maranello alternator

M4025

CONT 3500 kVA

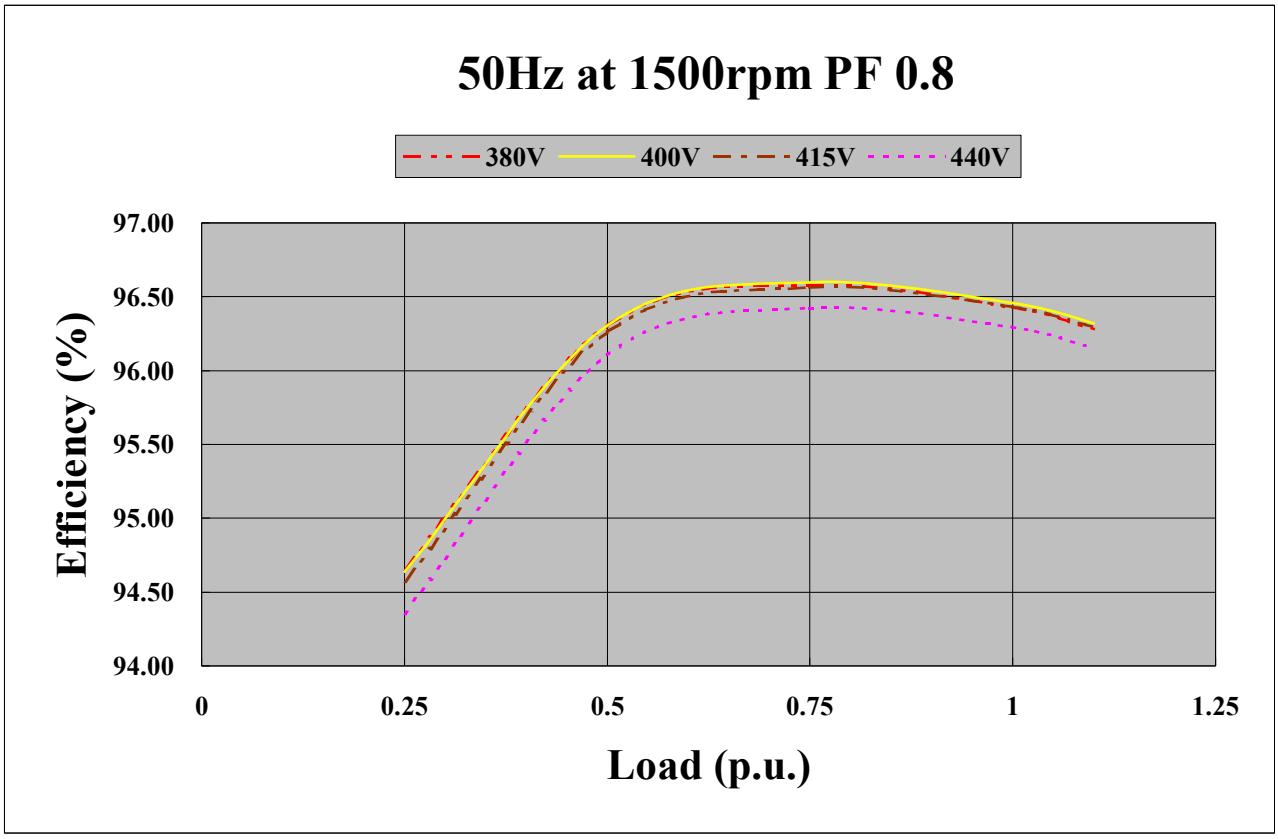
maranello alternator

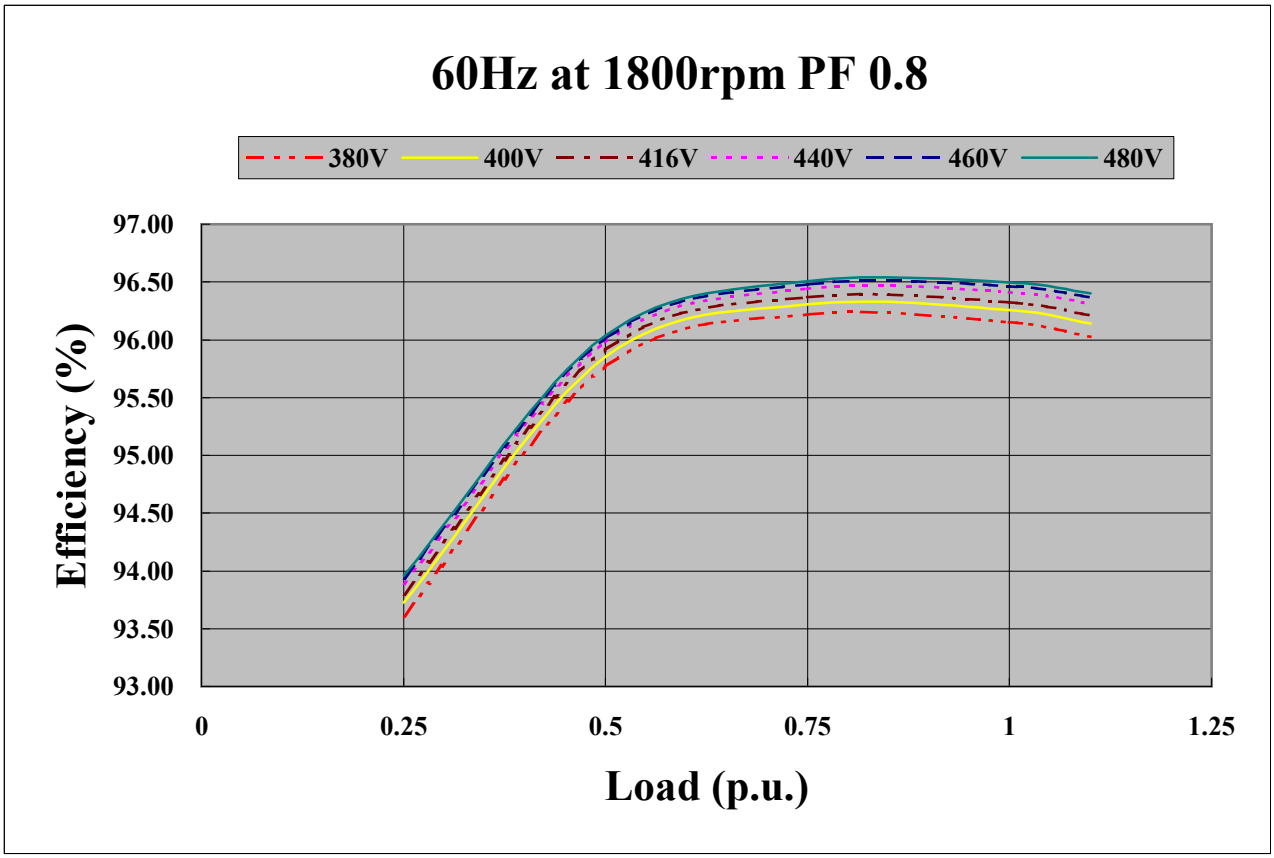
Frequency	Hz	50				60					
Rated capacity (kVA)	S	3325	3500	3631	3850	3491	3675	3822	4043	4226	4410
Rated power (kW)	P	2660	2800	2905	3080	2793	2940	3058	3234	3381	3528
Voltage (V)	U	380	400	415	440	380	400	416	440	460	480
Short-circuit ratio	Kcc	0.361	0.408	0.462	0.59	0.261	0.278	0.293	0.32	0.35	0.387
Reactance											
Direct axis synchronous reactance	Xd	3.341	3.174	3.059	2.885	4.209	3.999	3.845	3.635	3.477	3.332
Direct axis transient reactance saturated	X'd	0.171	0.163	0.157	0.148	0.216	0.205	0.197	0.187	0.178	0.171
Direct axis subtransient reactance saturated	X"d	0.131	0.124	0.12	0.113	0.165	0.157	0.151	0.142	0.136	0.13
Quadrature axis synchronous reactance	Xq	1.463	1.39	1.339	1.263	1.843	1.751	1.684	1.592	1.523	1.459
Quadrature axis subtransient reactance	X"q	0.162	0.153	0.148	0.14	0.204	0.193	0.186	0.176	0.168	0.161
Negative sequence reactance saturated	X2	0.15	0.14	0.13	0.13	0.18	0.17	0.17	0.16	0.15	0.15
Zero sequence reactance unsaturated	X0	0.008	0.007	0.007	0.007	0.01	0.009	0.009	0.008	0.008	0.008
Time constant											
Open circuit time constant	T'd0	4.483	4.483	4.483	4.483	4.483	4.483	4.483	4.483	4.483	4.483
