








2023 Europe

Water Technologies

Equipment innovations
and supporting materials
for water treatment applications



Cooling	
Boiler	
Process	
Pre-treatment	
Post-treatment	
Application	



WATER



FOOD



HEALTH




CLIMATE








 Control



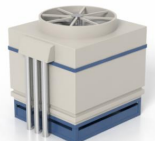

 Feed






 Storage

 Separation

 Analytical

Cooling	
Boiler	
Process	
Pre-treatment	
Post-treatment	
Application	

Cooling Water General	Cooling Water Light	Cooling Water Solids
		
Cooling Water Small	-	-
		

Portfolio	
	Control
	Feed
	Storage
	Separation
	Analytical



Cooling

Make-up water

Microbiology
treatment

Corrosion, scaling and
microbiology treatment

ClO₂ generation

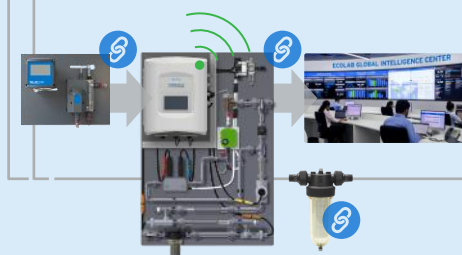
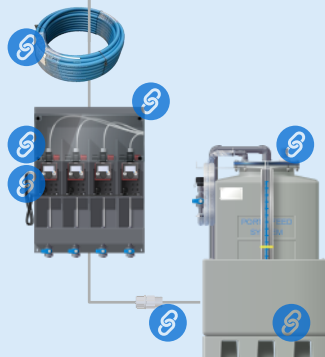
Water

Chemistry dosage

Monitoring and control

Blowdown

- ENVIROX
- NALDIOX
- PURATE-S





Cooling

Make-up water

Corrosion, scaling and
microbiology treatment

Chemistry dosage

Monitoring and control

Blowdown



Cooling

Make-up water

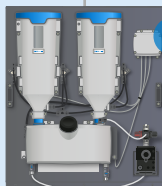


Microbiology
treatment

Microbiology treatment

Corrosion and
scaling treatment

Chemistry dosage



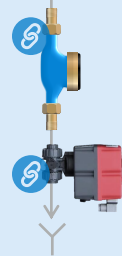
Water

Water

Monitoring and control



Blowdown





Cooling






Make-up water

Corrosion, scaling and
microbiology treatment



Chemistry dosage






Monitoring and control

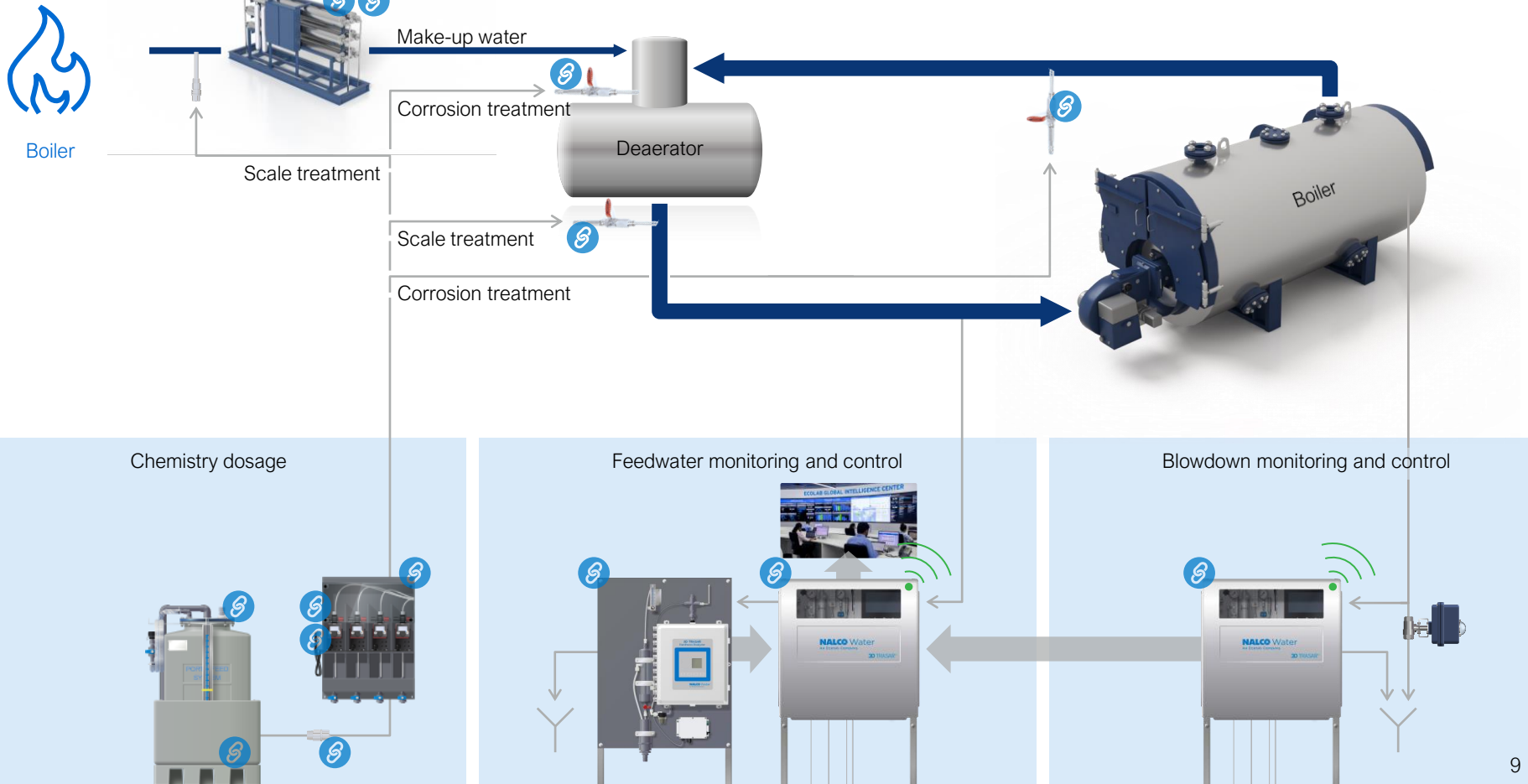
Blowdown

Cooling	
Boiler	
Process	
Pre-treatment	
Post-treatment	

Application

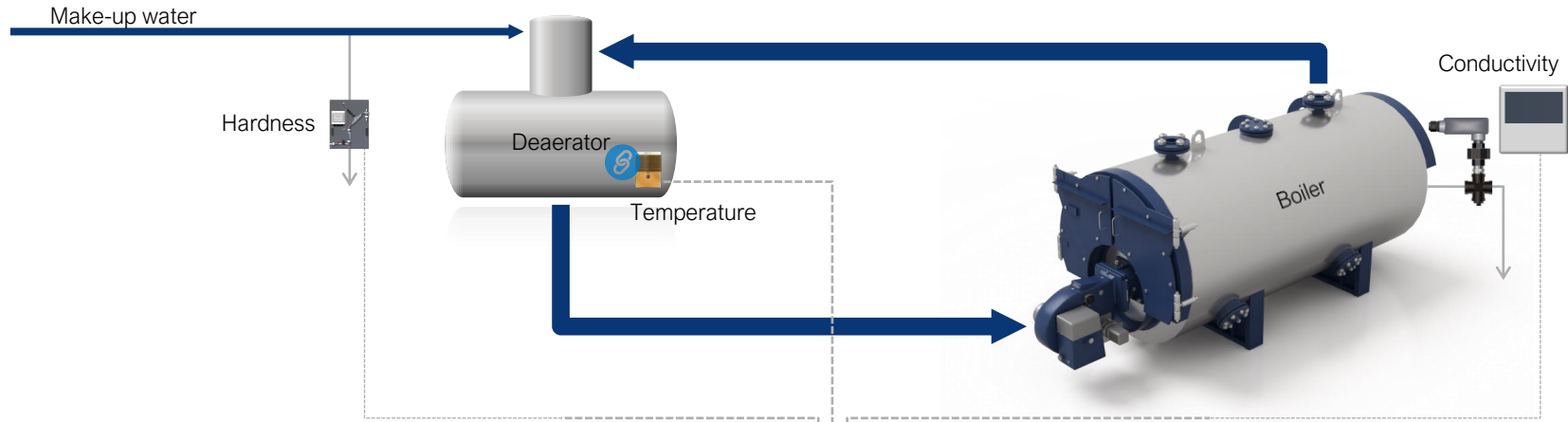
Boiler Control General	Boiler Monitoring Small	-
		
-	-	-

Portfolio
 Control
 Feed
 Storage
 Separation
 Analytical
8





Boiler



Tank level monitoring



Monitoring



Cooling



Boiler



Process



Pre-treatment



Post-treatment

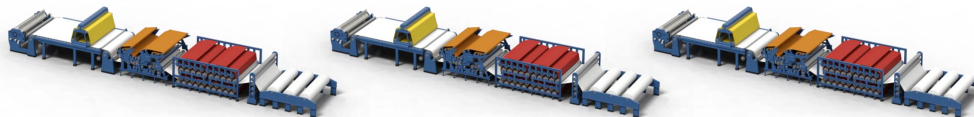


Application

Paper
Formation

Paper
Slime Control

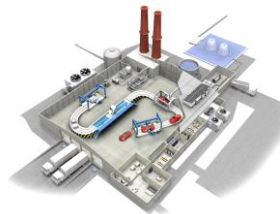
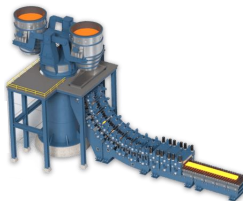
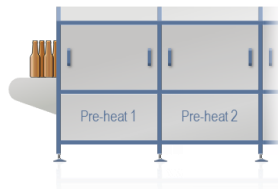
Paper
Raw Material Reduction



Food and Beverage
Pasteurizers

Primary Metals
Continuous Casters

Process Water
Water Flow Intelligence



Portfolio



Control



Feed



Storage



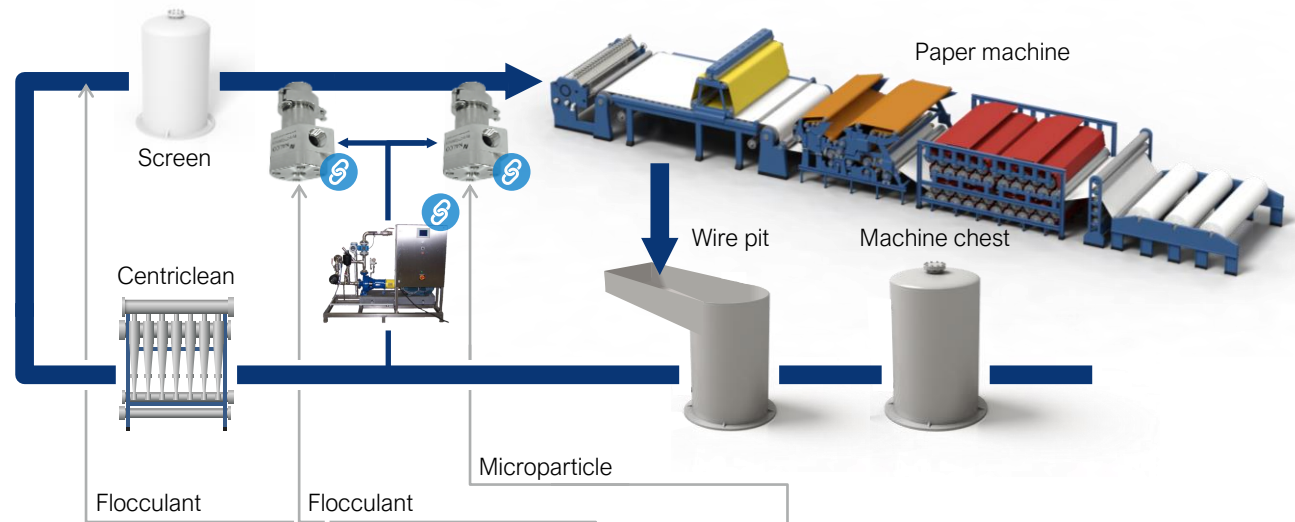
Separation



Analytical



Paper
formation



Flocculant dosage

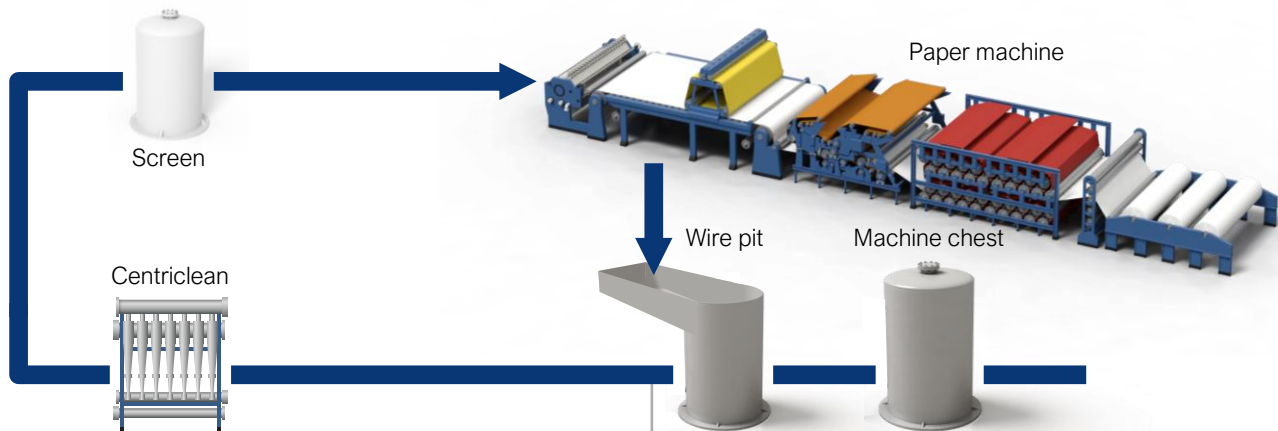


Microparticle dosage





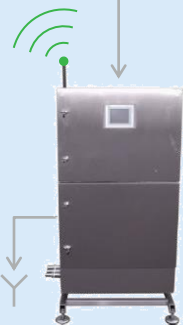
Paper
slime control



Double walled PTFE 12x9mm

To long loop
dosing points

Microbiology monitoring

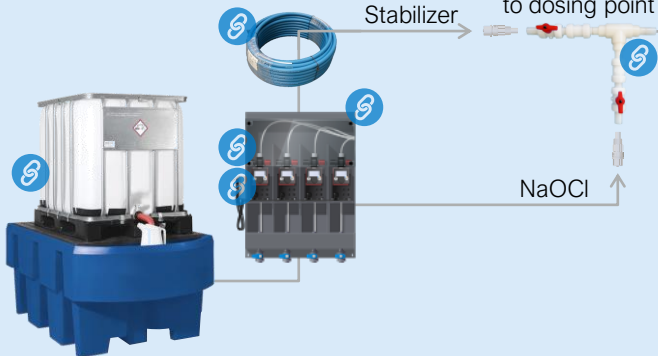


Biocide dosage

Stabilizer

Reaction tee close
to dosing point

NaOCl



Biocide dosage

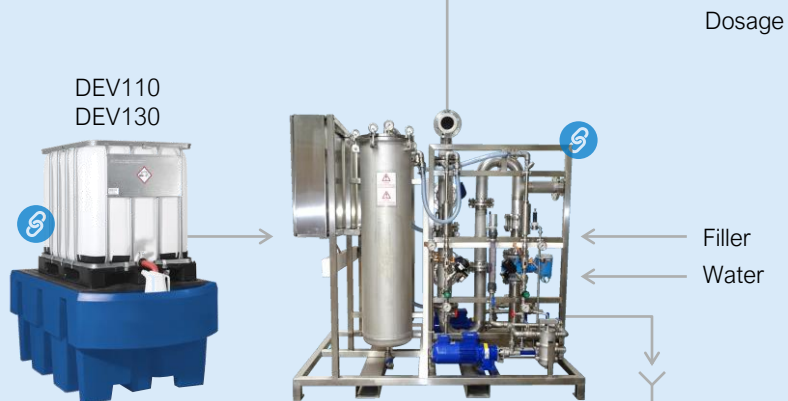
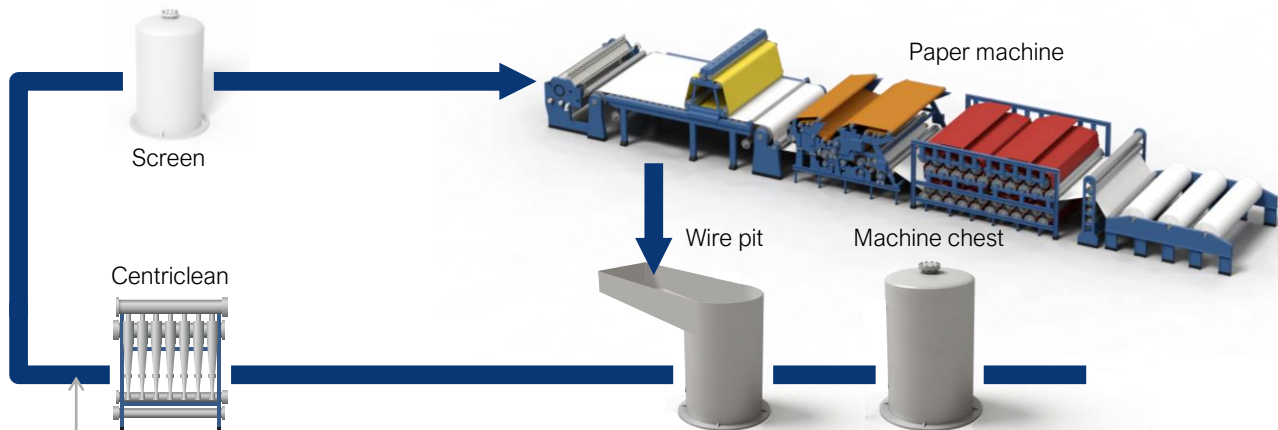
Water



- OxiPRO P
- OxiPRO Q2
- CONNEX

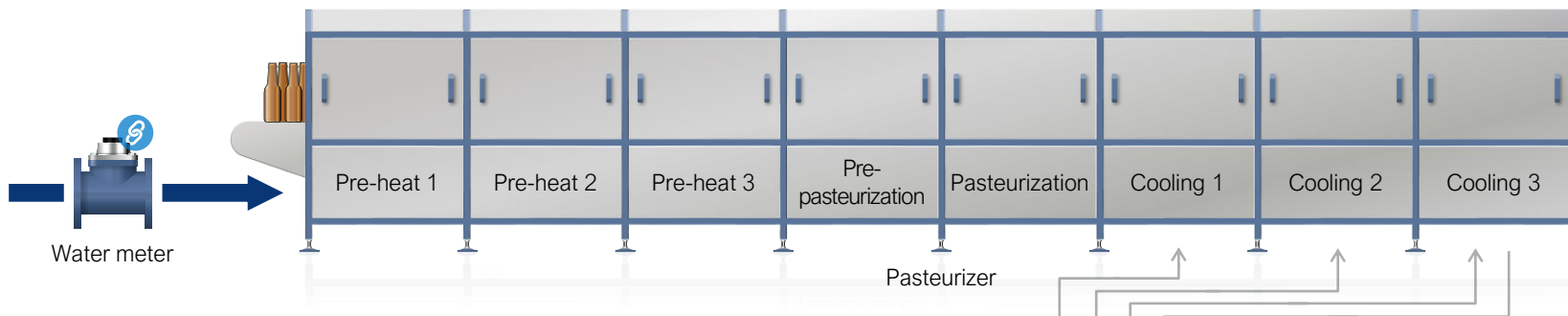


Paper
raw material
reduction

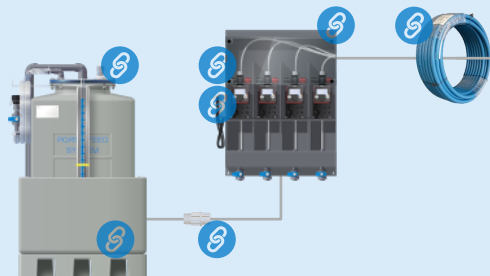




Pasteurizer



Chemistry dosage

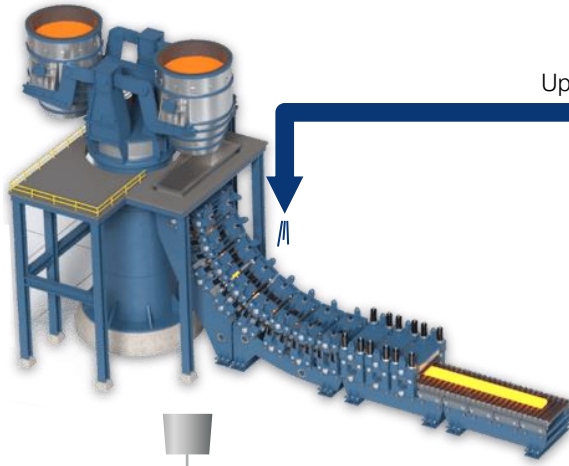


Monitoring and control





Continuous
caster



Upper spray line with spray water

Buffer

Corrosion inhibitor

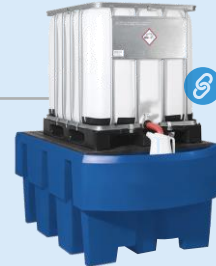
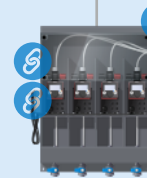
Anti-scalant

Monitoring and control



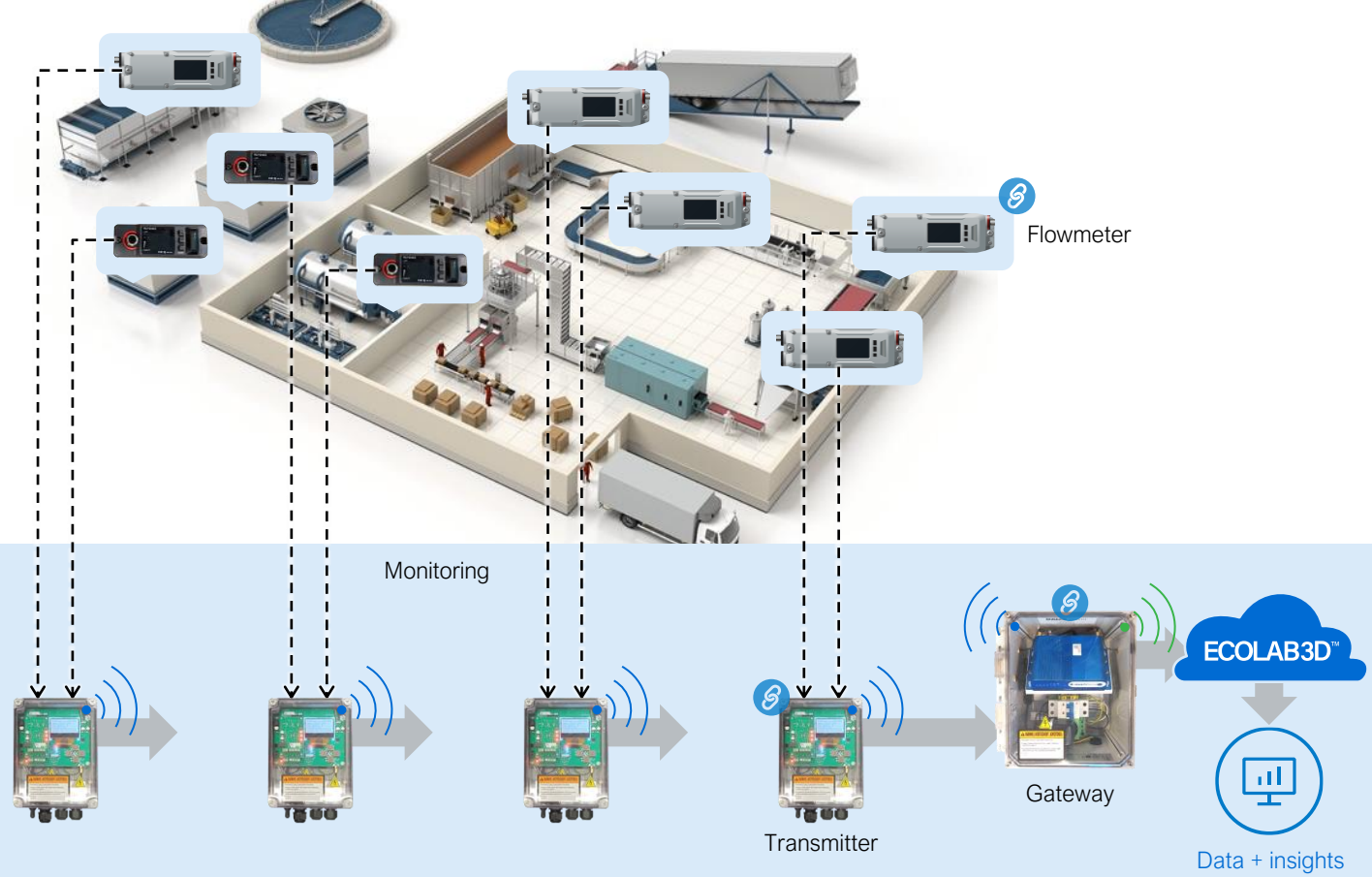
Compressed air
(or compressor)






Dosage





Intelligence



Cooling	
Boiler	
Process	
Pre-treatment	
Post-treatment	

Application

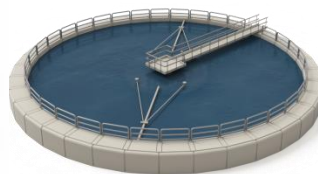
Reverse Osmosis
High Performance



Reverse Osmosis
Performance



Raw Water Treatment
Separation, Feed



Potable Water
Bio-management



Portfolio



Control



Feed



Storage



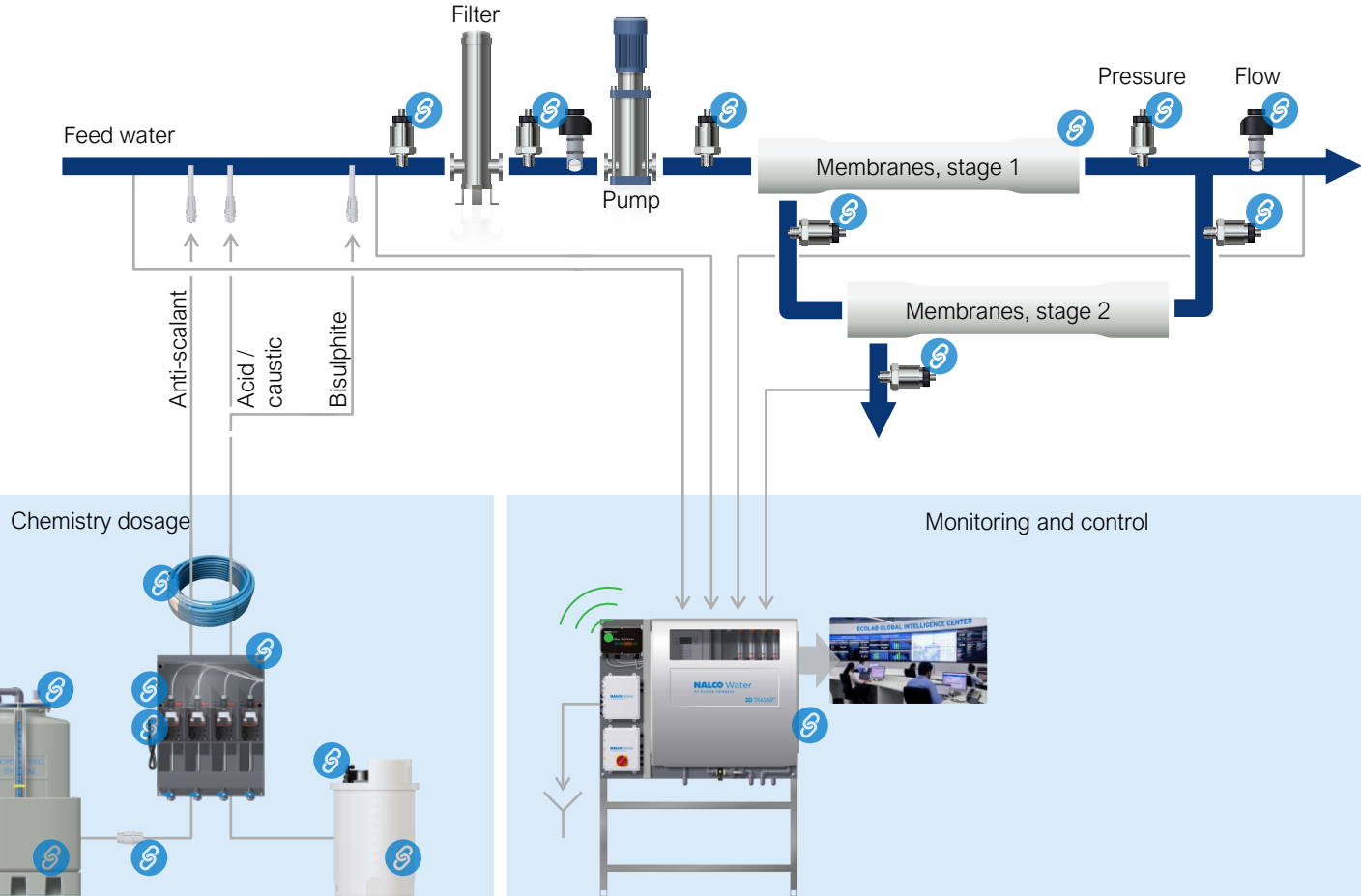
Separation



Analytical

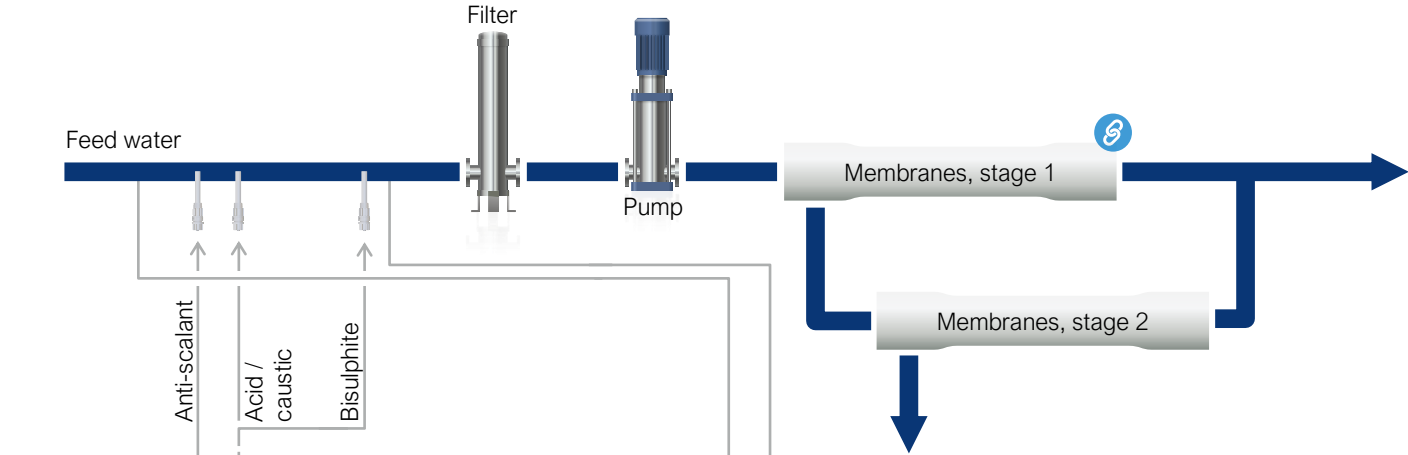


Membrane

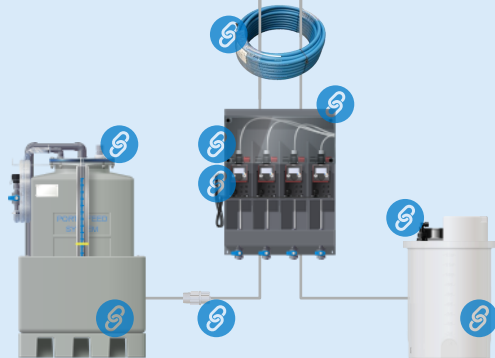




Membrane



Chemistry dosage

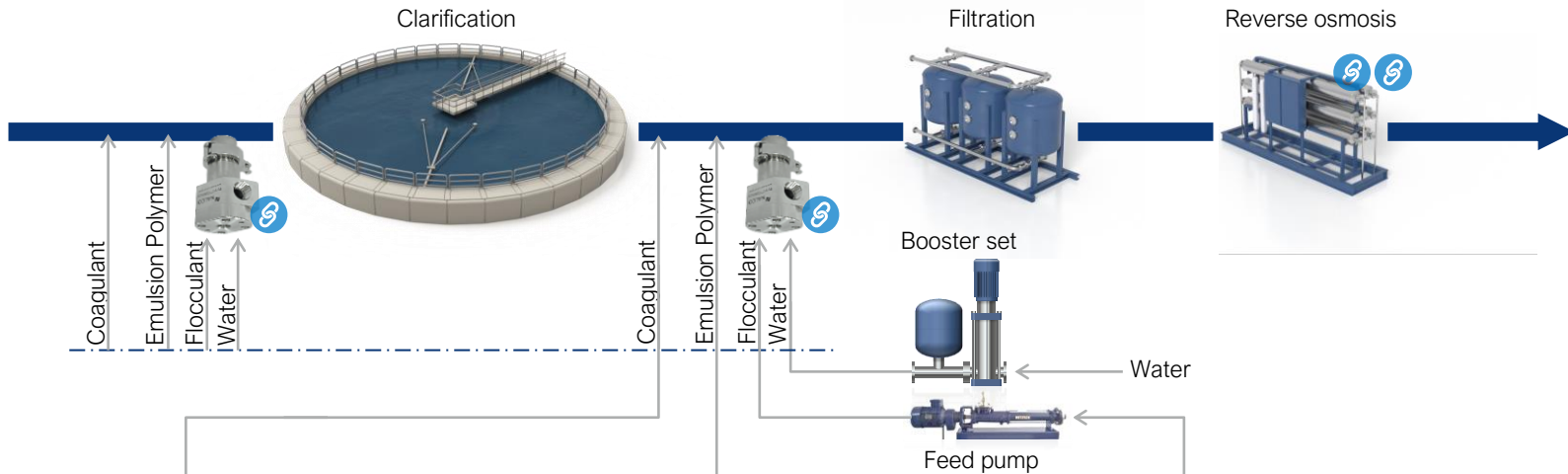


Monitoring and control

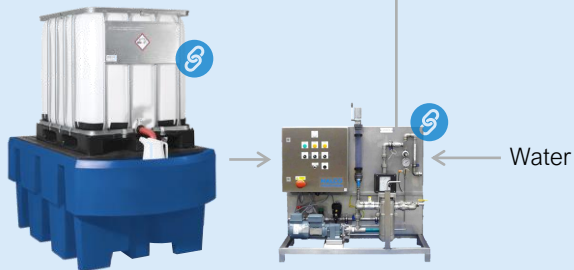




Raw water



Coagulant dosage



Emulsion polymer dosage



Flocculant dosage

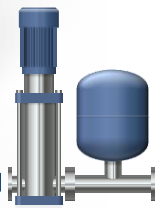




Potable water



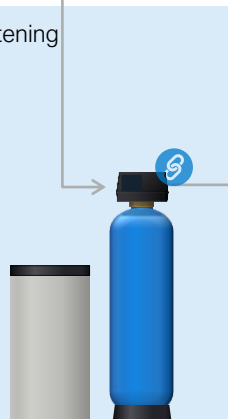
Potable water tank



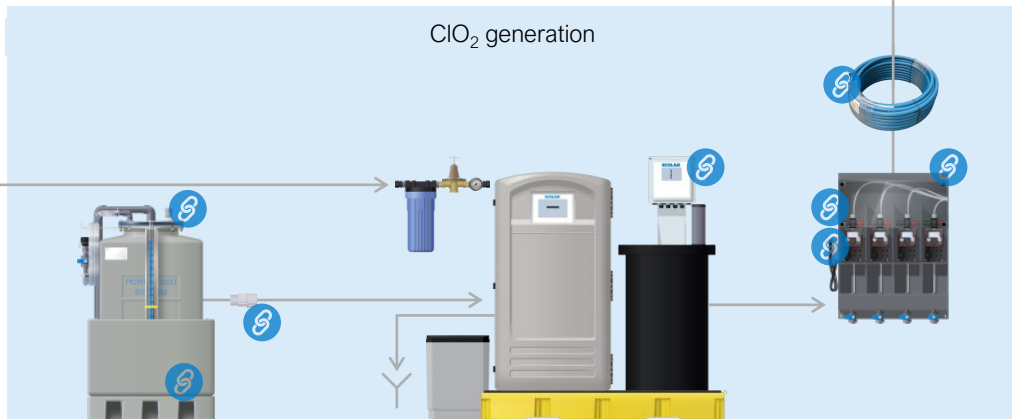
Booster set



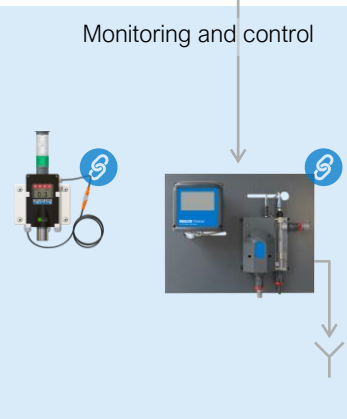
Softening











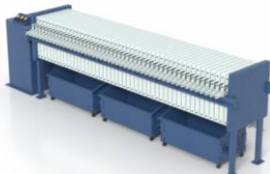

ClO₂ generation








Monitoring and control



Cooling	
Boiler	
Process	
Pre-treatment	
Post-treatment	
Application	

Post-treatment Feed	Post-treatment Monitoring, Control	Water Reuse Separation, Feed
		
