

DATA SHEET

Synchronous Alternator



Customer	:	Notes:
Customer reference	:	
Product line	: AG10-250MI00AI	Product code : 14418694
Area classification	: Safe	1010265932

General data Frame (IEC) : 250 Insulation Class : 180°C (H) THD (L-L, no load) : ≤ 3% Stator winding pitch : 2/3 Altitude : up to 1000 m.a.s.l Number of Leads : 12 Power factor : 0.8 to 1.0 Excitation system : Brushless with Auxiliary Coil Cooling : IC01	Degree of protection : IP23 Mounting style : B15T Number of poles : 4 Type of Pole : Salient Rated speed - 50 Hz : 1500 rpm Nominal rotation - 60 Hz : 1800 rpm Overspeed : 2250 rpm Approx. weight : 786 kg Overload : 1.1x In per 1h each 6h Momentary Overload : 1.5x In per 30s
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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	220		220		209		127.0		244		257		256		292		147.8	
	Continuous 105/40	252		252		239		145.5		288		294		293		335		169	
	Continuous 125/40	275		275		261		159		305		321		325		365		188	
	Standby 150/40	291		291		276		168		330		344		347		400		200	
	Standby 163/27	300		300		285		173		360		376		380		417		219	
Electrical data (FP=0.8 / Continuous 125/40 (H))	Xd(%) Dir. axis synchronous reactance	521.6		417.3		396.0		695.5		645.7		518.2		481.5		436.03		642.0	
	X'd(%) Dir. axis transient reactance	19.9		15.9		15.1		26.5		24.6		19.8		18.4		16.64		24.5	
	X''d(%) Dir. axis subtrans. reactance	14.3		11.5		10.9		19.1		17.7		14.2		13.2		11.97		17.6	
