SIEMENS

SYNCHRONOUS GENERATOR

Type: 1DH7048-3WE15-Z Constructive form:IM8225 (W42) Date of manufacture:

Serial Nr.:SP 97 110.1500.01 Manufacture place: Lapa - SP shop

Rated output:	68000 kVA	Temperature rise limit:	
Rated voltage:	15750 V	-stator core winding:	80°C
Rated current:	2493 A	-rotor winding:	80°C
Power factor:	0,9	Max. cooling air temperature:	40°C
Frequency:	50Hz	Max. cooling water temperature:	25°C
Rated speed:	200 rpm	Rated excitation voltage:	V
Runaway speed:	365 rpm	Rated excitation current:	A
Moment of inertia (J):	800 tm2	Insulation temperature class:	
Stator winding connection:	Y	-stator winding:	F
Number of phases:	3	-rotor winding:	F
Number of poles:	30	Max. weight for assembly:	1354 kN

ANSI,IEC,VDE Rotation: Clock wise viewed DS

Made in Brazil C.G.C.44013159/0002-05

1 The wind should be blowed in the center

2 Execution according to NWA 0006 use of letter Times

Lettering according to DIN51-128 o.20mm

Material: Stainless steel 1.4016 DIN5463x32 DIN 188

Execution: surface polished, lettering and lines in black (RAL 9005)

3 The manufacture date will be the finish date of each machine

4 The values for excitation current and voltage will be engraved after the commissioning

5 The plate will be placed in a concrete wall with bolt (item 2) and anchor bolt (item 3)

6 Execution according to DIN51-IEC

7 For machine

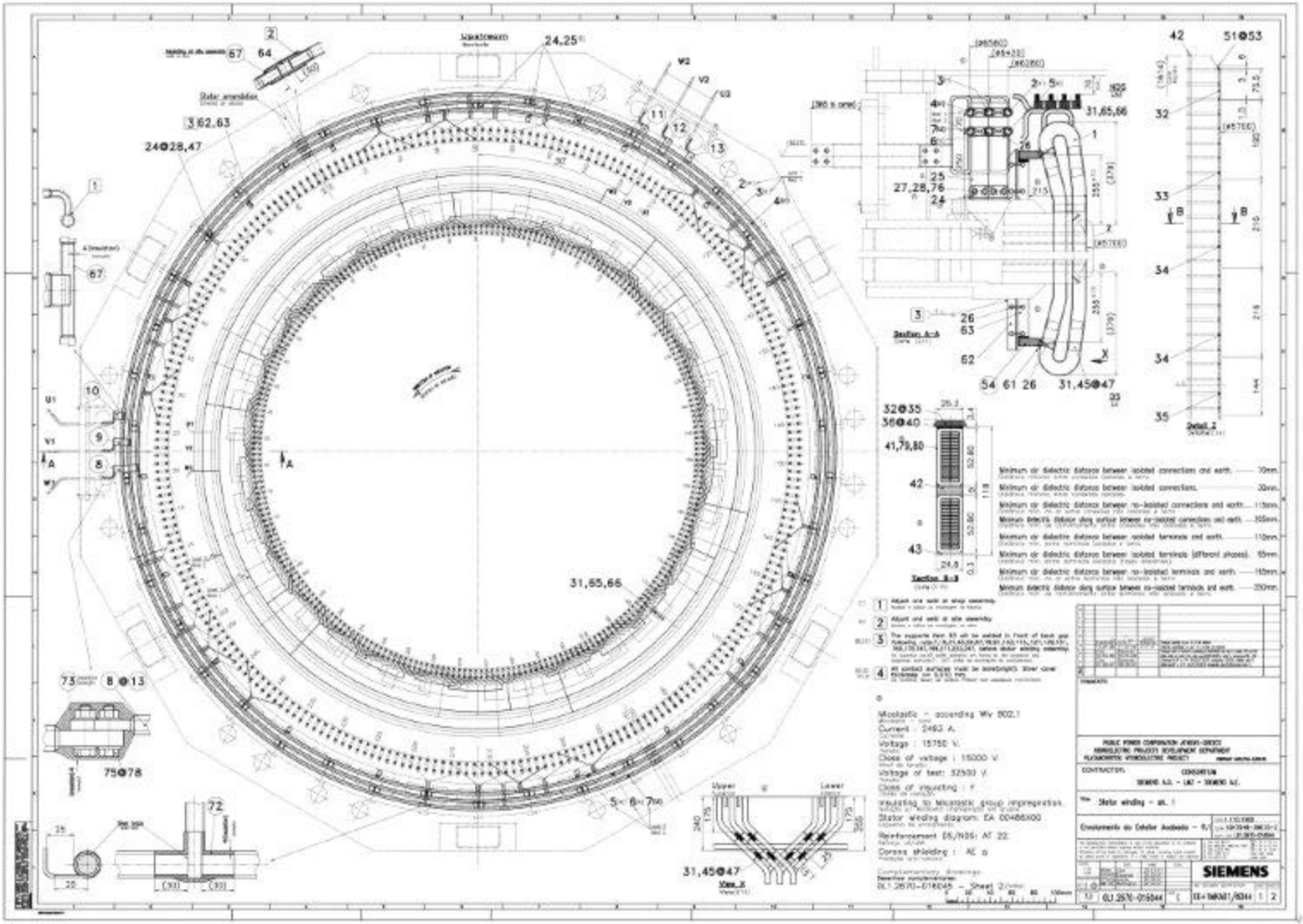
1- SP 97 110.1500.01
2- SP 97 110.1500.02

