

## THREE-PHASE SYNCHRONOUS GENERATOR MJB 355 MB 4

**4 POLES**

CONTINUOUS DUTY

**50 Hz-1500 min<sup>-1</sup> / 60 Hz-1800 min<sup>-1</sup>**

<b>AMBIENT TEMPERATURE</b>	<b>40°C</b>	<b>WINDING DATA</b>	
<b>TEMPERATURE RISE</b>	<b>H</b>	Winding code	<b>17</b>
<b>INSULATION CLASS</b>	<b>H</b>	Number of leads	<b>6</b>
<b>POWER FACTOR</b>	<b>0,8</b>	Winding pitch	<b>2/3</b>

FREQUENCY	Hz	50			60				
<b>VOLTAGE</b>	Star	<b>V</b>	<b>380</b>	<b>400</b>	<b>415</b>	<b>416</b>	<b>440</b>	<b>460</b>	<b>480</b>
	Delta		<b>220</b>	<b>230</b>	<b>240</b>	<b>240</b>	<b>254</b>	<b>265</b>	<b>277</b>
<b>RATING</b>		<b>kVA</b>	<b>800</b>	<b>800</b>	<b>800</b>	<b>880</b>	<b>920</b>	<b>950</b>	<b>960</b>
		<b>kW</b>	<b>640</b>	<b>640</b>	<b>640</b>	<b>704</b>	<b>736</b>	<b>760</b>	<b>768</b>
<b>EFFICIENCY (%) @ 0,8 p.f.</b>	4/4		94,9	95,0	95,1	95,2	95,2	95,2	95,3
	3/4		95,4	95,5	95,6	95,5	95,6	95,6	95,7
	2/4		95,7	95,6	95,6	95,6	95,7	95,8	95,8
<b>EFFICIENCY (%) @ 1,0 p.f.</b>	4/4		96,0	96,1	96,1	96,2	96,2	96,2	96,3
	3/4		96,4	96,4	96,5	96,4	96,5	96,6	96,6
	2/4		96,6	96,6	96,6	96,5	96,6	96,7	96,7
<b>SHORT CIRCUIT RATIO</b>			0,38	0,42	0,45	0,34	0,37	0,39	0,42
<b>REACTANCES (%)</b>									
Direct axis synchronous	xd		285	255	240	310	290	275	255
Quadrature axis synchronous	xq		155	140	130	170	155	150	140
Direct axis transient	x'd		23,0	20,8	19,3	25,4	23,7	22,4	20,8
Direct axis subtransient	x''d		11,0	9,9	9,2	12,1	11,3	10,7	9,9
Quadrature axis subtransient	x''q		13,6	12,3	11,4	15,0	14,0	13,3	12,3
Negative sequence	x <sub>2</sub>		12,3	11,1	10,3	13,5	12,7	12,0	11,1
Zero sequence	x <sub>0</sub>		3,1	2,8	2,6	3,4	3,2	3,0	2,8

### TIME CONSTANTS [s]

Open circuit (T'do)	2,2	Subtransient (T''d)	0,016
Transient (T'd)	0,18	Armature (Ta)	0,026

### MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6322 C3 / With grease nipple
N-end bearing/Lubrication	6317 2Z C3 / Prelubricated
Weight (IM B34) [kg]	2050
Inertia (J) (IM B34) [kgm <sup>2</sup> ]	13,12
Overspeed [min <sup>-1</sup> ]	2250
Method of cooling	IC 01
Cooling air required [m <sup>3</sup> /s] @ 50/60 Hz	0,93 / 1,12
Degree of protection	IP 23
Type of construction available	B2 - SAE / IM B34
Direction of rotation	CW

### OTHER DATA

Phase resistance mΩ @ 20 °C - Star series	3,1
Overloads	10% for 1 hour
3-phase short circuit current	>= 300% (3 I <sub>n</sub> )
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

