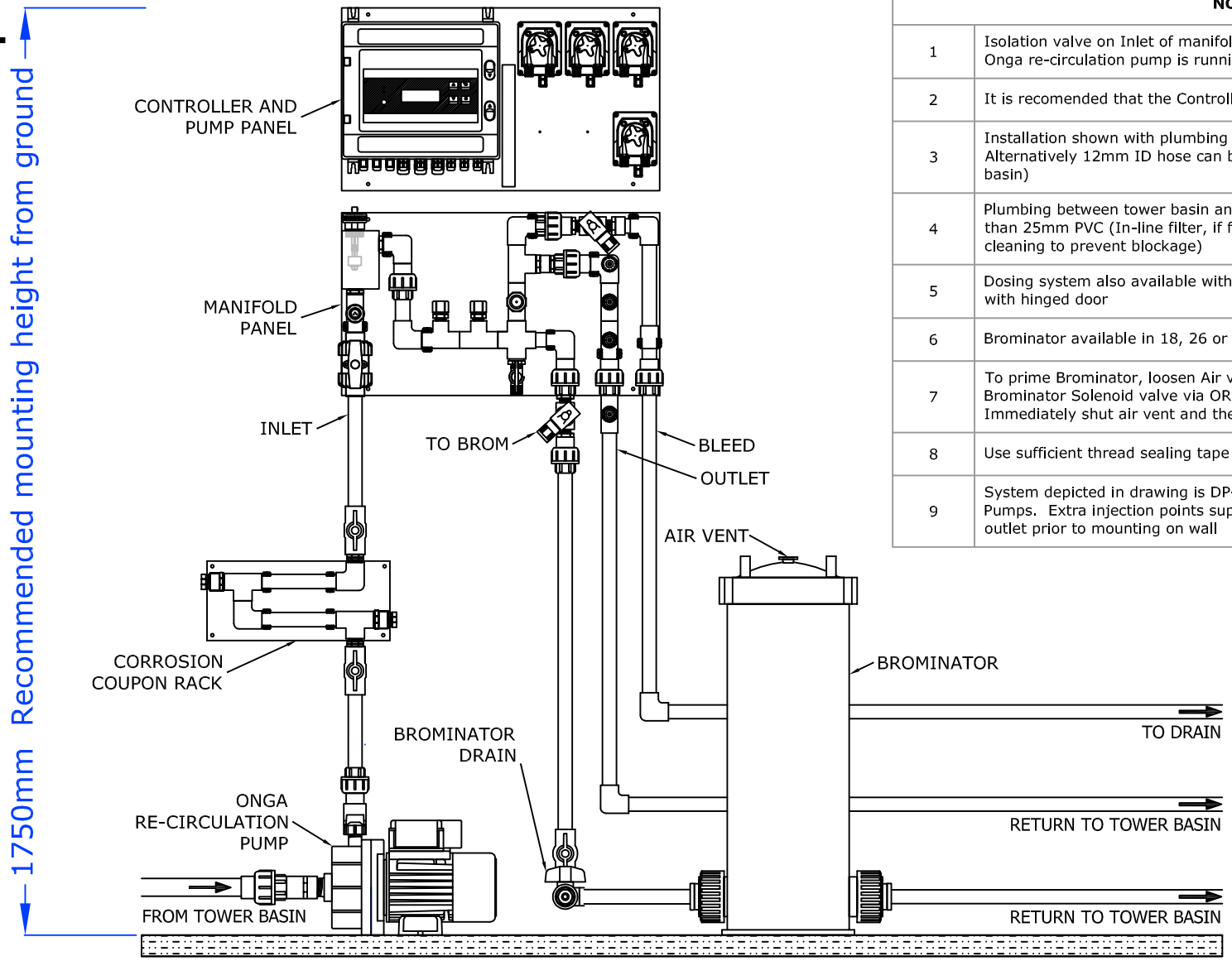
Installation Instructions for Cooling Tower Conductivity Bleed & Inhibitor Dosing with:

- Brominator Dosing via ORP

Convergent Water Controls

Part Number	Installation Drawing No		Systems with XP2 Series Controllers				Systems with DIGICHEM Plus+ Controller		
			No ORP or pH	pH Control	ORP Control		ORP Control with pH monitoring		
	With Onga Recirc pump	*Take-off from Condenser Pump*	*Timed Biocides Only*	*Timed Biocides w/pH control (No ORP control)*	*Chlorine Dosing*	*Brominator Dosing*	*Chlorine & Acid (pH) Dosing*	*Chlorine & Bromine Dosing*	*Brominator Dosing*
DIGICHEM-A2-V	A1 & A2	B1 & B2	•						
DIGICHEM-A2-V-CABG	A1 & A2	B1 & B2	•						
DIGICHEM-AB2-V	A1 & A2	B1 & B2	•						
DIGICHEM-AB2-V-CABG	A1 & A2	B1 & B2	•						
DIGI-A2PH2A-P	C1 & C2	D1 & D2		•					
DIGI-A2PH2A-P-CABG	C1 & C2	D1 & D2		•					
DIGI-AB2PH2A-P	C1 & C2	D1 & D2		•					
DIGI-AB2PH2A-P-CABG	C1 & C2	D1 & D2		•					
DIGI-A2RX2A-B	G1 & G2	H1 & H2				•			
DIGI-A2RX2A-B-CABG	G1 & G2	H1 & H2				•			
DIGI-AB2RX2A-B	G1 & G2	H1 & H2				•			
DIGI-AB2RX2A-B-CABG	G1 & G2	H1 & H2				•			
DIGI-A2RX2A-P	C1 & C2	D1 & D2			•				
DIGI-A2RX2A-P-CABG	C1 & C2	D1 & D2			•				
DIGI-AB2RX2A-P	C1 & C2	D1 & D2			•				
DIGI-AB2RX2A-P-CABG	C1 & C2	D1 & D2			•				
DP-CAPHP-RXP	C1 & C2	D1 & D2					•		
DP-CAPHP-RXP-CAB	C1 & C2	D1 & D2					•		
DP-CAPH-RXPP	E1 & E2	F1 & F2						•	
DP-CAPH-RXPP-CAB	E1 & E2	F1 & F2						•	
DP-CAPH-RXB	G1 & G2	H1 & H2							•
DP-CAPH-RXB-CAB	G1 & G2	H1 & H2							•

G1



NOTES	
1	Isolation valve on Inlet of manifold or coupon rack must NEVER be shut when Onga re-circulation pump is running
2	It is recomended that the Controller display is mounted at eye level
3	Installation shown with plumbing after the Onga pump in 20mm PVC pipe. Alternatively 12mm ID hose can be used (except for brominator return to tower basin)
4	Plumbing between tower basin and Onga pump suction must not be smaller than 25mm PVC (In-line filter, if fitted must be 1" or larger and requires regular cleaning to prevent blockage)
5	Dosing system also available with controller and pumps in weatherproof cabinet with hinged door
6	Brominator available in 18, 26 or 100kg capacity
7	To prime Brominator, loosen Air vent on Brominator and manually activate Brominator Solenoid valve via ORP controller until water exits air vent. Immediately shut air vent and then de-activate Solenoid valve
8	Use sufficient thread sealing tape on all threaded connections to prevent leaks
9	System depicted in drawing is DP-CAPH-RXB with optional Acid and Dispersant Pumps. Extra injection points supplied loose must be screwed to manifold outlet prior to mounting on wall

Convergent Water Controls

Ver	Date	Notes	By	Check
1.1	16/02/12	Upgraded Manifold	LF	LN
1.0	21/05/08	ORIGINAL	LF	LN

