DATA SHEET
Synchronous Alternator

Customer	: HooverTec LLC	Notes:	
Customer reference	:		
Product line	: AG10 315MI70AI	Product code	: 14092872
Area classification	: Safe		1011327670

General data

Frame (IEC)	: 315	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	: 1598 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	520	520		300	553	582	600	642	346
	Continuous 105/40	596	596		344	633	667	700	736	404
	Continuous 125/40	**650**	**650**		**375**	**691**	**728**	**750**	**803**	**433**
	Standby 150/40	715	715		413	757	794	813	875	469
	Standby 163/27	740	740		427	773	817	844	906	487
Electrical data (FP=0.8 / Continuous 125/40 (H)) Satured reactances values	Xd(%) Dir. axis synchronous reactance	258.1	213.3		344.1	421.4	312.0	287.3	229.29	383.1
	X'd(%) Dir. axis transient reactance	18.5	16.1		24.7	25.2	21.2	19.5	17.08	26.0
	X"d(%) Dir. axis subtrans. reactance	14.2	11.2		19.0	17.6	14.9	13.7	11.81	18.3
	Xq(%) Quad. axis sync. reactance	72.8	56.3		97.1	119.0	109.8	80.0	59.82	106.7
	X"q(%) Quad. axis subtrans. react.	9.7	8.5		12.9	13.4	25.4	10.4	9.03	13.8
	X2(%) Negative sequence reactance	12.0	9.8		16.0	15.5	20.1	12.1	10.42	16.1
	X0(%) Zero sequence reactance	2.4	1.9		3.2	2.9	2.5	2.3	1.97	3.0
	T'd(ms) Short Circ.Trans.time const.	138.8	135.8		185.1	141.1	100.4	140.1	135.76	186.8
	T"d(ms) Short Circ. Sub. time const.	0.9	0.8		1.2	1.3	2.0	1.0	0.76	1.3
	T'do(ms) Open Circ. time const Trans	1513	1402		2017	1690	1324	1565	1403.31	2087
	T"do(ms) Open Circ. time const Subt	1.7	1.7		2.3	1.8	2.6	1.7	1.7	2.3
	Ta(ms) Armature time const.	16	14		22	22	19	17	14.99	23
	uc(V) Full load excitation voltage	65.0	55.0		65.0	60.0	62.3	62.0	70.0	62.0
	ic(A) Full load excitation current	3.5	3.0		3.5	3.0	3.1	3.1	3.5	3.1
	ic(A) No load excitation current	0.8	0.9		1.1	0.7	0.8	0.8	1.0	1.1
	Icc(A) Sustained Short-Circ. Current	2963	2815		2815	3150	3031	2952	2897.58	2706
	Kcc Short-circuit ratio	0.39	0.47		0.29	0.24	0.32	0.35	0.44	0.26

	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	90.8	92.7	90.2	92.3			83.5	85.2	92.1	93.7	91.8	93.5	91.6	93.3	91.1	93	84.2	85.8
	50% of load	93.2	94.8	93	94.7			85.8	87.2	94	95.3	94	95.3	94.2	95.3	93.8	95.2	86.6	87.7
	75% of load	93.4	95.1	93.4	95.1			85.9	87.4	93.9	95.3	94.1	95.4	94.4	95.6	94.2	95.6	86.8	87.9
	100% of load	93.1	94.8	93.2	95			85.6	87.2	93.4	94.9	93.6	95.2	93.9	95.4	94	95.6	86.4	87.7
	125% of load	92.5	94.4	92.7	94.7			85	86.8	92.7	94.3	93	94.7	93.4	95	93.6	95.3	85.9	87.4

Other characteristics

Air flow	: 1.47 m³/s
Exciter stator winding resistance at 20ºC	: 15.26 ohm
Stator winding resistance at 20ºC	: 0.00319 ohm
Rotor winding resistance	: 2.31 ohm
Stator winding layers	: 2
Inertia WR²	: 8.5 kgm²
NDE Bearing	: 6316 2RS
DE bearing	
Flange	: SAE 1
Coupling disc	: SAE 14

