

CONTINUOUS DUTY

**4 poles**  
**50 Hz - 1500 rpm / 60 Hz - 1800 rpm**

AMBIENT TEMPERATURE		40°C	WINDING DATA										Winding code	M0
TEMPERATURE RISE		H											Number of leads	12
INSULATION CLASS		H											Winding pitch	2/3
POWER FACTOR		0,8												
FREQUENCY		Hz	50 Hz				60 Hz							
VOLTAGE	Connections	Star series Star parallel	V	380	400	415	440	380	416	440	460	480		
				190	200	208	220	190	208	220	230	240		
RATING POWER			kVA	92,0	92,0	92,0	92,0	97,0	108	114	114	114		
			kW	73,6	73,6	73,6	73,6	77,6	86,4	91,2	91,2	91,2		
EFFICIENCY [%] @ 0,8 p.f.			4/4	91,0	91,5	91,4	91,4	90,9	91,1	91,4	91,8	92,0		
			3/4	91,9	92,3	92,2	92,2	92,0	92,3	92,6	92,8	93,0		
			2/4	92,3	92,5	92,4	92,5	92,6	92,9	93,1	93,2	93,2		
EFFICIENCY [%] @ 1 p.f.			4/4	92,8	93,2	93,2	93,1	92,7	92,9	93,2	93,5	93,6		
			3/4	93,5	93,8	93,8	93,8	93,6	93,9	94,1	94,3	94,4		
			2/4	93,9	94,1	94,0	94,0	94,1	94,4	94,5	94,6	94,6		
SHORT CIRCUIT RATIO			SCR	0,35	0,39	0,42	0,47	0,28	0,30	0,32	0,35	0,38		
REACTANCES [%]														
Direct axis synchronous		X <sub>d</sub>	305	275	255	227	284	358	338	309	284			
Quadrature axis synchronous		X <sub>q</sub>	166	150	139	124	210	195	184	169	155			
Direct axis transient		X' <sub>d</sub>	23,8	21,5	20,0	17,8	30,1	28,0	26,4	24,2	22,2			
Direct axis subtransient		X'' <sub>d</sub>	11,3	10,2	9,5	8,4	14,3	13,3	12,5	11,5	10,5			
Quadrature axis subtransient		X'' <sub>q</sub>	12,5	11,3	10,5	9,3	15,8	14,7	13,9	12,7	11,7			
Negative sequence		X <sub>2</sub>	11,9	10,7	9,9	8,8	15,0	13,9	13,1	12,0	11,0			
Zero sequence		X <sub>0</sub>	2,5	2,3	2,1	1,9	3,2	3,0	2,8	2,6	2,4			
TIME CONSTANTS [s]														
Open circuit		T' <sub>do</sub>	0,9											
Transient		T' <sub>d</sub>	0,075											
Subtransient		T'' <sub>d</sub>	0,006											
Armature		T <sub>a</sub>	0,006											

**MECHANICAL CHARACTERISTICS**

D-end bearing/Lubrication	6215 2RS C3 / Prelubricated	
N-end bearing/Lubrication	6311 2RS C3 / Prelubricated	
Overspeed [r.p.m.]	2250	
Inertia (J) [kgm <sup>2</sup> ]	Refer to B34 construction	0,698
Weight [kg]	Refer to B34 construction	350
Method of cooling	IC01	
Cooling air required [m <sup>3</sup> /s] @ 50/60 Hz	0,31 / 0,39	
Degree of protection	IP23	
Types of construction available	B2 (SAE) - IM B34	
Direction of rotation (Standard)	CW	

**OTHER DATA**

Phase resistance [Ω] @ 20 °C - Star series	0,085
Overloads	10% for 1 hour every 12 hours
3-phase short circuit sustained current	≥ 300 % (3 I <sub>n</sub> ) with auxiliary winding
Voltage regulation accuracy	± 0,5 % I <sub>n</sub> steady state condition
Radio interference	EN 55011 - Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% - At no load

