

Measure and Control technologies

Solenoid Driven Dosing pumps

Motor Driven Metering pumps

Peristaltic dispensers

Sensors and Electrodes

Monitor Control Panels

Accessories



MEASURING AND CONTROL

MEASURING PARAMETERS: Free (residual) and Total chlorine; pH, RX (ORP); Conductivity EC (μS); Hydrogen Peroxide; Bromine; Ozone; Chlorine Dioxide; Absence of Chlorine.

TOUCH series



TOUCH series are work-in progress controllers whose functions make it the most versatile controller on the market. TOUCH series can be considered a Central management unit for BMS (Building management system) and Domotic.



- Touch screen controllers with graphic display;
- Possibility to expand relay outputs;
- Auxiliary outputs for remote equipment; Sensor cleaning;
- Real time clock driving Aux and Start-up/Stop operations;
- mA outputs, adjustable settings and galvanic isolation;
- Universal power supply 100÷250 Vac (on request 12Vdc);
- ON-OFF and Timed pulses (PWM) modes; PH priority; Max dosing time safety function; Over dosage; Hysteresis; Delay; Start up delay; Alarms; Level control; Proximity switch functions; Basic/Expert menu;
- Manual / Automatic temperature, programmable settings;
- Graphic charts and data logger download;
- Standard Ethernet (LAN) connection, Modbus TCP;
- RS485 expansion board using FWT® software;
- USB port, download on Pen drive via FWT® software.

OPTIONS UPON REQUEST:

- ✓ **WI-FI** connection: remote control by smartphone or tablet;
- ✓ **GSM** external module for receiving sms unit status.

CTRL series



CTRL series is a compact system with single, dual and triple controller with various functions that make the unit extremely versatile keeping a high quality of performances and accuracy combined with an excellent price/quality ratio



- Large graphic display;
- mA outputs, adjustable settings and galvanic isolation;
- Universal power supply 100÷250 Vac (on request 12Vdc);
- ON-OFF and Timed pulses (PWM) modes; PH priority; Max dosing time safety function; Over dosage; Hysteresis; Delay; Start up delay; Alarms; Level control; Proximity switch functions; Basic/Expert menu;
- Manual / Automatic temperature, programmable settings;

FEATURES COMMON TO CTRL3; CTRL2/6; CTRL+

- Possibility to expand relay outputs;
- Auxiliary outputs driving remote equipment;
- Open chlorine cell automatic cleaning;
- Max dosing time safety function;
- Real time clock configurable to Start-up/Stop operations;

OPTIONS UPON REQUEST:

- ✓ **Ethernet (LAN)** connection, Modbus TCP;
- ✓ **RS485** expansion board using FWT® TOUCH software;
- ✓ **USB** port, download on Pen drive via FWT® software;
- ✓ **GSM** external module for receiving sms.

OTHER IMPORTANT FEATURES ENHANCING FWT CONTROLLER QUALITY

- PH measurements can be changed to RX just changing the parameter during programming and using RX electrode;
- Chlorine measurements features 4 chlorine ranges suitable for Membrane and Open type chlorine cell;
- PPM measurements suitable for Membrane type sensors for various ranges and measurements: Hydrogen Peroxide; Bromine; Chlorine Dioxide; Absence of Chlorine.

SOLENOID DRIVEN DOSING PUMPS

FWT offers three solenoid driven dosing pump series covering a wide range of performances.

MX series

Performance from 1,5 to 7 l/h; pressure from 4 to 15 bar



MX series main characteristics are:

- Stroke frequency adjustment;
- Wall mounting: includes a support bracket for easy quick mounting;
- Small dimension: for mounting into small cabinets and small environments;
- Excellent Price/Quality ratio;
- Ceramic ball check valves, PTFE diaphragm, Plastic PP housing IP65

FX series

Performance from 1,5 to 22 l/h; pressure from 2 to 20 bar



- FX features double controls: pulse frequency and stroke volume adjustment.
- FXS features single control: pulse frequency adjustment

FX series main characteristics are:

- Foot mounting for horizontal mounting (available wall mounting bracket);
- Excellent Price/Quality ratio;
- Ceramic ball check valves, PTFE diaphragm, Plastic PP housing IP65