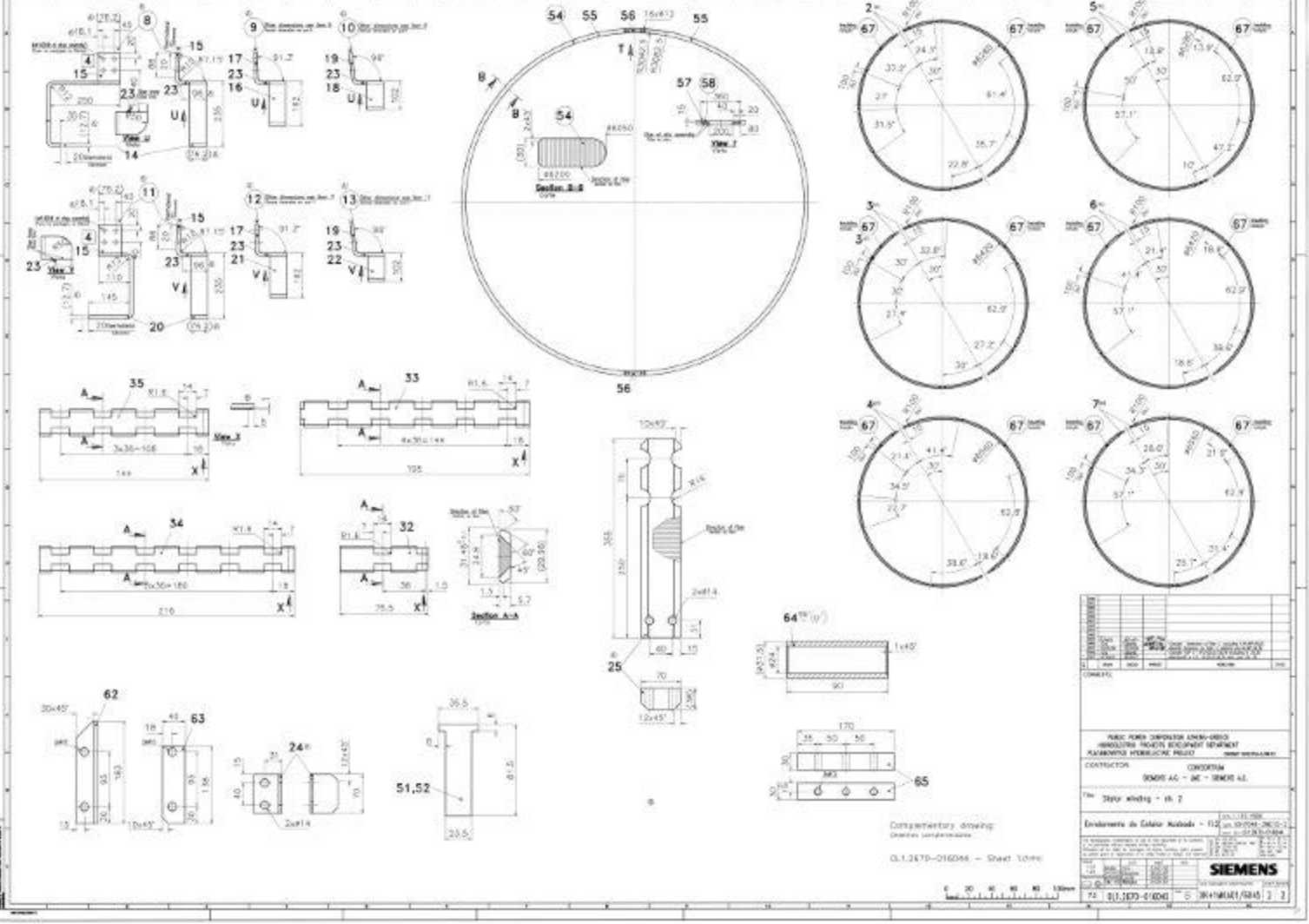
8 Plate holder: linear lettering, material per DIN51-C2

