

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

AMBIENT TEMPERATURE TEMPERATURE RISE INSULATION CLASS POWER FACTOR			40°C	WINDING DATA Winding code Number of leads Winding pitch										MO 12 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	48,5	50,0	50,0	50,0		47,5	52,6	55,4	60,0	60,0	
			kW	38,8	40,0	40,0	40,0		38,0	42,1	44,3	48,0	48,0	
EFFICIENCY [%] @ 0,8 p.f.				4/4	87,9	88,7	88,7	88,2	87,1	88,3	88,7	89,1	89,3	
				3/4	89,8	90,0	90,0	89,5	88,9	89,4	89,8	90,0	90,0	
				2/4	90,6	90,6	90,5	90,1	89,9	90,1	90,3	90,5	90,6	
EFFICIENCY [%] @ 1 p.f.				4/4	90,3	90,9	90,9	90,5	89,6	90,6	90,9	91,3	91,4	
				3/4	91,9	92,0	92,0	91,6	91,1	91,5	91,8	92,0	92,0	
				2/4	92,5	92,5	92,4	92,1	91,9	92,1	92,3	92,4	92,5	
SHORT CIRCUIT RATIO			SCR	0,33	0,35	0,38	0,42		0,28	0,30	0,32	0,32	0,35	
REACTANCES [%]														
Direct axis synchronous			X _d	407	379	352	313		379	442	416	413	379	
Quadrature axis synchronous			X _q	228	212	197	175		268	247	233	231	212	
Direct axis transient			X' _d	36,8	34,2	31,8	28,3		43,2	39,9	37,6	37,2	34,2	
Direct axis subtransient			X'' _d	15,6	14,5	13,5	12,0		18,3	16,9	15,9	15,8	14,5	
Quadrature axis subtransient			X'' _q	19,9	18,5	17,2	15,3		23,4	21,6	20,3	20,1	18,5	
Negative sequence			X ₂	17,7	16,5	15,3	13,6		20,8	19,3	18,1	18,0	16,5	
Zero sequence			X ₀	3,7	3,4	3,2	2,8		4,3	4,0	3,7	3,7	3,4	
TIME CONSTANTS [s]														
Open circuit			T' _{do}						0,7					
Transient			T' _d						0,06					
Subtransient			T'' _d						0,01					
Armature			T _a						0,007					