Filename: S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPH-RXB

Drawn By: LF Date: 21/05/08

Checked By: LN Date: 21/05/08

Scale: N/A

DIMENSIONS ARE IN MM DO NOT SCALE

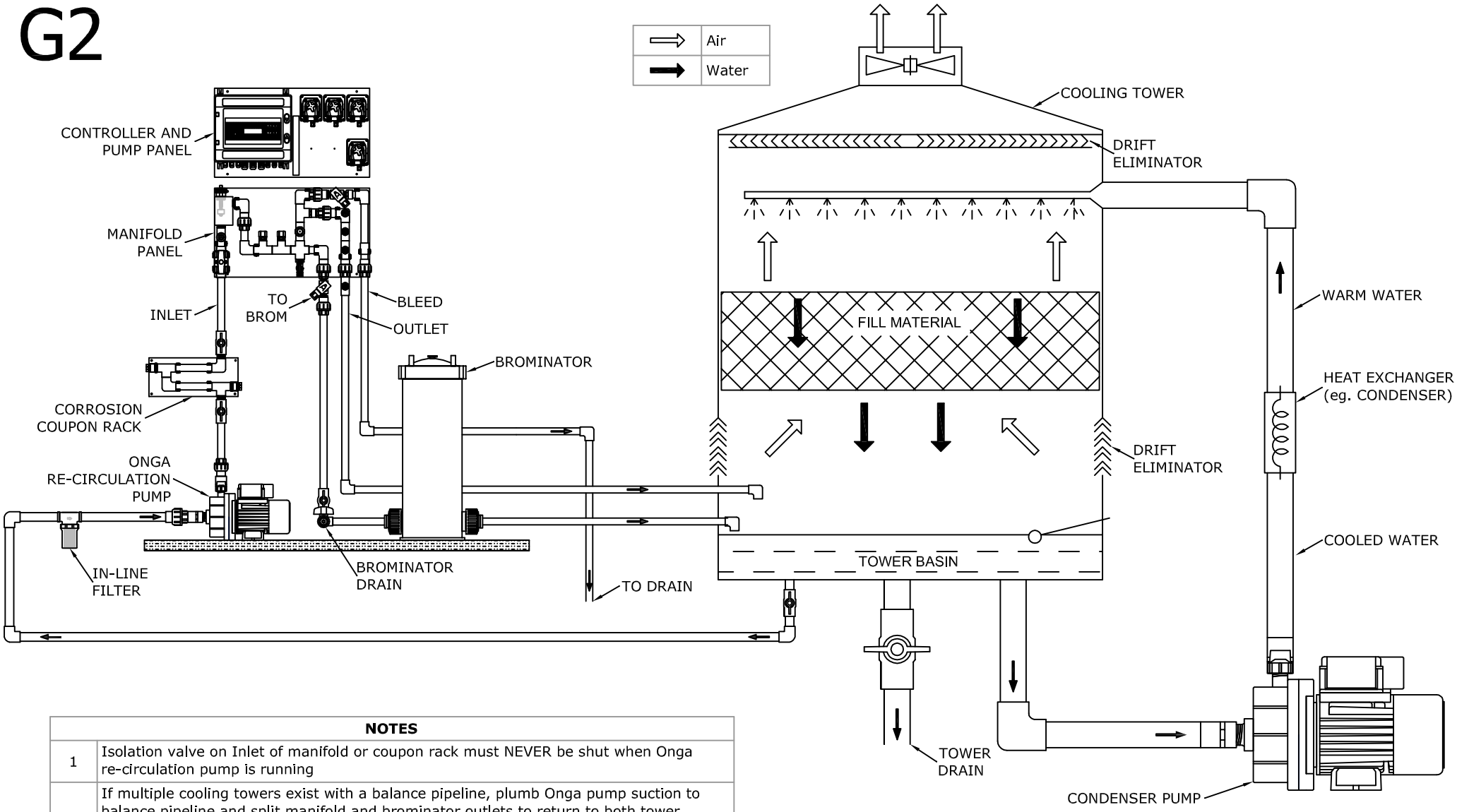
Title: INSTALLATION DIAGRAM FOR DP-CAPH-RXB, DP-CAPH-RXB-CAB, DIGI-A(B)2-RX2A-B, DIGI-A(B)2-RX2A-B-CABG WITH OPTIONAL DISPERSANT PUMP, ONGA RE-CIRCULATION PUMP, COUPON RACK AND BROMINATOR

Project / Part Number: DP-CAPH-RXB Ver: 1.1

Client: CONVERGENT WATER CONTROLS

Drawing No: DRAWING NO

G2



NOTES	
1	Isolation valve on Inlet of manifold or coupon rack must NEVER be shut when Onga re-circulation pump is running
2	If multiple cooling towers exist with a balance pipeline, plumb Onga pump suction to balance pipeline and split manifold and brominator outlets to return to both tower basins. To achieve good chemical mixing, return manifold flow to multiple points per tower basin

Convergent Water Controls

Ver	Date	Notes	By	Check
1.1	16/02/12	Upgraded Manifold	LF	LN
1.0	21/05/08	ORIGINAL	LF	LN