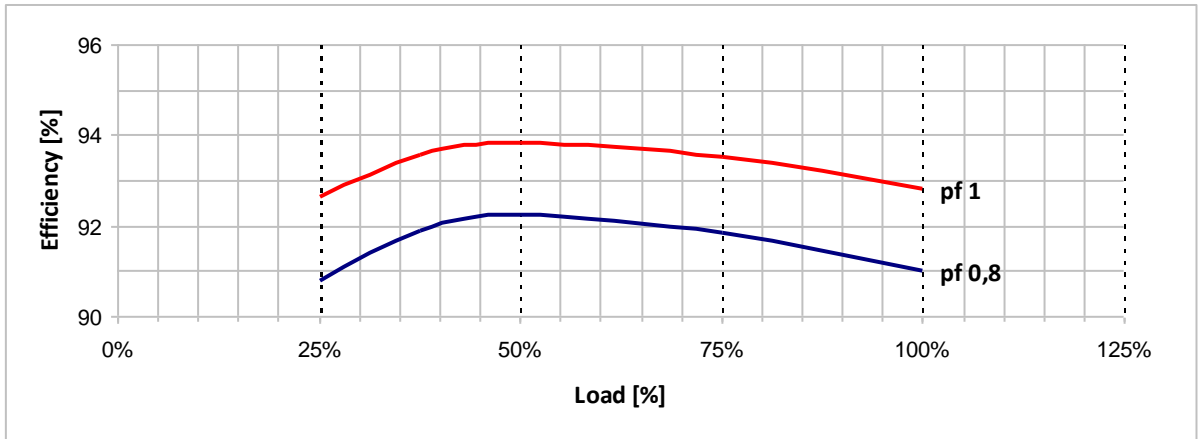
**STANDARDS**

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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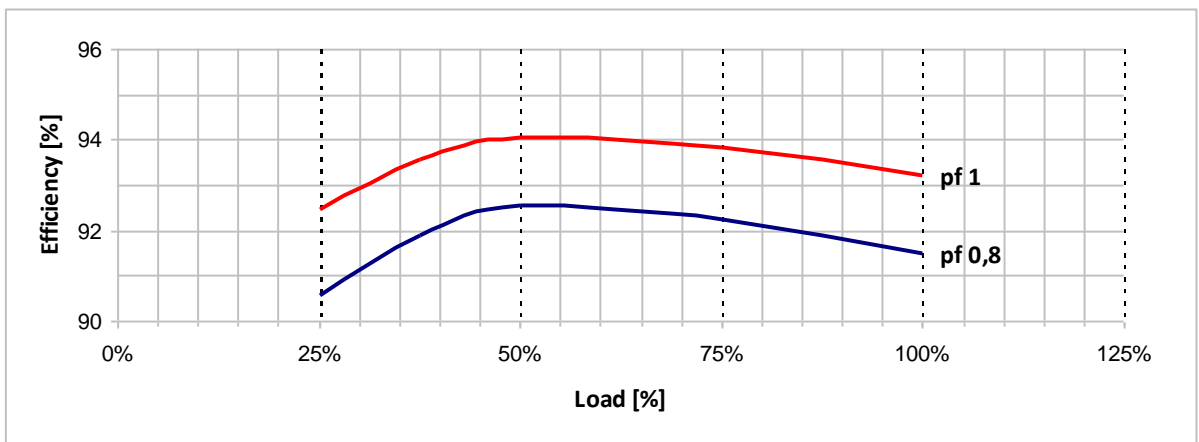
**Typical efficiency curves**