VX series

Performance from 5 to 30, 50 and 80 l/h; pressure from 1 to 20 bar



VX series main characteristics are:

- Stroke frequency adjustment;
- High performances;
- Wall mounting; Die-cast aluminium housing IP65;
- Excellent Price/Quality ratio;
- Ceramic ball check valves, PTFE diaphragm, Plastic PP housing IP65

MODELS AND DOSING MODES

- | | | | |
|-------------------|-------------------------------------|----------------|---|
| ▪ C/A-C/AL | Constant / ON-OFF analog controls | ▪ MF/D | Multifunctions all the dosing modes in one |
| ▪ C/D | Constant / ON-OFF digital controls | ▪ CTRL3 | Dosing pump with pH or RX or Cl ₂ controller |
| ▪ P/D | Proportional to ext digital contact | ▪ CTRL2 | Dosing pump with pH-RX controller |
| ▪ CS/D | Proportional to ext mA signal | | |

OPERATING CONTROLS

STROKE FREQUENCY ADJUSTMENT

Two operating controls versions:

Analog with L.E.D. indicators



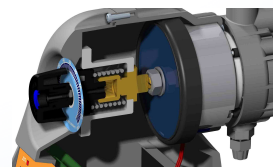
Digital with display, L.E.D.



PISTON STROKE LENGTH ADJUSTMENT

Two operating controls versions

Stroke length to adjust injected volume in addition to impulse frequency



Without stroke length adjustment, only with impulse frequency

MAIN COMMON FEATURES

Power supply: 230 Vac ($\pm 10\%$) / 1 phase / 50/60 Hz
 Reproducibility under standard conditions: 5%
 Plastic housing and support: PP reinforced, IP65
 Available: 110 Vac / 60 Hz; 12÷24 Vdc (limited range)
 Voltage working range: min.207 Vac ÷ Max 253 Vac

LIQUID ENDS

Wetted Parts	Standard config.	Extra Option
Pump Head / Fittings	PP	PVDF
Ball check valves	CERAMIC	LIP TYPE
Seal / o rings	FPM (Viton®)	EPDM
Diaphragm	PTFE	-----

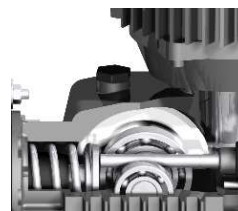
Each pump is provided with Accessories Kit comprising hoses, injection valve and foot valve.

MOTOR DRIVEN DOSING PUMPS

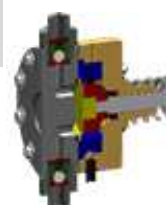
FWT offers four motor driven metering pump series covering a wide range of performances.

MAIN COMMON FEATURES FOR ALL MOTOR DRIVEN METERING PUMPS

- ⇒ Gearbox in cast aluminium protected with Epoxy paint;
- ⇒ Flow rate adjustment via stroke length from 0-100% whilst in operation or at rest;
- ⇒ Motor/gearbox are coupled by a flexible coupling thus increasing transmission life;
- ⇒ Standard power supply: 230/400 Vac 50 Hz / 275/480 Vac 60 Hz; 3 phase, +/-10%;
- ⇒ Standard motors are vertical mounting "TEFC", B14 type, ~ 1400 rpm;
- ⇒ Motors configuration: 0,18 kW • 0,25 kW • 0,37 kW • 0,55 kW • 0,75 kW
- ⇒ FWT offers a wide range of accessories and special configurations for a complete service



LIQUID ENDS			
WETTED PARTS	STANDARD CONFIGURATION		Option
	AA	CA / BA	SA
Pump head	AISI 316L	PP (CA) / PVC (BA)	PVDF
Piston	AISI 316L	CERAMIC	CERAMIC
Piston gaskets	NBR (or FPM or EPDM)	FPM (or EPDM)	FPM (or EPDM)
Ball check valve	AISI 316	CERAMIC	CERAMIC
Diaphragm	PTFE / NBR	PTFE / NBR	PTFE / NBR



MECHANICAL ACTUATED DIAPHRAGM METERING PUMPS

Mechanical diaphragm type motor driven metering pumps are suitable when:

- ✓ Zero leakage is essential
- ✓ Pumped liquid contains suspended solids particles

DS series

- Flow rates from 10 to 123 l/h
- Pressures from 14 to 2 bar
- Standard motor 0,18 kW
- Small dimensions



