

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 | | | | | | | |
|---|-----------------------|---------------|--------------|--------------|--------------|-----------------|--------------|--------------|--|
| | | 50 Hz | | | | 60 Hz | | | |
| | | Winding code | | 80 | | Number of leads | | 6 | |
| | | Winding pitch | | 2/3 | | | | | |
| FREQUENCY | Hz | 50 Hz | | | 60 Hz | | | | |
| VOLTAGE | Star V | 380 | 400 | 415 | 416 | 440 | 460 | 480 | |
| RATING | kVA kW | 1600 1280 | 1650 1320 | 1650 1320 | 1740 1392 | 1840 1472 | 1920 1536 | 1980 1584 | |
| EFFICIENCY [%] @ 0,8 p.f. | 4/4 | 95,8 | 96,0 | 96,1 | 96,0 | 96,1 | 96,3 | 96,3 | |
| | 3/4 | 95,9 | 96,1 | 96,1 | 96,2 | 96,3 | 96,4 | 96,4 | |
| | 2/4 | 96,0 | 96,2 | 95,9 | 96,2 | 96,3 | 96,4 | 96,4 | |
| EFFICIENCY [%] @ 1 p.f. | 4/4 | 96,7 | 96,8 | 96,9 | 96,8 | 96,9 | 97,1 | 97,1 | |
| | 3/4 | 96,8 | 96,9 | 96,9 | 97,0 | 97,1 | 97,2 | 97,2 | |
| | 2/4 | 96,8 | 97,0 | 96,8 | 97,0 | 97,1 | 97,2 | 97,2 | |
| SHORT CIRCUIT RATIO | SCR | 0,34 | 0,37 | 0,40 | 0,32 | 0,33 | 0,35 | 0,37 | |
| REACTANCES [%] | | | | | | | | | |
| Direct axis synchronous | X _d | 325 | 303 | 281 | 354 | 335 | 320 | 303 | |
| Quadrature axis synchronous | X _q | 181 | 169 | 157 | 197 | 187 | 178 | 169 | |
| Direct axis transient | X' _d | 29,8 | 27,7 | 25,7 | 32,4 | 30,6 | 29,2 | 27,7 | |
| Direct axis subtransient | X'' _d | 12,7 | 11,8 | 10,9 | 13,8 | 13,0 | 12,4 | 11,8 | |
| Quadrature axis subtransient | X'' _q | 13,2 | 12,3 | 11,4 | 14,4 | 13,6 | 13,0 | 12,3 | |
| Negative sequence | X ₂ | 12,9 | 12,0 | 11,2 | 14,1 | 13,3 | 12,7 | 12,0 | |
| Zero sequence | X ₀ | 2,9 | 2,7 | 2,5 | 3,1 | 2,9 | 2,8 | 2,7 | |
| TIME CONSTANTS [s] | | | | | | | | | |
| Open circuit | T' _{do} | | | | 3,47 | | | | |
| Transient | T' _d | | | | 0,32 | | | | |
| Subtransient | T'' _d | | | | 0,018 | | | | |
| Armature | T _a | | | | 0,032 | | | | |

MECHANICAL CHARACTERISTICS

| | |
|---|-----------------------------------|
| D-end bearing/Lubrication | 6326 C3 / With grease nipple |
| N-end bearing/Lubrication | 6320 C3 / With grease nipple |
| Overspeed [r.p.m.] | 2250 |
| Inertia (J) [kgm ²] | Refer to B34 construction 34 |
| Weight [kg] | Refer to B34 construction 3600 |
| Method of cooling | IC01 |
| Cooling air required [m ³ /s] @ 50/60 Hz | 1,50 / 1,80 |
| Degree of protection | IP23 |
| Types of construction available | B2 (SAE) - IM B34 - IM B20 |
| Direction of rotation (Standard) | CW |

OTHER DATA

| | |
|--|--|
| Phase resistance [Ω] @ 20 °C - Star series | 1,15 |
| 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

