

Solutions for Water & Industry



Your Choice, Our Commitment





A Worldwide Group at your service

Globally Present, Locally Active

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.

1 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



SEKO's 3 business units, Cleaning & Hygiene, Water & 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,

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 towers 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 is 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 liquid end 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 electromechanical pump applications.



Kompact

Analog 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.

Dosing Mode

The pump head has a manual priming valve. The flow rate is manually adjustable from 0 to 100% of the max flow rate. Moreover it is equipped with the low level alarm to stop or not the pump.

Constant flow rate

Manually adjustable using a control dial on the front panel. Two flow rate range: 0 - 100% or 0 - 20% fully adjustable across the whole scale.

Long life diaphragm tested to give "Five Year" working life

- •The advanced design and manufacturing process allows the diaphragm to have a unique life expectancy
- Made of pure solid PTFE, the diaphragm is compatible with most chemicals
- The diaphragm has been tested over a period of 5 years giving superior results
- Routine diaphragm replacement is no longer a requirement



Technical data

Kompact AML	Flow rate [gph]	Pressure [psi]	Stroke capacity [cc/stroke]	Ø IN/OUT Conn. [inch]	Frequency max [stroke/min]
Model 200	1.3	120	0.52	1/4"	160
Model 200	0.8	145	0.31	1/4	100

Technical data for pump head

Туре	Body pump	Balls	Seat valve	Diaphgram
P	PVDF-T	Ceramic	FPM - EPDM	FULL PTFE

Enclosure

Materials	Protection degree	Power supply	Consumption
PP	NEMA 4X rated	100 - 240 Vac 50/60 Hz	14 W

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.

- 2 versions: analog and digital
- 3 models that cover 1.1 to 29 gph with an output pressure up to 230 psi
- One style configuration allows for easy planning and preparation for installations

Intelligent Display, once a function is selected the pump will only display the parameters to set, which are linked to the selected function

PVDF pump head and ceramic ball valve are standard

Automatic Switching Power Supply

100 - 240 Vac 50/60 Hz



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Materials used in the pumps head

PVDF BODY BALL VALVES PVDF BALLS CERAMIC DIAPHRAGM PTFE

PVDF is suitable for almost all chemicals used in the Industrial, Waste Water Treatment and potable Water applications.

Ceramic balls are used to ensure chemical compatibility and pump reliability.

The parts that make contact with the injected chemicals have been chosen to provide for precise compatibility with most chemicals used in the industry.

Features

Level control input

Manual priming valve

Electrical connections are configured with "quickconnectors", capped when not in use

PTFE diaphragm. Standard pump head in PVDF

Case made in PP reinforced with fiber glass.

NEMA 4X rated

Complete standard installation kit includes:

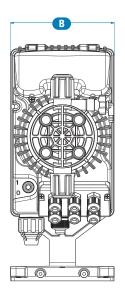
- PVDF foot filter and injection valve
- PVC suction tube
- PE delivery tube

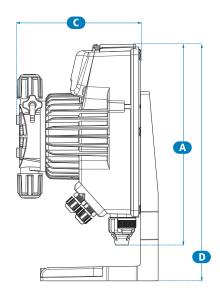
Standard power supply

Automatic Switching 100-240 Vac 50-60 Hz

Technical data

	Flow rate [gph]	Pressure [psi]	Stroke capacity [cc/stroke]	Ø IN/OUT Conn. [inch]	Frequency max [stroke/min]
	1.1	170	0.42		
Model 603	1.3	145	0,52	1/4″	160
Model 603	1.5	110	0.63	1/4	100
	2.1	30	0.83		
	1.8	230	0.38		
Model 800	3.6	145	0.55	1/4 "	300
Model 800	3.9	70	0.83	1/4	300
	4.8	10	1.00		
	8	70	1.11		
Model 803	10	60	1.39	3/8"	200
	14.5	30	2.22	3/0	300
	29	10	3.00		





Dimension (inch)

	603 – 800	803
A (Height)	9.09"	9.09"
B (Width)	4.68"	4.68"
C (Depth)	5.70"	5.86"
D (Max Height)	10.11"	10.11"

Product Line

Tekna AKL

Analog dosing pump with constant dosage

Analog dosing pump with constant flow rate, with manual adjustment by control dial on the front panel

- Two frequency range (0 20% or 0 100%)
- Power-ON led indicator and level control input



Tekna APG

Analog dosing pump with proportional dosage

Analog dosing pump with constant flow rate, with manual adjustment; proportional flow rate uses an external analog (4 - 20 mA) or digital pulse signal (e.g. from water meter).