CONTRACTOR: CONSORTIUM
SEMCO S.A. - IAC - SOMCO A.C.

SIEMENS

7.3 OL1.2239-010039 DH+IMB081/0059


Stator winding - st. 1
Minimum air dielectric distance between isolated connections and earth. 70mm.
Minimum air dielectric distance between isolated connections. 30mm.
Minimum air dielectric distance between no-isolated connections and earth. 115mm.
Minimum air dielectric distance between terminals and earth. 110mm.
Minimum air dielectric distance between isolated terminals (different phases). 65mm.
Minimum air dielectric distance between no-isolated terminals and earth. 165mm.
Minimum air dielectric distance along surface between no-isolated terminals and earth. 250mm.
Microtastic - according Wv 002.1
Current : 2493 A.
Voltage : 15750 V.
Class of voltage : 15000 V.
Voltage of test: 32500 V.
Class of insulating : F
Insulating to Microtastic group impregnation.
Stator winding diagram: EA 00486X00
Reinforcement DS/N35: AT 22.
Corona shielding : AC a
Complementary drawings
Reference complementary
DL1.2870-016045 - Sheet 2/
PUBLIC POWER CORPORATION (ANON-GREEC)
HYDROELECTRIC PROJECT DEVELOPMENT DEPARTMENT
PLATANOVRYSI HYDROELECTRIC PROJECT
CONTRACTOR:
CONSORTIUM
SIEMENS A.G. - L&T - SIEMENS A.G.
Title
Stator winding - st. 1
Enclosure to Order Annexe - 5/
SIEMENS
DL1.2870-016044
DX-TMN01/8044
1 2

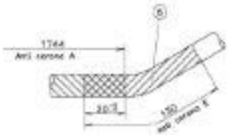

Complementary drawing
Complementary drawing
OL1.2670-016046 - Sheet 1(4)
PUBLIC POWER CORPORATION (KHMO-DEDD)
HYDROELECTRIC PROJECTS DEVELOPMENT DEPARTMENT
PLAGNIARITSA HYDROELECTRIC PROJECT
CONTRACTOR
CONSORTIUM
SEMENS AG - JAE - SIEMENS A.E.
Title: Stay ring - sh. 2
Embedments de Cuelot Acabado - F.G.
SIEMENS
OL1.2670-016046
3K+MAUEI/GR45
2 2

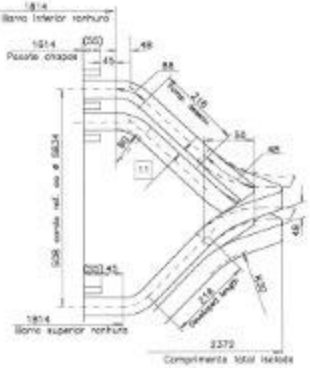
Cálculo

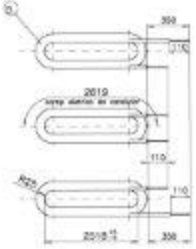
		Largura	Profundidade
Lado do ranhura	AB x N x B2 / 2T x W x 2B	16,80	49,20
	Acréscimo para sobrecapa	0,10	----
	Medida da barra prensa	16,90 +0,0 -0,10	49,30 +0,0 -0,50
	Duas camadas de isolação	6,80	6,80
	Dimensionamento das bobas da ranhura	23,30 +0,0 -0,10	32,80 +0,0 -0,50
Para medida da ranhura	Soma da dimensionamento das bobas da ranhura em profundidade	XXXXXXXXXX	102,80
	Separador de cabeças	XXXXXXXXXX	6,30
	Fita de fundo do ranhura	XXXXXXXXXX	2,40
	Revestimento da ranhura	----	XXXXXXXXXX
	Acréscimo conforme WV	1,30	XXXXXXXXXX
	Folgamento sem inclinação da ranhura	----	XXXXXXXXXX
Lado frontal	Fita de enchimento / Tiago	----	3,10
	Medida da ranhura	24,80	118,03
	AB x N x B2 / 2T x W x 2B	16,80	49,20
	Acréscimo conforme WV	2,00	2,00
	Duas camadas de isolação	6,80	6,80
	Dimensionamento das bobas frontais	24,40	53,80

