

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

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 Hz				60 Hz						
VOLTAGE		V	380	400	415	440	380	416	440	460	480		
Connections			Star series	190	200	208	220	190	208	220	230	240	
RATING POWER		kVA	220	220	220	210	225	235	245	255	270		
		kW	176	176	176	168	180	188	196	204	216		
EFFICIENCY [%] @ 0,8 p.f.		4/4	92,8	93,2	93,1	93,2	92,7	93,0	93,3	93,4	93,9		
		3/4	93,4	93,6	93,5	93,5	93,7	94,0	94,1	94,2	94,4		
		2/4	93,6	93,7	93,6	93,5	94,1	94,3	94,4	94,4	94,4		
EFFICIENCY [%] @ 1 p.f.		4/4	94,3	94,6	94,5	94,6	94,2	94,4	94,7	94,8	95,2		
		3/4	94,8	94,9	94,8	94,8	95,0	95,2	95,3	95,4	95,6		
		2/4	95,0	95,0	94,9	94,9	95,4	95,5	95,6	95,6	95,6		
SHORT CIRCUIT RATIO		SCR	0,36	0,4	0,43	0,51	0,29	0,34	0,36	0,38	0,39		
REACTANCES [%]													
Direct axis synchronous		X <sub>d</sub>	377	340	316	268	348	403	376	358	348		
Quadrature axis synchronous		X <sub>q</sub>	209	189	176	149	257	224	209	199	193		
Direct axis transient		X' <sub>d</sub>	31,7	28,6	26,6	22,6	38,9	33,9	31,6	30,1	29,2		
Direct axis subtransient		X'' <sub>d</sub>	12,4	11,2	10,4	8,8	15,2	13,3	12,4	11,8	11,5		
Quadrature axis subtransient		X'' <sub>q</sub>	14,8	13,4	12,4	10,6	18,2	15,9	14,8	14,1	13,7		
Negative sequence		X <sub>2</sub>	13,6	12,3	11,4	9,7	16,7	14,6	13,6	12,9	12,6		
Zero sequence		X <sub>0</sub>	3,0	2,7	2,5	2,1	3,6	3,2	2,9	2,8	2,7		
TIME CONSTANTS [s]													
Open circuit		T' <sub>do</sub>	1										
Transient		T' <sub>d</sub>	0,095										
Subtransient		T'' <sub>d</sub>	0,011										
Armature		T <sub>a</sub>	0,013										

**MECHANICAL CHARACTERISTICS**

D-end bearing/Lubrication	6218 2RS C3 / Prelubricated
N-end bearing/Lubrication	6313 2Z C3 / Prelubricated
Overspeed [r.p.m.]	2250
Inertia (J) [kgm <sup>2</sup> ]	Refer to B34 construction 1,89
Weight [kg]	Refer to B34 construction 660
Method of cooling	IC01
Cooling air required [m <sup>3</sup> /s] @ 50/60 Hz	0,42 / 0,52
Degree of protection	IP23
Types of construction available	B2 (SAE) - IM B34
Direction of rotation (Standard)	CW

