

Equipment Specification Data Sheet

Equipment Name: Garment Drying machine

Document No.: DS-DRY 01

Revision: 01

Project No.: 120310

Project Name: Integrated Vaccines Complex, Chengalpattu

Block Code	Block Name	Identification No.	Capacity	Quantity
G12	CENTRAL CHANGE ROOM & LAUNDRY	G12 - DRY 01, 02, 03, 04	30 Kg	4
G1	ANIMAL HOUSE	G1-DRY 01	30 Kg	1

NNE Pharmaplan India Limited

Name	Designation	Signature	Date
<b>Prepared by</b>			
Mr. Manohar M S	Engineer - Process	<i>Mus</i>	16/12/2015
<b>Checked by</b>			
Mr. Yogesha M J	Engineer - Process	<i>yogha-m J</i>	16/12/2015
<b>Approved by</b>			
Mr. Krishna Sattaya Amrutam	Lead Engineer - Fill Finish	<i>Amrutam</i>	16/12/2015

HLL Biotech Limited

Name	Designation	Signature	Date
<b>Reviewed by</b>			
Use department Central change room & Laundry <i>C.H. RAJESH</i>	Assistant manager	<i>Rajesh</i>	18-12-2015
Use department Animal House <i>K. YASWANTHA REDDY</i>	DM - Animal House	<i>Yaswanth Reddy</i>	18-12-2015
Project Management department <i>Pavan Kumar S</i>	DM - Projects.	<i>Pavan</i>	18/12/2015
<b>Approved by</b>			
Head of the department Central change room & Laundry <i>M. V. Subrahmanyam</i>	Head - Vaccines Development	<i>M.V. Subrahmanyam</i>	21/12/2015
Head of the department Animal House <i>R. A. ARUL ANAND</i>	MANAGER - ANIMAL HOUSE	<i>R.A. Arul Anand</i>	21.12.2015
Head of the department (Quality) Animal House <i>A. Suresh Babu</i>	DM - Q.C & QA	<i>A. Suresh Babu</i>	dd. 18/12/15
<b>Authorized by</b>			
Project Director <i>RAMAN . K . R .</i>	C.E.O	<i>Raman</i>	22-12-15

Equipment Specification Data Sheet			
HLL Biotech Limited, Chennai			
nne pharmaplan®	INTEGRATED VACCINES COMPLEX, CHENGALPATTU		 <small>HLL BIOTECH LIMITED            (Formerly HLL Biotech Limited)            A Government of India Company</small>
	Equipment Name	Garment Drying Machine	
	Project #	120310	
	Document #	DS-DRY 01	
<b>1 Process requirements</b>			
1.1	This equipment shall be used to dry the garments.		
<b>2</b>	<b>Equipment ID</b>	<b>Minimum Capacity (Kg)</b>	<b>Quantity (no's)</b>
2.1	G12-DRY-01-02-03-04	30	4
2.2	G1-DRY 01	30	1
<b>3 Technical Specification</b>			
3.1	Model	cGMP (Industrial)	
3.2	Type	Single door, Front loading.	
3.3	Operating temperature	up to 100 Deg.C (settable)	
3.4	Heating type	Steam heating	
3.5	Inlet utility connection	Black steam @ 3.5 barg	
3.6	Airflow m3/hr	Vendor to specify	
3.7	Average drying time	Vendor to specify	
3.8	Door type	Hinged door	
3.9	IP Protection for motor	IP 54	
3.10	Electrical Requirement	To be compatibility to the standard Indian Power supply sockets	
3.11	Chamber dimation (W x D x H) mm	Vendor to specify	
3.12	External dimation (W x D x H) mm	Vendor to specify	
3.13	Number of Compartments	Vendor to specify	
3.14	Drum speed, RPM	Vendor to specify	
3.15	Max. spin speed, RPM	Vendor to specify	
<b>4 Material of Construction</b>			
4.1	All contact parts with garments (Cabinets, inner drum, Jacket, tub, inlet and outlet connections, door frame etc.)	SS 304	

