

comelmar motors

via Fra Pampuri, 17 - Loc. Mendosio - 20081 Abbiategrasso (MI)
tel. +39.0294964134 / +39.0294964257 / +39.0294965980 - fax +39.029462618
Internet: www.comelmar.it - E-mail: info@comelmar.it - Pec: comelmarmotors@legalmail.it

Cliente/Customer: ITALCEMENTI SPA

Vs. Ordine/P.O. Nr: 4500880035

Generatore/ Generator: AVRT 710 LY6
N° 003Y071007
4500 KW – 6000 V – 1000 rpm



DATA BOOK

Item name: HV Motor	Project Location	IT	
Author: International Sales Dep.	Customer name	ITALCEMENTI	PO.No :N/M
Project contacts: F.CASTIGLIONI	Reference No.	ORDER 4500880035	Pages:1/1
	Date of issue	2020-4-30	

	Definition	Date	Unit	Remarks
1	Product	3-phase Slip ring (Wound rotor) HV Motor		
2	Product code	IEC60034-1		
3	Type/Frame	AVRT 710 LY6		
4	Mounting	IMB3		
5	Rated output P _N	4500		kW
6	Service factor	1.0		
7	Type of duty	S1(IEC)100%		
8	Rated voltage U _N	6000 V Y		±5%(IEC 60034-1)
9	Rated frequency f _N	50 Hz		
10	Rated speed n _N	992		r/min
11	Rated current I _N	519.6		A(ampere)
12	No-load current	129.9		A(ampere)
13	Rotor voltage	1520 V Δ		IEC60034-12 design N,H
14	Rotor current	1750		
15	Nominal torque T _N	43321.6		Nm
16	Maximum torque T _{max} /T _N	2.6		
19		Load %	Current A	Efficiency %
20	Load characteristics(IEC 60034-2-1:2007)PLL	100%	519.6	96.9%
21	determined from residual loss	75%	405.3	96.7%
22		50%	301.4	96.0%
23	Maximum starting time from hot	20	s	
24	Maximum starting time from cold	40	s	
25	Starting times Cold/Hot	3/2		
26	Insulation class/ Temperature	F/B		
27	Ambient temperature	42	°C	
28	Altitude	Less than 1000 m.a.s.l.		
29	Enclosure	IP55 Collector housing: IP55		
30	Cooling system(Method)	IC611		
31	Bearing DE/NDE	NU1048+6048/NU1044		
32	Type of Grease	No.3 Lithium base grease		
33	Sound pressure level(LP Db(A) 1m)	IEC60034-9		
35	Balancing	Rotor dynamic balance		
36	Vibration class	IEC60034-14		
37	Position of terminal box	on the left side of motor		
39	Number of power terminals	2		
40	Direction of rotation	CCW		
41	Total weight of motor	21000kg		
42	Dimension drawing no.	19-06-13001G5		
43	Bearing Temperature sensors	2*PT100		
44	Stator Temperature sensors	6*PT100		
45	Space heater spe.	1 phase 230V, 800W,		
46	Greasing interval	2000/2000h		
				Grease weight: 250/120g

