

# teknaEVO

solenoid dosing pumps



# The **evolution** of solenoid dosing pumps

## Clever

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

- **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
- **Inventory Reduction**  
**Reduce spares stock holding**



Models  
**803**

flow rate from 20 to 60 lt/h



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

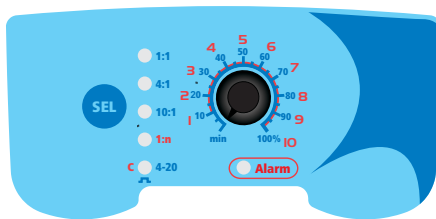


constant dosage

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

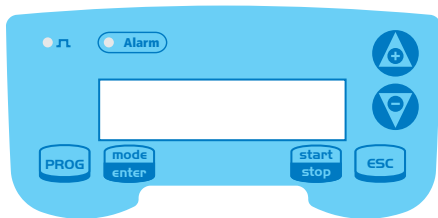
Analogue dosing pump with constant flow rate manually adjustable and timed dosage with T on-T off double regulation.

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



## Digital Version

### teknaEVO TPG



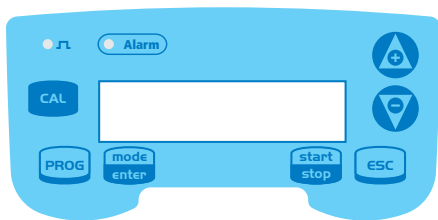
proportional dosage

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



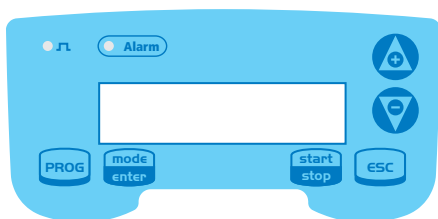
proportional dosage

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	
<b>AKL</b>	Analogue	Analogue dosing pump with constant flow rate manually adjustable	
<b>APG</b>		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)	
<b>ATL</b>		Analogue dosing pump with constant flow rate manually adjustable and timed dosage with T on-T off double regulation	
<b>TPG</b>	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)	
<b>TPR</b>		Digital dosing pump with pH/Redox control meter on board	
<b>TCK</b>		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]
<b>600</b>	20	2.5	120	0,35	4 / 6 suc. 4 / 7 dis.	12,0
	18	3		0,41		
<b>603</b>	12	4	160	0,42	4 / 6	12,2
	10	5		0,52		
	8	6		0,63		
	2	8		0,83		
<b>800</b>	12	7	320	0,36	4 / 6	23,9
	10	10		0,52		
	5	15		0,78		
	1	18		0,94		
<b>803</b>	5	20	300	1,11	8 / 12	22,2
	4	25		1,39		
	2	40		2,22		
	1	54		3		

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

					Pump head material
Code	Pump head	Connections	Balls	Diaphragm	
<b>H</b>	PVDF		Ceramic	PTFE	

