

THREE-PHASE SYNCHRONOUS GENERATOR MJB 225 LA 4

4 POLES

CONTINUOUS DUTY

50 Hz-1500 min⁻¹ / 60 Hz-1800 min⁻¹

AMBIENT TEMPERATURE	40°C					WINDING DATA				
TEMPERATURE RISE	H					Winding code				M0
INSULATION CLASS	H					Number of leads				12
POWER FACTOR	0,8					Winding pitch				2/3

FREQUENCY	Hz	50				60					
VOLTAGE	Star series	V	380	400	415	440	380	416	440	460	480
	Star parallel	V	190	200	208	220	190	208	220	230	240
RATING		kVA	127	132	132	132	137	148	153	158	158
		kW	101	106	106	106	110	118	122	127	127
EFFICIENCY (%) @ 0,8 p.f.	4/4		91,9	92,2	91,8	91,7	91,7	92,1	92,5	92,7	93,0
	3/4		92,5	92,6	92,4	92,3	92,7	93,0	93,1	93,3	93,3
	2/4		92,7	92,7	92,6	92,5	93,0	93,2	93,3	93,4	93,3
EFFICIENCY (%) @ 1,0 p.f.	4/4		93,5	93,8	93,4	93,4	93,4	93,8	94,0	94,2	94,4
	3/4		94,0	94,1	94,0	93,9	94,2	94,4	94,5	94,6	94,7
	2/4		94,2	94,2	94,1	94,0	94,4	94,6	94,7	94,8	94,7
SHORT CIRCUIT RATIO			0,39	0,42	0,45	0,51	0,30	0,34	0,37	0,39	0,42
REACTANCES (%)											
Direct axis synchronous	xd		280	265	245	220	365	330	305	290	265
Quadrature axis synchronous	xq		155	145	135	120	200	180	165	160	145
Direct axis transient	x'd		20,5	19,3	17,9	16,0	26,7	24,0	22,2	21,0	19,3
Direct axis subtransient	x''d		10,1	9,5	8,8	7,9	13,1	11,8	10,9	10,3	9,5
Quadrature axis subtransient	x''q		11,3	10,6	9,8	8,8	14,7	13,2	12,2	11,5	10,6
Negative sequence	x ₂		10,7	10,1	9,4	8,3	14,0	12,6	11,6	11,0	10,1
Zero sequence	x ₀		2,3	2,2	2,0	1,8	3,0	2,7	2,5	2,4	2,2

TIME CONSTANTS [s]

Open circuit (T'do)	1,08	Subtransient (T''d)	0,006
Transient (T'd)	0,087	Armature (Ta)	0,007

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6215 2RS C3 / Prelubricated
N-end bearing/Lubrication	6311 2RS C3 / Prelubricated
Weight (IM B34) [kg]	420
Inertia (J) (IM B34) [kgm ²]	0,924
Overspeed [min ⁻¹]	2250
Method of cooling	IC 01
Cooling air required [m ³ /s] @ 50/60 Hz	0,31 / 0,39
Degree of protection	IP 23
Type of construction available	B2 - SAE / IM B34
Direction of rotation	CW

OTHER DATA

Phase resistance [Ω] @ 20 °C - Star series	0,045
Overloads	10% for 1 hour
3-phase short circuit current	>= 300% (3 I _n)
Voltage regulation accuracy	+/- 0,5 % (in steady state condition, speed from -2% to +5%, p.f. from 0,8 to 1)
Radio interference	EN 55011 Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% (at no load)

STANDARDS

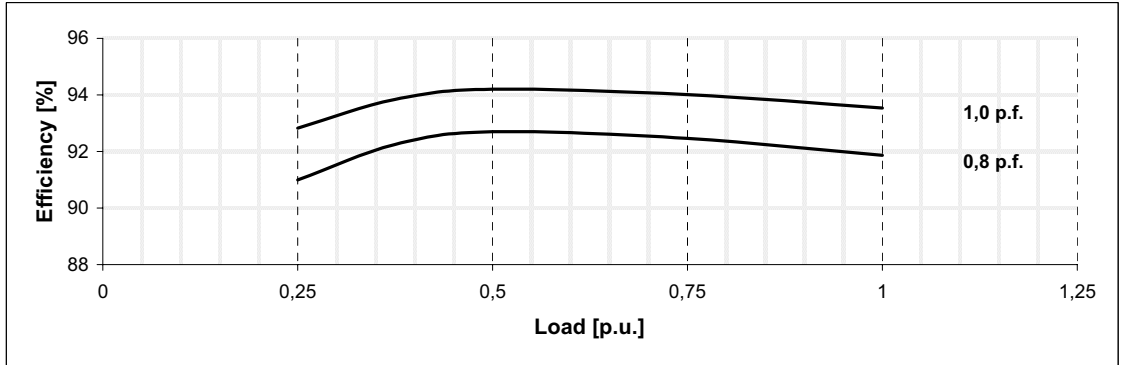
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

