Installation Instructions for Cooling Tower Conductivity Bleed & Inhibitor Dosing with:
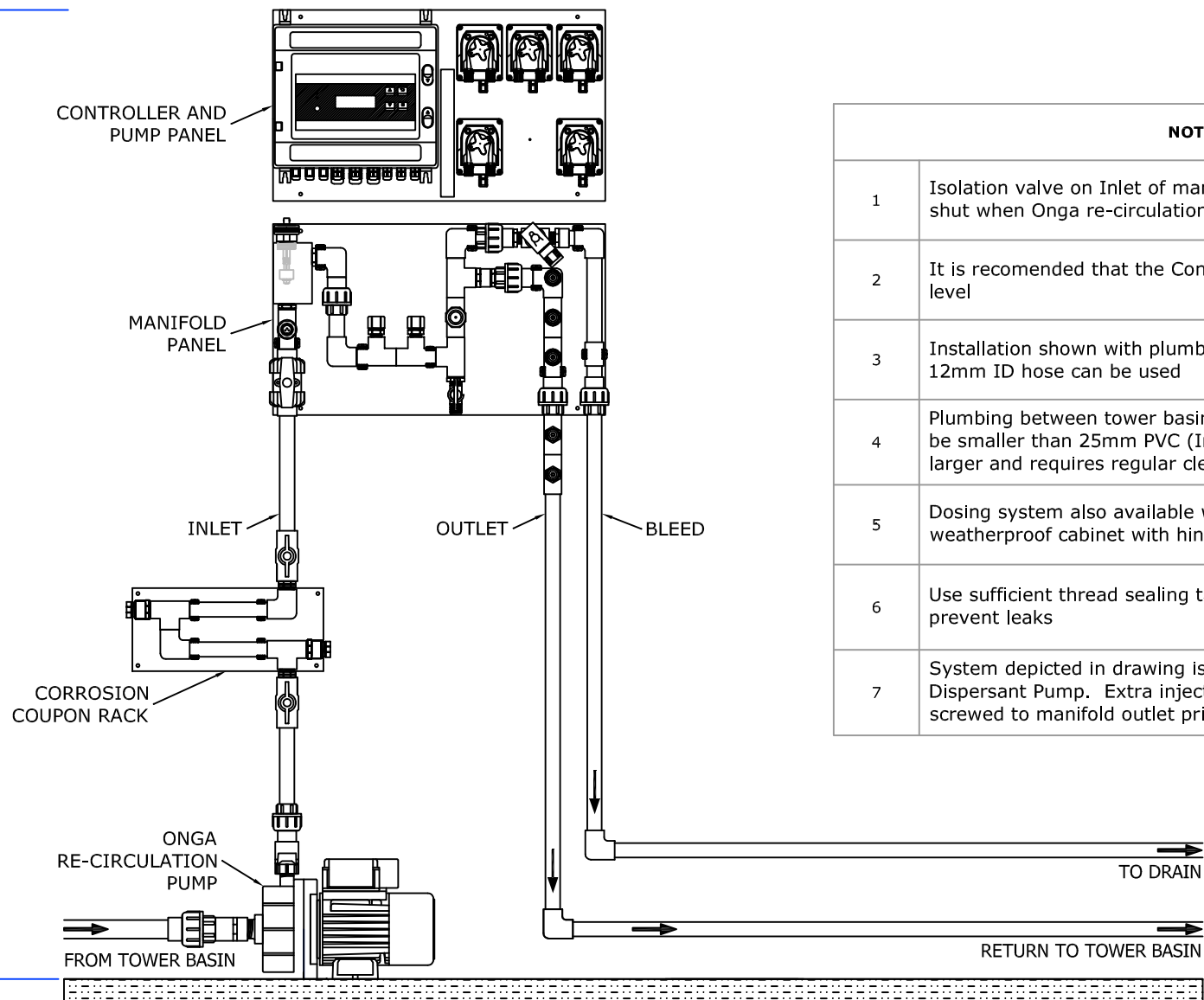
- Liquid Chlorine Dosing via ORP and/or Timed Biocide with pH Control

