

GUARANTEED TECHNICAL PARTICULARS FOR CAPACITOR VOLTAGE TRANSFORMERS

(To be filled in by the Bidder separately for each type and voltage rating)

1. Type of tank/Installation : Dead Tank Type, Outdoor
2. Type of mounting : Pedestal Type
3. Manufacturer's Name : M/s. CG Power and Industrial
Solutions Limited, Nasik, India
4. Conforming to standard : IEC:61869-1&5 & IEC60358(2013)
5. Type : CVE:145/650/50
6. Type of insulation : A Class
7. Rated primary voltage (kV rms) : 132kV / $\sqrt{3}$
8. Highest system voltage (kV rms) : 145kV / $\sqrt{3}$
- No. of Cores : Three
9. Rated Secondary Voltage (volts) : 110/ $\sqrt{3}$ 110/ $\sqrt{3}$ 110-110/ $\sqrt{3}$
10. Rated Transformation ratio : 132/ $\sqrt{3}$: 110/ $\sqrt{3}$ 132/ $\sqrt{3}$: 110/ $\sqrt{3}$ 132/ $\sqrt{3}$: 110-110/ $\sqrt{3}$
11. Rated secondary Burden(VA) : 50 100 50
12. Rated thermal burden(VA) : 300
- 13.a Accuracy at rated burden : 0.2 0.5 3P
- 13.b Simultaneous Burden (VA) : 50VA / 0.2, 100VA/0.5, 200VA/3P
14. Rated frequency (Hz) : 50
15. Temp. rise of winding by resistance(deg.c) : 55 / As per IEC61869-5 Clause No.7.2.2
16. Primary winding one minute power frequency withstand voltage kV (r.m.s) : 275 kV rms
17. Impulse withotand Voltage 1.2/50 micro Sec. full wave positive . 650 kV
And negative impulse withstand voltage KV(peak)
18. One minute power frequency withstand voltage of secondary winding kV (r.m.s) : 3 kV
19. Maximum dynamic P.F.overvoltage kV (peak) : Not applicable for CVT
20. Maximum Radio interference voltage at 266 kV r.m.s (micro volts) : < 1000
21. Corona inception and extinction voltage kV(r.m.s) : 110kV & 92kV
22. Capacitance (+ 10% -5%)pF : 4400pF

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Chief Engineer/Construction
TSTRANSCO, Vidyut Soudha,
Hyderabad - 500 082.



23. Total creepage distance of bushing(mm) : 3625 mm (min)
24. Overall height(mm) : 1980 +/- 40mm
25. Total weight (mm) : 300 kg (+/- 10%)
26. Type test report (Report No.) : Attached
27. Min. recommended spacing between voltage transformers : Not in our scope
28. Outline dimension drawing No. giving clearance for installation (Drg. No.) : Not in our scope
29. Mounting flange dimensional details : 450x450
30. Rated voltage Factor : 1.2 for continuous & 1.5 for 30 seconds
31. Partial discharge level at rated voltage for capacitance divider (pc) : < 10
32. Seismic acceleration (horizontal)(g) : 0.3g
33. No. of terminals in terminal box : 09
34. Primary and secondary windings made out of: Copper
35. Tank material & tank coating : MS Steel & HDG
36. Hardware exposed to atmosphere : S.S / MS HDG
37. Bolts, nuts and washers : Stainless and spring steels
38. Porcelain housing and its make : IEC/Modern/WSI/CJI/RaviKiran/ABIL
39. Sealing : Yes, by Stainless Steel Bellow
40. Whether supply includes terminal connectors : Not in CGPISL Scope of supply
41. Creepage : 25mm/kV



