



# Solutions for **Water & Industry**



Your Choice,  
Our Commitment

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# Content

**Introduction** page 4

**Seko Connectivity Platform** page 6

**Solenoid driven dosing pumps** page 8

- Tekna, Tekba, Maxima, Kompact, Invikta
- Accessories

**Motor driven dosing pumps** page 16

- Tork, Stark, Kosmo, Elektra, Spring
- Accessories

**Peristaltic dosing pumps** page 26

- Kronos

**Controllers & Sensors** page 28

- Kontrol 800 Tech, Kontrol 800, Kontrol 152, Kontrol 150, Kontrol 100, Kontrol 50, Kontrol 42, Kontrol 40
- pH, ORP, electrical and inductive conductivity, chlorine and disinfectants, dissolved oxygen, turbidity and flow sensor and probes
- Accessories

**Metering, measurement and control systems** page 40

- Kontrol 800 Panel, Kontrol 800 CT Panel, ECS 500 Panel, Kontrol Guard Tech

**Multi-parameter photometric system** page 42

- Photometer Systems

**FlowMeters** page 44

- SMAG 103

**Air operated double diaphragm pumps** page 46

- Duotek, Dampers
- Accessories

**Polymer preparation units** page 50

- PolyCendos, PolyMan, PolyTower, PolyKompact, PolyMaster

**Side channel compressors and vacuum pumps** page 54

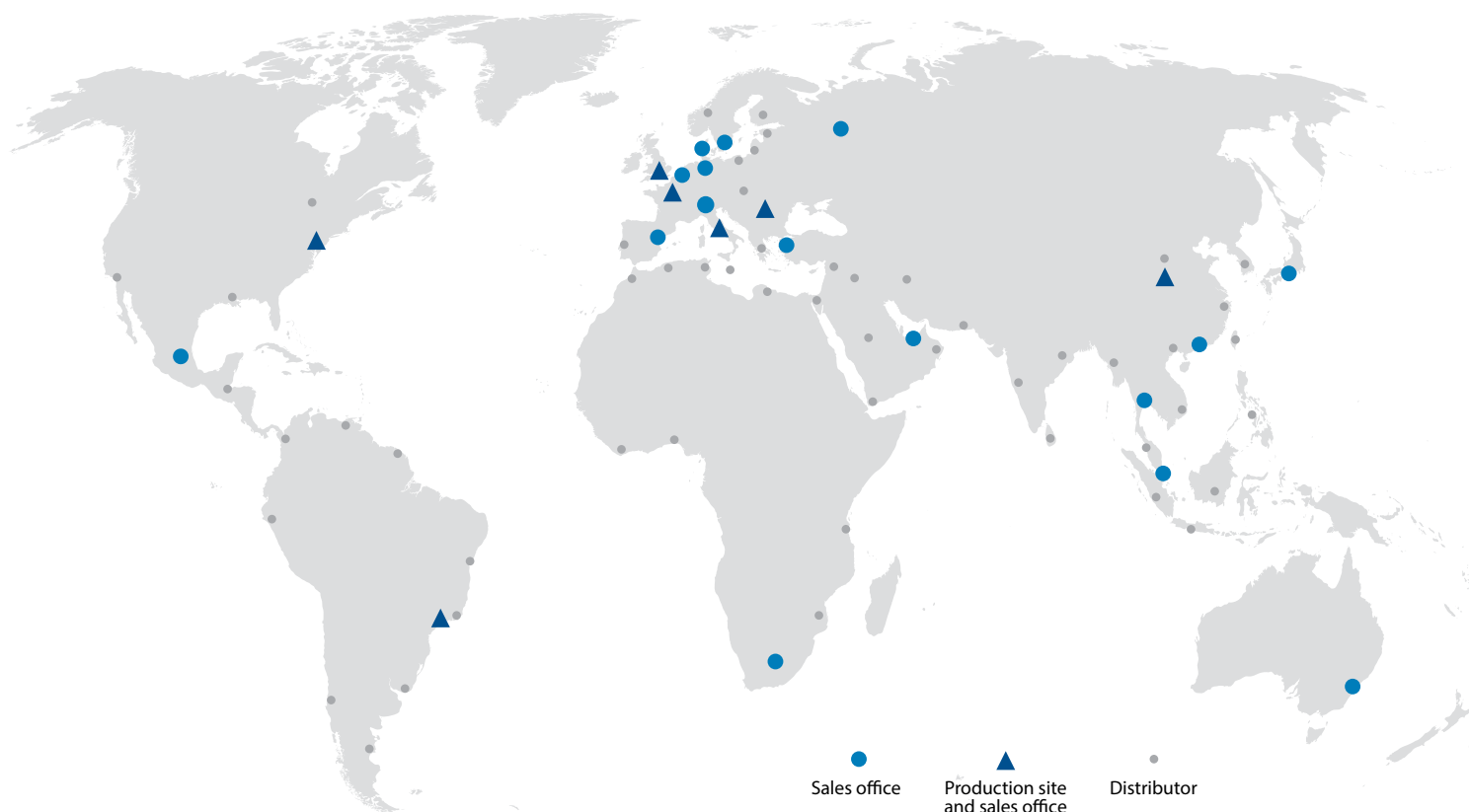
- Blowers

**Dosing and injection packages** page 56

**Vision and Values** page 58







# Globally Present, Locally Active

## A Worldwide Group at your service

Our Global presence ensures that we can support our Customers wherever they are. Supported by teams in over 20 countries, as well as by our accredited Partner Distributor network, we ensure professional, local customer support in over 120 countries, with the added benefit of rapid delivery of goods to meet your needs.

All this backed up and supported by a world-class team of Technical Customer Service, able to provide all the back up or technical support needed. With ISO certificated production sites in Europe, the Americas and Asia, we are close to our customers and fully compliant with all local norms both in terms of our product designs as much as our production facilities.

# How SEKO works for You

From the spark of an idea, through to the delivery of a solution, SEKO is with you all the way

SEKO supports its customers in every phase of a project, from the inception of an idea or request, through design and testing to launch and installation. Our in-house research, design and development teams work closely with the local teams, drawing on customer and market inputs. Then using state-of-the-art technologies to optimize costs and using our own specifically designed test benches to ensure rigorous, robust testing, we ensure a quality solution is delivered quickly to market.

No matter which processes and applications are planned SEKO has a solution in the cleaning and hygiene of kitchens and laundries and surfaces of all types in applications like Offices and Restaurants, Hospitals and Hotels, Retailers and Schools, Car Washes and Swimming Pools, Cooling Towers, Energy, Food & Beverage, Water & Gas Utilities Potable and Waste Water Treatment.

## Partnership philosophy

Being a privately-owned business means that we are here for the long term and can plan projects with and for our Customers, where both parties benefit. It means we can rapidly take decisions to invest our resources to ensure our optimum solutions are delivered.

## Your Business, Our Solutions

Our extensive product range represents a unique combination of design, development and implementation know how. With a wide and ever evolving range of products and ancillaries, we can offer specific and comprehensive solutions for a variety of industrial applications. Our solutions are conceived to fit seamlessly into your operation, optimizing the processes and applications.

## Uniquely positioned

SEKO's 3 business units, Cleaning & Hygiene, Water and Industry and Industrial Processes puts us in a unique position to be able to respond to the widest range of business needs, with a broad range that allows you the Customer to deal with just one company, simple.



# Water Treatment Applications

## An ever-evolving set of solutions safeguarding a precious resource

Water is becoming increasingly scarce, and therefore more valuable and as a result since the late '90s, the water treatment market has rapidly grown as have the challenges faced by those who work in the sector and who encounter increasingly complex challenges in water treatment processes, ranging from guaranteeing high water quality to meeting ever more closely monitored regulations.

From the treatment of water for human consumption, to the water used in cooling water treatment and the use of water in myriad industrial processes, SEKO has and continues to enjoy a strong reputation as a reliable and consistent partner delivering solutions tailored to meet any given need. Exploiting our market experience, we design, develop, test and manufacture designs that ensure all our solutions and systems deliver:

## Precision and Consistency

From managing the total cost of ownership of a system, whilst guaranteeing accurate measurement of critical water parameters from our Kontrol Series, through to chemically compatible raw materials, chosen for their robustness and durability in our manufacturing process, exemplified by our 5-year guarantee on our diaphragms, to our ATEX certificated pumps, SEKO offers an optimal result, providing peace of mind and brand security.

## Ease of Use and Installation

As a global company, we are attuned to the differing needs of individual markets. This is why, when we design a new product, we ensure that installation is simple and that we use uniform programming language solutions that are intuitive and easy to understand, in whatever language you speak.

## Operational Efficiency

From the affordability of the range of solutions, through to thoughtful design elements such as an adjustable stroke length, single Wetted parts options, stabilised power supply, multiple model outputs in one pump footprint, base or wall mounting, and a common programming language, SEKO's pumps offer an exceptional mix of affordability and high performance across solenoid and electro-mechanical pump applications.



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# SEKO Connectivity Platform

Today, the modern world's expectation is to be able to operate any piece of equipment or understand how it's performing from our phones, laptops, tablets and even our watches. Instant access to key data and our ability to respond immediately to any need is today a minimum requirement.

