

THREE-PHASE SYNCHRONOUS GENERATOR MJB 560 MA 4

4 POLES

50 Hz-1500 min⁻¹ / 60 Hz-1800 min⁻¹

CONTINUOUS DUTY

AMBIENT TEMPERATURE	40°C	WINDING DATA	
TEMPERATURE RISE	H	Winding code	80
INSULATION CLASS	H	Number of leads	6
POWER FACTOR	0,8	Winding pitch	2/3

FREQUENCY	Hz	50			60			
		V	380	400	415	416	440	460
VOLTAGE	Star							
	Delta	220	230	240	240	254	265	277
RATING	kVA	2500	2600	2600	2700	2850	2990	2990
	kW	2000	2080	2080	2160	2280	2392	2392
EFFICIENCY (%) @ 0,8 p.f.	4/4	96,3	96,4	96,4	96,2	96,3	96,4	96,5
	3/4	96,4	96,4	96,4	96,2	96,3	96,4	96,4
	2/4	96,4	96,4	96,3	96,0	96,1	96,2	96,2
EFFICIENCY (%) @ 1,0 p.f.	4/4	97,1	97,2	97,2	97,0	97,1	97,2	97,2
	3/4	97,2	97,2	97,2	97,0	97,1	97,2	97,2
	2/4	97,1	97,1	97,1	96,8	96,9	97,0	97,0
SHORT CIRCUIT RATIO		0,37	0,39	0,42	0,34	0,36	0,37	0,41
REACTANCES (%)								
Direct axis synchronous	x _d	300	280	260	325	305	290	270
Quadrature axis synchronous	x _q	170	160	150	185	175	165	155
Direct axis transient	x' _d	28,8	27,0	25,1	31,1	29,4	28,2	25,9
Direct axis subtransient	x'' _d	13,2	12,4	11,5	14,3	13,5	12,9	11,9
Quadrature axis subtransient	x'' _q	13,9	13,0	12,1	15,0	14,1	13,6	12,5
Negative sequence	x ₂	13,4	12,6	11,7	14,5	13,7	13,1	12,1
Zero sequence	x ₀	4,2	3,9	3,6	4,5	4,2	4,1	3,7

TIME CONSTANTS [s]

Open circuit (T' _{do})	5,9	Subtransient (T'' _d)	0,025
Transient (T' _d)	0,57	Armature (T _a)	0,052

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6332 C3 / With grease nipple
N-end bearing/Lubrication	6330 C3 / With grease nipple
Weight (IM B34) [kg]	5200
Inertia (J) (IM B34) [kgm ²]	83
Overspeed [min ⁻¹]	2250
Method of cooling	IC 01
Cooling air required [m ³ /s] @ 50/60 Hz	3,0 / 3,4
Degree of protection	IP 23
Type of construction available	B2 - SAE / IM B34
Direction of rotation	CW

OTHER DATA

Phase resistance [mΩ] @ 20 °C (per phase)	0,46
Overloads	10% for 1 hour
3-phase short circuit current	≥ 250% 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	< 5%
Total harmonic content	< 5% (under no-load or non-distorting-load condition)

STANDARDS

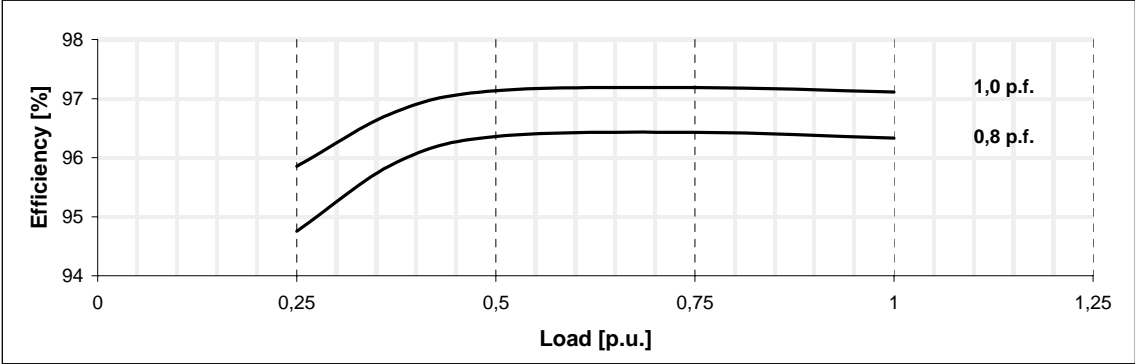
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

