

teknaEVO

solenoid dosing pumps



innovation > technology > future

The **evolution** of solenoid dosing pumps

Clever

Just 4 Models, Just PVDF,
All functions in one pump



Models
803

flow rate from 20 to 60 lt/h

4 models that cover 1 to 60 lt/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

evo **Inventory Reduction**
Reduce spares stock holding



Models
600
603
800

flow rate from 1 to 20 lt/h

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

EVO Reduced maintenance
Full chemical compatibility

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

EVO **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

Analogue Version

teknaEVO AKL

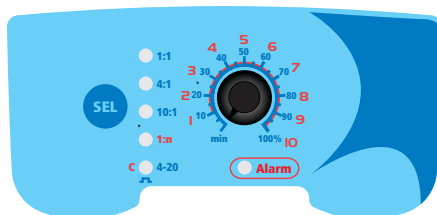


constant dosage

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



teknaEVO 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



teknaEVO ATL



timed dosage

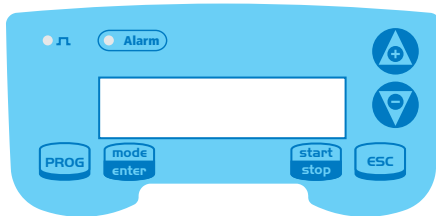
Analogue dosing pump with constant flow rate manually adjustable and timed dosage with T on-T off double regulation.

- 3 control dials (flow rate percentage - T on regulation - T off regulation)



Digital Version

teknaEVO TPG



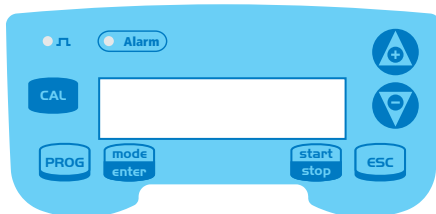
proportional dosage

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

This digital version of the APG, includes additional characteristics: Timer function, ppm dosing, statistics, password and On/Off input (remote switch)



teknaEVO TPR



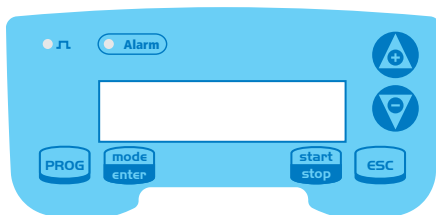
proportional dosage

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



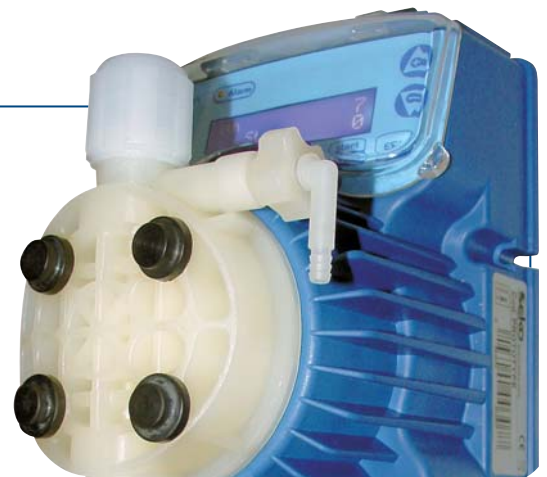
teknaEVO TCK



timed dosage

Digital dosing pump with constant flow rate manually adjustable, or timer control.

