

# DATA SHEET

## Synchronous Alternator



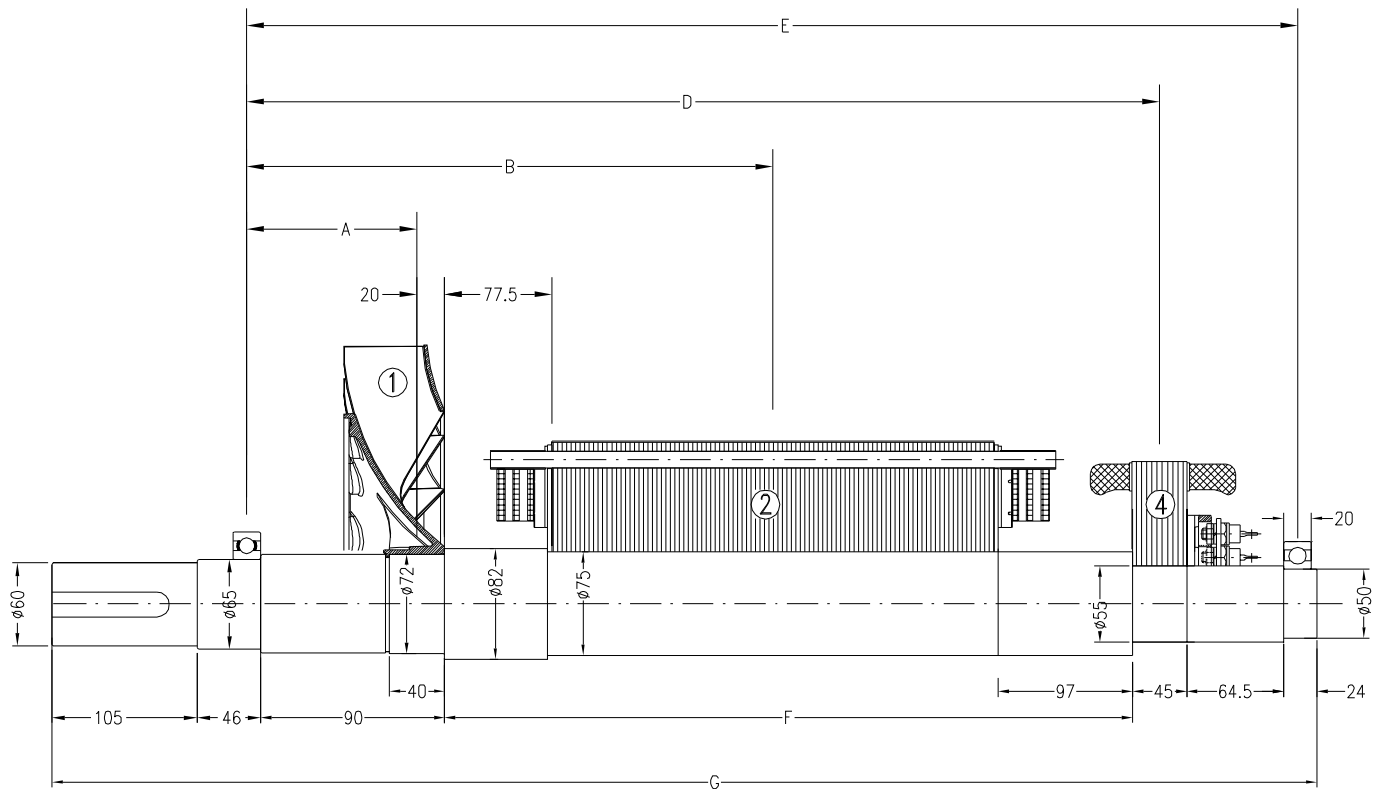
Customer	: HooverTec LLC	Notes:	
Customer reference	:		
Product line	: GTA201AIHS	Product code	: 14417163
Area classification	: Safe		1010334463