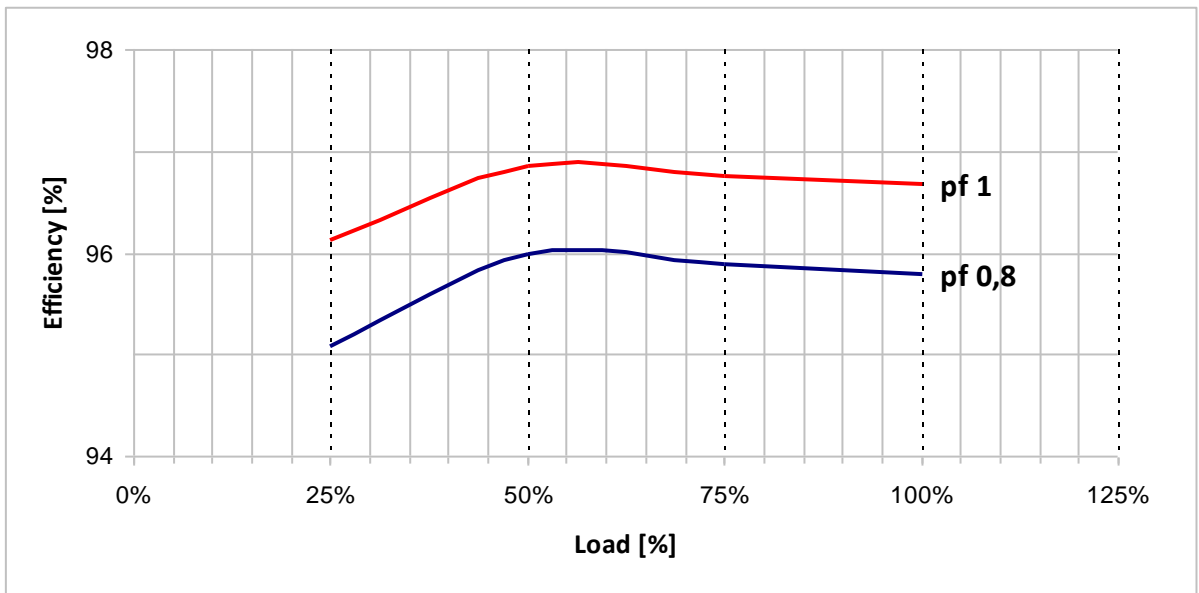
IEC 60034-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111; OVE M-10, NEMA MG 1.22.

