



# Breathing Air System

Model: *BA103* Item code: *PM034*



## 1. SPECIFICATIONS

Flow	: 51 Ncu.m/hr
Maximum Operating Pressure	: 16 bar (g) (232 PSI (g))
Rated Air Inlet Temperature	: 38° C (100°F) (ISO:7183-1986 (E)) rated Dewpoint
Rated Operating Pressure	: 7 bar (g) (101.5 PSI (g))
Cycle Time	: 4 Minutes
Operating Voltage	: 100-240 VAC 50/60 Hz 1 Ph
End Connections	: 1/2" BSP (F)
Purge Loss	: 15±1%
Noise Level	: <80 dBA
Pressure Drop	: <0.3 bar (g) ( <4.3 PSI (g))
Breathing Air Quality	: As Per Standard EN -12021:2014.

Components	Concentration
Moisture Content	- 11° C Pressure Dew Point
Carbon dioxide	≤ 500 PPM
Carbon monoxide	≤ 5 PPM
Oil	≤ 0.5 mg/m <sup>3</sup>

## 2. TECHNICAL DATA

### 2.1 ADSORBER DATA

Adsorber Type	Process
Activated Alumina	Adsorbs water vapor to achieve dew point.
Catalyst	Converts Carbon monoxide to Carbon dioxide.
Molecular Sieves 13X	Adsorbs Carbon dioxide.

- Adsorber Shell : Aluminum IS 63400
- Top & Bottom Block : Aluminum IS 63400

### 2.2 PROCESS DATA

Description	Purge Optimizer			
	100%	80%	60%	40%
Cycle Time (min)	4	4	4	4
Drying Time (min)	2	2	2	2
Regeneration Time (Sec)	90	72	54	36
De-pressurization time (sec)	30	48	66	84

## 3. FILTER DATA

### 3.1 STANDARD FILTER

- Internal Built-in After Filter micron rating : 25 microns (ISO:8573-1:2010 (E) Class 5)



### **3.2 PRE - FILTER**

- Pre-Filter Particle Removal Rating : 0.01 micron (ISO:8573-1:2010 (E) Class 1)
- Model : T 100 Y - EA
- Filter Media : Borosilicate Microfiber Glass
- Efficiency : 99.9%

### **3.3 OIL - FILTER**

- Carbon Filter Oil Removal Rating : 0.003 mg/m<sup>3</sup> (ISO:8573-1:2010 (E) Class 1)
- Model : T 100 A - IA
- Oil Filter Media : Activated Carbon
- Efficiency : 99.9%

### **3.4 AFTER - FILTER**

- After – Filter Particle Removal Rating : 0.003 mg/m<sup>3</sup> (ISO:8573-1:2010 (E) Class 1)
- Model : T 100 Y - IA
- Filter Media : Borosilicate Microfiber Glass
- Efficiency : 99.9%

### **ELECTRICAL DATA**

- Controller : Custom Made Micro-Processor Based
- Make : Trident
- Input Voltage : 100-240 VAC 50/60 Hz 1 Ph
- Display : LED Indication for Drying, Re-Pressurization & Drain
- Enclosure : IP55 Protection
- Power Consumption : 20 Watts (Max).

#### ***Dew Point Stretch Cycle:***

It stretches the moisture loading time of the desiccant bed by increasing the drying time. A dew point meter at the outlet with a required dew point setting provides the signal for the stretch cycle. This reduces the purge air in accordance to the air flow and dew-point chosen. The purge occurs for the pre-programmed time during this operation.

#### ***Purge Optimizer:***

It reduces the percentage of regeneration flow based on the front panel setting. It has 4 options 40%, 60%, 80% & 100% purge optimization cycles respectively. The settings correspond to flow or moisture load through the dryer.

Separate LED Indicators for Tower Status, Purge Optimizer & Condensate Drain.

