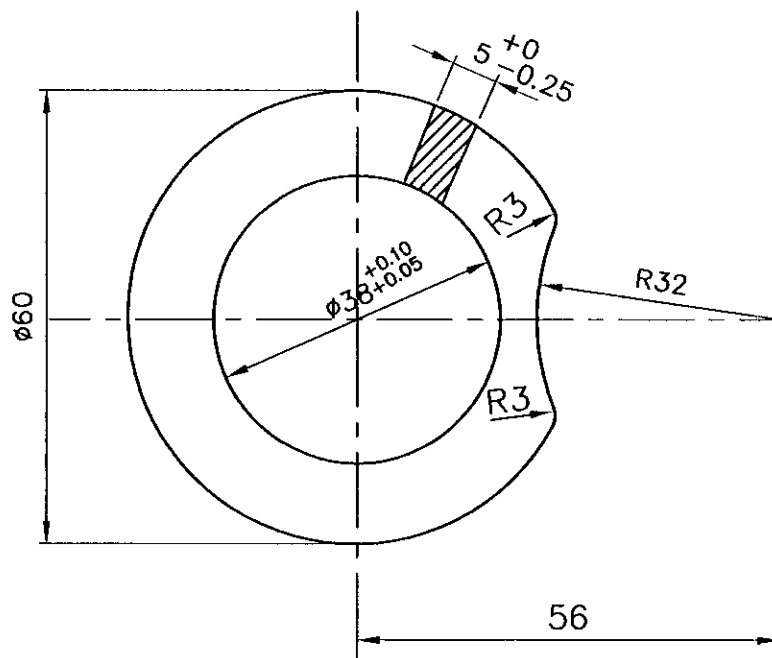


ALL DIMENSIONS ARE IN MILLIMETRES.

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP

REV	DATE	ALTERED
03	11.06.01	CHD & APPD
DRG.UPDATAED AND REDRAWN.		
DCN: SB:1298		


(6.3/√)



NOTE: --

1. SURFACES SHOULD BE PERFECTLY STRAIGHT AND THEY SHOULD BE FREE FROM BENDS.
2. ALL SHARP CORNERS TO BE ROUNDED OFF.
3. CADMIUM PLATE TO 0.012 TO 0.018MM THICKNESS.
4. MAINTAIN THE THICKNESS WITH TOLERANCE BY MACHINING IF NECESSARY.
5. DIMENSIONS GIVEN IN THE DRAWING ARE FINAL DIMENSIONS.
6. FOR QUALITY REQUIREMENTS REFER APPLICABLE LATEST QUALITY PROCEDURE.

PART CODE : 842020117500

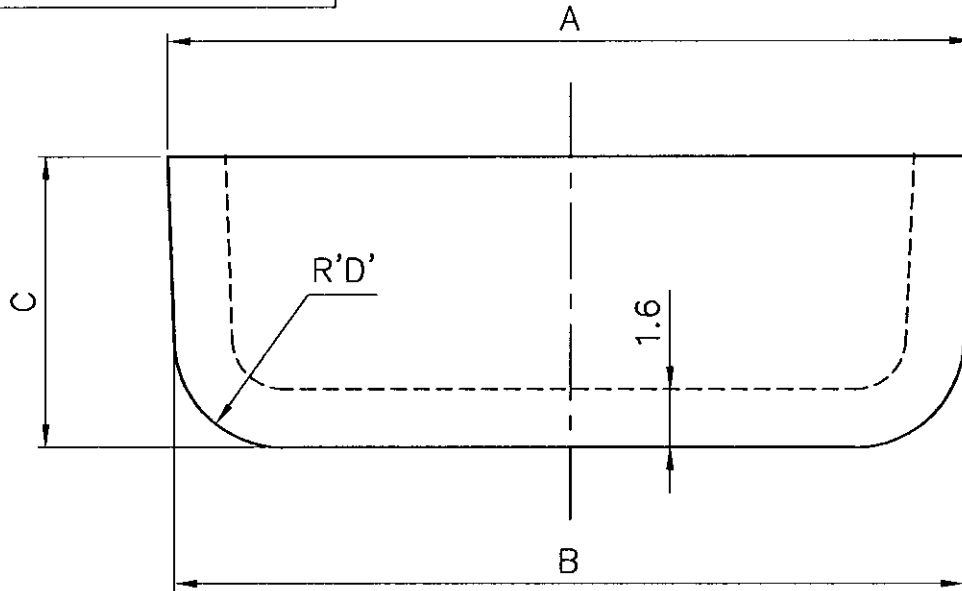
01	PL5XD65	05-011-029	IS2062Fe410WA			0.04				01
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No		ITEM No
 <b>BHARAT HEAVY ELECTRICALS LTD.,</b> UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.				DRN	NAME		SIGN	DATE	NO. OF VAR	
				CHD	V. VARUMUGAM					
				APPD	K. SRIDHARAN					
					S. NATARAJAN					
DEPT SB		SCALE		WEIGHT (KG).		REFERENCE INFORMATIONS				NO. OF ITEMS
CODE		NTS		0.04						
330										
TITLE				CARD CODE	DRAWING NO.				REV	
SWITCH CAM				U 01	4-20-201-00797				03	

