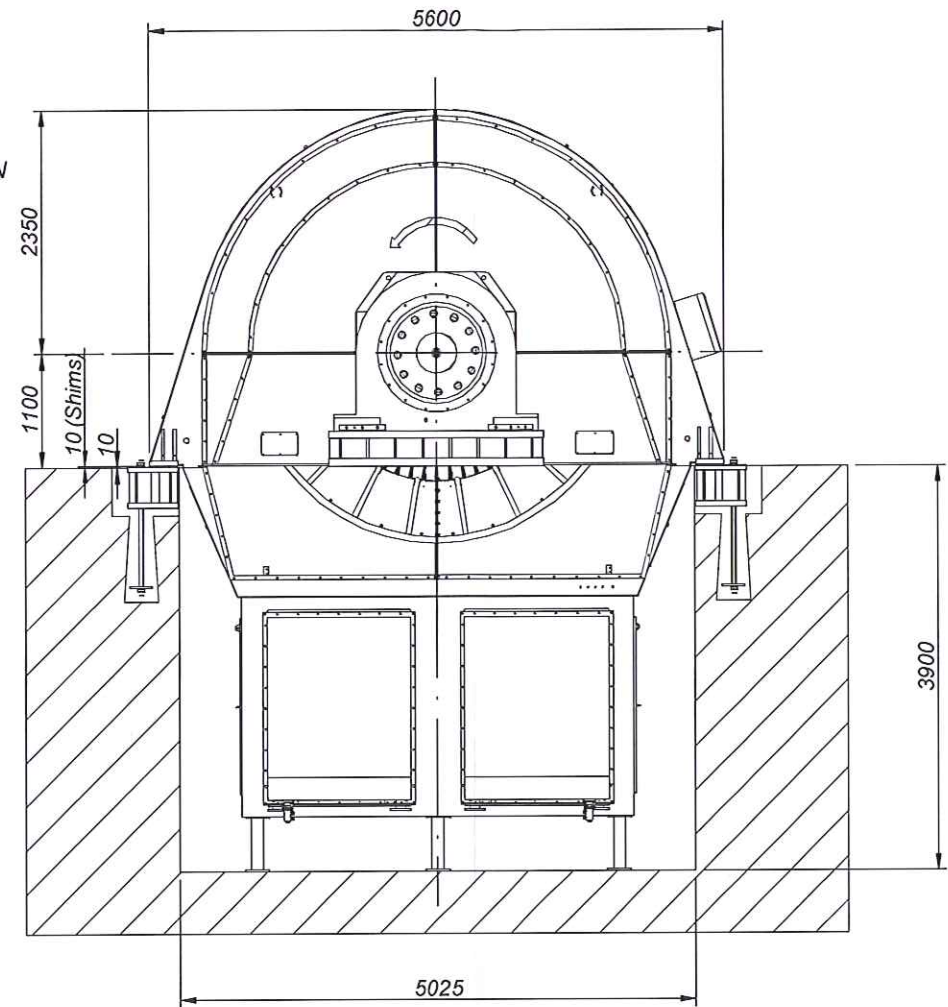
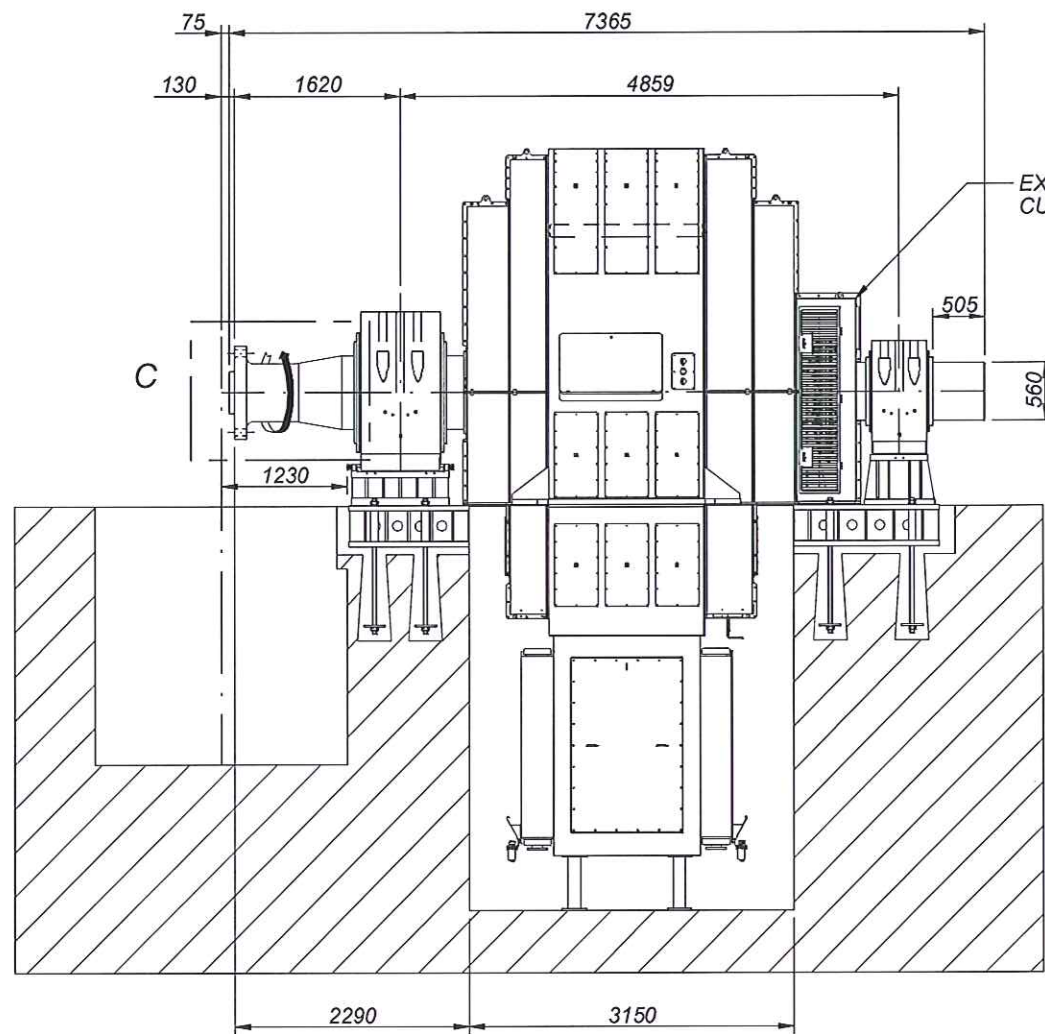
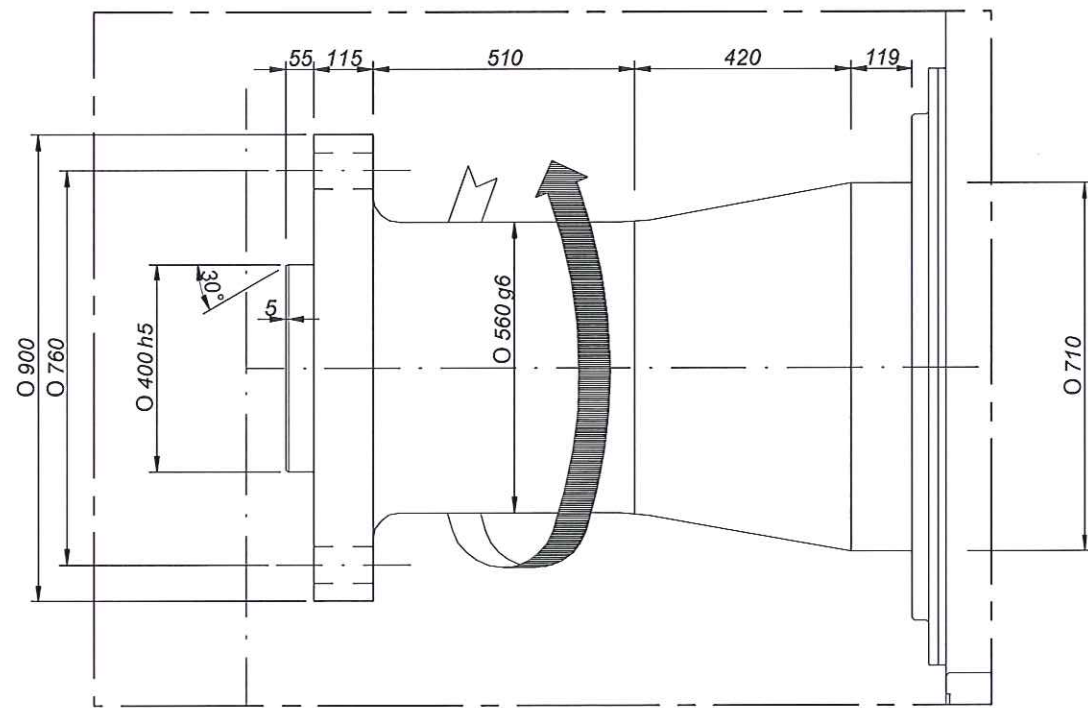


