DATA SHEET
Synchronous Alternator

Customer	: HooverTec LLC	Notes:	
Customer reference	:		
Product line	: GTA202AIVJ	Product code	: 13943284
Area classification	: Safe		1011326941

General data

Frame (IEC)	: 200	Degree of protection	: IP23
Insulation Class	: 180°C (H)	Mounting style	: B15T
THD (L-L, no load)	: ≤ 3%	Number of poles	: 4
Stator winding pitch	: 2/3	Type of Pole	: Salient
Altitude	: up to 1000 m.a.s.l	Rated speed - 50 Hz	: 1500 rpm
Number of Leads	: 12	Nominal rotation - 60 Hz	: 1800 rpm
Power factor	: 0.8 to 1.0	Overspeed	: 2250 rpm
Excitation system	: Brushless with Auxiliary Coil	Approx. weight	: 355 kg
Cooling	: IC01	Overload	: 1.1x In per 1h each 6h
		Momentary Overload	: 1.5x In per 30s

	Frequency and number of phases	50 Hz				60 Hz				
		3ph			1ph	3ph				1ph
Voltages (V)	Y (series star) connection	**380**	**400**		**-**	**380**	**416**	**440**	**480**	**-**
	YY (parallel star) connection	190	200		-	190	208	220	240	-
	Δ (series delta) connection	220	230		-	220	240	254	277	-
	ΔΔ (parallel delta) connection	110	115		-	110	120	127	138	-
	Zig-zag or single phase delta	-	-	-	190 - 200	-	-	-	-	220 - 240
Output power (kVA)	Continuous 80/40	76.0	76.0		46.2	93.8	100.6	105.4	107.2	62.0
	Continuous 105/40	86.0	86.0		52.9	107.5	115.2	120.7	122.8	71.1
	Continuous 125/40	**100.0**	**100.0**		**57.7**	**123.0**	**133.5**	**141.0**	**141.0**	**77.5**
	Standby 150/40	106.0	106.0		63.2	129.0	137.8	144.0	144.0	85.0
	Standby 163/27	108.0	108.0		65.9	136.0	144.2	150.0	150.0	88.6
Electrical data (FP=0.8 / Continuous 125/40 (H)) Satured reactances values	Xd(%) Dir. axis synchronous reactance	280.91	253.88		374.55	388.94	353.88	334.1	281.42	445.47
	X'd(%) Dir. axis transient reactance	21.24	19.19		28.32	29.5	26.78	25.28	21.27	33.71
	X"d(%) Dir. axis subtrans. reactance	18.58	16.78		24.77	25.79	23.42	22.11	18.6	29.48
	Xq(%) Quad. axis sync. reactance	106.43	96.19		141.91	147.33	125.11	126.58	106.62	168.77
	X"q(%) Quad. axis subtrans. react.	17.0	15.35		22.67	23.64	33.47	20.24	17.02	26.99
	X2(%) Negative sequence reactance	17.75	16.03		23.67	24.67	28.45	21.13	17.77	28.18
	X0(%) Zero sequence reactance	3.1	2.8		4.13	4.3	3.9	3.69	3.1	4.91
	T'd(ms) Short Circ.Trans.time const.	64.0	64.0		85.33	63.8	64.37	64.0	64.0	85.33
	T"d(ms) Short Circ. Sub. time const.	1.0	1.0		1.33	1.0	1.12	1.0	1.0	1.33
	T'do(ms) Open Circ. time const Trans	856.6	857.8		1142.13	851.9	802.64	855.7	857.8	1140.93
	T"do(ms) Open Circ. time const Subt	1.1	1.1		1.47	1.1	1.33	1.1	1.1	1.47
	Ta(ms) Armature time const.	10.29	10.3		13.72	10.27	9.35	10.29	10.3	13.72
	uc(V) Full load excitation voltage	34.31	35.31		34.31	31.36	34.25	34.21	35.2	34.21
	ic(A) Full load excitation current	3.57	3.67		3.57	3.26	3.56	3.56	3.66	3.56
	ic(A) No load excitation current	0.8	1.0		1.07	0.4	0.67	0.6	0.9	0.8
	Icc(A) Sustained Short-Circ. Current	455.8	433.01		433.01	560.64	510.18	555.04	508.79	484.38
	Kcc Short-circuit ratio	0.4	0.47		0.53	0.26	0.29	0.32	0.42	0.43