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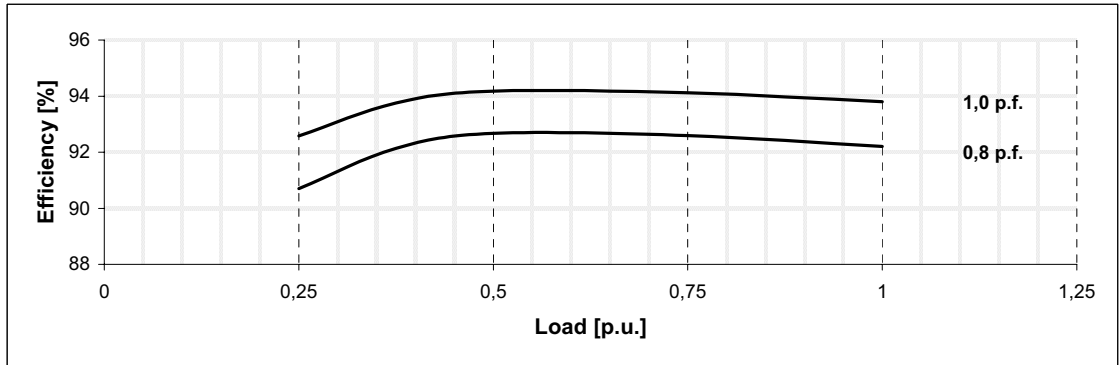
Typical efficiency curves