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DETALLE C/DETAIL C



**ORIENTATIVO/
PRELIMINARY**

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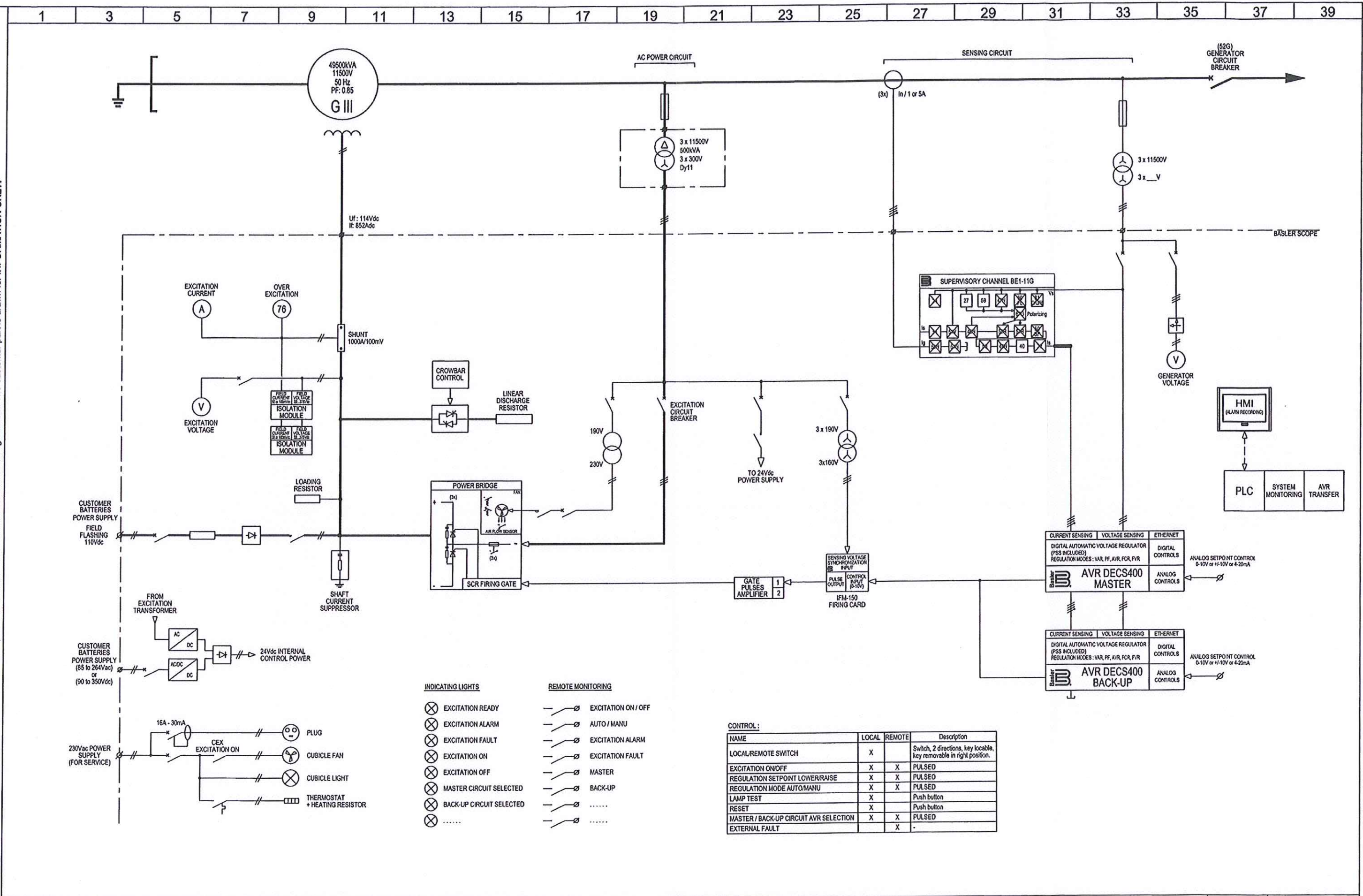
**Synchronous Generator;
11.500V; 50Hz; 600rpm; 49.500kVA.**

