LIQUIDS
Technology Trading Co.

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1) INTRODUCTION:

Liquids Technology Trading Company

is a company Established in 2010, with almost 50 experienced employees. Located in Riyadh, with many branches covering all Kingdom of Saudi Arabia.

LTC is involved to supply water & wastewater plants requirements of equipment & chemicals, with all required accessories & consumables as below:

- Dosing pumps, Controllers, Sensors & probes, Dosing system & skids, Chlorine dioxide generators.
- FRP tanks, RO pressure vessels, PVC housing.
- PP Wound filter, PP Melt blown filters, Bag filters. Available for all filtration rate & sizes.
- UV system, & Oson generators. Manufactured by our French partner Bio-UV.
- Stainless Steel Cartridge Filter Housing.
- Full range of chemicals for the following industries:
  o Reverse osmosis.
  o Utility; boilers, chillers, cooling towers.
  o Mining.
  o Upstream & downstream for refineries.
  o Wastewater plants.
  o MSF & MED plants.
- Other products: Chemical dosing tanks, mechanical flow meters, water & wastewater treatment plant accessories, Online treatment program.

2)Dosing Pumps & Instrumentation

LTC is the agent of EMEC company one of the worldwide leaders in dosing pumps industry:

Emec was established in 1982 to create a new all-Italian company in the field of chemical control and dosing systems. Over the years, the company has changed, growing and developing the necessary know-how to today achieve recognition on an international level.

Our LTC-EMEC portfolio contains:

- o METERING PUMPS
- o LOTUS - CHLORINE DIOXIDE GENERATOR
- o CONTROLLERS
- o PROBES
- o CUSTOMIZED SOLUTIONS
- o PUMPS ACCESSORIES.

Metering Pumps:

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PRISMA
Flow rate up to 80 L/hr,
working pressure up to 20 bar

AMS Series
Flow rate up to 60 L/hr,
working pressure up to 25 bar

V Series
Flow rate up to 16 L/hr,
working pressure up to 20 bar

PRISMA
Stepper motor-driven

- Stepper motor
- Multifunction control
- High strength PTFE membrane -5- year warranty
- Foot mounted
- LCD display

Modbus

STEPPER MOTOR

| SLOW SUCTION MODE |
| TURNDOWN RATIO 1:4800 |
| EXTERNAL CONSTANT DOSING |
| MULTICOLOR DISPLAY |
| MULTIFUNCTION |

WORKING MODES

CONSTANT	CONSTANT with external command	
PPM	%	MA	WEEKLY	PAUSE-WORK
MLQ	PULSE	VOLT	External/Manual BATCH

PRISMA BLUETOOTH
Configuration available
with extra-charge

AMS Series
Flow rate up to 60 L/hr, working pressure up to 25 bar

- Manual stroke length adjustment
- Manual or self venting
- High strength membrane -5- year warranty
- Horizontal mounting
- PVDF pump head

AMS MF	digital multi-function
AMS PH	built-in pH reading and adjustment
AMS RH	built-in ORP reading and adjustment

AMS PLUS	constant / constant 1-10
	multiplier 1-10
	divider 1-10 / 1-100 / 1-1000
	mA current signal
AMS CO PLUS	constant with divider 1/10
AMS CL PLUS	constant with level control and divider 1/10

V Series
Flow rate up to 16 L/hr, working pressure up to 20 bar

- Manual stroke length adjustment
- Manual or self venting
- High strength membrane -5- year warranty
- Wall mounting
- PVDF pump head

VMS MF	digital multi-function	VCO	constant
VMS PO	built-in pH or ORP reading and control (set by menu)	VCL	constant with level control
VMS EN	weekly timer and solenoid valve control		

PUMP HEADS

PVDF   PP   AISI316L   PMMA

SUPPLIED ACCESSORIES

Level Probe with foot filter   1/2" or 3/4" Injection valve

PUMP HEADS

PVDF   PP   AISI316   PMMA   LPV   P

SUPPLIED ACCESSORIES

Level Probe with foot filter   1/2" or 3/4" Injection valve

PUMP HEADS

PVDF Manual venting   PP Manual venting   PVDF Self venting   PP Self venting

SUPPLIED ACCESSORIES

Level Probe with foot filter   1/2" Injection valve

Metering Pumps:

T Series
Flow rate up to 100 L/hr,
working pressure up to 20 bar

PRIUS Series
Flow rate up to 1000 l/h,
working pressure up to 10 bar

T Series
Flow rate up to 100 L/hr, working pressure up to 20 bar

- Electronic flow adjustment
- Manual or self venting
- High strength membrane - 5 - year warranty
- Wall mounting
- PVDF pump head

