

# GBE S.p.A. TEST REPORT

Order Customer VESTFOLD TRAF0 ENERGI AS  
 Type ED3H01.0500 Serial Number 15923.1 Phase 3 KVA 500  
 Voltage ratio (V) 400- ± X % / 230- 50 Hz  
 Connection YNd11  
 Currents 721,69 - / 1.255,11 -  
 Insulation Class F / F Temperature Class 100 °C / 100 °C

Voltage ratio					Insulation test			
Pos.	Theoretical	U Measured	V Measured	W Measured	Voltage test applied to the primary against secondary and ground:			
					Test voltage	3000 V	t = 60 Sec	Result: POSITIVE
					Voltage test applied to the secondary against primary and ground:			
	1,004	1,004	1,004	1,004	Test voltage	3000 V	t = 60 Sec	Result: POSITIVE
					Induced voltage test			
					Supplied voltage	460 V f = 100 Hz	t = 60 Sec	Result: POSITIVE
Note								

Measurement of no-load loss and current										
Winding supply :				Measured at				Frequency		
Primary				400,0 V				50 Hz		
Voltage K = 1				Current K 1				KW = 1		Note
VMuv	VMuw	VMvw	VMm	Iu	Iv	Iw	Averag	W tot		
400,77	399,79	400,93	400,50	2,78	3,16	3,35	3,10	877,00		
IO = 0,43%				PO = 877,00 W						

Winding resistance measurement, Voltamperometric method								t. amb. : 17 C°		Note
Primary winding				Secondary winding						
400 V				230 V						
Terminals	mVolt	Amp.	mOhm	Terminals	mVolt	Amp.	mOhm			
1U1V	54,3788	14,9320	3,6418	2U2V	8,2043	14,9897	0,5473			
1U1W	54,0062	14,9325	3,6167	2U2W	8,1961	14,9898	0,5468			
1V1W	54,3302	14,9321	3,6385	2V2W	8,1708	14,9898	0,5451			
Average resistance (17,0 C°) 3,6323 mOhm				Average resistance (17,0 C°) 0,5464 mOhm						
Average resistance				Average resistance						

Measurement of short circuit impedance and load loss										
Winding supply :				A Current				Frequency		
Primary				721,69 A				50 Hz		
Voltage K = 1				Current K 1				KW = 1		Note
Vuv	Vuw	Vvw	Vm	Iu	Iv	Iw	Averag	W tot		
11,17	10,80	11,03	11,00	348,50	337,92	341,33	342,58	1.075,16		

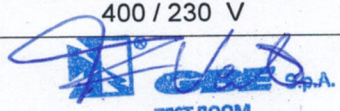
Determination of short circuit impedance and load loss						
Ratio	400 V /	230 V	Primary winding	Aluminium	Secondary winding	Aluminium
Ambient temperature	17,0 °C		Reference temperature		120 °C	
Vcc at rated current	23,17 V		Rln % = Rip % * KTemp		1,36 %	
Zlp% = (VCC/VNcc)*100 =	5,79 %		Xln% = Xlp%		5,71 %	
Rlp % (WCup/PN)*100	0,95 %		Zln % = ((Xln%)² + (Rln%)²) =		5,87 %	
Xlp % = ((Zlp%)² - (Rlp%)²) ½	5,71 %		<b>Load losses</b>		<b>6336,9 W</b>	
Pcc at rated current	4771,4 W					

Efficiency			Voltage drop (%)		Note
load	Cos φ =0,8	Cos φ =1	Cos φ =0,8	Cos φ =1	
100 %	98,228 %	98,578 %	4,525 %	1,430 %	
75 %	98,541 %	98,829 %	3,381 %	1,042 %	
50 %	98,784 %	99,025 %	2,245 %	0,675 %	

Tests carried out according to IEC 60726 and IEC 60076 Standards  
 Instrument used Norma D5255 and Norma 4000

The transformer is delivered with the following ratio 400 / 230 V

Customer	Manufacturer
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**TEST ROOM**  
 Date 06/03/2020