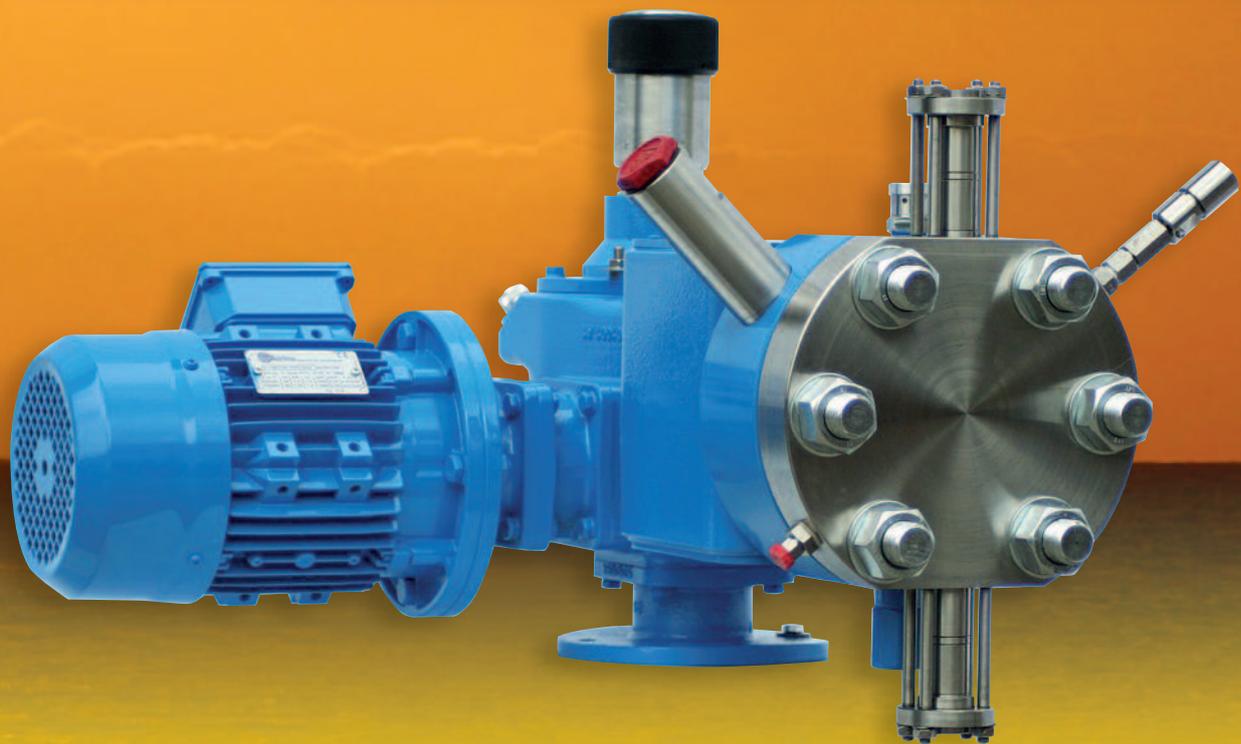


# Nexa Series

PLUNGER AND HYDRAULIC DOUBLE  
DIAPHRAGM METERING PUMPS



innovation > technology > future

# Nexa Series



Hydraulic double diaphragm metering pump in AISI 316L stainless steel

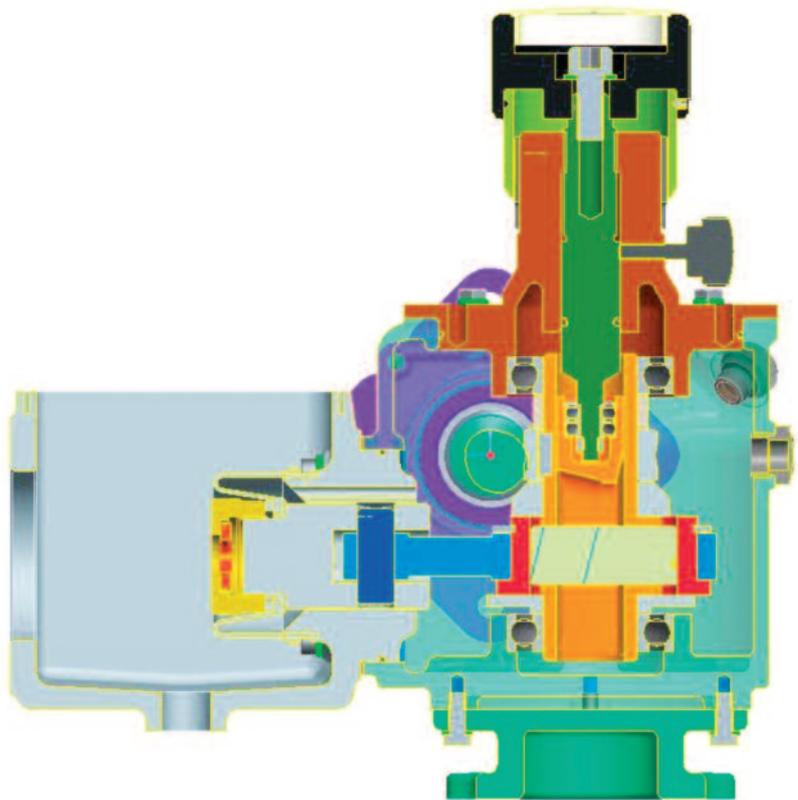
A line of plunger and hydraulic double diaphragm metering pumps designed according to the **API 675 standards**.

The flexibility of using different materials in contact with the process fluid makes possible to then satisfy a wide range of dosing and mixing applications.

The compliance with **ATEX** directive makes **SEKO** pumps suitable for being installed even in classified areas.

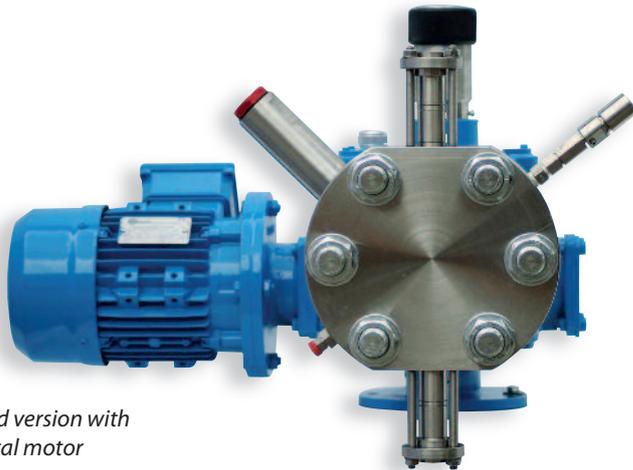
## Mechanisms

- Positive return type in different sizes
- Internal worm gearbox, oil bath lubricated with low noise emissions
- Rotating parts on bearings to minimize power consumption
- Each mechanism comes complete with an internal gearbox; pumps with different speeds (strokes/min) can therefore be joined to form multi-head pump units, allowing a greater flexibility when selecting the pumps themselves.
- Stroke adjustment with high precision can be achieved, both manually and automatically. Electrical and pneumatic servomotors designed by **SEKO** are available. Also an increase of turndown ratio can be achieved by frequency converter varying the speed of the electrical motor.



## Flexibility

The motor is horizontally assembled on the right, as standard. The pumps can also be produced with a horizontal left side motor or even vertically assembled, depending on the installation requirements.