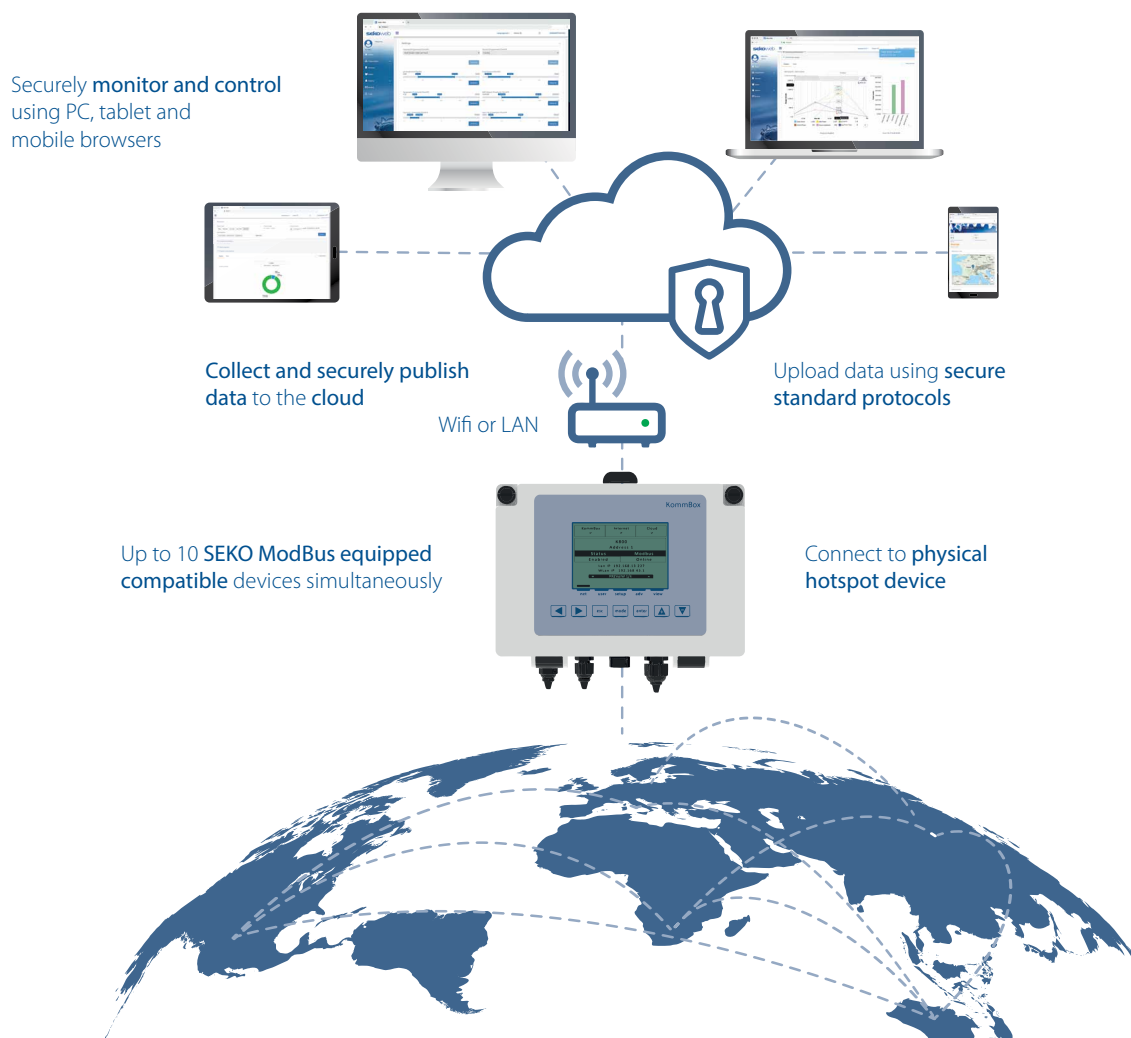
## How the Internet of Things (IoT) works

An IoT ecosystem consists of web-enabled smart devices that use embedded processors, sensors and communication hardware to collect, send and act on data they acquire from their environments. IoT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analysed fully with analysis and comparison possible, or analysed locally limited to the data acquired.

Sometimes, these devices communicate with other related devices and act on the information they get from one another. The devices do most of the work without human intervention, although people can interact with the devices, for instance, to set them up, give them instructions or access the data.

**IoT offers a number of benefits to organizations, enabling them to:**

- monitor their overall business processes
- improve customer experience
- save time and money
- enhance employee productivity
- integrate and adapt business models
- make better business decisions
- generate more revenue





## SekoWeb & Data on Demand

In today's connected world, customers expect to manage their equipment from a PC, laptop or smart device, using the Internet of Things to access operational information at their convenience. Whether viewing data in real time or analyzing it historically, remote connectivity allows costs to be optimized through targeted maintenance or problem solving, ensuring downtime is kept to a minimum.

Always at the forefront of technological innovation, SEKO has brought the IoT to its class-leading controllers and dosing systems\*, connecting plant operators to their equipment like never before.

Via the bespoke SekoWeb platform, users enjoy unparalleled access to live data and can make vital adjustments to their water-treatment operation 24 hours a day from any location worldwide.

Along with significant efficiency improvements, operators benefit from 24/7 awareness of system status for all their equipment across multiple installations, providing complete peace of mind.

Fully scalable, SEKO's systems are set up to allow users from the largest global multi-national to the independent engineering company to maximize their operations and running costs with a solution that ensures data is always available on demand, regardless of the application. Features include:

- Overall operating costs
- Chemical usage
- Programmes
- Parameters set
- Alarm reporting
- Data analysis
- Map geolocation



## KommBox

KommBox is a device that can be physically connected to all SEKO equipment provided with ModBus serial ports (\*) that are accessible via the web. Essentially, the KommBox is a gateway that creates the interface between several ModBus devices and the Wi-Fi or LAN – and therefore the web.

KommBox can be used via any available internet connection. Once configured and installed, the devices can be accessed directly from the dedicated SekoWeb portal, from any place in the world, by users with the appropriate credential.

KommBox features an intuitive wizard installation system for products as they are loaded, making the process quick, simple and straightforward. Once the products have been installed, they can be found in the portal itself.

(\*)Available on products across the SEKO range, identifiable by this icon.



### Features

- Able to manage up to 10 devices in the same wired ModBus RS485 network
  - Wi-Fi board and LAN input use every available internet connection in order to send periodical data to SekoWeb
  - Configurable as a hot spot for accessing the internal WebServer
  - Independent 100 – 240V power supply
  - Internal battery for a local clock
  - Seven-key user interface
  - Backlit three-colour graphic display
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# Solenoid driven dosing pumps

SEKO's solenoid driven dosing pumps offer a versatile solution for all water treatment applications.



The range is available in both analogue or digital versions. The digital versions contain powerful microprocessors that guarantee dosing accuracy through correct proportional adjustments and are supported by a mechanical stroke setting. As there is only one moving part, drive is virtually wear-free and the pumps require no lubricated bearings or shafts, driving low maintenance and repair costs whilst offering excellent, continuous running characteristics. The multilingual menus make set up simple, quick and flexible. All models are compliant to IP65 classification and feature low level alarms. The ranges are made in a variety of materials that serves to ensure the broadest compatibility with the metered products.

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# Tekna

## Solenoid driven dosing pumps

Tekna Series is the range of innovative wall mounted solenoid driven dosing pumps that SEKO has designed following many years of experience working with its customers worldwide. These multifunctional solenoid driven dosing pumps maintain outstanding precision and reliability, critical to any customer, characteristics synonymous with the SEKO name.

- Capacity range: 0.4 – 110 l/h, up to 20 bar
- Wetted parts: PVDF, PTFE, EPDM, FPM and Ceramic
- Analogue and digital range with constant or proportional dosage



CE  II 3GD  
Ex ic nA IIB T4 Gc  
Ex tc III CT120°C Dc IP65

Using only premium materials in its manufacture, Tekna's pump head comes as standard in PVDF and with a ceramic ball valve. These features assure high performance for the chosen applications and improve the reliability of the pump assuring the chemical compatibility of the wetted parts.

SEKO's diaphragms are solid PTFE offering superior life expectancy and are guaranteed by SEKO for 5 years, making routine replacement no longer necessary.

Tekna features reduced energy consumption thanks to a Stabilized Multi Power Supply 100 - 240 Vac, 50/60 Hz.

Tekna is also available in ATEX standard compliant versions. This pump offers digital dosing with a constant or proportional flow rate, that is manually adjustable from 0 - 100% and has a level control input.

Tekna ATEX comes as standard with a pump head in AISI 316. Optionally available are heads in PVDF, outer casing made in aluminium and with a manual priming valve.

### The range also features

- Constant or proportional dosing according the measured Chlorine, Hydrogen peroxide or Peracetic acid
- PT100 probe input for thermal compensation
- Repetition alarm relay
- Input On/Off for remote control
- 4 – 20 mA output for measure transmission
- Timer function
- ppm dosing
- Batch Mode & On/Off input
- Statistics menu
- Flow sensor
- Level control inputs & alarm output relay
- Password protection
- Proportional dosing using both analogue (4 – 20 mA) and digital inputs

# Tekba

## Solenoid driven dosing pumps

Tekba is a digital solenoid driven dosing pump with mechanical stroke length regulation. It represents the best compromise between reliability, dosing precision, and ease of use and has been designed following the positive customer feedback SEKO has received on the Tekna Series. The Tekba Series offers a modern and reliable product, a reference point in the base mounted dosing pump sector.