Post-treatment Solids Handling	Automotive Paint Detackification	-
		

Portfolio	
	Control
	Feed
	Storage
	Separation
	Analytical



Wastewater

Equalization tank

Primary clarification DAF/IAF

Biological treatment

Secondary clarification

Acid / caustic

Coagulant

Emulsion Polymer

Flocculant

Water

Nutrient

Antifoam

Coagulant

Emulsion Polymer

Flocculant

Water

Booster set

Water

Feed pump

Nutrient, antifoam, acid/caustic dosage

Coagulant dosage

Emulsion polymer dosage

Flocculant dosage

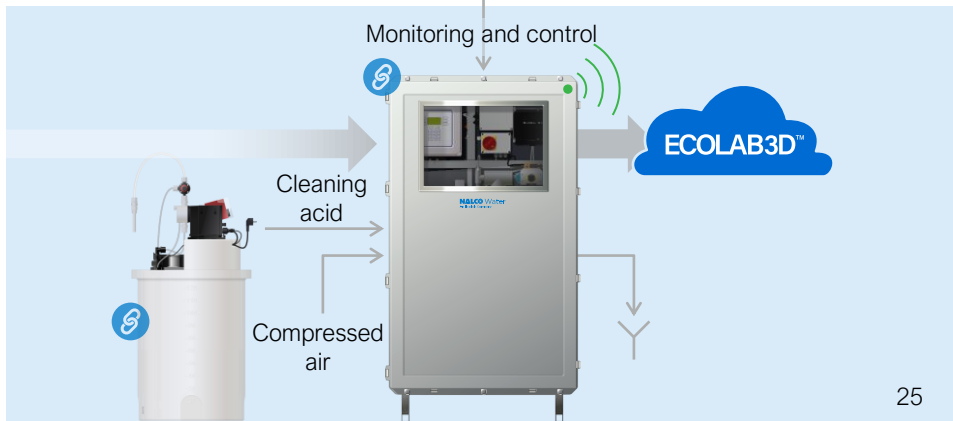
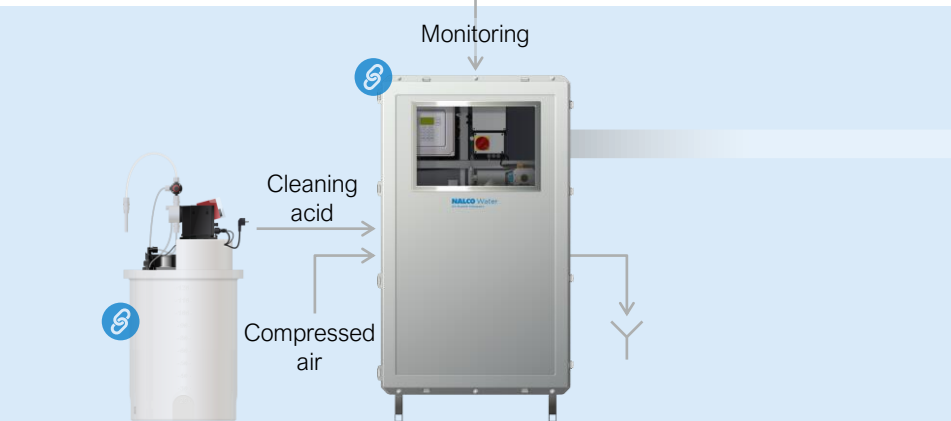
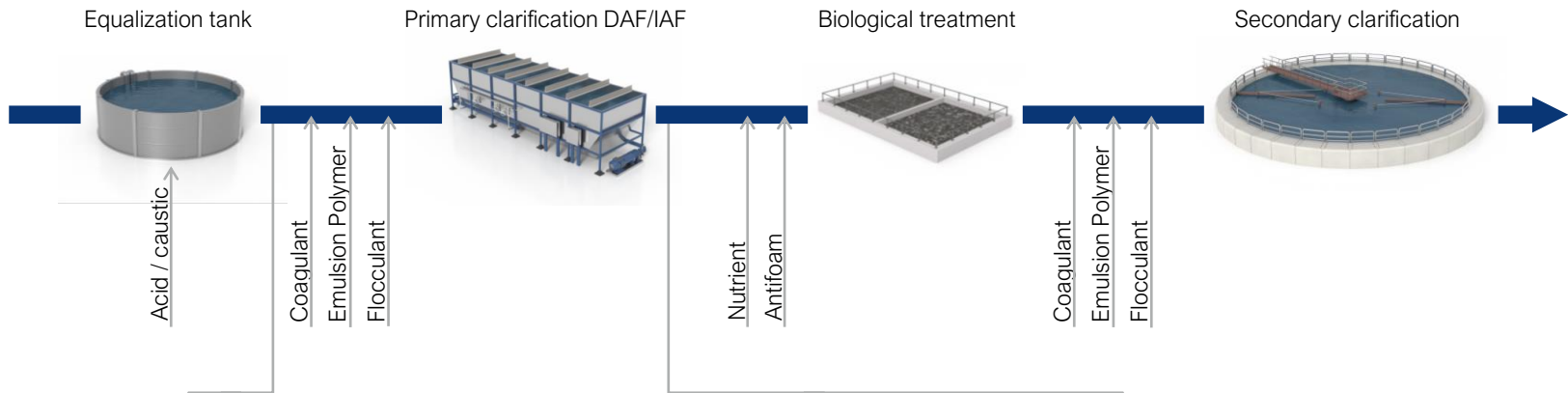
Water

Water

Powder Water



Wastewater



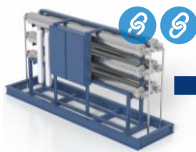


Water
reuse

Advanced Oxidation



Reverse osmosis



Filtration



Coagulant

Emulsion Polymer

Flocculant

Water

Water

Feed pump

Coagulant dosage



Water

Emulsion polymer dosage



Water

Flocculant dosage

Powder

Water



26





Solids
handling

Thickener

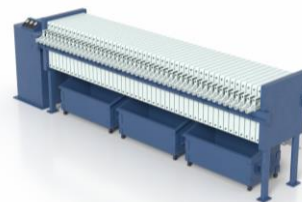


Solids
Sensor

Inline Mixer



Sludge dewatering



Flocculant preparation



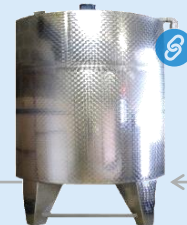
Water

Flocculant solution feed



Flocculant preparation

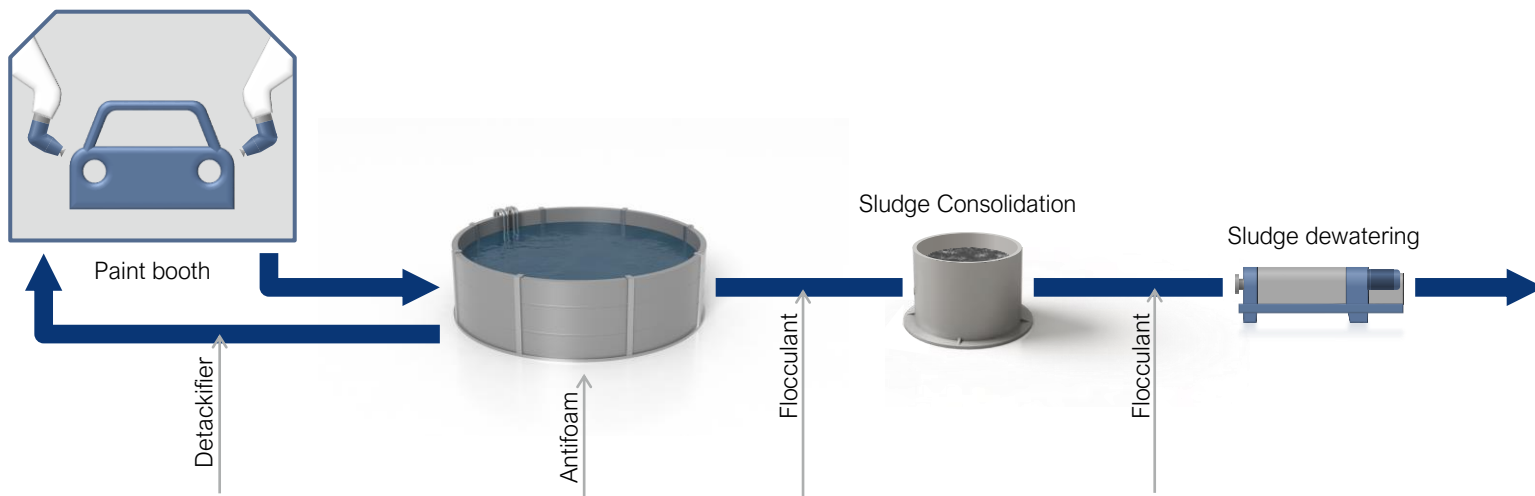
Powder



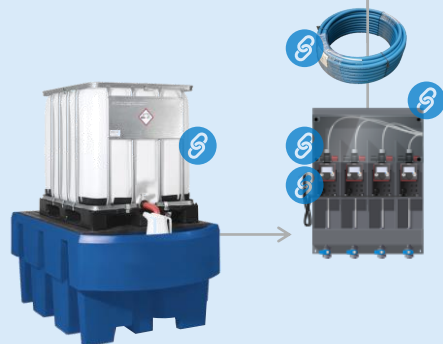
Water

27

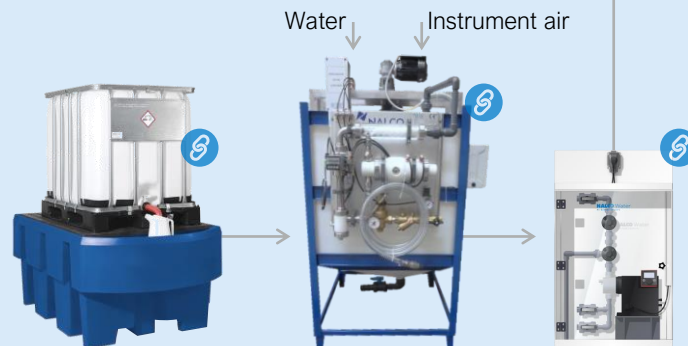




Detackifier, antifoam dosage



Flocculant activation and dosage





Control



Feed



Storage



Separation



Analytical

Cooling

3D TRASAR
Cooling Water3D TRASAR
Light CW3D TRASAR
Solid CW3D TRASAR Small
CWOMNI
Heat Exchanger

Boiler

3D TRASAR
Boilers3D TRASAR
Boilers - Hardness3D TRASAR
Boilers3D TRASAR
MembranesTRASAR
Reverse Osmosis

Process



Pre-treatment

3D TRASAR
DAF3D TRASAR
Wastewater3D TRASAR
Pasteurizers3D TRASAR
CastersTank Level
Monitoring

Post-treatment

Water Flow
IntelligenceCorrosion Test
RacksNalco Oxidant
Controller

Water Meters



-

3D TRASAR Technology for Cooling Water

PREMIUM C300 SERIES

Next Generation 3D TRASAR minimizes water usage, maximizes performance and optimizes TCO. The technology is designed to determine and control the scaling potential of your cooling water, microbial activity, as well as corrosion levels. Connect compressed air to minimize manual sensor cleaning. Smart sensors help enforce reliable readings. Our Ecolab Global Intelligence Center provides 24/7/365 expert monitoring and advice, using the readings and alarms that are sent to Nalco Water via wireless gateway.

Sample water: Typically 1-1.5m³/h, depending on required flow for corrosion sensors. 25mm PVC solvent weld connections (3/4" fBSP connectors included).

Power supply: 120-240VAC, max. 1800VA depending on connected devices.

Signal connections: 7x control relay (pot. free or Vac), 1x alarm relay, 8x analogue input, 8x analogue output, 16x digital input, Modbus.

Included: Fluorometer, sensors (conductivity, pH, ORP, mild steel corrosion, copper corrosion), wireless gateway.

Part No.

3DT-CW8214.88

3DT-CW8544.88

3D TRASAR System

Model CW8214, wall mount

Model CW8544, enclosed, floor mount, with hot-return ORP and chemical sensor clean components

Part No.

3DT-CWFRM1.88

3DT-CWMU1.88

Option for model CW8214

Floor mount frame

Add-on module, make-up water conductivity

3DT-CWCC2.88

Add-on module, chemical sensor clean pipe kit, 240VAC

3DT-CWHR0.88

Add-on module, hot return water ORP, 240VAC

3DT-CWHR2.88

Add-on module, hot return water ORP, 240VAC, with acid clean injection components

Part No.

3DT-CWMU2.88

Option for model CW8544

Add-on module, make-up water conductivity



Minimizes water, maximizes results, and optimizes TCO.

Provides advanced scaling, microbio and corrosion control.

24/7/365 supervision by our Ecolab Global Intelligence Center experts.



Accessories

Part No. Calibration (webshop)

500-NGTSRKITW.88 Start-up kit, calibration solutions (2x 3D TRASAR, pH4, pH7, conductivity 3000µS/cm, 600µS/cm), 3x syringe, 3x beaker, cleaning brush

Part No. External antenna

060-TR5284.88 External antenna, no cable
060-TR5284C25.88 Cable, 8m, for external NGG antenna
060-TR5284C100.88 Cable, 33m, for external NGG antenna

Part No. Sensor

3DT-NCMBRS.88 Corrosion sensor, NCM, brass

Part No. Sample filtration

6002106 Cartridge Filter, 25micron, NW25, 1" mBSP
6035389 Bracket, PP, for wall mount of cartridge filters NW18-NW32
6002104 Pressure gauge, 10bar, for cartridge filters NW18-NW32
6002099 Sleeves (5), 100micron, for cartridge filter NW25

Part No. 120VAC

3DT-FUSE120.88 Fuses for 120VAC (2x 15A, 8x 4A)

Spares

Part No.

3DT-CWMKIT1.88
3DT-PHPRB1.88
3DT-ORPPRB1.88
3DT-NCMMS1.88
3DT-NCMCU1.88
3DT-NCMBRS.88
500-P5035A.88
500-P5038A.88

Part No.

3DT-CWMKITW.88

500-P2817.88
500-P0116.88
500-P2147.88
460-S0940.75
460-S0297.75
460-S0298.75
460-S0407.75
460-S0406.75
460-S0800.74

Consumables

Maintenance kit, sensors (NCM, pH, ORP, desiccant)
Sensor, pH
Sensor, ORP
Sensor, corrosion NCM, mild steel
Sensor, corrosion NCM, copper
Sensor, corrosion NCM, Brass
Corrosion coupon, mild steel
Corrosion coupon, copper

Consumables (webshop)

Maintenance kit, calibration solutions (3D TRASAR, pH, cond., syringes)
Brush for Fluorometer cleaning
Beaker, plastic, 0.8L
Syringe for Fluorometer calibration
Calibration solution, 3D TRASAR, 1L
Calibration solution, conductivity, 3000µS/cm, 1L
Calibration solution, conductivity, 600µS/cm, 1L
Calibration solution, pH7, 1L
Calibration solution, pH4, 1L
Sulfuric acid, 10%, 0.5L, for manual cleaning of sensors

3D TRASAR Light Cooling Water Technology

PREMIUM C200 SERIES

The 3D TRASAR Premium C200 series 'Light' cooling water system is a simplified version of the Premium C300 series 'Next Gen' cooling water system. It delivers value to small cooling towers and evaporative condensers where corrosion is not a concern and where good water quality does not require the automatic air cleaning system.

Our Ecolab Global Intelligence Center provides 24/7/365 expert monitoring and advice, using the readings and alarms that are sent to Nalco Water via wireless gateway.

Part No.	3D TRASAR system
3DT-CWL500E.88	Model CWL500E, wall mount

Part No.	Options
3DT-CWS420.88	pH sensor and cable
3DT-FUSE120.88	Fuses for 120VAC (2x 15A, 8x 4A)

Sample water: 250...450L/h, 25mm PVC solvent weld connections ($\frac{3}{4}$ " fBSP connectors included).

Power supply: 120-240VAC, max. 1800VA depending on connected devices.

Signal connections: 7x control relay (pot. free or Vac), 1x alarm relay, 8x analogue input, 8x analogue output, 16x digital input, Modbus.

Included: Fluorometer, conductivity sensor, ORP sensor (pH sensor is optional), wireless gateway.



Minimizes water, maximizes results, and optimizes TCO.

Provides advanced scaling, microbio and corrosion control.

24/7/365 supervision by our Ecolab Global Intelligence Center experts.



Accessories

Part No.	Calibration (webshop)
500-NGTSRKITW.88	Start-up kit, calibration solutions (2x 3D TRASAR, pH4, pH7, conductivity 3000µS/cm, 600µS/cm), 3x syringe, 3x beaker, cleaning brush

Part No.	Sensor
3DT-CWS420.88	pH sensor and cable

Part No.	120VAC
3DT-FUSE120.88	Fuses for 120VAC (2x 15A, 8x 4A)

Part No.	External antenna
060-TR5284.88	External antenna, no cable
060-TR5284C25.88	Cable, 8m, for external NGG antenna
060-TR5284C100.88	Cable, 33m, for external NGG antenna

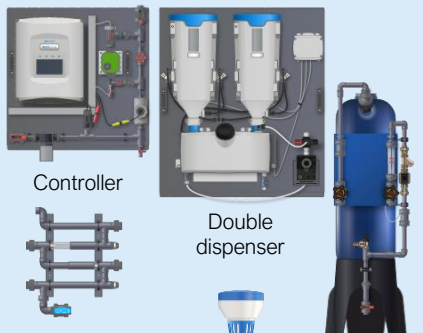
Part No.	Sample filtration
6002106	Cartridge Filter, 25micron, NW25, 1" mBSP
6035389	Bracket, PP, for wall mount of cartridge filters NW18-NW32
6002104	Pressure gauge, 10bar, for cartridge filters NW18-NW32
6002099	Sleeves (5), 100micron, for cartridge filter NW25

Spares

Part No.	Consumables
3DT-ORPPRB1.88	Sensor, ORP
3DT-PHPRB1.88	Sensor, pH
060-TR5226.88	Desiccant kit, for Fluorometer

Part No.	Consumables (webshop)
3DT-CWMKITW.88	Maintenance kit, calibration solutions (3D TRASAR, pH, conductivity, syringes)
500-P2817.88	Brush for Fluorometer cleaning
500-P0116.88	Beaker, plastic, 800ml
500-P2147.88	Syringe for Fluorometer calibration
460-S0940.75	3D TRASAR, 1L
460-S0297.75	Conductivity, 3000µS/cm, 1L
460-S0298.75	Conductivity, 600µS/cm, 1L
460-S0407.75	pH7, 1L
460-S0406.75	pH4, 1L
460-S0800.74	Sulfuric acid, 10%, 500ml, for manual cleaning of sensors





Controller
Double dispenser
Optional corrosion rack
Optional ClO₂ tablet feeder
BCD feeder

Safe, simple, sustainable solution.

Provides advanced scaling, microbio, corrosion control.

24/7/365 supervision by our Ecolab Global Intelligence Center.

3D TRASAR Solid Cooling Water Technology

PREMIUM C250 SERIES

Rethink cooling water treatment with our safe, simple and sustainable 3D TRASAR Solids solution. Our 3D TRASAR technology reduces TCO and extends asset life with real-time measurement and 24/7/365 performance monitoring.

Our solid inhibitor chemistry is packaged as dry bricks, eliminating the need to carry heavy pails or handle liquid chemistries. Filling the dispenser is as simple as taking a conveniently shaped brick and placing it inside the dispenser.

Our solid BCD biocide chemistry is packaged as dry tablets. The tablets are stored and dissolved in a BCD feeder. Our solid ClO₂ biocide chemistry is also packaged as dry tablets and dissolved in a floating dispenser.

Do not add other chemistry to the feeder or floating dispenser and do not use contaminated tools to fill the devices, as this may lead to a chemical reaction and very high-pressure build-up.

Part No.	Description
3DT-CWS110CE.88	3D TRASAR Solids controller, single dispenser, biocide feeder
3DT-CWS210CE.88	3D TRASAR Solids controller, double dispenser, biocide feeder
3DT-CWS100CE.88	3D TRASAR Solids controller, single dispenser
3DT-CWS200CE.88	3D TRASAR Solids controller, double dispenser

Sample water: Controller 250...450L/h, single dispenser 135...225L/h, double dispenser 270...450L/h, BCD feeder 64...640L/h.

Power supply: 120-240VAC, max. 1800VA depending on connected devices.

Signal connections: 7x control relay (pot. free or Vac), 1x alarm relay, 8x analogue input, 8x analogue output, 16x digital input, Modbus.

Included: Controller: Fluorometer, conductivity sensor, ORP sensor (pH sensor is optional), wireless gateway. Dispenser: Dosing pump.

Accessories

Part No.

500-P0116.88	Beaker, plastic, 800ml
460-S0297.75	Calibration solution, cond., 3000 μ S/cm, 1L
460-S0298.75	Calibration solution, cond., 600 μ S/cm, 1L
460-S0940.75	Calibration solution, 3D TRASAR, 1L
500-P2147.88	Syringe for Fluorometer calibration
460-S0407.75	Calibration solution, pH7, 1L
460-S0406.75	Calibration solution, pH4, 1L

Calibration (webshop)

Part No.

3DT-CWS420.88	pH sensor and cable
3DT-CWSFRM.88	Floor mount frame for controller + dispenser, 137x94x66cm
DSP-BIOTAB1.88	Floating dispenser for chlorine dioxide tablets
6001234	Corrosion test rack, uPVC, with two clear view sections
6001231	Orifice #3, 1.0...1.4m/s @ 3.5...7bar, for corrosion test rack
500-P5035A.88	Corrosion coupon, mild steel (1010), 76x13mm
500-P5038A.88	Corrosion coupon, copper, 76x13mm

Options

Part No.

060-TR5284.88	External antenna, no cable
060-TR5284C25.88	Cable, 8m, for external NGG antenna
060-TR5284C100.88	Cable, 33m, for external NGG antenna

External antenna

Accessories

Part No.

6002106	Cartridge Filter, 25micron, NW25, 1" mBSP
6035389	Bracket, PP, for wall mount of cartridge filters NW18-NW32
6002104	Pressure gauge, 10bar, for cartridge filters NW18-NW32
6002099	Sleeves (5), 100micron, for cartridge filter NW25

Sample filtration

Part No.

3DT-FUSE120.88	Fuses for 120VAC (2x 15A, 8x 4A)
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120VAC

Spares

Part No.

3DT-ORPPRB1.88	Sensor, ORP
060-TR5226.88	Desiccant indicator kit, for Fluorometer

Consumables

Part No.

460-S0800.74	Sulfuric acid, 10%, 0.5L, for manual cleaning of sensors
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Consumables (webshop)



3D TRASAR Cooling Water Technology

COMPACT C100-300 + PREMIUM C100 SERIES

The 3D TRASAR Compact C100-300 and Premium C100 series cooling water systems are simplified version of the Premium C200 series 'Light' cooling water system.

The series delivers value to small cooling towers and evaporative condensers by providing remote visibility to avoid escalation of issues. Our Ecolab Global Intelligence Center provides 24/7/365 expert monitoring and advice, using the readings and alarms that are sent to Nalco Water via wireless gateway, to minimize response time and increase performance. The version with TRASAR ensures chemical treatment and enables higher cycles of concentration to minimize water usage.

Part No.

3DT-FSCS161.88

3DT-FSCS261.88

3DT-FSCS461.88

3D TRASAR system

Compact C100, with conductivity

Compact C300, with conductivity, ORP

Premium C100, with conductivity, ORP, TRASAR

Sample water: 250...450L/h, 25mm PVC solvent weld connections ($\frac{3}{4}$ " fBSP connectors included).

Power supply: 108...253VAC, 50/60Hz, $\leq 7.5A@240V$, $\leq 15A@120V$.

Signal connections: 6x relay output (pot. free or Vac), 4x analogue input, 5x digital input, Modbus.

Included (depending on model): Fluorometer, conductivity sensor, ORP sensor (pH sensor is optional), wireless gateway.



Premium C100

Maximize visibility to avoid escalation of issues.

Minimize response time with the Ecolab Global Intelligence Center to increase performance.

Maximize cycles with TRASAR to reduce water usage.



Accessories

Part No.

3DT-FSCSKIT1.88
3DT-FSCSKIT5.88

Calibration (webshop)

Cal. kit, 1x 600 μ S/cm (1L), 1x 3000 μ S/cm (1L), 2x beaker
Calibration kit, 1x 600 μ S/cm (1L), 1x 3000 μ S/cm (1L),
2x TRASAR #2 (1L), 2x syringe, 4x beaker, 1x brush
Calibration solution, pH4, 1L
Calibration solution, pH7, 1L
Calibration solution, pH10, 1L

Part No.

060-TR5411.88
060-TR5412.88

Sensor

pH sensor
Cable for pH sensor (already included with Compact C300
and Premium C100)

Part No.

6079477
6079478

120VAC

Fuse, glass, 5x20mm, 120V, 3.15A, slow (1 required)
Fuse, glass, 5x20mm, 120V, 4A, slow (6 required)

Part No.

060-TR5284.88
060-TR5284C25.88
060-TR5284C100.88

External antenna

External antenna, no cable
Cable, 8m, for external NGG antenna
Cable, 33m, for external NGG antenna

Part No.

6002106
6035389
6002104
6002099

Sample filtration

Cartridge Filter, 25micron, NW25, 1" mBSP
Bracket, PP, for wall mount of cartridge filters NW18-NW32
Pressure gauge, 10bar, for cartridge filters NW18-NW32
Sleeves (5), 100micron, for cartridge filter NW25

Spares

Part No.

060-TR5421.88
060-TR5411.88
060-TR5226.88

Consumables

Sensor, ORP
Sensor, pH
Desiccant kit, for Fluorometer

Part No.

500-P2817.88
500-P0116.88
500-P2147.88
460-S0940.75
460-S0297.75
460-S0298.75
460-S0407.75
460-S0406.75
460-S0800.74

Consumables (webshop)

Brush for Fluorometer cleaning
Beaker, plastic, 800ml
Syringe for Fluorometer calibration
3D TRASAR, 1L
Conductivity, 3000 μ S/cm, 1L
Conductivity, 600 μ S/cm, 1L
pH7, 1L
pH4, 1L
Sulfuric acid, 10%, 500ml, for manual cleaning of
sensors



OMNI™ Heat Exchanger Reliability

OMNI™
Powered by ECOLAB3D™

A new approach to managing critical assets and improving your bottom line

Advanced Monitoring

- ▷ Non-invasive OMNI Heat Exchanger sensor technology
- ▷ 24/7/365 asset monitoring by Ecolab Global Intelligence Center
- ▷ Real-time U-value available on comprehensive ECOLAB3D dashboard

Holistic Insights

- ▷ Digital data combined with consultative analytics for total water planning
- ▷ Intimate knowledge of your full operation including ancillary assets

Expert Service

- ▷ Skilled audit team measures current performance against design
- ▷ Valuable service provided by onsite team
- ▷ Customized solutions implemented by true experts

Delivering Reliability

- ▷ Predict heat exchanger performance and maintenance costs
- ▷ Prolong asset life and production runs
- ▷ Prevent unplanned downtime and lost production

Driving Profitability

- ▷ Extend run lengths
- ▷ Increase output
- ▷ Reduce energy consumption by optimizing heat transfer

Power supply

OMNI sensor panel – 230VAC, 50Hz, 32W

OMNI master radio – 24VDC, ~1W

OMNI repeater (optional) – 230VAC, 50Hz, ~11W

Regulatory compliance

OMNI sensor panel, master radio and repeater: CE

Part No.

OMNI-K1-NONATEX.88

OMNI-K2-NONATEX.88

OMNI-K3-NONATEX.88

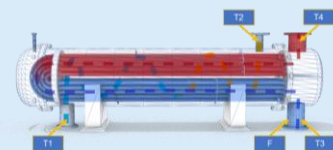
OMNI complete kits

Kit 1 - pipe size DN100-400

Kit 2 - pipe size DN200-600

Kit 3 - pipe size DN300-1000

Note: The 3D TRASAR controller is not part of the OMNI kit delivery. Any existing next generation 3D TRASAR cooling water controller can be used if it has a firmware release \geq 8A.



A first-of-its-kind program to maximize operational efficiency and improve your business outcomes - safely and sustainably.



Accessories

Part No.

060-OMNIHX-RBOX-EU.88

Repeater

OMNI repeater for 230VAC external power supply

Part No.

6069083

External antenna

External antenna 2,4GHz, magnet mount

Part No.

6077571

Extension cables

Master radio extension cable to 3DT controller (25m)

6069069

Junction box for cable extension of temperature probe

6069068

Extension cable for temperature probe (30m)

6069082

Junction box for cable extension of flow transducers

6069070

Extension cable for flow transducers (20m)

6069081

Extension cable for flow transducers (50m)

Spares

Part No.

6069054

Consumables

Coupling set for KIT 1+2*, coupling compound (100ml, 0-130°C) and coupling foil

6069055

Coupling set for KIT3*, coupling compound (100ml, 0-130 °C) and coupling foil



Minimize energy with less water intake through higher cycles.

Minimize response time with the Ecolab Global Intelligence Center to increase performance.

Maximize operation by monitoring and controlling corrosion stresses.

3D TRASAR Technology for Boilers

PREMIUM B100-200 SERIES

The Premium B100-200 series measures corrosion stresses and doses our oxygen scavenger chemistry accordingly. It also controls scale and deposits with our advanced TRASAR sensor technology and traced chemistry.

Energy is expensive: 3D TRASAR significantly reduces energy costs by accurately monitoring and controlling scale inhibitor concentrations, and therefore allowing for high cycles of concentration, which requires less feedwater and energy.

People are busy: Plants operate with fewer experienced operators. 3D TRASAR maximizes steam production, and safety, by continuously monitoring and controlling corrosion, with its corrosion stress monitor and chemistry. Out-of-spec occurrences take place frequently. Our Ecolab Global Intelligence Center, maximizes boiler performance, by monitoring, 24/7/365.

Sample water: 15...30L/h, 1...130bar (BM530: 1...165bar), 5...200°C (BM530: 5...260°C)

Cooling water: 115-450L/h @ 15°C

Model	Series	Application	Corrosivity (NCSM)	Sample condit.	Scale control (fluorometer)	Auto clean (fluorometer)	Cond., pH	Floor mount
3DT-BM55212.88	Premium B200	Feed water	●	●	TRASAR 3	-	●	●
3DT-BM57212.88	Premium B200	Feed water	●	●	TRASAR 1	-	●	●
3DT-BM53012.88	Premium B200	Feed water	●	-	-	-	-	-
3DT-BM53212.88	Premium B200	Feed water	●	●	-	-	●	●
3DT-BM54202.88	Premium B100	FW/BD	-	●	TRASAR 3	-	●	●
3DT-BM56202.88	Premium B100	FW/BD	-	●	TRASAR 1	-	●	●
3DT-BM64202.88	Premium B100	Blow down	-	●	TRASAR 3	-	-	●
3DT-BM86202.88	Premium B100	Blow down	-	●	TRASAR 1	●	-	●

Accessories

Part No.

500-BTSRKIT.88 (webshop)
6018909

Calibration

Start-up kit, preventative maintenance, Fluorometer
Start-up kit, preventative maintenance, NCSM

Part No.

060-TR5284.88
060-TR5284C25.88
060-TR5284C100.88

External antenna

External antenna, no cable
Cable, 8m, for external NGG antenna
Cable, 33m, for external NGG antenna

Part No.

060-BLM5200.88

060-BDP100C.88

Sensors

NCSM, wall mount, no controller, connects to
3D TRASAR Boiler controller
Sensor, conductivity, 5-10,000µS/cm, K1.0, 17.2bar,
200°C, 20cm PTFE cable, includes RTD, includes 3/4"
cross-piece
Particle Monitor, including 1 sensor and 1 constant
pressure weir
Particle module/sensor and weir, for Particle Monitor
(add max 3)

Part No.

060-ROMAIM101.88

6038502

6049226

Other

Analogue Input Module (8x 4-20mA for pressure / flow
signals)
Frame, SS, for floor mounting 060-BLM5320.88 or 060-
BLM5200.88
Solenoid, 120VAC, for replacing 240VAC solenoid of
Sample Conditioning System (SCS)

Spares

Part No.