Ex-motors

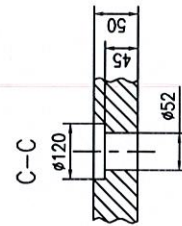
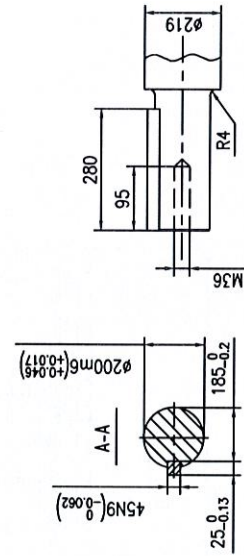
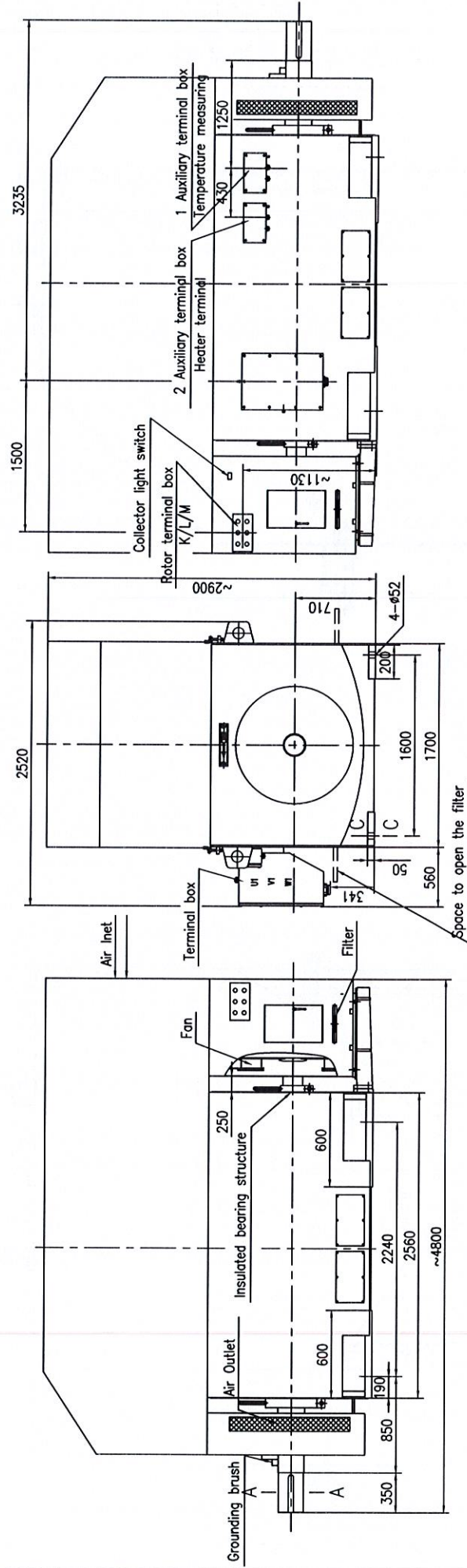
46	Ex-Mark	No					
47							
48							

Option Variant Codes/Definition

49	space heater in collector housing 450 W - 230 V - 1ph						
50	filter + differential switch in collector housing						
51	light with switch in collector housing						
52							
53							
54							
55							
56							

Remarks:

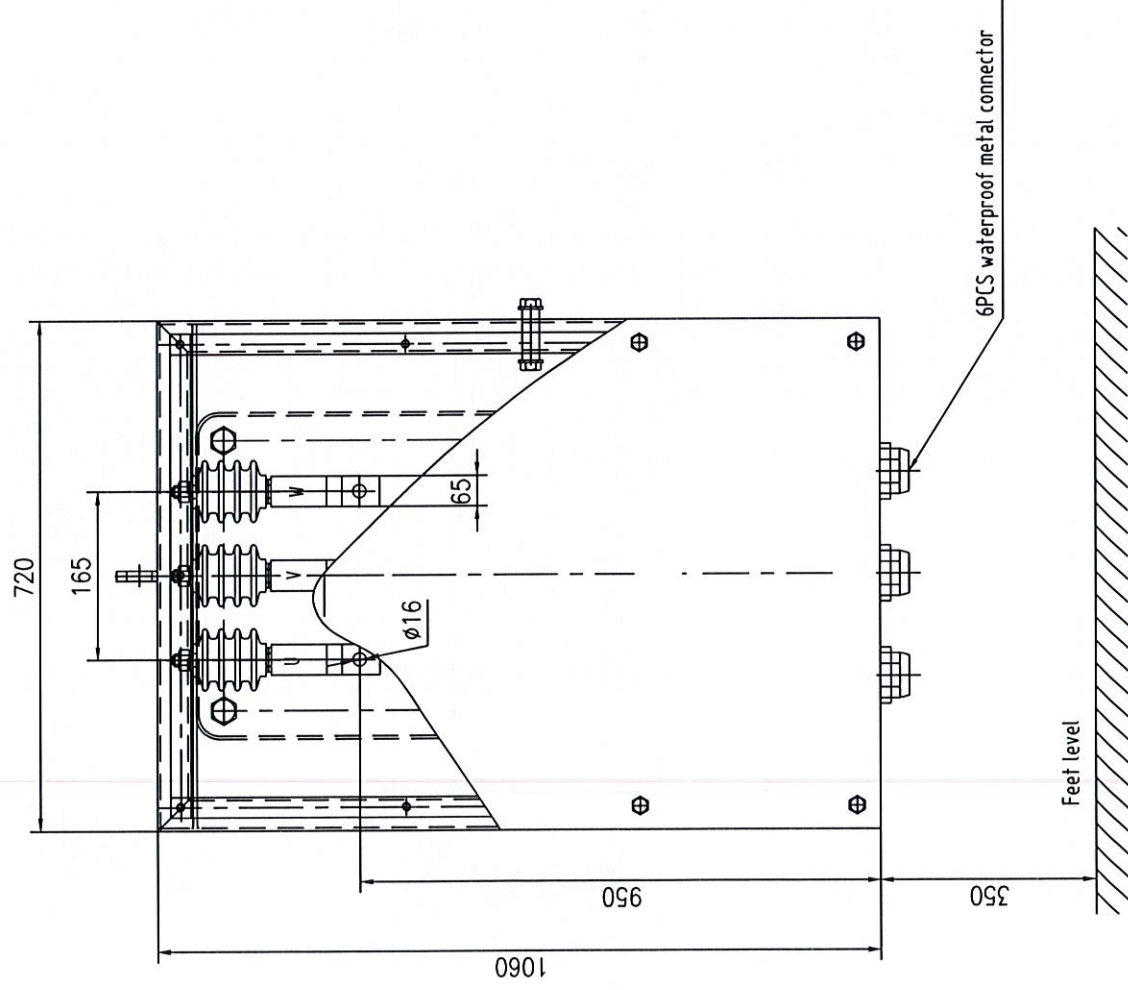
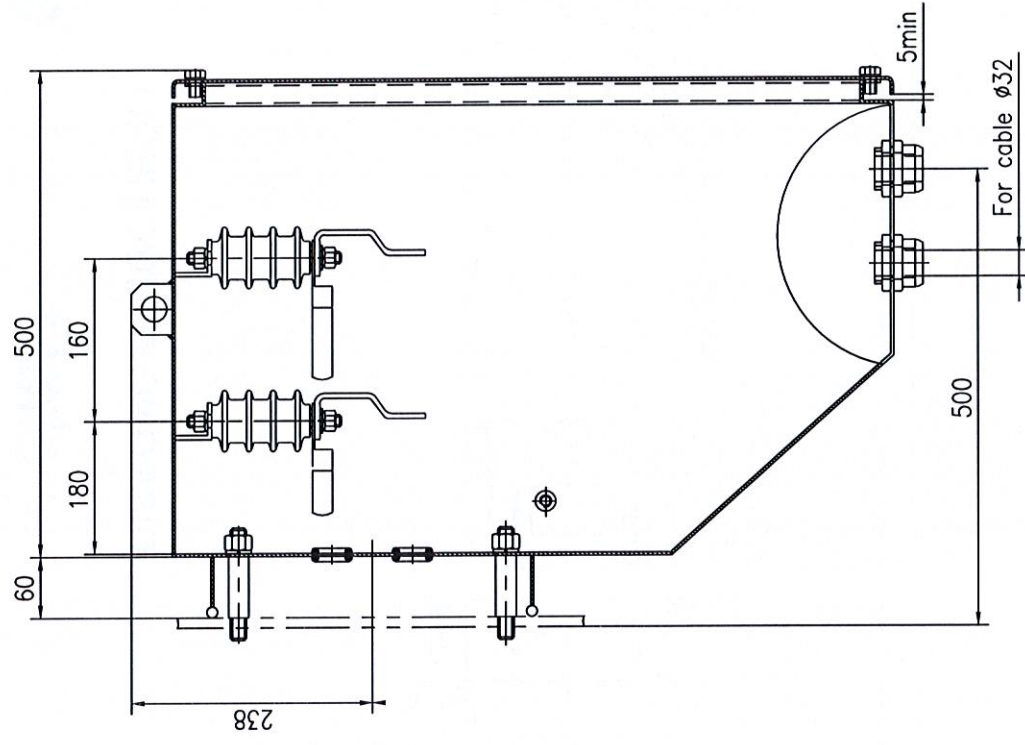
All data subject to tolerances in accordance with IEC60034-1



