Poultry Industry

Optimisation & Control

Emteq Dosing Systems

Data Acquisition, Logging & Remote Access.

Chemical Dosing Pumps & Accessories.

Flow: Open Channel & Full Pipe.

Concentration Measurement.

Suspended Solids & TDS.

pH, ORP & Conductivity.

Temperature.

Turbidity.

Pressure.

Level.

For:

Health & Safety.

Water Treatment.

Water Sanitisation.

Licence Compliance.
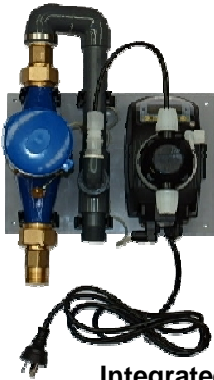
Maximising Production.

Productivity Improvements.

Performance Monitoring & Optimisation.

& many more process control improvements.

Package Water Treatment Solutions
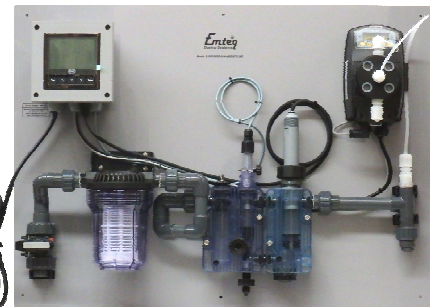
Emteq
Dosing Systems

Integrated Pump, Water Meter & Injection Point for Small Pipes

Integrated Pump & Injection Point for Large Pipes

Simple pH Neutralisation Acid & Caustic Dosing

Chlorination based on ORP

Controllers with large colour screen displays with multiple control functions and signal re-transmission.

Flow sensor to interlock dosing on loss of sample flow.

Robust, long life pH and ORP sensors.

Solenoid dosing pumps for accurate and reliable dispensing of chemical, activated by the controllers.

All components mounted on a PVC Panel, pre-wired, pre-configured, calibrated and tested. Ready for mounting on a wall, in an enclosure or on a frame.

Injection nozzles with non-return valves.

3 Pin Plug with lead for connection to standard GPO.

Chlorination based on ORP with pH Neutralisation

Valve on inlet to enable easy isolation for maintenance.

Pre-Filter with self cleaning function. Can be cleaned in-line while still filtering water.

Flow indicator with non-return valve function.

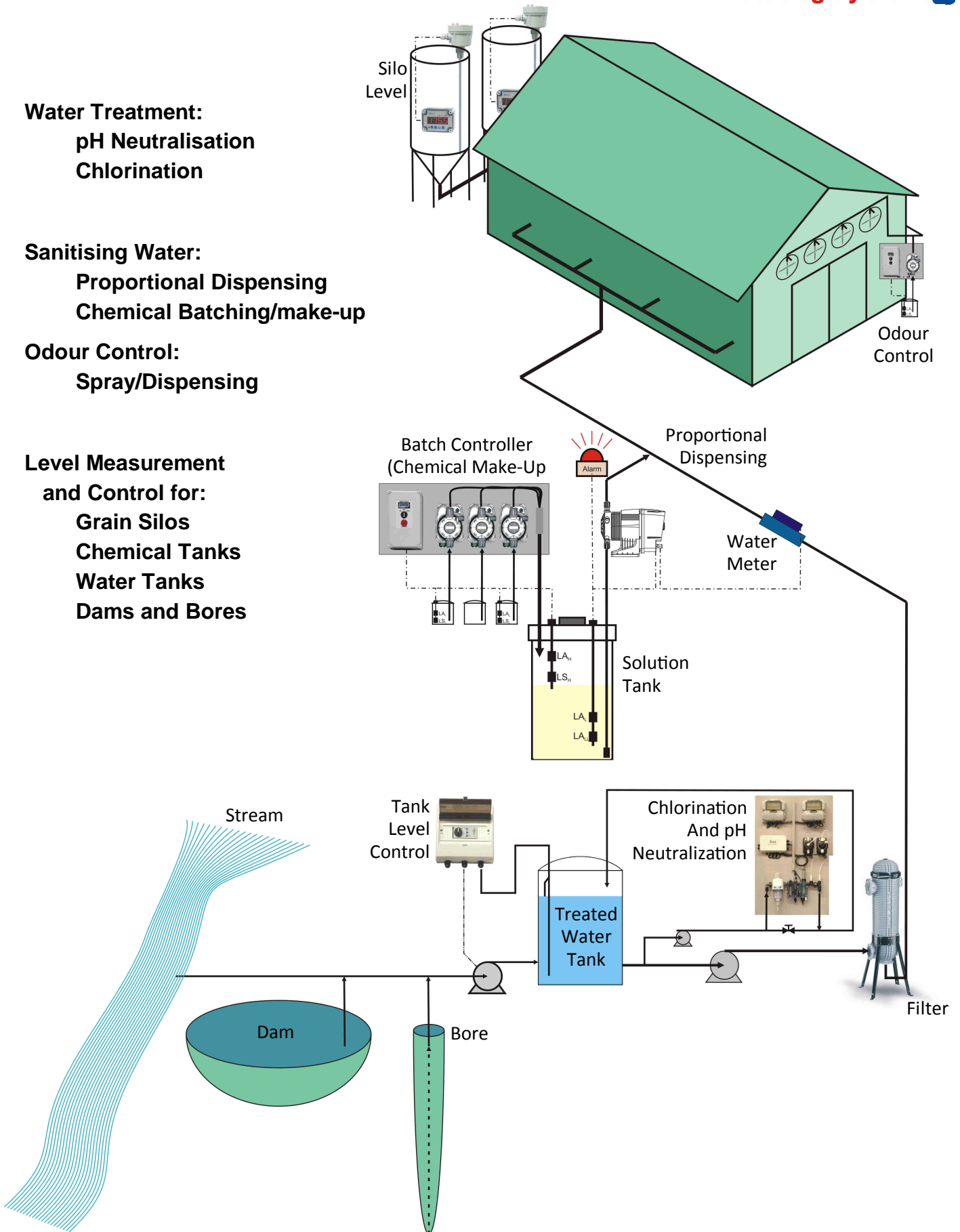Flow regulating needle valve with integral sample valve.

Water Security

Emteq
Dosing Systems

Water Treatment:
    pH Neutralisation
    Chlorination

Sanitising Water:
    Proportional Dispensing
    Chemical Batching/make-up

Odour Control:
    Spray/Dispensing

Level Measurement
  and Control for:
    Grain Silos
    Chemical Tanks
    Water Tanks
    Dams and Bores

Silo Level

Odour Control

Batch Controller (Chemical Make-Up

Alarm

Proportional Dispensing

Water Meter

Solution Tank

LA_H
LS_H
LA_L
LA_{LL}

Stream

Tank Level Control

Chlorination And pH Neutralization

Treated Water Tank

Filter

Dam

Bore

Top-Up Level Controller

Simple & robust top-up level controller.
Designed with useful MANUAL/OFF/AUTO functions.
Typical applications include tank filling/emptying for tanks or dams, & chemical batching.

