

DATA SHEET

Synchronous Alternator



Customer	:	Notes:
Customer reference	:	
Product line	: AG10-355MI80AI	Product code : 14417012
Area classification	: Safe	1010291619

General data Frame (IEC) : 355 Insulation Class : 180°C (H) THD (L-L, no load) : ≤ 3% Stator winding pitch : 5/6 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 : B3T 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 : 2688 kg Overload : 1.1x In per 1h each 6h Momentary Overload : 1.5x In per 30s
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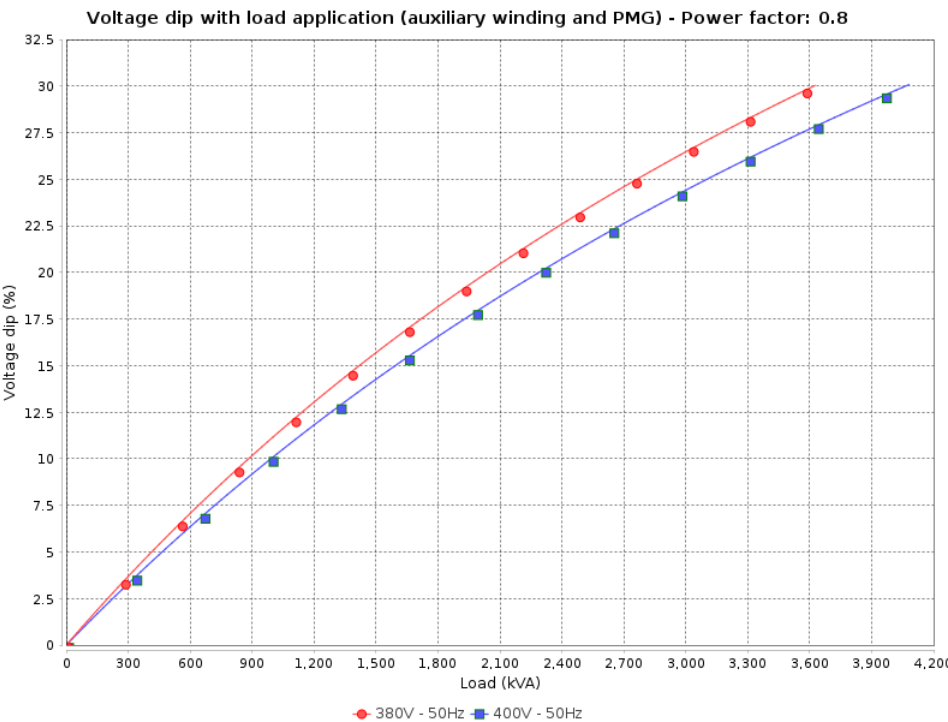
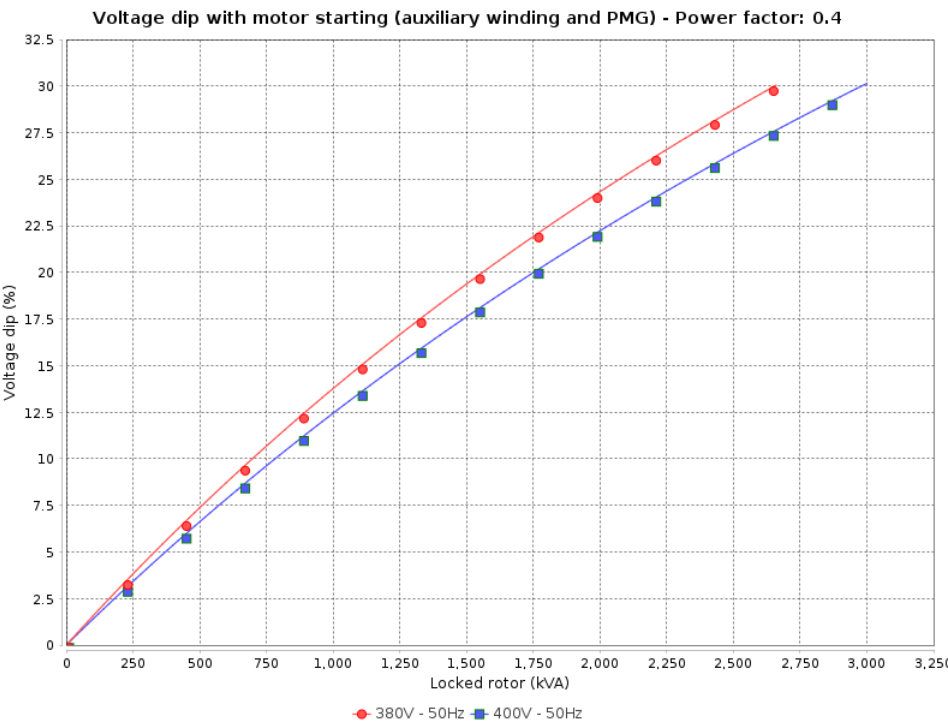
Frequency and number of phases		50 Hz				60 Hz			
