



ELECTRACONTROL

Pharco B
BMS 2020

Building Management System



System Description

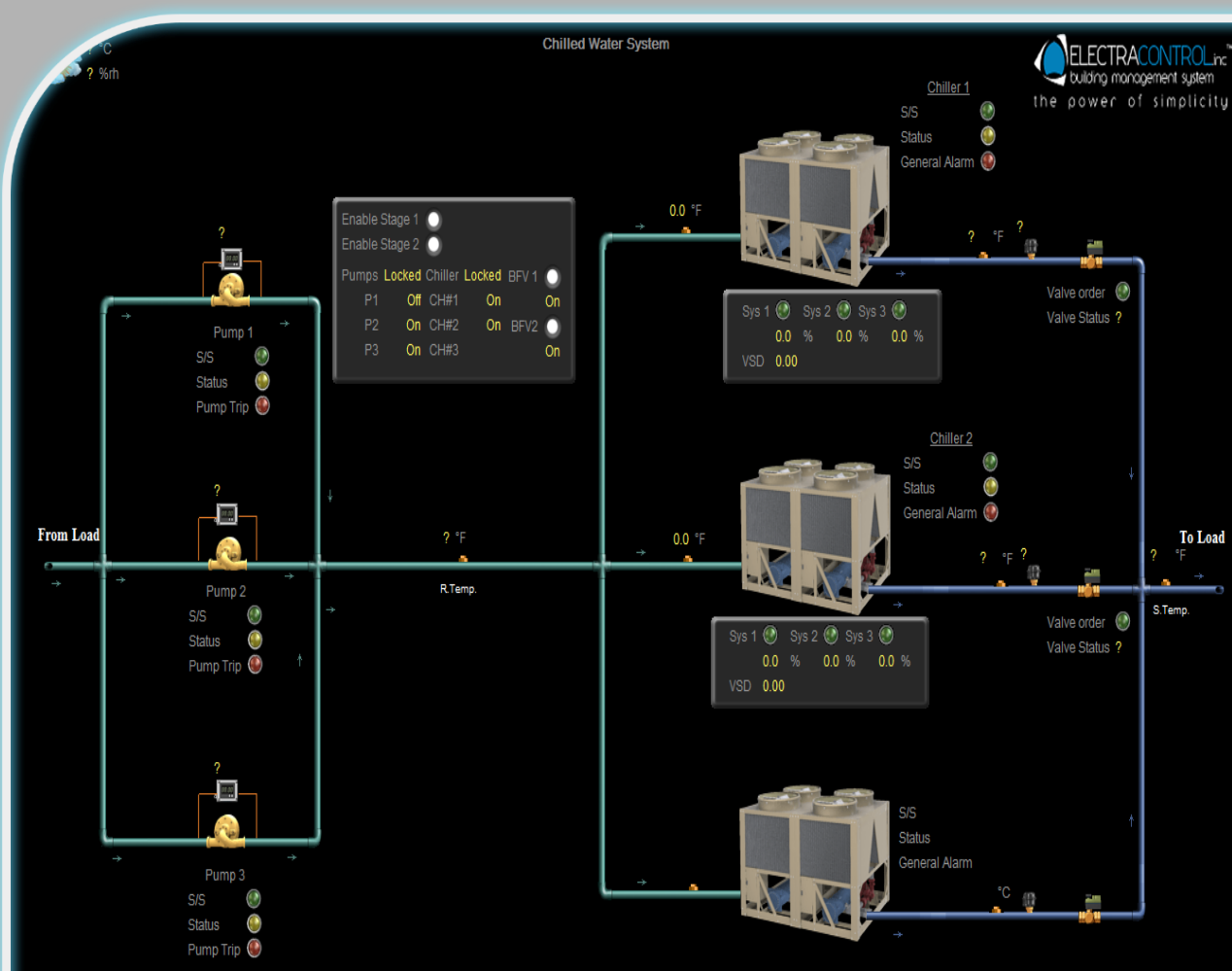
Operating under the umbrella of Pharco Corporation, Pharco B International (PBI) is a private Egyptian shareholding pharmaceutical company based in Alexandria, Egypt. Founded in 2008, PBI was established as a dedicated unit for the production of Cephalosporin and its derivatives. Our products are manufactured for both local and export markets.

Our Building Management System by Automated Logic is designed and executed to offer a complete building management system solution for controlling, monitoring and reporting all MEP systems.

