



Cooling Tower Control & Dosing

Bleed, Inhibitor

Ordering Code	Description
NANO-NC2	Conductivity controller for Cooling Towers for bleed control. Relay output for optional bleed solenoid valve. Includes conductivity probe with PVC Tee. (Pumps and solenoid valve excluded)
AUTOBLD	NANO-NC2 Controller with manifold on PVC backboard. (Incl. Bleed solenoid valve & conductivity probe)
AUTOBLD-PR-1	NANO-NC2 Controller with variable speed Inhibitor pump and manifold on PVC backboard. (Incl. SEKO PR-1 peristaltic pump, Bleed solenoid valve & conductivity probe)



NANO-NC2

Description

The NANO-NC2 controller is designed for bleed control on cooling towers. The conductivity probe supplied measures the conductivity in the manifold, and maintains the system conductivity to the programmed setpoint via the bleed solenoid valve.

The AUTOBLD-PR-1 also achieves Inhibitor dosage proportional to the amount of water bled. The display on the LCD can either be in μS or TDS.

Features & Benefits

- Bleed Control via solenoid valve (or via optional actuated ball valve)
- Inhibitor Dosing on bleed (AUTOBLD-PR-1 only)
- Easy to program and calibrate
- Backlit LCD simultaneously displays Conductivity, Setpoint & Output Status
- Manual priming & testing via menu
- Manifold with sample valve incorporates flow & bleed indicator
- Weatherproof - can be mounted outside

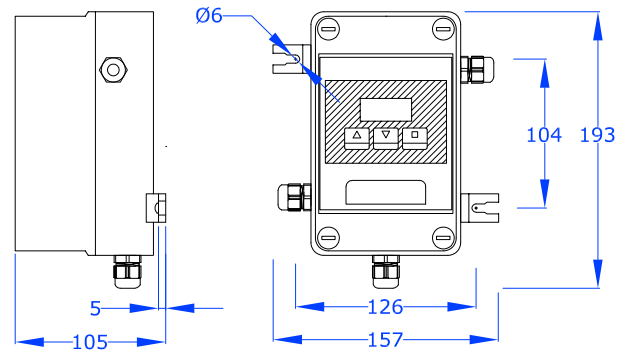


AUTOBLD



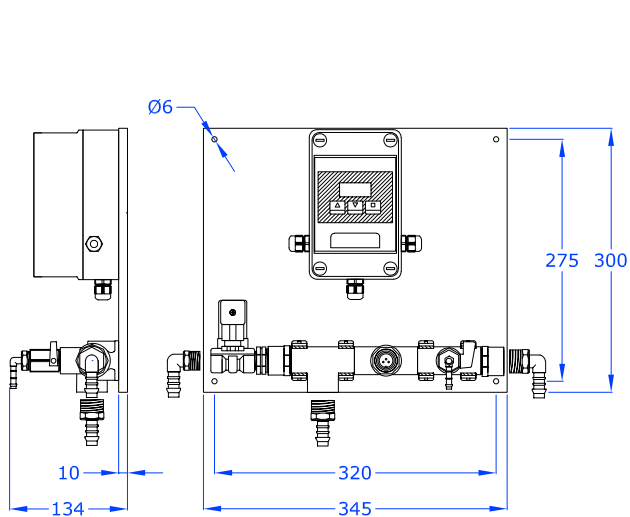
AUTOBLD-PR1

Dimensional Drawing - Controller only

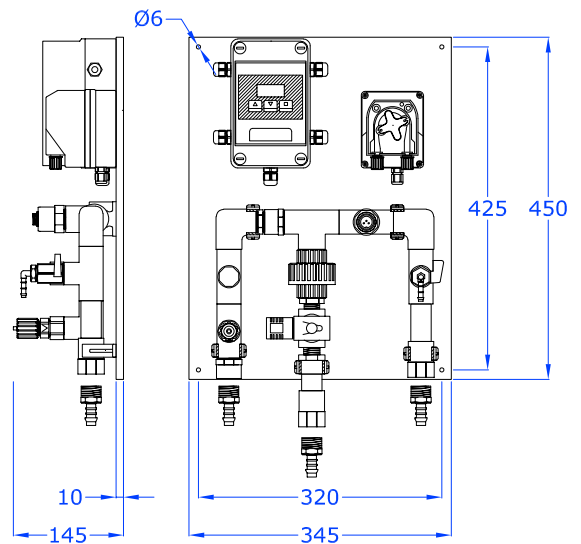


NANO-NC2

Dimensional Drawings - Dual Biocide Systems



AUTOBLD



AUTOBLD-PR-1

How to Order

Controller with Conductivity Probe Only (excludes pumps, manifold, backboard & cabinets)

Ordering Code → **NANO-NC2**

Conductivity Bleed Systems Supplied with/without Peristaltic Dosing Pumps

Ordering Code → **AUTOBLD - PR-1**

Explanation of Fixed Part Codes	
AUTOBLD	System with NANO-NC2 Bleed controller

Mounting of Controller & Pumps	
blank	Bleed System only
PR-1	Bleed System with Variable Speed 0.3 - 1.0 l/hr Inhibitor pump which doses continuously on bleed

