

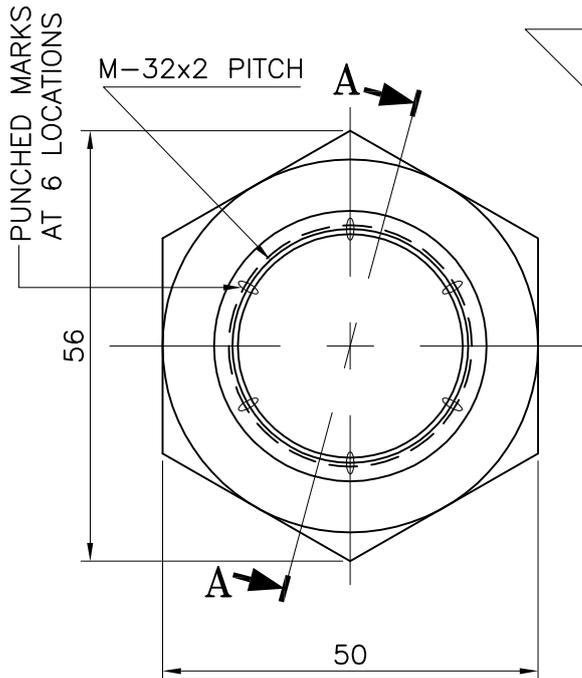
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

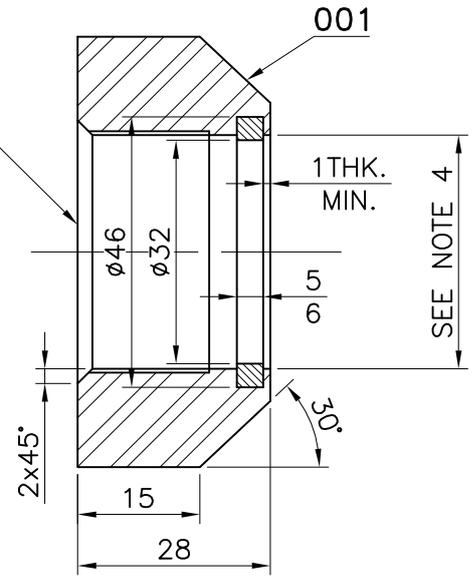
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REV. 02	DATE 02.5.05	ALTERED SKG	CHECKED DK	APPROVED NS	REV. 05	DATE 13.06.17	ALTERED SB @Bhat	CHECKED JK Kumar	APPROVED RC Rana	ADDITIONAL INFORMATION SIM DRG. NO.8360845
DRG. UPDATED. IN BOM ITEM 002 WAS NOT ON.					DIMN. $\phi 46, \phi 32, 5/6$ & 1 ADDED NOTE-4 & 5 ADDED.					STATUS OF DRAWING
										DISTRIBUTION TME-1, TAM-3, OF PRINTS TNX-1
REV. 03	DATE 29.11.05	ALTERED SKG	CHECKED DK	APPROVED NS	REV. 04	DATE 18.10.14	ALTERED SB @Bhat	CHECKED JK Kumar	APPROVED JK Kumar	
IN BOM IT.002 WAS ON. IN SECTION DIM. $\phi 44, \phi 39, \phi 34$ & 3,3.5,3 WERE ON. NOTE-2,3 WERE 1,2 NOTE-1 ADD.					IN TITLE BLOCK ASSY. REF. NO. 04304576002 WAS 04301076001. STYLE NO. ADDED.					

STYLE LIST		
VAR.	IT.NO.	STYLE NO.
-	001	BP9094676613



THIS SURFACE TO BE SQUARE TO PITCH DIA. WITHIN 0.35 T.I.R.



SECTION-'AA'

NOTES:-

1. NUT SHOULD CONFORM TO DIN:985 OR ISO:10511 PROPERTY CLASS-8.
2. MATERIAL TO BE STEEL & NON-METALLIC INSERT HEAT TREAT TO ROCKWELL "C" 25-31, FINISH-PHOSPHATE TREAT.
3. O.D. TO BE CONCENTRIC WITH THREAD AXIS WITHIN 0.25 TIR.
4. DIA. SHALL BE KEPT SUCH THAT NYLON DOES NOT COME OUT DURING TIGHTENING WITH M32 SCREW. SAMPLING CHECK TO BE DONE AT SUPPLIER'S WORKS.
5. NYLON WASHER SHALL BE TIGHT FITTED IN THE GROOVE SUCH THAT IT DOES NOT ROTATE DURING BOLT TIGHTENING.

VAR 00	REMARKS	VAR. NO.	ITEM NO.	DESCRIPTION	STD.	DRAWING NO.	IT.NO.	MATL. CODE	A	UNIT	UNIT WT.	G.S.	ZONE
	SEE NOTE		001	NUT									
							VAR	MATL. SPECN.	C/D		QTY.		