Project Phases

- Phase 1 in 2008 – WFI factory.
- Phase 2 in 2012 – Ampoule Factory
- Phase 3 in 2014 – Ceif Factory

ELECTRACONTROL



System Components

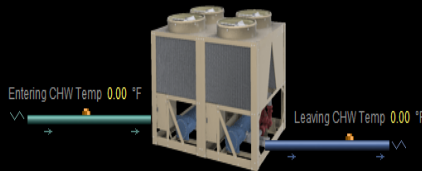
HVAC Systems

- Chilled Water System (7 air cooled Chillers + 7 CHW pumps)
- Air Handling Units (Qty:50)
- Exhaust / Fresh / Pressurization air fans
- Monitoring production zones (Temperature, Humidity & Pressure)
- Monitoring Particle counter

ELECTRACONTROL

Local Setpoint 0.00 °F
 Remote Setpoint 0.00 °F
 Setpoint Override 40.00 °F

Output Frequency 0.00 HZ
 Internal Ambient Temp 0.00 °F
 VSD DC Bus Voltage 0.00 V



Operation Mode **Local** Sys 1 **Off** 0.00 %
 Chiller S/S **Stop** Sys 2 **Off** 0.00 %
 Status **Off** Sys 3 **Off** 0.00 %
 General Alarm **Normal**

SYS 1 Data

Oil Pressure 0.00 PSIG
 Suction Pressure 0.00 PSIG
 Discharge Pressure 0.00 PSIG

Oil Temperature 0.00 °F
 Suction Temperature 0.00 °F
 Discharge Temperature 0.00 °F

Suction Superheat 0.00
 Discharge Superheat 0.00 SAT

Level 0.00 %
 Feed Valve % Open 0.00 %
 Drain Valve % Open 0.00 %

Compressor Status **Off**
 Eco Valve Status **Off**
 Condenser Fan Stages Running 0.00
 Total Number of Starts 0.00
 Total Run Hours 0.00 hrs

Lockout **Off**
 Alarm **Off**

Normal

SYS 2 Data

Oil Pressure 0.00 PSIG
 Suction Pressure 0.00 PSIG
 Discharge Pressure 0.00 PSIG

Oil Temperature 0.00 °F
 Suction Temperature 0.00 °F
 Discharge Temperature 0.00 °F

Suction Superheat 0.00
 Discharge Superheat 0.00 SAT

Level 0.00 %
 Feed Valve % Open 0.00 %
 Drain Valve % Open 0.00 %

Compressor Status **Off**
 Eco Valve Status **Off**
 Condenser Fan Stages Running 0.00
 Total Number of Starts 0.00
 Total Run Hours 0.00 hrs

Lockout **Off**
 Alarm **Off**

Normal

SYS 3 Data

Oil Pressure 0.00 PSIG
 Suction Pressure 0.00 PSIG
 Discharge Pressure 0.00 PSIG

Oil Temperature 0.00 °F
 Suction Temperature 0.00 °F
 Discharge Temperature 0.00 °F

Suction Superheat 0.00
 Discharge Superheat 0.00 SAT

Level 0.00 %
 Feed Valve % Open 0.00 %
 Drain Valve % Open 0.00 %

Compressor Status **Off**
 Eco Valve Status **Off**
 Condenser Fan Stages Running 0.00
 Total Number of Starts 0.00
 Total Run Hours 0.00 hrs

