

CONTINUOUS DUTY

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

AMBIENT TEMPERATURE		40°C										
TEMPERATURE RISE		H										
INSULATION CLASS		H										
POWER FACTOR		0,8										
			WINDING DATA					Winding code			M0	
								Number of leads			12	
								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	300	300	300	280	310	320	350	360	370	
		kW	240	240	240	224	248	256	280	288	296	
EFFICIENCY [%] @ 0,8 p.f.		4/4	92,7	93,1	93,0	93,4	92,5	93,1	93,4	93,5	93,8	
		3/4	93,4	93,7	93,6	93,7	93,1	93,5	93,8	93,9	94,1	
		2/4	93,9	93,9	93,9	93,8	93,3	93,6	93,9	94,0	94,1	
EFFICIENCY [%] @ 1 p.f.		4/4	94,2	94,5	94,5	94,8	94,0	94,5	94,8	94,8	95,1	
		3/4	94,8	95,0	94,9	95,0	94,5	94,9	95,1	95,2	95,3	
		2/4	95,2	95,2	95,2	95,1	94,7	94,9	95,2	95,3	95,3	
SHORT CIRCUIT RATIO		SCR	0,24	0,27	0,29	0,35	0,20	0,23	0,23	0,25	0,26	
REACTANCES [%]												
Direct axis synchronous		X <sub>d</sub>	448	404	375	312	415	478	467	440	415	
Quadrature axis synchronous		X <sub>q</sub>	250	226	210	174	311	267	261	246	232	
Direct axis transient		X' <sub>d</sub>	43,7	39,4	36,6	30,4	54,1	46,6	45,6	42,9	40,5	
Direct axis subtransient		X'' <sub>d</sub>	20,6	18,6	17,3	14,3	25,6	22,0	21,5	20,3	19,1	
Quadrature axis subtransient		X'' <sub>q</sub>	22,8	20,6	19,1	15,9	28,3	24,4	23,8	22,4	21,2	
Negative sequence		X <sub>2</sub>	21,7	19,6	18,2	15,1	26,9	23,2	22,7	21,3	20,1	
Zero sequence		X <sub>0</sub>	4,8	4,3	4,0	3,3	5,9	5,1	5,0	4,7	4,4	
TIME CONSTANTS [s]												
Open circuit		T' <sub>do</sub>										1,6
Transient		T' <sub>d</sub>										0,145
Subtransient		T'' <sub>d</sub>										0,014
Armature		T <sub>a</sub>										0,018

**MECHANICAL CHARACTERISTICS**

D-end bearing/Lubrication	6319 C3 / With grease nipple
N-end bearing/Lubrication	6315 2Z C3 / Prelubricated
Overspeed [r.p.m.]	2250
Inertia (J) [kgm <sup>2</sup> ]	Refer to B34 construction 3,66
Weight [kg]	Refer to B34 construction 830
Method of cooling	IC01
Cooling air required [m <sup>3</sup> /s] @ 50/60 Hz	0,83 / 1,00
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	0,016
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