Micalastic – Impregnação em grupos

Isolação conforme WVW02.1 para	15,0 kV
Tensão de ensaio fase-fase / fase-terra	30,9 kV
Classe de isolação	F
Disposição das condutores (conf. WV238)	2x(1:2//)x(5:3//)
Enrolamento longitudinal	
Dimensão dos condutores (parciais) FC :	8,00 x 2,10
Isolação :	8,40 x 3,08 com 20%
União das bobinas conforme DIN341.44 exec.	112/3
União das ligações conforme DIN341.44 exec.	112/3
Relação das cabeças de bobina conforme WV270:	A732 normal (1)
Número de ranhuras	202
Número de polos	30
Medida periférica:	143,70 +1 -1
Medida periférica média:	138,4
Medida de controle de prensa: (sem camada de cobertura)	23,00 +0,0 -0,4 (1)
Comprimento do Anti-corona A:	1744
Comprimento do Anti-corona E:	1ª camada = 120mm 2ª camada = 120mm 3ª camada = 70mm



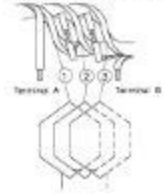


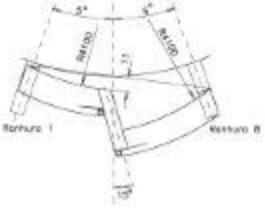


ENROLAMENTO IMBRICADO DE DUAS CAMADAS

1. Observar RM40070C50 exec 1 (pos 1 e 2)
2. Observar RM40070C50 exec 3 (pos 3)
3. Conforme WV210 parte 3, item 3, execução 5 (pos 11)
4. Envolver os condutores chanfradamente na ataque (pos 13)
5. 1 Camada, 50% –5% sobrepasta (pos 24 e 38)
6. Material auxiliar de montagem (pos 26 e 27)
7. Colocada sob o enfaixamento das bobas frontais (pos 24)
8. Sobrepor +3% +– 5% (pos22)
   Região das ranhuras : total de 11 camadas
   Região das bobas frontais: total de 7 camadas
9. 1 Camada justaposta (pos 23)
10. A ligação entre bobinas encontra-se defronte ao nariz da bobina
11. Distância de 15°° nos trocos de fases e de 15°° dentro de grupo
12. Parte reta, 1 camada 1/3 sobrepasta. Região do nariz, 1 camada 2/3 sobrepasta (pos 15)
13. Tornar condutores parciais em 90° no sulcos dos terminais
14. (1) Medida para dispositivo de impregnação