Typical efficiency curves
50 Hz - 1500 rpm

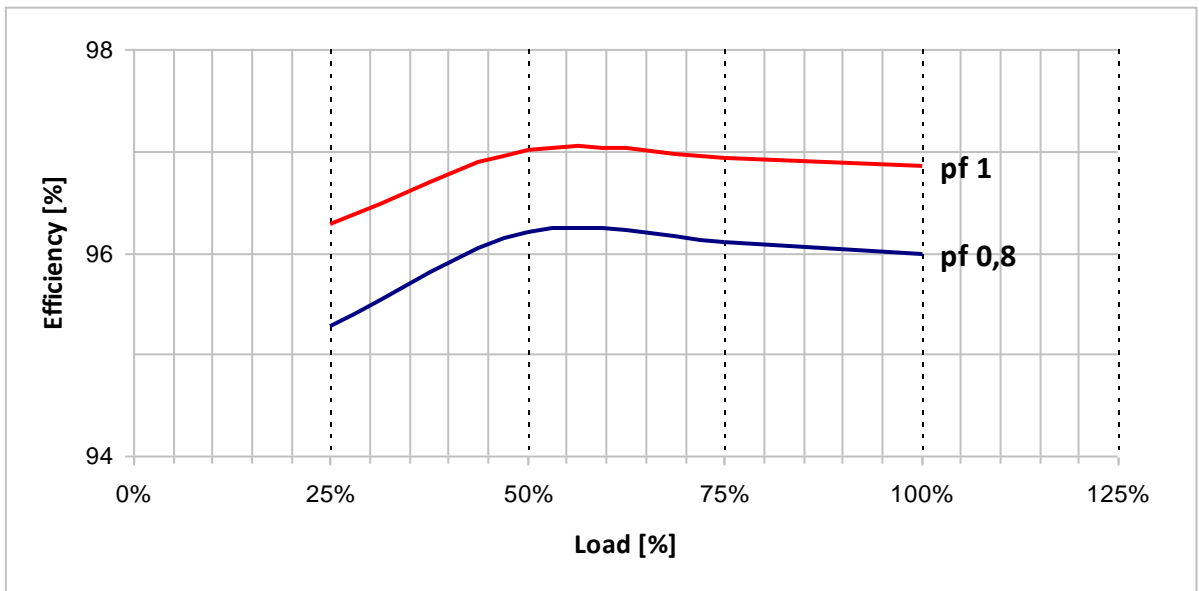
Typical efficiency curves