6018909
6018914
060-TR5226.88
060-TR5411.88
6035381

Consumables

Start-up kit, preventative maintenance, NCSM
Grease, 150g, for NCSM ref.
Desiccant kit, for Fluorometer
Sensor, pH, for 100-10,000µS/cm water
Sensor, pH, for 1-10,000µS/cm water

Part No.

500-BTSRKIT.88
001-H07641.75
460-S0743.75
460-S0297.75
460-S0299.75
001-H07642.75
460-S0298.75
460-S0408.75
460-S0407.75
460-S0980.75
460-S0800.74
6018930
6018931
500-P0120.88
500-P2147.88
500-P2817.88

Consumables (webshop)

Start-up kit, calibration, prev.maint., Fluorometer
Calibration solution, 10000µS/cm, 1L
Calibration solution, 200µS/cm, 1L
Calibration solution, 3000µS/cm, 1L
Calibration solution, 40µS/cm, 1L
Calibration solution, 5000µS/cm, 1L
Calibration solution, 600µS/cm, 1L
Calibration solution, pH10, 1L
Calibration solution, pH7, 1L
Calibration solution, TRASAR #3
Cleaning solution, sulfuric acid, 10%, 0.5L
Reference solution, KCl, 0.1N, 125ml, NCSM ref.
Test solution, KCl, 3.8M, 125ml, NCSM test
Beaker, plastic, 0.5L
Syringe, 60ml, for Fluorometer
Brush, for Fluorometer cell

3D TRASAR Boiler Hardness Analyzer

PREMIUM B300 SERIES

The 3D TRASAR Hardness Analyzer uses reagents and a fluorometer to measure calcium, magnesium and total hardness in boiler systems every 15, 30 or 60 minutes. NexGuard internal treatment chemistry can be increased automatically during hardness excursions (temporarily). The analyzer also calibrates itself periodically, and it sends alarms when reagent levels are low.

The analyzer must be connected to a Premium series 3D TRASAR boiler system. Up to three 3D TRASAR Hardness Analyzers can be connected to one 3D TRASAR boiler system.

Sample water: 6...30L/h (through weir), 0.27L/h measurement every 30 minutes (through analyzer).

Power supply: 88...264VAC, $\leq 1.2A$ @ 240VAC, $\leq 2A$ @ 120VAC.

Measurement: Total hardness, accuracy +/-10% @ 100...2400ppb, +/-50% @ <100ppb, +/-15% @ 2400...3000ppb. Magnesium hardness: Detection limit 10ppb.

Part No.

060-HMF100.88

060-HMW100.88

Hardness Analyzer

Floor mount

Wall mount

Part No.

460-S5048.88

460-S5049.88

460-S0355.88

500-P2147.88

500-P0120.88

500-P2817.88

Consumables

Reagent bags (2) magnesium + total hardness (replace every 8 weeks with measurement interval of 30 minutes)

Reagent bags (2) high calibration + low calibration (replace every 7 months)

Cleaning solution, iron fouling, 2L

Syringe, 60ml, for fluorometer calibration

Beaker, plastic, 0.5L

Brush, for cleaning fluorometer flow cell



Measures calcium, magnesium and total hardness.

Automatically increases internal treatment chemistry during hardness excursions.

Calibrates automatically and displays reagent and calibration solution bag volumes.



3D TRASAR Technology for Boilers

COMPACT B100

Smaller boilers typically receive less attention than needed. Out-of-spec occurrences take place frequently. Small issues can escalate into critical issues. It typically takes more than a week for people to respond to critical issues, impacting water treatment, boiler performance, and safety.

Our Ecolab Global Intelligence Center, safeguards boiler performance, by monitoring water quality, and treatment, through the Compact B100, 24 hours a day, 365 days a year.

The Compact B100 Ecolab Data Collector logs up to 5 parameters every 10 minutes and sends it to the ECOLAB3D Azure cloud every hour. One of the 5 parameters is temperature, the other 4 are connected via 4-20mA. The optional self-adhesive platinum Pt1000 temperature sensor can be installed on the deaerator or the feed water line. ECOLAB3D calculates the dissolved oxygen levels, which relate to corrosion stresses.

Part No.

6078931

Description

Compact B100, Ecolab Data Collector

Part No.

6074984

Accessory

Surface temperature sensor, self-adhesive, Pt1000, 15m cable

060-TLM100.88

Tank level sensor, 2.1m

060-TLM105.88

Tank level sensor, 4m

060-TR5284.88

External antenna

060-TR5284C25.88

Cable, 7.6m, for external antenna

060-TR5284C100.88

Cable, 30m, for external antenna



Maximize visibility to avoid escalation of issues.

Minimize response time with the Ecolab Global Intelligence Center to increase performance.

Minimize corrosion by monitoring calculated dissolved oxygen levels, based on temperature readings.





Maximize production capacity and minimize water intake by managing microbiology.

Maximize product quality by managing corrosion.

Minimize maintenance with automated sensors cleaning.

3D TRASAR Technology for Pasteurizers

Pasteurizer warm zones are susceptible to corrosion of cans or bottle crown corks; cold zones to microbio. The 3D TRASAR System for Pasteurizers monitors corrosion inhibitor levels, mild steel corrosion, free chlorine, pH, ORP and conductivity. Aluminium corrosion monitoring is available for can pasteurizers. Free chlorine is used to control oxidizing biocides. The free chlorine sensor is self-cleaning. If you add compressed air, the Fluorometer, pH and ORP are self-cleaning as well. The other sensors do not require frequent cleaning. A booster pump is included to ensure sufficient sample flow. 6065523 and 6065531 are available to stop sample flow during boil-outs.

If your can pasteurizer has a history of can staining, then use option TU8555 to monitor corrosion levels and pH in the warm water. Add booster pump TU8560 if the sample water pressure is low.

Part No.	System
3DT-TU8550.88	3D TRASAR System, 240VAC
3DT-TU8551.88	3D TRASAR System, 120VAC

Sample water: Cold (TU8550, TU8551): 1.0...1.8m³/h, ≤49°C, warm (TU8555): 100...200L/h, ≤70°C

Power supply: 240VAC or 120VAC, 13A@240VAC, 6.5A@120VAC

Signal connections: 3x control relay, 2x alarm relay, 8x analogue output, 8x analogue input, 13x digital input, Modbus.



Accessories

Part No.	Calibration (webshop)
500-BTPKIT.88	Start-up kit with calibration solutions (3D TRASAR, pH4, pH7, 3000µS/cm, 600µS/cm), 3x syringe, 3x beaker, cleaning brush

Part No.	External antenna
060-TR5284.88	External antenna, no cable
060-TR5284C25.88	Cable, 8m, for external NGG antenna
060-TR5284C100.88	Cable, 33m, for external NGG antenna

Part No.	Sensors
3DT-NCMA1100.88	NCM corrosion sensor, Al1100
3DT-NCMA6061.88	NCM corrosion sensor, Al6061

Part No.	Other
3DT-TU8555.88	Hot zone monitoring for pH and aluminium corrosion. Select one aluminium sensor above (not included)
3DT-TU8560.88	Booster pump for TU8555, 240VAC
6065523	Motorized valve, 240VAC, temp. sensor and strap to block sample water to TU8550 during boil-outs

Spares

Part No.	Consumables
500-P2817.88	Brush for Fluorometer cleaning
500-P0116.88	Beaker, plastic, 0.8L
500-P2147.88	Syringe for Fluorometer calibration
3DT-PHPRB1.88	Sensor, pH
3DT-ORPPRB1.88	Sensor, ORP
3DT-NCMMS1.88	Sensor, corrosion, mild steel
3DT-NCMA1100.88	Sensor, corrosion, aluminium, Al1100
3DT-NCMA6061.88	Sensor, corrosion, aluminium, Al6061
3DT-TUMKIT1.88	Maintenance kit with sensors (steel NCM, pH, ORP) and desiccant
6061575	Yearly oxidant preventative maint. kit, with oxidant sensor, membrane, spring, valve pin, o-ring set, batteries

Part No.	Consumables (webshop)
500-BTPKIT.88	Maintenance kit with calibration solutions (3D TRASAR, pH4, pH7, 3000µS/cm, 600µS/cm), 3x syringe, 3x beaker, cleaning brush
460-S0940.75	3D TRASAR, 1L
460-S0297.75	Calibration solution, conductivity, 3000µS/cm, 1L
460-S0298.75	Calibration solution, conductivity, 600µS/cm, 1L
460-S0407.75	Calibration solution, pH7, 1L
460-S0406.75	Calibration solution, pH4, 1L
460-S0800.74	Sulfuric acid, 10%, 500ml, for manual cleaning of sensors



Monitors your KPI's.

Ensures performance by avoiding scale.

Provides information for optimizing maintenance and water/energy usage.

3D TRASAR Technology for Membranes

- ▷ Monitor your membrane system's key performance indicators, permeate water flow and salt passage.
- ▷ Ensure performance by avoiding scale: monitor and control PERMACARE™ Anti-scalant.
- ▷ Monitor recovery and normalized information to optimize membrane lifespan, cleaning intervals, water usage, energy usage and maintenance hours.

Sample water: 15-30L/h, 0.5-5bar. $\frac{1}{2}$ "fBSP.

Power supply: 120VAC or 240VAC, 1200VA.

Signal connections: 7x control relay (pot. free or Vac), 1x alarm relay, 4x analogue input, 8x analogue output, 2x digital input, 1-2x remote start/stop.

Included: Fluorometers, sensors (conductivity, pH, ORP), wireless gateway.

An Input module or Protocol Converter module is required for pressure and flow signals from the membrane system. The start-up kit is not included, please order separately.

Part No.	Trains	Feed water lines with anti-scalant dosage	Passes	Fluorescence interference correction
060-ROM61110.88	1	1	1	No
060-ROM6111B.88	1	1	1	Yes
060-ROM61120.88	1	1	2	No
060-ROM6112B.88	1	1	2	Yes
060-ROM62110.88	2	1	1	No
060-ROM6211B.88	2	1	1	Yes
060-ROM62210.88	2	2	1	No
060-ROM6221B.88	2	2	1	Yes

Accessories

Part No.	Start-up, Calibration (webshop)
500-3DROMKIT.88	Start-up and preventative maintenance kit with solutions (3D TRASAR, pH4, pH7, 200mV, 600mV, 3000µS/cm, 600µS/cm, 200µS/cm, 40µS/cm), 2x syringe, 12x beaker, brush

Part No.	Modules, Communication
060-ROMAIM101.88	Input Module, 8x 4-20mA (press./flow)
060-ROMAIM201.88	As above, but 15 inputs
060-ROMAIM301.88	Input Module, 8x 4-20mA (pressure), 7x digital input (flow)
060-ROMPC101.88	Protocol Converter Module, Ethernet
060-ROMPC201.88	As above, but Profibus DP
060-ROMSRB200.88	Signal Splitter Box, 4x 4-20mA inputs, 240VAC
060-ROMSRB100.88	As above, but 120VAC
991-05059316.88	Signal splitter, 1x 4-20mA input, add-on for 060-ROMSRB200.88 (add max 2)
991-05059312.88	As above, but 120VAC

Part No.	Antenna
060-TR5284.88	Antenna, external, for NGG, no cable
060-TR5284C25.88	Cable, 8m, for external NGG antenna
060-TR5284C100.88	Cable, 33m, for external NGG antenna

Part No.	Sensors, Pressure, Flow
6047262	Pressure transducer, 0-10bar, 1/4"mBSP, 4-20mA output
6047263	As above, but 0-40bar
060-ROEXC005.88	Cable, 5m, for pressure transducer
060-ROEXC010.88	As above, but 10m
060-ROEXC030.88	As above, but 30m
6022275	Flow meter, paddle wheel, cPVC, DN25-DN100
6047088	As above, but SS316L
6028501	T-piece, PVC, DN25 (for flow meter)
6046611	As above, but SS316L
6022988	Saddle, PVC, DN50 (for flow meter)
6035473	As above, but DN80
6047089	As above, but DN100
6026485	Weld-on adapter, SS316L, DN40-225 (for flow meter)

Part No.	RO with Cleaning in Place (CIP)
060-ROMSVK200.88	Solenoid valve kit (for concentrate sample inlet, 240VAC)
060-ROMSVK100.88	As above, but 120VAC
6047076	Solenoid, 120VAC (to replace 240VAC solenoid)

Spares

Part No.	Consumables (webshop)
460-S0940.75	Calibration solution, 3D TRASAR, 1L
460-S0743.75	Calibration solution, 200µS/cm, 1L
460-S0297.75	Calibration solution, 3000µS/cm, 1L
460-S0299.75	Calibration solution, 40µS/cm, 1L
460-S0298.75	Calibration solution, 600µS/cm, 1L
460-S0932A.75	Calibration solution, ORP, 200mV, 1L
460-S0933A.75	Calibration solution, ORP, 600mV, 1L
460-S0406.75	Calibration solution, pH4, 1L
460-S0407.75	Calibration solution, pH7, 1L
460-S0800.74	Cleaning solution, sulfuric acid, 10%, 0.5L
500-P0120.88	Beaker, plastic, 0.5L
500-P2147.88	Syringe, 60ml, for Fluorometer calibration
500-P2817.88	Brush, for cleaning Fluorometer flow cell
500-P0237.88	Wash bottle, plastic, 230ml

Part No.	Consumables, Sensor
060-TR5421.88	Sensor, ORP
060-TR5411.88	Sensor, pH, for 100-10,000µS/cm water
060-TR5226.88	Desiccant indicator kit, for Fluorometer



TRASAR Technology for Reverse Osmosis

The TRASAR Technology for Reverse Osmosis Anti-scalant Control System is a basic version of the 3D TRASAR Membrane systems. It is intended for sites where personnel are already anticipating and preventing upsets by monitoring and interpreting normalized plant parameters and recovery, or when production, environment, upsets and peace of mind are lower priorities.

Sample water: 15-30L/h, 0.5-5bar, $\frac{1}{2}$ "fBSP.

Power supply: 120VAC or 240VAC, 1200VA.

Signal connections: 7x control relay (pot. free or Vac), 1x alarm relay, 4x analogue input, 8x analogue output, 2x digital input, 1x remote start/stop.

Included: Fluorometer, conductivity/temperature sensor, wireless gateway.

Part No.

060-ROM4500.88

TRASAR System

Reverse Osmosis Anti-scalant Control System, 240VAC, floor mount. Wall mount also possible (by not using the included stainless-steel frame).

The option to correct for background fluorescence interference may be required. It is installed after delivery.

Calibration start-up materials are not included, please order the calibration materials separately.



Ensures performance by avoiding scale.

Accessories

Part No.

Sensors

060-ROMBGTKIT.88	Fluorometer, TRASAR #2, includes plumbing for monitoring background on TRASAR RO
060-TR5411.88	Sensor, pH, 3/4"mNPT, for 100-10,000µS/cm
060-TR5421.88	Sensor, ORP, 3/4"mNPT
060-TR5412.88	Cable, for pH sensor
060-TR5422.88	Cable, for ORP sensor

Part No.

Consumables (webshop)

460-S0940.75	Calibration solution, 3D TRASAR, 1L
460-S0298.75	Calibration solution, 600µS/cm, 1L
460-S0297.75	Calibration solution, 3000µS/cm, 1L
460-S0407.75	Calibration solution, pH7, 1L
460-S0408.75	Calibration solution, pH10, 1L
460-S0932A.75	Calibration solution, ORP, 200mV, 1L
460-S0933A.75	Calibration solution, ORP, 600mV, 1L
460-S0800.74	Cleaning solution, sulfuric acid, 10%, 0.5L
500-P2147.88	Syringe, 60ml, for Fluorometer calibration
500-P0120.88	Beaker, plastic, 500ml, for sensor calibration
500-P2817.88	Brush, for cleaning Fluorometer flow cell

Part No.

Antenna

060-TR5284.88	Antenna, external, no cable
060-TR5284C25.88	Cable, 8m, for external NGG antenna
060-TR5284C100.88	Cable, 33m, for external NGG antenna

Part No.

120VAC

6047076	Solenoid, 120VAC (replaces 240VAC solenoid on TRASAR RO system and background option)
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Spares

Part No.

Consumable

060-TR5226.88	Desiccant indicator kit, for Fluorometer
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3D TRASAR Technology for DAF

3D TRASAR instrumentation for DAF is the innovative monitoring and control component of our integrated solutions for DAF systems. The instrumentation controls the feed of Nalco Water treatment chemical with the advanced TRASAR IR (infrared) Turbidimeter. Process parameters are monitored in the effluent stream to optimize DAF performance.

Sample water: 120...250L/h; adjustable with manual ball valve or booster pump if present, 2...7bar, PVC ¾" fBSP connections

Power supply: 110...240VAC, 50/60Hz, 10A for 120VAC; 20A for 240VAC

Compressed air: For air flushing (cleaning): 1-2bar for pneumatic valve operation: 5-6bar

Signal connections: 7x control relay, 1x alarm relay, 4x analogue input, 8x analogue output, 2x digital input, 1-2x remote start/stop

Turbidimeter fouling is removed during a periodic ultrasonic cleaning cycle. Debris in the sample line is removed periodically with compressed air. Turbidimeter scaling can be removed by periodically feeding cleaning acid with an optional external feed system. A debubbler aids in removing air bubbles in the sample water that may interfere with turbidity measurements.

Part No.

060-3DTDAFEFFC2.88

060-3DTDAFEFF2.88

3D TRASAR system

For DAF Effluent, floor mount, enclosed

For DAF Effluent, floor mount, not enclosed



3D TRASAR technology for dissolved air flotation (DAF) systems helps you to optimize discharge compliance, system reliability and cost of operation.

Accessories

Part No.	Start-up, Calibration (webshop)
060-3DTDAFKIT1.88	Start-up kit with solutions (turbidity, pH4/7), syringe, 3x beaker, brush
Part No.	Antenna
060-TR5284.88	External antenna, without cable
060-TR5284C25.88	Antenna cable, 8m for 060-TR5284.88
060-TR5284C100.88	Antenna cable, 33m for 060-TR5284.88
Part No.	Cleaning
060-3DTDAFACID.88	Chemical clean feed system for Turbidimeter (pump, tank, bund, suction lance, multi-function valve).
Part No.	120VAC
6055438	Solenoid, 120VAC, replaces 240VAC solenoid on air injection (6049920)
6055440	Solenoid, 120VAC, replaces 240VAC solenoid on pneumatic actuator
Part No.	Inputs, outputs
060-ROMAIM101.88	Input module (8x 4-20mA for pressure/flow signals)
060-ROMAIM201.88	Input module (16x 4-20mA for pressure/flow signals)
060-ROMAIM301.88	Input module (8x 4-20mA for pressure, 7x digital input for flow signals)
6057312	Signal splitter box, 240VAC, 2x 4-20mA input
6057313	Signal splitter box, 120VAC, 2x 4-20mA input
6021293	Relay box, 4x Vac input, 4x contact output
Part No.	Inlet water
6062443	Booster pump skid for inlet water, 230VAC

Accessories

Part No.	PARETO
6051383	PARETO Optimizer, coupling, large, 10.0MM, 2.1
6051384	PARETO Optimizer, coupling, small, 10.0MM, 2.1
6057461	PARETO Optimizer, coupling, PVC-C.S10.0.BSP
6040097	Threaded adaptor

Spares

Part No.	Consumables (webshop)
956-26606-49EU	Calibration solution, turbidity, 1NTU, 0.5L
001-H07958.88EU	Calibration solution, turbidity, 1000NTU, 0.5L
460-S0726.75	Cleaning solution turbidimeter, HCl 1:1, 1L
460-S0800.74	Cleaning solution turbidimeter, H ₂ SO ₄ , 10%, 0.5L
460-S0407.75	Calibration solution, pH7, 1L
460-S0408.75	Calibration solution, pH10, 1L
500-P0120.88	Beaker, plastic, 0.5L
500-P2147.88	Syringe, 60ml, for Fluorometer calibration
500-P2817.88	Brush, for cleaning Fluorometer flow cell
Part No.	Consumables
060-TR5411.88	Sensor, pH, for 100-10,000µS/cm water
6054406	Ultrasonic probe tip only, 40kHz
6054261	O-rings for ultrasound, washers for flowmeter
6062445	Spare parts for Booster pump 6062443



3D TRASAR Technology for Wastewater

Smart data, faster decisions, better insights

Our customers desire peace of mind by knowing that their post treatment plants are running smoothly, consistently and in regulatory compliance while optimizing their operational costs. Thanks to smart data, monitoring and control, customers are empowered to make faster decisions with better insights.

How is 3D TRASAR Wastewater different?

- ▷ Implements accurate product metering
- ▷ Collects multiple signals throughout the plant
- ▷ Can control chemistry at various units of operation
- ▷ Solves difficulties in proper storing and retrieving historical data in the web
- ▷ Alarms can be set when parameters out of specifications

Power supply: 100-240 VAC, 50/60 Hz, Max. 1800VA

Signal connections: 4x Low Frequency Counters, 8x Digital Inputs interlocks, 8x analogue input, 8x analogue output, Communication: Ethernet, USB, Wireless GSM

Optimizing sustainability compliance

Nalco Water post-treatment program powered by 3D TRASAR Technology for Wastewater unlocks data visibility enabling customers to detect system performance improvement opportunities. Our program provides our customers with optimized process performance and improved sustainability compliance at optimized total cost of operation.

Part No.

3DT-WW8206.88

3DT-WW8306.88

3D TRASAR Controller

Wall mounted controller

Frame mounted controller

Part No.

3DT-WWOGM1.88

3DT-WWOGM2B.88

Oval Gear Meter Plate (OGM)

For coagulants

For neat flocculants

Part No.

3DT-WWAFM4.88

3DT-WWAFM6.88

3DT-WWAFM8.88

Analog Flow Meter Plate (AFM)

SM4000 (0.005-3.0 L/min)

SM6000 (0.1-25 L/min)

SM8000 (0.2-100 L/min)



3D TRASAR technology for wastewater unlocks data visibility, enabling customers to detect system performance improvement opportunities. The result is optimized process performance and improved sustainability compliance.

Accessories

Part No.	Signal splitter
060-ROSRB300.88	Signal splitter with housing
Part No.	External antenna
060-TR5284.88	External antenna, no cable
060-TR5284C25.88	Cable, 7.5m, for external antenna
060-TR5284C100.88	Cable, 33m, for external antenna
Part No.	Extension cables
6070306	OGM extension cable, 15m (50ft)
6070307	OGM extension cable, 7.5m (25ft)
6065840	AFM connector cable, 30m (100ft)
6065841	AFM connector cable, 60m (200ft)

Spares

Part No.	Consumables
231-RM2MTR.88	Oval gear meter, RM2
6075602	T-strainer, fNPT, 70 mesh, PE for 3DT-WWOGM1.88
6075603	Screen, 70 mesh, for T-strainer of 3DT-WWOGM1.88
991-03850240.88	Basket strainer for 3DT-WWOGM2B.88, simplx, 1" PVC, 1/16"prf (05type)
6015635	Basket, for strainer of 3DT-WWOGM2B.88, 1/16" perf.



Minimize caster maintenance

Maximize asset life and production

Optimize TCO

Enhance safety

3D TRASAR Technology for Casters

Caster performance is key for steel makers. Productivity, quality and keeping costs and maintenance under control may be impacted by corrosion and scaling, which are often caused by extreme temperatures and high acidity levels. Minimizing the impact by continuously analyzing these stress conditions in the spray chamber and by responding to upsets with 3D TRASAR Caster technology protects critical assets. The technology is designed to optimize corrosion rates in the spray chamber of a continuous caster that produces large blooms, slabs and rounds.

Sample water: 300...1800L/h, 0.1...2bar, 5...80°C, 2" hose connection

Power supply: 100...240VAC, 50/60Hz, ≤6A@240VAC

Compressed air: 2.5-8bar, 6x4mm tubing connection

Signal connections: 4x 4-20mA analogue input, 5x relay output for control contact or powered (Vac), 1x alarm contact, 8x 4-20mA analogue output

Continuously monitoring water treatment parameters in hot caster water containing high levels of debris is extremely difficult. The 3D TRASAR system for casters does just that, monitoring corrosion, pH and temperature. The monitored readings are logged and made available in your secure section of the Nalco Water enVision site. The sample water for the 3D TRASAR system is the cooling water from your continuous caster. It is collected from the upper zone (segment 0 and 1) of the spray chamber. This water contains high amounts of debris / sinter. The sample water is clarified in a small settler on the 3D TRASAR system. Settled particles are frequently disposed of, e.g. every 15 minutes.

Part no.
060-CA5511.88

Description
3D TRASAR system for continuous casters

Accessories

Part No.	Antenna
060-TR5284.88	External antenna, no cable
060-TR5284C25.88	Cable, 7.6m, for 060-TR5284.88
060-TR5284C100.88	Cable, 30m, for 060-TR5284.88

Spares

Part No.	Consumables
500-P6116.88	2 mild steel tips and 2 FKM o-rings for NCM corrosion sensor
060-TR5411.88	pH sensor
460-S0406.75	Calibration solution, pH4, 1L
460-S0407.75	Calibration solution, pH7, 1L
460-S0800.74	Cleaning solution., sulfuric acid, 10%, 0.5L
500-P0116.88	Beaker, plastic, 0.8L



Tank Level Monitoring

Save time travelling from tank to tank, taking manual readings of level gauges. Tank level sensors do all the work, so your local team can focus on what is important to you.

Increase safety by detecting chemical feed problems immediately. Remote monitoring also aides troubleshooting, without having to send someone out to the plant, or up on a ladder to check large bulk tanks.

Improve system performance by using historical trend data, along with usage alerts, to more accurately predict future usage rates, leading to improved system performance.

One centralized website reports information in a consistent format for all of your tanks.

Part No.	Ultrasonic level sensor, signal / power wired to NGG (max 4)
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060-TLM100.88	0.1-2.1m, 1"mNPT, includes 2"mNPT adapter
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060-TLM105.88	0.3-4m, 1"mNPT, includes 2"mNPT adapter
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Part No.	Nalco Global Gateway (NGG)
060-NGG3110EI.88	With 4x 4-20mA input, 2x antenna

Part No.	Antenna accessories
060-TR5284.88	Antenna, external, no cable
060-TR5284C25.88	Cable, 8m, for 060-TR5284.88
060-TR5284C100.88	Cable, 33m, for 060-TR5284.88

Part No.	Sensor accessories
6040771	Extension tee for 1 sensor
6042972	Extension cable, shielded, for 2 sensors
6042973	As above, but for 4 sensors
6042072	Junction box, for 4 cables
060-TLM005.88	Display, for local level indication (1 per sensor)



Tank Level Monitoring eliminates the burden of manual tank level collection, while assuring an appropriate supply of product.



Water Flow Intelligence

Water Flow Intelligence helps uncover water saving opportunities via real-time visibility of water usage at enterprise and plant level.

It delivers data-driven insights, enabling faster responses and more informed decisions to achieve sustainability and total-cost-of-operation reduction goals.

Water Flow Intelligence is powered by ECOLAB3D. The proprietary equipment monitors water flows and sends data to the cloud.

Part No.

060-WFNODEEU.88

060-WFIGATEWYEU.88

Description

2-channel transmitter

Gateway, incl. sim card

Part No.

060-WFIFMFDQ20C.88

060-WFIFMFDQ32C.88

060-WFIFMFDQ50C.88

060-WFIFMFDR50.88

060-WFIFMFDR80.88

060-WFIFMFDR125.88

060-WFIFMFDR200.88

Clamp-on flowmeter

0.5-0.75", 3.6-6m³/h

1-1.25", 12-18m³/h

1.5-2", 24-30m³/h

1.5-2", 24-36m³/h

2.5-3", 60-90m³/h

4-5", 150-220m³/h

6-8", 330-570m³/h

Part No.

060-WFIFMCABLE.88

Cable

Flow meter cable, 10m,
M12 4-pin connector



Water flow visibility across plants or enterprises

Real time data monitoring and display in the ECOLAB3D platform

Easy installation and operation

Application expertise by Nalco Water



Corrosion Test Racks

Corrosion monitoring with NCM sensors provides trends that are used to determine, when and how corrosion levels change in relation to other parameters. Accurate long term corrosion values are determined with corrosion coupons. Corrosion test racks provide space for 4 corrosion coupons and 2 NCM sensors.

Sample water: Temperature: 55°C at 3.5bar, 38°C at 7bar; pressure: ≤ 7 bar (PVC rack), ≤ 20 bar (mild steel rack); connections: 1" fBSP.

Dimensions: Approx. 70x50x10cm, 32mm/DN25

Part No.

6001226

6001234

6001235

6001236

Corrosion Test Rack

PVC version

PVC version with 2 clear view sections

Mild steel version

Mild steel version with 2 clear view sections

Part No.

6001229

6001230

6001231

6001232

6001233

Flow orifice, one required per corrosion test rack

#1, 0.2-0.3m/s at 3.5-7bar

#2, 0.5-0.7m/s at 3.5-7bar

#3, 1.0-1.4m/s at 3.5-7bar

#4, 1.7-2.3m/s at 3.5-7bar

#5, 2.5-3.5m/s at 3.5-7bar

Part No.

6001227

500-P5006A.88

500-P5069.88

6001228

500-P5007A.88

500-P5070.88

Spare

1" PVC plug for holding rod

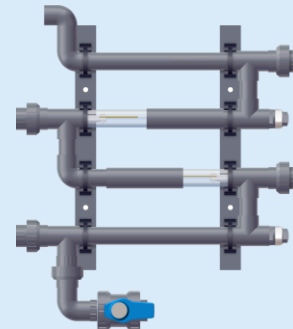
Nylon holding rod, includes bolt and nut

Nylon bolt and nut set (10/set)

1" mild steel plug for holding rod

SS304 holding rod, bolt, nut

SS304 bolt, nut and PTFE washer set (10/set)



Provides space for 4 corrosion coupons and 2 corrosion sensors.

Mimics the approx. water velocity in the critical part of your water system.

Corrosion Coupons

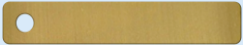
Bar-style corrosion coupons are used to accurately measure corrosion in water systems and process pipelines. A coupon made of a metal alloy similar to that used in the system is inserted into a corrosion test rack. After removal, the coupon is sent to the Nalco Water laboratory where the corrosion rate is determined.

Coupons are manufactured to rigid specifications to provide a high-quality coupon with reproducible characteristics. They come complete with data card and return mailer. Coupon part numbers do not include analysis.

76x13mm coupons are used in 32mm / DN25 (1") corrosion test racks; 76x10mm in (old-style) 25mm / DN20 (3/4") racks.

Part No.	Bar style coupon, 76x13mm
500-P5034A.88	Copper Nickel (70/30)
500-P5035A.88	Mild steel, MS1010
500-P5048A.88	Mild steel, MS1010 scaling, 6 holes
500-P5054A.88	Mild steel, MS1010, passivated
500-P5036A.88	Stainless steel, SS316
500-P5037A.88	Stainless steel, SS304
500-P5038A.88	Copper
500-P5039A.88	Aluminium, 1100
500-P5040A.88	Admiralty Brass
500-P5049A.88	Copper Nickel (90/10)
500-P5057A.88	Galvanised, hot dip

Part No.	Bar style coupon, 76x10mm
500-P5071.88	Mild steel, MS1010
500-P5072.88	Copper Nickel (70/30)
500-P5073.88	Copper Nickel (90/10)



Corrosion Coupon

Manufactured to rigid specifications, to provide a high-quality coupon with reproducible characteristics.

Comes with a data card and return mailer.

Nalco Oxidant Controller™

The Nalco Oxidant Controller is designed to monitor free chlorine, chlorine dioxide or ozone levels with the included low maintenance self-cleaning sensor. A flow regulator device is included to provide a constant sample water flow for stable, accurate and reliable readings. The sensor's electrode surfaces can be cleaned automatically from 1 to 84 times per week. During the innovative and effective cleaning process, hydrogen and oxygen are produced at the electrode surfaces, 'blasting away' persistent coatings. Oxygen oxidizes organic coatings. Hydrogen reduces organic and inorganic substances, especially iron and manganese oxides. Automatic cleaning can also be turned off for clean water applications.

Sample water: ≤6bar@20°C, reduced to 30L/h, pressure loss 0.2bar, 5...50°C. Make sure to provide a flow of ≤1bar, ≥35L/h, without air bubbles, turbidity ≤30NTU.

Power: 85...250VAC, 40...60Hz, 10VA

Outputs: 1x 4...20mA (recorder, PID control), 2x control relay (start/stop, PID pulse), 1x alarm relay

Inputs: 2x digital input

Part No. 400-P1380.88 **Nalco Oxidant Controller**
Model P1380, includes sensor and flow regulator device

Part No. 6058966 **Option**
Data log upgrade for P1380 (order when P1380 will not be connected to a 3D TRASAR controller)

6072965
NOC pre-filter, 1/4" with stainless steel filter inlet 350 µm, double nipple 1/4" to 1/4", Ball valve

Part No. 6061575 **Consumables**
Yearly preventative maintenance kit, with oxidant sensor, membrane, spring, valve pin, o-ring set, batteries

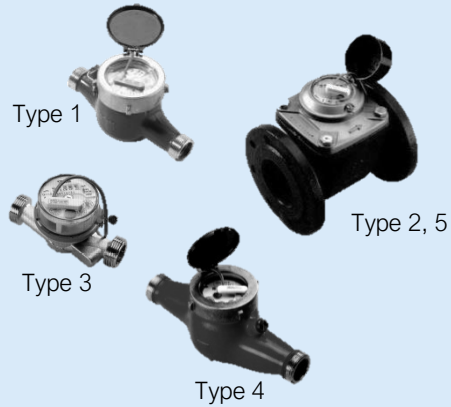
6078031
Screen, stainless steel, 350µm, for NOC pre-filter (6072965)



Continuously monitor free chlorine, chlorine dioxide or ozone levels.

Accurately control dosage of e.g. bleach or Acti-Brom™ + bleach.

Minimize manual maintenance with the reagent free, self-cleaning sensor.



Pulse output for flow count signal to e.g. a 3D TRASAR controller or for proportional dosing pump control.

Horizontal installation (type 1-5). Vertical installation (type 2, 3, 5).

Water Meters

Part No.	Type	DN	Nom. flow (m3/h)	K- factor	Length (mm)	Temp (°C)
6003820	1	15	1.5	1	170	≤30
6003822				5		
6003821				10		
6003824		20	2.5	1	190	
6003827				2.5		
6003828				5		
6003825				10		
6003829		25	3.5	1	260	
6003833				2.5		
6003834				5		
6003830				10		
6003835		30	5	1		
6003837				5		
6003836				10		
6003839		40	10	1	300	
6003842				5		
6003840				10		

Part No.	Type	DN	Nom. flow (m3/h)	K- factor	Length (mm)	Temp (°C)
6003863	2	50	15	5	200	≤40
6003861				10		
6003862				100		
6003865		65	25	10	225	
6003868		80	40	10		
6037172		100	60	10	250	
6037173				100		
6003748	3	15	1.5	10	110	≤90
6003806	4	25	3.5	10	260	
6003782	5	50	15	5	200	≤110
6003781				100		























Part No.

