



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

**GUARANTEED TECHNICAL PARTICULARS  
THREE PHASE DISTRIBUTION TRANSFORMER**

ENQUIRY No : 11158-5	Customer: KKM POWER Oy, Finland (CARUNA)				
kVA : 500	kV :20.5/0.41	Phase : 3	Freq. : 50Hz	Cooling : ONAN	Doc No: EGT 44453

Sl. No.	Description	UNIT	500 kVA
1)	Make		Toshiba Transmission & Distribution Systems (India) Pvt. Ltd
2)	Type		Hermitically Sealed
3)	Phases	No.	Three
4)	Rating	kVA	500 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	459 (MAX)-Tier-2
	Load Losses at 75 ° C	Watt	3900 (MAX)-Tier-2
14)	Impedance Voltage	%	4% (+/- IEC Tolerance Applicable)
15)	Percentage Resistance	%	0.78
16)	Regulation at:		
	Full Load UPF	%	0.86
	Full Load 0.8 PF	%	3.01
17)	Efficiency at 0.8 PF:		

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	Full Load	%	98.92
	¾ Full Load	%	99.12
	½ Full Load	%	99.29
18)	Terminal Arrangement:		
	HV		Bare Bushings – Porcelain-24kV/250A-P2
	LV		Bare Bushings – Porcelain-1kV/1250A
19)	Actual Overall Dimensions:		
	Length	mm	As per GA drawing 3OG86671
	Width	mm	
	Height	mm	
20)	Overall Weight		
	Total Weight	Kg.	2310
21)	Noise Level	LwAdB (A )	51
	<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		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 @ 75DegC and %Z @75 DegC.
3. \* With Rollers transformer height will increase by 100mm.
4. With HV flags transformer overall height will increase.
5. Paint: Class C4 corrosion protection paint will be provided.