

CONTINUOUS DUTY

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

| AMBIENT TEMPERATURE | | 40°C | WINDING DATA | | | | | | | | | | |
|------------------------------|-------------|------------------------------|--------------|------|------|------|-------|-----------------|------------|------|------|-----|--|
| TEMPERATURE RISE | | H | | | | | | Winding code | M0 | | | | |
| INSULATION CLASS | | H | | | | | | Number of leads | 12 | | | | |
| POWER FACTOR | | 0,8 | | | | | | Winding pitch | 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 | 300 | 300 | 300 | 280 | 310 | 320 | 350 | 360 | 370 | | |
| | | kW | 240 | 240 | 240 | 224 | 248 | 256 | 280 | 288 | 296 | | |
| EFFICIENCY [%] @ 0,8 p.f. | | 4/4 | 92,7 | 93,1 | 93,0 | 93,4 | 92,5 | 93,1 | 93,4 | 93,5 | 93,8 | | |
| | | 3/4 | 93,4 | 93,7 | 93,6 | 93,7 | 93,1 | 93,5 | 93,8 | 93,9 | 94,1 | | |
| | | 2/4 | 93,9 | 93,9 | 93,9 | 93,8 | 93,3 | 93,6 | 93,9 | 94,0 | 94,1 | | |
| EFFICIENCY [%] @ 1 p.f. | | 4/4 | 94,2 | 94,5 | 94,5 | 94,8 | 94,0 | 94,5 | 94,8 | 94,8 | 95,1 | | |
| | | 3/4 | 94,8 | 95,0 | 94,9 | 95,0 | 94,5 | 94,9 | 95,1 | 95,2 | 95,3 | | |
| | | 2/4 | 95,2 | 95,2 | 95,2 | 95,1 | 94,7 | 94,9 | 95,2 | 95,3 | 95,3 | | |
| SHORT CIRCUIT RATIO | | SCR | 0,24 | 0,27 | 0,29 | 0,35 | 0,20 | 0,23 | 0,23 | 0,25 | 0,26 | | |
| REACTANCES [%] | | | | | | | | | | | | | |
| Direct axis synchronous | | X _d | 448 | 404 | 375 | 312 | 415 | 478 | 467 | 440 | 415 | | |
| Quadrature axis synchronous | | X _q | 250 | 226 | 210 | 174 | 311 | 267 | 261 | 246 | 232 | | |
| Direct axis transient | | X' _d | 43,7 | 39,4 | 36,6 | 30,4 | 54,1 | 46,6 | 45,6 | 42,9 | 40,5 | | |
| Direct axis subtransient | | X'' _d | 20,6 | 18,6 | 17,3 | 14,3 | 25,6 | 22,0 | 21,5 | 20,3 | 19,1 | | |
| Quadrature axis subtransient | | X'' _q | 22,8 | 20,6 | 19,1 | 15,9 | 28,3 | 24,4 | 23,8 | 22,4 | 21,2 | | |
| Negative sequence | | X ₂ | 21,7 | 19,6 | 18,2 | 15,1 | 26,9 | 23,2 | 22,7 | 21,3 | 20,1 | | |
| Zero sequence | | X ₀ | 4,8 | 4,3 | 4,0 | 3,3 | 5,9 | 5,1 | 5,0 | 4,7 | 4,4 | | |
| TIME CONSTANTS [s] | | | | | | | | | | | | | |
| Open circuit | | T' _{do} | 1,6 | | | | | | | | | | |
| Transient | | T' _d | 0,145 | | | | | | | | | | |
| Subtransient | | T'' _d | 0,014 | | | | | | | | | | |
| Armature | | T _a | 0,018 | | | | | | | | | | |

MECHANICAL CHARACTERISTICS

| | |
|---|-----------------------------------|
| D-end bearing/Lubrication | 6319 C3 / With grease nipple |
| N-end bearing/Lubrication | 6315 2Z C3 / Prelubricated |
| Overspeed [r.p.m.] | 2250 |
| Inertia (J) [kgm ²] | Refer to B34 construction 3,66 |
| Weight [kg] | Refer to B34 construction 830 |
| Method of cooling | IC01 |
| Cooling air required [m ³ /s] @ 50/60 Hz | 0,83 / 1,00 |
| Degree of protection | IP23 |
| Types of construction available | B2 (SAE) - IM B34 |
| Direction of rotation (Standard) | CW |

