

THREE-PHASE SYNCHRONOUS GENERATOR
MJB 250 LB 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	240	250	235	220	250	260	275	290 300
		kW	192	200	188	176	200	208	220	232 240
EFFICIENCY (%) @ 0,8 p.f.	4/4		93,0	93,4	93,3	93,3	93,1	93,6	93,7	93,8 93,9
	3/4		93,4	93,7	93,6	93,5	94,0	94,3	94,4	94,5 94,5
	2/4		93,6	93,7	93,6	93,5	94,3	94,5	94,5	94,5 94,5
EFFICIENCY (%) @ 1,0 p.f.	4/4		94,4	94,8	94,7	94,7	94,5	94,9	95,0	95,1 95,2
	3/4		94,8	95,0	94,9	94,9	95,2	95,5	95,6	95,6 95,6
	2/4		94,9	95,0	94,9	94,9	95,5	95,7	95,6	95,7 95,6
SHORT CIRCUIT RATIO			0,39	0,42	0,48	0,58	0,32	0,36	0,39	0,40 0,42
REACTANCES (%)										
Direct axis synchronous	x _d		310	290	255	210	385	335	315	305 290
Quadrature axis synchronous	x _q		150	140	120	100	185	160	155	145 140
Direct axis transient	x' _d		26,1	24,5	21,4	17,8	32,6	28,3	26,7	25,8 24,5
Direct axis subtransient	x'' _d		12,2	11,5	10,0	8,4	15,3	13,3	12,5	12,1 11,5
Quadrature axis subtransient	x'' _q		13,5	12,7	11,1	9,2	16,9	14,7	13,9	13,4 12,7
Negative sequence	x ₂		12,9	12,1	10,6	8,8	16,1	14,0	13,2	12,7 12,1
Zero sequence	x ₀		3,0	2,8	2,4	2,0	3,7	3,2	3,1	2,9 2,8

TIME CONSTANTS [s]

Open circuit (T' _{do})	1,02	Subtransient (T'' _d)	0,011
Transient (T' _d)	0,098	Armature (T _a)	0,013

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6218 2RS C3 / Prelubricated
N-end bearing/Lubrication	6313 2RS C3 / Prelubricated
Weight (IM B34) [kg]	710
Inertia (J) (IM B34) [kgm ²]	2,06
Overspeed [min ⁻¹]	2250
Method of cooling	IC 01
Cooling air required [m ³ /s] @ 50/60 Hz	0,42 / 0,52
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	0,0155
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

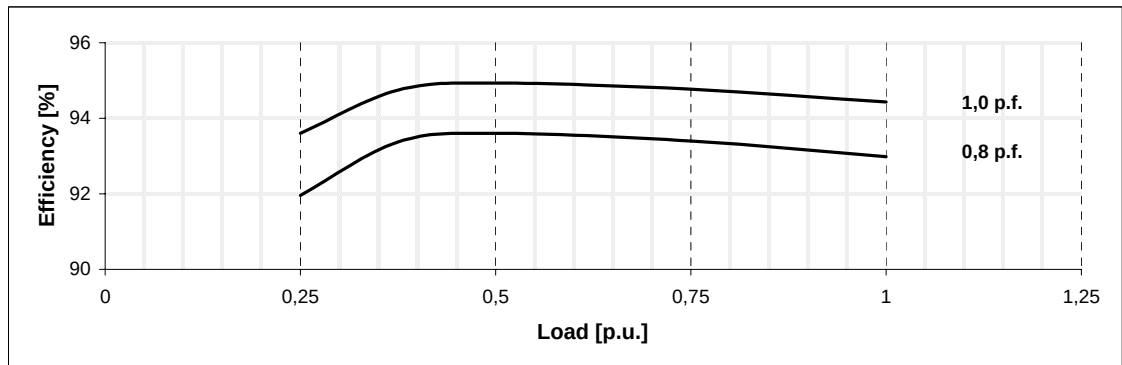
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