**50 Hz - 1500 rpm**

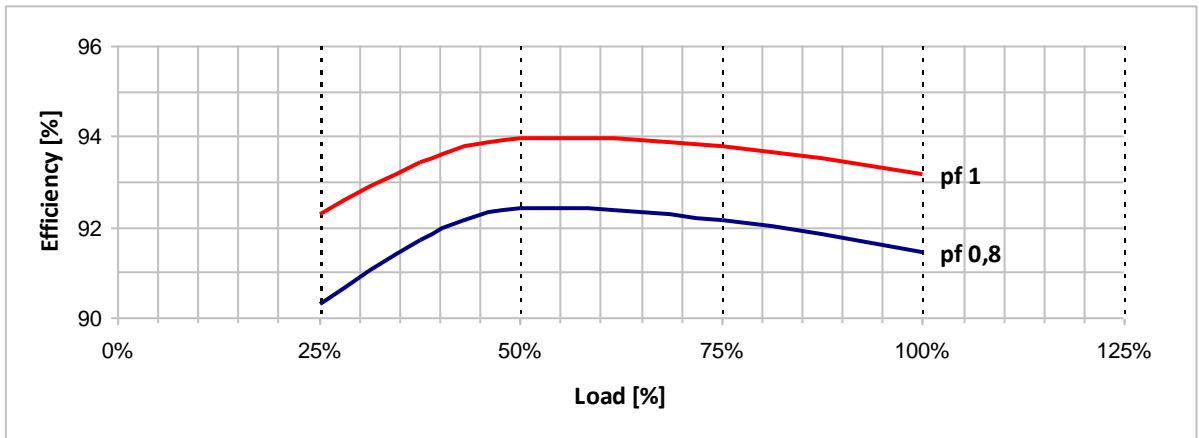
**380 V**



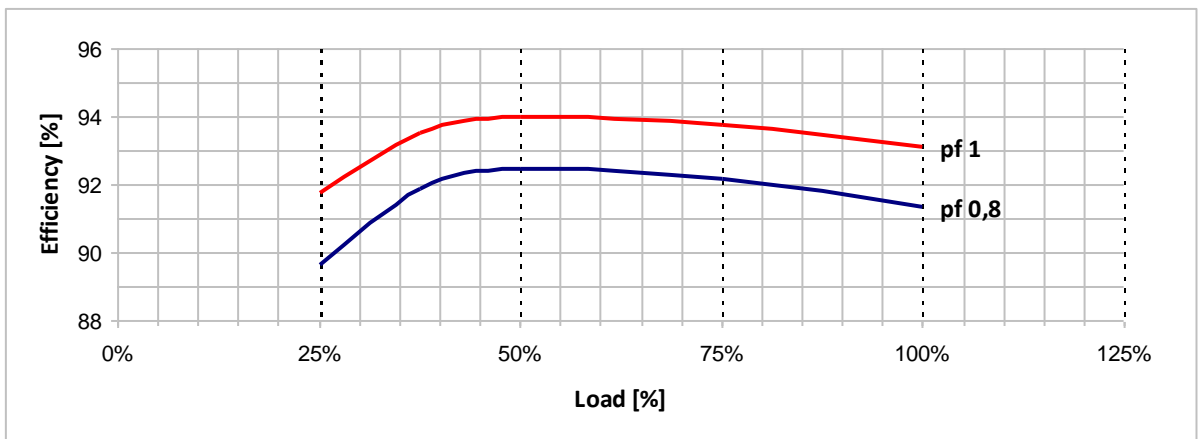
**400 V**



**415 V**



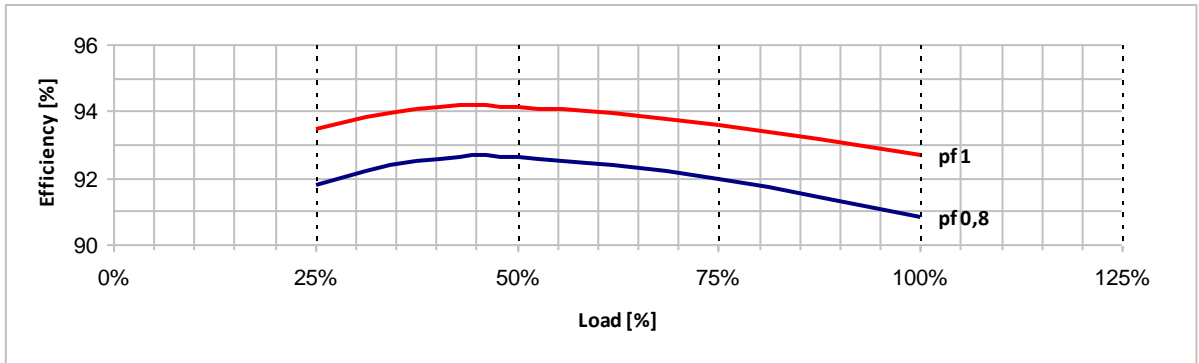