	Xq(%) Quad. axis sync. reactance	144.2		115.4		109.5		192.3		178.6		143.3		133.1		120.57		177.5	
	X''q(%) Quad. axis subtrans. react.	11.5		9.2		8.7		15.3		14.2		24.7		10.5		9.58		14.0	
	X2(%) Negative sequence reactance	18.6		14.9		14.2		24.9		23.1		19.4		17.2		15.58		22.9	
	X0(%) Zero sequence reactance	2.4		1.9		1.8		3.2		3.0		2.4		2.2		2.0		2.9	
	T'd(ms) Short Circ.Trans.time const.	71.9		57.5		57.5		95.9		89.0		68.5		66.4		60.13		88.5	
	T''d(ms) Short Circ. Sub. time const.	1.9		1.5		1.5		2.5		2.3		1.8		1.8		1.58		2.3	
	T'do(ms) Open Circ. time const Trans	1434		1148		1148		1913		1776		1367		1324		1199.11		1765	
	T''do(ms) Open Circ. time const Subt	2.6		2.1		2.1		3.5		3.2		2.5		2.4		2.17		3.2	
	Ta(ms) Armature time const.	12		10		10		16		15		11		11		9.95		15	
	uc(V) Full load excitation voltage	62.9		61.9		61.9		62.9		55.6		58.9		55.1		60.71		55.1	
	ic(A) Full load excitation current	3.8		3.7		3.7		3.8		3.3		3.5		3.3		3.65		3.3	
	ic(A) No load excitation current	0.7		0.9		0.9		1.0		0.6		0.7		0.7		0.89		1.0	
Icc(A) Sustained Short-Circ. Current	1253		1191		1089		1191		1390		1318		1279		1317.08		1173		
Kcc Short-circuit ratio	0.47		0.38		0.25		0.63		0.58		0.49		0.43		0.39		0.58		
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	0.8	1.0
	25% of load	91.5	93.4	91.7	93.5	91.9	93.7	84.2	85.9	92.1	93.7	92	93.6	91.9	93.5	91.8	93.5	84.6	86
