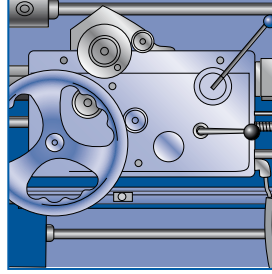




# DOSATRON®

WATER POWERED DOSING TECHNOLOGY



## metal processing



## Dosing and proportional mixing of water- soluble oils

The introduction of an efficient water, chemical product and effluent management system is the hallmark of an industrial company aiming at sustainable development. The Dosatron non-electric proportional dosing system ensures rationalised utilisation of additives. The Dosatron non-electric dosing pump ensures efficient metering and mixing during filling or adjusting operations with mineral or synthetic soluble oils, or the addition of biocides and anticorrosive and emulsifying agents.



## Disadvantages of existing systems

### Manual dosing

- Permanent over or under-dosing.
- Lengthy preparation time.
- Dirty and dangerous workstations.
- Risk of contact with concentrated products.

### Unreliable Venturi dosing

- Major dosing variation according to viscosity, temperature, pressure and flow-rate of the water circuit, and back pressure.
- Difficult adjustment and calibration.
- Pressure-sensitivity of the water circuit (calibration required according to flow-rate).

### Electrical dosing

- Pulse effect: injection with no mixing effect.
- Flow meter required to obtain correct dose proportioning in water.
- Not self-priming.
- Risk of undiluted product spray in the event of an injection pipe leak (pulse effect).
- Pressure-sensitivity of the water circuit: calibration required.

### Consequences

- Inefficient cooling, lubrication and protection.
- Premature tool wear.
- Excessive energy consumption.
- Poor surface condition.
- Rapid development of bacteria.

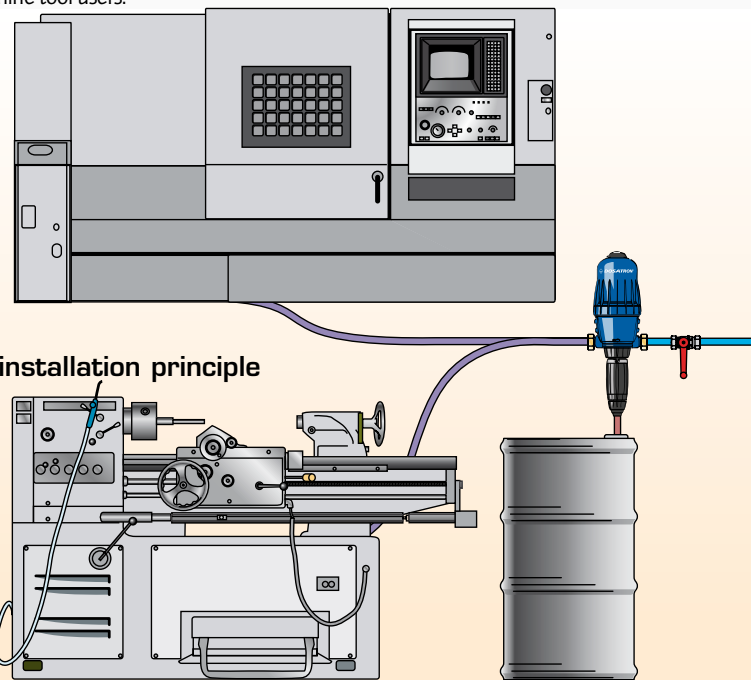
## Dosatron solution

Incorporated in the water circuit, the Dosatron pump uses water pressure as its sole power source. Driven in this way, the Dosatron can dose the various types of additive directly in the water feed tanks of one or more conventional or NC machines. The precision and reliability of the Dosatron pump eliminate any risk of errors in the dosing and preparation of products such as emulsions and solutions. The pump is not sensitive to the inherent variations (pressure, flow-rate, temperature, intake height and viscosity) of a fluid.

Constant emphasis on quality at all stages in the manufacture of the pump, both with regard to the materials used and the test and inspection procedures applied, ensures an optimum response to the requirements of metalworking machine tool users.

## Dosatron advantages

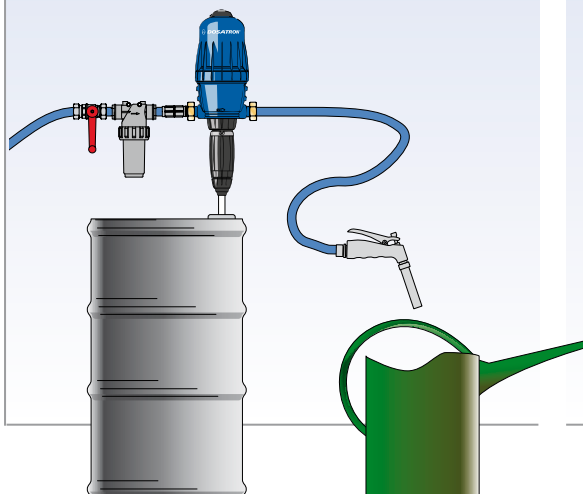
- Hydraulic, volumetric and non-electric.
- Dosing proportional to water flow-rate.
- Precision: surface quality optimised with no waste.
- Excellent dosing repeatability and final solution homogeneity.
- Emulsion delivered directly downstream by water power.
- Easy dosing adjustment at any time.
- Easy to install, operate and maintain (no electrical risks).
- Self-priming up to 4M.