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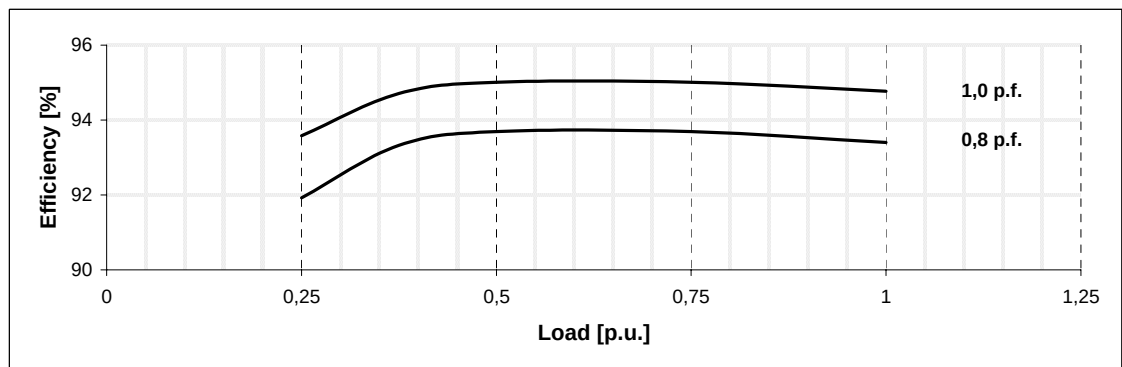
Typical efficiency curves