*Standard version with horizontal motor*

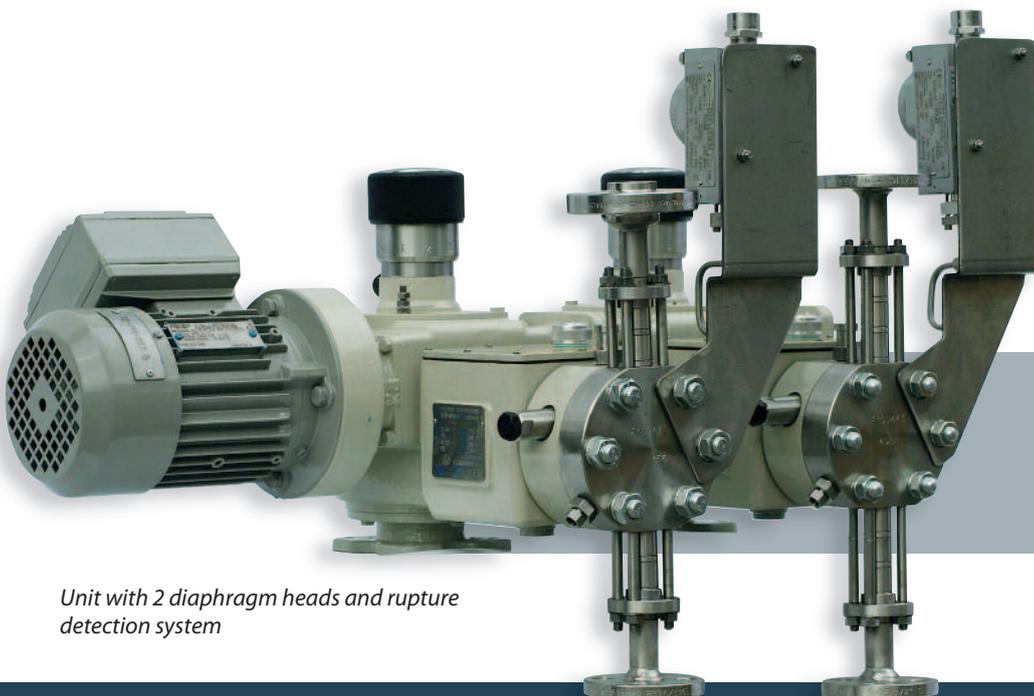


*Special version with vertical motor*

## Modularity

All **Nexa** mechanisms, even of different sizes, can be easily combined to form metering units with certain significant construction advantages, simplifying assembly and installation.

- The mechanisms are coupled together using joints with no exposed parts; the result is a compact unit with a strong and properly-aligned connection which does not require the use of a special base
- Another advantage is the possibility of adding a pump to another existing pump just by performing a few simple coupling operations , even on site



*Unit with 2 diaphragm heads and rupture detection system*

Different size mechanisms can be coupled; casings are designed to maintain the same foot level, to allow installation on a flat support base

## YN, TN, HN: Hydraulic double diaphragm heads

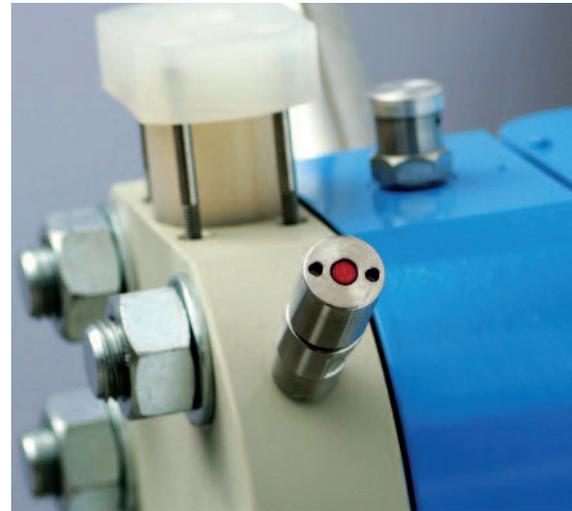
**The ideal solution for applications requiring high levels of operational safety and reliability:**

- Zero leakage; watertight construction for dosing toxic, corrosive and other hazardous liquids, to which a leakage free solution is fundamental
- Protection against external pollutants which could contaminate the liquid being pumped if using plunger pumps
- Double diaphragm, double protection; if one of the two diaphragms gets damaged, the protection system immediately signals the anomaly; the pump is nevertheless permitted to continue to operate, thereby preventing immediate downtime
- Flexibility of use; the PTFE diaphragms are compatible with a vast assortment of liquids
- Flow rate modularity; the rated flow rate can be changed by simply replacing the plunger and the relevant seal cartridge (change of plunger diameter).
- Solid suspensions; the diaphragm's proper positioning is ensured by a mechanical system which does not require the use of perforated shields on the process side, thereby allowing for liquids containing solid suspensions to be pumped.
- Construction materials; the parts in the standard configuration in contact with the liquid are made from AISI 316L stainless steel, PP and PVDF. Other materials are available upon request.