- Programmable timed relay



Code

			Version
Code	Interface	Description	
AKL	Analogue	Analogue dosing pump with constant flow rate manually adjustable	
APG		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)	
ATL		Analogue dosing pump with constant flow rate manually adjustable and timed dosage with T on-T off double regulation	
TPG	Digital	Digital 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)	
TPR		Digital dosing pump with pH/Redox control meter on board	
TCK		Digital dosing pump with constant flow rate or timed	

						Model
Code	Pressure [bar]	Flow rate [lt/h]	Frequency max [stroke./min]	Stroke capacity [cc/stroke]	Ø Connections IN / OUT [mm]	Consumption [W]
600	20	2.5	120	0,35	4 / 6 suc. 4 / 7 dis.	12,0
	18	3		0,41		
603	12	4	160	0,42	4 / 6	12,2
	10	5		0,52		
	8	6		0,63		
	2	8		0,83		
800	12	7	320	0,36	4 / 6	23,9
	10	10		0,52		
	5	15		0,78		
	1	18		0,94		
803	5	20	300	1,11	8 / 12	22,2
	4	25		1,39		
	2	40		2,22		
	1	54		3		

		Power supply
Code		
N	100 ÷ 240 Vac	50-60 Hz
O	24 ÷ 48 Vac (just for AKL and APG version)	

					Pump head material
Code	Pump head	Connections	Balls	Diaphragm	
H	PVDF		Ceramic	PTFE	

		Installation Kit
Code	Materials	
H	PVDF	

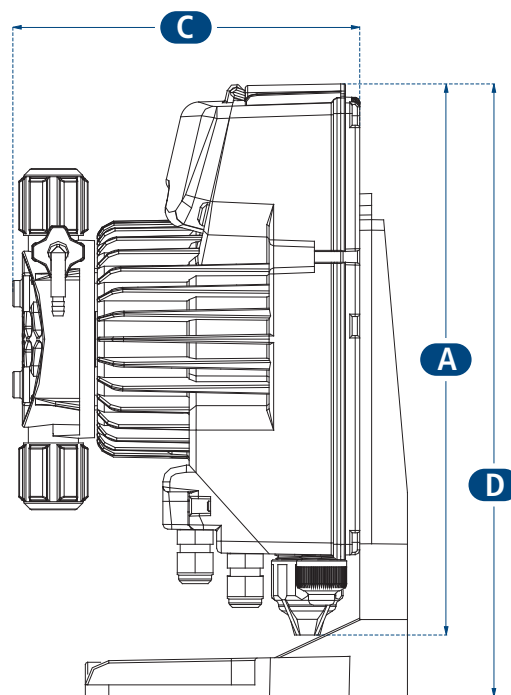
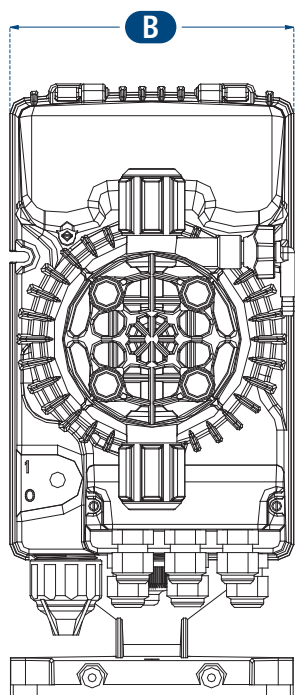
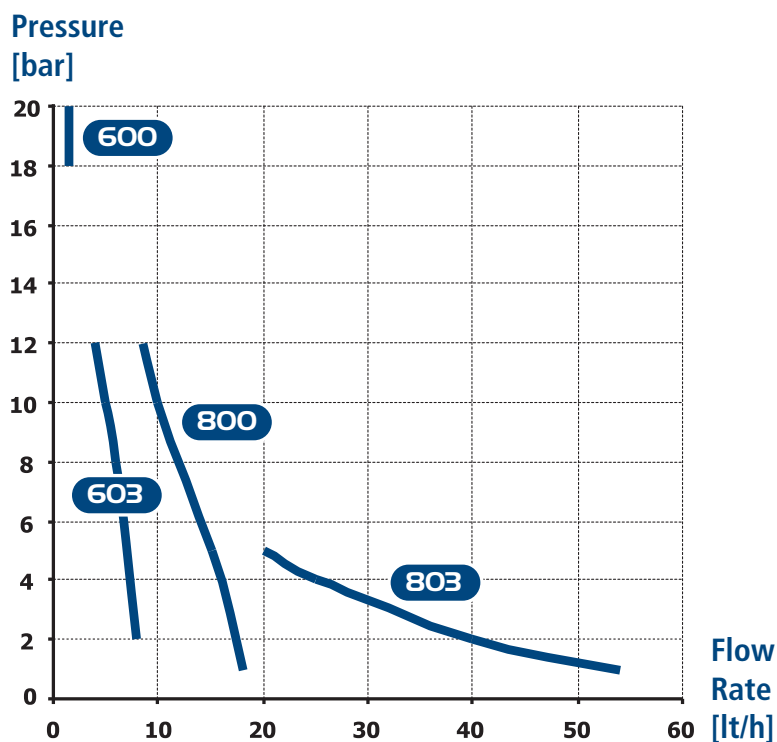
		Seals
Code	Materials	
0	FPM	
1	EPDM	

