

DATA SHEET

Synchronous Alternator



Customer	: Abadiesel	Notes:	Abadiesel.com
Customer reference	:		
Product line	: AG10-400MI80EI	Product code	: 14621641
Area classification	: Safe		1051945230

General data		Degree of protection	: IP21
Frame (IEC)	: 400	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	: 5/6	Rated speed - 50 Hz	: 1500 rpm
Altitude	: up to 1000 m.a.s.l	Nominal rotation - 60 Hz	: 1800 rpm
Number of Leads	: 6	Overspeed	: 2250 rpm
Power factor	: 0.8 to 1.0	Approx. weight	: 3941 kg
Excitation system	: Brushless with Auxiliary Coil	Overload	: 1.1x In per 1h each 6h
Cooling	: IC01	Momentary Overload	: 1.5x In per 30s

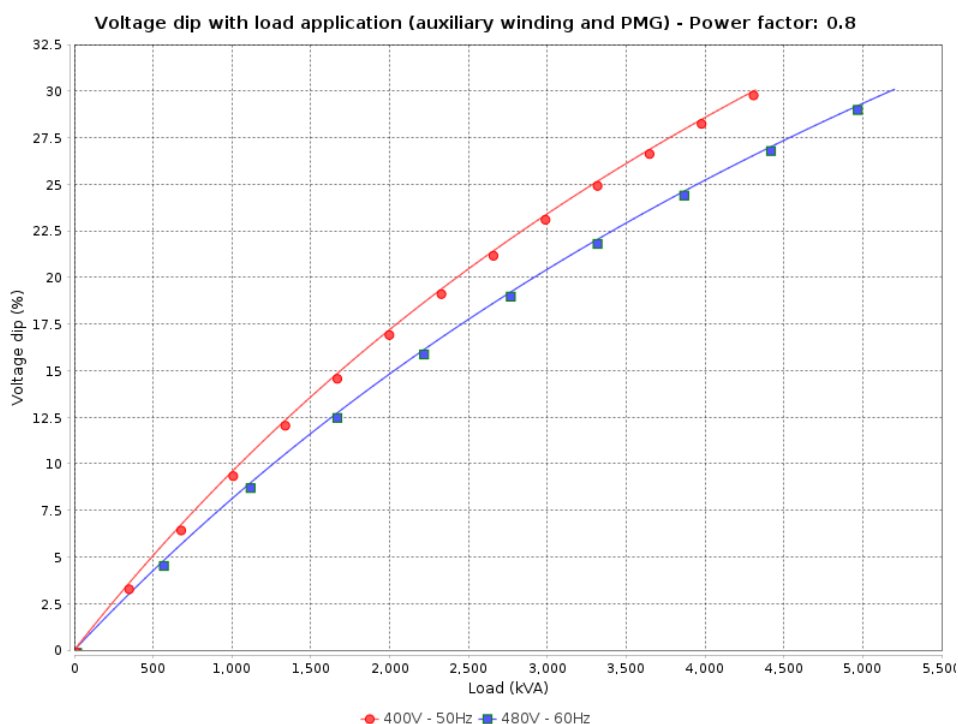
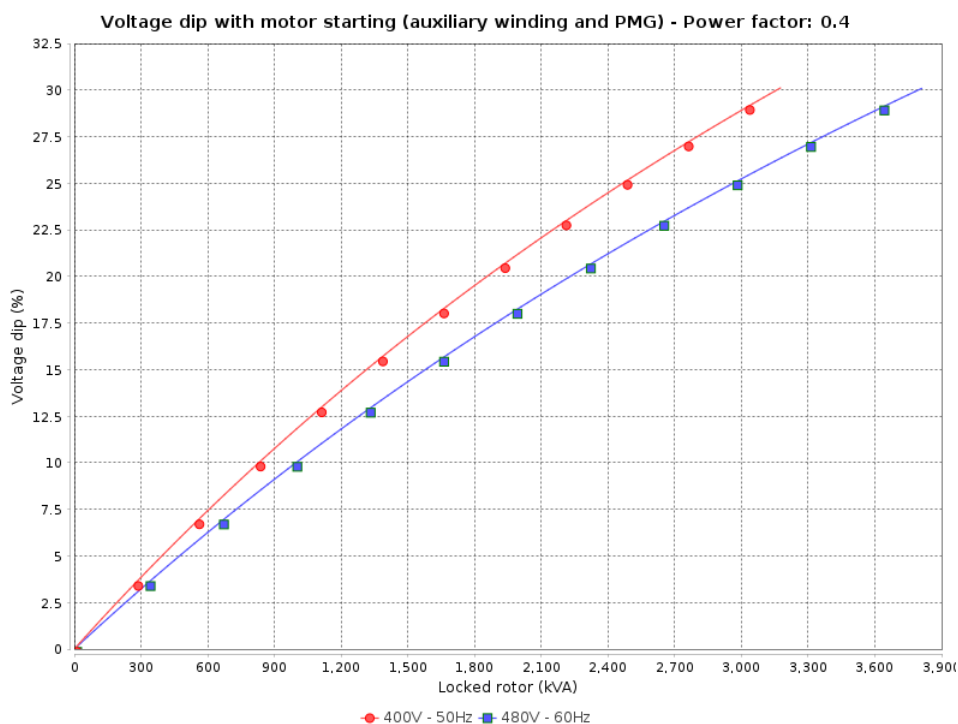
Frequency and number of phases		50 Hz				60 Hz				
		3ph		1ph	3ph		1ph			
Voltages (V)	Y (series star) connection	400		-	480				-	
	YY (parallel star) connection			-					-	
	Δ (series delta) connection	230		-	277				-	
	ΔΔ (parallel delta) connection			-					-	
	Zig-zag or single phase delta	-	-	-	-	-	-	-	-	
Output power (kVA)	Continuous 80/40	1240			1520					
	Continuous 105/40	1421			1741					
	Continuous 125/40	1550			1900					
	Standby 150/40	1615			2000					
	Standby 163/27	1660			2050					
