

CONTINUOUS DUTY

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

AMBIENT TEMPERATURE		40°C	WINDING DATA										Winding code	M0
TEMPERATURE RISE		H											Number of leads	12
INSULATION CLASS		H											Winding pitch	2/3
POWER FACTOR		0,8												
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	21,9	23,0	23,0	23,0	25,4	27,1	27,7	30,0	30,0			
		kW	17,5	18,4	18,4	18,4	20,3	21,7	22,2	24,0	24,0			
EFFICIENCY [%] @ 0,8 p.f.		4/4	86,2	87,5	87,1	86,8	85,8	86,4	86,9	87,7	88,3			
		3/4	88,4	88,9	88,9	88,7	88,3	88,6	89,0	89,5	89,9			
		2/4	89,5	89,4	89,3	89,3	89,4	89,6	90,0	90,0	90,2			
EFFICIENCY [%] @ 1 p.f.		4/4	88,9	90,0	89,6	89,4	88,6	89,0	89,5	90,1	90,6			
		3/4	90,7	91,1	91,1	91,0	90,6	90,9	91,2	91,6	91,9			
		2/4	91,6	91,5	91,4	91,4	91,5	91,7	92,0	92,0	92,2			
SHORT CIRCUIT RATIO		SCR	0,43	0,45	0,48	0,54	0,31	0,34	0,38	0,38	0,41			
REACTANCES [%]														
Direct axis synchronous		X _d	303	287	267	237	312	375	343	340	312			
Quadrature axis synchronous		X _q	170	161	150	133	236	210	192	191	175			
Direct axis transient		X' _d	29,2	27,7	25,7	22,9	40,7	36,2	33,1	32,8	30,1			
Direct axis subtransient		X'' _d	13,4	12,7	11,8	10,5	18,6	16,6	15,2	15,0	13,8			
Quadrature axis subtransient		X'' _q	17,0	16,1	15,0	13,3	23,6	21,0	19,2	19,1	17,5			
Negative sequence		X ₂	15,2	14,4	13,4	11,9	21,1	18,8	17,2	17,0	15,7			
Zero sequence		X ₀	2,7	2,6	2,4	2,1	3,8	3,4	3,1	3,1	2,8			
TIME CONSTANTS [s]														
Open circuit		T' _{do}										0,4		
Transient		T' _d										0,04		
Subtransient		T'' _d										0,005		
Armature		T _a										0,005		

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication	6310 2RS C3 / Prelubricated
N-end bearing/Lubrication	6309 2RS C3 / Prelubricated
Overspeed [r.p.m.]	2250
Inertia (J) [kgm ²]	Refer to B34 construction 0,135
Weight [kg]	Refer to B34 construction 150
Method of cooling	IC01
Cooling air required [m ³ /s] @ 50/60 Hz	0,11 / 0,14
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	0,57
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