- Capacity range: 2.5 – 110 l/h, up to 20 bar
- Wetted parts: PVDF, PTFE, EPDM, FPM and Ceramic



Tekba benefits from a standard PVDF pump head and ceramic ball valve, providing pump longevity and compatibility with all principal water treatment applications.

Diaphragms of PTFE offer a superior life expectancy guaranteed by SEKO for 5 years, making routine replacement no longer necessary.

Comes with a Stabilized Multi Power Supply 100 - 240 Vac, 50/60 Hz offering reduced energy consumption.

The solenoid only draws the required power to activate the pump, based on the working conditions which brings improved pump efficiency as performance is not affected by power supply fluctuations.

Programmable via its keypad, the flow rate can be manually or automatically adjusted, the latter using input signals, across a range from 0 (pump stop) to 100% of the maximum flow rate.

Both constant and proportional dosing is available dependent on model type, with the latter available in both analogue and digital versions.

### The range also features

- Low level alarm
- Proportional dosing using both analogue (4 – 20 mA) and digital inputs



# Maxima

## Solenoid driven dosing pumps

SEKO's range of base mounted solenoid driven dosing pumps features new revolutionary electronic stroke length regulation. The range offers both constant and manually adjustable, proportional flow rates, which can be based on either an external analogue or digital pulse signal.

- Capacity range: 0.4 – 110 l/h, up to 20 bar
- Wetted parts: PVDF, PTFE, EPDM, FPM and Ceramic
- Analogue and digital range with constant or proportional dosage



Built using premium materials Maxima comes as standard with a pump head made of PVDF offering superior chemical compatibility for industrial, waste water treatment and potable water applications.

Advanced design and manufacturing processes means SEKO's diaphragms are made of pure PTFE, ensuring compatibility with most chemicals. This also provides a superior life expectancy, which SEKO guarantees for 5 years, reducing operating costs.

The use of ceramic balls as standard improves the reliability of the pump and the chemical compatibility of the wetted parts.

Maxima is supplied with a Stabilized Multi Power Supply 100 - 240 Vac, 50/60 Hz offering reduced energy consumption.

Designed around a single outer casing, Maxima offers 5 pumps with common fixing points, allowing any selection of pumps to be quickly incorporated into pre-assembled skids.

### The range also features

- Constant or proportional dosing according the measured Chlorine, Hydrogen peroxide or Peracetic acid
- PT100 probe input for thermal compensation
- Repetition alarm relay
- Input On/Off for remote control
- 4 – 20 mA output for measure transmission
- Timer function
- ppm dosing
- Batch Mode & On/Off input
- Statistics menu
- Flow sensor
- Level control inputs & alarm output relay
- Password protection
- Proportional dosing using both analogue (4 – 20 mA) and digital inputs

# Kompact

## Solenoid driven dosing pumps

Kompact is a simple and reliable range of micro-processor based wall mounted solenoid driven dosing pump. The range has been designed to provide a general solution to the most commonly found daily needs. The range features both constant and proportional flow rates managed through a manually adjustable control dial on the front panel.

- Capacity range: 5 l/h at 8 bar or 3 l/h at 10 bar
- Wetted parts: PVDF-T, PTFE, EPDM, FPM and Ceramic
- Analogue and digital range with constant or proportional dosage



Kompact, even in its basic variant, uses premium materials in its manufacture. The pump head comes as standard in PVDF-T, but can be optionally specified in natural PVDF and comes with a ceramic ball valve as standard improving the reliability of the pump over time and offers chemical compatibility of the wetted parts. SEKO's diaphragms are made of pure solid PTFE offering a superior life expectancy guaranteed by SEKO for 5 years, making routine replacement no longer necessary.

Some variants come with a Stabilized Multi Power Supply 100 - 240 Vac, 50/60 Hz offering reduced energy consumption. The solenoid only draws the required power to activate the pump, based on the working conditions which brings improved pump efficiency as performance is not affected by power supply fluctuations.

### The range also features

- Power-ON led indicator
- Multi colour LED status system
- Level control input
- Timed dosing with a weekly programmable timer
- Dosage in ppm, dosage batch
- Statistics
- Password protection for digital models
- Input ON-OFF (remote control)

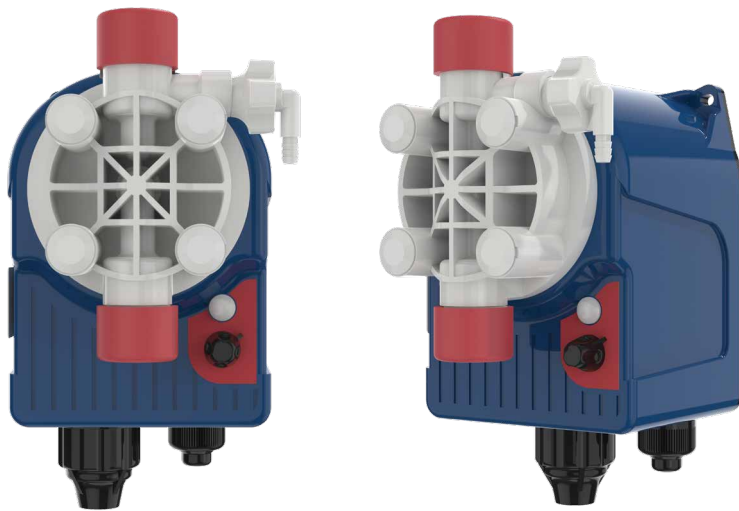


# Invikta

## Solenoid driven dosing pumps

The Invikta Series is a series of micro-processor based solenoid driven dosing pumps. While Invikta may be the entry level to SEKO's range of solenoid driven dosing pumps, it still brings with it great reliability, quality construction and flexibility in the number of applications where it can work, such as: OEMs, Swimming Pools, Car Wash, Cooling Water Treatment, Reverse Osmosis Systems and many other applications.

- Capacity range: 0.2 – 5 l/h, up to 7 bar
- Wetted parts: PVDF, PTFE, EPDM, FPM and Ceramic



As with the rest of SEKO's products Invikta, uses premium materials in its manufacture. The pump head is optionally available in PVDF and but the ball valves are ceramic as standard further enforcing the reliability of the pump and assures the chemical compatibility with all the wetted parts. SEKO's diaphragms are made of pure solid PTFE offering a superior life expectancy guaranteed by SEKO for 5 years, making routine replacement no longer necessary, making this essential pump a great entry point into the SEKO range.

External plastic enclosure is in PP which comes with IP65 class protection against jets of water and aggressive environments. A low-level alarm can be requested as an optional extra.

### The range also features

- Range of connections to suit specific applications
- Wall mounting option saves space
- Manual priming valve facilitates quick start-up
- Manually-adjustable flow rate for process optimization
- Operation state LED for monitoring at a glance
- Low-level alarm avoids dry running (optional)

# Accessories

## for a perfect installation

The trouble-free operation of a pump depends on the correct per-installation analysis that is specific for the required task. The consequent choice of accessories and their sizing are very critical for the correct and smooth performance of a reliable system.



Threaded water meters  
TC1 - TH1 - TC0 Series



Flanged water meters  
FC Series



Mixers



Suction  
Devices



Polyethylene tanks  
SER Series



Reinforcement and  
Uncovered tanks



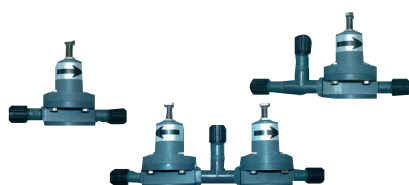
Flow Sensor



Priming-aid



Pump head  
with automatic  
degassing valve



Adjustables valves HY Series



Injection valves



Multifunction  
valve



Fixed / Adjustable  
backpressure valves







# Motor driven dosing pumps

SEKO's range of motor driven dosing pumps offer high levels of accuracy in dosing and flexibility in use for the most demanding water treatment applications.

SEKO offers an extensive range of dosing pumps with a capacity rating of up to 2065 l/h. The membrane versions can work effectively with the most problematic liquids, while our piston variants offer superior performance, giving the user the opportunity to find the most appropriate solution whatever the application.

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# Tork



## Hydraulic double diaphragm dosing pumps with full motion mechanisms

SEKO's long standing experience of designing and producing pumps for heavy duty applications has been utilized for the design of the Tork series. It offers an outstandingly flexible pump configuration allowing for customization of the pump even post installation whilst remaining always easy to maintain.

- Capacity range: up to 2065 l/h, up to 200 bar
- Wetted parts: SS 316L, PP, PVDF and PTFE
- Certified ATEX 2014/34/EU



Designed to produce low noise emissions and to minimize power consumption. Each mechanism comes complete with an internal gearbox; pumps with different speeds (strokes/min) can therefore be joined, allowing for greater flexibility in selecting the pumps themselves. Its high precision stroke adjustment, to an accuracy level  $\pm 1\%$ , can be both manually or electrically adjusted using SEKO designed electrical actuators.

Other features include a zero-leakage profile offering watertight construction for dosing toxic, corrosive and other hazardous liquids; its double diaphragm protection system immediately signals the anomaly whilst not stopping the pump from working, thereby preventing immediate downtime.

Manages solid suspensions thanks to the diaphragm not requiring perforated shields on the process side, which allows liquids containing solid suspensions to be pumped.