50 Hz - 1500 rpm

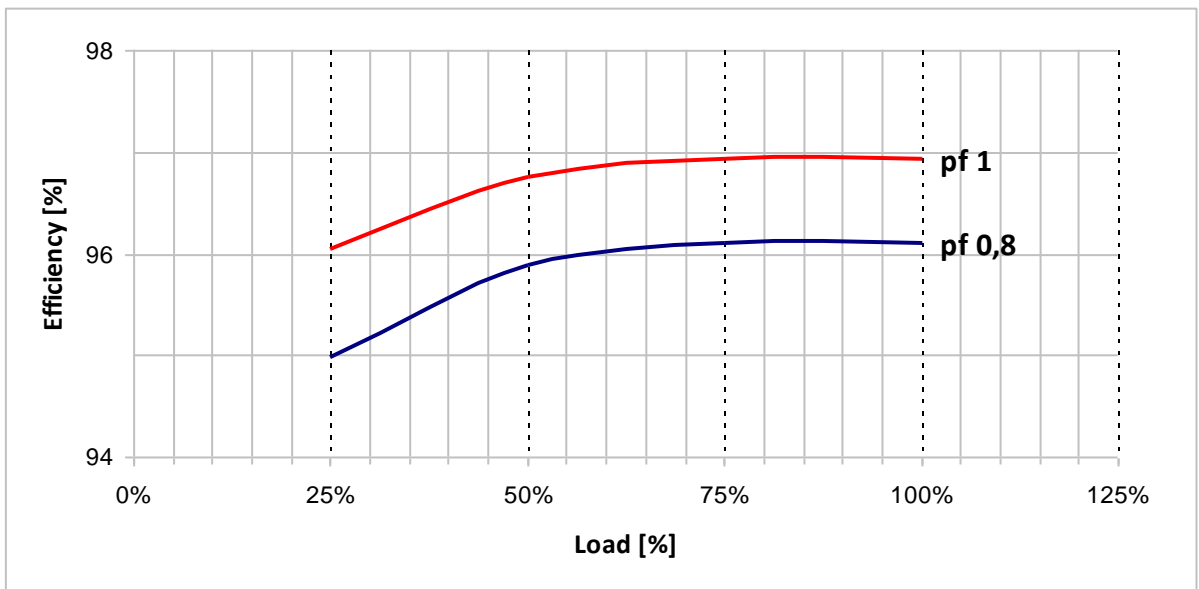
380 V

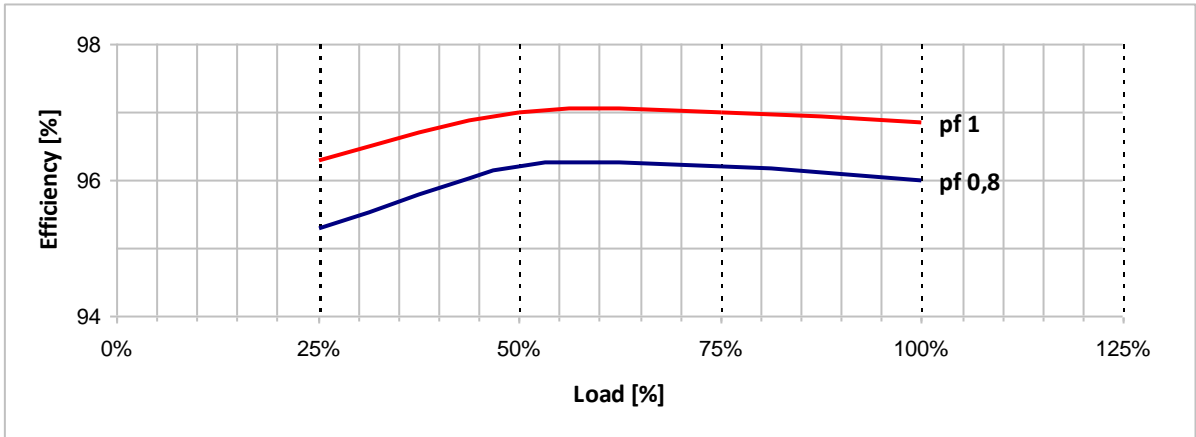