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ALL DIMENSIONS ARE IN MILLIMETRES.

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP


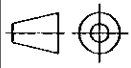
REV	DATE	ALTERED
02	11.06.01	CHD & APPD
DRG.UPDATAED AND REDRAWN.		
DCN:SB:1298		



WT	PARTCODE	STYLE	DIMENSION ØA	DIMENSION ØB	DIMENSION C	DIMENSION D
0.01	842020115100	01	22.2	21.5	8	6
0.01	842020115200	02	19.2	18.5	5	3

NOTES:-

1. FOR QUALITY REQUIREMENTS REFER APPLICABLE LATEST QUALITY PROCEDURE.

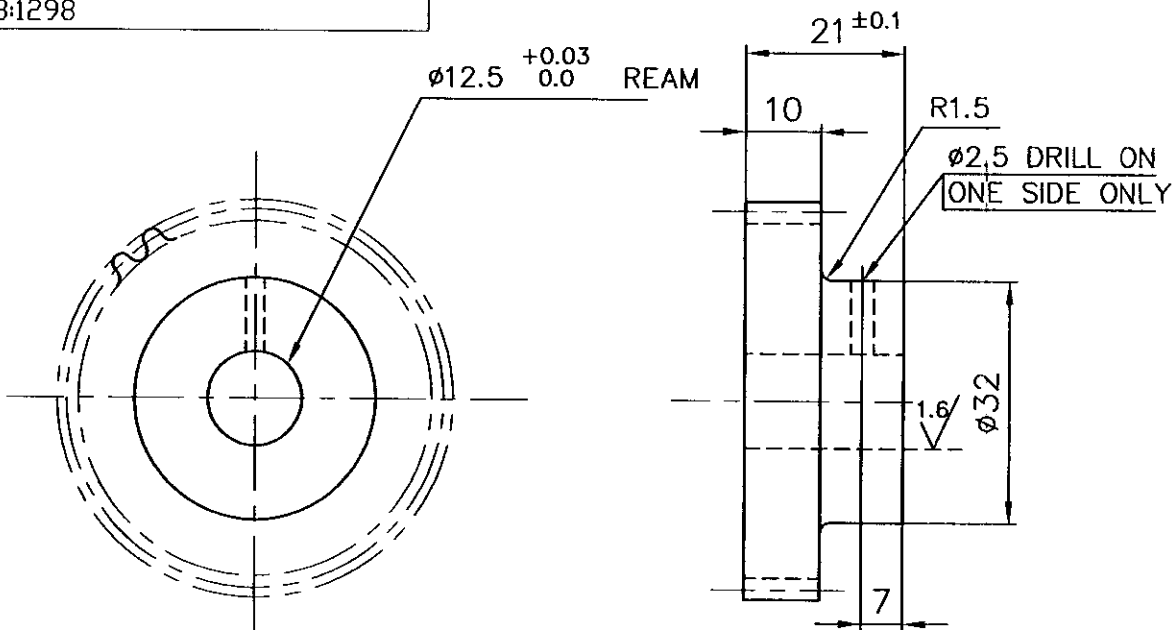
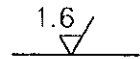
01	SH. 1.6 X Ø 30	150110760000	IS513GrD						01
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No
 <b>BHARAT HEAVY ELECTRICALS LTD.,</b> UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.				DRN	V.ARUMUGAM	SIGN		DATE	NO.OF VAR
				CHD	K.SRIDHARAN				
				APPD	S.NATARAJAN				
DEPT SB		 SCALE NTS	WEIGHT (KG).	REFERENCE INFORMATION				NO. OF ITEMS	
CODE 330									
TITLE				CARD CODE	DRAWING NO.			REV	
<b>CUPPED PLUG</b>				U 01	<b>4-20-201-00192</b>			<b>02</b>	

