



Asortiman vsebuje membranske dozirne črpalke z elektronskim upravljanjem (proporcionalne ali konstantne), dozirne črpalke za z regulatorji pH in Redox, rezervoarje za shranjevanje dozirnih sredstev, s pripravljenimi priključki za dozirne črpalke, pretočne števce z dajalnikom impulzov za upravljanje delovanja proporcionalnih dozirnih črpalok.

Asortiman dodatne opreme sestavljajo magnetna nivojska stikala, elektronski programatorji, sonde pH in Redox z ustreznimi nosilci sond. Vse dozirne črpalke so izdobljene kompletno s cevmi in priključki za vsis in vbrizg, filtrom, injektorskim priključkom, vijaki za zidno montažo ali montažo na rezervoar. Na prozorni upravljalni plošči, ki je zaščitena z neprodušnim plastičnim pokrovom, se nahajajo glavno stikalo, zaščitna varovalka, signalne lučke delovanja in minimalnega nivoja, potenciometer za uravnavanje pretoka, priključek za nivojsko stikalo in dajalnik impulzov (samo za črpalke Z), selektor delovanja - proporcionalno ali konstantno (samo za črpalke serije Z). Dozirne črpalke so primerne za doziranje vseh dozirnih sredstev Nobel ; za doziranje drugačnih sredstev, se zaradi ugotovitve komplementarnosti, posvetujte s tehnično službo.

*The range includes membrane dosing pump with electronic control (proportional or constant adjustable flow), dosing pump with pH and Redox monitor, pulse sender water meters to control proportional pumps, storage tanks. The latest advanced technology of these new dosing pumps allows high reliability and performances. The digital models (series TPZ, TPR and TCK) are complete with built-in electronic control panel, with bright display in 6 different languages to be selected (english, italian, french, german, spanish, turkish). A password to protect the programmed data can also be entered. All programming and setting are made by mean of the digital keyboard. Besides, these models are provided with alarm relay for remote alarm report and input connections for remote inhibition of pump working. Models AKL with analogic adjustment, are the simplest and more reliable solution for constant flow dosage. Construction characteristics The housing, IP65 protection, is made in fiberglass reinforced polypropilene with screw-closing colourless cover; there is not any elastomer in touch with liquid "EFT" (Elastomer Free Technology). Membranes and seats, made in PTFE, allow to dose all kind of Nobel chemicals for water treatment; for different chemicals apply Nobel technical dept to check compatibility. The pumps can be mounted on a wall or on horizontal surface, as well as on storage tanks, by a proper bearing supplied with pump. A special connector allows to modify electrical connection without any disconnection of the pump from the plant. All pumps are supplied equipped with fittings and tubings of suction and forcing, injection fitting, screws to fix the pump on a wall or on the storage tank. Flow sensor, deaeration valves, magnetic level switches, electronic timers, pH and Redox probes and their probe-holders are available as accessories.*

### Dozirne črpalke serije AKL

Dozirne črpalke z reguliranim konstantnim pretokom; na toplo barvani kovinski rezervoar; regulacija pretoka od 0÷100 %. Pripravljeno za magnetno nivojsko stikalo.

### Dozirne črpalke serije TPZ

Dozirne črpalke z reguliranim proporcionalnim pretokom, upravljana preko pretočnega števca z dajalnikom impulzov; toplo barvani kovinski rezervoar. Pripravljeno za magnetno nivojsko stikalo. Črpalke lahko preklopimo tudi na konstantno delovanje ali na časovno upravljanje. Vse funkcije so nastavljive preko digitalne tipkovnice in večjezičnega displeja. Pripravljeno za magnetno nivojsko stikalo in senzor pretoka.

### Dozirne črpalke serije TPR

Dozirne črpalke z vgrajenim inštrumentom za odčitavanje in kontrolo pH z nastavljivim "set point", za avtomatično uravnavanje dozirne črpalke. Omogočajo avtomatično uravnavanje pH vrednosti tekočine preko doziranja ustreznega kislega ali bazičnega dozirnega sredstva. Vse funkcije so nastavljive preko digitalne tipkovnice in večjezičnega displeja. Pripravljeno za magnetno nivojsko stikalo in senzor pretoka. Izmerjena vrednost (Ph ali mV) je prikazana na izhodu.