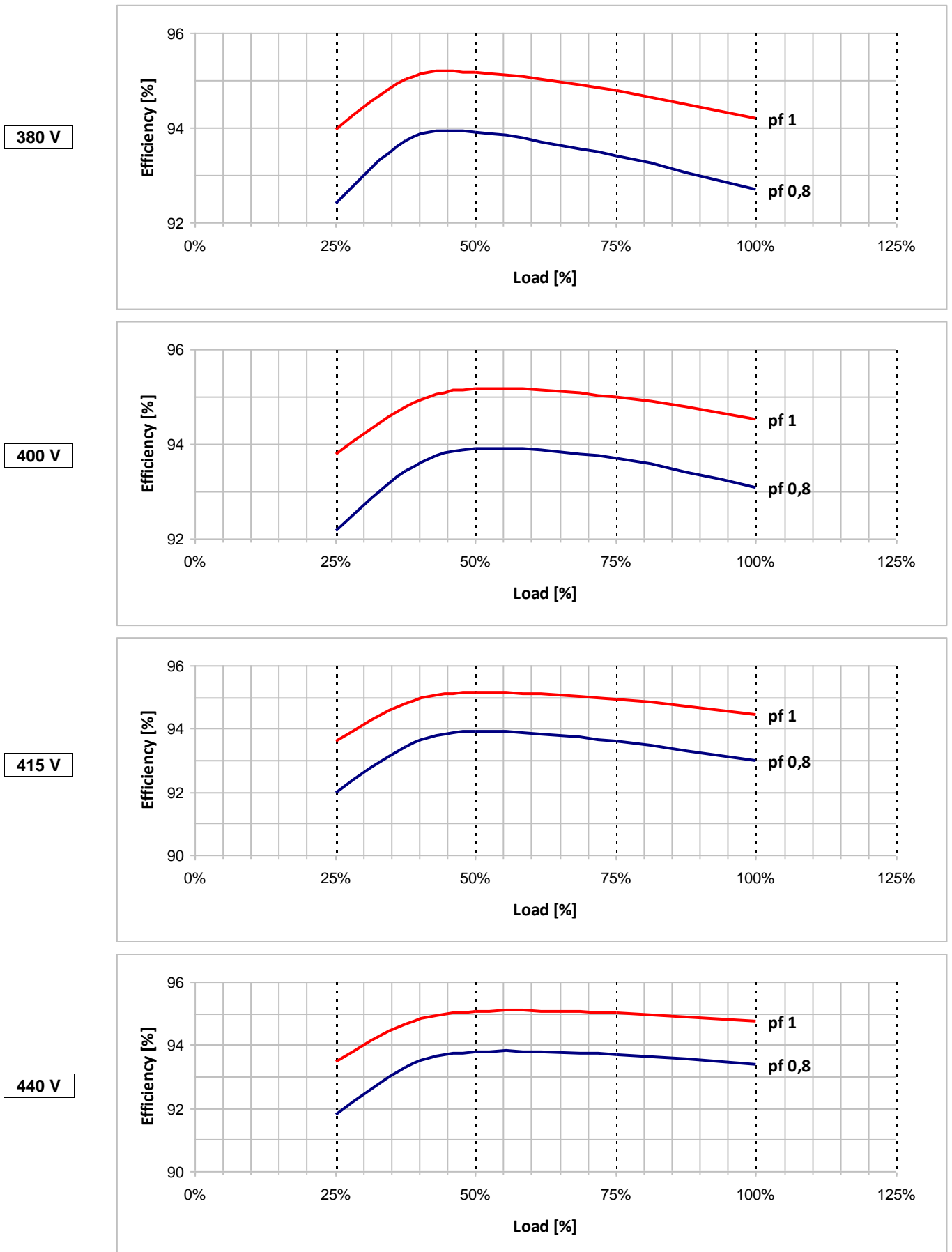
**STANDARDS**

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**

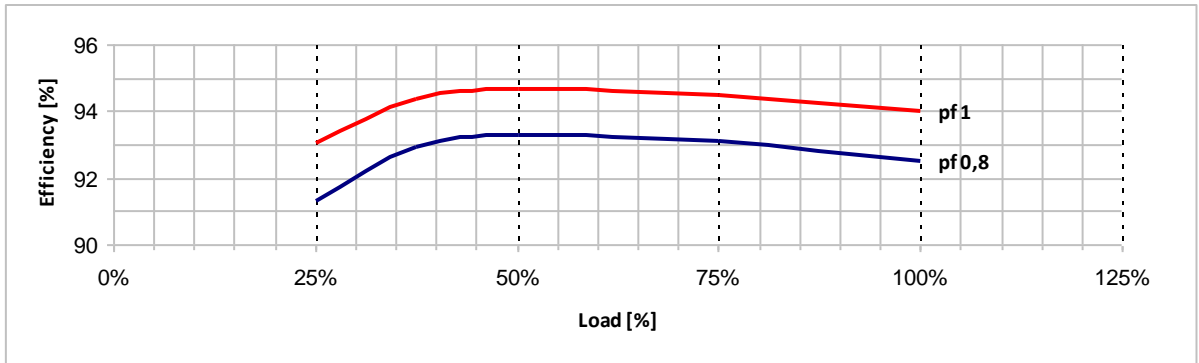