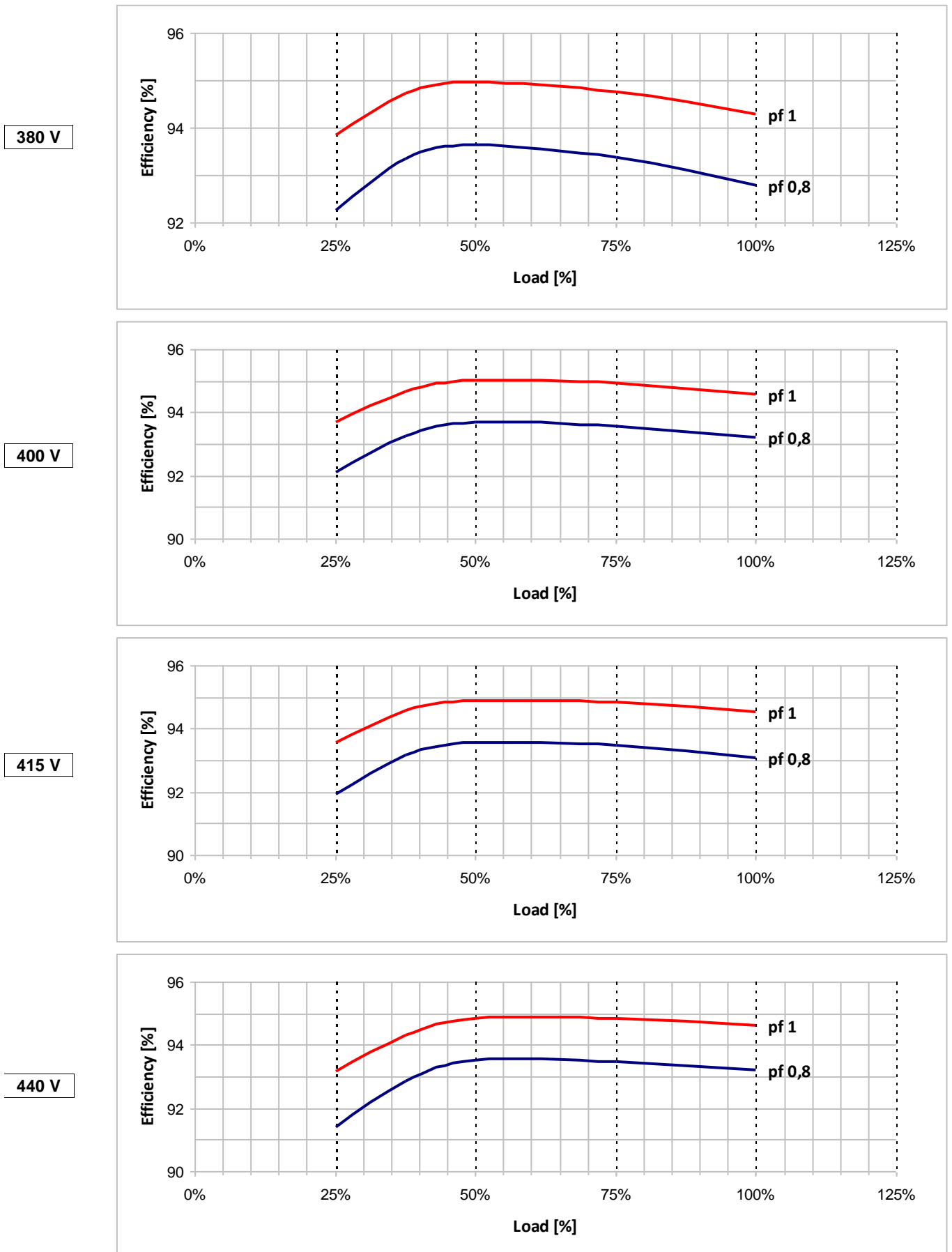
**OTHER DATA**

Phase resistance [Ω] @ 20 °C - Star series	0,021
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**