Filename: S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPH-RXB

Drawn By: LF — Date: 21/05/08

Checked By: LN — Date: 21/05/08

Scale: N/A

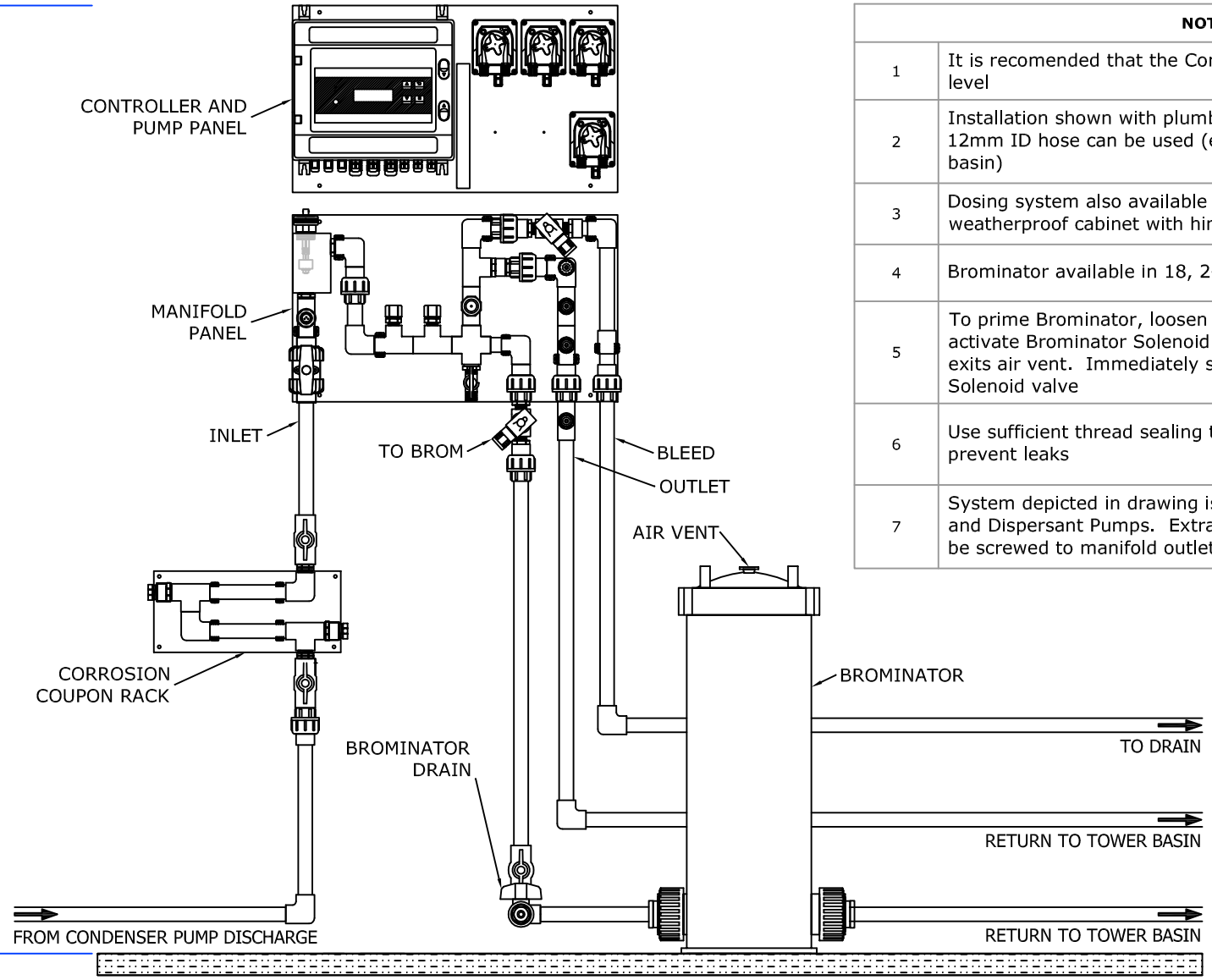
DIMENSIONS ARE IN MM DO NOT SCALE

Title: GENERIC DIAGRAM OF CONDUCTIVITY AND ORP (BROMINATOR) DOSING SYSTEM PLUMBED TO COOLING TOWER WITH ONGA RE-CIRCULATION PUMP

