

## PHARMA DEVILS

ENGINEERING DEPARTMENT

Title: Operation and Cleaning of Vacuum Pump

SOP No.:	Revision No.:	00
<b>Effective Date:</b>	Supersedes N	o. Nil
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#### 1.0 OBJECTIVE:

To lay down a Procedure for Operation and Cleaning of Vacuum Pump.

#### 2.0 SCOPE:

This SOP is applicable for Operation and Cleaning of Vacuum Pump.

#### 3.0 RESPONSIBILITY:

Officer /Executive - Engineering

#### 4.0 **ACCOUNTABILITY:**

Head - Engineering

#### **5.0 ABBREVIATIONS:**

ER Engineering

SOP Standard Operating Procedure

#### 6.0 PROCEDURE:

#### 6.1 OPERATING OF VACUUM PUMP:

- 6.1.1 Before starting of pump, Vacuum breaking valve (V1) shall be open and Suction inlet valve (SV) shall be closed & start the pump for 5 Second & close the Vacuum breaking valve (V1) & open Suction inlet valve (SV).
- **6.1.2** Before stopping of pump, close the Suction inlet valve than open the vacuum braking Valve, than after 5 second stop the vacuum pump.

#### 6.2 CLEANING AND FLUSHING OF VACUUM PUMP:

- **6.2.1** Flushing of the vacuum pump to flush out the substances that leave solid deposits in the Pump body.
- **6.2.2** Every completion of process required flushing with the required suitable solvent lit. (Diesel, Kerosene or Methylene chloride etc.)
- **6.2.3** Close the Suction inlet valve (SV), open the vacuum braking valve (V1).
- 6.2.4 Slowly dip suction tube in the solvent for 5 second (sucking the ¼ qty. of solvent in one time) and 10 second in air, repeat this process till the solvent finished.
- **6.2.5** After finishing the solvent let the air pass through Vacuum braking valve (V1) at least for 15 minutes, so that all solvent will drain out from pump.



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#### 6.3 CLEANING OF VACUUM FILTER:

- **6.3.1** After completion of drying operation open the drain flange provided on bottom side of the filter chamber.
- **6.3.2** Open cleaning water inlet port, provided on top of filter chamber.
- **6.3.3** Pour the raw water through cleaning water inlet port and collect the waste from the drain flange valve.
- **6.3.4** Pour water continue from the cleaning water port till drain water from flange be visually cleaned.
- **6.3.5** Pass the compressed air pressure jet from cleaning water inlet port side and to get the completely water drain out through the drain flange.
- **6.3.6** After cleaning close the drain flange tightly and also close the cleaning water inlet port by using Teflon.
- **6.3.7** After closing the drain flange and clean water inlet port check the leak test by the soap solution.
- **6.3.8** Fill the cleaning detail in format as enclosed Annexure -I.

**Precaution:** Never open the vacuum braking valve (V1) during product drying process.

#### 7.0 ANNEXURES:

ANNEXURE	TITLE OF ANNEXURE	FORMAT No.			
No.					
Annexure-I	Operation And Cleaning Format Record For Vacuum Pump				

**ENCLOSURES:** SOP Training Record

#### **8.0 DISTRIBUTION:**

Controlled Copy No. 01 Quality Assurance
 Controlled Copy No. 02 Engineering
 Master Copy Quality Assurance

#### 9.0 **REFERENCES:**

Operation Manual



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#### 10.0 REVISION HISTORY:

#### **CHANGE HISTORY LOG**

Revision No.	Change Control No.	<b>Details of Changes</b>	Reason for Change	Effective Date	<b>Updated By</b>	



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# ANNEXURE – I OPERATION AND CLEANING FORMAT RECORD FOR VACUUM PUMP

	Vacuum Pump Operation Detail									Vacuum Filter Flushing detail						
S.No.	Date	Product Name	Batch No.	Oil Level	Air Bubble	Start Time	End Time	Total Running Time	Done By	Checked By	Date	Product Batch No.	Type of Solvent	Done By	Checked By	Remark