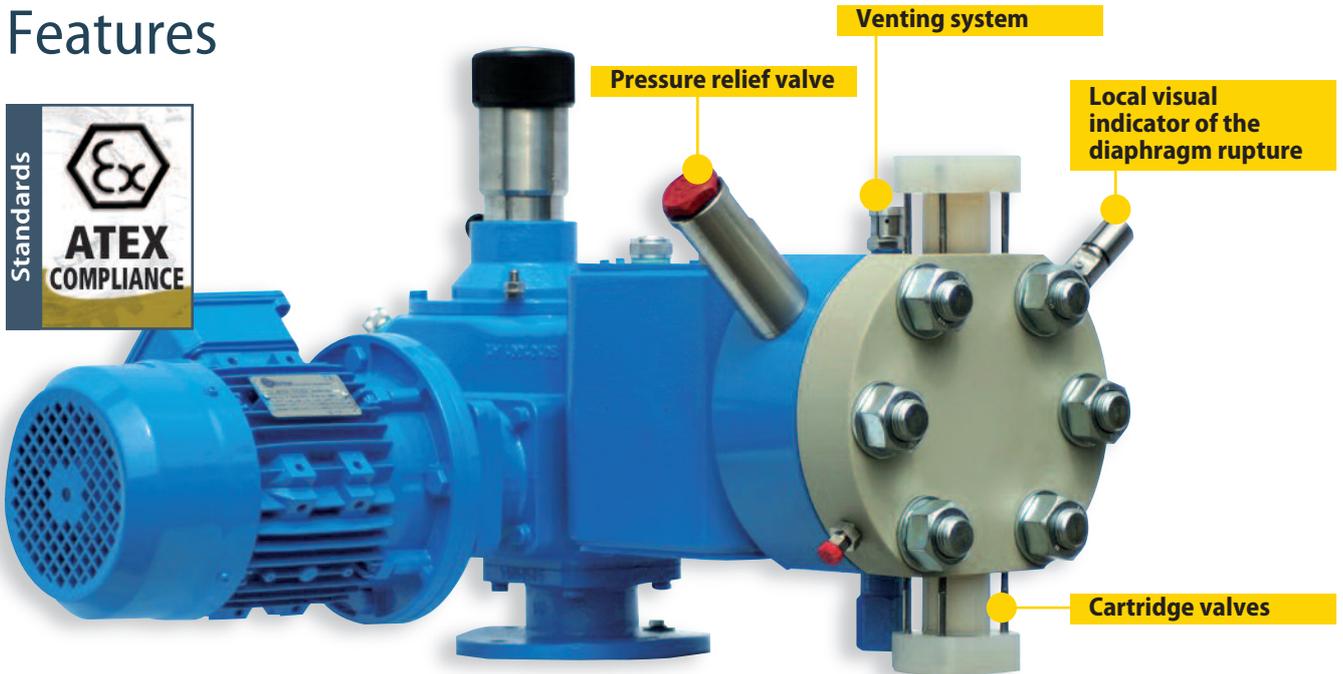
## PN, KN: Plunger heads

**The simplest and most suitable solution for dosing and transferring non-hazardous liquids; despite their simple design PN and KN heads have certain special features which provide for an extremely high performance**

- Particularly precise plunger surface finishing, with increased hardness for a longer working life
- Perfect alignment of the plunger in the seal
- Adjustable seal provided for flushing or leakage recovery



# Features



## ■ Pressure

up to 200 barg (higher upon request)

## ■ Flow rate

up to 2650 l/h with a single head

## ■ Fluid temperature

from -10 °C to 90 °C (from -40 °C to 150 °C upon request)

## ■ Contact materials

- AISI 316L
- PP
- PVDF
- Special configurations available upon request

## ■ Venting system

Aside from guaranteeing automatic venting during operation, the venting system also facilitates the pump start-up by favouring the air purge by means of a manual action.

## ■ Mechanical refilling system

Maintains a constant level of the hydraulic fluid, thereby guaranteeing maximum precision and repeatability. Also maintains control over the deformation of the diaphragm, thereby increasing its duration.

## ■ Cartridge valves

In order to ensure maximum dosing precision, even for small flow rates, double and triple ball configurations are available with high precision seats. They can be replaced without disconnecting the pump from the pipelines. The metal gaskets for the AISI 316L stainless steel heads, and the FPM gaskets for those in plastic, guarantee maximum compatibility.

## ■ Pressure relief valve

Protects the pump against unwanted excess pressure.

## ■ Double diaphragm with rupture detector

In the event that one of the two diaphragms should rupture, the detector activates a local visual indicator or signal; in this emergency situation, the second diaphragm guarantees the pump's continued functionality and allows for the necessary maintenance intervention to be scheduled.