Project / Part Number: DP-CAPH-RXB — Ver: 1.1

Client: CONVERGENT WATER CONTROLS — Drawing No: DRAWING NO

H1



NOTES	
1	It is recomended that the Controller display is mounted at eye level
2	Installation shown with plumbing in 20mm PVC pipe. Alternatively 12mm ID hose can be used (except for brominator return to tower basin)
3	Dosing system also available with controller and pumps in weatherproof cabinet with hinged door
4	Brominator available in 18, 26 or 100kg capacity
5	To prime Brominator, loosen Air vent on Brominator and manually activate Brominator Solenoid valve via ORP controller until water exits air vent. Immediately shut air vent and then de-activate Solenoid valve
6	Use sufficient thread sealing tape on all threaded connections to prevent leaks
7	System depicted in drawing is DP-CAPH-RXB with optional Acid and Dispersant Pumps. Extra injection points supplied loose must be screwed to manifold outlet prior to mounting on wall

Convergent Water Controls

Ver	Date	Notes	By	Check
1.1	16/02/12	Upgrade Manifold	LF	LN
1.0	21/05/08	ORIGINAL	LF	LN

Filename: S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPH-RXB

Drawn By: LF — Date: 21/05/08

Checked By: LN — Date: 21/05/08

Scale: N/A

DIMENSIONS ARE IN MM
DO NOT SCALE

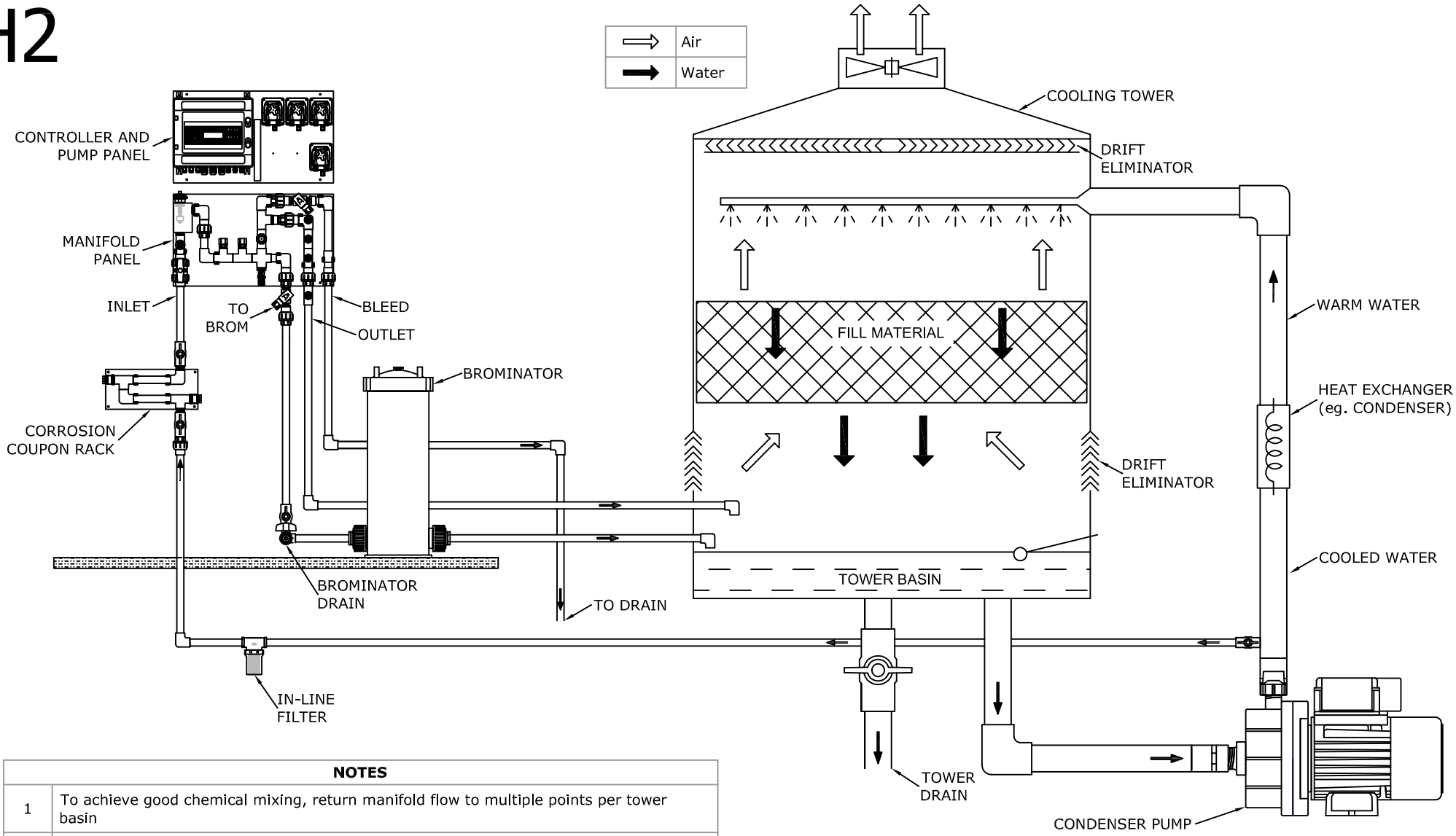
Title: INSTALLATION DIAGRAM FOR DP-CAPH-RXB, DP-CAPH-RXB-CAB, DIGI-A(B)2-RX2A-B, DIGI-A(B)2-RX2A-B-CABG WITH OPTIONAL DISPERSANT PUMP, COUPON RACK AND BROMINATOR (CONDENSER PUMP TAKE-OFF)