- Rotor weight / Peso rotor.....76.500 kg.
- Estator weight / Peso estator.....56.000 kg.
- Base plates weight / Peso bases.. 13.500 kg.
- Total weight / Peso total165.000 kg.

Rev.	Modification			Date	Dra.	Chk.	App.
Indar ref.	OF-95730-1-1	Installation	MISICUNI HEPP				
Customer ref.	-	Description	SYNCHRONOUS GENERATOR PCA-2000-Z/10				
		Designation	GENERAL DIMENSION DRAWING PLANO GENERAL DE LA MÁQUINA				
Drawn	I.S.	22-01-2014	Drawing ref.	Rev.	Scale		
Checked	J.R.G.	22-01-2014	OF-9573011-3D010	-	-		
Approved	J.A.M.	22-01-2014		Sheet	DIN		
Dimensions in mm				1	1	A2	

Indar

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- INDICATING LIGHTS**
- ⊗ EXCITATION READY
 - ⊗ EXCITATION ALARM
 - ⊗ EXCITATION FAULT
 - ⊗ EXCITATION ON
 - ⊗ EXCITATION OFF
 - ⊗ MASTER CIRCUIT SELECTED
 - ⊗ BACK-UP CIRCUIT SELECTED
 - ⊗
- REMOTE MONITORING**
- /⊗ EXCITATION ON / OFF
 - /⊗ AUTO / MANU
 - /⊗ EXCITATION ALARM
 - /⊗ EXCITATION FAULT
 - /⊗ MASTER
 - /⊗ BACK-UP
 - /⊗

CONTROL :

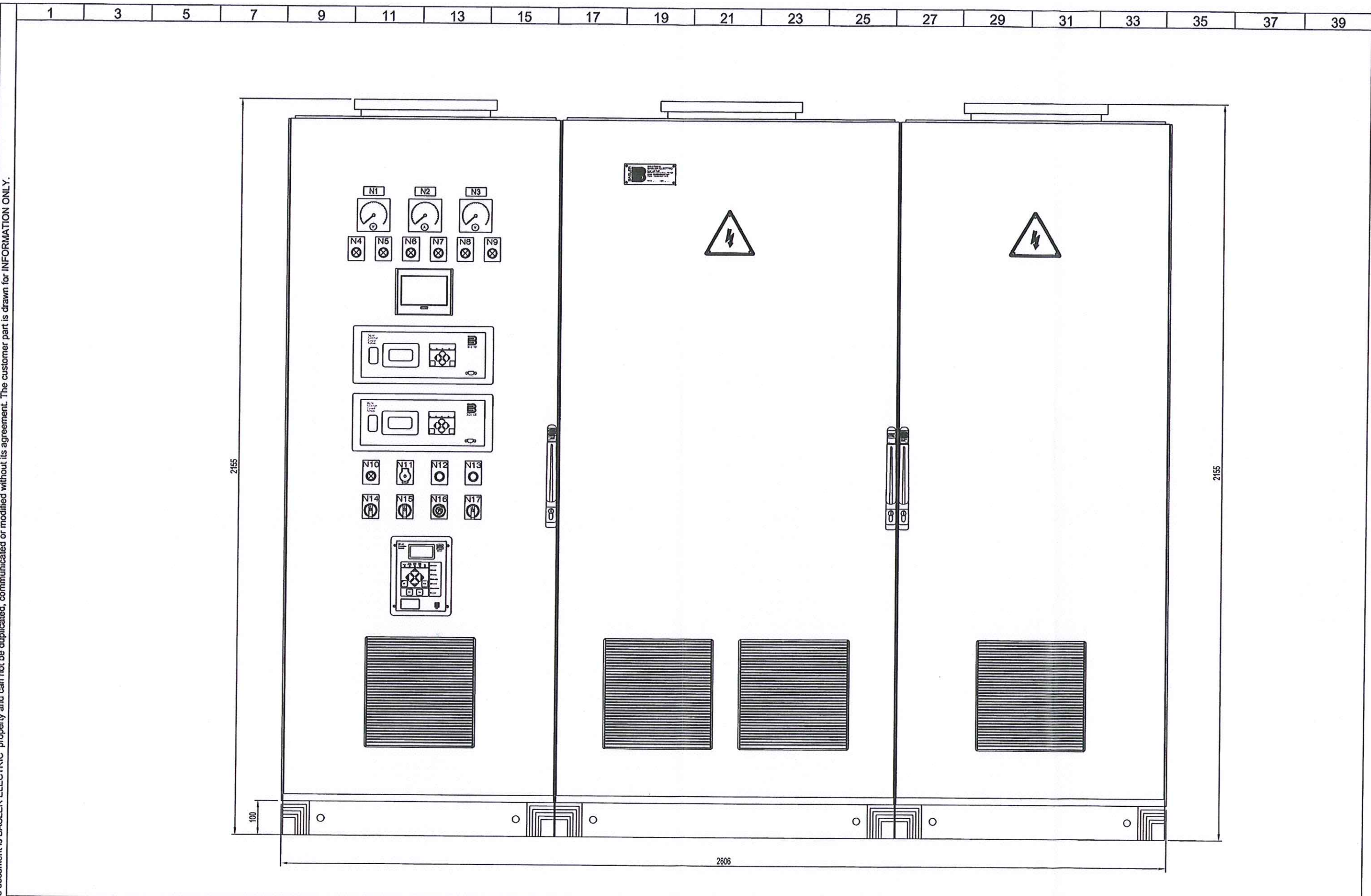
NAME	LOCAL	REMOTE	Description
LOCAL/REMOTE SWITCH	X		Switch, 2 directions, key locable, key removable in right position.
EXCITATION ON/OFF	X	X	PULSED
REGULATION SETPOINT LOWER/RAISE	X	X	PULSED
REGULATION MODE AUTO/MANU	X	X	PULSED
LAMP TEST	X		Push button
RESET	X		Push button
MASTER / BACK-UP CIRCUIT AVR SELECTION	X	X	PULSED
EXTERNAL FAULT		X	-

