MarelliGenerators®

THREE PHASE SYNCRONOUS GENERATOR

MJB 250 LB4

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	**V**	**380**	**400**	**415**	**440**	**380**	**416**	**440**	**460**	**480**
		Star parallel		**190**	**200**	**208**	**220**	**190**	**208**	**220**	**230**	**240**
RATING POWER			**kVA**	**240**	**250**	**235**	**220**	**250**	**260**	**275**	**290**	**300**
			kW	***192***	***200***	***188***	***176***	***200***	***208***	***220***	***232***	***240***
EFFICIENCY [%] @ 0,8 p.f.			**4/4**	93,0	93,4	93,3	93,3	93,1	93,6	93,7	93,8	93,9
			3/4	93,4	93,7	93,6	93,5	94,0	94,3	94,4	94,5	94,5
			2/4	93,6	93,7	93,6	93,5	94,3	94,5	94,5	94,5	94,5
EFFICIENCY [%] @ 1 p.f.			**4/4**	94,4	94,8	94,7	94,7	94,5	94,9	95,0	95,1	95,2
			3/4	94,8	95,0	94,9	94,9	95,2	95,5	95,6	95,6	95,6
			2/4	94,9	95,0	94,9	94,9	95,5	95,7	95,6	95,7	95,6
SHORT CIRCUIT RATIO			SCR	0,39	0,42	0,48	0,58	0,32	0,36	0,38	0,40	0,42
REACTANCES [%]												
Direct axis synchronous			Xd	323	304	265	221	304	351	332	320	304
Quadrature axis synchronous			Xq	180	169	148	123	225	195	184	178	169
Direct axis transient			X'd	26,7	25,1	21,9	18,3	33,4	29,0	27,4	26,4	25,1
Direct axis subtransient			X"d	10,2	9,6	8,4	7,0	12,8	11,1	10,5	10,1	9,6
Quadrature axis subtransient			X"q	12,3	11,6	10,1	8,4	15,4	13,4	12,7	12,2	11,6
Negative sequence			X_2	11,3	10,6	9,3	7,7	14,1	12,2	11,6	11,2	10,6
Zero sequence			X_0	2,4	2,3	2,0	1,7	3,0	2,6	2,5	2,4	2,3
TIME CONSTANTS [s]												
Open circuit			T'do	1,25								
Transient			T'd	0,1								
Subtransient			T"d	0,007								
Armature			T_a	0,009								

MECHANICAL CHARACTERISTICS

D-end bearing/Lubrication		6218 2RS C3 / Prelubricated
N-end bearing/Lubrication		6313 2Z C3 / Prelubricated
Overspeed [r.p.m.]		2250
Inertia (J) [kgm2]	Refer to B34 construction	2,06
Weight [kg]	Refer to B34 construction	710
Method of cooling		IC01
Cooling air required [m3/s] @ 50/60 Hz		0,42 / 0,52
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 In) with auxiliary winding
Voltage regulation accuracy	± 0,5 % In 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.