50 Hz - 1500 min⁻¹

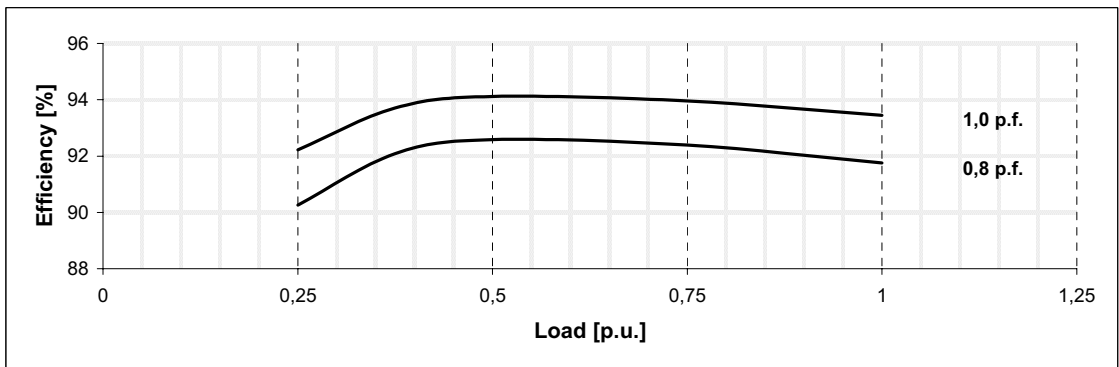
380 V



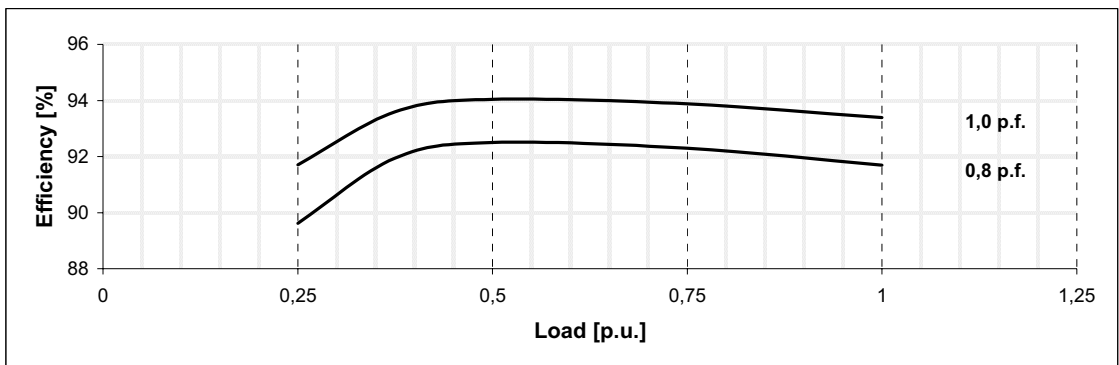
400 V



415 V



440 V

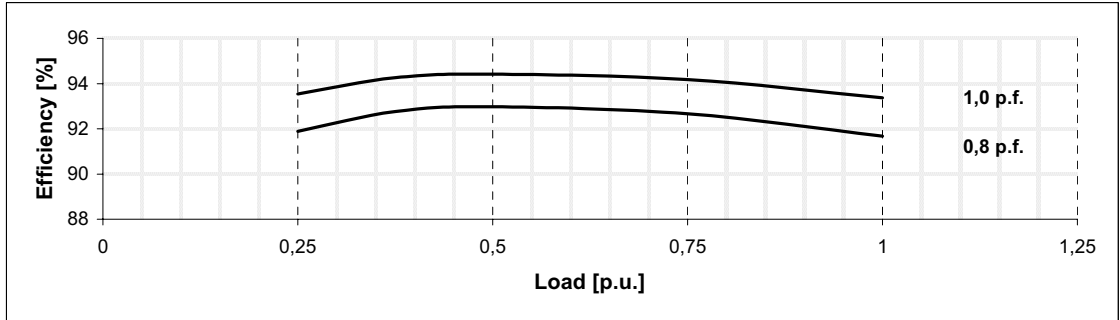


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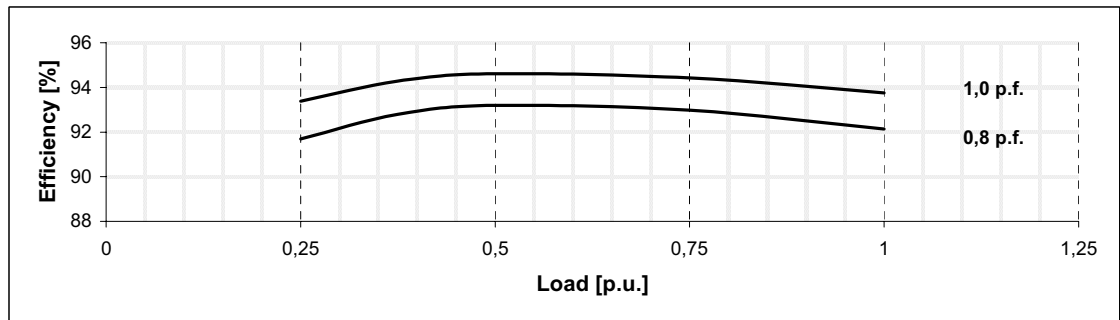
Typical efficiency curves