TMS DC	digital constant	TCO	constant
TMS MF	digital multi-function	TCL	constant with level control
TMS PH	built-in pH reading and adjustment		
TMS RH	built-in ORP reading and adjustment		

PUMP HEADS

PVDF   PP   LPV   P

SUPPLIED ACCESSORIES

Level Probe with foot filter   1/2" or 3/4" Injection valve

PRIUS
Flow rate up to 1000 l/h, working pressure up to 10 bar

PRIUS D MF
Multifunction motor driven diaphragm dosing pumps

- PTFE diaphragm
- 230 VAC single phase power supply
- Wide display with clear information and easy navigation system with the click and turn wheel.
- Gear box can be rotated on the field 90 degrees for optimal installation

- Operating modes: Constant - ppm - % - mlq - pause-work - pulse - weekly - mA - Volt and Batch
- Level input
- Stand-by
- MODBUS (optional)
- IP65 Motor (optional)

PUMP HEADS

PVDF   PP   AISI316   PVC

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Pump Accessories:
(Reliable Products)

MIXVN/8
High speed mixer 1400 RPM.
AISI shaft-PVC coated,
different lengths available (630-730).
Marine impeller, diameter 70mm.

MIXN/8
Slow speed mixer 65/200 RPM.
AISI shaft-PVC coated,
different lengths available (630-730mm).
3-blade impeller, diameter 150mm.

MIXN/MAN
Manual mixer. PVC shaft,
Different lengths available
(450-650 and 770-1100 mm).
Impeller diameter 130 mm.

MIX « PISTON »
Manual mixer. PVC shaft,
different lengths available (450 mm).

LASP
Suction lances with level control,
for tanks up to 1000 liters.

LINI R
1/2" injection lance for dosing
sodium hypochlorite in hard
water.
Self cleaning. FKM B o-ring. PVDF
or Stainless-Steel body.

2)Dosing Pumps & Instrumentation

Pump Accessories:
(Reliable Products)

MF MULTIFUNCTION VALVE
Multifunction valve (pressure, safety, antisyphon and bleed) 1/2" connections for different hoses diameters. FKM B or EPDM o-ring. PVDF body.

SEFL
Flow sensor with PVDF body,
N.C. contact and adjustable sensitivity.
Max 45°C - 25 bar

CWFA
Woltmann water pulse sender water meter, dry dial.
Max 60°C - 16 bar

CTFI
Cold water pulse sender water meter.
Max 30°C - 16 bar
CATFI - dry dial

CWFAT
Woltmann water pulse sender water meter, dry dial and PTFE internal/ external coating.
Max 60°C - 16 bar

MF MULTIFUNCTION VALVE
Cold water pulse sender water meter and PTFE internal/external coating.
Max 30°C - 16 bar

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Chlorine Dioxide Generator: LOTUS

LOTUS MINI:
Max capacity: from 8 to 20 g/h.

LOTUS AIR:
Max capacity: from 10 to 60 g/h.

LOTUS MAXI:
Max capacity: from 80 to 1000 g/h.

Chlorine Dioxide Generator: LOTUS

LOTUS ULTRA:

Max capacity: 4000 g/h.

LOTUS EASY:

Max capacity: from 8 to 80 g/h.

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CONTROLLERS:

Centurio Pro / Tower / Pool

up to 10 channels

▬ Water treatment
▬ Cooling towers
▬ Swimming

HARDWARE
• Large 4.3" LCD Full Color
• Touchscreen Display
• High-performance ARM A5 microprocessor
• Large capacity storage for logging

SOFTWARE
• ERMES Remote Control
• Multi-language
• Cross platform software
• Communication WIFI - 3G - ETHERNET – MODBUS
• High performance with LINUX operatin

CONDUCTIVITY - CONTACT OR INDUCTIVE	
pH	ORP
CHLORINE	TRACERS
mA INPUT	TURBIDITY
POTENTIOSTATIC	DISSOLVED OXYGEN
LEVEL LASER SENSOR	CORROSION

ONLINE REMOTE CONTROL

REALTIME PARAMETERS READING AND REGULATION
SETTINGS EXPORT / IMPORT
REMOTE SOFTWARE UPDATE

PARAMETERS
• CENTURIO with conductivity measurement
• 5 Modular channels to combine
• MODBUS TCP/IP and RTU module included
• ETHERNET module included
• USB module included
• WIFI or 3G module as option
• 0-20 mA input module as option to control different parameters remotely