Electrical data (PF=0.8 / Continuous 125/40 (H))	Saturated reactances values									
	Xd(%) Dir. axis synchronous reactance	283.3			289.4					
	X'd(%) Dir. axis transient reactance	19.8			20.2					
	X''d(%) Dir. axis subtrans. reactance	12.2			12.5					
	Xq(%) Quad. axis sync. reactance	78.0			79.6					
	X''q(%) Quad. axis subtrans. react.	12.0			12.2					
	X2(%) Negative sequence reactance	12.1			12.4					
	X0(%) Zero sequence reactance	2.0			2.1					
	T'd(ms) Short Circ.Trans.time const.	236.4			236.4					
	T''d(ms) Short Circ. Sub. time const.	1.6			1.6					
	T'do(ms) Open Circ. time const Trans	3455			3455					
	T''do(ms) Open Circ. time const Subt	5.2			5.2					
	Ta(ms) Armature time const.	32			33					
	uc(V) Full load excitation voltage	49.3			50.0					
	ic(A) Full load excitation current	4.1			4.2					
ic(A) No load excitation current	1.0			1.0						
Icc(A) Sustained Short-Circ. Current	5593			6856						
Kcc Short-circuit ratio	0.35			0.35						
Efficiency (%)	Power factor	0.8	1.0		0.8	1.0				
	25% of load	91.4	93.1		92.1	93.7				
	50% of load	94.6	95.8		95.1	96.3				
	75% of load	95.4	96.6		95.9	96.9				
	100% of load	95.6	96.8		96.1	97.1				
	125% of load	95.5	96.7		96.1	97.1				