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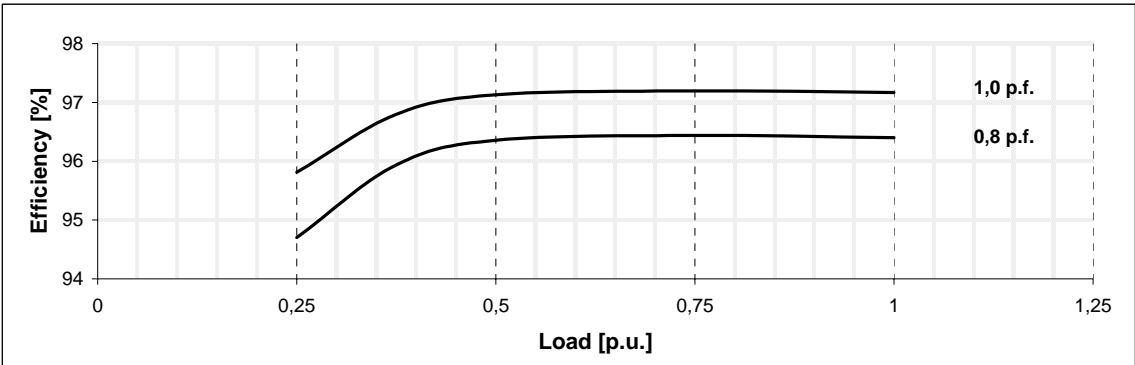
Typical efficiency curves

