1/261.3
001	1408570	SNAP GAUGE 305 -0.1/0.3
001	1408573	SNAP GAUGE 244 -0.1/0.3



FOR ROUGH M/C FORGING

- NOTES:-**
1. MATERIAL OF ITEM-001 TO BE AA19333 EXCEPT FOR THE MECHANICAL PROPERTIES WITH SHALL CONFORM TO IS:2004 CLASS 4 TABLE-2
 2. REMOVE ALL SHARP CORNERS.
 3. ALL UNTOLERATED DIMENSIONS TO BE ±0.25
 4. ALL UNTOLERATED ANGLES TO BE ±0°-30°
 5. MACHINE ALL OVER 1/2 EXCEPT WHEREVER SHOWN.
 6. ALL CORNERS RADIUS SHALL BE 0.5th TO AVOID SHARPNESS EXCEPT WHEREVER STATED.
 7. SAMPLE Ø25X600 LONG AS PER 11.2 OF AA19333 TO BE SUPPLIED FOR TESTING OF ITEM 001.
 8. TEMPORARY RUST PREVENTIVE (TRP) TO BE APPLIED ALL OVER AS PER AA55152.

REV.	DATE	ALTERED AS/WHEN	CHECKED AS/WHEN	APPROVED AS/WHEN	ZONE
04	15.12.21				
03	22.11.21				
02	26.11.20				
01	29.05.20				

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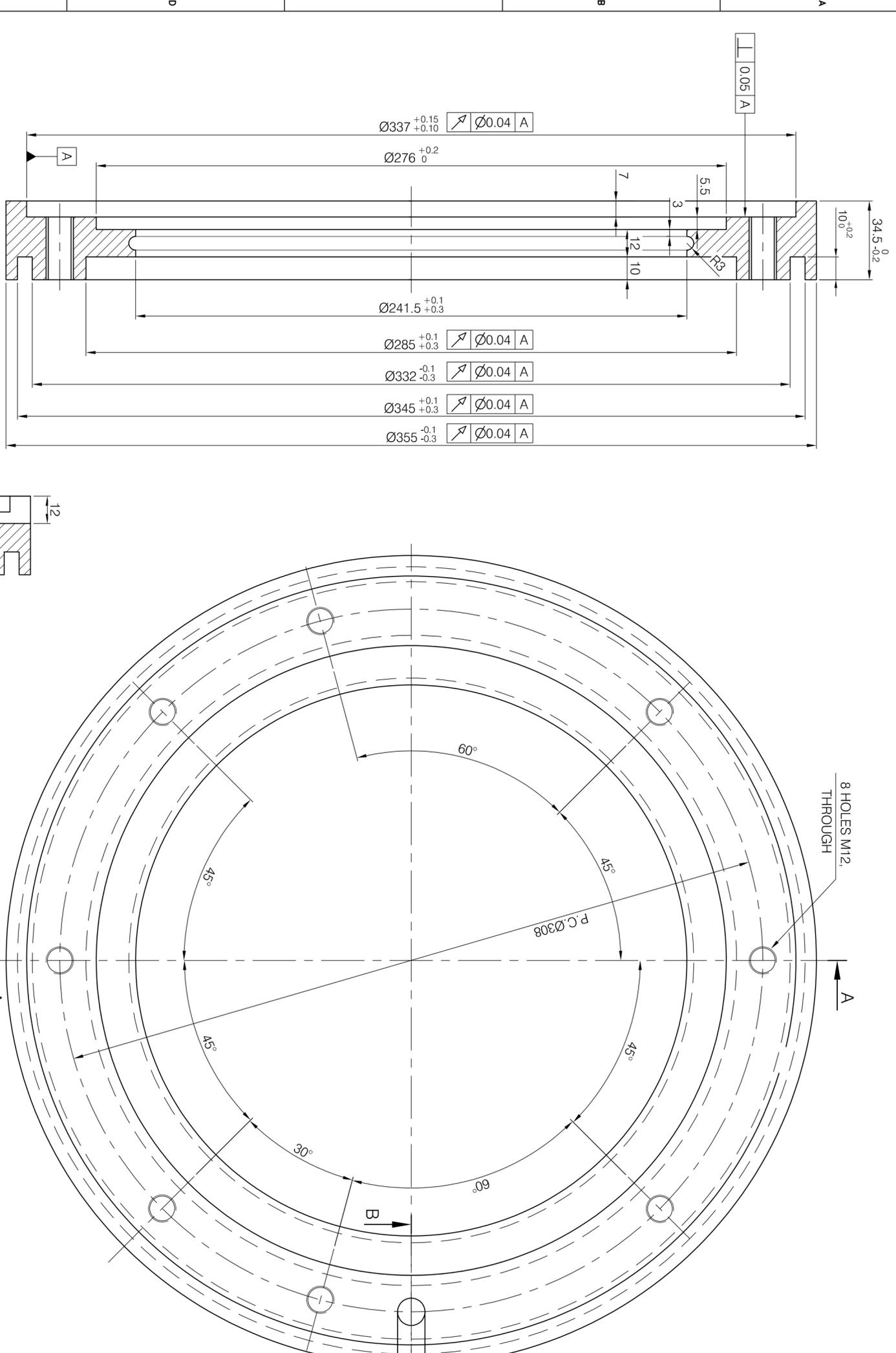
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02	26.11.20				
01	29.05.20				