OTHER DATA

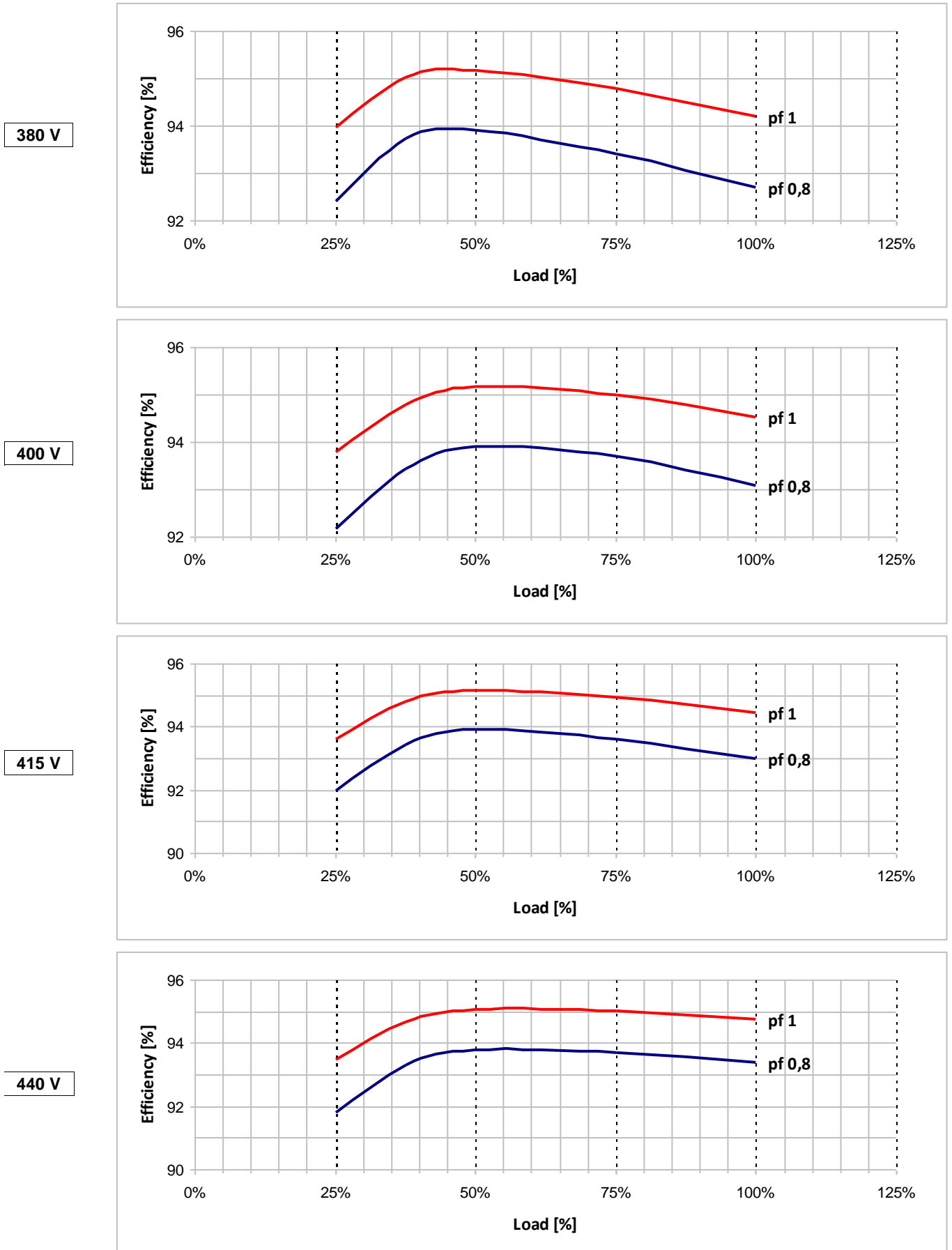
| | |
|--|--|
| Phase resistance [Ω] @ 20 °C - Star series | 0,016 |
| Overloads | 10% for 1 hour every 12 hours |
| 3-phase short circuit sustained current | ≥ 300 % (3 I _n) with auxiliary winding |
| Voltage regulation accuracy | ± 0,5 % I _n steady state condition |
| Radio interference | EN 55011 - Class B Group 1 |
| Wave form THF | < 2% |
| Total harmonic content | < 2% - At no load |

STANDARDS

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| 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

