

PROJECT REPORT

Of

VACUUM CLEANER

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Vacuum Cleaner Manufacturing unit.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
- Pin: xxxxxxxx State: xxxxx
- Mobile : xxxxxxxx
- 5 Product and By Product : **VACUUM CLEANER**
- 6 Name of the project / business activity proposed : **VACUUM CLEANER MANUFACTURING UNIT**
- 7 Cost of Project : Rs.17.02 Lakhs
- 8 Means of Finance
- Term Loan Rs.10.65 Lakhs
- Own Capital Rs.1.7 Lakhs
- Working Capital Rs.4.67 Lakhs
- 9 Debt Service Coverage Ratio : 2.90
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 32%
- 13 Employment : 10 Persons
- 14 Power Requirement : 18.00 KWH
- 15 Major Raw materials : Plastic Granules, Motor, Rubber Hose and Rubber Knock Out, Bristles, Power Cord and Cord Winder, Filters, Dust Bag, Electrical Components, Screws, On-Off Switches, Wheels, Connectors, Metal Staples, etc
- 16 Estimated Annual Sales Turnover (Max Capacity) : 133.33 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	10.83
Furniture & Fixtures	1.00
Working Capital	5.19
Total	17.02

MEANS OF FINANCE

Particulars	Amount
Own Contribution	1.70
Working Capital(Finance)	4.67
Term Loan	10.65
Total	17.02

VACCUUM CLEANER MANUFACTURING UNIT

Introduction:

A vacuum cleaner, also known simply as a vacuum or a Hoover, is a device that causes suction in order to remove dust from floors and other surfaces. It is generally electrically driven. The vacuum cleaner is an essential part of every home no matter how small. Many families have several vacuum cleaners for dedicated uses. These specialized uses have helped broaden the lines of vacuums made. Components of a vacuum cleaner are: an intake port, an exhaust port, an electric motor, a fan, a filter and a dust compartment. When the motor that is attached to the fan creates the wanted pressure drop at the exhaust port the ambient air is pushed into the vacuum cleaner through the intake port and the particles are suctioned into the dust compartment. The filter contains holes, which are small enough to stop the particles, but large enough to let the air go through. The dust air is filtered and flows through the exhaust port. What determines the suction power is the power of the fan, the shape of the air passageway and the size of the intake port's opening.



Uses & Market Potential:

Vacuum cleaner market will grow at a CAGR of 4.63% in the forecast period of 2021 to 2028. Rising benefits of vacuum cleaners is an essential factor driving the vacuum cleaner market. The high demand is attributed to shifting consumer preferences toward advanced cleaning appliances over manual cleaning methods. The rising household disposable income levels coupled with the increasing consumer awareness about health & hygiene across the globe will drive the household vacuum cleaners market growth.

Consumers are adopting these devices over manual cleaning to save their time & efforts in cleaning. Vacuum Cleaners are most lightweight and compact size one so that it easily can handle. Vacuum Cleaners are capable to clean carpets, bare floors, hardwood floors, stairs, sofa set, curtains and tricky places like underneath of bed, sofa etc. Vacuum cleaners have the concept of sucking in the dust particles with the help of suction created by a motor working the fan into a dust bag attached to them. Drivers of vacuum cleaner market growth- Rising demand for energy efficient household appliances. Increasing consumer awareness and product popularity in Asian countries, Increasing population and urbanization in Latin America, Emergence of stick and robotic vacuum cleaners. Also rising advancements in the market and innovative product launches, rising adoption from automotive, chemicals, electronics, food and beverages, and pharmaceuticals sectors, rising integration of artificial intelligence technology in industrial vacuum cleaners, increasing demand for industrial vacuum cleaners across various industries in emerging economies and increasing implementation of automation across various industries are the major factors among others boosting the industrial vacuum cleaner market.

Product:

VACCUM CLEANER

Raw Material:

1. Plastic Granules
2. Motor
3. Rubber Hose and Rubber Knock Out
4. Bristles
5. Power Cord and Cord Winder
6. Filters
7. Dust Bag
8. Electrical Components
9. Screws, On-Off Switches, Wheels, Connectors, Metal Staples, etc.