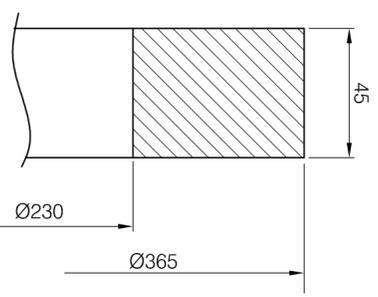
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REV.	DATE	ALTERED AS/WHEN	CHECKED AS/WHEN	APPROVED AS/WHEN	ZONE
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03	22.11.21				
02	26.11.20			</	

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TOOL LIST		
IT. NO.	TOOL NO.	DESCRIPTION
001	1607652	DRILL JIG FOR 8 X M12 @ PCD 308
001	1607634	ID GROOVING TOOL LH & RH FULL ROUND R3, AP = 6MM AR = 3MM INDEXABLE
001	1607635	FACE GROOVING TOOL LH & RH INDEXABLE FIG- ANY OF SK-745 AP = 6.5 AR ≥ 10
001	1408592	OFFSET PIN GAUGE 276 +0.2
001	1408593	OFFSET PIN GAUGE 337 +0.15
001	1408594	SNAP GAUGE 355 -0.3
001	1408582	GROOVE GAUGE 6.5X10 DEEP



FOR ROUGH M/C FORGING

- NOTES:-**
- MATERIAL OF ITEM-001 TO BE AA19333 EXCEPT FOR THE MECHANICAL PROPERTIES WITH SHALL CONFORM TO IS:2004 CLASS 4 TABLE-2
 - REMOVE ALL SHARP CORNERS.
 - ALL UNTOLERATED DIMENSIONS TO BE ±0.25
 - ALL UNTOLERATED ANGLES TO BE ±0-30°
 - MACHINE ALL OVER *EXCEPT WHEREVER SHOWN.
 - ALL CORNERS RADI SHALL BE 0.5 R TO AVOID SHARPNESS EXCEPT WHEREVER STATED.
 - SAMPLE Ø23X60 LONG AS PER 11.2 OF AA19333 TO BE SUPPLIED FOR TESTING OF ITEM 001.
 - TEMPORARY RUST PREVENTIVE (TRP) TO BE APPLIED ALL OVER AS PER AA65152.
 - ALTERNATIVE MATERIAL TO BE USED FOR IT. 001 IS AA10108 (SIZE 45TK X Ø365).

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	DESCRIPTION
001	29.05.20	AS/AM	AS/AM	AS/AM	01	TOOL LIST ADDED. (TCM356)
002	26.11.20	AS/AM	AS/AM	AS/AM	02	IN TOOL LIST TOOL NOS. 1408592 TO 1408594 & 1408582 ADDED. (TCM-356)
003	12.12.20	AS/AM	AS/AM	AS/AM	03	DIM. Ø355 -0.1 WAS Ø355. DIM. 10 0 +0.2 WAS 10.

ADDITIONAL INFORMATION
REF. DRG. NO.-14391553007

STATUS OF DRAWING

DISTRIBUTION OF PRINTS
TIME-1, TCM-3, TNX-1

TYPE OF PRODUCT
OR
NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD
BHOVAL

IM4504AZ



DRN	NAME	SIGN	DATE	NO. OF VAR.
A-1	A-JHARIA		12.12.19	
C-1	MOHIT P.		12.12.19	
A-1	MOHIT P.		12.12.19	

DEPT.	TIME	SCALE	WEIGHT	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
405	M	N.T.S.	9.35	1 445 15 91 076	002	001

UNTOOL.	DIMS.	GR.	SCALE	WEIGHT	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
AA0230208	M	N.T.S.	9.35	1 445 15 91 076	002	001	001

