




HLL BIOTECH LIMITED									
INTEGRATED VACCINES COMPLEX, CHENGALPATTU									
		Documnt Name:			Data Sheet for Air Compressor				
		Data Sheet No:			NPI/120310/UTL(URS)/U1/D01.01				
		Date / Revision:			31.01.2014/ 02				
OPERATION DATA									
1	Make	XX			11	Site Data			
2	Model No	XX				Max. temp	39.4 deg C		
3	Location	Indoor	<input checked="" type="checkbox"/>			Min. temp	18.3 deg C		
		Outdoor	<input type="checkbox"/>			Max R H	88 %		
4	Capacity (Actual Output)	400 CFM				Min. R H	41 %		
5	Quantity	3 Nos (2 No with VFD and 1 no with constant speed)				Altitude (above MSL)	30 feet		
6	No. of Stages	XX			12				
7	Discharge Pressure	10 bar (g)			13	Air dryer type	Dessicant		
8	Type	Rotary Screw (Non-Lubricated) (Oil Free) (Class O)			14	Pressure drop (across drier)	XX		
9	Operation	Continuous	<input checked="" type="checkbox"/>		15	Air quality standard	ISO 8573-1:2001.Class"O"		
		Intermittant	<input type="checkbox"/>		16	Dryer PDP	(-) 40 Deg C		
10					17				
					18				
19 Note : 1.) Moisture Separator with auto drain, Pr. Relief valve, Minimum pr. Check valve, Inter cooler, After cooler, Control panel shall be in the scope of vendor.									
MANUFACTURER DATA									
20	L P Stage				35	Cooling	Water	<input checked="" type="checkbox"/>	
	Suction Press	XX					Air	<input type="checkbox"/>	
	Discharge Press	XX			36	Cooling water requirement			
21	H P Stage					flow	XX	lph	
	Suction Press	XX				press	XX	bar g	
	Discharge Press	XX				temp in	32/33 deg C		
						temp out	37/38 deg C		
22	Unloading / loading	Automatic	<input checked="" type="checkbox"/>		37	Heat Exchanger data	Inter cooler	After cooler	
		Pneumatic	<input type="checkbox"/>			Surface area AIR	XX	XX	
23	Power	XX	bKW			Surface area WATER	XX	XX	
24	Sound level at 1 Mtr from the	70	db(a)			No: of passes	XX	XX	
25	Overall Dimension (L x W x H)	XX				Tube material / size	XX	XX	
26						Shell materia/ size	XX	XX	
27	Cycle time	XX			38	Drive details - Motor type	(TEFC With Class 'F' Insulation) and EEF 1		
28	Dryer media	XX				Motor make	XX		
29	Dryer media quantity / tower	XX				kW / R P M	XX		
30	Guaranteed dryness					Volts / Hz	415 V±10%, 50 Hz		
	Min %	XX				Encl:	IP 55		
	Max %	XX			39	Starter (Star Delta)	XX		
31	Guaranteed Pressure dew point	(-) 40 deg C			40	Power required for drier			
32	Turn down ratio	XX				KVA	XX		
33	Variable speed drive	Required				Volts	XX		
34									
41	Remarks	1) The compressor shall be supplied as a skid mounted unit with drive and cooling arrangement. 2) Heat exchanger shall be designed as per TEMA. 3) Material test certificate is required for Heat Exchanger shell & tubes. 4) Heat exchanger shall be pressure tested for leakages. 5) Air filter shall be provided at the suction of the air compressor for filtering. 6) Hot compressed air pipe shall be insulated suitably with resin bonded mineral wool at the generation equipment. 7) Vendor should clearly mention the number of starts and stops permissible with the motors. 8) Vendor should provide foundation, electrical wiring & other details. 9) Vendor should submit foundation drawing if required 10) Vendor should submit SAT, commissioning and validation protocols							
	XX	VENDOR TO SPECIFY							
ACCESSORIES / SAFETIES / INTERLOCKS									
42	Air receiver	4000 ltr			54	Disch. Air Temp. High	Warning / cut off		
43	MOC of air receiver	MS Sandblasted,epoxy coated.			55	Control Panel	Required		