Short-circuit transient time constant	T'd	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Subtransient time constant	T"d	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Armature time constant	Ta	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
No load losses	W	28092	29355	30346	32075	38709	39829	40767	42242	43536	44885
Heat dissipation at full load at Class H	W	98559	102789	107417	118492	111756	114376	116610	120300	123962	128083
Efficiency											
PF=0.8 Efficiency of 25% load	%	94.66	94.64	94.57	94.35	93.61	93.72	93.80	93.89	93.94	93.96
50% load	%	96.30	96.30	96.26	96.10	95.77	95.86	95.91	95.98	96.02	96.04
75% load	%	96.58	96.60	96.56	96.42	96.22	96.31	96.37	96.44	96.48	96.51
100% load	%	96.43	96.46	96.43	96.30	96.15	96.26	96.33	96.41	96.46	96.50
110% load	%	96.28	96.32	96.29	96.15	96.03	96.14	96.22	96.31	96.37	96.40
PF=1 Efficiency of 25% load	%	94.81	94.81	94.77	94.63	93.85	93.96	94.04	94.13	94.18	94.22
50% load	%	96.62	96.63	96.62	96.55	96.17	96.25	96.30	96.36	96.40	96.43
75% load	%	97.06	97.08	97.08	97.05	96.79	96.86	96.91	96.97	97.01	97.05
100% load	%	97.10	97.14	97.15	97.15	96.91	97.00	97.05	97.12	97.17	97.21
110% load	%	97.05	97.09	97.11	97.11	96.88	96.96	97.02	97.10	97.15	97.20
No load excitation current	io(A)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Full load excitation current	ic(A)	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Full load excitation voltage	uc(V)	88	88	88	88	88	88	88	88	88	88
Short circuit current capacity	%	>300I_N 10s(with PMG or Auxiliary winding!									
Recovery time	Tr	1 s									
Waveform : TIF		<50									
Waveform : THD		<3%									
Waveform : THF		<2%									
Winding pitch		2/3									
Steady state voltage regulation		+/- 1%									
A.V.R. model		EVC600									
Duty		Continuous									
Number of poles		4									
Class of insulation		H									
Altitude		≤1000m									
Rated power factor		0.8									
Excitation		Brushless									
Stator winding		6ends									
Rotor		With damping cage									
Overload	%	110% rated load for 2 hour per 24 hour									
Stator winding resistance (20)	ohm	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Rotor winding resistance (20)	ohm	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.46
Exciter resistance (20)	ohm	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8	14.8
Cooling air requirement	m^3/min	188	188	188	188	226	226	226	226	226	226
Energy storage constant (H)	sec.	0.409	0.388	0.374	0.353	0.561	0.533	0.512	0.484	0.463	0.444
Method of cooling		IC 01									
Ambient temperature		40									
Sense of rotation		Clockwise-DE									
Type of construction		Single / Double bearing									
Degree of protection / enclosure		IP21 or IP23									
Maximum overspeed		2250 rpm 2minutes									