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

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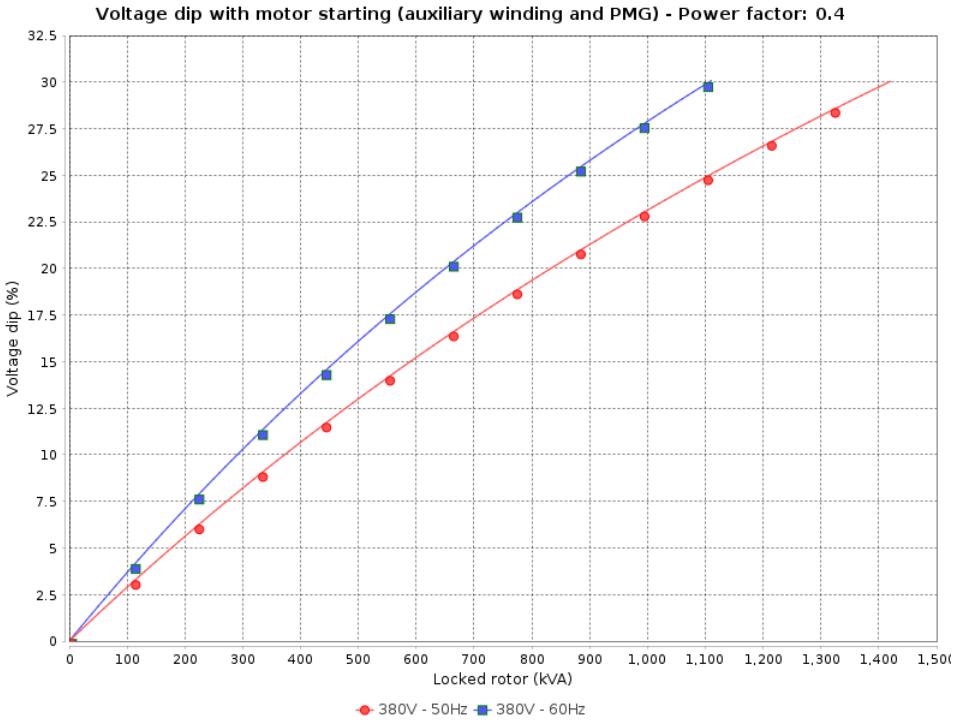
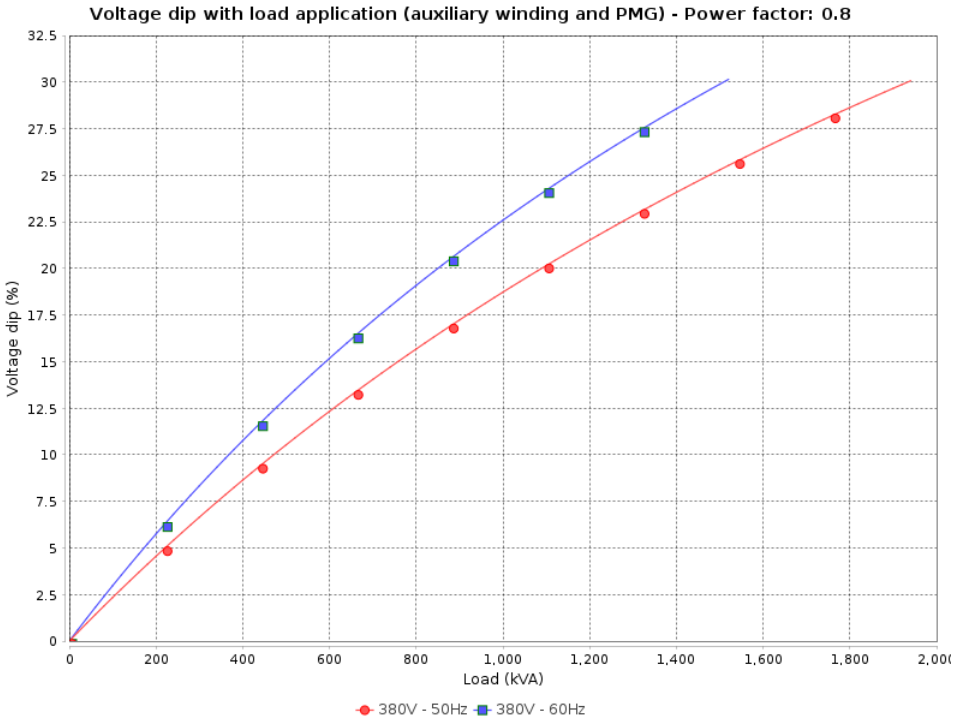
DATA SHEET
Synchronous Alternator