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<b>5</b>	<b>Specific Equipment requirement</b>	
5.1	Machine should be provided with Micro processor based control system.	
5.2	Electronic frequency drive motor to be provided for variable working and spin speed.	
5.4	The cylinder beaters should be designed to ensure a gentle, rapid and uniform treatment of all fabrics.	
5.5	The mechanical parts shall be properly covered & sealed so that only SS parts are exposed inside the clean room.	
5.6	Door should be suitably big for easy loading and unloading of garments.	
5.7	Acceleration and Braking should be gradual and adjusted via VFD/Electronically.	
5.8	Toughened glass view panel to be provided in the door with proper leakproof sealing	
5.9	Door interlock with motor functioning shall be provided.	
5.10	Overload protection/ Indication & alarm shall be provided	
5.11	Water filling / Draining shall be controlled by control system.	
5.13	Machine shall be provided with heat balance control.	
5.14	Foundation for the machine and erection on the same under the scope of the supplier.	
5.15	Electrical components of the machine should be with water protection.	
5.16	Machine should be programmable for specific linen type and specific linen processing.	
5.17	Memory presettings for different drying cycles.	
5.18	LED display to indicate the progress of the cycle.	
5.19	Proper earthing should be provided. Client will provide earthing through the incoming power supply cable. Necessary termination to be provided in the termination point.	
5.20	Drain connection with drain hose (Up to drain point in Vendor scope). Vendor to ensure that condensate flows out gradually, or providing necessary sealings with the floor traps so that condensate doesn't not gush out turbulently during drain.	
5.21	Steam provided should not in contact with the garments used for drying.	
5.22	Steam should be circulated through jacket of the machine for drying of garments.	
5.23	There should be an interlock between steam valve and temperature inside the machine	
5.24	Autovalue on the steam line and integration with machine will under vendor scope	
5.25	Alarm should be provided for over heating of garments, low steam supply, high steam supply, Over drying period	

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5.26	Energy efficiency class B.	
5.27	Utility Consumption (Vendor to Specify): Steam consumption/ cycle:----- Electricity Consumption:-----	
5.28	Moisture content of the garments after drying should be provided by the vendor	
5.29	Vendor to Specify: Drum Size as per capacity shall be considered (Minimum, dry weight of laundry) :----- Drum minimum/ maximum RPM : ----- % of drying :-----	
5.30	All steam contact parts should be able to withstand temperature upto 150 °C	
<b>6</b>	<b>Other requirement</b>	
6.1	All the wiring should be neatly dressed in PVC cable trays with Covers	
6.1	All Electrical parts including the MCB's, Relays, connectors etc must be fixed on DIN Rails/Fixed boards for easy Maintenance	
6.1	All connections inside must be provided using Terminal Blocks/connectors fixed on DIN Rail / fixed board. No Open Joints are allowed	
6.1	All connections to the terminal block/connectors are to be done using 'Cable lugs with Insulation' of appropriate sizes and the same has to be crimped tightly	
6.1	Proper Ferruling and Tagging of every individual cable (Control & Power)	
6.1	All Electrical Components like, VFDs, Relays, Terminal Blocks etc. must be tagged. This should reflect in the Wiring Diagram to be Submitted along with other documents	
6.1	A wiring Diagram incorporating and matching with the cables laid should be provided with the machine	
6.1	The electrical Wiring Diagram with the Operating Manual, should be explicitly provided by vendor.	
6.2	All bolts, nuts on the exterior part of equipment should be with cap head or cap nut.	
6.3	There should be no crevices, so as to avoid dust accumulation	
<b>7</b>	<b>Regulatory guidelines / standards</b>	
7.1	Not Applicable	
<b>8</b>	<b>Safety requirements</b>	
Following facilities must be provided to protect personnel and equipment:		
8.1	Appropriate closure of all parts.	
8.2	On power failure equipment should come in failsafe condition	

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8.3	Appropriate closure of all parts	
8.4	Proper earthing is necessary	
8.5	Doors interlocking alarm (visual/ audio).	
8.6	Noise level should be below 70 decible at a distance of 1m from the equipment	
8.7	System shall be insulated properly	
9	<b>Documents</b>	
	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 document.	
9.2	Operation and maintenance manuals shall be provided along with IOQ documents during installation at site.	
9.3	Calibration certificate of critical instruments with respect to the traceable national reference standard instrument and their calibration procedure.	
9.4	Warranty Letter for minimum 1 year from the date of supply.	
9.5	Vendor should provide list of standard spare parts with ordering information.	
9.6	Vendor should provide list of change parts (if applicable) with ordering information.	
10	<b>Timelines</b>	
10.1	Not Applicable	
11	<b>List of Preferred Makes</b>	
11.1	IFB, Godrej, Ramsons	
	<b>NOTE:</b> Accurate size and technical specification need to be mentioned by the vendor	

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	Equipment Name	Garment Drying Machine		
	Project #	120310		
	Document #	DS-DRY 01		
Table-1: Equipment location				
Equipment ID	Block Name	Room Name	Room No	Room dimension in m <sup>2</sup>
G12 - DRY 01, 02, 03, 04	CENTRAL CHANGE ROOM & LAUNDRY	Garment drying & folding station	G12G013	170
G1-DRY 01	Animal house	Cloth wash	G1G005	3500 x 5550
Table-2: Change Log				
Date	Name	Revision	Section	Change/Comment
13-10-2015	Manohar M S	00	-	New document
16-12-2015	Yogesha M J	01	7.1	Updated as per the discussion had with HBL dated 15-12-2015
Table-3: Annexure				
Not applicable				