**50 Hz - 1500 rpm**



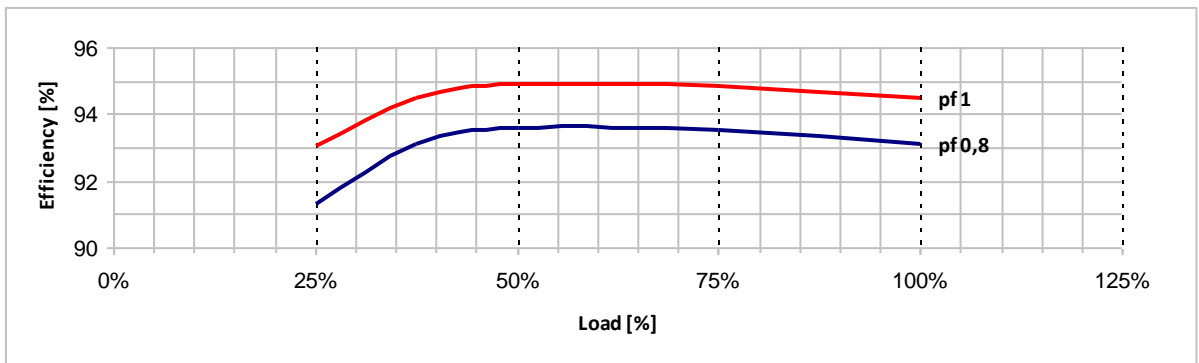
**Typical efficiency curves**

**60 Hz - 1800 rpm**

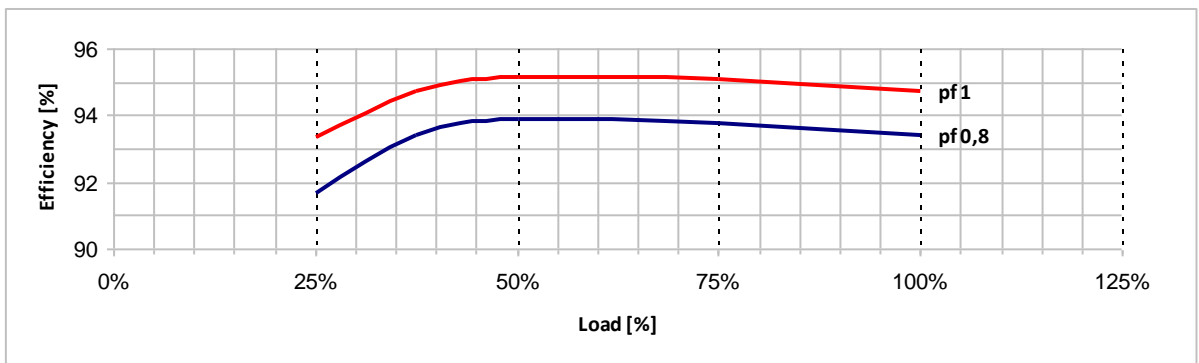