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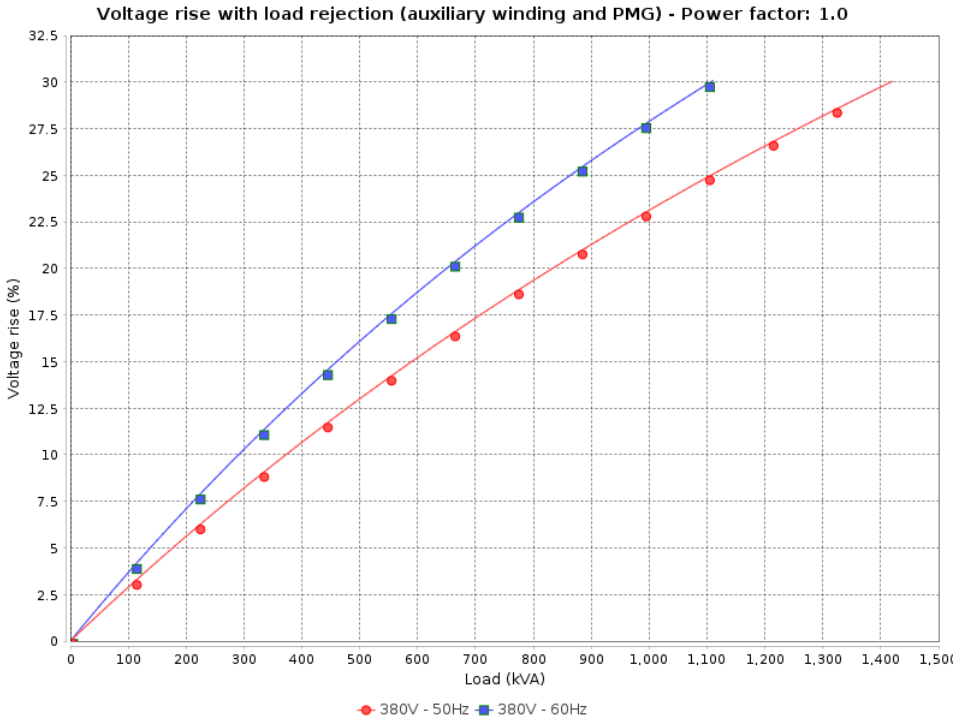