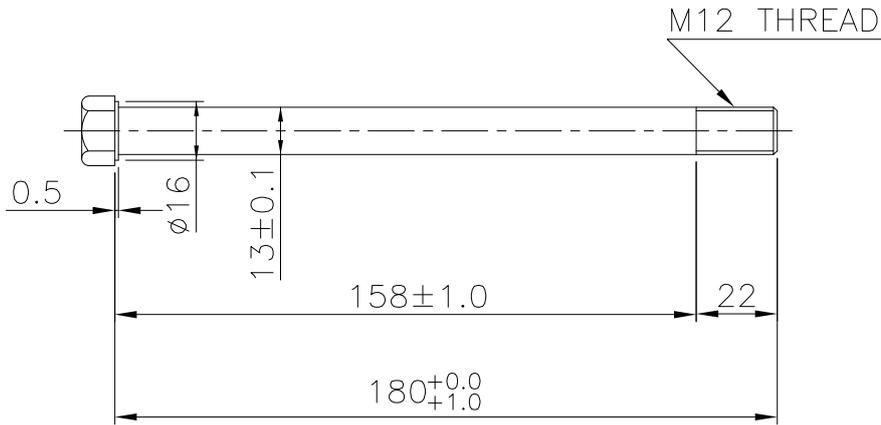
भारत हेवी इलेक्ट्रिकल्स लिमिटेड
भोपाल
BHARAT HEAVY ELECTRICALS LTD.
BHOPAL

नाम NAME	हस्ता. SIGN	दिनांक DATE	वे.र. की संख्या NO. OF VAR.
कार्या DRN R.B.V.	-sd-	15.6.02	
जांचा CKD D.K.	-sd-	15.6.02	
अनुमोदित APPD M.B.	-sd-	15.6.02	

विभाग DEPT TME	अन. टॉल. नाप की त्रुटि UNTOI.DIMS. GR. TM 20079 GR'M'	अनुपात SCALE NTS	भार कि.ग्रा. WEIGHT (K.G.)	उसे.ड्राईंग का संदर्भ REF. TO ASSY. DRG. 04304576002	मद क. ITEM NO. 012	मद संख्या NO. OF ITEM 001
कोड CODE 405						
शीर्षक/TITLE NUT SLFLKG TRACTION ALTERNATOR TA9001AZ				आरेख क्र./DRAWING NO. 4 430 10 76 006		पुन./REV. 05
				पृष्ठ क्र./SHT. No. 01	पृष्ठों की संख्या/NO. OF SHT. 01	

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REV. 03	DATE 20.11.14	ALTERED @bsent	CHECKED fmar	APPROVED fmar	REV. 02	DATE 5.2.09	ALTERED MMJ	CHECKED OPV	APPROVED SA	ADDITIONAL SIM DRG. NO. 9437798				
STYLE NO. ADDED. WEIGHT ADDED.					DRG. UPDATED & DIGITIZED.					STATUS OF DRAWING				
										DISTRIBUTION TME-1 OF PRINTS TAM-4 TNX-1				
REV. 04	DATE 06.02.15	ALTERED @bsent	CHECKED fmar	APPROVED fmar	REV. 05	DATE 09.03.15	ALTERED @bsent	CHECKED fmar	APPROVED fmar	REV. 06	DATE 14.03.17	ALTERED SDB @bsent	CHECKED JK fmar	APPROVED RC Ransh
DIMS. 187 ⁰ _{+1.0} & 34 WERE 191 ⁰ _{+1.0} & 38 RESPLY.					DIMS. 165±1.0 & 22 WERE 153±0.5 & 34. NOTE-2 ADDED.					DIMS. 158±1.0 & 180 ^{0.0} _{+1.0} WERE 165±1.0 & 187 ^{0.0} _{+1.0}				



STYLE LIST	
IT.NO.	STYLE NO.
001	BP9014677529

NOTES:-

- ALL OTHER PROPERTIES AND DIMENSIONS OF ITEM 001 TO BE AS PER AA7111122 FOR M12 BOLT PROPERTY CLASS 8.8.
- AXIS OF HEAD MUST BE CONCENTRIC WITH AXIS OF BOLT WITHIN 1MM TIR.