Manufacturing Process:

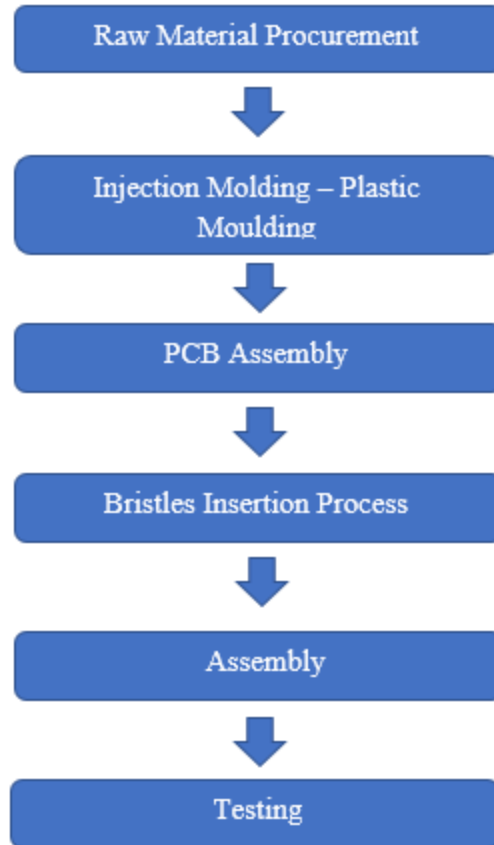


Fig. 1 – Process Flowchart

Area:

The land required for this manufacturing unit will be approx. around 1500 square feet.

Cost of Machines:

S No.	Machine	Price (INR)
1.	Injection Molding Machine	5,00,000/-
2.	Bristles Inserting Machine	3,00,000/-
3.	Laser Marking Machine	2,20,000/-
4.	Temperature Controlled Soldering Station	20,000/-
5.	Power Supply	10,000/-
6.	Multimeter	6,500/-
7.	Magnifying Glass Fitted with Tube light	6,500/-
8.	Tools	20,000/-
	Total	10,83,000/-

Power Requirement- The estimated Power requirement is taken at 18 KWH.

Manpower Requirement- Following manpower is required:

- Skilled/unskilled worker-6
- Helper- 2
- Sales Personal and Accountant- 2

FINANCIALS

<u>PROJECTED BALANCE SHEET</u>					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
<u>Capital Account</u>					
Opening Balance	-	1.96	3.57	5.19	7.39
Add: Additions	1.70	-	-	-	-
Add: Net Profit	2.86	4.61	6.41	7.70	9.32
Less: Drawings	2.60	3.00	4.80	5.50	6.90
Closing Balance	1.96	3.57	5.19	7.39	9.81
CC Limit	4.67	4.67	4.67	4.67	4.67
Term Loan	9.46	7.10	4.73	2.37	-
Sundry Creditors	1.64	1.88	2.13	2.39	2.66
TOTAL :	17.74	17.23	16.73	16.82	17.15
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	11.83	11.83	11.83	11.83	11.83
Gross Dep.	1.72	3.20	4.45	5.52	6.43
Net Fixed Assets	10.11	8.63	7.38	6.31	5.40
Current Assets					
Sundry Debtors	2.55	3.05	3.49	3.95	4.44
Stock in Hand	4.28	4.94	5.63	6.36	7.12
Cash and Bank	0.80	0.60	0.22	0.20	0.18
TOTAL :	17.74	17.23	16.73	16.82	17.15
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
<u>A) SALES</u>					
Gross Sale	76.56	91.43	104.68	118.64	133.33
Total (A)	76.56	91.43	104.68	118.64	133.33
<u>B) COST OF SALES</u>					
Raw Material Consumed	49.20	56.46	63.99	71.81	79.92
Electricity Expenses	1.61	1.81	2.01	2.22	2.42
Repair & Maintenance	2.30	2.74	3.14	3.56	4.00
Labour & Wages	9.32	11.00	13.20	15.58	18.38
Depreciation	1.72	1.47	1.25	1.07	0.91
Cost of Production	64.16	73.49	83.60	94.23	105.63
Add: Opening Stock /WIP	-	2.64	3.06	3.50	3.97
Less: Closing Stock /WIP	2.64	3.06	3.50	3.97	4.46
Cost of Sales (B)	61.52	73.07	83.16	93.77	105.14
C) GROSS PROFIT (A-B)	15.04	18.37	21.52	24.87	28.19
	19.65%	20.09%	20.56%	20.96%	21.14%
D) Bank Interest i) (Term Loan)	1.15	0.94	0.68	0.42	0.16
ii) Interest On Working Capital	0.51	0.51	0.51	0.51	0.51
E) Salary to Staff	5.92	6.81	7.63	8.24	8.90
F) Selling & Adm Expenses Exp.	4.59	5.49	6.28	7.12	8.00
G) TOTAL (D+E+F)	12.18	13.75	15.11	16.29	17.57
H) NET PROFIT	2.86	4.61	6.41	8.58	10.62
	3.7%	5.0%	6.1%	7.2%	8.0%
I) Taxation	-	-	-	0.87	1.30
J) PROFIT (After Tax)	2.86	4.61	6.41	7.70	9.32