Project / Part Number: DP-CAPH-RXB — Ver: 1.1

Client: CONVERGENT WATER CONTROLS

Drawing No: DRAWING NO

H2



NOTES	
1	To achieve good chemical mixing, return manifold flow to multiple points per tower basin
2	Refer to detailed installation diagram for full installation instructions for DP-CAPH-RXB, DP-CAPH-RXB-CAB, DIGI-A(B)2-RX2A-B and DIGI-A(B)2-RX2A-B-CABG with Condenser Pump Take-off

Convergent Water Controls

Ver	Date	Notes	By	Check
1.1	16/02/12	Upgraded Manifold	LF	LN
1.0	21/05/08	ORIGINAL	LF	LN

Filename: S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPH-RXB

Drawn By: LF — Date: 21/05/08

Checked By: LN — Date: 21/05/08

Scale: N/A

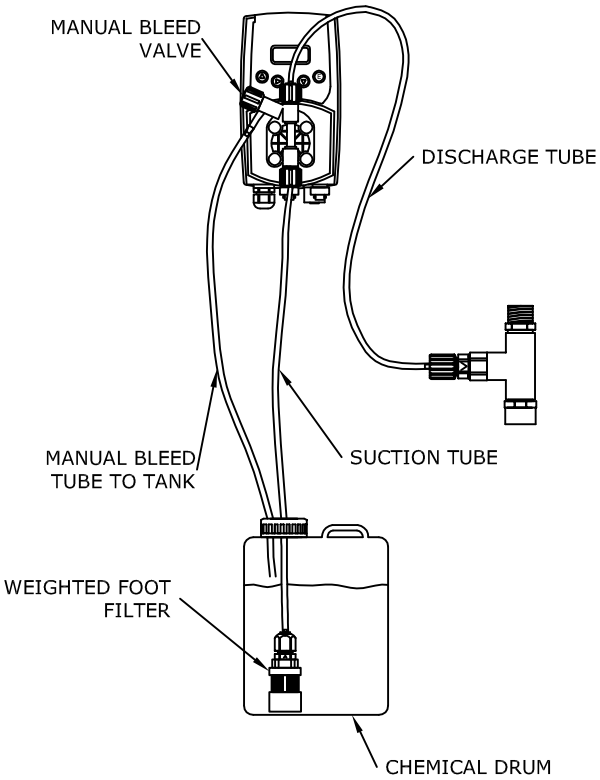
DIMENSIONS ARE IN MM DO NOT SCALE

Title: GENERIC DIAGRAM OF CONDUCTIVITY AND ORP (BROMINATOR) DOSING SYSTEM PLUMBED TO COOLING TOWER FROM CONDENSER PUMP DISCHARGE