### Dozirne črpalke serije TCK

Dozirne črpalke z reguliranjem konstantnega časovnega pretoka z možnostjo nastavitve desetih neodvisnih tedenskih programov. Možno je tudi regulirati želeni pretok in trajanje v fazi doziranja, interval med dvema fazama doziranja in morebitno zakasnitev pričetka doziranja. Vse funkcije so nastavljive preko digitalne tipkovnice in večjezičnega displeja. Pripravljeno za magnetno nivojsko stikalo in senzor pretoka.

### Pretočni števci z dajalnikom impulzov serije CD

Turbinski pretočni števci za hladno vodo, s suhim prikazovalnikom ; kompletno opremljeni z dajalnikom impulzov (4 impulzi/liter) in direktnim odčitavanjem pretočenih m<sup>3</sup> vode. Medeninasto ohišje je opremljeno z navojnimi priključki (1/2" ÷ 2").

### Pretočni števci z dajalnikom impulzov serije CW

Pretočni števci za mrzlo vodo tip Woltman, s suhim prikazovalnikom ; kompletno opremljeni z dajalnikom impulzov in direktnim odčitavanjem pretočenih m<sup>3</sup> vode. Medeninasto ohišje je opremljeno s flanžnimi priključki (DN065 ÷ DN200).

### Zbirni rezervoarji serije SL

Zbirni plastični rezervoarji iz polietilena, odporne na udarce, različnih volumnov, s pripravljenimi priključki za pritrditev dozirnih črpal (od 50 do 1000 litrov).

### Dodatna oprema :

**SFL** : senzor pretokov za preverjanje učinkovitega pretoka dozirnega sredstva. Samo za dozirne črpalke z digitalno regulacijo (TPZ, TPR, TCK).

**PDT** : tedenski časovni elektronski programator za dozirne črpalke (serije AKL in TPZ).

**LEV 4 :** magnetno nivojsko stikalo, ki izključi delovanje dozirne črpalke ob pomanjkanju dozirnega sredstva, ali aktivira daljinski alarm.

**E-RXC :** sonda za merjenje redox potenciala (za odčitavanje rezidualnega klora); izdelana iz stekla/gel, ø 12 mm, max 6 bar, cevjo 6m in priključkom BNC.

**E-PHC :** sonda za mejenja pH; izdelana iz stekla/gel, ø 12 mm, max 6 bar, cevjo 6m in priključkom BNC.

**PS-IM :** nosilec sonde ø 12 mm, l=400mm

**PS-TB :** nosilec sonde, priključek 1/2", za sond ø 12 mm.

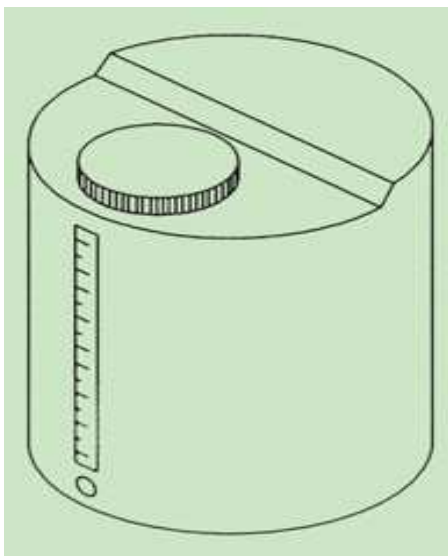
**PS-DF :** nosilec sonde, narejen iz polipropilena/AS, 1/2". Za 3 kom. sond pH ali Rx ø 12 mm.

		<b>DOZIRNE ČRPALKE</b>															
		<b>DOSING PUMPS</b>															
<b>model/model</b>		<b>500</b>				<b>603</b>				<b>800</b>				<b>803</b>			
<b>max pretok/flow max</b>	l/h	0,4	0,8	1,2	1,5	4	5	6	8	7	10	15	18	20	25	40	54
<b>protitlak/backpressure</b>	bar	20	16	10	6	12	10	8	2	12	10	5	1	5	4	2	1
<b>max frekvenca/max frequency</b>	imp/m	120				160				300				300			
<b>priključek injektorja</b>	ø	3/8" – 1/2"												1/2"			
<b>teža/weight</b>	Kg	2								3							
<b>dimenzije/dimensions</b>	mm	120x45x230												120x150x230			
<b>tok povp./max/current avv./peak</b>	VA	13/90								24/90							
<b>delovna temperatura/working temperature</b>	°C	+ 5 °C ... + 40 °C															
<b>električno napajanje/power supply</b>	V/H z	110-230 / 50-60															
<b>max viskoznost sredstva/max viscosity liquid</b>	cps	40															
<b>stopnja zaščite/protection</b>	IP	65															

