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Water Treatment and Industrial Applications





innovation > technology > future

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Tekna Series

Clever

evo

Just 5 Models, Just PVDF, All functions in one pump

5 models that cover 0,4 to 54 l/h with an output pressure up to 20 Bar

1 Casing allows skids to be pre-constructed, as the fixing points remain constant, and the pumps can be selected on confirmation of the dosing flow

Inventory Reduction Reduce spares stock holding



Compatible

PVDF pump head and ceramic ball valve as standard

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

The use of **Ceramic balls** as standard improves the pumping reliability and the chemical compatibility of the whole liquid end

evo Full chemical compatibility





Reliable

Long life diaphragm tested to give 5 years 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

Reduced maintenance

Full chemical compatibility



The **Evolution** of solenoid dosing pumps

A new concept of programming menu. Once a function is selected, the pump displays only the parameters that are associated with the specific function

PVDF pump head and ceramic ball valve as standard

Stabilized Multi Power Supply 100÷240 Vac 50/60 Hz with reduced consumption

ard

Steady Dosing Performance

Stabilized Multi Power Supply 100÷240 Vac 50/60 Hz with reduced consumption

Reduced power consumption as the solenoid only draws the required power to activate the pump, based on the working conditions



Stable dosing performance: improve pump efficiency as performance is not affected by power supply fluctuations

Reduce inventory holding



Intuitive programming

A new concept of programming menu

Programming menu are self explanatory and available in 5 languages

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



evo Reduced programming time

Versions



Tekna Analogue version



Analogue dosing pump with constant flow rate manually adjustable by control dial on the front panel, two frequency range (0÷20% or 0÷100%), Power-ON led indicator.



AKL Costant dosage

Analogue dosing pump with constant flow rate manually adjustable by control dial on the front panel, two frequency range (0÷20% or 0÷100%), Power-ON led indicator and level control input.



APG Proportional dosage

Analogue dosing pump with constant flow rate manually adjustable, proportional flow rate according to an external analogue (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 Digital version



TPG Proportional dosage

Digital dosing pump with constant flow rate manually adjustable, proportional flow rate according to an external analog $(4 \div 20 \text{ mA})$ or digital pulse signal (e.g. from water meter).

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



TPR 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

Flow Rate and Dimensional Drawings



Flow rate liters / hour





DIMENSIONS [mm]

Model	500 600 803 603 800			
A (Height)	231			
B (Width)	119			
C (Depth)	145 149			
D (Max Height)	257			

Installation Kit

The pumps are supplied complete with the indispensable accessories for their correct installation as: Foot filter, Screws, Fixing bracket, Injection valve, 2m PE tube (delivery), 4 m PVC tube (suction), Seal in FPM and EPDM



Wall-mounted bracket



Injection valve (PVC) (G3/8", G1/2")



Foot valve (PVC)



PVC Suction tube



PE Delivery tube



Vertical mounting bracket

Pumps Identification

Ver	sion							
AK	(S	Analogue dosing pump with constant flow rate manually adjustable						
Ak	(L	Analogue	Analogue dosing pump with constant flow rate manually adjustable and level control input					
AP	G	Analogue	Analogue dosing pump with constant flow rate manually adjustable, with proportional flow rate according to an external analog (4÷20 mA) or digital signal (water meter)					
ТР	G	Digital	Digital dosing pump with constant flow rate manually adjustable, with proportional flow rate according to an external analog $(4 \div 20 \text{ mA})$ or digital signal (water meter)					
TP	R		Digital dosing pump with pH/Redox control meter built in					

Model	Pressure [bar]	Flow rate [L/h]	Stroke capacity [cc/stroke]	Ø Connections IN / OUT [mm]	Frequency max [stroke/min]	Consumption [W]	Weight [Kg]	Wooden box size (LxWxH)
	20	0,4	0,06		120		2.4	
500	16	0,8	0,11	4 / 6 suc. 4 / 7 dis.		15		
500	10	1,2	0,16			15	5,4	
	б	1,5	0,21					
	20	2,5	0,35					
600	18	3	0,42	4 / 6 suc.	120	20	3,9	285x185x240 (mm)
000	14	4,2	0,58	4 / 7 dis.				
	8	7	0,97					
	12	4	0,42	4/6	160	20	3,4	
603	10	5	0,52					
005	8	6	0,63					
	2	8	0,83					
	16	7	0,38	4/6 200	40	лл		
800	10	10	0,55					
000	5	15	0,83	470	500	40	4,4	
	1	18	1,00					
	5	20	1,11					
903	4	25	1,39	0 / 10	300	40	4.4	
005	2	38	2,22	0/12	300		4,4	
	0,1	54	3,00					



Typical Installation



Degassing head installation



With control instrument



Kompact Series

Kompact is a simple solenoid dosing pump, operating with a micro-processor to manage the dosing.

Its external enclosure has an IP65, which guarantees a protection versus splashing water and aggressive environments.



Dosing Mode

The pump head has a manual priming valve.

The flow rate is manually or automatically (by signal input) adjustable from 0 (pump stop) to 100% of the max flow rate. Moreover it is equipped with the low level alarm to stop or not the pump.

Pumps Head

BODY	PVDF
BALL VALVES	Ceramic
SEAT VALVE	FPM/EPDM
DIAPHRAGM	PTFE

The parts in contact with the liquid have been chosen in order to guarantee perfect compatibility with most chemical normally in use.

Long life diaphragm Tested to give 5 years 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

Graphic display and Keypad

Kompact digital is programmable via keypad and 2 line x 8 digits backlighted display.

Wall-mounted

Kompact pump can be fixed on wall by fixing bracket provide with the pump or top of drums by the optional foot fixing bracket.

Kompact Analogue version



AMS Costant dosage

Constant flow rate manually adjustable by control dial on the front panel, Power-ON led indicator.



40,50,60		AMM Proportional dosage	
80 10 0 0 100%	J⊤L O mA alarm	Constant flow rate manually adjustable analogue signal (4÷20 mA), Power-ON lec modes are:	, proportional flow rate according to an external l indicator and level control input. The two different
		Constant (switch in C position)	The pump constantly doses the rate selected with the potentiometer.
		Proportional (switch in P position)	The pump doses proportionally to the analogue input signal (4÷20 mA).



AMC Proportional dosage

Constant flow rate manually adjustable, proportional flow rate according to a digital pulse signal (e.g. from water meter), Power-ON led indicator and level control input. The two different modes are:

Constant (switch in C position)	The pump constantly doses the rate selected with the potentiometer.
Proportional (switch in P position)	The pump doses proportionally to the digital input signal (Division mode 1 : 1). Maximum input frequency: 80Hz.

Installation Kit

The pumps are supplied complete with the indispensable accessories for their correct installation as:

Foot filter, Screws, Fixing bracket, Injection valve, 2m PE tube (delivery), 4 m PVC tube (suction), Seal in FPM and EPDM



Injection valve (PVC)

(G3/8", G1/2")





PE Delivery tube

bracket







Technical specifications

Model	Flow rate [l/h]	Pressure [bar]	Stroke capacity [cc/stroke]	Ø Connections IN / OUT [mm]	Fequency max [stroke/min]		Weight [Kg]	Wooden box size (LxWxH) [mm]	
	5	8	0.52						
200	3	10	0.31	4/6	160		2,4	285x185x180	
	9	2	0,93						
201	1	7	0,10	4/6	1	160		285x185x180	
	_				-				
Pump Head	Туре	Type Body Pump		Balls	Seat valve			Diaphgram	
materials	Р		PVC	Ceramic	FPN	/I - EPDM		PTFE	
	Matoria	la Dr	etaction dograa			10	0.240.1/-		
Enclosure	Materia	15 11	otection degree	Power su	Power supply		supply		
	PP		IP65			Consumption 12 W		tion 12 W	

DIMENSIONAL DRAWINGS





TECHNICAL FEATURES

FLOW RATES	5 I/h @ 8 bar 3 I/h @ 10 bar 9 I/h @ 2 bar 1 I/h @ 7 bar
POWER SUPPLY	100÷240 Vac 50/60 Hz
STROKE RATE	160 strokes/minute
ENCLOSURE	PP protection degree IP65
INSTALLATION KIT	Included

Invikta Series

Invikta is a simple yet reliable series of micro-processor based solenoid dosing pumps.

Ideal applications are: OEMs, Swimming Pools, Car Wash, Cooling Towers, RO Systems and many other applications.

KCL Costant dosage

Analog dosing pump with costant flow rate, manually adjustable by control dial on the front panel, with level control input. Power-ON led indicator.



Technical specifications

Liquid end material								
Head Type	VF	HF						
Body Pump	P۱	PVDF						
Balls								
Seals	FPM	EPDM	FPM					
Diaphragm		PTFE						

Model	635				
Pressure [bar]	r] 7 5				
Flow rate [l/h]	3	5	6		
Stroke/min	140				
cc/stroke	0.36	0.60	0.71		
Ø Connections IN / OUT [mm]	4 / 6				
Power Consumption		15 W			
Weight [Kg]	2,4				
Wooden box size (LxWxH) [mm]	28	35x185x18	30		

DIMENSIONAL DRAWINGS





Installation Kit







PE Delivery tube



Injection valve (PVC) (G3/8", G1/2")



C)

Vertical mounting bracket

Tork Series

Hydraulic Double Diaphragm Metering pumps

A line hydraulic diaphragm metering pumps designed according to the **API 675 Standards.**

FEATURES

■ FLOW RATE	up to 7500 l/h
■ MAX PRESSURE	up 200 bar
■ TEMPERATURE	Ambient: from -5 ℃ to 40 ℃ Fluid: from -5 ℃ to 50 ℃
CONTACT MATERIALS	SS316L; PP; PVDF
■ COMPLIANCE	STANDARD ACCORDING TO API 675



for zone 1 and zone 2



Mechanical return type available in various sizes.

Main characteristics:

- Internal worm gearbox, oil bath lubricated with low noise emissions
- Rotating parts on bearings to minimise 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
- High precision stroke adjustment, both manual and by means of an electric or pneumatic actuator or frequency converter.
- Accuracy within ± 1%



Venting system

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



Pressure relief valve

Protects the pump against unexpected overpressure.



Cartridge valves

In order to ensure maximum dosing precision, even for small flow rates, double and triple ball configurations are available with high precision seats. The metal gaskets for the SS316L stainless steel heads, and the FPM gaskets for those in plastic, guarantee maximum compatibility.

TY, TT, TH: Hydraulic double diaphragm heads

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

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

Mechanical refilling system

Maintains a constant level of the hydraulic fluid, thereby guaranteeing maximum precision and repeatability. Keeping also under control the deformation of diaphragm thereby increasing its duration.



Double diaphragm with rupture detector

In the event of a rupture of one of the two diaphragms, the detector activates either a local visual alarm or a pressure switch. The second diaphragms ensure the continued operation of the pump. This allows for scheduled maintenance.



Flow Rate adjustment

- Easy to handle knob with high visibility nonius for the best flow adjustment.
- Optionally automatic variation by electrical actuators AKTUA.

The electrical actuators **AKTUA** were designed to replace the manual adjusting device of the flow, on the pump, with an automatic system, remotely controllable, which acts on the length of the stroke of the pump, directly in the field.

- Internal display 4-digit, 7-segment display.
- Calibration can also be executed with system running.
- Available in standard version for installation in areas not classified, or ATEX compliant for installation in hazardous areas.