		Accessories
Code		Materials
<b>P</b>		PVC
<b>H</b>		PVDF

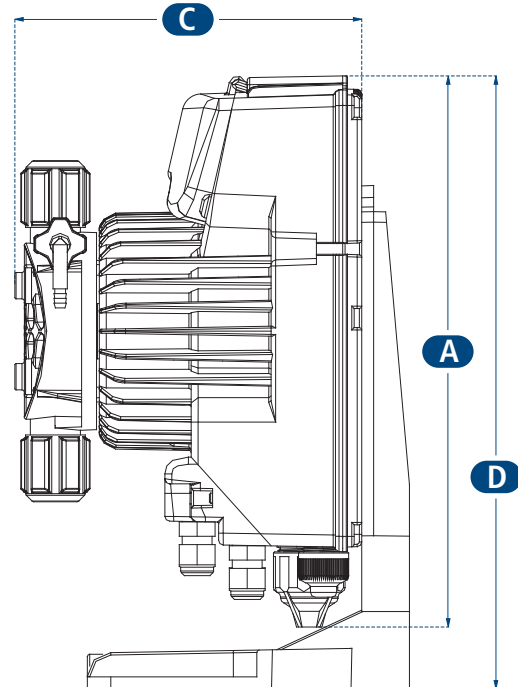
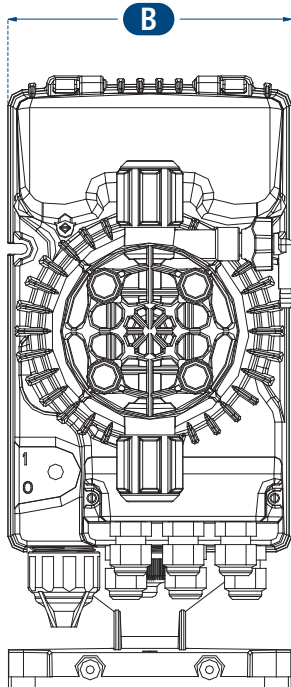
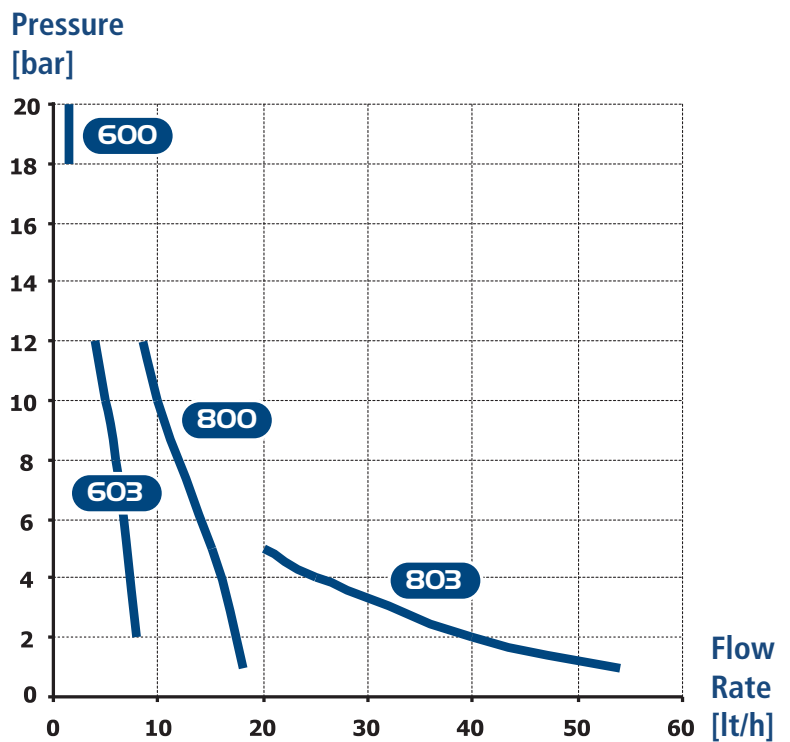
		Seals
Code		Materials
<b>0</b>		FPM
<b>1</b>		EPDM

		Options
Code		Description
<b>000</b>		Standard

**AKL | 603 | N | H | P | O | 000**

# Technical Features - Flow Rate and Dimensional Drawings

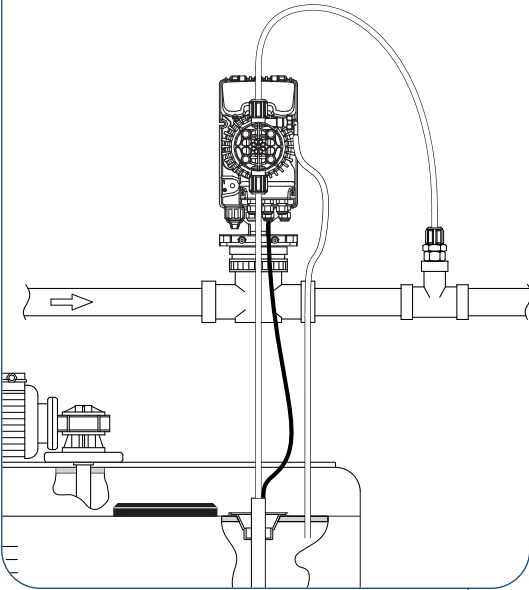
- Casing made of PP reinforced with glass fibre
- IP 65 rated
- PTFE diaphragm
- Level control input
- Priming valve
- Complete standard installation kit composed by: PVC foot filter and injection valve, PVC suction tube, PE delivery tube and fixing bracket