APPROVED

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Chief Engineer/Construction 25/8/22
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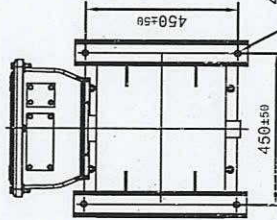
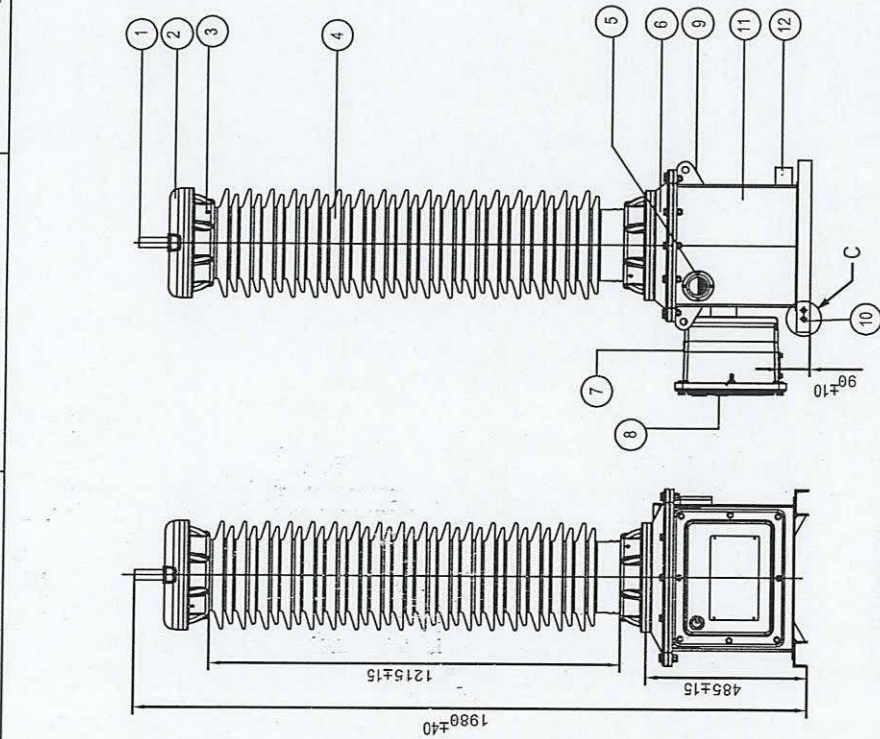
Standardized Guaranteed Technical Particulars for 132kV Capacitor Voltage Transformer (CG Power & Industrial Solutions Ltd. make)
STD/GTP-DWG/Approval No.12003, Revision No.0
Prepared & Approved during SEPTEMBER 2022

DRG.NO: 3-CAD 10400

IF IN DOUBT, ASK

FRAME : B15e (MDMO)

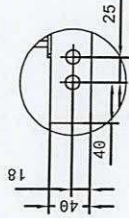
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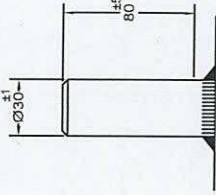
Bottom view

CAPACITOR VOLTAGE TRANSFORMER

DETAIL C



ITEM - 10



ITEM - 1

SR.NO	QTY.	DESCRIPTION	MATERIAL
1	1	H.V. TERMINAL Ø30x80 mm LONG	ALUMINIUM
2	1	HOOD	ALUMINIUM
3	2	PORCELAIN FLANGE	ALUMINIUM
4	1	PORCELAIN INSULATOR *	PORCELAIN
5	1	OIL LEVEL INDICATOR ON EMU	POLYCARBONATE
6	1	TANK COVER	ALUMINIUM
7	1	SECONDARY TERMINAL BOX	ALUMINIUM (METAL PHOTO)
8	1	RATING/SCHEMATIC PLATE	ALUMINIUM
9	4	LIFTING LUGS	STEEL HDG
10	2	EARTHING HOLES	—
11	1	EMU TANK	STEEL HDG
12	1	OIL SAMPLING VALVE (FOR EMU)	STEEL GALVANISED

* MAKE OF PORCELAIN : IEC / CJI / MODERN / RAVIKIRAN / ABIL

NOTE:

OIL IS FILLED UP TO NORMAL LEVEL OF OIL LEVEL INDICATOR.

TOTAL MASS	: 300 kg	±10%
TOTAL OIL MASS	: 50 kg	±10%
TOTAL CREEPAGE	: 3625 mm (Min)	