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							●

C1

1750mm Recommended mounting height from ground

CONTROLLER AND PUMP PANEL

MANIFOLD PANEL

INLET   OUTLET   BLEED

CORROSION COUPON RACK

ONGA RE-CIRCULATION PUMP

FROM TOWER BASIN

TO DRAIN

RETURN TO TOWER BASIN

	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 in 20mm PVC pipe. Alternatively 12mm ID hose can be used
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	Use sufficient thread sealing tape on all threaded connections to prevent leaks
7	System depicted in drawing is DP-CAPHP-RXP with optional Dispersant Pump. Extra injection points supplied loose must be screwed to manifold outlet prior to mounting on wall

Convergent Water Controls

CWC

Ver	Date	Notes	By	Check
1.1	16/02/12	Upgraded Manifold	LF	LN
1.0	22/05/08	ORIGINAL	LF	LN

Filename
S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPHP-RXP

Drawn By: LF   Date: 22/05/08
Checked By: LN   Date: 22/05/08
Scale: N/A

DIMENSIONS ARE IN MM
DO NOT SCALE

Title: INSTALLATION DIAGRAM FOR DP-CAPHP-RXP, DP-CAPHP-RXP-CAB, DIGI-A(B)2-RX2A-P, DIGI-A(B)2-RX2A-P-CABG, DIGI-A(B)2-PH2A-P, DIGI-A(B)2-PH2A-P-CABG WITH OPTIONAL DISPERSANT PUMP, ONGA RE-CIRCULATION PUMP AND COUPON RACK
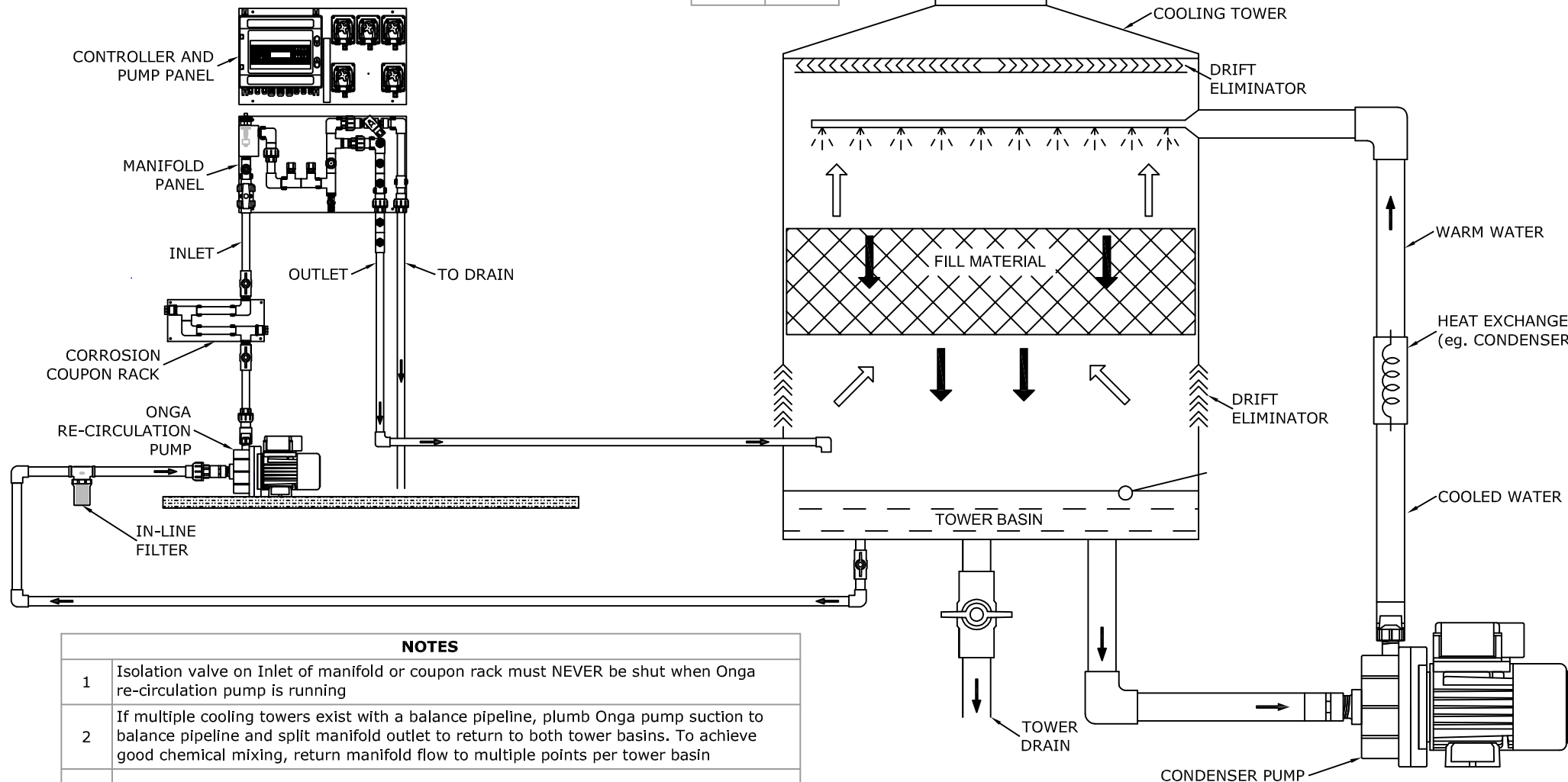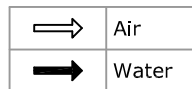
Project / Part Number: DP-CAPHP-RXP

