

1). Minimum 300 mm Plinth shall be maintained for Current transformers in the substation during foundation works to ensure safe live to ground clearances as per IE rules.

2). Since the supply of terminal connectors is not in the scope of CT Manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with the CT requirement and compatibility.

FOR EPC CONTRACTS ONLY

LIST OF STANDARD DRAWINGS

145 KV INDUCTIVE VOLTAGE TRANSFORMER			IVT RATIO = $\frac{132KV}{\sqrt{3}} / \frac{110V}{\sqrt{3}} - 110 - \frac{110V}{\sqrt{3}}$				
SR.NO.	TITLE	DRAWING NO.	REV.	RECORD			
				APPLICATION		RETURN	
				KIND	DATE	DATE	CC
01	GENERAL ARRANGEMENT DRAWING	145IVT HC II WDG GA	R0	AA	20.05.2021		
02	SECTIONAL VIEW	145IVT HC II WDG SV	R0	AA	20.05.2021		
03	RATING & SCHEMATIC DIAGRAM	145IVT HC II WDG RS	R0	AA	20.05.2021		
04	SECONDARY BOX ASSEMBLY	145IVT HC II WDG SB	R0	AA	20.05.2021		

IF IN DOUBT ASK

- AA : Application for Approval
- RA : Reapplication for Approval
- FD : Final Drawing
- RD : Reference Drawing
- AP : Approved
- AC : Approved with Corrections
- RC : Return for Corrections
- CC : Customer Comments

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SURFACE FINISH.....
FINISH : MS COMPONENT- HOT DIP GALVANISED.

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS.

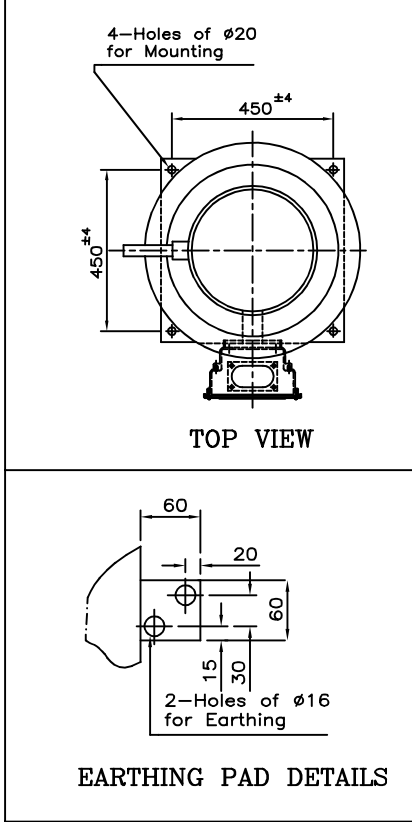
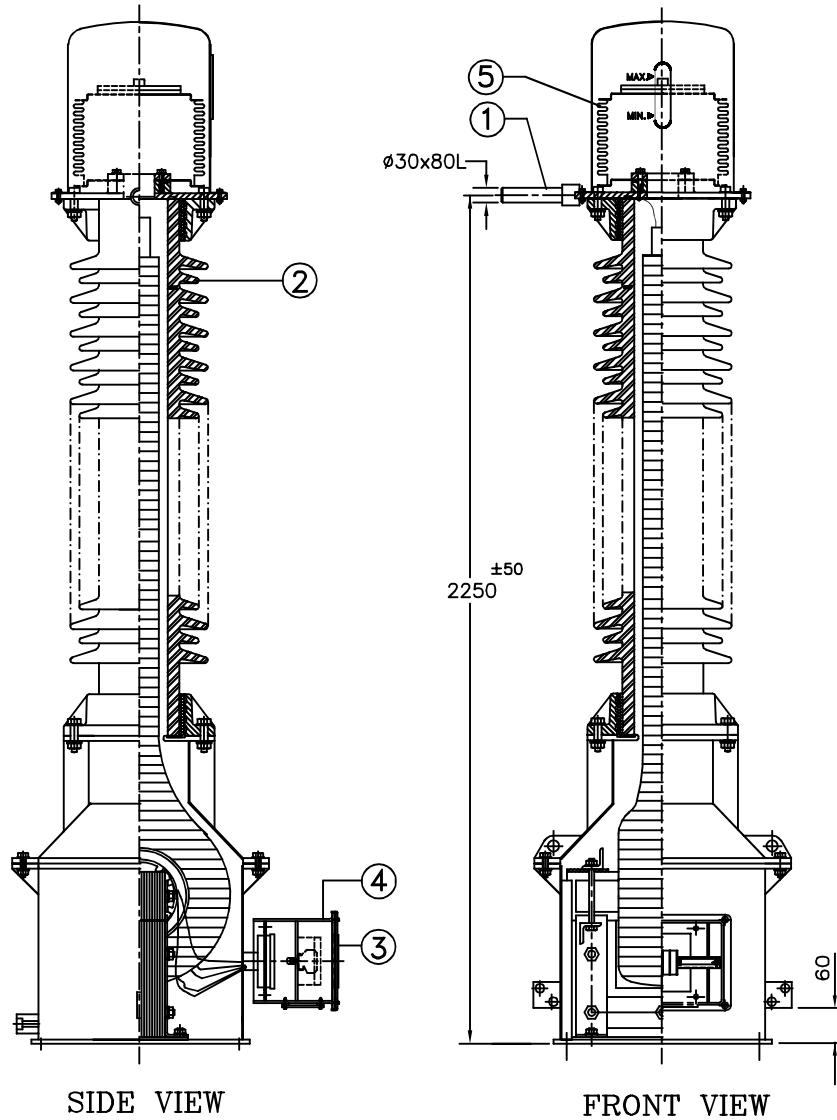
PACKING DIMENSIONS : L-920 x W-680 x H-2725 mm.
NET WEIGHT : 400 Kg. (Approx.)
GROSS WEIGHT : 600 Kg. (Approx.)