- Conductivity Level Controller
- Single probes (set of 3)
- Alternative: Triple probe holder with Stainless Steel rods
- Selector switch for
  AUTO - Solenoid controlled by 3 probes
  OFF - no power to solenoid
  ON   - Power to Solenoid (Manual Top-Up)
- Indication POWER & LOAD
- Weather Proof Enclosure with transparent lid
- 240 Vdc supply with 12 Vac to valve
- Solenoid Valve, 12 VAC with flow control & manual override
- 5 meter cable between controller & solenoid
- 5 meter cable between controller & single probes
- 240 Vac (3 pin plug & lead included)
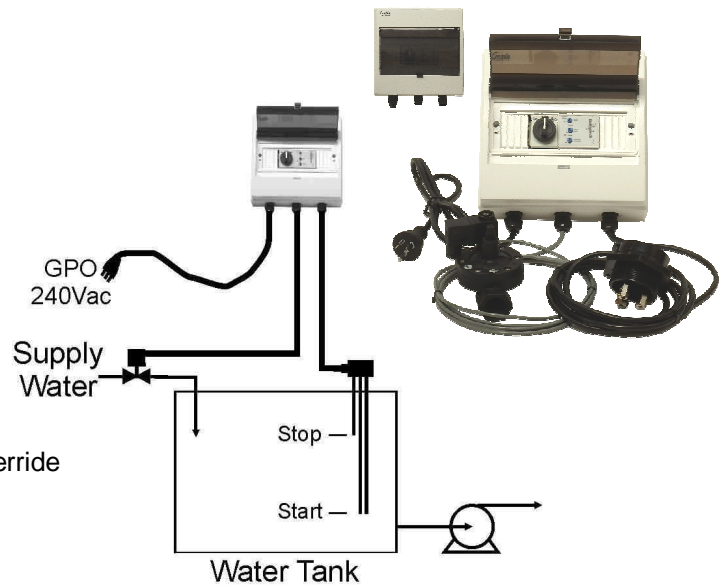
Filters

The **Big One** is a unique polypropylene housing for professional applications where high performances and reliability is required. Designed to treat high quantity of water, it's a two-piece compact container, that can fit 23" & 40" filtering elements. The housing is made with 3" female In/Out threaded connections and it's equipped with a plastic drain plug and a plastic relief valve. The Big One is supplied with a stainless steel clamp that enables it to quickly and easily open and close the housing for cleaning or replacing the filter element.

Washable (re-useable) and replaceable elements are available with a wide range of micron ratings from 1-10 to 250. Maximum capacities range from 8 to 65 m^3/hr, depending on micron rating and element length.

The maximum working pressure is 6 Bar with a burst pressure of 20 Bar.

AP-PRO Self Cleaning Filter

Innovative filter design with 80 micron washable screen enables in-line cleaning, manually actioned, to brush and flush the dirt from the mesh without stopping the water flow through the filter. The cleaning function is carried out while the filter continues to operate. Flow direction can be changed to horizontal or vertical with flow in either direction.

Sizes:
1/2" for up to 3 m^3/hr.
3/4" for up to 3.5 m^3/hr.
1" for up to 4 m^3/hr.
1.1/4" for up to 5 m^3/hr.
1.1/2" for up to 6 m^3/hr.

Melt blown Series FON

Washable Series RLA

Pleated Polyester Series PL

Wound PP Series FA

Chemical Dispensing Pumps

Emteq Dosing Systems

HC897 - ON/OFF Control

- Adjustable stroke rate
- 0-20% 0-100%
- PVDF head
- Input for interlock
- 4 Sizes (l/hr-Bar) :
  1. 2 - 8, 5 - 5, 7 - 2
  2. 7 - 4, 8 - 2, 10 - 0
  3. 3 - 12, 4 - 10, 5 - 8
  4. 10– 4, 12 - 2, 14 - 0

Peristaltic Pumps

With adjustable speed
Size: 1 l/hr to 3 Bar
       4 l/hr to 1 Bar
       6 l/hr to 1 Bar
       13 l/hr to 0 Bar

HC997 - Proportional Dosing

- PVDF head, viton seals
- Pulse input
- 4-20 mA timer
- 7 Day timer
- 4 Sizes (l/hr-Bar): Same as for HC897

HC201 - Proportional Dosing in Bench Mount Enclosure with Stroke Length Adjustment

- PP or PVDF head, viton seals
- Pulse input & 4-20 mA input
- Settable in ppm, or pulse rate, or strokes per min, hour or day
- Stroke length & frequency adjustment
- Input for interlock
- Size (l/hr - bar):   2-18, 4/18, 10-10, 15-3

HC301 - Proportional Dosing in Wall Mount Enclosure
Functionality & sizes same as for HC201

Options

- De-gassing head (Auto Bleed Valve) in PVC
- Dutral/EPDM valves
- PVC Head
- DIN plug connection for power lead (HC200 series only)

Sensors & Fittings

Water Meter
With pulse output for connection to dosing pumps
- sizes 1/2", 3/4", 1", 1 1/4", 1 1/2" & 2"
- larger sizes with flange connections

Tee Fittings
- PVC, CPVC, PP and PVDF
- 1/2" to 1.1/2"
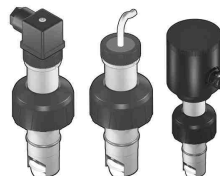- Solvent and thread connections
- Range 0-100□C
- PVC or PTFE body

Saddle Clamp
- CPVC
- 2" to 12"

Insertion Paddle Wheel Flow Sensors
- 4-20 mA signal frequency output or switch output

Blind Insertion MAG Flow Meter

Flow Switches

FineTek SF1800

Flowline FT

IndustrieTechnik SF1K

FLS F3.05

FineTek SP

Flow Meter
with Display Paddle Wheel or MAG

Chemical Tank Level Sensors

Carboy Level Switch
With 3m lead to suit 20 litre carboy with 58mm lid.
With cap for foot filter & 6mm tubing.
(foot filter & tubing not included).
Model: E-LSCB-31: A = Blue Cap, B = Black Cap.
Float material: PP
Extension shaft: PVC
Options: Float material in PVDF
             5m Lead instead of 3m
             Additional port for Bleed Tube
             To suit for 15l or 25l carboy
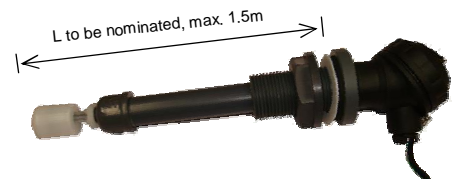Model Example: E-LSCB-31A3 (Blue with 3m Cable)