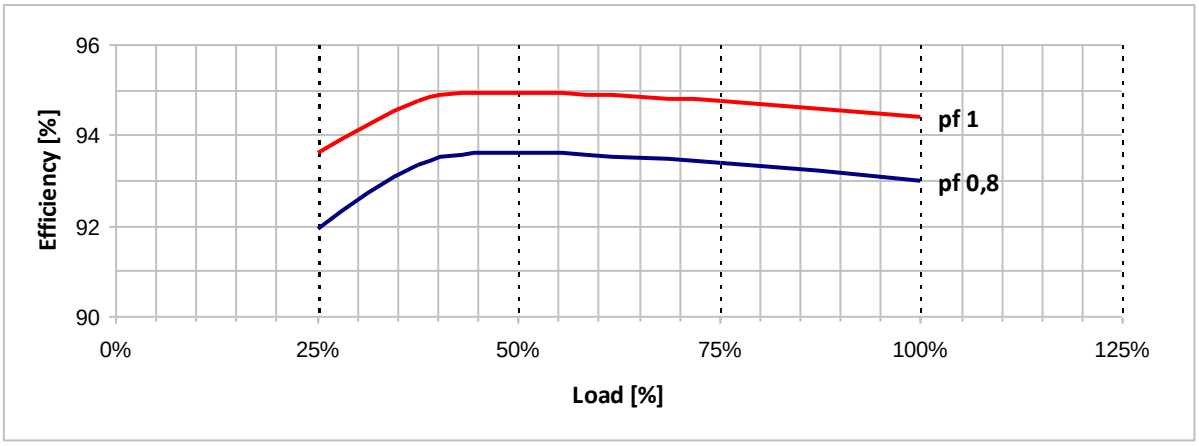
THREE PHASE SYNCRONOUS GENERATOR

MJB 250 LB4

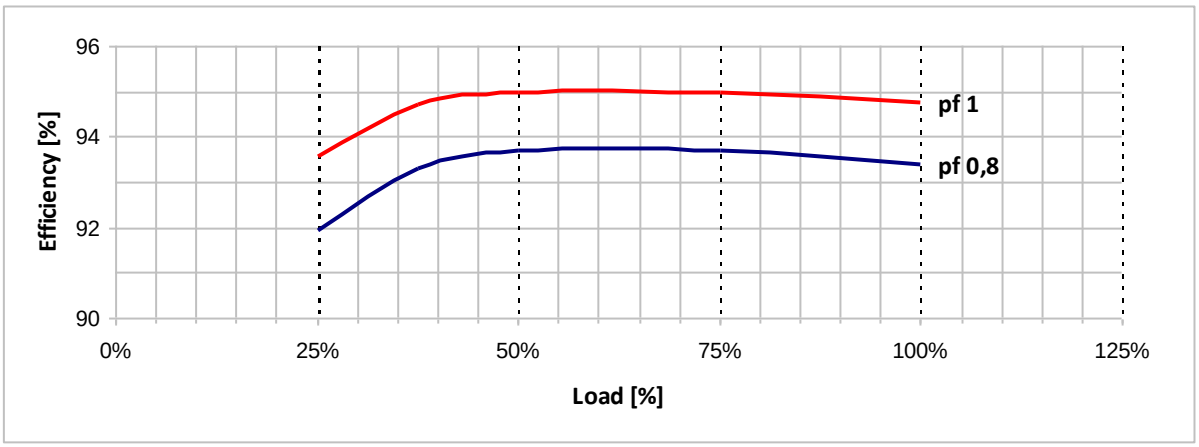
Typical efficiency curves

50 Hz - 1500 rpm

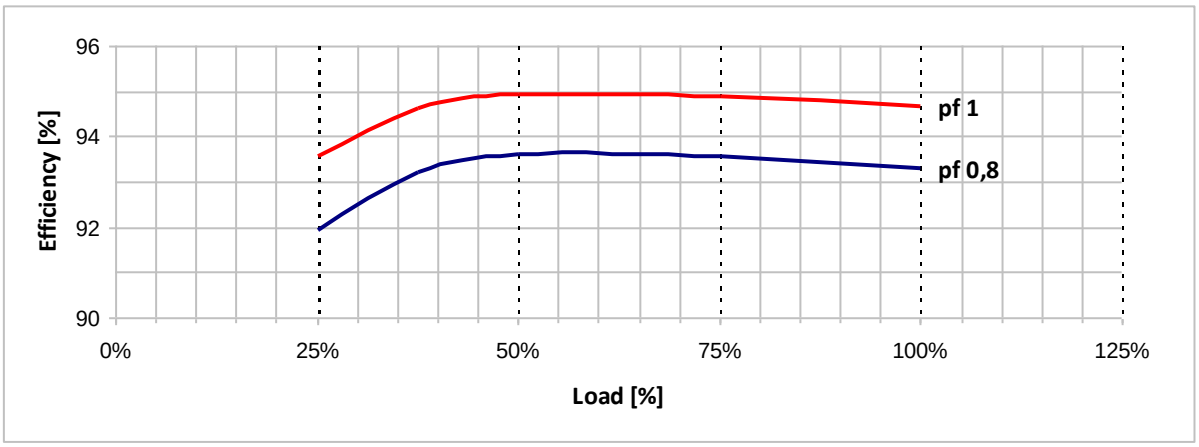
380 V