Applications

Water treatment and Industrial sectors



- Power Generation
- Environment
- Petrochemical
- Pharmaceutical
- Paper
- Textile

Accessories

- Flow rate calibration pots
- Pulsation dampers
- Safety valves
- Back pressure valves

Options

- Flanged connections
- Heated or cooled heads
- Transmission of the diaphragm rupture signal

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Tork TY N0

LIQUID END N	MATERIAL									
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR		
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW		
12		47	2,8	0,74		174				
15	10	70	6,5	1,72	12		174 1/2" F	0.18		
25	10	93	25	6,60	12			0,10		
35		93	49	12,94						
LIQUID END MATERIAL PVDF										
12		47	2,8	0,74	20		290 1/2" F			
15	10	70	6,5	1,72		290		0,18		
25	10	93	25	6,60						
35		93	49	12,94	19	275				
LIQUID END M	IATERIAL	SS316L								
12		47	2,7	0,71	40	580				
15	10	70	6,5	1,72	ŦV	500	1 <i>//</i> /" F	0.18		
25	10	93	25	6,60	39	566	1/4 1	0,10		
35		93	49	12,94	19	275				

Tork TY N1

LIQUID END N	ATERIAL	PP								
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR		
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW		
30		117	113	29,85		174			1/2" F	
50	25	93	254	67,10	12		1/2 1	1,10		
70		93	501	132,35			1" F			
LIQUID END M	LIQUID END MATERIAL PVDF									
30		117	111	29,32	20	200	1/2" F	1,10		
50	25	93	254	67,10	20	20 290	1/2 1			
70		93	501	132,35	12	174	1" F			
LIQUID END M	ATERIAL	SS316L								
30		117	106	28,00	40	580	1/2" F			
50	25	93	254	67,10	24	348	3/4" F	1,10		
70		93	501	132,35	12	174	1" F			

Tork TY N2

LIQUID END N	ATERIAL	PP							
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR	
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW	
70		117	865	228,51	12	174	1" F		
90	35	93	1200	317,01	11	160	1 1/2" E	2,20	
120		93	2065	545,52	7	102	1 1/2 F		
LIQUID END N	LIQUID END MATERIAL PVDF								
70		117	865	228,51	20	290	1" F		
90	35	93	1200	317,01	11	160	1 1/2" E	2,20	
120		93	2065	545,52	7	102	1 1/2 1		
LIQUID END N	ATERIAL	SS316L							
70		117	865	228,51	20	290	1" F		
90	35	93	1200	317,01	11	160	2" E	2,20	
120		93	2065	545,52	7	102	2Γ		

Tork TY N3

LIQUID END N	MATERIAL	SS316L						
PLUNGER	STROKE	MAX. SPEED	FLOW	FLOW RATE		SURE	CONNECTION	MOTOR
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
130	50	78	2600	686,85	10	145	3" F	5,5
		117	3900	1030,27	10			7,5

Tork TY N4

Tork TT

LIQUID END N	ATERIAL	SS316L						
PLUNGER	STROKE	MAX. SPEED	FLOW RATE		PRESSURE		CONNECTION	MOTOR
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
130	70	117	6000	1585,03	10	145	3" F	18,5
		145	7500	1981,29	10			

high pressure up to 120 bar

LIQUID	END MATERIA	L	SS316L							
TVDE	PLUNGER	STROKE	MAX. SPEED	FLOW	FLOW RATE		SURE	CONNECTION	MOTOR	
	DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW	
NO	12	10	93	4,5	1,19	120	1740	1//" E	0.18	
NU	20	10	70	11,7	3,09	57	827	1/4 F	0,10	
	15			26,5	7,00	120	1740	1 ///" E		
N1	N1 20	25	25	25	25 117 47 1	12,41	120	1740	1/4 1	1,10
	30			99	26.15	68	986	1/2" F		
	20		117	70	18,49	120	1740	1/4" F		
NO	25	35	117	94	24,83	120	1740	1/2" F	2,20	
N2 35	35	35	93	162	42,80	00	90 1160	2///" Г		
		117	202	53,36	80	1100	5/+1			

high pressure up to 200 bar

LIQUID	END MATERIA	L	SS316L						
TYPE PLUNGER		STROKE	MAX. SPEED	FLOW	FLOW RATE		SURE	CONNECTION	MOTOR
DIAME	DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
N1	10	25	117	10	2,64	200	2001	1/4" F	1,10
	15	15	117	24	6,34	200	2901		
NO	15	25	117	35,2	9,30	200	2001		
N2 20	35	117	67	17,70	200	2901	1/4" F	2,20	

Tork TH

Stark Series

Hydraulic diaphragm Metering pumps

A line hydraulic diaphragm metering pumps designed according to the **API 675 Standards.**

FEATURES

■ FLOW RATE	up to 660 l/h
■ MAX PRESSURE	up 124 bar
■ TEMPERATURE	Ambient: from -5 °C to 40 °C Fluid: from -5 °C to 50 °C
CONTACT MATERIALS	SS316L; PP; PVDF; PVC
■ COMPLIANCE	STANDARD ACCORDING TO API 675



Mechanisms

Mechanical return type available

in various sizes

Main characteristics:

- Internal worm gearbox, oil bath lubricated with low noise emissions
- Rotating parts on bearings to minimise power consumption
- High precision stroke adjustment, both manual and by means of an electric actuator

Hydraulic diaphragm heads

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

- Zero leakage; hermetic construction for dosing toxic, corrosive and other hazardous liquids, for which the absence of leaks is fundamental
- Protection against external pollutants which could contaminate the liquid being pumped
- Flexibility of use; the PTFE diaphragms are compatible with a vast assortment of liquids



Mechanical refilling system

Maintains a constant level of the hydraulic fluid, thereby guaranteeing maximum precision and repeatability. Keeping also under control the deformation of diaphragm thereby increasing its duration.



Venting system

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

Pressure relief valve

Protects the pump against unexpected overpressure.



Cartridge valves

In order to ensure maximum dosing precision, even for small flow rates, double and triple ball configurations are available with high precision seats. The metal gaskets for the SS316L stainless steel heads, and the FPM gaskets for those in plastic, guarantee maximum compatibility.



The electrical actuators **AKTUA** were designed to replace the manual adjusting device of the flow, on the pump, with an automatic system, remotely controllable, which acts on the length of the stroke of the pump, directly in the field.

- Internal display 4-digit, 7-segment display.
- Calibration can also be executed with system running.
- Available in standard version for installation in areas not classified, or ATEX compliant for installation in hazardous areas.

Flow Rate adjustment

- Easy to handle knob with high visibility nonius for the best flow adjustment.
- Optionally automatic variation by electrical actuators **AKTUA**.



Applications

Water treatment and Industrial sectors



Textile

Accessories

- Flow rate calibration pots
- Pulsation dampers
- Safety valves
- Back pressure valves

Stark SC B0

LIQUID END N	ATERIAL	PP or PV	'C					
PLUNGER	STROKE	MAX. SPEED	FLOW	FLOW RATE		SURE	CONNECTION	MOTOR
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
		112	6	1,59				0.18
12		140	8	2,11	15	218	1/2" F	0,10
	10	186	11	2,91				0,25
		70	12	3,17				0.18
20		112	18	4,76				0,10
	10	186	29	7,66	15			0,25
20		93	34	8,98				0.19
50		140	52	13,74				0,10
25		140	76	20,08				0,18
33		186	97	25,62				0,25

LIQUID END N	ATERIAL	PVDF						
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
		112	6	1,59				0.18
12		140	8	2,11]	290		0,10
		186	11	2,91			1/2" F	0,25
		70	12	3,17				0.18
20	10	112	18	4,76				0,10
	10	186	28	7,40	20		1/2 F	0,25
20		93	33	8,72				0.19
50		140	52	13,74				0,10
35		140	74	19,55				0,18
		186	96	25,36				0,25

LIQUID END N	ATERIAL	SS316L									
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR			
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW			
		112	3	0,79				0.19			
12		140 4 1,06		124	1798		0,18				
		186	6	1,59				0,25			
		70	9	2,38			1/ <i>4</i> " Г	0.19			
20	10	112	15	3,96	40	580		0,18			
	10	186	25	6,60			1/4 F	0,25			
20		93	27	7,13	27	300		0.19			
50		140	46	12,15	21	392		0,18			
35		140	64	16,91	20	200		0,18			
		186	86	22,72		290		0,25			

Stark SC B1

LIQUID END N	ATERIAL	PP or PVC								
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR		
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW		
20		117	110	29,06			1/2" F	1,10		
30		186	175	46,23		218		1,50		
		78	130	34,34				0,75		
40		117	200	52,83				1,10		
	25	235	420	110,95	15			1,50		
		93	228	60,23]			1,10		
50		117	300	79,25				1,10		
50		186	500	132,09				1,50		
		235	650	171,71				1,50		

LIQUID END N	ATERIAL	PVDF						
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
20		117	110	29,06		290	1/2" F	1,10
50		186	170	44,91	20			1,50
		78	125	33,02				0,75
40		117	200	52,83				1,10
	25	235	415	109,63				1,50
		93	225	59,44]			1,10
50		117	295	77,93				1,10
50		186	500	132,09				1,50
		235	640	169,07				1,50

LIQUID END M	ATERIAL	SS316L						
PLUNGER	STROKE	MAX. SPEED	FLOW	RATE	PRES	SURE	CONNECTION	MOTOR
DIAMETER	LENGHT	Strokes/min	L/h	gph	Bar	p.s.i.	Suc/Dis (BSPP)	kW
15		93	18	4,76				
		93	35	9,25	124	1798	1/4" F	1,10
20		117	44	11,62			.,	
		235	90	23,78				1,50
		62	63	16,64		986		0,75
30		117	110	29,06	68			1,10
		186	170	44,91				1,50
	25	78	130	34,34			3/4" F	0,75
40		117	200	52,83	25	508		1,10
70		186	330	87,18	33	500		1 50
		235	420	110,95				1,50
		62	150	39,63				0,75
50		93	240	63,40				1 10
		117	310	81,89	24	348		1,10
		186	510	134,73			1" F	1 50
		235	660	174,35				0,1

MS4 Series

Mechanical Diaphragm Metering pumps

MS4 pumps are mechanical diaphragm metering pumps featuring a spring return mechanism in an cast iron housing.

210 mm

20 mm

1.1 Kw (standard, IP 55)

FEATURES

- FLOW RATE from 800 to 2000 L/h
- MAX PRESSURE 4 bar
- STROKE RATE 47 58 93 –116 strokes/minute
- DIAPHRAGM DIAMETER
- MOTOR
- STROKE LENGTH



TECHNICAL FEATURES

MODEL	DIAPHRAGM DIAMETER	STROKE LENGTH	STROKES RATE	FLOW RATE	MAX PRESSURE [bar]		MAX PRESSURE [bar]		MAX PRESSURE [bar]		MAX PRESSURE [bar]		CONNECTION	TOR [W]	WEI [K	GHT g]	WOODEN BOX SIZE (LxWxH)
	[mm]	[mm]	[Strokes/min]	[L/h]	SS316L	PVC PVDF		M M M	SS316L	PVC PVDF	(mm)						
MS4G210L	210	20	93	1600	4		DN50-PN10	1 1	160	120	900v600v1025						
MS4G210C	210	20	116	2000	4	4	GB9119-2000	1,1	100	120	80000000021025						

PUMP HEAD MATERIALS

LIQUID END

PVC liquid end (standard) or SS316L or PVDF.

PTFE DIAPHRAGM

The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

MAX DOSAGE TEMPERATURE

- SS316L pump head: 90° C
- PVC PVDF pump head: 40° C

Every pump can be equipped with frequency-conversion motor or explosion-proof motor or electric actuator which accepts 4-20mA signal.

DIMENSIONAL DRAWINGS







Connection DN50-PN10 RF GB/T9119-2000





	STAN	DARD	ON REQUEST					
	21	31	41					
PUMP HEAD	SS316L	PVC	PVDF					
DIAPHRAGM	PTFE							
SEAL		PTFE						
VALVES	662161	Ceramic						
VALVE SEATS	33310L	PVC PVDF						



М	S 4	G	210	C	21	Q4	080	PUMP IDENTIFICATION
								■ OPTIONAL
								■ MOTOR
								■ PUMP HEAD MATERIALS
								■ STROKES
								DIAPHRAGM DIAMETER
								■ STROKE LENGTH
								■ MECHANISM TYPE
								■ MODEL

MS3 Series

Mechanical Diaphragm Metering pumps

MS3 pumps are mechanical diaphragm metering pumps featuring a spring return mechanism in an cast iron housing.

660 L/h

165 mm

6 mm

156 strokes/minute

0.75 Kw (standard IP 55)

FEATURES

- FLOW RATE
- MAX PRESSURE 4 bar
- STROKE RATE
- DIAPHRAGM DIAMETER
- MOTOR
- STROKE LENGTH

TECHNICAL FEATURES

MODEL DIA DI	DIAPHRAGM	STROKE LENGTH [mm]	STROKES	OKES FLOW ATE RATE es/min] [L/h]	MAX PRESSURE [bar]			SR _	WEIGHT [Kg]		WOODEN BOX
	DIAMETER [mm]		RATE [Strokes/min]		SS316L	PVC PVDF	CONNECTION	MOT [kw	SS316L	PVC PVDF	SIZE (LxWxH) (mm)
MS3C165H	165	6	156	660	4	4	1"gf	0.75	40	33	615x405x810

PUMP HEAD MATERIALS

LIQUID END

PVC liquid end (standard) or SS316L and PVDF.

PTFE DIAPHRAGM

The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

MAX DOSAGE TEMPERATURE

- SS316L pump head: 90° C
- PVC and PVDF pump head: $40^\circ\,\text{C}$

Every pump can be equipped with frequency-conversion motor or explosion-proof motor or electric actuator which accepts 4-20mA signal.

DIMENSIONAL DRAWINGS









	STAN	DARD	ON REQUEST			
	21/24	31/34	51/54	41/44		
PUMP HEAD	SS316L	PVC	PP	PVDF		
DIAPHRAGM		PT	FE			
SEAL		FPM /	EPDM			
VALVES	552161		Ceramic			
VALVE SEATS	555 TOL	PTFE	PTFE	PVDF		



MS1 Series

Mechanical Diaphragm Metering pumps

MS1 pumps are mechanical diaphragm metering pumps featuring a spring return mechanism in an aluminium housing.