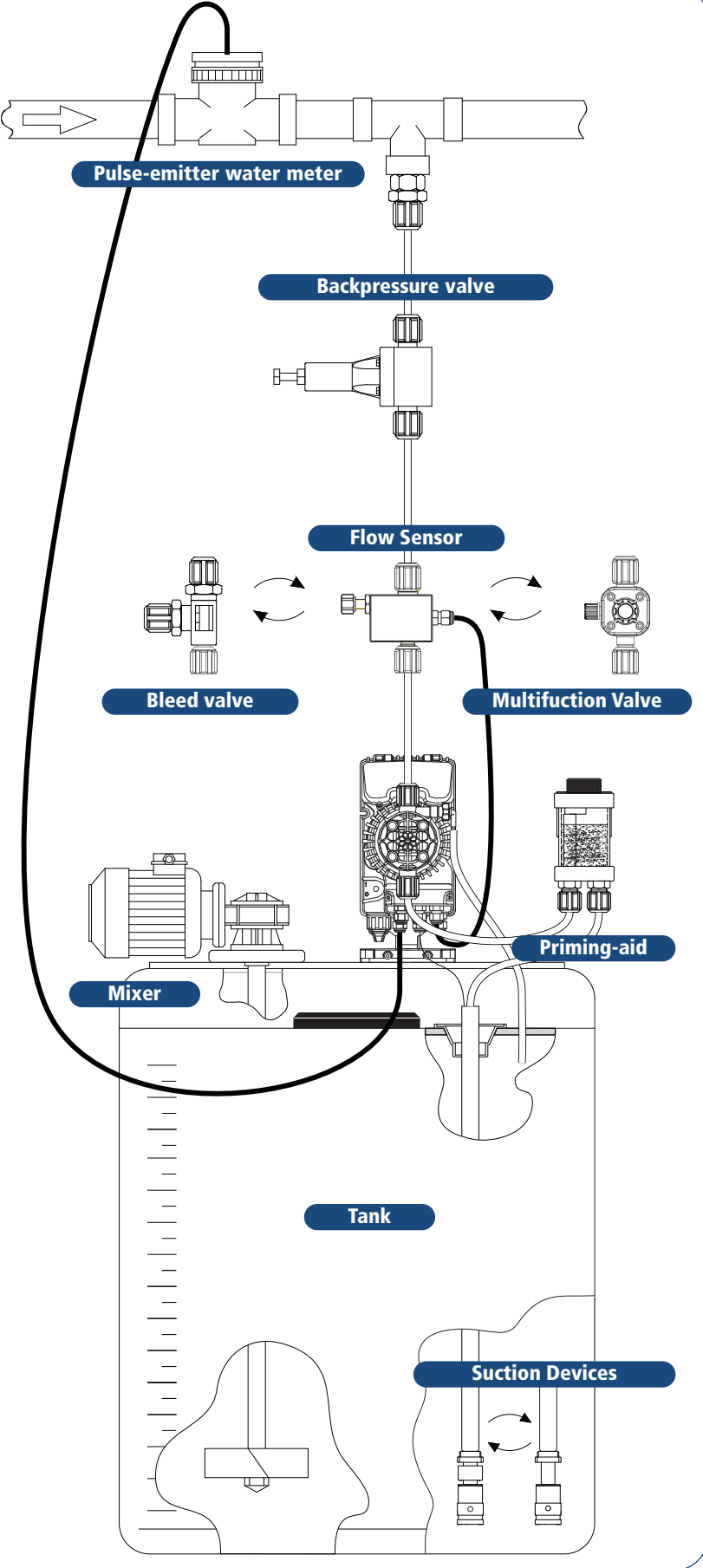
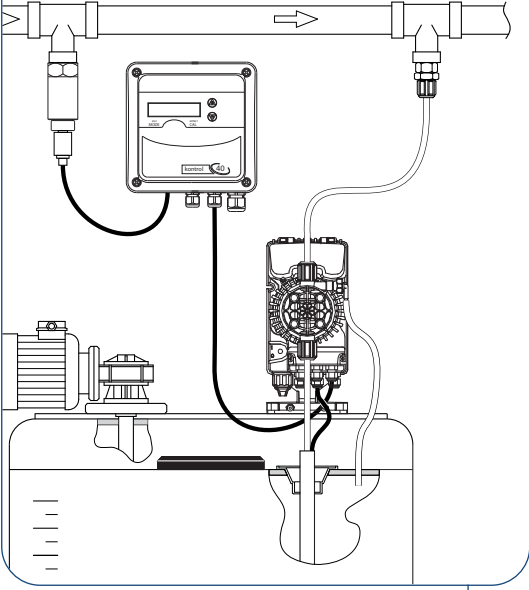
Model	A (Height) [mm]	B (Width) [mm]	C (Depth) [mm]	D (Max Height) [mm]
600	231	119	145	257
603			145	
800			145	
803			149	

# 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

**CB4**  
4 pulse/lt

**CB1**  
1 pulse/lt

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

**HB**  
Series

**HB4**  
4 pulse/lt

**HB1**  
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

**CN4**  
4 pulse/lt

**CN1**  
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)

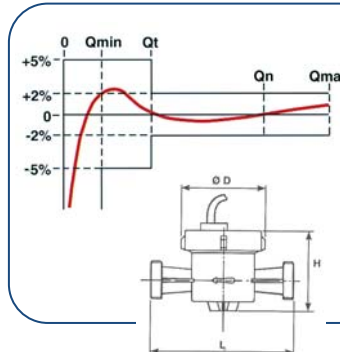
**DR**  
Series

**DR1**  
1 pulse/lt

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



Size	DN	13	20	25	30	40	50	
	Inch	1/2	3/4	1	1 1/4	1 1/2	2	
hydraulic data	Max flow (short period)	Qmax m <sup>3</sup> /lt	3	5	7	10	20	30
	Nominal flow	Qn m <sup>3</sup> /lt	1.5	2.5	3.5	5	10	15
	Min flow (accuracy ±5%)	Qmin m <sup>3</sup> /lt	30	500	70	100	200	450
	Transition flow (accuracy ±2%)	Qt m <sup>3</sup> /lt	120	200	280	400	800	3000
	Maximum reading	m <sup>3</sup>	10000	10000	10000	10000	10000	10000
dimension data	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