MECHANICAL CHARACTERISTICS

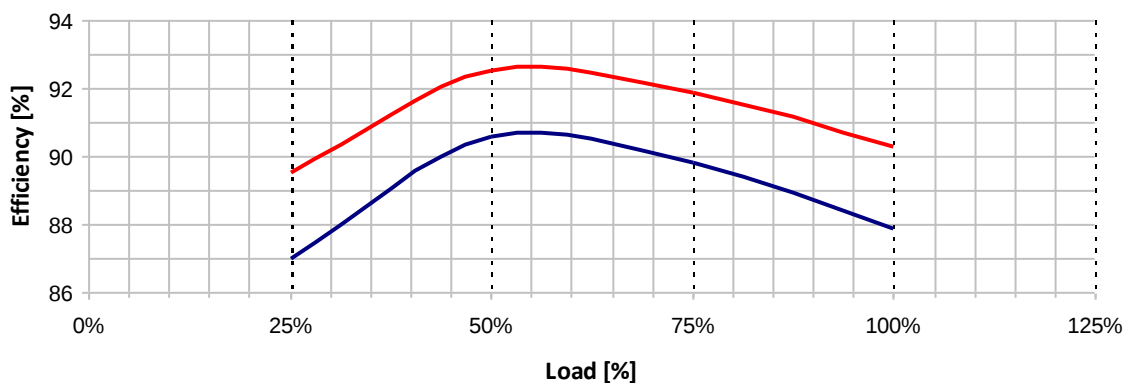
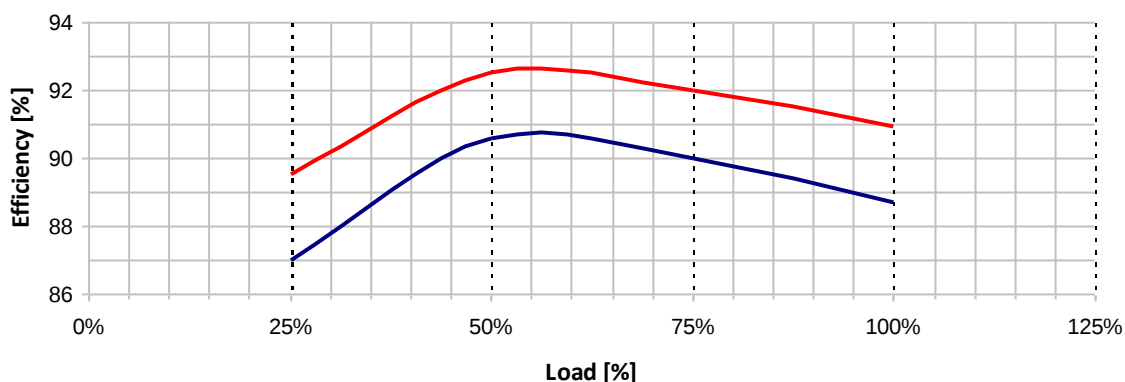
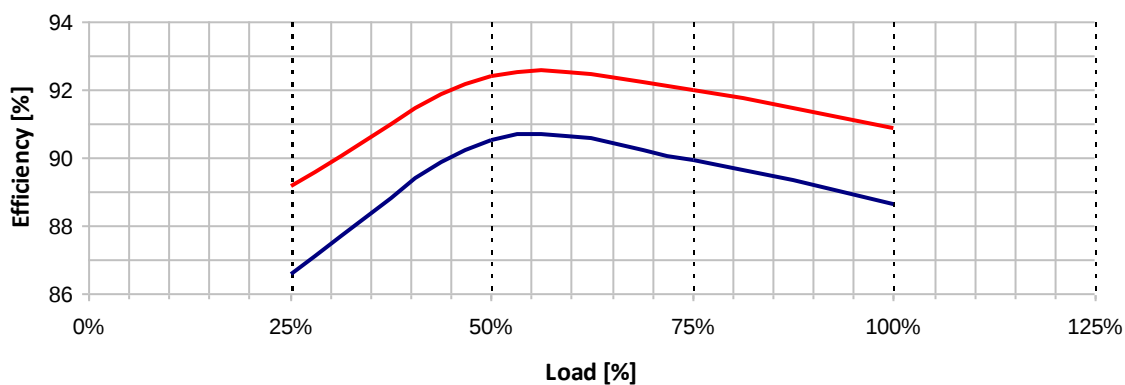
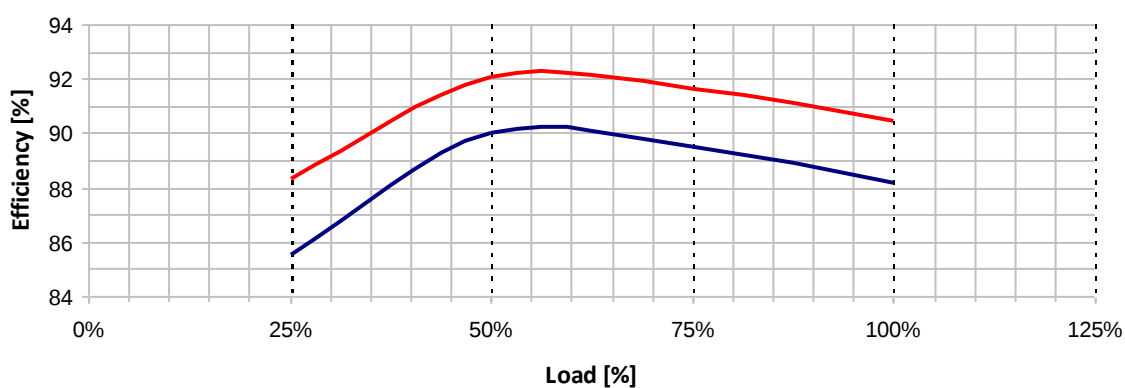
D-end bearing/Lubrication	6313 2RS C3 / Prelubricated
N-end bearing/Lubrication	6309 2RS C3 / Prelubricated
Overspeed [r.p.m.]	2250
Inertia (J) [kgm ²]	Refer to B34 construction 0,301
Weight [kg]	Refer to B34 construction 225
Method of cooling	IC01
Cooling air required [m ³ /s] @ 50/60 Hz	0,21 / 0,25
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	0,2
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

