



# dosing and mixing of fluids



**DOSAPRO  
MILTON ROY**

A Sundstrand Company

# DOSAPRO MILTON ROY

## A Sundstrand Company

Our business : to dose and mix the widest range of fluids and to provide our customers with products most suited to their applications, in terms of reliability, accuracy and safety.

Since 1956, this has been the aim of Dosapro Milton Roy (**DOSing-Automation-PRO**portionality). We have developed numerous solutions to many dosing or mixing problems, thanks to our product range, the widest in the market.

## The power of an international group



*Our integration into the Sundstrand Group in 1991 means that Dosapro Milton Roy benefits from an important international presence and wide resources in terms of mechanical, hydraulic and chemical engineering.*

### SUNDSTRAND

Leader in the design and manufacture of high technology equipment

- Aerospace division : electricity generators, auxiliary systems...
- Industrial division : centrifugal pumps and compressors, gearboxes, screw compressors, dosing pumps and mixers...

### MILTON ROY

Milton Roy is a worldwide leader in the dosing pump market with :

- 140 000 pumps sold each year
- 6 manufacturing units
- More than 130 locations throughout the world
- The largest range : a few watts to more than 40 kW
- The optimal technical solution : electromagnetic pumps, motor driven pumps, packed plunger, mechanically actuated diaphragm and hydraulically actuated diaphragm liquid ends...



*Dosapro Milton Roy : head office and manufacturing unit on a 20 000 m<sup>2</sup> site.*

### DOSAPRO MILTON ROY

- European head office in Pont Saint Pierre, Eure, France
- 3 subsidiaries in Europe : Robin Industries in France, Dosapro Milton Roy Iberica, Milton Roy UK
- About 30 Distributors in Europe, providing a quality service : advice, local stock, Technical Assistance/Spare Parts service
- Two thirds of the pumps manufactured are installed outside France
- More than 200 000 pumps sold in the last 10 years

## Our history

- **1956** Creation of Dosapro in Paris
- **1960** The manufacturing plant is set up in Pont Saint Pierre
- **1966** Association with Milton Roy, the leading American dosing pump manufacturer : Dosapro Milton Roy
- **1980** A new expertise : mixing of fluids and the SEM technology (Société Européenne de Mélange)
- **1984** Integration with Milton Roy
- **1991** Integration of Dosapro Milton Roy and Milton Roy into Sundstrand Corporation
- **1995** Beginning of the LMI Europe activity (electromagnetic pumps)
- **1998** Integration of Robin Industries into Dosapro Milton Roy : Agitators and mixers design and manufacturing



# Dosing and mixing of fluids



## Dosing

A dosing pump is a reciprocating controlled volume pump with a variable flowrate which can be adjusted while running or stopped, and is used to accurately pump a fluid, in the form of continuous or batch injection.

The range of pumped products includes slurries, viscous, abrasive, corrosive, pyrophoric or radioactive products... and covers applications from 0.4 cc/min to more than 30 000 l/h.

## Mixing

The agitators and propeller mixers of the Dosapro Milton Roy range are of the dynamic rotary type. The speed range and the different propeller types used meet the requirements

of many applications : blending, suspension, reagent mixing, aeration... for volumes from 30 l to more than 3 000 m<sup>3</sup>.

## For all industries

Our dosing pumps and agitators are used in many industrial processes such as :

- Drinking water and waste water treatment
- Water treatment for boilers
- Industrial effluent treatment
- Oil and gas treatment, Energy
- Chemical and petrochemical processes
- Food processing industry and Agriculture
- Pulp and paper industry
- Detergent manufacturing
- Pharmaceutical industry
- Surface treatment, metal industry, electronics...



# At the heart of our strategy innovation & quality

Our objective : to improve the quality and the reliability of our products, to increase their performance, to optimize our manufacturing processes, to respect the environment and to provide the best working conditions for our employees.

More than 100 patents have been registered, including those relating to the 'HPD' liquid end (High Performance Diaphragm) and the 'Profil +' diaphragm.

## Quality control

There is a constant emphasis on quality, from the manufacturing of products to customer satisfaction.

Dosapro Milton Roy has been ISO 9001 certified since 1993.



## From design to manufacturing



*The HPD liquid end with its 3 European patents.*



*Modern design methods to guarantee quality.*



*One of the flexible cells used for the machining of complex components, supplying the assembly lines on demand.*



*Each Dosapro Milton Roy pump is tested on an automated test bench.*



# Your specific needs our expertise

A real partnership with our customers enables us to find the solutions best suited to a wide range of applications.

## Water treatment

Pumps for dosing and injection of ferric chloride, aluminium sulfate, and polymers for flocculation and coagulation treatment of waste water.



## Nuclear Power

Remote head pumping of nitric acid in a radioactive area. The dosing head is fitted with a double metallic diaphragm.



## Petrochemical Industry

Process pumps with 3 heads and low level of residual pulsations for polymerization plant. The dosing heads are insulated and steam heated for pumping at 180°C.



## Agricultural Industry

Egg dosing pump used in manufacturing of pasta.



## Chemical Industry

Hot fatty acid dosing pump. As this fluid is very corrosive, the pumping head and the diaphragm pulsation dampener (Dosapro Milton Roy's design and manufacture) have a triple diaphragm made of zirconium.



## Oil industry

Corrosion inhibitor injection for oil treatment in a refinery.

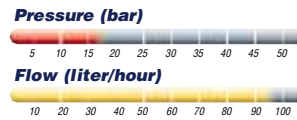


## Pulp and Paper industry

Multi-headed pump for coloring preparation.

