

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

AMBIENT TEMPERATURE TEMPERATURE RISE INSULATION CLASS POWER FACTOR	40°C H H 0,8	WINDING DATA										Winding code Number of leads Winding pitch	M0 12 2/3	
FREQUENCY	Hz	50 Hz					60 Hz							
VOLTAGE	V	380	400	415	440	380	416	440	460	480	Connections	Star series Star parallel		
RATING POWER	kVA kW	13,3	14,0	14,0	14,0	13,7	14,8	15,7	16,0	17,0				
EFFICIENCY [%] @ 0,8 p.f.	4/4 3/4 2/4	82,7	85,0	84,7	83,6	82,2	83,2	84,0	84,9	85,8				
EFFICIENCY [%] @ 1 p.f.	4/4 3/4 2/4	86,0	87,9	87,6	86,7	85,5	86,3	87,1	87,8	88,6				
SHORT CIRCUIT RATIO	SCR	0,49	0,52	0,56	0,63	0,40	0,44	0,47	0,50	0,51				
REACTANCES [%]														
Direct axis synchronous	Xd	269	256	238	212	259	300	285	265	259				
Quadrature axis synchronous	Xq	152	144	134	119	187	169	160	149	146				
Direct axis transient	X'd	28,0	26,6	24,7	22,0	34,6	31,2	29,6	27,6	26,9				
Direct axis subtransient	X''d	14,0	13,3	12,4	11,0	17,3	15,6	14,8	13,8	13,5				
Quadrature axis subtransient	X''q	16,8	16,0	14,9	13,2	20,8	18,8	17,8	16,6	16,2				
Negative sequence	X ₂	15,4	14,6	13,6	12,1	19,0	17,1	16,2	15,1	14,8				
Zero sequence	X ₀	2,8	2,7	2,5	2,2	3,5	3,1	3,0	2,8	2,7				
TIME CONSTANTS [s]														
Open circuit	T'do					0,356								
Transient	T'd					0,037								
Subtransient	T''d					0,094								
Armature	T _a					0,003								

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 0,098
Weight [kg]	Refer to B34 construction 109
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	1,41
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