	Power factor	0.8	1.0	0.8	1.0			0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
Efficiency (%)	25% of load	91.1	93.5	90.7	93.1			83.8	86	93.6	95.4	93.3	95.2	93.2	95.2	92.4	94.6	85.8	87.6
	50% of load	91.6	94	91.5	94			84.3	86.5	92.8	94.8	92.8	94.9	92.9	95	92.6	94.8	85.5	87.4
	75% of load	90.5	93.2	90.6	93.4			83.2	85.8	91.1	93.4	91.3	93.7	91.5	93.9	91.5	94	84.2	86.4
	100% of load	89.2	92.2	89.4	92.5			82	84.8	89.3	91.9	89.6	92.4	89.9	92.7	90.3	93.1	82.7	85.3
	125% of load	87.7	91	88.1	91.5			80.6	83.8	87.4	90.4	87.9	91	88.3	91.4	88.9	92.2	81.2	84.1

Other characteristics

Air flow	: 0.9 m³/s
Exciter stator winding resistance at 20ºC	: 10.55 ohm
Stator winding resistance at 20ºC	: 0.053 ohm
Rotor winding resistance	: 1.27 ohm
Stator winding layers	: 2
Inertia WR²	: 0.63 kgm²
NDE Bearing	: 6210-2RS/ZZ
DE bearing	
Flange	: SAE 3
Coupling disc	: SAE 11,5

Automatic voltage regulator

Accuracy (stability)	: +/- 0.5%
Rated current	: 5 A
Analog input	: Yes
Digital input	: No
Peak current	: 7 A/10 s
Droop / TC	: Yes
Dynamic recovery	: 8 to 500 ms
U/F	: Yes
Internal voltage adjustment	: +/- 15%
External voltage adjustment	: +/- 10%
Transient recovery time for ΔU=20%	: 500 ms

According to:

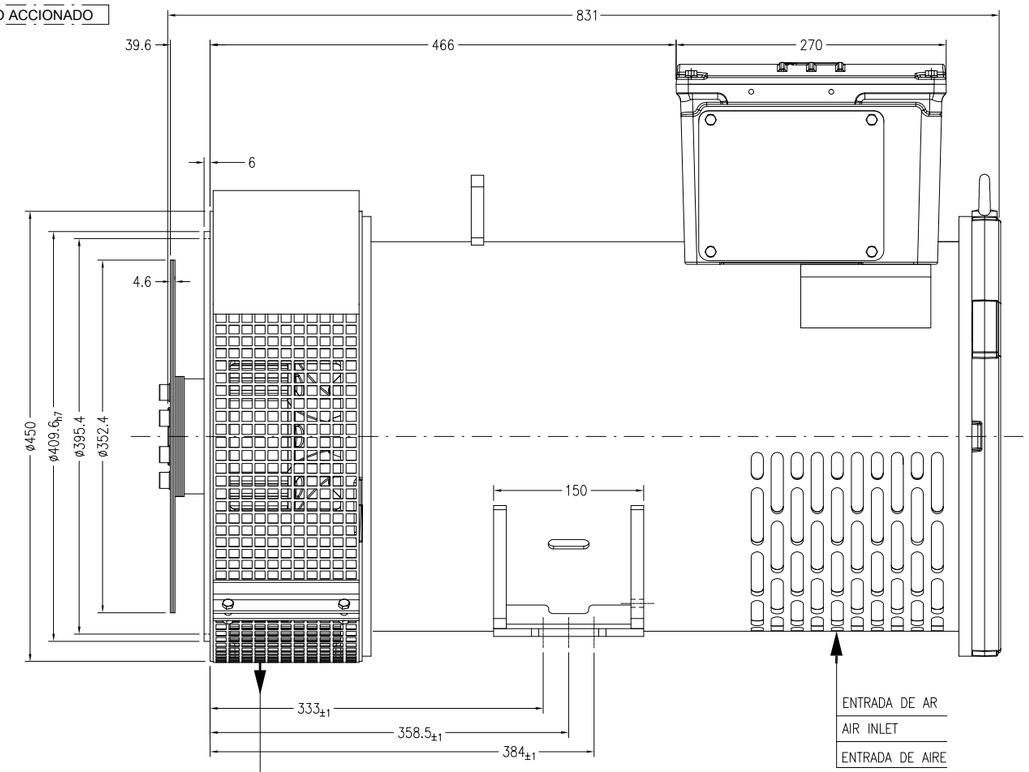
IEC 60034
NBR 5117
NEMA MG1
VDE530
ISO 8528
CSA