**440 V**



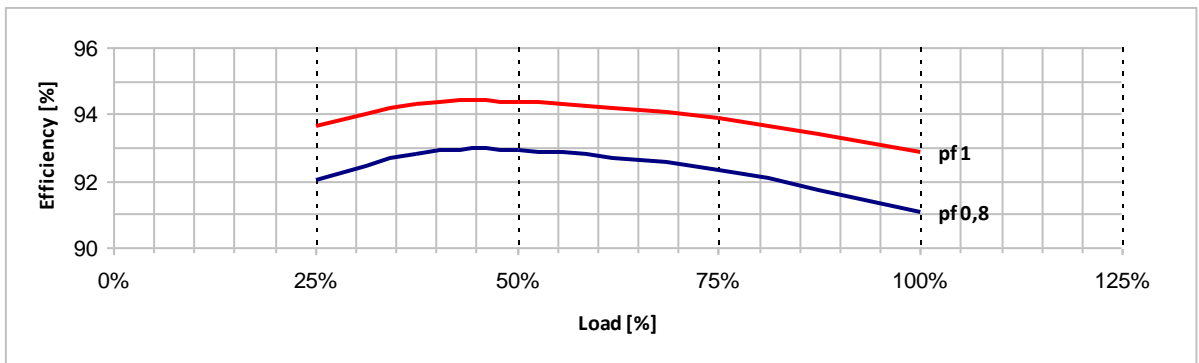
**Typical efficiency curves**

**60 Hz - 1800 rpm**

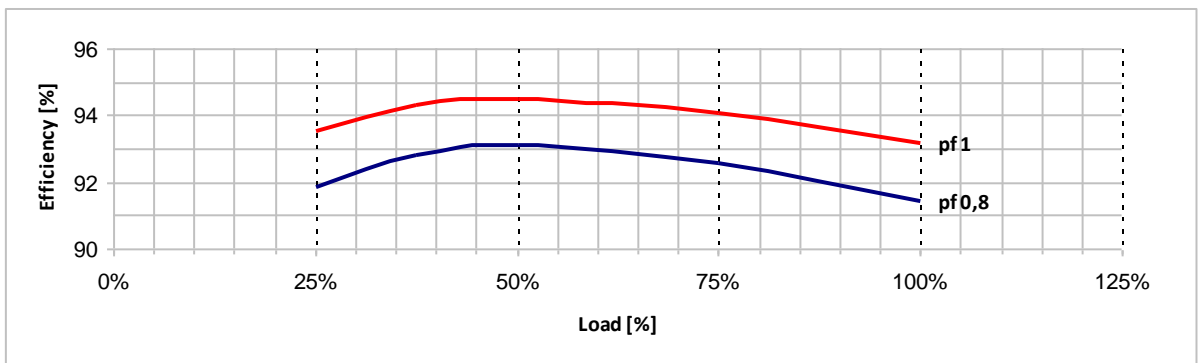
**380 V**



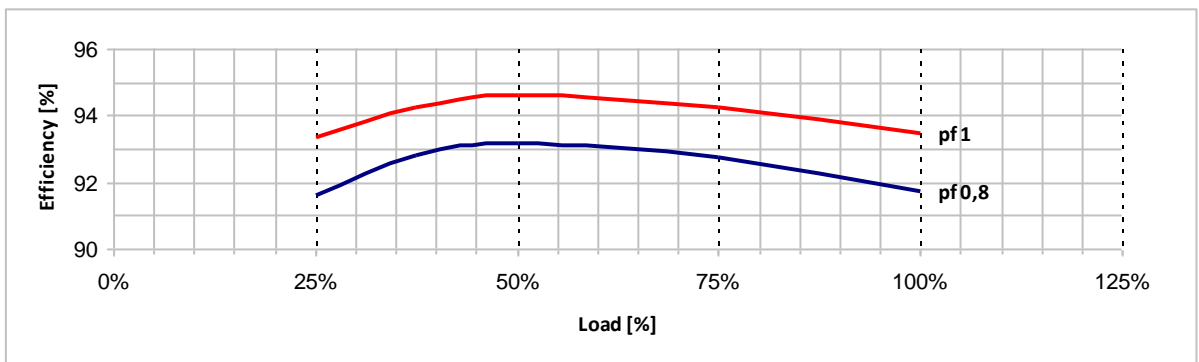