		ŠTEVCI IMPULZOV / PULSE SENDER WATER METER											
modeli/models		CD 403	CD 405	CD 407	CD 410	CD 420	CD 430	CW 060	CW 080	CW 100	CW 125	CW 150	CW 200
Priključki/ connections		1/2 "	3/4"	1"	1 1/4"	1/2"	2"	DN 065	DN 080	DN 100	DN 125	DN 150	DN 200
nominalni pretok/ normal flow	m <sup>3</sup> /h	1,5	2,5	3,5	6	10	15	25	40	60	100	150	250
min. pretok/ min. flow	m <sup>3</sup> /h	0,06	0,1	0,14	0,24	0,4	1,2	2	3,2	4,8	8	12	20
frekvenca impulzov/ pulses freq.	imp / l	4						0,01				0,001	
teža/ weight	Kg	1,5	2,0	3,0	3,0	5,0	5,0	13,5	14,5	18,0	22,0	32,0	46,0
dimenzije/ dimensions	mm	110	130	260	260	300	300	200	225	250	250	300	350
		x 80	x 80	x 130	x 130	x 170	x 190	x 150	x 170	x 180	x 190	x 170	x 200

P max = 16 bar (1600 kPa)

t max = 30°C (HT = posebni modeli s t max = 90°C ; *special models up to 90°C also available*)



		REZERVOAR / STORAGE TANKS						
modeli / models		SL50	SL100	SL150	SL250	SL300	SL500	SL1000
kapaciteta / capacity	l	50	100	150	250	300	500	1000
dimenzije / dimensions	mm	400x460	460x640	480x860	600x870	670x950	760x1200	1100x1230
teža / weight	kg	3	5	8	9	12	18	25



AKL

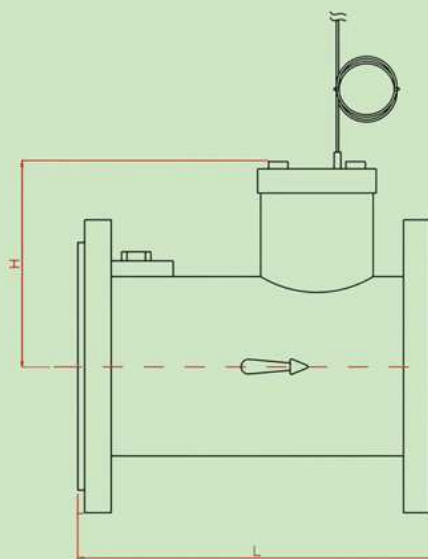
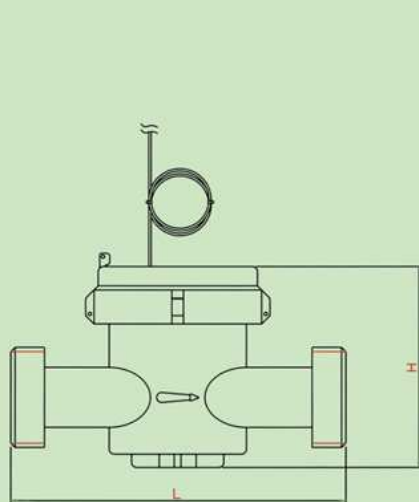
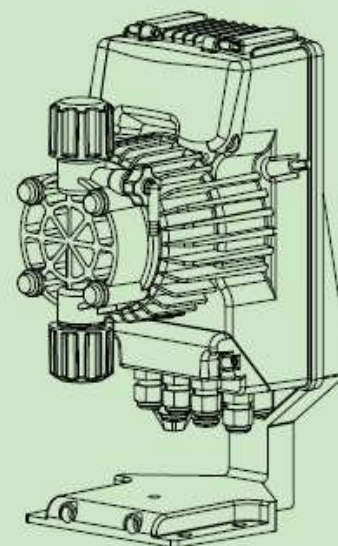