44	MOC of air dryer	As per IS : 2062			56	(System ON / OFF)	Required		
45	Safety valve	Required			57	High Discharge/ Suction Pr.	Warning / cut off		
46	Auto moisture drain	Required			58	Blowdown Solenoid valve	Required		
47	Press. Switch	Required			59	Sensor Calibration	Required		
48	Motor overload relay	Required			60	Water flow switch for cooling water	Required		
49	Power on Indicator	Required			61	Press. Gauge	Required		
50	High after cooler air press.	Required			62	Oil pressure gauge	Required		
51	Online dew point meter	Required			63				
52	In built non-return valve	Required			64				
53	Man hole for receiver & dryer	Required			65				
66	Remarks	1) Air receiver and dryer towers shall be fabricated as per ASME Sec VIII.Div 1/IS 2825. 2) Receiver and dryer towers shall be pressure tested for leakages. 3) Calibration & Testing Certificates are required for Safety valve. 4) Material test certificate is required for receiver & dryer towers. 5) Both dishends shall be 100% radiography tested. Vendor to submit radiography test reports. 6) Vendor should mention makes & specifications of all brought out items. 7) Vendor should provide provisional communication port to connect to the central BMS system 8) One Sampling valve should be provided at discharge of dryer and receiver, each. 9) Flow transmitter should be installed at the discharge of Dryer.							
2	31.01.2014	BTGV	SLMU	HBL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	sheet:		
Rev	Date	Prepared by	Checked by	Approved by	AFE	AFO	1 / 2		

HLL BIOTECH LIMITED							
INTEGRATED VACCINES COMPLEX, CHENGALPATTU							
nne pharmaplan®	Document Name:		Data Sheet for Air Compressor			 HBL <small>HLL BIOTECH LIMITED (Subsidiary of HLL Lifecare Limited) (A Government of India Enterprise)</small>	
	Data Sheet No:		NPI/120310/UTL(URS)/U1/D01.01				
	Date / Revision:		31.01.2014/ 02				
67	Remarks : Equipment shall be provided with automatic moisture trap drain. All valves shall be supplied with relevant test certificates. All instruments shall be supplied with relevant calibration certificates valid for at least 6 months from date of Commissioning. 1.2μ filter along with 0.45μ filter cartridge with SS304 housing to be provided with provision for filter integrity testing Filters should be provided as mentioned in URS and P&ID.						
NOTES							
1)	The dryer equipment shall be complete with necessary pipings, isolation valves, control panel sequence timer, control valves, pressure / temperature instruments, safety valves, auto drain valves, safety interlocks, alarm hooters, etc.						
2)	Vendor should guarantee pressure dew point of dry air equal to (-) 40°C or below. Vendor to demonstrate dew point during performance testing.						
3)	Asbestos based gasket material is prohibited.						
4)	Vendor should submit the Design, Installation, Operational documents to the client.						
<u>PRE-DESPATCH / INSPECTION DOCUMENTS REQUIRED</u>							
1)	Operational and Maint. Manual in 3 set						
2)	GA drawings						
3)	P & ID drawing						
4)	As built drawings						
5)	List of fast moving spares						
6)	Material test certificates						
7)	Warranty certificates <input checked="" type="checkbox"/> <input type="checkbox"/>						
8)	Radiography Report for Receiver and Dryer						
NOTE: PLEASE FIND ENCLOSED SCHEMATIC							
AFE -- Approved for Enquiry, AFO -- Approved for ordering							
2	31.01.2014	BTGV	SLMU	HBL			sheet:
Rev	Date	Prepared by	Checked by	Approved by	AFE	AFO	2 / 2