50 Hz - 1500 min⁻¹

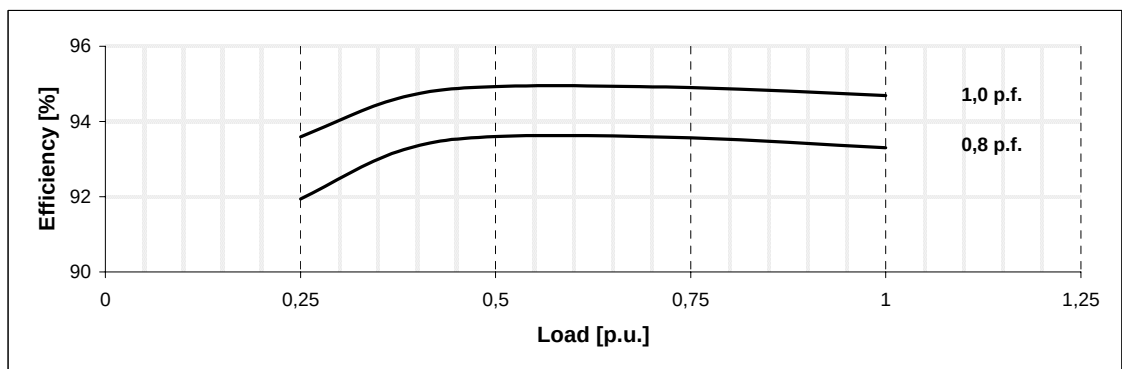
380 V



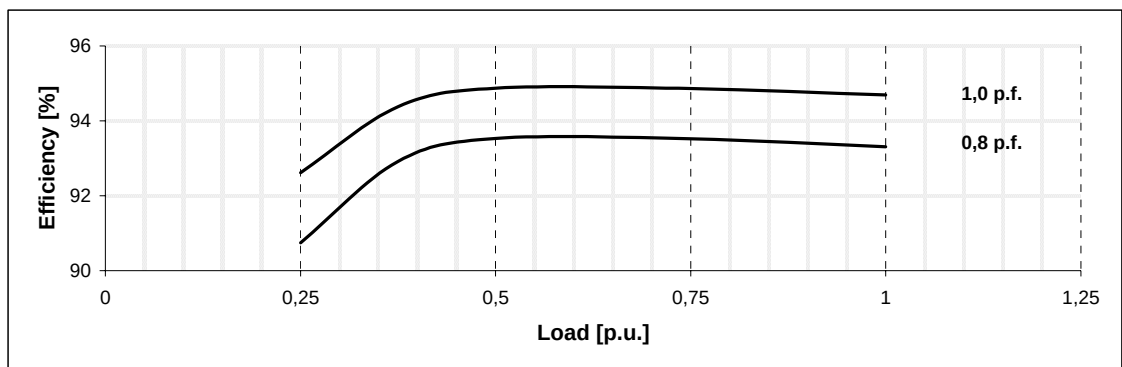
400 V



415 V



440 V

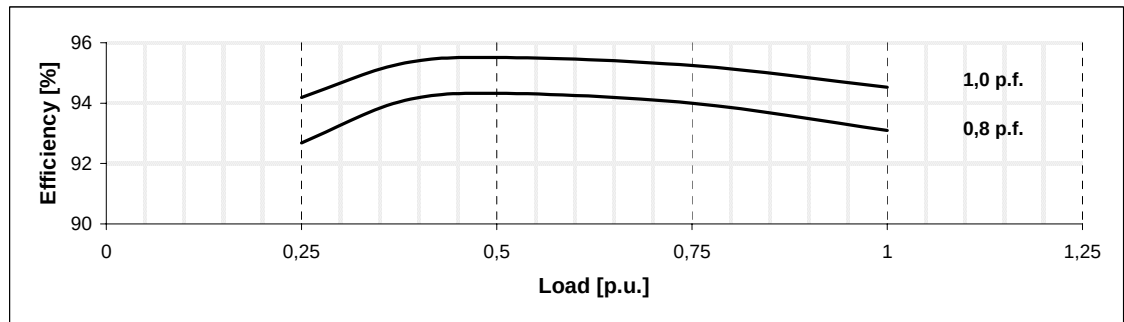


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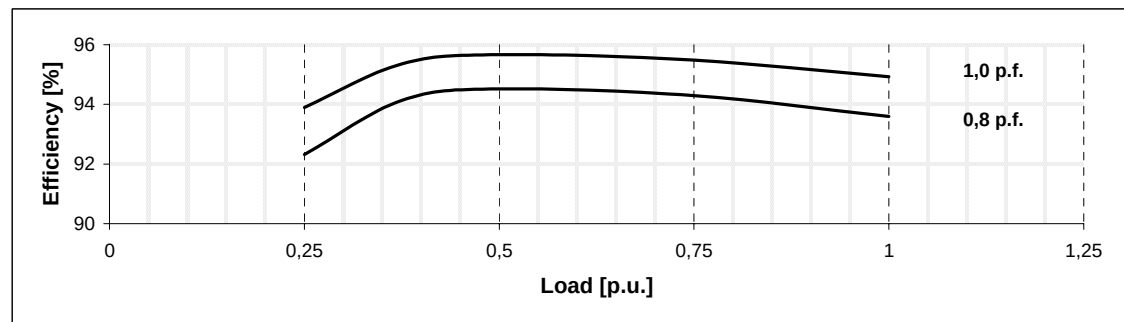
Typical efficiency curves