Single Point Tank Level Switch
With tank adaptor & terminal enclosure.
Model: E-LSTA-31
Float material: PP (PVDF option)
Extension shaft: PVC

Dual Point Tank Level Switch
With tank adaptor & terminal enclosure.
Model: E-LSTA-PV31A (30/135mm)
        E-LSTA-PV31C (30/55mm)
Float material: PP (PVDF option)
Extension shaft: PVC
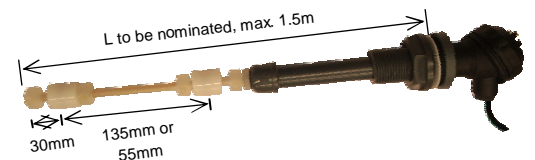
Single and Double Point Tank Level Switch
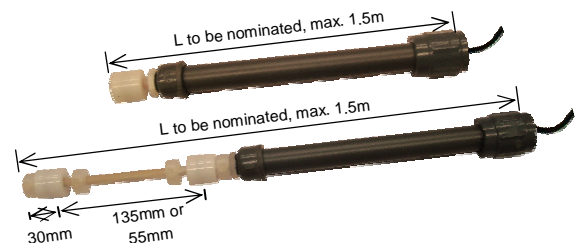With 1/2" connector & flying leads.
Single model: E-LS12-31
Double model: E-LS12-PV31A (30/135mm)
              E-LS12-PV31C (30/55mm)
Float material: PP (PVDF option)
Extension shaft: PVC

Side Mounted Tank Level Switch
External non-intrusive capacitance level switch.
Model: LP50
Accuracy: +/- 1mm in water
Enclosure rating: NEMA 4x(IP65)
Bracket options: PE, PP, PVDF

Ultrasonic 4 Point Tank Level Switch
Provides level measurement for up to 1.25m
- with a 4-20mA output (DL10)
- with 4 point relay (DS14)
- with 4-20mA output and 4 point relay (DL14)

Bund Tank Level Switch
Provides reliable leak detection in & around secondary
containment sumps & tanks.

General Accessories

Dosing Systems

ph Calibration Starter Kits
- 75 ml bottle of pH 7 buffer
- 75 ml bottle of pH 4 buffer
- 75 ml empty bottle for probe wash

Discharge Tube Savers

To remove the bending stress from pump discharge tubing.

Single union for horizontal tube direction.

Dual union for universal adjustment of tube direction.

Tube Saver with pulsation dampening

Chlorine Simple Test Kit
- Colour chart
- Sample vial
- Pack of 20 tests

ORP Calibration Starter Kits
- 75 ml bottle of 465 mv solution

Level Probes for Pump Interlock
- With DIN plug, tinned connections or terminal housing
- Option for clip for mounting on foot filter
- Option for top mounting or tank

Injection Point with Isolation

To enable easy isolation for servicing pump injection nozzle & discharge tubing.

PE Tanks with Large (150mm) Cap for Easy Filling/Access
- 4 sizes: 100, 160, 220, 330L.
- suitable to accept stirrers/mixers
- suitable to accept level switches & ports for suction/ bleed tubing
- suitable to accept HC200 mounted on top

Containment Tube

Clear soft PVC Tube 10/14mm to go over discharge tube to contain leaks from burst tubing.

Mixers/Stirrers, Motor Driven
- Fast & Slow
- Single phase & 3 phase
- SS & PVC

Calibration Cylinders
- Sizes: 100 ml up to 5 l/hr
  250 ml up to 15 l/hr
  500 ml up to 30 l/hr
  1,000 ml up to 60 l/hr
  2,000 ml up to 120 l/hr
  4,000 ml up to 250 l/hr

Calibration Cylinder Manifold on Base Plate
- Options:
  10 x 14mm tube connections
  4 x 6mm tube connection
  1/2" Thread or Solvent connections

Static Mixers for Blending Injected Chemicals into Pipes
- Sizes 1", 1 1/2", 2", 2 1/2" & 3".
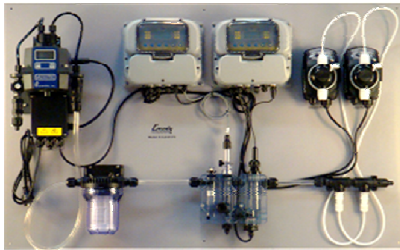- Injection port 1/2" thread

Enclosures
- Plastic enclosures as junction box for user termination to alarm & signal outputs
- Plastic enclosure for panel mounted instruments
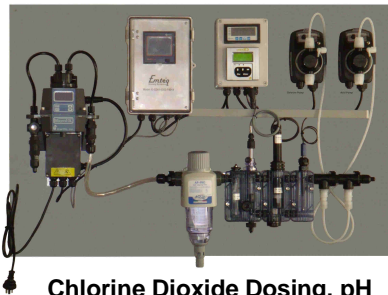- Powder coated steel enclosures for complete panels
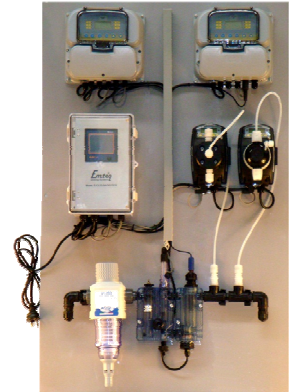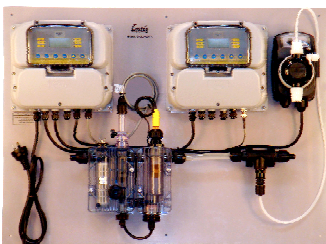
Chlorine & Chlorine Dioxide