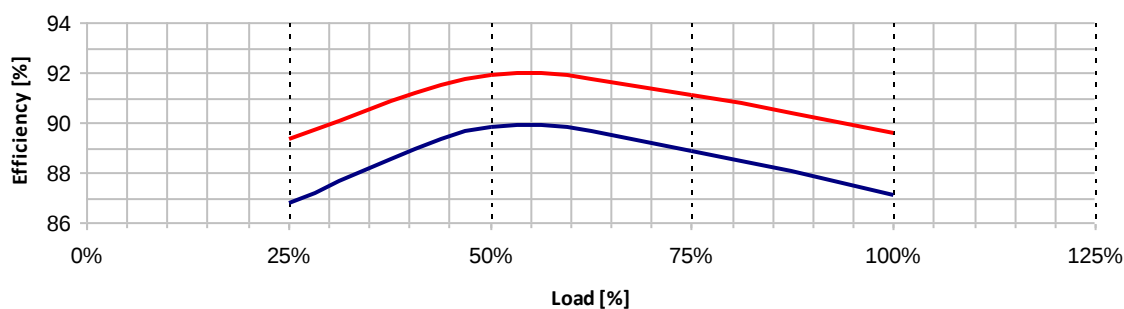
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

Typical efficiency curves
50 Hz - 1500 rpm
380 V

400 V

415 V

440 V