<u>PROJECTED CASH FLOW STATEMENT</u>					
PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	1.70	-			
Reserve & Surplus	2.86	4.61	6.41	8.58	10.62
Depreciation & Exp. W/off	1.72	1.47	1.25	1.07	0.91
Increase In Cash Credit	4.67				
Increase In Term Loan	10.65	-	-	-	-
Increase in Creditors	1.64	0.24	0.25	0.26	0.27
TOTAL :	23.25	6.33	7.92	9.91	11.80
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	11.83	-	-	-	-
Increase in Stock	4.28	0.66	0.69	0.73	0.76
Increase in Debtors	2.55	0.50	0.44	0.47	0.49
Repayment of Term Loan	1.18	2.37	2.37	2.37	2.37
Taxation	-	-	-	0.87	1.30
Drawings	2.60	3.00	4.80	5.50	6.90
TOTAL :	22.45	6.52	8.30	9.93	11.81
Opening Cash & Bank Balance	-	0.80	0.60	0.22	0.20
Add : Surplus	0.80	- 0.20	- 0.38	- 0.02	- 0.02
Closing Cash & Bank Balance	0.80	0.60	0.22	0.20	0.18

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	I	II	III	IV	V
<u>Finished Goods</u>					
(10 Days requirement)	2.64	3.06	3.50	3.97	4.46
<u>Raw Material</u>					
(10 Days requirement)	1.64	1.88	2.13	2.39	2.66
Closing Stock	4.28	4.94	5.63	6.36	7.12

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	4.28		
Less:			
Sundry Creditors	1.64		
Paid Stock	2.64	0.26	2.38
Sundry Debtors	2.55	0.26	2.30
Working Capital Requirement			4.67
Margin			0.52
MPBF			4.67
Working Capital Demand			4.67

REPAYMENT SCHEDULE OF TERM LOAN					11.0%		
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	10.65	10.65	0.29	-	10.65
	Iind Quarter	10.65	-	10.65	0.29	-	10.65
	IIIrd Quarter	10.65	-	10.65	0.29	0.59	10.06
	Ivth Quarter	10.06	-	10.06	0.28	0.59	9.46
						1.15	1.18
II	Opening Balance						
	Ist Quarter	9.46	-	9.46	0.26	0.59	8.87
	Iind Quarter	8.87	-	8.87	0.24	0.59	8.28
	IIIrd Quarter	8.28	-	8.28	0.23	0.59	7.69
	Ivth Quarter	7.69		7.69	0.21	0.59	7.10
						0.94	2.37
III	Opening Balance						
	Ist Quarter	7.10	-	7.10	0.20	0.59	6.51
	Iind Quarter	6.51	-	6.51	0.18	0.59	5.92
	IIIrd Quarter	5.92	-	5.92	0.16	0.59	5.32
	Ivth Quarter	5.32		5.32	0.15	0.59	4.73
						0.68	2.37
IV	Opening Balance						
	Ist Quarter	4.73	-	4.73	0.13	0.59	4.14
	Iind Quarter	4.14	-	4.14	0.11	0.59	3.55
	IIIrd Quarter	3.55	-	3.55	0.10	0.59	2.96
	Ivth Quarter	2.96		2.96	0.08	0.59	2.37
						0.42	2.37
V	Opening Balance						
	Ist Quarter	2.37	-	2.37	0.07	0.59	1.77
	Iind Quarter	1.77	-	1.77	0.05	0.59	1.18
	IIIrd Quarter	1.18	-	1.18	0.03	0.59	0.59
	Ivth Quarter	0.59		0.59	0.02	0.59	0.00
						0.16	2.37
Door to Door Period		60	Months				
Moratorium Period		6	Months				
Repayment Period		54	Months				

CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	4.58	6.08	7.67	8.77	10.23
Interest on Term Loan	1.15	0.94	0.68	0.42	0.16
Total	5.74	7.03	8.35	9.20	10.39
<u>REPAYMENT</u>					
Repayment of Term Loan	1.18	2.37	2.37	2.37	2.37
Interest on Term Loan	1.15	0.94	0.68	0.42	0.16
Total	2.34	3.31	3.05	2.79	2.53
DEBT SERVICE COVERAGE RATIO	2.45	2.12	2.74	3.30	4.11
AVERAGE D.S.C.R.			2.90		

Assumptions:

1. Production Capacity of Vacuum Cleaner is 20 Units per day. First year, Capacity has been taken @ 40%.
2. Working shift of 10 hours per day has been considered.
3. Raw Material stock and Finished goods closing stock has been taken for 10 days.
4. Credit period to Sundry Debtors has been given for 10 days.
5. Credit period by the Sundry Creditors has been provided for 10 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 18 KWH.
10. Selling Prices & Raw material costing has been increased by 3% & 2% respectively in the subsequent years

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