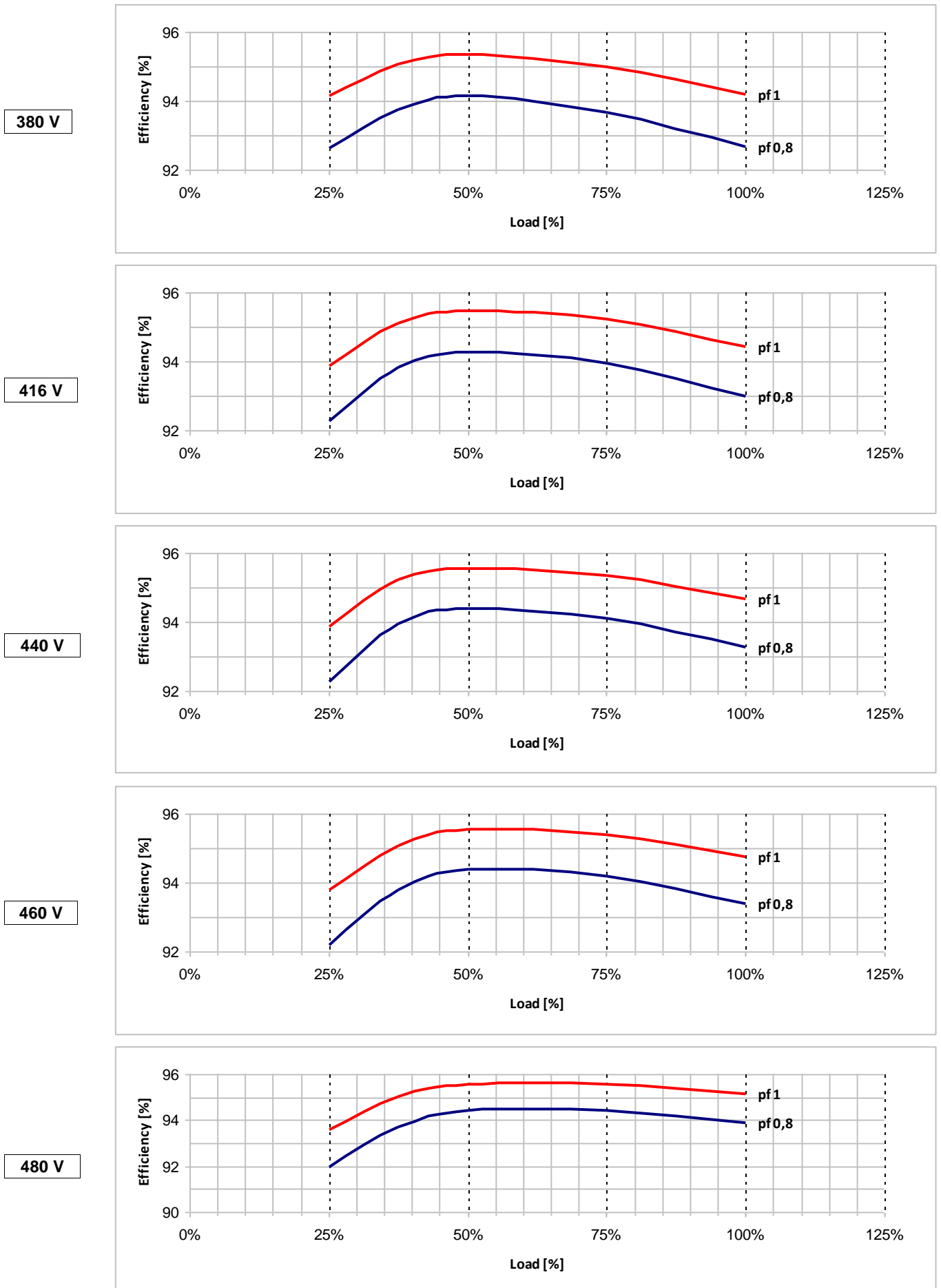
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