Enrolamento a direita

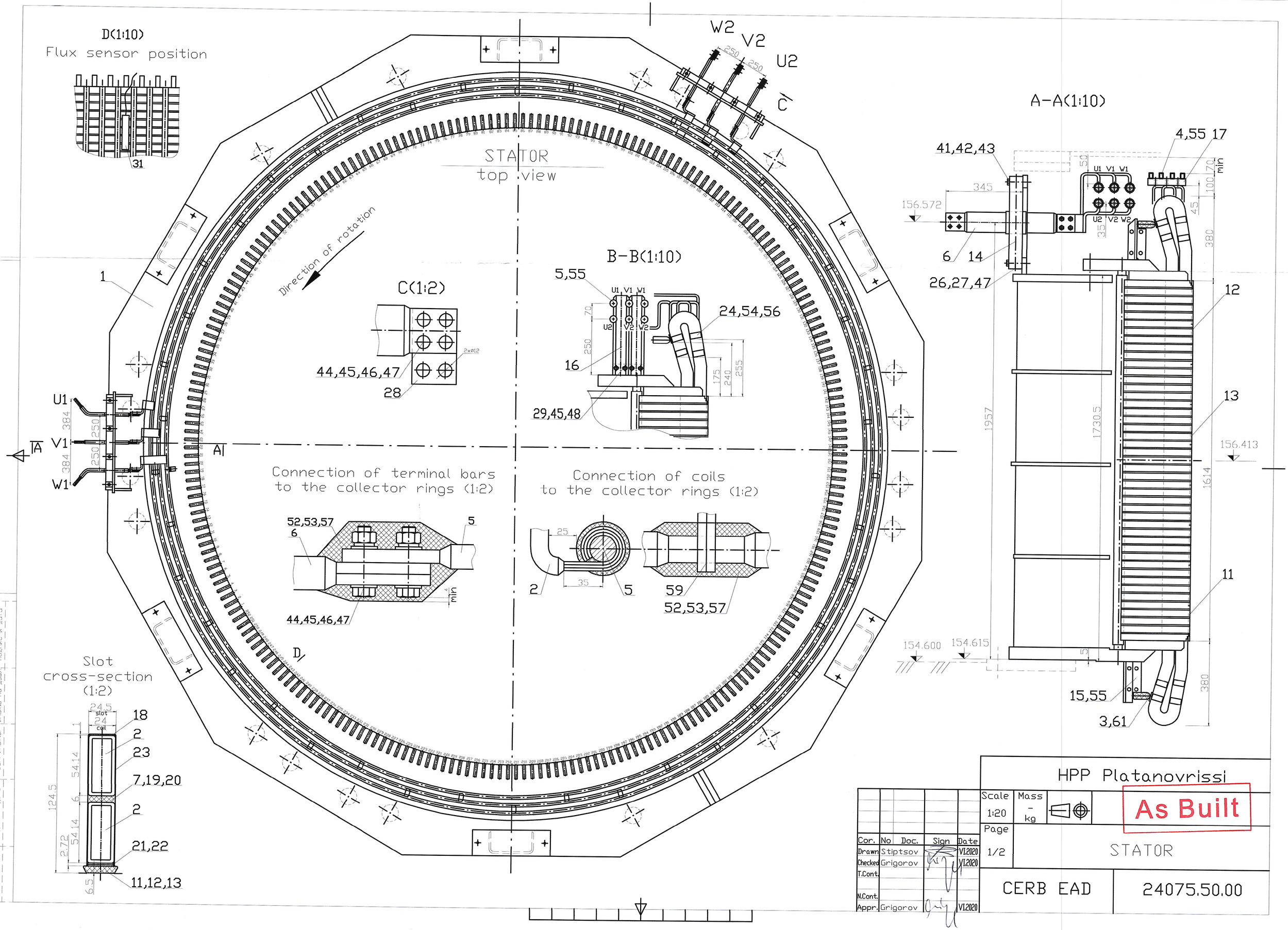




0 20 40 60 80 100mm

DIN 71460			
		STATOR COIL BOBINA DO ESTATOR	
		SIEMENS	1L1.2690-016048 D

Photocopiable



				Scale 1:20	Mass - kg
Cor.	No Doc.	Sign	Date	Page 1/2	
Drawn	Stiptsov		VI.2020		
Checked	Grigorov		VI.2020		
T.Cont.					
N.Cont.					
Appr.	Grigorov		VI.2020		

