

Equipment Specification Data Sheet

Equipment Name: Garment Washing Machine

Document No.: DS-GWM 02

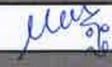
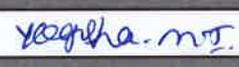
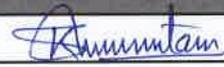
Revision: 01

Project No.: 120310

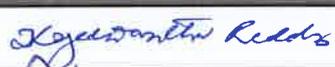
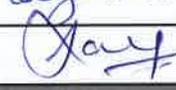
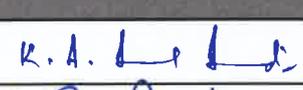
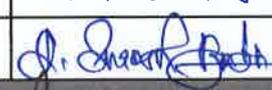
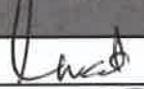
Project Name: Integrated Vaccines Complex, Chengalpattu

Block Code	Block Name	Identification No.	Capacity	Quantity
G1	ANIMAL HOUSE	G1-GWM 01-02	30 Kg	2

NNE Pharmaiparr India Limited

Name	Designation	Signature	Date
Prepared by			
Mr. Manohar M S	Engineer - Process		16/12/2015
Checked by			
Mr. Yogesha M J	Engineer - Process		16/12/2015
Approved by			
Mr. Krishna Sattayya Amrutam	Lead Engineer - Fill Finish		16/12/2015

HLL Biotech Limited

Name	Designation	Signature	Date
Reviewed by			
K. YASWANTHAKRISHNAN	DM - Animal House		18.12.2015
Pavan Kumar. S	DM - Projects.		18/12/2015
Approved by			
Dr. K. A. Arul Anand	MANAGER - ANIMAL HOUSE		21.12.2015
J. SURESH BABU	DM - D.C & QA		22.12.2015
Authorized by			
RAMAN. K.R.	C.E.O		22.12.15

Equipment Specification Data Sheet		
HLL Biotech Limited, Chennai		
nne pharmaplan	INTEGRATED VACCINES COMPLEX, CHENGALPATTU	
	Equipment Name	Garment Washing Machine
	Project #	120310
	Document #	DS-GWM 02
		
<b>1</b>	<b>Process requirements</b>	
1.1	This equipment shall be used to wash and extract the water from the clean room garments.	
<b>2</b>	<b>Equipment ID</b>	<b>Minimum Capacity (Kg)</b>
2.1	G1-GWM-01-02	30
<b>2</b>	<b>Quantity (no's)</b>	
2.1	2	
<b>3</b>	<b>Technical Specification</b>	
3.1	Model	cGMP (Industrial)
3.2	Type	Single door, Front loading, Automatic washer cum dryer
3.3	Drum Speed, G-Factor Spin Speed	Vendor to specify
3.4	Operating temperature	up to 90 Deg.C (settable)
3.5	Heating type	Electrical / Steam
3.6	Inlet water connection	PW (Purified Water)
3.7	Door type	Hinged door
3.8	IP Protection for motor	IP 54
3.9	Electrical Requirement	To be compatibility to the standard Indian Power supply sockets
3.9	Chamber dimation (W x D x H) mm	Vendor to specify
3.9	External dimation (W x D x H) mm	Vendor to specify
3.4	Number of Compartments	Vendor to specify
3.5	Washing speed, RPM	Vendor to specify
3.6	Max. spin speed, RPM	Vendor to specify
<b>4</b>	<b>Material of Construction</b>	
4.1	All contact parts with garments (Cabinets, inner drum, tub, inlet and outlet connections, door frame etc.)	SS 304
<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.	
5.3	One dispenser for additives with pump must be provided. ( Normally 10-15 gm of common detergent per Kg of clothes)	
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.	

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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.	
5.12	Machine shall be provided with inbuilt extractor facility for the clothes also with spinning drum.	
5.13	Machine shall be provided with balance control.	
5.14	Foundation for the machine and erection on the same under the scope of the supplier.	
5.15	Machine should have total water protection.	
5.16	Machine should be programmable for specific linen type and specific linen processing.	
5.17	Memory presettings for different washing 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 water flows out gradually, or providing necessary sealings with the floor traps so that water doesn't not gush out turbulently during drain.	
5.21	Energy efficiency class B.	
5.22	Utility Consumption (Vendor to Specify): Purified Water consumption/ cycle:----- Steam consumption:----- Electricity Consumption:-----	
5.23	Drying cycle should start after the completion of washing cycle defined by the user to the machine	
5.24	Drying of garments will takes place to certain extent, it should be defined by the vendor and shall provided moisture content of the garments	
5.25	Vendor to Specify: Drum Size as per capacity shall be considered (Minimum, dry weight of laundry) :----- Drum minimum/ maximum RPM : ----- % of drying :-----	
<b>6 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.	

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6.3	There should be no crevices, so as to avoid dust accumulation	
7	Regulatory guidelines / standards	
7.1	Not Applicable	
8	Safety requirements	
	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	
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	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 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	Timelines	
10.1	Not Applicable	
11	List of Preferred Makes	
11.1	IFB, Godrej, Ramsons	
	NOTE: Accurate size and technical specification need to be mentioned by the vendor	