60 Hz - 1800 min⁻¹

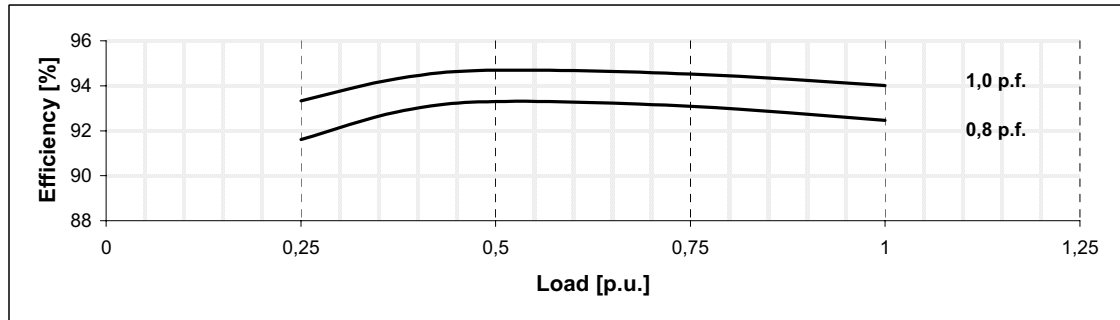
380 V



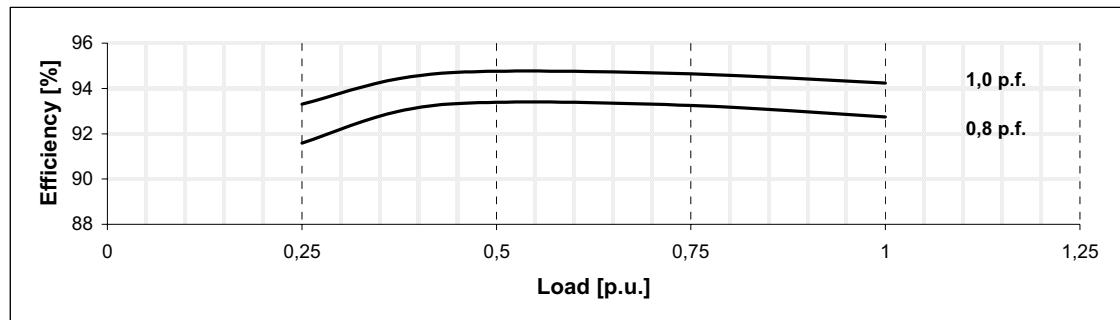
416 V



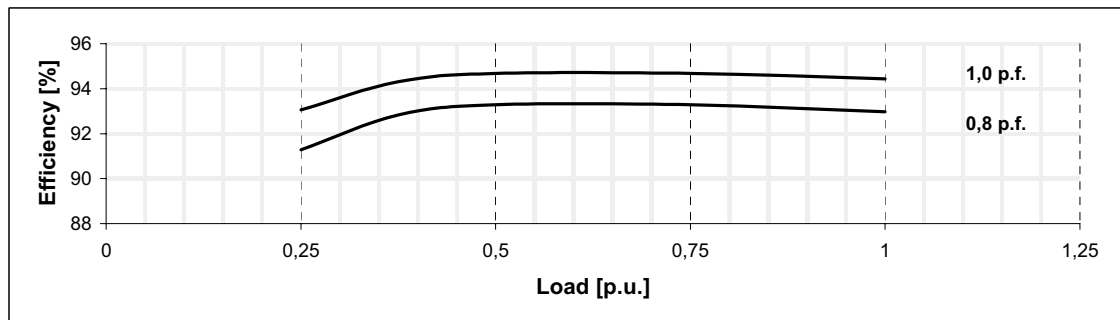
440 V



460 V



480 V

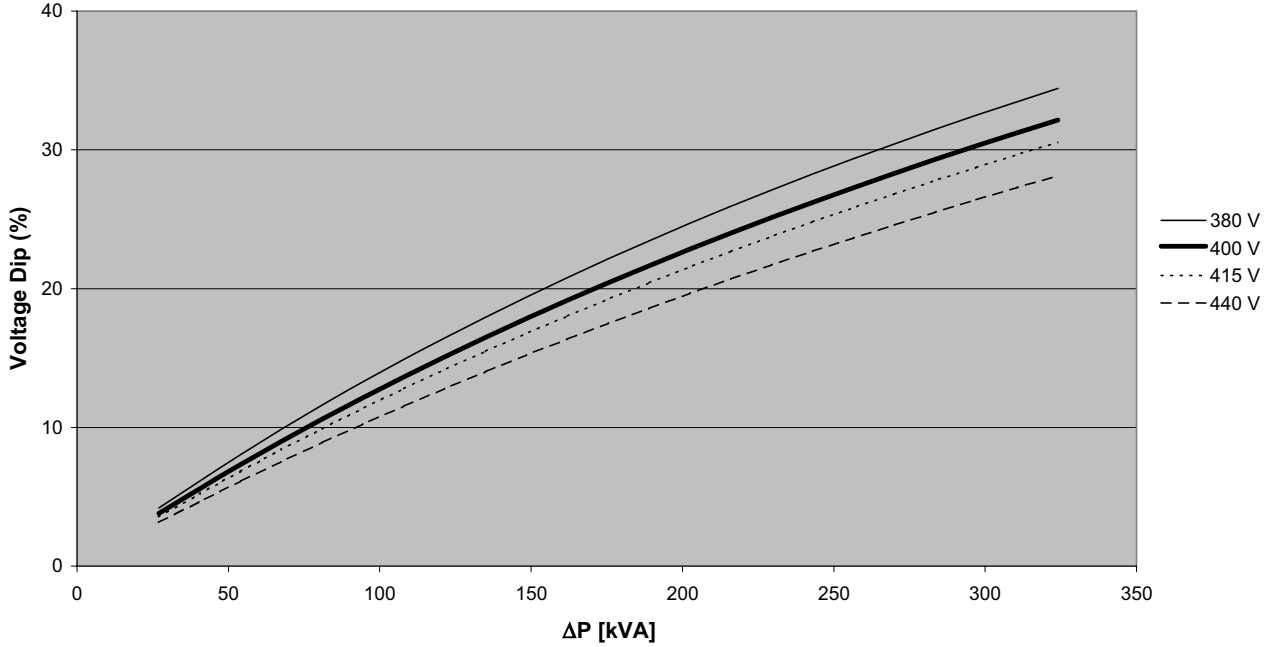


Data and Technical Specification are subject to change in order to update or improve the products, without prior notice

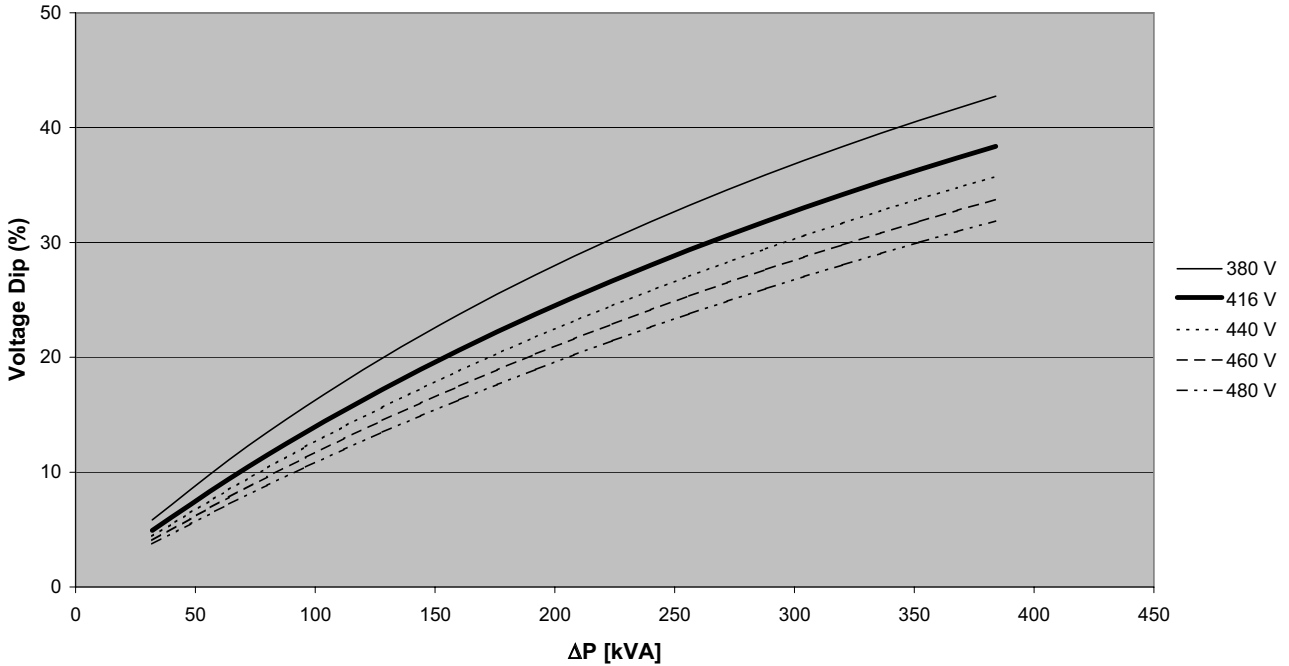
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Locked rotor motor starting curves (*)

50 Hz - 1500 min⁻¹



60 Hz - 1800 min⁻¹



$$\Delta P = P_n \times (I_s / I_n) / (\cos\varphi_n \times \eta_n)$$

(*): A coefficient of 0,85 must be applied to the voltage dip if the load has a power factor equal or greater than 0,8.

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