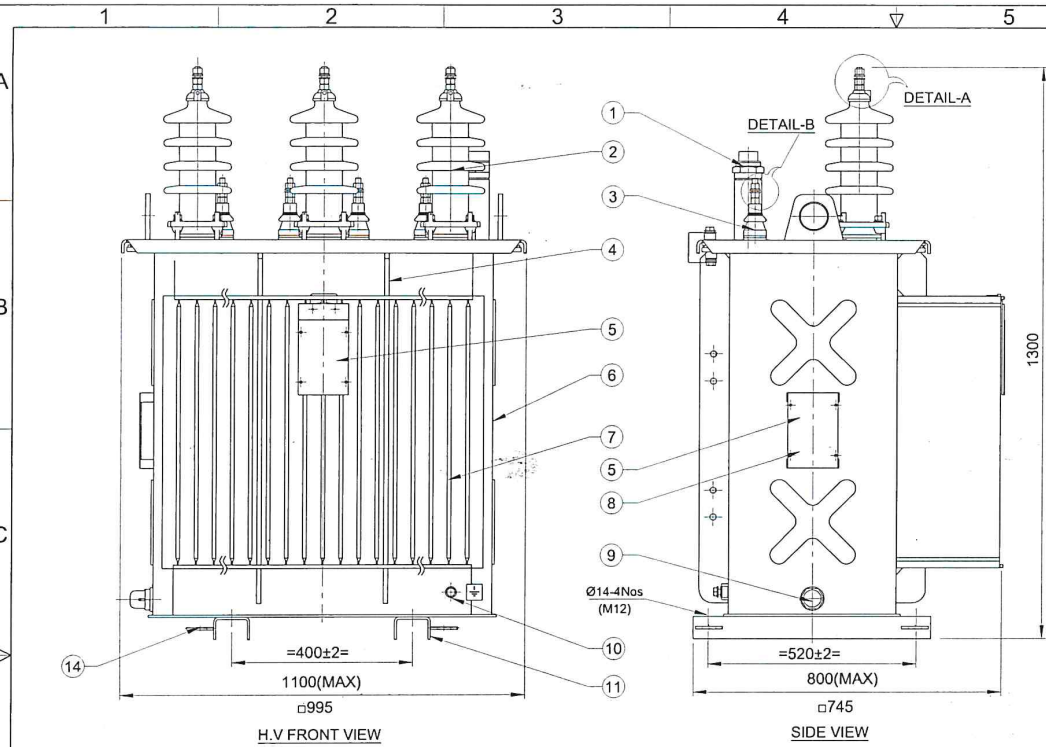


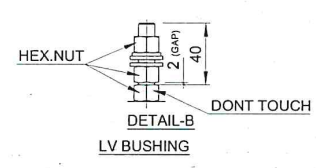
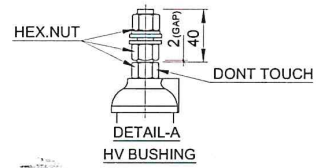
Product design meets OHSAS requirements (Ref. Work instructions DOC No.WIU10/ENG01).
ALL DIMENSIONS ARE IN mm & WEIGHTS ARE IN kg UNLESS OTHERWISE SPECIFIED.
FORMAT No.: Mech/003/R0

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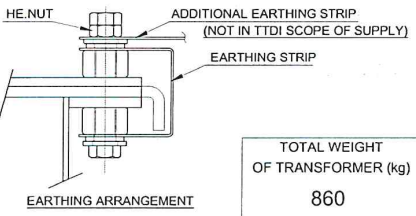
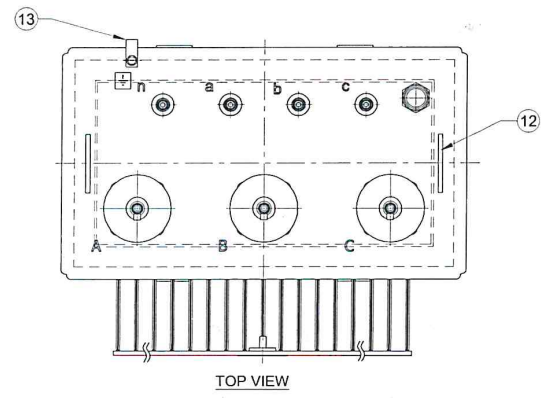


NOTE:-

1. FINISH PAINT SHADE: RAL 7035 (LIGHT GREY).
2. "ACTUAL OVERALL DIMENSIONS & WEIGHTS ARE SUBJECT TO ±10% TOLERANCE, PROVIDED THAT THE TOLERANCE IS NOT EXCEEDED THE MAX.VALUE DEFINED.
3. THE POSITION, LOCATION, DESIGN OF FITTINGS & ACCESSORIES MAY SLIGHTLY VARY DURING MANUFACTURING.
4. COMPLETE TRANSFORMER WITHSTANDS LOWER LIMIT OF AMBIENT TEMPERATURE -40°C.
5. TIGHTENING TORQUE
.LV & HV BUSHING STEM(OUTSIDE) - 13Nm.
.HV BUSHING FIXING STUD - 15Nm.
6. TERMINAL MARKING AND EARTHING SYMBOL SHALL BE PAINTED WITH BLACK COLOUR.
7. OIL LEVEL MARKING SHALL BE VISIBLE FROM TANK SHORTER SIDE
8. GAP (2mm) SHOULD MAINTAIN BETWEEN TWO ADJACENT NUTS AS PER DETAIL-A & DETAIL-B