Emteq
Dosing Systems

Chlorination

Chlorine Dosing & pH Correction with Turbidity Monitoring

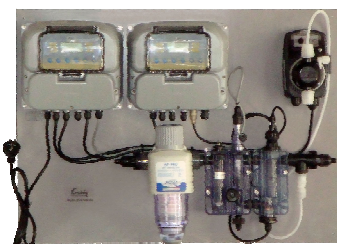**Chlorine Dioxide Dosing, pH Neutralisation Turbidity Monitoring with Recording**
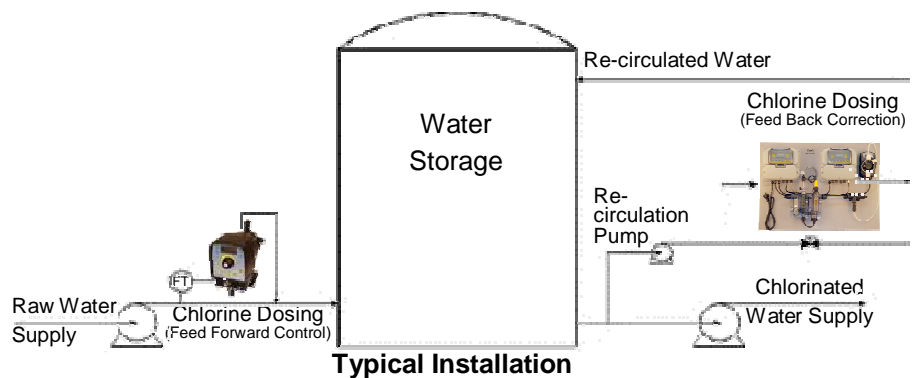
Chlorine Dosing & pH Correction

Chlorine Dosing & pH Monitoring

Chlorine Dosing with Self Cleaning Pre-Filter

Chlorine Dosing & pH with Self Cleaning Pre-Filter

Re-circulated Water

Water Storage

Chlorine Dosing
(Feed Back Correction)

Re-circulation Pump

Chlorinated Water Supply

Raw Water Supply

FT

Chlorine Dosing
(Feed Forward Control)

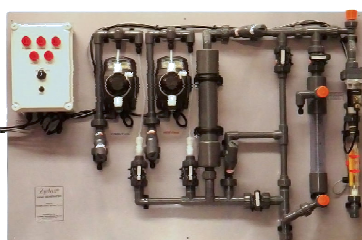**Typical Installation**

Chlorine Dioxide Generators

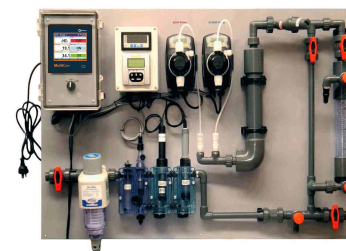**Basic Batch Tank System**

Direct Dilution

Batch Tank with Pump Isolation & Relief

Direct Dilution with Feedback Control & Data Logging
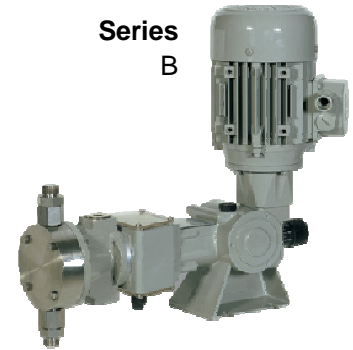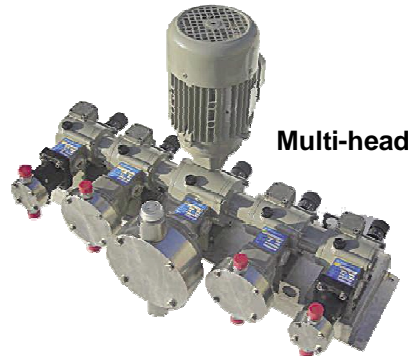
Chemical Dosing

Motor Driven Dosing Pumps

- Hydraulic diaphragm
- Mechanical diaphragm
- Piston
- Multi - head pumps
- Polyethylene tanks
- Safety relief valve & back pressure valves
- Injection valves & foot valves
- Pulsation dampeners
- Calibration cylinders
- Dosing rate: up to 3800 l/hr
- Integrated packages

Emteq
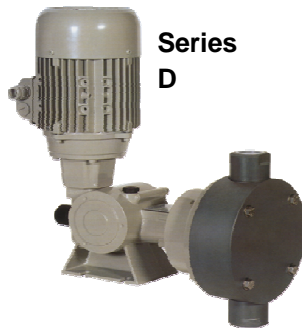**Dosing Systems**

Series SD

Series B

Series D

Multi-head

Series A

Series SDI

Series BR

DRV

DMT / DEM

SAFETY VALVES

BACK PRESSURE VALVES
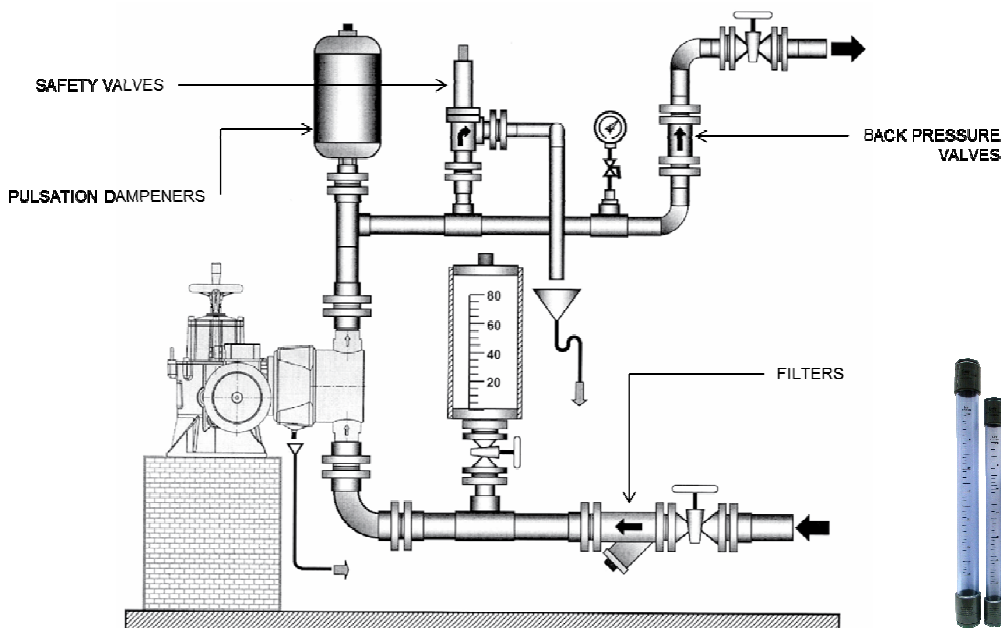
PULSATION DAMPENERS

80
60
40
20

FILTERS

Accessories

Effluent Treatment

## Clarifier Bed Level Detection & Dispersion Layer

- Installation: Bridge mounted with wiper sensor
- Use: Monitor & control
- Range: 0.5 to 10m
- Up to 16 sensors per system
- Wired & wireless field network (RS-485 & ethernet options available)
- Benefits: Early warning of process upset
    Improve management of flocculant dosing
    Prevent rake stalling

Up to 16 Measurements per system.
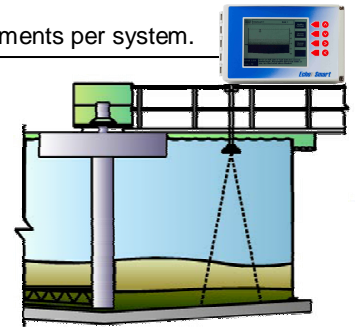
In-Line Turbidity & Suspended Solids Meters
With Quadbeam Auto-Compensation Principle

- Suitable for immersion into tanks & insertion into pipes. A variety of accessories are available for installation.
- Fully configurable electronics unit with 4-20mA output & 2x relay outputs. Available in 1, 2 or 3 Channel versions.
- Options for automatic in-line cleaning in place. With inputs for Turbidity,

Flocculant Dosing Control: Feed

- Adjust dose rate of flocculant for changes to feed concentration to DAF plants, Clarifiers, Thickeners, Centrifuges & Filters.