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE	TITLE
001	29.05.20	AS/AM	AS/AM	AS/AM	01	END COVER (GWE) (CNC MACHINED)

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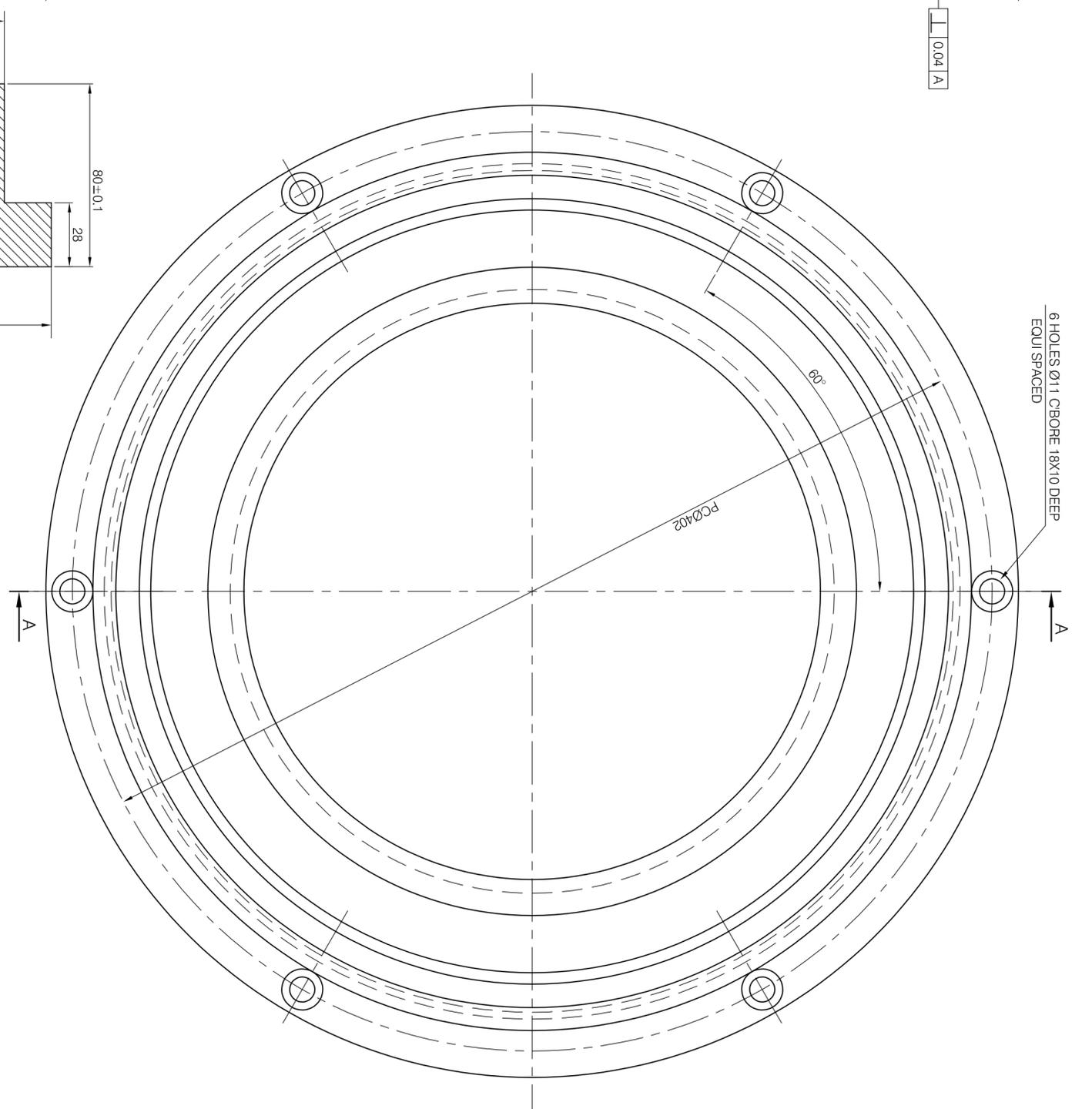