Lockout **Off**
 Alarm **Off**

Normal

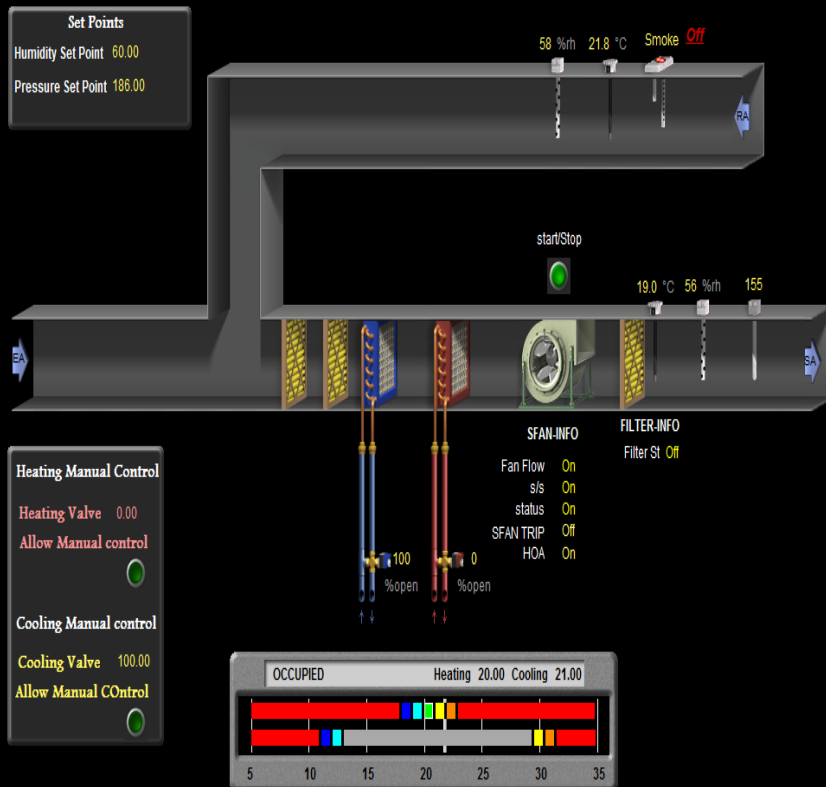
Mechanical Systems


- Air Compressors
- Nitrogen Generators
- Oxygen Generators

ELECTRA CONTROL

AHU-01-HC

ELECTRA CONTROL INC.
Building Automation System






AHU AMP-1

AHU Schedule

Unoccupied until 12:00 AM

off auto



Humidity setpoint adjust

40 %rh

R Fan SIS	On	●
R Fan Status	On	●
Auto Position	Auto	●
VFD General Alarm	Normal	●
VSD Speed BMS Order	45	
VSD Speed Feedback	45.3	Hz
VSD Override	<input type="checkbox"/>	
VSD Override Value	45	Hz

From Driver TO Pre Cooling Unit

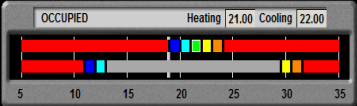
Flow Flow Dirty

No Smoke 41.2%rh 19.0°C 423ppm

0%open 100%open

50%open

Occupied Heating 21.00 Cooling 22.00



cool source 40

heat source 65

Cooling Override Heating Override

S Fan SIS	On	●
S Fan Status	On	●
Auto Position	Auto	●
VFD General Alarm	Normal	●
VSD Speed BMS Order	48	
VSD Speed Feedback	49.3	Hz
VSD Override	<input type="checkbox"/>	
VSD Override Value	48	Hz


Buzz Enable Reset Buzzer On

Filling_A Horn ● ● ●

Filling_B Horn ● ● ●

Flow Flow 390.0Pa On 17.6°C 370.0Pa No Smoke


Mechanical System



AHU Seph 4

AHU Schedule

Occupied until 12:00 AM



Humidity setpoint adjust

50 %rh

51.4 %rh 25.1 °C

No Smoke

%Open1 100 Feedback1 100 Override

%Open2 60 Feedback2 63 Override

Clean Flow No Flow 10.0 pa 0 CMH

%Open 20 Feedback 21 Override

%open 0 Feedback 5

%open 0 Feedback 99

cool source 0

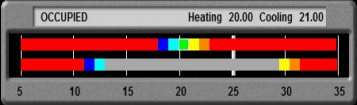
heat source 100

Cooling Override Heating Override

S Fan SIS	Off	●
S Fan Status	Off	●
Auto Position	Manual	●
VFD General Alarm	Off	●
VSD Speed Feedback	0.0	Hz
VSD Override	<input type="checkbox"/>	
VSD Override Value	44	%

Order On Feedback Off Override

Occupied Heating 20.00 Cooling 21.00



Order On Feedback Off Override



First Floor



Seph Area - Zones Temperature & Humidity

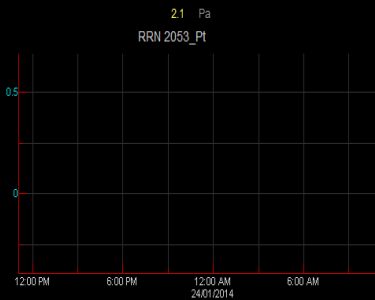
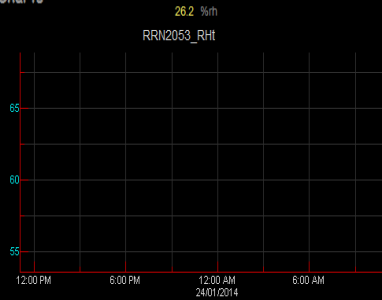
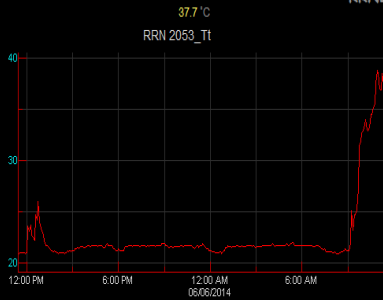
— Unclassified — Class D — Class B — Class C