Client: CONVERGENT WATER CONTROLS

Ver: 1.1

Drawing No: DRAWING NO

C2

CONTROLLER AND PUMP PANEL

MANIFOLD PANEL

INLET

OUTLET — TO DRAIN

CORROSION COUPON RACK

ONGA RE-CIRCULATION PUMP

IN-LINE FILTER

COOLING TOWER

DRIFT ELIMINATOR

FILL MATERIAL

DRIFT ELIMINATOR

TOWER BASIN

TOWER DRAIN

WARM WATER

HEAT EXCHANGER (eg. CONDENSER)

COOLED WATER

CONDENSER PUMP

| | Air |
| → | Water |

	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 outlet to return to both tower basins. To achieve good chemical mixing, return manifold flow to multiple points per tower basin
3	Refer to detailed installation diagram for full installation instructions for DP-CAPHP-RXP, DP-CAPHP-RXP-CAB, DIGI-A(B)2-RX2A-P, DIGI-A(B)2-RX2A-P-CABG, DIGI-A(B)2-PH2A-P, DIGI-A(B)2-PH2A-P-CABG with Onga re-circulation pump

Convergent Water Controls

CWC

Ver	Date	Notes	By	Check
1.1	16/02/12	Upgraded Manifold	LF	LN
1.0	22/05/08	ORIGINAL	LF	LN

Filename
S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPHP-RXP

Drawn By	Date
LF	22/05/08

Checked By	Date
LN	22/05/08

Scale: N/A

DIMENSIONS ARE IN MM
DO NOT SCALE

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

Project / Part Number
DP-CAPHP-RXP

Client
CONVERGENT WATER CONTROLS

Ver: 1.1

Drawing No
DRAWING NO

D1

CONTROLLER AND
PUMP PANEL

MANIFOLD
PANEL

1750mm Recommended mounting height from ground

INLET   OUTLET   BLEED

CORROSION
COUPON RACK

TO DRAIN

RETURN TO TOWER BASIN

FROM CONDENSER PUMP DISCHARGE

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
3	Dosing system also available with controller and pumps in weatherproof cabinet with hinged door
4	Use sufficient thread sealing tape on all threaded connections to prevent leaks
5	System depicted in drawing is DP-CAPHP-RXP with optional Dispersant Pump. Extra injection points supplied loose must be screwed to manifold outlet prior to mounting on wall