REF. DRG. NO.	SEE NOTE-1	001	STATOR BOLT 19 A/Fx200LG.	AA7111122	KG.	0.21	
	REMARKS	ITEM NO.	DESCRIPTION	MATL. CODE	UNIT	UNIT WT.	
SIGN. & DATE	CARD TYPE-3	28	28	CARD TYPE-1	28	CARD TYPE-2	
	 BHARAT HEAVY ELECTRICALS LTD. BHOPAL			DRN.	NAME	SIGN	DATE
INVENTORY NO.	DEPT. TME	UNTOL. DIMS. GR.	SCALE	WEIGHT(KG)	REF.TO ASSY.DRG.	ITEM NO.	23 24
	CODE 405	GR'M' TM 20079	N.T.S.	0.21	14323477001	005	NO.OF ITEM 001
TITLE					DRAWING NO.		REV
STATOR BOLT					44323477001		06
AUX. ALTERNATOR AA9201AZ					SHT.NO 01	NO.OF.SHT. 01	

	<h1>CORPORATE STANDARD</h1>	AA7111122
		Rev No.09
		PAGE 1 of 3

BOLTS, HEXAGON HEAD, PRODUCT GRADE 'A' COARSE PITCH, STEEL PROPERTY CLASS 8.8 (M3 - M16)

1.0 DESIGNATION:

A product Gr.A, hexagon head, steel bolt of nominal diameter 10 mm, length 60 mm, coarse pitch and conforming to property class 8.8 shall be designated as:

1.1 On Drawings:

- i) Material specification column : AA7111122
ii) Description Column : BOLT HEX A M10 X 60 – 8.8

1.2 On Indents:

Bolt Hex A M10 X 60 – 8.8: AA7111122

1.3 For issuing enquiries and on purchase orders:

While issuing enquiries and purchase orders delete BHEL standard number from above description and add the information given under clause 2.0

2.0 COMPLIANCE WITH STANDARDS:

2.1 Dimensions, Tolerance & General Requirements:

As per IS 1364 : Part 1 : 2018

2.2 Mechanical Properties:

To conform to property class 8.8, as specified in Table-3 of IS:1367, Part 3
Permissible hardness 238-350 HB for sizes M6-M10

2.3 Threads:

Pitch-Coarse to IS 4218 : Part 2

Tolerance quality – Medium

Tolerance class – 6g

2.4 Identification Marking:

As stated in Clause 10 of IS 1367 : Part 3

2.5 Surface Discontinuity:

As per IS 1367 : Part 9 : Sec 1

2.6 Finish:

Planted as specified in BHEL order.

Revisions:

APPROVED:
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(F)

Rev No.09	Amd No.	Reaffirmed	Prepared	Issued	Dt. of 1 st Issue
Dt:20-03-2021	Dt:	Year:	12HEEP, Haridwar	Corp.R&D	January 1977

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AA7111122

Rev. No.09

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CORPORATE STANDARD**3.0 NOTE:**

- 3.1** Length and diameter combination (refer Table-1 on page 3 of 3) between the bold lines should only be use
- 3.2** For screw threads, general (Metric) refer to BHEL standard AA0231800
- 3.3** For tolerance grade, position and class refer to BHEL standard AA0230201
- 3.4** Bolts to this standard would be un-plated, divisions wishing to have plated bolts would have to get them plated.
- 3.5** Weights given in this standard are for general reference only and are not meant for commercial transaction.
- 3.6** For product group Gr:A, hexagon head, steel bolts, property class 8.8 (M20 - M24) refer BHEL standard AA7111124
- 3.7** When fasteners are to be tested with in BHEL, the sampling and acceptance plan shall be as per IS:1367, part 17

4.0 REFERRED STANDARDS (Latest publications including amendment):

- | | | |
|-------------------------------------|--------------|---------------------|
| 1) AA0231800 | 2) AA0230201 | 3) AA0231850 |
| 4) IS 1367 : Part 3, 9 : Sec 1 & 17 | 5) AA7111124 | 6) IS 4218 : Part 2 |

EXPLANATORY NOTE

- In Clause 2.1, year of IS updated to 2018
- In Clause 2.4, clause 10 in place clause 9.
- In Clause 2.5, applicable Section of IS added.



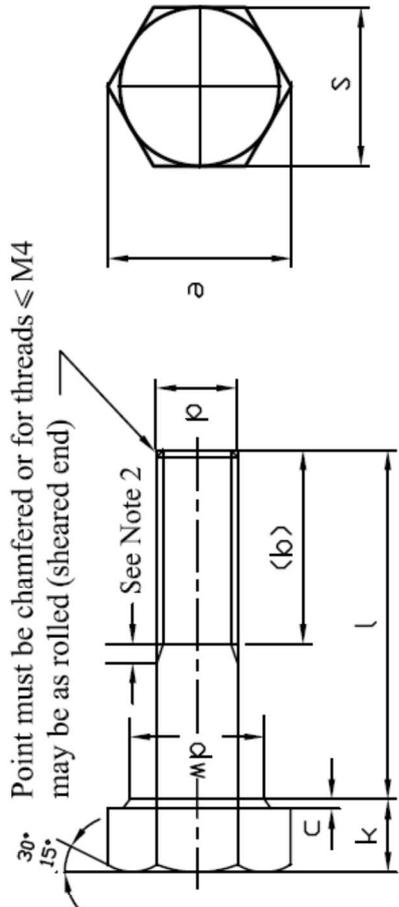
CORPORATE STANDARD

AA7111122

Rev. No.09

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Point must be chamfered or for threads ≤ M4 may be as rolled (sheared end)