		Options
Code	Description	
000	Standard	

AKL | 603 | N | H | H | 0 | 000

Technical **Features** - Flow Rate and Dimensional **Drawings**

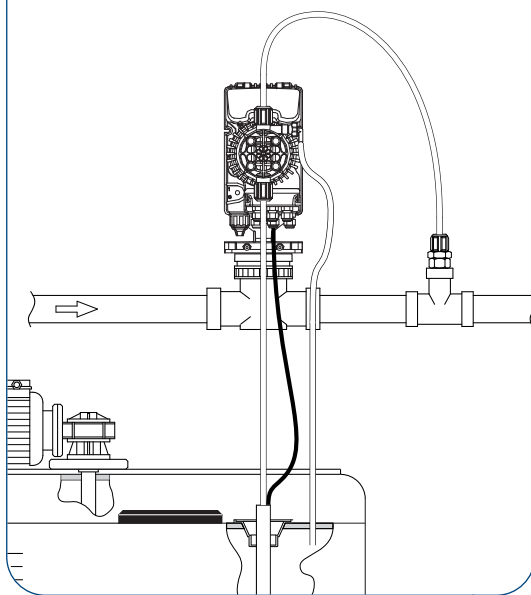
- Casing made of PP reinforced with glass fibre
- IP 65 rated
- PTFE diaphragm
- Level control input
- Priming valve
- Complete standard installation kit composed by: foot filter and injection valve, PVC suction tube, PE delivery tube and fixing bracket