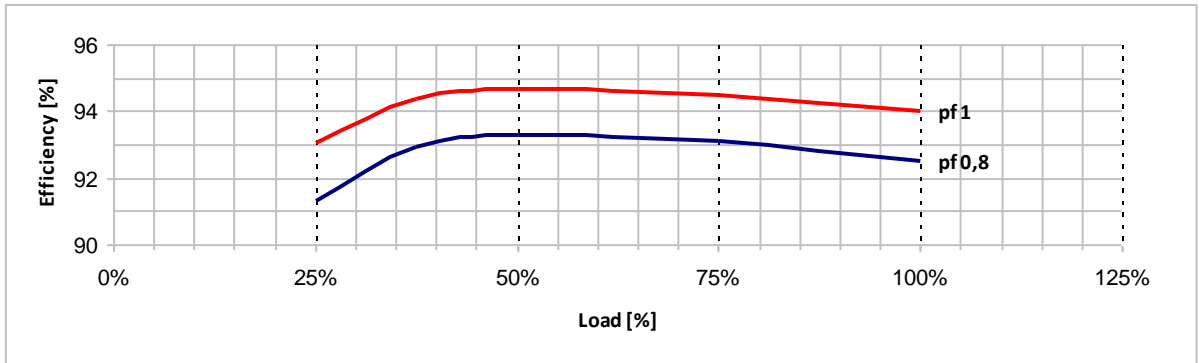
50 Hz - 1500 rpm



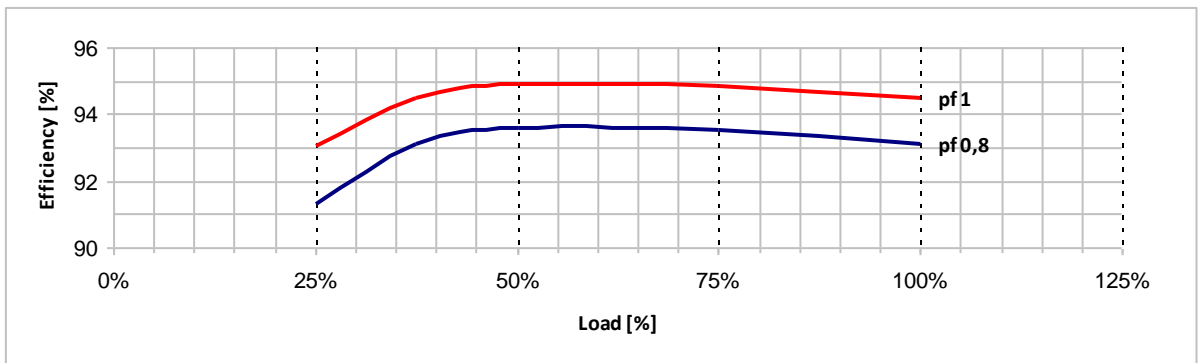
Typical efficiency curves

60 Hz - 1800 rpm