DISEGNO D'INGOMBRO

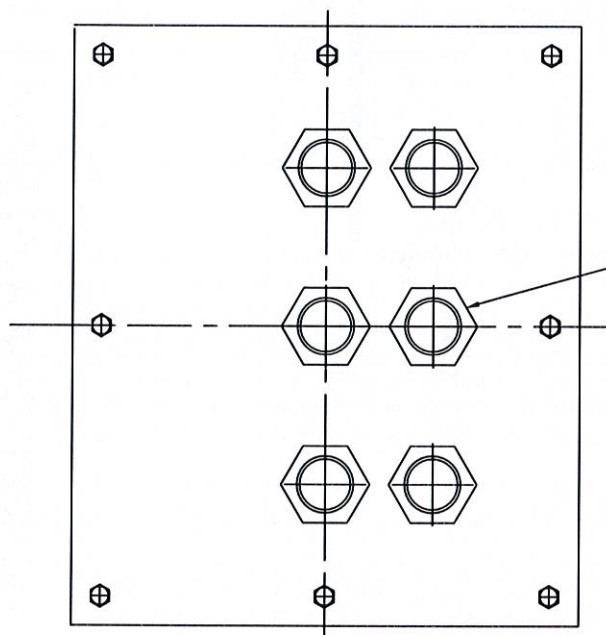
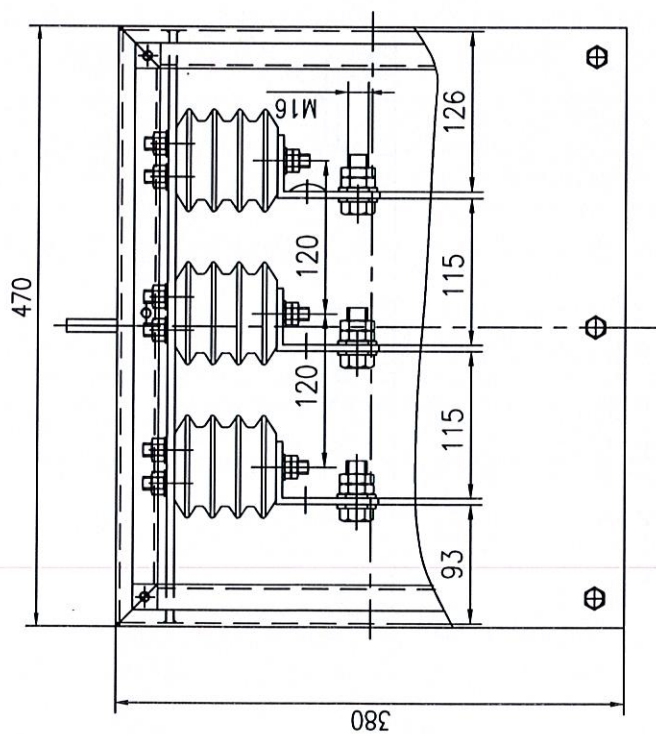
comelmar motors





