

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 Star parallel		190	200	208	220	190	208	220	230	240	
RATING POWER			kVA	42,0	42,0	42,0	42,0	42,5	44,9	47,1	51,0	51,0	
			kW	33,6	33,6	33,6	33,6	34,0	35,9	37,7	40,8	40,8	
EFFICIENCY [%] @ 0,8 p.f.				87,7	88,5	88,5	88,0	87,3	88,4	88,9	89,3	89,5	
				89,5	89,8	89,7	89,2	89,0	89,9	90,2	90,6	90,6	
				90,4	90,5	90,4	89,9	90,2	90,8	90,9	91,2	91,3	
EFFICIENCY [%] @ 1 p.f.				90,1	90,8	90,7	90,3	89,8	90,7	91,1	91,5	91,6	
				91,6	91,9	91,8	91,4	91,2	91,9	92,1	92,5	92,5	
				92,4	92,4	92,3	91,9	92,2	92,6	92,7	93,0	93,1	
SHORT CIRCUIT RATIO			SCR	0,34	0,38	0,41	0,46	0,28	0,32	0,34	0,34	0,38	
REACTANCES [%]													
Direct axis synchronous			X _d	382	345	321	285	349	409	384	380	349	
Quadrature axis synchronous			X _q	214	193	179	160	260	229	215	213	195	
Direct axis transient			X' _d	34,9	31,5	29,3	26,0	42,4	37,4	35,0	34,7	31,9	
Direct axis subtransient			X'' _d	15,1	13,6	12,6	11,2	18,3	16,1	15,1	15,0	13,8	
Quadrature axis subtransient			X'' _q	18,9	17,1	15,9	14,1	23,0	20,3	19,0	18,8	17,3	
Negative sequence			X ₂	17,0	15,3	14,2	12,6	20,6	18,1	17,0	16,9	15,5	
Zero sequence			X ₀	3,5	3,2	3,0	2,6	4,3	3,8	3,6	3,5	3,2	
TIME CONSTANTS [s]													
Open circuit			T' _{do}	0,7									
Transient			T' _d	0,06									
Subtransient			T'' _d	0,01									
Armature			T _a	0,006									

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6313 2RS C3 / Prelubricated
N-end bearing/Lubrication	6309 2RS C3 / Prelubricated
Overspeed [r.p.m.]	2250
Inertia (J) [kgm ²]	Refer to B34 construction 0,275
Weight [kg]	Refer to B34 construction 219
Method of cooling	IC01
Cooling air required [m ³ /s] @ 50/60 Hz	0,21 / 0,25
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	0,23
Overloads	10% for 1 hour every 12 hours
3-phase short circuit sustained current	≥ 300 % (3 I _n) with auxiliary winding
Voltage regulation accuracy	± 1 % I _n steady state condition
Radio interference	EN 55011 - Class B Group 1
Wave form THF	< 2%
Total harmonic content	< 2% - At no load