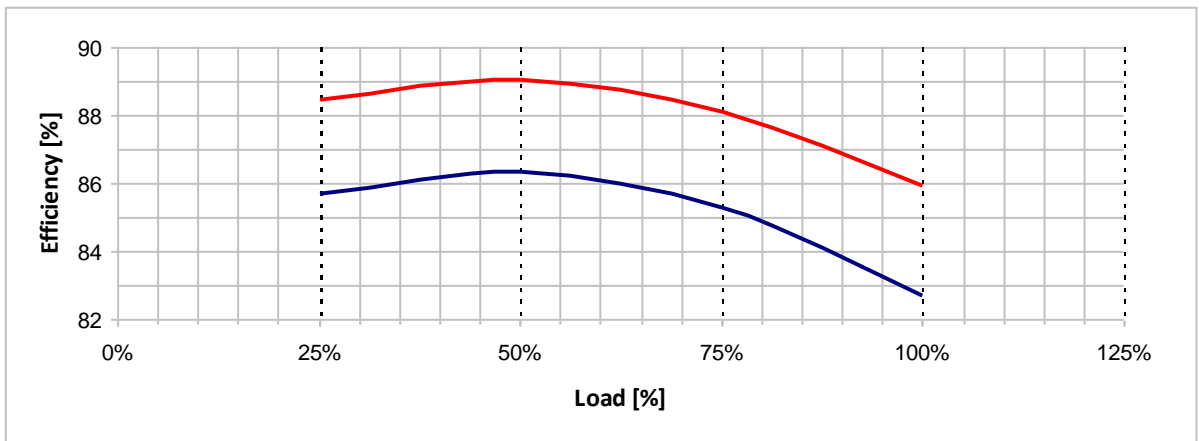
STANDARDS

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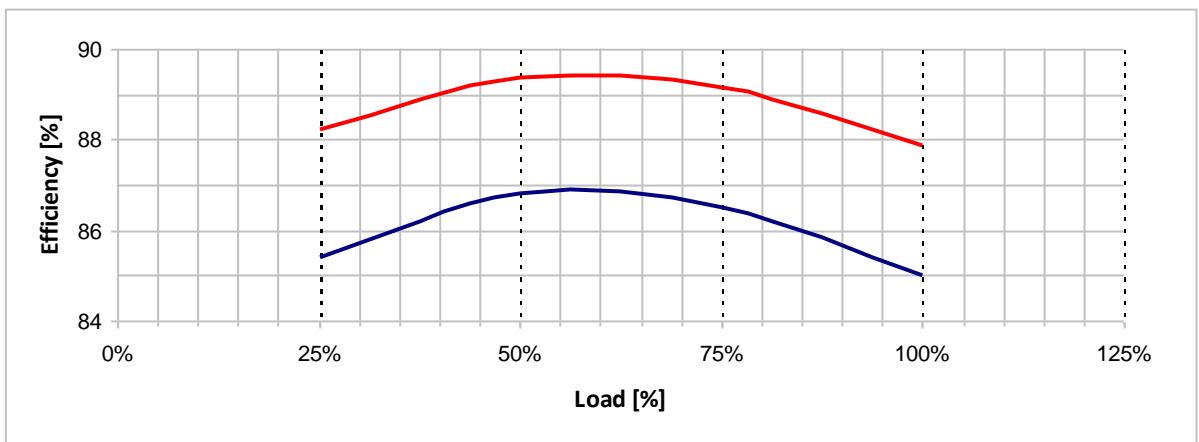
Typical efficiency curves