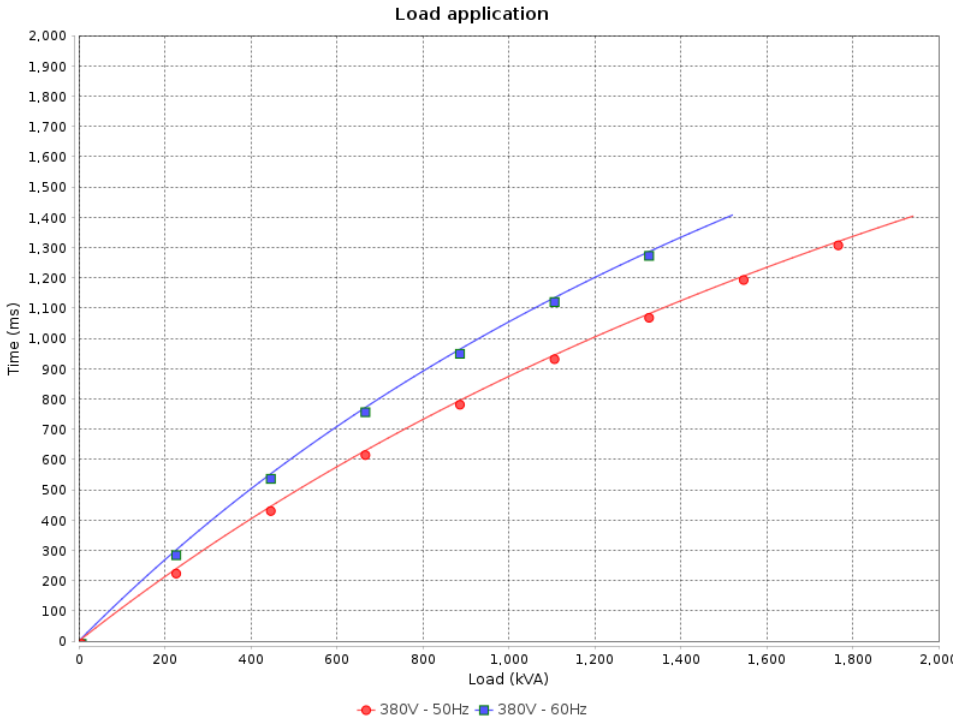

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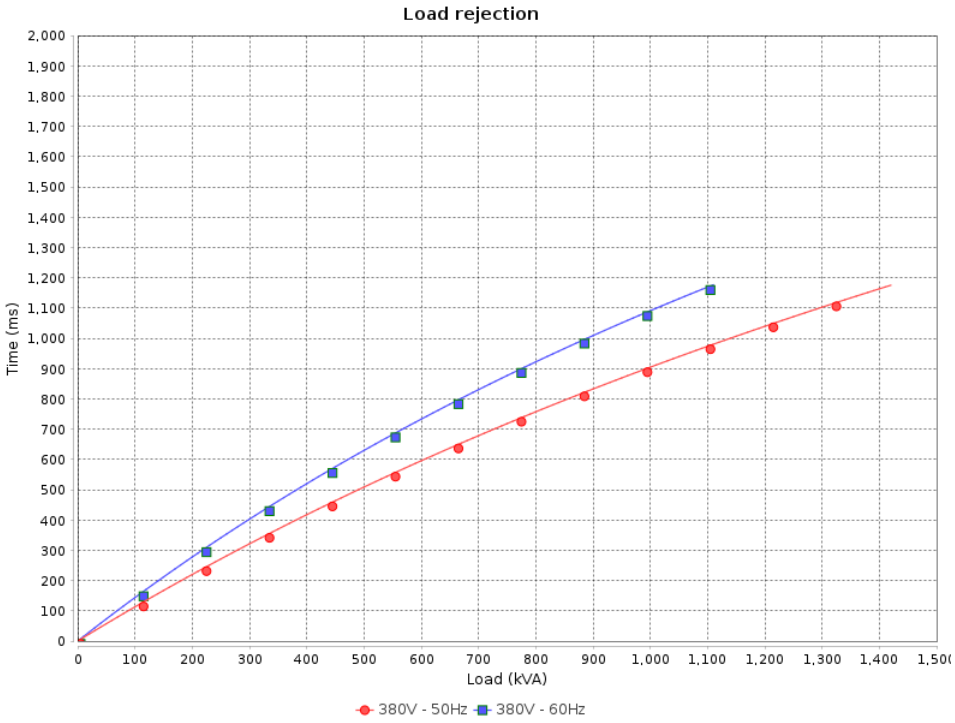