MORSETTIERA PRINCIPALE

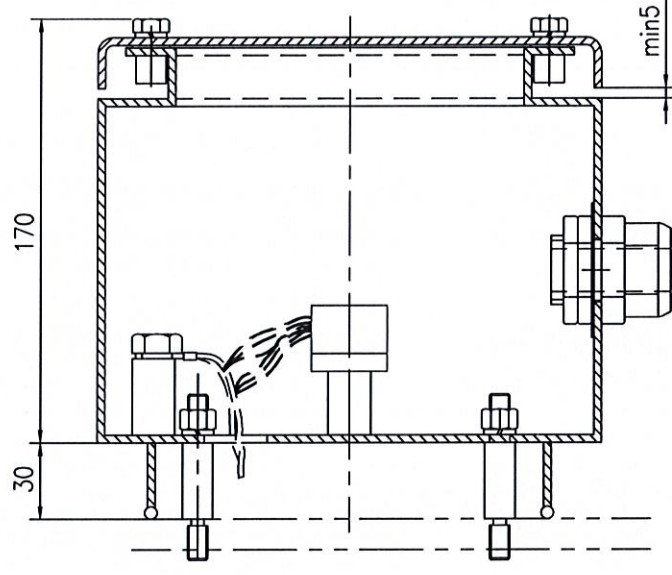
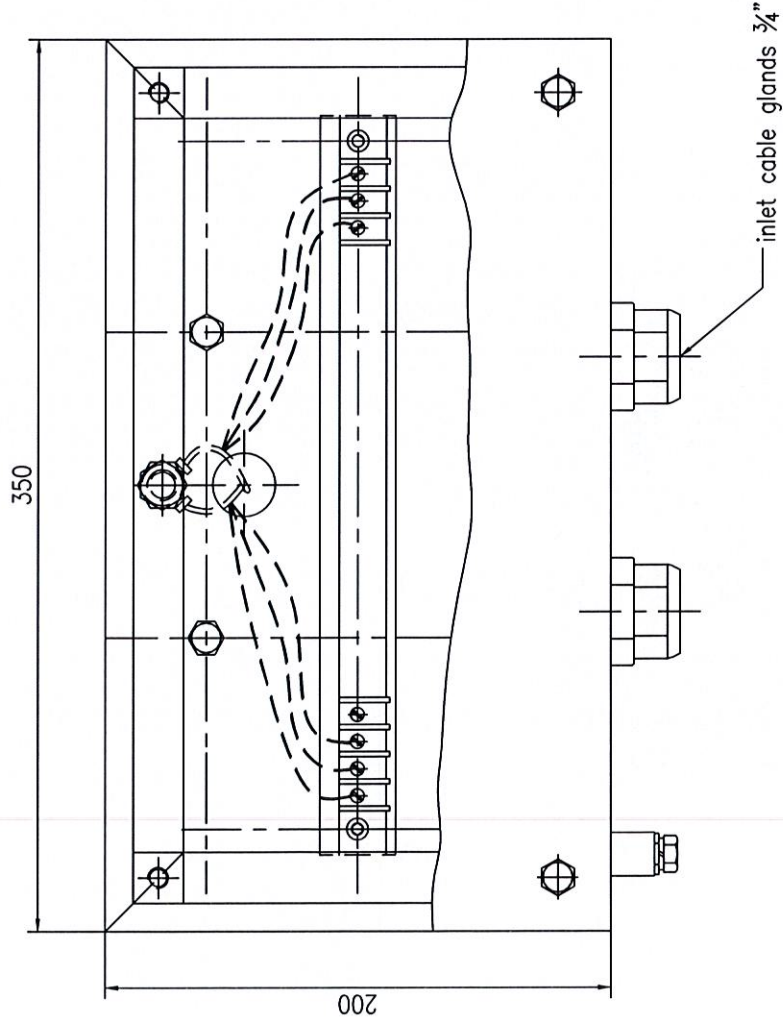
comelmar motors 