50 Hz - 1500 min⁻¹

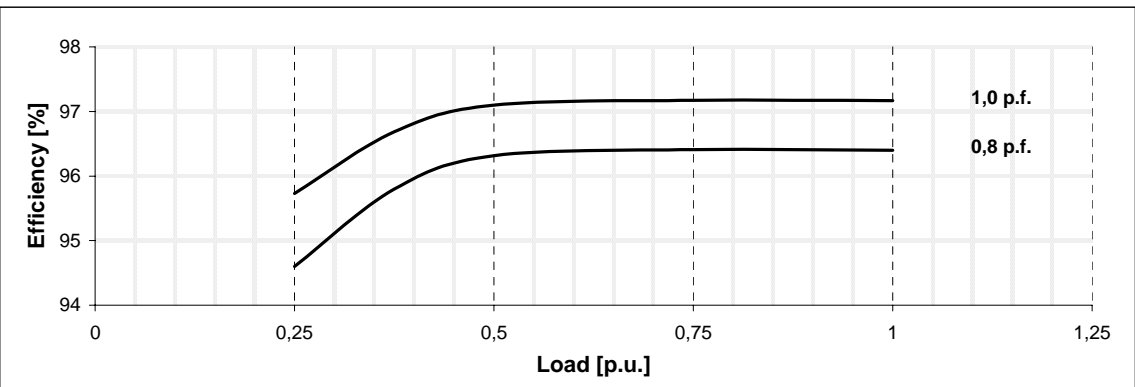
380 V



400 V



415 V

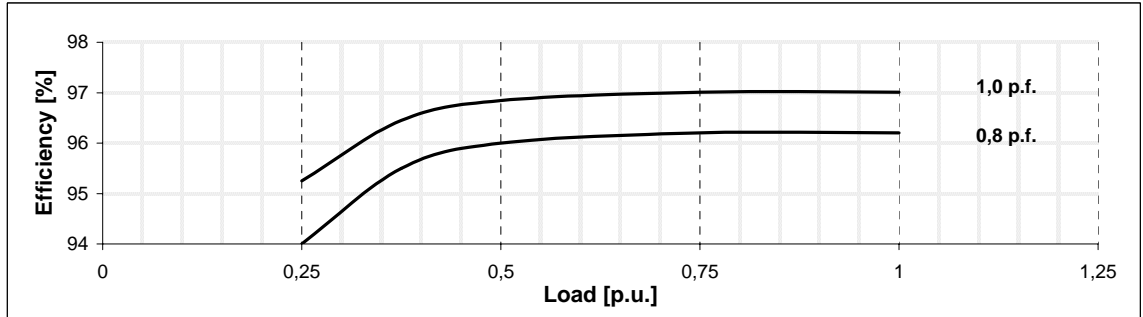


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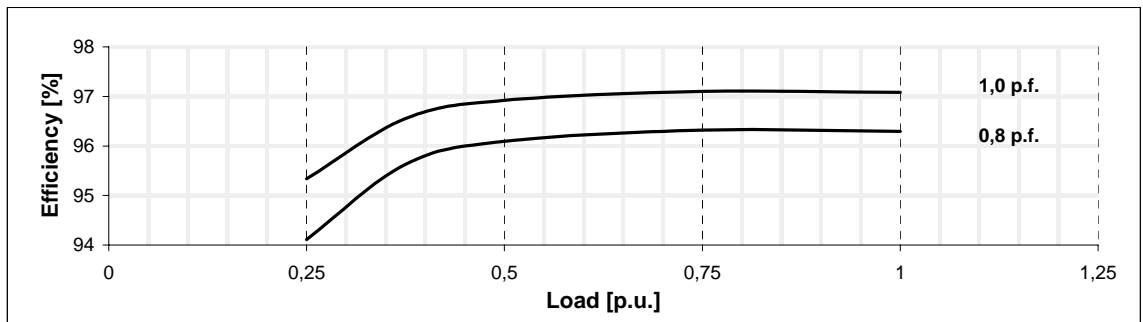
Typical efficiency curves