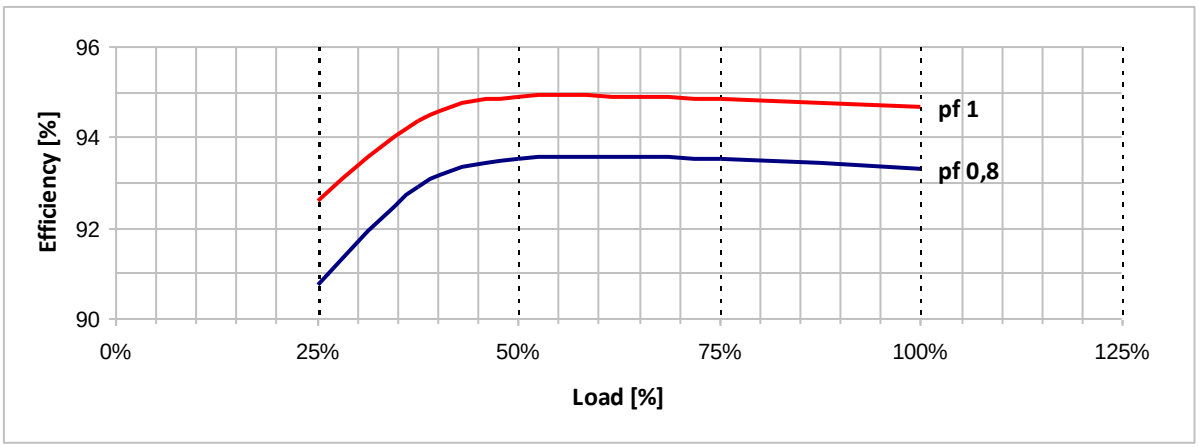
400 V



415 V



440 V



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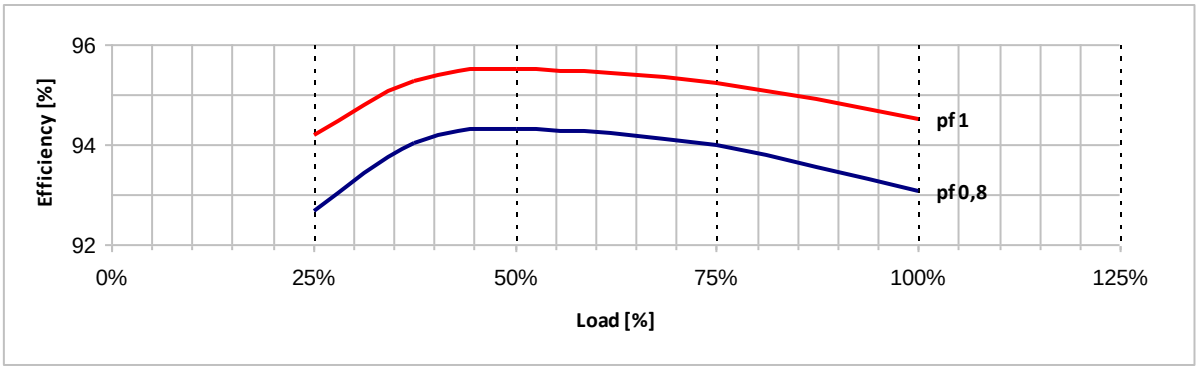
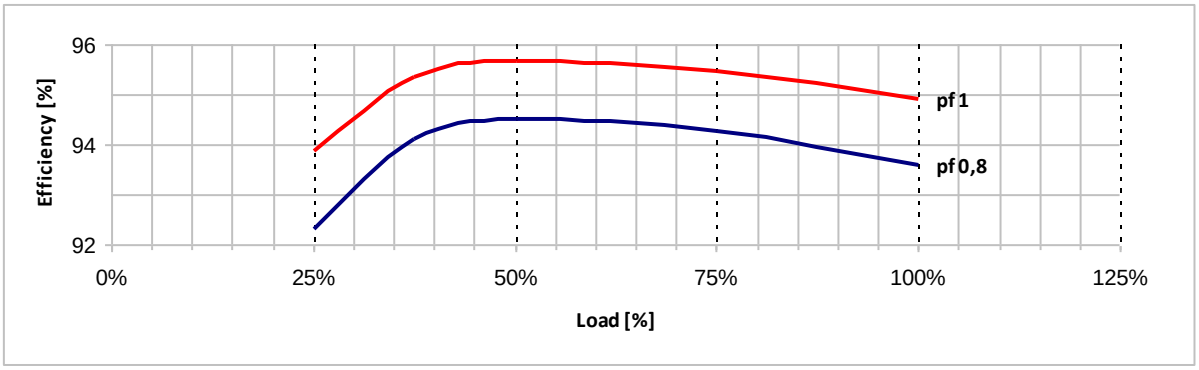
Typical efficiency curves