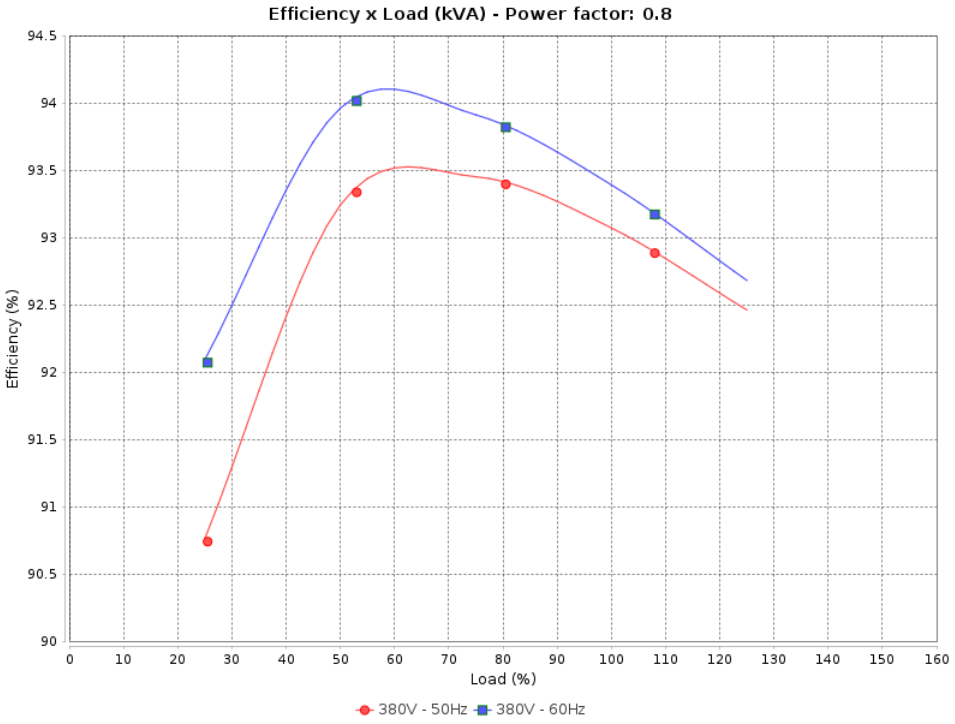

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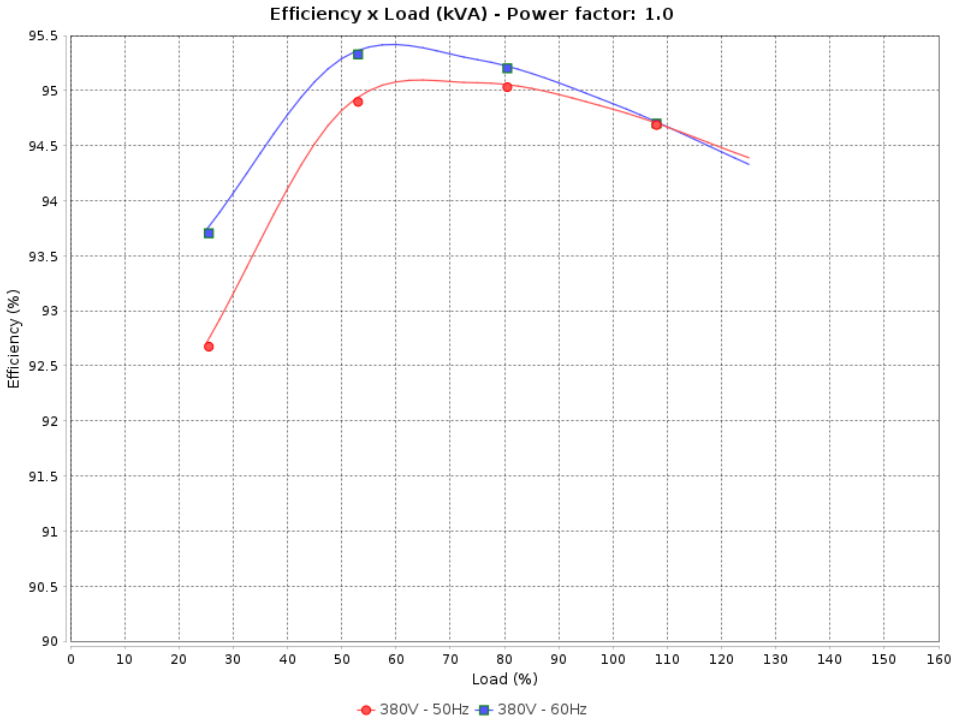