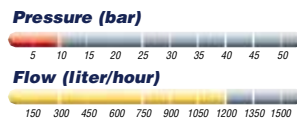


# Mechanically actuated diaphragm dosing pumps



## **LMI® Pump** *electronically controlled pump*

- Multi programmable models
- Pump with separately adjustable stroke rate and length
- Function control by microprocessor
- Proportional dosing
- Liquid ends for high viscosity (HV)
- Compact, light, economical



## **G® Pump** *motor driven pump*

- Stroke adjustment by variable eccentric (GA and GB)
- Low pulsations (without hydraulic shocks)
- Few mechanically moving components : durability
- Proportional control 'G Pulse'
- High technology plastic components
- 3 patents pending

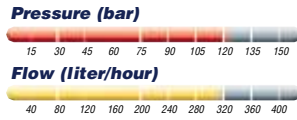


## **Accessories**

A wide range of accessories designed to complete the dosing pump installation.



# Hydraulically actuated diaphragm dosing pumps



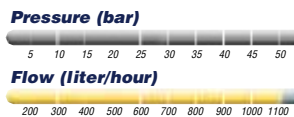
## mROY® Pump

- Hydraulically actuated diaphragm pump : an innovative concept created 40 years ago, which is still current technology
- High pressure industrial pump
- Single or double hydraulically actuated diaphragm
- Optional automatic control (stroke length/speed)
- Conforms to API 675 standard



Paper industry : mROY® pumps for bleaching recycled paper.

Water treatment : MAXROY® pumps in effluent treatment plant.

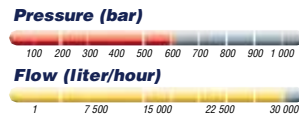


## MAXROY® Pump

- Low pressure industrial pump
- Single or double hydraulically actuated diaphragm
- Optional automatic control (stroke length/speed)
- 2 international patents
- Long life diaphragms : 20 000 h and more
- Conforms to API 675 standard



# Modular dosing pumps



## MILROYAL®/MAXROYAL® Pumps

- Modular design for customized dosing
- Many liquid ends and motors for all applications
- Multiplexable mechanical units
- Re-usable preformed diaphragm
- HPD diaphragm dosing head : 3 international patents
- Conforms to API 675 standard



MILROYAL® B - C - D pumps.



MAXROYAL® C with 3 totally sealed HPD heads and electric servomotor.



MILROYAL® B equipped with a precision ECC electronic servomotor.



MILROYAL® B with pneumatic automatic control and fitted with a packed plunger liquid end and a heating jacket.



MILROYAL® D with a double diaphragm head with flushing of the double diaphragm chamber (pyrophoric products).





# Custom-designed dosing systems

Dosapro Milton Roy manufactures on request complete modular dosing systems for many industries.

Designed to order, these systems can have liquid or powder dosing functions, mixing functions, and include measurement, regulation, automation and control systems.

Dosapro Milton Roy undertakes all operations : feasibility study, systems design, manufacturing, delivery of complete systems, technical assistance for start up.



*Water treatment :  
Preparation and dosing of hydrazine and phosphate  
for boiler water treatment.*



*Food processing industry :  
Insulated dosing system.*



*Oil and Gas industries :  
Dosing packages for sulphuric acid, caustic soda, dimethyldisulfide  
in a refinery subjected to severe atmospheric conditions.*



*Oil industry :  
Corrosion inhibitor injection package for oil treatment.*



# Automatic polymer preparation units



- Compact and functional, suitable for pallet loading
- Control of maturing time
- Many configurations and options
- 3-compartment tank

## **Polypack® AP** powder polymer

- Concentrations up to 5 g/l as standard
- Output up to 13 400 l/h as standard

## **Polypack® AE** emulsion polymer

- Any kind of emulsion up to 5 g/l as standard
- Output up to 4 500 l/h as standard

### **Applications :**

- Flocculation for industrial and domestic water treatment
- Sludge treatment
- Applications in chemical, iron and steel, food and paper industries...

## Dosapack®

### **Preparation and dosing units**

- Preparation, storage and injection of reagent chemical solutions
- Includes : dosing pump, agitator and storage tank, complete set of accessories
- Resistant to most common corrosive products



## Valves



Pinch valves 'PIC' range cast iron/aluminium or PVC.

### **Pinch valves** **'PIC' range**

- Full bore valves
- Total sealing for powders, liquids, pastes and slurries - without glands
- Choice of materials of construction : PVC, aluminium, cast iron
- Variety of sleeves : natural or food grade rubber, neoprene...

### **Applications :**

- Waste water, slurries
- Sludge extraction
- Pneumatic conveying (powdered products, granules, cereals...)
- Cleaning water or pulp transfer (sugar refineries)...



# Agitators propeller mixers



VDE/VRE/FRE mixers.

## Agitators

- Mixing applications : suspension, dissolution, precipitation, crystallization, dispersion
- Axial impeller
- SABRE® blade propeller : major innovation in mixing (SEM patent)
- For a tank capacity from 30 l to 100 m<sup>3</sup>

## High efficiency mixers for industrial applications

- Top entry propeller mixers : blending and agitation of liquids, solids suspension and gas dispersion in liquids
- Side entry helical mixers : blending of liquid phases, circulation of tank sediments
- For tank capacities from 60 l to 3 000 m<sup>3</sup>.



Top entry propeller mixer :  
SABRE® profiled blade propellers.

# Technical Assistance Department



Our technicians ensure a quick and complete service throughout the world.

- A department dedicated to after-sales service
- Spare parts
- Repairs on site or in our workshops
- Warranty backup
- Training
- Maintenance contracts
- Dedicated stock





## **DOSAPRO MILTON ROY**

A Sundstrand Company

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Czech Republic  
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Egypt  
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Finland  
Germany  
Greece  
Hungary  
India  
Iran  
Ireland  
Israel  
Italy  
Kuwait  
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