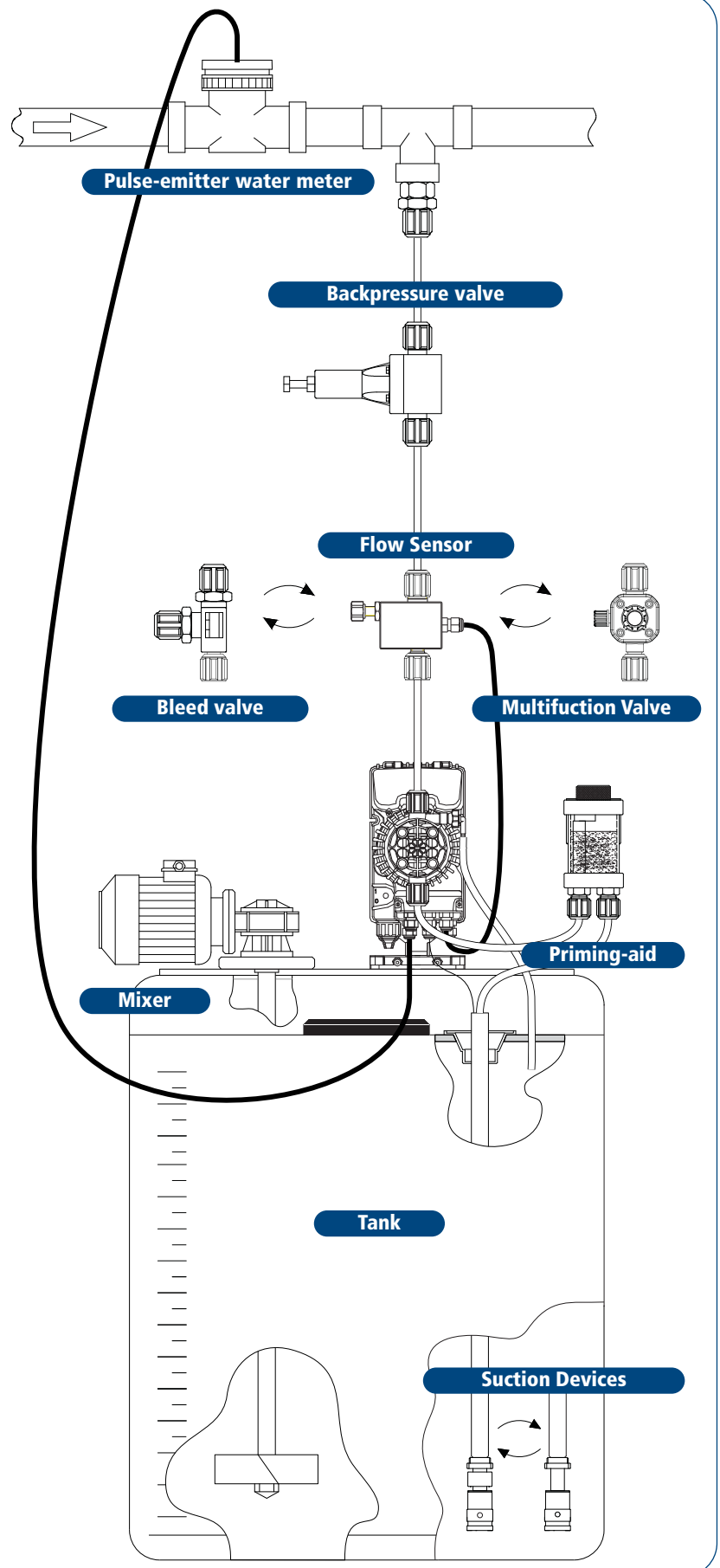
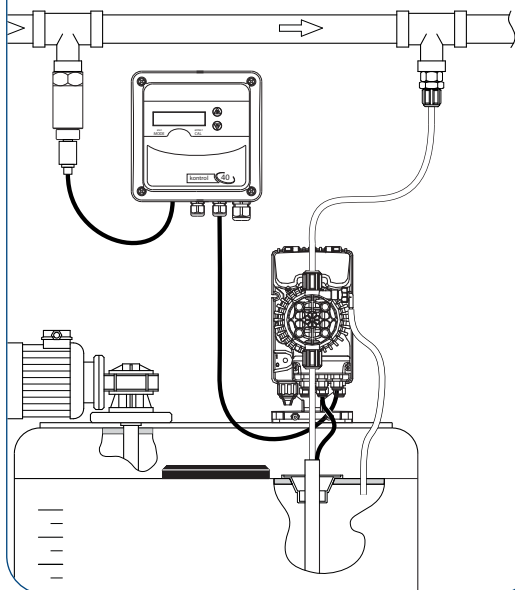
Model	A (Height) [mm]	B (Width) [mm]	C (Depth) [mm]	D (Max Height) [mm]
600	231	119	145	257
603				
800				
803			149	

Typical *Installation*

On pulse-emitter water meter



On control instrument



Accessories Pulse-emitter water meter

Threaded water meters

The meters which we offer have high precision and sensitivity according to CEE standards

Their plastic and metallic parts, in particular those in contact with water, comply with current regulations and are subject to extensive checks and controls.