### The range also features

- Mechanical refilling system
- PTFE diaphragms compatible with a vast assortment of liquids
- Flow rate modularity
- Venting system
- Pressure relief valve

# Stark

## Hydraulic diaphragm dosing pumps with full motion mechanisms

The Stark series are hydraulic diaphragm dosing pumps suitable for applications that require very high levels of precision, manufactured with materials that ensure compatibility with the widest range of liquid dosing application.

- Capacity range: up to 660 l/h, up to 124 bar
- Wetted parts: SS 316L, PP, PVDF and PVC



Conceived to produce low noise emissions and to minimize power consumption. High precision stroke adjustment, both manual and via electric actuator.

Other design features include a zero-leakage profile offering watertight construction for dosing toxic, corrosive and other hazardous liquids; it also offers protection against pollutants which could contaminate the liquid that is being pumped.

The flow rate adjustment uses SEKO's AKTUA system that replaces the pump's manual flow adjustment device with an automatic system that offers remote management.

A mechanical refilling system maintains a constant hydraulic fluid level, thereby guaranteeing maximum precision and repeatability. It also helps manage the eventual deformation of diaphragm thereby increasing its lifespan and reducing operational costs.

### The range also features

- PTFE diaphragms compatible with a vast assortment of liquids
- Cartridge valves for maximum dosing precision
- Venting system
- Pressure relief valve



# Kosmo

## Mechanical-return diaphragm dosing pump

SEKO's newest pump, Kosmo is a range of electric motor-driven pumps with mechanical diaphragm liquid ends and mechanical return aimed at delivering exceptional performance across a wide range of flow and pressure environments.

- Capacity range: up to 2300 l/h at up to 12 bar
- Wetted parts: SS 316L and PVDF



Range has two principal models MM1 and MM2 designed to be compact and robust. Offers excellent performance across a wide range of flow rates as low as 3.5 l/h up to 2300 l/h. This makes Kosmo ideal for low discharge pressures – for example in the water treatment industry, but also in the food industry in clean-in-place applications.

Designed using materials chosen for their robustness and conceived to work for long periods of continuous operation thanks to the benefits derived from its variable eccentric system.

Kosmo can effectively be used in any of the following applications: potable water treatment (injection of coagulants, flocculating agents, sodium hypochlorite, lime slurry, acid, bases, caustic soda, activated carbon, etc.); domestic or industrial waste water treatment, boiler feed water, reverse osmosis, cooling water; chemical treatment, electrolytic (electro-plating) treatments: addition of degreasing agents, cleaning agents, nickel electroplating and chemical nickel plating, copper plating, tinning; etc.

### The range also features

- Broad range of chemical compatible materials
- Permanent lubrication of mechanism
- Low noise operation
- Protection degree IP55

# Elektra

## SEKO brings connectivity to mechanical dosing

Elektra builds on the SEKO Spring range of motor driven pumps which have long been recognised for their affordability, low total cost of operation and ease of maintenance. To this mix of characteristics Elektra brings the ultimate in precision digital dosing and remote data management further enhancing operational cost advantages through ease of programming from any smart device or pc as well as traditional display.

## Data on Demand

In a world that is increasingly “connected” Elektra brings the benefits of Data on Demand, essential to running an efficient operation across potentially complex installations. Designed to manage operating costs of plants and installations that are continuously under cost pressure, Elektra helps cost control and provides peace of mind driven the knowledge of having exactly the right dosage being delivered consistently and with guaranteed repeatability.

## Key Features

Data on Demand offers remote data management and programming from built in hot spot, unique to Elektra

Real time and historic data available directly to any smart device or pc including alarms to help drive effective maintenance planning and rapid technical intervention

Reliability of SEKO's Spring range offers broad range of flow rates, including high flow rate up to 1000 l/h at up to 20 bar

Wide range of applications - suitable also for higher viscosity product applications

Digital dosing for precise dosing

Multiple operating modes – timed, batch, manual, proportional from analogue or digital signals

Intelligent Graphic display – shows red, yellow or green according to operating function

Electronic control unit interface can be fixed in multiple positions to facilitate operation/installation

Outstanding ease of programming coupled with low maintenance costs give exceptional operating costs

Energy efficient 3 phase motors, wide range of materials available



## Hydraulic characteristics

### MS1A/B/C - Diaphragm pump

Flow rate up to 500 l/h

Max pressure up to 16 bar

Strokes 1 - 116

### PS1 D - Piston pump

Flow rate up to 304 l/h

Max pressure up to 10 bar

Strokes 1 - 116

### PS2 E - Piston pump

Flow rate up to 1000 l/h

Max pressure up to 20 bar

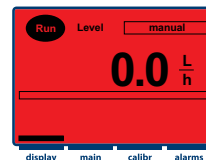
Strokes 1 - 116

### Simple fast programming

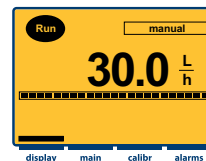
Elektra's controller allows simple fast programming from any smart device or laptop even remotely as well as from the display

### Smart digital display

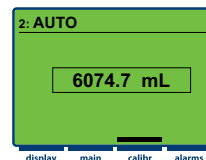
Offers not only multiple language options, but also changes colour according to operating function



Red - shows alarm mode



Yellow - shows the control unit is connecting to a smart device



Green - shows after the successful completion of a calibration process

### Flexible position

Controller and motor can be fixed in 3 different positions for maximum flexibility

### Manual adjustment of stroke length

Provides the ultimate in accuracy when combined with the digital dosing of Elektra's controller

### Wide choice of materials

For the pump head SS – PVDF – PVC – PP



# Spring

## Plunger piston and mechanical diaphragm dosing pumps

Motor driven dosing pumps need to be robust, reliable and able to run on their own without supervision. SEKO's entry level offering in motor driven pumps is the Spring series. Three sizes of mechanism and a wide selection of models with varying performance profiles allow the user to find the appropriate solution for almost any application, offering accurate dosing even under fluctuating pressure conditions.

- Capacity range: up to 1200 l/h, up to 20 bar
- Wetted parts: SS 316L, PVC, PP and PVDF

Features a spring return mechanism in an aluminium housing. These pumps always deliver robust, affordable and efficient power. They offer flexibility in stroke length and motor speed which are separately controllable. Thanks to the mechanically actuated diaphragms, SEKO's Spring pumps can be used almost universally in low pressure applications with the additional benefit of being a zero-leakage solution.

### The range also features

- Piston available as standard in SS316 or ceramic
- Mechanical diaphragm in PTFE
- Every pump can be equipped with an electric actuator which accepts a 4 – 20 mA signal

## Spring PS1 Plunger piston dosing pumps

The PS1 series piston dosing pump offers a flexibility of choice combining different pump head and engine power options that ensures a solution for almost any eventuality or application.

The PS1 Series' performance achieves flow levels between 1.5 and 304 l/h at pressures up to 20 bar.

Each model can be configured with 2 different stroke rates.

Stroke lengths can be set automatically or manually using the AKTUA Kit which uses a 4 - 20 mA signal.

Spring PS1 is supplied with a 3 phase electric motor with IP55 protection. Optionally available on request is a single-phase motor.



The PS1 12 VDC range achieves flow rates between 34 and 350 l/h at up to 20 bar.

## Spring PS2 Plunger piston dosing pumps

The PS2 series piston dosing pump also offers multiple combinations of pump heads and motor power that enables it to adapt to a large number of applications.

The PS2 achieves flow rates of between 40 and 1000 l/h with a pressure up to 20 bar. Whilst having similar features with the PS1 Series, PS2 Series is also flexible, being able to alter its hydraulic characteristics thanks to a bigger size of piston and longer stroke length, which therefore alters the flow rate and power.

Like PS1, PS2 pumps have a spring-loaded mechanism in an aluminium housing, and each model can be configured with 2 different stroke rates.



Stroke lengths can be set automatically or manually using the AKTUA Kit which uses a 4 - 20 mA signal.

PS2 pumps are supplied as standard with a 3 phase electric motor, though a single-phase is available on request, both with IP55 protection.

## Spring PS2 HP Plunger piston dosing pumps

The PS2 series of High Pressure Piston dosing pumps can adapt to a large number of applications.

The PS2 High Pressure Series covers a flow rate of 0.25 to 12 l/h with a back pressure of 100 bar. Like other variants in the Spring Pump series, PS2-HP has a spring return mechanism in an aluminium housing.

This model has 2 stroke rates..

Stroke lengths can be set automatically or manually using the AKTUA Kit which uses a 4 - 20 mA signal.

They can be powered by a 3-phase motor which has an IP55 electrical protection classification.



For use in applications requiring an economic and practical solution for dosing small amounts of product with at high pressure, for example in a boiler at up to 100 bar.

## Spring MS1

### Mechanical diaphragm dosing pumps

Mechanical diaphragm dosing pumps MS1 series offer several combinations of pump heads able to adapt to a large number of applications.

The MS1 Series achieves flow rates between 5.5 and 1200 l/h with a pressure of up to 16 bar. Multiple combinations of pump head and motor power provide options in selection of the optimal combination most suited to the specific application.

The MS1 pumps have a spring return mechanism in a single aluminium housing. Each model works with 3 different stroke lengths.

Stroke lengths can be set manually or even automatically, by using the AKTUA Kit based on a 4 - 20 mA signal.

In addition, Spring MS1 pumps can be supplied with a single or three-phase electric motor with IP55 protection.