58 – 78 – 116 strokes/minute

2 mm – 4 mm – 6 mm

standard 0,18 – 0,25 – 0,37 Kw (IP 55)

FEATURES

- FLOW RATE from 5,5 to 530 L/h
- MAX PRESSURE 10 bar
- STROKE RATE
- DIAPHRAGM DIAMETER from 64 to 165 mm
- MOTOR
- STROKE LENGTH



TECHNICAL FEATURES

MODEL	DIAPHRAGM DIAMETER	STROKE LENGTH	STROKES RATE	FLOW RATE	FLOW RATE		CONNECTIONS		TIONS & S		GHT g]	WOODEN BOX SIZE (LxWxH)
	[mm]	[mm]	[Strokes/min]	[L/h]	[L/h] SS316L PVDF	PVC	SS316L	PVC	Ŭ ₩	SS316L	PVC PVDF	(mm)
MS1A064A			58	5,5				1/4 65				
MS1A064B	64		78	8			1/4 GF	1/4 GF DN15	0,18	15	13	
MS1A064C		2	116	11				DITIS				
MS1A094A			58	20		10						430x280x530
MS1A094B	94		78	26	10				0,25	16	14	
MS1A094C			116	40			2/9 CE	3/8 GF				
MS1B108A			58	60			5/0 01	DN15		19		
MS1B108B	108	4	78	80							16	
MS1B108C			116	120								
MS1C138A			58	155			2/4 65	2/4 CE				
MS1C138B	138		78	220	7	7	3/4 GF	3/4 GF	0,37	23	18	
MS1C138C			116	310								
MS1C165A	165	Ö	58	230	_	_	1″GE	1″GE				590x400x550
MS1C165B			78	330	5	5 5	1″GF	1″GF		27	21	
MS1C165C		105		116	530	4	4					

DIMENSIONAL DRAWINGS









DIAPHRAGM DIAMETER	A [mm]		B [mm]		([m	: m]	T [mm]			
[mm]	PVC	SS316L	PVC	SS316L	PVC	SS316L	PVC	SS316L		
64	208	150	149	144	1/4 GF		9	8		
94	236	172	144	146	2/0 C F		117	120		
108	248	212	144	140	5/0	Gr	131	140		
138	347 258	347 258	347 258	347 258	158		3/4 GF		160	170
150	547	250	150	157	1″	GE	100	170		
165	377	296	160			JI	193	190		

		STANDARD					
	21	31	41				
PUMP HEAD	SS316L	PVC	PVDF				
DIAPHRAGM		PTFE					
SEAL		FPM					
VALVES	552161	Cera	amic				
VALVE SEATS	333 IOL	PTFE	PVDF				

OPTIONAL FEATURES

Every pump can be equipped with frequency-conversion motor or explosion-proof motor or electric actuator which accepts 4÷20mA signal.

Μ	S 1	Α	064	В	31	A4	080	PUMP IDENTIFICATION
								■ OPTIONAL
								■ MOTOR
								■ PUMP HEAD MATERIALS
								■ STROKES
								DIAPHRAGM DIAMETER
								■ STROKE LENGTH
								■ MECHANISM TYPE
								■ MODEL

MSA Series

Mechanical Diaphragm Metering pumps

Dosy Series is a mechanical diaphragm metering pump with spring return and PPS housing.

FEATURES

- FLOW RATE
- MAX PRESSURE 5 bar
- STROKE RATE 30 - 50 - 100 - 150 strokes/minute ■ DIAPHRAGM DIAMETER 70 mm

4 mm

from 10 to 60 L/h

■ STROKE LENGTH

TECHNICAL FEATURES

MODEL	DIAPHRAGM DIAMETER	STROKES RATE	FLOW RATE	MAX PR [ba	ESSURE ar]	CONNE	CTIONS	IOTOR [kw]	WEI [K	GHT g]	WOODEN BOX SIZE (LxWxH)
	[mm]	[Strokes/min]	[L/N]	SS316L	PVC	SS316L	PVC	Z	SS316L	PVC	(mm)
MSAF070P		30	10	5	5 5		8x12				
MSAF070O	70	50	20			1/2"af	(Standard) DN15 0,04	11	o	130x280x370	
MSAF070N	70	100	40		5	1/2 gi		0,04	11	ð	430X280X370
MSAF070M		150	60				(Option)				

PUMP HEAD MATERIALS

SS316L, PVC PUMP HEAD

PTFE DIAPHRAGM

MAX DOSAGE TEMPERATURE

– SS316L pump head 90° C 40° C

– PVC pump head

MOTOR CHARACTERISTICS

■ POWER SUPPLY

380V-50HZ-3 phase 220V-50HZ-single phase

■ PROTECTION CLASS

IP55; Insulation : F



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DIMENSIONAL DRAWINGS



INSTALLATION KIT (for PVC pump head only)





Injection valve (PVC) (G3/8", G1/2")

Foot valve (PVC)



Suction tube (PVC, 2m, 8×12)



Delivery tube (PE, 3m, 8×12)

	STAN	DARD	ON RE	QUEST		
	21	21 31		34		
PUMP HEAD	SS316L	PVC	SS316L	PVC		
DIAPHRAGM	PTFE					
SEAL	FPM		EPDM			
VALVES	CC2161	Ceramic	552161	Ceramic		
VALVE SEATS	222 IOL	PTFE	333 IOL	PTFE		

EPDM seal is also available upon request, EPDM seal is applicable to alkaline chemical, and FPM seal is applicable to acid chemical.



(*) **XS** 380V-50HZ 3 PHASE – **XC** 220V-50HZ SINGLE PHASE

PS2 Series

Plunger Piston Metering pumps

PS2 pumps are plunger piston metering pumps featuring a spring return mechanism in an aluminium housing.

from 40 to 1000 L/h

from 25 to 89 mm

58 – 116 strokes/minute

standard 0,25 – 0,37 – 0,55 – 0,75 Kw (IP 55)

20 bar

25 mm

FEATURES

- FLOW RATE
- MAX PRESSURE
- STROKE RATE
- PISTON DIAMETER
- MOTOR
- STROKE LENGTH

TECHNICAL FEATURES

MODEL	PISTON DIAMETER	STROKES RATE	FLOW RATE	MAX PR [ba	MAX PRESSURE [bar]		MAX PRESSURE [bar] CONNECTIONS		CTIONS	DTORS [kW]	WEIGHT [Kg]		WOODEN BOX SIZE (LxWxH)
	[mm]	[Strokes/min]	[L/h]	SS316L	PVC	SS316L	PVC	ž	SS316L	PVC	(mm)		
PS2E025A	25	58	40										
PS2E025C	25	116	80]			2/9 65		0.55	25	72		
PS2E030A	20	58	55			3/8 GF	3/8 GF	0,55	25	25			
PS2E030C	50	116	112			DN15							
PS2E038A	20	58	90	20	20 10								
PS2E038C	30	116	180						26	24			
PS2E048A	10	58	140			1/2 (5			20	24			
PS2E048C	40	116	284				1/2	1/2 01	1/2 CE				500×400×550
PS2E054A	БЛ	58	180	15	15 10		1/2 GF		27	25	39084008330		
PS2E054C	54	116	365			10		0.75	27	23			
PS2E064A	64	58	250	10	10	10	2/4 CE	2/4 CE	0,75	20	26		
PS2E064C	04	116	505		10	3/4 GF	3/4 GF		29	20			
PS2E076A	76	58	365	7	7				24	77			
PS2E076C	70	116	730			1″ CE	1″ CE		54	27			
PS2E089A	00	58	495	E	5 5	I GF	F 1" GF		20	70			
PS2E089C	09	116	1000	2		5				- 20	20		

DIMENSIONAL DRAWINGS









PISTON DIAMETER	A [mm]		B [mm]		(m	c m]	T [mm]		
[mm]	SS316L	PVC	SS316L	PVC	SS316L	PVC	SS316L	PVC	
25	120	1.47	250	259	2/9 CF		60	90	
30	120	147	230	230	5/0 GF	3/8 GF	00	00	
38	160	168					88	100	
48	100	196	268	268	1/2 GF	1/2 GE		100	
54	173	216				1/2 01	109	120	
64	202	222	273	273	3/4 GF	3/4 GF	100	120	
76	202	244	288	200	1" CE	1" CE	138	148	
89	238	256	200	200	I UF	I GF	150	160	

	STANDARD						
	21	31					
PUMP HEAD	662161	PVC					
PISTON	222 IOF	Ceramic					
PISTON SEAL	FP	PM					
VALVES	662161	Ceramic					
VALVE SEATS	222 IOL	PTFE					

PUMP HEAD MATERIALS

MAX DOSAGE TEMPERATURE

SS316L pump head
90° C
PVC pump head
40° C

FLOW RATE ADJUSTMENT

Every pump can be equipped with an electric actuator which accepts a $4\div 20$ mA.

Ρ	S2	E	064	C	31	E4	080	PUMP IDENTIFICATION
								■ OPTIONAL
								■ MOTOR
								■ PUMP HEAD MATERIALS
								■ STROKES
								■ PLUNGER DIAMETER
								■ STROKE LENGTH
								■ MECHANISM TYPE
								■ MODEL

PS1 Series

Plunger Piston Metering pumps

PS1 pumps are plunger piston metering pumps featuring a spring return mechanism in an aluminium housing.

FEATURES

FLOW RATE from 1,5 to 304 L/h
 MAX PRESSURE 20 bar
 STROKE RATE 58 – 116 strokes/minute
 PISTON DIAMETER from 6 to 64 mm
 MOTOR standard 0,18 and 0,25 Kw (IP 55)
 STROKE LENGTH 15 mm

TECHNICAL FEATURES

MODEL	PISTON DIAMETER	STROKES RATE	FLOW RATE	MAX PR [ba	MAX PRESSURE [bar]		MAX PRESSURE [bar] CONNECTIONS		OTORS [kW]	WEIGHT [Kg]		WOODEN BOX SIZE (LxWxH)
	[mm]	[Strokes/min]	[L/N]	SS316L	PVC	SS316L	PVC	ž	SS316L	PVC	(mm)	
PS1D006A	6	58]					1/	12		
PS1D006C	Ŭ	116	3				1/4 СГ		17	12		
PS1D011A	11	58	5			1/4 GF	DN15	0.19				
PS1D011C	11	116	10									
PS1D017A	17	58	11	20	20 10			0,10	14	12		
PS1D017C	17	116	22						14	15		
PS1D025A	25	58	25								42022802520	
PS1D025C	25	116	50				2/0.05				43082808330	
PS1D030A	30	58	35]		3/8 GF	3/8 GF DN15		17	1/		
PS1D030C	50	116	70						17	14		
PS1D038A	20	58	55	17	17 10				10	16		
PS1D038C	30	116	110	17	10				19	10		
PS1D048A	10	58	85	10	10			0.25	10	17		
PS1D048C	40	116	170	10	10	1/2 CE	1/2 CE	0,23	19	17		
PS1D054A	EA.	58	110	•	0	1/2 01	1/2 01		20	17		
PS1D054C	34	116	220	•	8				20	17	590x400x550	
PS1D064A	64	58	152	E	4	2/4 CF			21	10		
PS1D064C	04	116	304	0	4	3/4 GF	3/4 GF		21	19		

DIMENSIONAL DRAWINGS









PISTON DIAMETER	A [mm]		B [mm]		C [mm]		T [mm]	
[mm]	SS316L	PVC	SS316L	PVC	SS316L	PVC	SS316L	PVC
6		157			1/4	сг		
11		157	210	216	1/4 GF			
17	120							80
25		147	215	225	2/0	3/8 CE		
30			215	225	5/0			
38	160	168	227	235			88	100
48	100	196	227	240	1/2	CE.	00	100
54	172	216	229	240	1/2		108	120
64	202	222	238	250	3/4	GF	100	120

	STANDARD						
	21	31					
PUMP HEAD	\$\$2161	PVC					
PISTON	33310L	Ceramic					
PISTON SEAL	FP	M					
VALVES	553161	Ceramic					
VALVE SEATS	333 TOL	PTFE					

PUMP HEAD MATERIALS

MAX DOSAGE TEMPERATURE

SS316L pump head 90° C
PVC pump head 40° C

FLOW RATE ADJUSTMENT

Every pump can be equipped with an electric actuator which accepts a $4\div20$ mA.

Ρ	S 1	D	064	С	31	B4	080	PUMP IDENTIFICATION
								■ OPTIONAL
								■ MOTOR
								■ PUMP HEAD MATERIALS
								■ STROKES
								■ PLUNGER DIAMETER
								■ STROKE LENGTH
								■ MECHANISM TYPE
								■ MODEL

Duotek Air operated double diaphragm pumps.

The draft of the SEKO's new double diaphragm pumps, it is mainly developed around the air distribution system, the diaphragm's high technology, the pumping chambers geometry and the valves system; this in order to extend the functionality, not only for transfer but also for dosing. The result is an innovative product with next-generation solutions.