Convergent Water Controls

CWC

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-CAPHP-RXP

Drawn By	Date
LF	21/05/08

Checked By	Date
LN	21/05/08

Scale
N/A

DIMENSIONS ARE IN MM
DO NOT SCALE

Title INSTALLATION DIAGRAM FOR DP-CAPHP-RXP, DP-CAPHP-RXP-CAB, DIGI-A(B)2-RX2A-P, DIGI-A(B)2-RX2A-P-CABG, DIGI-A(B)2-PH2A-P, DIGI-A(B)2-PH2A-P-CABG WITH OPTIONAL DISPERSANT PUMP AND COUPON RACK (CONDENSER PUMP TAKE-OFF)
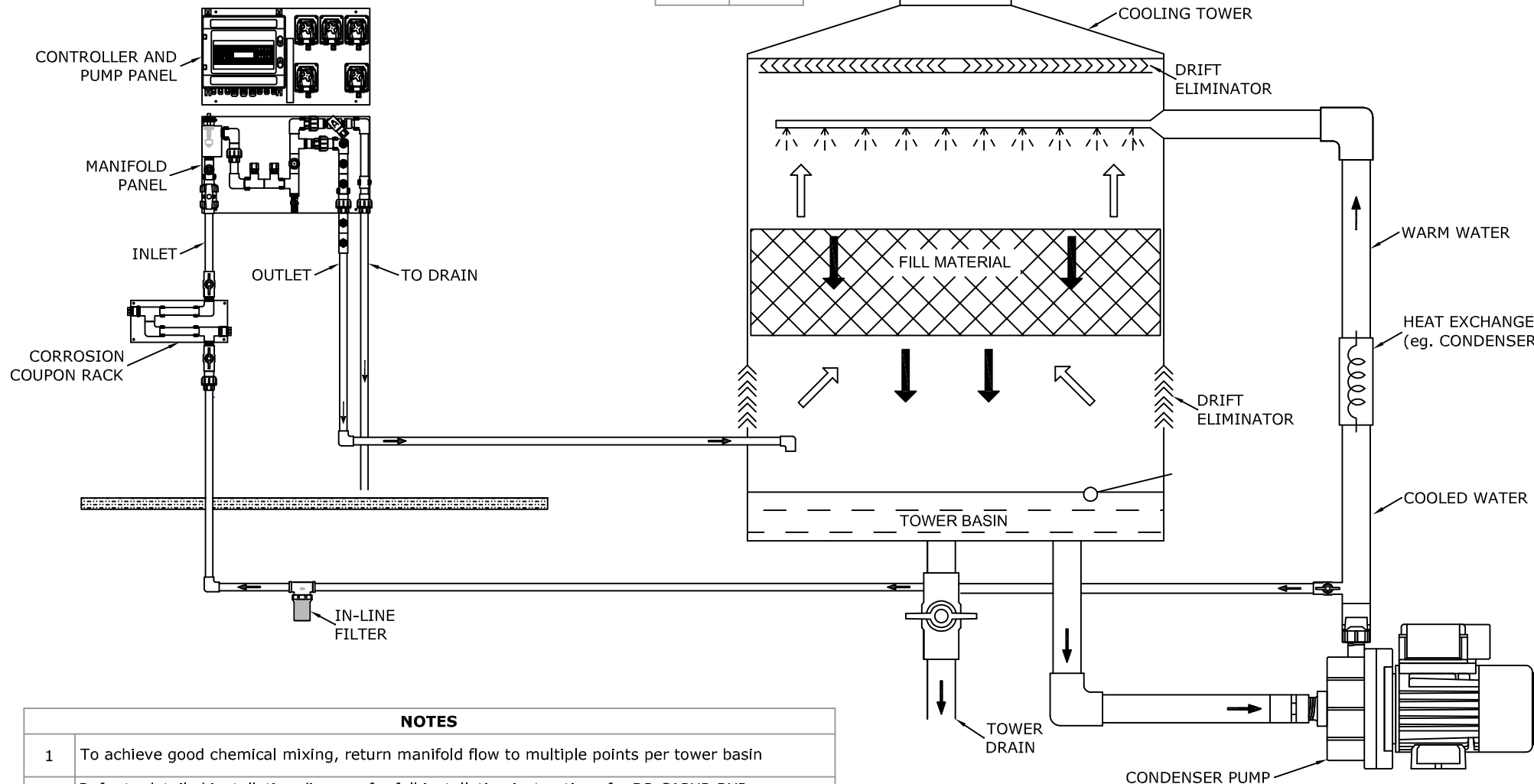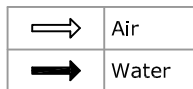
Project / Part Number
DP-CAPHP-RXP