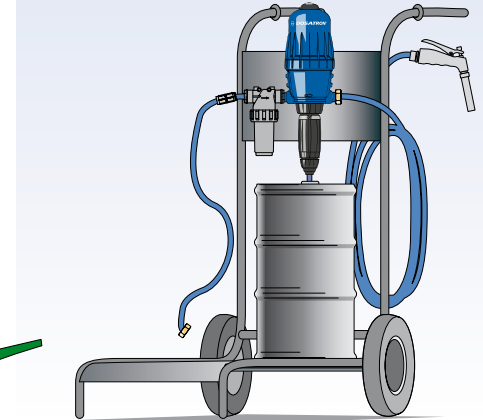
Centralised installation principle



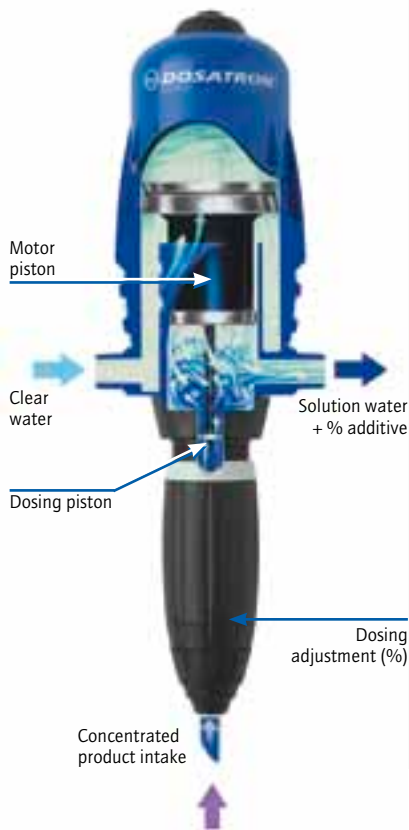
Manual set-up



Mobile set-up



## Operating principle



## 2. Choice of the dosing rate

### Particularity: proportional volumetric dosing

The Dosatron pump operates on the proportional volumetric dosing principle: the quantity of product injected is proportional to the quantity of water passing through the Dosatron pump.

Example: A 10% setting gives a solution of 10 parts concentrated product to 100 parts water. In absolute % terms, this gives 9.09% ( $\frac{10}{110}$ ).

This particularity of the Dosatron system must be taken into account when selecting your model.

### D3RE 10 (1 à 10%)

This Dosatron model is ideal for filling and adjusting, and answers a recurrent demand from professional users.

## Recommendations for installation

- Installation and utilisation in a drinking water circuit demands compliance with national standards and regulations in force.
- The system must incorporate a stop valve or non-return valve upstream from the injection system, to avoid any risk of pollution of the water source.
- Include a 300 micron filter (50 mesh) up-stream from the dosing pump, according to supply water quality.
- The level in the dosing product container must never be higher than the pump (risk of siphoning).

## Caution

The flow-rate and pressure operating ranges indicated for each model must be complied with. Check the characteristics of your water supply before setting up your dosing system, and install a flow-rate or pressure limiting device if necessary.

## Pump selection

The appropriate Dosatron pump is selected firstly according to filling rate and secondly to dosing rate.

### 1. Calculation of flow-rate requirement

Flow-rate is determined according to the required tank volume and filling time.

Example: 25-litre tank to be filled in one minute = flow-rate 1,500 l/h.

In this case you can select your pump in the 2.5 m<sup>3</sup>/h range.

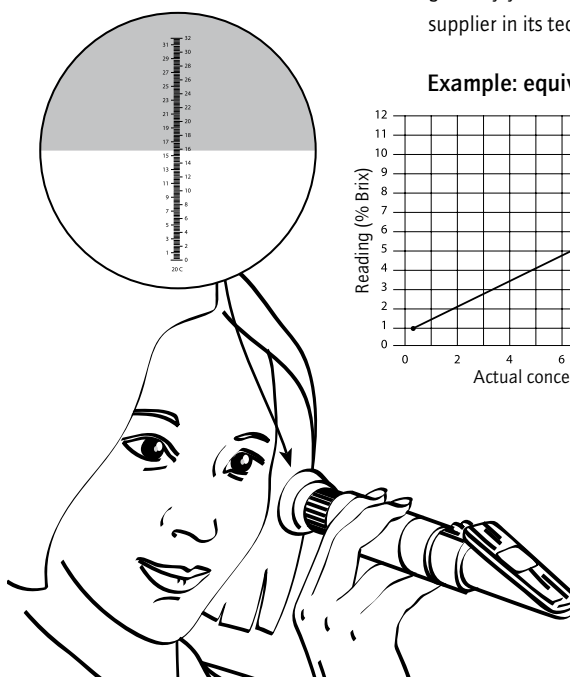
If you wish to supply a number of tanks/machines simultaneously, or fill the tanks faster (if your available water flow-rate makes this possible), you should select a model in the 4.5 or 8 m<sup>3</sup>/h range.