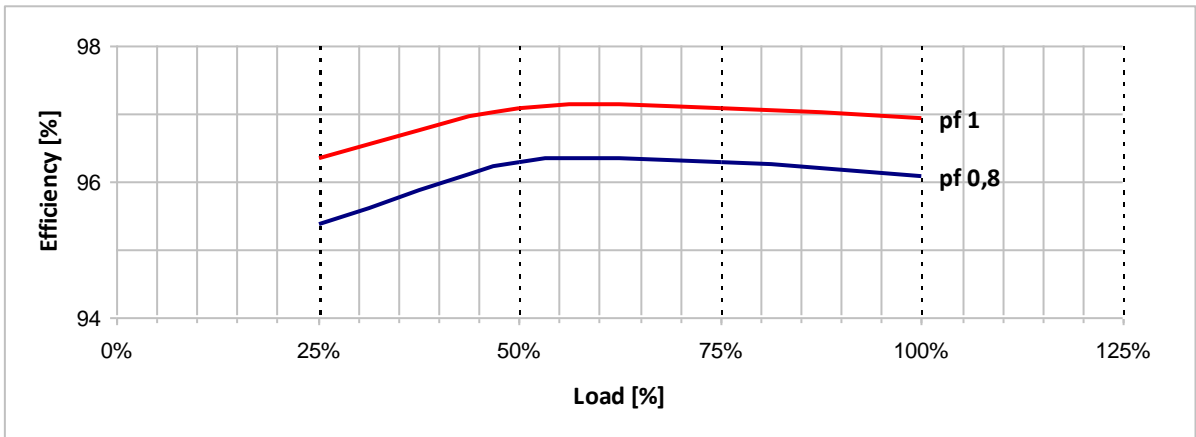
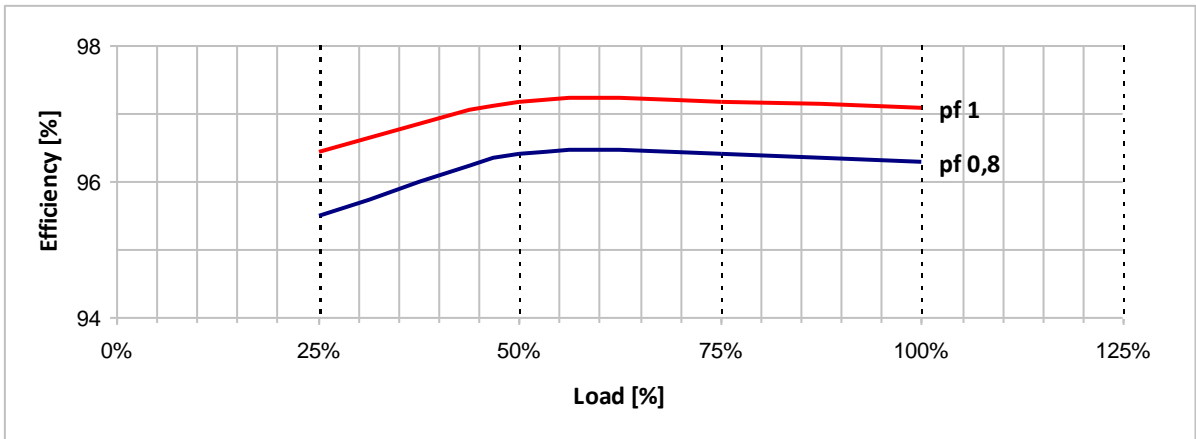
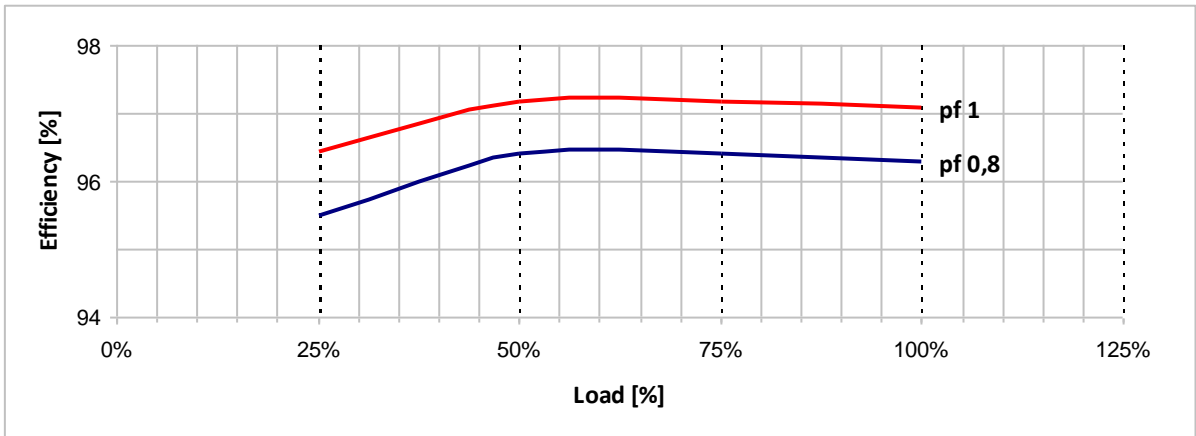