TPR



TPZ - TCK

- AKL Črpalka s konstantnim pretokom**  
- Analogna regulacija s potenciometrom
- TPZ Črpalka s proporcionalnim pretokom**  
- Digitalna regulacija  
- Avtomatika s števcem impulzov  
- 0-4 / 20 mA  
- Delovanje s konstantnim pretokom
- TPR Črpalka z variabilnim pretokom**  
- Vgrajena naprava Ph/Redox  
- Digitalna regulacija  
- Delovanje s konstantnim pretokom
- TCK Črpalka s konstantnim pretokom in časovnim vpravljanjem**  
- Vključen časovni upravljalnik  
- Digitalna regulacija  
- Delovanje s konstantnim pretokom
- AKL Črpalka s konstantnim pretokom**  
- Analogično upravljanje s potenciometrom
- TPZ Črpalka s proporcionalnim pretokom**  
- Digitalno upravljanje  
- Upravljanje z dajalnikom impulzov  
- 0-4 / 20 mA  
- Pomožno delovanje na konstantnem pretoku
- TPR Črpalka z variabilnim pretokom**  
- Vgrajena pH/Redox naprava  
- Digitalno upravljanje  
- Pomožno delovanje na konstantnem pretoku
- TCK Črpalka s konstantnim pretokom in časovnim upravljanjem**  
- Vgrajen timer  
- Digitalno upravljanje  
- Pomožno delovanje na konstantnem pretoku



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### **Dosing pump serie AKL**

*Adjustable constant flow pumps, analogical adjustment of flow (1÷ 100 %). Pre-arranged for level switch.*

### **Dosing pump serie TPZ**

*Adjustable proportional flow pumps controlled by a pulse sender water meter or by current input 0/4÷20 mA; the pump can also work as constant flow or time controlled modes. All digital selection and settings are made by a push-button panel and digit display. Prearranged for level switch and flow sensors.*

### **Dosing pump serie TPR**

*Dosing pump with a built-in pH or Redox control instrument, with adjustable set-point, for automatic control of the pump. The working of pH or Redox control can be selected directly on the pump. Whether connected to pH probe (E-PHC) they allow to control automatically the pH of a solution by dosing an acid or alkaline chemical. Wheter connected to Redox probe (E-RXC), the most common application is to control automatically the dosing of a chemical (sodium hypochlorite, usually) according to a preset value of chlorine residual. All digital selection and setting are made by a push-button panel and digit display. Pre-arranged for level switch and flow sensors. The measured value (pH or mV) is reported on a proportional current output.*

## Dosing pump serie TCK

*Constant flow pumps time controlled. It is allowable to schedule up to 10 different weekly programmes of dosage; besides it is also possible to set the volume and duration of dosing phase, interval between two following phases and delay if required. All digital selection and settings are made by a push-button panel and digit display. Pre-arranged for level switch and flow sensor.*

## Pulse sender water meter - serie CD

*Multiple jet turbine water meter, for cold water with dry dial, with direct visualization of m<sup>3</sup> of water; complete with pulse sender head (4 pulses/liter). Brass housing with thread connections (1/2"÷2").*

## Pulse sender water meter - CW

*Woltmann type water meter for cold water, with dry-dial, direct visualization of m<sup>3</sup> of water; complete with pulse sender head. Castiron housing with flange connections (DN65-DN200).*

## Storage tanks serie SL

*Storage tanks made in shock-resistant polyethylene, graduated, with screw cover; they are suitable to hold dosing pumps by mean of the proper bearing supplied with pumps.*

## Accessories

**SFL:** *flow sensors to check the dosage flow as actual. Only for digital models (TPZ, TPR, TCK)*

**PDT:** *electronic weekly timer for dosing pumps; it is supplied preassembled and interconnected with dosing pump.*

**LEV4:** *magnetic level switch to stop the pump when tank is empty or for remote alarm.*

**E-RXC:** *redox probe, body in epoxy/gel ø 12 mm, P max 6 bar, complete with 6 m cable, BNC connection.*

**E-PHC:** *pH probe, body in epoxy/gel ø 12 mm, Pmax 6 bar, complete with 6 m cable, BNC connection.*

**PS-IM:** *probe-holder (immersion) for probes ø 12 mm, l=400 mm.*

**PS-TB:** *probe-holder in polypropilene 1/2", for pipes, for probes ø 12 mm.*