**Typical efficiency curves**
**50 Hz - 1500 rpm**

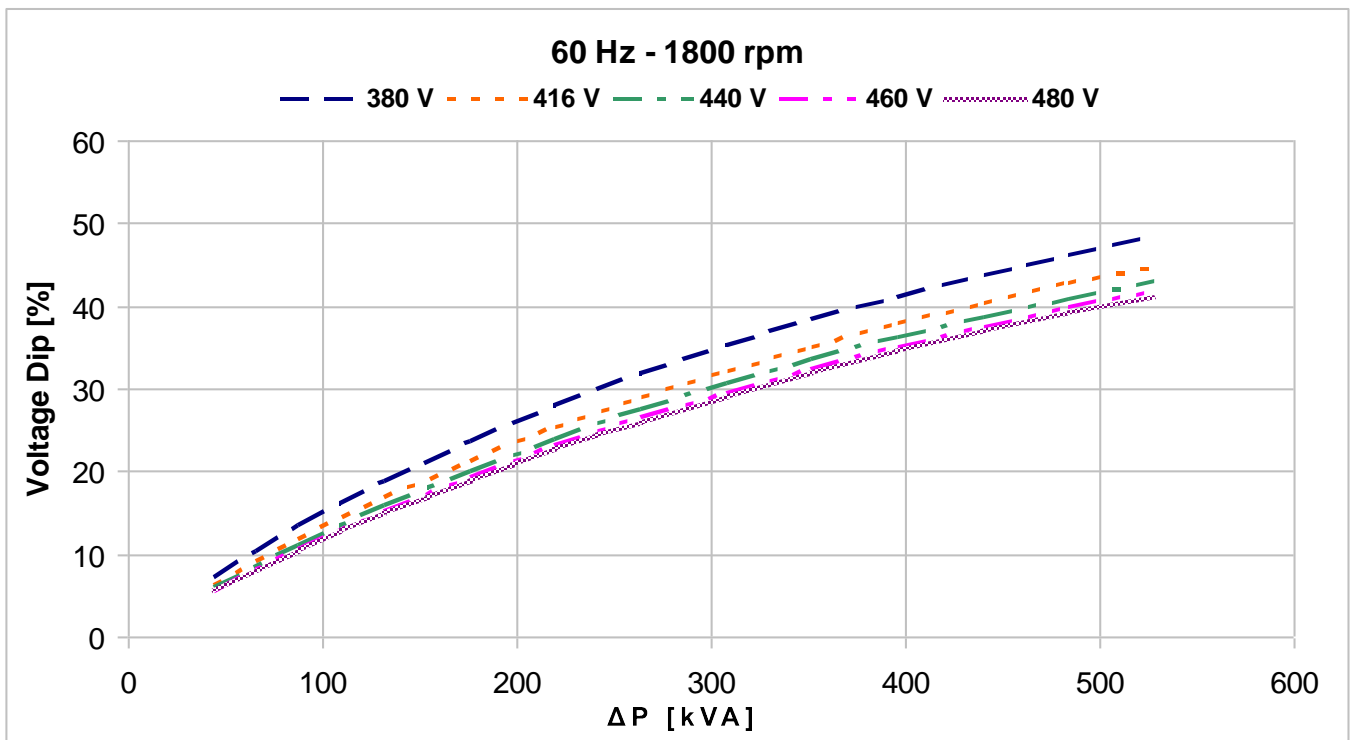
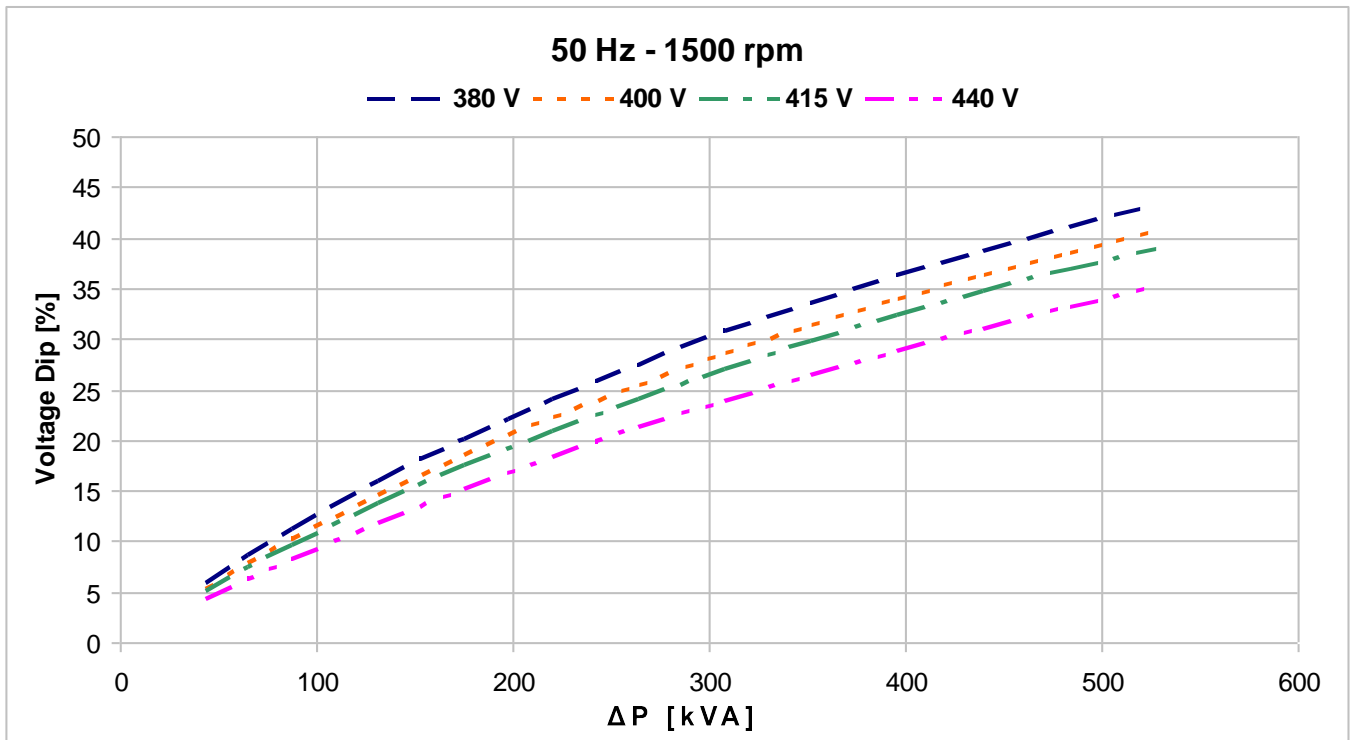
**Typical efficiency curves**
**50 Hz - 1500 rpm**


**Typical efficiency curves**

**60 Hz - 1800 rpm**



### 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.