60 Hz - 1800 min⁻¹

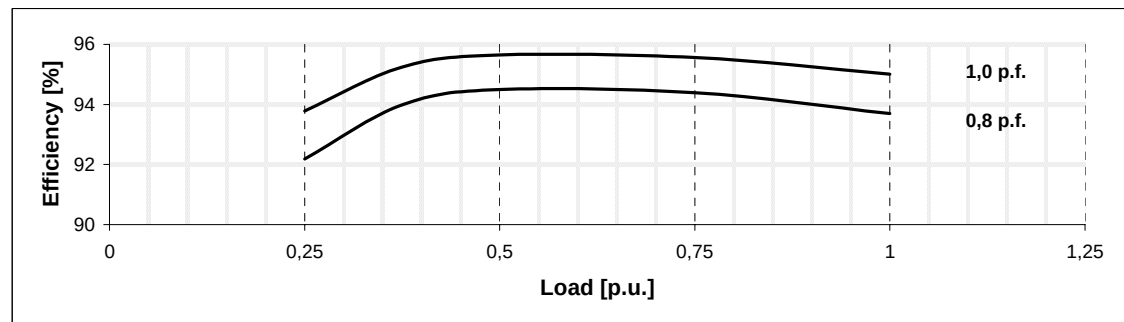
380 V



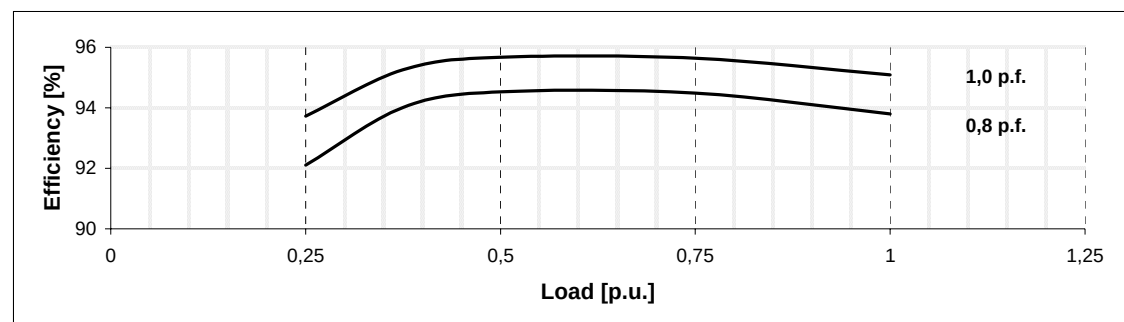
416 V



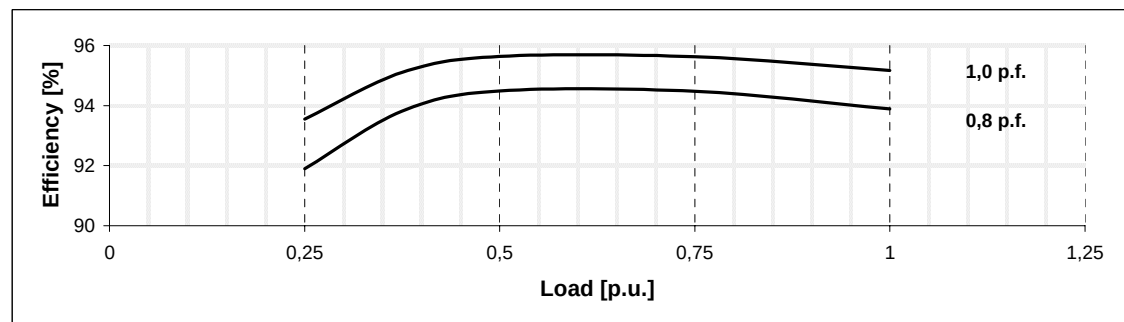
440 V



460 V



480 V

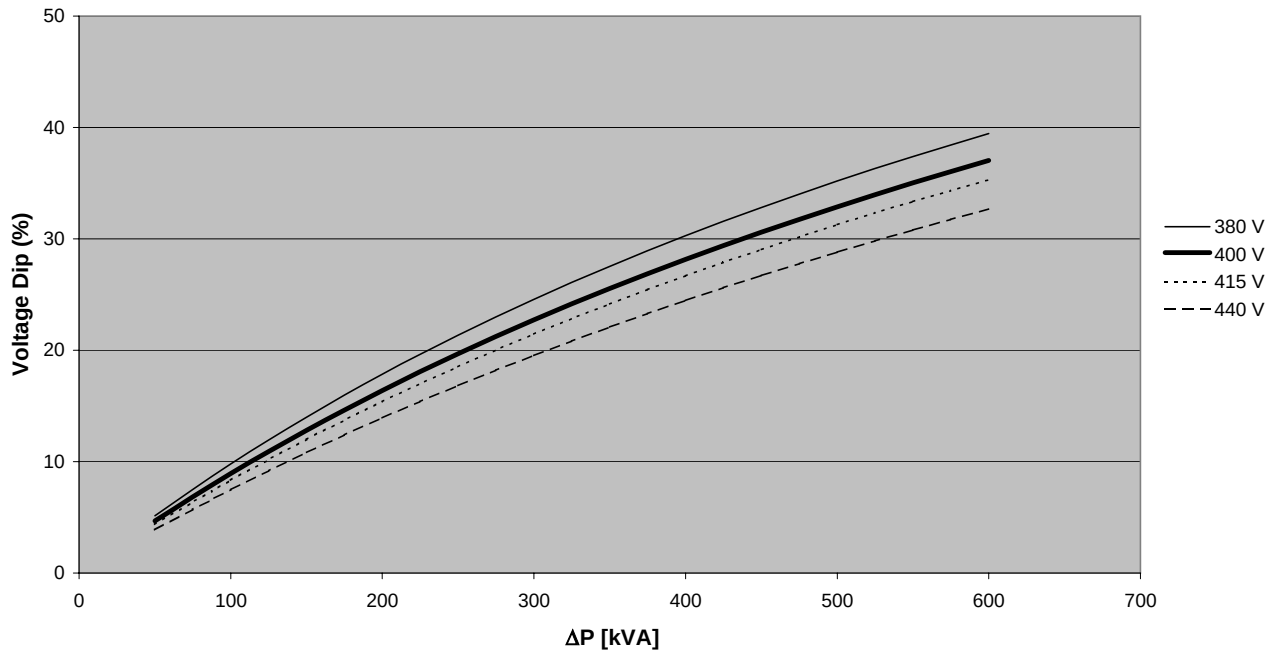


Data and Technical Specification are subject to change in order to