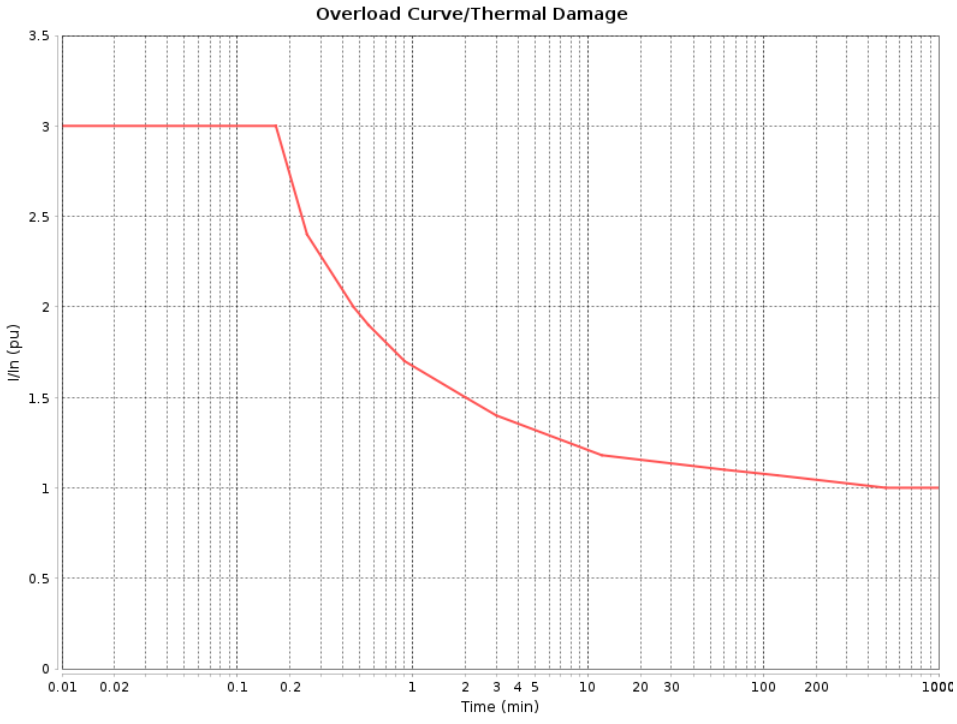

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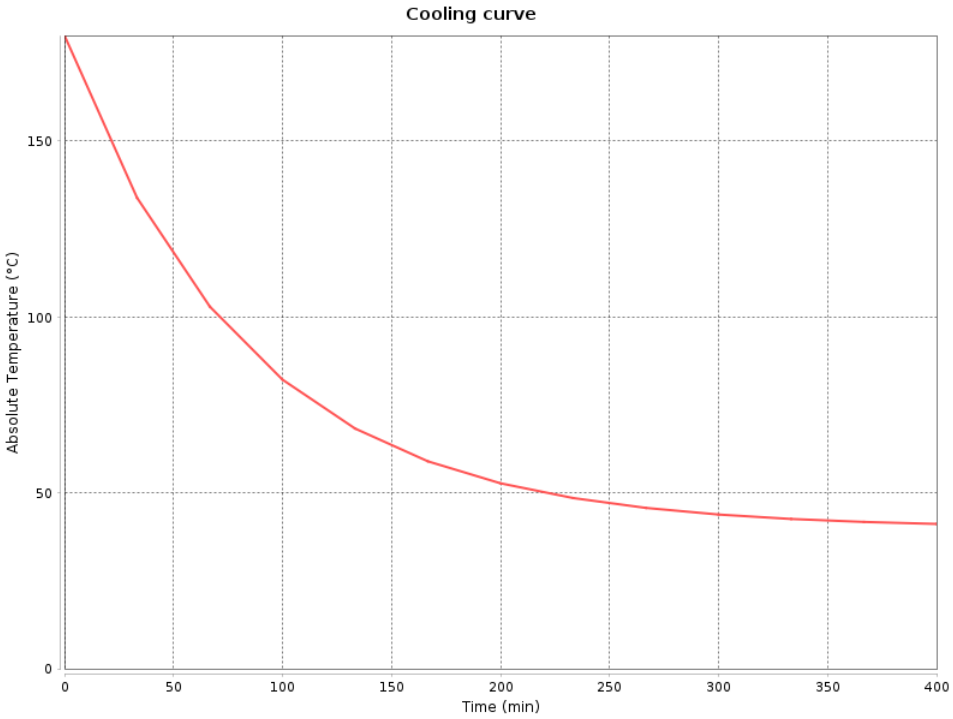

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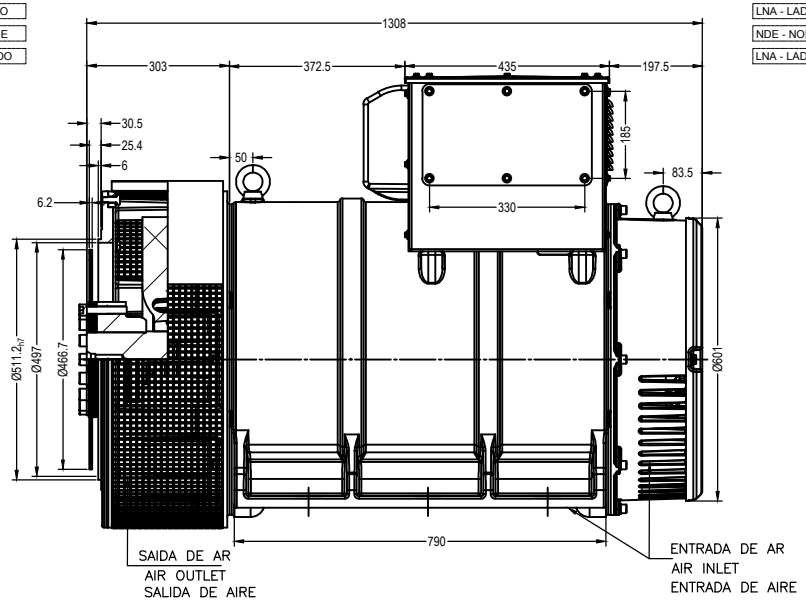
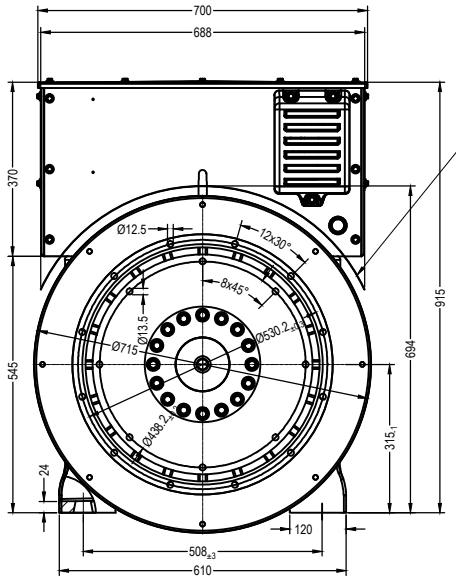
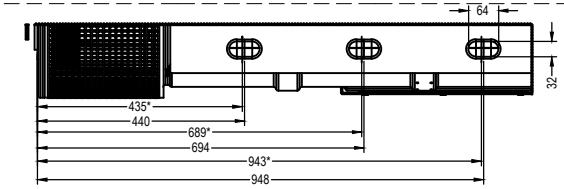
LA - LADO ACIONADO
DE - DRIVE-END SIDE
LA - LADO ACCIONADO