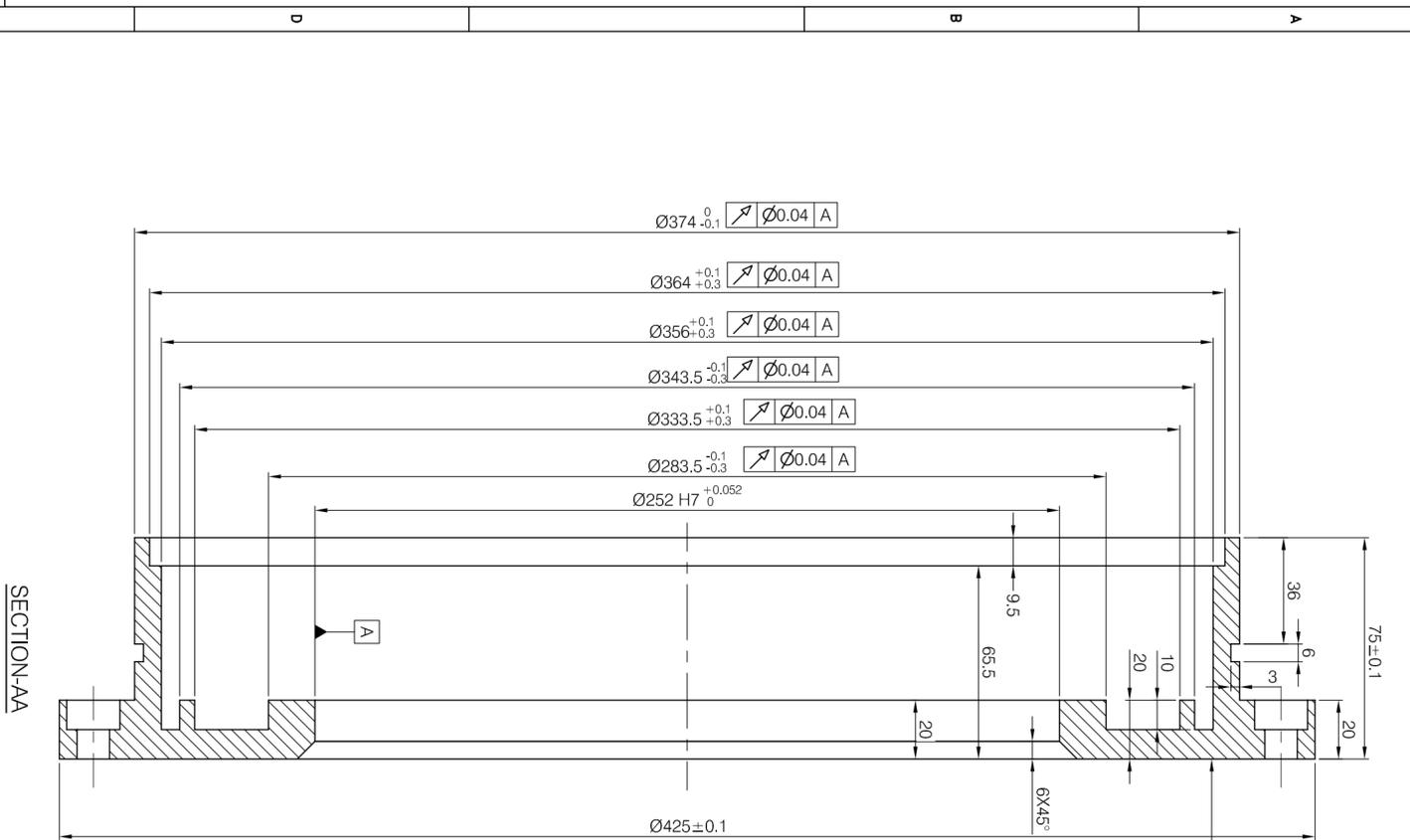
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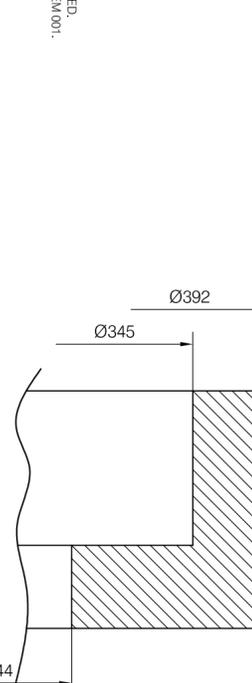
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1194847/2022/HEP-TAM21300 INVENTORY NO. SIGN. & DATE REF. DRG. NO.