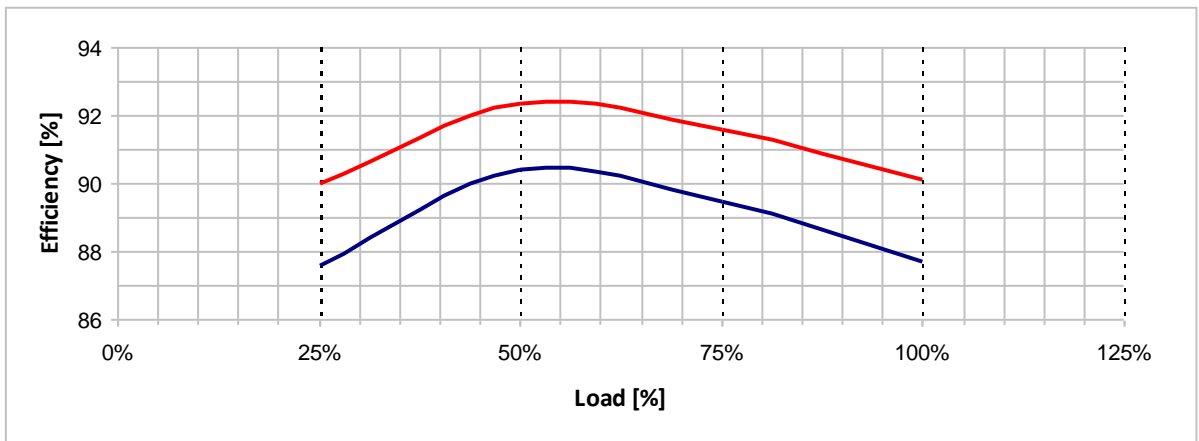
STANDARDS

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

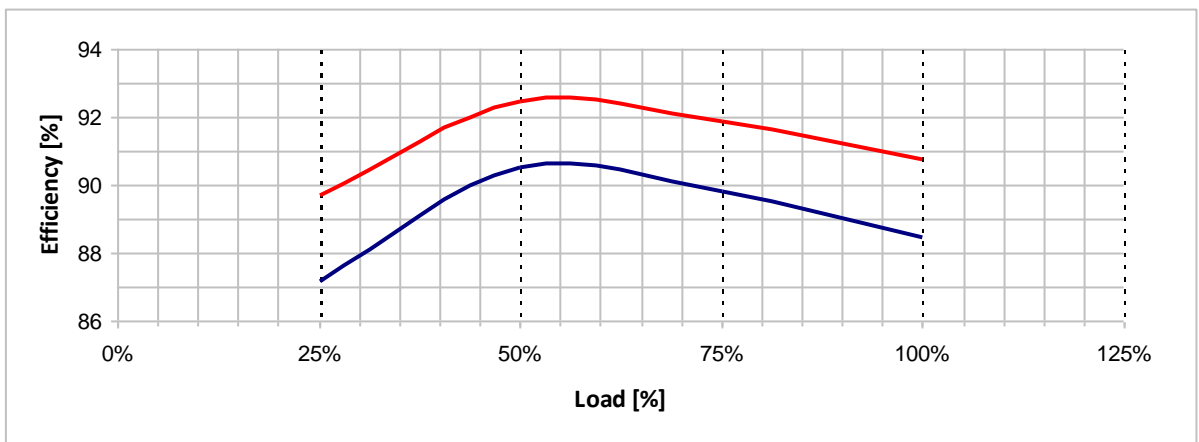