CB Series

4 pulse/lt

1 pulse/lt

- Single jet water meter
- Wet dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 2" (50 mm)

HB Series

4 pulse/lt

1 pulse/lt

- Single jet water meter
- Wet dial
- Roller reading
- Hot water up to 90 °C
- Max. connection 1 1/2" (40 mm)



CN Series

4 pulse/lt

1 pulse/lt

- Single jet water meter
- Wet dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 1 1/2" (40 mm)
- Mounting for solenoid dosing pump

RBF Series

- Single jet water meter
- Wet dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 1 1/2" (40 mm)

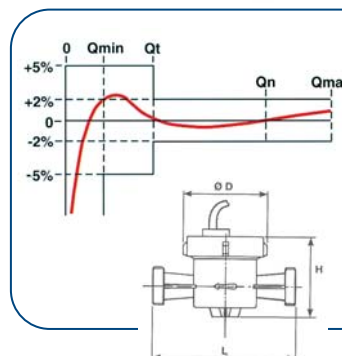
DR Series

1 pulse/lt

- Single jet water meter
- Dry dial
- Roller reading
- Cold water up to 30 °C
- Max. connection 2" (50 mm)



Size	DN Inch	13	20	25	30	40	50
		1/2	3/4	1	1 1/4	1 1/2	2
Max flow (short period)	Qmax m³/lt	3	5	7	10	20	30
Nominal flow	Qn m³/lt	1.5	2.5	3.5	5	10	15
Min flow (accuracy ±5%)	Qmin m³/lt	30	500	70	100	200	450
Transition flow (accuracy ±2%)	Qt m³/lt	120	200	280	400	800	3000
Maximum reading	m³	10000	10000	10000	10000	10000	10000
Length without adapters	L mm	110	130	160	160	200	300
Length with thread	mm	190	228	260	280	340	472
Width	D1 mm	80	80	110	100	110	152
Height	H mm	90	90	120	120	130	200

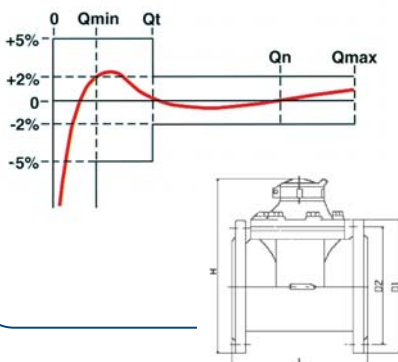


Flanged Water Meters (Dry-dial magnetic coupling)

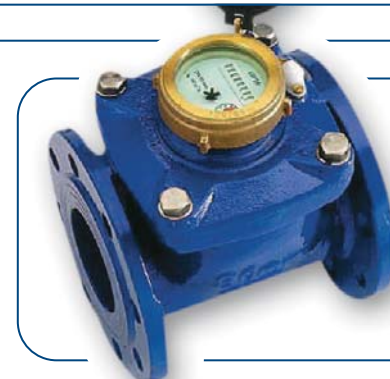
Woltmann Series

Water meters, with reading, for cold water up to 30 °C.

It/pulse	WE 25	WE 50	WE 100	WE 250	WE 500	WE 1000
25	25	50	100	250	500	1000
50	50	50	50	-	-	-
65	65	65	65	-	-	-
80	80	80	80	-	-	-
100	100	100	-	-	-	-
-	-	-	-	150	150	150



Size	DN Inch	50	65	80	100	150
		2	2 1/2	3	4	6
Max flow (short period)	Qmax m³/lt	30	50	80	120	300
Flow rate with 0.1 bar loss charge	m³/lt	20	55	65	120	300
Nominal flow	Qn m³/lt	15	25	40	60	150
Min flow (accuracy ±5%)	Qmin m³/lt	1.2	3	3.2	4.8	12
Transition flow (accuracy ±2%)	Qt m³/lt	4.5	7.5	12	18	45
Maximum reading	m³	10000	10000	10000	10000	10000
Length	L mm	200	200	200	250	300
Width	D1 mm	165	185	200	220	285
Height	H mm	247	258	265	272	302
Flange holes	Ø mm	18	18	18	18	22
	N°	4	4	4	8	8
	D2 mm	125	145	160	180	240



Accessories Tanks • Mixers • Suction devices ...