The MS1 12 VDC range achieves flow rates between 23 and 620 l/h at up to 16 bar.

## Spring MS1 AVS®

### Mechanical diaphragm pumps

The patented AVS® (Assisted Vacuum System), helps overcome the typical functional limitations of the pumps with a spring return, such as the priming and the maximum suction height. Furthermore, it's possible to increase the performance of the pump by using a high number of strokes/min, but without affecting the lifespan of the diaphragm.

This means that Spring MS AVS® can reach a flow rate of 1200 l/h, whilst keeping noise and mechanical stress levels at a reduced level. Each model can be configured with 2 different stroke length and, to get the highest flow rates, can be supplied with a single or three-phase 2 poles electric motor with IP55 protection.





## Spring MSV Mechanical diaphragm dosing pumps

MSV is a new range of diaphragm dosing pump, designed to ensure reliable and effective long-term transfer of fluids. MSV features motorized mechanisms with high performance, high efficiency motors that are mounted vertically in a PP casing.

Reinforced by its double camshaft mechanical structure, the pump offers high levels of stability while remaining a low noise unit with exceptionally accurate flow rates.

Adaptable to a wide range of uses, Spring MSV provides high dosing accuracy across a wide variety of liquids, sludge and chemicals.



With flow rates between 10 and 120 l/h MSV can also be adjusted by regulating the stroke length.

## Accessories for a perfect installation

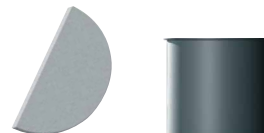
The trouble-free operation of a pump depends on the correct pre-installation analysis that is specific for the required task. The consequent choice of accessories and their sizing are very critical for the correct and smooth performance of a reliable system.



Mixers



Polyethylene tanks  
SER Series



Reinforcement and Uncovered  
tanks



Calibration pots



Pulsation dampers



Adjustable  
Backpressure valves



Overpressure valves



Backpressure valves



# Peristaltic dosing pumps

Combining ease of use with superior technology, SEKO's peristaltic range ideally showcases the company's product offering to the Water Treatment and Industrial process markets.

The extensive range provides solutions for every type of Water and Industry process. Features include Stepper motors, that offer the ultimate in dosing accuracy and versatility for use in a wide range of potential applications. The range also provides advanced solutions for the OEM market.

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# Kronos

## Peristaltic dosing pumps

The Kronos Series of peristaltic dosing pumps is the result of SEKO's dedication to innovation in its product range and SEKO's passion for delivering dosing systems that meet the technical requirements of increasingly complex and large customers.

- Capacity range: 2 – 25 l/h, up to 4 bar
- Roll PTFE body, Enclosure box IP65
- Standard installation kit includes: Ceramic foot filter, FPM non return valve, PVC and PE tubes



Kronos' superior design principles allied to the use of a high quality stepper motors along with innovative electronic control systems brings accuracy of dosing down to 0.01% of its maximum flow rate. The dosing function is particularly accurate and reliable over time, while the stepper motor offers an extended lifetime and a superior quietness in operation (<35dB).

Digital programming of the parameters via keyboard and display ensures a fast set up and final check on the programming data. The easy and intuitive menu enables a simple setting of the various options without the risk of forgetting anything. The internal menu also allows users to check the statistics on the life of the tube and the operating life of the pump

All Kronos pumps can use a wide range of membrane tubes ensuring perfect chemical compatibility without any sacrifice in the mechanical resistance of the tube. Currently the range of available Sekotubes includes Santoprene, SekoBril, SekoFlex and SekoKem.

New to the range are several new tubes, fully tested in our laboratories such as SekoExtra, SekoMed and SekoFort, this last one being specifically aimed at use with mineral oil, HP-San for high pressure, Sekolast and Pharmapure tubes for high chemical compatibility.

Kronos is an ideal range for use in Water treatment applications. Satisfied customers can already be found in the following areas: drinking, water applications, irrigation systems, cooling water treatment applications, swimming pools, flocculent dosing systems, priming of chemical products that release gas easily.

### The range also features

- Anti-scaling proportional dosing via an external pulse signal
- Open drain valve for blow down function via a conductivity feedback measure
- Software settings that disable drain action after chemical dosing



A photograph of a water treatment facility. In the foreground, a large blue pipe runs horizontally across the frame, with a black handwheel visible. To the right, a series of blue pipes with metal railings extends into the distance. In the background, a tall, cylindrical white storage tank with a red top is visible against a clear blue sky. The ground is a mix of concrete and dirt.

# Controllers & Sensors

Ensuring that water quality is always at its best, balancing the variables that impact it, demands measuring and dosing systems with the highest accuracy.

SEKO's Controllers and Sensors are built with precision in mind and can function in both internal and external environments. Specifically conceived to fit a wide range of individual applications, they are available in different performance classes ensuring easy integration into every process environment.

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# Kontrol

## Single, double, multi parameter controllers

The Kontrol Range represents SEKO's most advanced solution for the comprehensive monitoring of multiple water parameters. The result of SEKO's dedication to innovation and a passion for measurement solutions and systems to meet increasingly complex and large customers' technical requirements, Kontrol provides high levels of measuring accuracy and control with simple functionality.

- The range enables the operator to monitor key values to suit almost any application covering the following parameters: pH, ORP, Conductivity, Chlorine, Dissolved oxygen, Turbidity, Suspend Solid, Peracetic Acid, Ozone, Bromine, Peroxide, Flow rate and Temperature.



All models in the Kontrol Range have a standard calibration routine (or wizard calibration) to help end users through probe maintenance operations. Moreover, the controller is equipped with programmes that assist the installer when it comes to the management and replacement of the measurement electrodes, thanks to a clever "electrode quality" control function.

All models also benefit from having a traditional compensation measures providing the extra assurances on the accuracy and repeatability of measurements taken.

### The range also features

- All Kontrol units are CE/UL certificated ensuring full health and safety compliance
- Easy to install and easy to maintain the electronic circuits
- High contrast image graphic display, and easy to read, self-explanatory icons
- Variable display backlighting allows the user to quickly understand the active operating mode

## Kontrol 800 Tech

### Multi-parameter controller



The Kontrol 800 Tech series are professional controllers designed for advanced water treatment applications. All models are equipped with analogue and digital outputs that can be set by the end user via software.

Equipped with programmes that assist the installer in the management, replacement of the measurement electrodes, using the "electrode quality" control function. The data logger function helps monetise measurements supported by graphic line feedback.

Equipped with independent and proportional control outputs, four programmable frequency and four 4 - 20 mA current outputs, an RS485 serial port with MODBUS protocol, six relay outputs, probe quality control and is enabled for data collection.



Graphic displays ensures a fast set up and final check of the programming data, while the easy menu enables a simple set up of the various options without the risk of forgetting anything.

Internal menu enables monitoring of statistics on the probe life and the controller operation.

## Kontrol 800

### Multi-parameter controller



Kontrol 800 are user-friendly controllers designed for simple and advanced water treatment applications requiring simultaneous control of a number of chemical parameters. All models are equipped with analogue and digital outputs that can be set by the end user via software.

Equipped with independent and proportional control outputs, two programmable frequency and two 4 - 20 mA current outputs, an RS485 serial port with MODBUS protocol, six relay outputs, probe quality control and is enabled for data collection.

The alphanumeric display ensures fast set up and final check on the programming data. The easy to use menu enables a simple setting of the various options without the risk of forgetting anything and the "electrode quality" function allows the user to ensure optimum performance of the equipment.



The internal menu allows users to check the statistics on the life of the probes and the operating life of the controller while the data logger function provides information that helps monetise the results from the measurements.



## Kontrol 152

### Dual-parameter controller



Kontrol 152 are professional controllers designed for advanced water treatment applications and more. All models can monitor two different parameters and can drive consequently its several analogue and digital outputs according with the settings that the users set up through the powerful and intuitive menus of the device.

The controllers are equipped with independent outputs, fully configurable with proportional or PID control, and an RS485 serial port with RTU ModBus protocol. They implement a quality control of the probe, and are capable of a comprehensive data collection that allows a wide historical database of the behaviour of the device

A Data logger function is included able to give a graphic feedback of the evolution of the measures along the time.



Features a back-wash probe function and a dedicated remote alarm output relay.

Data logging functions allow users and management to accurately track the performance of their systems in use.

## Kontrol 150

### Single-parameter controller



The Kontrol 150 series are professional controllers designed for advanced high-end water treatment applications and more. All models are equipped with flexible analogue and digital outputs that can be easily set via software by the end user, with full autonomy of programming and working mode.

Kontrol 150 controllers have independent and proportional controlled outputs with active PID, an RS485 serial port with MODBUS protocol, a probe quality control and a comprehensive data collection capability.

The controller assists the installer in the management, replacement of the measurement electrodes, by means of the "electrode quality" control function.



Features a back-wash probe function and a remote alarm feature, using dedicated relays.

Data logging functions allow users and management to accurately track the performance of their systems in use.

## Kontrol 100

### Single-parameter controller

Advanced controllers designed for high-end applications. All models are equipped with analogue and digital outputs that can be programmed by the end user via software providing the user has a great autonomy in programming.

Kontrol 100 instruments assist the installer in managing and replacing the measuring electrodes, using the "electrode quality" function.