Typical efficiency curves

50 Hz - 1500 rpm

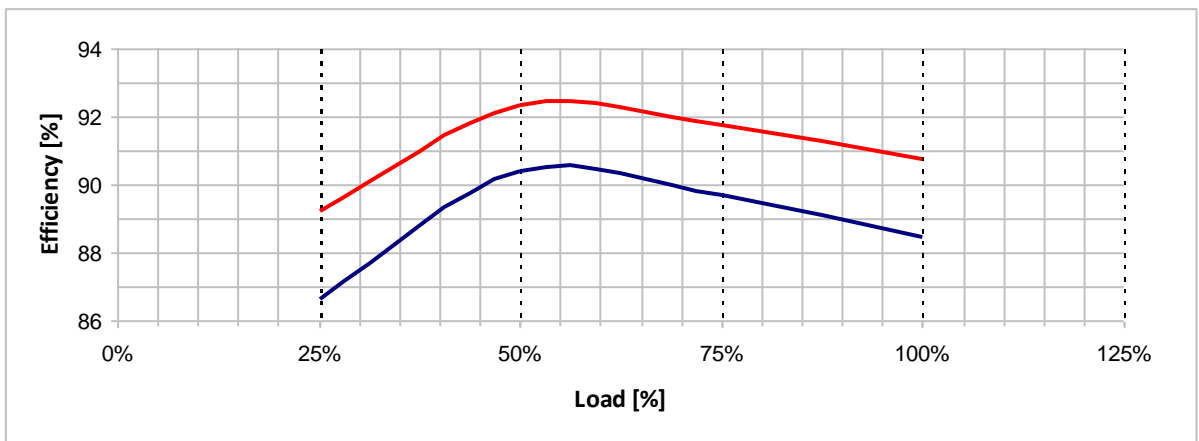
380 V



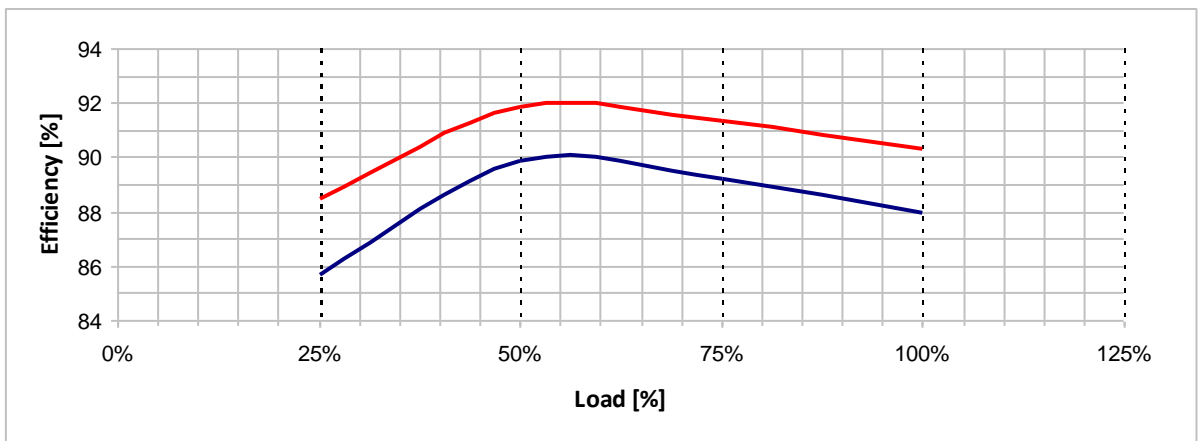
400 V