Other characteristics		Automatic voltage regulator		According to:	
Air flow	: 1.92 m³/s	Accuracy (stability)	: +/- 0.5%	IEC 60034	
Exciter stator winding resistance at 20°C	: 11.7 ohm	Rated current	: 7 A	NBR 5117	
Stator winding resistance at 20°C	: 8.0E-4 ohm	Analog input	: Yes	NEMA MG1	
Rotor winding resistance	: 1.77 ohm	Digital input	: No	VDE530	
Stator winding layers	: 2	Peak current	: 10 A/10 s	ISO 8528	
Inertia WR²	: 30.71 kgm²	Droop / TC	: Yes	CSA	
NDE Bearing	: 6319 C3	Dynamic recovery	: 8 to 500 ms		
DE bearing	: 6326 C3	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			Page	Revision
Date	21/02/2024		1 / 6	

DATA SHEET

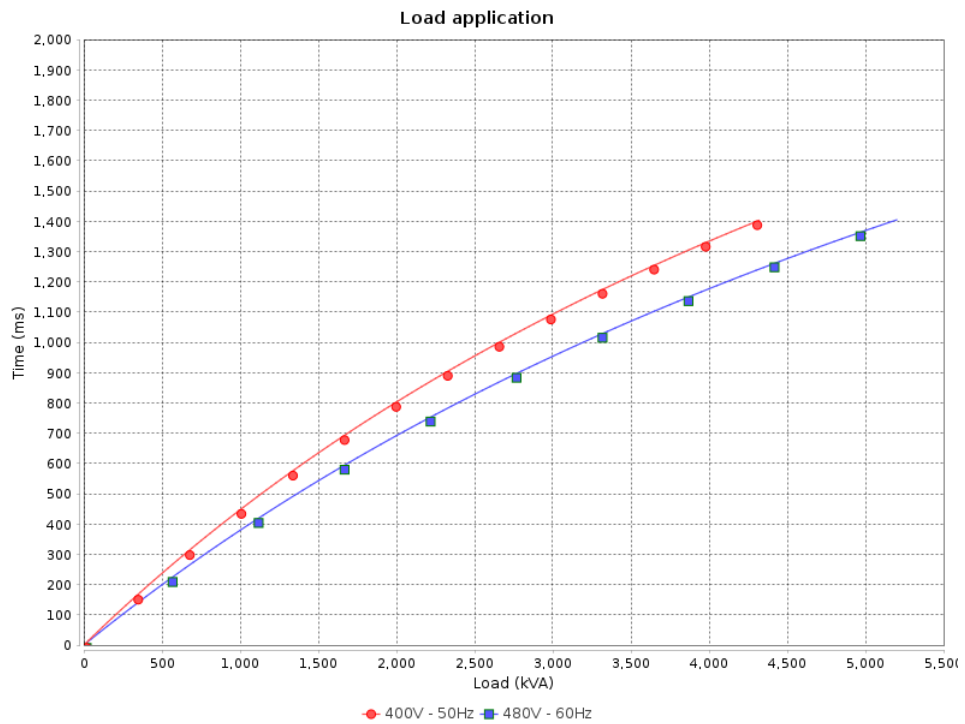
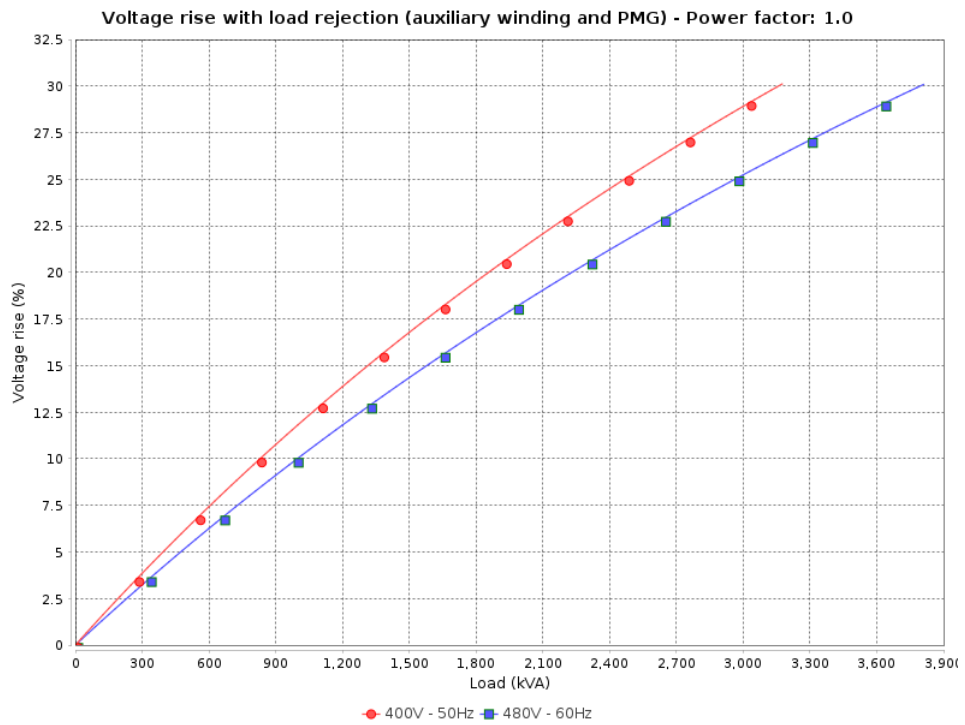
Synchronous Alternator



Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 6	Revision
Checked by				
Date				

DATA SHEET

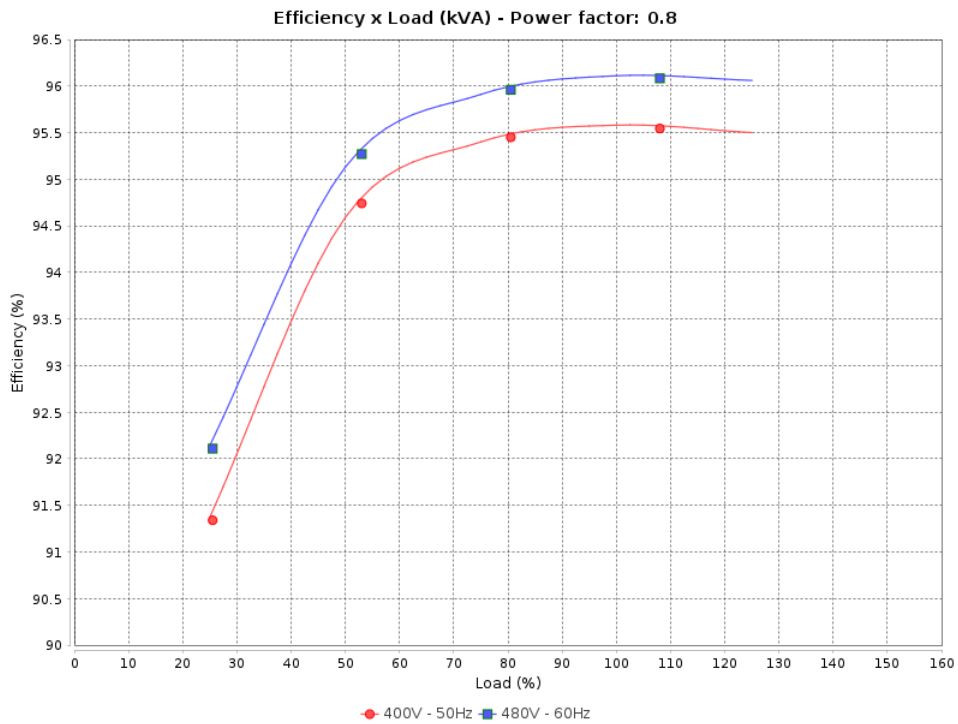
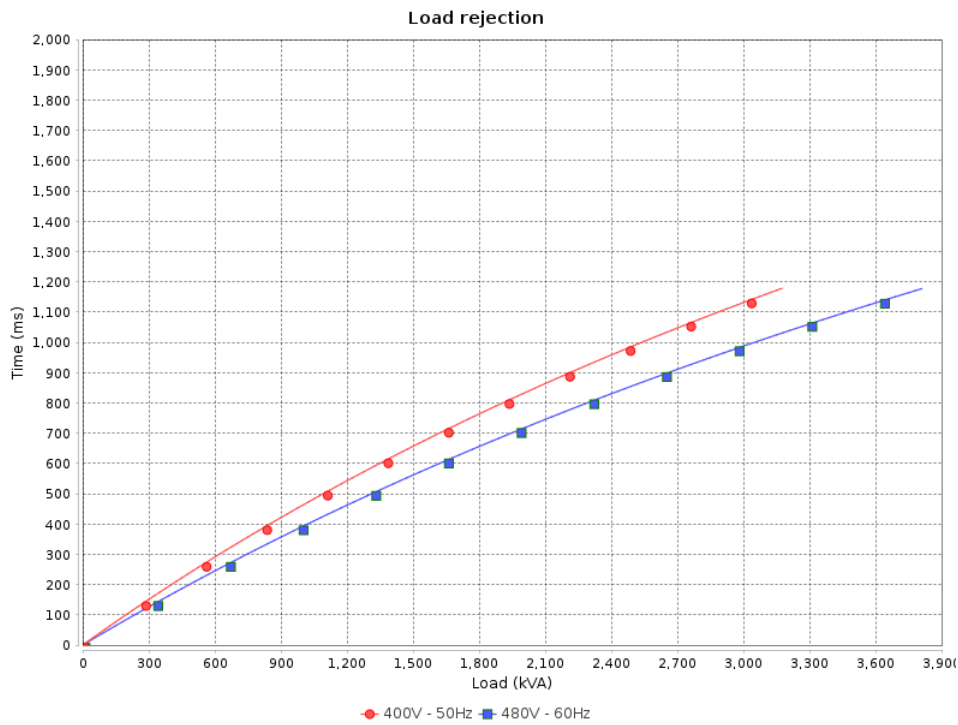
Synchronous Alternator



Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 3 / 6
Checked by				
Date	21/02/2024			
			Revision	

DATA SHEET

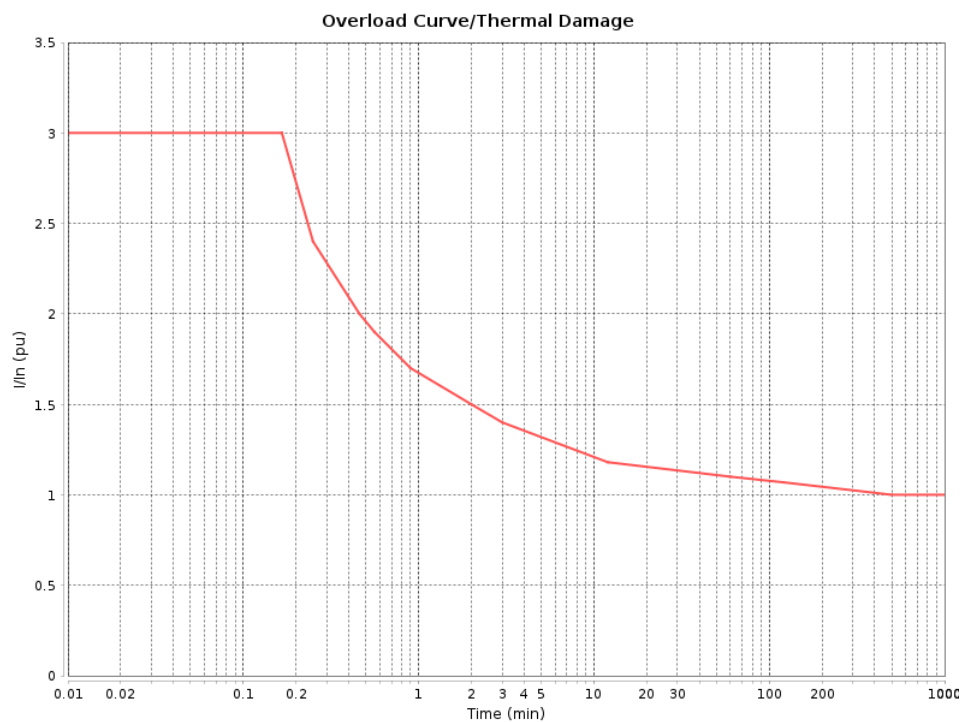
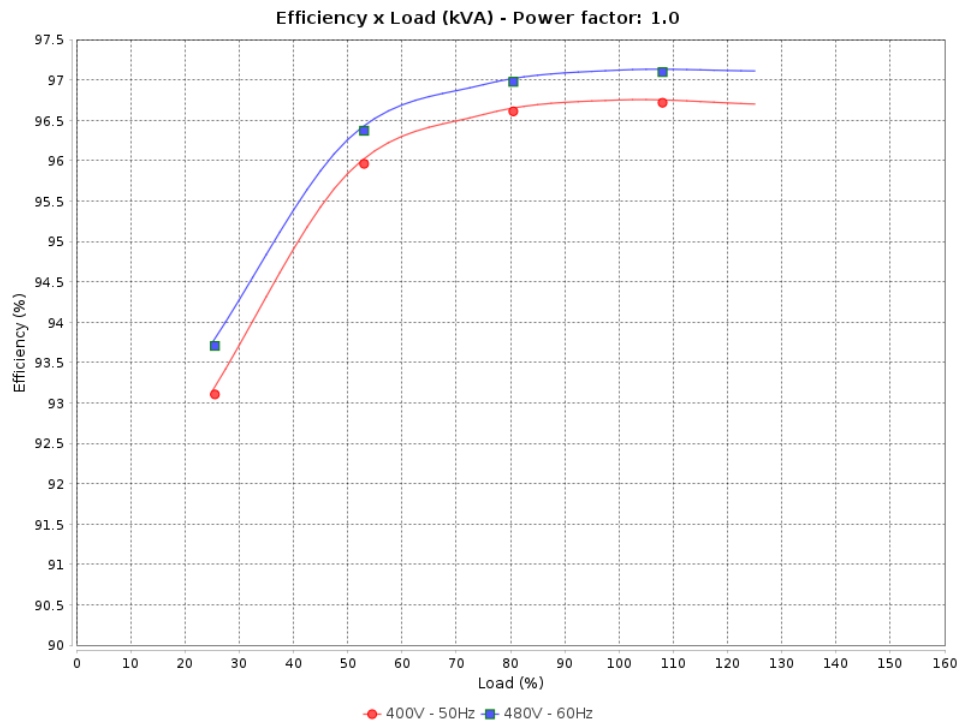
Synchronous Alternator



Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 6	Revision
Checked by				
Date				

DATA SHEET

Synchronous Alternator



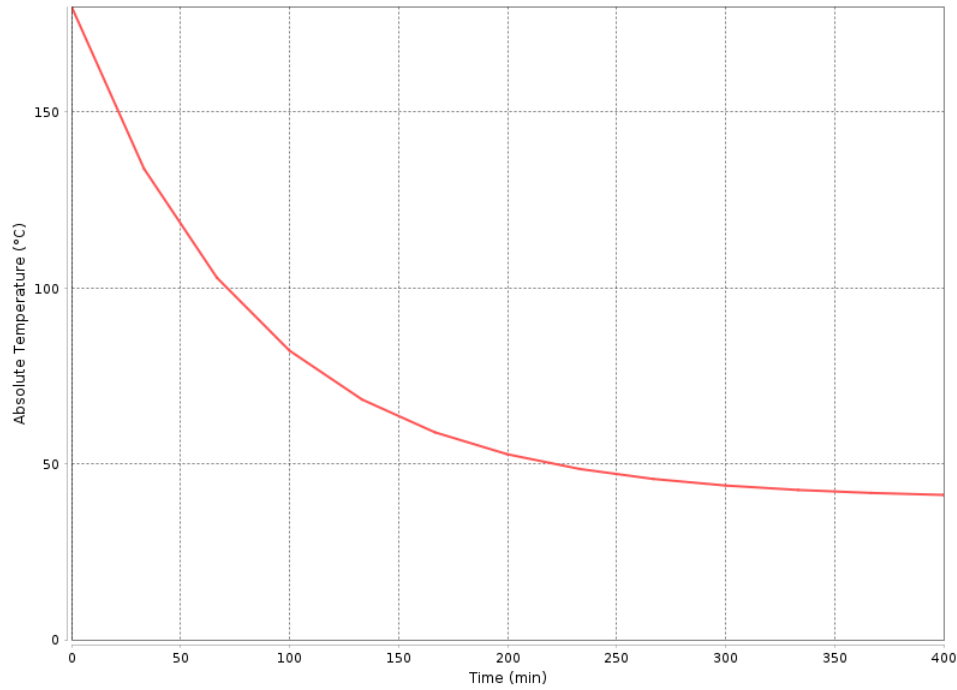
Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 6		Revision
Checked by				
Date				