60 Hz - 1800 rpm

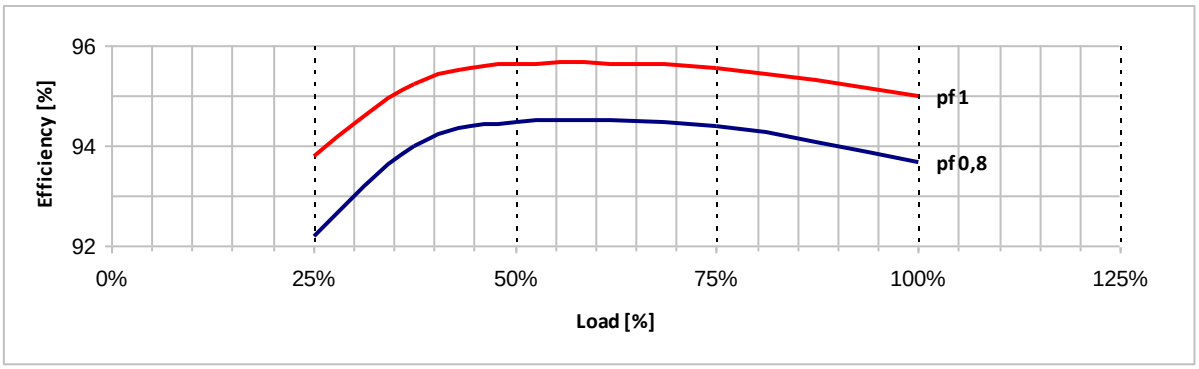
380 V



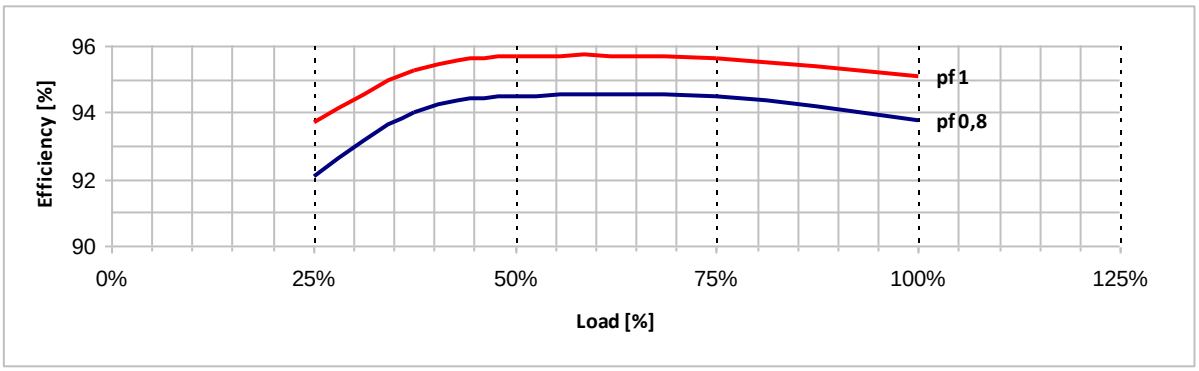