MAIN FEATURES

- . construction's materials: PP,PVDF, AISI 316, ALUMINIUM
- . Self-priming up to 6m
- . Unlimited dry running
- . Anti-stall pneumatic circuit , easy to maintain
- . possibility to adjust: flow-rate, head and speed
- . various installations and configurations
- . ATEX certifications for Zone 1 and 2 in all versions
- . air-discharge's cover with connections for various uses

ASTABLE SISTEM INTERNAL PNEUMATIC EXCHANGER AF18 - AF50

b SUCTION MANIFOLD c ASTABLE AIR EXCHANGER

DELIVERY MANIFOLD

- d PUMPING CHAMBER
- e DIAPHRAGMS
- f BALL VALVE

а

ASTABLE SYSTEM EXTERNAL PNEUMATIC EXCHANGER AF65 - AF100 - AF160 - AF250 - AF500 - AF700





INSTALLATION

the maximum viscosity are:

drum transfer = max. viscosity 10.000 cps at 20° C

self-priming = max. viscosity 10.000 cps at 20° C

under uid level = max. viscosity 50.000 cps at 20° C

immersed = max. viscosity 50.000 cps at 20° C









ON REQUEST: POSSIBILITY TO DOUBLE THE MANIFOLDS IN SUCTION AND IN DELIVERY





PUMPS COMPOSITION

PUMP MODEL	TYPE ATEX	SERIES	PUMP BODY	AIR DIAPHRAGM	FLUID DIAPHRAGM	BALLS	BALL SEATS	O-RINGS	CONNECTIONS
AF	XO - ATEX ZONE 1 OO - ATEX ZONE 2	0018 0050 0165 0100 0160 0250 0500 0700 1000	P - POLYPROPYLENE POLYPROPYLENE +CF WITH ATEX ZONE 1 A - ALLIMINUM S - SS316L M - POM POM+CF WITH ATEX ZONE 1 K - PVDF PVDF+CF WITH ATEX ZONE 1	H - Hytrel M - Santoprene D - epdm N - nbr	T - ptfe	T - ptfe S - SS AISI 316 D - epdm N - nbr	P - Polipropilene K- pvDF S - SS AISI 316 A - Aluminum Z - PE-UHIMW	D - EPDM V - FPM T - ptfe N - NBR	 1 - BSP THREATED 2 - FLANGED 3 - CLAMP 4 - TWIN CONNECTION 5 - NPT THREATED

OPERATING PRINCIPLE

The pneumatic distribution system sends compressed air behind one of the two diaphragms (A), which pushes the fluid towards the delivery circuit.

Simultaneously, the opposing diaphragm (B) is located, creating a vacuum in the chamber B, in the suction phase, moved from the shaft that connect the diaphragm to the other (A). In this way the product is sucked from the intake manifold, thanks to depressure created in the fluid chamber.

When the diaphragm (A), under pressure, reaches the limit of the stroke the distributor switches the two inputs, and the cycle starts again. At the same time, the balls open and close, alternating the chamber A and B, in the closed situation for suction and open delivery in the situation.









Duotek - zone 2 😔 II 3/3 GD c IIB T135°C

 $AF^{**}O($

Technical data



1/2" BSP 50 l/min 70 m 7 bar

Max self priming capacity

Diameter of passing solids

1/4" BSP 6 m 3 mm

Duotek - zone 2 😔 II 3/3 GD c IIB T135°C

Performance



Air connection

Air consumption Nlt/min

C



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material. Dimensions



Duotek Atex - zone 1 😔 II 2/2 GD c IIB T135°C 0 PP



Alu



	PP	PVDF	Alu	AISI 316
A (mm)	222	222	225	225
B (mm)	156	156	156	156
C (mm)	233	233	230	230
Weight (kg)	4	4,5	5	6
MAX Temperature	65°	95°	95°	95°

ISO-ANSI flanged connections on request


Technical data



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.





В

Duotek - zone 2 😔 II 3/3 GD c IIB T135°C Duotek Atex - zone 1 😔 II 2/2 GD c IIB T135°C



PVDF+CF

Alu



	PP	PVDF	Alu	AISI 316
A (mm)	265	265	265	250
B (mm)	175	175	175	175
C (mm)	245	245	245	250
Weight (kg)	6,5	7	7	9
MAX Temperature	65°	95°	95°	95°
-ANSI flanged connection	is on reque	st		









(Ex)

1" BSP 160 l/min 70 m 7 bar

Duotek - zone 2 😔 II 3/3 GD c IIB T135°C

' Duotek Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Diameter of passing solids

1/2" BSP Max self priming capacity 6 m 7,5 mm

Performance

Air supply pressure

Air connection

Air consumption Nlt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

	PP	PVDF	Alu	AISI 316
A (mm)	370	370	370	360
B (mm)	220	220	220	220
C (mm)	364	364	364	365
Weight (kg)	15	16	16	20
MAX Temperature	65°	95°	95°	95°
O-ANSI flanged connection	is on reques	st		

PP





Alu

AISI 316

PVDF+CF

Dimensions







Duotek - zone 2 😔 II 3/3 GD c IIB T135°C Duotek Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Technical data

Connections Max flow rate Max head Max pressure

1 ¼″ BSP 250 l/min 70 m 7 bar

Air connection Max self priming capacity Diameter of passing solids

6 m 7,5 mm

Air consumption Nlt/min Air supply pressure Performance 72.4 U.S.gpm 262,4 H(ft) 13.2 19.7 26.3 65.8 0 6.6 32.9 39.5 46 52.6 59.2 H (m) 80 700 70 900 7 60 1300 6 50 1600 5 40 (4) 30 3 20 2 10 0 0 25 50 75 100 125 150 175 200 225 250 275 Lit/min

* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions









ISC





	PP	PVDF	Alu	AISI 316
A (mm)	370	370	370	360
B (mm)	220	220	220	220
C (mm)	364	364	364	365
Weight (kg)	15	16	16	20
MAX Temperature	65°	95°	95°	95°
)-ANSI flanged connection		:+		

1/2" BSP

229,6

196,8

164,0

131.2

98,4

65,6

32,8

0





Duotek - zone 2 📟 II 3/3 GD c IIB T135°C Duotek Atex - zone 1 🔳 II 2/2 GD c IIB T135°C

PVDF+CF

Dimensions

Alu

Α

Air supply pressure



READY IN SEPTEMBER 2014



AISI

	M ISO-AN

AISI 31

В

		PVDF	Alu	AISI 316
.m)				
C (mm)	245			
Weight (kg)				
MAX Temperature				
		st		

Duotek - zone 2 😔 II 3/3 GD c IIB T135°C Duotek Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Technical data

Connections Max flow rate Max head Max pressure

DN40 (1 1/2" BSP)* 500 l/min 70 m 7 bar

Air connection Max self priming capacity Diameter of passing solids

3/4" BSP 6 m 8,5 mm

^{**}0500



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

PP **PVDF** Alu AISI 316 A (mm) 595 595 595 582 B (mm) 340 340 340 345 565 C (mm) 565 245 570 Weight (kg) 30 30 35 58 **MAX** Temperature 65° 95° 95° 95° (*) Threaded connections on request



70 m

7 bar

Technical data



DN50 (2" BSP)* Air connection 680 l/min Max self priming capacity Diameter of passing solids

3/4" BSP 6 m 8,5 mm

Air consumption Nlt/min

Performance

13,2 26,4 39,6 52,8 66,0 79,2 92,4 105,6 118,8 132,0 145,2 158,5 171,7 U.S.gpm 262,4 H (ft) 0 H (m) 80 1200 70 229,6 240 60 196.8 3000 6 50 <u>(5</u> 164.0 3800 40 131,2 4 30 98.4 (3 20 65,6 10 32,8 0 0 0 150 200 250 300 350 400 450 500 550 600 650 Lit/min 50 100

Air supply pressure

* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

Dimensions













PVDF+CF

Alu

AISI 316

	PP	PVDF	Alu	AISI 316
A (mm)	595	595	595	582
B (mm)	340	340	340	345
C (mm)	572	572	572	570
Weight (kg)	31	36	36	60
MAX Temperature	65°	95°	95°	95°
Threaded connections on	request			



Duotek Food & Sani Duotek

Double diaphragm pumps for food, pharmaceutical and cosmetics industry.



The air-operated double diaphragm pumps series FOOD Duotek, thanks to their structural characteristics, can be used to pump products used in food and cosmetics industry.

The air-operated double diaphragm pumps series Duotek FOOD, are made with FDA certified construction materials. The parts in contact with the fluid, in fact, are exclusively electro-polished AISI 316 and PTFE, both certified for food use. These pumps are able to handling fluids with very high viscosity and temperature up to 95° C.

MAIN FEATURES

- . Construction's materials: Electro-polished AISI 316,
- medium roughness is 2,7µm.
- . Self-priming up to 6m
- . Unlimited dry running
- . Anti-stall pneumatic circuit , easy to maintain
- . Possibility to adjust: flow-rate, head and speed
- . Various installations and configurations
- . ATEX certifications for Zone 1 and 2 in all versions
- . Air-discharge's cover with connections for various uses
- . Suction and delivery connection with CLAMP

DUOTEK FOOD

Material: Stainless steel AISI 316 Electropolished. Average roughness of 2.7 μm





SANI DUOTEK

Material: Stainless steel AISI 316 mechanically polished. Roughness of 0,4 μm







DELIVERY MANIFOLD

- SUCTION MANIFOLD
- ASTABLE AIR EXCHANGER
- PUMPING CHAMBER d е
 - DIAPHRAGMS BALL VALVE

а b

С

f

PUMPS COMPOSITION

PUMP MODEL	TYPE ATEX	SERIES	PUMP BODY	AIR DIAPHRAGM	FLUID DIAPHRAGM	BALLS	BALL SEATS	O-RINGS	CONNECTIONS
AF	XF - ATEX ZONE 1 /	0018	S - AISI 316	H - Hytrel	T - PTFE	T - PTFE	S - AISI 316 SS	T - PTFE	1 - BSP THREATED
	FDA COMPLIANT	0050	PF: ELECTROPOLISHED			S - AISI 316 SS			2 - Flanged
	OF - Atex Zone 2 / FDA Compliant	0100	SP: MECHANICALLY POLI- SHED						3 - Clamp
	XS - Atex Zone 1 /	0160							
	SANI FDA Compliant	0500							
	OS - Atex Zone 2 /	0700							
	SANI FDA Compliant	1000							







DF/SD - zone 2 😔 II 3/3 GD c IIB T135°C 🛛 DF/SD Atex - zone 1 😓 II 2/2 GD c IIB T135°C

-**0()18

Technical data



CLAMP da 3/4" Air connection 18 l/min 70 m 7 bar

Max self priming capacity Diameter of passing solids

6 mm 6 m 2.5 mm



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

	AISI 316
A (mm)	145
B (mm)	95
C (mm)	160
Weight (kg)	2,5
MAX Temperature	95°

AISI 316 electropolished or mechanically polished

Dimensions (internet) (Ð <u>}∰</u>

E**0050

DF/SD - zone 2 😔 II 3/3 GD c IIB T135°C DF/SD Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Ö

Technical data





AISI 316 electropolished or mechanically polished

	AISI 316
A (mm)	225
B (mm)	156
C (mm)	230
Weight (kg)	6
MAX Temperature	95°

* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material. В Α Dimensions

E**0100

Technical data





AISI 316 electropolished or mechanically polished

	AISI 316
A (mm)	250
B (mm)	175
C (mm)	250
Weight (kg)	9
MAX Temperature	95°





AISI 316 electropolished or mechanically polished





 \mathbf{C}

DF/SD - zone 2 😔 II 3/3 GD c IIB T135°C

CLAMP da 1 1/2" 160 l/min 70 m 7 bar

Air connection Max self priming capacity Diameter of passing solids

Air supply pressure Air consumption Nlt/min

**0160

1/2" BSP

7,5 mm

6 m



AISI 316 A (mm) 360 220 B (mm) C (mm) 365 Weight (kg) 20 MAX Temperature 95°



C

AF**0400

FDA	DF/SD	9 - zone 2 - II 3/3 GD c IIB T135°C) Atex - zone 1 - II 2/2 GD c IIB T135°C		0400
AISI 316 electropolishe	d or mec	T' 'al data CLAMP 680 I/m 70 m 7 bar	Air connection Max self primi Diameter of p.	An g capacity assing solids 3/4" BSP assing solids 8,5 mm
I				AISI 316
Dimensions	·		A (mm)	
MK.LÖ			B (mm)	
			C (mm)	
	RH VIII -		Weight (kg)	
		,	MAX Temperature	
AF**05 Technical data Connections CLAN Max flow rate 500 Max pressure 7 bar Performance 132 264 396 5	AP da 2" Vmin Air connection Vmin Air connection Max self priming capacity Diameter of passing solid Air 2.8 66.0 79.2 92.4 105.6 118.8 132.0 145.2 158.5 171.7 U.	tone 2		Compliant
H(m) 80 70 70 70 7 10 7 10 7 10 7 10		229,6 196,8 164,0 131,2 98,4 65,6 32,8 0 AISI 216 clost		isally palished
* The curves and performance values n with water at 20°C, and vary according	fer to pumps with submerged suction and a free delive to the construction material.	ADD STO Elect		
Dimensions 🛉	A B		A (mm)	582
			B (mm)	345
			C(mm)	570
		0	Weight (kg)	58

Y

)) If

Πŕ

MAX Temperature

95°

AF**0700



AISI 316 electropolished or mechanically polished

Dimensions



Α



Technical data

Connections

Max flow rate

Max pressure

Max head

CLAMP da 2 1/2" 680 l/min 70 m 7 bar

Air connection Max self priming capacity Diameter of passing solids

3/4″ BSP 6 m 8.5 mm

Performance

Air supply pressure

Air consumption NIt/min



* The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

	AISI 316
A (mm)	582
B (mm)	345
C (mm)	570
Weight (kg)	60
MAX Temperature	95°

AF**1000

Technical data



DF/SD Atex - zone 1 😔 II 2/2 GD c IIB T135°C

DF/SD - zone 2 😔 II 3/3 GD c IIB T135°C

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AISI 316 electropolished or mechanically polished

		AISI 316
	A (mm)	582
	B (mm)	345
	C (mm)	570
	Weight (kg)	60
	MAX Temperature	95°
(*) Clamp conne	ections on request	

48 seko **>** water & industry **>** Air operated double diaphragm pumps

Accessories



ELECTRICAL AND PNEUMATIC CONTROL VALVES





FLANGE CONNECTION KIT



ELECTRICAL AND PNEUMATIC "START & STOP"



BASKET STRAINER FILTERS IN PP



INOX TROLLEY

ANTI VIBRATION FEET KIT



VALVES, FITTINGS AND CONNECTIONS IN PP, PVC, INOX



HOSE IN PVC REINFORCED, HOSE WITH PTFE OR PE INTERNAL

PP, PVDF, ALUMINIUM AND STAINLESS STEEL NOOZLE



Damper

Pneumatic pulsation dampener

The new range of pneumatic pulsation dampener series DAMPER was developed with a new technology, which guarantees an optimal solution to minimize the pulsation effect of the flow.