maranello alternator

THREE-PHASE SYNCHRONOUS

THREE PHASE EFFICIENCY CRUVES 20121201



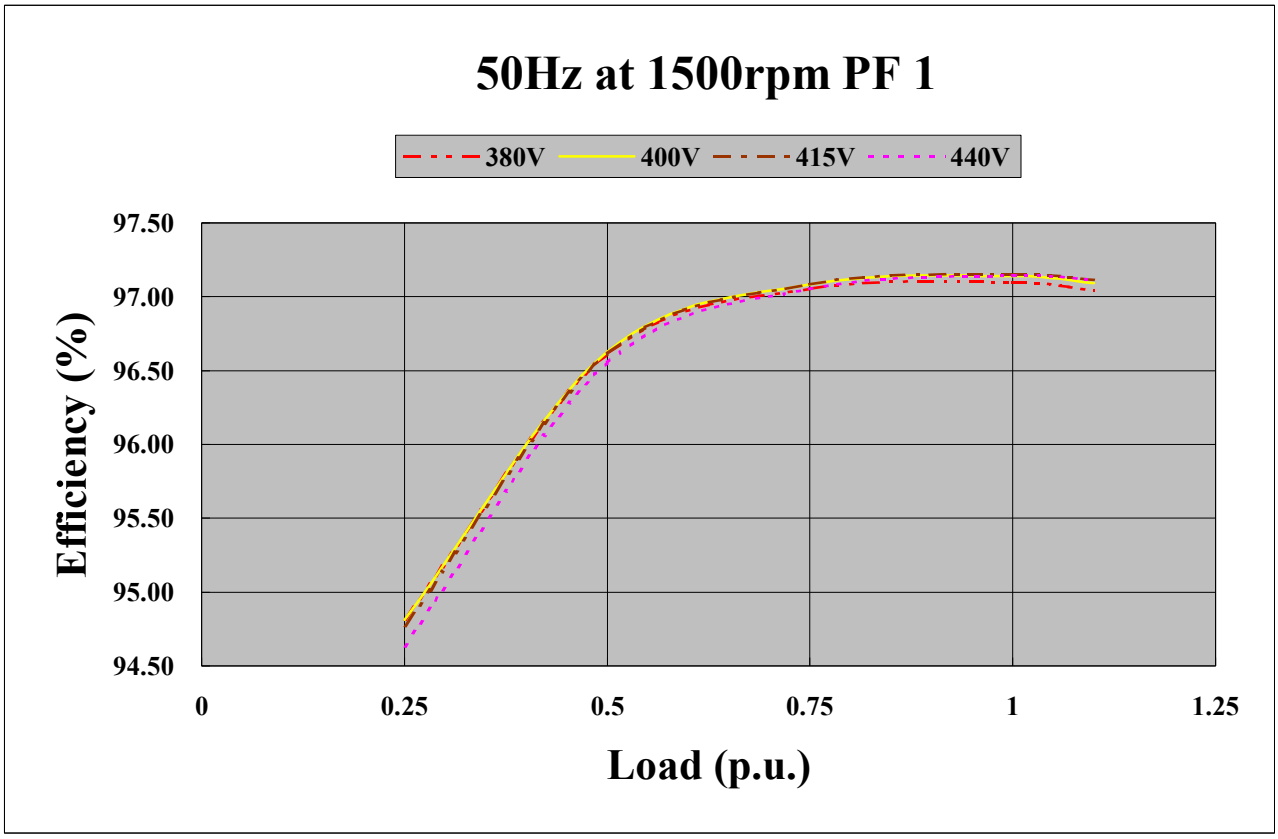