**380 V**



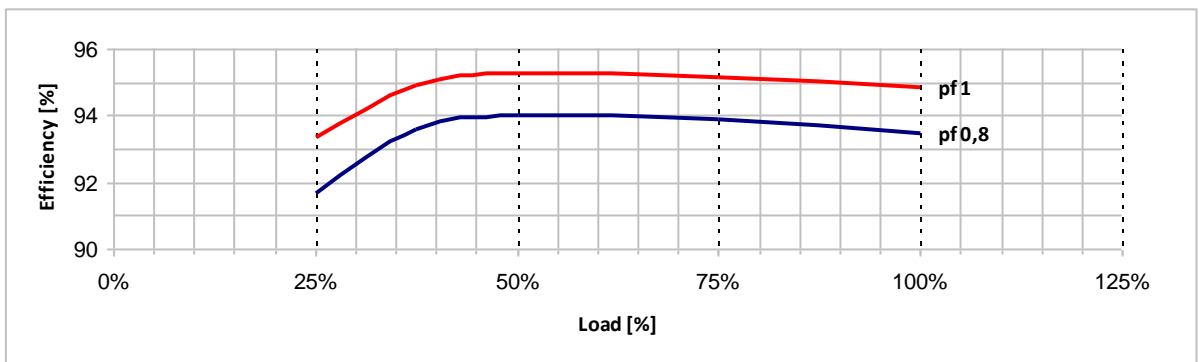
**416 V**



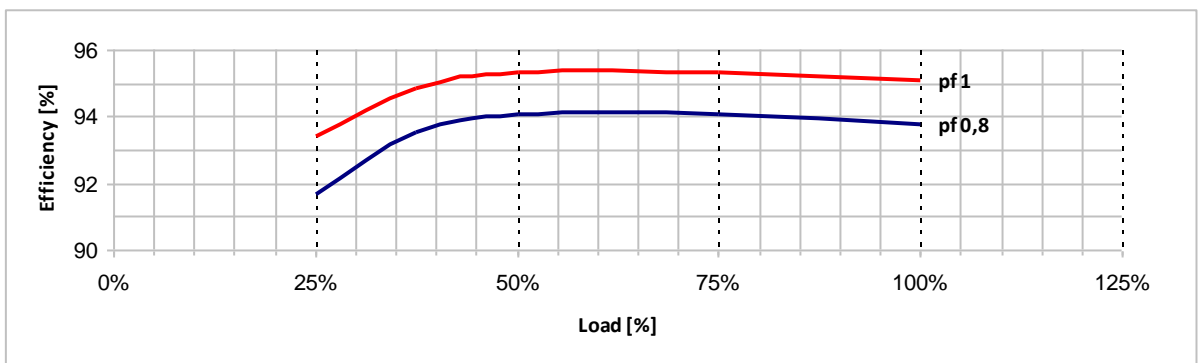
