

Calculation of reactive power

Fix PFCs

Compensation of MV/LV Trafo

For economic purposes, it is advisable to compensate the no-load losses on the LV side of the MV/LV transformer serving in the plant. The choice of reactive power is calculated based on I_0 % of the Trafo, or more simply by referring to the table below.

Power (kVA)	Type	
	Oil (kVAr vacuum)	Resin (kVAr vacuum)
100	5	2,5
160	7	45
200	7,5	4
250	8	7,5
315	10	7,50
400	12,5	8
500	15	10
630	17,5	12,5
800	20	15
1000	25	17,5
1250	30	20
1600	35	22
2000	40	25
2500	60	35
3150	60	50

Compensation of Asynchronous motors

The reactive power necessary for the power factor correction of Asynchronous Motors is chosen from the following table. It is always advisable in these situations to take into account the possible self-excitation of the capacitors, which is why the installation of an automatic PFC system rather than a fixed one is preferred.

Power (kVA)		Necessary reactive power (kVAr)				
HP	kW	3000 rpm	1500 rpm	1000 rpm	750 rpm	500 rpm
10	7,38	3	3	4	4	5
15	11	4	5	5	6	6
30	22,1	10	10	10	12	15
50	36,8	15	20	20	25	25
100	73,6	25	30	30	30	40
150	110	30	40	40	50	50
200	147	40	50	50	60	70
250	184	50	60	60	70	80