This PRELIMINARY single line diagram has been drawn up based on customer requirements however is intended for general information only. For more precise details please refer to the FINAL or AS BUILT drawings that may include variations to reflect the exact design and system to be delivered. SCALE: NONE

B. Basler Electric	DRAWINGS BY: AKOZAK	REV:		INDAR	SINGLE LINE DIAGRAM
	REVIEWED BY: Y.EHRMANN	REV:			
	APPROVED BY: S.HEINI	REV:			
		REV: A	FIRST ISSUE		
				OF-95730-1-1-2 DV 20468 rev NONE	6-9130-91-387
				PAGE: 15	SHEET: 20



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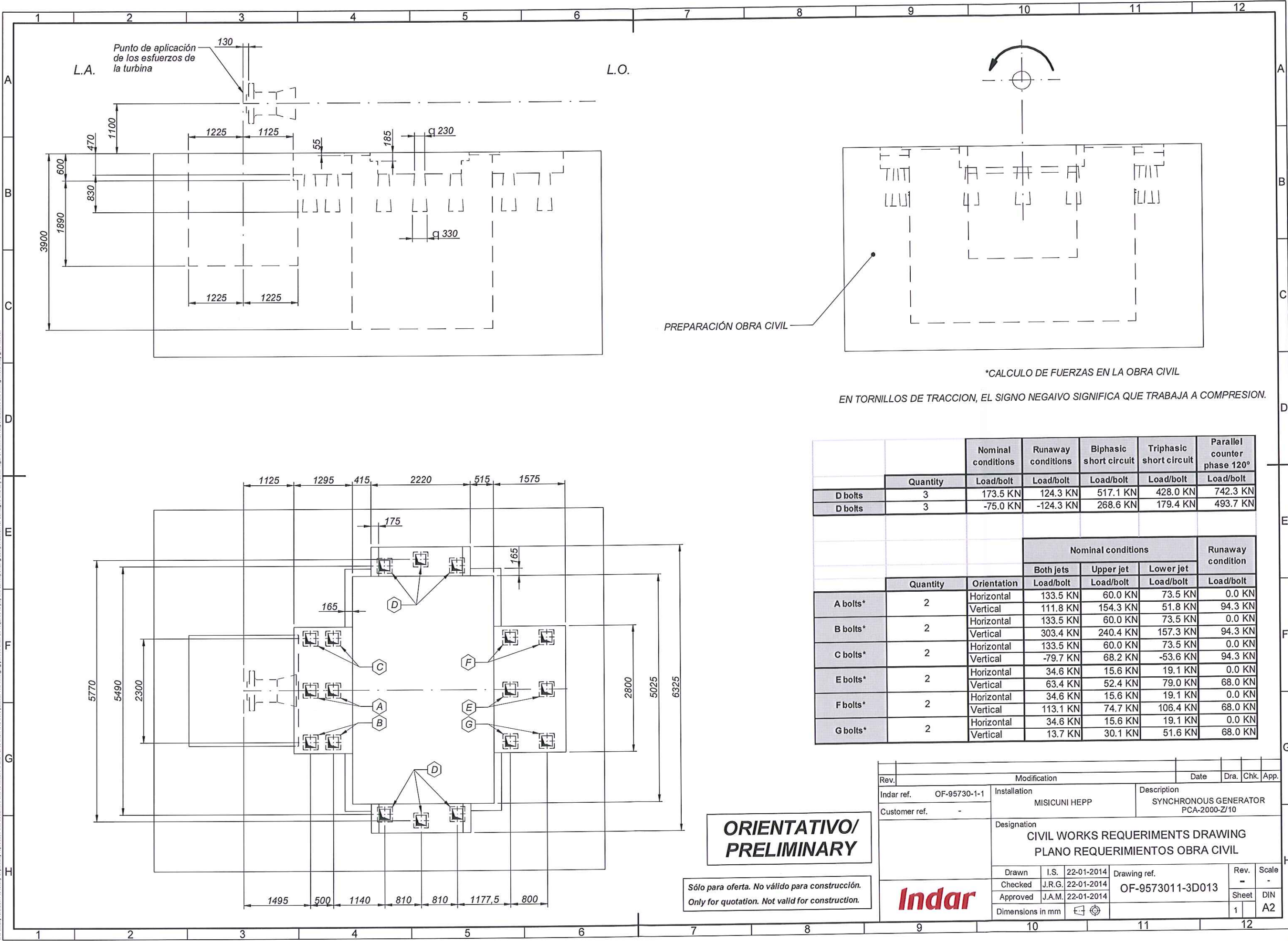