- Control dial (percentage and "n" value in multiplication mode)
- 6 position adjustable switch: 3 in division mode (1, 4, 10 = n); 1 in multiplication mode (n=1); 1 for proportional 4 - 20 mA signal; 1 for constant functionality
- "pacing" function adjustable by dip switch



Tekna TPG

Digital dosing pump with proportional dosage

Digital dosing pump with constant flow rate with manual adjustment; proportional flow rate uses an external analog (4 - 20 mA) or digital pulse signal (e.g. from water meter).

Timer function, ppm dosing, statistics, password and On/Off input (remote switch).



Tekna TPR

Digital dosing pump with proportional dosage

Digital dosing pump with pH/Redox control meter built in.

- Digital interface for constant or proportional dosing, depending on the measured pH or Rx value
- PT100 probe input for thermal compensation
- Repetition alarm relay
- Input On-Off for remote control
- 4 20 mA output for measure transmission



Tekna TCK

Digital dosing pump with timed dosage

Digital dosing pump with constant flow rate with manual adjustment, or timer control.

Programmable timed relay





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 and different pressure conditions.

- Capacity range: up to 340 gph, up to 116 psi
- Liquid End: SS 316L and PVC

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 zeroleakage solution.

The range also features

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



Product Line

Spring MS1

Mechanical diaphragm dosing pumps

The MS1 series mechanical diaphragm dosing pumps offer multiple combinations of pump head and motor power that allow the selection of the optimal combination most suited to the specific application. The MS1 Series achieves flow rates between 1.45 and 170 gph with a pressure of up to 116 psi making it very flexible.

The MS1 pumps have a spring return mechanism in a single aluminium housing. Each model can be adjusted to between 0 - 100% of the total flow rate. This can be done manually or automatically by using the AKTUA actuator which operates with a 4 - 20 mA signal.

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



Technical data

Spring MS1	Diameter [mm]	Frequency max [stroke/min]	Flow rate [gph]		Pressure [psi]	NPT Coni	nections [inch]
MS1 B108	108	78	27	185	116	3/8 "	3/8 "
MS1 C138	120	58	52	80	80	3/4"	3/4"
	138 -	78	75	80	80	3/4"	3/4"
MS1 C165	1.65	78	110	55	55	1 "	1 "
	165 -	116	170	35	35	1 "	1 "
				SS 316L	PVC	SS 316L	PVC

Spring PS2

Plunger piston dosing pumps

The PS2 series piston dosing pump 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 10.5 and 340 gph with a pressure up to 80 psi. PS2 Series is 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.

The PS2 pumps have a spring-loaded mechanism in an aluminium housing, and each model can be adjusted to between 0 - 100% of the total flow rate. This can be done manually or automatically by using the AKTUA actuator which operates with a 4 - 20 mA signal.



Technical data

Spring PS2	Diameter [mm]	Frequency max [stroke/min]	Flow rate [gph]		Pressure [psi]	NPT Coni	nections [inch]
PS2 E076	76	116	250	80	80	1 "	1 "
PS2 E089		58	170	55	55	1 "	1 "
P32 E009	09 -	116	340	55	5	1 "	1 "
				SS 316L	PVC	SS 316L	PVC

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.



Kontrol 100

Single-parameter controller

The Kontrol 100-series are advanced controllers designed for simpler high-end applications. The units feature an independent proportional control output, probe quality checking and a variety of outputs. The user has full programming authority.

Graphic display 128 x 128 pixel resolution monochrome display with graphic icons to show digital output status, washing cycle, alarms menu.

Enclosure box wall mounting ABS plastic material IP65 (144x144) and panel mounting IP54 (96x96)

Universal Power Supply 100 - 240 Vac 50/60 Hz





Multi-Color Backlight Function

Four different Backlight colors to underline functions.

Configuration Outputs

All outputs Relay, SSR and Output mA are configurable with primary and secondary measure.

Current outputs

4 - 20mA Galvanic isolation . Two independent programmable Output Measures with Proportional routine regulation.

Relay Outputs

Two independent relays, two set points, alarm remote and back washing probe setting by software. On/OFF, Timed routine function setting.

Solid State Relay (SSR)

Two Frequency output signal, two set points with Proportional routine regulation.