Clarifier: Overflow

- Installation: T30 Sensor, immersion from bridge on thickener with Auto Air Blast cleaning.
- Use: Alarm, performance monitoring.
- Typical Range: 0 - 1000 NTU
- Benefits: Cleaner water circuit, reduced chemical costs, reduced

De-Watering: Centrifuges & Filters

- Installation: T30 or S40 Sensor, in filter / centrate pipe.
- Use: Alarm, performance monitoring
- Typical Range: 0 - 0.3%

Environmental: Licence Compliance

- Installation: T30 Sensor with flow in open channel.
- Use: Recording & alarming
- Typical Range: 0 - 50 NTU

Water Quality

FLS ChemX - pH/ORP & Conductivity Controller

- 240 Vac, or 24 Vdc/ac
- 2 x 4-20mA - (Recording, Control or Temperature)
- 2 x Relay + 2 x SSR
- Panel or Wall Mount available, IP 67
- Manual or auto temperature compensation Sensor
  - ❖ Alarm, Control On/Off, Pulse Width Modulation or Frequency
  - ❖ Direct reading of raw probe response for diagnostic purpose & probe condition
 - ❖ Auto calibration routine

Wall Mount
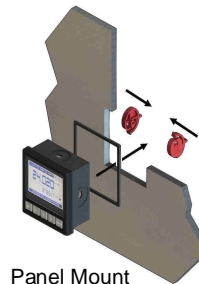
Panel Mount

Tip Types

Notched

Flush

ORP

Barben Long Life pH & ORPSensor

- Patented Axial Ion Path™ reference technology increases electrode lifespan in harsh application
- Quick & easy remove & install for checking & calibration
- Proprietary low-noise, high temperature signal cable
- Longer lasting performance
- Minimal maintenance
- Options for Auto Cleaning In-Line
- Immersion or in-line installation
- Flat Tip simplifies cleaning
- With temperature compensation
- Poison resistant
- pH range: 1-13pH
- Temp range: 0-100'C
- Max. pressure: 150psig (10 bar or 1000kpag)
- For ORP; Platinum, Gold or Silver Cyanide solid bullet
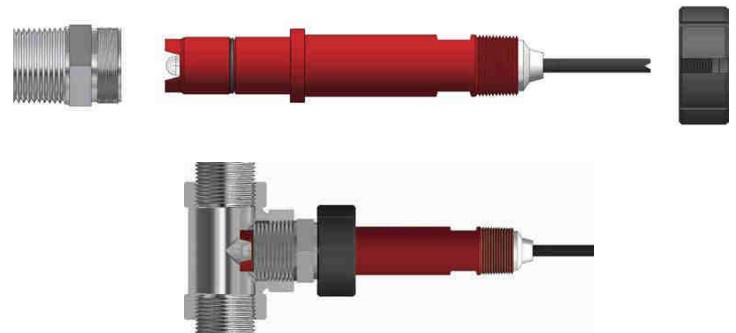
Environmental Monitoring

Online Turbidimeter

Model MicroTOL

Designed for filtered water, raw water, waste water final effluent & industrial applications.

- Nephelometry measurement principal.
- Ranges 0 – 100 NTU & 0-1000 NTU.
- Resolution down to 0.001 NTU.
- Fast response & easy calibration.
- Accurate, reliable & cost effective.
- With ultrasonic cleaning

Simple Calibration

Ultrasonic Cleaning

Dissolved Oxygen

- Maintenance free DO measurement
- Using the revolutionary fluorescence principle
- Long term stability now enables reliable control
- Direct insertion into aeration tank.
- No need for floats or other costly mechanisms.
- Not pressure sensitive, can be inserted at any depth

Hand Held Turbidity.

Includes carrying case, one set of calibration standards, indexing rings, 4AAA alkaline batteries operator's manual & measuring cuvettes with light shield caps.

- MicroTPW Portable Turbidimeter (White Light) 0-1,100 NTU
- MicroTPI Portable Turbidimeter (IR) 0-1,100 NTU

Hand Held Chlorine.

Chlorine Pocket Photometer
Each unit includes: 4 measuring cuvettes w/caps, 4 AAA batteries, rugged carrying case & instructions.
(REAGENT DISPENSER SOLD SEPARATELY)

Hand Held Chlorine Dioxide.

Chlorine Dioxide Pocket Photometer
Each unit includes: 4 measuring cuvettes w/caps, Powder Pop Dispenser w/ 100 doses of DPD, 30 ml of Glycine Reagent, 4 AAA batteries, rugged carrying case and instruction card.

Data Recorder SRD-N16 & CMC-99

Available as portable or fixed installation, for monitoring & logging multiple water quality & environmental parameters.
A variety of remote access & alarm options are available.

Standards & Reagents

Emteq
Dosing Systems

Pro Cal Primary Turbidity Standards (for Hach® Instruments)

ProCal primary standard turbidity standards are pre diluted, factory certified*, & ready for use with Hach® process, laboratory & field instruments, as well as the HF Scientific product line & other manufacturer's instrumentation. The ProCal standard formula utilizes a preservative that enhances stability, yet it is safe & biodegrades rapidly. Custom NTU available.

Standards certified *for use with the Hach® Company's turbidimeters.
Hach® 1720 c/d/e Process Turbidimeter
Hach® 2100N Laboratory Turbidimeter
Hach® 2100Q Portable Field Turbidimeter

ProCal litre

Standards certified * for use with the Hach®
Company's 2100N turbidimeter

Standards certified * for use with the Hach®
Company's 2100P turbidimeter

Chlorine Testing

PPD-2 DPD Powder Pop® Dispenser

The HF PPD-2 DPD Dispenser is compatible with HF & many more non-HF Scientific photometers.