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ALL DIMENSIONS ARE IN MILLIMETRES.

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP

REV	DATE	ALTERED
03	11.06.01	CHD & APPD
DRG.UPDATED AND REDRAWN.		
DCN:SB:1298		



**GEAR DATA**

MODULE	1.25
PITCH CIRCLE DIA	50mm
NO. OF TEETH	40
TIP DIA	52.5mm
ROOT DIA	46.875mm
TOOTH DEPTH	2.8125mm
PRESSURE ANGLE	20°
CENTRE DISTANCE	33.125mm
TOOTH CLEARANCE	0.3125mm

**TOLERANCE ON GEAR BLANK**

TIP DIA = 52.5 <sup>+0.0</sup>/<sub>-0.05</sub>  
 RADIAL AND AXIAL RUN OUT ON REFERENCE SURFACES = 0.02


**TOLERANCE ON GEAR**

TEETH RUN OUT = 0.063 <sup>+0.0</sup>/<sub>-0.07</sub>  
 WIDTH ACROSS FIVE TEETH = 17.3060 <sup>+0.0</sup>/<sub>-0.13</sub>

**NOTES:-**

1. FOR QUALITY REQUIREMENTS REFER APPLICABLE LATEST QUALITY PROCEDURE.

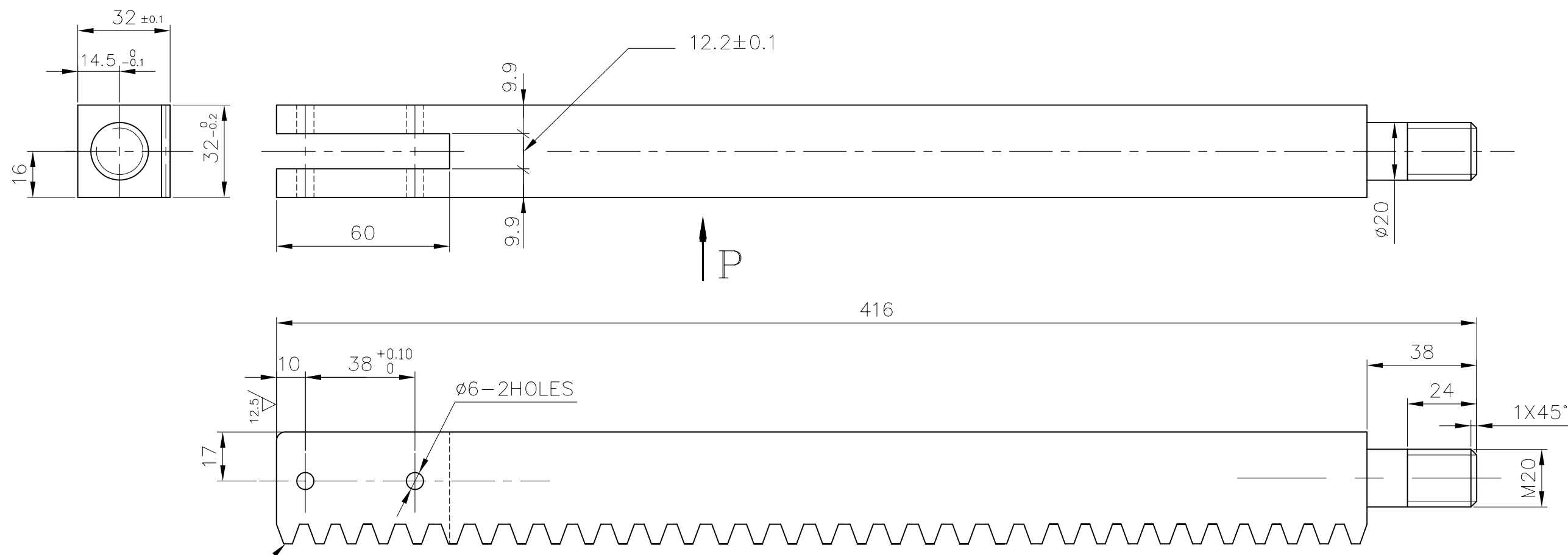
**PART CODE : 842020117900**

01	D63 x 25	150041380000	IS1875CL4			0.020				01
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No		ITEM No
 <b>BHARAT HEAVY ELECTRICALS LTD.,</b> UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.					DRN	NAME		SIGN	DATE	NO.OF VAR
					CHD	V.ARUMUGAM				
					APPD	K.SRIDHARAN				
						S.NATARAJAN				
DEPT SB		SCALE		WEIGHT (KG).	REFERENCE INFORMATIONS				NO. OF ITEMS	
CODE		NTS		0.020						
330										
TITLE					CARD CODE	DRAWING NO.			REV	
GEAR					U 01	4-20-201-00246			03	

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3-20-201-00138  
DRAWING NO.

6.3/  
12.5/



FULL TOOTH PROFILE  
TO BE MAINTAINED  
AT THIS END.

VIEW-P

PART NUMBER : 842020116100

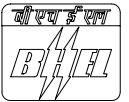
NOTES: -

- FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURES.

MODULE	3
PRESSURE ANGLE	20°
WHOLE DEPTH	6.75

REV	DATE	ALTERED	K.S.
11	26.06.06	CHD & APPD	S.N.
DRG. UPDATED AND REDRAWN.			
DCN: 800547 Dt.02.01.06			

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01	ROUND ø50MM	15 339 142	SA 105				3.680		01	
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No	
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT										
 BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI-620014.						DRN	NAME	SIGN	DATE	NO.OF VAR.
						CHD	K.SRIDHARAN	K.S.	26.06.06	
						APPD	S.NATARAJAN	S.N.	26.06.06	
DEPT	VL	SCALE		WEIGHT (KG).		REFERENCE INFORMATIONS				
CODE	330	NTS		3.680						
TITLE							CARD CODE	DRAWING NO.	REV	
RACK							U 01	3-20-201-00138	11	

