

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	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	410	410	410	410	420	430	470	490	500	
			kW	328	328	328	328	336	344	376	392	400	
EFFICIENCY [%] @ 0,8 p.f.			4/4	93,4	93,7	93,6	93,7	93,3	93,7	93,9	94,1	94,2	
			3/4	94,0	94,1	94,1	94,2	93,8	94,0	94,2	94,3	94,5	
			2/4	94,4	94,3	94,3	94,3	94,0	94,2	94,3	94,4	94,5	
EFFICIENCY [%] @ 1 p.f.			4/4	94,8	95,0	94,9	95,0	94,7	95,0	95,2	95,3	95,4	
			3/4	95,3	95,3	95,3	95,4	95,1	95,3	95,4	95,5	95,7	
			2/4	95,6	95,5	95,5	95,5	95,3	95,4	95,5	95,6	95,7	
SHORT CIRCUIT RATIO			SCR	0,34	0,38	0,41	0,46	0,28	0,33	0,33	0,35	0,37	
REACTANCES [%]													
Direct axis synchronous		X _d	443	400	372	331	407	465	455	434	407		
Quadrature axis synchronous		X _q	249	225	209	186	306	262	256	244	229		
Direct axis transient		X' _d	41,0	37,0	34,4	30,6	50,4	43,1	42,1	40,1	37,6		
Direct axis subtransient		X'' _d	18,1	16,3	15,1	13,5	22,2	19,0	18,5	17,7	16,6		
Quadrature axis subtransient		X'' _q	20,7	18,7	17,4	15,5	25,5	21,8	21,3	20,3	19,0		
Negative sequence		X ₂	19,4	17,5	16,3	14,5	23,8	20,4	19,9	19,0	17,8		
Zero sequence		X ₀	4,3	3,9	3,6	3,2	5,3	4,5	4,4	4,2	4,0		
TIME CONSTANTS [s]													
Open circuit		T' _{do}										1,75	
Transient		T' _d										0,16	
Subtransient		T'' _d										0,014	
Armature		T _a										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 ²]	Refer to B34 construction 4,8
Weight [kg]	Refer to B34 construction 1060
Method of cooling	IC01
Cooling air required [m ³ /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	0,01
Overloads	10% for 1 hour every 12 hours
3-phase short circuit sustained current	≥ 300 % (3 I _n) with auxiliary winding
Voltage regulation accuracy	± 0,5 % I _n steady state condition
Radio interference	EN 55011 - Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% - At no load

STANDARDS

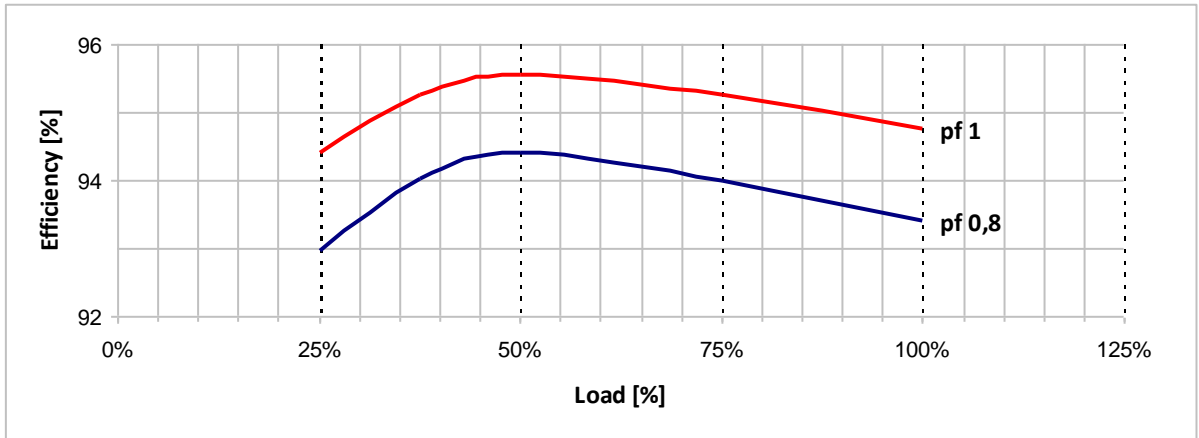
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