DRAWINGS BY: A.KOZAK	REV:	
REVIEWED BY: Y.EHRMANN	REV:	
APPROVED BY: S.HEINI	REV:	
	REV: A	FIRST ISSUE

INDAR
OF-95730-1-1-2
DV 20468 rev NONE

MECHANICAL LAYOUT		SCALE: 1/10
6-9130-91-387	COL:	REV:
	PREVIOUS PAGE: 15	THIS PAGE: 20

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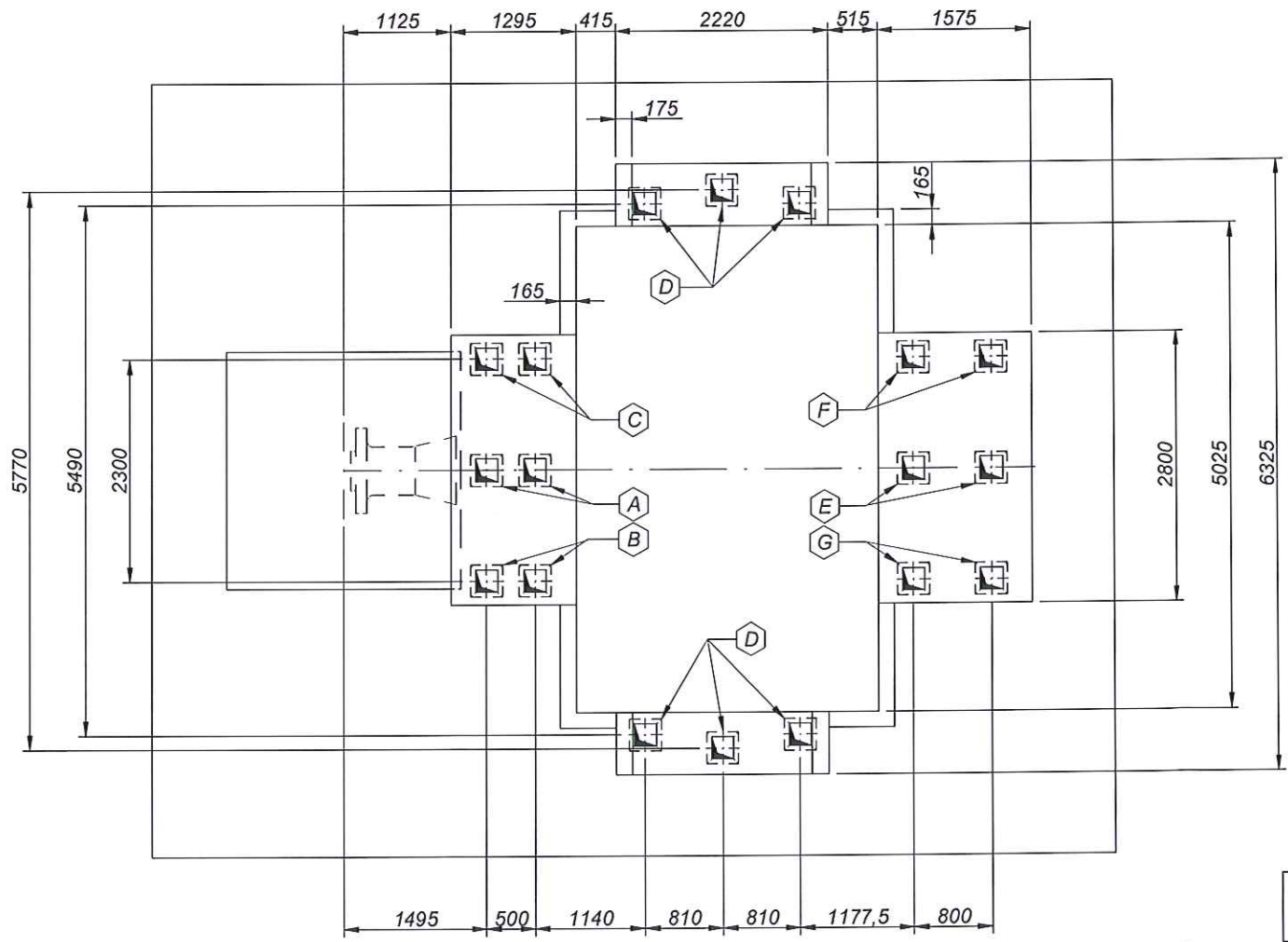


*CALCULO DE FUERZAS EN LA OBRA CIVIL

EN TORNILLOS DE TRACCION, EL SIGNO NEGAIVO SIGNIFICA QUE TRABAJA A COMPRESION.

	Quantity	Nominal conditions Load/bolt	Runaway conditions Load/bolt	Biphasic short circuit Load/bolt	Triphasic short circuit Load/bolt	Parallel counter phase 120° Load/bolt
D bolts	3	-75.0 KN	-124.3 KN	268.6 KN	179.4 KN	493.7 KN

	Quantity	Orientation	Nominal conditions			Runaway condition Load/bolt
			Both jets Load/bolt	Upper jet Load/bolt	Lower jet Load/bolt	
A bolts*	2	Horizontal	133.5 KN	60.0 KN	73.5 KN	0.0 KN
		Vertical	111.8 KN	154.3 KN	51.8 KN	94.3 KN
B bolts*	2	Horizontal	133.5 KN	60.0 KN	73.5 KN	0.0 KN
		Vertical	303.4 KN	240.4 KN	157.3 KN	94.3 KN
C bolts*	2	Horizontal	133.5 KN	60.0 KN	73.5 KN	0.0 KN
		Vertical	-79.7 KN	68.2 KN	-53.6 KN	94.3 KN
E bolts*	2	Horizontal	34.6 KN	15.6 KN	19.1 KN	0.0 KN
		Vertical	63.4 KN	52.4 KN	79.0 KN	68.0 KN
F bolts*	2	Horizontal	34.6 KN	15.6 KN	19.1 KN	0.0 KN
		Vertical	113.1 KN	74.7 KN	106.4 KN	68.0 KN
G bolts*	2	Horizontal	34.6 KN	15.6 KN	19.1 KN	0.0 KN
		Vertical	13.7 KN	30.1 KN	51.6 KN	68.0 KN



**ORIENTATIVO/
PRELIMINARY**

Sólo para oferta. No válido para construcción.
Only for quotation. Not valid for construction.