Client
CONVERGENT WATER CONTROLS

Drawing No
DRAWING NO

Ver
1.1

D2

COOLING TOWER

DRIFT ELIMINATOR

CONTROLLER AND PUMP PANEL

MANIFOLD PANEL

INLET

WARM WATER

OUTLET

TO DRAIN

FILL MATERIAL

HEAT EXCHANGER (eg. CONDENSER)

CORROSION COUPON RACK

DRIFT ELIMINATOR

COOLED WATER

TOWER BASIN

IN-LINE FILTER

TOWER DRAIN

CONDENSER PUMP

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-CAPHP-RXP, DP-CAPHP-RXP-CAB, DIGI-A(B)2-RX2A-P, DIGI-A(B)2-RX2A-P-CABG, DIGI-A(B)2-PH2A-P and DIGI-A(B)2-PH2A-P-CABG with Condenser Pump Take-off

Ver	Date	Notes	By	Check
1.0	21/05/08	ORIGINAL	LF	LN

Filename
S:\Data Files\Service & Installation\Installation Diagrams\DP-CAPHP-RXP

Drawn By	Date
LF	21/05/08

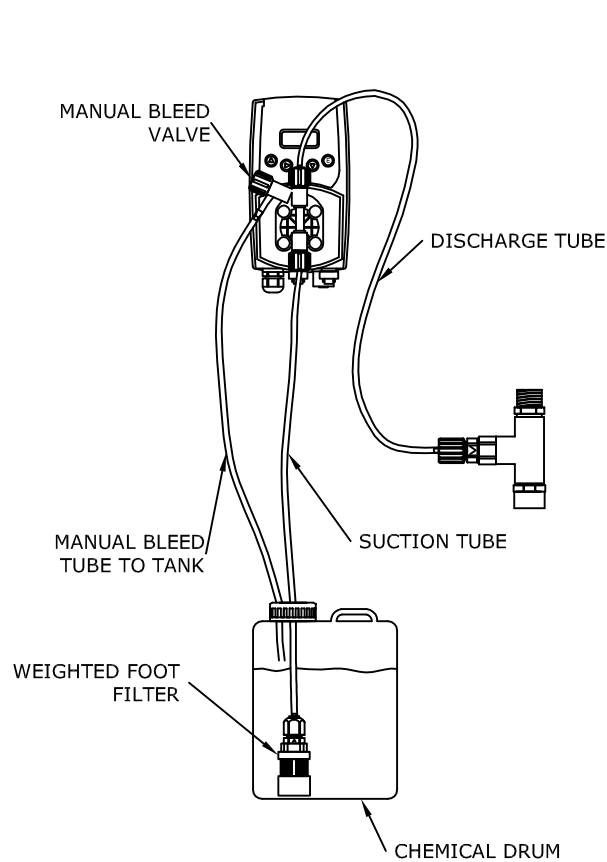| Checked By	Date
LN	21/05/08

Scale N/A