Customer : APTRANSCO
Customer Order Ref. :
QUANTITY :

Drawing approval subject to valid vendor registration

R6			R4			R2				SIGN	NAME	LIST OF DRAWINGS 145 KV INDUCTIVE VOLTAGE TRANSFORMER TYPE-VBOT:145/850/50	 CG Power and Industrial Solutions Limited, Aurangabad			
R5			R3						DRN	SSM						
									CHD	SSM						
										APPD	SDS					
NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	SCALE	N.T.S.	DATE: 20.05.2021	ALL DIMENSIONS ARE IN mm	DRG.NO:-145IVT HC II WDG LD/RO

IF IN DOUBT ASK




NO.	QTY.	DESCRIPTION	MATERIAL
1	1	PRIMARY TERMINAL(Ø30x80L) Min.	COPPER
2	1	PORCELAIN INSULATOR (BROWN COLOUR)	PORCELAIN
3	1	RATING & SCHEMATIC DIAGRAM	145IVT HC II WDG RS
4	1	SECONDARY TERMINAL BOX	145IVT HC II WDG SB
5	1	BELLOWS	STAINLESS STEEL

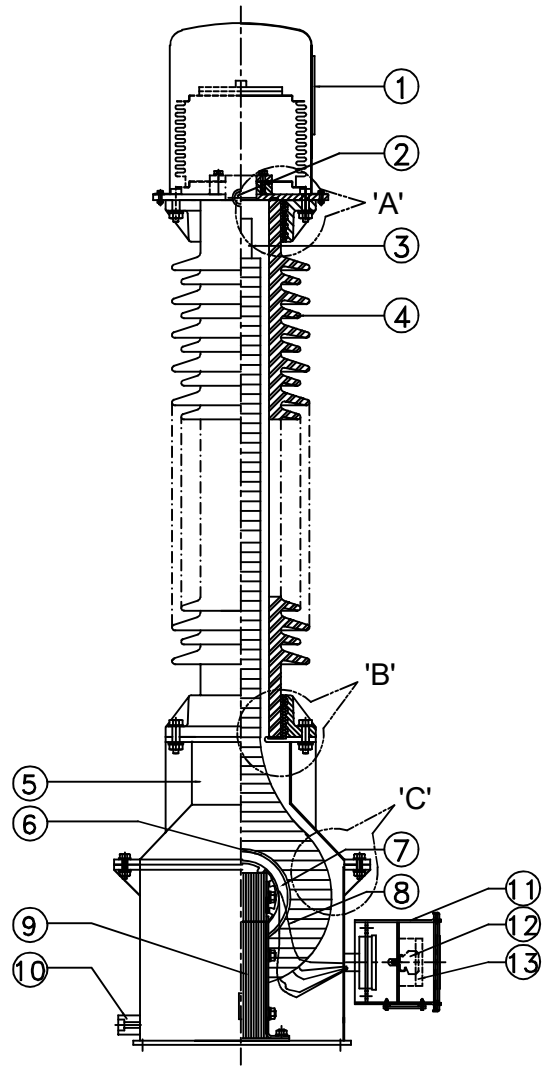
Chief Engineer
Power Systems, Planning & Design
APTransco

Drawing approval subject to valid vendor registration

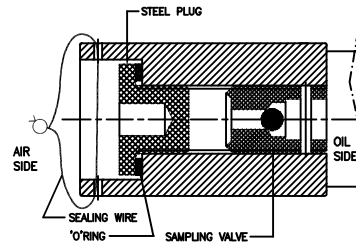
NOTE : PLEASE REFER INSTRUCTION MANUAL FOR HANDLING & TRANSPORTATION OF IVT.

R6		R4		R2		SIGN	NAME	GENERAL ARRANGEMENT DRAWING FOR 145 KV INDUCTIVE VOLTAGE TRANSFORMER TYPE-VEOT:145/650/50	 CG Power and Industrial Solutions Limited, Aurangabad				
R5		R3		R1	DRN	SSM							
					CHD	SSM							
					APPD	SDS							
NO	REVISION	SIGN/DATE	NO	REVISION	SIGN/DATE	NO	REVISION	SIGN/DATE	SCALE	N.T.S.	DATE: 20.05.2021	ALL DIMENSIONS ARE IN mm	DRG.NO:-145IVT HC II WDG GA/RO

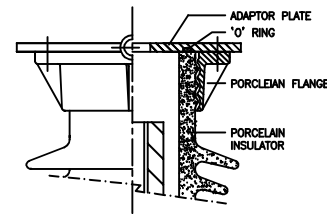
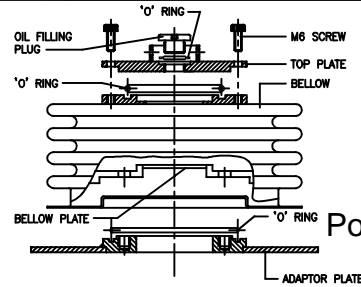
IF IN DOUBT ASK



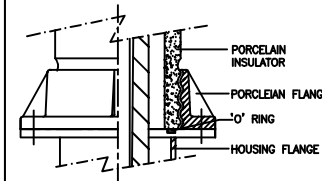
ITEM NO. 9
ASSEMBLY OF OIL SAMPLING VALVE



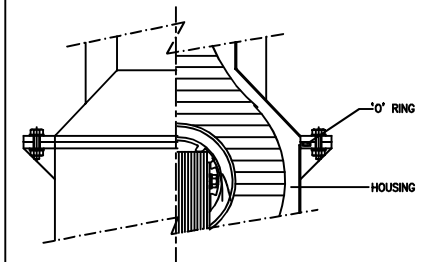
ASSEMBLY OF BELLOWS



DETAILS OF 'A'



DETAILS OF 'B'




DETAILS OF 'C'