The high damping capacity can be up to 90%. The pulsation dampeners series DAMPER, not require adjustament or pre-loading, but it adapt to the fluid curve, automatically.

The DAMPERs, mounted on the delivery of double diaphragm pumps, drastically reduce the pulsation, the hammerings and the vibrations of the pump.





MAIN FEATURES

- Construction's materials:
 Polypropylene, PVDF, Aluminium, AISI 316
- Automatically, not need pre-loading
- Unlimited dry running
- Various installations and configurations
- ATEX certifications for Zone 1 and 2 in all versions
- Easy to mantain

DAMPER COMPOSITION

DAMPER MODEL	DAMPER BODY	AIR DIAPHRAGM	FLUID DIAPHRAGM	ATEX ZONE 1
D020	P - POLYPROPYLENE	H - Hytrel	T - PTFE	Х
D025	KC - PVDF+CF	M - Santoprene		
D040	A - Aluminum			
D050	S - AISI 316 55			
	О - Ром			

INSTALLATION



FUNCTION



PULSATING FLUID PASSES TROUGH THE DAMPENER WHICH DRIVES THE CONTROL VALVE, WHICH MOVES THE DIAPHRAGM ALIGNING THE FLOW OUT

DAMPER 20



Damper - zone 2 😔 II 3/3 GD c IIB T135°C Damper Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Pneumatic pulsation dampener for pumps: AF**0018 - AF**0050

Technical data Connections 3/4"; Air connection 6 mm; Max pressure 7 bar









AISI electropolished or mechanically polished



DAMPER 25

Damper - zone 2 😔 II 3/3 GD c IIB T135°C Damper Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Pneumatic pulsation dampener for pumps: AF**0065 - AF**0100

Technical data Connections 1"; Air connection 8 mm; Max pressure 7 bar











AISI electropolished or mechanically polished

Damper - zone 2 😔 II 3/3 GD c IIB T135°C Damper Atex - zone 1 😔 II 2/2 GD c IIB T135°C



DAMPER 40

Pneumatic pulsation dampener for pumps: AF**0160 - AF**0250

Technical data Connections 1"1/2; Air connection 10 mm; Max pressure 7 bar









AISI electropolished or mechanically polished



PP

DAMPER 50

POM c



Damper - zone 2 😔 II 3/3 GD c IIB T135°C Damper Atex - zone 1 😔 II 2/2 GD c IIB T135°C

Pneumatic pulsation dampener for pumps: AF**0500 - AF**0700 - AF**1000

Technical data Connections 2"; Air connection 10 mm; Max pressure 7 bar









AISI electropolished or mechanically polished



PVDF



Kontrol 800 Multi-parameter control instrument

The Kontrol 800 is a dedicated multi-parameter controller for complex applications that require a number of chemical parameters to be checked at the same time. The unit features independent proportional control output measures, two programmable frequency outputs, RS 485 serial port with MODBUS protocol, three relais outputs, probe quality checking and Data logging capability.

Parameters

- pH / ORP
- Conductivity
- Chlorine
- Chlorine Dioxide

Kontrol 800

Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Legionella disinfection
- Reverse Osmosis
- Sludge
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Fish Farming
- Sea water
- Dairy

Features

Graphic display and Keypad

Simultaneous value of the measure, Temperature and Relay status.

4-line, 20-character Alphanumeric Display.

Seven control keys for instrument calibration and configuration.

Enclosure Box and Power Supply

Wall mounting ABS plastic material IP65. Universal Power Supply 100÷240 Vac 50/60 Hz

Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

Data logging

Internal Flash memory to load record measures values. Type: Circular (F.I.F.O.) or Filling.

Measure range

Code	Description
рН	0÷14,00 pH
ORP	± 200 mV
Conductivity	1÷200/10÷2000/100÷20.000μS
Chlorine (Amperometric Cell)	0÷5,00 ppm (*)
Chlorine and Chlo. Dioxide	0÷0,50 /1,00 /2,00 /5,00 /10,0 /20,0 / 200,0 ppm
(Potentiostatic Cell)	

Temperature

with PT100/PT1000 0÷100°C (32÷212 °F)

(*): Amperometric Chlorine CU+PT sensors

Product line Kontrol 800 Single parameter

Code	Model	Description
K800L01	Kontrol CL 800	for Amperometric Chlorine values
K800L06	Kontrol CL _P 800	for Free and Total Potentiostatic Chlorine values

Product line Kontrol 800 Double parameters

K800L02	Kontrol PR 800	for pH/ORP - pH/ORP values
K800L03	Kontrol PC 800	for pH/Amperometric Chlorine values
K800L04	Kontrol PRC 800	for pH/ORP - Amperometric Chlorine values
K800L05	Kontrol PR+EC 800	for pH/ORP - Conductivity values
K800L07	Kontrol PC _P 800	for pH + Potentiostatic Chlorine values
K800L08	Kontrol PRC _P 800	for pH /ORP + Potentiostatic Chlorine values
K800L09	Kontrol PRC _P +C _A 800	for pH/ORP + Pot. and Amperometric Chlorine values

RS485 Serial port

For set-up and real-time data acquisition from remote or for stored data download on PC or laptop (Communication software **Sekonet** required).

MODBUS RTU communication protocol.

Measure Input

High measuring resolution with probe quality control.

Modular measuring system.

Chlorine measure in sea water application.

Digital Input

Double channel, Voltage Input and Reed level input to disable all function controller output.

Current outputs 4÷20mA Galvanic isolation

Two (2) programmable Output Measure.

Frequency Outputs

1÷120 Pulse/Minutes open collector Isolation channel.

Two (2) programmable Output Measure.

Relay Outputs

Three (3) independent relais, Three (3) set point measure with power contact.

One Alarm remote dry contact One Set point Measure dry contact. On/OFF, Timed, Proportional routine function setting.



Kontrol **500** Single parameter control instruments

The Kontrol 500-serie is a advanced controller 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.

Parameters

- pH / ORP
- Conductivity
- Dissolved Oxygen
- Chlorine
- Chlorine Dioxide
- Hydrogen Peroxide
- Ozone
- Peracetic Acid
- Turbidity
- Suspended solids

Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Legionella disinfection
- Reverse Osmosis
- Sludge
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Fish Farming
- Sea water
- Dairy

Features

Graphic display and Keypad

128 by 64 pixel resolution monochrome display with graphic icons to show digital output status, Data logging, washing cycle, alarms.

Simultaneous flashing values for the measurement (numeric + bargraph) and temperature readings.

Analogue scrolling output values.

Five control keys for instrument calibration and configuration.

Enclosure Box and Power Supply

Wall mounting ABS plastic material IP65 (144x144)

Panel mounting IP54 (96x96)

Universal Power Supply 100÷240 Vac 50/60 Hz

Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

Kontrol 500

Measure range

Code	Description
рН	0 ÷14,00 pH
ORP	± 1500 mV
Conductivity	0÷20/200/2.000/20.000/ 200.000μS
Inductive Conductivity	0÷10.000 /10.000 /100.000 /999.999 μS
Dissolved Oxygen	0÷20,0 ppm or mg/l - 0÷200% SAT
Chlorine and Chlo. Dioxide	0÷0,50/1,00 /2,00 /5,00 /10,0 /20,0 / 200,0 ppm
Hydrogen Peroxide	0÷500 /1000 /2000 /10.000 / 100.000 ppm
Ozone (03)	0÷0,5 /2,00 /5,00 /10,00 ppm
Peracetic Acid	0÷500 /2000 /10.000 / 20.000 ppm
Turbidity	0,00÷1,00 /10,0 /100 NTU/FTU
Suspended Solids Turbidity	0,0÷4,00 /40,0 /400 /4.000 NTU/FTU - 0÷30 gr/l
Temperature	with PT100/PT1000 0÷100°C (32÷212 °F)

Product line Kontrol 500 Single parameter

Code	Model	Description
K500PR	Kontrol PR 500	for pH or ORP values
K500CD	Kontrol CD 500	for Conductivity values
K500ID	Kontrol ID 500	for Inductive Conductivity values
K500OX	Kontrol OX 500	for Dissolved Oxygen values
K500CL	Kontrol CL 500	for Chlorine values The unit's Software enables the following measures: H2O2 O3 CIO2 C2H4O3
K500T1	Kontrol TB 500	for Turbidity values
K500T2	Kontrol TS 500	for Suspended Solid Turbidity values

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

To set-up and to acquire/capture real time data or to download stored data on PC or laptop (Communication **Software Master** Controller **NET** required).

MODBUS RTU communication protocol

USB port

To download recorded data on removable memory Usb Pen Drive (upon request).

Measure Input

High measuring resolution with probe quality control.

Modular measuring system

Chlorine measure for sea water application.

Digital Input

Dedicated to disable all controller output functions.

Current outputs 4÷20mA Galvanic isolation

Two independent programmable Output Measures with PID routine regulation.

Relay Outputs

Four independent relais, two set points, one alarm remote output, on backwashing probe output.

On/OFF, Timed routine function setting.







Kontrol **40**

Single parameter control instruments

The Kontrol 40 are single parameter controllers. These very user-friendly systems combine advanced performance and simple design. Single-parameter units are available in four different casings, ensuring perfect fit at the right price.

Parameters

- pH / ORP
- Conductivity
- Chlorine
- Chlorine Dioxide
- Flow Rate

Applications

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler

(ontrol 40

- Legionella disinfection
- Reverse Osmosis
- Crate Wash
- Galvanic Process
- Dioxide Station
- CIP
- Irrigation
- Swimming Pool
- Sea water

Features

Graphic display and Keypad

Simultaneous value of the measure, Temperature and Relay status. 2-line, 16 character Aplhanumeric Display. Four control keys for instrument calibration and configuration.

Enclosure Box and Power Supply

Four (4) mechanical box: Wall mounting PP (IP65)

Panel mouting: 96x96 IP65 Front panel 48x96 IP40 Din-Rail (6 modules) IP40

Universal Power Supply 100÷240 Vac 50/60 Hz and 24Vac/dc

Measure range

Code	Description
рН	0÷14,00 pH
ORP	± 1500 mV
Conductivity	$1 \div 200/10 \div 2000/100 \div 20000/200 \div 50000 \mu S$
Chlorine (Amperometric Cell)	0÷5,00 ppm
Chlorine and Chlo. Dioxide	0÷0,50 /1,00 /2,00 /5,00 /10,0 /20,0 /200,0 ppm
(Potentiostatic Cell)	
Temperature	with PT100 0÷100°C (32÷212 °F)
Flow Rate	99 999,99 Liters/second (*)

(*) Setting by software following unit measures: I/s, I/h, m³/h, GPM.

Product line Kontrol 40 Single parameter

Code	Model	Description
SPR040	Kontrol 40	for pH/ORP values
SCD040	Kontrol 40	for Conductivity value
SCL040	Kontrol 40	for Potentiostatic Chlorine value
SFX040	Kontrol 40	for Flow Rate value

Manual controls

The user-friendly programming step menu makes starting up and checking the control and dosing system easy.

Measure Input

High measuring resolution with probe quality control.

Modular measuring system

Chlorine measure in sea water application

Digital Input

Voltage Input to disable all function controller output.

Current outputs 4÷20mA Galvanic isolation

One(1) programmable measurement output.

Relay Outputs

Two (2) independent function, two Set point Measure, dry contact. Software-set alarm functions.

Routine function settings : ON/OFF, Timed or proportional



Photometer **System** Multi parameter photometer instrument

The Seko Photometer System is a DPD reference point for Chlorine control. The combination of water sampling and reagents ensure maximum measurement precision. The unit itself is a compact miniature analysis laboratory dedicated to Chlorine measurement.