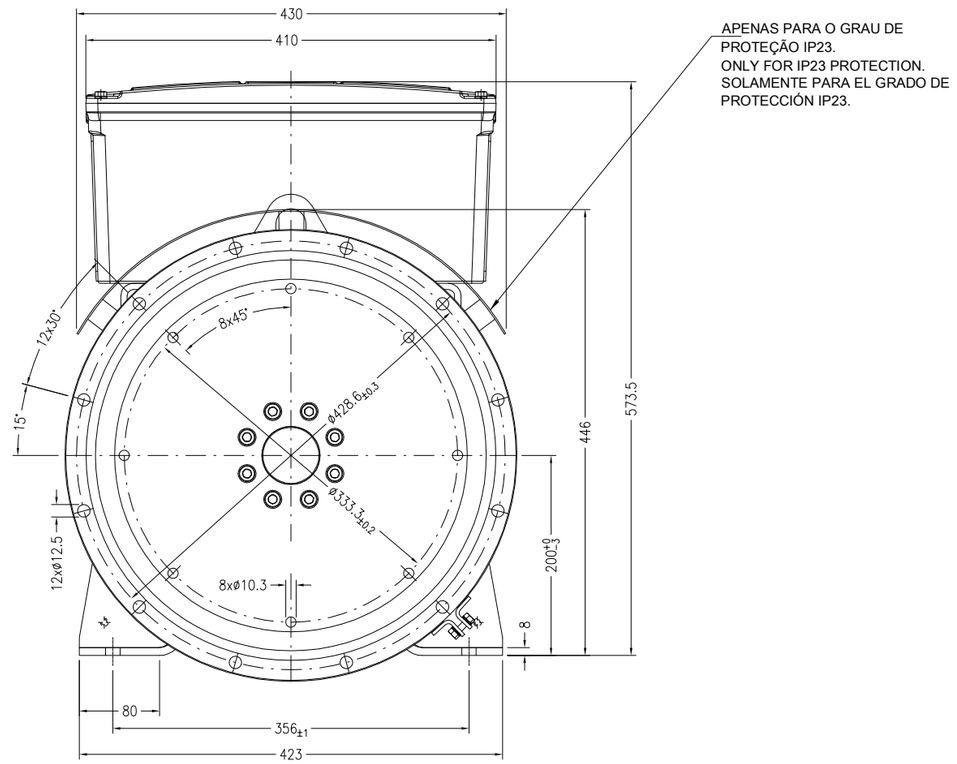
Rev.	Changes Summary	Performed	Checked	Date

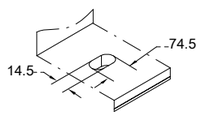
Performed by				
Checked by			Page	Revision
Date	08/09/2023		1 /	

LA - LADO ACIONADO
DE - DRIVE-END SIDE
LA - LADO ACCIONADO

LNA - LADO NÃO ACIONADO
NDE - NON DRIVE-END SIDE
LNA - LADO NO ACCIONADO







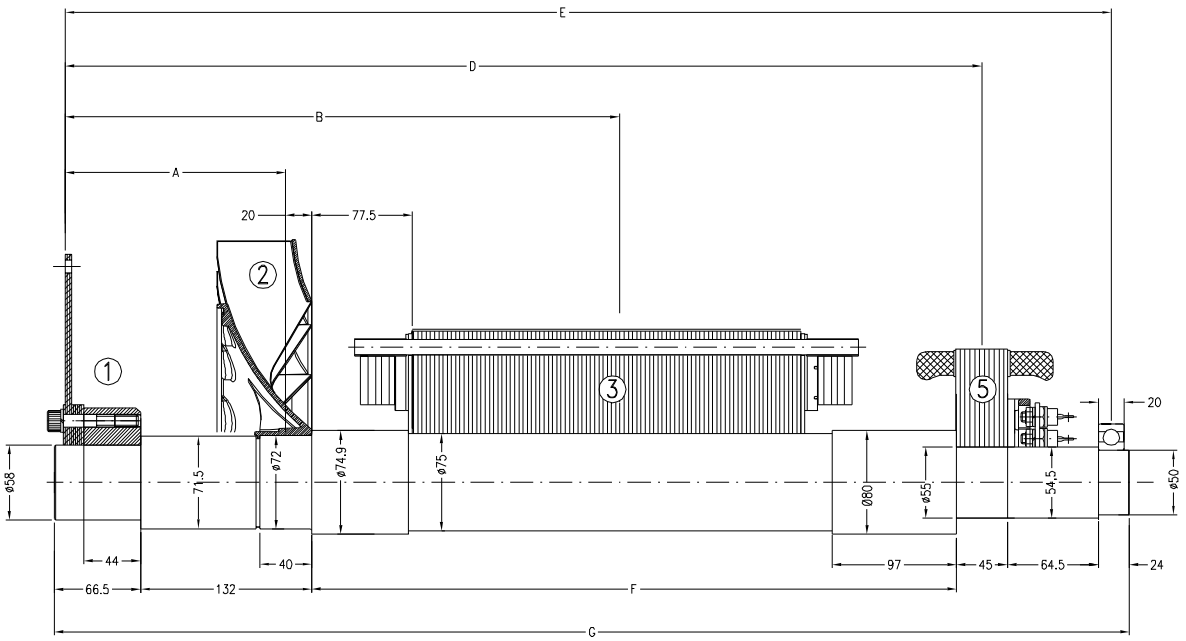
Furo para fixação da máquina
(Detalhe fora de escala)
Mounting Hole
(Detail is not in scale)
Agujero para fijación de la máquina
(Detalle fuera de escala)