415 V



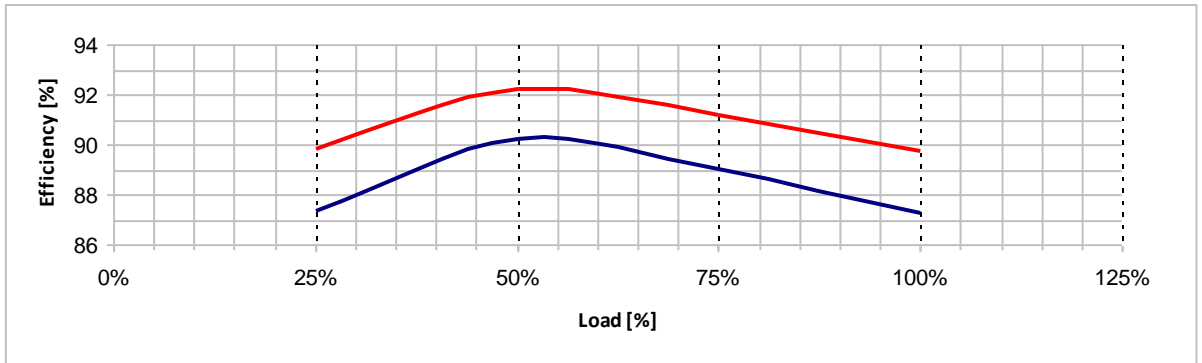
440 V



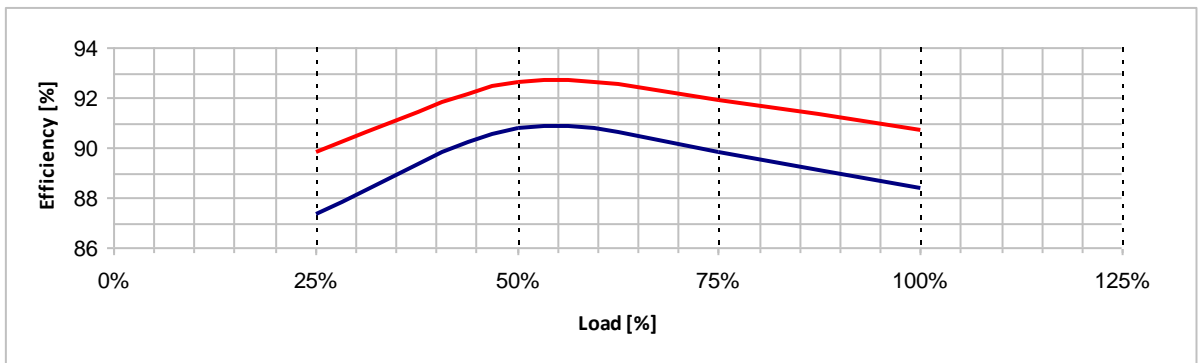
Typical efficiency curves

60 Hz - 1800 rpm