Spares

- 6056196 Reed switch EIJM and cable for pulse output. For water meters with indications 'G2' and 'AQUATEL'.
- 6003800 Reed switch ILSS and cable for pulse output. For older water meters.



Cooling	
Boiler	
Process	
Pre-treatment	
Post-treatment	
Application	

Generic Dosing Systems	Product Specific Dosing Systems	Dosing Stations	Dosing Pumps	Dosing Spares, Accessories	Bleed Valves
					
PARETO (Flocculant, Microparticle)	Liquid Polymer	Polymer Solution	FLOCMaster (Flocculant)	POLIMAT (Flocculant)	ULTRAPOSITEK (Microparticle)
					
FILLERTEK Lite	Progressing Cavity Pumps	Foamer	OXIPRO Reaction Tee (74808)	OXIPRO Q2 (MCA)	CONNEXX (Paper)
					
OXIPRO P (74650)	PURATE ($\leq 90\text{kg/h ClO}_2$)	PURATE ($\leq 4.5\text{kg/h ClO}_2$)	NALDIOX ($\leq 300\text{g/h ClO}_2$)	ENVIROX ($\leq 100\text{g/h ClO}_2$)	-
					

Portfolio



Control



Feed



Storage



Separation



Analytical

Dosing Pump Selection Guide

Chemical Product	Advanced + Degassing DDA-FCM	Advanced DDA-AR	Standard DDC-AR	Economy DDE-P
Inhibitor	●	○	●	○
Non-oxidizing biocide	●	○	●	○
Oxidizing biocide (degassing product)	●	○	○	-
Dispersant (viscous)	● ¹⁾	-	● ¹⁾	-
Sulphuric acid (H ₂ SO ₄)	●	○	●	-
Hydrochloric acid (HCl)	● ²⁾	-	● ²⁾	○ ²⁾
NaOH	-	-	-	●
Boiler (high pressure)	●	●	-	-
Reverse Osmosis Anti-scalant	● ³⁾	●	-	-
Reverse Osmosis Sodium Sulphite	● ³⁾	-	●	-

● Recommended ○ Optional - Do not use

¹⁾ Order spring loaded PVDF/FKM valves. DDC pump works in slow mode-most suitable for viscous products.

²⁾ Order PVDF non-return valves with PTFE seals.

³⁾ Where flow control and measurement are critical.



DDA

DDE

DDC

The innovative stepper motor driven dosing pumps provide reliability, long pump life and continuous smooth product dosage.



Reduce the risks of chemical sprays.

Safely contain pump leaks.

Isolate and flush dosing pumps safely before servicing.

Safely mix Acti-Brom™ and bleach.

Dosing Pump Cabinet

Reduce the risks of chemical sprays and spills from dosing pumps with a pump cabinet. Reduce chemical contact during pump replacement with isolation and flush valves. The optional mixer for Acti-Brom and bleach ensures safe mixing in a closed environment.

Up to four DDA, DDC or DDE dosing pumps ($\leq 30\text{L/h}$) can be installed in the pump cabinet. Each pump has its own drip tray with a drain valve. Walls between the dosing pumps ensure that chemical products are not mixed. A transparent cover protects against sprays from the pressure side of the dosing pumps.

The dosing pump cabinet is intended to be installed on the back of a Next Generation 3D TRASAR device, or on the wall. It comes with a wall mount bracket that is first mounted on the wall. You can then safely hang the cabinet on the bracket and fix it with two bolts. The pumps have a baseplate with a click connection, so they can easily be removed for troubleshooting or replacement.

Part no.	Description
6059754	Dosing pump cabinet, for up to 4 DDA, DDC or DDE dosing pumps (order pumps and multi-function valves separately)
6059874	Isolation and flush valve set for one dosing pump
6059905	Mixing components for Acti-Brom and bleach
3DT-CWFRM1.88	Frame, SS, for floor mounting dosing cabinet

Materials: Cabinet PVC, isolation/flush valves: PVDF/PTFE

Tubing connections: 12x9mm (6x4mm connectors included to replace 12x9mm connectors)

Dimensions: 92x70x34cm (without drain valves)





Product specific dosing systems

The NDS100 series chemical dosing systems from Nalco Water are designed to dose specific chemistry safely and reliably. The dosing systems replace frequently requested custom dosing systems that require time and cost for engineering.

Part no.	Model	Chemical product	Capacity	Flow [L/h]	Pressure [bar]
6062931	NDS101L	NaOCl	Low	0.2...7	16
6062734	NDS101H		High	0.5...60	10
6062691	NDS102L	Acti-Brom + NaOCl	Low	1...10	7
6062761	NDS102H		High	15...150	7
6062739	NDS103L	H ₂ SO ₄	Low	0.2...10	7
6062740	NDS103H		High	0.5...40	7
6062723	NDS105L	Biocide (liquid)	Low	0.2...15	7
6062725	NDS105H		High	0.5...65	4
6062727	NDS106L	74800	Low	3...30	4
6062811	NDS106H		High	6...60	7
6062808	NDS107L	Antiscalant for Membranes	Low	0.05...3	7
6062807	NDS107H		High	0.5...7	7
6062806	NDS108L	Antiscalant for Paper Industry	Low	0.5...7	7
6062805	NDS108H		High	1...17	7
6062804	NDS109L	Antifoam	Low	0.5...7	7
6062796	NDS109H		High	3...30	4
6062736	NDS110L	Coagulant	Low	0.5...15	7
6062735	NDS110H		High	3...60	4

Safe and reliable.

Tailor made for specific chemistry.

No need for custom engineering.



Dosing Stations

When it is not possible to store your Nalco Water chemical product in a PORTA-FEED base tank, the next best solution is a tank with a dosing pump, suction lance, injection valve and discharge tubing. Nalco Water supply these components as packaged dosing stations that can be ordered with a single part number, ready for on-site assembly. Make sure to order a containment bund, when not available on site. Also make sure to use a transfer pump to safely fill the dosing station.

Power dosing pump: 100-240VAC, 50-60Hz

Flow, pressure: DDC 9: 9ml/h-9L/h, 7bar; DDE-P 6: 6ml/h-6L/h

Dosing tank, optional bund: PE

Suction lance: PVC

Optional transfer pumps: 240VAC; PP pump: max. density: 1.3kg/dm³, max. viscosity: 300mPas. PVDF pump: max. density: 1.8kg/dm³, max. viscosity: 800mPas.

Part No.	Dosing Station
6018121	With DDC 9 dosing pump, 60L tank
6018123	With DDC 9 dosing pump, 100L tank
6018125	With DDC 9 dosing pump, 200L tank
6034433	With DDE-P 6 dosing pump, 60L tank
6034436	With DDE-P 6 dosing pump, 100L tank
6018130	With DDE-P 6 dosing pump, 200L tank
Part No.	Accessory
6018696	Bund, PE, 60L
6018697	Bund, PE, 100L
6018698	Bund, PE, 200L
6036335	Transfer pump set with 1m PP shaft and variable speed
6036336	Transfer pump set with 1m PVDF shaft and variable speed
Part No.	Spare
6017406	Tank, PE, cylindrical, 60L
6017404	Tank, PE, cylindrical, 100L
6017405	Tank, PE, cylindrical, 200L



The next best thing when
PORTA-FEED is not an option.

Dosing Pumps

The innovative Smart Digital DDA, DDC and DDE dosing pumps have an electronically controlled variable speed stepper motor. The advanced DDA pumps provide features for critical and degassing products. The DDC pump is the standard version with the main operation modes. The DDE pump is the economy version with basic functions.

Included with DDA/DDC/DDE pumps ≤ 30L/h:

Control cable for remote start/stop or analogue control, floor/wall mounting plate, installation kit (PE suction tubing, discharge tubing and PVC vent tubing, foot valve, injection valve, tubing connectors). 6 sets of tubing connectors (2 of each size): 6x9mm, 9x12mm, 6x12mm, 5x8mm, 6x8mm, 1/4"x3/8".

Included with DDA pumps ≥ 60L/h: Control cable for remote start/stop or analogue control, floor/wall mounting plate, injection valve, tubing connectors.

Part No. Advanced DDA-FCM

6044921	7.5L/h, 16bar, PVDF
6080431	17L/h, 7bar, PVDF
6071576	30L/h, 4bar, PVDF
6071575	60L/h, 10bar, PVDF
6067031	120L/h, 7bar, PVDF
6071574	200L/h, 4bar, PVDF
6080421	7.5L/h, 16bar, PP
6080430	17L/h, 7bar, PP
6080429	30L/h, 4bar, PP
6080285	60L/h, 10bar, PVC
6080286	120L/h, 7bar, PVC
6080287	200L/h, 4bar, PVC

Part No. Advanced DDA-AR

6044923	7.5L/h, 16bar, PVDF
6044925	17L/h, 7bar, PVDF
6044927	30L/h, 4bar, PVDF
6067018	60L/h, 10bar, PVDF
6067019	120L/h, 7bar, PVDF
6067020	200L/h, 4bar, PVDF
6080422	7.5L/h, 16bar, PP
6080424	17L/h, 7bar, PP
6080425	30L/h, 4bar, PP
6080281	60L/h, 10bar, PVC
6080282	120L/h, 7bar, PVC
6080284	200L/h, 4bar, PVC

Part No. Standard DDC-AR

6044928	9L/h, 7bar, PVDF
6080426	9L/h, 7bar, PP

Part No. Economy DDE

6044929	6L/h, 10bar, PVC
6044930	15L/h, 4bar, PVC
6080427	6L/h, 10bar, PP
6080428	15L/h, 4bar, PP



DDA

DDE

DDC

The innovative stepper motor driven dosing pumps provide reliability, long pump life and continuous smooth product dosage.

Dosing Pumps - Features



Features	DDA-FCM	DDA-AR	DDC-AR	DDE-P	DME375
LCD display	●	●	●	-	●
LCD display front or side mounted	●	●	●	-	-
Turn-down ratio	1 : 3000 (7.5L/h) 1 : 1000 (30L/h) 1 : 800 (60-200L/h)	1 : 3000 (7.5L/h) 1 : 1000 (17-30L/h) 1 : 800 (60-200L/h)	1 : 1000	1 : 1000	1 : 800
Manual control, pulse control (e.g. water meter), external start/stop, stop on tank empty	●	●	●	●	●
Analogue control	●	●	●	-	●
Scaling for analogue input	●	●	-	-	-
Week timer	●	●	-	-	-
Interval timer	-	-	-	-	●
Batch control	●	●	-	-	●
Auto-deaeration during standby	●	●	-	-	-
Flow control-fault diagnosis, pressure monitoring (min/max), flow measurement, auto flow adapt	●	-	-	-	-
Slow mode (anti-cavitation)	●	●	●	-	●
Relay outputs	2	2	2	-	1
Analogue output	1	1	-	-	-

● Included - Not included 1-2 Number of outputs

Dosing Pumps – Accessories by Pump



Valves		DDA-FCM DDA-AR 7.5l/h	DDA-FCM DDA-AR 17l/h-30l/h	DDC-AR 9l/h	DDE 6l/h	DDE 15l/h	DDA... >60l/h
Multi-function valve	PVDF / FKM			6045964			-
	PP / FKM			6080721			
	PVC / FKM			6045965			
	PVDF / PTFE			MFV-PTFE1			
Non-return valves	Spring-loaded (for high viscosity products)	PVDF / FKM	6045951	6045952	6045951	6045952	-
		PP / FKM	6080724	6080726	6080724	6080726	
		PVC / FKM	-	-	-	6080725	
	If not compatible with FKM	PVDF / PTFE	6045953	6045954	6045953	6045954	
Pressure loading valve, if back pressure < 3bar		PVDF / FKM		6045976			
		PP / FKM		6080723			



Control cables / plugs

0(4)-20mA, pulse, remote on/off, level	Input cable, 5m	6045978
	Input plug only	6045980
2x relay output alarm and warning	Output cable, 5m	6045981
	Input plug only	6045982



Suction lances

0.5m	Level switch	PE / FKM	6050461	6071578
		PE / PTFE	SL500-PTFE	
1.2m	No level switch	PE / FKM	6050464	-
		PE / FKM	6050465	
	Level switch	PE / PTFE	SL1200-PTFE	6071579
		PE / FKM	6050466	
0.7m	Level switch	PE / FKM	6050467	-
		PE / PTFE	SL690-PTFE	

Dosing Pumps – Other Accessories



Injection Quills

Process connection: 1/2" mBSP

Pressure: Max. 40 bar

Part No.	Description
6007024	ChemQuill, with isolation valve and non-return valve, 155mm insertion length, SS316
6007025	As previous, 80mm insertion length
6003089	Compression fitting for ChemQuill, SS, 6mm outside diameter
6003090	As previous, 8mm outside diameter

Bulletin BEU-191



Hot Water Injection Assembly

Process connection: 1/2" mBSP

Tubing connection: 9x6mm PVDF

Temperature: Max. 150°C

Part No.	Description
6008941	Injection assembly for hot water applications, 1/2" ball valve, 10x8mm SS tubing



PORTA-FEED connector

Process connection: 1/2" mBSP

Tubing connection: 6x4mm and 12x9mm included

Part No.	Description
6021304	PORTA-FEED connector, PVDF, for 6x4mm or 12x9mm tubing
6018945	Tubing adapter, 9x6mm
6018946	Tubing adapter, 8x5mm
6018947	Tubing adapter, 8x6mm
6017400	Tubing adapter, 12x6mm
6018948	Tubing adapter, 3/8"x1/4"



Dosing Pumps – Tubing

Single Walled LDPE	Double Walled LDPE	Single Walled PTFE	Double Walled PTFE	Single Walled PVC Braided	Diameter, Outer x Inner	Length (m)	Pressure Max. (bar)
6003014	-	6003062	6002966	-	$\frac{3}{8}$ "x $\frac{1}{4}$ "	30	19
6003015	-	6003063	6002967	-		50	
6003016	-	6003064	6002968	-		100	
6003022	6002998	6003070	6002974	-	6x4mm	30	19
6003023	6002999	6003071	6002975	-		50	
6003024	6003000	6003072	6002976	-		100	
6003034	6003006	6003082	6002986	-	8x5mm	30	23
6003035	6003007	6003083	6002987	-		50	
6003036	6003008	6003084	6002988	-		100	
6031727	-	-	-	-	9x6mm	50	13
6003030	6003010	6003078	6002982	-	12x9mm	30	13
6003031	6003011	6003079	6002983	-		50	
6003032	6003012	6003080	6002984	-		100	
-	-	-	-	6031153	12x6mm	25	23
-	-	-	-	6031155		50	



Double wall:
inner tubing is
surrounded by a
 $\frac{3}{4}$ " LDPE outer
tube

Spares

Maintenance kit

Diaphragm and 2 non-return valves



Model	Capacity	PVDF	PP	PVC
DDA-FCM	7.5L/h	6045958	6080741	-
	17L/h	6045957	6080742	-
	30L/h	6045959	6080745	-
	60L/h	6070951	-	-
	120L/h	6070694	-	6080744
	200L/h	6070698	-	6080743
DDA-AR	7.5L/h	6045958	6080741	-
	17L/h	6045957	6080742	-
	30L/h	6045959	6080745	-
	60L/h	6070951	-	-
	120L/h	6070955	-	6080744
	200L/h	6070688	-	6080743
DDC-AR	9L/h	6045958	6080741	-
DDE	6L/h	-	6080741	6045955
	15L/h	-	6080742	6045956

Bleed Valves

Motorized bleed valves can be directly controlled/powered by a 3D TRASAR controller. A relay box is not required. The motor valves have two 240VAC power inputs. One 240VAC input is connected to the 3D TRASAR controller's relay. The other 240VAC input requires continuous (external) power. The valves can also be connected to other controllers (e.g. WCT610), as long as input 1 is connected to the controller's N/O output and input 2 is continuously powered (and not connected to the N/C output).

Solenoid bleed valves require an isolation valve and strainer kit to protect the valve from blockage and to prevent passing. The kit must be installed prior to the solenoid valve.

Power: 240VAC

Temperature: Motorized valve: brass -20...90°C;
PVC 0...60°C; solenoid valve: -10...90°C

Pressure: Motorized valve: 0-16bar; solenoid valve:
0-10bar

Ingress protection: IP65

Part No. Motorised bleed valves

6037050	PVC, 25mm (DN20)
6037111	PVC, 32mm (DN25)
6037112	PVC, 40mm (DN32)
6037113	PVC, 63mm (DN50)
6037093	Brass, 1/2" (DN15)
6037094	Brass, 3/4" (DN20)
6037095	Brass, 1" (DN25)
6037096	Brass, 1 1/2" (DN40)
6037097	Brass, 2" (DN50)

Part No. Solenoid Valves

6002779	Brass, 1/2" (DN15)
6002781	Brass, 3/4" (DN20)
6002783	Brass, 1" (DN25)
6002777	Brass, 2" (DN50)

Part No. Strainer and ball valve kit for solenoid valves

6002837	Brass, 1/2" (DN15)
6002838	Brass, 3/4" (DN20)
6002839	Brass, 1" (DN25)
6002841	Brass, 2" (DN50)



These motorized bleed valves can be directly controlled / powered by a 3D TRASAR controller without the need for an additional external relay box.



PARETO Mixing Technology

PARETO Mixing Technology enhances chemical performance by optimizing the injection of the chemical additives into process streams. It allows for a more uniform additive distribution in a shorter time compared to traditional injection systems. Water savings, energy savings, increased production and quality improvement can all be achieved when this innovative solution is used to replace traditional injection technologies for e.g. flocculant addition into the wet-end of the paper machine system.

Part No. PARETO Optimizer, main

6051383	Optimizer, Coupling, Large, 10.0mm, 2.1
6051384	Optimizer, Coupling, Small, 10.0mm, 2.1
6057461	Optimizer, Coupling, PVC-C ,Small, 10.0mm

Part No. PARETO Pressure Booster Set

6042930	15/20m ³ /h, Automatic
6042931	15/20m ³ /h, Semi-automatic
6042932	15/20m ³ /h, Manual
6042933	50m ³ /h, Automatic
6042934	50m ³ /h , Semi-automatic
6042935	50m ³ /h, Manual
6051499	100m ³ /h, Automatic (Andritz pump)

Part No.

6057461	Coupling, PVC-C.S10.0.BSP
6042938	Optimizer, Connect, Polymer
6042937	Optimizer, Connect, Water, 15/20m ³ /h
6042944	Optimizer, Water, Connect, 15/20m ³ /h
6042948	Optimizer, Water, Connect, POL, 50m ³ /h
6042943	SBM, Manifold, INT, POL, 4OUTL, 20m ³ /h
6042946	SBM, Manifold, POL, 4OUTL, 50m ³ /h
6042942	SBM, Manifold, INT, POL, 3OUTL, 15m ³ /h
6040097	Threaded Adaptor
6033144	Adapter, 316, 1 1/4 FBSPP
6042936	Booster, Hose, DN50, 5m, 15/20m ³ /h
6042947	SBM, Hose, Optimizer, DN32, 5m, 50m ³ /h
6042945	Booster, Hose, DN65, 5m, 50m ³ /h
6042940	Optimizer, Hose, DN32, 5m, 50m ³ /h
6042939	Optimizer, Hose, DN20, 5m, 15/20m ³ /h
6042941	Optimizer, Water, Valve, NRV, 50m ³ /h

PARETO Accessory

The involvement of a Nalco Water Project Engineer is required to ensure proper installation.



PARETO Mixing Technology has been specifically designed to reduce the inefficiencies and challenges that are inherent in e.g. traditional papermaking methods.

G2010, G1010 Polymer Feed Systems

The G2010 range of Polymer Feed Systems offer the very best in polymer dilution, in manual, batch or online operation. Safety systems and high performing fully automatic modes provide continuous high-quality emulsions and therefore an economic product application and usage. Due to its small space requirements, the G2010 Polymer Feed System can be integrated and assembled very easily into any existing facility.

The G2010 Polymer Feed System is a fully automatic batching and dosing station for liquid polymers. The liquid polymer available from the bulk storage tank is blended in the mixing pump by a specially developed mixing unit with the solution water to the desired concentration of the solution, all controls and adjustments are achieved through the touch panel located on the front of the electrical control panel.

G1010 Polymer Feed System has been designed for online process application, so that solution can be dosed directly without intermediate storage tank. If required, the system can also be operated in batch operation mode using an aging tank with a dosing pump.

Part No.	Feeder Model	Water (m3/h)	Polymer (kg/h)
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G2010 Polymer Feed System

6046449	G2010, 3-25-2.5	2.5	2.5-25
6046461	G2010, 3-60-6	6	6-60
6046462	G2010, 3-100-10	10	10-100
6046463	G2010, 3-150-15	15	15-150

G2010 Polymer Feed System, with inductive solution flow meter, PID controlled dosing pump

6046464	G2010, 6-25-2.5	2.5	2.5-25
6046465	G2010, 6-60-6	6	6-60
6046468	G2010, 6-100-10	10	10-100
6046469	G2010, 6-150-15	15	15-150

G1010 Polymer Feed System

6017581	G1010, 10-1	1.0	0.5-10
6017582	G1010, 30-2.5	2.5	2-30



G2010 Polymer Feed Systems offer the very best in polymer dilution, in manual, batch or online operation.

G1010 Polymer Feed Systems offer automatic in-line dosing or into an aging tank.

Coagulant Polymer Feed Systems

Coagulant Polymer Feed Systems have been designed for online process application, so that solution can be dosed directly without intermediate storage tank.

The feed systems feature a switching / control cabinet approved to VDE / UVV Regulations and is built on a stainless-steel frame.

Power: 400V, 3-Phase

Solution: 1-10%

Min. water pressure: 3.5bar

Dimensions LxWxH: 1.0x0.5x1.1m

Part No.	Feeder Model	Water (m ³ /h)	Polymer (kg/h)
6017559	CF 10-1	1.0	0.5-10
6017580	CF 30-2.5	2.5	2-30

Part No.	Accessory
6017660	Filter with by-pass for stock polymer with spare basket 1200um
6017595	Polymer flow control, inline flow switch to observe the polymer flow (flow / no flow)



Polymer Feed Systems for automatic in-line dosing of coagulant polymers.



Solution pumps available in simplex single pump or duplex two pump duty/standby operation.

Polymer Solution Dosing Systems

The polymer solution dosing systems have been designed to give a wide variable range of flows to suit your customer needs. The pumps have a configuration with a simplex single pump or a duplex duty/standby option. Other configurations are available upon request.

All pump systems have the facility to be started and stopped via the customer's volt free dry contact process interlock. Pump flow rate option to be controlled locally on the main panel or from your customer's DCS flow signal. Output signal indicating solution flow rate is available, local indication of flow from magnetic flowmeter (Magflo).

The systems are delivered as a ready-to-use device, complete with all electrical wiring and internal piping. The electrical panel features all switching / control cabinet approved to VDE / UVV Regulations and is built on a stainless-steel chassis so that you only need to install signal and electrical connections.

Features

- ▷ Fully enclosed control panel
- ▷ Solution output with inductive flowmeter controlled by frequency drive
- ▷ Progressing cavity pump/ pumps, stainless steel rotor / FKM stator
- ▷ Stainless steel chassis and internal piping

Power supply: 400 V, 50 Hz, 4.5 kW

Dimensions (WxDxH): Approx. 1.8 x 0.9 x 1.6m

Part No.	Polymer Solution Dosing System
6049581	Simplex, 2m ³ /h
6049582	Simplex, 4m ³ /h
6049583	Simplex, 6m ³ /h
6049584	Duplex, 2m ³ /h
6049585	Duplex, 4m ³ /h
6049586	Duplex, 6m ³ /h



FLOCMaster Mixing Technology

Sludge is produced at every step of the wastewater operation. Sludge dewatering is an essential step in meeting environmental and TCO targets. Poor dewatering has a significant impact on sludge volume, disposal route and cost. Achieve quantifiable sustainability performance and operational efficiency in sludge dewatering with the innovative and unique Nalco Water FLOCMaster mixing technology. It integrates your chemical and equipment needs for an optimum sludge management operation.

Part No.	FLOCMaster Inline Mixer, connects to control cabinet of Polymer Preparation Station
6046794	V3, 2-100m ³ /h sludge, PN16, DN100
6046795	AT, 2-200m ³ /h sludge, PN16, DN150

Part No.	FLOCMaster Inline Mixer with Control Cabinet
6046808	V3, 2-100m ³ /h sludge, PN16, DN100
6046809	AT, 2-200m ³ /h sludge, PN16, DN150

Part No.	DosingStation Control Cabinet
6046803	For Inline Mixer, Polymer Solution Dosing Pump and Flow Meter

Part No.	FLOCMaster Polymer Preparation Station
6060541	Light, Liquid Polymer 6L/h, 0.1-3.0%*
6046785	PS1, Liquid Polymer 12L/h, 0.1-4.0%*
6046801	PS4L, Liquid Polymer 60L/h, 0.1-4.0%*
6046802	PS4LD, Liquid Polymer 60L/h, Dry Polymer 40kg/h, 0.1-2.0%* for dry

* Concentration depends on process and chemical product

Part No.	Buffer Tank with Agitator, Transfer Pump
6046788	Volume 2.0m ³ , transfer 18m ³ /h

Part No.	Polymer Solution Dosing Pump, for Polymer Preparation Station or DosingStation
6046791	550L/h, 10bar, freq. control, with flow meter
6046792	3000L/h, 15bar, freq. control, with flow meter
6062176	Option to control a 2 nd dosing line with a Polymer Preparation Station (PS1, PS4) or DosingStation

Part No.	Automation solids probe technology with controller, sensor, pipe and armature
6053907	Solid Probe Kit, for DN100
6053909	Solid Probe Kit, for DN150



Inline Mixer



Polymer Station

Innovative and unique package designed to deliver quantifiable sustainability performance and operational efficiency in sludge dewatering applications.

Spares

Part No. Polymer Preparation and Dosing

6053450	Service kit, for PS4LD, Dry (O-rings, strainer, cartridge heater, sensor)
6053895	Service kit, for PS1L-PS4L, Liquid (pump spare kit*, strainer)
6053896	Filter element for powder conveying system FG 205 of PS4LD, Dry
6053897	PVC tube with Co-litz wire for powder conveying system FG 205
6062968	Carbon brushes (set) for powder conveying system FG 205
6062969	Limit switch Liquiphant FTL260
6062970	Dry run sensor for all pumps (flow sensor LMT100)
6062967	Filter mat for fan of control cabinet (148x148mm)
6062965	Filter mat for fan of control cabinet (276x276mm)
6053898	Spare kit* for transfer pump NM038BY01L06B of 6046788
6053900	Spare kit* for small dosing pump CY06/1000
6053901	Spare kit* for small dosing pump NM015BY01L06B
6053903	Spare kit* for dosing pump 3000L/h, NM031BY04S24B of 6046792
6063001	Spare kit* for dosing pump 550L/h, NM015BY02S12B of 6046791

* Includes rotor, stator, seals, accessory kit

Part No. Solids Sensor

6053467	Wiper kit for solids sensor (5pc)
6053463	Solids sensor, measurement range up to 500g/L, stainless steel, wiper, 10m cable, max. 40°C, max. 5bar
6053440	Solids controller, 2x DI, 2x 20mA output, 100-240VAC
6053465	Safety inline armature, retractable with ball valve, DN65, for solids sensor, stainless steel, max. 5bar
6053461	Fixed sensor holder, DN65, for solids sensor, stainless steel, max. 1bar
6053462	DN100,65,100 flange, T-pipe for solids sensor
6053464	DN150,65,150 flange, T-pipe for solids sensor
6053466	Extension cable, 50m, for solids sensor

Part No. Polymer Preparation FLOCMaster Light

6060551	PLC Controller, CPU1215C
6060561	PLC Controller Module, SM1234
6060563	Touch Panel, KTP400Basic, (for Version 1.0 / 2.0)
6062934	Touch Panel, KTP400Comfort, (for Version 3.0)
6060564	Frequency drive, 0.55kW
6060566	Frequency drive, 4.0kW
6060567	Dosing Valve, Motor controlled, DN15, (CV-001)
6062936	Dosing Valve, spare part kit, (for CV-001)
6060568	Flowmeter for Water, DN12, (FT-01)
6060571	Flowmeter for Polymer, 6MM, (FT-02)
6060572	Mixing pump, (P-001)
6060573	Mixing pump, spare part kit (seal, wear out parts, O-ring set), (P-001)
6060576	Polymer pump, (P-002), (for Version 1.0 / 2.0)
6062938	Polymer pump with external cooling, (P-002), (for Version 3.0)
6060577	Calibration pump, manual, (P-003)
6060579	Pressure reducer, DN25, (PC-001), (for Version 1.0)
6062939	Pressure reducer, DN15, (PC-001), (for Version 2.0 / 3.0)
6060580	Solenoid valve, DN25, (V-003), (for Version 1.0)
6062940	Solenoid valve, DN15, (V-003), (for Version 2.0 / 3.0)
6060581	Non-Return valve, DN25, (V-004), (for Version 1.0)
6062971	Non-Return valve, DN15, (V-004), (for Version 2.0 / 3.0)
6060582	Pressure-Relief valve, DN15



POLIMAT Polymer Make Down/Activation System for Flocculation Applications

POLIMAT make down/activation systems can be used in the automotive industry, paper industry and post-treatment applications. In the automotive industry, it is part of the innovative APEX technology for Paint Detackification. The technology aims to reduce cost of operation, increase system performance and provide a step-change improvement in sustainability. APEX polymers require 0.1-2% make down and an activation/ageing period. The make down system ensures the best possible performance of the APEX polymers. The system also comes in a cost-effective version (6049934) for less challenging applications.

Part No.	Description
6063936	POLIMAT polymer make down system, with air driven dosing pump
6046657	POLIMAT polymer make-down system, with air driven dosing pump, 370L PE tank, level switch, agitator and electrical cabinet
6049934	POLIMAT polymer make-down system, with water driven dosing pump, with 370L PE tank, level switch, agitator and electrical cabinet (not for ULTIMER polymers)

Part No.	Accessory
6046663	Bund for 6046657, 6049934, PE, 600L

	POLIMAT 6063936	POLIMAT 6046657	POLIMAT 6049934
Power supply	24Vac or 240VAC	24Vac or 240VAC	24Vac or 240VAC
Compressed air	3-8bar, 6x4mm	3-8bar, 6x4mm	-
Inlet water	0.1-3.0m³/h, 2-6bar, 1-43°C, 3/4"FBSP	0.1-3.0m³/h, 2-6bar, 1-43°C, 3/4"FBSP	0.1-3.0m³/h, 2-6bar, 1-43°C, 1"x1.25" tube
Solution	0.1-2%, 3/4"FBSP	0.1-2%, 1"FBSP	0.1-2%, 1.5"FBSP



6063936

6046657

6049934

Nalco Water innovation helps to meet sustainability goals across the automotive industry, paper industry, and post-treatment applications.

Spares



6063936



6046657

Part No.	Consumables
6059125	Rubber injectors (5/pkg)
6059143	Suction valve and tube



6049934

Part No.	Consumables
6059147	Seals kit, for dosing pump
6059149	Rubber injectors (5/pkg)
6059150	Injector complete
6059151	Suction kit for dosing pump

UltraPositek™ Feed Systems

UltraPositek Feeders are compact devices for the automatic production of UltraPositek solution. UltraPositek is dosed directly into a static mixer using magnetic membrane pumps.

For rinsing purposes the Feeder is fitted with an automatic rinsing system. A consistent solution is guaranteed through the pressure-reducer built into the water-flow path.

Power: 400V, 3-Phase

Solution: 0.1-5%

Min. water pressure: 3.5bar

Part No.	Accessory
6017661	Duplex filter KF-2, for filtering the neat UltraPositek, 1200um
6017597	MID flow meter (4-20mA output)
6017595	Polymer flow control, inline flow sensor (flow/no flow)



Automated production of
UltraPositek solutions

Part No.	Feeder type	Polymer flow (L/h)	Water flow (m3/h)	Piping	Frame
6017583	UPF 3-25-2.5	2-25	2.5	PVC	PP
6017586	UPF 6-25-2.5	2-25	2.5	SS	SS
6017584	UPF 6-60-6	6-60	6	SS	SS
6017585	UPF 6-100-10	10-100	10	SS	SS



Reduced TCO with less expensive raw materials.
Increased sheet ash content.
A paper sheet that is less likely to dust or lint in printing and converting operations.
Ability to sell excess pulp to the market.

FillerTEK Technology

Paper producers are under pressure to improve the overall efficiency of their operations in the face of unforeseen economic challenges, shifting market demands, and escalating costs.

FillerTEK is one of the Nalco Water technology-based solutions to reduce total cost of operation by using less expensive raw materials while preserving end product quality. The program successfully delivers higher sheet ash levels than previously attainable in the past. This technology is designed for customers utilizing either PCC for precipitated calcium carbonate, GCC for ground calcium carbonate or a blend of these carbonates as their filler source.

Part No.	Description
6064691	FillerTEK Lite GCC
6064692	FillerTEK Lite PCC

Increased sheet ash level: The Nalco Water filler treatment allows customers to increase their total sheet ash content up to 5% points and maintain the critical strength and optical properties of the end product.

Utilization of less expensive raw materials: FillerTEK allows the papermaker to use less fiber and more filler. The technology may also provide the opportunity to use less expensive fiber sources.

Improved internal bond strength of final sheet: FillerTEK can also be used to achieve increased internal bond strength at the mill's current level of sheet ash.

Sheet less prone to linting and dusting: Commercial sheets produced with FillerTEK were found to dust less in printing and converting studies.

Final product with good press room runnability: Commercial UCFS produced with FillerTEK showed no negative impact in print trials.

Reduced steam consumption: Sheets containing higher levels of ash are easier to dry.

Staying competitive with the global economy.

Low maintenance programme.



Progressing Cavity Pumps

Netzsch/Nemo pumps are positive displacement pumps designed for dosing highly viscous material. The key components are the rotor (a rotating part) and the stator (a fixed part), the former rotating in the latter. The rotor is a type of extremely coarse pitch threaded screw with a deep thread and narrow core. The stator has twice the pitch of the rotor. As the rotor turns within the stator cavities are formed between the stator and the eccentrically turning rotor, pumping product from the inlet to the outlet of the pump.

Power: 400V, 3-Phase

Control: For use with frequency inverter (not included)

Max pressure: 6bar

Materials: FKM stator, SS rotor

Progressing cavity pumps are designed for dosing highly viscous products.

Part No.	Pump Type	Flow (L/h)	Frequency (Hz)	Power (kW)	Part No. Spare Stator	Part No. Spare Rotor
6017672	NM003-FU	0.5-3.0	0-100	0.55	6031118	6031119
6017673	NM005-FU	2.0-14.0			6031120	6031121
6017674	NM008-FU	6.0-60			6031122	6031123
-	NM011-FU	24-170			6031124	6031125
6017676	NM015-FU	75-550		0.75	6031126	6031127
6017677	NM021-FU	125-1100		1.5	6031128	6031129
-	NM038-FU	800-4000		2.2	6031130	6031131



High Volume Foamer

The Nalco Water High Volume SS Foamer is an air-assisted, water-driven venturi system that dilutes chemical concentrates and projects high quality foam onto any surface, providing for superior cleaning and visual assurance of complete coverage.