Typical efficiency curves
50 Hz - 1500 rpm

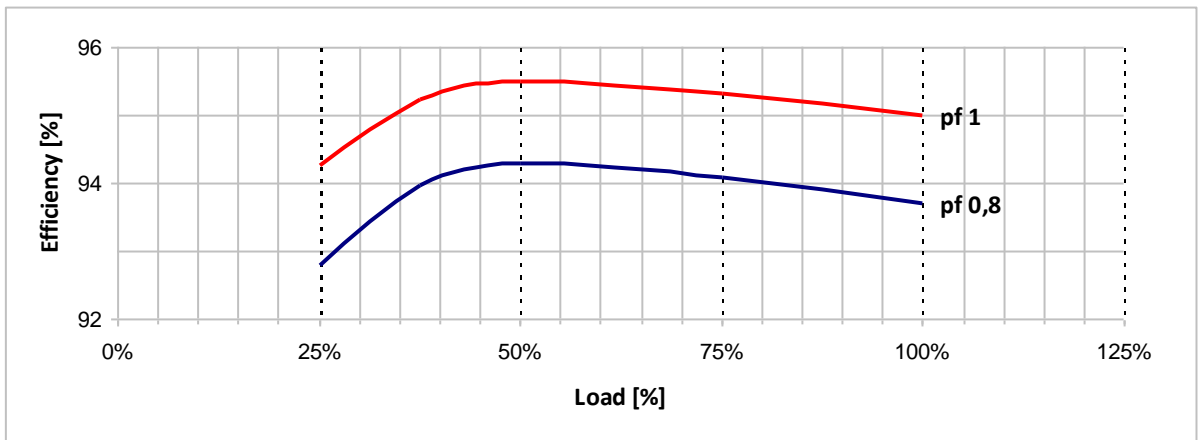
Typical efficiency curves