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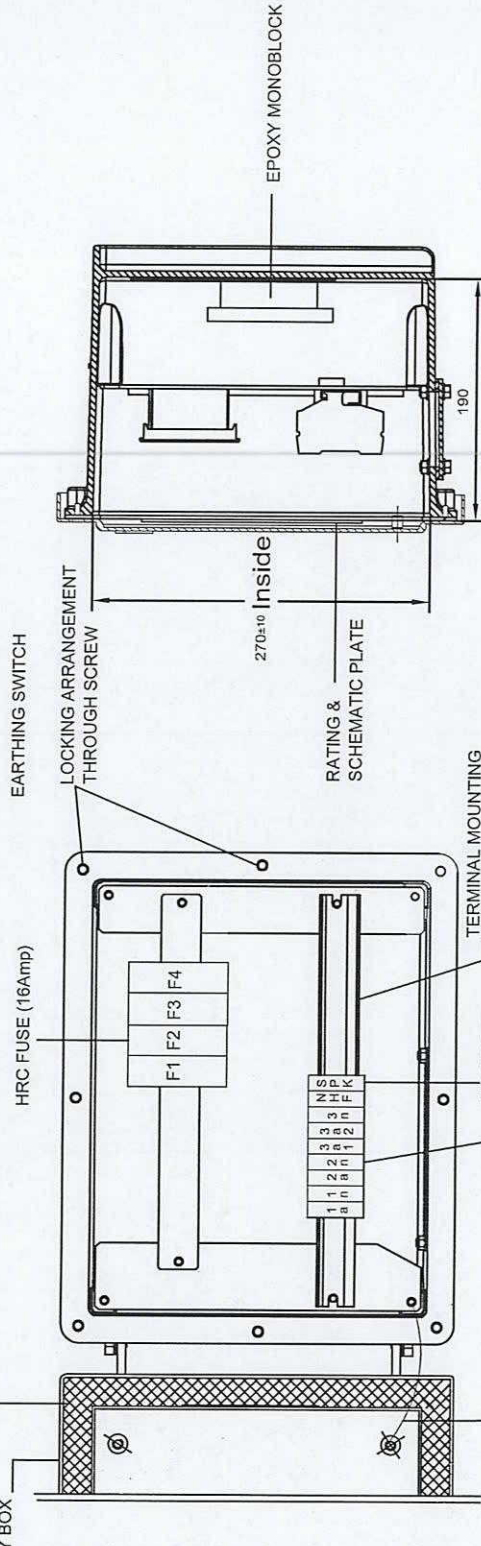
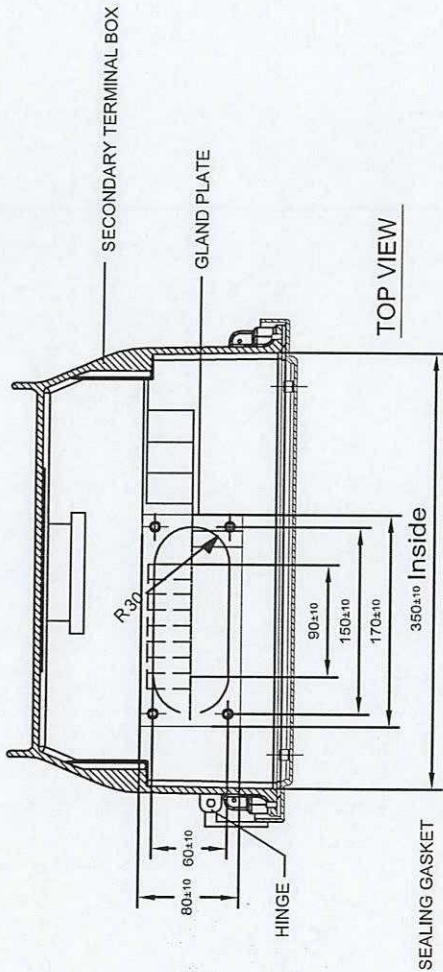
A. Suresh 25/8/22
Civil Engineer/Construction
ISTRANSCO, Vidyut Soudha,
Hyderabad - 500 082.



Suresh

CUSTOMER : TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO)	
GEN. TOL.	MATL.:
SPEC.:	
TITLE : STANDARD DRAWING GENERAL ARRANGEMENT 145 KV CVT (4400 pF)	
SCALE: NTS	INITIALS
ALL DIMNS. IN MM.	NSB
UNLESS OTHERWISE SPECIFIED.	HARI
DATE: 26.02.2022	USS
NO	REVISION
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A3 297 * 420	

CG Power and Industrial Solutions Limited S1 - DIVISION, AMBAD, NASHIK	
DRG.NO: 3-CAD 10400	REV 0



CUSTOMER : TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO)

GEN. TOL. : MATL. : SPEC. :

THIRD ANGLE PROJECTION

SCALE: NTS

ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.

TITLE : STANDARD DRAWING
SECONDARY BOX GA
145 KV CVT (4400 pF)

CG Power and Industrial Solutions Limited
S1 - DIVISION, AMBAD, NASHIK

DRG.NO: 3-CAD 10402

REV 0

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S. Suresh
CHIEF ENGINEER / CONSTRUCTION
TSTRANSCO/VIDYUT SOUDHA/HYD.