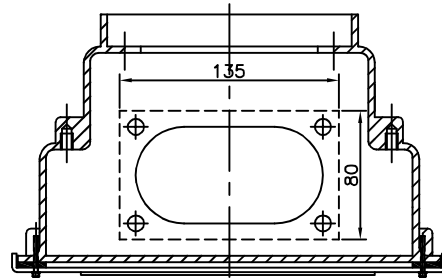
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ITEM	QTY.	DESCRIPTION
1	1	OIL LEVEL INDICATOR
2	1	PRIMARY TERMINAL(ø30x80mm.Long.Min)
3	1	COND. BUSHING
4	1	PORCELAIN INSULATOR
5	1	HOUSING
6	1	SHIELD
7	1	PRIMARY WINDING
8	1	SECONDARY WINDING
9	1	CRGO-CORE
10	1	OIL SAMPLING VALVE
11	1	SECONDARY TERMINAL BOX
12	7	SECONDARY TERMINALS
13	3	HRC FUSES

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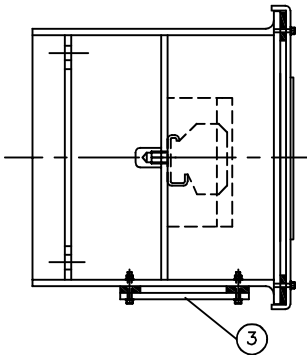
R6			R4			R2			SIGN	NAME	SECTIONAL VIEW DRAWING FOR 145 KV INDUCTIVE VOLTAGE TRANSFORMER TYPE-VEOT:145/850/50	 CG Power and Industrial Solutions Limited, Aurangabad				
R5			R3		R1			DRN	SSM							
								CHD	SSM							
								APPD	SDS							
NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	SCALE	N.T.S.	DATE: 20.05.2021	ALL DIMENSIONS ARE IN mm	DRG.NO:-145IVT HC II WDG SV/RO

SL.NO.	QTY	ITEM	MATERIAL	RM SIZE/SPECIFICATION
1	1	SECONDARY BOX ASSEMBLY	ALUMINIUM	DRG.NO.-480684
2	7	SEC.TERMINAL BLOCK WITH MARKER	MELAMINE	MAKE: ELMEX KBT M5-15
3	1	GLAND PLATE	ALUMINIUM	135x80 mm.
4	1	RATING & SCHEMATIC DIAGRAM	ALUMINIUM ANOD.	--
5	3	HRC FUSE	STD.MAKE	RATING - 6 AMP.

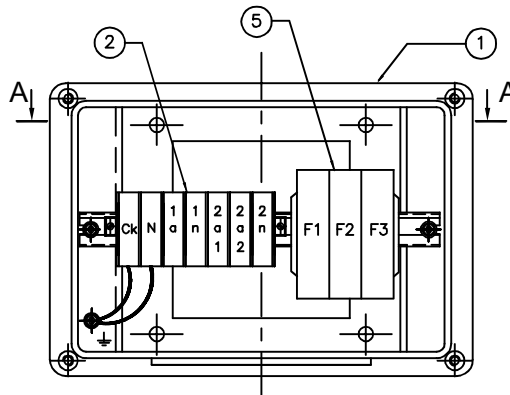


TOP VIEW (SECTION A-A)

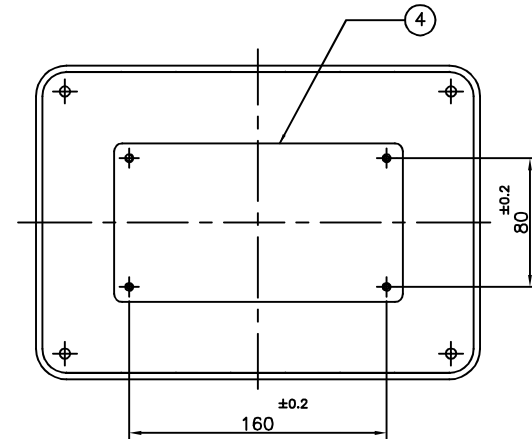
Drawing approval subject to valid vendor registration



SIDE VIEW



ELEVATION




COVER

IF IN DOUBT ASK

NOTES :

- 1) SECONDARY BOX ASSEMBLY TO CONFIRM IP55 AS PER IS:13947
- 2) Ck:TERMINAL FOR CAPACITANCE & TAN DELTA MESUREMENT ONLY. SHOULD BE KEPT EARTHED WHEN NOT IN USE.