50 Hz - 1500 rpm

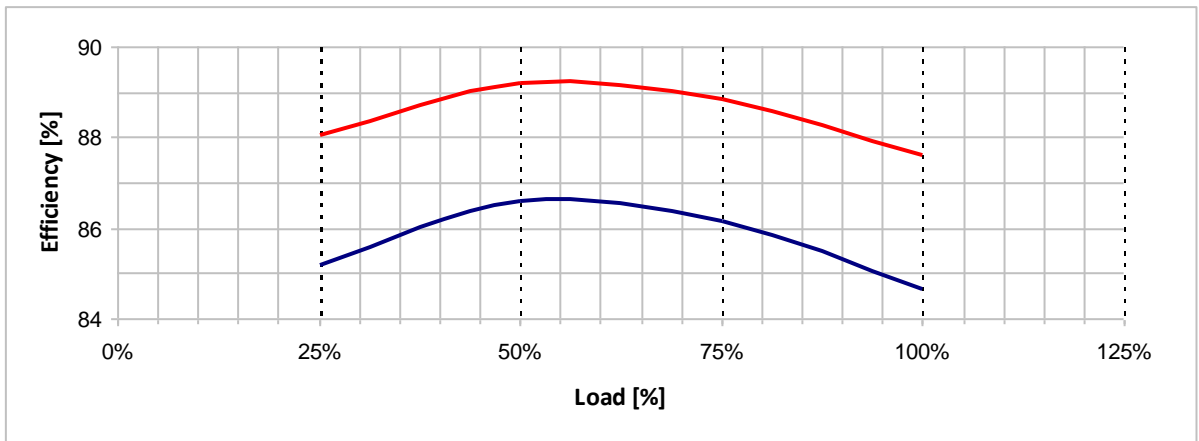
380 V



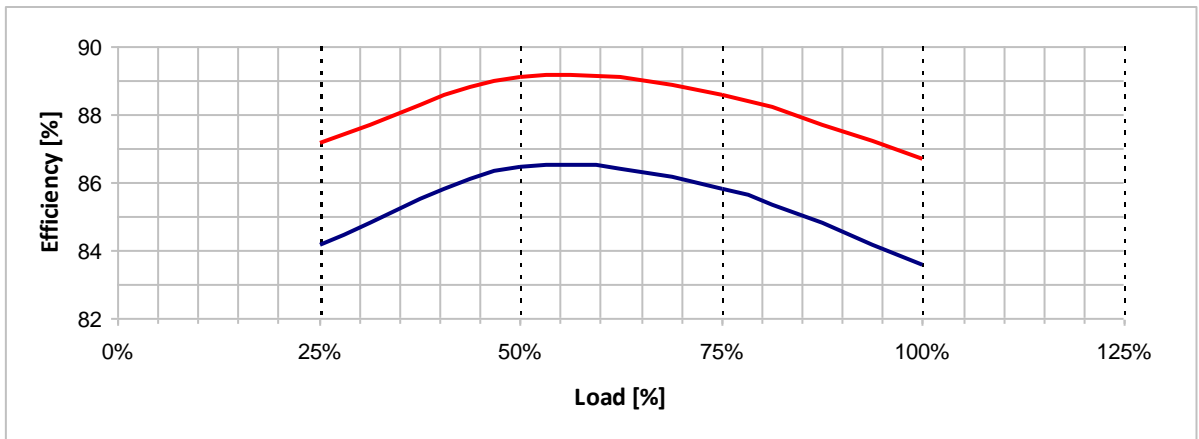
400 V



415 V



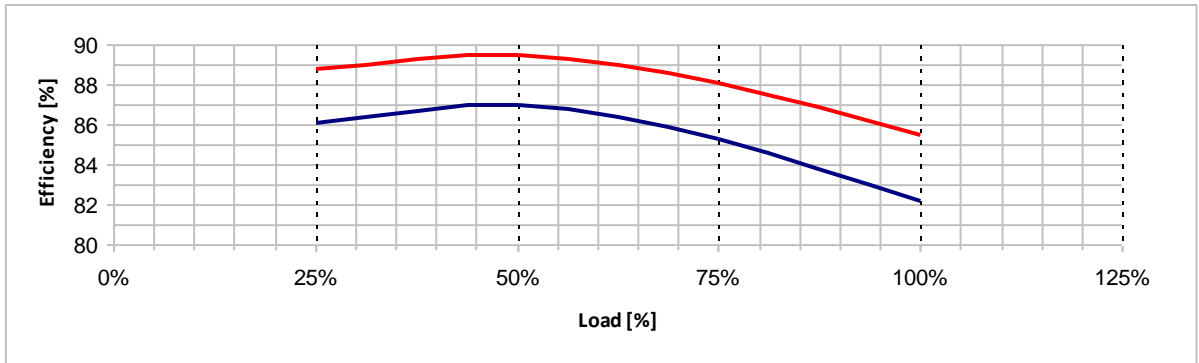
440 V