Visitor A.L.	#	Degowning (PV1/09)	Gowning (PV1/08)	Material In (PV1/07)	Material Out (PV1/04)	Buffer Area (PV1/04)	Janitor (PV1/03)
24.1 °C	23.6 °C	24.6 °C	23.8 °C	23.8 °C	23.8 °C	23.6 °C	24.1 °C
57.9 %rh	68.6 %rh	56.2 %rh	59.7 %rh	58.4 %rh	58.1 %rh	50.2 %rh	53.9 %rh

Washing 2 (PV1/16)	Filling Utility 2 (PV1/17)	AL (PV1/11)	AL (PV1/28)	Packaging 2 (PV1/15)	Corridor
38.0 °C	32.8 °C	23.8 °C	28.1 °C	24.1 °C	25.8 °C
26.6 %rh	51.7 %rh	62.4 %rh	57.2 %rh	52.7 %rh	64.2 %rh
	Filling 2 (PV1/10)	Capping 2 (PV1/13)			
	28.7 °C	26.6 °C			
	32.6 %rh	51.1 %rh			
Prep for Autoclave (PV1/23)	Autoclave 2 (PV1/12)	AL (PV1/11)	Disinfectant (PV1/25)	DMPC (PV1/01)	Men Packaging (PV1/28)
30.7 °C	27.6 °C	25.1 °C	25.1 °C	23.8 °C	23.6 °C
40.5 %rh	47.6 %rh	31.7 %rh	25.1 °C	56.2 %rh	57.4 %rh
25.1 °C (PV1/18)	Autoclave 1 (PV1/04)	AL (PV1/28)	PK (PV1/26)	°C Inlet (PV1/28)	
56.1 %rh (MAL)	26.7 °C	25.1 °C	23.6 °C	24.1 °C	
	26.8 °C (PAL)	25.1 °C	23.6 °C	54.5 °C	
	48.8 %rh (PV1/19)	31.7 %rh	13.4 %rh	53.8 %rh	
	50.0 %rh		24.1 °C	56.0 %rh	
			25.1 °C		
			31.7 %rh		
Format Parts (PV1/26)	Washing 1 (PV1/08)	Filling 1 (PV1/01)	Capping (PV1/06)	Packaging 1 (PV1/07)	
28.1 °C	35.6 °C	29.8 °C	25.1 °C	24.1 °C	
45.5 %rh	25.7 %rh	35.5 %rh	48.0 %rh	55.2 %rh	
		Filling Utility 1 (PV1/09)	AL (PV1/28)		
		30.0 °C	24.1 °C		
		39.1 %rh	48.0 %rh		



Ceph-08 Zone_1 RRN2053 Room Trend Charts



- [Next Zone](#)
- [Filling Utility](#)
- [Previous Zone](#)
- [PAL](#)
- [Back To Ceph-Zones](#)



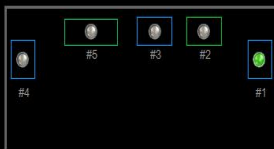
Air Compressors



Schedule / Manual



Rotate every: 24.00 hrs



Air Pressure -2.30 Bar
Low Pressure Alarm
Swap Now



Air Compressor 1 (Ingersoll)

Start / Stop On
Status On
Trip Off

Air Compressor 2 (Ingersoll)

Start / Stop On
Status Off
Trip Off

Air Compressor 3 (Atlas Copco)

Comp SIS On
Comp Status Off
Load/Unload Off
Load Status Off
Trip Off

Air Compressor 4 (Atlas Copco)

Comp SIS On
Comp Status Off
Load/Unload Off
Load Status Off
Trip Off

Air Compressor 5 (Atlas Copco)

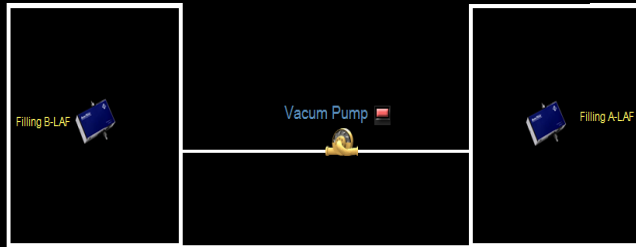
Comp SIS On
Comp Status Off
Load/Unload Off
Load Status Off
Trip Off



Buzzer operation On

Particle Counters Floor Plan

Buzzer operation On



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