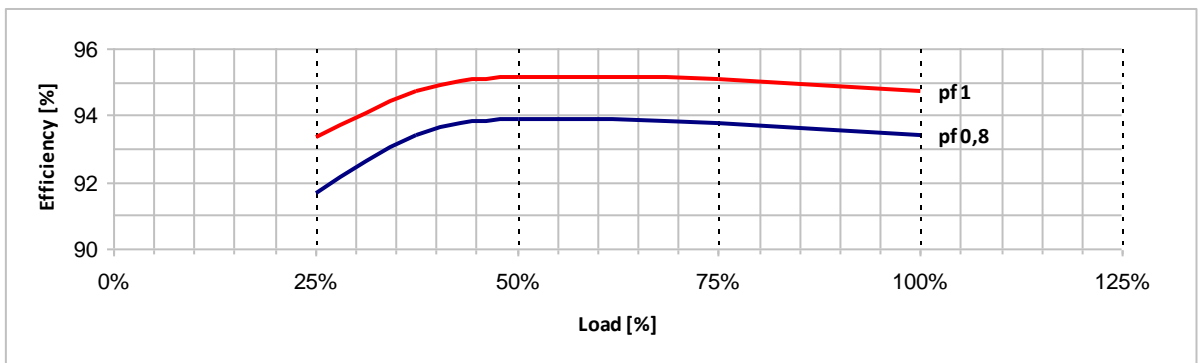
380 V



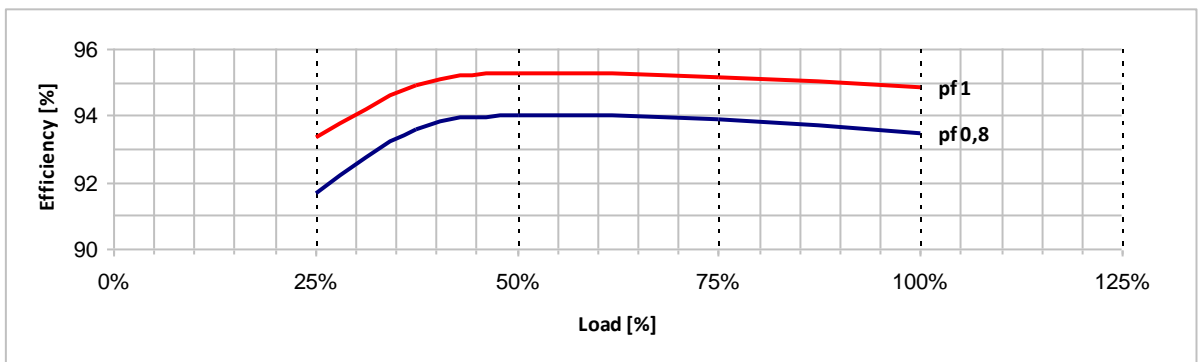
416 V



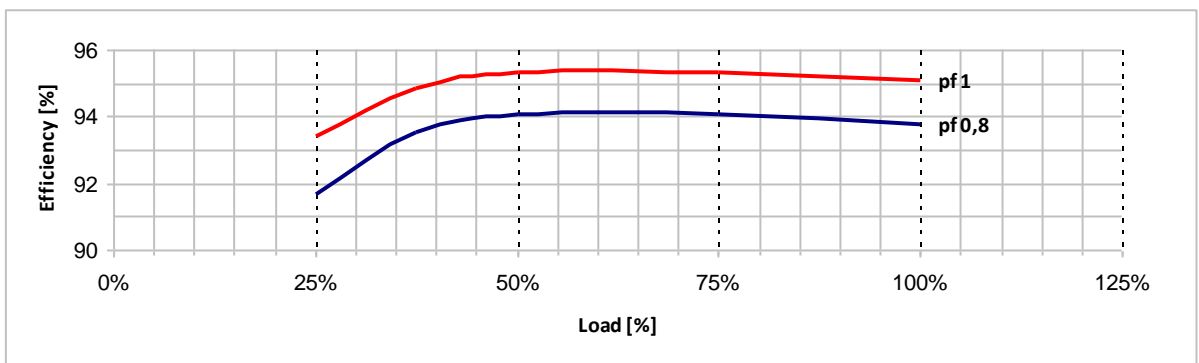
440 V

