

F-001
Vent Gas Carbon Adsorption System

FOR INFORMATION

**Ecobat Vent Gas Study
Project No.: 2260.220842**

B	12/20/2022	ISSUED FOR INFORMATION	H. Arenas	A.Kolhatkar	G. Allum-Govia
A	10/20/2022	ISSUED FOR INFORMATION	H. Arenas	A.Kolhatkar	D.L Brown
REV	DATE	DESCRIPTION	ORIGINATOR	CHECKER	APPROVER



Carbon Adsorption System DATA SHEET

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Rev B

1	CLIENT	Ecobat	EQUIPMENT NO.	F-001
2	PROJECT TITLE	Vent Gas Process Study	SERVICE	Vent Gas Carbon Adorption System
3	PROJECT LOCATION	Casa Grande, Arizona	P. O. / INQUIRY NO.	
4	PROJECT NO.	2260.220842	P&ID NO.	PFD

5

6 **Function:**

7 The carbon adsorption filter is to remove Dimethyl carbonate (DMC) , Halogen (HF) and VOC contaminants

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9 **Operation:**

10 The fixed bed filter will operate continuously. One spare filter should be provided

11 to allow for continuous operation while replacing the carbon of a bed.

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13 **Design:**

- 14 • modularize to the extent practical
 - 15 • provide a platform with handrail and stairs for access to the top of the vessels/equipments
 - 16 • provide the instrumentation and controls prewired to a common peripheral location
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Parameter	Units	Value
Eq. Number	-	F-001
Flow:	m ³ /hr	654
	kg/hr	818
Organics: in	ppm(w)	See page 2
out	ppm(w)	See page 2
Vapor properties:		
density	kg/m ³	1.25
viscosity	cP	0.017
solids	ppm(w)	None
Allowable DP	barg	0.1
Operating T	°C	25
Design T	°C	50
Operating P	barg	0.1
Design P	barg	1
Vessel Size:		
Diameter	cm	*
St Side	cm	*
Overall L x W x H	feet	*

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- 38 **Notes:**
- 39 • Supplier to recommend and supply the specific carbon to be used
 - 40 • Supplier to provide general size of package (L' x W' x H') within one week of RFQ receipt.
 - 41 • Size beds for a minimum of 45 days saturation holding capacity. Sparring requirements
 - 42 should be indicated.
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Filter System Feed (Inlet)

Description	Units	To Filter System	
Pressure	Bar g	0.1	
	psig	1.45	
Mass Flows	kg/hr	817.7	PPM
DIMET-01	kg/hr	0.0	0
ETHYL-01	kg/hr	0.0	0
DIETH-01	kg/hr	0.0	0
WATER	kg/hr	10.8	13228
ACETA-01	kg/hr	0.8	933
HYDRO-01	kg/hr	2.60E-08	3.00E-05
NITROGEN	kg/hr	702.70	
AIR	kg/hr	103.4	

Outlet requirements

VOC < 0.5 Kg/hr
HF < 15 grms/hr

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