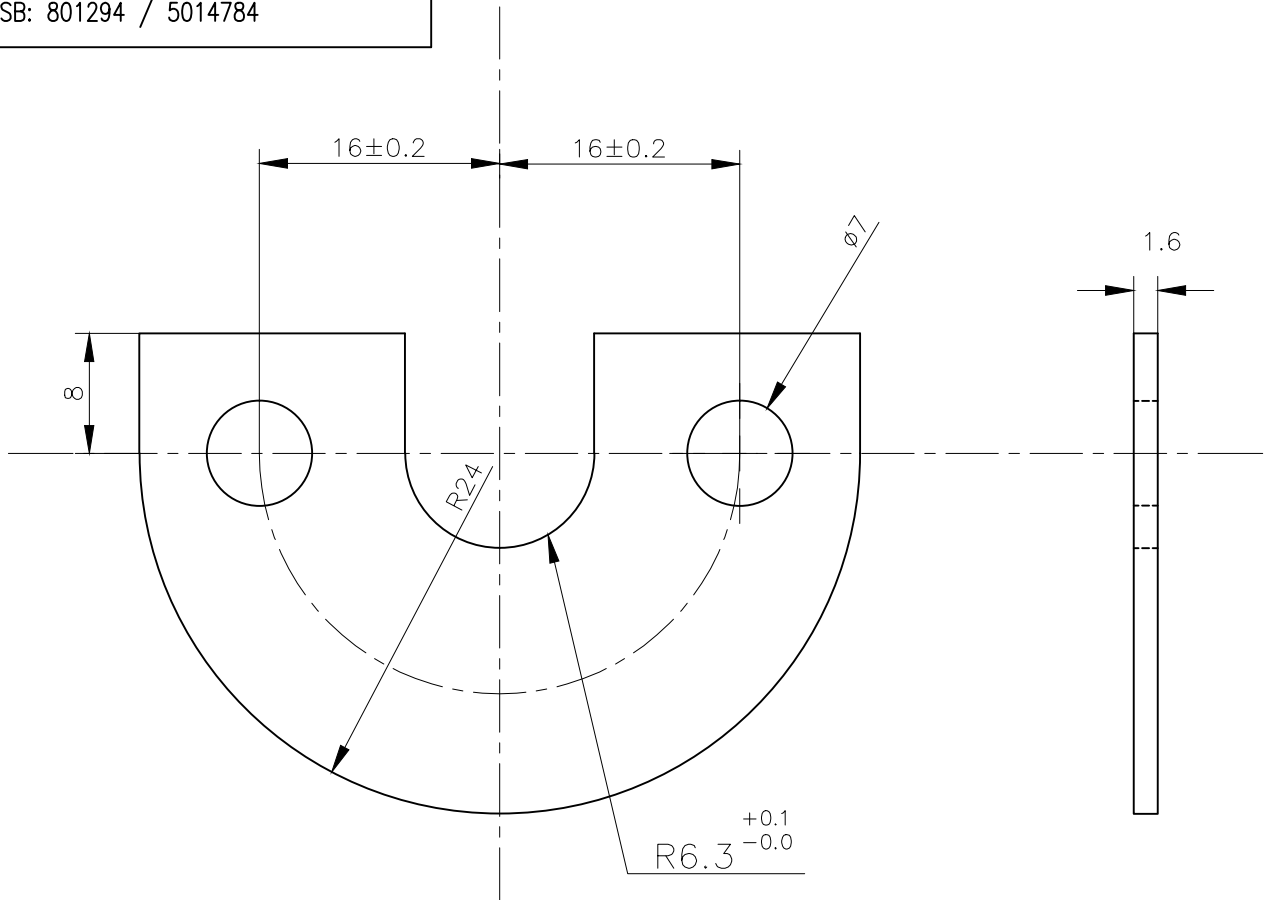
ALL DIMENSIONS ARE IN MILLIMETRES.

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP

REV	DATE	ALTERED	J.S
03	06.01.12	CHD & APPD	K.S

DRAWING CONVERTED AS CAD & UPDATED.


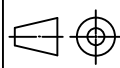