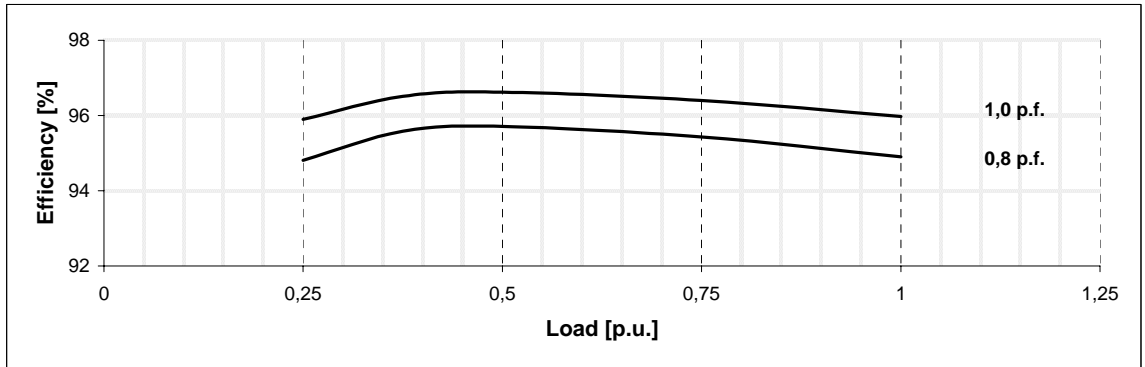
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