416 V



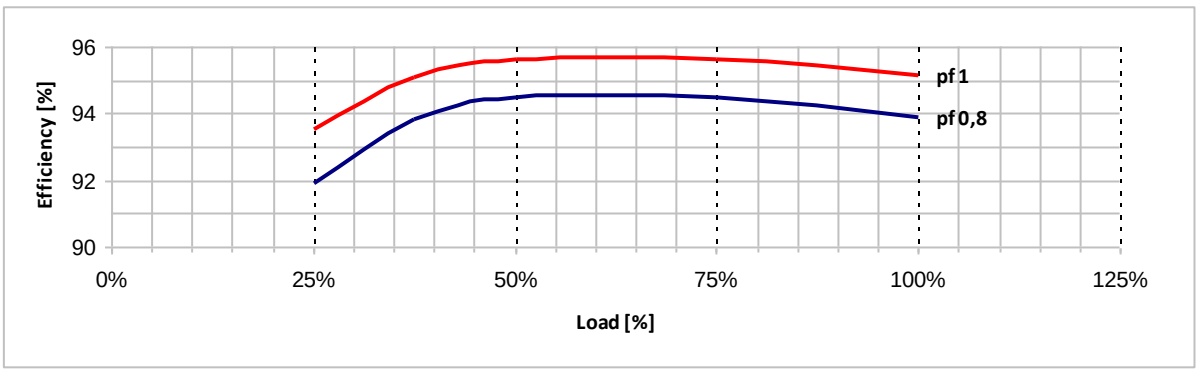
440 V



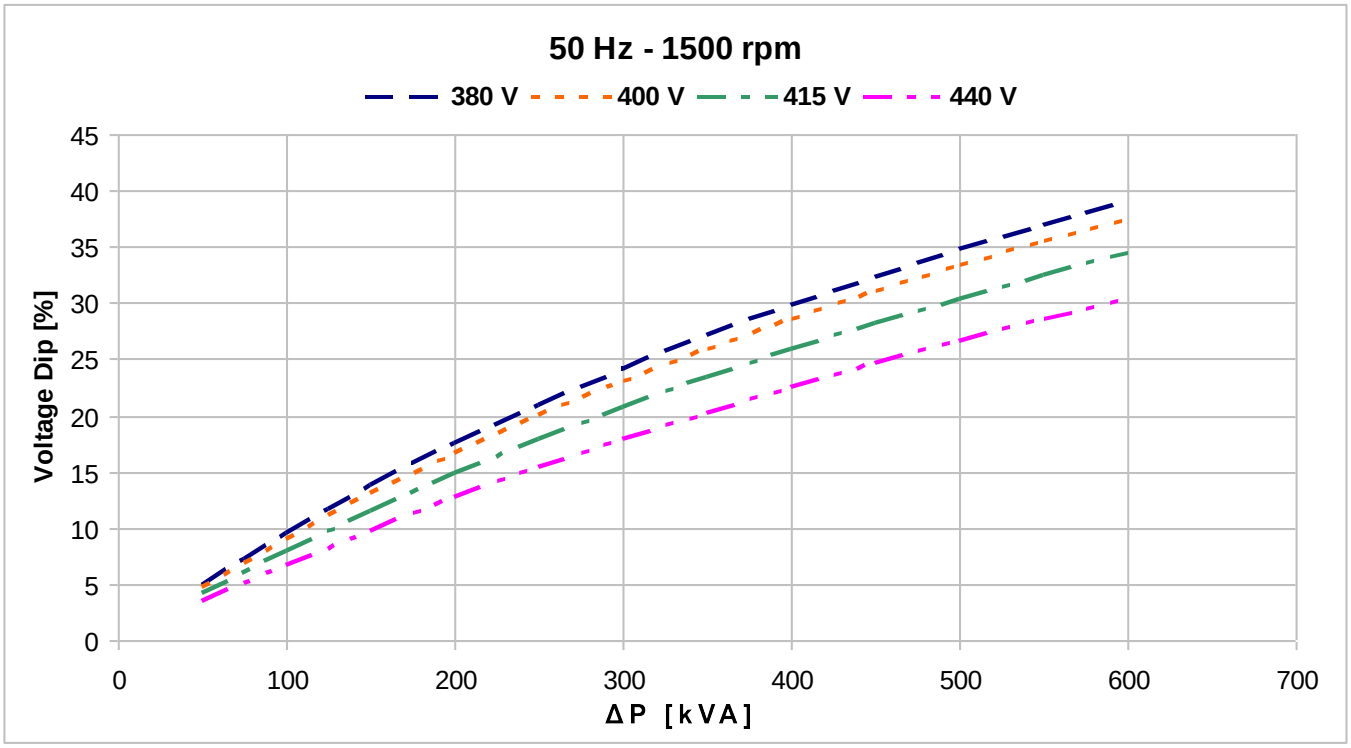
460 V