update or improve the products, without prior notice

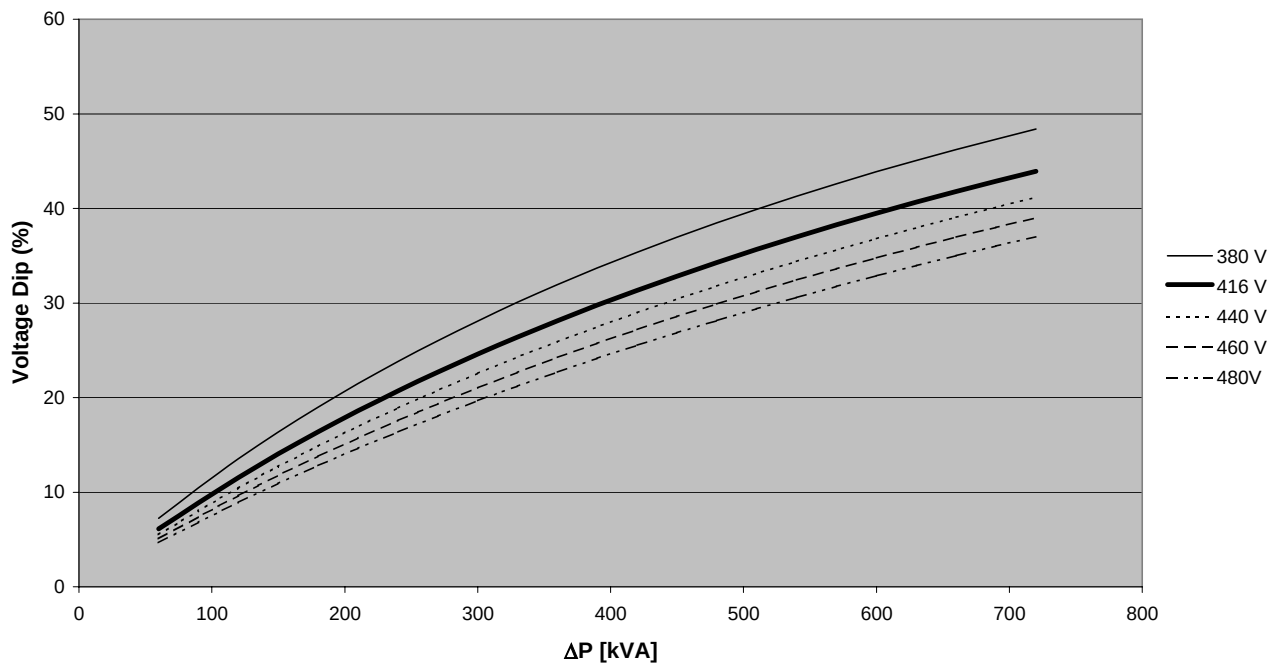
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Locked rotor motor starting curves (*)

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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