<b>General data</b>		Degree of protection	: IP23
Frame (IEC)	: 200	Mounting style	: B3T
Insulation Class	: 180°C (H)	Number of poles	: 4
THD (L-L, no load)	: ≤ 3%	Type of Pole	: Salient
Stator winding pitch	: 2/3	Rated speed - 50 Hz	: 1500 rpm
Altitude	: up to 1000 m.a.s.l	Nominal rotation - 60 Hz	: 1800 rpm
Number of Leads	: 12	Overspeed	: 2250 rpm
Power factor	: 0.8 to 1.0	Approx. weight	: 237 kg
Excitation system	: Brushless with Auxiliary Coil	Overload	: 1.1x In per 1h each 6h
Cooling	: IC01	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	415	-	380	416	440	480	-							
	YY (parallel star) connection	190	200	208	-	190	208	220	240	-							
	Δ (series delta) connection	220	230	239	-	220	240	254	277	-							
	ΔΔ (parallel delta) connection	110	115	120	-	110	120	127	138	-							
	Zig-zag or single phase delta	-	-	-	190 - 200	-	-	-	-	220 - 240							
Output power (kVA)	Continuous 80/40	33.0	33.0	31.2	18.9	35.2	38.5	40.8	43.4	23.9							
	Continuous 105/40	37.5	37.5	35.7	21.7	40.3	44.0	46.7	49.7	27.4							
	<b>Continuous 125/40</b>	<b>41.0</b>	<b>41.0</b>	<b>39.0</b>	<b>23.7</b>	<b>44.0</b>	<b>48.1</b>	<b>51.0</b>	<b>54.3</b>	<b>29.9</b>							
	Standby 150/40	45.0	45.0	42.7	25.9	48.2	52.6	55.8	59.5	32.8							
	Standby 163/27	47.0	47.0	44.5	27.0	50.2	54.9	58.2	62.0	34.1							
Electrical data (FP=0.8 / Continuous 125/40 (H)) Saturated reactances values	Xd(%) Dir. axis synchronous reactance	291.37	277.45	263.58	388.49	372.0	341.06	323.25	290.0	431.0							
	X'd(%) Dir. axis transient reactance	22.72	21.61	20.53	30.29	29.13	26.61	25.22	22.59	33.63							
	X''d(%) Dir. axis subtrans. reactance	18.1	17.2	16.34	24.13	23.18	21.19	20.08	17.98	26.77							
	Xq(%) Quad. axis sync. reactance	111.2	105.9	100.61	148.27	141.98	124.32	123.36	110.66	164.48							
	X''q(%) Quad. axis subtrans. react.	17.84	17.0	16.15	23.79	22.9	33.26	19.81	17.74	26.41							
	X2(%) Negative sequence reactance	17.97	17.1	16.25	23.96	23.04	27.22	19.95	17.86	26.6							
	X0(%) Zero sequence reactance	3.02	2.87	2.72	4.02	3.87	3.53	3.35	3.0	4.46							
	T'd(ms) Short Circ. Trans. time const.	43.8	43.84	43.84	58.4	43.74	66.03	43.8	43.84	58.4							
	T''d(ms) Short Circ. Sub. time const.	0.99	0.99	0.99	1.32	0.99	1.15	0.99	0.99	1.32							
	T'do(ms) Open Circ. time const Trans	573.0	573.89	573.89	764.0	570.0	823.38	572.44	573.89	763.25							
	T''do(ms) Open Circ. time const Subt	1.22	1.22	1.22	1.62	1.22	1.36	1.22	1.22	1.62							
	Ta(ms) Armature time const.	6.35	6.35	6.35	8.47	6.34	9.59	6.35	6.35	8.46							
	uc(V) Full load excitation voltage	47.1	50.9	50.9	47.1	42.15	46.74	46.47	50.26	46.47							
	ic(A) Full load excitation current	3.65	4.03	4.03	3.65	2.62	3.29	3.06	3.63	3.06							
ic(A) No load excitation current	0.5	0.6	0.6	0.67	0.3	0.44	0.4	0.6	0.53								
Icc(A) Sustained Short-Circ. Current	186.88	177.54	162.77	177.54	200.55	195.66	200.76	195.94	186.88								
Kcc Short-circuit ratio	0.35	0.39	0.38	0.47	0.26	0.29	0.31	0.37	0.42								
Efficiency (%)	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
	25% of load	85.5	89.6	85.3	89.5	85.6	89.8	78.7	82.4	87.4	90.8	87.2	90.8	86.7	90.4	80.2	83.6
	50% of load	87.6	91.7	87.6	91.8	87.8	92.1	80.6	84.4	88.5	92	88.6	92.2	88.8	92.6	81.7	85
	75% of load	86.2	90.8	86.2	91	86.5	91.3	79.4	83.5	86.7	90.5	87.1	91	87.4	91.4	87.7	84.1
	100% of load	84	89.1	84.2	89.6	84.4	89.8	77.2	82	84.4	88.5	85	89.3	85.4	89.8	85.9	82.6
	125% of load	81.5	87.3	81.7	87.9	81.9	88.1	75	80.3	81.8	86.6	82.5	87.5	83	88	83.6	81