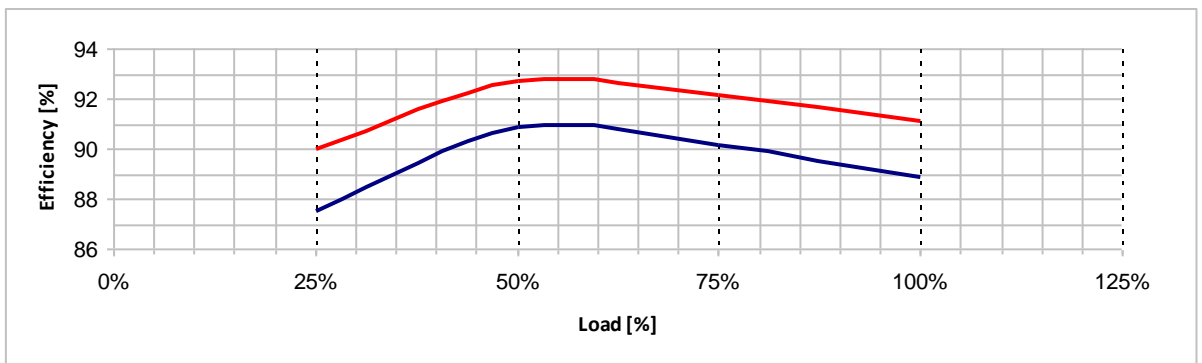
380 V



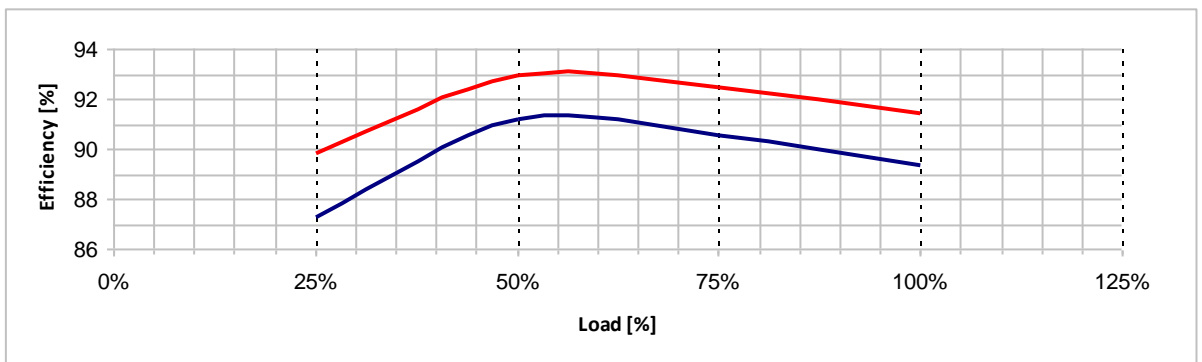
416 V



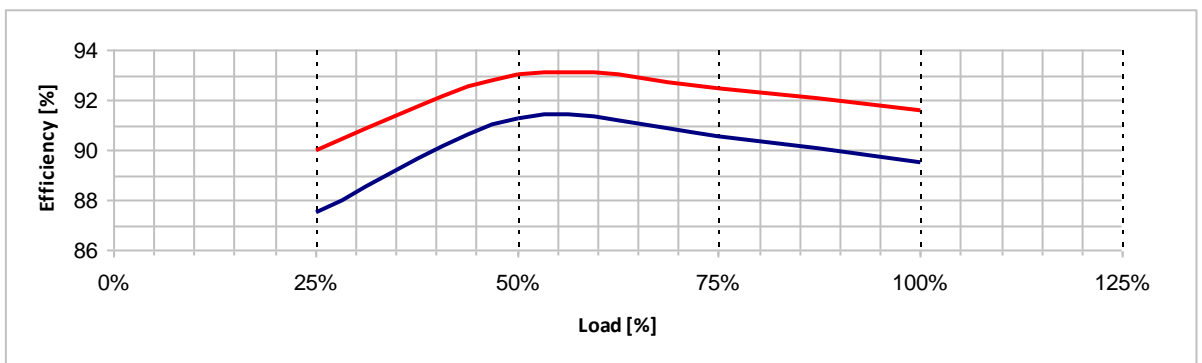
440 V



