

Equipment Specification Data Sheet

Equipment Name: Air curtain

Document No.: DS-ACT 01

Revision: 02

Project No.: 120310

Project Name: Integrated Vaccines Complex,  
Chengalpattu

Block Code	Block Name	Identification No.	Capacity	Quantity
G12	Central Laundry and Change room	G12-ACT 01	-	1
G1	Animal House	G1-ACT 01	-	1
G1	Animal House	G1-ACT 02	-	1
G1	Animal House	G1-ACT 03	-	1
G1	Animal House	G1-ACT 04	-	1
W1	Warehouse	W1-ACT 01	-	1

NNE Pharmaplan India Limited

Name	Designation	Signature	Date
<b>Prepared by</b>			
Mr. Kiran Kumar M S	Engineer - Process	<i>K. Kiran</i>	
<b>Checked by</b>			
Mr. Yogesha M J	Engineer - Process	<i>yogesha-mj</i>	
<b>Approved by</b>			
Mr. Vikas Katial	GM - Projects (SME) & Head of COC Vaccines	<i>Vikas</i>	

HLL Biotech Limited			
Name	Designation	Signature	Date
<b>Reviewed by</b>			
User department: (Central laundry and change room)	DM (Electrical)		
User department: (Animal House) K. P. S. K. RAO	Deputy manager		
User department: (Warehouse) K. RAOHARISHAN	D.M (PRODUCTION)		
Project / Engineering department	DM (HVAC)		
<b>Approved by</b>			
Head of the department (Central laundry and change room) M. V. SUBRAMANYAM	Head-Vaccines Development		
Head of the department (Animal House) D. K. A. ARUL ANAND	MANAGER		
Head of the department (Warehouse) Dr. R. Kumaran	DVP		
Head of the department Dr. SURESH BABU	DM		
<b>Authorized by</b>			
Project Authority	CEO		

x

**Equipment Specification Data Sheet****HLL Biotech Limited, Chennai**

nne pharmaplan®		INTEGRATED VACCINES COMPLEX, CHENGALPATTU		 <small>HLL BIOTECH LIMITED Company of HLL Lifecare Limited (A Government of India Enterprise)</small>
		Equipment Name	Air curtain	
		Document No.	DS-ACT-01	
		Revision No.	02	
<b>1</b>	<b>Process requirements</b>			
1.1	It is used to control the entry of dust/ airborne particles, insects in to the room.			
<b>2</b>	<b>Equipment ID</b>			
2.1	Refer Table no.1			
<b>3</b>	<b>Technical Specification</b>			
3.1	Model	GMP model		
3.2	Execution	Horizontally mounted		
3.3	Length	Actual door size plus 150 mm extended on both sides of Door According to Door height (Door Size (W x H): 1.5 m x 2.1 m)		
3.4	Air Velocity (m/s)	16-24 m/s or Vendor to specify		
3.5	Location	Exterior of the room		
3.6	Filtration level	10 micron pre-filter		
3.7	Motor	Single Phase		
3.8	Blower Size	Vendor to specify		
3.9	IP rating	IP54		
3.10	Quantity	As per Table no. 1		
3.11	Shipping Weight	Vendor to specify		
3.12	Power Consumption,KW	Vendor to specify		
3.13	Dimension (H x W x L),mm	Vendor to specify(External Dimension)		
<b>4</b>	<b>Material of Construction</b>			
4.1	Main Body	G.I powder coated		
4.2	Fasteners	G.I powder coated		
4.3	Blowers	With aluminium powder coated casing and aluminium blower		

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CHENGALPATTU**

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HLL BIOTECH LIMITED  
(A Subsidiary of HLL (Group) Limited)  
(A Government of India Company)**5 Specific Equipment requirement**

- 5.1 It shall have high air velocity with evenly distributed laminar flow to prevent influx of dust/ airborne particles into the room.
- 5.2 Air velocity of air curtains shall be customized for door height as indicated above.
- 5.3 Micro switch shall be mounted such that the air curtain turns on as door begins to open.
- 5.4 Air curtain shall be provided with adjustable vanes at the discharge to direct the air flow.
- 5.5 It shall create invisible door that is able to deflect wind gust.
- 5.6 It shall have corrosion proof casing.
- 5.7 It shall have overheat protection and built in thermostat.
- 5.8 Air curtains shall not have any dead zones in the air barrier.
- 5.9 Preferred make for Motor Blower Assembly: Crompton Greaves/ ABB/BBL
- 5.10 Approved make for filter: Camfil Farr / AAF / Freudenberg

**6 Other requirement**

- 6.1 All bolts, nuts on the exterior part of equipment should be with cap head or cap nut.
- 6.2 Air curtain shall statically & dynamically balanced blowers for durability and smooth operation.
- 6.3 All metal and metal contact points of the enclosure shall be provided with neoprene rubber separator to reduce noise.

**7 Regulatory aspects**

- 7.1 Noise level should be below <75 dB.
- 7.2 Heat given out of the equipment should be stated.

**8 Safety requirements****Following facilities must be provided to protect personnel and equipment:**

- 8.1 Appropriate closure of all parts.
- 8.2 Proper earthing is necessary.

**9 Documents****Following documents, but not limited to these, are expected from the vendor as part of the supply package in hard copy as well as editable electronic file**

- 9.1 IOQ documents.
- 9.2 Operation and maintenance manuals shall be provided along with IOQ documents during installation at site.
- 9.3 Warranty letter for 1 year from the date of installation.
- 9.4 Calibration certificate of critical instrument with respect to the traceable national reference standard instrument and their calibration procedure.
- 9.5 List of standard spare parts with ordering information.

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9.6 List of change parts (if applicable) with ordering information

### 10 Timelines

10.1 NA

### 11 Preferred list of Makes

11.1 Preferred make for Motor Blower Assembly: Crompton Greaves/ ABB/ GE/ Siemens/EBM-PAPST/Nicotra  
 Approved make for filter: Camfil Farr / AAF / Freudenberg

NOTE: Accurate size and technical specification need to be mentioned by the vendor

**Table-1: Equipment location**

Equipment ID	Block Name	Room Name	Floor	Room No	Room height in mm
G12-ACT 01	Central Laundry and change room	Entry	Ground floor	G12G002	3000
G1-ACT 01	Animal House	Entry Corridor	Ground floor	G1G001	2700
G1-ACT 02	Animal House	Animal and material entry	Ground floor	G1G007	2700
G1-ACT 03	Animal House	Entry Corridor - Unclean corridor	Ground floor	G1G081	2700
G1-ACT 04	Animal House	Dirty cage store area (Breeding)	Ground floor	G1G089	2700
W1-ACT 01	Warehouse	Receipt	Ground floor	W1G001	3000

**Table-2: Change Log**

Date	Name	Revision	Section	Change/Comment
12-03-2014	Kiran Kumar M S	00	-	New document
11-06-2015	Kiran Kumar M S	01	All	Updated as per comments received from HBL dated 09-06-2015
15-07-2015	Yogesh M J	02	3.9	Updated as per comments received from HBL dated 15-07-2015

**Table-3: Annexure**

Not applicable