

2. Basis of Design

2.1 Design Conditions

The Gas Dehydration Unit shall be capable of processing the following gas stream to 4 Lbs./MMSCF gas:

	<u>Design</u>
Gas Flow Rate (MMSCFD)	20 MMSCFD
Pressure (psig)	1000 psig
Temperature (°F)	60-100°F
Expected Gas-Water Content (#/MMSCFD)	Saturated at 100°F
Specific Gravity	N/A (0.65).
Particulate Solids	Nil
Design Ambient (°F)	-40°F to 150°F
Design Pressure (psig)	1325 at -20/150°F
Corrosion Allowance	As Noted
Regeneration Heat Load (BTU/Hr.)	500,000 Nominal
H ₂ S Content	Nil

* High H₂S contents may result in excessive emissions from still, contact Propak for individual cases.

2.2 Process Description

Number of Contactor Trays:	Eight (8) Bubble Cap Trays
Desiccant Used:	99.93% TEG Glycol
Solution Loading (TEG/Lb. H ₂ O):	2.80 Gal.
Circulation Rate:	210 USGPH
Regeneration Temperature:	400°F
Stripping Gas Consumption:	3 SCF/Gal. (10.5 SCFM)
Fuel Gas Consumption:	13 SCFM
Total Gas Consumption:	23.5 SCFM

PROPAK SYSTEMS LTD POSTAL BAG # 2, AIRDRIE, ALBERTA, CANADA T4B 2C3				BUILDING		SHEET 1 OF 1 FILE NO: 11.7.B REQ.#	
CUSTOMER : PROPAK				REV	BY	DATE	REVISION DESCRIPTION
PLANT : STOCK 36" SWEET DEHYDRATAOR PACKAGE				0	WH	02/02/00	FOR PURCHASE
SERVICE :							
JOB NO. : 99423 TAG NO: B-155							
MFR. : MODEL NO:							
1 DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF							
2 RIGID FRAMED				SELF FRAMED		X	INSTALLED BY PROPAK YES
3 LENGTH mm		7315	WIDTH mm		3658	EAVE mm	2896 / 3200
4							
5 WALL		ROOF			STRUCTURAL STEEL		
6 THICKNESS mm		STD	THICKNESS mm		STD	COLUMN	
7 OUTER LINING mm		22 GAUGE	OUTER LINING mm		22 GAUGE	GIRTS	
8 MATERIAL		GALVANIZED	MATERIAL		GALVANIZED	PERLINS	
9 COLOR		N/A	COLOR		N/A	CROSS BRACING	
10 INSULATION m C/W		R12	INSULATION m C/W		R12	SURFACE PREP	
11 VAPOR BARRIER		YES	VAPOR BARRIER		YES	PRIMER	
12 INNER LINING mm		24 GAUGE	INNER LINING mm		24 GAUGE	OVERCOAT	
13 MATERIAL		ALUMINUM	MATERIAL		ALUMINUM		
14 COLOR		N/A	COLOR		N/A	CRANE	
15 PERFORATED		FLUTED	PERFORATED		FLUTED	CAPACITY kg	
16 TRANSLUCENT PANEL %		NONE	TRANSLUCENT PANEL %		NONE	HOOK HEIGHT mm	
17 REMOVABLE WALL PANEL		REQUIRED	DOUBLE			MAN / ELECTRIC	
18			ROOF (GABLE/SHED)		SHED	ACCESS LADDER	
19			REMOVABLE ROOF PANEL		REQUIRED		
20 WINDOWS		MAIN DOOR			MAINTENANCE DOOR		
21 QUANTITY		TWO (2)	QUANTITY		TWO (2)	QUANTITY	
22 SIZE mm X mm		1016 X 1016	SIZE mm X mm		914 X 2133	SIZE mm X mm	
23 HORIZONTAL		YES	STEEL		YES	STEEL	
24 SLIDING		YES	INSULATED		YES	ROLL UP	
25 DOUBLE GLAZE		YES	PANIC HARDWARE		YES	MAN / AUTO	
26 SCREEN		YES	CLOSER		YES	WALL MOUNT	
27			CANOPY		ONE	GUIDES	
28			WIREGLAZED WINDOW		YES	INT/EXT. HANDLE	
29			LOCKSET (KEYED ALIKE)		YES		
30 RIDGE		LOUVERS			EXHAUST FAN		
31 VENT THROATS mm			QUANTITY		TWO (2)	SIZE mm Xmm	
32 CHAIN OPERATED			SIZE mm x mm		305 X 305	CLASSIFICATION	
33 BIRD SCREEM			MAN / AUTO		MANUAL	MOTOR kW	
34 AIR CHANGE /HR			BIRD SCREEN		YES	VOLTS/PHASE/CYCLE	
35 LENGTH mm			WIND SPEED km/h			FORCE AIR CHANGE /HR	
36							
37 UNIT HEATER		MISC.			MISC.		
38 DUTY kW			LIGHTING SERV ACCESS			STEPS	
39 CLASSIFICATION			MONORAIL			PLATFORMS	
40 MOTOR kW			EAVES TROUGH			COOLER DORMER	
41 VOLTS/PHASE/CYCLES			DOWN SPOUTS			CANOPY	
42			LADDERS				
43 REMARKS:							
44 1. WEATHER STRIPPING, DOOR THRESHOLD AND CHECK CHAIN REQUIRED							
45 2. REFERENCE PROPAK DRAWING D-ASY-99423-152							
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