DCN:SB: 801294 / 5014784



NOTE: -

1. TO BE STAMPED AND GALVANIZED TO A THICKNESS OF 0.005MM.
2. FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURE.

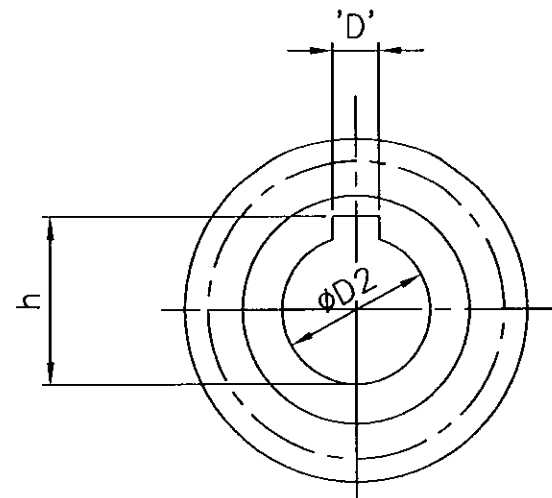
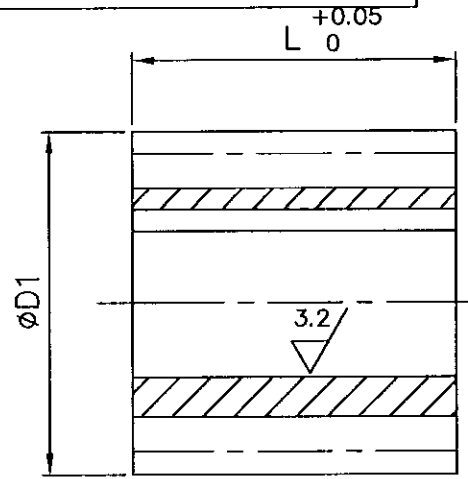
PART CODE: 842020112000