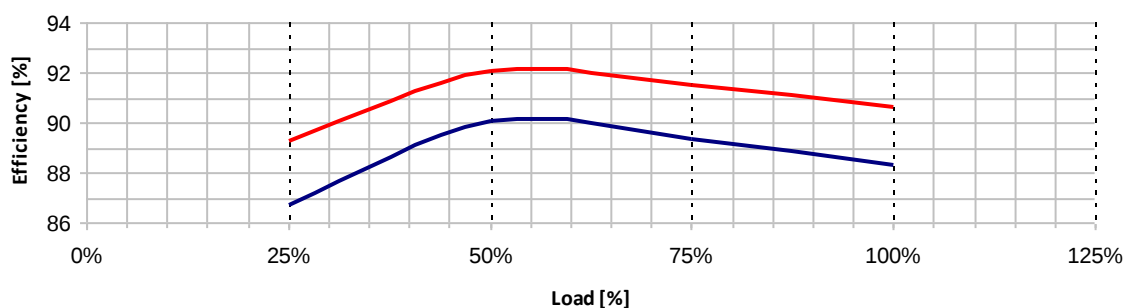
Typical efficiency curves

60 Hz - 1800 rpm

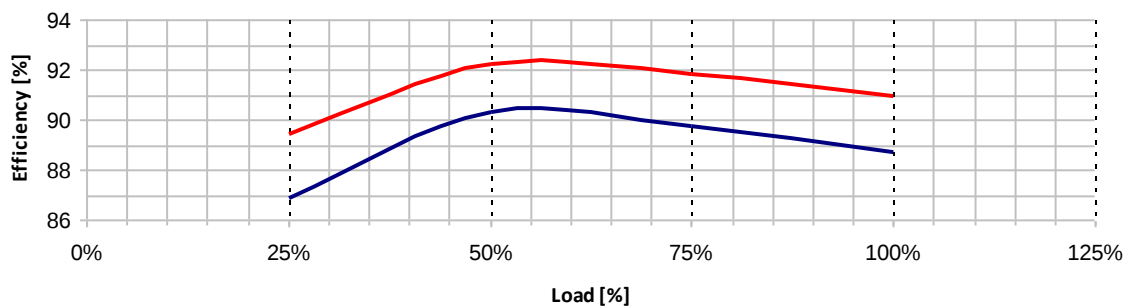
380 V



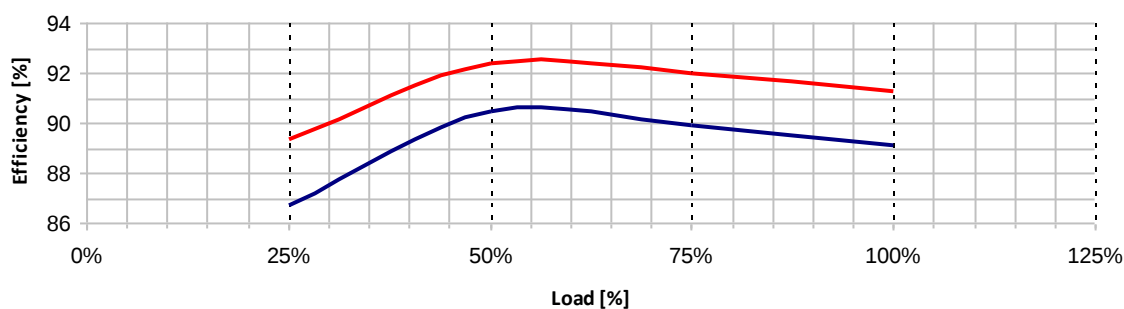
416 V