Parameters

- pH / ORP
- Free and Total Chlorine
- Combined Chlorine by software

Applications

- Waste Water
- Drinking Water
- Boiler

^ohotometer **System**

- Legionella disinfection
- Crate Wash
- Dioxide Station
- Irrigation
- Swimming Pool
- Sea water

Features

The unit has the following innovative features:

- New hydraulic device with water drain dedicated to chemical reagents used for chlorine measure. Therefore it allows to reduce the water amount used for chlorine measure. The water dedicated to pH and Redox probes it may be to restored in the compensating basin, while only the water with chemical DPD reagent will be discharged in special tank to observes the local law.
- Fast installation thanks to quick coupling for Inlet and Outlet water.
- Optical unit assure a High accuracy Chlorine measure with a 520 nm sensor and LED light device.

Moreover:

- The Peristaltic pump with 4 mechanical support assure chemical reagent saving.
- Reagent level controlled by level probes.
- The chemical powder to dilute before the use is a good solution safety to keep it ready in every place.

Graphic display and Keypad

LCD STN 340x128 backlighted.

Visualisation of: measurements (simultaneous up to 4 values + trend line), digital outputs condition, storage condition, malfunctions.

Using keypad with 4 embossed keys.

Internal data logger

4 Mbit flash memory equal to 16000 records Recording interval 00:00 to 99:99 min Type: circular / fill Display: table / graph (1 for each parameter).

Analogue outputs

1 for each measured parameter (excluding comb. chlorine) Type: 0.00 / 4.00 to 20.00 mA Galvanically isolated

Programming limit: lower / upper / reverse

Maximum load: 500 Ohms - Alarm output NAMUR compliant 2.4 mA (with 4÷20 mA range)

PID control function can be activated on the pH output

Set point relay outputs

Two (2) for Primary measure + for pH measurement (only mod. 4001-3)

Programming for Hysteresis, working time and Daily hourly activation not subject to the measured value:

- ON - OFF

- 00.00 to 05:00 ppm Cl 2

- 00:00 to 14.00 pH

Working time: 000 to 999 sec.

Relays 5A resistive load up to 230 Vac

Alarm Relay Output

Two (2) for Primary measure + Two (2) for pH measurement (only mod. 4001-3)

Programming for Hysteresis, working time and Daily hourly activation not subject to the measured value: - ON - OFF

- 00.00 to 05:00 ppm Cl 2
- 00:00 to 14.00 pH

Working time: 000 to 999 sec.

Relays 3A resistive load up to 230Vac

Measure range

Code	Description
рН	0÷14,00 pH
ORP	± 1500 mV
Chlorine (Photometric chamber)	0÷5,00 ppm (*)
Temperature	with PT100/PT1000 0÷100°C (32÷212 °F)

(*): DPD Method

Product line Photometer Light Multi parameters

SPL3CL

Photometer

Free Chlorine, pH and Redox

Product line Photometer System Single parameter

Code	Model	Description	
SPT2CL	Photometer	Free Chlorine	
SPT2CT	Photometer	Total Chlorine	

Product line Photometer System Multi parameters

SPT3CL(*)	Photometer	Free Chlorine and pH
SPT4CL	Photometer	Free Chlorine, pH and Redox
SPT5CL	Photometer	Free, Total and Combined Chlorine, pH, Redox

(*): Sea water application on demand code SPT3CLMW0001

pH/Redox Probes

SPH-1 / SRH-1

Field Application:

- · General laboratory
- · Drinking Water
- · Swimming pools
- · Water monitoring and control plan



Features:

- · Low maintenance sealed unit
- · Gel filled reference cell
- · BNC connection with Boot plastic Cover
- · Cable length 6 or 1,5 meter
- · Pellon Diaphragm high accuracy



· Drinking Water · Reverse Osmosis

· Waste water

- · Cleaning in place (CIP)
- · Galvanic Process

SPH-4 HP

Field Application:

Features:

- · Low maintenance sealed unit
- · Gel filled reference cell
- · S8 connection with PG 13,5 mm · Glass Body for High Temperature
- Enviromental
- · Diaphragm 2 Sigle pore



Field Application:

- $\cdot \, \text{Waste water}$
- · Drinking Water
- · Cooling Towers
- · Legionella disinfection
- · Galvanic Process

Features:

- · Low maintenance sealed unit
- · Gel filled reference cell
- · S8 connection with PG 13,5 mm
- · Glass Body
- · Diaphragm open hole



SPH-4 HT SRH-4 HT-PT

Field Application:

- · Ammonia application
- · Chromium plating
- · Reverse Osmosis
- · Bisulphite application
- · Galvanic Process

Features:

- · Low maintenance sealed unit · Gel filled reference cell · S8 connection with PG 13,5 mm
- · Glass Body for High Pressure Enviromental
- · Three ceramic diaphragm type

Measure range

Measurement range	Min. conductivity	Temperature range	Pressure range	Body material	Membrane material	Reference electrolyte	Diaphragm type	Electrical connection	
SPH-1	1.5M	Code 9900	105001					рH	Probes
2÷12	50 μS/cm	0÷60°C	0÷4 bar	Ероху	Glass	GEL	1 Ceramic	1,5m cable + BNC	Standard Ø 12
SPH-1	5M	Code 9900	105088					рH	Probes
2÷12	50 µS/cm	0÷60°C	0÷4 bar	Ероху	Glass	GEL	1 Ceramic	5m cable + BNC	Standard Ø 12
SPH-3	ww	Code 9900	105005					рH	Probes
2÷12	5 μS/cm	0÷80°C	0÷6 bar	Glass	Glass	GEL	1 Open hole	S8	PG 13.5
SPH-4	НР	Code 9900	105006					р Н	Probes
0÷14	5 μS/cm	0÷130°C	0÷6 bar	Glass	Glass	GEL	2 Single Pore	S8	PG 13.5
SPH-4	нт	Code 9900	105007					р Н	Probes
0÷14	5 μS/cm	0÷130°C at 6 bar	0÷16 bar at 25°C	Glass	Glass	GEL	3 Ceramic	S8	PG 13.5
SRH-1	-1.5M	Code 9900	105031					R e d o x	Probes
±1000 mV	-	0÷60°C	0÷4 bar	Ероху	Platinum wire	GEL	1 Ceramic	1,5m cable + BNC	Standard Ø 12
 SRH-1	- 5M	Code 9900	105089					Redox	Probes
±1000 mV	-	0÷60°C	0÷4 bar	Ероху	Platinum wire	GEL	1 Ceramic	5m cable + BNC	Standard Ø 12
SRH-3	PT	Code 9900	105033					R e d o x	Probes
±2000 mV	-	0÷80°C	0÷6 bar	Glass	Platinum wire	GEL	1 Open hole	S8	PG 13.5
SRH-4	HT - PT	Code 9900	105034					Redox	Probes
±2000 mV	-	0÷130°C at 6 bar	0÷16 bar at 25°C	Glass	Platinum wire	GEL	3 Ceramic	S8	PG 13.5

pH/Redox Probes

* **S7 connection:** it is a electrical connection only

** S8 connection: S7 on the top electrical probe connection and PG 13.5 mm mechanical connection

Conductivity Probes

The **seko** range of conductivity probes is specially designed for use in industrial environments in conjunction with **seko** measurement instruments. The various available models make it possible to cover an extremely wide measurement range. There are versions with temperature sensors and special versions with graphite or platinum probes, PTFE cell bodies and IP67 connectors.

Measurement of conductivity is performed by suspending the two metallic electrodes of the probe in the solution to be measured. The passage of the current between the two electrodes indicates the electrical resistance of the liquid, and therefore its conductivity.

The measurement is influenced by the temperature. In saline solutions, measurement variations of 2% / °C can occur. This variation can even reach 7% / °C. Therefore, conductivity probes without temperature sensors should only be used if the solution being tested is maintained at a temperature between 15°C and 25 °C, restricting the potential for error to 10%.

Note All the models are guaranteed for a maximum pressure of 6 bars.



C-K1 PT

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Boiler
- Reverse Osmosis
- CIP
- Irrigation
- Fish Farming
- Dairy

Features:

- Costant Cell: 1 cm⁻¹ or K=1
- Body material: Glass (130°C)
- Electrodes material: Platinum
- Mechanical Connection: Ø12 mm

Without temperature sensor

CT-K5

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

Features:

- Costant Cell: 0,1 cm⁻¹ or K=10
- Body material: PP (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ³/₄ Gas M PP

With temperature sensor (PT100)



Field Application:

- · Waste Water · Drinking Water · Cooling Towers
- Irrigation

Features:

- Costant Cell:
- 0,1 cm⁻¹ or K=10
- 0,2 cm⁻¹ or K=5
- 1,0 cm⁻¹ or K=1
- Body material: PVC (60°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ½ Gas M Pvc

Without temperature sensor



CT-K10

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis

- Irrigation

Features:

- Costant Cell: 0,1 cm⁻¹ or K=10
- Body materia: IPP (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection :³/₄ Gas M PP

With temperature sensor (PT100)



CT-K1

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

Features:

- Costant Cell: 0,1 cm⁻¹ or K=10
- Body material PP (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ³/₄ Gas M PP

With temperature sensor (PT100)

Measure range

Measurement range	Constant [C-K]	Temperature range	Pressure range	Body material	Mounting Process	Cable
С-К10	Code 9900101012			Without	t e m p e r a t	ure Sensor
0,01÷500μS	C=0,1 cm-1 K=10cm	60°C	6(*)	PP-AISI 316	1/2″ G.M.	5 m
C-K5	Code 9900101011			Without	t e m p e r a t	ure Sensor
0,1÷1000µS	C=0,2 cm-1 K=5cm	60°C	6(*)	PP-AISI 316	1/2″ G.M.	5 m
C-K1	Code 9900101010			Without	temperat	ure Sensor
1÷5000µS	C=1 cm-1 K=1cm	60°C	6(*)	PP-AISI 316	1/2″ G.M.	5 m
С-К1-РТ	Code 9900101013			Without	t e m p e r a t	ure Sensor
1÷20000µS	C=1 cm-1 K=1cm	120°C	6(*)	Glass - Platinum	Ø 12 mm	6 m
CT-K10	Code 9900101103		(P T 1	00) With	t e m p e r a t	ure Sensor
0,01÷500µS	C=0,1 cm-1 K=10cm	80°C	6(*)	PP-AISI 316	3/4″ G.M.	Plug (**)
CT-K5	Code 9900101102		(P T 1	00) With	t e m p e r a t	ure Sensor
0,5÷2000μS	C=0,2 cm-1 K=5cm	80°C	6(*)	PP-AISI 316	3/4″ G.M.	Plug (**)
CT-K1	Code 9900101101		(P T 1	00) With	t e m p e r a t	ure Sensor
5÷5000µS	C=1 cm-1 K=1cm	80°C	6(*)	PP-AISI 316	3/4″ G.M.	Plug (**)

Conductivity Probes

(*) The maximum pressure of 6 bars is guaranteed at 25 °C. As the temperature increases, the pressure decreases linearly and at 50° or 80 °C, the maximum pressure is 1 bar.

(**) To be used in conjunction with CC series cables.

Conductivity Probes



CT-K1 G

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- CIP
- Irrigation
- Fish Farming

Features:

- Costant Cell: 1 cm⁻¹ or K=1
- Body material: PVC (60°C)
- Electrodes material: Graphite
- Mechanical Connection: Ø12 mm

With temperature sensor (PT100)



CT-K1-SS

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

Features:

- Costant Cell: 0,1 cm⁻¹ or K=10
- Body material: PVDF (80°C)
- Electrodes material: Stainless steel 316L
- Mechanical Connection: ¾ Gas M PP

With temperature sensor (PT100)

CT-K1-GR

Field Application:

- Waste Water
- Drinking Water
- Cooling Towers
- Reverse Osmosis
- Irrigation

Features:

- Costant Cell: 0,1 cm⁻¹ or K=10
- Body materia: I PVC (60°C)
- Electrodes material: Graphite
- Mechanical Connection: ½ Gas M PVC

With temperature sensor (PT100)

Measure range

Measurement range	Constant [C-K]	Temperature range	Pressure range	Body material	Mounting Process	Cable
CT-K1-G	Code 9900101124		(P T 1	00) With	t e m p e r a t	ure Sensor
5÷20000µS	C=1 cm-1 K=1cm	60°C	6(*)	PVC Graphite	PG 13,5 mm	7 m
CT-K1-SS	Code 9900316009 (5m) 9	900316010	(10m) (PT1	00) With	t e m p e r a t	ure Sensor
1÷20000µS	C=1 cm-1 K=1cm	100°C	6(*)	PTFE	1″ G.M.	5 m or 10 m
CT-K1-GR	Code 9900316028 (5m) 9	900316029	(10m) (PT1	00) With	t e m p e r a t	ure Sensor
1÷20000µS	C=1 cm-1 K=1cm	50°C	6(*)	PVC	1/2" G.M.	5 m or 10 m

(*) The maximum pressure of 6 bars is guaranteed at 25 °C. As the temperature increases, the pressure decreases linearly and at 50° or 80 °C, the maximum pressure is 1 bar.

Conductivity Probes

Inductive Probes

The S411/IND series of inductive sensors has been engineered and developed to produce an electrode that is very powerful but at the same time competitive. The result has been obtained by moulding the sensor made using polypropylene reinforced with fibreglass.