CENTURIO TOWER is the control instrument in cooling tower water treatment, with the ease and safety you need and with the stylish box designed by Giugiaro Design. CENTURIO is equipped with a Linux operating system, a high-performance ARM A5 microprocessor, a large, touchscreen, color display, in order to give you total and simultaneous control, also with real-time graphs, over 5 channels and the most important parameters for cooling tower water treatment, such as conductivity, chlorine, pH or ORP. CENTURIO TOWER can connect to the internet and then be safely configured and managed with ERMES wherever you are by using any device and any browser. It is also equipped with MODBUS serial communication to be connected to other devices on RS485 networks and TCP/IP MODBUS.

DESIGN
• Box design by GIUGIARO DESIGN
• New "EASY-MOUNT" system
• Designed for mounting on pipes
• Opening with side zipper and captive screws

CONTROLLERS:

LD Multichannel / PLUS Series

2 channels plus 1 for temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agriculture
Swimming pools disinfection

Factory parameter configuration:
• pH
• ORP
• Chlorine/Bromine
• Conductivity
• Inductive Conductivity
• Chlorine Dioxide
• Hydrogen peroxide
• Ozone
• Peracetic acid
• Turbidity

Options:
• USB for data log recording
• Current Output (0/4 - 20 mA)
• Ethernet
• 2G/3G modem
• MODBUS protocol
• WIFI module

PLUS Features:
• 5 relais (2 setpoint; alarm; probe cleaning; circulation)
• Probe cleaning
• PID
• Feed forward

Controller for acid (pH) and a second parameter. Wheel with "EASY-NAV" control, Flow control, Local & Remote Controlled, ERMES web communication, Permanent data storage with system log, PT100 temperature probe, Stand-by input. Alarms: damaged probes - max dosage - threshold - levels - flow - reading. Programmable delay at dosing start-up (up to 60 minutes), Priority dosage, Probe readout menu, Probes check up, Multiple probe readings can be viewed. Working modes: on/off, impulsive proportional, proportional PWM and fixed PWM. Automatic or manual dosing activity, Chlorine/Bromine selection with SBR (LDPHCL), Flocculant pump control, mA output (option).

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CONTROLLERS:

LDS / LDS PLUS Series

1 channel plus 1 for temperature

- Water treatment
- Cooling towers
- Industrial-level chemical dosing
- Depuration
- Agriculture
- Swimming pools disinfection

Options:
- USB for data log recording
- Current Output (0/4 - 20 mA)
- Ethernet
- 2G/3G modem
- MODBUS protocol
- WIFI module

Factory parameter configuration:
- pH
- ORP
- Chlorine/Bromine
- Conductivity
- Inductive Conductivity
- Chlorine Dioxide
- Hydrogen peroxide
- Ozone
- Peracetic acid
- Turbidity
- Dissolved Oxygen

PLUS Features:
- 5 relais (2 setpoint; alarm; probe cleaning; circulation)
- Probe cleaning
- PID
- Feed forward

Wheel with "EASY-NAV" control, flow control, local & Remote Control, ERMES web communication, permanent data storage with system log, PT100 temperature probe, Stand-by input, Alarms: damaged probes - max dosage - threshold - levels - flow, Programmable delay at dosing start-up (up to 60 minutes), Priority dosage, Automatic temperature compensation, Probe readout menu (LDSCDIND), Working modes: on/off, impulsive proportional, proportional PWM and fixed PWM, Automatic or manual dosing activity, mA output (option)

2)Dosing Pumps & Instrumentation

CONTROLLERS:

MTOWER Series

Up to 3 channels

▬▬▬ Cooling towers

Factory parameter configuration:
• pH
• ORP
• Chlorine
• Conductivity or Inductive conductivity
• Temperature

Options:
• Conductivity inductive probe
• USB for data log recording
• Current Output (0/4 - 20 mA)
• Ethernet
• 2G/3G modem
• WIFI module
• MODBUS protocol

Features:
• Conductivity for blowdown
• 2 Timers for biocides
• Pre-bleed
• Lockout

Easy control by ENCODER wheel with "EASY-NAV" rotation, Current Feed & Bleed display, Local & Remote Controlled, ERMES web communication, Simultaneous multiple view for probes reading, Permanent data storage with system log, Stand-by input, mA output (option). Working modes: on/off, impulsive proportional, proportional PWM and fixed PWM. Pre-bleed: Reduced water system conductivity before biocide dosing. Blow down: Discharge control on conductivity values, Lockout: Discharge valve locked for a settable time (after biocide dosage). Timeout: Maximum discharge valve opening time, Programmable delay at dosing start-up (up to 99 minutes), PT100 temperature compensation. Alarms: conductivity (high/low), Bleed timeout (conductivity not reached after set time), product level, flow, meter activity, not restored water.