**440 V**



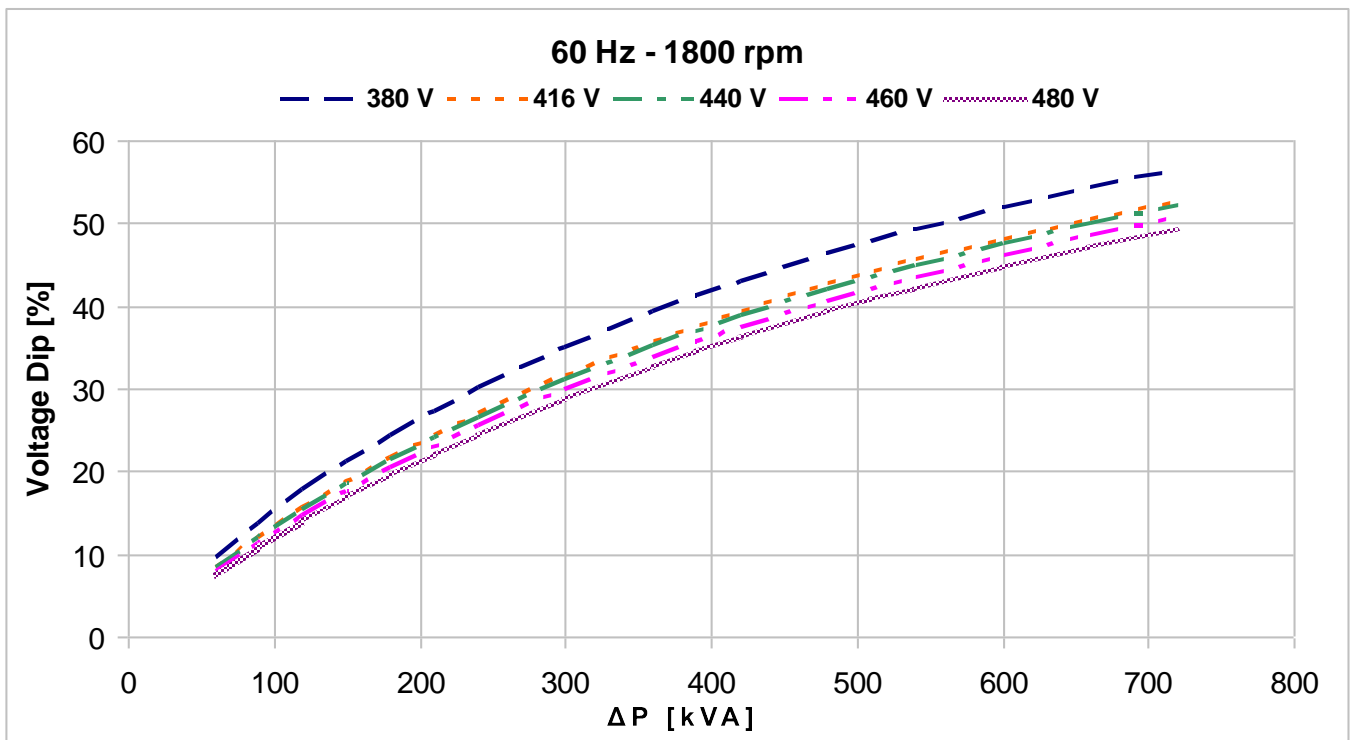
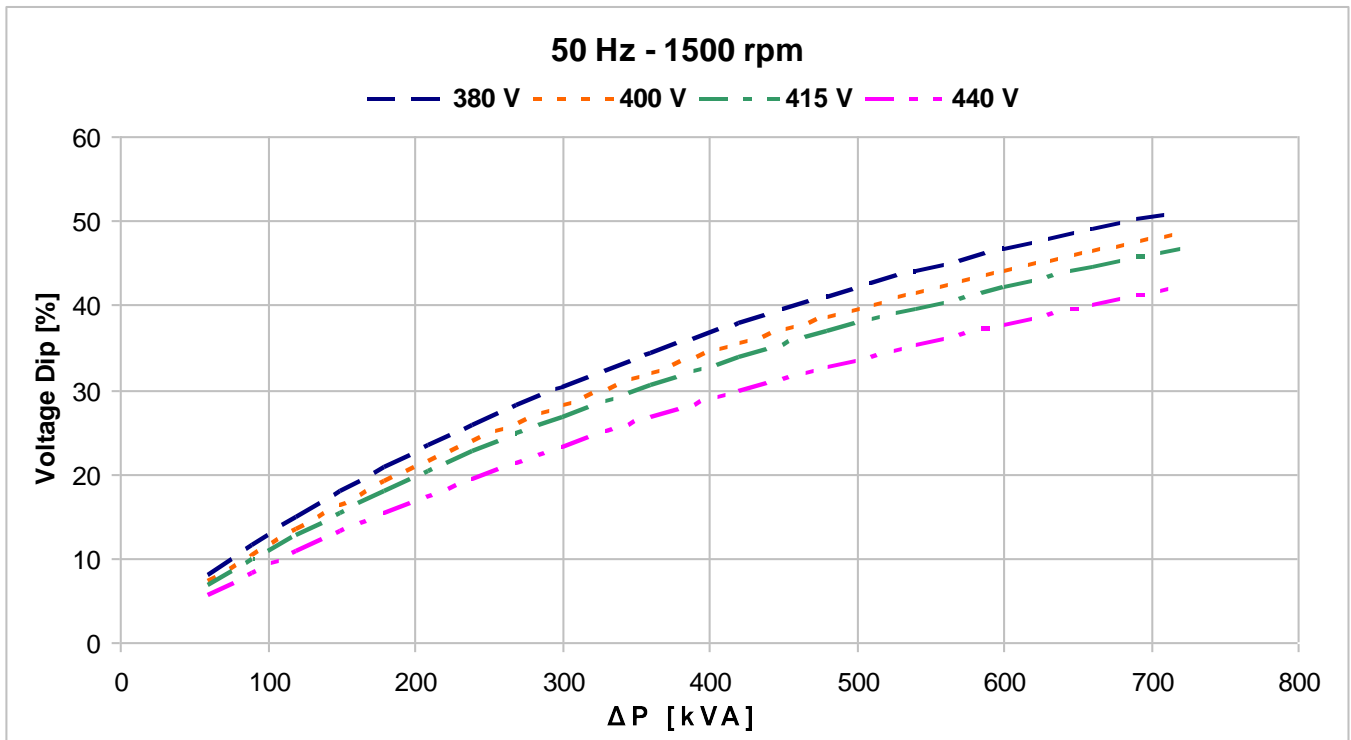
**460 V**



**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.