**THREE-PHASE SYNCHRONOUS GENERATOR**  
**MJB 355 MB 4**

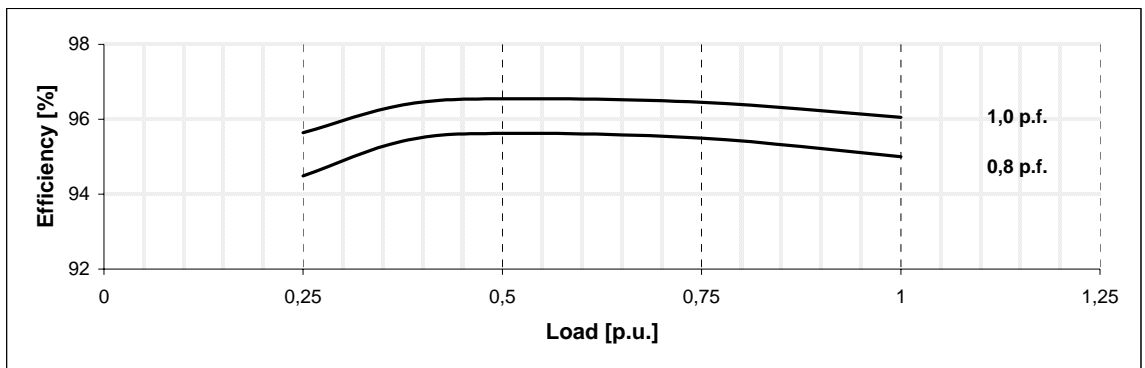
Typical efficiency curves

50 Hz - 1500 min<sup>-1</sup>

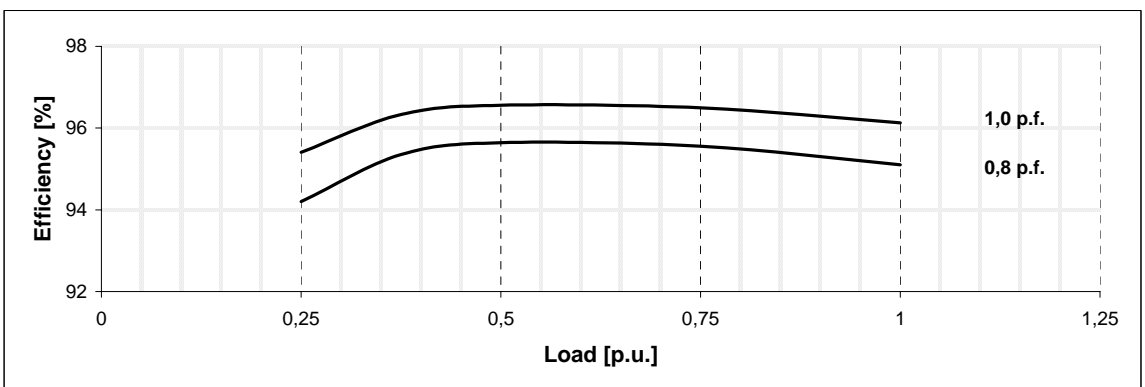
**380 V**



**400 V**



**415 V**

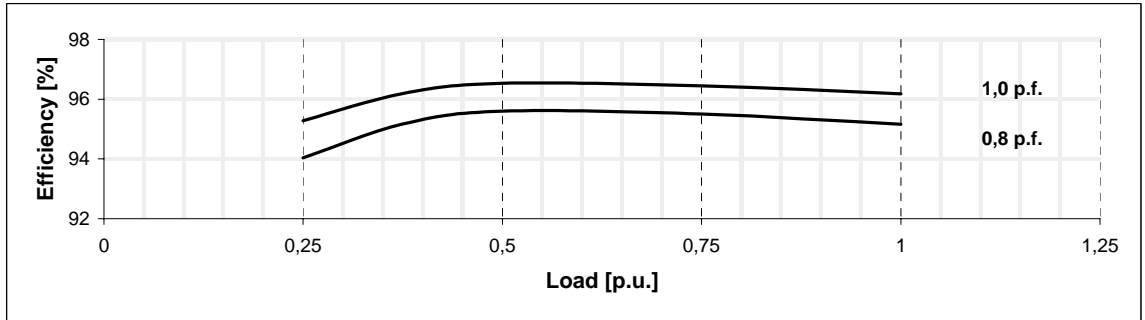


**THREE-PHASE SYNCHRONOUS GENERATOR**  
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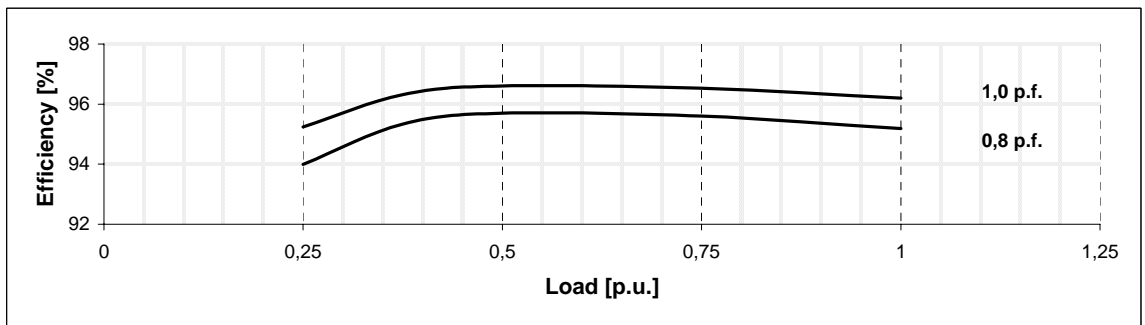
**Typical efficiency curves**