Rev.	Modification	Date	Dra.	Chk.	App.
Indar ref. OF-95730-1-1	Installation				
Customer ref. -	MISICUNI HEPP				
	Description				
	SYNCHRONOUS GENERATOR				
	PCA-2000-Z/10				
	Designation				
	CIVIL WORKS REQUERIMENTS DRAWING				
	PLANO REQUERIMIENTOS OBRA CIVIL				
	Drawn	I.S.	22-01-2014	Drawing ref.	Rev.
	Checked	J.R.G.	22-01-2014	OF-9573011-3D013	Scale
	Approved	J.A.M.	22-01-2014		
	Dimensions in mm			Sheet	DIN
				1	A2

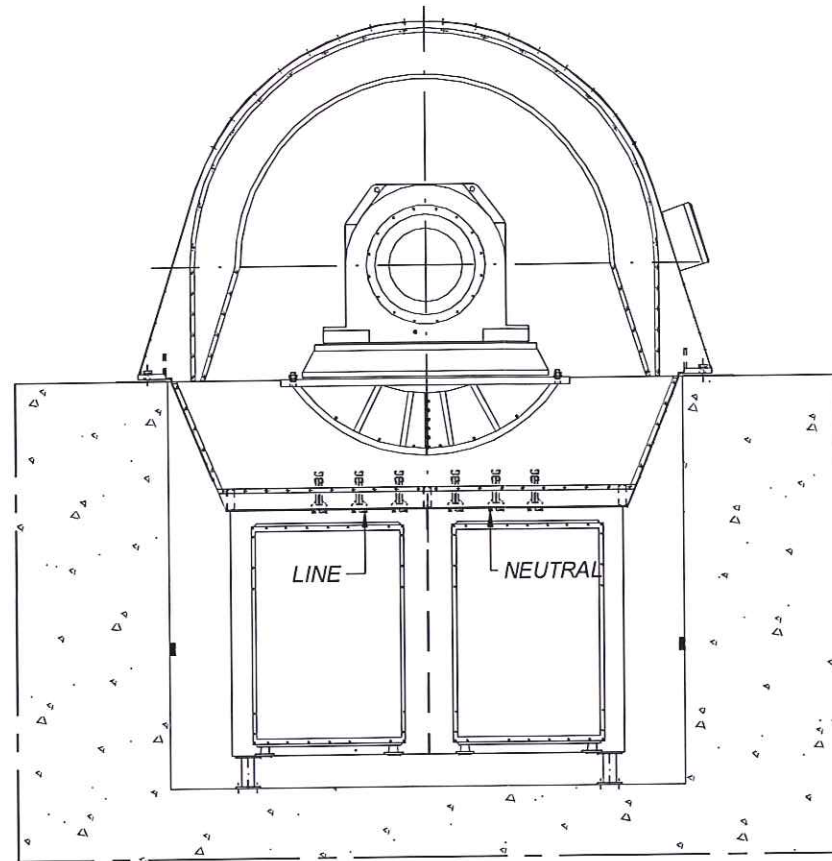
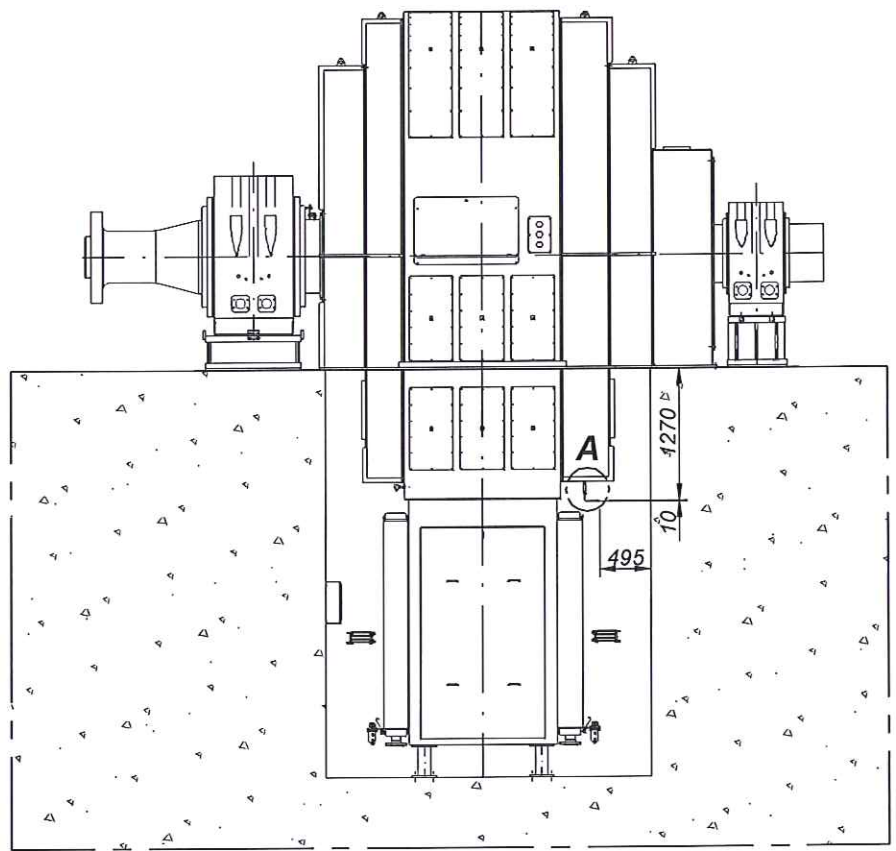
Indar