- NOTES:-**
1. MATERIAL OF ITEM-001 TO BE AA19333 EXCEPT FOR THE MECHANICAL PROPERTIES WITH SHALL CONFORM TO IS 2004 CLASS 4 TABLE-2
 2. REMOVE ALL SHARP CORNERS
 3. ALL UNTOLERATED DIMENSIONS TO BE ±0.25
 4. ALL UNTOLERATED ANGLES TO BE ±0°-30°
 5. MACHINE ALL OVER EXCEPT WHEREVER SHOWN
 6. ALL CORNERS RADIUS SHALL BE 0.5 ± 0.03 TO AVOID SHARPNESS EXCEPT WHEREVER STATED.
 7. SAMPLE Ø25x800 LONG AS PER 1:1.2 OF AA19333 TO BE SUPPLIED FOR TESTING OF ITEM 001.
 8. TEMPORARY RUST PREVENTIVE (TRP) TO BE APPLIED ALL OVER AS PER AA55152.
 9. ALTERNATIVE MATERIAL TO BE USED FOR IT: 001 IS AA10108 (SIZE 80TK-X-Ø433).



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ITM NO.	TOOL NO.	DESCRIPTION
001	1607655	DRILL JIG FOR 8 X Ø11 @ PCD 402
001	1607641	PIN GAUGE 252 ± 0.052/0
001	1607642	SNAP GAUGE 283.5-0.1/±0.3
001	1607643	PIN GAUGE 333.5 ± 0.1 ± 0.3
001	1607644	SNAP GAUGE 343.5-0.1/±0.3
001	1607645	PIN GAUGE 356 ± 0.1/±0.3
001	1607646	PIN GAUGE 364 ± 0.1/±0.3
001	1607647	OD GROOVING TOOL INDEXABLE LH & RH AP = 6MM, AR ≥ 3 MM
001	1607648	FACE GROOVING TOOL INDEXABLE FIG-3 & 4 OF SK-745 AP = 6 AR ≥ 10
001	1607649	FACE GROOVING TOOL INDEXABLE FIG-3 & 4 OF SK-745 AP = 10-25 AR ≥ 10

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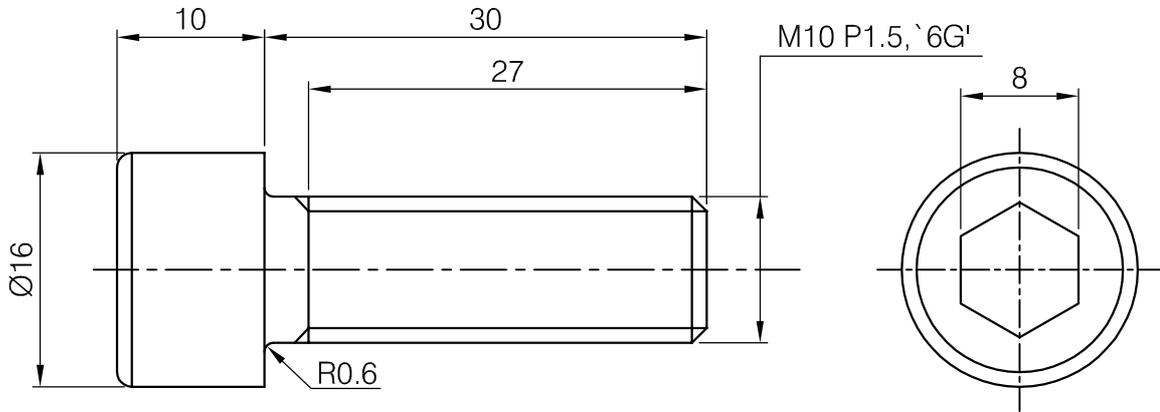
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BHARAT HEAVY ELECTRICALS LIMITED.

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			1 HOLE DIA. 2.5 DELETED. IN REMARKS COLUMN OF BOM IT.001, 'UNBREAKO BOUGHTOUT' DELETED.				STATUS OF DRAWING	
							DISTRIBUTION OF PRINTS	
							TME-1 TNX-1 TXM -4	