- Note:
- 1) Corporate sub codes are shown in the table.
 - 2) For thread runout refer AA0231850
 - 3) Weights have been shown in kg per 1000Nos
 - 4) Symbol Δ denotes the non-preferred size.

All dimensions are in 'mm'

Nom. Size d	Flats s		Crms e		Tks k		Dia dw		Washer c		Thread Length b		Nominal Length (l)														
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	For Norm. Length ≤ 125	For Norm. Length > 125 & ≤ 200	Sub Code	Weight	65	70	80	90	100	110	120	130	140	150			
M3	5.5	6.01	2.12	4.6	0.4	0.15	12	-																			
M4	7.0	7.66	2.92	5.9	0.4	0.15	14	-																			
M5	8.0	8.79	3.65	6.9	0.5	0.15	16	-																			
M6	10.0	11.05	4.15	8.9	0.5	0.15	18	-																			
M8	13.0	14.38	5.45	11.6	0.6	0.15	22	-																			
M10	16.0	17.77	6.58	14.6	0.6	0.15	26	-																			
M12	18.0	20.03	7.68	16.6	0.6	0.15	30	-																			
M16	24.0	26.75	10.18	22.5	0.8	0.2	38	-																			
	23.67		9.82																								

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

For uploading along with the enquiry

Ref No: TME/PQR/TA/SELF LOCKING NUT

Dated: 15/12/2025

Technical Pre-Qualification Requirements (PQR)

Vendor should comply with the following clauses in order to qualify for supply of *tendered item* (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 item as per drawing no. & description mentioned in the enquiry.	Yes/No	Not Required
2.	Vendor should be manufacturer of the item & not a trader.	Manufacturer/ Trader	Not Required
3.	Vendor should have experience of successfully supplying of self-locking nut having non-metallic insert like nylon etc. of size M30 minimum in preceding 5 years from enquiry opening date.	Yes/No	a. PO copy. b. Drawing of supplied item. c. Supply proof i.e. invoice.
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. Declaration by vendors regarding information / compliance submitted by vendor shall be correct in all respect. In case any deviation/false information is revealed later on, BHEL is free to initiate appropriate punitive proceeding as per prevalent processes and guidelines of company.

Important: This document is to be filled and submitted along with the offer. This document must be signed by authorized representative of the vendor and should contain the name of representative & seal of the company.

Date:

(Sign and Seal of Authorized representative of vendor)

BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL
 QUALITY CONTROL TRANSPOSITION
 QUALITY ASSURANCE PLAN(QAP)
 QA PLAN NO. : QTM/TAM/VEENDOR/QAP/2016-17/TA9901/SELF LOCKING NUT REV 00 DT. 24.08.2016
 REFERENCE- DRG NO. 44301076006

Sl. No.	CHARACTERISTIC	CLASSIFICATION	TYPE OF CHECK	QUANTUM OF CHECK		REF. DOCUMENT	FORMAT OF RECORD	REMARKS
				TP	TP/A			
1.0	Material Test Certificate	A	VR	100%	100%	Dwg. no. 44301076006 and relevant spec.	TR	TEST LAB NABL / EQUIVALENT ACCREDITED/ SOURCE MILL. (Supplier to get the raw material correlated with TC, purchase document from TPIA/QC), TC to be Submitted
2.0	Dimensions	A	I	100%	5%	Dwg. no. 44301076006	SR	TM 2007/9 grade M to be followed for untolerated dimensions. Report to be submitted
3.0	Identification Vendor Name	A	VR	100%	5%		SR	
4.0	Packaging suitability for transit & storage	B	VR	100%	---		SR	Packaging shall be such that during transit components should not damage.

PREPARED BY
[Signature]

APPROVED BY
[Signature]

Notes:
 1) All TR, SR checked by TP, TPIA/QC (daily signed & sealed) as per above QAP requirement shall be submitted along with the report.
 2) Note 1, 2 and 3 of drg 44301076006 is to be followed.

Abbreviation: A: Critical, B: Major, VR - Verification, I-Instrument/ Gauges,
 TR - Test Record, SR - Shop Record.

AGENCIES:
 TPIA - BHEL appointed third Party Inspecting Agency
 TP - Task Performer

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