A high concentration dilution ratio can be applied for tough cleaning jobs. The foamer does not have moving parts, which ensures very low maintenance. The foam coverage is up to 46m²/min; the foam throw distance up to 9m.

- ▷ Machined SS foamer body
- ▷ SS mounting bracket, SS hose rack
- ▷ Air regulator
- ▷ Discharge hose with quick disconnects, SS ball valve, PP foam wand and 0° nozzle

Compressed Air: 113-453L/min

Water Pressure: 3.4-8.6bar

Water Flow Rate: 14L/min @ 3.4bar

Discharge Hose: 22.9m x 1" (ID)

Part No.	Description
6035373	High Volume Foamer

A high concentration dilution ratio can be applied for tough cleaning jobs. The foamer does not have moving parts, which ensures very low maintenance.

OxiPRO MCA Q2 Feed System

OxiPRO microbial control technology is an integrated program that effectively controls microbial growth and deposit formation in papermaking systems. Uncontrolled microbial growth can negatively impact the profitability of the papermaking operation through machine deposits, felt deposits, sheet spots/holes, breaks, offensive odor in process/sheet, increased wash-ups, increased boil-outs and unscheduled shutdowns.

Power: 480V, 3 phase, 50Hz, 10A

Inlet water supply: 6m³/h

Compressed air: 5...6bar, instrument air quality

The OxiPRO MCA Q2.0 feed system is made for metering and mixing proprietary chemistry together in a diluted form, in a safe and controlled manner to produce a unique, stabilized hypochlorite chemistry. The blended solution can be supplied to up to 6 zones, selected as required using the system touchscreen control panel.

Part No.	Description
6070621	OxiPRO MCA Q2 feed system
6073824	OxiPRO MCA Q2 feed system auto version



Reduce TCO with a stabilized solution ideally suited for high and medium speed paper machines, including tissue.

CONNEXX for Paper Dosing System

The safe CONNEXX dosing system is a timer-based dosing system for PAA. It's integrated with an exclusive packaging system to handle hazardous chemistry, minimizing the risk of chemical exposure.

Benefits:

- ▷ Direct discharging from the container without opening the container socket and without immersion of a suction lance.
- ▷ No direct contact with the chemical product
- ▷ Simple operation with the integrated control device 'CONNEXX Control'
- ▷ Automatic container switchover
- ▷ Reliable discharging of PAA products
- ▷ Increased process stability
- ▷ Increased security and comfort for operators

Power: 400VAC, 50/60Hz 1A

Electrical signals: 1 digital input 24V/100mA, 1 relay output 50VDC/75Vac 0.5A

Part No. CONNEXX dosing system

6066099 For 6 dosing points

Part No. Ordered separately

6067945 Low containment bund for two IBC containers

Important

Please make sure this containment bund is ordered. It avoids siphoning by keeping the chemistry below the maximum level as indicated on the dosing system. Do not use other bunds.

Part No. Consumable

6066070 Replacement filter cartridges (4 included with dosing systems)



6 dosing points

Specially designed to safely handle PAA products. Prevents trapping chemistry expansion in a closed pipe section.



OxiPRO Feed System
for Nalco 74650

OxiPRO Deposit Control Technology provides control of microbial growth, surface deposits, operational costs and chemical usage.

OxiPRO Deposit Control Feed System

OxiPRO Deposit Control Technology is our innovative, SMART Solutions offering for enhanced control of microbial growth and deposit formation in paper making systems. It uses proprietary chemistry that is the best technical fit for the system to provide maximum performance and wet-end compatibility.

The OxiPro Feed System activates and doses the Nalco Water three-component chemistry biocide feed programme (Halogen Stabiliser, Bleach and Caustic) to the application points on the paper machine.

All operations and control parameters are available from the HMI PLC screen.

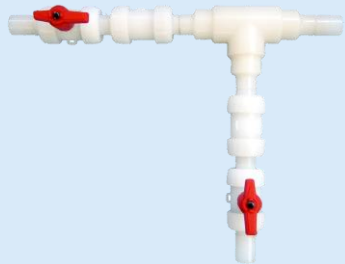
The feed system comes in two sizes: Low Flow and High Flow. It can feed to up to six addition points.

Process control and interlocks to the customers process are built into the standard feed system ensuring safe operation at your customer's plant.

The involvement of a Nalco Water Customer Project Engineer is required to ensure proper installation.

Part No.	Description	Bleach Max. flow (L/h)	Caustic Max. flow (L/h)	Stabilizer Max. flow (L/h)
6058624	OxiPRO Feeder Low Flow	60	7.5	60
6058625	OxiPRO Feeder High Flow	375	12	375

Part No.	Description	Chiller model	Bleach heat cooler	Stabilizer hear cooler
6059484	OxiPRO Low Chiller/Heat Exchanger	ENR 008	M10Hx20	M10Hx30
6059804	OxiPRO High Chiller/Heat Exchanger	ENR 010	M10Hx50	M10Hx60



OxiPRO Reaction Tee
for Nalco 74808

Safe mixing of Nalco 74808
and Sodium Hypochlorite
chemical products

OxiPRO Reaction Tees

The OxiPRO Reaction Tees have been designed for safe mixing of Nalco 74808 and Sodium Hypochlorite chemical products. Each chemical product has its own injection inlet to the reaction vessel where the chemical products are then mixed within the Tee and discharged to the injection point.

The Reaction Tee can also be used for mixing other chemical products, e.g. ACTI-BROM™ and Sodium Hypochlorite.

Each inlet port is fitted with a PVDF non-return valve, which are fitted with PTFE coated springs, allowing position of the Tee in any plane. The reaction Tee is filled with PTFE 'rasher rings' to aid the mixing process. The Tee must be positioned within the 5m of the addition point.

Applications: machine stock systems, process control, waste neutralisation, cooling water.

Part No.	Description
6036971	Reaction Tee, 50ml
6036973	Reaction Tee, 20ml

Material: PVDF, fusion welded

Inlet connections: Two, 1/2" fBSP

Outlet connections: One, for 12x9mm tubing

Discharge tubing: 5m, PTFE (supplied)

PURATE Chlorine Dioxide Generator up to 90kg/h

Chlorine dioxide is an effective biocide that can be applied in treatment of recirculating cooling tower water, paper process water, wastewater, odour control, and drinking water. As a dissolved gas, it penetrates and removes biofilm. Chlorine dioxide is also effective over a broad pH range from 4-10.

PURATE generators use two precursors, PURATE and sulphuric acid (H_2SO_4), for safe and efficient production of chlorine dioxide. PURATE is a unique stabilised solution of sodium chlorate and hydrogen peroxide. PURATE AD models require 78% H_2SO_4 . PURATE MSA models require 78-98% H_2SO_4 . Models with -DS extension come with a distribution system for up to 4 dosing points, avoiding a ClO_2 storage tank. Every generator comes with one fixed gas detector.

Inlets: 1x water, 1x PURATE precursor, 1x acid precursor

Outlets: 1x ClO_2 , DS models: 4x ClO_2

Dimensions (HxWxD): DS/AD models: 2.1x1.9x1.4m, MSA models: 2.1x2.6x1.4m

Power supply: 400V, 3 phase, 50Hz, 32...50A

Part No.

PUREU-AD8.88

PUREU-AD18.88

PUREU-AD52.88

PUREU-AD90.88

PUREU-AD-DS8.88

PUREU-AD-DS18.88

PUREU-AD-DS32.88

PUREU-AD-DS52.88

PUREU-MSA8.88

PUREU-MSA18.88

PUREU-MSA70.88

PUREU-MSA-DS8.88

PUREU-MSA-DS18.88

PUREU-MSA-DS32.88

PUREU_DSX.88

Description

Generator AD, 8kg/h

Generator AD, 18kg/h

Generator AD, 52kg/h

Generator AD, 90kg/h

Generator AD-DS, 8kg/h

Generator AD-DS, 18kg/h

Generator AD-DS, 32kg/h

Generator AD-DS, 52kg/h

Generator MSA, 8kg/h

Generator MSA, 18kg/h

Generator MSA, 70kg/h

Generator MSA-DS, 8kg/h

Generator MSA-DS, 18kg/h

Generator MSA-DS, 32kg/h

Add-on DS with 1-4 dosing points

Part No.

6063881

Accessory

Dry coupling, 316SS, for a transfer line of PURATE bulk tank

Part No.

6061471

6071473

6057379

6057380

Additional Gas detectors and parts

ClO_2 gas detector, Ultima XA

Replacement sensor for 6061471

Minibump gas generator, with ClO_2 cell

Minibump cell spare for 6057379



PURATE generators reliably produce chlorine dioxide up to 90kg/h, with 95% efficiency, using two precursors.



PURATE PUR-S Chlorine Dioxide Generator up to 4.5kg/h

Chlorine dioxide is an effective biocide that can be applied in treatment of recirculating cooling tower water, paper process water, wastewater, odour control, and drinking water. As a dissolved gas, it penetrates and removes biofilm. Chlorine dioxide is also effective over a broad pH range from 4-10.

PURATE generators use two precursors, PURATE and sulphuric acid (78% H_2SO_4), for safe and efficient production of chlorine dioxide. PURATE is a unique stabilised solution of sodium chlorate and hydrogen peroxide. The distribution system comes with a booster pump and is available for 1, 2 or 4 dosing points, avoiding a ClO_2 storage tank.

Inlets: 1 x water, 1 x PURATE precursor, 1 x acid precursor

Outlets: 1 x ClO_2 , Distribution: 1, 2 or 4 x ClO_2

Communication: Wireless 4G

Dimensions (LxWxH): Generator: 108x70x206cm, Distribution system: 102x71x183cm

Power supply: Generator 230VAC, 50Hz, 10A, Distribution system 230VAC, 50Hz, 2A + 400V, 3 phase, 50Hz, 10A

Part No.

PUR-S2EU.88

PUR-S4EU.88

Part No.

PUR-SDS1.88

PUR-SDS2.88

PUR-SDS4.88

Part No.

6071473

Generator

Generator 2.2 kg/h

Generator 4.5 kg/h

Booster and distribution system

Single Feed Point ClO_2 Boost Pump

2 Feed Point System with ClO_2 Boost Pump

4 Feed Point System with ClO_2 Boost Pump

Gas detector spare part

Gas detector MSA ULTIMA XA
spare sensor ClO_2



Generator

Distribution

PURATE generators for small systems reliably produce chlorine dioxide up to 4.5kg/h, with 95% plus efficiency, using two precursors.



NALDIOX™ Version 2 Chlorine Dioxide Generator

NALDIOX is a unique on-site ClO₂ generation technology for bio-management in small and medium size cooling and process water systems. ClO₂ minimises the risk of Legionella pneumophila proliferation by controlling biofilm, maximising heat transfer by controlling biofilm, minimising downtime associated with cooling tower or plant cleaning. It also minimises environmental impacts by meeting local requirements for no AOX produced in waste water systems. ClO₂ has less by-products that do not bio-accumulate compared to conventional oxidising biocides. ClO₂ is not pH dependant, does not cause pipe corrosion. The NALDIOX system produces safe concentration of ClO₂ at less than 500ppm and has many safety features built in to assure safe, reliable operation and effective control.

NALDIOX Version 2 generators use two precursor (PC-1 and PC-2) to safely produce ClO₂ in the range of 2.5 - 200g/h.

Inlet water: 0.2-3.6m³/h, pressure 1-3.5bar, temperature 0-30°C

Communication: Via external Next Generation 3D TRASAR controller (ordered separately).

Power supply: 230VAC, 50/60Hz, 10A@230VAC

Part No.
NXV2-BASE.88

Part No.
NXV2-D05.88
NXV2-D20.88

Part No.
NX-BRTANK.88

Part No.
NX-DOSPB1.88
NX-DOSTM3.88
NX-BTI50L.88

NX-BTE150L.88

Part No.
NX-INDENC.88
NX-OUTHOU.88
NX-CONGRP.88

Part No.
NX-CLO2CON.88
NX-CLO2C02.88

NX-CLO2C05.88

NX-CLO2P02.88
NX-CLO-T02.88

NALDIOX V2 base unit
NALDIOX V2 ClO₂ generator base unit

NALDIOX V2 model
Model D05, 2.5...50g/h
Model D20, 10...200g/h

Break tank
Water break tank 200L

Dosing strategy
Single injection – pumped bypass
Timer manifold 3-way, non-simultaneous
Batch tank 50L, simultaneous control of 6 pumps
Batch tank 150L, simultaneous control of 6 pumps

Enclosure
Indoor enclosure
Outdoor housing GRP (limited space)
Containerized plant room GRP

Optional sensor
ClO₂ concentrated probe 100-3500ppm
ClO₂ sensor, <30°C, <2ppm, no backpressure
ClO₂ sensor, <30°C, <5ppm, no backpressure
ClO₂ sensor, <30°C, <2ppm, <8bar
Chlorite sensor, <30°C, <2ppm, no backpressure



NALDIOX is a best-in-class technology for safe production of chlorine dioxide up to 200g/h on customer sites.

NALDIOX offers dosing strategies from single point bypass injection, non-simultaneous 3-way timer manifold or batch tank with up to 6 simultaneous controlled dosing pumps.



NALDIOX™ UltraPure Chlorine Dioxide Generator

Food safety conscious manufacturers want to produce food in a safe way. Our NALDIOX UltraPure chlorine dioxide solution promotes effective microbiological control minimizing disinfection by-products in water and food while ensuring asset protection. The result is optimized chlorate, chlorite compliance and the confidence of enhanced food safety. UltraPure adds a purification step to NALDIOX ClO₂ generators which will minimize the amount of by-products entering the system while keeping all the advantages and benefits of NALDIOX Version 2. This is a differentiating solution since the generation route is efficient and effective (proven) and produces the cleanest possible ClO₂ stream available today (Purity ≥ 99%). The integrated approach (chemistry, generator, purification, service- and maintenance, data-visibility) will bring you peace of mind to produce Safe Food with Clean Water.

NALDIOX Ultrapure generators use two precursor (PC-1 and PC-2) to safely produce ClO₂ in the range of 2.5 - 300g/h.

Inlet water: 120-600L/h, pressure 1-3.5bar, temperature 0-30°C

Communication: Via external Next Generation 3D TRASAR controller (ordered separately).

Power supply: 230VAC, 50/60Hz, 10A@230VAC

Part No.
NXUP-BASE.88

NALDIOX base unit
NALDIOX UltraPure ClO₂ generator base unit

Part No.
NXUP-U05.88
NXUP-U30.88

NALDIOX UltraPure model
Model U05, 2.5...50g/h, Batch tank 20L
Model U30, 15...300g/h, Batch tank 50L

Part No.
NX-BRTANK.88

Break tank
Water break tank 200L

Part No.
NX-INDENC.88
NX-CONGRP.88

Enclosure
Indoor enclosure
Containerized plant room GRP

Part No.
NX-CLO2CON.88
NX-CLO2C02.88

Optional sensor
ClO₂ concentrated probe 100-3500ppm
ClO₂ sensor, <30°C, <2ppm, no backpressure

NX-CLO2C05.88

ClO₂ sensor, <30°C, <5ppm, no backpressure

NX-CLO2P02.88
NX-CLO-T02.88

ClO₂ sensor, <30°C, <2ppm, <8bar
Chlorite sensor, <30°C, <2ppm, no backpressure



With NALDIOX UltraPure, ClO₂ is generated efficiently and includes a purification step, minimizing by-products entering the system.

The integrated approach with chemistry, generator, purification, services and data visibility, supports the production of safe food with clean water and instils peace of mind.



ENVIROX Chlorine Dioxide Generator

Chlorine dioxide is an effective biocide that can be applied in treatment of recirculating cooling tower water, paper process water, wastewater, odour control, and drinking water. As a dissolved gas, it penetrates and removes biofilm. Chlorine dioxide is also effective over a broad pH range from 4-10.

The ENVIROX generator uses a single chemical precursor to safely generate ClO_2 . Bleach or acid are not required. To ensure the proper installation and safe application, all chlorine dioxide generators require the involvement of a Nalco Water Customer Project Engineer.

ClO_2 production, 1...4 cassettes: SRE1000 5...20g/h, SRE2000 25...100g/h

Power supply, 1...4 cassettes: SRE1000 0.2...0.8kW, SRE2000 1.0...4.0kW

Inlet water: SRE1000 10...40L/h @ 1...4 cassettes, SRE2000 54...214L/h @ 1...4 cassettes, 2.5...6.8bar, 10...25°C, potable or equivalent

Inlet water quality: pH: 4...10, hardness: <320ppm, although soft water is preferred, alkalinity: <300ppm, conductivity: 50...1000 $\mu\text{S}/\text{cm}$, chloride: <280ppm, CO_2 : <50ppm, SiO_2 : <25ppm, Fe + Mn: <1ppm

Part No.
161-SRE1001CE.88
161-SRE2001CE.88
Note: Cassettes are ordered separately

Part No.
991-DOS053002.88

6057377
987-650505

Part No.
161-CASSRE005NS.88
161-CASSRE025NS.88

6017775

6017776

991-FIL0019.88

991-FIL0020.88

991-FIL0002.88

Generators
ENVIROX SRE1000 Generator
ENVIROX SRE2000 Generator

Accessories
Chlorine Dioxide storage tank, PTFE lined, bund, carbon filter, level probes, leak detection
 ClO_2 gas detector, wall mount
 ClO_2 drop titration test kit

Consumables
Cassette, 5gr/h, for SRE1000 from \geq Aug-2016
Cassette, 25gr/h, for SRE2000 from \geq Mar-2017
Cassette, 5gr/h, for SRE1000 from < Aug-2016
Cassette, 20gr/h for SRE2000 from < Aug-2016
4x 10" feed water filter cartridges, 10um, for SRE1000
4x 20", feed water filter cartridges, 20um, for SRE2000
4x Carbon filter, for ClO_2 storage tank
991-DOS053002.88



ENVIROX generator safely produces chlorine dioxide, up to 100gr/h using a single precursor.

1...4 electrochemical cassettes can be installed, to produce the quantity of ClO_2 as required, up to 100g/h.



Cooling



Boiler



Process



Pre-treatment



Post-treatment



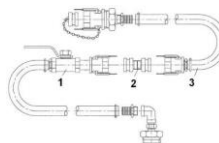
PORTA-FEED Accessories Selection Procedure



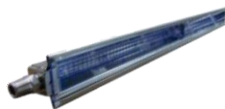
PORTA-FEED Accessories Selection Guide

Accessory	Standard	Not compatible with	Standard	Not compatible with
	SPC	SPC	SPC	SPC
	SPC	SPC	SPC	SPC
Accessory	Standard	Not compatible with	Standard	Not compatible with
Level Gauge	SPC	SPC	SPC	SPC
Level Gauge Comp.	SPC	SPC	SPC	SPC
Overflow Pipe	SPC	SPC	SPC	SPC
Manifold	SPC	SPC	SPC	SPC
Accessory	Standard	Not compatible with	Standard	Not compatible with
Level Gauge	SPC	SPC	SPC	SPC
Level Gauge Comp.	SPC	SPC	SPC	SPC
Overflow Pipe	SPC	SPC	SPC	SPC
Manifold	SPC	SPC	SPC	SPC
Accessory	Standard	Not compatible with	Standard	Not compatible with
Level Gauge	SPC	SPC	SPC	SPC
Level Gauge Comp.	SPC	SPC	SPC	SPC
Overflow Pipe	SPC	SPC	SPC	SPC
Manifold	SPC	SPC	SPC	SPC

PORTA-FEED Accessories Transfill Lines



PORTA-FEED Accessories Level Gauges



PORTA-FEED Accessories Vents, Overflow Pipes



PORTA-FEED Accessories Manifolds



PORTA-FEED Accessories Other



Dosing Tanks, Bunds



-

Portfolio



Control



Feed



Storage



Separation



Analytical

Application

Selection Procedure

All PORTA-FEED base tanks should be kept in good condition. To ensure safe operation and uninterrupted transfer services, defective and incorrect accessories must be replaced. All accessories in this catalogue are approved by the Nalco Water Packaging Systems department. Approval from Packaging Systems is mandatory, if other accessories are required.

Step 1. Determine the base tank type and material(s) of construction. Check the labels on the base tank. The type can also be found in the Nalco Water SAP system (IQ09) with the serial number of the base tank. The models and materials are shown below and on the right.

Step 2. Determine the Nalco Water part number of the accessory with the [selection guide](#) or from these sections: transfill lines, level gauges, vent assemblies/overflow pipes, manifolds, other.

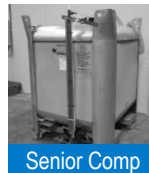
Step 3. Check the compatibility with the chemical product in the SDS or CPP to make sure that the product is compatible with the standard accessory materials as indicated in this catalogue. If not compatible, select one of the alternative accessories from this catalogue. Make sure that the plumbing materials of the complete accessory assembly are identical.

Step 4. Place your order the same way as for other equipment items.

PORTA-FEED Base tanks

		SS304	SS316	PEL	Comp
Micro	100L	●	-	●	-
Micro Plus	230L	-	-	-	●
Mini	280L	●	●	●	-
Mini Plus	440L	●	-	●	●
Junior	750L	●	●	●	●
Senior	1500L	●	●	●	●
Twin Senior	3000L	●	●	●	●

SS304	Unlined SS304 base tank
SS316	Unlined SS316 base tank
PEL	PE lined SS base tank
Composite	PE base tank with SS frame
Plastic	PE base tank



Selection Guide

Click on these links for: [standard transfill lines](#), [other transfill lines](#), [level gauges](#), [vent assemblies/overflow pipes](#) and [manifolds](#), [extensions](#)

Accessory	Standard	Not compatible with			Standard	Not compatible with			Standard	Not compatible with			Standard	Not compatible with		
		FKM	PVC	PVC/FKM		FKM	PVC	PVC/FKM		FKM	PVC	PVC/FKM		FKM	PVC	PVC/FKM
	Senior Twin SS				Junior SS				Mini Plus PEL				Mini PEL			
Transfill Line	6000926	6008246 ³⁾			6001162 ²⁾	6027382			6027330 ²⁾	6063647	-	-	6027330 ²⁾	6063647	-	-
Level Gauge	6000851	6025442	6000851	6025442	6001046	6001071			6025472	6029568			6001171	6029566		
Vent Assembly	5)				5)				6024006				6001163	6001163		
Manifold	6000927	6025441 ³⁾	6000927	6025441 ³⁾	6000891	6025441	6000891	6025441	6025474 + 6001172	6031004 + 6031006			6025474 + 6001172	6031004 + 6031006		
	Senior Twin PEL / Composite				Junior PEL				Mini Plus Plastic				Micro Plus Plastic			
Transfill Line	6025445	6008246 ³⁾	-	-	6027330 ²⁾	6063647	-	-	6027330 ²⁾	6063647	-	-	6027330 ²⁾	6063647	-	-
Level Gauge PEL ⁵⁾	6000973	6027354			6001078	6027355			6026297		6025518		6027361	6027361	-	
Level Gauge Comp. ⁵⁾	6036885	6036881			-				-				-			
Overflow Pipe	-				-				6026298				6027364			
Manifold	6025447	6027357 ³⁾			6000982	6027357			6026296	6028572	6027383 ⁴⁾		6026296	6028572	6027383	
	Senior SS				Junior Plus Plastic				Mini Plus Plastic US				Micro SS			
Transfill Line	6000918 ¹⁾	6008246			6027330 ²⁾	6063647	-	-	6027330 ²⁾	-	-	-	6027330 ²⁾	6027382	-	-
Level Gauge	6000851	6025442	6000851	6025442	6027331		-		6025501	Not available anymore			6002711	6029571		
Vent Assembly	5)				5)				6024006				5)			
Overflow Pipe	-				6027365				Not Setup				6002721			
Manifold	6000891	6025441	6000891	6025441	6026296	6028572	6027383		6025511				6002716	6029569		
	Senior PEL / Composite				Mini Plus SS				Mini SS				Micro PEL			
Transfill Line	6000996 ¹⁾	6008246	-	-	6001162 ²⁾	6027382			6001162 ²⁾	6027382	6001162 ²⁾	6027382	6027330 ²⁾	6063647	-	-
Level Gauge PEL	6000973	6027354			6025514	6029567			6001184	6029565	6001184	6029565	6002729	6029572		
Level Gauge Comp.	6036885	6036881			-				-		-		-			
Vent Assembly	5)				6024006				6001163 for SS304, 6001190 for SS316				5)			
Overflow Pipe	-				-				6001186 for SS316, N/A for SS304				6002737			
Manifold	6000982	6027357			6025515 + 6031007				6025515 + 6031007		6025515 + 6031007		6002730	6029570		

¹⁾ When a 20m hose is required, use for Senior SS: [6001064 + 6025450 + 6001068](#); Senior PEL: [6001089 + 6001096 + 6001097](#).

²⁾ Swagelok coupling [6001185](#) required for Kathon chemical products. ³⁾ Without link. ⁴⁾ PVDF. ⁵⁾ Vent assembly included in level gauge.



Transfill Lines, Standard, 3m

Part No.	PORTA-FEED Type		Transfill line	Coupling	Elbow connect to lid	Old Part No.
6000926	Senior Twin SS		2"	Camlok SS	Included for both PORTA-FEED tanks	003-581-525
6025445	Senior Twin PEL/Composite			Camlok PP		003-583-525
6000918	Senior SS			Camlok SS	Included	003-581-300
6000996	Senior PEL/Composite			Camlok PP		003-583-300
6027330	Junior PEL ¹⁾ Junior Plus Plastic ²⁾ Micro Plus Plastic ²⁾ Micro PEL / SS	Mini Plus Plastic EU ²⁾ Mini Plus Plastic US ¹⁾ Mini (Plus) PEL	1"	Camlok PP	Not Included	N/A
6001162	Junior SS ¹⁾²⁾	Mini (Plus) SS		Camlok SS	Included	009-100-300
6001185	Junior SS316/PEL ²⁾	Mini (Plus) PEL		Swagelok SS	Included for PEL only	009-400-300
	Junior Plus Plastic ²⁾	Mini Plus Plastic EU/US ²⁾				
	Micro Plus Plastic ²⁾	Mini SS316 ³⁾				
	Micro PEL					

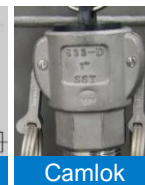
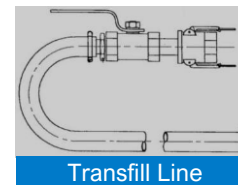
The transfill lines above that come without an elbow can also be supplied including an elbow, in case the elbow on the base tank is missing or needs to be replaced. See transfill lines below.

6001052	Junior SS ¹⁾	1"	Camlok SS	Included	004-581-300
6025449	Junior 316SS/PEL ¹⁾		Swagelok SS		004-581-300K
6001080	Junior PEL ¹⁾		Camlok PP		004-583-300
6001179	Micro PEL		Camlok SS		009-300-300
6002719	Micro SS				015-100-300
	Mini (Plus) PEL				

¹⁾ Delivered without dust plug. Click here for 1" dust plugs.

²⁾ Do not use the included elbow. [Click here](#) if an elbow is required.

³⁾ For the Mini (Plus) SS, only the included transfill line hose tail should be used. The elbow is welded on the base tank.



Material: PVC

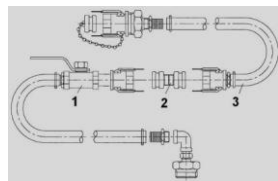
Seals: FKM

Couplings: SS or PP

A transfill line is approx. 2m long. The transporter tank must be positioned next to the base tank, for the Nalco Water Delivery Specialist to see all components involved in the transfer. The Senior base tank can be equipped with a 20m transfill line, and a transfer pump.

The Nalco Water Delivery Specialist will only transfer chemical product when the proper coupling is installed. Camlok couplings are the standard. Swagelok couplings are used for Kathon products (Isothiazolin > 15ppm).

Other Transfill Lines



1. Transfill line 1", from base tank to transfer pump, 20m
2. Connector
3. Transfill line 1", from transfer pump to transporter, 1m



Petro Transfill Line

Transfill Lines, 20m, for Senior PORTA-FEED

Part No.	PORTA-FEED	Description	Old Part No.
6001064	Senior 304/316SS	Transfill line (1.)	004-581-320
6025450		Transfill line (3.)	004-581-385
6001068		Connector (2.)	004-581-395
6001089	Senior PEL / Composite	Transfill line (1.)	004-583-320
6001096		Transfill line (3.)	004-583-385
6001097		Connector (2.)	004-583-395

Complete 20m transfill line sets:

Senior SS: 6001064, 6025450, 6001068.

Senior PEL: 6001089, 6001096, 6001097.

Alternative Transfill Lines

For products not compatible with the standard transfill line material PVC and/or FKM gaskets.

Part No.	PORTA-FEED tp.	Transfill Line	Materials
6008246 ¹⁾	Senior SS	2", Petro, 2m	Camlok SS PTFE
6027356 ²⁾	Senior PEL/Comp.	2", 2m	Camlok PP PVC / PTFE
6063647 ²⁾	Junior, Mini, Micro PEL/Plus Plastic	1", 2m	
6027382 ¹⁾	Junior SS Mini (Plus) SS Micro SS	1", Petro, 3m	Camlok SS PTFE

¹⁾ Use when product not compatible with PVC/FKM. Elbow on lid not included.

²⁾ Use when product not compatible with FKM. Elbow on lid incl.



Dust Plug



Camlok Coupling



Elbow on Lid

Transfill Line Accessories

Dust plugs, elbows and Camlok couplings.

Part No.	PORTA-FEED Type	Description
6027362	(Twin) Senior SS Senior PEL/Composite	Dust Plug 2" PP
6026284	All Junior, Mini and Micro	Dust plug 1" PP
6027323	Junior, Mini (EU), Micro Plus Plastic	Elbow on lid to connect transfill line
6027328	Junior PEL Junior, Mini, Micro Plus Plastic Mini (Plus) PEL Micro PEL / SS	Camlok Coupling, Female, 1" PP
6027329	(Twin) Senior PEL	Camlok Coupling, Female, 2" PP

Level Gauges

Standard Level Gauges

Part No.	PORTA-FEED Type	Connection to Manifold	Level Gauge Vent	Old Part No.
6000851	Senior (Twin) SS	SS	Included	003-581-100
6000973	Senior (Twin) PEL	PVC		003-583-100
6036885	Senior (Twin) Composite			-
6027331	Junior Plus Plastic			004-900-100
6001046	Junior SS	SS		004-581-100
6001078	Junior PEL	PVC		004-583-100
6025514	Mini Plus SS ¹⁾	SS	Not Included ¹⁾	009-800-100
6025472	Mini Plus PEL ¹⁾	PVC		009-600-100
6026297	Mini Plus Plastic		Included	009-900-100
6001184	Mini SS ¹⁾	SS	Not Included ¹⁾	009-400-100
6001171	Mini PEL ¹⁾	PVC		009-300-100
6027361	Micro Plus Plastic		Included	015-900-100
6002711	Micro SS			015-100-100
6002729	Micro PEL			015-200-100

¹⁾ These PORTA-FEED types have a vent from lid to level gauge. [Click here](#) for vent assemblies.

SS base tank: Glass tube, FKM seals

PEL base tanks, Mini Plus Plastic US: Glass tube, FKM seals

Plastic base tank (EU): Duran tube, no seals (glued)

Alternative Level Gauges

Part No.	PORTA-FEED Type	Connection to manifold	Gaskets	Use when product not compatible with	Old Part No.
6025442	Senior SS	SS	PTFE	PVC / FKM	003-582-100S
6027354	Senior PEL	PVC		FKM	003-583-100S
6036881	Senior Com			-	
6001071	Junior SS	SS	PTFE	PVC / FKM	004-581-100S
6027355	Junior PEL	PVC		FKM	004-583-100S
6025518	Mini Plus Plastic	PVDF	FKM	PVC	0204M084
6029567	Mini Plus SS	SS	PTFE	PVC / FKM	009-800-100S
6029568	Mini Plus PEL	PVC		FKM	009-600-100S
6029565	Mini SS	SS		PVC / FKM	009-100-100S
6029566	Mini PEL	PVC		FKM	009-300-100S
6029571	Micro SS	SS		PVC / FKM	015-100-100S
6029572	Micro PEL	PVC		FKM	015-200-100S



Indicator Strip

Part No.	Description
6027327	Level Indicator Strip, Yellow

100



Vent Assemblies and Overflow Pipes

Part No.	PORTA-FEED Type	Material	Old Part No.
Vent Assemblies			
6024006	Mini Plus SS Mini Plus PEL	LDPE tubing PVC, PP fittings	009-100-450A
6001163	Mini 304SS Mini PEL		009-100-400
6001190	Mini 316SS		009-400-500
Overflow Pipes			
6027365	Junior Plus Plastic	PVC	N/A
6026298	Mini Plus Plastic EU		N/A
6001186	Mini 316SS		009-400-400
6027364	Micro Plus Plastic		N/A
6002721	Micro SS		015-100-400
6002737	Micro PEL		015-200-400



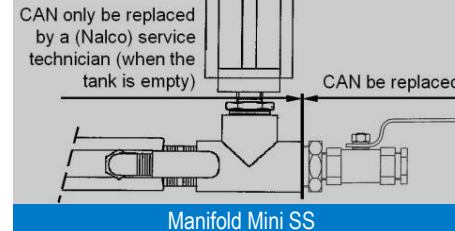
Air is allowed out when the base tank is filled and allowed in when a dosing pump pumps product out of a PORTA-FEED base tank. The air flows through a vent assembly or an overflow pipe. Vent assemblies are supplied with level gauges. [Click here](#) for level gauges.

Manifolds

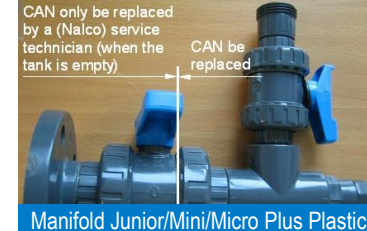
A PORTA-FEED Manifold connects the tank outlet, the level gauge and the suction line of the dosing pump.