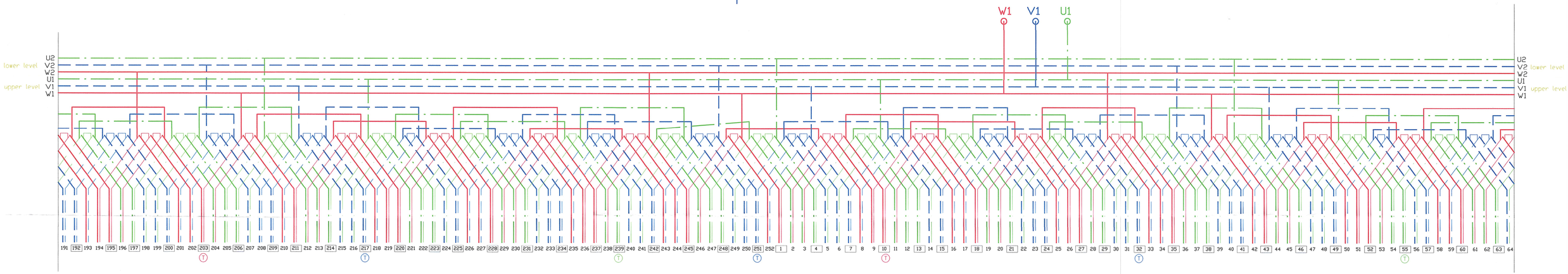
HPP Platanovrissi

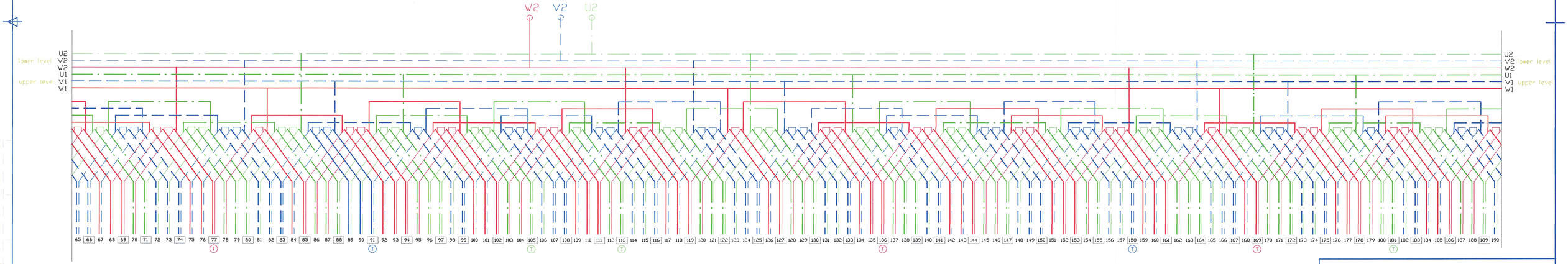
As Built

STATOR

CERB EAD

24075.50.00

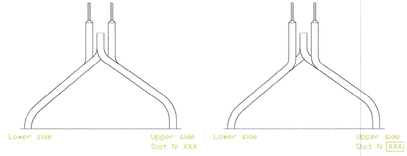




1. Number of slots	Z=252
2. Number of poles	2p=30
3. Number of phases	m=3
4. Slots per pole per phase	q=2 4/5
5. Number of paralel paths in winding	a=6
6. Coil pitch	y=1-8

DESIGNATION

- phase U - upper layer
- phase V - upper layer
- phase W - upper layer
- phase U - lower layer
- phase V - lower layer
- phase W - lower layer
- (T) Temperature sensor Pt100



Type I (162 pcs.) Type II (90 pcs.)

Cor.	No.	Doc.	Sign	Date
Drawn	Ctiatisas			VI.2020
Checked	Cpigoropo			VI.2020
T.Cont				
N.Cont				
Appr.	Cpigoropo			VI.2020