To facilitate further legibility during programming and data reading, the reverse display function allows the user to reverse the writing on the screen to obtain a high contrast.



The multi-colour backlit function, with four different colors, makes it easy to interpret what function the controller is in even in poor light conditions.

Kontrol 100 features a Modbus RTU/ASCII protocol that allows remote control interface using a RS485 port, making using the system for larger multi-site complexes easier and more efficient.

## Kontrol 50

### Single-parameter controller

Kontrol 50 are controllers designed for applications covering multiple parameters. All models are equipped with analogue and digital outputs that can be set by the end user via software.

The controller is equipped with programmes that assist the installer in the management and replacement of the measurement electrodes, using the "electrode quality" control function.

The easy-to-use set up menu makes verification of the dosing and control system simple and quick while high quality probes gives high precision measurements.



Reading data from the Kontrol 50 is easy thanks to its real-time status bar and the clear measurement screen in the centre of the digital display.

As with all Kontrol systems, it benefits from a wizard calibration system to facilitate daily maintenance tasks and a multilingual menu to ensure end users ability to use and interpret the system

## Kontrol 42

### Dual-parameter controller

Kontrol 42 instruments are double parameter function controllers designed for simple water treatment applications. These very user-friendly systems combine advanced performance with robust design.

A technologically advanced controller that enables precise adjustments, its easy-to-use programming menu makes verification of the dosing and control system simple and quick while the quality of the probes used ensure high resolution measurements.

Reading the data from the Kontrol 42 is made easy thanks to its real time status bar and from the clear measurement display in the centre of the digital display.



As with all Kontrol systems, it benefits from a multilingual menu to ensure end users ability to use and interpret the system.

## Kontrol 40

### Single-parameter controller

Kontrol 40 is a single parameter controller that uses the latest technology to accurately and reliably monitor pH, Redox (ORP), flow, potentiostatic chlorine and conductivity in all principal water treatment applications.

The innovative electronic control board used in Kontrol 40, allows full exploitation of its capabilities resulting in improved accuracy and consistent repeatability of measurement.

Its easy-to-use programming menu makes verification of the dosing and control system simple and quick while the quality of the probes used ensure high resolution measurements.



Reading the data from the Kontrol 40 is made easy thanks to its real time status bar and from the clear measurement display in the centre of the digital display.

As with all Kontrol systems, it benefits from a multilingual menu to ensure end users ability to use and interpret the system.



# Sensor and Probes

## pH, ORP, Electrical and Inductive Conductivity, Dissolved Oxygen, Flow, Chlorine and disinfectants, Turbidity and Suspended Solids

Monitoring a limit value or building a closed control circuit is easy with our sensors – in an enormous range of measuring applications. The measured values are delivered in real time and can be flexibly connected to the various process interfaces via bypass, immersion or installed fittings

Our product line provides a wide range of sensors for different measuring tasks. The field of application covers everything from simpler water treatment tasks to industrial process waters with more stringent requirements in terms of temperature, pressure, contamination tolerance and chemical resistance.



pH measurement is based on the use of a pH sensitive glass electrode, a reference electrode and a temperature element to develop a potential proportional to the pH of the solution.

The reference electrode is designed to maintain a constant potential at any given temperature, and serves to complete the pH measuring circuit within the solution.

- For every application up to 130°C and 16 bar
- Virtually maintenance-free
- Highly accurate with pressurizable liquid electrolyte
- Open hole, pella or ceramic diaphragms



ORP is a potentiometric measurement of the oxidizing/reducing power of a liquid. An ORP measuring electrode is similar to a pH measuring electrode, except it is normally constructed of a noble metal (Platinum or Gold).

From a water treatment perspective, ORP measurements are used often to control disinfection with chlorine and chlorine dioxide.

- For every application up to 130°C and 16 bar
- Virtually maintenance-free
- Highly accurate with pressurizable liquid electrolyte
- Open hole, pella or ceramic diaphragms



EC

The conductive principle sees an alternating current applied between sensor poles and the resulting current, dependent on the concentration of ions and on the length and area of the solution through which the current flows, is measured.

The current path is defined by the sensor geometry, or cell constant, which has units of 1/cm (length/area).

- From ultrapure water to high concentrated process media
- Cost-efficient for water / wastewater applications
- Conductive sensors for maintenance free applications

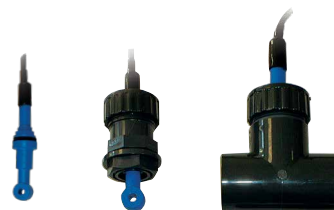


IC

The inductive principle sees the field coil of the sensor stimulated by a sinusoidal voltage. The current field in the fluid, that depends on its conductivity, generates a voltage in the receiver coil of the sensor.

The measure of this voltage and the cell constant give the right value of conductivity of the fluid.

- From ultrapure water to high concentrated process media
- Cost-efficient for water / wastewater applications
- Inductive sensors for maintenance free applications



DO

Dissolved Oxygen measuring sensor comes with an integrated temperature probe. The measuring technique is based on the following optical principle: a diode emits a blue light towards a support on which a fluorescent substrate is applied.

The substrate reacts by emitting initially a red light (luminescence), then returns to its initial state. The intensity of the produced red light and the return rate to the initial state are related to the present dissolved oxygen concentration.

- Innovative method gives accurate measurements over time, eliminating system calibration
- Maintenance required only every 2 years
- Suitable for variety of applications including where measuring liquid is almost stationary



FW

The paddle wheel sensor consists of a freely rotating wheel with magnets which is perpendicular to the flow. As the magnets in the blades spin past the Hall sensor, a frequency and voltage signal which is proportional to the flow rate is generated.

According to Faraday's Law the voltage induced by the magnetometer is proportional to the velocity of the conductor fluid. In the SFWE magnetometer the physical principle at work is electromagnetic induction.

- Low cost solution with high flow system accuracy
- No pressure drop making it ideal for gravity flows
- Reduced dependence on flow, substances and film-forming media
- Magnetometer without moving parts for measurement of conductive and homogeneous dirty media



CL

PAA

 $\text{H}_2\text{O}_2$ 

Br

 $\text{O}_3$ 

The standard potentiostatic and amperometric probe design consists of two electrodes (anode and cathode) that measure a change in current caused by the chemical reduction of hypochlorous acid at the cathode. The current that flows because of this reduction is proportional to the chlorine concentration.

The sensor contains a platinum and a copper electrode. With the sample water acting as the electrolyte, galvanic potential develops between the two electrodes. With stable conditions of pH and water flow, the sensor current increases proportionally to the free chlorine content.

- Different membranes available to measure range of chlorine ions
- Only 30 seconds to achieve an accurate reading
- Reduced dependence on flow, substances and film-forming media
- Wide range of measure up to 200 ppm
- Complete range of parameter measure as: Chlorine, Peracetic Acid, Peroxide, Bromine and Ozone
- 4 - 20mA output



TB

SS

Turbidity and Suspend Solid is the cloudiness of a fluid caused by large numbers of individual particles. SEKO's probes are used to determine high and very high concentrations of suspended solids up to 150 g/l. They offer reliable measurement thanks to an infrared optical measurement at 880 nm.

Their dual pulsed light beam system compensates for drift from any optical components, while digitized signals inside the probe body reduce the possibility of electrical interference in the signal transmission.

- Measurement is performed by using a 90° scattered light method compliant with ISO 7027 / EN 27027
- Medium is in direct contact with the sensors to make the unit virtually independent from humidity and condensate water
- No need to replace silica gel for easier and cheaper maintenance
- Also available version with Standard Protocol RS485 and 4 - 20mA outputs.





# Accessories

Probeholders, power supply, temperature sensor, cables, buffer solutions and probe accessories



Probes holder



Pressurized probes holder



Outflow probes holder



By-Pass probes holder



Immersion probe holder



Power Supply



Temperature sensor



Probe cable



Certified buffer solutions



Signal amplifiers for pH and ORP probes only

A large, cylindrical industrial cooling tower with a textured, metallic surface. It is set against a bright blue sky with scattered white clouds. The tower has a series of small, dark, rectangular openings or platforms along its side. The foreground shows a grassy field.

# Metering, measurement and control systems

At the core of any operation where water quality is key, the ability to measure and control the quality quickly, accurately and with a reassurance constancy is paramount.

SEKO's measuring systems are built with precision in mind and that can function in both internal and external environments, specifically conceived to fit individual applications. Available in different performance classes they can be integrated into every process environment.

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# Metering, measurement and control systems

## Panel-mounted and cabinet

When choosing to install a new piece of measuring equipment in your operation, the ability to simply “plug and play” is a key benefit, saving time and money and potential risks of selecting the incorrect or incompatible individual components. SEKO, renowned for its attention to offering practical and pragmatic designs, offers a range of preassembled panels that deliver outstanding results for most commonly found water treatment applications.

- SEKO's Kontrol Range delivers a modular technical solution for the Water Treatment & Industrial Process markets.
- The multi-parameter controllers are suitable for use in the following applications Municipal Water Treatment, Drinking Water, Cooling Water Treatment, Swimming Pools, Waste Water Treatment.