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DRG.NO: 3-CAD 10402

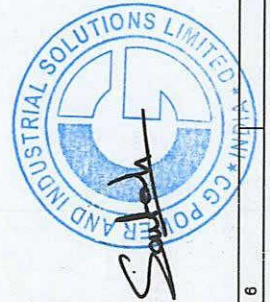
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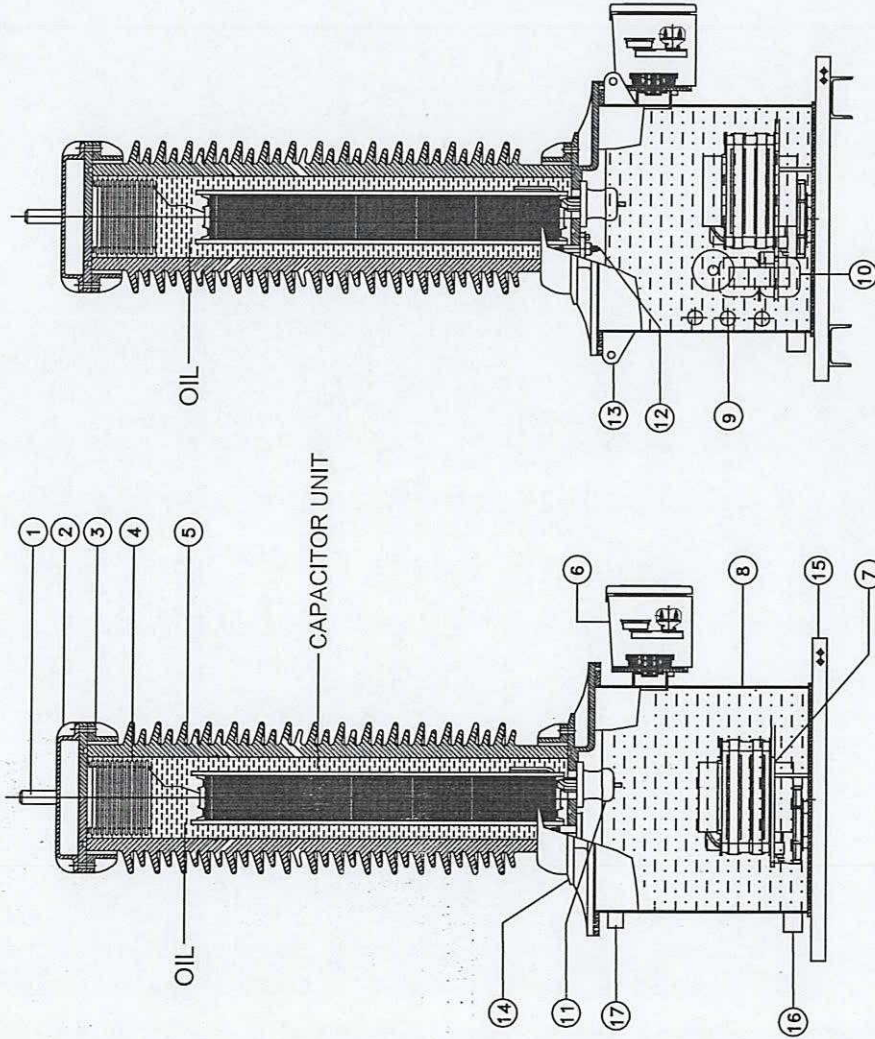
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CHIEF ENGINEER / CONSTRUCTION
TSTRANSCO/MDYUT SOUDHA/HYD.



SR.NO QTY. DESCRIPTION

1	1	H.V. TERMINAL Ø30x80 mm LONG
2	1	HOOD
3	2	PORCELAIN FLANGE
4	1	BELLOWS
5	1	PORCELAIN INSULATOR
6	1	SECONDARY TERMINAL BOX
7	1	INDUCTIVE VOLTAGE TRANSFORMER
8	1	EMU TANK
9	1	DAMPING DEVICE
10	1	COMPENSATING CHOKE
11	1	M.V. TAP TERMINAL
12	1	NHF TERMINAL
13	4	LIFTING LUGS
14	1	TANK COVER
15	2	EARTHING PADS (8mm. THK)
16	1	OIL SAMPLING VALVE (FOR EMU)
17	1	OIL FILLING PLUG (FOR EMU)

CUSTOMER : TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO)		TITLE : STANDARD DRAWING	
GEN. TOL.	MATL. SPEC.	SECTIONAL VIEW FOR 145 KV CVT (4400 pF)	
THIRD ANGLE PROJECTION		INITIALS	NAME
SCALE: NTS	ORG	NSB	HARI
ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	CHD	APPD	USS
DATE : 26.02.2022		REV 0	
NO		DRG.NO: 3-CAD 10403	
SIGN		DATE	
REVISION		DATE	