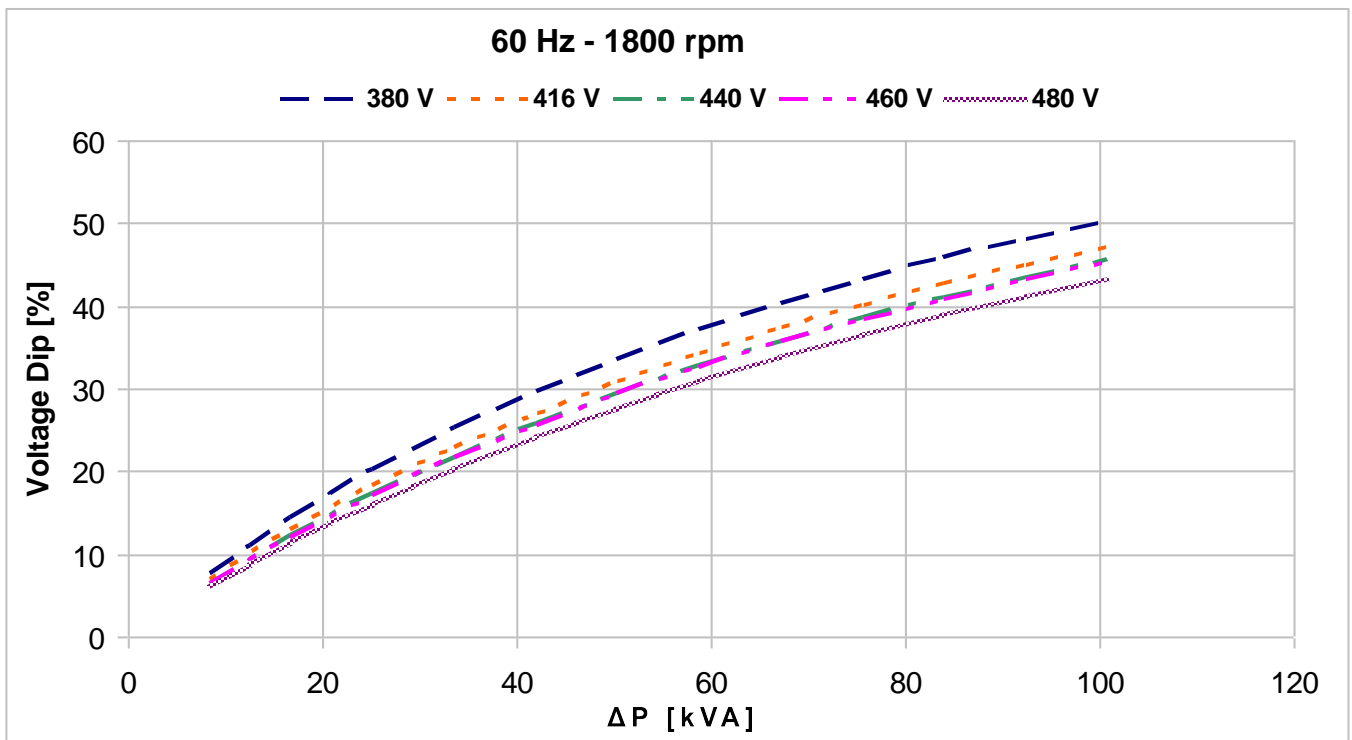
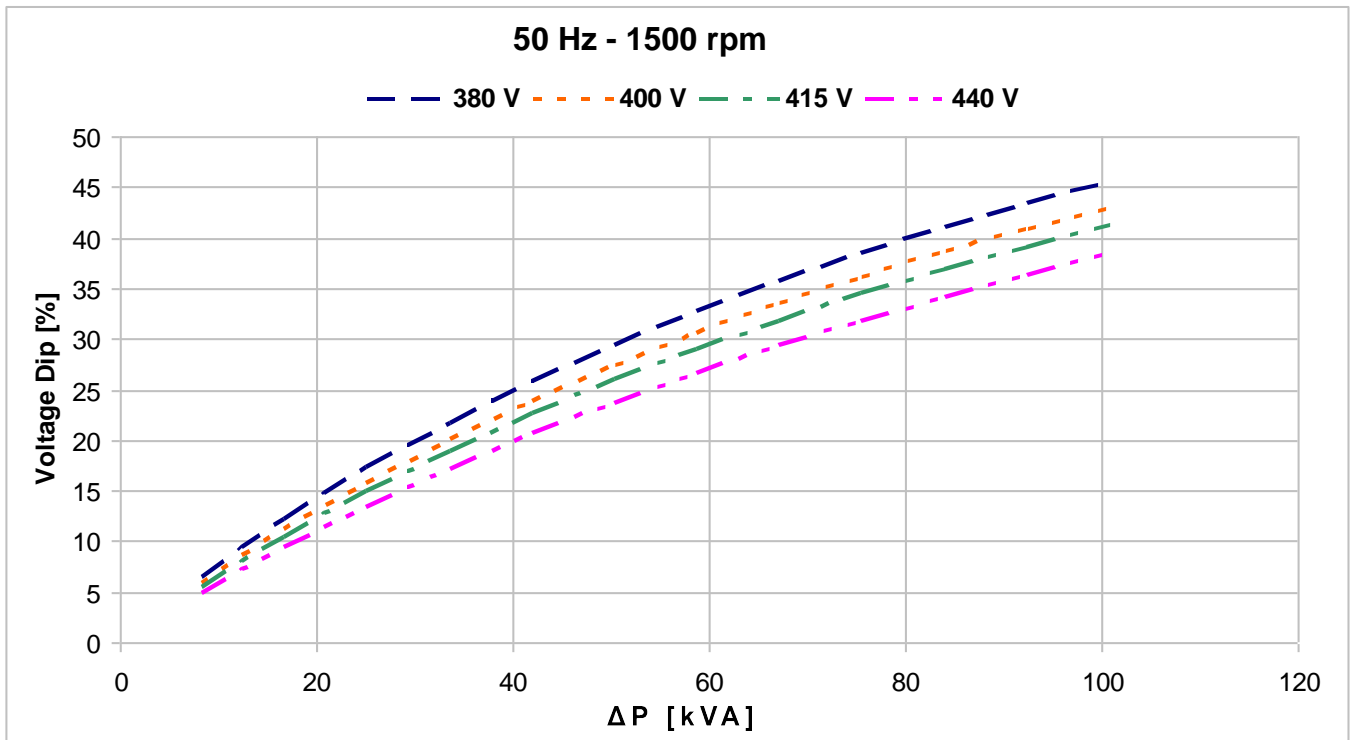
460 V



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.