01	SHEET 1.6MM	150110760000	IS 513D			0.01	0.045		
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No
 <b>BHARAT HEAVY ELECTRICALS LTD.,</b> UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.					DRN	NAME	SIGN	DATE	NO.OF VAR
					CHD	J.SANKAR	J.S	06.01.12	
					APPD	K.SRIDHARAN	K.S	06.01.12	
DEPT SB	 SCALE NTS	WEIGHT (KG).		REFERENCE INFORMATIONS				NO. OF ITEMS	
CODE 330		0.14		—					
TITLE					CARD CODE	DRAWING NO.			REV
SHAFT COLLAR					U 01	4-20-201-00261 03			

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3-20-201-00119  
DRAWING NO.

0.8 / (3.2)



NOTES

1. THREADS GROUND AND POLISHED
2. TO BE CASE HARDENED TO A DEPTH OF 0.8MM TO 1MM TO A HARDNESS RC 60-66 FOR STYLES 01 & 02 ONLY

3. TOLERANCE ON GEAR.	10DP	12DP
	1. RADIAL RUNOUT ON PCD (TIR)	0 -0.018mm
2. CHORDAL TOOTH THICKNESS AT ADDENDUM	3.99 <sup>-0.16</sup> -0.235 mm	3.32 <sup>-0.105</sup> -0.18 mm
3. AXIAL PITCH ERROR	±0.011mm	±0.011mm
4. MIN BACKLASH WHEN TEETH ARE IN CONTRACT	0.095mm	—

4. TOLERANCE ON GEAR BLANK

TIP DIA 0  
-0.039  
RADIAL RUNOUT OF THE CYLINDER 0.016  
RADIAL AXIAL RUN OUT OF THE REF SURFACE 0.0125

5. FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURES.

TOLERANCE	VALUE
5JS9	±0.015
4JS9	±0.015
12H8	+0.027 0
15H8	+0.027 0
16H8	+0.027 0

DESCRIPTION	VARIANT NO.1 CASE HARDENED WORM 10	VARIANT NO.2 CASE HARDENED WORM 12	VARIANT NO.3 SOFT WORM 10
O D	1.45"	1.1666"	1.45"
WHETHER L.H- OR RH.	R.H	L.H	RH
KEY WAY WIDTH 'D'	5JS9	4JS9	5JS9
HEIGHT 'h'	18.3 <sup>+0.1</sup> 0	13.8 <sup>+0.1</sup> 0	17.3 <sup>+0.1</sup> 0
FACE 'L'	35mm	22mm	35mm
LEAD ANGLE 'Y'	4° 34'	4° 45'	4° 34'
LEAD	0.3142"	0.2618"	0.3142"
PRESSURE ANGLE	14 1/2°	14 1/2°	14 1/2°
NO.OF STARTS 'Z'	1	1	1
DIAMETRAL PITCH	10	12	10
HOLE DIA D2	16H8	12H8	15H8
PITCH CIRCLE DIA D1	1.25"	1"	1.25"
PART CODE	842020112200	842020113600	842020113500

NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No
01	WORM 10 D 40	15-039-116	A 193 B7			0.150			3
01	WORM 12 D 50	15-027-142	IS157013Ni3Cr			0.100			2
01	WORM 10 D 50	15-027-142	IS157013Ni3Cr			0.150			1

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										BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI-620014. 365-121					DRN	NAME		SIGN	DATE	NO.OF VAR.
															CHD	V.ARUMUGAM				
															APPD	S.NATARAJAN				
DEPT	VL	SCALE NTS		WEIGHT (KG).		REFERENCE INFORMATION				NO. OF ITEMS										
CODE	330					DRAWING NO.				REV										
TITLE					CARD CODE		DRAWING NO.				REV									
WORM					U 01		3-20-201-00119				09									

REV	DATE	ALTERED
09	11.06.01	CHD & APPD
DRG.UPDATED AND REDRAWN.		
DCN: SB: 1298		