Applications

- Waste Water
- Drinking Water
- Pure Water
- Cooling Towers
- Boiler
- Reverse Osmosis
- Crate Wash
- Galvanic Process
- CIP
- Irrigation
- Swimming Pool
- Dairy

Measurement range

pH	0 - 14 pH
ORP	±2500 mV
Conductivity	0.054 - 20 /200 /2000 /20000 /200000 μS
Flow Rate	0 - 99999 l/sec
Dissolved Oxygen	0 - 20 ppm or mg/l • 0-200% SAT
Chlorine and Chlorine Dioxide	0 - 0.5 / 1/ 2/ 5/ 10/ 20/ 200 ppm
Hydrogen Peroxide	0 - 500/ 1000/ 2000/ 10000/ 100000 ppm
Ozone (0 ₃)	0 - 0.5/ 2/ 5/ 10 ppm
Peracetic Acid	0 - 500/ 2000/ 10000/ 20000 ppm
Turbidity	0 - 1/ 10/ 100 NTU/FTU
Temperature	with PT100/PT1000 32 - 212 °F (0 - 100°C)

Kontrol 500/502

Single and dual-parameter controller

The Kontrol 500-series are advanced controllers designed for high-end applications. The units feature independent proportional PID-enabled control outputs, RS 485 serial port with MODBUS protocol, USB port on request, probe quality checking, a variety of outputs and full data logging capability. The user has full programming authority.

Graphic display 128 x 64 pixel resolution monochrome display with graphic icons to show: digital outputs' status, data storage, washing cycle, alarms

Enclosure box wall mounting ABS plastic material IP65 (144x144) and panel mounting IP54 (96x96)

Universal Power Supply 100 - 240 Vac 50/60 Hz





Data logging

Internal Flash Memory with records interval from 1 to 99 min. (near to 16000 records). Visualization key for stored data in tabular and graphic form. Type: Circular (F.I.F.O.) or Filling.

RS485 Serial port For set-up and real-time data acquisition from remote or for stored data download on PC or laptop (Communication Software Master Controller NET required). MODBUS RTU communication protocol.

USB port Download measuring data on removable memory Usb Pen Drive (upon request).

Measure Input

- High measuring resolution with probe quality control.
- A modular measuring system
- Chlorine measure in sea water application.

Current outputs 4 - 20mA Galvanic isolation Two independent programmable. Output Measures with PID routine regulation.

Relay Outputs Four independent relays, two set points, one alarm remote output, one backwashing probe output. On/OFF, Timed routine function setting.

Applications

- Waste Water
- Drinking Water
- Pure Water
- Cooling Towers
- Boiler
- Reverse Osmosis
- Crate Wash
- Galvanic Process
- CIP
- Irrigation
- Swimming Pool
- Dairy

Measurement range

рН	0 - 14 pH
ORP	±1500 mV
Conductivity	0 - 20/ 200/ 2000/ 20000/ 200000 μS
Inductive Conduct.	0 - 1000/ 10000/ 100000/ 999999 μS
Dissolved Oxygen	0 - 20 ppm or mg/l • 0 - 200% SAT
Chlorine and Chlorine Dioxide	0 - 0.5 / 1/ 2/ 5/ 10/ 20/ 200 ppm
Hydrogen Peroxide	0 - 500/ 1000/ 2000/ 10000/ 100000 ppm
Ozone (03)	0 - 0.5/ 2/ 5/ 10 ppm
Peracetic Acid	0 - 500/ 2000/ 10000/ 20000 ppm
Turbidity	0 - 1/ 10/ 100 NTU/FTU
Suspended Solids Turbidity	0 - 4/40/400/4000 NTU/FTU • 0 - 30 gr/l
Temperature	with PT100/PT1000 32 - 212 °F (0 - 100°C)

Sensor and Probes

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

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 develops 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 266 °F and 232 psi
- Virtually maintenance-free
- Highly accurate with pressurizable liquid electrolyte
- Open hole, pellon 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 an 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 266 °F and 232 psi
- Virtually maintenance-free
- Highly accurate with pressurizable liquid electrolyte
- Open hole, pellon or ceramic diaphragms





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





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





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 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





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 magmeter is proportional to the velocity of the conductor fluid. In the SFWE magmeter 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
- Magmeter without moving parts for measurement of conductive and homogeneous dirty media



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 collection range of parameter measure as: Chlroine, Peracetic acid, Ozone, Bromine, Peroxide





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 150g/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



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.

OUALITY

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 reknown 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