CONTROLLERS:

Panel instruments

1 channel with temperature

Water treatment
Cooling towers
Industrial-level chemical dosing
Depuration
Agriculture
Swimming pools disinfection

Options:
• Avalilable low voltage 9-18VDC or 18-36VDC power supply
• Available IP54 protection cover.

Features:
• 2 setpoints (on/off, proportional)
• flow alarm
• flow sensor
• stand-by input
• 0-20 mA or 4-20 mA output
• proportional to read value and programmable in the reading range
• alarm output
• mA module
• MODBUS serial communication

JA PRO

control instruments are a series of rack-mount (96x96) single reading systems with temperature reading, mA module and native modbus. On/Off, impulsive proportional and PID are main working modes. It can set and monitor: pH, ORP, chlorine (depending on the probe: total chlorine, free chlorine, chlorine dioxide, hydrogen peroxide, ozone, bromine or paracetic acid) and conductivity (uS/S - Ohm - TDS / PPM) with automatic range and probe / product selection (H3PO4 - H2SO4 - HNO3 - HCl - NaOH - NaCl).

J DIGITAL

control instruments are a series of rack mounting (96x48) single reading systems that meets many applications. It can set and monitor: pH, ORP, chlorine (depending on the probe: total chlorine, free chlorine, chlorine dioxide, hydrogen peroxide, ozone, bromine or paracetic acid), conductivity, ozone, chlorine dioxide and temperature. Probes are not included. J DIGITAL models have: 2 setpoints (on/off, proportional), flow alarm, flow sensor stand-by input, 0-20 mA or 4-20 mA output proportional to read value and programmable in the reading range.

DIN DIGITAL

control instruments are a series of rail mounting (6 modules) single reading systems that meets many applications. It can set and monitor: pH, ORP, chlorine (depending on the probe: total chlorine, free chlorine, chlorine dioxide, hydrogen peroxide, ozone, bromine or paracetic acid), conductivity, ozone, chlorine dioxide and temperature. Probes are not included. DIN DIGITAL models have: 2 setpoints (on/off, proportional), flow alarm, flow sensor stand-by input, 0-20 mA or 4-20 mA output proportional to read value and programmable in the reading range.

2)Dosing Pumps & Instrumentation

CONTROLLERS:

ERMES

Software for complete remote configuration and control of instruments

ADVANTAGES:
• reduces plant intervention and inspections.
• reports on the current status of the network's devices and connections (probes, outputs, alarms, setpoints)
• instantly gives notification of alarms by SMS or email
• generates an up-to-date report of all plant instruments
• can display the instruments activity log as line graphs and charts and it can download it to your pc in excel or pdf format

HOW DOES ERMES WORK?

Enter the website www.ermes-server.com and, after registration, set your plants. EMEC instruments with ETHERNET, 3G or WIFI Configuration will be immediatly connected and available for remote control. Furthermore, with ERMES you can receive alarm messages via email, with different report option on instrument status. If your instrument has a 3G Configuration you can receive SMS report on your mobile. All EMEC latest controllers are ERMES ready:
• CENTURIO TOWER
• MAX5
• LD MULTICHANNEL
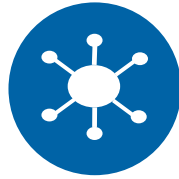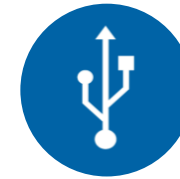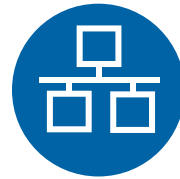• LD WITH ENCODER (wheel)
• MTOWER
• WD
• JA

2)Dosing Pumps & Instrumentation

CONTROLLERS:

ERMES

AVAILABLE CONFIGURATIONS FOR CONTROL INSTRUMENTS

CONFIGURATION	BASIC	ETHERNET	3G	WIFI	USB	MODBUS
FEATURES	/	LAN	MOBILE	WIFI	USB	PLC
CONNECTION TYPE	Local control	Remote control via ERMES web (www.ermes-server.com)	Remote control via ERMES web (www.ermes-server.com)	Remote control via ERMES web (www.ermes-server.com)	Download data log from controller to USB drive	PLC plant management
REQUIREMENTS	/	LAN (RJ-45)	Network Coverage	Network Coverage	/	/
FUNCTIONS	• RS485 link to EMEC instruments	• RS485 link to EMEC instruments • ERMES Web (PC, smartphone, tablet) • Email messages	• RS485 link to EMEC instruments • ERMES Web (PC, smartphone, tablet) • Email/SMS messages	• RS485 link to EMEC instruments • ERMES Web (PC, smartphone, tablet) • Email messages	• RS485 link to EMEC instruments • Data Log recording on USB drive	•PLC connection output for reading and modifying parameters via RS485 or TCP/IP

You can CUSTOMIZE configurations adding external modules. Mixed configurations allows to connect instruments to ERMES software in multiple ways: directly, locally and remotely. Those configurations extend connection capacity. If you already use EMEC instruments and you want use ERMES web application, contact our customers service.
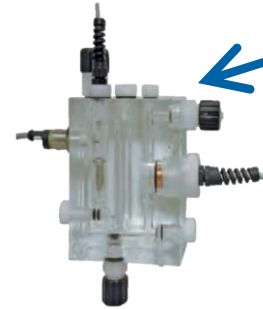
2)Dosing Pumps & Instrumentation

CONTROLLERS:

PROBES

SCL - Closed amperometric cells
Free chlorine (organic and inorganic) for fresh water, total chlorine, chlorine dioxide, hydrogen peroxyde, ozone, peracetic acid, bromine.

ECL - Open amperometric cells
Free chlorine (organic and inorganic) for fresh water and salt water.

EPH - PH probes
Working temperature max 70° C
Working pressure max 7 bar

ERH - ORP probes
Working temperature max 70° C
Working pressure max 7 bar

EOLUM - Dissolved Oxygen probes
Working temperature max 50° C
Working pressure max 10 bar

ETORB2 - Turbidity probes
Working temperature max 40° C
Working pressure max 2 bar

ETRC2 - Inline Fluorometer
Working temperature max 50° C
Working pressure max 7 bar

CONTROLLERS:

PROBES

EICD - Conductivity Stainless Steel probes
Working temperature max 130° C
Working pressure max 15 bar

ECDHL - Conductivity, Platinum electrodes
Working temperature max 70° C
Working pressure max 7 bar

EFL - Fluoride ione probes
Working temperature max 70° C
Working pressure max 7 bar

ECDC - Conductivity, Graphite electrodes
Working temperature max 60° C
Working pressure max 7 bar

ECDIND PT - Inductive Conductivity probes
Measuring range up to 300,00 mS
Working temperature max 85° C
Working pressure max 8 bar
L 151.00 mm Ø 44.70 mm

ECDI - Conductivity, Stainless Steel electrodes
Working temperature max 60° C
Working pressure max 7 bar

ECDSIND PT - Inductive Conductivity probes
Measuring range up to 10,00 mS
Working temperature max 85° C
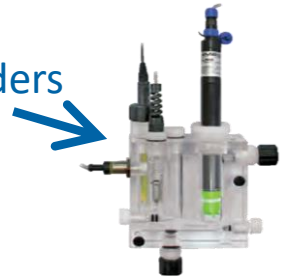Working pressure max 8 bar
L 105.00 mm Ø 32.70 mm

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2)Dosing Pumps & Instrumentation

CONTROLLERS:

PROBES ACCESSORIES

PEF - Off-line probe holders
for closed amperometric cells

NPED – Offline probe holders
Working temperature 0°/50° C
Maximum pressure 5 bar

PEL - In-line probe holders

PEC - Immersion probe holders
Optional compressed air or water self cleaning
system (automatic or manual control)

NFIL – Filters
Maximum temperature 60° C
(30° C NFIL/CA)
Filtration degree 60 μ / 150 μ

**MANIFOLD - With flow sensor
as well as housing for the conductivity probe**
Optional motorized valve, two injection points and even additional
measurement probes
Maximum pressure 8 bar
Maximum temperature 75° C

Buffer solutions
for probe calibration

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2)Dosing Pumps & Instrumentation

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CUSTOMIZED SOLUTIONS:

MIXING AND DOSING STATION/SKID

MIXING AND DOSING STATION

Storage, dosing, all regulation in one single system.
Dosing stations are assembled to include:

- Dosing pumps
- Suction lances
- Mixer
- Water makeup valve
- Water bleed valve

Dosing stations are complete solutions ready to go.

