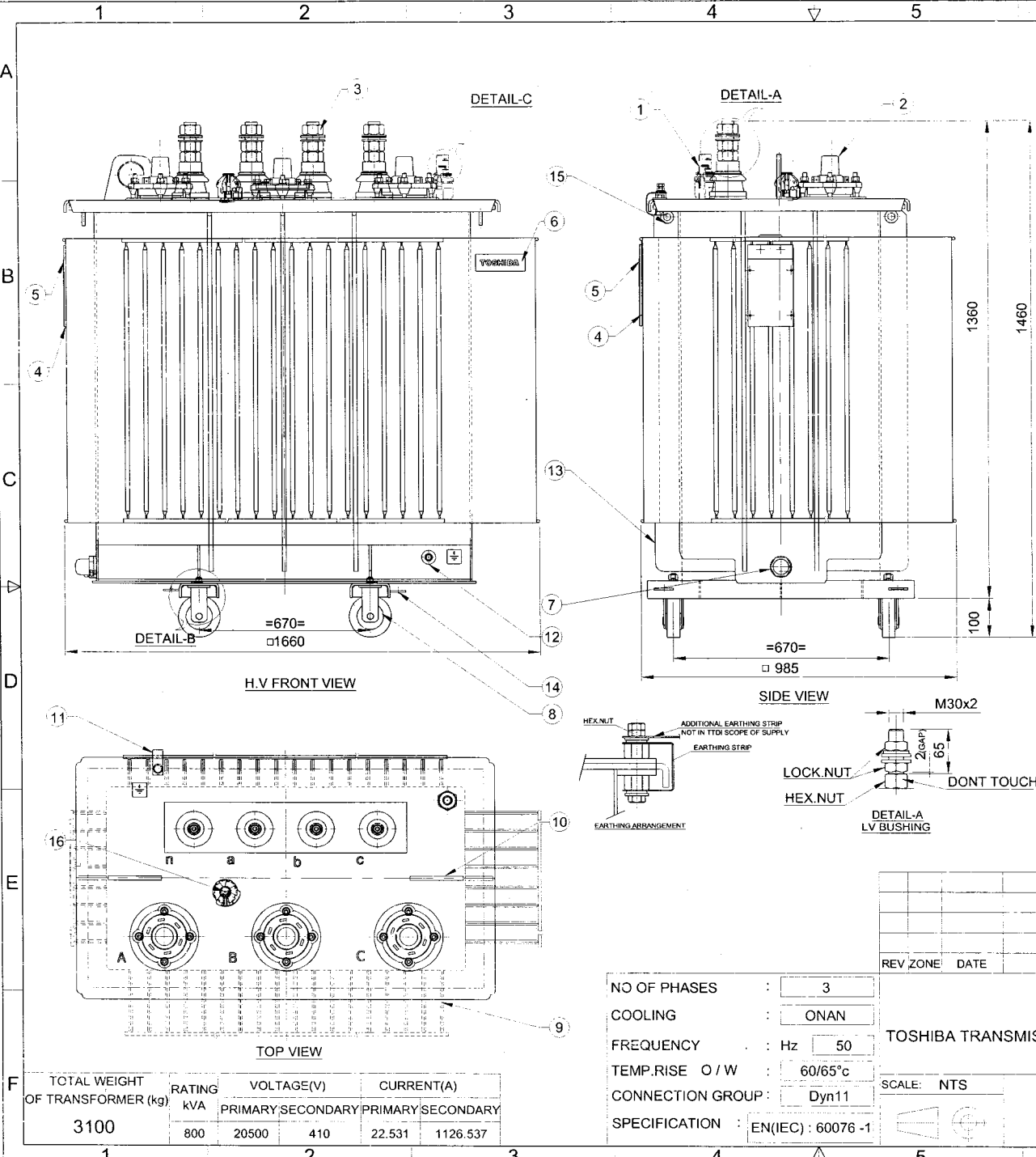
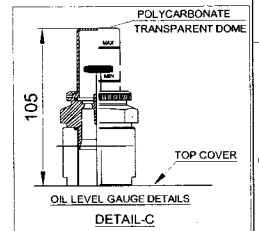
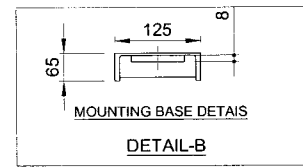