Handwritten signature

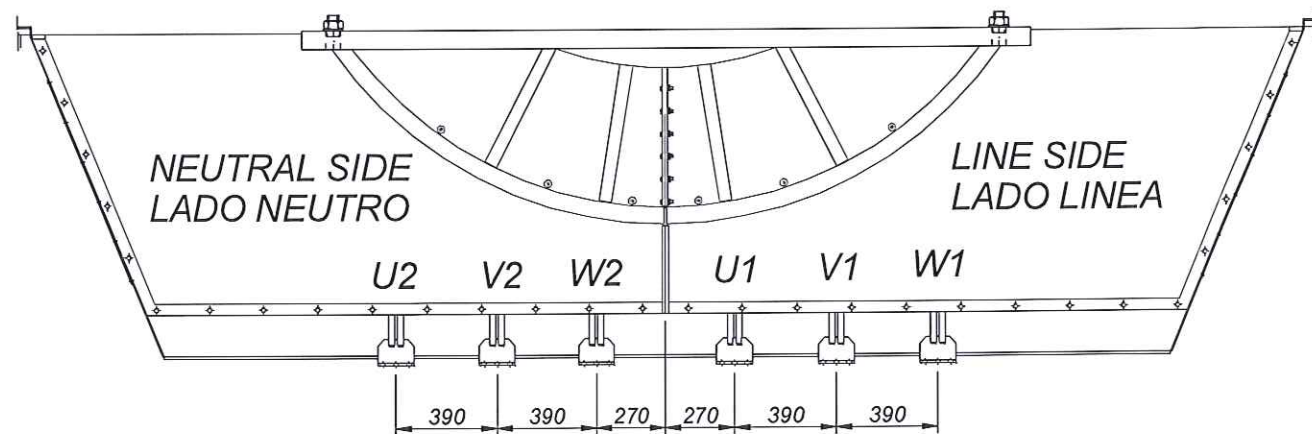
Indar Una Marca Ingeteam		LISTA DE BULTOS / PACKING LIST				Proyecto/Project:		Modelo Generador / Generator Model			Dirección entrega / Delivery adress		Rev.	Fecha / Date
						OF 95730 MISICUNI							0	19-09-13
						N° serie/Serial number:		Gen. sinc. de 49.500 kVA. 600 rpm. 11.500 V. IM-7325, IP-44, IC-81W, S-1, 35° C, 50 Hz. tipo PCA-2000-Z/10			BOLIVIA			
Bultos / Packages				Peso / Weight (Kg)		N° ENVÍO	Volumen (m³)	Dimensiones / Dimensions (mm)			Descripción contenido	Content description	Grupo Embalado / Packed in group	
Número Id.	Cantidad	Código	Tipo	Neto	Bruto			Largo	Ancho	Alto				
Number Id.	Quantity	Code	Type	Net	Gross	DELIVERY N°	Volume	Length	Width	Height				
01/01	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	4 REFRIGERADORES			
01/01	1	Sea packaging	Wooden Box	3000	3300	1	3,629	1.800	1.680	1.200	BASES ESTATOR			
01/02	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	BASES COJINETE Y ACCESORIOS			
01/03	1	Sea packaging	Wooden Box	1750	2000	1	2,700	1.800	1.000	1.500	COJINETE L.A. Y ACCESORIOS			
01/04	1	Sea packaging	Wooden Box	2250	2500	1	2,700	1.800	1.000	1.500	COJINETE L.O.			
01/05	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	ACCESORIOS 1: [hidrostatico +elementos auxiliares de cojinete +escobillas+portaescobillas+detector fuga]			
01/06	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	ACCESORIOS 2: [Soporte caja ACB1(P459751-1)+caja auxiliares +elementos auxiliares de cijinetes]			
01/07	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	ACCESORIOS 3:[Resistencia de caldeo+elementos auxiliares aire+Calces]			
01/08	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	ACEITE			
01/09	1	Sea packaging	Wooden Box	1400	1700	1	3,629	1.800	1.680	1.200	GRUPO ÓLEO			
01/11	1	Sea packaging	Wooden Box	60520	62500	2	78,155	5.800	4.900	2.750	ESTATOR			
01/12	1	Sea packaging	Wooden Box	75000	77000	3	67,788	7.400	2.955	3.100	ROTOR P480936			
01/13	1	Sea packaging	Wooden Box	1800	2200	4	21,300	4.410	2.100	2.300	4 Deflector-Capota LA P458894-P1	Deflectores-Capotas exteriores de mitad superior Montados juntos para transporte	LA+LO Embalados juntos para transporte	
01/14	1	Sea packaging	Wooden Box	75	150	4	0,975	1.900	570	900	Deflector-Capota LA P458894-P2	Deflector-Capota exterior de mitad inferior dcha.		
01/15	1	Sea packaging	Wooden Box	75	150	4	0,975	1.900	570	900	Deflector-Capota LA P458894-P3	Deflector-Capota exterior de mitad inferior izda.		
01/16	1	Sea packaging	Wooden Box	100	200	4	0,923	1.800	570	900	Deflector-Capota LA P458896-P1	Deflectores-Capotas exteriores de mitad inferior sueltos		
01/17	1	Sea packaging	Wooden Box	100	200	4	0,923	1.800	570	900	Deflector-Capota LA P458896-P2	Deflectores-Capotas exteriores de mitad inferior sueltos		
01/18	1	Sea packaging	Wooden Box	45	90	4	2,720	3.200	1.700	500	1 Deflector Interior LA P458895	Mitad inferior		
01/19	1	Sea packaging	Wooden Box	135	270	4	0,646	1.700	760	500	Deflector-Capota LO P458897-P2	Deflector-Capota exterior de mitad inferior dcha.		
01/20	1	Sea packaging	Wooden Box	135	270	4	0,646	1.700	760	500	Deflector-Capota LO P458897-P5	Deflector-Capota exterior de mitad inferior izda.		
01/21	1	Sea packaging	Wooden Box	100	200	4	0,646	1.700	760	500	Deflector-Capota LO	Deflectores-Capotas exteriores de mitad inferior sueltos		
01/22	1	Sea packaging	Wooden Box	100	200	4	0,646	1.700	760	500	Deflector-Capota LO	Deflectores-Capotas exteriores de mitad inferior sueltos		
01/23	1	Road packaging	Wooden Box	250	350	5	2,070	1.000	900	2.300	Armario AVR			
01/24	1	Road packaging	Pallet	60	120	5	1,464	1.000	1.220	1.200	VARIOS			
01/25	1	Road packaging	Pallet	40	75	5	0,384	1.200	800	400	TORNILLERIA+ACCESORIOS VARIOS			
TOTAL	25			155335	163675		214,692							

Nota: Los materiales han sido embalados y cargados según normas y standards internacionales. ¡UTILIZAR LOS MEDIOS DE ELEVACIÓN RECOMENDADOS!
 Note: Goods have been packed and loaded according to internationally accepted norms and standards. ¡USE THE RECOMMENDED LIFTING DEVICES!