PPD-2 DPD Powder Pops®

Chlorine Micro Check Test Strips
(bottles of 50 strips)

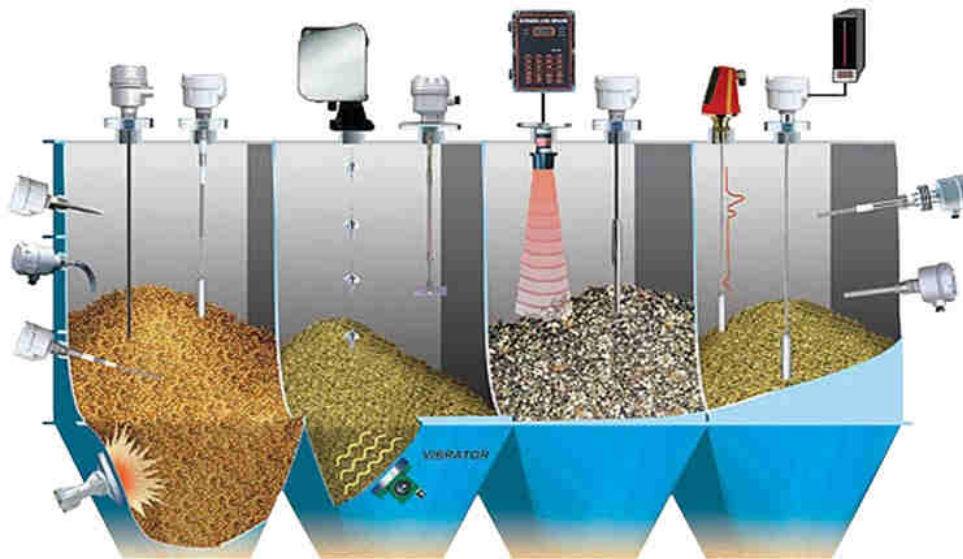**J.A.W. Reagents** for use in the Hach® CL 17 & HF CLX
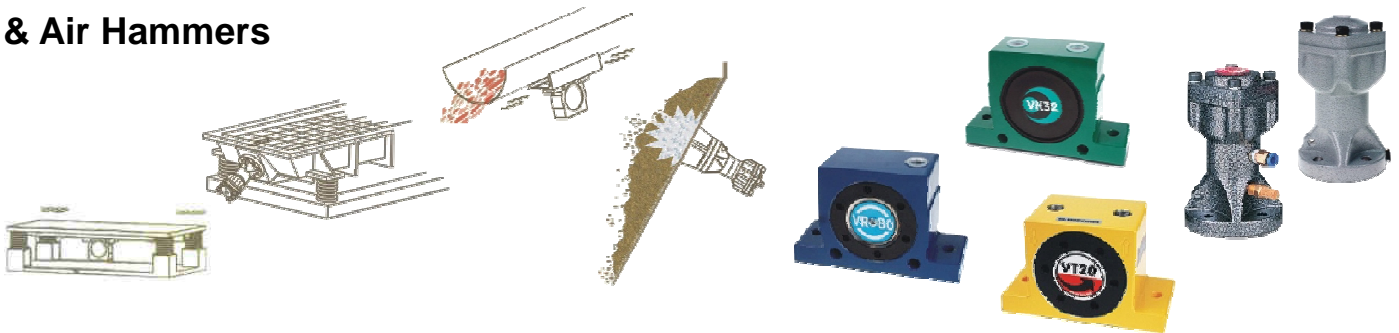
Level - Solids