50 Hz - 1500 rpm

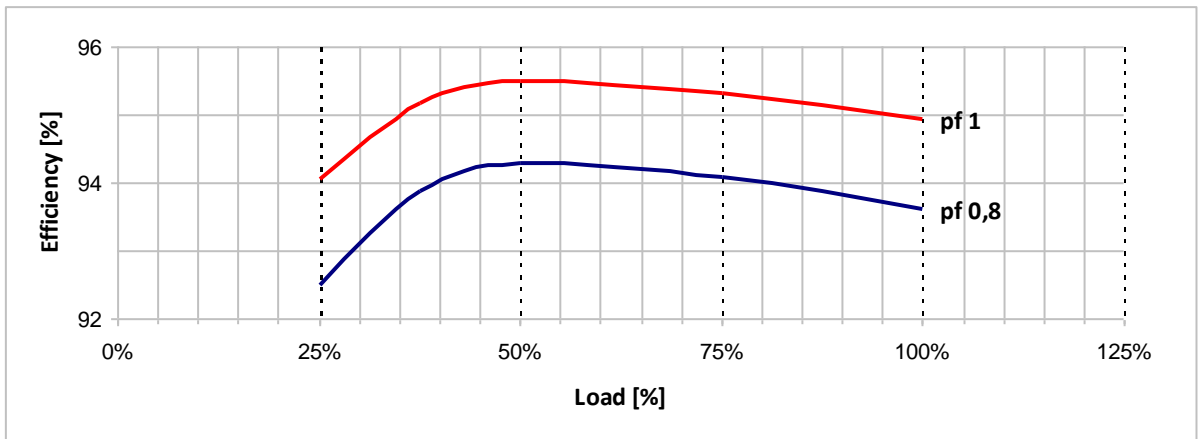
380 V



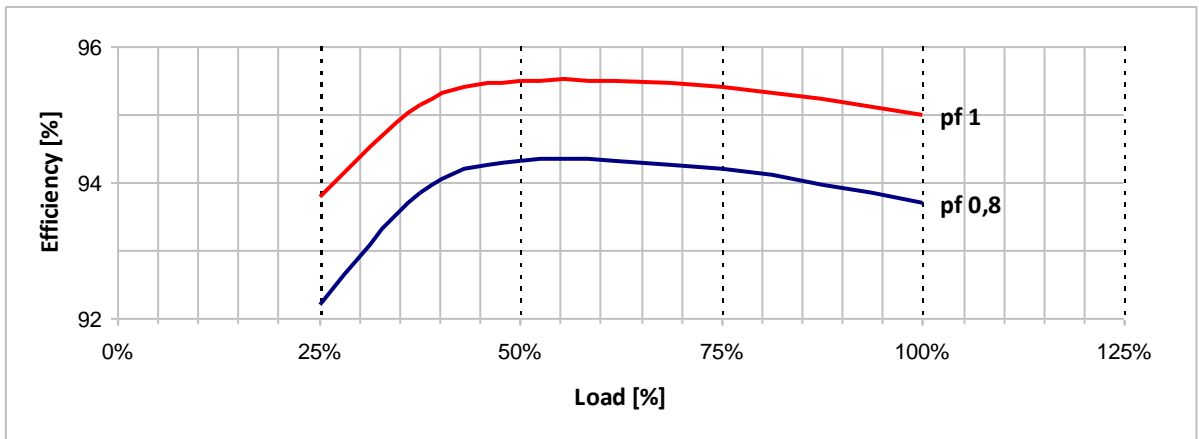
400 V