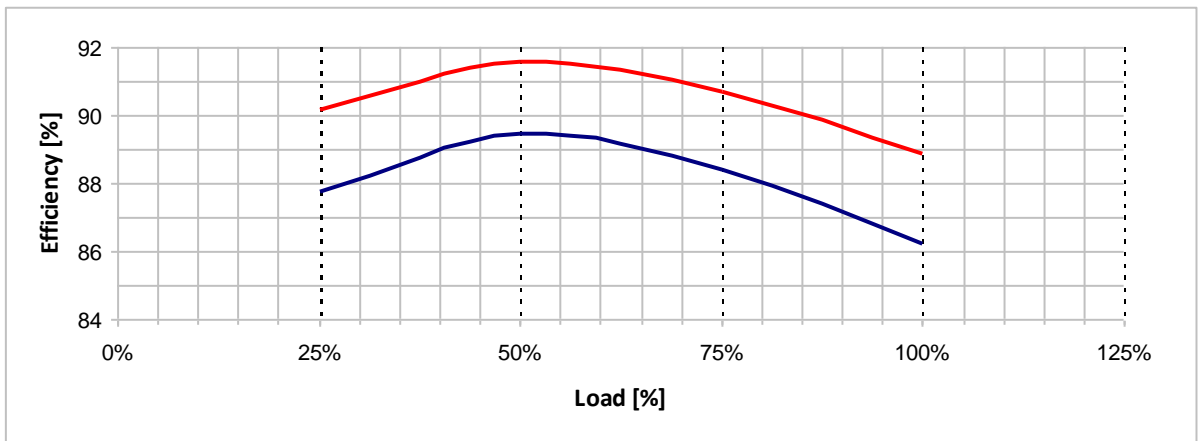
STANDARDS

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

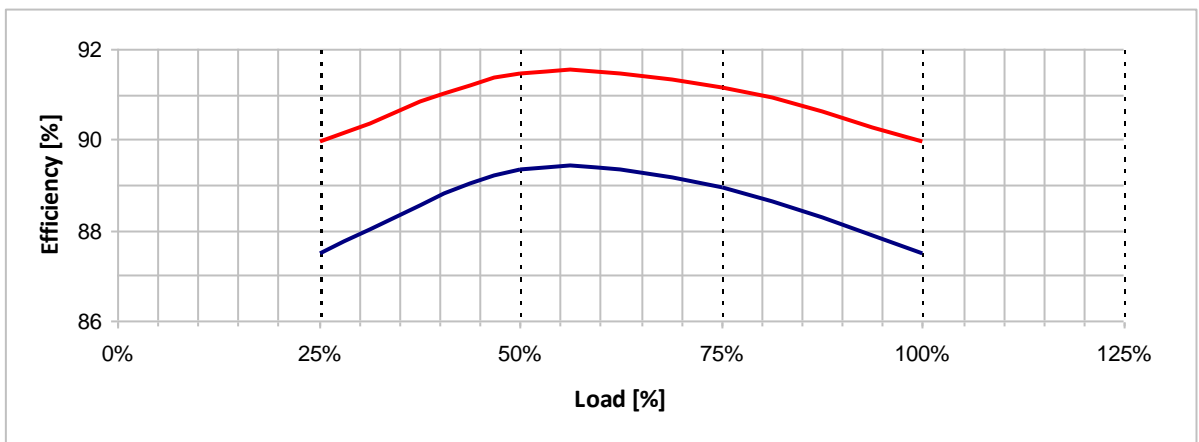