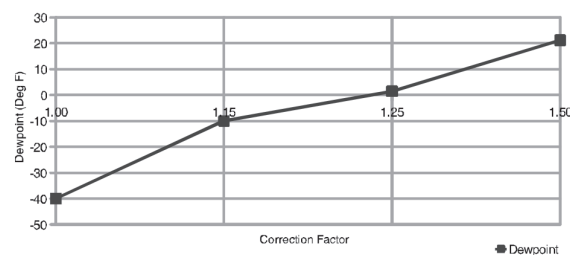
#### **Inlet Pressure Correction Factor**

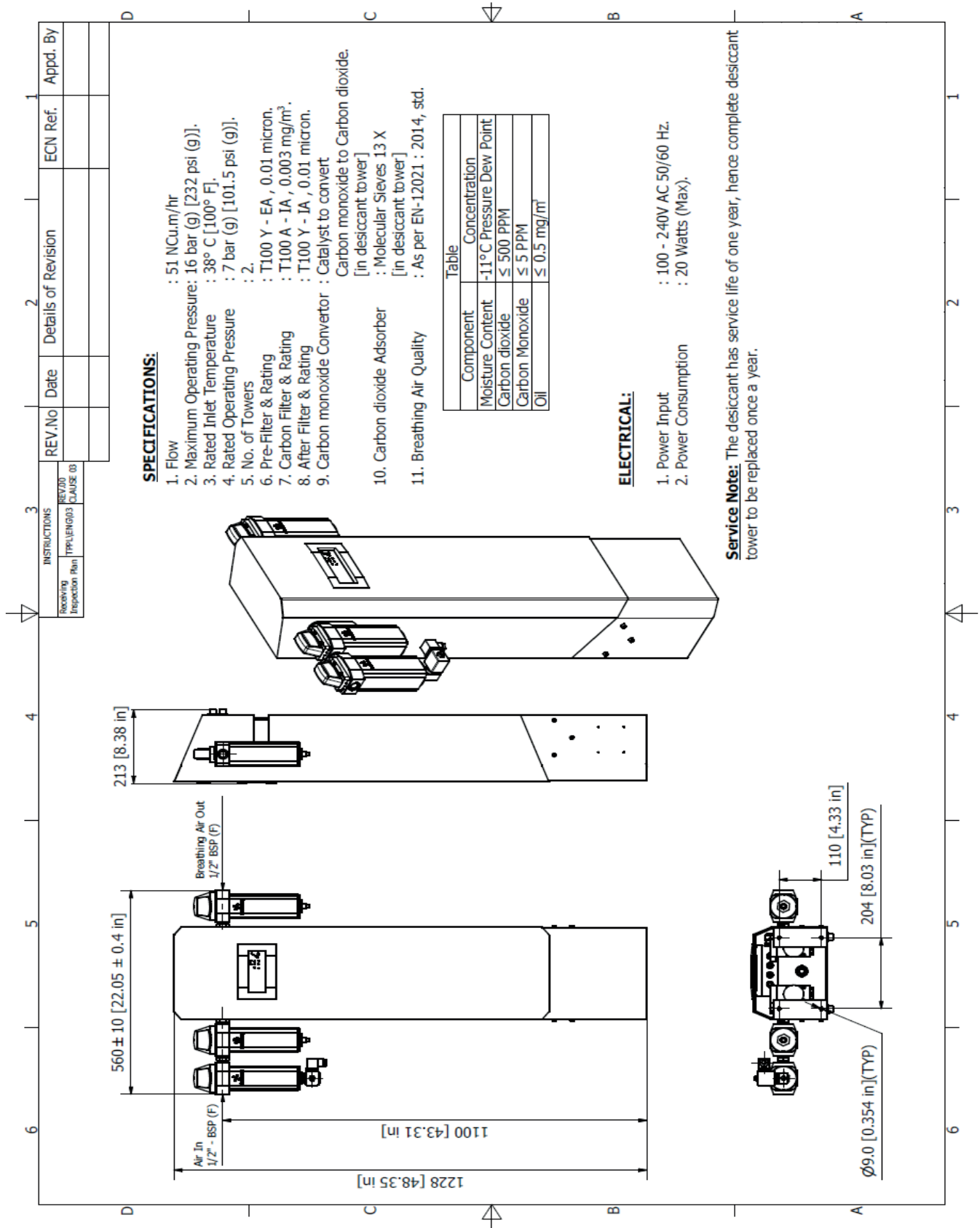
psi (g)	60	80	100	120	140	160	180
bar (g)	4.1	5.5	6.9	8.3	9.7	11	12.4
Factor	0.65	0.83	1	1.18	1.37	1.52	1.7