Product design meets OHSAS requirements (Ref. Work instructions DOC.No.WIU/010/ENGG/001). ALL DIMENSIONS ARE IN mm & WEIGHTS ARE IN kg UNLESS OTHERWISE SPECIFIED. FORMAT No.: Mech/003/R0

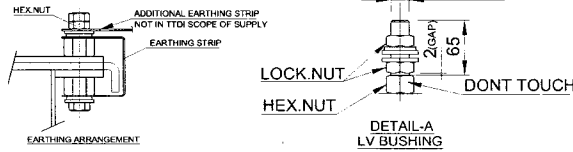
ALL INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF TOSHIBA TRANSMISSION & DISTRIBUTION SYSTEMS (INDIA) PVT. LTD. REPRODUCTION OF THIS IN ANY FORM IS TO BE DONE WITH THE SPECIFIC PERMISSION OF THE ORGANISATION.



- NOTE:-**
- FINISH PAINT SHADE: RAL 7035 (LIGHT GREY).
  - ACTUAL OVERALL DIMENSIONS & WEIGHTS ARE SUBJECT TO  $\pm 10\%$  TOLERANCE, PROVIDED THAT THE TOLERANCE IS NOT EXCEEDED THE MAX. VALUE DEFINED.
  - THE POSITION, LOCATION, DESIGN OF FITTINGS & ACCESSORIES MAY SLIGHTLY VARY DURING MANUFACTURING.
  - COMPLETE TRANSFORMER WITHSTANDS LOWER LIMIT OF AMBIENT TEMPERATURE  $-40^{\circ}\text{C}$ .
  - ROLLERS WILL BE PROVIDED AS SPARE ITEM & SHALL BE SUPPLIED IN LOOSE CONDITION.
  - RATING PLATE SHALL BE PROVIDED ONLY ON LV SIDE.
- TIGHTENING TORQUE :-**
- HV BUSHING STEM(OUTSIDE) M12- 13Nm.
  - LV BUSHING STEM(OUTSIDE) M30- 70Nm.
  - HV BUSHING FIXING STUD M10 - 15Nm.
- TERMINAL MARKING AND EARTHING SYMBOL SHALL BE PAINTED WITH BLACK COLOUR.
  - OIL LEVEL MARKING SHALL BE VISIBLE FROM TANK SHORTER SIDE
  - GAP (2mm) SHOULD MAINTAIN BETWEEN TWO ADJACENT NUTS AS PER DETAIL-A & B
  - LASHING EYES PROVIDED FOR TRANSPORT PURPOSE, LASHING EYES SHALL BE REMOVED AFTER REACHING DESTINATION/BEFORE INSTALLATION



S.NO	DESCRIPTION	QTY.
16	TAP SWITCH	1
15	LASHING EYES	4
14	TOWING EYES	4
13	VERTICAL STIFFENER	-
12	EARTHING TERMINALS	2
11	EARTHING STRIP BETWEEN TANK AND TOP COVER	1
10	LIFTING LUGS FOR LIFTING OF TRANSFORMER	2
9	CORRUGATION PANEL	-
8	BI-DIRECTIONAL ROLLERS ( $\phi 125 \times 40$ )	4
7	OIL DRAINING CUM SAMPLING DEVICE	1
6	NAME OF THE MANUFACTURER (MONOGRAM)	1
5	RATING PLATE	2
4	RATING PLATE FIXING	2
3	L.V. BUSHINGS(1kV/1250A)	4
2	H.V. BUSHINGS(24kV/250A-PLUG IN)	3
1	OIL FILLING PLUG WITH VERTICAL FLOAT OLG	1



NO OF PHASES	:	3
COOLING	:	ONAN
FREQUENCY	:	Hz 50
TEMP.RISE O/W	:	60/65 $^{\circ}\text{C}$
CONNECTION GROUP	:	Dyn11
SPECIFICATION	:	EN(IEC) : 60076 -1

REV	ZONE	DATE	MODIFICATION	MODIFIED	CHECKED	APPRD.