Typical efficiency curves

50 Hz - 1500 rpm

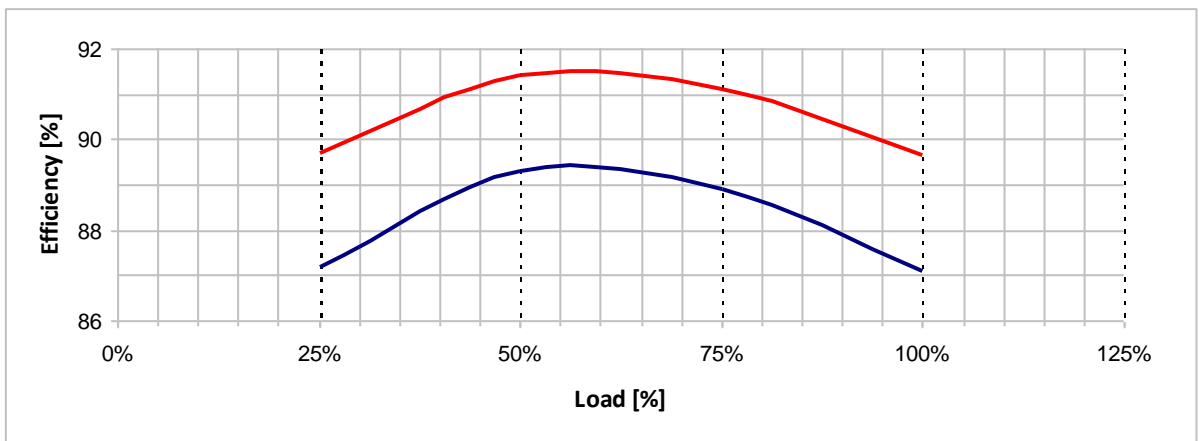
380 V



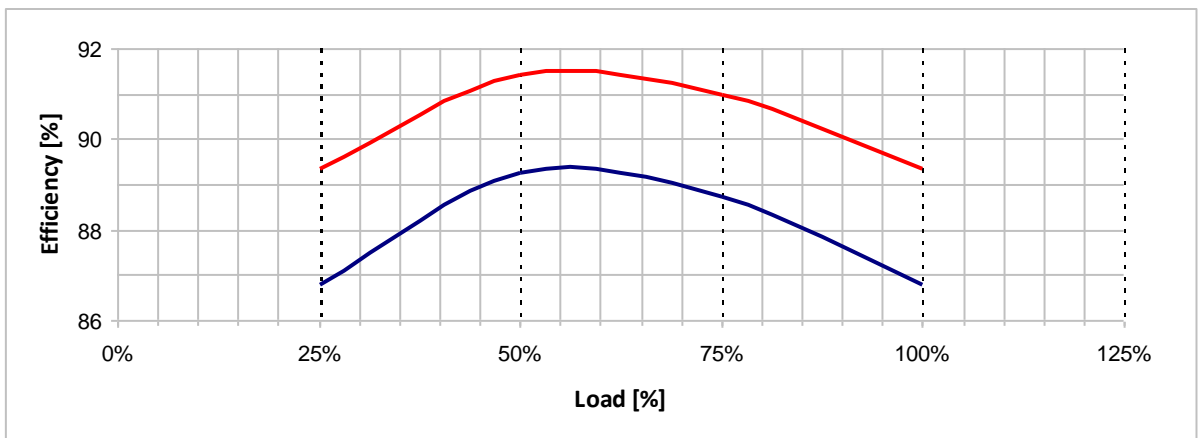
400 V