## ■ Separation of the hydraulic fluid from the mechanism's lubricant

The two fluids have independent and differentiated functions and are therefore kept separate.

# Nexa Series

## Options

- Automatic, electric or pneumatic adjustment or through an inverter
- Flanged connections
- Heated or cooled heads
- Transmission of the diaphragm rupture signal

## Accessories

- Flow rate calibrators
- Pulsation dampers
- Safety valves
- Back pressure valves



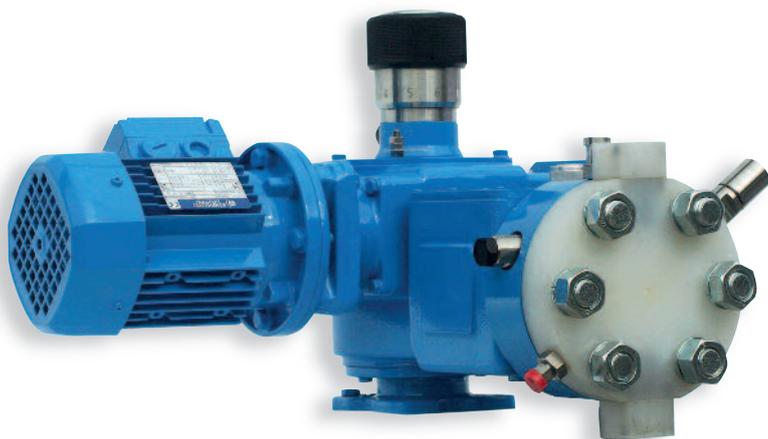
*ATEX metering pump equipped with an electric actuator for flow rate adjustment*



# Applications

## Industrial sectors

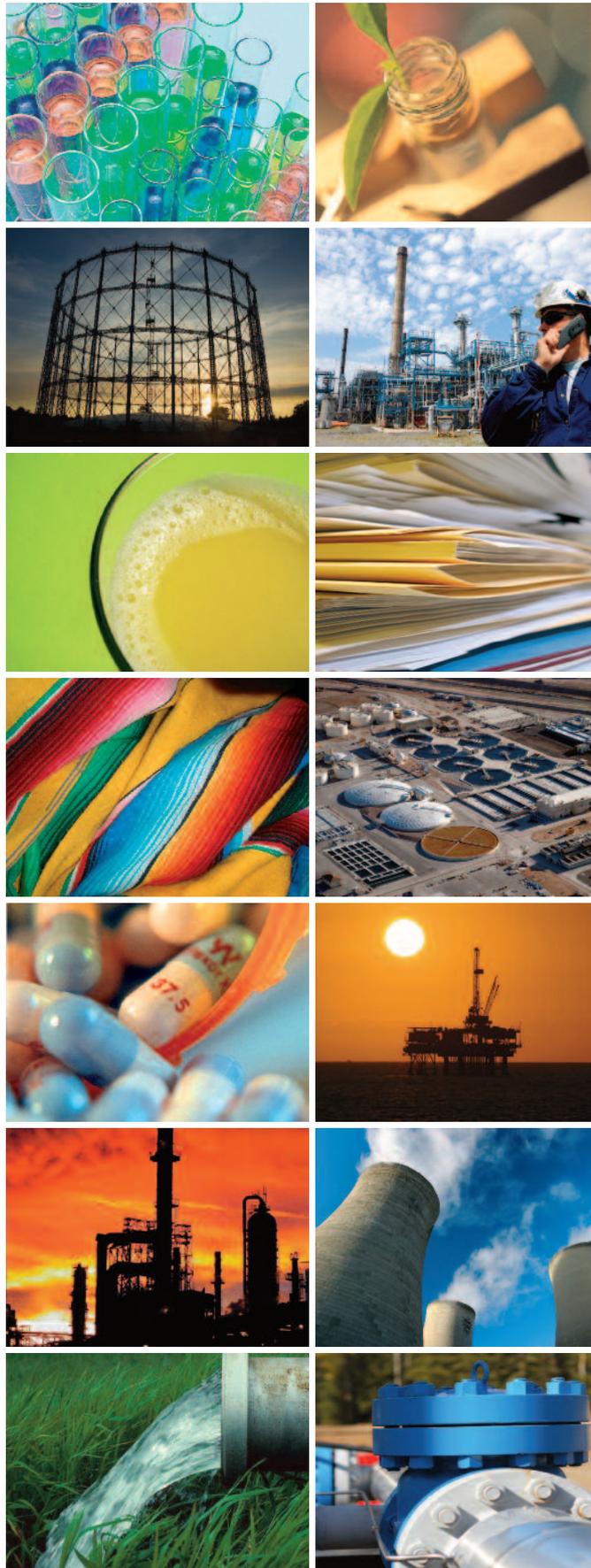
- Chemical
- Food & Beverages
- Detergents
- Power Generation
- Environment
- Oil & Gas
- Petrochemical
- Pharmaceutical
- Paper
- Textile