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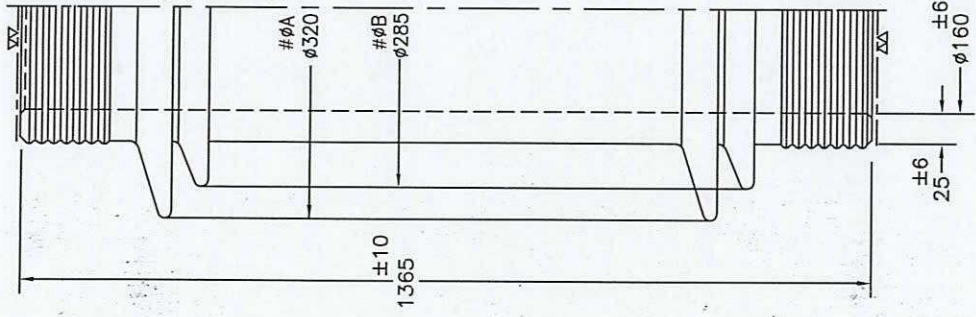
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Surekha
CHIEF ENGINEER / CONSTRUCTION
TS TRANSCO/VIDYUT SOUDHA/HYD.

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NOTE

- * VV INDICATE UNGLAZED SURFACE GROUND SMOOTH, PERPENDICULAR TO THE AXIS AND PARALLEL TO EACH OTHER.
- * SHALL BE HIGH VOLTAGE ELECTRICAL PORCELAIN CONFORMING TO IS 5621:80 (OR IEC 62155:2003) UN SPECIFIED TOLERANCES AS PER IS 5621:80 INSIDE AND OUTSIDE SHALL BE BROWN GLAZED.
- * SHED FORM CONFORMS TO IEC 60815:2008 REQUIREMENTS.
- * TOTAL CREEPAGE DISTANCE = 3625 mm
- * CANTILEVER LOAD OF PORCELAIN = 350 kgf
- * QTY = 1 NO/CVT

NOTE:

TOLERANCES ON ØA, ØB ARE AS PER IS 5621:1980 AND THE SAME ARE $\pm(0.025xd+6)$ mm. WHERE d IS ØA OR ØB



CUSTOMER : TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO)			
GEN. TOL.	MATL. SPEC.	TITLE : STANDARD DRAWING	
THIRD ANGLE PROJECTION		PORCELAIN INSULATOR	
SCALE: NTS	INITIALS	145 KV CVT (4400 pF)	
ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	ORG	NSB	NAME
	CHD	HARI	
	APPD	USS	
	DATE : 26.02.2022		
NO	REVISION	SIGN	DATE
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CG Power and Industrial Solutions Limited			CG Power and Industrial Solutions Limited
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DRG.NO: 3-CAD 10404			REV 0

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LIST OF STANDARD DRGS./ DOCUMENTS APPLICABLE FOR 145 KV CVT (4400 pF)

SR. NO.	DESCRIPTION	DRG./DOC.NO.	APP. CAT.	REMARKS
01	GENERAL ARRANGEMENT	3-CAD 10400/R0	---	---
02	RATING/SCHEMATIC PLATE	3-CAD 10401/R0	---	---
03	SECONDARY TERMINAL BOX G.A.	3-CAD 10402/R0	---	---
04	SECTIONAL VIEW	3-CAD 10403/R0	---	---
05	PORCELAIN INSULATOR	3-CAD 10404/R0	---	---
06	GUARANTEED TECHNICAL PARTICULARS	S1/CV/T/638/R0	---	---
07	LIST OF TYPE TEST REPORTS	S1/CV/T/637/R0	---	---

LIST OF VARIABLE DRGS. APPLICABLE FOR 145 KV CVT (4400 pF)

SR. NO.	DESCRIPTION	DRAWING NO.
01	COVER SHEET	AS APPLICABLE
02	RATING/SCHEMATIC PLATE	AS APPLICABLE

CUSTOMER
LOA NO. :
PO. NO. :
S.O. NO. :
QUANTITY :
AS APPLICABLE



Sudha

APPROVED

Surekha
CHIEF ENGINEER / CONSTRUCTION
TSTRANSCOVIDYUT SOUDHA/HYE

CUSTOMER : TRANSMISSION CORPORATION OF TELANGANA LIMITED (TSTRANSCO)			
GEN. TOL.	MATL.:	TITLE : STANDARD DRAWING	
	SPEC.:	LIST OF STANDARD DRGS. / DOCUMENTS APPLICABLE FOR 145 KV CVT (4400 pF)	
THIRD ANGLE PROJECTION	SCALE: NTS	INITIALS	NAME
	ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	ORG	NSB
		CHD	HARI
		APPD	USS
		DATE : 26.02.2022	
		CG Power and Industrial Solutions Limited	
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		DRG.NO: 3-CAD 10399	
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