**416 V**



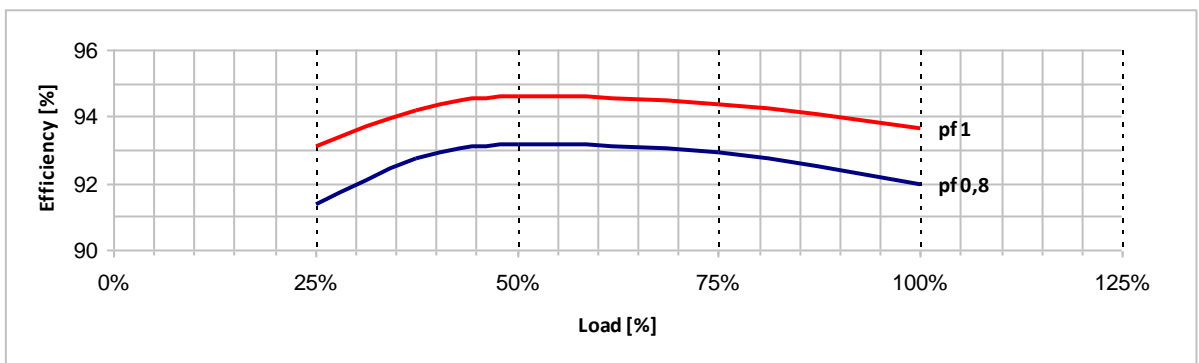
**440 V**



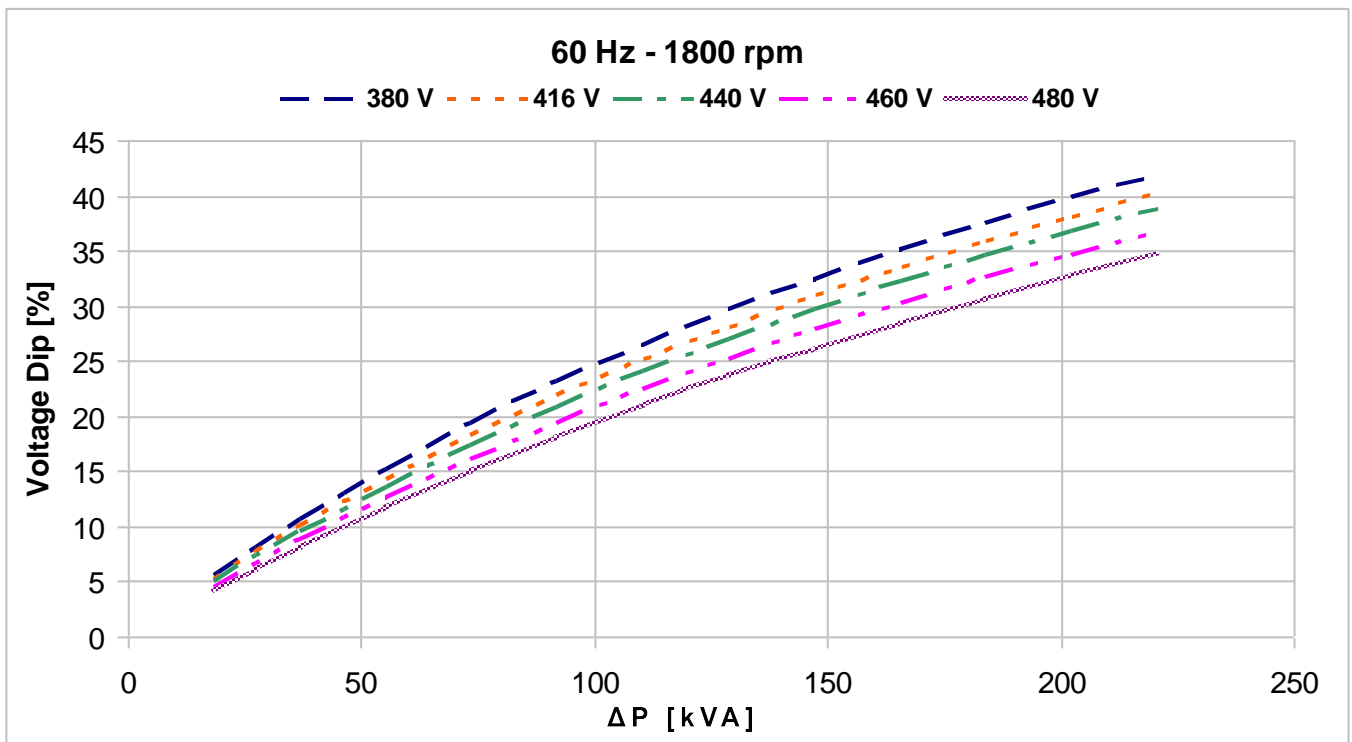
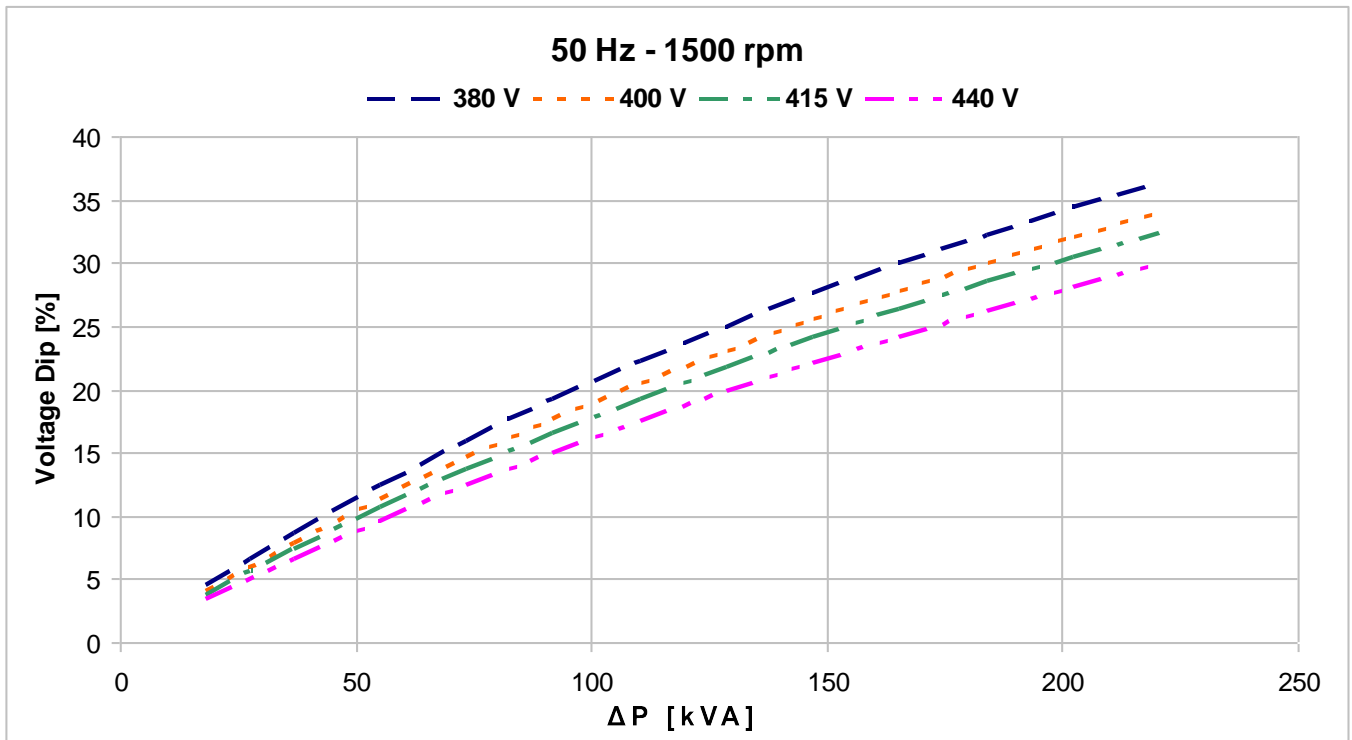
**460 V**



**480 V**



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



$$\Delta P = P_n \times \frac{I_s / I_n}{\cos \varphi_n \times \eta_n}$$

(\*): 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.