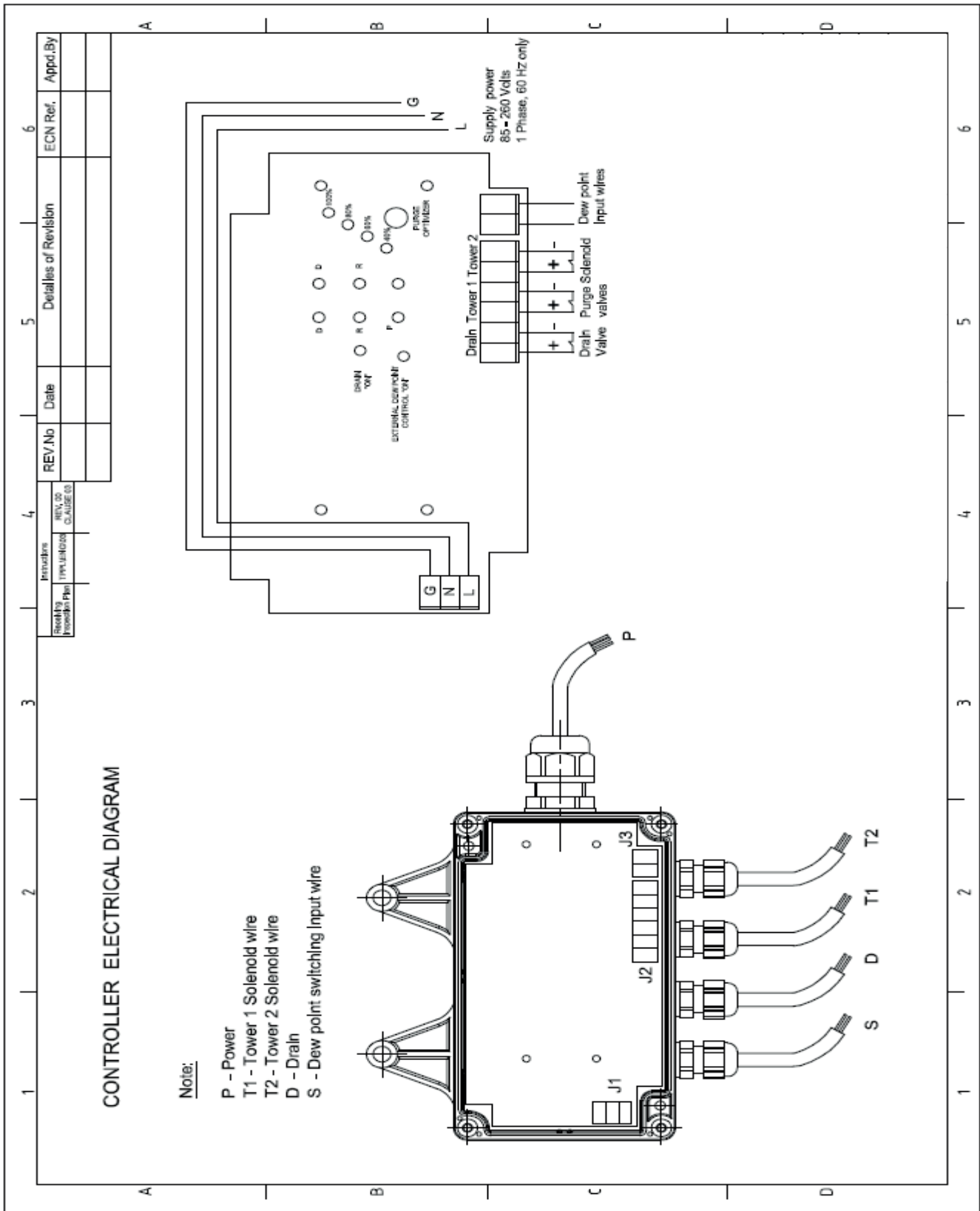
#### **Temperature Correction Factor**

°F	90	95	100	105	110	115	120
°C	32	35	38	41	43	46	49
Factor	1.35	1.16	1	0.85	0.74	0.64	0.56

#### **Dew Point Correction**







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