DM series

- Flow rates from 56 to 535 l/h
- Pressures from 12 to 2 bar
- Motor 0,25 and 0,37 kW
- High performances



PLUNGER TYPE METERING PUMPS

Piston type motor driven metering pumps are suitable when:

- ✓ High pressure dosing is required
- ✓ High flow rate dosing is required
- ✓ Dosing high viscosity liquids

PS series

- Flow rates from 6 to 190 l/h
- Pressures from 16 to 3,5 bar
- Standard motor 0,18 kW
- Small dimensions



PM series

- Flow rates from 14 to 1027 l/h
- Pressures from 25 to 6,5 bar
- Motors configuration
0,18÷0,25÷0,37÷0,55÷0,75 kW



PUMP ADJUSTMENT REMOTE CONTROL

- ✓ Inverter to control pump flow via remote control from external input signal 4÷20 mA
- ✓ Servomotors 4÷20 mA or 3÷15 psi for remote stroke length control
- ✓ Controller with timer to manage external contacts (eg. water meter) recommended for proportional dosing.

PERISTALTIC DISPENSERS

PERISTALTIC WITH CONTROLLERS: SIMPLE, RELIABLE, COST EFFECTIVE SYSTEMS FOR SMALL POOLS



CTRL POOL is a compact system, with **single** or **dual** controller and peristaltic dispenser all in one enclosure.

CTRL POOL: measuring parameters pH, RX;

- PH measurement can be changed to RX using RX electrode;
- Graphic display.

CTRL+ POOL: measuring parameters pH, RX, Chlorine, H₂O₂;

- PH measurement can be changed to RX using RX electrode
- 2 Auxiliary outputs controlled by timer to drive external equipment
- Graphic display; 2 of 4-20 mA outputs



CTRL2 POOL is a compact system, with **dual** controller and peristaltic dispensers all in one enclosure.

CTRL2 POOL: measuring parameters pH, RX;

- PH measurement can be changed to RX using RX electrode;
- Graphic display

CTRL2/6 POOL: pH-RX, pH-Chlorine, pH-H₂O₂, pH(or RX)- conductivity

- PH measurement can be changed to RX using RX electrode
- 3 Auxiliary outputs controlled by timer to drive external equipment
- Large Graphic display; 4 of 4-20 mA outputs



Available with peristaltic with FIXED and VARIABLE flow rate

VPER



l/h	Bar
1	3
4	3
12	1

VPER series: peristaltic dispensers with flow adjustment from 0 to 100%, enclosed into IP 65 reinforced polypropylene housing.

- Rollers with guides and fastener clips ensure hose firm in place
- Standard peristaltic hose: Santoprene (available on request Silicone)
- Power supply: 90 ÷ 260 Vca 50/60Hz (available 110-24Vac - 12-24Vdc)
- Level control on request
- Available removable power cable with connector

UPER



l/h	Bar
1,1	1
2,2	1

UPER series: fixed constant flow rate without housing for internal mounting into other equipment enclosures.

- Power supply 230Vac 50/60Hz; optional 24Vdc-ac; 240V; 110V 60Hz
- Available series UPER C: peristaltic with fixed flow rate into IP65 housing with performance 3 l/h-1 bar, 12 l/h-1 bar

VPER HF



l/h	Bar
100	1,5

UPER HF series: variable speed peristaltic dispenser for high flow rate Flow is controlled by adjusting motor speed by means of a knob.

- Rollers with guides and fastener clips ensure hose firm in place
- Santoprene hose (Silicon upon request)
- Power rating: 90 ÷ 260 Vca 50/60Hz

ALSO AVAILABLE FOLLOWING SERIES

VPER EC



Peristaltic dispensers automatically driven by integral CONDUCTIVITY meter (micro Siemens):

- Conductivity 500 ÷ 20.000 µS
- Sensor provided with unit.

TVPER



Peristaltic with integral TIMER (Digital or Analog settings); Recommended for dosing biological activators, odours control and hydrogen peroxide

Each peristaltic is provided with Accessories Kit comprising hoses, injection valve and foot valve.

ELECTRODES AND SENSORS

ELECTRODES PH and RX with cables



Plastic body electrodes satisfying most of the technical requirements featured in typical installations.