## The range also features a

- Measuring and control panels that offer an easy access “plug and play” solutions that make servicing and alterations simple. Available in the following models: Kontrol 800 Panel, Kontrol 800 CT Panel, ECS 500 Panel, Kontrol 500 Panel, Kontrol 40 Panel
- Metering, measuring and control panels that provide flexible, easy to use solutions, with simple maintenance using dosing pumps with built-in controllers. Available in the following models: Kronos panel, Tekna panel
- Kontrol Guard Tech measuring and control cabinet is a tamper proof enclosure containing instrumentation and manifold for measurement and control



## Kontrol 800 Panel

### Panel-mounted multi-parameter

The Kontrol panel 800 comprises 2 key elements and is designed with SEKO's usual attention to ease of use and simple to perform set up and maintenance regime that requires little technical knowledge.

The Kontrol 800 controller is a dedicated multi-parameter controller for complex applications that checks multiple chemical parameters simultaneously.

It comes with an alphanumeric display (4 lines x 20 characters), multi-language menus for easy operator interface and provides for remote control interface via a serial port RS485 by Modbus RTU/Ascii protocol.



Its universal power supply 100 – 240 Vac 50/60 Hz 20W delivers high technical performance and the galvanized electrical and measuring insulation ensures reliability.

The second is a piping hydraulic PSS-Tube probe holder with Volumetric Flow-meter, featuring a range from 300 to 3000 litres/hour, with an external reed sensor for proper flow rate.

## Kontrol 800 CT Panel

### Panel-mounted multi-parameter

The SEKO range of bespoke cooling water treatment panels are designed to provide a simple and effective way of automating the control of chemicals in cooling water treatment applications.

These systems comply with the requirements for dosing to control microbiological growth, prevent corrosion and bleed off the tower as required.

A selection of pump options provides maximum flexibility to cater for all cooling water treatment chemical options.



These plug and play systems save valuable installation time and together with user friendly set up menu and easy maintenance, the SEKO cooling water treatment systems provide an ideal solution to dosing control.

## ECS 500 Panel

### Panel-mounted multi-parameter

The ECS 500 panel helps to prevent legionella-related risks. The panel analyzes the water in a circuit, measures the concentration of free chlorine, and its regulation in a closed circuit

It is a plug and play panel, ready to use as soon as its installed and comes with several possible combinations for flexible solutions according to your needs.

Multiparameter instrument with data recording and direct reading of the measured parameters, with a potentiostatic probe.



Version dedicated to the measurement of chlorine with a potentiostatic probe.

Version dedicated to the measurement of chlorine, with a probe and ORP sensor.

## Kontrol Guard Tech

### Cabinet multi-parameter



The new Kontrol Guard Tech unit, with its 5" digital graphic display, combines the traditional elements of control and dispensing with a totally digital control system, which facilitates the setting and monitoring of the various parameters, depending on the application, using and comparing historic values to identify or analyze any errors.

The Kontrol 800 Tech controller is a dedicated multi-parameter controller for complex applications that checks multiple chemical parameters simultaneously.

It comes with an graphic display 5" (240x128 pixel), multi-language menus for easy operator interface. With the high-contrast image of the graphic display and the easy-to-read, explicit icons that are used, the operator is guided step-by-step through the applications. To improve the readability of the screen, the controller has several screen settings.



It provides for remote control interface via a serial port RS485 by Modbus RTU/Ascii protocol.

Its universal power supply 100 – 240 Vac 50/60 Hz 20W delivers high technical performance and the galvanized electrical and measuring insulation ensures reliability.

New box design for increased controller protection.





# Multi-parameter photometric systems

SEKO's products offer very high precision and reproducible analysis results with minimum time and effort.

SEKO's multi-parameter control unit provides for real time determination of Free Chlorine (Photometric System), pH, Redox and temperature. The system is equipped with a graphic display subdivided into areas for simultaneous display of all available measurements.



# Photometer System

## Multi-parameter analyser

Over the last decades, Photometry has developed as an essential method of analysis because it enables the “quantitative” determination of both organic and inorganic compounds. The technique uses the colorimetric methods characteristic of certain analytes, i.e. the properties of certain chemical reagents to develop colour with an intensity proportional to the concentration of a given substance, at a particular wavelength of the spectrum visible between the UV and IR.

Compared to UV or IR spectrophotometry, the colorimetric technique has the extraordinary advantage of relying on well-defined linear reactions and with few well-known interfering substances. The Palin method employs the interactive DPD principle to determine the concentration of certain oxidants such as: Free Chlorine, Total Chlorine, Chlorine Dioxide, Ozone, Peracetic Acid, Bromine, Permanganate etc. The DPD reacts with the oxidant present in the water, producing almost instantly a pink colour, making sure that all those factors that may affect measurement (pH,  $\mu\text{S}$ ,  $^{\circ}\text{C}$ , organic matter etc.) have no influence on the analytical methodology

- The range enables the operator to monitor key values to suit almost any application covering the following parameters: pH, ORP, Free and Total Chlorine; Combined Chlorine by software



SEKO's products offer very high precision and reproducible analysis results with minimum time and effort. Its multi-parameter control unit provides for real time determination of Free chlorine (Photometric System), pH, Redox and Temperature.

The system is equipped with a graphic display subdivided into areas for simultaneous display of all available measurements.

### The range also features

- Multi parameter with high accuracy measure and integrated data logger
- Comes with RS485 port with ModBus RTU protocol for full compatibility remote data logging interface
- Chlorine Photometric chamber

A close-up photograph of a blue industrial pipe with water gushing out of its end. The water is turbulent, creating white foam and splashing, with green foliage visible in the blurred background.

# Flow meters

Electromagnetic flow meters are used to measure the flow rate of conductive fluids and waste water.

The measurement is independent of the density, viscosity, temperature and pressure of the fluid. The conductivity of the fluid must be greater than  $5\mu\text{S}/\text{cm}$ . The measuring tube must not be crossed by fluids carrying solid bodies of high dimension that cannot be considered suspended solids. Load losses are absent and straight stretches reduced upstream and downstream of the instrument are necessary.

The converter has been designed with the purpose of meeting all the requirements of modern water management systems. It supports extended functions which make it perfectly suitable for measuring and billing in civil, industrial and agricultural sector and for flow measurement in residual water treatment.

# SMAG 103

## Flow Meters

Electromagnetic flow meters are used to measure the flow rate of conductive fluids and waste water. The measurement is independent of the density, viscosity, temperature and pressure of the fluid. The conductivity of the fluid must be greater than 5µS/cm.

- Size : DN15 – DN2000 (Flange UNI 2223) / DN25 – DN100 (Triclamp or DIN11851) / DN3 – DN20 (Thread Gas or NPT)
- Pressure : PN10 – PN64 / PN10 – PN40 / PN16
- Body Material : Carbon Steel ; SS 304 / Electrodes Material : Hastelloy C ; SS 316 L



### Principle applications include:

- Sudge and water treatment
- Control of civil and industrial wastes
- Measurement of industrial process water
- Control of the chemical dosage
- Energy industry: generation and distribution
- Extraction industries: quarries, mines

## SMAG 103 Converter controller

The converter has been designed to meet all the requirements of modern water management systems. It supports extended functions which make it perfectly suitable for measuring and billing in civil, industrial and agricultural sector and for flow measurement in residual water treatment.







# Air operated double diaphragm pumps

SEKO's range of air operated double diaphragm pumps offers versatility and reliability of operation for all applications

Diaphragm pump technology is one of the oldest pumping technologies in the world but technological advances have transformed them into a popular affordable, easy to maintain, simple to install and operate pump, able to handle a variety of product viscosities. They also feature a seal-less design, self-priming and dry-running capabilities.

# Duotek

## AODD



Air operated double diaphragm pumps have long been recognized as the most flexible pumps of the industry for handling difficult liquids at relatively low pressures and flows. The range of applications is virtually limitless. SEKO AODD pumps come in many sizes and choices of materials of construction. Almost every type of liquid from highly corrosive acids through high viscosity paints and adhesives, to food and drink products can be pumped. The range covers everything from FDA (EC 1935/2004) Compliant pumps to ATEX Zone 1 and 2 versions.

- Capacity range: from 8 l/min to 1050 l/min, up to 8 bar
- Construction materials : PP, PVDF, SS 316, Aluminium, POMc
- Duotek FOOD realized in SS 316 electro-polished
- Duotek ATEX realized in PP+CF, PVDF+CF, Aluminium, AISI 316, POMc+CF



The range is 100% wet tested after final assembly including deadheading, priming, and sealing. Thanks to its seal-less design, SEKO AODD pump can dry-run without damaging the pump or system. The pump can be fully submerged according to fluid compatibility .

DuoTek FOOD pneumatic double diaphragm pumps, have been designed for use in the transfer of products used in the food industry. The pumps double-diaphragm manufactured with materials that conform to FDA (EC 1935/2004); the parts in contact with the liquid are polished by electrolysis and the SS316 and PTFE are both suitable for food use. These pumps can convey very high liquids viscosity and at temperatures up to 95°.

### The range also features

- Portable and compact for multi-location use, optionally with trolley
- Self-priming dry up to 6 meters: works in suction lift applications
- All bolted construction: it provides maximum leak resistance and safety
- Conductive plastic pumps available

# Dampers



The active pulsation damper is the most efficient way to remove pressure variations on the discharge of the pump. Pulsation dampers work actively with compressed air and a diaphragm, automatically setting the correct pressure to minimize the pulsations. Pulsation dampers require minimum maintenance and are, subject to the requirements of the application, available in the same housing and diaphragm materials as the pump.