415 V

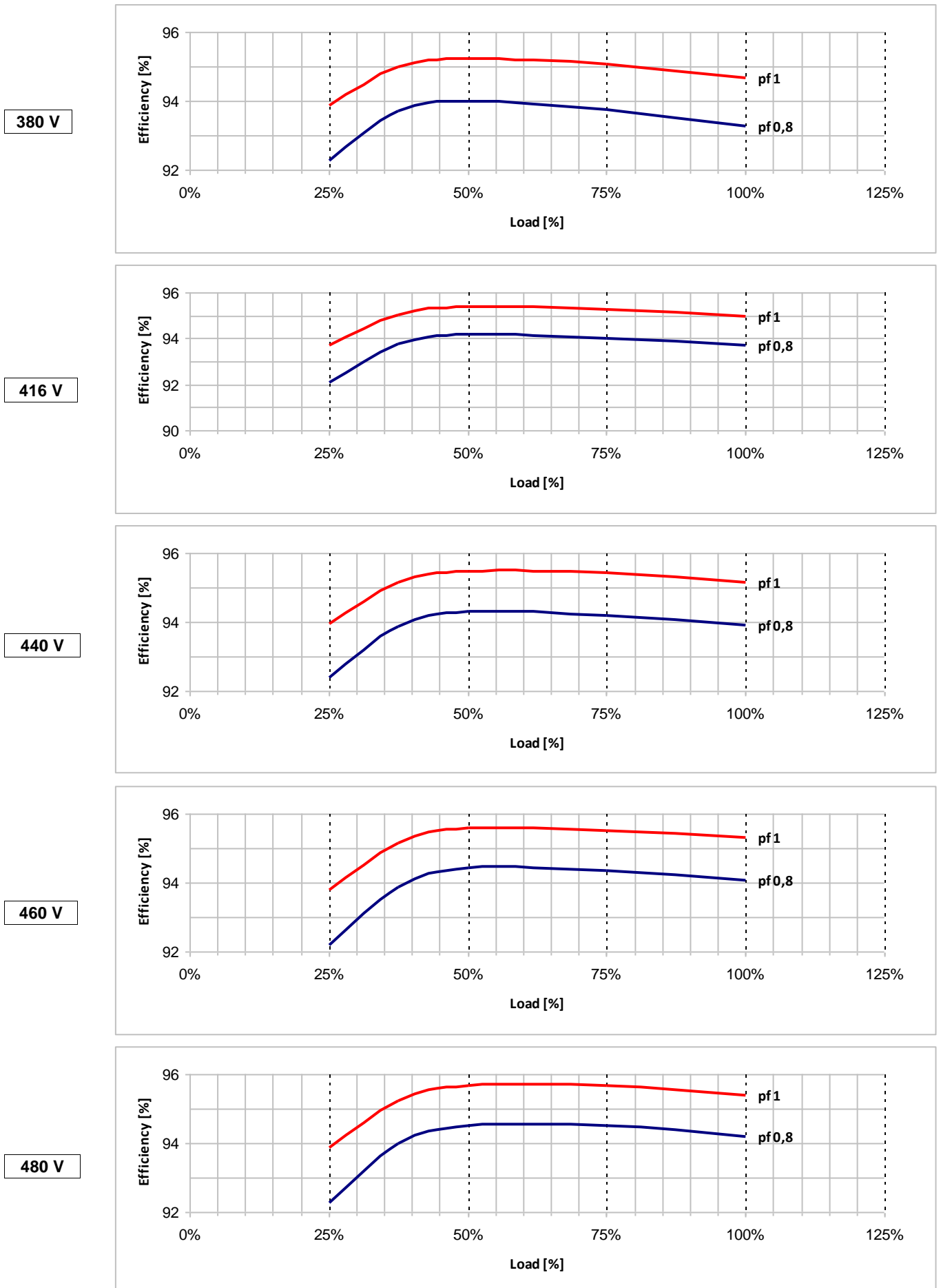


440 V

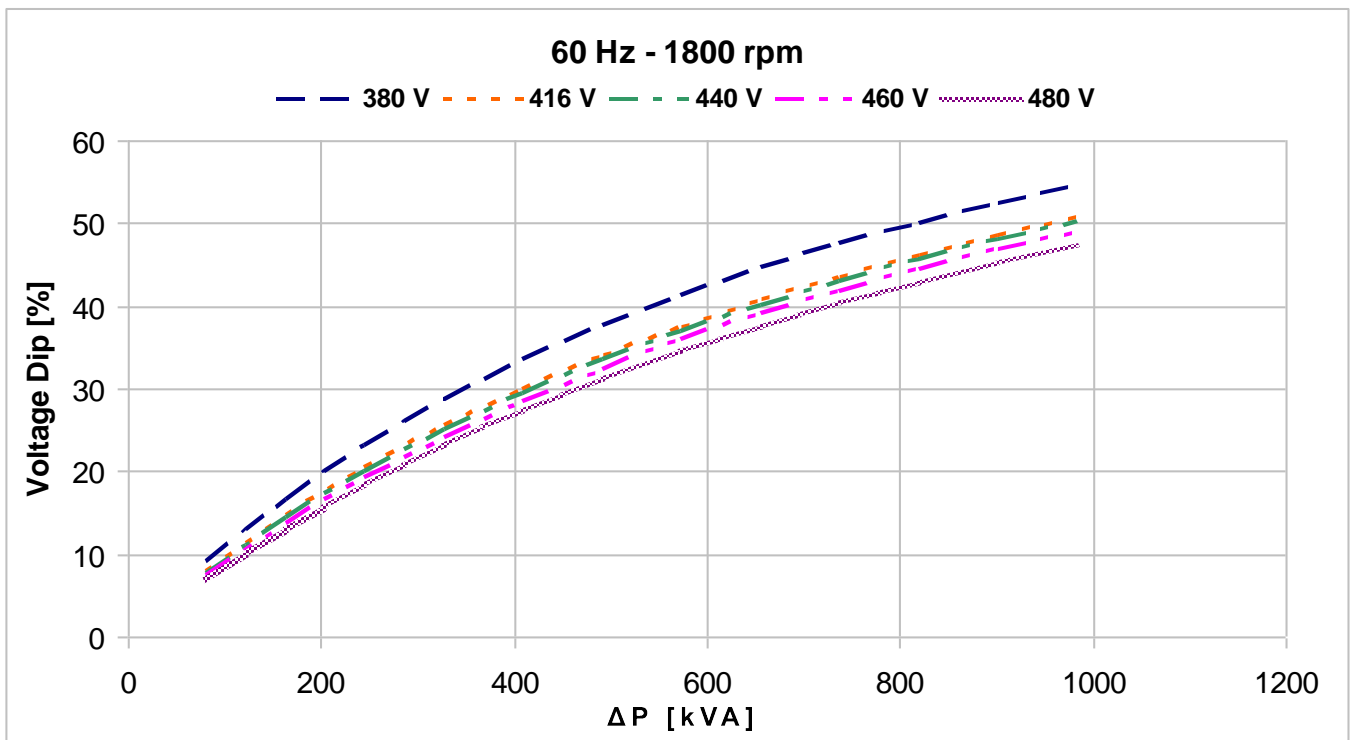