		3ph			1ph	3ph			1ph
Voltages (V)	Y (series star) connection	380	400	415	-	380	416	440	480
	YY (parallel star) connection	190	200	208	-	190	208	220	240
	Δ (series delta) connection	220	230	239	-	220	240	254	277
	ΔΔ (parallel delta) connection	110	115	120	-	110	120	127	138
	Zig-zag or single phase delta	-	-	-	-	-	-	-	-
Output power (kVA)	Continuous 80/40	1000	1040	988		1040	1115	1168	1280
	Continuous 105/40	1146	1192	1131		1192	1278	1338	1466
	Continuous 125/40	1250	1300	1235		1300	1394	1460	1600
	Standby 150/40	1300	1400	1330		1450	1528	1600	1660
	Standby 163/27	1350	1450	1377		1480	1575	1670	1720
Electrical data (FP=0.8 / Continuous 125/40 (H))	Xd(%) Dir. axis synchronous reactance	285.0	257.5	244.6		386.2	325.7	305.0	264.09
	X'd(%) Dir. axis transient reactance	19.0	17.6	16.8		24.4	21.4	20.0	18.09
	X''d(%) Dir. axis subtrans. reactance	14.0	12.7	12.1		17.5	15.4	14.4	13.06
	Xq(%) Quad. axis sync. reactance	106.0	92.5	87.9		156.8	111.6	115.5	94.89
	X''q(%) Quad. axis subtrans. react.	14.0	13.4	12.7		18.4	26.7	15.1	13.73
	X2(%) Negative sequence reactance	14.0	13.1	12.4		17.9	21.1	14.8	13.4
	X0(%) Zero sequence reactance	2.0	2.1	2.0		2.9	2.6	2.4	2.18
	T'd(ms) Short Circ.Trans.time const.	163.0	162.6	162.6		163.8	163.2	163.3	162.6
	T'd(ms) Short Circ. Sub. time const.	1.0	1.2	1.2		1.5	1.2	1.3	1.2