Tanks in polyethylene

Our tanks are designed to assemble dosing systems with mixers and motor driven pumps or solenoid dosing pumps. All are made from food-safe polyethylene, resistant to almost all chemicals normally encountered.



Models and Technical Features			
Tank Code	Capacity (Lt)	Height (cm)	Diameter (cm)
SER 50	50	45,5	40
SER 100	100	64	46
SER 250	250	87	59,5
SER 300	300	95	67
SER 500	500	118,5	76
SER 1000	1000	122	108,5

Reinforcement

Tank reinforcement made of PVC (20 mm thick) to be used to install mixers and motor driven pumps or solenoid dosing pumps on tanks SER series.



Models	
Code	Tank
SML 100	SER 100
SML 250	SER 250
SML 300	SER 300
SML 500	SER 500
SML 1000	SER 1000

Mixers

Electric mixers three-phase (single-phase on request) and flange attachment. For tanks SER series.

Slow mixers
[70 rpm]



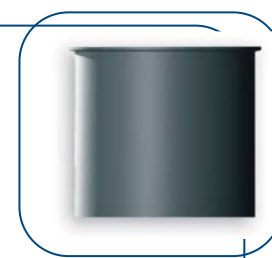
Fast mixers
[1400 rpm]



Technical Features					
Body	Shaft length (mm)	Propeller diameter (mm)		Motor (kW)	SER Model
		Slow (70 rpm)	Fast (1400 rpm)		
PVC AISI 316	600	150	90	0,13	100
	800				250
	900	220			300
	1100				500/1000

Uncovered Tanks in Polyethylene

Designed to contain our tanks SER series.



Models and Technical Features				
Code	Tank Model	Capacity (Lt)	Height (cm)	Diameter (cm)
T150	SER 100	150	75,5	51
T300	SER 250	300	87,5	67
T400	SER 300	400	99	72
T800	SER 500	800	120	90
T1500	SER 1000	1500	134	122

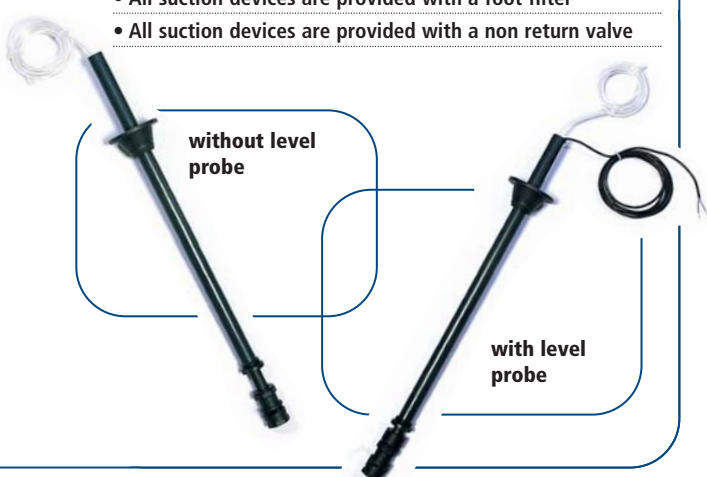
Suction Devices

A suction filter is provided to protect pump valves from debris or particles that could obstruct the pump valve.

Suction devices can also be supplied with integral level controls. These allow the use of alarms, and protect against the system running dry.

- Easy to install
- Standard FPM seals (EPDM upon request)
- Made of PCV with clear PVC suction tubing
- All suction devices are provided with a foot filter
- All suction devices are provided with a non return valve

Technical Features			
Dimensions (mm) Length x Ø	Tube 4x6	Tube 8x12	Tank suitability
450 x 22	●		SER 50
450 x 34		●	
650 x 22	●		SER 100
650 x 34		●	
900 x 22	●		SER 250
900 x 34		●	
1050 x 22	●		SER 300
1050 x 34		●	
1250 x 22	●		SER 500/1000
1250 x 34		●	



