

RECP Best Practices Catalogue

Electrical system and compressor optimisation
Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is
funded by the European Union

Best Practice - Electrical system and compressor optimisation

SECTOR:	Textile & Readymade Garments
Branch:	Finishing of textiles
CATEGORY	Good Housekeeping
APPLICABILITY	Utilities

COMPANY SIZE	145
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Description of the Problem (Base Scenario):

The electrical system and the compressed air network require several control, monitoring and preventive maintenance measures. Energy consumption is very important relating to production, and the performance indicators are above the national standard.

Description of the Solution

1: Electrical System:

Reduction in power usage (from 450 kVA to 300 kVA, where there will be a gain on the power premium of **€ 3,120/year**, i.e 9% of the electricity bill; inv = 0 €)

- Power factor optimisation at the transformer station level;

- Optimisation of lighting fixtures.
- Revision of the power contract;
- Procurement of a capacitor battery;

2: Optimisation of Compressors

- Procurement of an air dryer.
- Repairing compressed air leaks (The rate of compressed air leaks is estimated at 40%, the gains are 25% of the compressed air station, or about 10% of the electric bill (**€ 3,480/year**)).

Best Practice - Electrical system and compressor optimisation

Economic Gains	Economic gain: € 14,676 (19% of the energy bill)
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Environmental Gains	Energy Savings: 119 MWh (29%)
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Health and Safety Impact	Productivity enhancement
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TEST Training kit

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Capital Investments & Financial Indicators	€ 22,609 Time for Return on Investment: 18 months
Supplier Information	
Other aspects	Productivity enhancement
Implementation	The measures have been carried out for the most part and the real gains were calculated based on Base Line II and III as follows: • 450 kVA to 300 kVA, where there will be a gain on the power premium of € 3,120/year, or 9% of the electricity bill. • The rate of compressed air leaks is estimated at 40%, the gains are 25% of the compressed air station, or about 10% of the power bill (€ 3,480/year).