HPP Platanovrissi

As Built

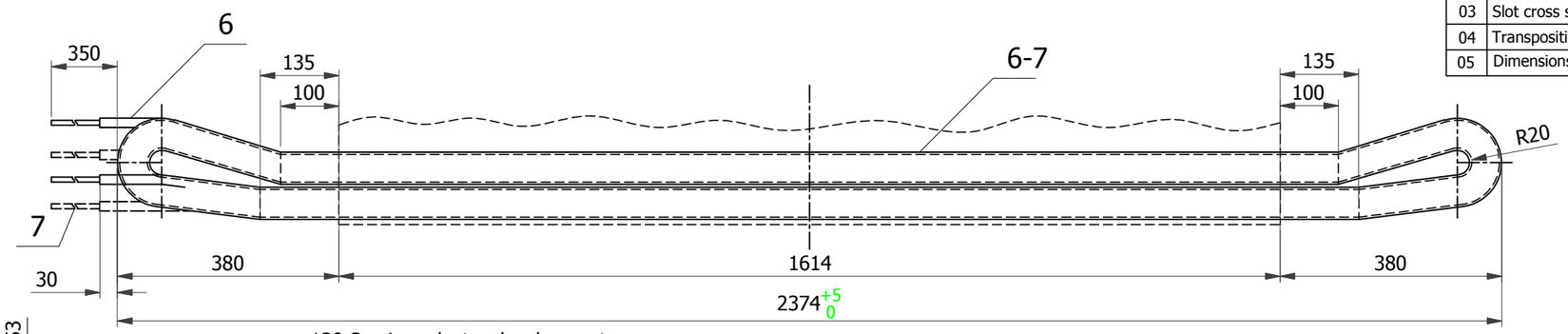
Scale	Mass	Page
-	- kg	1/1

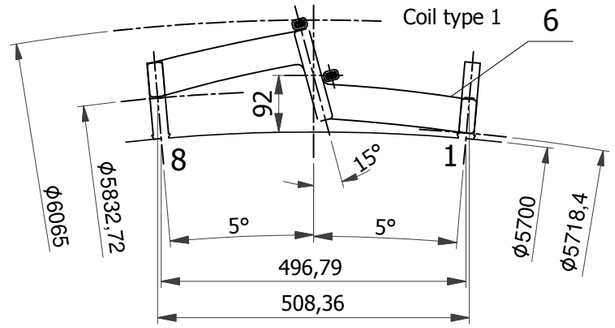
STATOR WINDING DIAGRAM

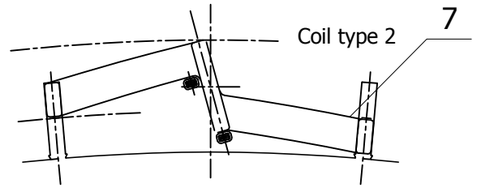
CERB EAD

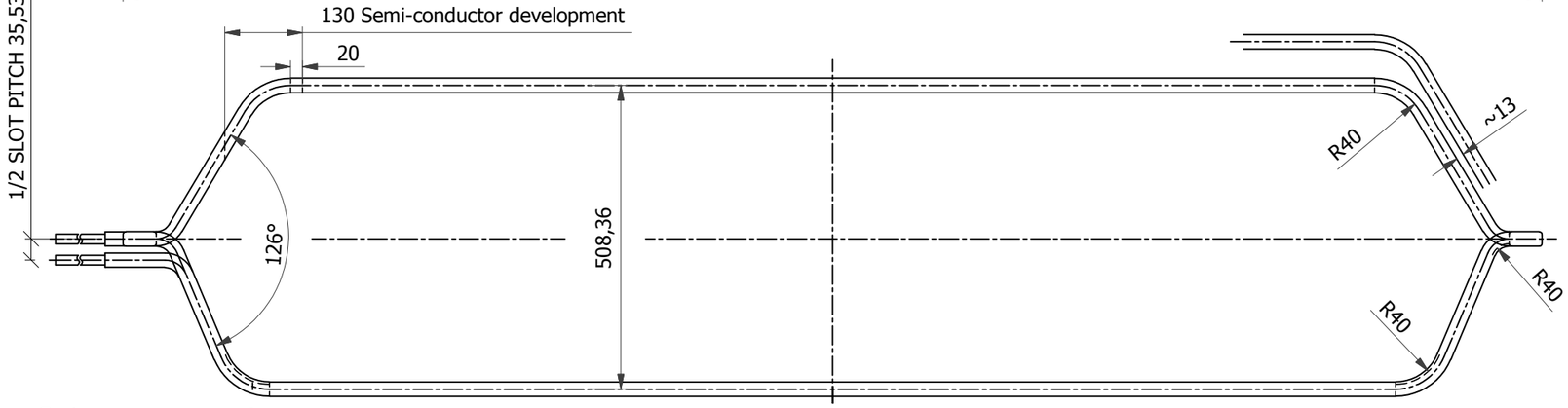
24075.50.00cx

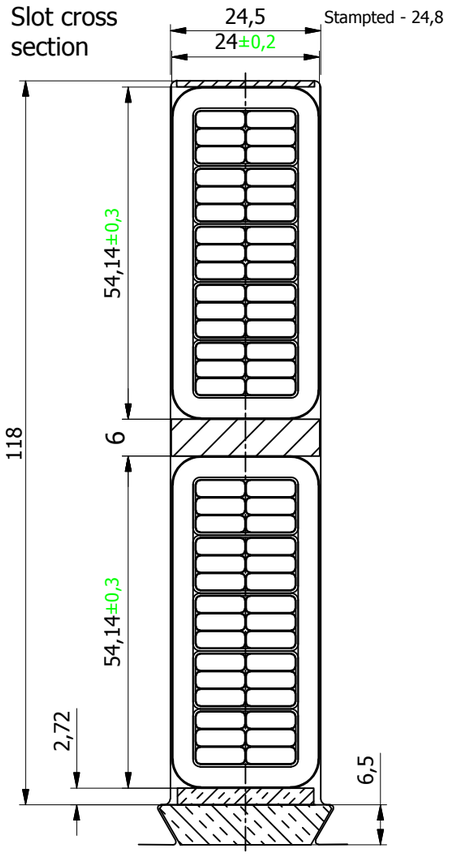
REV	DESCRIZIONE	DATA	DISEGNATO	VERIFICATO	APPROVATO
01	General update	14/05/2020	P. Conte	A. Russo	I. Rescigno
02	Coil section update	19/05/2020	L. La Rocca	A. Russo	I. Rescigno
03	Slot cross section added	09/06/2020	L. La Rocca	A. Russo	I. Rescigno
04	Transposition deleted	18/06/2020	L. La Rocca	A. Russo	I. Rescigno
05	Dimensions updated	08/07/2020	L. La Rocca	A. Russo	I. Rescigno

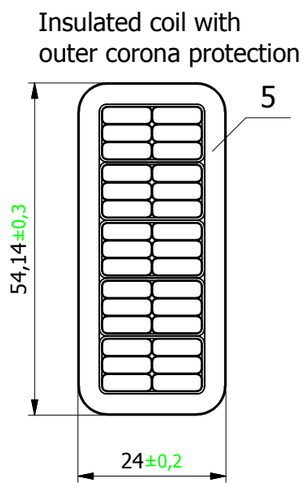


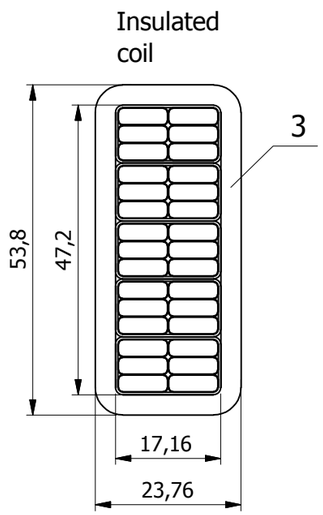


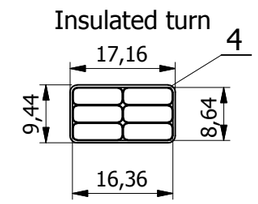


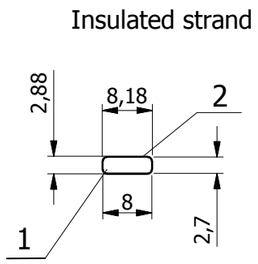












CURRENT RATINGS = 2493 A
V = 15,75 kV

N° COILS = 252
SLOT PITCH = 1 ÷ 8
MEDIUM LENGHT COIL ~ 5255 mm
COIL WEIGHT ~ 37 kg

POS	QTA'	DESCRIPTION		MATERIAL	