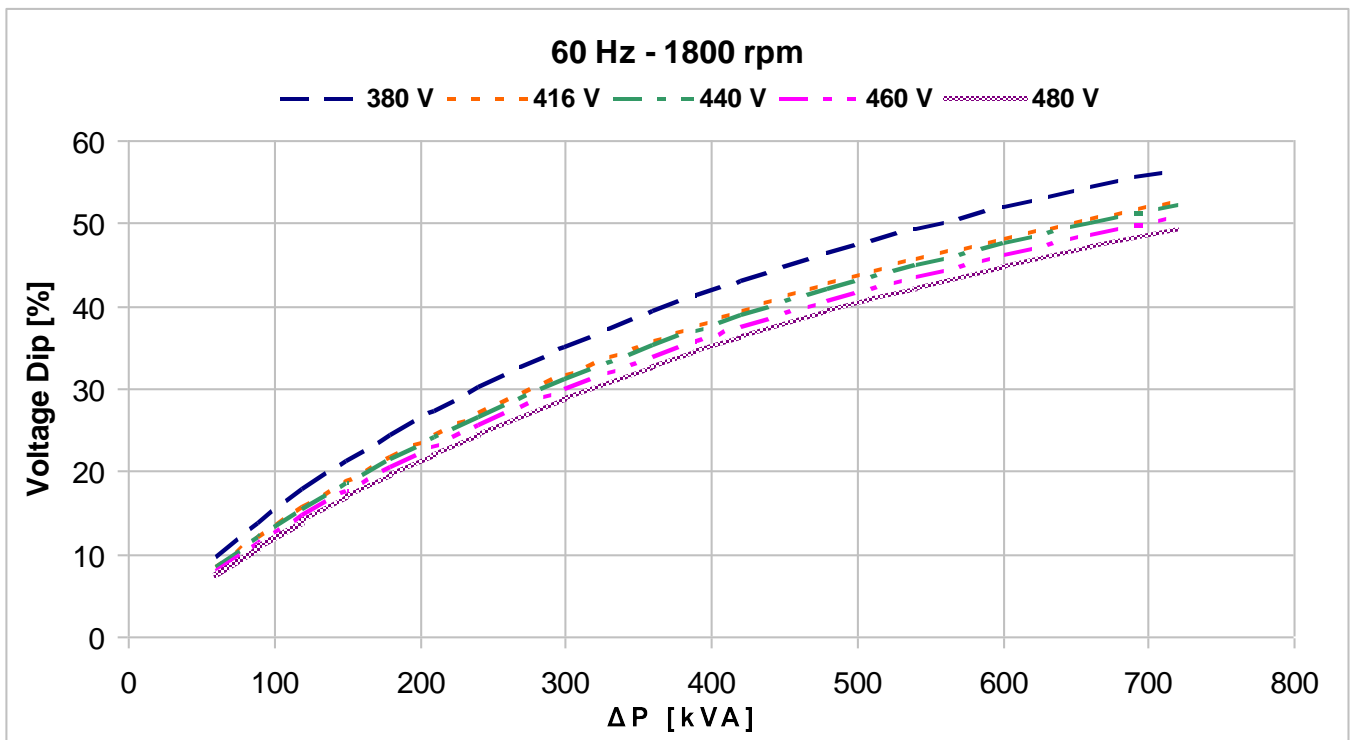
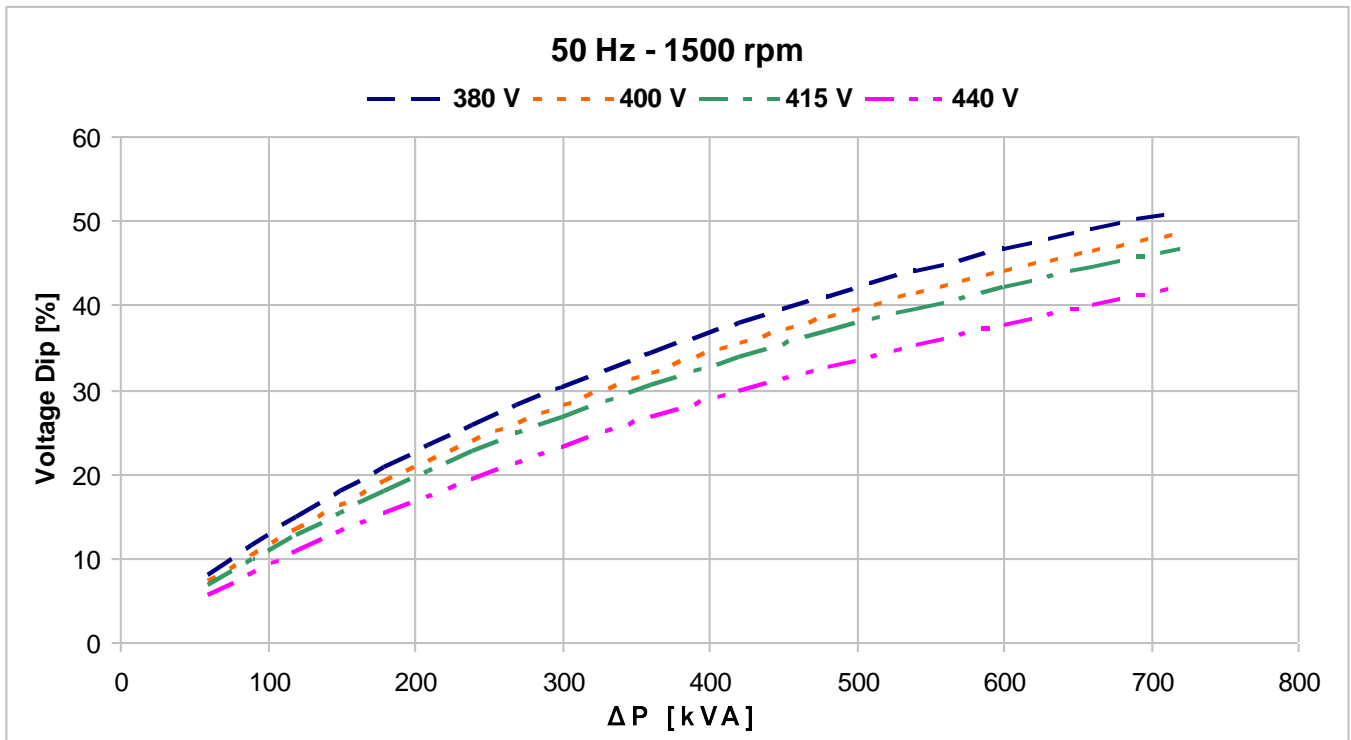


460 V



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.