	50% of load	92.7	94.5	92.8	94.6	93	94.8	85.3	86.9	93.2	94.8	93.3	94.8	93.4	94.9	93.3	94.9	86	87.3
	75% of load	92.1	94.1	92.4	94.4	92.6	94.6	84.8	86.6	92.6	94.4	92.8	94.6	93.2	94.8	93.1	94.8	85.7	87.2
	100% of load	91.2	93.5	91.6	93.8	91.8	94	83.9	86	91.6	93.7	92	94	92.4	94.3	92.5	94.4	85.1	86.8
	125% of load	90.2	92.6	90.7	93.2	90.9	93.3	80.8	83.4	90.4	92.8	91	93.2	91.6	93.7	91.8	93.9	84.2	86.2

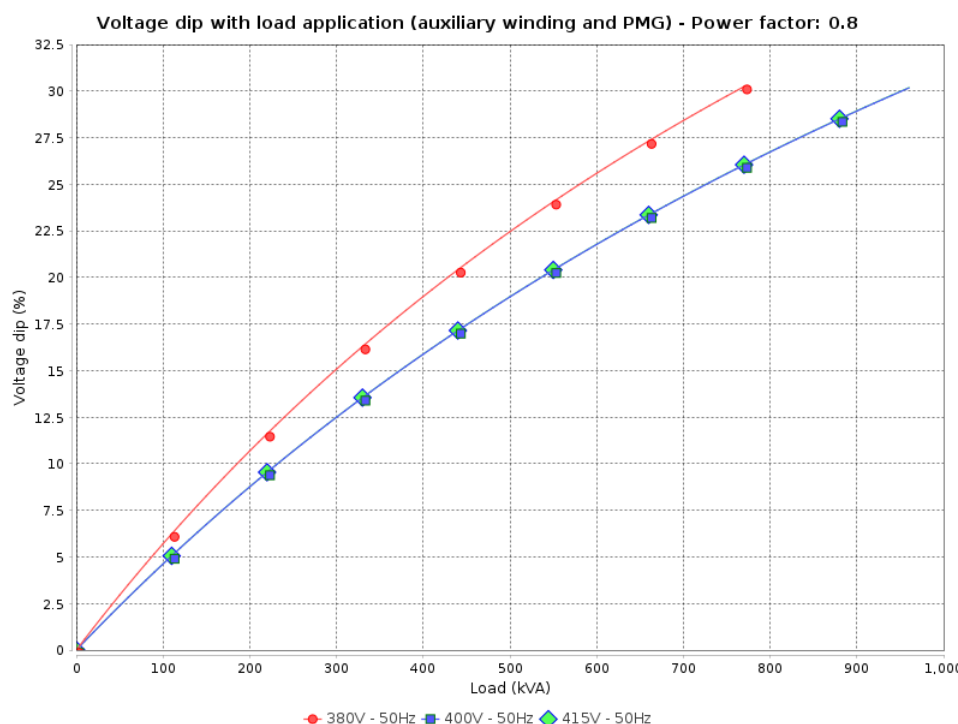
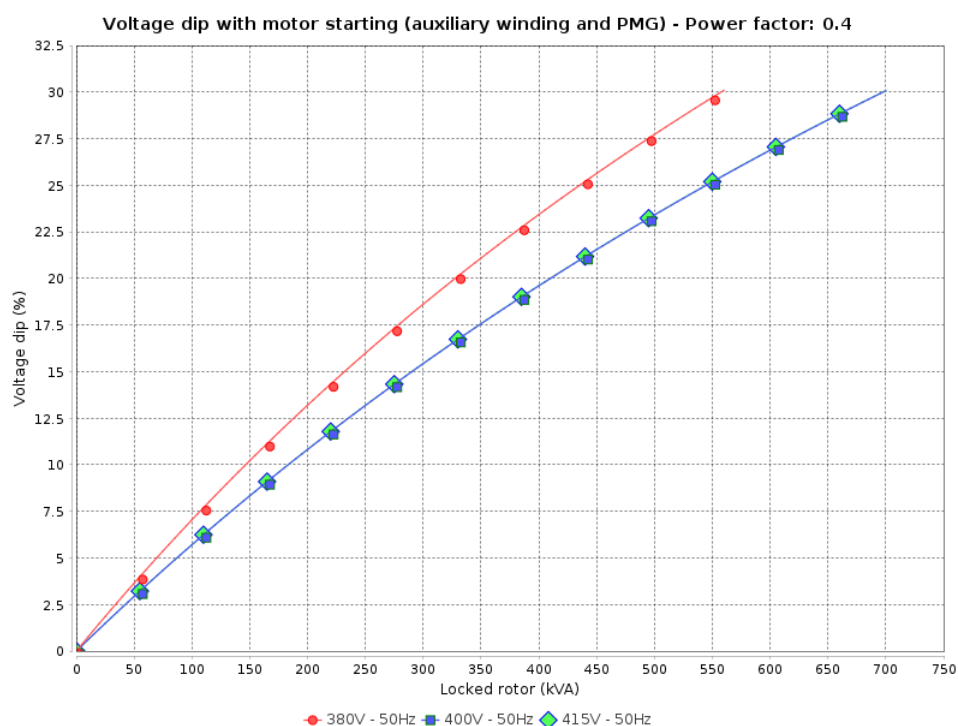
Other characteristics Air flow : 1.55 m³/s Exciter stator winding resistance at 20°C : 12.17 ohm Stator winding resistance at 20°C : 0.01616 ohm Rotor winding resistance : 1.28 ohm Stator winding layers : 2 Inertia