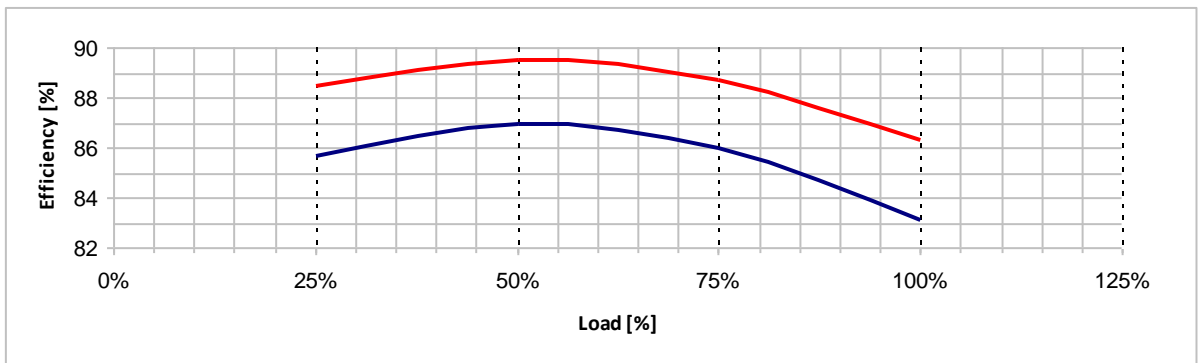
Typical efficiency curves

60 Hz - 1800 rpm

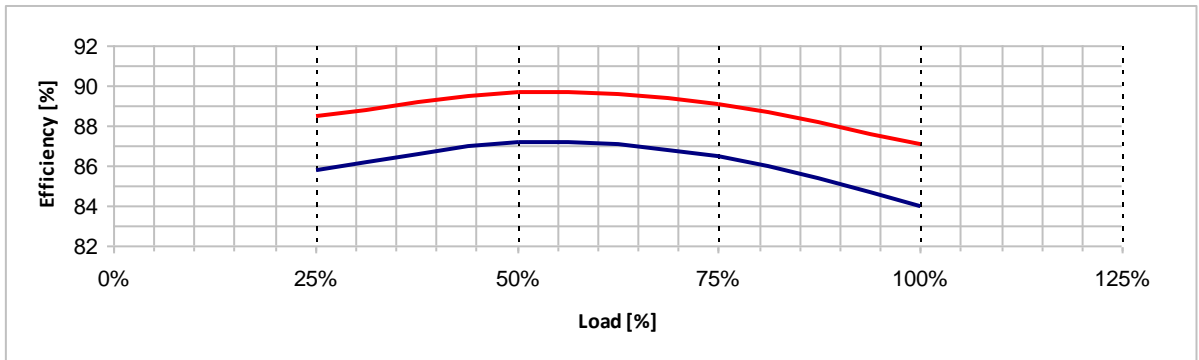
380 V



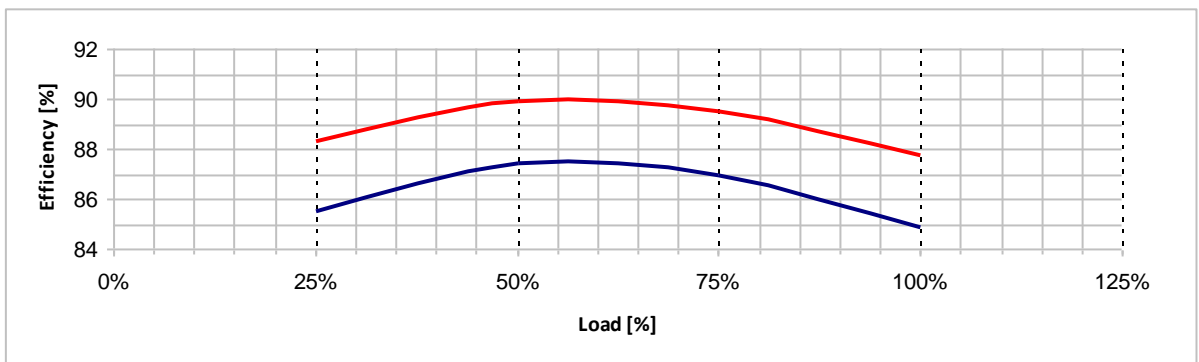
416 V