**TOSHIBA**

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

DESIGNED: *[Signature]*  
DRAWN: *[Signature]*  
CHECKED: *[Signature]*  
APPROVED: *[Signature]*

TOTAL WEIGHT OF TRANSFORMER (kg)	RATING KVA	VOLTAGE(V)		CURRENT(A)	
		PRIMARY	SECONDARY	PRIMARY	SECONDARY
3100	800	20500	410	22.531	1126.537

SCALE: NTS

OUTLINE GENERAL ARRANGEMENT OF  
800 kVA, 20.5/0.41 kV TRANSFORMER

PRJ.NO. 08861 E  
DRG.NO. 3 OG 94021  
SHT.NO. 1 OF 1 R 0

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

GUARANTEED TECHNICAL PARTICULARS				
THREE PHASE DISTRIBUTION TRANSFORMER				
Work order No : 08861E		Customer: Re-Tech Oy, Finland.		
kVA : 800	kV :20.5/0.41	Phase : 3	Freq. : 50Hz	Cooling : ONAN
Sl. No.	Description	UNIT	800 kVA	
1)	Make		Toshiba Transmission & Distribution Systems (India) Pvt. Ltd	
2)	Type		Hermitically Sealed	
3)	Phases	No.	Three	
4)	Rating	kVA	800 kVA	
5a)	Rated Voltage:			
	HV	V	20500	
	LV	V	410	
b)	Highest voltage for equipment			
	HV	kV	24	
	LV	kV	1	
c)	HV Tapping Range		+5% to -5% insteps of 2.5%	
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	585 (MAX)-Tier-2	
	Load Losses at 75 ° C	Watt	6000 (MAX)-Tier-2	
14)	Impedance Voltage	%	6% (+/- IEC Tolerance Applicable)	
15)	Percentage Resistance	%	0.75	
16)	Regulation at:			
	Full Load UPF	%	0.93	
	Full Load 0.8 PF	%	4.26	
17)	Efficiency at 0.8 PF:			

"ALL INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF TOSHIBA TRANSMISSION & DISTRIBUTION SYSTEMS (INDIA) PVT. LTD., REPRODUCTION OF THIS IN ANY FORM IS TO BE DONE WITH THE SPECIFIC PERMISSION OF THE ORGANIZATION"

<b>TOSHIBA</b>	<b>Toshiba Transmission &amp; Distribution Systems (India) Pvt.Ltd. Distribution Transformers Division</b>		<b>Engineering</b>
			<b>Unit-10</b>
	Full Load	%	98.98
	¾ Full Load	%	99.18
	½ Full Load	%	99.35
18)	Terminal Arrangement:		
	HV		Bare Bushings – Plug in–24kV/250A
	LV		Bare Bushings – Porcelain–1kV/1250A
19)	Actual Overall Dimensions:		
	Length	mm	1660
	Width	mm	985
	Height	mm	1360(without rollers)*
20)	Overall Weight		
	Total Weight	Kg.	3100
21)	Noise Level	LwAdB(A)	53
<b>Applicability of Optional Fittings For above mentioned Actual Overall Dimensions</b>			
22)	Provision for Rollers		Yes
23)	Pole Mounting consoles		No
24)	HV bushing flags/connector/lug		No
25)	LV bushing flags/ connector/lug		No
26)	HV Tapping/Tap Switch		Yes

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 @ 75DegC and %Z @ 75 Deg C.
3. \* With Rollers transformer height will increase by 100mm.
4. Paint: Class C4 corrosion protection paint will be provided.