415 V



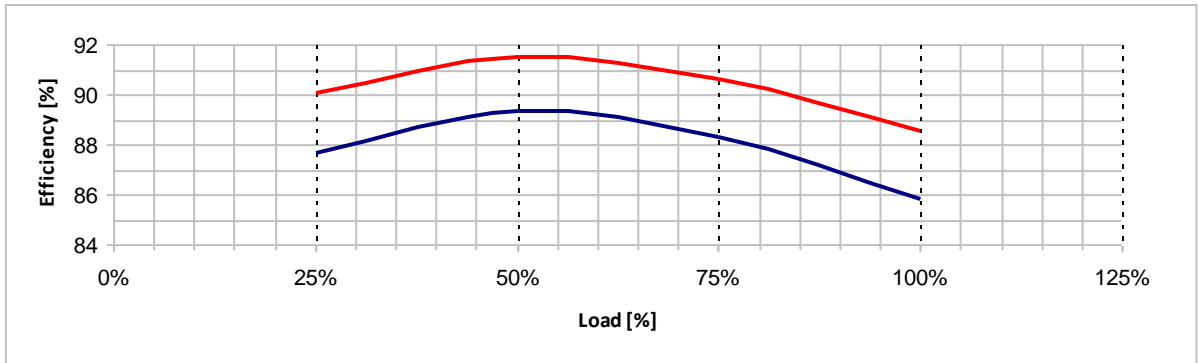
440 V



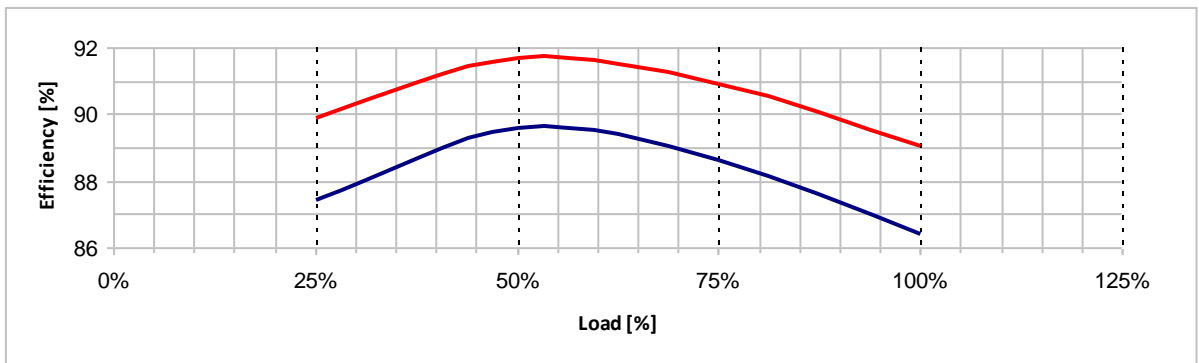
Typical efficiency curves

60 Hz - 1800 rpm