NOTAS / NOTES / NOTAS
Máquina / Machine / Máquina : GTA202 - B15T
Grau de proteção / Protection / Grado de protección: IP21 / IP23
Flange de acoplamento / Coupling flange / Brida de acoplamiento: SAE 3
Disco de acoplamento / Coupling disc / Disco de acoplamiento: SAE 11,5

PESO BRUTO / ***GROSS WEIGHT***		PESO LIQUIDO / ***NET WEIGHT***		ESC / ***SCALE***	1:8

ECM ***ECM***	LOC ***LOC***	RESUMO MODIFICAÇÃO ***SUMMARY OF MODIFICATIONS***	EXECUTADO ***EXECUTED***	VERIFICADO ***CHECKED***	LIBERADO ***RELEASED***	DATA ***DATE***	VER ***VER***

EXEC. / ***EXECUTED***		DIMENSIONAL GTA202 B15T	10005056168
VERIF. / ***CHECKED***			000 | 03
LIBER. / ***RELEASED***			
DATA LB / ***REL DT***	29.01.2018	WEN JARAGUA DO SUL ALTERNADORES GENSET	FOLHA / ***SHEET*** 01 / 01



TIPO	DISCOS	DIMENSÕES: mm / DIMENSIONS: mm							1		2		3		5		Total Weight kg	Total Mom. Iner. kgm²
TYPE	DISCS	A	B	C	D	E	F	G	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²		J
GTA 201 __HS	SAE 11.5	170.0	327.5	---	580.0	677.0	367.5	699.5	6.4	0.06	0.9	0.01	32.5	0.24	8.0	0.04	47.8	0.35
GTA 201 __HV			337.5										38.0	0.28			53.3	0.39
GTA 201 __HB			352.5										45.0	0.33			60.3	0.44
GTA 201 __HE			362.5										50.0	0.36			65.3	0.47
GTA 202 __VS			387.5	---	710.0	807.0	497.5	829.5					61.0	0.44			76.3	0.55
GTA 202 __VJ			407.5	---									70.0	0.50			85.3	0.61

TIPO	DISCOS	DIMENSÕES: mm / DIMENSIONS: mm							1		2		3		5		Total Weight kg	Total Mom. Iner. kgm²
TYPE	DISCS	A	B	C	D	E	F	G	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²		J
GTA 201 __HS	SAE 10	160.5	318.0	---	570.5	667.5	367.5	699.5	5.7	0.04	0.9	0.01	32.5	0.24	8.0	0.04	47.8	0.35
GTA 201 __HV			328.0										38.0	0.28			53.3	0.39
GTA 201 __HB			343.0										45.0	0.33			60.3	0.44
GTA 201 __HE			353.0										50.0	0.36			65.3	0.47
GTA 202 __VS			378.0	---	700.5	797.5	497.5	829.5					61.0	0.44			75.6	0.53
GTA 202 __VJ			398.0	---									70.0	0.50			85.3	0.61

PESO BRUTO / GROSS WEIGHT	kg	PESO LIQUIDO / NET WEIGHT	kg	ESC / SCALE	1:4		
		EMISSÃO INICIAL / INITIAL EMISSION					
ECM / ECM	LOC / LOC	RESUMO MODIFICAÇÃO / SUMMARY OF MODIFICATIONS	EXECUTADO / EXECUTED	VERIFICADO / CHECKED	LIBERADO / RELEASED	DATA / DATE	VER / VER
EXEC. / EXECUTED		ANALISE TORSIONAL LINHA G-PLUS 200 B15		10009091390			
VERIF. / CHECKED				000 | 00			
LIBER. / RELEASED							
DATA LB / REL DT		JARAGUA DO SUL ENGENHARIA DO PRODUTO		FOLHA / SHEET 01 / 01			