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





APENAS PARA O GRAU DE PROTEÇÃO IP23.
ONLY FOR IP23 PROTECTION.
SOLAMENTE PARA EL GRADO DE PROTECCIÓN IP23.



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)

*Dimensão recomendada pela WEG para a furação no skid
*Recommended dimension for mounting hole position on the skid
*Dimensión recomendada para el montaje del agujero sobre el skid

NOTAS / NOTES / NOTAS
Máquina / Machine / Máquina : AG10315M - B15T
Grau de proteção / Protection / Grado de protección: IP21 / IP23
Flange de acoplamento / Coupling flange / Brida de acoplamiento: SAE 1
Disco de acoplamento / Coupling disc / Disco de acoplamiento: SAE 14

PESO BRUTO / GROSS WEIGHT		PESO LIQUIDO / NET WEIGHT		ESC / SCALE	

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

EXEC. / EXECUTED		DIMENSIONAL AG10 315 M B15T	10005087258	
VERIF. / CHECKED			000 | 01	
LIBER. /RELEASED				
DATA LB / REL DT	10.07.2017		FOLHA / SHEET 01 / 01	

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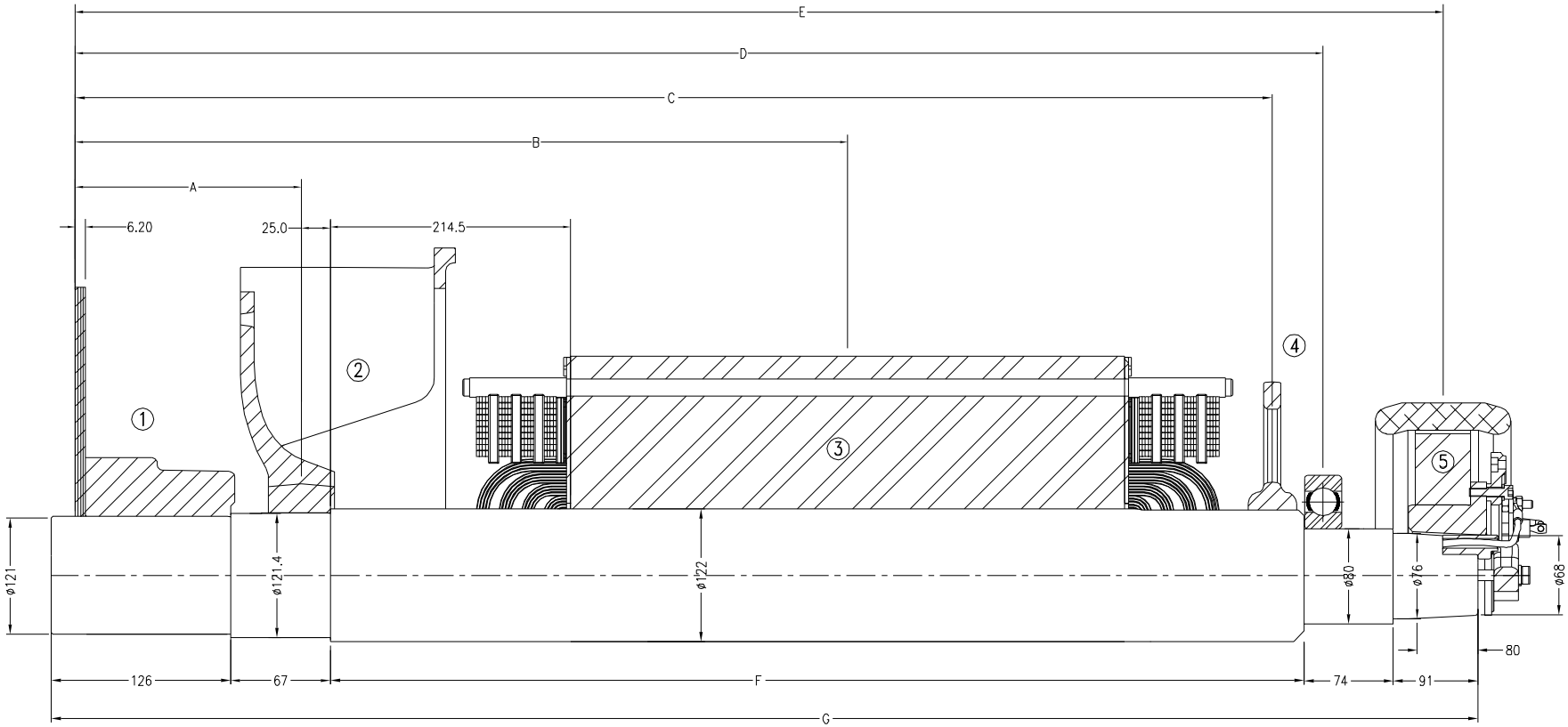