Options & Accessories

Ordering Code	Description
AF02	Replace 1/2" direct acting solenoid valve with pilot assisted 3/4" solenoid valve
AF02-1/2-LRU230	Replace 1/2" solenoid valve with Actuated Ball Valve 1/2" F/F (15mm) 240VAC, Full bore, Continuous voltage to close, Apply voltage to open (3-wire connection A, A, N), 3.5 bar, 100 degC max, IP54 (Weather protection recommended)
AF02-3/4-LRU230	Replace 1/2" solenoid valve with Actuated Ball Valve 3/4" F/F (20mm) 240VAC, Full bore, Continuous voltage to close, Apply voltage to open (3-wire connection A, A, N), 3.5 bar, 100 degC max, IP54 (Weather protection recommended)
AF04-M	Option on new system: Add Flow Switch To Manifold during manufacture
RV ILS-3/4-T20E	In-line Strainer, 3/4" NPTF ports, transparent Nylon bowl, 20% glass filled PP body, EPDM gasket, 20 mesh (915 micron) SS304 screen, max 6.9 bar @ 52 degC or 10.3 bar @ 21 degC, mounting in any orientation
RV ILS-1-T20E	In-line Strainer, 1" NPTF ports, transparent Nylon bowl, 20% glass filled PP body, EPDM gasket, 20 mesh (915 micron) SS304 screen, max 6.9 bar @ 52 degC or 10.3 bar @ 21 degC, mounting in any orientation

Recommended Spare Parts

Ordering Code	Description
SP-DCON-P10T-P	Replacement conductivity probe 3/4" BSPM
SP-DCON-P10AT-P-PL	Replacement probe lead
SP-SOL-1/2-S	Replacement SMC direct acting solenoid valve (0-2.7bar)
SP-SK-01A-BK	Replacement Squeeze tube, EPDM 3x8mm (pre-greased with connectors) for SEKO PE-1.3 peristaltic pump with SP-SK-06 rotor assembly
SP-SK-06	Replacement rotor assembly for SEKO PE-1.3 pump with SP-SK-01A-BK squeeze tube



Specifications

NANO-NC2 CONTROLLER

Control Function

Measured Variable	Conductivity
Range	0 - 9999 μ S/TDS
Resolution	1 μ S / 1 ppm TDS
Accuracy	0.2% of Range
Repeatability & Drift	1% of Range
Control Type	ON/OFF (controlling bleed valve)
Hysteresis	Deadband: 3% (fixed)

Dosing Settings

Inhibitor	None. However, AUTOBLD-PR-1 supplied with Inhibitor pump which doses continuously on bleed
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General

Display	Dual Line LCD displays Conductivity (μ S/TDS), Setpoint, Flow & Output Status
Keypad	UP, DOWN & ENTER pushbuttons
LED Indication	-
Manual Test	Output manually activated via menu
Flow Sensing	Flow input bridged unless ordered with optional flow switch
Calibration	Menu driven
Data Retention	100 years

Electrical

Power Supply	220-240 VAC, 50/60 Hz (110 VAC available on request)
Power Consumption	10W max (with no load on output)
Fuse	2A, 5x20mm (in-line with circuit and powered relay output)
Bleed Relay Output	Switched 240VAC outputs rated 8A/250VAC resistive (2A fused)

AUTOBLD

AUTOBLD-PR-1

Dosing Pumps Incl.

Inhibitor	-	1.3 l/hr
Pump Type	-	Peristaltic Pump (SEKO PR-1-FP), 0.3 - 1.0 l/hr variable speed (EPDM Compound Squeeze tube, PP injection valve, PVC foot valve, Clear PVC suction tubing, Black UV stable PE discharge tubing).

Manifold Standard

Description	Inlet, (flow switch - optional), sample point, conductivity probe (carbon electrodes), 1/2" bleed solenoid valve (w/ flow indicator) to drain, outlet	Inlet, (flow switch - optional), transparent flow indicator, sample point, conductivity probe (carbon electrodes), 1/2" bleed solenoid valve (w/ flow indicator) to drain, check valve, 1 injection point, outlet
Bleed Solenoid Valve	SMC 240VAC N/C Direct Acting 0-2.7 bar, 10mm orifice	
Inlet & Outlet	3/4" BSP Female Thread (3/4" x 12mm hosetails supplied loose)	
Max pressure & temp.	270 kPa (2.7 bar) @ 50°C	

Physical

Protection	IP55 (weatherproof)	Controller IP55, Pump IP65 (weatherproof)
10mm PVC panel	300 (h) x 345 (w) mm	450 (h) x 345 (w) mm
Packaged dimensions	430(l) x 370(w) x 300(h) mm	630(l) x 370(w) x 290(h) mm
Packaged weight	6 kg	10 kg