6PCS Waterproof metal connector
For cables $\phi 40$

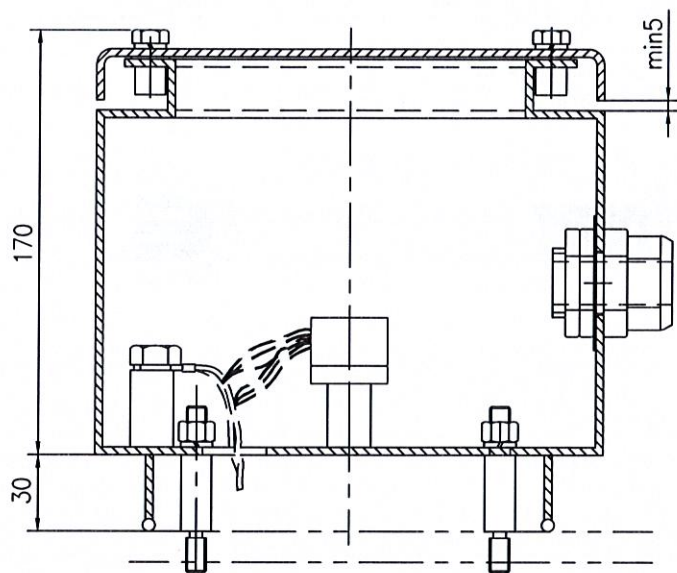
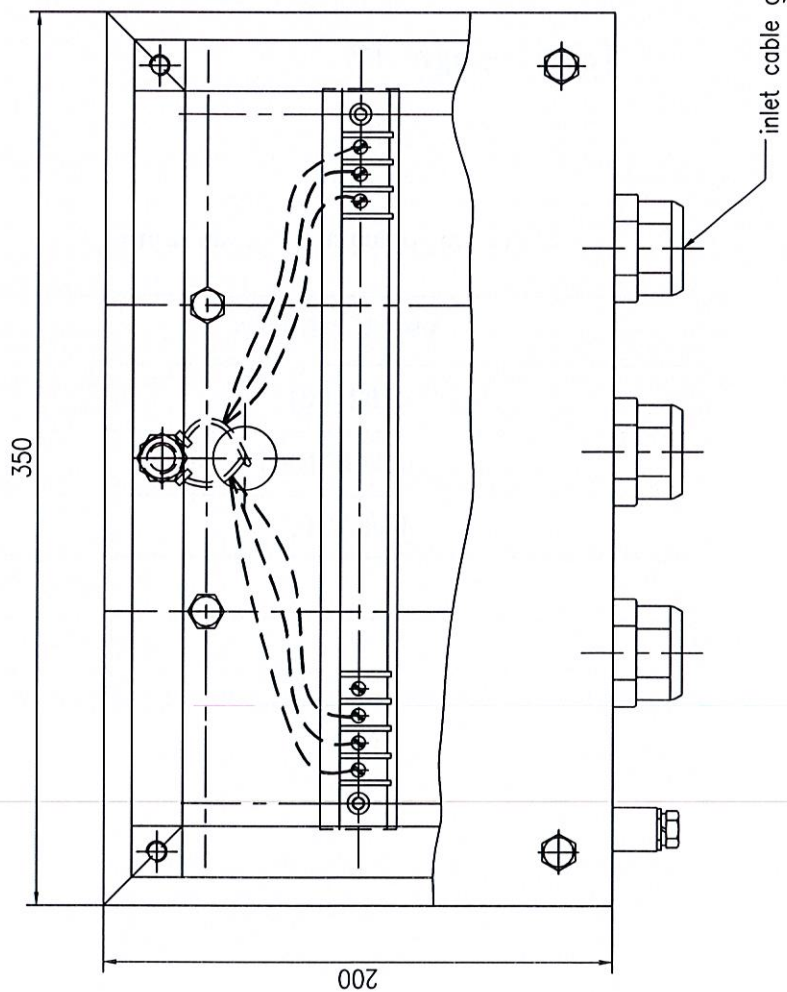
MORSETTIERA ROTORICA

comelmar motors 



MORSETTIERA AUSILIARIA 1 - PT100





MORSETTIERA AUSILIARIA 2 - SCALDIGLIE

comelmar motors 



AVRT series three-phase asynchronous motor

Type Test Report

Total page 12

Name	Three-phase asynchronous motor
Type	AVRT 710 LY6
Product NO.	2021001
Serial No.	003Y071007
Test date	10/03/2021
Surveyor	

