

# RECP Best Practices Catalogue

*Automatic stirring of the ink preparation*

*Developed within the framework of MED TEST II*



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



switchmed



The SwitchMed Programme is  
funded by the European Union

# Best Practice - Automatic stirring of the ink preparation

SECTOR:	Chemicals, chemical products, refined petroleum, non-metallic mineral, and plastic products
SUBSECTOR:	Printing and service activities related to printing
PRODUCTS	Paper and plastic bags, valve bags, open glued, flat, with hexagonal bottoms, bags and polyethylene film, tarpaulins and irrigation ducts.
CATEGORY	Technology upgrade/Eco-innovation
APPLICABILITY	Process
COMPANY SIZE	90



The SwitchMed Programme is funded by the European Union

# Best Practice - Automatic stirring of the ink preparation

## Description of the Problem (Base Scenario):

In the ink preparation laboratory, the colours of the customer's image are prepared. To do this, and according to the required tones, the company process the base colour and water mixtures, in well-defined quantities, based on the PANTONE reference. The prepared solution is collected in a trough, where it is mixed manually using a vigorous stirring system which causes splashing, resulting in 4% of the prepared ink being lost.

## Description of the Solution

It is proposed to set up a stirring system whose speed control and stirring times are programmed.



The SwitchMed Programme is funded by the European Union

# Best Practice - Automatic stirring of the ink preparation

---

<b>Economic Gain</b>	Preliminarily, we estimate the reduction of ink losses by approximately 0.5% of overall consumption, that is: $187,425 \text{ €} \times 0.5\% = 973 \text{ €/year.}$ $203 \text{ tons} \times 0.5\% = 1.02 \text{ tons}$
<b>Environmental Gain</b>	Reduction of VOC emissions from ink spills composed mainly of organic matter. Reduction of the pollutant load of liquid discharges
<b>Health and Safety Impact</b>	The implementation of such a stirring system will reduce the stains that inks can cause in the laboratory, and a positive impact on the health of staff

---



The SwitchMed Programme is funded by the European Union

# Best Practice - Automatic stirring of the ink preparation

<b>Investment and Financial Indicators</b>	The budget required to achieve the expected gains is on the order of: 833.4 €, tax included, for the agitator; 33.3 €, tax included, for the stem; 67.5 € for the stainless steel tank. For a sum total of 934.2 €, tax included. (Time for Return on Investment: 12 months)
<b>Suppliers</b>	A company that markets digital propeller agitators
<b>Other aspects</b>	None
<b>Implementation and New Indicator</b>	Scheduled for 2018