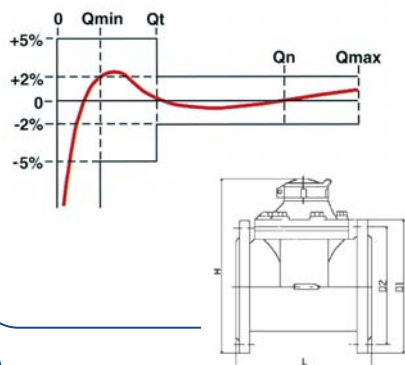


## Flanged Water Meters (Dry-dial magnetic coupling)

**Woltmann**  
Series

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

	WE 25	WE 50	WE 100	WE 250	WE 500	WE 1000
lt/pulse	25	50	100	250	500	1000
Connections DN (mm)	50	50	50	-	-	-
	65	65	65	-	-	-
	80	80	80	-	-	-
	100	100	-	-	-	-
	-	-	-	150	150	150



Size	DN	50	65	80	100	150	
	Inch	2	2 1/2	3	4	6	
hydraulic data	Max flow (short period)	Qmax m <sup>3</sup> /lt	30	50	80	120	300
	Flow rate with 0.1 bar loss charge	m <sup>3</sup> /lt	20	55	65	120	300
	Nominal flow	Qn m <sup>3</sup> /lt	15	25	40	60	150
	Min flow (accuracy ±5%)	Qmin m <sup>3</sup> /lt	1.2	3	3.2	4.8	12
	Transition flow (accuracy ±2%)	Qt m <sup>3</sup> /lt	4.5	7.5	12	18	45
Maximum reading	m <sup>3</sup>	10000	10000	10000	10000	10000	
dimension data	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	

## 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.



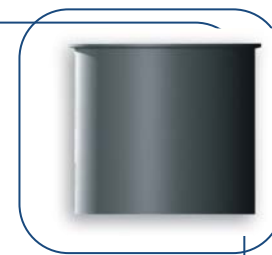
Slow mixers [70 rpm]

Fast mixers [1400 rpm]

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	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

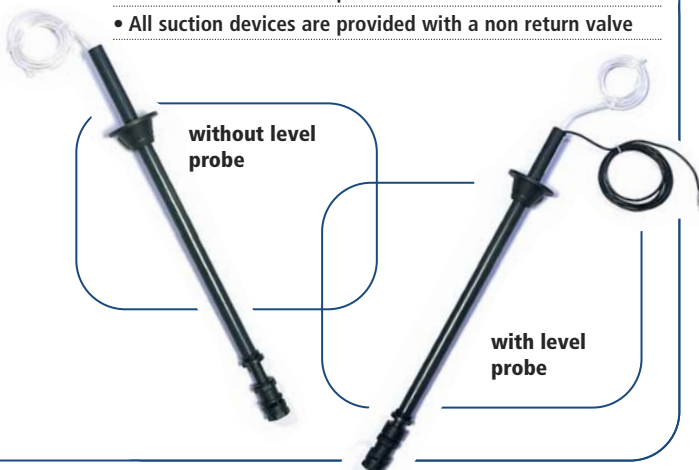
## Suction Devices

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		●	



without level probe

with level probe

# Accessories Valves • Sensors • Priming-aid

## HY Series adjustables valves

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



HYC backpressure valves



HYM Multi valve



HYS Safety valves

## Injection valves

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

<b>Safety valve with</b>	pressure selection 6 <sup>(*)</sup> - 12 bar
<b>Back pressure valve with</b>	pressure 1.5 bar
<b>Max temperature of liquid</b>	40° C

<sup>(\*)</sup> 6 bar type, supplied with 8/12 tube connections

Materials		Ø Connections IN/OUT [mm]
Valve body	Diaphragm	
PVC	PTFE	4/6 <sup>(*)</sup>
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.



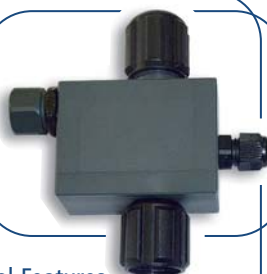
### Technical Features

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

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

<b>Max pressure</b>	10 bar
<b>Max temperature of liquid</b>	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



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