400 V

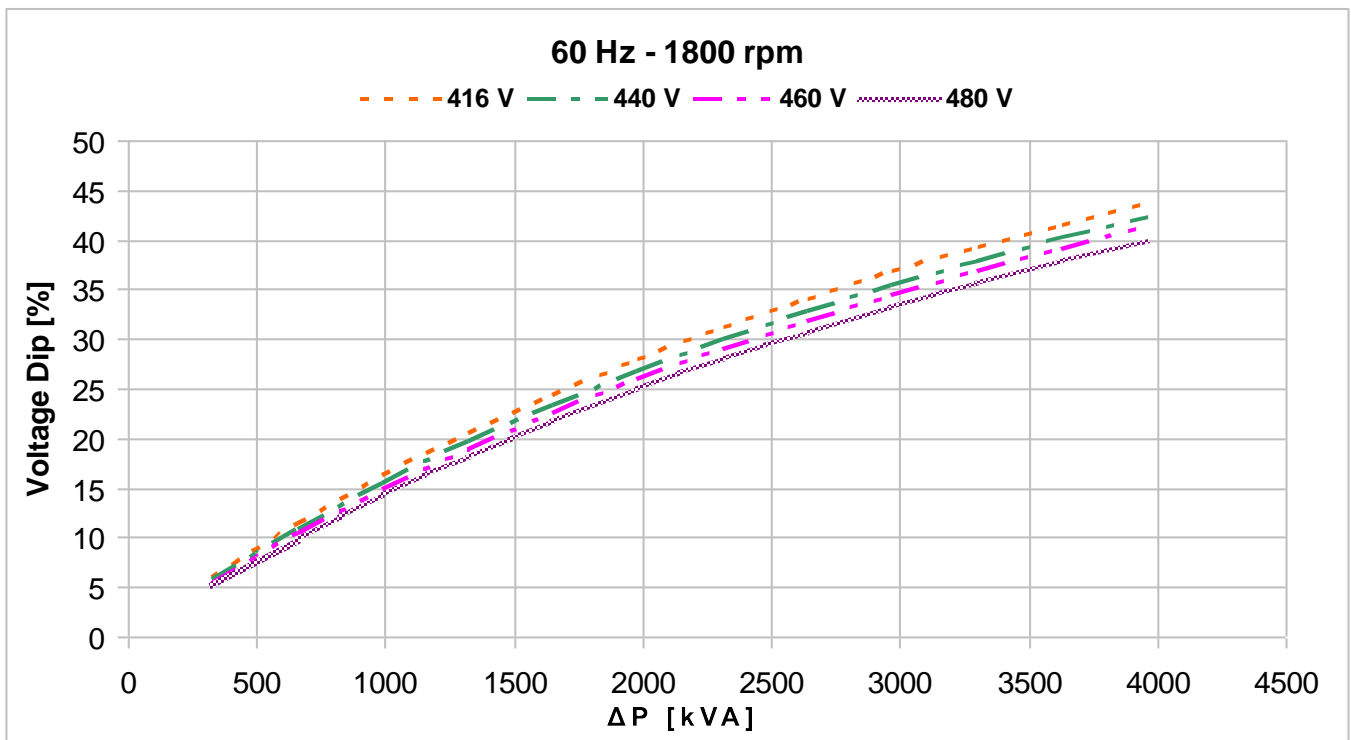
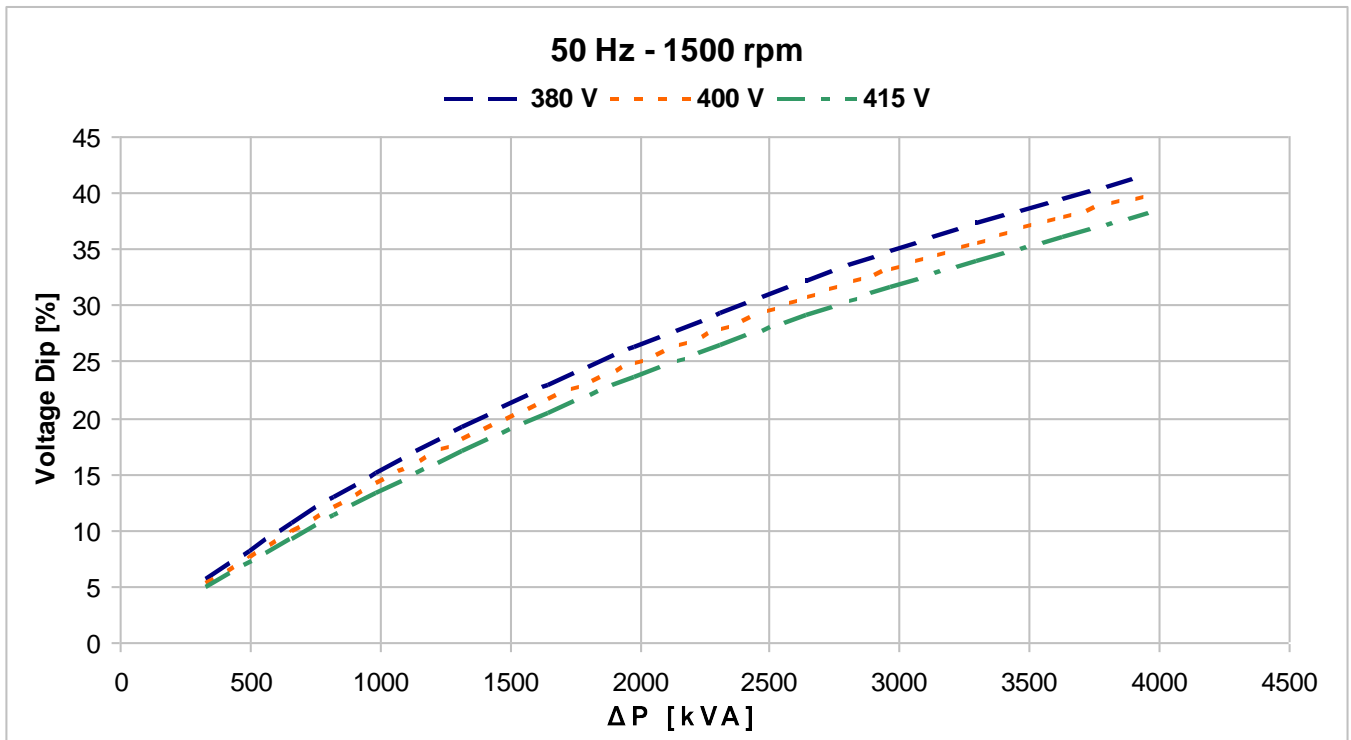


415 V



Typical efficiency curves
60 Hz - 1800 rpm
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.