Manifold Senior SS



Manifold Mini SS



Manifold Junior/Mini/Micro Plus Plastic

Standard Manifolds

Part No.	PORTA-FEED Type	Material	Gaskets	Old Part No.
6000927	Twin Senior SS ¹⁾	SS	FKM	003-581-550
6025447	Twin Senior PEL/Composite ¹⁾	PVC		003-583-550
6000891	Senior/Junior SS	SS		003-581-200
6000982	Senior PEL/Composite Junior PEL	PVC		003-583-200

The following manifolds can only be replaced by a specialised technician:

6026296	Junior/Micro Plus Plastic Mini Plus Plastic EU	PVC	FKM	N/A
6025515 + 6031007 (ext)	Mini (Plus) SS	SS	PTFE	009-800-200 + 009-100-200 (ext)
6025474 + 6001172 (ext)	Mini (Plus) PEL	PVC	FKM	009-600-200 + 009-300-200 (ext)
6002716	Micro SS			015-100-200
6002730	Micro PEL			015-200-200

¹⁾ Includes the link between the two PORTA-FEED base tanks

Alternative Manifolds

Part No.	PORTA-FEED Type	Material	Gaskets	Use when product is not compatible with standard manifold material	Old Part No.
6025441	Senior SS Junior SS	SS (Petro)	PTFE	PVC + FKM	003-581-200S
6027357	Senior PEL/Comp. Junior PEL	PVC		FKM	003-583-200S
6028572	Junior Plus Plastic Mini Pl. Plastic EU Micro Plus Plastic				N/A
6027383	Junior Plus Plastic Mini Plus Plastic Micro Plus Plastic	PVDF	FKM	PVC	
6031004	Mini Plus PEL	PVC	PTFE	FKM	009-600-200S
6031006	Mini PEL				009-300-200A
6029569	Micro SS				015-100-200S
6029570	Micro PEL				015-200-200S

Manifold Extensions for Multiple dosing pumps

Part No.	PORTA-FEED Type	Outlets	Material	Gaskets	Old Part No.
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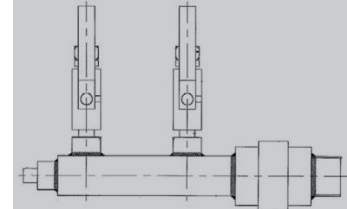
Manifold extensions are connected to the manifold on the base tank:

6000914	Senior/Junior SS	2	SS	FKM	003-581-270
6000917	Senior/Junior SS	3			003-581-280
6000993	Senior PEL/Composite Junior PEL	2	PVC		003-583-220
6000994	Senior PEL/Composite Junior PEL	3			003-583-230
6027384	Junior/Mini/Micro Plus Plastic	2	PVDF		N/A
6027385		3			N/A
6025520	Junior/Mini/Micro Plus Plastic	2	PVC		0204M086
6025521		3			0204M087
6025522		4			0204M088
6025523		5			
6025524		6			
6031007		Mini (Plus) SS			1
6001172	Mini (Plus) PEL	1	009-300-200		
6027326	Mini (Plus) SS/PEL	1	PVDF		N/A
6001149		2	PVC		009-100-220
6001158		3			009-100-230
6001160		4			009-100-240

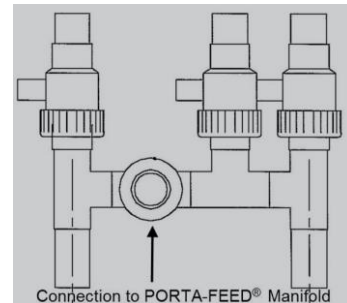
For Micro SS/PEL base tanks, a new manifold has to be ordered:

6002717	Micro SS	2	PVC	FKM	015-100-220
6002718		3			015-100-230
6002731	Micro PEL	2			015-200-220

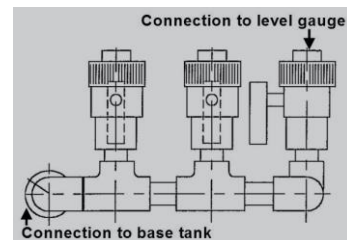
When ordering a new Micro SS/PEL base tank, indicate on the Base Tank Feasibility Checklist that a manifold with multiple outlets is required, to avoid replacing the standard manifold after delivery.



Double Manifold Extension Senior SS



Triple Manifold Extension Mini+ Plastic



Double Manifold Micro PEL

Other Accessories



Containment Bunds for Junior/Senior

Junior and Senior SS, PEL and Composite base tanks are supplied without containment bund.

Part No.	PORTA-FEED Type	LxWxH (cm)	Material
6028592	Junior SS	175x122x76	SS
6029853	Junior PEL	175x122x76	SS, PE lined
6028591	Senior SS	188x152x91	SS
6029683	Senior PEL / Composite	188x152x91	SS, PE lined
6059892	Twin Senior SS	TBD	SS
6059894	Twin Senior SS, PEL	TBD	SS, PE lined



Stacking Equipment for Senior

Stacking frame 6008245 and stacking adapter 6000747 can be used to stack one IBC/OWC (one-way container) or Junior PORTA-FEED tank on top of a (Twin) Senior PORTA-FEED base tank.

Part No.	PORTA-FEED Type	Stacked on Top	Material
6008245	(Twin) Senior	IBC/OWC or Junior	Galvanised Steel
6000747	Senior SS/PEL (not Composite)	Junior	SS



Dip Tubes

A product that foams requires a dip tube to fill the base tank from the bottom, instead of the product falling into the tank. All Micro, Mini base tanks and the Junior Plus Plastic base tank are always equipped with a dip tube. The dip tube is optional for Senior/Junior SS/PEL base tanks.

Part No.	Description
6026290	SS316 dip tube for Senior SS
6026291	SS316 dip tube for Junior SS
6026292	PVC dip tube for Senior PEL/Composite
6026293	PVC dip tube for Junior PEL

Other Accessories



Heating Coils

Heating Coils allow for warm water, hot water or steam, depending on the version, to flow through a PORTA-FEED base tank.

	Heating Coil SS	Heating Coil PP
Lid (included):	Universal Senior lid SS	Universal Senior lid PE-lined
Connections:	1" mBSP	1" mBSP
Heating medium:	Water or steam, max. 150°C	Water, max. 80°C
Pipe material:	SS, 1"	PP, 32-20mm

Part No.	Heating Coil
6026313	SS, for Junior/Senior SS
6026314	PP, for Junior/Senior PEL
6026315	Heating Coil and Agitator Combined, SS, for Junior/Senior SS

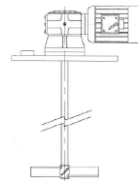


Heating Jackets

The Explosion Proof Zone 2 Heating Jackets come with heating cables inside the jacket. A junction box is included to connect electrical power.

Power Supply:	240VAC, 4A
Ex-Proof:	ATEX, Zone 2, II 2G EEx edm IIC T6
Thermostat:	Yes, product temperature: max. 30°C
Material:	Polymer

Part No.	Heating Jacket
6026303	For Senior SS/PEL
6026304	For Junior SS/PEL
6026305	For Mini Plus SS/PEL
6026306	For Mini SS/PEL



Agitators

The Gear driven agitators are directly mounted on a universal Senior or Junior PORTA-FEED lid.

Impeller:	4 blades, Ø350mm, 200rpm
Motor:	IP55, 0.75kW, 400V 3 phase

Part No.	Agitator, SS316
6026307	For Senior SS
6026308	For Junior SS
6026310	ATEX, for Senior SS
6026311	ATEX, for Junior SS
6026315	Heating coil and agitator combined for Junior/Senior SS

Other Accessories



Dosing Pump Platforms

New PORTA-FEED base tanks that are delivered with a containment bund, come with a single pump platform on the bund. When more pump platforms are required, please mention this on your base tank requests (on the feasibility checklist).

Part No.	Pump Platform
6027322	For Junior/Senior SS/PEL/Comp. SS/PEL, WxDxH 300400x300mm
6026288	For Mini (Plus)/Micro SS/PEL, WxD 210x260mm
6026289	For Junior/Mini/Micro Plus Plastic, WxD 210x260mm



Dosing Pump Connectors

The dosing pump connectors fit the 1/2" fBSP pump outlet on the base tanks.

Part No.	Pump Type	Description	Tubing Connection	Material
6021304	Grundfos DD/DM	Dosing pump connector	6x4mm + 12x9mm	PVDF
6021304 + 6018945	Grundfos other	Dosing pump connector + Tubing adapter	9x6mm	
6021304 + 6018946	Prominent		8x5mm	
6027359	LMI	Dosing pump connector	6x3mm	PTFE
6021304 + 6018947	Miscellaneous	Dosing pump connector + Tubing adapter	8x6mm	PVDF
6021304 + 6017400			12x6mm	
6021304 + 6018948			3/8"X1/4"	
6027360		Dosing pump connector	1/8"X1/4"	PP
6027381			1/4"X1/2"	

Dosing Tanks and Containment Bunds



Dosing Tanks

Tank and bund material: PE

Part No.	Description
6017406	Dosing tank, 60L, semi-transp., ø415x575mm
6017404	Dosing tank, 100L, semi-transp., ø470x790mm
6017405	Dosing tank, 200L, semi-transp., ø600x845mm
BTNK60	Dosing tank, 60L, black, ø415x575mm
BTNK100	Dosing tank, 100L, black, ø470x790mm
BTNK200	Dosing tank, 200L, black, ø600x845mm
6018696	Bund for 60L tank, ø500x540mm
6018697	Bund for 100L tank, ø500x700mm
6018698	Bund for 200L tank, ø655mmx730mm

Bulletin BEU-395



Containment Bunds for IBC's, Drums, Pails

Bund material: PE

Part No.	Containment bund
6059895	For one 1000L IBC (IBC not included), LxWxH: 1280x1910x895mm
6059896	For one 200L drum (drum not included), LxWxH: 900x760x525mm
6059899	For one or two 20L pails (pails not included), LxWxH: 800x400x120mm

Bulletins BEU-392, BEU-393, BEU-394

Cooling

ULTRASOFT
Softener OverviewULTRASOFT
ResidentialULTRASOFT
Eco DVGWULTRASOFT
Light Industrial

Boiler

ULTRASOFT
Heavy IndustrialULTRARO
Commercial GradeULTRARO
Light IndustrialULTRARO
Heavy Industrial

Pre-treatment

Sand Filters
Cooling Systems

Cartridge Filters

Cartridge Filters
Self-cleaningDuplex Cartridge
Filter

Post-treatment



Control



Feed



Storage



Separation



Analytical

Application

ULTRASOFT Softeners Overview

ULTRASOFT softeners cover residential, light commercial and heavy industrial applications. They come complete with pressure vessel, potable monosphere high-capacity ion exchange resin, multi-port control valve, and electronic and electro-mechanical control. All softeners are equipped with a no hard water bypass valve to stop hard water passing to service during regeneration.

Standard systems are designed for flows up to 60m³/h and have exchange capacities of up to 130,000gms. To convert the capacity from gms (grams of hardness as CaCO₃) to m³, divide it by the incoming water hardness in mg/l as CaCO₃.

Operating meter pressure: 3-6bar

Water temperature: < 43°C

Electrical consumption: Max. 10VA

Power supply: 240VAC, 50Hz

Series	Simplex	Duplex	Water meter control	Timer	Flow (m ³ /h)	Flow @ 1bar, 15°C (m ³ /h)	Water usage (L/regen.)	Salt usage (kg/regen.)
Residential	Yes	No	Yes	Yes	0.04-1.5	2.6-3.2	52-188	1.3-3.9
Residential, Hot Water (60°C)	Yes	No	No	Yes	0.04-1.5	2.6-3.2	52-188	1.3-3.9
Eco	Yes	No	No	Yes	0.04-2.5	2.2-2.8	37-272	0.9-4.5
Eco DVGW	Yes	No	No	Yes	0.04-2.5	2.2-2.8	37-272	0.9-4.5
Light Industrial	Yes	Yes	Yes	Yes	0.1-23	0.1-23	131-2946	3.25-74.75
Heavy Industrial	Yes	Yes	Yes	Yes	1.2-60	17.5-50	1630-15242	39-338



Covering residential to heavy industry applications

ULTRASOFT Residential and Residential Hot Water Series

Residential softener systems that are tailored to meet your requirements are available via our Engineering departments. Examples of these softener systems are shown on this page.

Model	Valve	Vessel type	Resin volume (L)	Water volume (L/regen.)	Salt usage (kg/regen.)	Min flow in (m3/h)	Max flow in (m3/h)	System Flow @ 1bar, 15°C (m3/h)	Capacity (gms) Each Vessel
Residential Simplex, time clock control									
FS56C10C	5600 (Noryl™)	8x17	10	52	1.30	0.04	0.5	3.2	500
FS56C20C		8x30	20	105	2.60	0.08	1	2.6	1000
FS56C30C		10x35	30	188	3.90	0.12	1.5	3	1500
Residential Simplex, water meter control									
FS56V10C	5600 (Noryl)	8x17	10	52	1.30	0.04	0.5	3.2	500
FS56V20C		8x30	20	105	2.60	0.08	1	2.6	1000
FS56V30C		10x35	30	188	3.90	0.12	1.5	3	1500
Residential Hot Water Simplex, max. 60°C, time clock control									
FS46C10H	4600 (Bronze)	8x17	10	52	1.30	0.04	0.5	3.2	500
FS46C20H		9x35	20	105	2.60	0.08	1	2.6	1000
FS46C30H		10x35	30	188	3.90	0.12	1.5	3	1500



Pressure vessels:
Housed within an integral cabinet style brine tank for reduced footprint.

Bulletins
BEU-170, BEU-171

ULTRASOFT Eco DVGW Series

Part No.	Model	Valve	Vessel type	Resin volume (L)	Water volume (L/regen)	Salt usage (kg/regen)	Min flow in (m3/h)	Max flow in (m3/h)	System Flow @ 1bar, 15°C (m3/h)	Capacity (gms) Each Vessel
Eco DVGW Simplex – Separate brine tank										
6030842	FS66E10	6665 (Noryl)	8x22	10	37	0.90	0.04	0.5	2.8	500
6030803	FS66E20		7x35	20	74	1.80	0.08	1	2.2	1000
6030804	FS66E30		8x44	30	133	2.70	0.12	1.5	2.6	1500
6030805	FS66E50		10x44	50	272	4.50	0.2	2.5	2.2	2500

Eco DVGW with an integral cabinet and Eco Simplex without DVGW are available via our Engineering departments.



Counter current regeneration and reduced brining levels of 90g/L of resin improves efficiency and waste management.

The DVGW (German norm) valve has immediate up-flow regeneration, with chlorination and 'pause-vacancy' position

Bulletin BEU-172

ULTRASOFT Light Industrial Series

Simplex				Duplex			Vessel type	Resin volume (L)	Water volume (L/regen)	Salt usage (kg/regen)	Min flow in (m3/h)	Max flow in (m3/h)	System Flow @ 1bar, 15°C (m3/h)	Capacity (gms) Each Vessel
Part No. Electronic Time Clock	Part No. Water Meter Control	Model	Valve	Part No. Water Meter Control	Model	Valve								
6030827	6030861	FS25SXT25	2510	6030812	FD91SXT25	9100	10x35	25	131	3.25	0.1	1.25	1.25	1250
6030828	6030862	FS25SXT50		6030813	FD91SXT50		10x54	50	247	6.50	0.2	2.5	2.5	2500
6030829	6030863	FS25SXT75		6030814	FD91SXT75		13x54	75	371	9.75	0.3	3.75	3.75	3750
6030830	6030864	FS25SXT100		6030815	FD91SXT100		14x65	100	495	13.00	0.4	3.75	5	5000
6030832	6030866	FS28SXT125	2850	6030817	FD95SXT125	9500	16x65	125	659	16.25	0.5	5	5	6250
6030834	6030868	FS28SXT150	2850	6030819	FD95SXT150		18x65	150	715	19.50	0.6	6	6	7500
6030835	6030869	FS29SXT150HF	2910	6030820	FD29NXT150HF	2910					7.5	7.5		
6030836	6030870	FS28SXT225	2850	6030821	FD95SXT225	9500	21x60	225	1073	29.25	0.9	8	8	11250
6030837	6030871	FS29SXT225HF	2910	6030822	FD29NXT225HF							11.25	11.25	
6030839	6030873	FS29SXT300HF	2910	6030824	FD29NXT300HF	2910	24x69	300	1502	39.00	1.2	15	15	15000
6030840	6030874	FS29SXT450		6030825	FD29NXT450	30x72		450	2253	58.50	1.8	18	18	22500
6030841	6030875	FS29SXT575		6030826	FD29NXT575			575	2946	74.75	2.3	23	23	25000



Bulletins
BEU-173, BEU-174

ULTRASOFT Heavy Industrial Series

Heavy Industrial softener systems that are tailored to meet your requirements are available via our Engineering departments. Examples of these softener systems are shown on this page.

Simplex Electronic Time Clock	Duplex Water Meter Control	Valve	Vessel type	Resin volume (L)	Water volume (L/regen)	Salt usage (kg/regen)	Min flow in (m ³ /h)	Max flow in (m ³ /h)	System Flow @ 1bar, 15°C (m ³ /h)	Capacity (gms) Each Vessel
Model	Model									
SS36EASY300	SD36EASY300	V360	24x69	300	1630	39	1.2	15	17.5	15000
SS36EASY500	SD36EASY500		30x72	500	2652	65	2	25	21	25000
SS36EASY650	SD36EASY650		36x72	650	3448	84.5	2.6	30	24	32500
SS36EASY900	SD36EASY900		42x78	900	4774	117	3.6	35	25	45000
SS36EASY1200	SD36EASY1200		48x82	1200	6366	156	4.8	60	45.9	60000
SS36EASY1600	SD36EASY1600		55x120	1600	8487	208	6.4	60	50	80000
SS36EASY2100	SD36EASY2100		55x130	2100	12311	273	8.4	60	47	105000
SS36EASY2600	SD36EASY2600		55x140	2600	15242	338	10.4	60	43	130000



ULTRARO Commercial Grade Series MiniBP-S

Commercial grade reverse osmosis systems that are tailored to meet your requirements are available via our Engineering departments. Examples of these reverse osmosis systems are shown on this page.

Commercial grade RO systems feature high rejection low-pressure 2.5" diameter membrane modules. A microprocessor controller provides simple operation and advanced diagnostics and control functions.

Requirements and Specifications:

- ▷ Max salinity inlet 2000ppm NaCl.
- ▷ Max feed water temperature 35°C.
- ▷ Medium 10% residual salinity in treated water.

Notes:

- ▷ Data are valid for clear water (S.D.I. <3) – iron and chlorine free – temperature 20°C – salinity 1000ppm NaCl.
- ▷ Indicated working pressure may vary due to fluctuations in supply water pressure and/or quality to all RO's.

Model	Membranes			Pressurization pump			Pressures (bar)		
	Nº	Type	Permeate Flow (L/h)	Flow (L/h)	Power (kW)	Power Supply	Feed water	Working	Permeate
MiniBP-S/100	1	LP-2540	100	400	0.37	240VAC 50Hz	2.5	10	0.8
MiniBP-S/200	2		200	800	0.55			8	
MiniBP-S/300	3		300	800	0.55			9	



Reliable and efficient removal of dissolved solids from water for commercial applications.

ULTRARO Light Industrial Series BP-S

Light Industrial reverse osmosis systems that are tailored to meet your requirements are available via our Engineering departments. Examples of these reverse osmosis systems are shown on this page.

Light industrial grade RO systems feature high rejection low-pressure 4" diameter membrane modules. A microprocessor controller is included for simple operation, advanced diagnostics and control functions.

Requirements and Specifications:

- ▷ Max salinity inlet 8000ppm NaCl.
- ▷ Max salinity inlet 2000ppm NaCl.

- ▷ Max feed water temperature 35°C.
- ▷ Max feed water temperature 35°C.
- ▷ Preset for periodical washing of membranes.
- ▷ Preset for installation of chemical feeders.
- ▷ Medium 5-8% residual salinity in treated water.

Notes:

- ▷ Data are valid for clear water (S.D.I.<3) – iron and chlorine free – temperature 20°C – salinity 1000ppm NaCl.
- ▷ Indicated working pressure may vary due to fluctuations in supply water pressure and/or quality to all RO's.

Model	N°	Membranes		Pressurization pump			Pressures (bar)		
		Type	Permeate Flow (L/h)	Flow (L/h)	Power (kW)	Power Supply	Feed water	Working	Permeate
BP-S/1	1	LCLE 4040	180	1200	1.1	400V 50Hz 3 phase + Neutral	2.5	7.5	0.8
BP-S/2	2		360	1500				7.7	
BP-S/3	3		640	1700	1.5			8.9	
BP-S/4	5		1200	2200	2.2			10.3	
BP-S/5	6		1500	2600				11	
BP-S/6	8	B440LE	2000	3700	3			12.2	1.0
BP-S/7	3		3000	7000	4			9.3	
BP-S/8	4		4000	7800	5.5			9.9	
BP-S/9	5		5000	9000				9.8	



Reliable and efficient removal of dissolved solids from water for light industrial applications.

ULTRARO Heavy Industrial Series AP-S

Heavy Industrial reverse osmosis systems that are tailored to meet your requirements are available via our Engineering departments. Examples of these reverse osmosis systems are shown on this page.

Heavy industrial RO systems feature high rejection low-pressure 8" diameter membrane modules. A PLC is included for simple operation, advanced diagnostics and control functions.

Requirements and Specifications:

- ▷ Max salinity inlet 8000ppm NaCl.
- ▷ Max feed water temperature 35°C.

- ▷ Unit for chemical washing of membranes.
- ▷ Pre-assembled metering installation for chemical products of pre and post treatment.
- ▷ Medium 5-8% residual salinity in treated water.

Notes:

- ▷ Data are valid for clear water (S.D.I.<3) – iron and chlorine free – temperature 20°C – salinity 1000ppm NaCl.
- ▷ Indicated working pressure may vary due to fluctuations in supply water pressure and/or quality to all RO's.

Model	Membranes		Pressurization pump			Pressures (bar)			
	Nº	Type	Permeate Flow (m³/h)	Flow (m³/h)	Power (kW)	Power Supply	Feed water	Working	Permeate
AP-S/1	5	B440LE	6	10.2	5.5	400V 50Hz 3 phase + Neutral	2	11	1
AP-S/2	7		8	12.2	7.5				
AP-S/3	9		10	14.2	11				
AP-S/4	11		12	16					
AP-S/5	12		15	21.2	15				
AP-S/6	15		18	25					
AP-S/7	17		20	27					
AP-S/8	21		22	32					
AP-S/9	21		25	35	18.5			13	
AP-S/10	26		30	42	30				



Reliable and efficient removal of dissolved solids from water for heavy industrial applications.



Side Stream Sand Filter Systems for Cooling Towers

Side stream sand filter systems are tailored to meet your requirements are available via our Engineering departments. Examples of these filter systems are shown on this page.

Side stream filters for filtration of particles in cooling water systems. The filters are ready-for-use, compact and mounted on a Euro pallet. The GRP vessels are filled with quartz sand and stabilizing sand, and are pressure resistant up to 6bar.

Side stream sand filter systems that are tailored to meet your requirements are available via our Engineering departments. Examples of these systems are shown on this page.

Advantages:

- ▷ Automatic, time controlled backwash.
- ▷ The integrated feed pump ensures maximum operating flows.
- ▷ High separating performance due to quartz sand with the best possible distribution of grain sizes.
- ▷ Straightforward installation as the filter is pre-assembled and pre-wired.
- ▷ Filtration speeds between 25m/h and 36m/h.
- ▷ The filter can also be installed in the main flow of the cooling tower, as long as the maximum permissible flow pressure is not exceeded.

The filters are ready-for-use, compact, mounted on a Euro pallet, and ensure maximum operating flows.

Model	Flow rate at 25m/h (m3/hr/m2)	Flow rate at 36m/h (m3/hr/m2)
SF 200	7	11
SF 320	11	17
SF 580	17	24



Cartridge Filters

The transparent bowl facilitates visual inspection of impurity deposits. When used for drinking water, it is recommended that the filter bag is changed at least twice a year.

Water: Max. 50°C, NW18-NW32: max 10bar, NW50-NW75: max 16bar

Average yield for a 0.2bar drop across the filter (with 25um bag): NW18: 3.5m³/h, NW50: 20m³/h, NW25: 5.5m³/h, NW62: 25m³/h, NW32: 6.5m³/h, NW75: 30m³/h

Inlet/outlet couplings: Included with NW18/25/32 (plastic), optional with NW50/62/75 (brass).

Part No.

6002104

6035389

6037043

6037044

6037045

Part No.

6035391

6035388

Option

Pressure gauge for NW18-NW32, 10bar

Wall bracket for NW18-NW32, PP

Two couplings for NW50, 2", brass

Two couplings for NW62, 2 1/2", brass

Two couplings for NW75, 3", brass

Replacement Part

Pressure gauge for NW50-NW75, 20bar

O-ring for NW18-NW32



NW18-NW32

NW50-NW75

The flow of water entering the Cintropur cartridge filter is transformed into a vortex using a centrifugal vane, which precipitates the large particles to the base of the filter bowl.

Part No.	Cartridge Filter Complete, 25um	Part No. Five 25um Replacement Filters	Part No. Five 100um Optional Filters
6002105	NW18, 3/4" mBSP	6002096	6002097
6002106	NW25, 1" mBSP	6002098	6002099
6002107	NW32, 1 1/4" mBSP	6002100	6002101
6002108	NW50, 2" mBSP		
6002109	NW62, 2 1/2" mBSP	6002102	6002103
6002110	NW75, 3" mBSP		



Self-cleaning Filters

Surface corrosion in pipe work and other water systems can be minimized by filtering out iron oxide (rust), dirt, sand, precipitated calcium carbonate, installation residue. Filtrate is uninterrupted during backwash maintaining a constant supply to service. The filters with automatic backwash are timer controlled and require a 240VAC electrical supply.

For hygiene reasons, it is recommended to service the filter every 6 months. All materials used comply with drinking water regulations. The filters have been granted the German DIN/DVGW certificate.

Filter element: SS, 105-135µm

Max. water temperature: RF: 40°C, RFF: 70°C

Water pressure: 1.5...10bar (RF and RF-RAM models), 1.5...16bar (RFF models)

Pressure gauge: Differential pressure



RF

RF-RAM

RFF100

Part No.	Manual Backwash	Part No.	Automatic Backwash	Max. Flow	Weight	Connections
6002421	RF1"	6002428	RF-RAM1"	7.2m ³ /h	3.1kg	1"
-	-	6002429	RF-RAM1 1/4"	7.8m ³ /h	3.3kg	1 1/4"
6002424	RF2"	6002431	RF-RAM2"	11.5m ³ /h	4.8kg	2"
6002427	RFF100	-	-	54m ³ /h	60.5kg	DN100

Manual backwash and time-controlled backwash versions

Filtrate is uninterrupted during backwash





Duplex Basket Strainers

Duplex basket strainers are compact and robust complete systems for filtering media with different viscosities.

Material: Stainless steel 1.4571

Max. medium pressure: 10bar

- ▷ Easy isolation with inlet and outlet valves.
- ▷ Pressure gauges in both vessels.
- ▷ Safe filter change at low pressures with vent and drain valves.
- ▷ Robust stainless-steel skid and piping.
- ▷ Easy process connection with metric threads.

Robust mechanical filtration
of varying viscosity fluids

Part No.	Model	Screen	Max. water flow	Max. flow at 600mPas	Dimensions
6017661	KF-2	1500µm	2m ³ /h	0.6m ³ /h	0.7x0.4x0.5m
6017662	KF-18	250µm	18m ³ /h	6m ³ /h	0.75x0.55x0.9m
6017663	KF-36	250µm	36m ³ /h	12m ³ /h	0.75x0.75x1.3m





Application Test Kits

[illegible]

Drop/Comparator Test Kits



Nalco Water associates order
via the Analytical Webshop

Open Webshop

Titration Test Kits



Spectrophotometer Tests



Other Test Kits



Calibration Solutions



Analytical Accessories



Portfolio



Control



Feed



Storage



Separation



Analytical

Application

ECOLAB® | **NALCO**Water

Instrument Selection Guide

	Part No.	Hand-held Instrument	Product (ppm)	Conductivity (mS/cm)	pH	Dissolved Oxygen (ppm)	Redox (mV)	Temperature (°C)	Turbidity (NTU)	ClO ₂ gas (ppm)	Various gasses
→											
	060-TSR2PENII.88	TRASAR Pen Fluorometer #2	0...10k	-	-	-	-	5...50	-	-	-
	060-TSR3PENII.88	TRASAR Pen Fluorometer #3	0...10k	-	-	-	-	5...50	-	-	-
→											
	060-TSR13MTR.88	TRASAR Fluorometer #1 + #3	0...1k	-	-	-	-	-	-	-	-
	060-TSR6MTR.88	TRASAR Fluorometer #6	0...5	-	-	-	-	-	-	-	-
→	6032962	CyberScan PCD650	-	0...500	-2...20	0...90	+/-2000	-10...110	-	-	-
	6032961	CyberScan PC650	-	0...500	-2...20	-	+/-2000	-10...110	-	-	-
	6032910	CyberScan CON600	-	0...200	-	-	-	0...80	-	-	-
	6032909	CyberScan PH600	-	-	-2...20	-	+/-2000	-10...110	-	-	-
→	008-014-100.88	CyberScan PC450	-	0...200	-2...16	-	-	-10...110	-	-	-
	6032907	CyberScan CON410	-	0...200	-	-	-	0...80	-	-	-
	6032905	CyberScan PH310	-	-	-2...16	-	+/-2000	-10...110	-	-	-
	008-024-000.88	CyberScan DO300	-	-	-	0...20	-	0...50	-	-	-
→	6032963	Pocket Meter PCTestr35	-	0...20	0...14	-	-	0...50	-	-	-
	008-028-100.88	Pocket Meter ECTestr11	-	0...20	-	-	-	0...50	-	-	-
	008-026-000.88	Pocket Meter PHTestr30	-	-	-1...15	-	-	0...50	-	-	-
	008-027-000.88	Pocket Meter ORPTestr10	-	-	-	-	+/-1000	-	-	-	-
→	008-025-000.88	Turbidity Meter	-	-	-	-	-	-	0...1k	-	-
	008-029-000.88	LolliTemp	-	-	-	-	-	-10...200	-	-	-
	008-030-000.88	TempTestrIR	-	-	-	-	-	-18...260	-	-	-
→	6017771	Gas Detector	-	-	-	-	-	-	-	0...1	-
	6023383	Gas Detector	-	-	-	-	-	-	-	-	●
	6038083	Refractometer	-	-	-	-	-	-	-	-	-



Confirm scale inhibitor concentrations in boiler, cooling or membrane applications.

Perform diagnostic studies in water systems.

TRASAR #2, #3 Pen Fluorometers

Use the waterproof Pen Fluorometer to ensure that the Nalco Water scale inhibitor is present at the expected treatment levels. The Pen can also be used for leak detection and diagnostic studies. Two TRASAR Pen Fluorometers are available:

- ▷ **Dye #3 TRASAR Pen:** For boiler applications, treated with NEXGUARD internal treatment products.
- ▷ **Dye #2 TRASAR Pen:** For cooling water applications, treated with 3D TRASAR scale inhibitors. They are also used for membrane applications that are treated with PERMACARE Anti-scalants.

Note: Turbid samples need to be filtered with the included filter kit. The manuals provide guidelines on when to use the filters: dye #2 > 20NTU, dye #3 > 80NTU. Do not use other types of filters (e.g. Nylon).

Power: 4x 1.55V Silver Oxide battery (Duracell 357 Silver Oxide (303/357B) or Energizer Silver Oxide (357/303)), battery life +/- 1000 readings.

Measurement: 0-9999ppm product, resolution: 0.1ppm, relative accuracy: 5% of reading, temperature measurement: 5-50°C.

Part No.

060-TSR3PENII.88

060-TSR2PENII.88

Pen Fluorometer

For boiler systems (dye #3)

For cooling, membrane, pasteuriser systems (dye #2)

Included: 4x battery, 2x disposable syringe, 50x filter syringe cartridge, 45um, 2x calibration plugs (black), 1x operation manual.

Part No.

460-S0980.75

460-S0920.75

460-S0726.71

460-S0800.74

111-P01047.88

500-P0197.88

460-DND299.74

Accessory

Calibration solution, dye #3, 1L
Calibration solution, dye #2, 1L
Cleaning solution HCl, 1:1, 50ml
Cleaning soln, H2SO4, 10%, 0.5L
Cell cleaning brush, 6mm, 3/pkg
Beaker, plastic, 100ml, with screw cap
Diagnostic reagent, dye #2, 0.5L

Part No.

500-P1434.88

6017888

500-P1692.88

500-P2166.88

Consumable

Filter syringe cartridges 0.45um, 100/pkg
Battery, Silver Oxide, 1.55V, 1/pkg
Calibration plugs, 10/pkg
Disposable syringe, plastic, 10ml

TRASAR #1, #3 and #6 Handheld Fluorometers

The battery powered handheld fluorometer allows quick and accurate measurements of TRASAR 1 and TRASAR 3 products in boiler systems with high purity (T1) and low purity (T3) feedwater.

The TRASAR 6 version measures the concentration of yellow metal inhibitor in cooling systems. The water sample needs to be diluted 10 times with 0.1% formic acid for TRASAR 6 measurements.

Power: 2 AA (LR6) alkaline batteries (supplied)

Dimensions: 22 x 10 x 12cm

Measurement range examples:

BT###1, with TRASAR 1, product factor 90.9

Low range: 0.68...113.6ppm

High range: 22.72...1363.5ppm

22300, with TRASAR 3, product factor 40

Low range: 0.4...120ppm

High range: 40...1000ppm

3DT398 in 0.1% formic acid, TRASAR 6

Range: 0.1...5ppm

Part No.

060-TSR13MTR.88

Description

TRASAR 1 and 3 handheld fluorometer, includes soft carrying case, 2 AA batteries and 3 sample cups

060-TSR13MTR.88

As above, but for TRASAR 6

Part No.

460-S0910.75

Consumables

TRASAR 1 and 6 calibration solution, 1L

460-S0980.75

TRASAR 3 calibration solution, 1L

460-S0988.75

Formic acid, 0.1%, 1L, for TRASAR 6 measurements and TRASAR 6 calibration



Boiler applications with high and low purity feedwater

Cooling water applications with yellow metal corrosion inhibitor



600 Series

300-400 Series

PC450

600 Series: High accuracy,
advanced data management.

300-400 Series: A balance of
convenience and
performance.

CyberScan pH, Redox, Cond., DO, Temp., Meters

600 Series

Conductivity: 0...500mS/cm; resolution:

0.01μS/cm...0.1mS/cm

pH: range: -2...20; resolution: 0.001pH

Dissolved Oxygen: 0...90ppm; res.: 0.01ppm

Part No.

6032962

CyberScan Meter

PCD650 cond., pH, DO, redox,
TDS, temp.

6032961

PC650 cond., pH, redox, TDS,
temp.

6032910

CON600 cond., TDS, temp.

6032909

PH600 pH, redox, temp.

Part No.

6032951

Consumable

pH sensor

008-024-006.88

DO electrolyte (50ml)

008-024-002.88

DO membranes (5)

Part No.

008-024-004.88

Maintenance Accessory

DO membrane removal tool

300-400 Series

Conductivity: 0...200mS/cm; resolution:

0.01μS/cm...1mS/cm

pH: range: -2...16; resolution: 0.01pH

Dissolved Oxygen: 0...20ppm; res.: 0.01ppm

Part No.

008-014-100.88

CyberScan Meter

PC450 cond., pH, temp.

6032907

CON410 cond., TDS, temp.

6032905

PH310 pH, redox, temp.

008-024-000.88

DO300 dissolved oxygen, temp.

Part No.

008-014-001.88

Consumable

pH sensor, 1m cable

008-024-006.88

DO electrolyte (50ml)

008-024-002.88

DO membranes (5)

Part No.