**60 Hz - 1800 min<sup>-1</sup>**

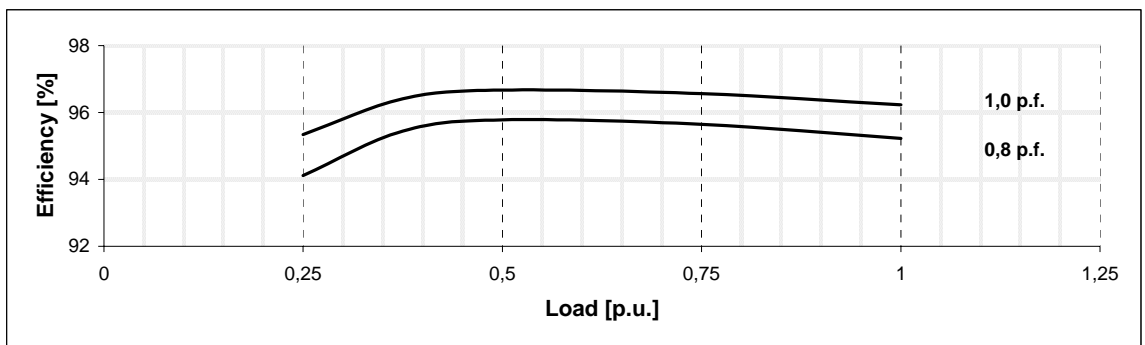
**416 V**



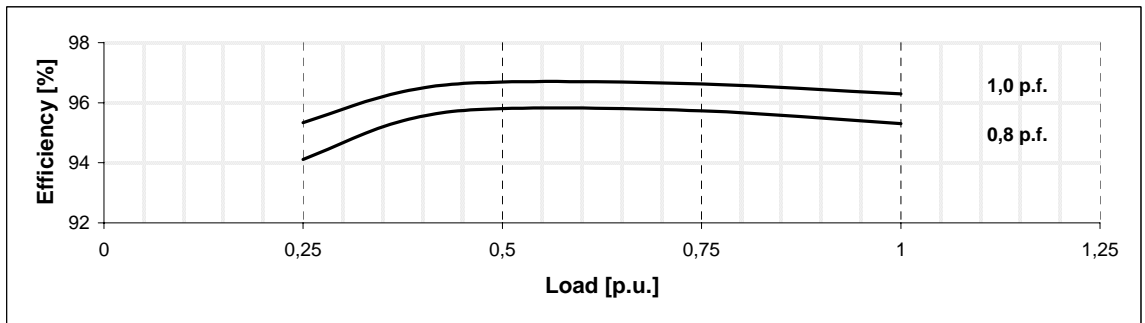
**440 V**



**460 V**



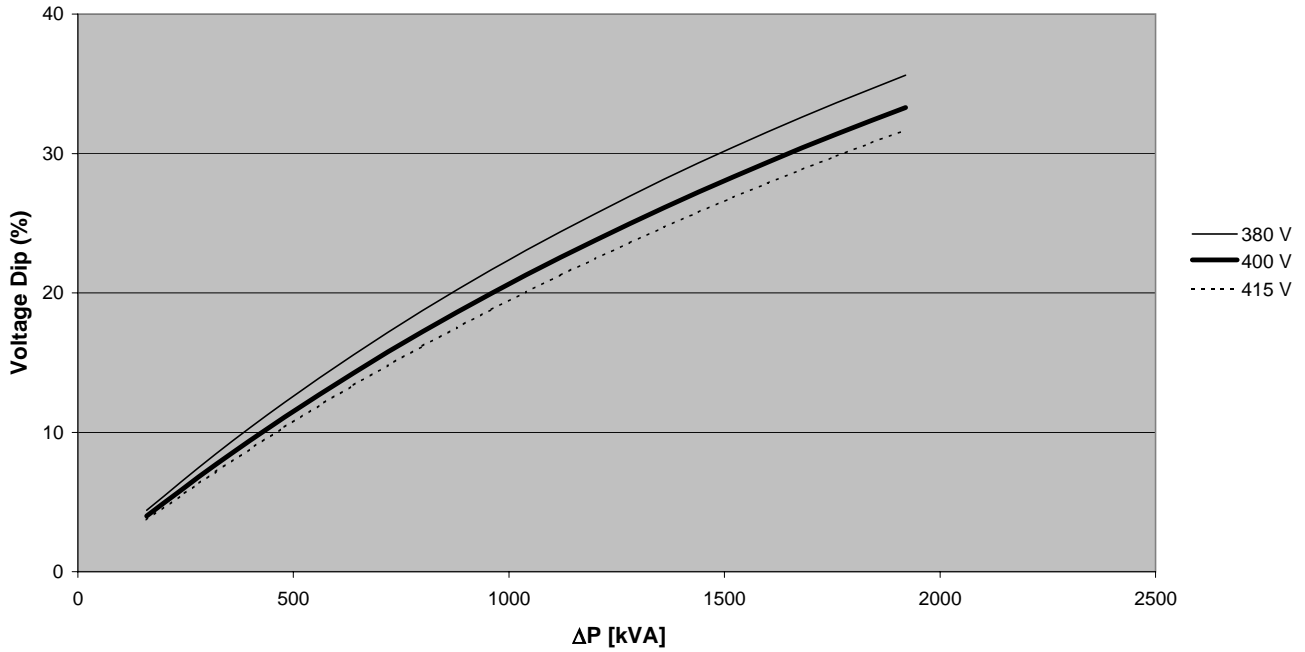
**480 V**



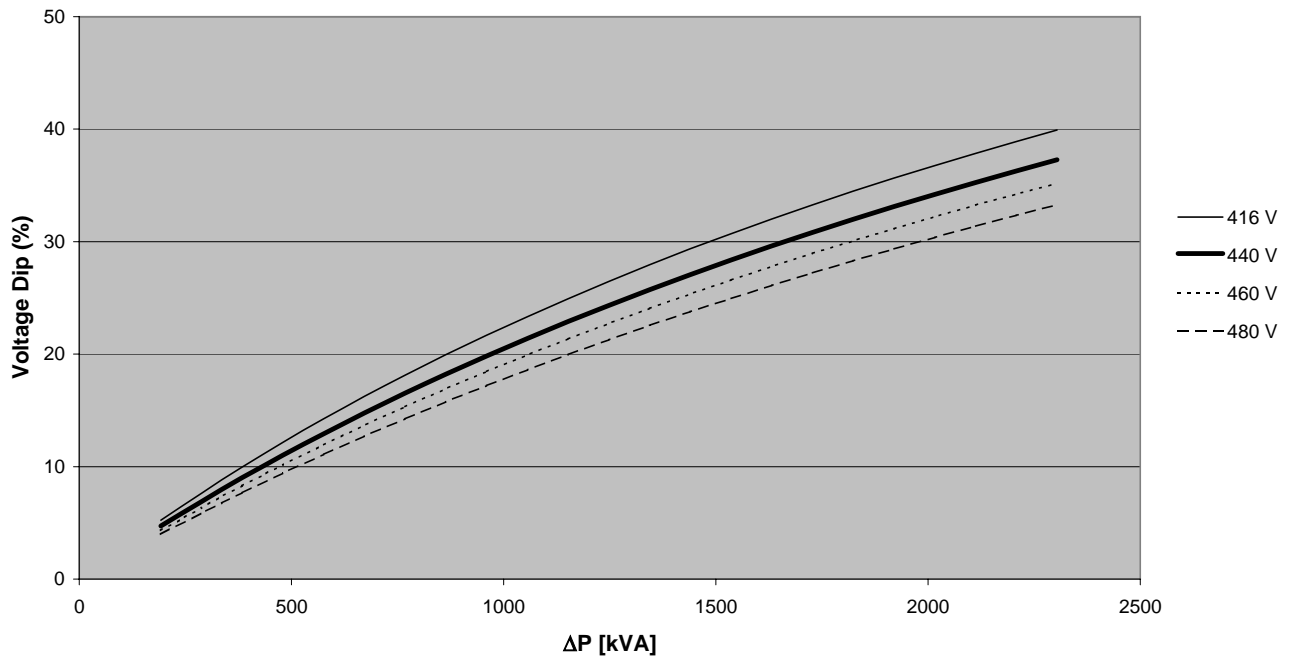
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**Locked rotor motor starting curves (\*)**

**50 Hz - 1500 min<sup>-1</sup>**



**60 Hz - 1800 min<sup>-1</sup>**



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

(\*): 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