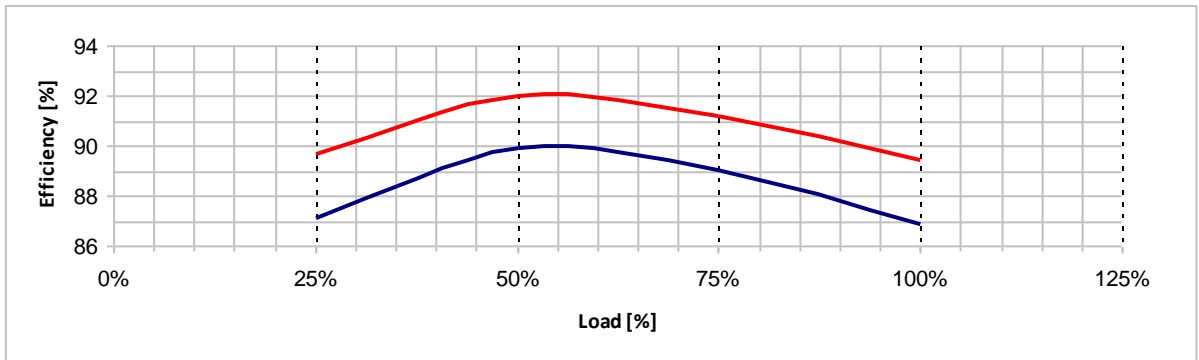
380 V



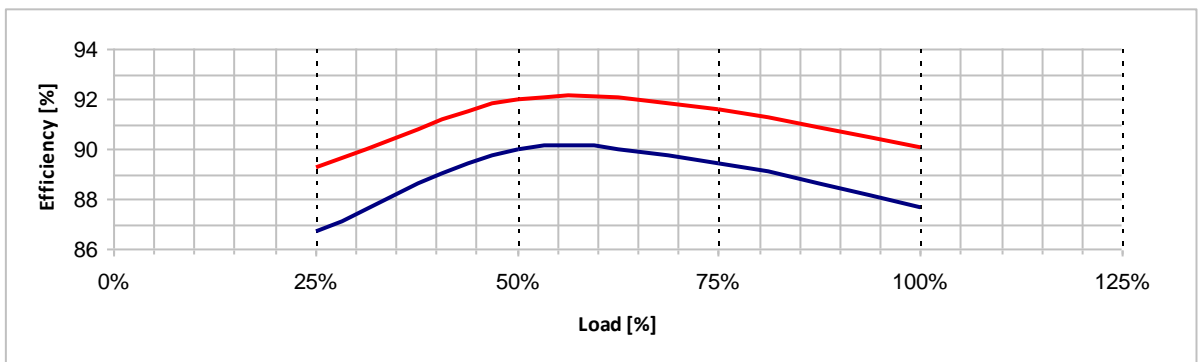
416 V



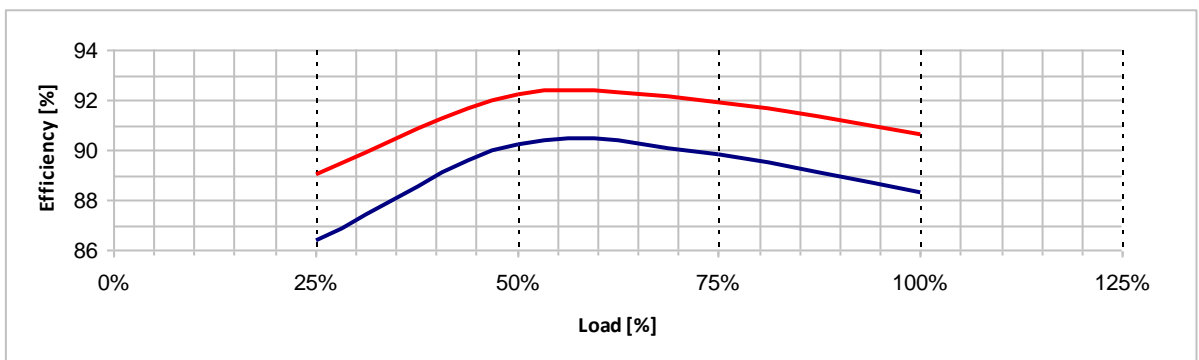
440 V