008-024-004.88

Maintenance Accessory

DO membrane removal tool

Other Hand-held Instruments



Pocket Meters, pH, Redox, Conductivity

pH: -1...15 (pHTestr30), 0...14 (PCTestr35)
ORP: -1000...1000mV
Conductivity: 0...20mS/cm
Bulletin: BEU-341

Part No.	Pocket Meter
6032963	PCTestr35 cond., pH, temp. meter
008-026-000.88	pHTestr30 pH meter
008-027-000.88	ORPTestr10 redox meter
008-028-100.88	ECTestr11 cond. meter

Part No.	Consumable Part
6032946	PCTestr35 pH, cond. sensor
008-026-001.88	pHTestr30 pH sensor
008-027-001.88	ORPTestr10 redox sensor



Turbidity Meter

Range: 0.01...1100NTU
Resolution: 0.01 / 1NTU
Accuracy: 0...500NTU: max of 2.5% of measurement
or 0.01NTU; 500...1000NTU: 5% of measurement.

Part No.	Description
008-035-000.88	TB 211 turbidity meter in case



Temperature Meters

Bulletin: BEU-341

Part No.	Description
008-030-000.88	TempTestr IR infrared temp. meter, -18...260°C; resolution: 0.5°C
008-029-000.88	LolliTemp thermometer, -10...200°C, resolution 0.1°C

Other Hand-held Instruments



ATEX Gas Detectors

Combustibles: 0...100% (0-5% v/v)

Oxygen: 0...30%

Carbon Monoxide: 0...999ppm

Hydrogen Sulphide: 0...300ppm

Chlorine Dioxide: 0...1ppm

ATEX: II 1 G EEx ia IIC T4 (5-gas),
X 2460 g II 1G Ex ia IIC T4 Ga (1-gas)

Bulletin: BEU-341 (5-gas)

Part No.	Gas Detector
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6017771	1-Gas detector ClO ₂ , ATEX
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6023383	5-Gas Detector ClO ₂ , Combustibles, O ₂ , CO, H ₂ S, ATEX
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Part No.	Accessory
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6023384	Cradle and vehicle charger for 5-Gas Detector
---------	--

6023385	Manual aspirator pump for 5-Gas Detector
---------	--



Brix Refractometer

Range: 0...32%

Part No.	Description
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6038083	Refractometer, Brix, 0...32%
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Test Selection Guide, A-E

Parameter	Method	Part No. / AP	Units	Min	Max	Bulletin
Acidity	➔ Digital titrator	Hach AP-8201, AP-8202	mg/l CaCO ₃	10	4000	BEU-348
	➔ Drop test	008-400-000	mg/l H ₂ SO ₄	100	3000	BEU-342
Alkalinity	➔ Digital titrator	Hach AP-8203	mg/l CaCO ₃	10	4000	BEU-348
	➔ Burette	420-C0204.88 420-C0205.88 AP-059		0	Unlimited	-
	➔ Drop test	008-401-000 008-402-000		50 200	600 3200	BEU-342
	➔ DR2800/DR1900 DR900/DR890	AP-028		0.002	0.25	BEU-343
		AP-106		0.013	0.8	BEU-340
Amine	➔ Comparator test	420-C0039.88 AP-066	mg/l	0.04	1.1	-
Ammonia	➔ DR2800/DR1900 DR900/DR890	AP-073 AP-073	mg/l NH ₃	0.04	0.6	BEU-343
	➔ Comparator test	420-C0041.88 AP-085		0.04	0.5	BEU-340
	➔ Comparator test	420-C0041.88 AP-085		0.1	10	-
	➔ Drop test	008-403-000		0	5	BEU-342
Boron	➔ DR2800/DR1900	AP-030	mg/l B	0.6	11.7	BEU-343
Bromine	➔ DR900/DR890	AP-087	mg/l Br ₂	0.05	4.5	BEU-340
	➔ Comparator test	008-454-000		0	4	BEU-354
	➔ Drop test	008-404-000		0	10	BEU-342
	➔ Digital titrator	Hach AP-8205		10	100	BEU-348

Parameter	Method	Part No. / AP	Units	Min	Max	Bulletin
Chloride	➔ Digital titrator	Hach AP-8206, 8207	mg/l Cl	10	8000	BEU-348
	➔ Burette	420-C0204.88 AP-059		0	unlimited	-
	➔ Drop test	008-405-000 008-406-000		0 50	20 1000	BEU-342
	➔ Strips	500-P3208.88		30	600	-
	➔ DR900/DR890	AP-126		0.04	5	BEU-340
Chlorine Dioxide	➔ Drop test	987-650505	mg/l ClO ₂	0.16	12	BEU-342
Chlorine, Free	➔ DR2800/DR1900 DR900/DR890	AP-034	mg/l Cl ₂	0.02	2	BEU-343
	➔ Drop test	008-408-000		0.02	2	BEU-340
	➔ Drop test	008-408-000		5	150	BEU-342
Chlorine, Total	➔ DR2800/DR1900 DR900/DR890	AP-035		0.02	2	BEU-343
	➔ Drop test	008-408-000		0.02	2	BEU-340
Chlorine, Free and Total	➔ Pocket	001-H11782.88		0.02	8	BEU-352
	➔ Comparator test	008-457-000		0	2	BEU-354
	➔ Drop test	008-407-000		0	4	BEU-342
	➔ DR2800/DR1900 DR900/DR890	AP-045	ug/l Cu	2	210	BEU-343
Copper	➔ Comparator test	008-459-000	mg/l	5.4	210	BEU-340
	➔ Drop test	008-409-000		0	4	BEU-354
	➔ Drop test	008-409-000		0	4	BEU-342
Eliminox	➔ Digital titrator	AP-060	ug/l	100	6000	BEU-343
	➔ Burette			180	6000	BEU-340

Test Selection Guide, H-O

Parameter	Method	Part No. / AP	Units	Min	Max	Bulletin
Hardness Total	➔ DR2800/DR1900	AP-067	ug/l CaCO ₃	13	1000	BEU-343
		AP-043		0.5	4	
		DR900/DR890		0.5	4	BEU-340
	➔ Burette	420-C0204.88 AP-059	mg/l CaCO ₃	0	unlimited	-
		420-C0205.88 AP-059		0	unlimited	
		420-C0033.88 AP-059		0	unlimited	
		Hach AP-8213		10	4000	BEU-348
	➔ Digital titrator	008-411-000		50	600	BEU-342
	➔ Drop test	008-412-000		0	20	
	➔ Digital titrator	Hach AP-8204		10	4000	BEU-348
Hardness Calcium	➔ Digital titrator	008-410-000		50	600	BEU-342
Hardness Soap Test	➔ Drop test	008-414-000		30	400	
		008-426-000		2	60	
Hydrazine	➔ DR2800/DR1900	AP-050	ug/l N ₂ H ₄	4	600	BEU-343
		DR900/DR890		16	500	BEU-340
Iron (II)	➔ DR2800/DR1900	AP-022	ug/l Fe ₂	3	150	BEU-343
		AP-103		3	1400	
		AP-022		10	150	BEU-340
	DR900/DR890	AP-103		10	1400	
		AP-088		4	1400	BEU-343
Iron Total	➔ DR2800/DR1900	AP-016		100	3000	
		AP-023		4	160	BEU-340
		AP-088		11	1400	
	DR900/DR890	AP-016		30	3000	BEU-340
		AP-023		11	160	

Parameter	Method	Part No. / AP	Units	Min	Max	Bulletin
Iron Total	➔ Comparator test	008-466-000	mg/l Fe	1	10	BEU-354
	➔ Drop test	008-415-000		0	10	BEU-342
		008-416-000		0	2	
Microbio	➔ Dip-slide	Dip-slides	CFU/ml	10 ²	10 ⁷	-
	RAPIDBIO	RAPIDBIO.88		10 ²	unlimited	BEU-347
Molybdate/ Molybdenum	➔ DR2800/DR1900	AP-002	mg/l Mo	0.3	40	BEU-343
	DR900/DR890	AP-002		0.2	40	BEU-340
Molybdate	➔ Comparator test	008-467-000	mg/l MoO ₄	0	100	BEU-354
	➔ Drop test	008-417-000		0	350	BEU-342
NALCOOL 2000	➔ Drop test	420-C0145.88 AP-062	See chart			-
NEXGUARD	DR2800/DR1900	AP-125	See AP			BEU-343
	➔ DR900/DR890	AP-117				BEU-340
Nitrate	➔ Drop test	008-418-000	mg/l NO ₃	0	80	BEU-342
Nitrite	➔ DR2800/DR1900	AP-003	mg/l NO ₂	2	250	BEU-343
	➔ DR900/DR890	AP-003		3	150	BEU-340
	➔ Drop test	008-419-000	mg/l NaNO ₂	150	2000	BEU-342
	➔ Strips	500-P3205.88	mg/l NO ₂	0	50	-
Oxygen Dissolved	➔ Comparator test	420-C0030.88 AP-081	mg/l O ₂	0	12	-
		420-C0032.88 AP-082		0	1	
		420-C0031.88 AP-082	ug/l O ₂	0	100	
		420-C0029.88 AP-082		0	40	

Test Selection Guide, O-Z

Parameter	Method	Part No. / AP	Units	Min	Max	Bulletin
Oxygen	➞ Comparator test	008-455-000	mg/l DEHA	0	0.5	BEU-354
Scavenger	➞ Drop test	008-425-000		0	0.5	BEU-342
Peroxide		500-P3211.88	mg/l	0	25	-
pH	➞ Strips	500-P3204.88	pH units	0	14	
		500-P3207.88		5	10	
Phosphate Inorganic	➞ DR2800/DR1900 DR900/DR890	AP-004	mg/l PO ₄	0.1	5	BEU-343
				0.1	5	BEU-340
Phosphate, Ortho Inorganic	➞ DR2800/DR1900 DR900/DR890	AP-029		1	25	BEU-343
				1	25	BEU-340
Phosphate, Total Inorganic	➞ DR2800/DR1900 DR900/DR890	AP-005		0.1	5	BEU-343
				0.1	5	BEU-340
Phosphate, Total Organic / Inorganic	➞ DR2800/DR1900 DR900/DR890	AP-101		0.1	19.99	BEU-343
				1	19.99	BEU-340
Phosphate, Ortho	➞ Comparator test ➞ Drop test	008-470-000		0	20	BEU-354
		008-420-000		0	100	BEU-342
Phosphonate	➞ DR2800/DR1900	AP-025		0.1	13.9	BEU-343
		AP-070		0.1	125	
	DR900/DR890	AP-025		0.6	13.9	BEU-340
		AP-070		0.1	125	
	➞ Drop test	6018816 / AP-138		0	unlimited	BEU-342
Polymer Active	DR2800/DR1900	AP-116	mg/l	0.6	20	BEU-343
	➞ DR900/DR890			1.7	20	BEU-340
Silica	DR2800/DR1900	AP-006	mg/l SiO ₂	1	100	BEU-343
		AP-007		0.01	1.6	

Parameter	Method	Part No. / AP	Units	Min	Max	Bulletin
Silica	➞ DR900/DR890	AP-006	mg/l SiO ₂	1	75	BEU-340
		AP-007		0.02	1.6	
	➞ Comparator test	008-471-000		0	4	BEU-354
	➞ Drop test	008-422-000		0	200	BEU-342
		008-421-000		0	10	
Silt Density Index	➞ Physical Measurement	6024340	-			BEU-349
Sulphate	➞ DR2800/DR1900	AP-008	mg/l SO ₄	2	70	BEU-343
	DR900/DR890			5	70	BEU-340
Sulphide	➞ DR2800/DR1900	AP-056	ug/l S	10	800	BEU-343
	DR900/DR890			10	700	BEU-340
Sulphite	➞ Digital titrator	Hach AP-8216	mg/l SO ₃	4	1600	BEU-348
	➞ Burette	420-C0204.88 AP-059		0	60	-
		420-C0205.88 AP-059		0	60	
	➞ Drop test	008-423-000		15	100	BEU-342
	➞ Strips	500-P3241.88		100	500	-
Sur-gard	➞ DR2800/DR1900	AP-009	ug/l	103	6199	BEU-343
	DR900/DR890			103	6199	BEU-340
Tannin	➞ Drop test	008-424-000	mg/l	50	300	BEU-342
Triazole	➞ DR2800/DR1900	AP-074		0.1	16	BEU-343
	DR900/DR890			0.7	16	BEU-340
Zinc	➞ DR2800/DR1900	AP-015	mg/l Zn	0.01	3	BEU-343
	DR900/DR890			0.02	3	BEU-340
	➞ Comparator test	008-477-000		0	4	BEU-354

Microbiology Testing



Rapid Bio Intelligence

Easy monitoring of total aerobic bacterial growth in water systems, allowing for quick response to microorganism contamination. The test is not strain-specific.

Method: Protein-based assay

Range: 10^3 - 10^6 CFU/ml

Testing time: 20 minutes

Required phone: Compatible with many phones, including Apple iPhone SE, 6S, 7, 8, X and newer; Samsung Galaxy S6 and newer; LG V30, G6; Huawei Mate 20 Pro, P20 Pro

Analytical Procedure: SPEC-745

Part No.	Test Kit
RAPIDBIO.88	Rapid Bio Intelligence total aerobic bacteria test kit (10/pkg)



Aerobic/Anaerobic Dip-slides

A dip-slide consists of specially prepared agars affixed to a plastic paddle. Dip into the sample, return to plastic sleeve and [incubate](#). Compare the slide to charts to estimate the microbio level.

Part No.	Dip-slide Test
008-300-000	Anaerobic Bacteria Test (10/pkg)
008-300-001	Total Bacteria Dip-slides (10/pkg)
008-300-003	Yeast and Mould Dip-slides (10/pkg)
008-300-004	Plate Count Agar TTC (10/pkg)
500-AP8099.88	3M Aerobic Petrifilm Test Kit, Yeast and Mould (AC02502), requires courier shipment (100/pkg)
500-P3055.88	3M Aerobic Petrifilm Count Plates (100/pkg), requires refrigeration and courier shipment

Part No.	Accessory
008-312-000	Incubator for 12 dip-slides, 240VAC, 12VDC car adapter



Microbio Quick Test (MQT) Kit

$0-10^7$ organisms/ml total bacteria. Bacteria are filtered out of the sample onto a special pad. The test solution reacts with the bacteria to produce a pink colour.

Analytical Procedure: AP-068

Part No.	Test Kit
420-C0260.88	Microbio Quick Test (Colour Chart)
Part No.	Replacement Part
460-S0780.71	MQT-1, Form: Liquid, 50ml
500-C0092.88	Pressure Filter, includes cylinder and filter bulb
500-P0120.88	500ml Plastic Beaker
500-P1427.88	A/E Glass Microfiber Filter, 47mm (100/Pkg)
500-P2107.88	1ml Disposable Sterile Pipette
500-P2804.88	Forceps, blunt tip

Microbiology Testing



Surface Microbial Monitoring Test Kit

Test kit for monitoring sessile populations of micro-organisms primarily associated with metal surfaces. In most cases, corrosion coupons will be used as the sampling surface. This kit contains the supplies necessary to aseptically sample a surface for subsequent microbiological analyses and does not contain supplies for the analyses themselves.

Analytical Procedure: AP-105

Part No.	Test Kit
420-C0243.88	Surface Microbial Monitoring Test Kit

Part No.	Replacement Part
500-P0214.88	75 x 175 mm Sterile Whirl-Pak Bag
500-P3065.88	Sterile Cotton Swabs, 100/box
500-P3066.88	10ml Sterile Buffer in Plastic Test Tubes



Bio-box

The Bio-Box provides a visual means of monitoring fouling in systems that are closed and difficult to inspect. Micro-organisms will grow on the box and the microscope slides and form a biofilm. Once the biofilm exceeds 50 microns, it will become visible. Any build up will indicate the need for improved bacteria control and/or dispersancy.

Pressure: Max. 1.3bar

Bulletin: SPEC-402

Part No.	Bio-box
440-P3060.88	Nalco Water Bio-box with slide holder

Part No.	Accessory
500-P3014.88	Microscope Slides (72), Flat
500-P3063.88	50ml Centrifuge Tube
500-P0214.88	75 x 175 mm Sterile Whirl-Pak Bag



DPD Free/Total Chlorine Test

Test kit for monitoring sessile populations of micro-organisms primarily associated with metal surfaces. In most cases, corrosion coupons will be used as the sampling surface. This kit contains the supplies necessary to aseptically sample a surface for subsequent microbiological analyses and does not contain supplies for the analyses themselves.

Bulletin: BEU-352

Part No.	Colorimeter
001-H11782.88	Pocket Chlorine Colorimeter including carrying case, manual, reagents and sample cells

Part No.	Accessory
460-S0460A.87	Free Chlorine powder pillows (100)
460-S0461.87	Total Chlorine powder pillows (100)

Application Test Kits

Cooling Water Test Kits: Alkalinity (008-401-000), Total Hardness (008-412-000), Ortho-Phosphate (008-420-000), Free and Total Chlorine (008-407-000) and Phosphonate (6018816) tests. Space for two other tests.

Boiler Water Test Kits: Alkalinity (008-401-000), Total Hardness (008-412-000), Ortho-Phosphate (008-420-000) and Sulphite (008-423-000) tests are provided as standard. Space for two other tests.

Legionella Compliance Test Kits: Total Bacteria Dip-slides (008-300-001), Free and Total Chlorine

test (008-407-000). Space for four other tests. An incubator (008-312-000) is required for proper incubation of the dip-slides.

Instruments: Premium test kits are supplied with a PC300 conductivity, pH and temperature meter (008-014-100.88). Economy test kits are supplied with pocket conductivity (008-028-100.88) and pH (008-026-000.88) meters.

Part No.	Accessory
6024492	Plastic case only
6024495	A5 binder

Part No.	Application	Type	PC300 Cond./pH Meter	Pocket Cond. Meter	Pocket pH Meter	Chlorine Test	Hardness Test	Alkalinity Test	Phosphate Test	Phosphonate Test	Sulphite Test	Filter Kit	Dip-slides
6024474	Cooling Water	Premium	●			●	●	●	●	●			
6024475		Economy		●	●	●	●	●	●	●			
6024476	Boiler Water	Premium	●				●	●	●		●	●	
6024477		Economy		●	●		●	●	●		●	●	
6024479	Legionella Compliance	Economy		●	●	●							●



Application Test Kits will help you to conveniently manage your water system and allow you the flexibility to choose the kit you need now and in the future.

Drop Test Kits

Drop Test Kits are particularly suitable for customer use. When the reagents are used up simply order replacement kits. When ordering replacement reagents ([click here](#)), please note that they are in larger sizes than supplied with the Drop Test Kits (e.g. 65ml instead of 30ml). The larger reagents of the Drop Test Kits Plus can be replaced individually.

Part No.	Drop Test Kit	Range (ppm)
008-400-000	Acidity	10-3000
008-401-000	Alkalinity, LR	50-600
008-402-000	Alkalinity, HR	200-3200
008-403-000	Ammonia	0.25-5
008-404-000	Bromine, Total	0.5-10
008-405-000	Chloride, LR	0-20
008-406-000	Chloride, HR	50-1000
008-407-000	Chlorine, Free, Total	0.2-4
008-408-000	Chlorine, Free	5-150
987-650505	Chlorine Dioxide	0.16-12
008-409-000	Copper	0-4
008-410-000	Hardness, Calcium	50-600
008-411-000	Hardness, Total, HR	50-600
008-412-000	Hardness, Total, LR	0-20

Part No.	Drop Test Kit	Range (ppm)
008-414-000	Hardness Soap Test, HR	30-400
008-426-000	Hardness Soap Test, LR	2-60
008-415-000	Iron, HR	0-10
008-416-000	Iron, LR	0-2
008-417-000	Molybdate	0-350
008-418-000	Nitrate	0-80
008-419-000	Nitrite	150-2000
008-420-000	Phosphate, Ortho	0-100
6018816	Phosphonate	0-25
008-421-000	Silica, LR	0-10
008-422-000	Silica, HR	0-200
008-423-000	Sulphite	15-100
008-424-000	Tannin	50-300
008-425-000	Oxygen Scavenger (DEHA)	0-0.5

Part No.	Drop Test Kits Plus	Range (ppm)
008-501-000	Alkalinity, P+M, LR/HR	50-3200
008-510-000	Hardness, Calcium	50-600
008-511-000	Hardness, Total, LR/HR	5-600
008-519-000	Nitrite	150-2000
008-523-000	Sulphite	15-100



Drop Test Kit Plus



Drop Test Kit

Drop Test Kits cover the most common analyses required in the field. They are particularly suitable for customer use.





Comparator test kits use a comparator and disc to aid the accurate assessment of the intensity of the colour produced by the test.

Comparator Test Kits

Comparator Test Kits come complete with a comparator, continuous gradient colour disc, test tubes, syringe, reagents and instructions in a rugged plastic case.

In most cases, the test chemistries are the same as the Drop Test Kits. However, where the drop test kits use simple colour charts, the comparator test kits use a comparator and disc to aid the accurate assessment of the intensity of the colour produced by the test.

Part No.	Test Kit	Range (ppm)
008-454-000	Bromine, Free, Total	0-4
008-457-000	Chlorine, Free, Total	0-2
008-459-000	Copper	0-4
008-466-000	Iron	1-10
008-467-000	Molybdate	0-100
008-470-000	Phosphate, Ortho	0-20
008-471-000	Silica	0-4
008-475-000	Oxygen Scavenger (DEHA)	0-0.5
008-477-000	Zinc	0-1

Part No. Replacement Part

6035054	Comparator disc for Bromine test
6035056	Comparator disc for Chlorine test
6035058	Comparator disc for Copper test
6035059	Comparator disc for Iron test
6035014	Comparator disc for Molybdate test
6035016	Comparator disc for Ortho Phosphate test, 0-20ppm
6035038	Comparator disc for Silica test
6035039	Comparator disc for Oxygen Scavenger test
6035040	Comparator disc for Zinc test
6035051	Comparator test tube, 5/10ml
6035052	Comparator syringe, 10ml
6035053	Comparator disc holder



Replacement Reagents for Drop/Comparator Tests

Part No.	Description	Cross-reference
460-R1.71	Reagent1, Acidity, Alkalinity, 65ml	PA1, NDR029, 987-662001, 987-020516, 987-653036
460-R2.71	Reagent2, Acidity, 65ml	ACD3
460-R3.71	Reagent3, Alkalinity, 65ml	TA3, NDR048, 987-662027, 987-653032
460-R4.71	Reagent4, Alkalinity, 65ml	PA2, 987-662002
460-R5.71	Reagent5, Alkalinity, 65ml	TA4
460-R6.71	Reagent6, Ammonia, 65ml	AMMONIA1
460-R7.71	Reagent7, Ammonia, 65ml	AMMONIA2
460-R8.81	Reagent8, Ammonia, 20g	AMMONIA3
460-R9.71	Reagent9, Chlorine, 65ml	FCL1, NRR274
460-R10.71	Reagent10, Chlorine, 65ml	FCL2, NRR275
460-R11.71	Reagent11, Chlorine, 65ml	FCL3, NRR276
460-R12.86	Reagent12, Bromine, Chlorine, 50tabs	DPD1, NRR033, 987-020089
460-R13.86	Reagent13, Bromine, Chlorine, 50tabs	DPD4
460-R14.71	Reagent14, Chloride, 65ml	CHLORIDEA
460-R15.71	Reagent15, Chloride, 65ml	CHLORIDEB
460-R16.71	Reagent16, Chloride, 65ml	BC1, CC1, NRR903, 987-662004
460-R17.71	Reagent17, Chloride, 65ml	CC2, NRR903, 987-662006
460-R18.71	Reagent18, Chloride, 65ml	BC2, NDR138, 987-662005
460-R19.86	Reagent19, Copper, 50tabs	COPPERHR
460-R20.71	Reagent20, Hardness, Calcium, 65ml	CH2, NDR014, 987-662012, 987-653038
460-R21.81	Reagent21, Hardness, Calcium, 20g	CH1P, 987-653033
460-R22.71	Reagent22, Hardness, Calcium, 65ml	CH3, NDR015, 987-662010
460-R24.71	Reagent24, Hardness, Iron, 65ml	TH2, NDR054, 987-662008, 987-653038
460-R25.81	Reagent25, Hardness, 20g	TH1P, 987-653037, 987-662007
460-R26.71	Reagent26, Hardness, 65ml	TH3, NDR055, 987-662009
460-R26B.71	Reagent26b, Hardness, 65ml	TH4, NDR056, 987-662010
460-R28.71	Reagent28, Hardness, 65ml	SOAPHR
460-R29.71	Reagent29, Iron, Molybdate, 65ml	FE6
460-R30.71	Reagent30, Iron, 65ml	FE5, NRR036

Part No.	Description	Cross-reference
460-R31.81	Reagent31, Molybdate, Tannin, 20g	TN1, NDR058, 987-662016
460-R32.71	Reagent32, Nitrate, 65ml	NITRATE1
460-R33.81	Reagent33, Nitrate, 20g	NITRATE2
460-R34.71	Reagent34, Nitrite, 65ml	N1, NDR027, 987-662014
460-R35.71	Reagent35, Nitrite, 65ml	N2
460-R36.71	Reagent36, Phosphate, Ortho, 65ml	CRP, NRR025
460-R37.81	Reagent37, Phosphate, Ortho, 20g	AA
460-R38.71	Reagent38, Silica, 65ml	SILICA1
460-R39.71	Reagent39, Silica, 65ml	SILICA2
460-R40.81	Reagent40, Silica, 20g	SILICA3
460-R44.81	Reagent44, Sulphite, 20g	S1, NDR044, 987-662025, 987-653028
460-R45.71	Reagent45, Sulphite, 65ml	S2, NDR045, 987-662026
460-R46.71	Reagent46, Tannin, 65ml	TN2, NDR059, 987-662017
460-R47.71	Reagent47, Oxygen, Scavenger, 65ml	DEHAA/B, NRR025
460-R48.71	Reagent48, Oxygen, Scavenger, 65ml	DEHAC
460-R49.71	Reagent49, Hardness, 65ml	SOAPLR
460-R50.71	Reagent50, Silica, 65ml	ACIDMOLY, NRR187
460-R53.71	Reagent53, Zinc, 65ml	ZINC1
460-R54.81	Reagent54, Zinc, 20g	ZINC2
460-R56.86	Reagent56, Bromine, 50tabs	DPDNitrite, NRR212
460-R57.86	Reagent57, Chlorine, 50tabs	DPD3, NRR034
987-651100	Reagent, Cd01, Chlorine, Dioxide, 65ml	CD01
987-651101	Reagent, Cd02a, Chlorine, Dioxide, 65ml	CD02A
460-PD488.71	Soln, Phosphonate Titrating, 60ml	PD488
460-PD488.74	Soln, Phosphonate Titrating, 500ml	PD488
460-PD489.71	Soln, Pdq Indicator/Buffer, 30ml	PD489
460-PD489.74	Soln, Pdq Indicator/Buffer, 500ml	PD489
460-PD490.71	Phosphonate pH adjustor, 60ml	-
460-PD491.71	Phosphonate sulphate suppressor, 60ml	-

Titration Test Kits

Digital Titration

The Digital Titrator offers higher levels of precision and accuracy than drop count procedures. The titrator accommodates interchangeable titrant cartridges, so multiple titrations involve changing the cartridge and delivery tube. Snapping cartridges in and out saves the time associated with cleaning and assembling cumbersome, fragile glass burettes and virtually eliminates the possibilities of cross contamination. Order the Digital Titrator Kit as well as the reagents ([click here](#)) required to perform the test as specified on the applicable procedure.

Syringe Titration

The titrator cartridges can also be used together with a 3-way valve and 1.25ml syringe. The syringe is specially graduated with 100 steps for greater accuracy. The analytical procedure is identical to the Digital Titrator. The factor is simply 10x the Digital Titrator factor. This method is quicker than the Digital Titrator method with sufficient accuracy.

Part No.	Titration
956-16900-01	Digital Titrator, delivery tubes (5) and manual
6033951	Titration Syringe (1.25ml with 100 grads)

Part No.	Accessory
6007269	3-way valve for syringe titration
956-17205-00	Delivery tubes (5)
6033955	Delivery tubes, straight (5)
500-P1505.88	Flask 250ml
500-P1503.88	Flask 125ml

Digital Titration: 800 digits/ml, Accuracy: +/-1%. Uncertainty of readings is 1 digit. Most samples require more than 100 digits, weight: 132g

Syringe Titration: Volume 1.25ml, delivery 80 graduations/ml

Cartridges: Volume 13ml, tests: 50-100 (most reagents are formulated to provide 100 typical titrations; number of tests may vary depending on sample strength), weight (full): 57g



Digital titration offers higher levels of precision and accuracy than drop count procedures



Titration Reagents

Test	Part No.	Description
Acidity Hach AP-8201, AP-8202	008-300-011	NaOH, 0.1600 N, 10-40-160mg/L CaCO_3
	008-300-013	NaOH, 1.600 N, 100-400-800-2000-4000mg/L CaCO_3
	956-14550-99	Bromphenol Blue PP 50ml pk/100
	956-942-99	Phenolphthalein PP pk/50 x2
Alkalinity Hach AP-8203	008-300-014	H_2SO_4 , 0.1600 N, 10-40-160mg/L CaCO_3
	008-300-015	H_2SO_4 , 1.600 N, 100-400-800-2000-4000mg/L CaCO_3
	956-943-99	Bromcresol Green - Methyl Red Indicator PP pk/50 x2
	956-23292-32	Bromcresol Green - Methyl Red Indicator, 100ml
	956-942-99	Phenolphthalein Indicator PP pk/50 x2
	956-162-32	Phenolphthalein Indicator, 100ml
Carbon Dioxide Hach AP-8205	008-300-012	NaOH, 0.3636 N, 10-50-100mg/L CO_2
	956-942-99	Phenolphthalein PP pk/50 x2
Chloride Hach AP-8207	008-300-017	AgNO_3 , 0.2256 N, 10-40-100mg/L as Cl ⁻
	008-300-018	AgNO_3 , 1.128 N, 100-400-1000-4000-10,000 mg/L as Cl ⁻
	956-1057-66	Chloride 2 Ind PP 100ml pk/50
Calcium Hardness Hach AP-8204	008-300-010	EDTA, 0.0800 M, 10-40-160mg/L CaCO_3
	008-300-019	EDTA, 0.800 M, 100-400- 800-2000-4000mg/L CaCO_3
	008-300-021	EDTA, 0.714 M, 10-40-25-100-200 German degrees of hardness
	008-300-022	EDTA, 0.1428 M, 1-4-16 German degrees of hardness
	956-282-32	Potassium Hydroxide 8N 100ml
	956-852-99	Calver 2 PP 50ml pk/100

Test	Part No.	Description
Total Hardness Hach AP-8213	008-300-010	EDTA, 0.0800 M, 10-40-160mg/L CaCO_3
	008-300-019	EDTA, 0.800 M, 100-400- 800-2000-4000mg/L CaCO_3
	008-300-021	EDTA, 0.714 M, 10-40-25-100-200 German degrees of hardness
	008-300-022	EDTA, 0.1428 M, 1-4-16 German degrees of hardness
	956-424-32	Buffer Solution Hardness 1 Test Solution, 100ml
	956-425-32	Buffer Solution Hardness 2 Test Solution, 100ml
	956-851-99	Manver 2 PP 50ml pk/100
Total Hardness Sequential Hach AP-8329	008-300-010	EDTA, 0.0800 M, 10-40-160mg/L CaCO_3
	008-300-019	EDTA, 0.800 M, 100-400- 800-2000-4000mg/L CaCO_3
	008-300-021	EDTA, 0.714 M, 10-40-25-100-200 German degrees of hardness
	008-300-022	EDTA, 0.1428 M, 1-4-16 German degrees of hardness
	956-424-32	Buffer Solution Hardness 1 100ml
	956-928-99	Manver 2 PP 50ml pk/50 x2
	956-282-32	Potassium Hydroxide 8N 100ml
	956-947-99	Calcium Ind PP PK/100
	956-2449-32	Sulphuric Acid 5.25N 100TS MDB
Sulphite Hach AP-8216	008-300-023	KIO_3/KI , 0.3998 N, 100-160-400-1600 mg/L as SO_3^{2-}
	956-987-99	Dissolved Oxygen 3 PP Pk/100
	956-349-32	Starch Indicator Solution 100ml
	956-2038-32	Sulphuric Acid, 19.2N, 100ml

Spectrophotometers

DR1900 vs. DR900



	DR1900	DR900
Specification		
Waterproof	Yes (IP67)	Yes (IP67)
Weight	1.5kg	0.6kg
Dimensions	26x18x10cm	24x9x5cm
Languages	26	26
Storage log	500 readings	50 readings
Operating temperature	0...40°C	0...50°C
Power		
Batteries	4x AA Alkaline or 4x Rechargeable NiMH	4x AA Alkaline
Max. battery life	100 measurements	650 measurements
Battery charger	Included	Not applicable
External power	110-240VAC, 50/60Hz	Not applicable
Measurement		
Wavelength range	340...800nm	420, 520, 560, 610nm
Photometric range	0...3Abs	0...2Abs
Photometric accuracy	3mAbs @ <0.5Abs 1% @ >0.5Abs	5mAbs @ 1Abs
Sample cell compatibility	□10mm, ○13mm, ○16mm, ○□25mm. Flow-thru cell for □10mm, □25mm.	○16mm, ○/□25mm

Test	Procedure	DR1900	DR900
A Aluminium	AP-106	✗	●
Aluminium, Low Range	AP-028	●	✗
Ammonia	AP-073	●	●
B Bromine	AP-087	●	●
C Chlorine Free (DPD)	AP-034	●	●
Chlorine Total (DPD)	AP-035	●	●
Chlorine Dioxide Free (DPD)	AP-126	✗	●
Copper	AP-045	●	●
E ELIMIN-OX	AP-060	●	●
H Hardness	AP-043	●	●
Hardness, Total Ultra Low Range	AP-067	●	✗
Hydrazine	AP-050	●	●
I Iron, Total, High Level	AP-016	●	●
Iron, Total, Low Level	AP-023	●	●
Iron, Total, Low Level, Extended Range	AP-088	●	●
Iron, Low Level	AP-022	●	●
Iron, Low Level, Extended Range	AP-103	●	●
M Molybdate/Molybdenum, High Range	AP-002	●	●
N NexGuard	AP-117	●	●
NexGuard	AP-125	●	✗
Nitrite, High Range	AP-003	●	●
O Orthophosphate, Inorganic	AP-004	●	●
Orthophosphate, Inorganic, High Level	AP-029	●	●
P Phosphate, Total Organic and Inorganic	AP-101	●	●
Phosphate, Total Inorganic	AP-005	●	●
Phosphate, Soluble Organic (EASIPHOS 11)	AP-025	●	●
Phosphonate Persulfate UV Oxidation	AP-070	●	●
Polymer, Active	AP-116	●	●
S Silica, High Range	AP-006	●	●
Silica, Low Range	AP-007	●	●
Sulfate	AP-008	●	●
Sulfide	AP-056	●	●
SUR-GARD 1700	AP-009	●	●
T Triazole, Benzotriazole/Tolyltriazole	AP-074	●	●
Z Zinc	AP-015	●	●

DR1900 Portable Spectrophotometer

The portable DR1900 spectrophotometer is robust, lightweight, battery-powered and can be plugged into a mains socket. Its multilingual display works well in direct sunlight and indoors. These features make the instrument highly suitable for both field and laboratory use.