This sensor offers all the advantages of the inductive cond. measurement method, including the absence of passivation of the conventional conductivity electrodes. All the sensors in the S411/IND range are temperature-compensated, and are also designed for inline, submersion or tank installation.





S411/IND

S411/IND/E



S411/IND/T IN

Measure range

Inductive Probes
Temperature
Contact materials
Temp. compensation
Cable
Connection
Protection rating
Materials
Operating temperature
Submersion length
Assembly
Operating pressure
Conductivity Range
Resolution

Inductive Probes

SENSOR S411/IND

-5 to 60 °C (without freezing)

Glass-reinforced polypropylene

PT1000 wires

Standard 5 metre

1/2" BSP male

IP67

PVC with Viton gaskets

-5 to 60 °C (without freezing)

600 or 1200 mm

Standard bracket or optional flange

From vacuum to 6.5 bar (100 psi)

1000 µS to 1 Simens

100 μS to 1000 μS

Code 6100011441

Inductive Probes



innovation > technology > future 65

Dissolved Oxigen Probes



Dissolved Oxigen Probes

OXYSENS

The OXYSENS[®] is an

electrochemical oxygen sensor designed for applications in water, e.g. waste water treatment. swimming pools or fish farms. It is easy to maintain, because the membrane and the electrolyte don't need to be replaced. The response time of the OXYSENS[®] is fast, it is almost independent of flow and insensitive to soiling.



Dissolved Oxigen Probes

S423/C OPT

The S423/C OPT sensor with an integrated temperature sensor is based on luminescent optical technology. Without calibration requirements and thanks to an ultra low power technology, the S423/C OPT sensor meets the demands of field works and short or long term campaigns. Without oxygen consumption, this technology allows you an accurate measure in all situation and especially in very low oxygen concentrations.

The S423/C OPT sensor stores calibration and history data within the sensor. This allows you a "plug and play" system without recalibration. Thanks to the Universal Modbus RS485 protocol, The S423/C OPT sensor can be connected to all devices commonly used (Datalogger, Controller, Automat, Remote System...).

Dissolved Oxigen Probes Measuring method Measurement range Accuracy **Response time Required flow Temperature sensor** Storage temperature **Temperature range Pressure range Body material** Membrane material **Reference electrolyte Electrical connection Mechanical mounting Measuring method Signal interface Polarization voltage Application fields**

Measure range

OXYSENS

Measurement of the electrical current affected by the partial pressure of oxygen

40ppb÷40ppm

< 0.5% [relative to current in air]

98% Max. 60 s at 25 °C

≥ 0.03 m/s

NTC 22 kOhm

-10÷60°C

0÷60°C

0÷4 Bar

Stainless steel 1.4435, silicone, EPDM

OPTIFLOW

Silver platinum combination

5 m cable

PG 13.5

Measurement of the electrical current affected by the partial pressure of oxygen

 $-670 \pm 50 \, \text{mV}$

Water applications: Waste water treatment, swimming pools, fish farms; composting facilities

Code 9900316005

 $\pm 0.1 mg/L / \pm 0.1 ppm / \pm 1\%$ No necessary move CTN -10÷60°C 0÷50°C 0÷5 Bar Stainless Steel INOX 316L No membrane No electrolyte 10 m cable 35mm Optical measure by luminescence Modbus RS-485 (standard) and SDI-12 (option) 5 to 12 volts

Urban wastewater treatment, industrial effluent treatment, surface water monitoring, drinking water

Code 9900105091 35mm

S423/C OPT (35mm)

Optical measure by luminescence

0,00 to 20,00 mg/L / 0,00 to 20,00 ppm / 0-200% [Resolution 0,01]

90% of the value in less than 60 seconds

Flow Sensor



SFW

The paddlewheel flow sensor SFW is designed to be used with every kind of solid-free liquid. The sensor can measure flow from 0.15 m/s (0.5 ft/s) producing a frequency output signal highly repeatable.

A new electronic, with a pushpull output, is now available for a safe connection to any kind of PLC/instrument digital input.

A special family of fittings ensures installation into all pipe material in sizes from DN15 to DN600 (0.5" to 24").



SFWE

The SFWE insertion magmeters can measure flow rate in both metal and plastic pipes.

No moving parts allow the measurement of liquids with suspended solids as long as conductive and homogeneous.

The sensors can be assembled into the standard FLS fittings for installation from DN15 to DN600 (0.5" to 24").

They offer frequency output to use with FLS flow instrumentation and 4-20 mA output for long distance transmission and PLC connection.

Special versions for salt-water applications (high concentration of chlorides as sea water) and for high temperature conditions.

Measure range

Flow Sensor			SFW				SFWE	
Working range	0.1	5 to 8r	m/s [0.5 to	o 25ft/s]		0.15	to 8m/s [0.5 to 2	25ft/s]
Minimum reynolds			4500				-	
Linearity		±0.75	% of full s	scale		$\pm 1\%$ of reading +1.0 cm/s		
Repeatability		±0.5%	% of full s	cale			±0.5% of reading	g
Maximum process Pressure/Temperature	PVC-Cbody: PVDFbody: Brass&SSbody: 10 bar - 25°C 10 bar - 25°C 25 bar - 120°C 1.5 bar - 80°C 1.5 bar - 100°C 25 bar - 100°C					16 bar - 25°C 8.6 bar - 70°C		
Materials	Sensor body: O- CPVC or PVDF E or 316L SS 0	- rings : EPDM or FPM	Rotor: ECTFE (Halar)	Shaft: Ceramic (Al ₂ O ₃)	Bearings: Ceramic (Al ₂ O ₃)	Sensorbody: 316L SS PVDF	O-rings: EPDM or FPM	Electrodes: 316L SS
Outputs	Square wave, frequence 4÷20 m/	y: 45 Hz A with K	: per m/s [1 (330 outpu	3.7 Hz per t kit moun	ft/s] nominal ited	4÷20 mA - Isolated Square wave, frequency: 0-500Hz Open collector: flow direction		
Power supply	5 to	24 VD0	C ± 10% r	egulated	I	12 to 24 VDC \pm 10% regulated (reverse polarity and short circuit protected)		
Application fields	fields Water and industrial waste water treatment, water distribution, processing and manufacturing industry, textile finishing, chemical production, cooling and Heating systems, swimming pools and Spas.					Water and waste water treatment, raw water intake, industrial water distribution, textile industry, swimming pools, Spas and aquariums, HVAC, processing and manufacturing industry.		
	Code 9900317 Code 9900317	01X P\ 04X St	/C SFW1 / ainless Ste	SFW2 eel SFW1	/ SFW2	Code 99003170 Code 99003170	40 Mag SFW1 41 Mag SFW2	

Potentiostatic Probes

CLPROBES

This range consists of potentiostatic amperometric probes to measure free or total chlorine for applications such as: water treatment, swimming pools, industrial applications and more.

The wide range of probes allows a better choice depending on the parameter to be tested, thus obtaining a more accurate measurement.

- The two-wire interface allows quick and easy installation.
- Calibration of the probe is guided by the **Kontrol CL500** instrument .

High pressure Probe sensors



F-CL 1 F-CL 5 F-CL 6 F-CL 9 Models F-CL 2 F-CL 3 F-CL 4 F-CL 7 F-CL 8 **F-CL 10 F-CL 11** Measure 0÷200 0÷2 0÷1 0÷5 0÷1 0÷5 0÷0,5 0÷5 0÷10 ppm ppm ppm ppm ppm range ppm ppm ppm ppm pH range 4÷8 pH 4÷12 pH 4÷11 pH 4÷8 pH 5÷9 pH 4÷8 pH 4÷8 pH **Response time** 1 minutes - 90% of measure (100% of measure after 15 minutes) **Flow rate** 30 L/h 80 L/h 30 L/h 45 °C 50 °C 70 °C 45 °C Temperature Pressure 1 bar 0,5 bar 5 bar (*) 8 bar (*) 0,5 bar 1 bar Sensor material Silver chlorine with gold Gold Silver chlorine with gold M20 M48 M48 M20 M20 M20 M20 Membrane G ₽. ECL1 ECC1 ECS1 2 ECL1 2 ECL1 ECL1 ECL1 Gel EAS1 Gel Electrolyte Electrical Wire connection with screw connection **Mechanical** Ø24mm mounting Inorganic Organic Application **Inorganic Free Chlorine** Free Free fields Chlorine Chlorine Code 9900101140 9900101141 9900101142 9900101146 9900101148 9900101149 9900101150 9900101152 9900101153 9900101159 9900101173

Measure range

(*) with Snap-Ring

F-CL 2 • F-CL 3 • T-CL 1 can be used in sea water application with special electrolites

and Modular probe holder



PSS-PLEXI

Features

- In/Out: 8x12 mm (tube)
- Material Plexiglas without color
- Hydraulic **By Pass**
- Pressure **5 bar**
- Temperature 60°C

 Code 9900103047
 PSS-PLEXI [FLUX/PH]

 Code 9900103048
 PSS-PLEXI [FLUX/PH/RX]

 Code 9900103049
 PSS-PLEXI [FLUX/CL-A]

 Code 9900103050
 PSS-PLEXI [FLUX/PH/CL-A]

 Code 9900103051
 PSS-PLEXI [FLUX/PH/RX/CL-A]

 Code 9900103052
 PSS-PLEXI [FLUX/PH/RX/CL-A]

 Code 9900103053
 PSS-PLEXI [FLUX/PH/RX/CL-P]

 Code 9900103054
 PSS-PLEXI [FLUX/PH/RX/CL-P]

 Code 9900103055
 PSS-PLEXI [FLUX/PH/RX/CL-P]

 Code 9900103056
 PSS-PLEXI [FLUX/PH/RX/CL-A]

 Code 9900103056
 PSS-PLEXI [FLUX/PH/RX/CL-P]

 Code 9900103056
 PSS-PLEXI [FLUX/PH/RX/CL-A]

F-CL12	F-CL13	T-CL 1	T-CL 2	D-CL	D-CL 2	D-CL 3	PAA 1	H ₂ 0 ₂ 1	H ₂ 0 ₂ 2	0 ₃ 1	0 ₃ 2	BR 1
0÷ pp	-2 m	0÷10 ppm	0÷5 ppm	0÷10 ppm	0÷ pp	÷1 om	0÷2000 ppm	0÷200 ppm	0÷500 ppm	0÷2 ppm	0÷5 ppm	0.05÷10 ppm
4÷12 pH	4÷11 pH	4÷1	4 pH	1÷14 pH	5÷9	рН		2÷11 pH		1÷14	4 pH	6.5÷9.5 pH
			1	minutes - 90	% of measu	re (100% of	measure afte	er 15 minute	s)			
		30 L/h			80	L/h			30	L/h		
		45 °C			50 °C	70 °C			45	°C		
	0,5	bar		1 bar	5 bar (*)	8 bar (*)	1 bar	5 ba	ır (*)	1 k	bar	0,5 bar
	Silver	chlorine wit	h gold		Go	old			Silver chlori	ne with gold		
M48	M48 G	M48	M48	M20	-	-		M7N		M20	M20	M48
ECC1	ECS1 Gel	Gel ECP1	Gel ECP1	EDC41	EAS1	I Gel		EPS7/W		EO	Z1	EBR1 Gel
					Wire co	nnection wit	h screw					
						Ø 24mm						
Organic Free Chlorine	Inorganic Free Chlorine	Total C	hlorine	Ch	llorine Dioxid	de	Peracetic Acid	Hydrogen	Peroxide	Ozo	one	Bromine
Code 9900101174	Code 9900101177	Code 9900101143	Code 9900101172	Code 9900101144	Code 9900101151	Code 9900101154	Code 9900101157	Code 9900101158	Code 9900101156	Code 9900101175	Code 9900101176	Code 9900101179
								atic	Chl	orin		

Turbidimetric Probes

The principle of measurement is the deviation of light produced by suspended particles in the liquid. Thanks to the dual sensor is possible to make measurements of turbidity at low and very low concentrations with high accuracy and repeatability.

Avoiding contact with the measuring liquid, the optical LED technology make the system stable over time and minimize the need for recalibration. The cell is installed directly in line, the maximum allowable pressure is 4 or 6 bar, pipe or bypass. The flow velocity does not affect the measurement.