## Do you check your emulsion with a refractometer?

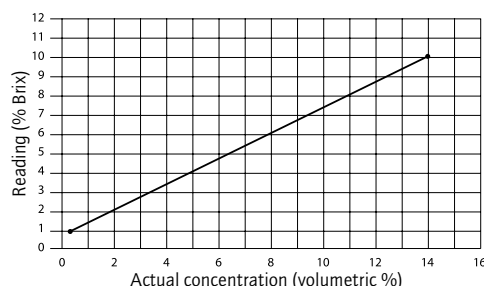
The initial % Brix readings given by your refractometer are not volumetric % values.

Consequently, you must:

- either calibrate your refractometer,
- or check the equivalence curve generally given by your oil or other viscous concentrate supplier in its technical data sheet.



### Example: equivalence curve at 20°C



# metal processing

## Recommended models \*



**2.5**  
m<sup>3</sup>/h

Injection at inlet:  
excellent homogeneity  
even at low flow-rate

Practical operating flow:  
10 l/h to 1.5  
or 2.5 m<sup>3</sup>/h  
3/4" M BSP/NPT  
Pressure 0.3 to 6 bar

D25RE1500: 0.07 to 0.2 %  
D25RE2: 0.2 to 2 %  
D25RE5: 1 to 5 %  
D25RE10: 3 to 10 % (limited to 1.5 m<sup>3</sup>/h)



**4.5**  
m<sup>3</sup>/h

High flow applications

Practical operating flow:  
100 l/h to 4.5 m<sup>3</sup>/h  
1" 1/4 M BSP/1" M NPT  
Pressure 0.5 to 5 bar

D45RE3000: 0.03 to 0.1 %  
D45RE1.5: 0.2 to 1.5 %  
D45RE3: 0.5 to 3 %  
D45RE8: 3 to 8 %

Other model for this application: D8R: 0.2 to 2 %

## Other Dosatron applications

- Die casting.
- Vibro-abrasion.
- Water jet cutting (polymer dosing).
- Part degreasing and cleaning.
- Surface treatment.
- Vulcanisation, etc.



**3**  
m<sup>3</sup>/h

Injection at outlet

Practical operating flow:  
10 l/h to 3 m<sup>3</sup>/h  
3/4" M BSP/NPT  
Pressure 0.3 to 6 bar

D3RE2000: 0.05 - 0.3 %  
D3RE2: 0.2 - 2 %  
D3RE5: 0.5 - 5 %  
D3RE10: 1 - 10 % <sup>(1)</sup>  
D3RE25IE: 5 - 25 % \*<sup>(1)</sup>

\*D3RE25IE water flow maxi 2m<sup>3</sup>/h - <sup>(1)</sup> limit 0.5 - 4 Bar

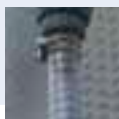
CAUTION: For dosing aggressive products, please consult your dealer to check product compatibility with the Dosatron pump before use

**Options:** A wide range of dosing pumps and an equally wide choice of options (high flow-rates, micro-dosing, high chemical resistance materials, etc.) enable us to meet your needs.



VF: Seals for acids, oils,  
odour-control concentrates...

AF: Seals for alkaline concentrates  
K: Seals for highly concentrated acids  
(> 15%) - systematically PVDF.



V: Kit for viscous concentrate recommended  
for more than 200 or 400 cPs  
(depending on model).



PVDF:  
Housing for highly  
concentrated acids  
and other aggressive  
concentrates.

## Recommended accessories



Filter



Adaptor



Kit AK17



DOSAPACK



Kit AK19

Kit AK18

Family	Reference	Characteristics	Associated ranges
Filters	P085	Filter 300 microns [50 mesh] 3/4" F - opaque - filtering surface: 24cm <sup>2</sup> [sq.in. 3,7]	
	PPDI030	Filter 150 microns [100 mesh] 3/4" F - opaque + 2 plastic connections M 1 1/4 x F 3/4" - filtering surface: 106 cm <sup>2</sup> [sq.in. 16,4]	
Mixers	PPDI031	Homogenizer, static 3/4" F (filter without cartridge) + 2 plastic connections, M 1 1/4 x F 3/4"	
Adaptors	P199M	Adaptor for metallic can/drum: D25 range	
	PDI861M	Adaptor for metallic can/drum: D3RE5, D3RE10 models	
	PDI865M	Adaptor for metallic can/drum: D3RE2 model	
Kits	DOSAPACK	Protective kit assembled on wall plate (without Dosatron)	
	AKI7	Protective kit, not assembled, without wall plate	
	AKI8	Water inlet kit (tap/pump inlet) - pipe length: 2 m + adjustable pressure limiter (preset at 3 bar) + NR valve	
	AKI9	Soluble oil filler pipe kit, length 3 m + SS support + gun	

CUSTOMER SERVICE - SERVICE CLIENTÈLE

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