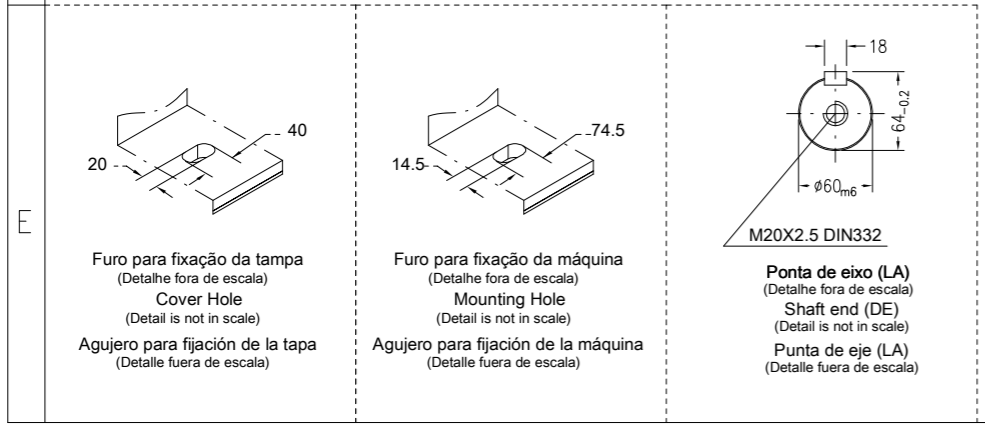
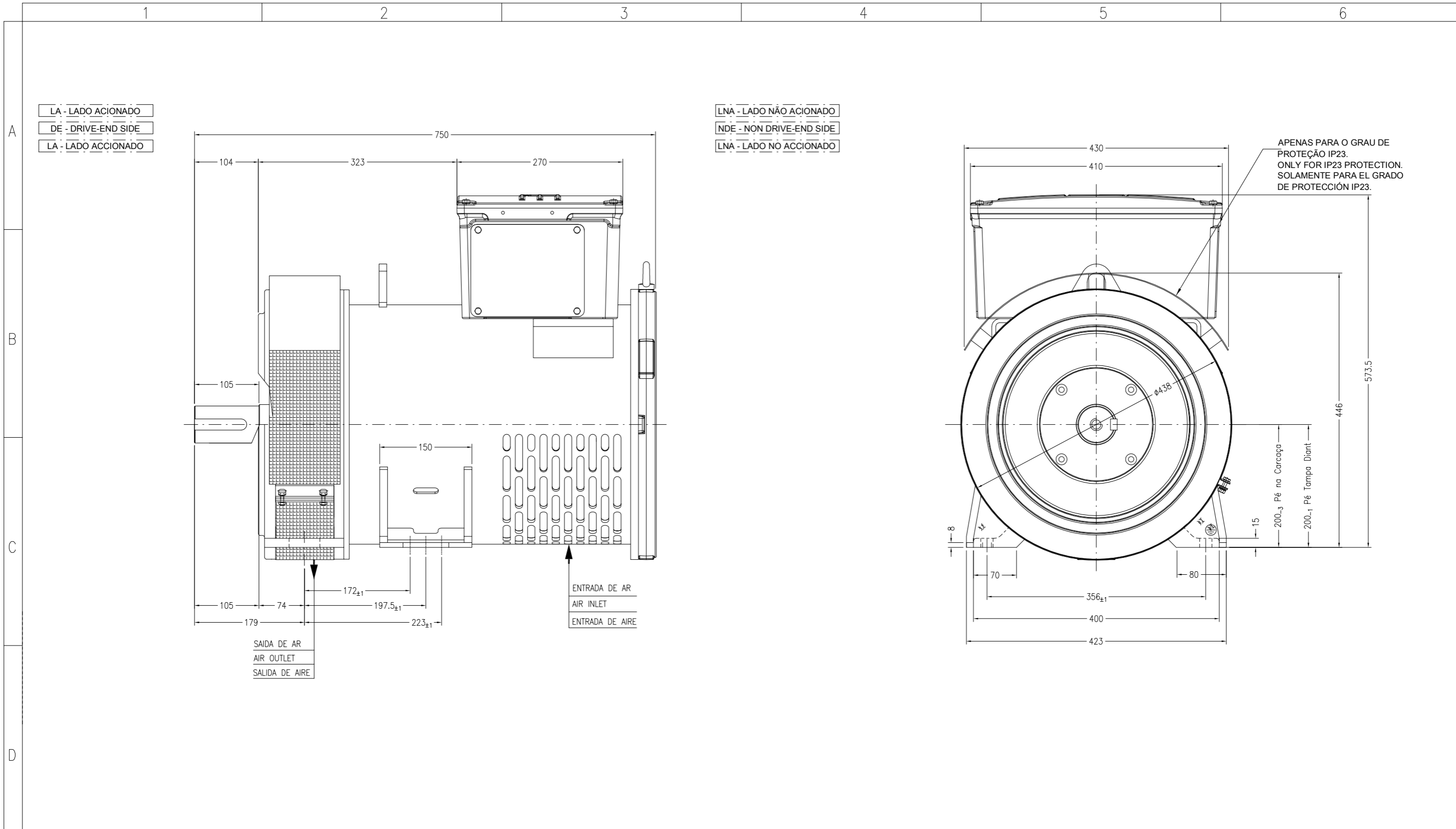
<b>Other characteristics</b>		<b>Automatic voltage regulator</b>		<b>According to:</b>	
Air flow	: 0.5 m³/s	Accuracy (stability)	: +/- 0.5%	IEC 60034	
Exciter stator winding resistance at 20°C	: 10.55 ohm	Rated current	: 5 A	NBR 5117	
Stator winding resistance at 20°C	: 0.183 ohm	Analog input	: Yes	NEMA MG1	
Rotor winding resistance	: 0.77 ohm	Digital input	: No	VDE530	
Stator winding layers	: 2	Peak current	: 7 A/10 s	ISO 8528	
Inertia WR²	: 0.3 kgm²	Droop / TC	: Yes	CSA	
NDE Bearing	: 6210-2RS/ZZ	Dynamic recovery	: 8 to 500 ms		
DE bearing	: 6313-2RS/ZZ	U/F	: Yes		
Flange	: NOT APPLICABLE	Internal voltage adjustment	: +/- 15%		
Coupling disc	: NOT APPLICABLE	External voltage adjustment	: +/- 10%		
		Transient recovery time for ΔU=20%	: 500 ms		