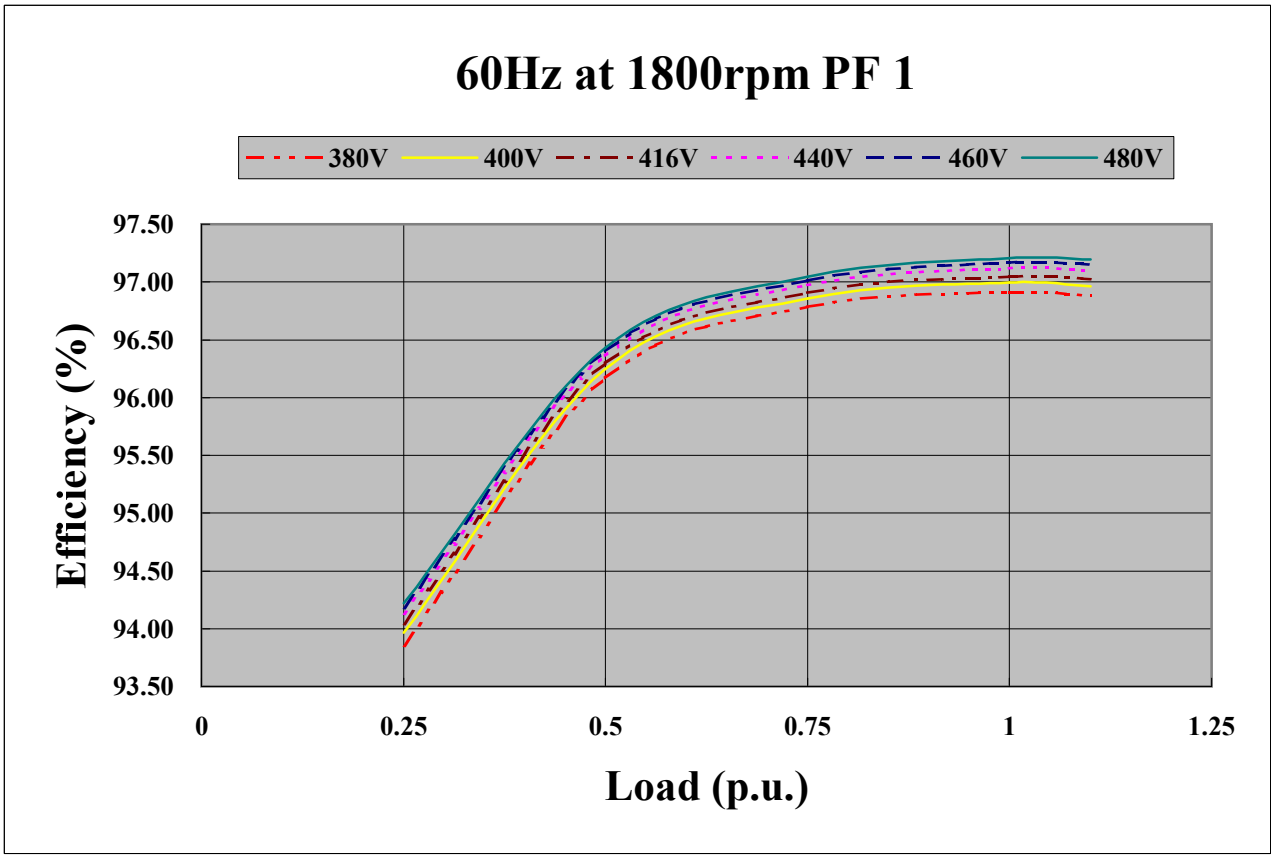
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THREE-PHASE SYNCHRONOUS