DATA SHEET

Synchronous Alternator



Cooling curve

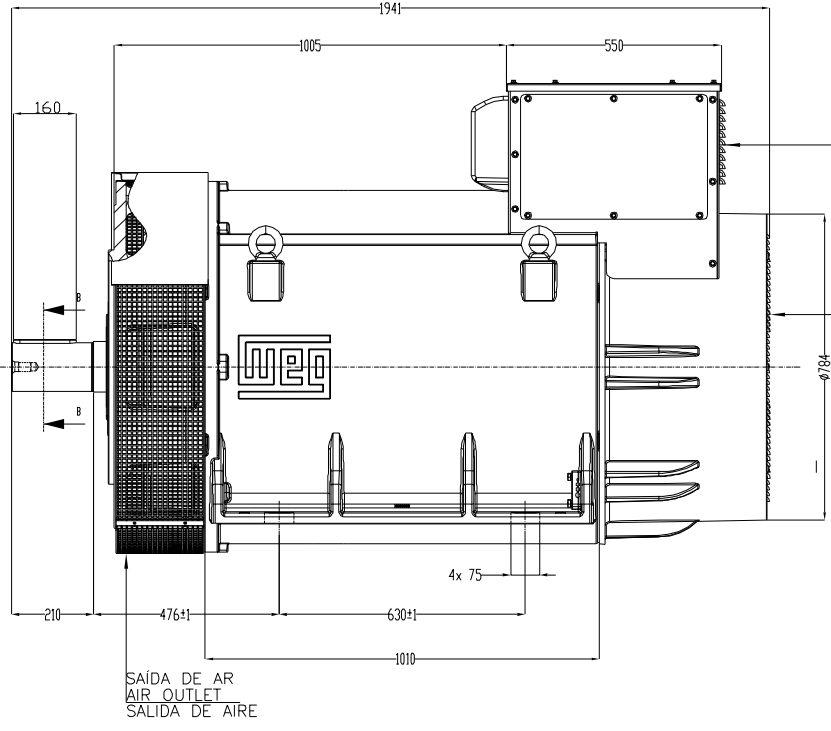


Rev.	Changes Summary	Performed	Checked	Date
Performed by				Page 6 / 6
Checked by				
Date	21/02/2024			
				Revision

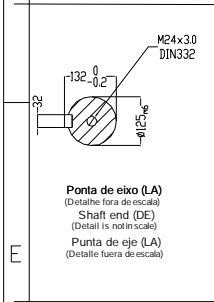
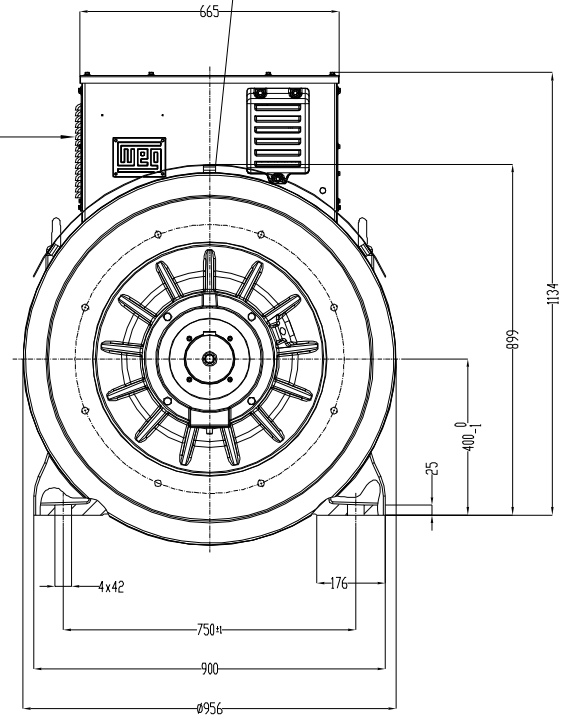
LA - LADO ACIONADO
 DE - DRIVE-END SIDE
 LA - LADO ACCIONADO

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.



ENTRADA DE AR
 AIR INLET
 ENTRADA DE AIRE



		NOTAS / NOTES / NOTAS							
		Máquina / Machine / Máquina : AG10 400 - B3T							
		Grau de proteção / Protection / Grado de protección: IP21 / IP23							
PESO BRUTO / GROSS WEIGHT		PESO LÍQUIDO / NET WEIGHT		ESC / SCALE					
EXEC / EXECUTED	LOC / LOC	RESUMO MODIFICAÇÃO / SUMMARY OF MODIFICATIONS		EXECUTADO / EXECUTED	VERIFICADO / CHECKED	LIBERADO / RELEASED	DATA / DATE	VER / VER	
EXEC / EXECUTED	LOC / LOC	DIMENSIONAL AG10 400 B3T		EXECUTADO / EXECUTED	VERIFICADO / CHECKED	LIBERADO / RELEASED	DATA / DATE	VER / VER	
VERIF. / CHECKED				000	00				
LIBER. / RELEASED									
DATA LB / REL DT	24/04/2018			FOLHA / SHEET		01 / 01			

