



PHARMA DEVILS
QUALITY ASSURANCE DEPARTMENT

FAT FOR FLUID BED DRYER

**FACTORY ACCEPTANCE TEST
FOR
FLUID BED DRYER**



FAT FOR FLUID BED DRYER

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1. OBJECTIVE:

- 1.1 The objective of this protocol is to confirm that the machine Fluid Bed Dryer- 30 manufactured by M/s., at their Works in is in line with the specifications as desired by the customer.

2. SCOPE:

- 2.1 The scope of this protocol is limited to the Factory Acceptance Test of Lab Scale Fluid Bed Dryer
- 2.2 The testing of the support utilities does not come in the scope of this protocol.
- 2.3 Any auxiliary equipment supporting this machine, required along with the machine, for its effective overall performance shall not be tested in this protocol. Any such auxiliary equipment, if present, shall be tested separately.

3. RESPONSIBILITIES:

3.1 MANUFACTURER (M/s.)

- 3.1.1 The manufacturer is responsible for the preparation of the FAT protocol, unless and until, it is specified by the Customer for its indigenous protocol.
- 3.1.2 The manufacturer shall assist the customer in performing the Factory Acceptance Test at the manufacturer's factory, until and unless, it is specified by the customer to conduct the **PROXY-FAT**.

3.2 CUSTOMER (.....).

- 3.2.1 The Customer shall conduct the Factory Acceptance Test at the manufacturer's factory.
- 3.2.2 In case the customer wants the manufacturer to conduct the **PROXY-FAT**, a written communication, as an ANNEXURE, shall be attached along with this protocol.

NOTE: Please Check the below

• FAT BY THE CUSTOMER	
• PROXY-FAT BY THE MANUFACTURER	



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4. VERIFICATION OF TECHNICAL SPECIFICATION:

S.No.	Parameter	Specifications	Observation	Remarks
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				



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5. VERIFICATION OF TECHNICAL SPECIFICATIONS OF SUB-COMPONENTS & BOUGHT OUT ITEMS:

S.No.	Parameter	Specifications	Observation	Remarks
1.	Exhaust Blower Motor	Make: Mega HP: 5, RPM: 2800		
4.	Pneumatic Cylinder for filter bag shaking	MAKE: Airamax		
5	FILTER BAG	PC Satin.		
6	TEMPERATURE SENSOR	MAKE: Techno Model: PT100 RTD		
7	Inlet air Temperature Controller	Make: Multi Span Model: MDC 2901		
8	Exhaust air temperature display	Make: Multi Span Model: MDI 2101		
9.	Process Timer	Make: Multi Span Model: MDT 2312		
10	Cyclic Timer	Make: Multi Span Model: CYL-1044		
11	AMPERE Meter	Make: AVM Model: AVM-21		
12.	MCB	Make: LS Model: BKN 16 TP		
13.	Contact	Make: LS Model: GMC-22		
14.	Control Relay	Make: PLA 220 v, 11 PIN		
15.	BDR Timer	Make: BCH Model: SBT 02100		
16.	Pneumatic Valve	Make: Jentics Model: 5/2		



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S.No.	Parameter	Specifications	Observation	Remarks
17.	Pneumatic Valve	Make: Jentics Model: 3/2		
18.	FRL	Make: Jentics Model: 1/4		
19.	Pre Filter and Final Filter	Make: Pyramid Model: 5 & 20 Micron		
20.	HEPA Filter	Make: Pyramid Model: 0.3 Micron		
21.	Filter Bag	Make: Khosala Model: 5 micron		

6. VERIFICATION OF MOTOR SPECIFICATION:

S.No.	Type of Motor	Parameter				Observation	Remarks
		A	HP	kW	V		
1.	Motor	7.5	5.0	3.75	415		

7. VERIFICATION OF MATERIAL OF CONSTRUCTION CERTIFICATES:

S.No.	Component	MOC	Observation	Remarks
1.	Product Container	SS 316		
2.	Sieve for product container	SS 316		
3.	Bottom Chamber	SS 316		
4.	Inlet Air unit	S.S.304		
5.	Main Body	SS 304		
6.	Blower casing	M.S.		
7.	Blower fan	M.S.		



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S.No.	Component	MOC	Observation	Remarks
8.	Rubber Seal	Silicon		
9.	Filter Bag	Satin		

8. VERIFICATION OF TEST/CALIBRATION CERTIFICATES:

S.No.	Component	Type	Observation	Remarks
1.	Main Drive Motor	Test Certificate		
2.	Inlet Air temperature controller	Test Certificate		
3.	Exhaust Air temperature controller	Test Certificate		
4.	Process Timer	Test Certificate		
5.	Cyclic Timer	Test Certificate		

9. VERIFICATION OF INTERLOCKS (IF ANY):

S.No.	Interlock Message	Justification	Observation	Remarks
1.				
2.				
3.				

10. VERIFICATION OF OPERATIONS:

S.No.	Type of Operation	Mode of Simulation	Observation	Remarks
1.	Wet Powder charge in Product Container			
2.	Set the process time and inlet air temperature than Start the blower motor. The powder is fluidized in side of the			



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S.No.	Type of Operation	Mode of Simulation	Observation	Remarks
	chamber and increased temperature of inlet air and exhaust air.			
3.	Checked the inlet air temperature is auto controlling by temp. controller as per desired set value			
4.	Checked filter bag shaking timer should working as per desired and set.			
5.	Checked the working of process timer. The timer should stop the process after complete of process time as per desired and set.			
6.	Removed the dried powder from product container.			



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11. VERIFICATION OF SURFACE FINISH:

S.No.	Component	Surface Finish- Mirror/ Matt	Observation	Remarks
1.	Product Container	Mirror		
2.	Bottom Chamber	Mirror		
3.	Trolley	Mirror		
4.	Machine Body	Mirror		

12.MACHINE TRIAL SHEET

DRY RUN TEST

S.No.	Check Points	Observation	Remarks
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

WET RUN TEST

ACTUAL PRODUCT

DUMMY PRODUCT

S.No.	Parameter	Specification			
1.	Name of the Product				
2.	Type of granulation	DRY		WET	
3.	Property	Corrosive	Non-Corrosive	Abrasive	Non-Abrasive
4.	Color				



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13. SUGGESTIONS / MODIFICATIONS:

COMMENTS FROM THE CUSTOMER	MANUFACTURER'S ACCEPTANCE



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14. FAT CLOSEOUT:

- The Factory Acceptance Test for Fluid Bed Dryer-30 vides Sr. No 145, stands completed.
- All the parameters have been checked and found in line with the requirement of M/s.
- The machine is cleared, by the undersigned authority of M/s. for dispatch to their plant at

For M/s.

Name	Designation	Department	Signature

For M/s.

Name	Designation	Department	Signature
		Production	
		Design	
		Quality	
		Validation	
		Marketing	