Rev.	Changes Summary				Performed				Checked				Date			
Performed by																
Checked by																
Date	07/09/2023								Page				Revision			
									1 /							



TIPO TYPE	DIMENSÕES: mm / DIMENSIONS: mm							1		2		4		Total Weight kg	Total Mom. Iner. kgm <sup>2</sup>
	A	B	C	D	E	F	G	WEIGHT MASSA kg	MOMENT MOMENTO kgm <sup>2</sup>	WEIGHT MASSA kg	MOMENT MOMENTO kgm <sup>2</sup>	WEIGHT MASSA kg	MOMENT MOMENTO kgm <sup>2</sup>		
GTA 201 __HS	86.5	244	---	497.0	594.0	368.0	742.5	0.9	0.01	32.5	0.24	8.0	0.04	41.4	0.29
GTA 201 __HV		254								38.0	0.28			46.9	0.33
GTA 201 __HB		269								45.0	0.33			53.9	0.38
GTA 201 __HE		279								50.0	0.36			58.9	0.41
GTA 202 __VS		286								61.0	0.44			79.9	0.49
GTA 202 __VJ		324								70.0	0.50			78.9	0.55

PESO BRUTO / GROSS WEIGHT		kg		PESO LÍQUIDO / NET WEIGHT		kg		ESC / SCALE	1:3	
				EMISSÃO INICIAL / INITIAL EMISSION						11
ECM ECM	LOC LOC	RESUMO MODIFICAÇÃO SUMMARY OF MODIFICATIONS				EXECUTADO EXECUTED	VERIFICADO CHECKED	LIBERADO RELEASED	DATA DATE	VER VER
EXEC / EXECUTED		ANÁLISE TORSIONAL LINHA G-PLUS 200 B3S				10009091383				
VERIF. / CHECKED						000		00		
LIBER. / RELEASED										
DATA LB / REL. DT	WEN	JARAGUA DO SUL	ENGENHARIA DO PRODUTO	FOLHA / SHEET	01 / 01					



PESO BRUTO / GROSS WEIGHT		kg	PESO LIQUIDO / NET WEIGHT		kg	ESC / SCALE	1:6
EXEC. / EXECUTED	LOC		RESUMO MODIFICAÇÃO / SUMMARY OF MODIFICATIONS		EXECUTADO / EXECUTED	VERIFICADO / CHECKED	LIBERADO / RELEASED
VERIF. / CHECKED			DIMENSIONAL GTA201 B3T				
LIBER. / RELEASED							
DATA LB / REL DT	10.07.2017	WEN	JARAGUA DO SUL	ENGENHARIA DO PRODUTO	FOLHA / SHEET	1 / 1	