DIMENSIONS ARE IN MM
DO NOT SCALE

Title
GENERIC DIAGRAM OF CONDUCTIVITY AND LIQUID CHLORINE (BROMINE) ORP DOSING SYSTEM PLUMBED TO COOLING TOWER FROM CONDENSER PUMP DISCHARGE
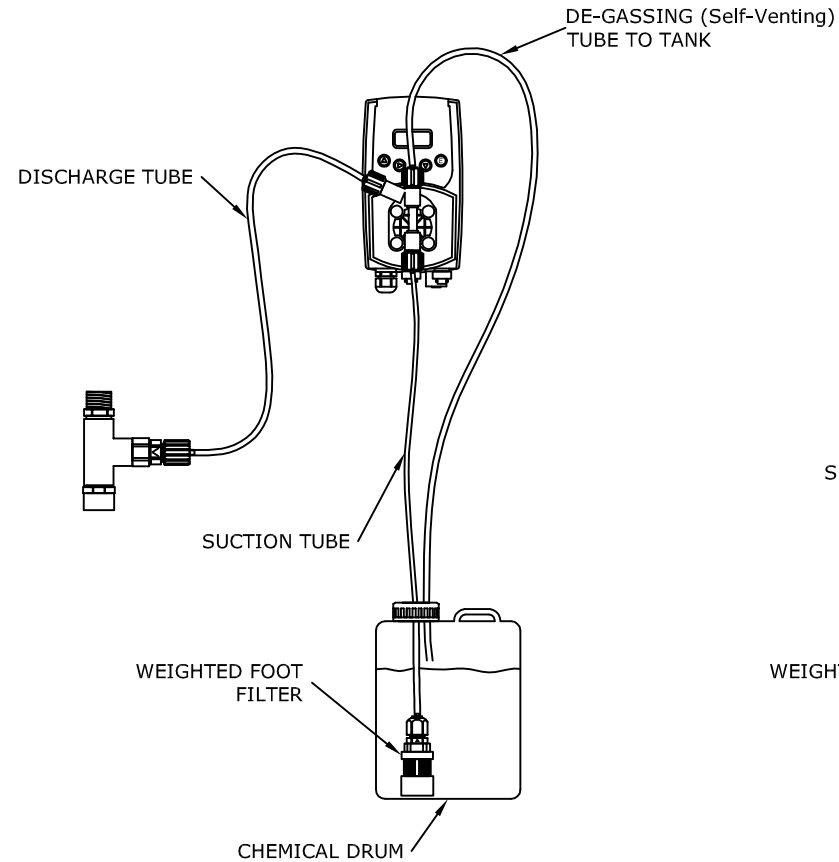
Project / Part Number
DP-CAPHP-RXP

Client
CONVERGENT WATER CONTROLS
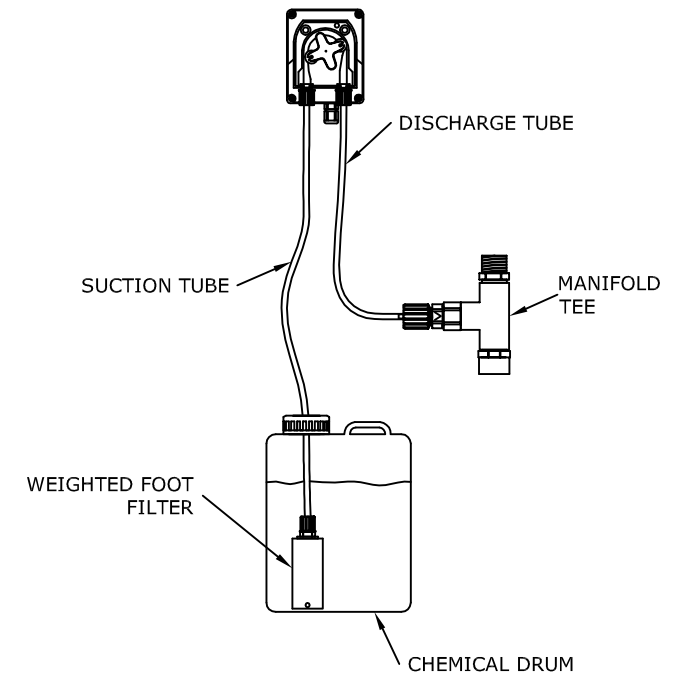
Ver
1.0

Drawing No
DRAWING NO

EMEC V SERIES PUMP

- MANUAL BLEED VALVE
- DISCHARGE TUBE
- MANUAL BLEED TUBE TO TANK
- SUCTION TUBE
- WEIGHTED FOOT FILTER
- CHEMICAL DRUM

EMEC VA SERIES PUMP

- DE-GASSING (Self-Venting) TUBE TO TANK
- DISCHARGE TUBE
- SUCTION TUBE
- WEIGHTED FOOT FILTER
- CHEMICAL DRUM

SEKO PERISTALTIC PUMP

- DISCHARGE TUBE
- SUCTION TUBE
- MANIFOLD TEE
- WEIGHTED FOOT FILTER
- CHEMICAL DRUM

	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