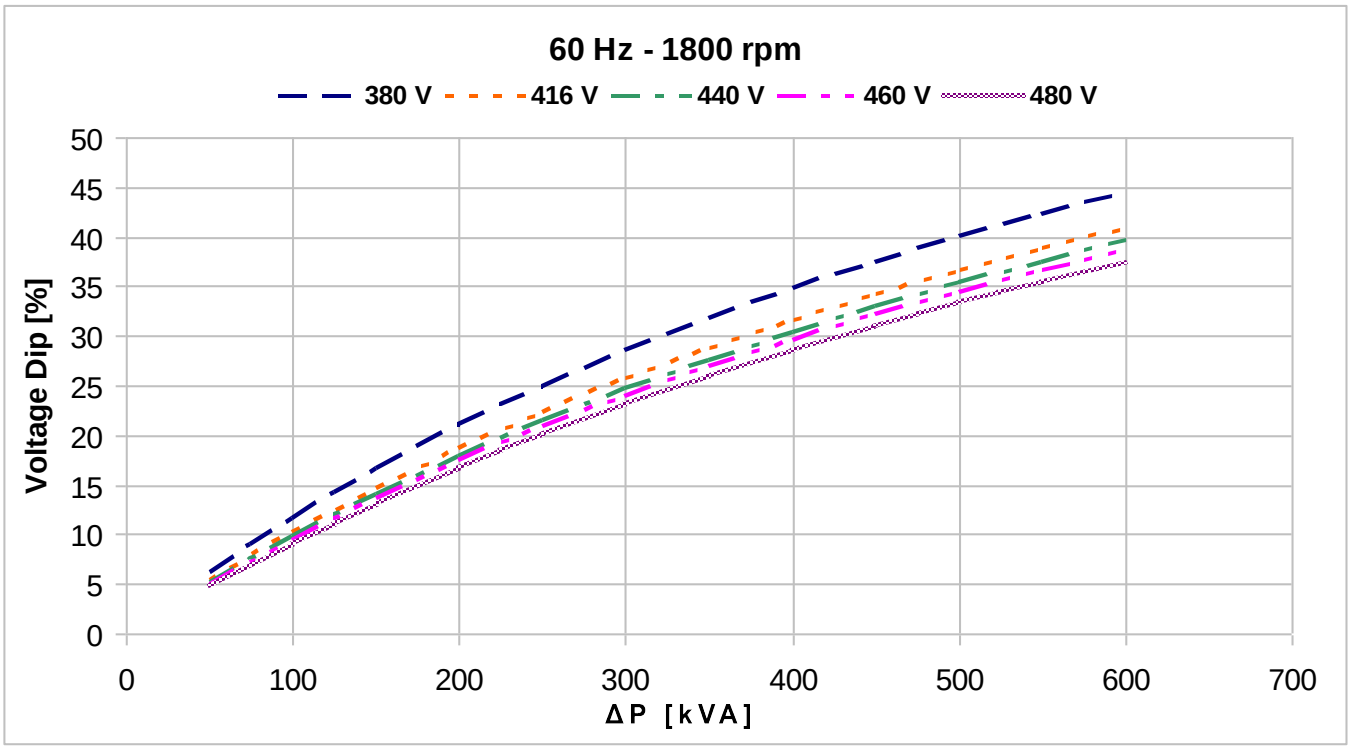


480 V



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.