PLANTS ON SKIDS OR IN CUSTOM-MADE CABINS

The Stainless Steel or plastic skid is designed and built on client requirements.
In addition to the solution on skids, it is possible to create dosing plants in a cabin,
screen guard or with window.
Electric control panels designed to control all the assembled solution.
The final product includes electrical and piping hook-ups ready for installation.
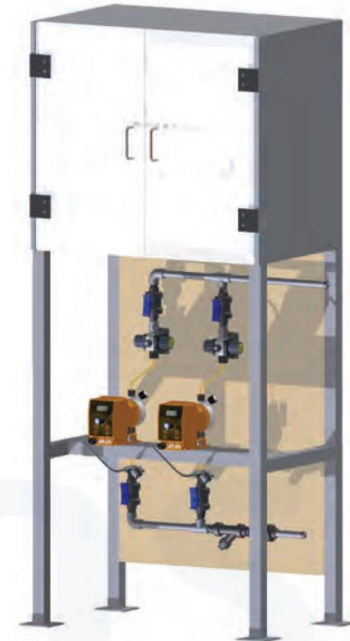
CUSTOMIZED SOLUTIONS:

POOLBRAVO

POOLBRAVO is a turnkey product available in several configurations to immediately and easily manage the main parameters concerning water treatment in swimming pools, in order to optimize the dosing and consumption of the needed chemicals.

its elegant cover makes POOL BRAVO suitable for any installation context and, besides safeguarding from accidental liquid loss, preserves at the same time the cleanliness of the inner components and their integrity.

The LD multiple reading digital system inside POOLBRAVO gives you the complete control over the measuring parameters and over the dosing of chemicals, besides being easy to use thanks to the LCD display and the ENCODER control knob that makes simple to browse through its configuration menus. Complete control also comes from the wide range of probes that can measures hydrogen peroxide, oxygen, bromine, chlorine, ozone, peracetic acid and chlorine dioxide. A colored LED light is installed on PEF probe-holder in order to quickly signal, through an opening on the cover, specific operation statuses or possible alarms according to the color of the light.

EMEC exclusive online systemERMES enables you to remotely control and regulate POOLBRAVO from any smartphone or PC, so to keep the status of your swimming pool always under control, wherever you are.

CUSTOMIZED SOLUTIONS:

POOLBRAVO Models

PROBES HOLDER COLORED LED LIGHT ALARM

+ ACID PUMP
+ CHLORINE PUMP

+ ACID PUMP
+ CHLORINE PUMP
+ ANTI-ALGAE PUMP

+ ACID PUMP
+ CHLORINE PUMP
+ FLOCCULANT PUMP

ALL MODELS ARE AVAILABLE WITH ECL6 OPEN AMPEROMETRIC CELL
OR WITH SCL3 CLOSED AMPEROMETRIC CELL

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3)LTC–an Official Distributor of Ultraviolet (UV) disinfection devices & Ozone Generators of BIO-UV

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BIO-UV is a European leader in water treatment and surface disinfection by UV, ozone, salt electrolysis & AOP.
Disinfection solutions for pure, quality and perfectly disinfected water, can be used in many applications as below:

Private pools and spas
Community pools and spas, water parks
Aquariums, ocean parks and zoos
Aquaculture, fish farming, ornamental ponds
Drinking water
Industrial waters
Fountains
REUSE (reuse of treated wastewater)
Ballast water

BIO UV
Ultraviolet Solutions

4)FRP Filter Tanks & RO Membrane, PVC housing

LTC have FRP Tanks, RO Pressure vessels, PVC housing, & many other accessories for Water & Wastewater industry

FRP Tanks
• NSF/ANSI Standard 44 Certificated Designed to meet PED 2014/68/EU Requirement
• Fatigue test: 100,00 cycles
• Burst test: 4 times of operating pressure
• Operating temperature range: 1-50° C (34-122° F)
• Available color: Natural, Blue, Grey, Black
• Limited Warranty:
    Ten (10) years for 6" to 10" tanks
    Five (5) years for 12" to 63" tanks

MEMBRANE HOUSING
• ASME (American Society of Mechanical Engineers) Certificated
• Quality assurance
    Fatigue test: 100,00 cycles
    Burst test: ^ times of operating pressure
• Composite Construction results in superior impact and corrosion resistance
• Easy for loading and unloading

GROOVE   EMBEDMENT   END PORT   SIDE PORT

5)Stainless Steel housing

Different standard sizes available
Suitable for different flow rate

Customized SS housing available
for high flow rate

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LTC Cartridge Filters Products Portfolio:

- PP Melt Blown Filter/Spun Filter Cartridge - DOE, SOE & PP Core

- Hard Surface/Orange Peal Filter Cartridge

- Grooved Surface Filter Cartridge

- String Wound Filter Cartridge – PP Core & SS Core

- GAC - Granular Activated Carbon

- CTO - Carbon Filter Cartridge

- RO PIPE/RO TUBING

- Bag Filters.