- Construction materials : PP, PVDF, Aluminium, AISI 316
- ATEX certifications for Zone 1 and 2 in all versions



## Accessories

for a perfect installation



Air regulation kit



Switch valves



Stroke counter

Diaphragm Failure  
DetectionPneumatic or electronic  
batch control

INOX trolley



Anti vibration feet kit



Flange connection kit









# Polymer preparation units

Designed specifically to  
provide effective solutions  
to the needs of Water  
Treatment customers.

The polymer preparation unit is designed to automatically prepare polymer solutions which are used as coagulants for the eventual removal of suspended particles in the water treatment processes of a number of industries from swimming pool maintenance through to the various stages of waste water treatment. SEKO's Poly Series offers a complete range of polymer batching and metering systems. The range cover 4 models designed to meet all principal requirements including the PolyTower, designed specifically to have a small footprint for confined spaces.

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# PolyCendos

## Effective polymer metering

Triple chamber continuous flow systems PolyCendos are used as batch flocculation aids for the preparation of polymer solutions and feature a storage tank subdivided into three chambers.

Processing of liquid polymer (0.05–1.0 %) and powdered polymers (0.05–0.5 %).

Minimal product carry-over.

Extraction of the polymer solution and drainage of the chambers via the front of the storage tank.

User-guided input of the solvent concentration as well as calibration of the powder metering unit and liquid concentrate pump.



Version with terminal box available on request.

Extraction rate up to 8000 l/h.

# PolyMan

## Batching of polymer solutions in batch quantities

PolyMan batching stations are used for the manual batching of liquid and powdered polymers.

Ideal for use where there is no need for continuous operation.

Manual addition of flocculants in batch quantities.

Robust design.

Cost-effective.



Batching tank manufactured from polypropylene including flushing system.

Gentle mixing for constant performance (electric stirrer).



# PolyTower

## Compact double-decker

The compact double-deck PolyTower systems are subdivided into two storage tanks stacked on top of each other and are used as batch flocculation aids for the preparation of polymer solutions. The PolyTower product system is especially designed for confined areas thanks to its space saving design.

Processing of liquid polymer (0.05 – 1.0 %) and powdered polymers (0.05 – 0.5 %).

Offers user-guided input of the solvent concentration, as well as calibration of the powder metering unit. Comes with liquid concentrate pump water apparatus, with flow meter and fitting set for the dilution water.



Gentle mixing for constant performance (electric stirrer).

Version with terminal box available on request.

# PolyKompact

## Super Compact High Performance

PolyKompact are super compact emulsion polymer preparation units where even the PolyTower might not fit. Available in 3 sizes, the PK series covers a wide range of applications ranging from water purification, chemical treatment, biological to mineral treatment.

For such systems, concentrations of 0.05 to 1.0% can be defined. The viscosity of the polymer solution produced must not, however, exceed 1500 mPas.

Flow rate of the preparation water can be adjusted to fully utilize the desired preparation range. Concentrations greater than 0.5% may reduce the performance of the preparation.



The system capacities range from 200 l for the PK200 up to 600 l for the PK600.



# PolyMaster

## Polymer systems ready for operation

PolyMaster are automatic triple chamber batching systems for powdered flocculant, suitable for the preparation of 0.05 to 0.5% polymer solutions.



Systems assembled ready for operation.

Three individual cylindrical polypropylene storage tanks serve as batching, maturing and storage tanks.

Cylindrical storage tanks are hydraulically coupled via overflow channels.

Dry feeder with drive motor, dosing pipe heating and powder funnel with seal tight lid.

Flushing system for flushing and wetting of the powder.

Gentle mixing with two electric stirrers for constant performance.

Control cabinet for automatic control of the entire system.

An aerial photograph of a wastewater treatment plant at sunset. The sky is filled with large, dark clouds, and the sun is low on the horizon, casting a warm, golden glow over the scene. The water in the treatment tanks is a mix of brown and grey, with some areas reflecting the sunlight. The land around the plant is green and hilly.

# Side channel compressors and vacuum pumps

SEKO's range of side channel blowers are an effective solution for air displacement in many applications.

Side Channel blowers are the first choice in many automation projects for applications requiring large volumes of clean, dry air at low pressures and vacuums. SEKO has sought to deliver a product that offers easy installation as with our other products but also offers low operating noise levels in a small light weight design with operational energy saving in mind.

# Blowers

## Side channel compressors and vacuum pumps

Side channel blowers work according to an impulse principle, or regenerative flow. This means that kinetic energy from a rotating impeller is transferred to the pumping medium and converted into pressure. The impeller is mounted directly on the motor shaft for frictionless compression and, together with the specially shaped housing, forms the side channel. The pumping medium is sucked in, compressed in the side channel and conveyed to the second stage after one rotation.

Here, it is compressed again before being discharged. This way a side channel blower can be used to generate both vacuum and blast air. The motor rated power determines the maximum differential pressure of the blower. Silencers fitted to the inlet and discharge sides ensure quiet operation while maximum operational reliability, even at high differentials, is ensured by having the bearings outside the compression chamber.

The unique principle of operation and design brings key advantages of:

- no wearing parts
- no lubrication required
- minimum maintenance
- silent operation
- smooth air flow
- can be mounted in any direction, with reduced footprint and installation costs



New variable frequency drive allows maximum performance of a common motor driven unit to be improved by 300%. The precision machine tool cutting, ensures the accuracy and quality, of the blower. All products go through a strict mechanical and electrical performance test, using PROE, UG, CAD and other computer aided design software and motion simulations that test all the design features prior to final manufacture.

Dual frequency (50/60HZ) and wide voltage can meet almost all the voltage levels in all regions of the world, while the external design of the bearing, can bear high working temperature, and improves the reliability and service life of the blower.

Aluminium alloy one-time die-casting molding, machining parts completed in the cutting process, ensure accuracy improvement of traditional technology. The impeller design increases performance versus competitor products of 20% while its IP55 class protection (class F insulation) makes it suitable for applications worldwide.





# Dosing and injection packages

Where time is precious, costs are high and processes are intense, Dosing and injection systems provide a sometimes tailor made guarantee of precision, durability and reliability.

Injection and dosing systems for chemicals tend to be subject to very exacting requirements, with tailor made designs usually being required for a specific application and industry. There is also enormous demand for reliability and easy maintenance in extremes of environment be they hot, cold, on land or in the ocean.

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**Cræte Flow s.r.o.**

# Dosing and injection packages

For more than 40 years SEKO has linked its success to a wide range of industrial fields by supplying complete dosing pumps and packages throughout the world. SEKO develops its own projects to best solve metering and pumping problems relating to different fluid properties and plant operating conditions.

The main industrial application areas for the dosing/injection packages designed and produced by SEKO are:

- Water treatment (municipalities, wastewater)
- Industrial sectors (steel, ceramics, food & beverages, detergents, paper, textile and pharmaceutical industries)
- Energy (boilers, desalination, cooling water treatment, environment)



## Advantages of SEKO chemical dosing/injection packages

- Range that covers applications from water treatment to oil & gas, to the food industry
- Products designed, manufactured and commercialized by SEKO worldwide
- Design and implementation of systems, from mechanical installation to electrical and automation systems & turnkey projects
- Ability to match many and multiple parameters - variances in pressures & flow rates, adverse environmental conditions, marine environment, ATEX / NON ATEX
- Professional design programs, software and personnel that ensure safety of processes
- Optional accessories: atomizers, instrumentation, custom connections, heating systems etc.
- Own maintenance service, prompt interventions, warranty of maintenance



# Your Choice, Our Commitment

People choose to do business with SEKO for one or more reasons, but ultimately it is their choice, and therefore they merit our commitment. "Our commitment" is total and not only to our customers, but also to each other and the Company's to its employees.

## Vision

TO BE YOUR PARTNER  
OF CHOICE FOR DOSING  
SOLUTIONS, GLOBALLY

SEKO, is a passionate, dedicated Global Family of Professionals. We listen to each of our Partners and are committed to deliver the right solution in the Hygiene, Water Treatment and Industrial Process markets.

## Values

MUTUAL RESPECT, QUALITY  
AND SPIRIT OF COLLABORATION

### MUTUAL RESPECT

Mutual Respect because doing business is about being able to generate trust between Customer and Supplier. We'll deliver against our commitments, on time and in a transparent fashion, so you know can plan for your own business needs.

### QUALITY

Quality for SEKO is a 360° reality. It covers not only the design, development, production and delivery of our products and solutions but it runs through the core professionalism of our teams.

### SPIRIT OF COLLABORATION

Spirit of Collaboration is fundamental to our success and SEKO prides itself on how we work as a worldwide team, blending multiple country teams and functions to bring solutions to a Customer request or market need from an idea to the real world in very short time, across our global presence and beyond.







# Your Choice, Our Commitment

In the modern Globalised world, being a privately owned Company has significant benefits especially for our Customers, our Partners. For over 40 years, SEKO has developed a Global organisation able to take the longer view, manage the pressure of the now, and to plan for the long term, delivering true Partnership for our Customers, with transparency and mutual respect for each other.

Whether it's for our renowned flexibility, our attention to detail, the high-quality products, or just the way we do business, we understand that it's Your Choice to do business with us. It is Our Commitment to fulfill your needs wherever you, our Customers are.



For more information about our portfolio, worldwide locations, approvals, certifications, and local representatives, please visit [www.seko.com](http://www.seko.com)



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