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R6			R4			R2				SIGN	NAME	SECONDARY BOX ASSEMBLY FOR 145 kV INDUCTIVE VOLTAGE TRANSFORMER TYPE-VEOT:145/650/50	 CG Power and Industrial Solutions Limited, Aurangabad			
R5			R3		R1				DRN	SSM						
									CHD	SSM						
									APPD	SDS						
NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	SCALE	N.T.S.	DATE: 20.05.2021	ALL DIMENSIONS ARE IN mm	DRG.NO: 145IVT HC II WDG SB/R0

CG Power and Industrial Solutions Limited Drawing approval subject to valid vendor registration
Vacuum Interrupters and Instrument Transformers Division: Power Systems
 D-2, MIDC, Waluj, Aurangabad 431 136, Maharashtra, India
 T. +91 240 255 8000 F. +91 240 255 4697



**GUARANTEED TECHNICAL PARTICULARS FOR
ELECTROMAGNETIC (INDUCTIVE) VOLTAGE TRANSFORMERS**

REF.	145 KV IVT	132000/√3 /110/√3 + 110-110/√3 V, High Creepage.	Revision No.	RO
Sr#	Particulars	Unit	Values	
1	Type/ Installation			
2	Manufacturer's Name and Country of Manufacture		CG Power and Industrial Solutions Limited Aurangabad, India	
3	Manufacturers Type designation		VEOT:145/650/50	
4	Highest System Voltage (Ph. to ph.)	kV	145	
5	Type of insulation used		Class A (Oil Impregnated Paper)	
6	Rated Frequency	Hz	50	
7	Suitable for Altitude (Max)	Meters	1000	
8	Conforming to Standard		IS: 16227-1&3 / IEC: 61869-1&3	
9	Rated System Voltage	kV	132/√3	
10	No. of Secondary Windings		Two	
11	Secondary Winding Details		I	II
12	Rated Primary voltage	Volts	132000/√3	132000/√3
13	Rated Secondary Voltage	Volts	110/√3	110 - 110/√3
14	Rated Secondary Burden	VA	150	50
15	Accuracy Class		0.2	3P
16	Rated Voltage Factor		1.2 Continuous, 1.5 for 30 secs.	
17	Simultaneous Burden		NA	
18	One minute Power Frequency (Wet & Dry) withstand Voltage on Primary Winding	kV rms	275	
19	1.2/50 micro sec. Lightning Impulse withstand Voltage	kV peak	650	
20	One minute Power Frequency withstand Voltage on Secondary Winding	kV rms	3	
21	Total Creepage distance	mm (mm/kV)	4495 (31 mm/kV)	
22	Primary Terminal material & details		Copper, φ30 x 80 mm long	
23	Surface Finish of MS components exposed to atmosphere		Hot Dip Galvanized	
24	Secondary Terminal Box arrangement		Single Door Box.	
25	Volume of Oil	Litres	90 +/-10%	
26	Total weight of equipment	kg	400 +/-10%	
27	Mounting details	mm	4 holes of φ20 at 450 x 450 mm	
28	Dielectric Dissipation Factor (Tan-Delta)		< 0.005	
29	Measurement of Partial Discharge @ 1.2 UM/ √3	pC	< 5	
30	Measurement of Partial Discharge @ UM	pC	< 10	

145 KV STD I

Registered Office:
 CG House, 6th Floor, Dr Annie Besant Road, Worli, Mumbai 400 030, India
 T: +91 22 2423 7777 F: +91 22 2423 7733 W: www.cgglobal.com
 Corporate Identity Number: L99999MH1937PLC002641

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