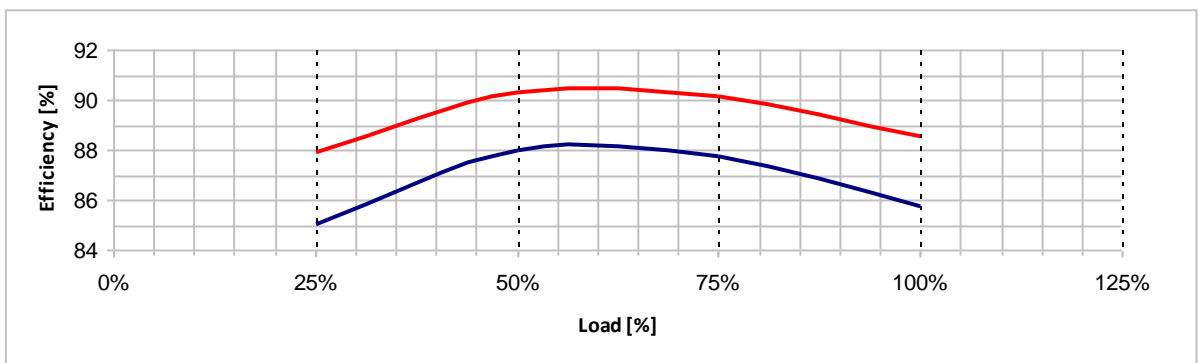
440 V



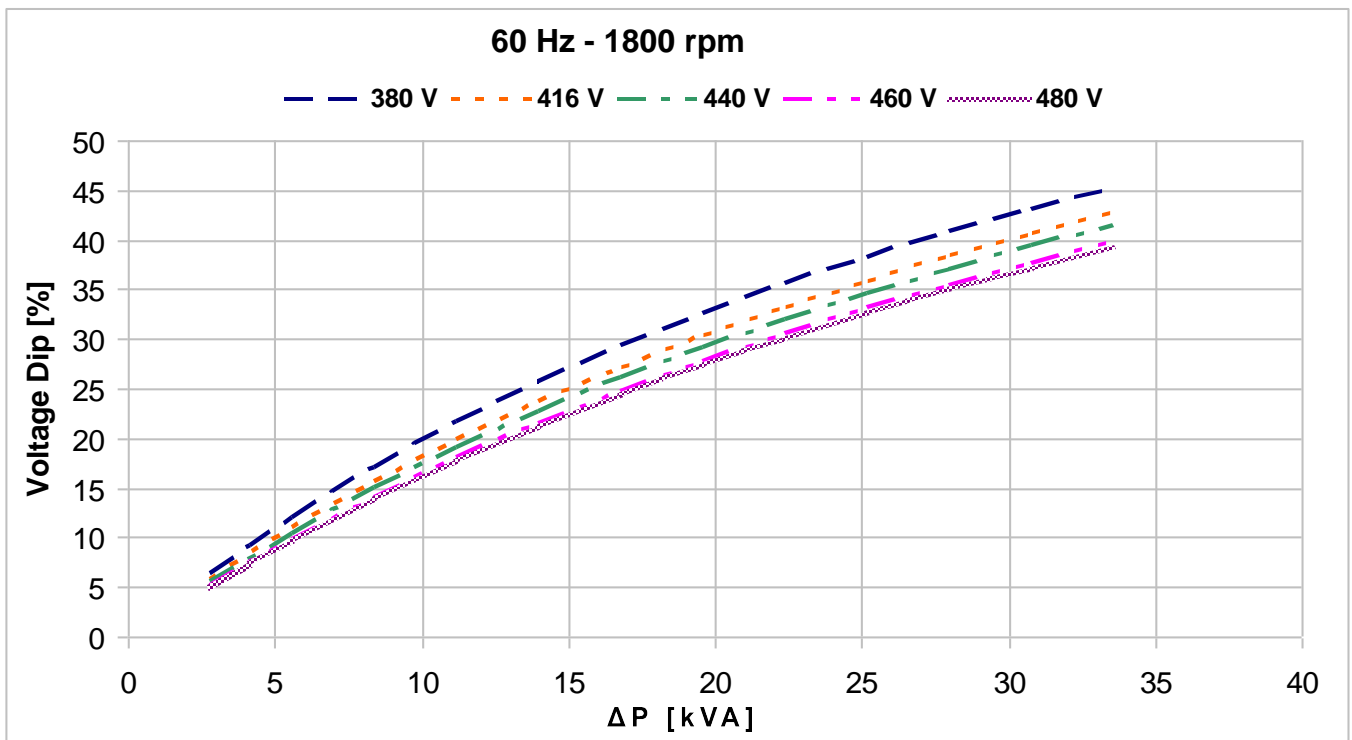
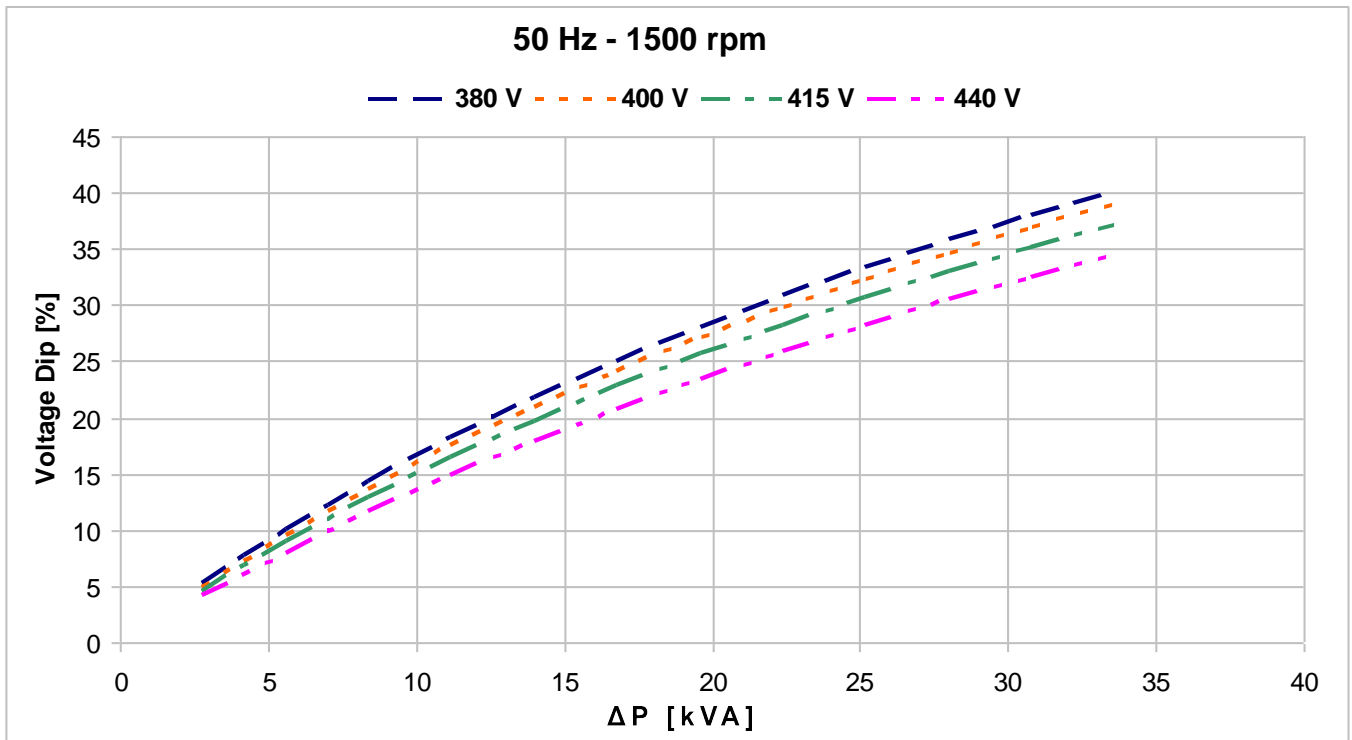
460 V



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.