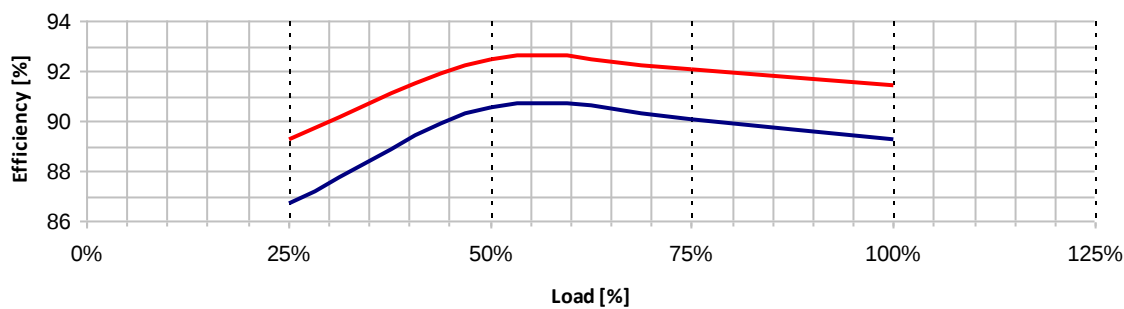
440 V



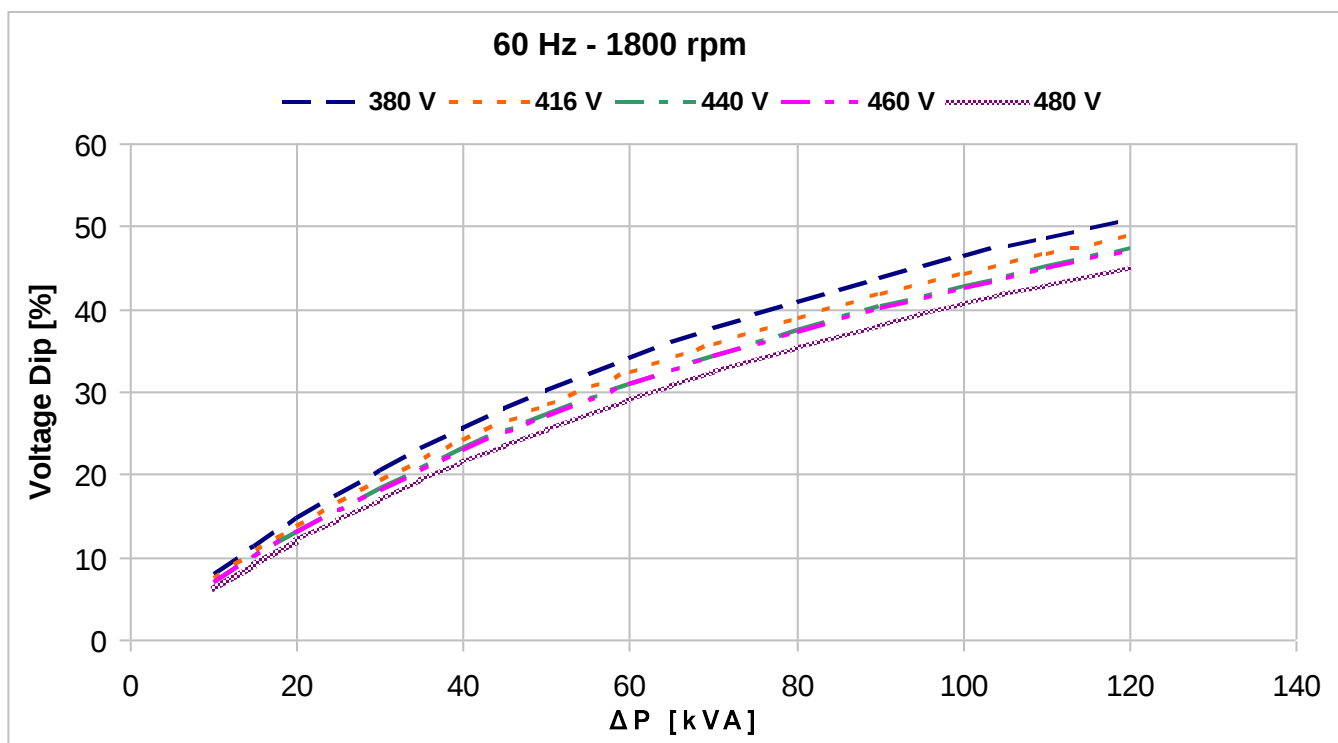
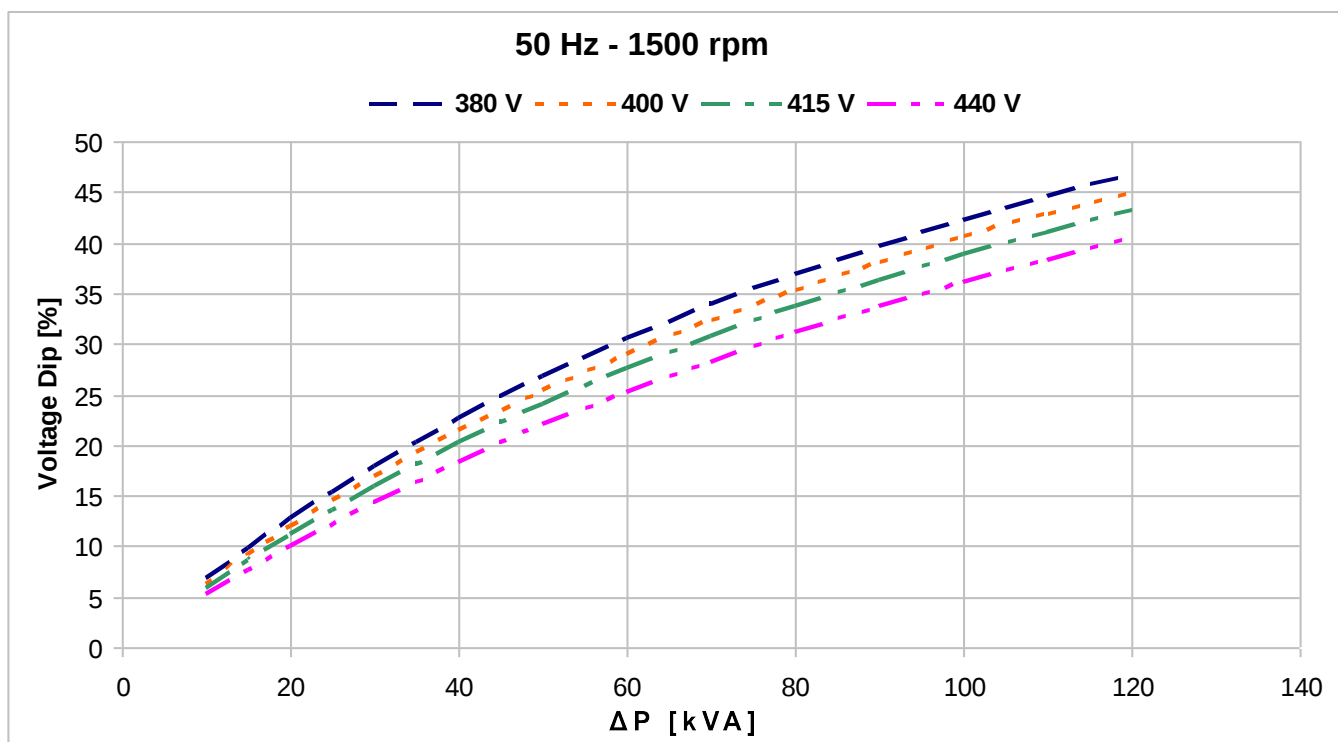
460 V



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.