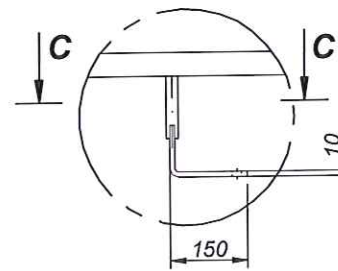
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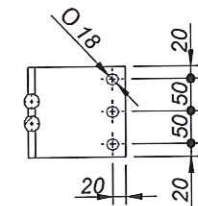
SEE FROM "X"
1/20



DETAIL / DETALLE A
1/10



SECTION / CORTE C-C



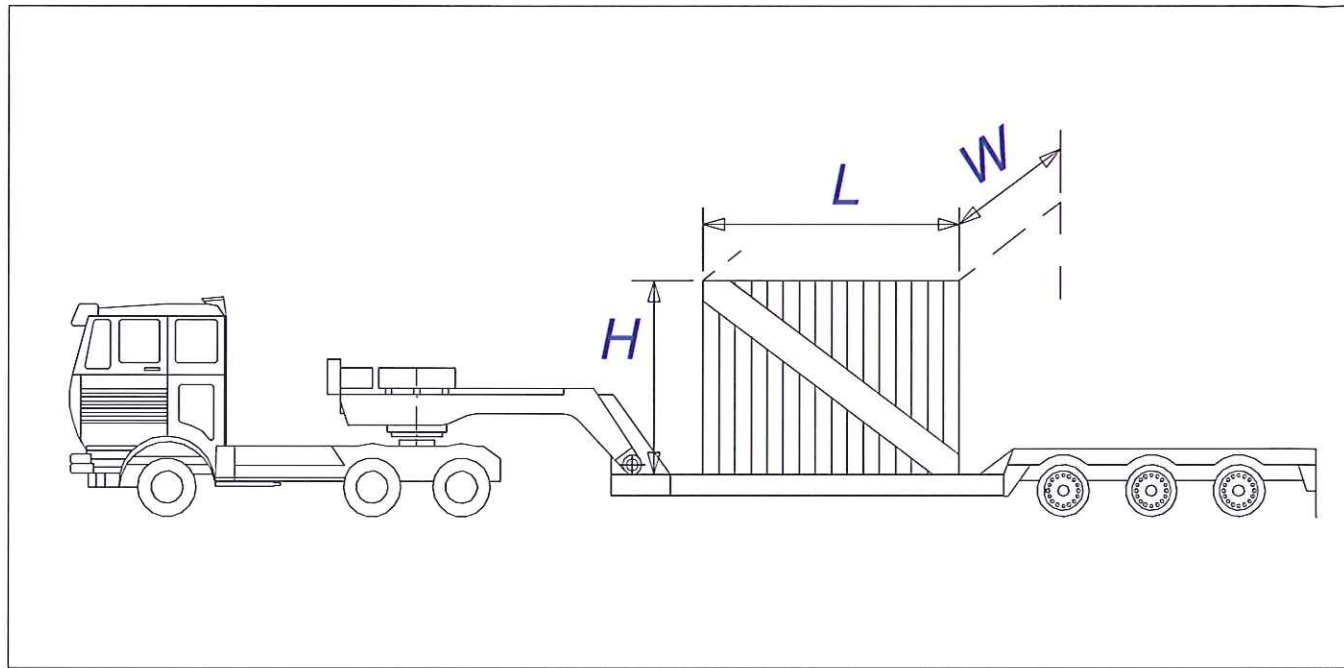
**ORIENTATIVO/
PRELIMINARY**

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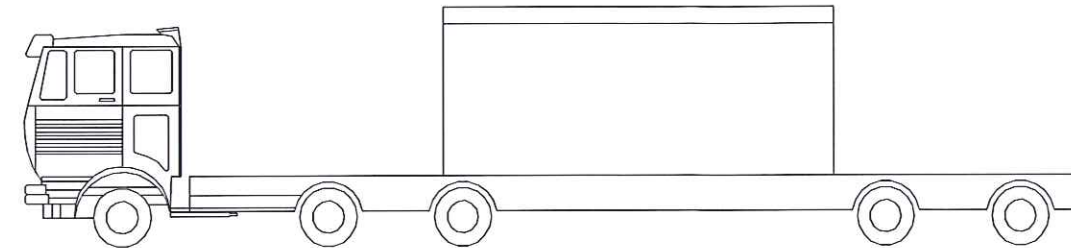
Rev.	Modification	Date	Dra.	Chk.	App.
Indar ref. OF-95730-1-1	Installation				
Customer ref. -	MISICUNI HEPP				
	Description				
	SYNCHRONOUS GENERATOR				
	PCA-2000-Z/10				
	Designation				
	MAIN TERMINAL BOX DRAWING				
	PLANO CAJA POTENCIA				
	Drawn	I.S.	04-02-2014	Drawing ref.	Rev.
	Checked	J.R.G.	04-02-2014	OF-9573011-3D012	Scale
	Approved	J.A.M.	04-02-2014		
	Dimensions in mm				
				Sheet	DIN
				1	A2

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1...5



6...13

		PACKING LIST		Length (m)	Width (m)	Height (m)	Weight (t.)
SEAWORTHY PACKING	Wooden boxes	1	Housing / Stator	6	5	3	60
		2	Rotor	8	3,2	3,7	80
	OPEN TOP	3	Various	Open Top 40 " (11x2,3x2,3)			15
		4	Various	Open Top 40 " (11x2,3x2,3)			15
		5	Various	Open Top 40 " (11x2,3x2,3)			15

**ORIENTATIVO/
PRELIMINARY**

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Rev.	Modification			Date	Dra.	Chk.	App.
Indar ref.	OF-95730-1-1	Installation	MISICUNI HEPP	Description	SYNCHRONOUS GENERATOR PCA-2000-Z/10		
Customer ref.	-	Designation	TRANSPORT DRAWING PLANO DE TRANSPORTE				
Indar	Drawn	I.S.	22-01-2014	Drawing ref.	OF-9573011-3D030	Rev.	Scale
	Checked	J.R.G.	22-01-2014	-		-	
	Approved	J.A.M.	22-01-2014	Sheet		DIN	
	Dimensions in mm			1		A2	