The DR1900 features pre-programmed calibrations to run over 90 tests, push-button method selection, automatic wavelength selection, and data logging capability. Analysis requires a minimum of time and preparation, with results displayed directly on the large crystal display. The instrument is dust proof, chemical resistant, and waterproof for years of reliable service.

The spectrophotometer comes complete with 2 sample cells (10ml/□25mm), and 4 sample cell adapters. Also included are a USB/power/charger module, 4 rechargeable batteries, a protective light shield and a dust cover. The basic instrument manual comes in 28 languages; the full manual in 6 languages.

Part No.
400-P1900.88

Spectrophotometer Kit
DR1900 Spectrophotometer kit

Part No.
500-P2500.88
500-P2502.88
500-P2523.88

Accessory
Sample cells (2), □25mm, 10ml
Sample cells (2), □25mm, 25ml
Sample cells (12), □25mm, 25ml, disposable (plastic), with cap
Sample cells (6), ○25mm, 10-20-25ml, w/cap
Check absorbance standards

500-P2555.88
956-27639-00



Suitable for field use and laboratory use

Lightweight and waterproof

26 language display





DR900 Hand-held Colorimeter

The DR900 is designed specifically for easy on-site testing. The instrument features pre-programmed calibrations to run over 90 tests, push-button method selection, automatic wavelength selection, and data logging capability. Analysis requires a minimum of time and preparation, with results displayed directly on the large crystal display. The instrument is dust proof, chemical resistant, and waterproof for years of reliable service.

The colorimeter comes complete with two Ø25mm sample cells marked at 10-20-25ml, a 16mm vial adapter, batteries, instrument manual and procedures manual.

Part No.	Colorimeter
400-P0900.88	DR900 Colorimeter

Part No.	Accessory
500-P0891A.88	Instrument carrying case
500-P2555.88	Sample cells (6), round, 10-20-25ml w/cap
956-27639-00	Check absorbance standards

Part No.	Spare
500-P0952.88	Light shield

Suitable for field use

Compact, lightweight and waterproof

26 language display

Reagents and Parts for DR2800 / DR1900 / DR900 / DR890, A-H

Part No.	Active Polymer Test for DR2800, DR1900, DR900, DR890 ♦ AP-116
460-S0811.75	Polymer Reagent, Form: Liquid, 1L (35 tests)
460-S0726.71	HCl 1:1, Form: Liquid, 50ml

Part No.	Aluminium Test for DR2800, DR1900 ♦ AP-028
460-P3113.88	Aluminium DR/2800 10ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): ALECR-1, ALECR-2, ALECR-3
460-S0726.71	HCl 1:1, Form: Liquid, 50ml

Part No.	Aluminium Test for DR900, DR890 ♦ AP-106
460-P3120.88	Aluminium DR900, DR890 Reagent Set

Part No.	Ammonia Test for DR2800, DR1900, DR900, DR890 ♦ AP-073
460-P3110.88	Ammonia DR2800, DR900, DR890 10ml Reagent Set, Form: Solid, 100 tests (HM): AM-1, AM-2

Part No.	Boron Test for DR2800, DR1900 ♦ AP-030
460-S0793.71	B-1, Form: Liquid, 50ml
460-S0794.81	B-2, Form: Solid, 50g

Part No.	Bromine Test for DR2800, DR1900, DR900, DR890 ♦ AP-087
460-S0461.87	DPD-T, Form: Solid, 100 pillows
460-S0243.71	Sulphuric Acid N/1 (H ₂ SO ₄), Form: Liquid, 50ml

Part No.	Chlorine Test for DR2800, DR1900, DR900, DR890 ♦ AP-035
460-S0460A.87	DPD-F, Form: Solid, 100 pillows
460-S0461.87	DPD-T, Form: Solid, 100 pillows
460-S0243.71	Sulphuric Acid N/1 (H ₂ SO ₄), Form: Liquid, 50ml

Part No.	Chlorine Dioxide Test for DR900, DR890 ♦ AP-126
460-P3122.88	Chlorine Dioxide, Free Reagent Set (contains DPD-F and Glycine reagent)
460-S0460A.87	DPD-F, Form: Solid, 100 pillows
460-S0310.70	Glycine reagent, 29ml

Part No.	Copper Test for DR2800, DR1900, DR900, DR890 ♦ AP-045
460-P3100.88	Copper DR2800, DR1900, DR900, DR890 10ml Reagent Set, Form: Solid, 100 tests (HM): CUP-1, CUP-2, CUP-3
460-S0801.74	Nitric Acid 10%, Form: Liquid, 500ml

Part No.	ELIMIN-OX Test for DR2800, DR1900, DR900, DR890 ♦ AP-060
460-P3115.88	ELIMIN-OX DR2800, DR1900, DR900, DR890, 25ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): ELIMIN-OX-1 (S0195), ELIMIN-OX-2 (S0196)
460-S0726.71	HCl 1:1, Form: Liquid, 50ml
460-S0734.71	Fe-4, Form: Liquid, 50ml (HM)
460-S0195.87	ELIMIN-OX Reagent 1, Form: Solid, 100 pillows
460-S0196.72	ELIMIN-OX Reagent 2, Form: Liquid, 100ml

Part No.	Hardness Test for DR2800, DR1900, DR900, DR890 ♦ AP-043
460-P3116.88	Hardness DR2800, DR1900, DR900, DR890 25ml Reagent Set, Form: Liquid, 100 tests (HM): Alkali, Calcium and Magnesium Indicator, EDTA, EGTA

Part No.	Hardness Test, Ultra Low Range for DR2800, DR1900 ♦ AP-067
460-S0471.70	CDTA Reagent, Form: Liquid, 10ml
460-S0472.87	Chlorophosphonazo Ind, Form: Solid, 100 pillows

Part No.	Hydrazine Test for DR2800, DR1900, DR900, DR890 ♦ AP-050
460-S0718.71	HZ-1, Form: Liquid, 50ml

Reagents and Parts for DR2800 / DR1900 / DR900 / DR890, I-P

Part No. Iron Test , High Level Total for DR2800, DR1900, DR900, DR890 ♦ AP-016

460-S0466.87 Fe-HL, Form: Solid, 100 pillows
460-S0726.71 HCl 1:1, Form: Liquid, 50ml

Part No. Iron Test, Low Level Fe(II) for DR2800, DR1900, DR900, DR890 ♦ AP-022, AP-103

460-S0799.72 Fe (II), Form: Liquid, 100ml (HM)
460-S0726.71 HCl 1:1, Form: Liquid, 50ml

Part No. Iron Test, Low Level Total for DR2800, DR1900, DR900, DR890 ♦ AP-023, AP-088

460-S0451.72 Fe-4, Form: Liquid, 100ml (HM)
460-S0726.71 HCl 1:1, Form: Liquid, 50ml

Part No. Molybdate/Molybdenum Test, High Range for DR2800, DR1900, DR900, DR890 ♦ AP-002

460-P3102.88 Molybdenum DR2800, DR1900, DR900, DR890 10ml Reagent Set, Form: Solid, 100 tests (HM): MO-1, MO-2, MO-3

Part No. NEXGUARD Test for DR2800, DR1900, DR900, DR890 ♦ AP-117

460-P3106.88 NEXGUARD DR900, DR890 25ml Reagent Set, Form: Liquid, 100 tests (HM): PA-1 (S0635), PA-2 (S0636), PA-1 (S0635), PA-2 (S0636)

Part No. NEXGUARD Test for DR2800, DR1900 ♦ AP-125

460-S0811.75 Polymer Reagent, Form: Liquid, 1L (35 tests)
460-S0726.71 HCl 1:1, Form: Liquid, 50ml

Part No. Nitrite Test, High Range for DR2800, DR1900, DR900, DR890 ♦ AP-003

460-S0464.87 NT-2, Form: Solid, 100 pillows, 10ml

Part No. Phosphate Test, High Level Inorganic Ortho for DR2800, DR1900, DR900, DR890 ♦ AP-029

460-P3109.88 Ortho and Total Inorganic Phosphate DR2800, DR1900, DR900, DR890 25ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): TP-1 (SH357), XP-2 (S5091), 1:1 HCl (S0726), 60ml dropper bottle (P0359)
460-S0726.71 HCl 1:1, Form: Liquid, 50ml
460-S5091.80 XP-2, Form: Solid, 25 g
460-SH357.72 TP-1, Form: Liquid, 100ml

Part No. Phosphate Test, Inorganic Ortho for DR2800, DR1900, DR900, DR890 ♦ AP-004

460-P3109.88 Ortho and Total Inorganic Phosphate DR2800, DR1900, DR900, DR890 25ml Reagent Set, Form: Solid/Liquid, 100

tests (HM): TP-1 (SH357), XP-2 (S5091), 1:1 HCl (S0726), 60ml dropper bottle (P0359)
460-S0726.71 HCl 1:1, Form: Liquid, 50ml
460-S5091.80 XP-2, Form: Solid, 25 g
460-SH357.72 TP-1, Form: Liquid, 100ml

Part No. Phosphate Test, Total Inorganic for DR2800, DR1900, DR900, DR890 ♦ AP-005

460-P3109.88 Ortho and Total Inorganic Phosphate DR2800, DR1900, DR900, DR890 25ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): TP-1 (SH357), XP-2 (S5091), 1:1 HCl (S0726), 60ml dropper bottle (P0359)
460-S5091.80 XP-2, Form: Solid, 25 g
460-SH357.72 TP-1, Form: Liquid, 100ml

Part No. Phosphate Test, Total Organic and Inorganic for DR2800, DR1900, DR900, DR890 ♦ AP-101

460-S0726.71 HCl 1:1, Form: Liquid, 50ml
460-S0735.80 POE-1, Form: Solid, 25 g
460-S0736.71 POE-2, Form: Liquid, 50ml
460-S0801.74 Nitric Acid 10%, Form: Liquid, 500ml
460-S5091.80 XP-2, Form: Solid, 25 g
460-SH357.72 TP-1, Form: Liquid, 100ml



Reagents and Parts for DR2800 / DR1900 / DR900 / DR890, P-Z

Part No.	Phosphate, Organic Soluble EASIPHOS II for DR2800, DR1900, DR900, DR890 ♦ AP-025
460-P3108.88	EASIPHOS II Organic Phosphate DR2800, DR1900, DR900, DR890 25ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): EP-1 (S0321), EP-2 (S0322), EP-5 (S0325), EP-6 (S0326)
460-S0321.71	EP-1, Form: Liquid, 50ml
460-S0322.80	EP-2, Form: Solid, 25 g
460-S0325.80	EP-5, Form: Solid, 25 g
460-S0326.72	EP-6, Form: Liquid, 100ml
460-S0726.71	HCl 1:1, Form: Liquid, 50ml

Part No.	Phosphonate Test, Persulphate UV Oxidation for DR2800, DR1900, DR900, DR890 ♦ AP-070
460-S0324A.87	EP-4, Form: Solid, 100 pillows
460-S0327.87	Persulphate Pillows, Form: Solid, 100 pillows
460-S0726.71	HCl 1:1, Form: Liquid, 50ml

Part No.	Silica Test, High Range for DR2800, DR1900, DR900, DR890 ♦ AP-006
460-P3111.88	High Range Silica DR2800, DR1900, DR900, DR890 10ml Reagent Set, Form: Solid, 100 tests (HM): SIH-1 (S0622), SIH-2/SIL-2 (S0623), SIH-3 (S0625)
460-S0622.87	SIH-1, Form: Solid, 100 pillows
460-S0623.87	SIH-2/SIL-2, Form: Solid, 100 pillows
460-S0625.87	SIH-3, Form: Solid, 100 pillows

Part No.	Silica Test, Low Range for DR2800, DR1900, DR900, DR890 ♦ AP-007
460-P3112.88	Low Range Silica DR2800, DR1900, DR900, DR890 10ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): SIL- 1 (S0626), SIH-2/SIL-2 (S0623), SIL-3 (S617P)
460-S0626.71	SIL-1, Form: Liquid, 50ml
460-S0623.87	SIH-2/SIL-2, Form: Solid, 100 pillows
460-S617P.87	SIL-3, Form: Solid, 100 pillows

Part No.	Sulphate Test for DR2800, DR1900, DR900, DR890 ♦ AP-008
460-S0465.87	SO4-1P, Form: Solid, 100 pillows, 10ml

Part No.	Sulphide Test for DR2800, DR1900, DR900, DR890 ♦ AP-056
460-P3117.88	Sulphide DR2800, DR1900, DR900, DR890 , 25ml Reagent Set, Form: Liquid, 100 tests (HM): Sulphide 1, Sulphide 2
460-S0467.70	Bromine Water, Form: Liquid, 30g/l, 25ml
460-S0468.70	Phenol Solution, Form: Liquid, 30 g/l, 25ml

Part No.	SUR-GARD 1700 Test for DR2800, DR1900, DR900, DR890 ♦ AP-009
460-P3105.88	SUR-GARD DR2800, DR1900, DR900, DR890 , 10ml Reagent Set, Form: Liquid, 100 tests (HM): SG-1 (S0201), SG-2 (S0202), SG-3 (S0203)
460-S0201.72	SG-1, Form: Liquid, 100ml
460-S0202.80	SG-2, Form: Solid, 5 g
460-S0203.71	SG-3, Form: Liquid, 50ml
460-S0726.71	HCl 1:1, Form: Liquid, 50ml

Part No.	Triazole Test for DR2800, DR1900, DR900, DR890 ♦ AP-074
460-P3119.88	Triazole DR2800, DR1900, DR900, DR890 25ml Reagent Set, Form: Solid, 100 tests (HM):Triazole Reagent Powder Pillows
460-S0243.71	Sulphuric Acid N/1 (H2SO4), Form: Liquid, 50ml
460-S0469.70	Rochelle Salt Solution, Form: Liquid, 25ml

Part No.	Zinc Test for DR2800, DR1900, DR900, DR890 ♦ AP-015
460-P3103.88	Zinc DR2800, DR1900, DR900, DR890 10ml Reagent Set, Form: Solid/Liquid, 100 tests (HM): ZN-5 (S0605), ZN-6
460-S0726.71	HCl 1:1, Form: Liquid, 50ml
460-S0279.75	H-6 Calcium Hardness Buffer, Sodium Hydroxide 1N, Form: Liquid, 1L

Hardware for DR2800 / DR1900 / DR900 / DR890 Tests

Part No.	Description
420-C0091.88	Pressure Filter (with filters)
500-P0010.88	5ml/10ml Drop Count Tube
500-P0015.88	1ml Plastic Dropper Pipette w/Bulb
500-P0018.88	0.1g Plastic Spoon
500-P0119.88	50ml Glass Beaker
500-P0197.88	100ml Plastic Beaker w/Cap
500-P0237.88	235ml Wash Bottle
500-P0346A.88	Bottle, plastic, 120ml w/0.5-1.0ml pipette
500-P0349.88	30ml Vial w/0.1g Scoop
500-P0354A.88	0.1 and 0.5g Scoops, Red/Blue for Vials (3/each)
500-P0359.88	60ml Plastic Bottle w/Dropper Tip
500-P1204.88	25ml Glass Graduated Cylinder w/Plastic Cap
500-P1206.88	50ml Glass Graduated Cylinder w/Stopper
500-P1208.88	100ml Glass Graduated Cylinder w/Stopper
500-P1214.88	100ml Plastic Graduated Cylinder w/Stopper (translucent)
500-P1216.88	25ml Plastic Graduated Cylinder

Part No.	Description
500-P1405.88	Metrical Membrane Filter, 0.45um, 47mm (100/Pkg)
500-P1434.88	25mm (0.45um) Syringe Filter Cartridge (100/pkg)
500-P1501.88	250ml Glass Erlenmeyer Flask (wide mouth)
500-P1503.88	125ml Glass Erlenmeyer Flask
500-P1512.88	50ml Glass Erlenmeyer Flask
500-P1605.88	Powder Pillow Snippers
500-P1725.88	60ml PTFE Boiling Chips
500-P2020.88	-10 to 260°C, Lab Thermometer, Glass
500-P2107.88	1ml Disposable Sterile Pipette
500-P2132.88	5ml Glass Serological Pipette
500-P2135.88	10ml Glass Serological Pipette (short)
500-P2150.88	5.0ml Glass Volumetric Pipette
500-P2162.88	1ml Glass Serological Pipette

Part No.	Description
500-P2166.88	10cc Disposable Plastic Syringe
500-P2167.88	20cc Disposable Plastic Syringe
500-P2171.88	5ml Glass Serological Pipette (wide tip)
500-P2179.88	0.5-1.0ml Dropper Assembly (pipette/cap/bulb) for P0346
500-P2554.88	UV Lamp with power supply, 230 VAC
500-P2721.88	0-10ml Pi-Pump Pipettor
500-P3004.88	50ml Volumetric Tube
500-P3037.88	#8 Red Plastic Stopper (for P1501)
500-P3204.88	pH Test Strips 0-14 pH (100/box)
500-P3207.88	pH Test Strips 5-10 pH (100/box)
500-P3750.88	1000ul Pipettor
500-P3753.88	200-1000ul Pipettor Tips (100/pkg)



Other Test Kits

Alkalinity, Chlorides, Hardness and Sulphite Burette Titration Test Kits

A wide variety of high and low range titrations necessary to control many water treatment programmes can be performed easily using the auto burette.

The auto burette has a built-in reservoir. Simply squeeze the rubber bulb until the burette is filled, release the bulb and the liquid levels off at zero. The test kits do not include a burette stand.

Analytical procedure: AP-059

Part No.	Burette Titration Test Kit
420-C0204.88	Alkalinity, Chloride, Hardness, Sulphite
420-C0205.88	Alkalinity, Hardness, Sulphite
420-C0033.88	Hardness, Sulphite

Part No.	Replacement Part
460-S0209.82	Barium Chloride Crystals, Form: Solid, 100g
460-S0222.72	P-Indicator (Phenolphthalein), Form: Liquid, 100ml (HM)
460-S0226.75	Sulphuric Acid N/50, Form: Liquid, 1L
460-S0229.75	AgNO ₃ 0.0172N, Form: Liquid, 1L
460-S0260.72	Special Indicator M, Form: Liquid, 100ml
460-S0274.75	H-1 High Range Titrant, Form: Liquid, 1L
460-S0275.74	H-2 Total Hardness Buf., Form: Liquid, 500ml
460-S0277.81	H-3 Total Hardness Ind., Form: Solid, 50g
460-S0279.75	Sodium Hydroxide 1N, Form: Liquid, 1L
460-S0447.75	LH-3 Titrant, Form: Liquid, 1L
460-S0279.75	H-6 Calcium Hardness Buffer, Sodium Hydroxide 1N, Form: Liquid, 1L
460-S0280.81	H-7 Calcium Hardness Ind, Form: Solid, 50g
460-S0613.80	ST-1 Drop-wise Sulphite, Form: Solid, 25g
460-S0614.72	ST-2 Drop-wise Sulphite, Form: Liquid, 100ml
460-S0726.71	HCl 1:1, Form: Liquid, 50ml

Part No.	Replacement Part
460-S0729.81	De-ionisation Resin, Form: Solid, 50 g
460-S0224.73	Potassium Chromate, Form: Liquid, 250ml
460-S0442.80	NR-2, Form: Solid, 25 g
500-P0237.88	235ml Wash Bottle
500-P0346A.88	Bottle, plastic, 60ml w/0.5-1.0ml pipette
500-P0351.88	30ml Plastic Bottle w/Dropper Tip
500-P0401.88	10ml Auto Burette w/475ml Clear Glass Bottle
500-P0402.88	10ml Auto Burette w/475ml Amber Glass Bottle
500-P0701.88	140ml Porcelain Casserole
500-P1201.88	50ml Glass Graduated Cylinder
500-P1403.88	Whatman #5 Fine Filter Paper, 15cm (100)
500-P1501.88	250ml Glass Erlenmeyer Flask (wide mouth)
500-P1610.88	Crucible Tongs
500-P1701.88	90mm Liquid Funnel
500-P2302.88	150mm Plastic Stirring Rod
500-P3301.88	Boiler Water Test Report Forms (25)
500-P3303.88	Cooling Water Test Report Forms (25)

Other Test Kits

Filming Amine Test Kit

Filming amines are used to inhibit corrosion in steam generating condensate systems.

Analytical Procedure: AP-066

Part No.	Test Kit
420-C0039.88	Filming Amine Comparator Test Kit

Ammonia Test Kit

The Ammonia Test can be used to analyse steam condensate, and also samples from most rivers, lakes and streams.

Analytical Procedure: AP-085

Part No.	Test Kit
420-C0041.88	Ammonia Comparator Test Kit

Dissolved Oxygen Test Kits

Dissolved oxygen in boiler feed water is a major cause of corrosion to boiler internals. Oxygen levels must be monitored closely to detect the loss of oxygen removal efficiency of de-aerator and oxygen scavenger products. Self-filling ampoules provide high sensitivity and minimize atmospheric contamination.

Analytical Procedures: AP-081, AP-082

Part No.	Dissolved Oxygen Test Kit
420-C0029.88	0-40ppb
420-C0031.88	0-100ppb
420-C0032.88	0-1ppm
420-C0030.88	0-12ppm



Part No.	Replacement Part
460-S0279.75	H-6 Calcium Hardness Buffer, Sodium Hydroxide 1N, Form: Liquid, 250ml
460-S0726.71	HCl 1:1, Form: Liquid, 50ml
500-P3204.88	pH Test Strips 0-14 pH (100/box)
500-P3207.88	pH Test Strips 5-10 pH (100/box)
460-P0303.88	Dissolved Oxygen Refill, 0-12ppm O ₂ (30/pkg), Form: Liquid
460-P0304.88	Dissolved Oxygen Refill, 0-40 or 0-100ppb O ₂ (30/pkg), Form: Liquid
460-P0305.88	Dissolved Oxygen Refill, 0-1ppm O ₂ (30/pkg), Form: Liquid
500-P0310.88	0-40ppb O ₂ Comparator
500-P1122.88	0-100ppb O ₂ Comparator

Other Test Kits



Strong and Weak Acid Test Kit (SWAT)

Determination of strong (HCl , SO_x) and weak (H_2S , CO_2) acids in refinery overheads.

Analytical Procedure: TM029

Part No.	Test Kit
420-C0280.88	SWAT Test Kit

Part No.	Replacement Part
460-S0222.72	P-indicator, 100ml
460-S0260.72	Special indicator, 250ml
460-S0781.73	NaOH , 250ml
460-S0782.82	Dyed cation resin, 100g
500-P0111.88	Beaker, glass, 100ml
500-P2242.88	Syringe, disposable, plastic, 50cc
500-P2243.88	Cation trap assembly, 11ml



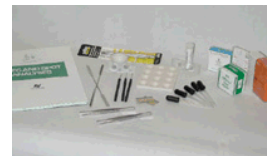
NALCOOL 2000 Test Kit

Designed to be a quick, easy method for determining concentration of NALCOOL 2000 in diesel cooling water. It is a very simple test requiring no formal analytical training or experience and can be run by any operator.

Analytical Procedures: AP-062

Part No.	Test Kit
420-C0145.88	NALCOOL 2000 Drop Test Kit

Part No.	Replacement Part
460-S0620.73	NALCOOL 2000-1, form: liquid, 250ml
460-S0621.74	NALCOOL 2000-2, form: liquid, 500ml
500-P0347.88	60ml plastic bottle w/0.5-1.0ml dropper
500-P0351.88	30ml plastic bottle w/dropper tip



Paper Speck and Spot Test Kit

Part No.	Test Kit
440-C0152.88	Speck and Spot Test Kit

Part No.	Replacement Part
460-S5400.70	SS-1, form: liquid, 25ml
460-S5408.70	SS-9, form: liquid, 25ml
460-S5409.70	SS-10, form: liquid, 25ml
500-P2802.88	Pencil magnet
500-P3203.88	Lead acetate test strips for Sulphide (100/box)
500-P3204.88	pH test strips 0-14 pH (100/box)



Other Test Kits



Silt Density Test Kit

The SILT DENSITY INDEX is a key measurement required for the specification of Reverse Osmosis systems. It is simply a controlled measurement of the rate that the water blinds a filter.

Bulletin: BEU-349

Part No.	Test Kit
6024340	Silt Density Test Kit, SDI005

Part No.	Replacement Part
6024401	Valve, SDI010
6024403	Regulator, SDI015
6024404	Gauge, SDI020
6024406	Hose, SDI025
6024408	Filter holder, WA1068
6024409	Filters (100), WA6008-47
6024410	Cylinder, WA1046
6024411	Timer, WA1067



Jar Mixers

Jar Mixers are used to carry out flocculation tests to determine the most appropriate product solution. The Portable FP4 Jar Mixer can be easily moved from one site to another. The unit can be powered from 100-240VAC or from a car cigarette lighter. The JLT4 Jar Mixer can be powered from 100-240VAC.

Bulletin: BEU-353

Part No.	Jar Mixer
6035392	Portable FP4 Jar Mixer, 100-240VAC, 50/60Hz or 12VDC, 13kg
6035394	JLT4 Jar Mixer, 100-240VAC, 50/60Hz, 17kg
6035393	Carry case for FP4
500-P0115.88	1000ml glass beaker



Calibration Solutions

Part No. TRASAR

460-S0940.75	3D TRASAR, Cooling Water, 1L
460-S0910.75	TRASAR 1 and 6, 1L
460-S0920.75	TRASAR 2, 1L
460-S0980.75	TRASAR 3, 1L

Part No. Blank

01-S0470-08	Demineralised Water, 4L
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Part No. Conductivity

460-S0297.75	3000 μ S/cm, 1L
460-S0298.75	600 μ S/cm, 1L
460-S0299.75	40 μ S/cm, 1L

Part No. pH

460-S0406.75	pH 4.0, 1L
460-S0407.75	pH 7.0, 1L
460-S0408.75	pH 10.0, 1L

Part No. Redox (ORP)

460-S0932A.75	200mV, 1L
460-S0933A.75	600mV, 1L

Part No. Conductivity, pH

6024491	Four solutions, 65ml: pH4, pH7, pH10, 1413 μ S/cm
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Accurate sensor measurements help ensure reliable water treatment results.



Analytical Accessories, B-C

Part No. Bags

500-P0212.88	150 x 230 mm Plastic Zip-Lock BAG
500-P0214.88	75 x 175 mm Sterile Whirl-Pak BAG
500-P0214A.88	75 x 175 mm Sterile Whirl-Pak BAG (500/case)

Part No. Beakers, Glass

500-P0105.88	400ml (short)
500-P0106.88	150ml
500-P0111.88	100ml
500-P0112.88	800ml
500-P0113.88	600ml
500-P0115.88	1000ml
500-P0119.88	50ml

Part No. Beakers, Plastic

500-P0116.88	800ml
500-P0118.88	250ml
500-P0120.88	500ml
500-P0197.88	100ml, w/Cap

Part No. Bottles, Dropper

500-P0237.88	Wash bottle, 235ml
500-P0346A.88	Plastic bottle, 120ml, w/0.5-1.0ml pipette
500-P0347.88	Plastic bottle, 60ml, w/0.5-1.0ml Dropper
500-P0351.88	Plastic bottle, 30ml, w/Dropper Tip
500-P0359.88	Plastic bottle, 60ml, w/Dropper Tip
500-P2179.88	Dropper assembly (pipette/cap/bulb), 0.5-1.0ml, for P0346

Part No. Bottles, Plain

500-P0218A.88	Glass bottle, 475ml, w/Cap
01-P2550	Mixing bottle, 25ml
500-P0219A.88	Plastic bottle, 475ml, w/Cap
500-P0221A.88	Plastic bottle, 1L, w/Cap
500-P0258.88	Plastic bottle, 1L, w/Cap (Nalge - HDPE)
500-P0260.88	Plastic bottle, 475ml, w/Cap (NALGENE - HDPE)
500-P4209A.88	Plastic bottle, 475ml, w/Cap (wide mouth)
500-P4216A.88	Plastic bottle, 250ml, w/Cap
500-P4218A.88	Plastic bottle, 120ml, w/Cap (wide mouth)
500-P4229A.88	Plastic bottle, 235ml, w/Cap (wide mouth)
500-P4257A.88	Plastic bottle, 60ml, w/Cap (wide mouth)

Part No. Cleaning Brush

500-P2817.88	For 3D TRASAR Fluorometer flow cell
500-P2818.88	For 3D TRASAR Pellet Feeder
111-P01047.88	For TRASAR 3000 flow cell

Part No. Case / Box

6036051	Reagent storage boxes (10/pkg), used in the Nalco Water Engineer Test Kit
500-P0636.88	Carrying case, 11"x19"x11" (28x48x28cm), blue



Analytical Accessories, C-F

Part No. **COD Vial, Hach**

956-21258-25 LR HW3 25/pkg
956-21259-25 HR EEC 25/pkg

Part No. **Cylinder, Graduated, Glass**

500-P1201.88 50ml
500-P1204.88 25ml, w/plastic cap
500-P1206.88 50ml, w/stopper
500-P1208.88 100ml, w/stopper
500-P1210.88 100ml

Part No. **Cylinder, Graduated, Plastic**

500-P1209.88 1000ml
500-P1212.88 100ml
500-P1214.88 100ml, w/stopper (translucent)
500-P1216.88 25ml
500-P1217.88 50ml
500-P1221.88 500ml (assembly for Polymer Test)
500-P1222.88 250ml

Part No. **Flask**

500-P1503.88 Glass Erlenmeyer flask, 125ml
500-P1505.88 Plastic Erlenmeyer flask, 250ml
500-P1501.88 Glass Erlenmeyer flask (wide mouth), 250ml
500-P1508.88 Glass Erlenmeyer flask (wide mouth), 500ml
500-P1512.88 Glass Erlenmeyer flask, 50ml
500-P3037.88 #8 red plastic stopper (for 500-P1501.88)

Part No. **Filter**

500-P1401.88 Filter paper, 6" (100)
500-P1402.88 Filter paper, 5" (100)
500-P1405.88 Metricel membrane filter, 0.45um, 47mm (100/Pkg)
500-P1434.88 25mm (0.45um) Nylon syringe filter Cartridge (100/Pkg)
500-P1427.88 A/E Glass microfiber filter, 47mm (100/Pkg)
500-P1428.88 Cellulose Nitrate membrane filter, 24 mm, 0.45 um (100/pkg)
500-P1436.88 110mm (0.45um) filter paper (100/Pkg)
500-P2240.88 25mm reusable filter holder (for 50cc syringe)



Flasks, Erlenmeyer



Cylinder, Graduated, Plastic

Analytical Accessories, M-P

Part No. Microbiology, Agar

008-313-012	Tomato Juice Agar (10/pkg)
008-313-015	MRS agar 9cm (10/pkg)
008-313-003	Iron Sulphite agar (40/pkg)
500-P3027.88	Sulphate Reducer agar tubes, 9ml (100/box)
500-P3042.88	Sulphate Reducer agar tubes, 9ml (20/box)

Part No. Microbiology, Dilution Tubes, Sterile

500-P3023A.88	Narrow mouth, 9.9ml (100/box)
500-P3056A.88	Narrow mouth, 9.0ml (100/box)
500-P3057.88	Wide mouth, 9.0ml (100/box)
500-P3704.88	Wide mouth, 9.9ml (100/box)

Part No. Microbiology, Incubator

008-312-000	Portable, for 12 dip-slides, 240VAC, 12VDC car adapter
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Part No. Microbiology, Supplies, Miscellaneous

008-313-007	Crossley milk, 40/pkg
008-313-008	Paraffine wax, 10ml, 40/pkg
500-P3014.88	Microscope slides, flat (72/box)
500-P3707.88	Nutrient packages, 5/pkg

Part No. Pipettes and Droppers

500-P2707.88	BULB, 3-WAY, SAFETY, RBR
500-P2107.88	Pipette, disposable, sterile, 1ml
500-P2182.88	Pipette, disposable, 10ml (25/pkg)
500-P2195.88	Pipette, disposable, 1ml
500-P0015.88	Dropper pipette, plastic, w/bulb, 1ml
500-P2120.88	Dropper pipette, glass, w/bulb, 0.5-1ml
500-P2130.88	Serological pipette, glass, 10ml
500-P2150.88	Volumetric pipette, glass, 5ml
500-P2151.88	Volumetric pipette, glass, 10ml
500-P3753.88	Pipettor tips, 200-1000ul (200/pkg)
500-P3754.88	Pipettor tips, 50-200ul (384/pkg)
500-P2721.88	Pi-Pump pipettor, 0-10ml
500-P3750.88	Pipettor, 1000ul
500-P3752.88	Pipettor, 100ul



Incubator
008-312-000



Pipettes
Disposable

Analytical Accessories, S-T

Part No. Sample Shippers

500-P0276.88	Hazardous (Air), 1L
500-P0228.88	Microbio, bottles, 4x50ml, and cooling gel pack
500-P0243.88	High Purity (EE), w/2 plastic pre-cleaned bottles, 120ml
500-P0268.88	Mailer Bio Eng.
900-010-000	Plastic, 500ml, 12 boxes with 2 bottles each
900-020-000	Microbio tubes, 30ml, 12 boxes with 6 tubes each
900-040-000	Glass, 500ml, 8 bottles
900-050-000	Legionella, plastic, 500ml, 12 boxes with 2 bottles each

Part No. Syringes, Disposable Plastic

500-P2242.88	50cc
500-P2147.88	60cc, w/Luer-Lock
500-P2163.88	1cc
500-P2164.88	3cc
500-P2165.88	5cc
500-P2166.88	10cc
500-P2167.88	20cc
500-P2197.88	1cc, sterile, w/25 GA, 16mm needle

Part No. Test Strips

500-P3203.88	Lead Acetate, for Sulphide (100/box)
500-P3204.88	0-14pH (100/box)
500-P3207.88	5-10pH (100/box)
500-P3205.88	Nitrite 0-50mg/L (100/box)
500-P3208.88	Chloride, QUANTABS, 30-600 ppm (40/box)
500-P3211.88	Peroxide, 0-25mg/L (100/box)
500-P3241.88	Sulphite, 10-500mg/L (100/box)

Part No. Tubes

500-P0010.88	Drop count tube, glass, 5ml/10ml
500-P1323.88	Sample cells, 10ml (6/pkg)
500-P3001.88	Comparator tube, 13mm (for P1101)
500-P3004.88	Volumetric tube, 50ml
500-P2505.88	#4 Red Plastic stopper (for tube 500-P3004.88)

Part No. Miscellaneous

500-P1605.88	Powder pillow snippers
500-P1612.88	Stopwatch
500-P1725.88	Boiling chips, PTFE, 60ml
500-P2302.88	Stirring rod, plastic, 150mm



500-P0276.88 500-P0228.88 500-P0268.88 900-010-000 900-020-000 900-040-000 900-050-000 Syringe



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