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A) Reverse osmosis membrane solutions

- **Pretreatment Chemicals:**
  We offer a full range of coagulants, flocculants (Ameroyal, Praestol & Zetag), filter aids and chlorine removal chemistries (Ameroyla RCR Sodium Bisulfate) to remove colloidal matter and strong oxidants before water contacts the RO membranes.

- **Scale Inhibitors (Ameroyal & Sokolan):**
  Our scale inhibitors, which include polymer, phosphonate and polymer blend products, protect RO membranes from a wide range of inorganic foulants, ensuring longer periods of high efficiency water production. Phosphate-free and potable water- approved formulations are also available.

- **Microbiological Control Agents (Biosperse & Generox):**
  Our collection of diverse microbiological control agents minimizes the buildup of organic matter, biological organisms and other foulants on the membrane surface, thereby ensuring optimal system performance and reducing internal shearing of RO membranes.

- **Cleaners (Ameroyal & Antispex):**
  We also provide acidic and alkaline cleaners for routine RO membrane maintenance. Together, this collection of chemical treatments ensures that membranes operate at peak efficiency and throughput while running longer between cleanings and maximizing useful life.

SOLENIS
Strong bonds. Trusted solutions.

7)Specialty Water Treatments, Wastewater Chemicals & Digital Controllers with SOLENIS

B) Open system products – Scale and fouling inhibition & Corrosion inhibition

Overview	Family Name	Prefix	Number Convention	Comments
Premium Products	Performax	MX	1XXX - Neutral 2XXX - Alkaline	Our best technology for Alkaline and Neutral programs
Conventional Blends	Performax	PM	3XXX	Basic "Me Too" technology for Alkaline programs
Deposit Control	Performax	DC&SR	5XXX	Basic antiscalants and antiscalant blends - good for multi-drum bids (DC - Inhibitors / SR – Surfactants)
Corrosion Inhibitors	Performax	CC	6XXX	Copper corrosion inhibitors and specialty inhibitors
Corrosion Inhibitors	Millsperse	MS&PT	7XXX	Concentrated, basic corrosion inhibitors for general, once-through and potable applications. Also good for multi-drum bids.

7) Specialty Water Treatments, Wastewater Chemicals & Digital Controllers with SOLENIS

C) Closed system products – Corrosion inhibition

Product	Technology	Notes
Drewgard™ 315	Molybdate / TTA /Polymer	Highly effective multi-metal inhibitor. Always check with APPL before use in Aluminium systems.
Drewgard™ 880	Nitrite/Phosphonate/TTA	Never let nitrite levels fall below limit. Use biocide.
Maxigard™ 4109 PLUS	Silicate/Nitrite/Amine/TTA/Polymer	Never let nitrite levels fall below control limit. Use biocide
Performax™ 95T	Alkanolamine/Triazole	All-organic corrosion inhibitor with passivating properties. Always add biocide, product will act as microbial nutrient
Performax™ 330	Molybdate/Nitrite/Silicate/TTA/Polymer	Very effective for multi-metal systems (not Aluminum!). Will passivate corroded surfaces.
Performax 345E	Phosphonate/Organic/MBTA/Polymer	Low toxicity inhibitor for CaCl2 brines and low conductivity systems. Non-Nitrite / metal - free treatment.
Performax™ 891	Ethylene Glycol/Nitrite/Silicate/MEA/MBTA	Ethylene Glycol antifreeze, contains multi-metal inhibitors. Nitrite based! Dose rate depends on temperature.
Performax™ CL1300	Phosphonate/Polymer/Silicate/TTA	Corrosion inhibitor for mixed metal systems including Aluminum. FOR ALUMINIUM – USE AT 10 000 ppm AS PRODUCT.
Performax™ CL4105	Nitrite/TTA	Never let nitrite levels fall below control limit. Use biocide

7)Specialty Water Treatments, Wastewater Chemicals & Digital Controllers with SOLENIS

D) Micro Biological Water Treatment Technology (Biocides)