Double diaphragm metering pump with PVDF head



Kolben-Dosierpumpe, Pumpenkopf aus rostfreiem Edelstahl AISI 316L



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**seko** is a leading manufacturer of dosing pumps and dosing systems with more than 40 years experience. This long activity allowed **seko** to acquire a vast experience in diversified applications and to confirm its international success in many industrial fields through the supply of reliable solutions for the dosing, injection and transfer of liquids.



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■ Subsidiaries

## ITALY

▲ **Seko Spa**  
[Process & Sytems]  
20068 Peschiera Borromeo -  
Milano  
info.psd@seko.com  
info@seko.com

## FRANCE

▲ **Seko Lefranc-Bosi S.A.**  
77435 - Marne La Vallee  
Cedex 2  
lefrancbosi@lefrancbosi.com  
service.commercial@seko.fr  
www.lefrancbosi.com

## ROMANIA

▲ **Seko Sieta S.r.l.**  
400393 Cluj-Napoca  
info.dpro@seko.com

## UNITED ARAB EMIRATES

▲ **Seko Middle East FZE**  
P.O. Box 42090 – Hamriyah  
Free Zone, Sharjah  
info@seko.ae  
sales@seko.ae

## BRAZIL

■ **Seko do Brasil**  
**Comercio de Sistemas de**  
**Dosagem Limitada**  
03170-050 São Paulo (SP)  
sekobrasil@sekobrasil.com.br  
www.sekobrasil.com.br

## BENELUX

■ **Seko Benelux B.V.**  
7532 SK Enschede  
(The Netherlands)  
info@sekobenelux.com

## CHINA

■ **Seko China Ltd**  
072750 Hebei  
china@seko.com  
www.sekochina.com

## DENMARK

■ **Seko Denmark**  
DK-4930 Maribo  
info@seko.com

## GERMANY

■ **Seko Deutschland**  
**GmbH**  
55252 Mainz - Kastel  
info@seko-messtechnik.de  
www.seko-germany.com

## ITALY

■ **Seko Spa**  
02010 S.Rufina - Rieti  
sales@seko.com

## RUSSIA

■ **OOO Seko**  
129347 - Moscow  
sekorussia@seko.com  
www.sekorussia.ru

## SINGAPORE

■ **Seko Dosing Systems**  
**Asia Pacific Pte Ltd**  
608838 Singapore  
asiapacific@seko.com

## SOUTH AFRICA

■ **Seko Southern Africa**  
**(PTY) Ltd**  
Kyasand - Johannesburg -  
Gauteng  
sales@sekosa.co.za

## SPAIN

■ **Seko Ibérica Sistemas**  
**de Dosificación S.A.**  
08960 Sant Just Desvern -  
Barcelona  
sekoiberica@sekoiberica.com

## SWEDEN

■ **Seko Sweden**  
26123 Landskrona  
info@seko.com

## TURKEY

■ **Seko Endüstriyel**  
**Pompalar ve Proses**  
**Sistemleri San. ve**  
**Tic. Ltd. Şti.**  
Kartal Istanbul  
info@seko.com.tr  
www.seko.com.tr

## UNITED KINGDOM

■ **Seko UK**  
**Chemical Controls Ltd**  
Harlow, Essex - CM19 5JH  
seko.uk@seko.com  
www.sekouk.com

## USA

■ **Seko Dosing Systems**  
**Corporation**  
Tullytown - PA 19007  
sales@sekousa.com  
www.sekousa.com

For more information  
[www.seko.com](http://www.seko.com)