Features and **Benefits**

Reliable concentration measurement using optical measuring process

Infrared light pulsing beams scattering method

Black rigid PVC sensor body

No mechanically moving parts

Measured value pre-processing in sensor resulting in low signal transmission sensitivity



Features:

- · SS AISI 316 material · Solid Measure with Led light with Resistors sensor · Threaded Connection 2 1/2" M GAS
- · Two cables included

S461/T

Field Application:

S462/SS

Field Application:

· Sewage Treatment

· Drinking Water

· Cleaning in place

Resistors sensor

Cables included

Threaded Connection 1" GAS

· Waste water

- · Sewage Treatment
- · Sludge application
- · Waste water
- · Fish farming

Resistors sensor

Threaded Connection 1" GAS Cables included

S461/S

Field Application:

- · Sewage Treatment
- · Sludge application
- · Waste water

Resistors sensor

Threaded Connection 1" GAS Cables included

S462/PVC/SWP

Features:

- · Black Plastic Body
- · Turbidity Measure with Led light with

Resistors sensor

Threaded Connection 2 1/2" F GAS Two cables included · SS AISI 316 material

Features:

- · Turbidity Measure with Led light with Resistors sensor
- · Threaded Connection 1" GAS
- · Cables included

Suspended Solids probes

Turbidimetric probes

- **Features:**
 - · SS AISI 316 material
 - · Solid Measure with Led light with Resistors sensor
 - · Threaded Connection 1" GAS
 - · Cables included

Field Application: · Waste water

- · Drinking Water
- · Swimming pool
- · Sewage Treatment

Turbidimetric probes

Measure range

Measurement range	Measurement method	Temperature range	Pressure range	Body material	Power supply	Electrical connection	Threaded connection	Applications field
S462/PV	C Code 99	900316	021	Turb	i d i m e t	ric Pr	o b e s	
0,00÷100 NTU/FTU	Scattering at 180° Light absorption	0÷45 °C	0÷6 bar	PVC black Transparent PVC door	12÷24 Vdc	2 cables 5m	21⁄2"F	- Water treatment plants , downstream of filtration and decantation. Process section;
S462/SS	Code 99	900316	006	Turb	i d i m e t	ric Pr	o b e s	- Aging facilities of wastewater reuse for agricultural or industrial purposes;
0,00÷100 NTU/FTU	Scattering at 180° Light absorption	0÷90 °C	0÷6 bar	Stainless Steel INOX 316 Tempered glass window	12÷24 Vdc	5m cable	21⁄2"M	 Food industry particularly in the production of beverages, wine, beer etc.; Pool water.
S461/T	Code 99	900316	022	Turb	i d i m e t	ric Pr	obes	
0,00÷/4 /40 /400 /4000	Scattering at 90° Light absorption	0÷60 °C	0÷4 bar	Stainless Steel INOX 316 Special Optical Glass or Viton	12÷24 Vdc	10m cable	1"GAS	Wastewater, primary water, industrial water, recirculating water.
S462/SW	P Code 99	900316	024	Turb	i d i m e t	ric Pr	o b e s	
0,00÷40 NTU/FTU	Scattering at 180° Light absorption	0÷45 °C	0÷6 bar	PVC black Transparent PVC door	12÷24 Vdc	2 cables 5m	21⁄2"F	Pool water

Turbidimetric Probes

Measure range

Measurement range	Measurement range	Temperature range	Pressure range	Body material	Power supply	Electrical connection	Threaded connection	Applications field
S461/S	Code 9	900316	025			So	s p e n c	led Solid Probes
20 gr/l	Scattering at 90° Light absorption	0÷60 °C	0÷4 bar	Stainless Steel INOX 316 Special Optical Glass or Viton	12÷24 Vdc	10m cable	1"GAS	Wastewater, primary water, industrial water, recirculating water.

Sospended Solid Probes

Suspended Solid Probes

The 7520 SAV and 7540 SRH sensors are used for optical solids content measurement in turbid water for up to 150g solid matter/l.

Applications

- Solids content measurement of suspended matter in sewage treatment plants: Primary sludge, digested sludge, thickened sludge, Inflow to centrifuge / press.
- Industrial quality control.

Features and Benefits

Reliable concentration measurement using optical measuring process.

Infrared light pulsing beams scattering method.

Black rigid PVC sensor body.

No mechanically moving parts.

Measured value pre-processing in sensor resulting in low signal transmission sensitivity.



Measure range

S	uspended Solid Probes	7520 SAV-T/E	7540 SRH-T/E
Mechanical data	Dimension (LxØ) Immersion type	139 x 38 Ø mm	134 x 38 Ø mm
	Dimension (LxØ) Installation type	220 x 38 Ø mm	220 x 38 Ø mm
	Weight Immersion type	Approx. 1Kg	Approx. 1Kg
	Weight Installation type	Approx. 3Kg	Approx. 3Kg
Materials	Sensor Body	Stainless steel SS316L Ti	Stainless steel SS316L Ti
	Sight glass	Epoxy resin	Epoxy resin
	O-rings	Viton®	Viton®
Measurement	Measuring principle	Light absorption method	Backscatter light method
range	Optical components	Light source 2 LEDs detectors 2 photodiodes	Light source 2 LEDs detectors 2 photodiodes
	Measuring light	Infrared light at 880 mm absorption maximum	Infrared light at 880 mm absorption maximum
	Measuring range	0÷50g solid matter/l, dependent on sludge type	10÷150g solid matter/l, dependent on sludge type
	Accuracy	< 1% of measuring range end value	< 1% of measuring range end value
	Reference	Using four-beam pulsed light method	Using four-beam pulsed light method
	Cable lengths	T version 13m E version 1m + 10m extension cable	T version 13m E version 1m + 10m extension cable
	Calibration	With silica standard	With silica standard
Operating conditions	Op. temperature	0÷150°C	0÷150°C
	Op. pressure	max 6 bar	max 6 bar
	Protection	IP 68	IP 68
		On demand	On demand

Suspended Solid Probes

Cables, buffer solutions and probe accessories

Immersion probe holder

Immersion probe holder

Immersion probe holders

Probe Accessories

Sensors for measuring pH, Redox and Conductivity must be installed in the system using special probe holders that ensure the correct mechanical protection and degree of impermeability.

The pH and Redox measurement probes can be submerged in tanks, inserted in pipes or placed in sample draw down containers (Catch Pots).

The immersion models with adjustable flange can be used in conjunction with a counter-flange which allows quick and easy installation and removal. The P-IG range with a floating platform adapts to the varying liquid level of deep water tanks. The polypropylene versions PIR-2-PPxxx can house two sensors, e.g. pH and Redox.

It is not recommended to use PH and/or Redox sensor in the same probe holder as a conductivity cell.

Ы	Immersion	No. of probes	Max Temperature	Material							
	PI PVC 400	Code 9900	100111								
	400 mm	1	40°C	PVC							
	PI PVC 800	Code 9900	100112								
	800 mm	1	40°C	PVC							
	PI PVC 1000	Code 9900	100115								
	1000 mm	1	40°C	PVC							
	PI PVC 1500	Code 9900	100113								
	1500 mm	1	40°C	PVC							
•	PI PVC 2000	Code 9900	100116								
	2000 mm	1	40°C	PVC							
PIR PVC	Immersion	No. of probes	Max Temperature	Material							
PIR PVC	PIR PVC 200	No. of propes	Max Temperature	Material							
PIR PVC		No. of bropes Code 9900	Max Temperature 3005	Material							
PIR PVC	Signal Sector PIR PVC 200 100÷250 mm PIR PVC 400	se do booper No of brooper No	Jemberature 0°C 2001001	Material							
PIR PVC	FIR PVC 200 100÷250 mm PIR PVC 400 100÷450 mm	sequed Jo ool Source 99000 1 Code 99000 1	Темрегание 40°С 40°С	Material DVd							
PIR PVC	Source PIR PVC 200 100÷250 mm PIR PVC 400 100÷450 mm PIR PVC 800	sequed 50 ool 2000 99000 1 2000 99000 1 2000 99000	Lemberature 40°C 40°C 40°C	Material DVd DVd							
PIR PVC	••••••••••••••••••••••••••••••••••••	sequed 5000 200de 99000 1 200de 99000 1 200de 99000 1	нарная нарна	Material DVA DAA							
PIR	Signature PIR PVC 200 100÷250 mm PIR PVC 400 100÷450 mm PIR PVC 800 100÷850 mm PIR PVC 1000	sequed 5000 2000 99000 1 2000 99000 1 2000 99000	Lemberative and a constant a constant constant constant constant constant constant const	Material DVA DAA							
PIR		sequed 5000 2000 99000 1 2000 99000 1 2000 99000 1 2000 99000 1	Lemberative and a constraint of the second s	Waterial DVA DVA DAA DAA DAA							
PIR		signal,	Lemberative and a constant a do°c a do a do°c a do a do a do a do a do a do a do a do	Waterial DVA DVA DVA DVA DVA DVA							
PIR	Solution PIR PVC 200 100÷250 mm 100÷250 mm PIR PVC 400 100÷450 mm PIR PVC 800 100÷850 mm PIR PVC 1000 100÷1050 mm PIR PVC 1500 100÷1550 mm	sequed 5 o 2 Code 99000 1 Code 99000 1 Code 99000 1 Code 99000 1 Code 99000 1	Humberstein 100101 40°C 100103 40°C 100103 40°C 100103 40°C 100103 40°C 100103 40°C 100105 40°C 40°C 40°C 40°C	Waterial DVA DAA DAA DAA DAA DAA DAA							
1	PIR 2 PP	Immersion	No. of probes	Max Temperature	Material			PI G			Probe Accessori
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		PIR 2 PP 400	Code 9900	100121							ß
~		100÷450 mm	2	80°C	PP						
5		PIR 2 PP 800	Code 9900100122								
olde		100÷850 mm	2	80°C	РР				Sec	are	
be h		PIR 2 PP 1000	Code 9900100124			der	rsion		prol	erati	rial
n pro		100÷1050 mm	2	80°C	РР	be hold	e holo Imme		No. of	Max Temp	Matei
ersic						prob	PIG Floating		Code 9900100131		
E E						sion			1	40°C	PVC
-						mer	B PI G		Code 9900	100132	
						<u></u>	2m anchora	ge arm	-	40°C	PVC
	PP	Immersion	No. of probes	Max Temperature	Material	1	6	FER			
	T	PICIR PP 400	Code 9900	100141			-	1	for o	quick ren	noval
		100÷450 mm	1	80°C	РР		-	F	a		
_		PICIR PP 800	Code 9900	100142			t. Diamete	mete	atur	tion	-
olde		100÷850 mm	1	80°C	PP			t. Dia	ax mper	nnec	teria
oe h		PICIR PP 1000	Code 9900	100144			Ĩ	EX	Te Te	ĉ	W
pro		100÷1050 mm	1	80°C	PP	Ige	FER	Code 99	00100133	3	
sion		PICIR PP 1500	Code 9900	100145		-flar	65 mm	140 mi	m 40°C	4 holes Ø 6 mm	PP
mer		100÷1550 mm	1	80°C	PP	nter					
<u>2</u>						lou					

Probe holders with 3/4" probe attachment without protection

These can house conductivity probes with threaded 3/4" G. Attachment with output cable or IP67 connector.

Cables, buffer solutions and probe accessories

Probe Accessories

	PIA PVC	Immersion	No. of probes	Max Temperature	Max Pressure	1/h Min - Max
_		PIA PVC 400	Code 9900100151			
lolde		400 mm	1	40°C	2÷6	100÷600
beh		PIA PVC 800	Code 9900100152			
pro		800 mm	1	40°C	2÷6	100÷600
vasł						
Back v						

Immersion probe holders with spray cleaning

These special probe holders can be connected with a cleaning liquid injection unit. Regular cleaning of the probe ensures linearity and stability of the measurement over time, preventing the need for timeconsuming manual intervention.



Tap probe holders

Tap probe holders are used for in-line measurements where part of the sample is re-directed from the main pipe to the probe holder. The water can be drawn off into the sampling circuit at a pressure of 6 bars.



Pressurized probe holders

Pressurised probe holders are used to immerse the probe directly into the pipe where the sample to be measured passes. The probe must always be positioned vertically or slanting in the direction of the flow at a maximum of 45°. The probe holder connection line must be fitted between two isolation valves (input and output) in order to permit the prevention of the flow during maintenance of the probes.



Cables, buffer solutions and probe accessories



for higher protection from electical interference.

Length	Type of Cable	Terminal block		
CE 1/B	Code CE 9900108001 C	EB 9900109001		
1 mt.	Mod. RG58 5 mm	Crimping BNC Soldered BNC		
CE 5/B	Code CE 9900108003 C	EB 9900109003		
5 mt.	Mod. RG58 5 mm	Crimping BNC Soldered BNC		
CE 10/B	Code CE 9900108004 C	EB 9900109004		
10 mt.	Mod. RG58 5 mm	Crimping BNC Soldered BNC		
CE 20/B	Code CE 9900108006 C	EB 9900109006		
20 mt.	Mod. RG58 5 mm	Crimping BNC Soldered BNC		
CE 10 HT [™] /B	Code CE 9900110001 C	EB 9900110101		
10 mt.	Mod. HT 5 mm	Crimping BNC Soldered BNC		
CE 20 HT [™] /B	Code CE 9900110002 C	EB 9900110102		
20 mt.	Mod. HT 5 mm	Crimping BNC Soldered BNC		
CE 30 HT ⁽ */B	Code CE On demand C	E B 9900110103		
30 mt.	Mod. HT 5 mm	Crimping BNC Soldered BNC		

	cc	Length	Version	No. poles
	Cables for Cables for CTK Probe with 4-pole connectors	CC 5	Code 9900110111	
		5 mt.	standard	4
		CC 10	Code 9900110112	
bles		10 mt.	standard	4
		CC 15	Code 9900110113	
Probe		15 mt.	standard	4



Probe Accessories