Switches

- Rotary Paddle
- Capacitance
- RF Admittance

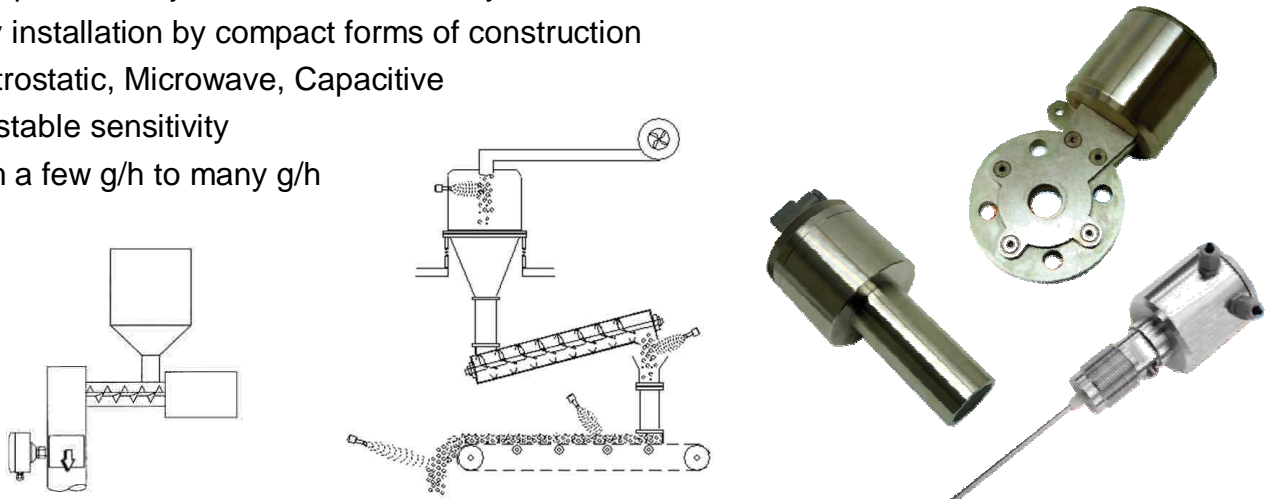## Transmitters

- Capacitance
- Radar
- Mechanical
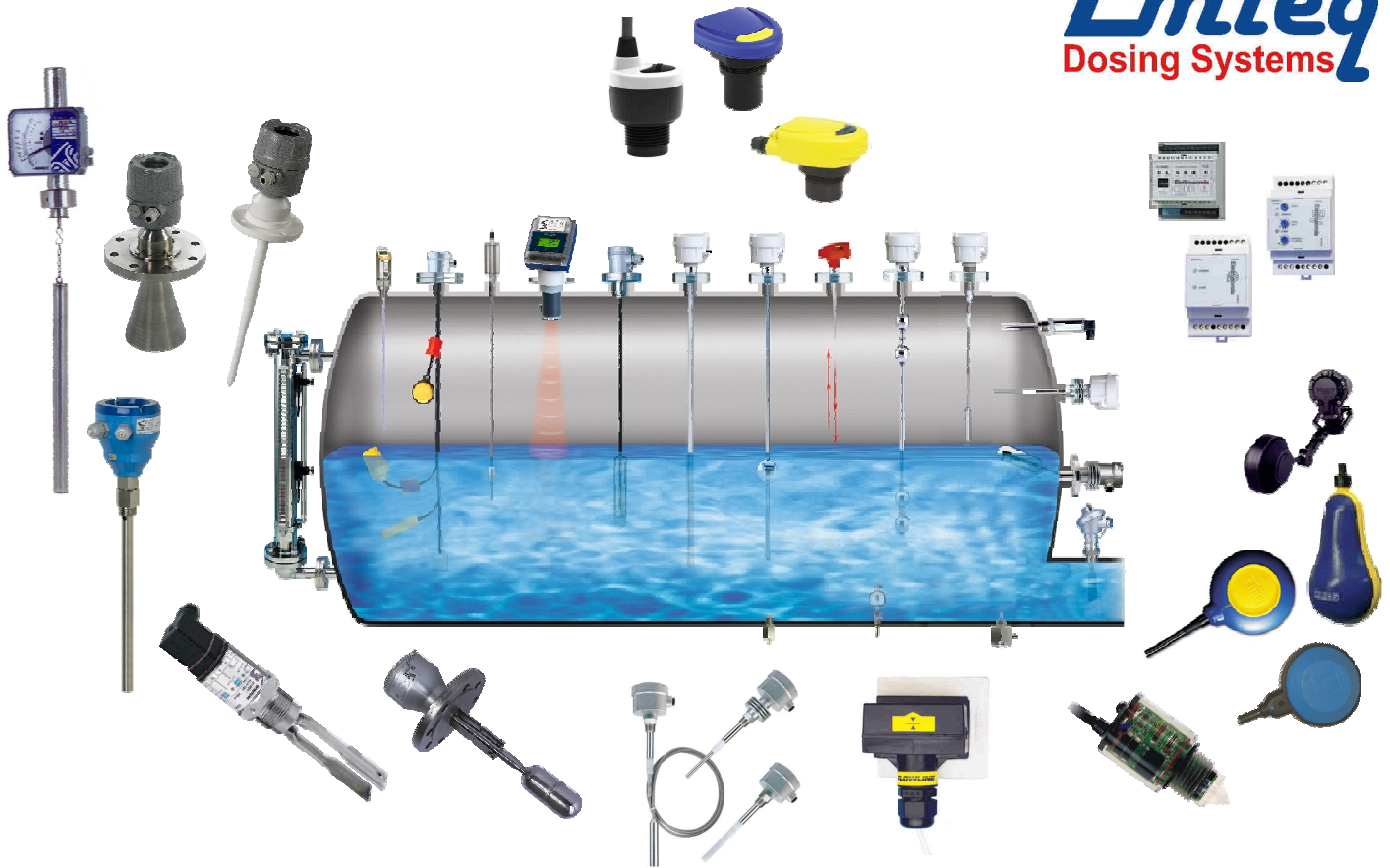

Pneumatic Vibrators & Air Hammers

Blocked Chute Detection

- For pipes, conveyor belts, screw conveyors, silos, etc
- Easy installation by compact forms of construction
- Electrostatic, Microwave, Capacitive
- Adjustable sensitivity
- From a few g/h to many g/h

Level - Liquid

Switch

Measurement Principles

Magnetic Float

Side Float

Rotary Paddle

Buoyancy

Capacitance

RF Admittance

Ultrasonic

Cable Float

Vibrating Fork

Conductive

Optical

Brands

Tecfluid

FineTek

FlowLine

MAC3

Transmitters

Measurement Principles

Magnetic Float

Guided & Non-Guided Radar

Magnetostrictive

Buoyancy

Capacitance

Ultrasonic

Hydrostatic (Pressure)

Brands

Tecfluid

FineTek

FlowLine

MAC3

Gauges

Measurement Principles

By-Pass Gauges

Sight Glasses (PVC)

Buoyancy

Brands

Emteq

Tecfluid

FineTek

Flow - General

Switch

Measurement Principles

Thermal Dispersion

Paddle Wheel

Sprung Paddle

Free Paddle

Variable Area (Rotameter)

Impeller

Sprung Float

Electromagnetic

Brands

Tecfluid

FineTek

FlowLine

Industrie Technik

Meister Stromungstechnik

Intek Rheotherm

Transmitters

Measurement Principles

Thermal Dispersion

Paddle Wheel

Variable Area

Impeller

Sprung Float

Electromagnetic

Ultrasonic (T/T & Doppler)

Turbine

Rotary Piston (PD)

Brands

Tecfluid

FineTek

FlowLine

Mainstream

Industrie Technik

Meister Stromungstechnik

Indication (Gauges)

Measurement Principles

Paddle Wheel
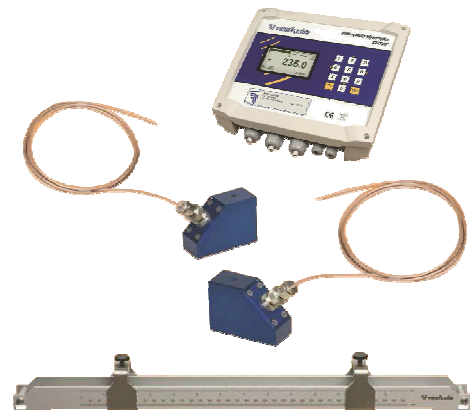
Variable Area

Impeller

Sprung Float

Brands

Tecfluid

Meister Stromungstechnik

Kytola

FIP / FLS

Ultrasonic Flow Meters

Non-Intrusive Pipe Flow Measurement

- Clamp On Doppler for slurries

- Clamp On Transit Time for clean liquids

- Portable & Permanent Instruments

- Pipe sizes from 80 - 2000mm

Open Channel Flow Measurement

- Bi-directional flow measurement for forward & reverse velocities from 10 mm/S up to 5m/S.

- Powerful, easy to use PC software simplifies flowmeter commissioning

- Sophisticated ultrasound processing ignores spurious signals

- Ultrasound signal quality monitor confirms measurement integrity

- High capacity data logger for permanent records of level,
  velocity & flow rate.