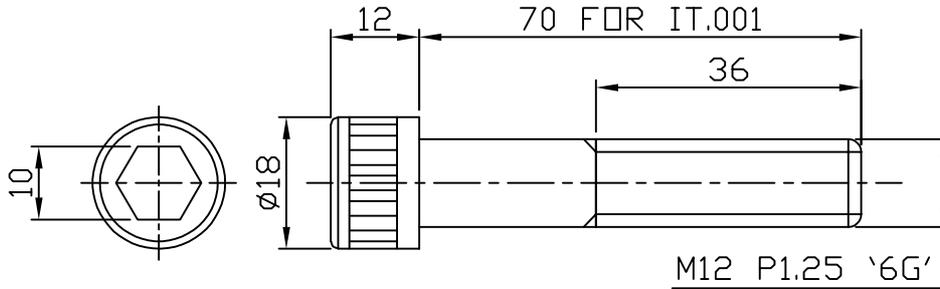
NOTES:-

1. IT. 002 TO BE APPLIED ON THREAD BEFORE TIGHTENING TO SCRU.
2. SCRU TO BE 100% M.C.D. TESTED OF BP0850178 .

REF. DRG. NO.	AS REQD,	002	LOCKTITE-270			KG	0.004	
	SEE NOTE-1	001	SOCKET HEAD CAP SCRU M10x30, P12.9			KG	0.03	
SIGN. & DATE	REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	UNIT	UNIT WT.	
					MATL. SPECN.		QTY.	
INVENTORY NO.	CARD TYPE 3	28	28	CARD TYPE 1	28	CARD TYPE 2		
					DRN.	NAME	SIGN	DATE
	DEPT. TME	GRADE OF UN.TOL.	SCALE	WEIGHT(KG)	REF.TO ASSY.DRG.	ITEM NO.	NO. OF ITEM	
	CODE 405		N.T.S.	0.034	04451503001	010	002	
	TITLE				DRAWING NO.		REV	
	SOCKET HEAD CAP SCRU (IM3601AZ)				44451503005		01	
			SHT.NO	01	NO.OF.SHT.		01	

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		APPROVED			APPROVED	
						STATUS OF DRAWING
						DISTRIBUTION TME-1 TNX-1 OF PRINTS TXM-4



NOTES:-

1. IT. 002 TO BE APPLIED ON THREAD BEFORE TIGHTENING SCRU.
2. SCRU TO BE 100% M.C.D. TESTED TO BP0850178.

REF. DRG. NO.	AS REQD,	002	LOCKTITE-270			KG	0.004				
	SEE NOTE-1 UNBREAKD BOUGHTOUT	001	SOCKET HEAD CAP SCRU M12x70, P12.9			KG	0.08				
REMARKS	ITEM NO.	DESCRIPTION	STD	MATL. CODE	A/C	UNIT	UNIT WT.				
				MATL. SPECN.			QTY.				
CARD TYPE 3	→ 28	28	→	CARD TYPE 1	28	→	CARD TYPE 2				
SIGN. & DATE	 BHARAT HEAVY ELECTRICALS LTD. BHOPAL			DRN.	SDB	SIGN	@Bharat	DATE	26.03.18	NO.OF VAR.	
				CKD.	ABHIJIT	SIGN	<i>ABHIJIT</i>	DATE	26.03.18		-
				APPD.	ABHIJIT	SIGN	<i>ABHIJIT</i>	DATE	26.03.18		-
INVENTORY NO.	DEPT. TME	GRADE OF UN.TOL.	SCALE	WEIGHT(KG)	REF.TD ASSY.DRG.	ITEM NO.	NO.OF ITEM				
	CODE	405		N.T.S.	0.084	04451509051	011	02			
	TITLE				DRAWING NO.		REV				
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				SHT.NO	01	NO.OF.SHT.	01				

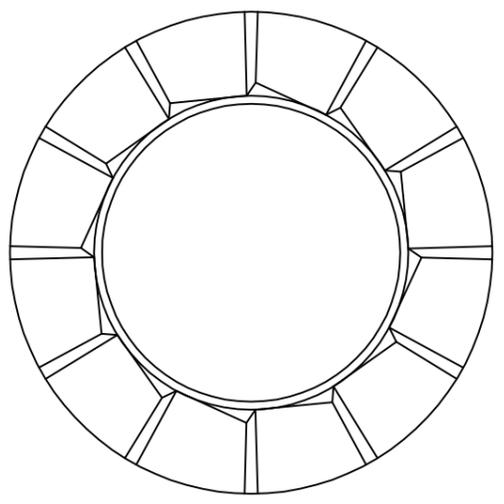
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FIRST ANGLE PROJECTION

ALL DIMENSIONS ARE IN mm.

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SEIZING RIDGES ON OUTER SURFACE

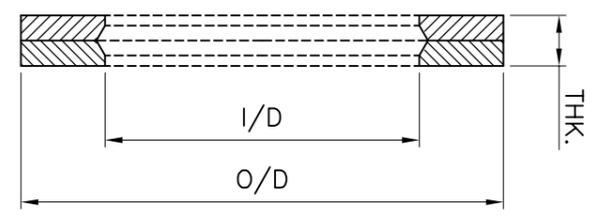
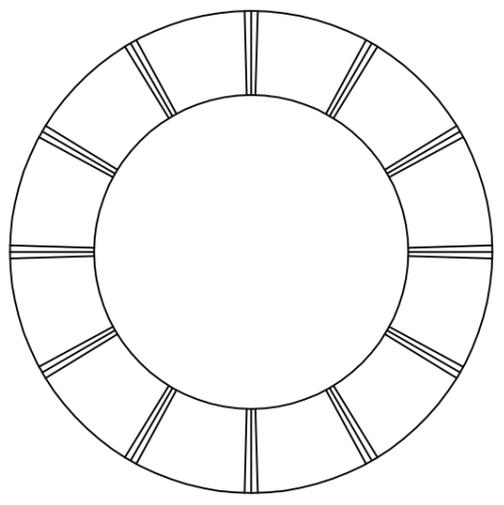