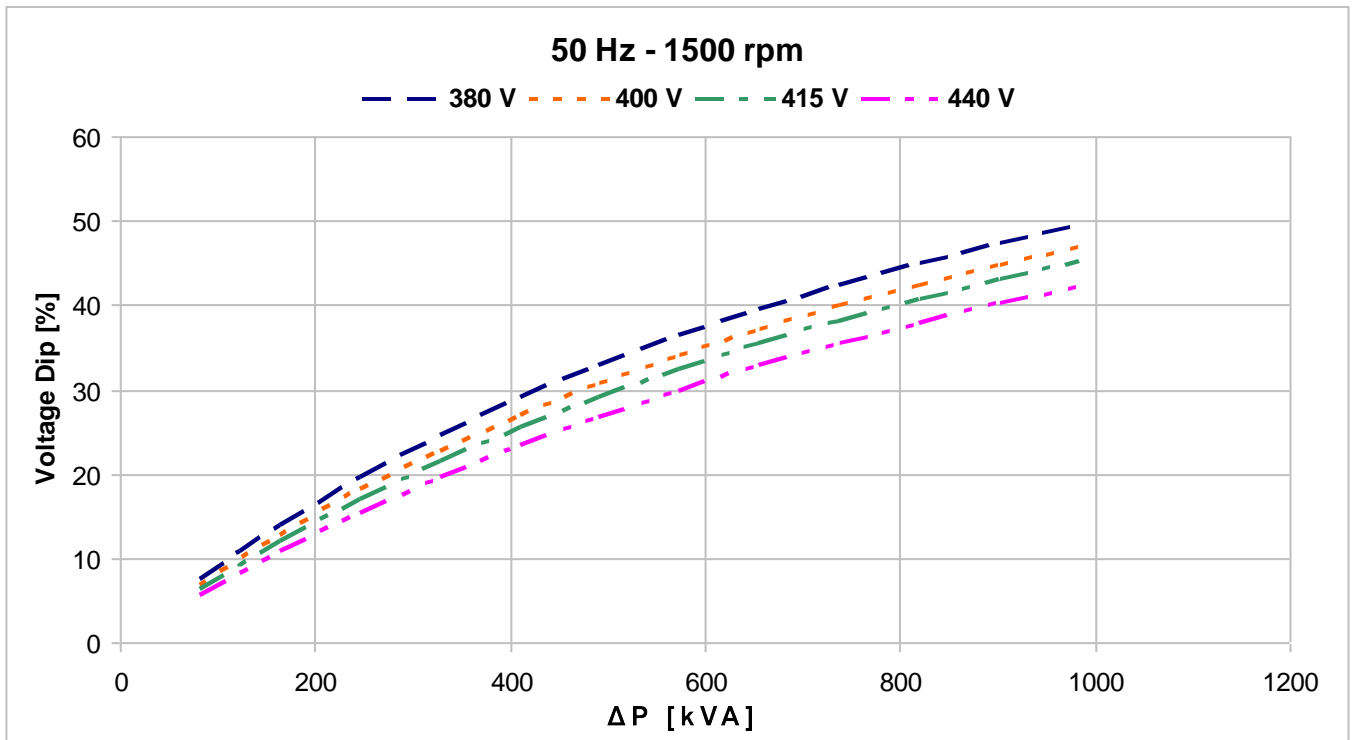


Typical efficiency curves

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.