THREE PHASE EFFICIENCY CRUVES 20121201

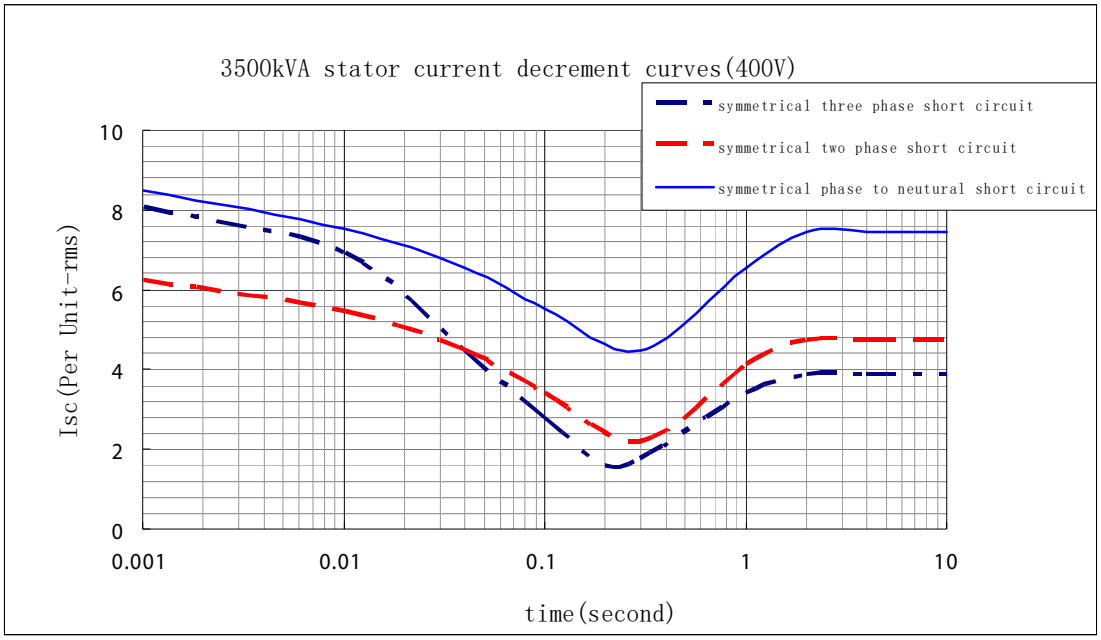




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THREE-PHASE SYNCHRONOUS GENERATOR
STATOR CURRENT DECREMENT CURVES

20140601

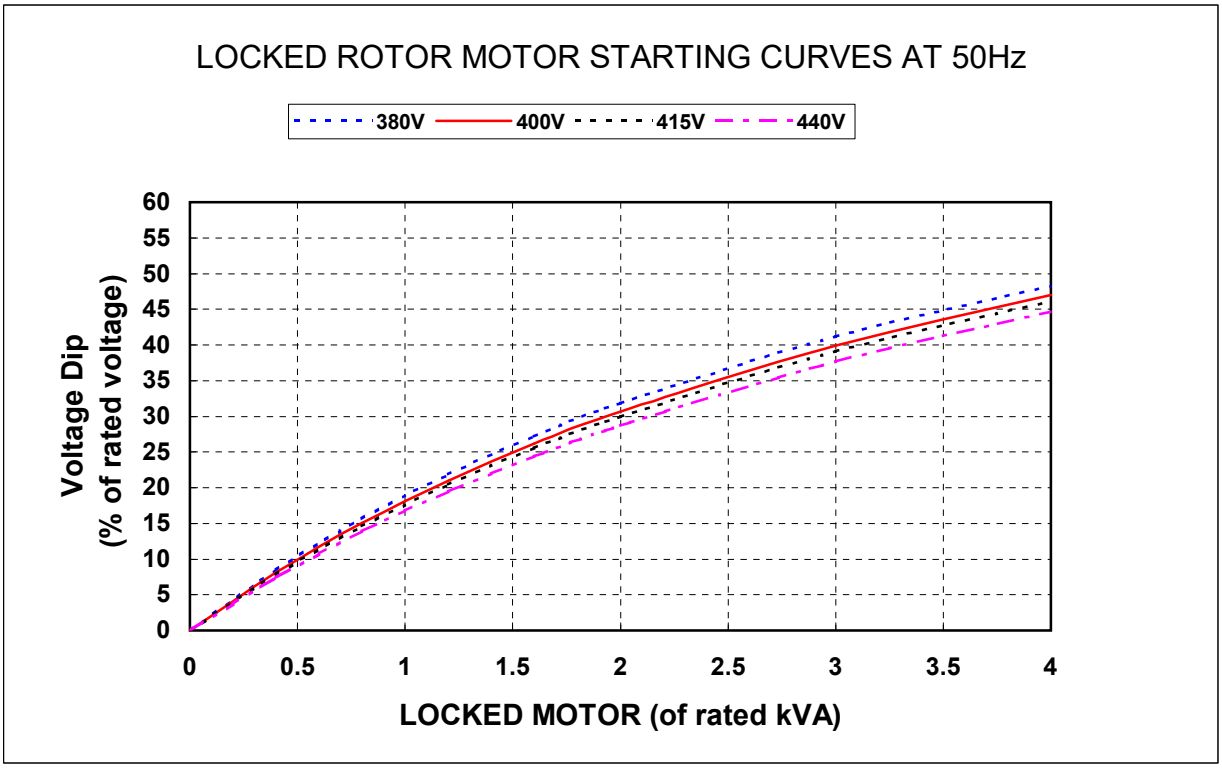