TABLE-1 (ALL DIMENSIONS ARE IN MM)

SL. NO.	SIZE	I/D	O/D	THK.	REF. ASSY. DRG. NO.	ITEM NO.
1	M12	A. 13.00±0.2	A. 19.60±0.2	A. 2.50±0.25	04391531106	014
		B. 12.95±0.2	B. 19.60±0.2	B. 4.22±0.25	04391527001	014
2	M12	A. 13.00±0.2	A. 19.60±0.2	A. 2.50±0.25	04391580002	014 & 037
		B. 12.95±0.2	B. 19.60±0.2	B. 2.50±0.25	04451509051	016
3	M30	A. 31.50±0.2	A. 47.00±0.3	A. 6.60-8.5	04393180001	011
		B. 32.39±0.2	B. 47.63±0.3	B. 6.73-8.5	04393131106	017
4	M36	A. 37.30±0.2	A. 55.10±0.3	A. 6.60-8.5	04393113002	016
		B. 36.32±0.2	B. 55.78±0.3	B. 5.84-8.5	04393127007	016
5	M16	A. 17.00±0.2	A. 30.70±0.2	A. 3.30±0.25	04394001001	010
		B. 16.53±0.2	B. 31.67±0.2	B. 4.79±0.25	04394001001	010
6	M24	A. 25.40±0.2	A. 39.10±0.2	A. 3.30±0.25	04394001001	010
		B. 25.78±0.2	B. 41.30±0.2	B. 6.50±0.25	04394001001	010
7	M10	A. 10.55±0.2	A. 16.5±0.2	A. 2.5±0.25	04451509051	015

NOTES:

- SUPPLIER CAN OFFER THE WASHER AS PER EITHER 'A' OR 'B' AGAINST EACH SERIAL NO. AS MENTIONED IN TABLE 1
- MATERIAL OF SERRATED LOCK WASHER SHALL BE CONFORMING TO EITHER OF THE FOLLOWING:
 - EN 1.7182
 - EN 1.7182
 - 50Cr V4 TO DIN17222
- SURFACE COATING-DELTA PROTEKT ® BASE COAT (KL100) AND TOP COAT (VH302GZ)
- ONE SERRATED 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, IM3302 SHALL BE AS PER SL NO. 02 OF TABLE-1.

VAR NO.	ITEM NO.	DESCRIPTION	QTY.	UNIT WT.	ZONE
59	64	58 59 60	77	29	55
VAR 00	65	75 78 79 25	27	29	55
		SEE TABLE 1			

ADDITIONAL INFORMATION

REV.	DATE	ALTERED	CHECKED	APPROVED
04	17.10.19	A.JHARIA	A.JAIN	A.JAIN
ZONE	IN TABLE-1, SL. NO. 2 & 3, REF. ASSY. DRG. NO. 04451509051 & 44453109001 ADDED. NOTE-5 MODIFIED.			
ZONE	IN TABLE-1, SL. NO. 7 ADDED.			

STATUS OF DRAWING
DISTRIBUTION OF PRINTS
TME-1, TXM-3,
TNX-1

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

DEPT. TME
UNTOL. DIMS. GR.
SCALE NTS
WEIGHT (K.G.)
REF. TO ASSY. DRG.
SEE TABLE 1

DRN. VJAY
CHD. D.K.
APPD. A.S.

NAME SIGN DATE
VJAY 18.03.13
D.K. 18.03.13
A.S. 18.03.13

NO. OF VAR. 00

INVENTORY NO.	SIGN. & DATE	REF. DRG. NO.
03	23.01.15	
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.	

REV.	DATE	ALTERED	CHECKED	APPROVED
02	12.07.14	A.JHARIA	A.JAIN	A.JAIN
ZONE	IN TABLE-1 SL. NO.-5 WAS ON.			
ZONE	IN TABLE-1 IT.006 ADDED. IT.002 ASSY.REF. DRG. NO. & IT. NO. 04304581001 & 037 ADDED.			

REV.	DATE	ALTERED	CHECKED	APPROVED
01	13.07.13	A.JHARIA	A.JAIN	A.JAIN
ZONE	IN TABLE-1 SL. NO.-5 WAS NOT ON.			