Type test performance Summary				Page	2021001
				No	

Type	AVRT 710 LY6	Capacity Power(kW)	4.500	Phase	3	Poles	6
(V) Rated Vol.	6000	(V) Rotor Vol.	1520	(rpm) Speed	992	(Hz) Frequency	50
(A) Rated Curr.	510	(A) Rotor curr.	1750	Insu. class	F	Work duty	S1
Stator Wire	Y	Rotor Wire	Δ	Protect class	IP55	Standard	

(Item)	Test value	Design Value	Standard Value	remark
Phase Stator R 75 °C Rref1 (Ω)	0.0407			
Phase Rotor R 75 °C Rref2 (Ω)	0.0105			
Stator open-circuit voltage ratio e U1: U2 (V)	3.67			
No-load Current at rated voltage I_0 (A)	137.1			
Loss at no load test P_0 (W)	85.20K			
Pfe at No load test P_{fe} (W)	29.9K			
Pfw at No load test P_{fw} (W)	47.08K			
Pcu1 at load test °C P_{cu1} (W)	35.74K			
Pcu2 at load test °C P_{cu2} (W)	32.22K			
Ps at load test P_s (W)	23.16K			
Psumm at load test P_{summ} (W)	131.3K			
η at load test η (%)	97.16			
S at load test S (%)	0.807			
COS Φ at load test COS Φ	0.8968	0.88	0.86	Conformity
IN at load test I_N (A)	496.97			
TN at load test T_N (Nm)	43335			
IkN/IN (I_{kN}/I_N) (times)	5.91			
TkN/TN (T_{kN}/T_N) (times)	1.13			
Tmax/TN (T_{max}/T_N) (times)	2.94	2.6	2.5	Conformity
Stator Trise at full load $\Delta Q1$ (K)	79.20		80	Conformity
Bearing temp.(Thermomeer): DE/NDE (°C)	37.5/37.5			
Ambient Temperature (°C)	10.00			
Over Torque 15scd $1.76I_N$	OK			
Over Speed 2min $1.2N_s$	OK			
Rise Valtage 3min $1.3U_N$	OK			
Stator/ Rotor hot insulation resistance (M Ω)	5000			
Sound L_p (dB)	95,8			
Value of vibration mm/s	0.9			

Result							
Check		Check		Tester		Date	10/03/2021

U (V)				I (A)				(Hz)	(W)	Pf	Winding			
u-v	v-w	u-v	veg	u	v	w	veg	Freq	P0	Cosp	T0 (°C)			
7381.0	7383.0	7381.0	7382.0	229.7	231.0	231.5	230.7	50.00	129.5K	0.04390	61.6			
6841.0	6843.0	6841.0	6842.0	181.7	182.7	183.2	182.5	50.00	107.8K	0.04990	62.6			
5977.0	5978.0	5978.0	5978.0	135.8	136.1	136.5	136.1	50.00	84.40K	0.05990	62.0			
5088.0	5089.0	5089.0	5089.0	109.3	109.4	109.9	109.5	50.00	72.00K	0.07460	64.9			
4193.0	4194.0	4193.0	4194.0	88.68	88.81	89.29	88.93	50.00	63.30K	0.09790	60.5			
2934.2	2935.7	2934.7	2934.8	61.94	62.61	62.55	62.36	50.00	54.40K	0.17200	60.1			
2387.7	2389.1	2388.0	2388.3	51.10	51.74	51.72	51.52	50.00	51.91K	0.24400	59.9			
1776.5	1777.6	1776.3	1776.8	40.36	40.96	40.98	40.77	50.00	49.80K	0.3970	60.1			
Initial winding resistance R1(Ω)			0.0624	Stator initial temp.θ1 (°C)			10	The resistance after test R0 (Ω)						
Rated no-load current I0		137.1	(A)				Rated no-load loss P0		85.20K	(W)				
Rated mechanical loss Pfw		40.2K	(W)				Rated iron loss Pfe		28.9K	(W)				