WR² : 3.0 kgm² NDE Bearing : 6314 2RS DE bearing : Flange : SAE 3 Coupling disc : SAE 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
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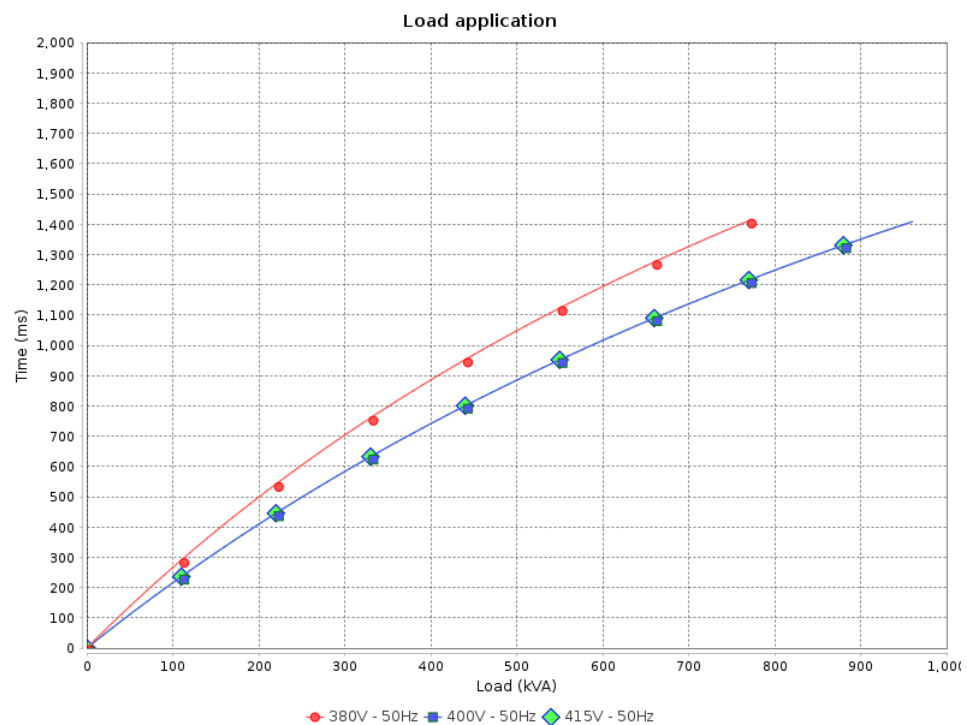
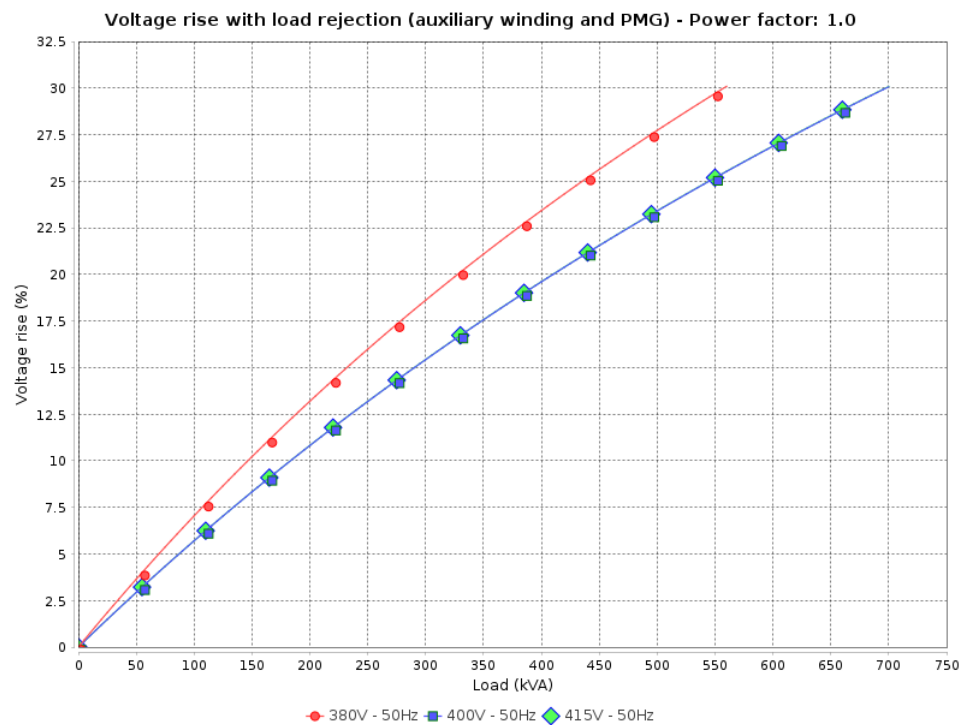


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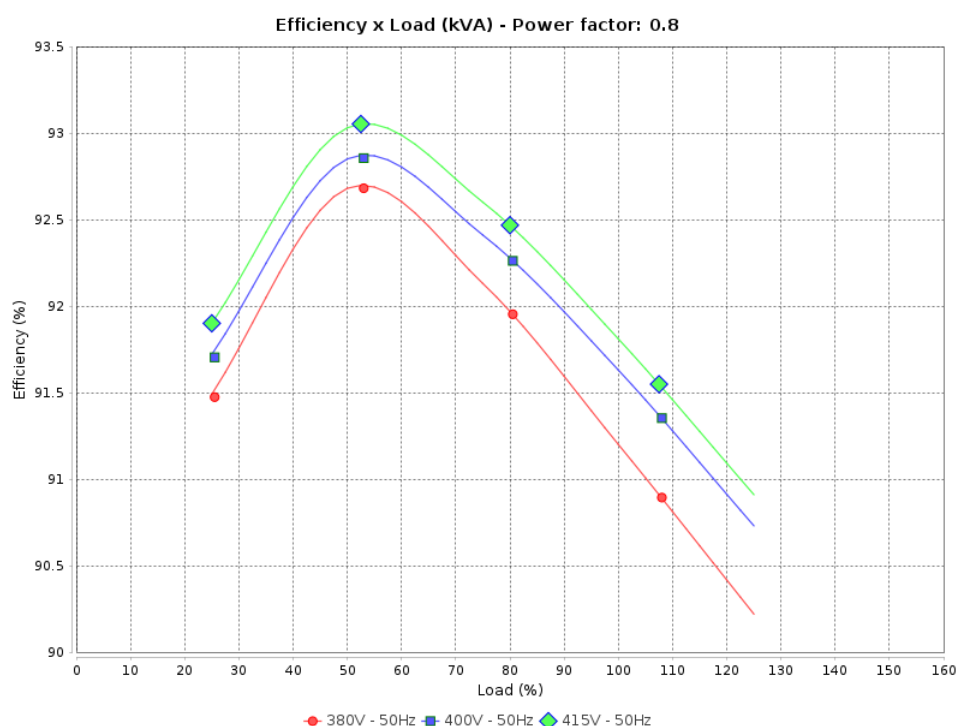
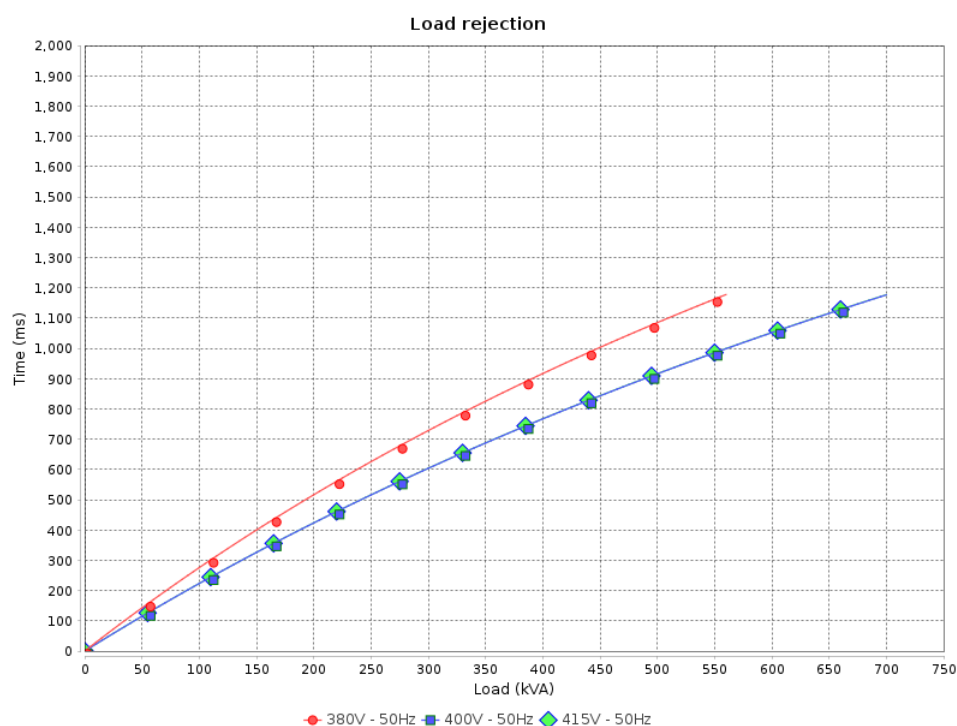


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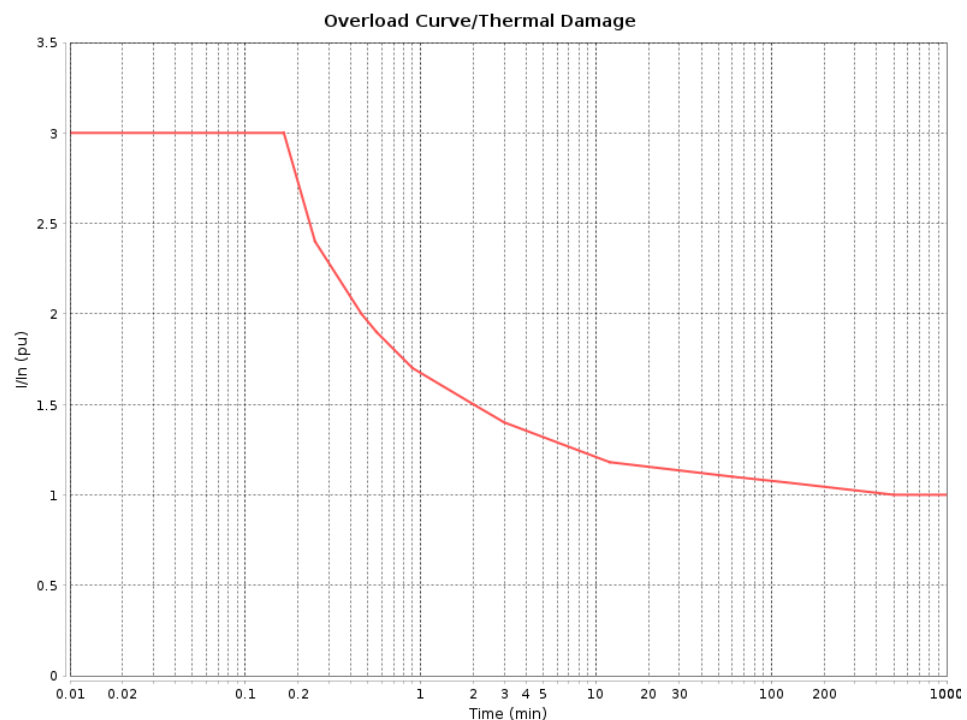
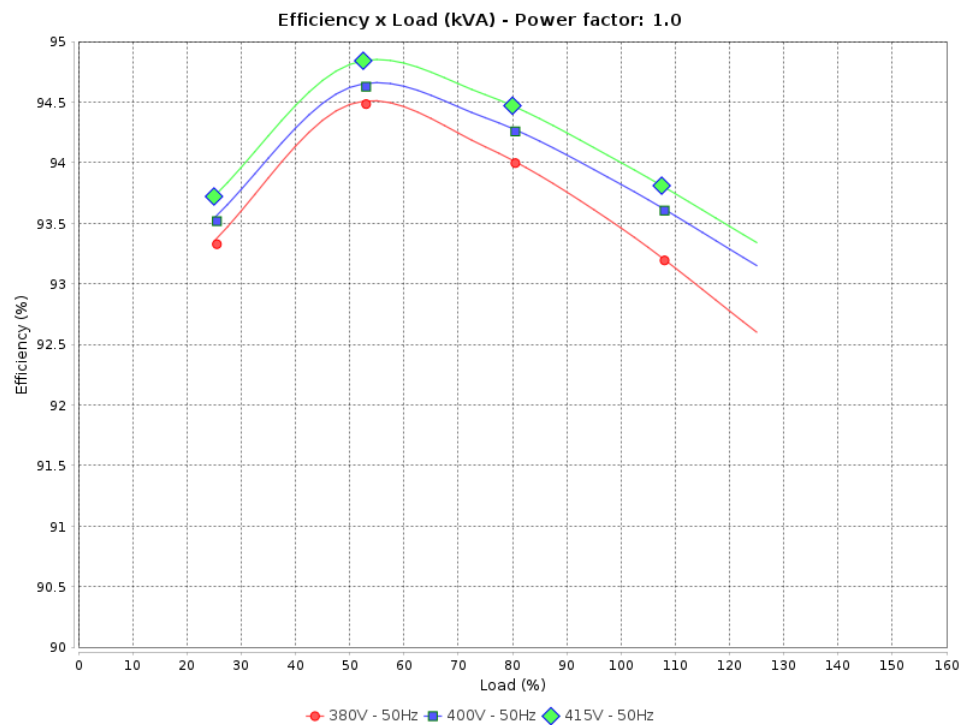


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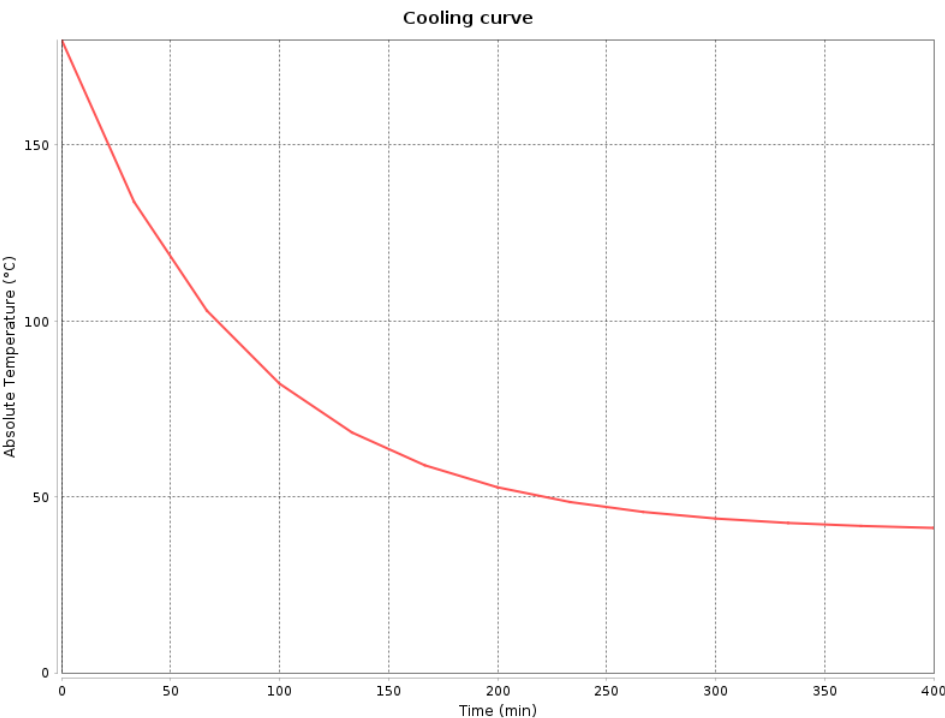


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