TITLE

SERRATED LOCK WASHER

DRAWING NO. **34391560001**

SHEET NO. 01 NO. OF SHEET 01

REV. 04

SIZE A3

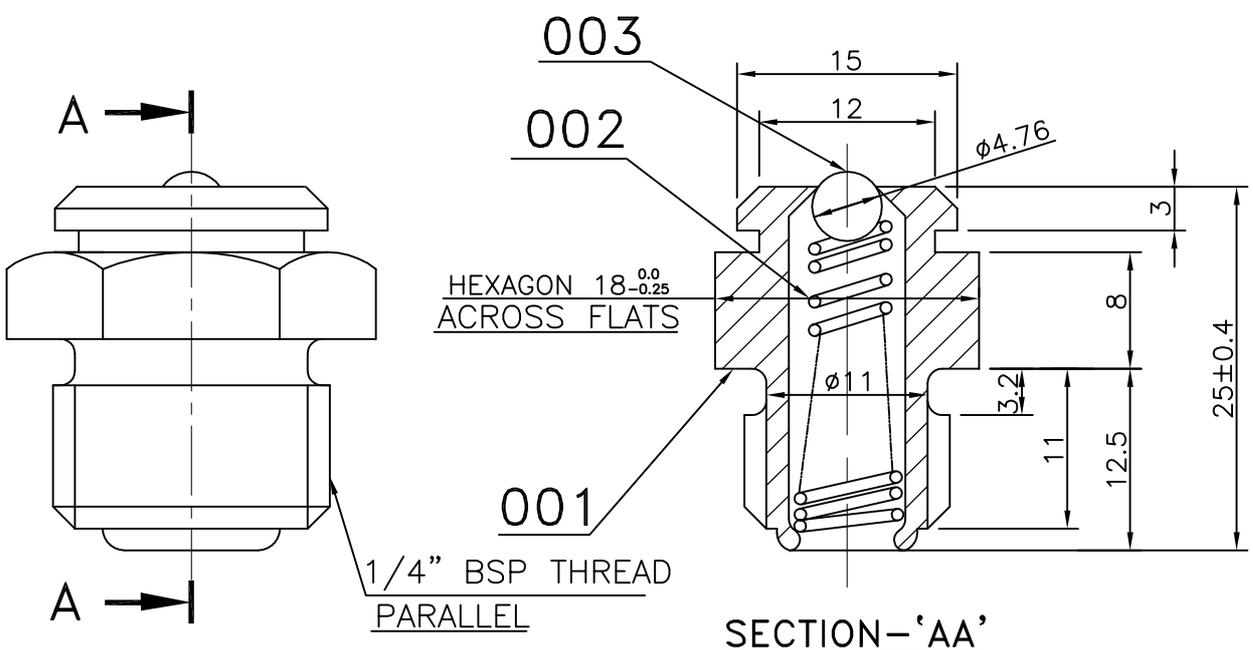
1194847/2022/HEP-TAM21300

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED			CHECKED	
		APPROVED			APPROVED	
ZONE					ZONE	STATUS OF DRAWING
						DISTRIBUTION TME-1, TXM-3, TNX-1 OF PRINTS

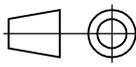


NOTE:-

- GREASE NIPPLE TO BE ZINC PLATED TO AA0673603 AND AA0673604.

REF. DRG. NO.	VAR00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	IT.NO.	MATL. CODE	A	C	UNIT	UNIT WT.
001			003	BALL			AISI304			KG.	0.01
001			002	VALVE SPRING			AA10301			KG.	0.01
001			001	GREASE NIPPLE BODY			AA12114			KG.	0.02
						VAR.	MATL. SPCN.				QTY.
28 → CARD TYPE-3			28 → CARD TYPE-1			28 → CARD TYPE-2					

SIGN. & DATE	 BHARAT HEAVY ELECTRICALS LTD. BHOPAL	NAME	SIGN	DATE	NO. OF VAR.
		DRN. A.JHARIA	<i>A.Jharia</i>	22.07.11	
		CHD. D.K.	<i>D.K.</i>	22.07.11	
		APPD. A.S.	<i>A.S.</i>	22.07.11	

INVENTORY NO.	DEPT. TME	UNTOL. DIMS. GR.		SCALE	WEIGHT (K.G.)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEM
	CODE			N.T.S.	-			
	405					24454303001	016	003
TITLE						DRAWING NO.	REV.	
						4 445 15 03 007	00	
						SHT. NO. 01	NO. OF SHT. 01	