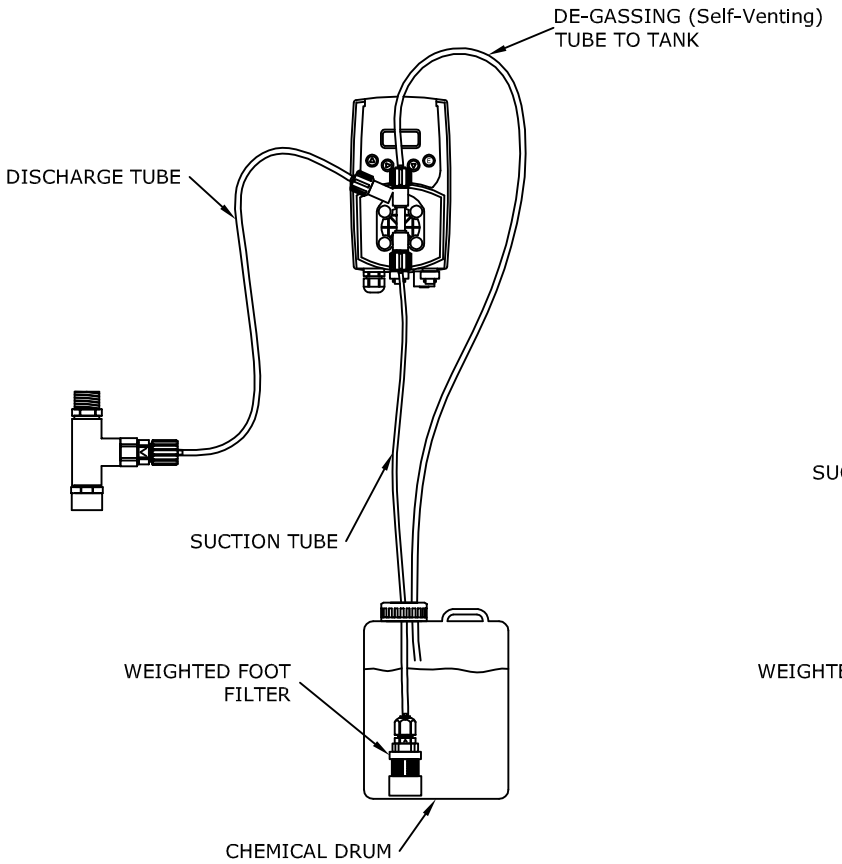
Project / Part Number: DP-CAPH-RXB — Ver: 1.1

Client: CONVERGENT WATER CONTROLS — Drawing No: DRAWING NO

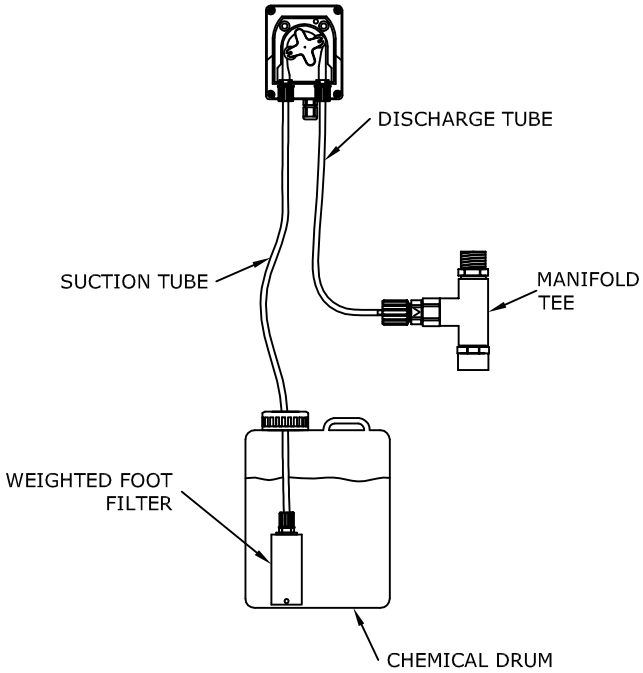
EMEC V SERIES PUMP



EMEC VA SERIES PUMP



SEKO PERISTALTIC PUMP



Notes	
1	All tubing supplied with pumps has 4mm inside diameter, 6mm outside diameter. Suction tubing is clear PVC, Discharge tubing is black PE
2	It is recommended that pumps are mounted less than 2m from base of chemical drum

Convergent Water Controls

Ver	Date	Notes	By	Check
1.0	17/02/12	ORIGINAL	LF	LN

Filename: S:\Data Files\Service & Installation\Installation Diagrams\EMEC & SEKO Dosing Pump Installation

Drawn By: LF — Date: 17/02/12

Checked By: LN — Date: 17/02/12

Scale: N/A

DIMENSIONS ARE IN MM
DO NOT SCALE

Title: Pump Installation Diagram

Project / Part Number: EMEC V SERIES & SEKO PUMPS — Ver: 1.0

Client: CONVERGENT WATER CONTROLS — Drawing No: DRAWING NO