- Opto-isolated switch outputs for alarms & controls

- Optional 4:20 mA outputs for telemetry & control systems

- Optional modem for dial-up access & internet connectivity

Pressure & Temperature

Switches

Measurement Principles

Bellows

Bourdon Tube

Diaphragm

Capiliary

Bi-Metal

Brands

Regulateurs Georgin

FineTek

Industrie Technik

Transmitters

Measurement Principles

Pizoresistive

Thermocouple

RTD (PT100/PT1000)

Brands

Regulateurs Georgin

FineTek

MAC3

Rhomberg

Gauges

Measurement Principles

Bellows

Bourdon Tube

Diaphragm

Capiliary

Bi-Metal

Brands

Regulateurs Georgin

Rhomberg

Teltherm

Display, Controllers & Loggers


Emteq
Dosing Systems

Single Channel Displays & Controllers

- Current (0/4-20mA), Pulse, Frequency, Temperature & Weight Inputs.
- Small & Large Displays: 9mm, 13mm, 20mm, 57mm & 100mm.
- Rate, Total or Both from pulse or analogue inputs.
- Panel, DIN Rail & Wall Mount (IP-65) Enclosure.
- Display Only or with Alarm & Control Outputs.
- Panel Sizes: 72x36, 96x48, 72x72, 96x96.
- Modus (RS-485) Masters & Slaves.
- Batch Controllers & Counters
- Bar Graph Display
- Clocks, Timers & Time Controllers.
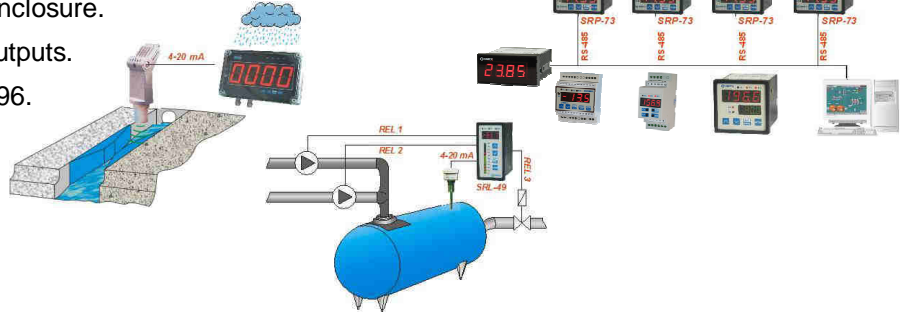
Multichannel Display, Recorder & Controller with:

- Inputs: Current (0/4-20mA), V, mV, TC, RTD, R, OC/Relay.
- Outputs: Current (0/4-20mA), V, SSR, Relay (1A+5A).
- Touchscreen Colour Display
- Ethernet Options.
- Modbus RTU (Master & Slave).
- USB Host (memory stick).
- Remote Access Options.
- Option for data logging.
- Control Modes: PID, PWM, On/Off & Frequency, Batch, Feedforward/Feedback, Remote Set Points.
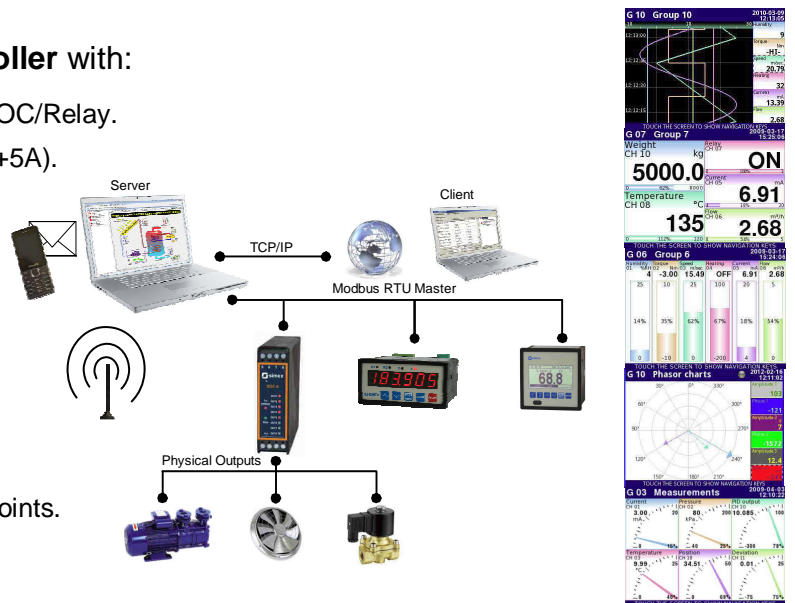
Power Supplies & Signal Conditioners

- Modbus I/O Modules, Slaves for Input & Outputs.
- 12/24 Vdc Power Supplies, DIN Rail.
- Transmitters: DIN Rail & Puck.
      Temperature, Load Cells, mV, V.
- 4-20mA Signal Isolators.
- Semi - SCADA Software.
- Convertors: USB/RS485 & USB/RS232

SCADA system with local display
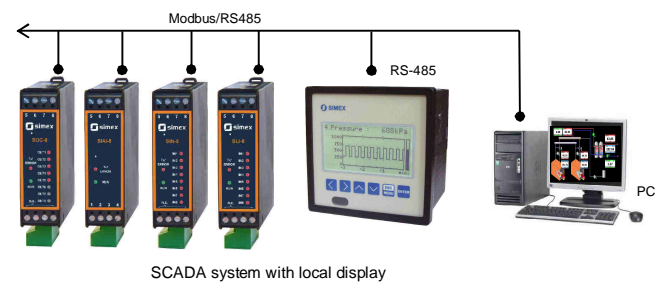
Barriers

- Rail Mount
- Back Plane Mount
- Galvanic Isolators
- Zener Barriers
- IECEX Certified
- SIL2 Capability
- HART Compatible

About Emteq

Emteq customized chemical dosing solutions and accessories are produced for a broad range of agricultural, municipal and industrial applications. These customized solutions and accessories are developed and manufactured in Australia by Process Control Services.

Emteq systems are supported by Process Control Services who are renowned for their industry expertise together with their extensive choice and range of equipment. Their highly trained engineers are able to offer extraordinary levels of expert service and advice through combining their extensive product knowledge with industry experience that extends in many cases beyond the life of the company.

For twenty years Process Control Services have provided Measurement & Dosing equipment to an extensive range of industries, varying in size, throughout Australasia. Continuous growth over the past twenty years driven predominately through word of mouth referrals has led to an outstanding market profile. With offices in Sydney, Brisbane and Melbourne combined with a network of over twenty regional sales outlets PCS is able to deliver top quality solutions integrating leading international brands at very competitive prices, backed by an outstanding level of customer service throughout Australia and New Zealand.

We supply Flow, Level, Pressure, Temperature, Water Quality and Specialty Measurement Equipment and Chemical Dosing Equipment for monitoring, control and optimization.

If you have a problem, call us, we have the solution......

Brought to you by:

Code 4935

Process Control Services Pty Ltd, ABN 22 054 111 018

Ver 16a

Ph: Sydney (02) 9319 1808, Brisbane (07) 3299 7881, Melbourne (03) 9859 0157, Auckland (09) 525 3425
eMail sales@pcspl.com.au, Web www.pcspl.com.au