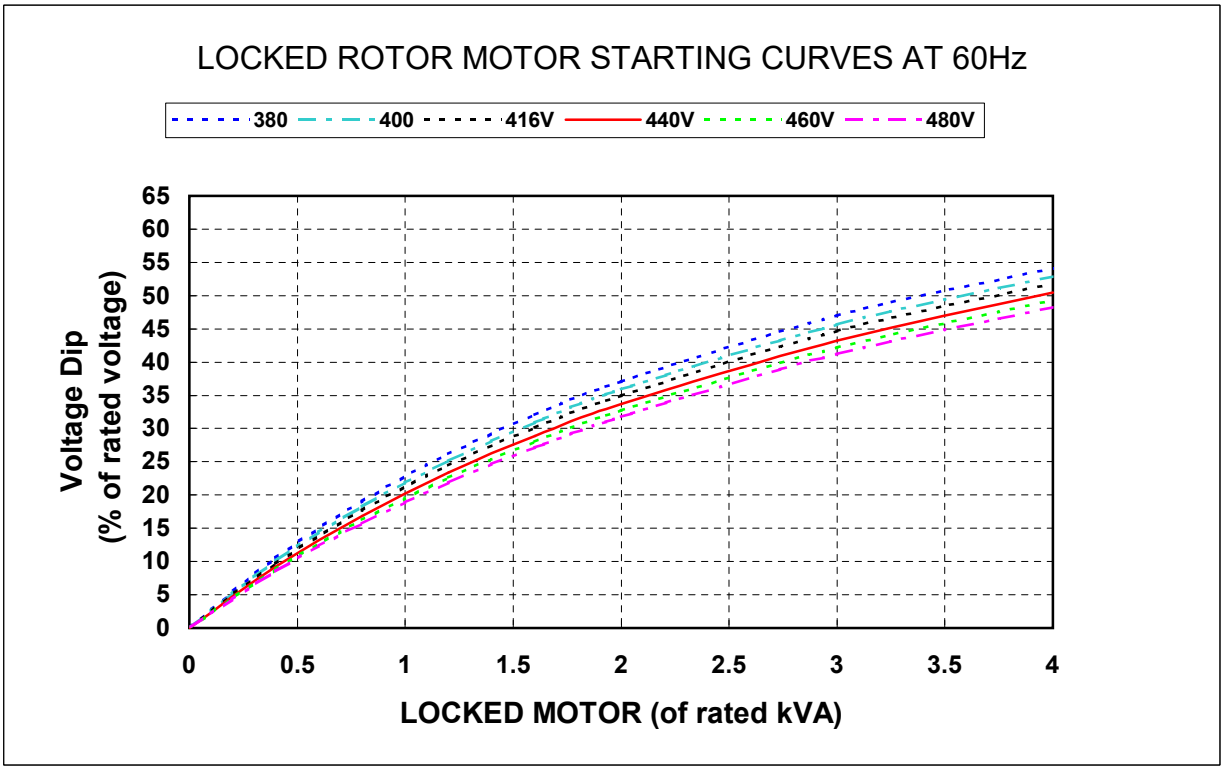
with PMG or Auxiliary winding

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THREE PHASE SYNCHRONROUS GENERATOR

20130527





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