Accessories Valves • Sensors • Priming-aid

HY Series adjustables valves

Material	PVC
Max flow rate	50 lt/h
Max pressure	10 bar
Connections	1/2" g.m., tube 8x12, tube 4x6
Diaphragm	FPM (standard) or EPDM (upon request)
Max temperature of liquid	35 °C



HYC backpressure valves



HYM Multi valve



HYS Safety valves

Injection valves

Material	PVC
Max flow rate	50 lt/h
Connections IN	1/2" g.m., tube 8x12, tube 4x6
Connections OUT	1/2" g.m.
Max working pressure	10 bar
Seals	FPM (standard) or EPDM (upon request)
Max temperature of liquid	35 °C



Bleed valve

Gas inside the pump casing could compromise the correct functioning of the dosing pump.

The bleed valve is used to automatically eliminate any gas that has built up inside the pump casing. The bleed valve is fitted directly on the delivery side of the dosing pump.

Materials		Ø Connections IN/OUT [mm]
Valve body	Diaphragm	
PVC	FPM - PTFE	4/6 8/12
PVDF	FPM - PTFE	4/6 8/12



Technical Features
Max temperature of liquid 40° C

Multifunction valve



Multifunction valve acts as: a back pressure valve, an anti-siphoning valve, a safety valve, a priming valve, a delivery drain valve (for maintenance)

Multifunction valve is fitted directly on the delivery valve on the dosing pump.

Technical Features

Safety valve with pressure selection 6^(*) - 12 bar
Back pressure valve with pressure 1.5 bar
Max temperature of liquid 40°C

(*) 6 bar type, supplied with 8/12 tube connections

Materials		Ø Connections IN/OUT [mm]
Valve body	Diaphragm	
PVC	PTFE	4/6 ^(*)
PVDF		

Backpressure valves ST Series adjustables

The precision of electronic pumps is affected by fluctuations in pressure at the intake, especially between 0 and 1 bar.

The backpressure valve keeps a constant pressure inside the pipeline during the dosage. In addition, dosing with a backpressure avoids siphoning from occurring in the pump.



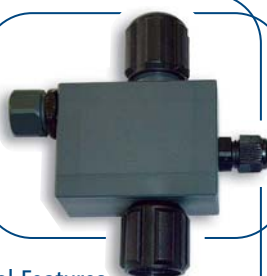
Technical Features

Max pressure 10 bar
Min pressure 0.5 bar
Max flow rate 500 lt/h

Materials			Ø Connections IN/OUT [mm]
Valve body	Diaphragm	Seals	
PVC	PTFE	FPM EPDM	4/6 - 8/12
PVDF	PTFE	FPM	3/4" DIN8063

Flow Sensor

In order to assess the actual dosing phase, the flow sensor can be used to detect the pump's pulsations during the delivery phase: the sensor can also be used to determine the actual dosing flow rate. This flow sensor is fitted directly on the delivery valve on the dosing pump.



Materials	
Body	Seals
PVC	FPM

Technical Features

Max pressure 10 bar
Max temperature of liquid 40° C

Priming-aid

Priming problems may occur on dosing pumps with a low flow rate, and also in case of excessive suction heights in relation to the pump's capacity. This accessory is able to resolve these problems. Where possible it is fitted at the same height as the pump's intake valve and a short distance from it.



Technical Features

Temperatura max. del liquido 40° C

Materials		Ø Connections IN/OUT [mm]	Model
Body	Seals		
PVC	FPM	4/6 - 8/12	300 ml



seko

SEKO Asia Pacific **SINGAPORE** • SEKO China **CHINA** • SEKO do Brasil **BRAZIL** • SEKO Dosing Systems **USA** • SEKO Deutschland **GERMANY** • SEKO France **FRANCE** • SEKO Iberica **SPAIN** • SEKO Italia **ITALY** • OOO SEKO **RUSSIA** • SEKO Northern Europe **DENMARK** • SEKO SIETA **ROMANIA** • SEKO Southern Africa **SOUTH AFRICA** • SEKO UK **UNITED KINGDOM**

www.seko.com