7	90+5	Stator coil type 2			
6	162+8	Stator coil type 1			
5		Outer corona protection		Contafel N20/4	
4		Turn insulation		Conductfol 2371	
3		Ground insulation		Calmicaglass 0409	
2		Strand insulation		Daglas	
1		Copper strand		Cu-ETP	

PROGETTO/ PROJECT: Platanovryssi

DISEGNATO/ DESIGNED: P. Conte

OGGETTO/ OBJECT: Stator coil

VERIFICATO/ VERIFIED: A. Russo

NOTE/ NOTES: Definitivo

APPROVATO/ APPROVED: I. Rescigno

MOTORTECNICA s.r.l.

DATA/ DATE: 18/09/2019

FORM/ SIZE: A3

SCALA/ SCALE: 1 : 10

CODICE DISEGNO/ DRAWING CODE: 2005030.002

ORDINE DI LAVORO/ JOB NO.: 20.05.030

FOGLIO/ SHEET: 1

DI/ OF: 1

CLIENTE/ CLIENT: 534

DOCUMENTO N°/ DOCUMENT NO.: .

REV./ REV.: 05

Tolleranze secondo UNI EN 22768 - mk
Tolerances according to UNI EN 22768 - mk

A termine di legge è rigorosamente vietato riprodurre o comunicare a terzi il contenuto del presente disegno
Under the law it is rigorously prohibited to reproduce or to communicate to thirds party the content of the present drawing

Mod.45 Rev.04