14	TOWING EYES	4
13	EARTHING STRIP BETWEEN TANK AND TOP COVER	1
12	LIFTING LUGS FOR LIFTING OF TRANSFORMER	2
11	BASE CHANNEL FORMED	2
10	EARTHING TERMINALS	2
9	OIL DRAINING CUM SAMPLING DEVICE	1
8	RATING PLATE FIXING BRACKETS	1
7	CORRUGATION PANEL	1
6	NAME OF THE MANUFACTURER (MONOGRAM)	1
5	RATING PLATE	2
4	VERTICAL STIFFENER	-
3	L.V. BUSHINGS(1.0kV/250A)	4
2	H.V. BUSHINGS(24kV/250A-P2)	3
1	OIL FILLING PIPE WITH VERTICAL FLOAT OLG	1
S.NO	DESCRIPTION	QTY.



TOTAL WEIGHT OF TRANSFORMER (kg)		860
RATING kVA		100
VOLTAGE(V)		PRIMARY 20500, SECONDARY 410
CURRENT(A)		PRIMARY 2.816, SECONDARY 140.817
Minimum External Air Clearances		
Phase to Phase	220	
Phase to Earth	220	

NO OF PHASES	: 3
COOLING	: ONAN
FREQUENCY	: Hz 50
TEMP.RISE O / W	: 60/65°C
CONNECTION GROUP	: Dyn11
SPECIFICATION	: IEC 60076 & EN 50588/EN 50708-2

REV ZONE DATE MODIFICATION

TOSHIBA

TOSHIBA TRANSMISSION & DISTRIBUTION SYSTEMS (INDIA) PVT. LTD.
DISTRIBUTION TRANSFORMERS DIVISION

SCALE: NTS

OUT LINE GENERAL ARRANGEMENT FOR
100 kVA, 20.5/0.41 kV TRANSFORMER

DESIGNED	ANB	20.4.21
DRAWN	ALWD	20.4.21
CHECKED	PC	20.4.21
APPROVED	PC	20.4.21

PRJ.NO. E-11158-2
DRG.NO. 3 OG 86668
SHT.NO. 1 OF 1 R 0

HERMETICALLY SEALED COMPLETELY FILLED - (TIER-2)

TOSHIBA	Toshiba Transmission & Distribution Systems (India) Pvt.Ltd. Distribution Transformers Division	Engineering
		Unit-10

**GUARANTEED TECHNICAL PARTICULARS
THREE PHASE DISTRIBUTION TRANSFORMER**

Enquiry No : 11158-2	Customer: KKM POWER Oy, Finland (CARUNA)				
kVA : 100	kV :20.5/0.41	Phase : 3	Freq. : 50Hz	Cooling : ONAN	Doc No: EGT 44450

Sl. No.	Description	UNIT	100 kVA
1)	Make		Toshiba Transmission & Distribution Systems (India) Pvt. Ltd
2)	Type		Hermitically Sealed
3)	Phases	No.	Three
4)	Rating	kVA	100 kVA
5)a)	Rated Voltage:		
	HV	V	20500
	LV	V	410
b)	Highest voltage for equipment		
	HV	kV	24
	LV	kV	1
c)	HV Tapping Range		Not Applicable
6)	Frequency	Hz	50
7)	Vector Group		Dyn11
8)	Insulation Level		
	HV	kV peak	125
	LV	kV peak	Not Applicable
9)	Power Frequency Level		
	HV	kV rms	50
	LV	kV rms	3
10)	Winding material		Aluminium
11)	Core Material		CRGO
12)	Temperature Rise:		
	Oil	° C	60
	Winding	° C	65
13)	Losses		
	No Load Losses at rated Voltage and Frequency	Watt	130 (MAX)-Tier-2
	Load Losses at 75 ° C	Watt	1250 (MAX)-Tier-2
14)	Impedance Voltage	%	4% (+/- IEC Tolerance Applicable)
15)	Percentage Resistance	%	1.25
16)	Regulation at:		
	Full Load UPF	%	1.32
	Full Load 0.8 PF	%	3.31
17)	Efficiency at 0.8 PF:		

TOSHIBA	Toshiba Transmission & Distribution Systems (India) Pvt.Ltd. Distribution Transformers Division		Engineering
			Unit-10
	Full Load	%	98.30
	¾ Full Load	%	98.63
	½ Full Load	%	98.91
18)	Terminal Arrangement:		
	HV		Bare Bushings – Porcelain-24kV/250A-P2
	LV		Bare Bushings – Porcelain-1kV/250A
19)	Actual Overall Dimensions:		
	Length	mm	As per GA drawing 3 OG 86668
	Width	mm	
	Height	mm	
20)	Overall Weight		
	Total Weight	Kg.	860
21)	Noise Level	LwA dB (A)	41
Applicability of Optional Fittings For above mentioned Actual Overall Dimensions			
22)	Rollers		No
23)	Pole Mounting consoles		No
24)	HV flags/connector/lug		No
25)	LV flags/connector/lug		No
26)	HV Tapping/Tap Switch		No

Note:

1. Actual overall dimensions and weights are subjected to +/-10% Tolerance.
2. All the efficiencies and regulations are calculated at the nominal values of NLL, LL AT 75DegC and % Z at 75 Deg C.
3. Paint: Class C4 corrosion protection paint will be provided.
4. If HV/LV flags required transformer overall height will increase.