TIPO/AG10	DISCO	DIMENSÕES: mm / DIMENSIONS: mm							1		2		3		4		5		Total Weight	Total Mom. Iner.
TYPE/AG10	DISCS	A	B	C	D	E	F	G	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	kg	J kgm²
315M_50	SAE 18	178.0	582.5	–	1079.5	1185.0	882.0	1240.0	35.1	0.705	23.9	0.988	285.6	5.609	–	–	27.4	0.23	372.0	7.294
315M_60			582.5	–									285.6	5.609					372.0	7.294
315M_70			647.5	–									368.4	6.874					454.8	8.559
315L_80			687.5	–	1259.5	1365.0	1062.0	1420.0					431.7	8.118					518.1	10.041
315L_90			717.5	–									472.1	8.873					558.5	10.558

TIPO/AG10	DISCO	DIMENSÕES: mm / DIMENSIONS: mm							1		2		3		4		5		Total Weight	Total Mom. Iner.
TYPE/AG10	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	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	kg	J kgm²
315M_50	SAE 14	178.0	582.5	–	1079.5	1185.0	882.0	1240.0	30.9	0.423	23.9	0.988	285.6	5.609	–	–	27.4	0.23	367.8	7.012
315M_60			582.5	–									285.6	5.609					367.8	7.012
315M_70			647.5	–									368.4	6.874					450.6	8.279
315M_80			687.5	–	1259.5	1365.0	1062.0	1420.0					431.7	8.118					513.9	9.759
315L_90			717.5	–									472.1	8.873					554.3	10.278

TIPO/AG10	DISCO	DIMENSÕES: mm / DIMENSIONS: mm							1		2		3		4		5		Total Weight	Total Mom. Iner.
TYPE/AG10	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	WEIGHT MASSA kg	MOMENT MOMENTO kgm²	kg	J kgm²
315M_50	SAE 11,5	178.0	582.5	–	1079.5	1185.0	882.0	1240.0	27.4	0.271	23.9	0.988	285.6	5.609	–	–	27.4	0.23	364.3	6.860
315M_60			582.5	–									285.6	5.609					364.3	6.860
315M_70			647.5	–									368.4	6.874					447.1	8.125
315M_80			687.5	–	1259.5	1365.0	1062.0	1420.0					431.7	8.118					510.4	9.607
315L_90			717.5	–									472.1	8.873					550.8	10.124

PESO BRUTO / GROSS WEIGHT | PESO LÍQUIDO NET WEIGHT | ESC SCALE

EMISSÃO INICIAL / INITIAL EMISSION

EDV DCW	LOC LOC	RESUMO MODIFICAÇÃO SUMMARY OF MODIFICATIONS	EXECUTADO EXECUTED	VERIFICADO CHECKED	LIBERADO RELEASED	DATA DATE	VE VR

EXEC. EXECUTED
VERIF. CHECKED
LIBER. RELEASED

ANALISE TORSIONAL AG10 315 B35

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