HALOGENE BASED OXIDIZERS		O•/•OH-Radical Releasers	
Biosperse 261T	- BCDMH tables (bromine releaser)	Generox 207A/225A	- NACIO2 for CIO2 generation
Biosperse 263	- BCDMH granules (bromine releaser)	Generox 207B/225B	- HCI for CIO2 generation
Biosperse 3001	- NAOCI (chlorine bleach)	Generox 3100	- Stabilized Chlorine Dioxide
Drewborm EU	- NABR	Enviroplus 1010	- Hydrogen Peroxide
Drewborm One L	- BRCL	Enviroplus 1020	- Peracetic Acid

Biosperse 214 N	- Quats DDAC/BCDAC
Biosperse 244	- DBNPA
Biosperse 250	- ISO (CMI/MIT)
Biosperse 2545	- Glutaraldehyde
Biosperse 2544	- Glutaraldehyde (dil.)
Biosperse 48 L	- BNPD (Bronopol)
Biosperse 535 EMD	- THPS
Biosperse CN7848	- Mix: Glut./ISO (CMI/MIT)
Biosperse 227	- Mix: Glut./Quat (BCDAC)

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E) Organic dispersant

Product	Composition	Comments
PERFORMAX SR5600	Wetting and dispersing agents	Low foaming non-ionic dispersant for oils, greases and dispersion of organic debris and fouling.
PERFORMAX DC5801	Soya oil-based dispersant and emulsifier	Very low foam formulation and Biodegradable, environmentally friendly dispersant. Particularly useful where deposits may contain microbial content.

7)Specialty Water Treatments, Wastewater Chemicals & Digital Controllers with SOLENIS

F) Boiler Water Treatment

Request	Respond	Product Lines
Corrosion Control	Oxygen Scavengers Alkalizers and Neutralizers	MEKOR™ AMERSITE™ AMERCOR™
Deposit Control	Antiscalants	AMERTROL™ DREWPHOS™
Fireside Deposit & Corrosion Control	Fuel Stabilizers Dispersants Combustion Additives	AMERG™
Investment Protection Programs	Lay Up Agents Cleaners	DREWCLEAN™ PROTECSOL™
Special Leak Alert System	Controller	ONGUARD™ Controller Systems

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G) Wastewater treatment and sludge dewatering, Mining:

Physical Forms of <u>SOLENIS</u> Polyacrylamide (PAM) Polymers:
- Granular
- Beads
- Emulsions
- Water-water Dispersions

Products portfolio:
- Drewfloc™ flocculants
- Amerfloc™ polymers
- Praestol™ polymers
- Zetag™   Polymers
- ChargePac™ coagulants
- Amerscent™ odor control agents
- Drewplus™ defoamers
- Amersep™ metal precipitants

SOLENIS™
Strong bonds. Trusted solutions.

H) ONLINE CONROLLERS

Clearpointsm Biofilm Detection & Control

The **OnGuard™ 3B analyzer** provides the earliest detection and most accurate measurement of biofilm growth possible in industrial water systems, enabling plant operators to take corrective action before biofilm can cause heat transfer loss or equipment damage. Watch to see how it works.

Its unique features include:

- Ultrasonic sensor that distinguishes soft organic fouling from hard scale
- Ability to track multiple biofilm-related metrics such as thickness and temperature
- Unparalleled measurement sensitivity down to 10 microns

The unique ultrasonic sensor has received third-party validation for biofilm detection.

Onguardtm 3S Analyzer

Impurities in industrial water and process streams can cause scale to form on equipment surfaces and in associated piping. By addressing scale proactively, you can prevent it from affecting system performance and reducing equipment life.
Our revolutionary OnGuard 3S analyzer provides accurate scale measurement in real time and provides advanced warning of potential upset conditions like fouling factor changes. The analyzer uses patented ultrasound technology to detect scale deposition at levels as low as 1 micron, providing unparalleled sensitivity as compared to other scale measurement techniques.

The OnGuard 3S analyzer is proven to provide the following benefits:

- Improved system performance
- Improved asset protection
- Optimized chemical usage
- Reduced costs
- Reduced operator intervention

8)Other LTC Products

LTC has a lot of other products needed for Water & Wastewater Treatment industry:

- Designing and building small RO, STP, Greywater Treatment Plants.
- Mechanical flow meters.
- RO membranes (4", & 8") sizes.
- UPVC Housing with different standard sizes.
- Commodity Chemicals.
- Pressure gauges.
- Chemicals Transfer pumps.
- Electro-magnetic flow meters.

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📍 7273 Prince Turki Ibn Abdul Aziz ALAwal-Hittin District-13512 Riyadh 2205

✉️ Info@liquidstechnology.com

☎️ +966 11 8125290

🌐 www.LiquidsTechnology.com