60 Hz - 1800 min⁻¹

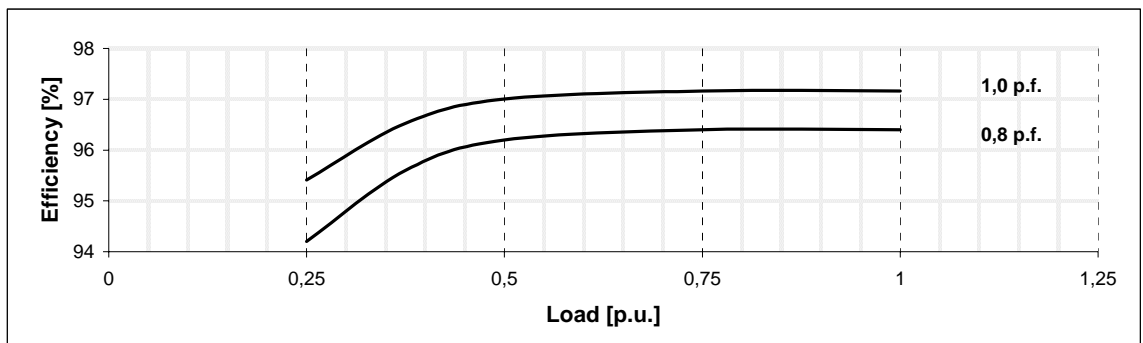
416 V



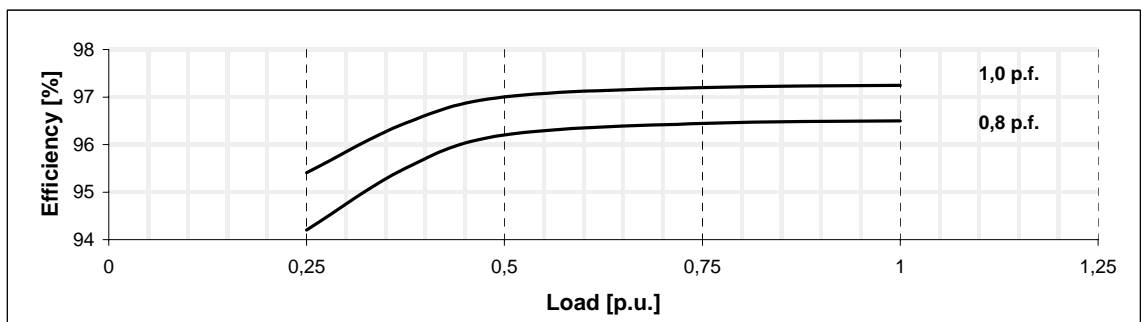
440 V



460 V



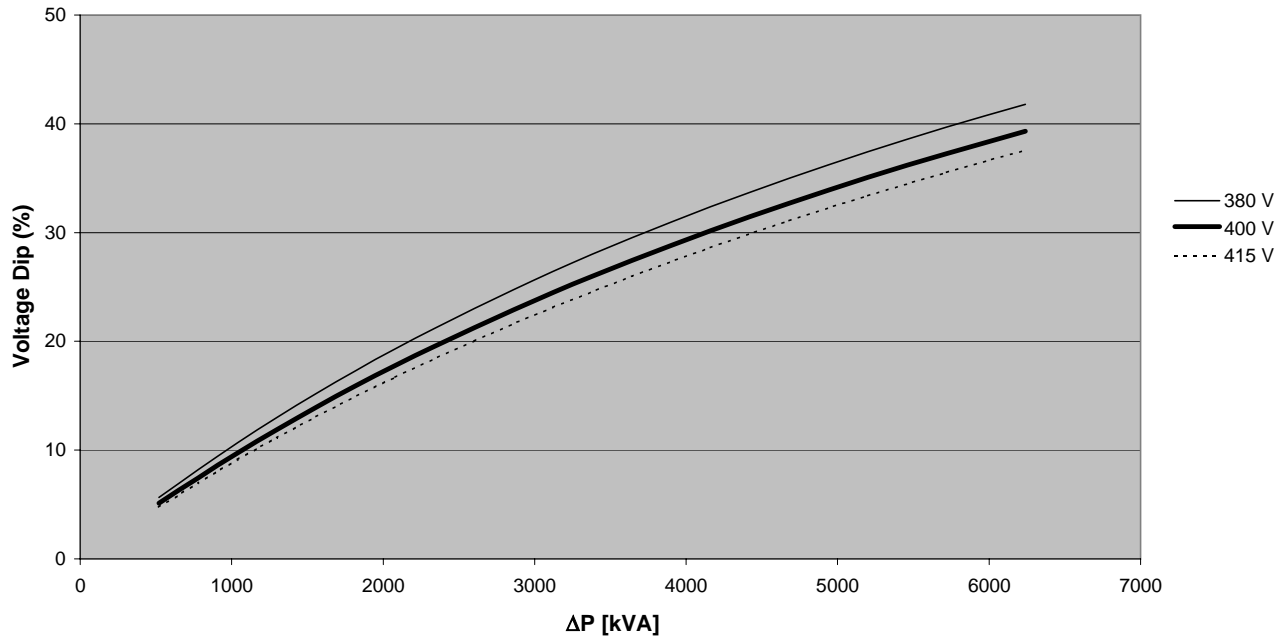
480 V



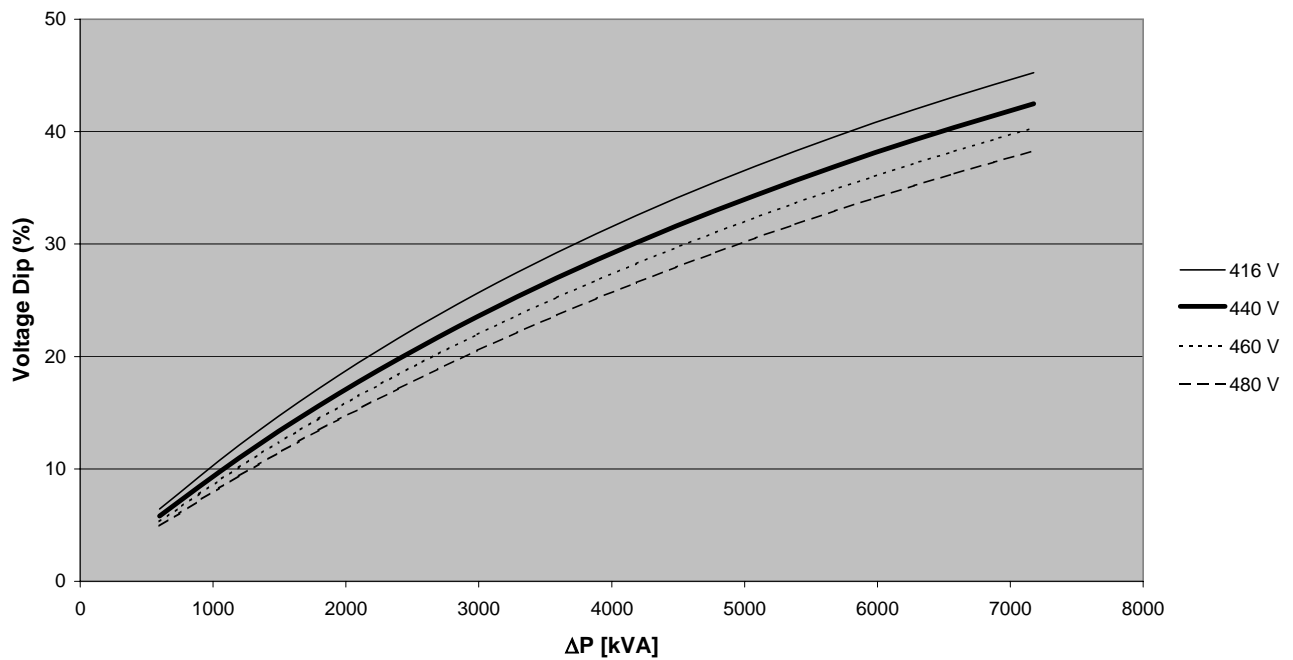
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Locked rotor motor starting curves (*)

50 Hz - 1500 min⁻¹



60 Hz - 1800 min⁻¹



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

(*): 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.

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