Electrodes are provided with coaxial cable from 1 to 5 meters.

Each electrode includes a single buffer solution storage container.

Glass body electrodes for those applications where special performances are required such as high temperatures (spas and hydro pools), electrolysis and sea water.

Electrodes do not feature a coaxial cable, which are available upon request. Connectors S8-P13,5



MEMBRANE SENSORS



Ion-selective potentiostatic sensors.

Measuring parameters: Free and Total chlorine; pH, RX (ORP); Hydrogen Peroxide; Bromine; Ozone; Absence of chlorine; Peracetic acid; Chlorites.

- CC1 Free chlorine Inorganic-Organic: NaOCl ; $\text{Ca}(\text{OCl})_2$; chlorine gas;
- CLST Totale chlorine; $\text{Ca}(\text{OCl})_2$; chlorine gas; ▪ CN1H Absence of chlorine;
- AS2N Free chlorine Inorganic, open system, 8 bar; ▪ BR1-N Bromine;
- CLS WP Hydrogen Peroxide; ▪ CLS OZ dissolved ozone.

OPEN CHLORINE CELLS



Amperometric free chlorine cell; "open" system; body in PMMA

- CLC2 free chlorine cell, pH-RX and temperature holder, in-coming flow adjustment;
- CLC3 free chlorine cell, pH or RX and temperature holder, provided of proximity switch, in-coming flow adjustment;
- CLC4 free chlorine cell, provided of proximity switch, in-coming flow adjustment

CONDUCTIVITY PROBES



Conductivity sensors for cooling towers, boilers and water treatment systems

- High resolution sensors in graphite stem body;
- Two electrodes system, with 4m cables length: Graphite electrodes sensor with body PTFE and AISI 316 electrodes sensor with body PVC.

OTHER SENSORS



Temperature; Proximity switch

- TEMPERATURE: stem or tap sensors PT100 or NTC;
- PROXIMITY SWITCH: inductive flow sensor to control the incoming water flow into the electrode holder;

SENSOR HOLDERS



Off-line sensor holders, in-line holder, immersion holder.

- OFF-LINE SENSOR HOLDER: FWT has developed a new modular in-line probe cell able to lodge many components according to the system and measurement requirements; modules for electrodes, temperature and flow sensors, conductivity stem sensors, membrane sensor, flow adjustment.
- IN-LINE HOLDER: installation in the pipe system;
- IMMERSION HOLDER: body in PVC, length from 0.50, 1 and 1,5 m;

DOSING PUMPS ACCESSORIES

FWT offers a wide range of accessories for dosing pumps and controllers to ensure a complete service.

- Electric Mixers
- Manual Mixers
- Suction lances
- Extractable Injection lances



- Dosing tanks PE up to 1000 lt



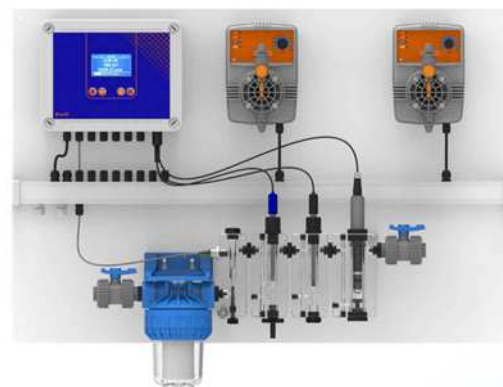
- Safety valves
- Counterpressure valves
- Pulsation dampers

- Pulse emitter water meter (threaded) from 1/2" to 2"
- Pulse emitter water meter (flanged) from 2" to 8"



MONITORING PANELS

FWT offers wide range of complete panel mounted stations for in-line measuring and control, which are available in a variety of designs covering most of requirements for most installations. FWT panels allow also full customization according to individual application. FWT panels cover water treatment, cooling towers, swimming pools, waste water, process industry and more.



FWT (Fluid and Water Technology) is a company formed with specialised experts with over twenty years of experience in liquid handling dosing systems and measuring systems. All the staff has been operating in these fields covering all key positions concerning customer service, research & development, trading, production.

FWT offers a wide range of accessories and sensors to guarantee a complete service.

If you are interested to receive our complete catalogue and price list, please contact our International sales department.



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