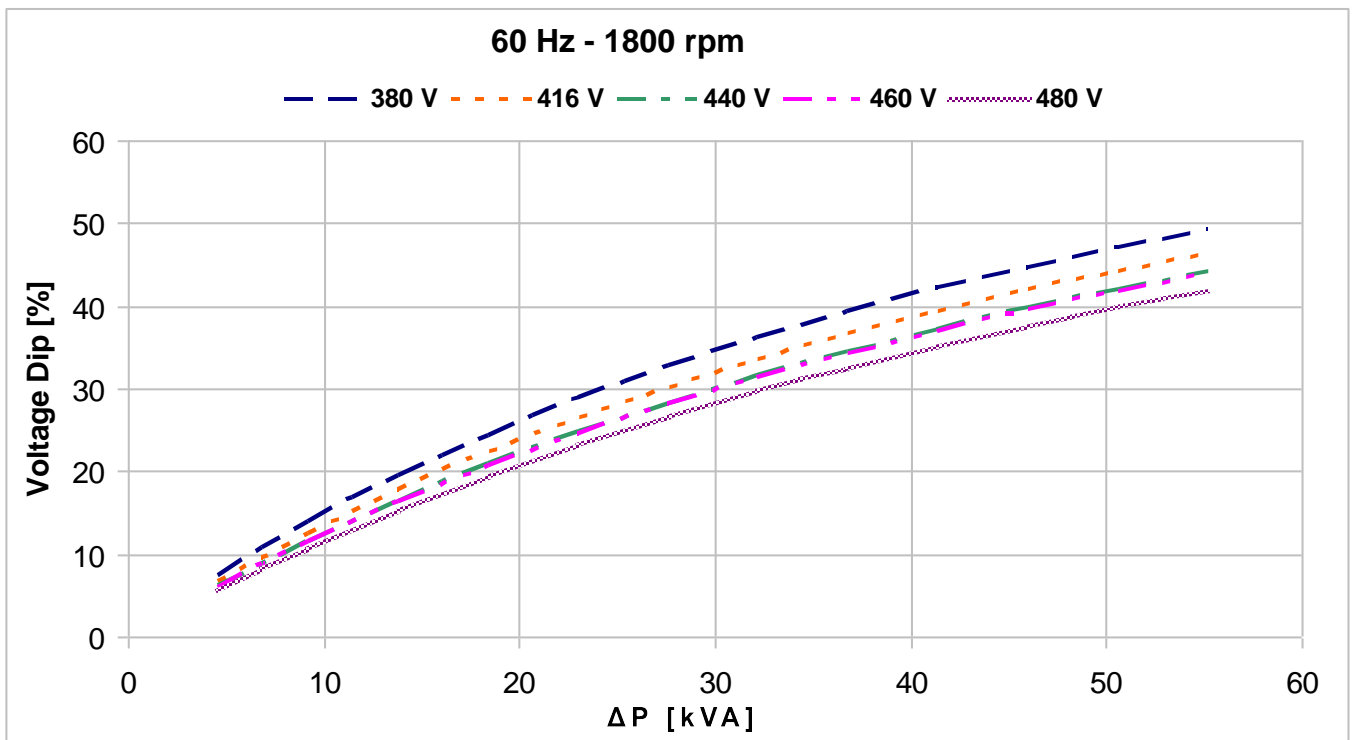
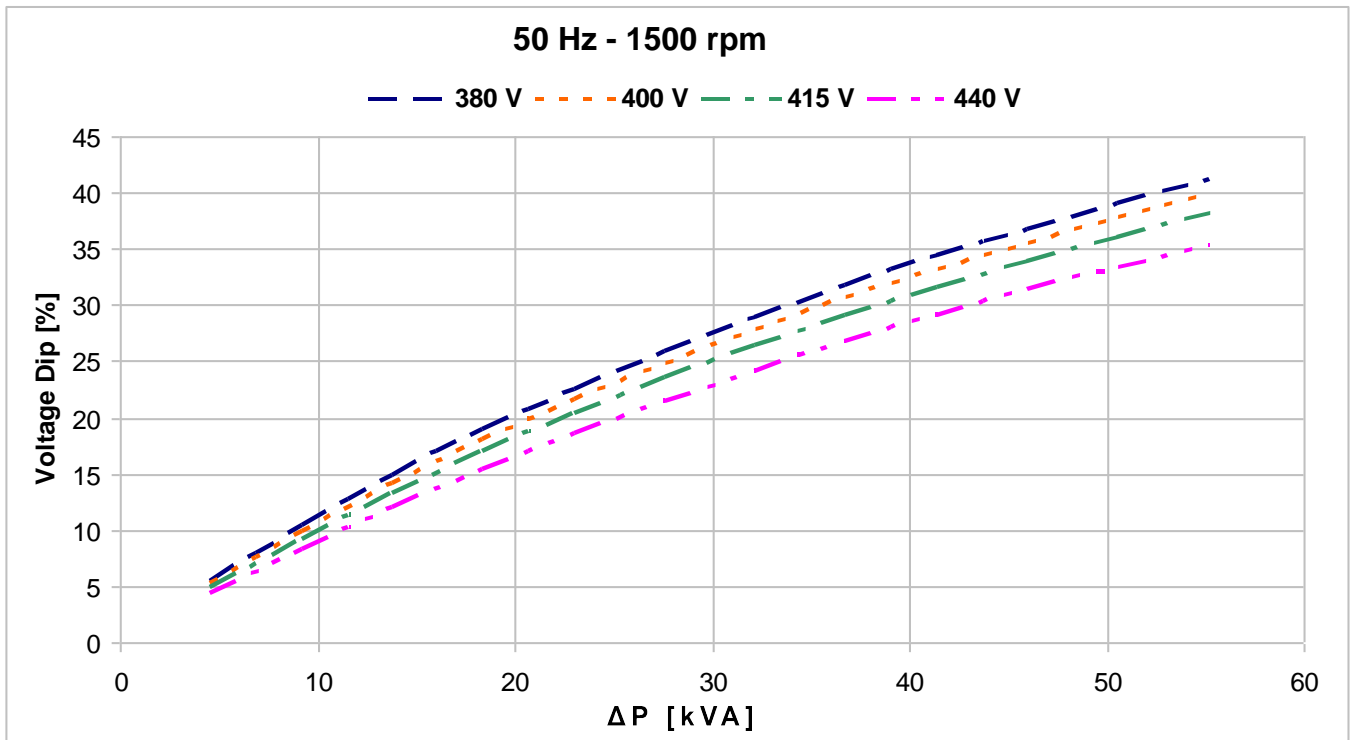
460 V



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.