	T'do(ms) Open Circ. time const Trans	2471	2396	2396		2621	2497	2514	2396.5
	T'do(ms) Open Circ. time const Subt	2.0	2.0	2.0		2.1	2.0	2.0	2.0
	Ta(ms) Armature time const.	37	35	35		48	38	39	35.51
	uc(V) Full load excitation voltage	49.0	50.4	50.4		41.8	45.3	43.0	45.24
	ic(A) Full load excitation current	4.0	4.2	4.2		3.5	3.7	3.6	3.77
	ic(A) No load excitation current	1.0	1.2	1.2		0.8	1.0	0.9	1.07
	Icc(A) Sustained Short-Circ. Current	5698	5629	5154		5925	5759	5747	5773.5
	Kcc Short-circuit ratio	0.35	0.39	0.41		0.26	0.3	0.33	0.38
Efficiency (%)	Power factor	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
	25% of load	90.8	92.7	90.7	92.6	90.7	92.6	91.8	93.5
	50% of load	93.6	95	93.6	95	93.6	95.1	94.1	95.4
	75% of load	94	95.4	94.1	95.5	94.2	95.5	94.4	95.6
	100% of load	93.9	95.3	94	95.5	94.1	95.5	94.1	95.4
	125% of load	93.5	95	93.7	95.2	93.7	95.2	93.6	95

Other characteristics Air flow : 2.04 m³/s Exciter stator winding resistance at 20°C : 10.5 ohm Stator winding resistance at 20°C : 0.00135 ohm Rotor winding resistance : 3.64 ohm Stator winding layers : 2 Inertia WR² : 21.1 kgm² NDE Bearing : 6318 C3 DE bearing : 6322 C3 Flange : NOT APPLICABLE Coupling disc : NOT APPLICABLE	Automatic voltage regulator Accuracy (stability) : +/- 0.5% Rated current : 7 A Analog input : Yes Digital input : No Peak current : 10 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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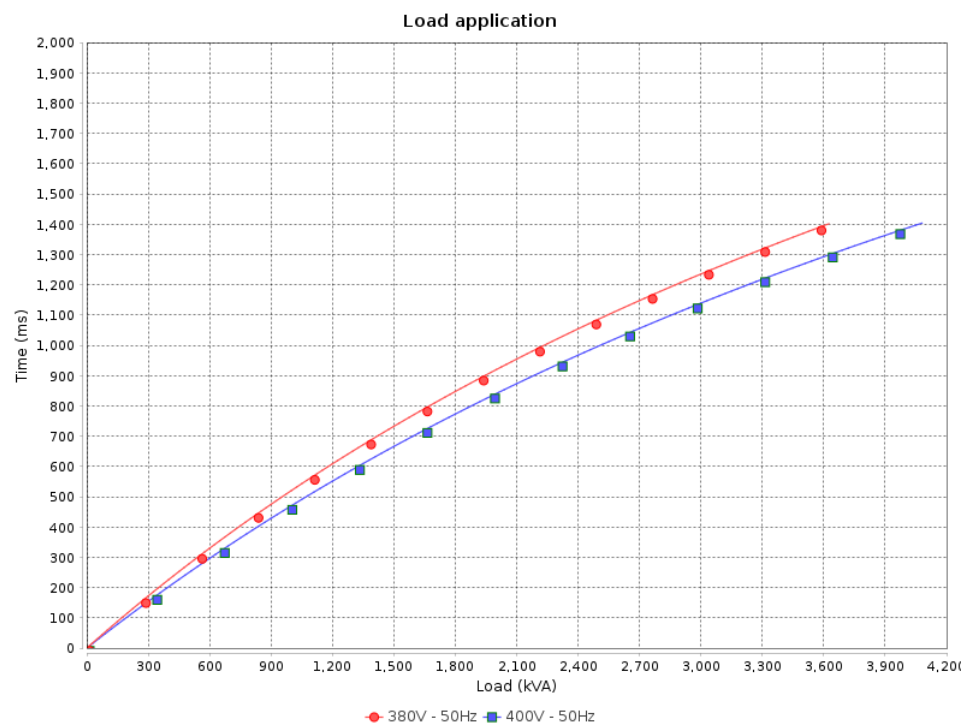
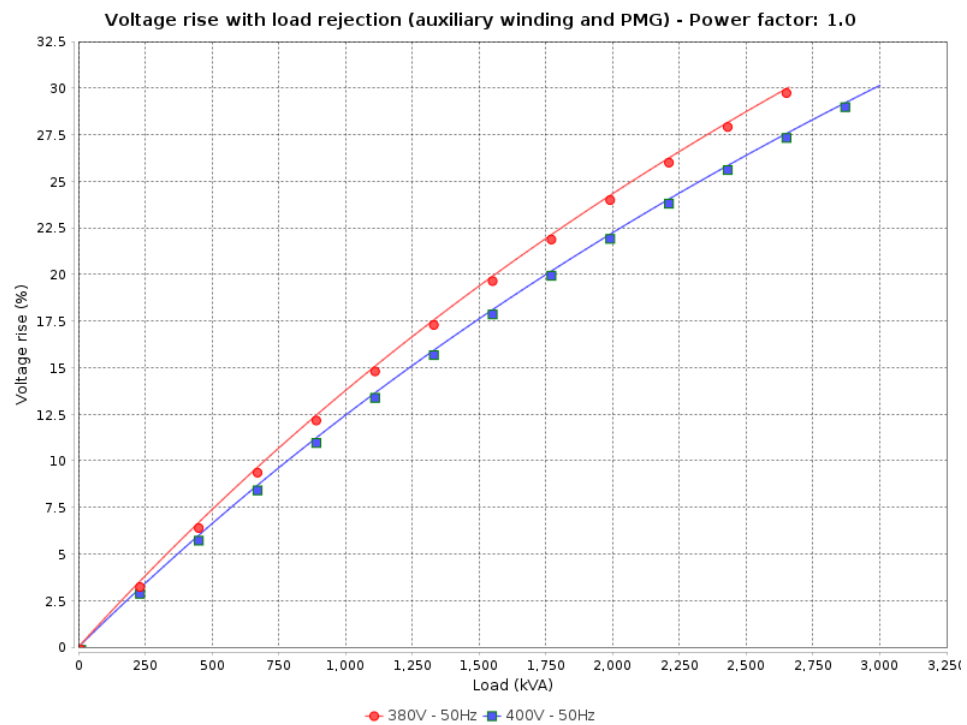
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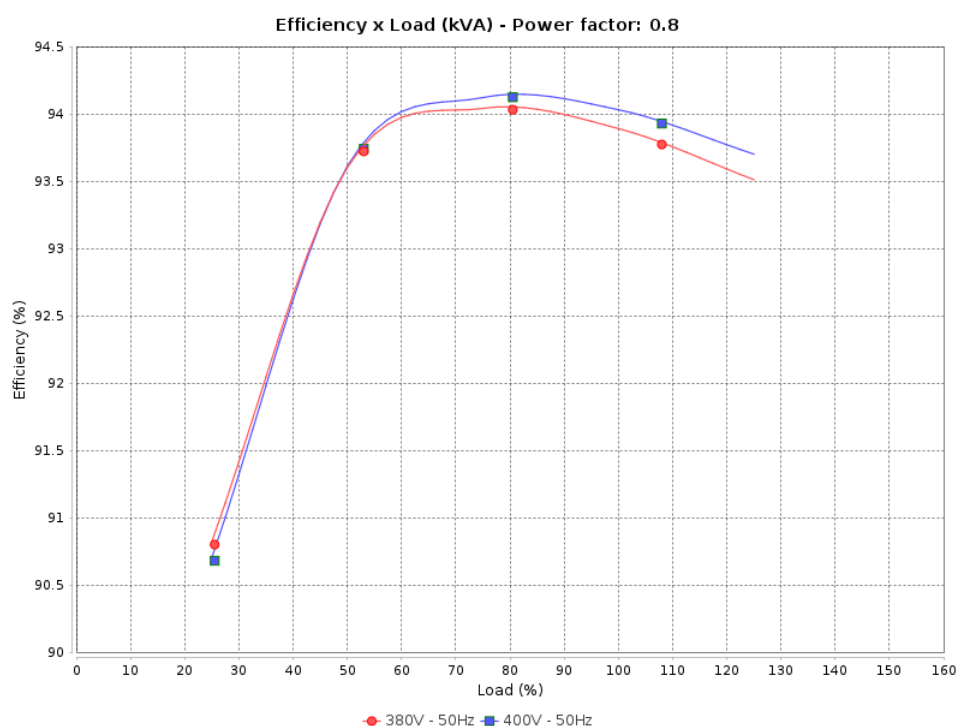
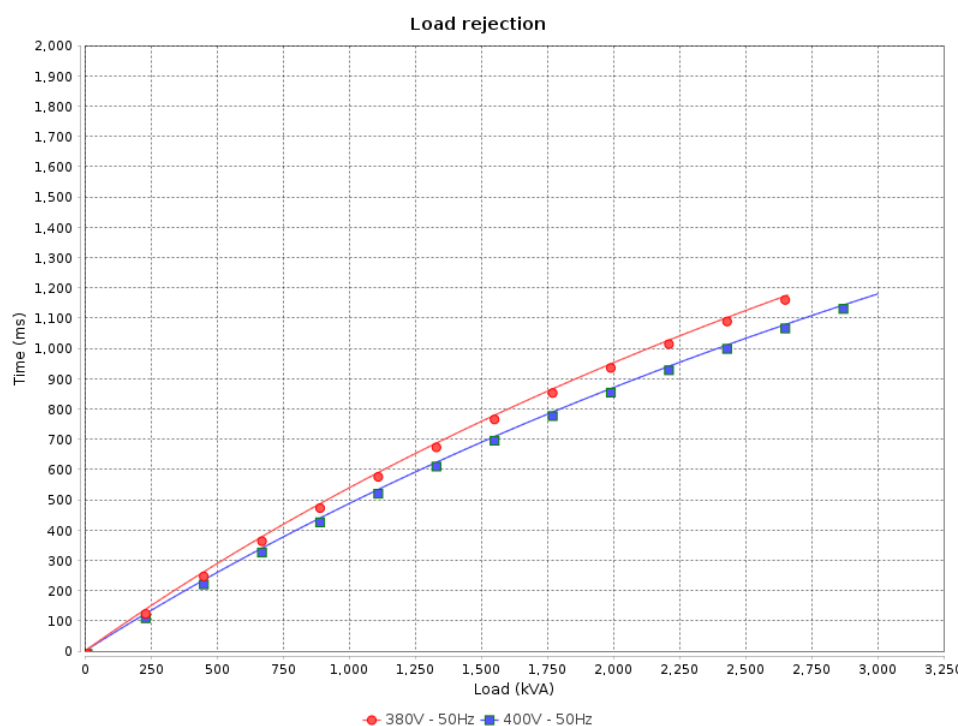


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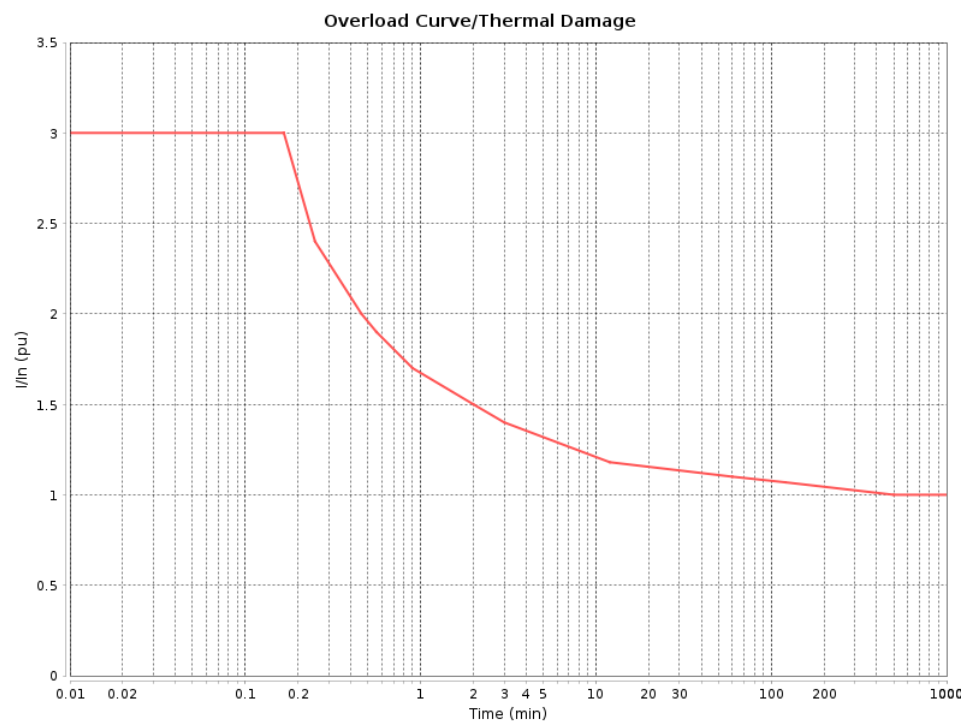
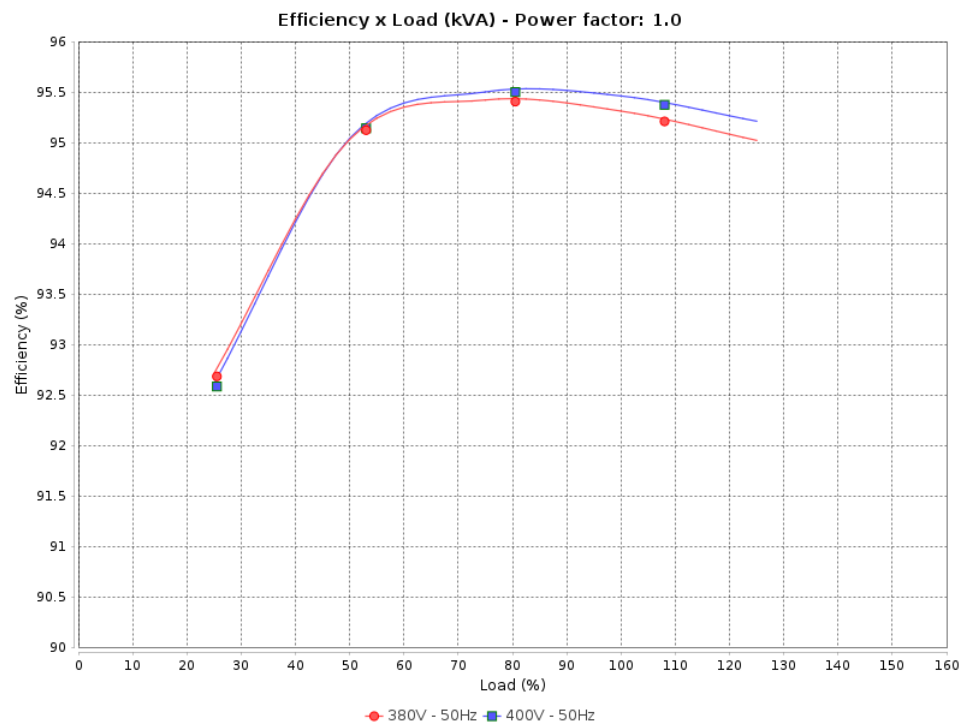


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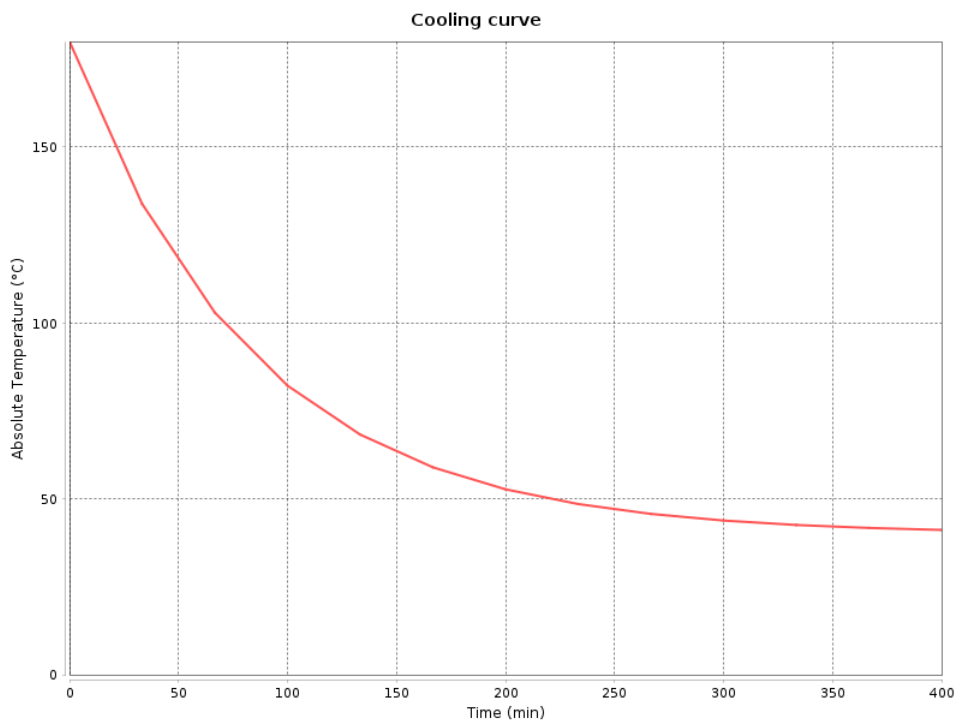


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