

UP MSME 1-Connect

PROJECT REPORT

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PROJECT:

Surgical 3 Ply Mask unit

PROJECT REPORT

Of

SURGICAL 3 PLY MASK

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Surgical 3 Ply Mask**.

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.]

PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
Pin: xxxxxx State: xxxxxxxx
Mobile xxxxxx
- 5 Product and By Product : **SURGICAL 3 PLY MASKS**
- 6 Name of the project / business activity proposed : **SURGICAL 3 PLY MASK MANUFACTURING UNIT**
- 7 Cost of Project : Rs.18.05 Lakhs
- 8 Means of Finance
Term Loan Rs.11.25 Lakhs
KVIC MARGIN MONEY As per Project Eligibility
Own Capital Working Rs.1.81 Lakhs
Capital Rs.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.36
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 39%
- 13 Employment : 10 Persons
- 14 Power Requirement : 6 KW
- 15 Major Raw materials : PP Spun Bond Non Woven Fabric(Three Layers), Nose Bar, Ear Loop etc
- 16 Estimated Annual Sales Turnover (Max Utilized Capacity) : 61.39 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)	
Particulars	Amount
Land	Own/Rented
Building /Shed 1200 sq ft	4.00
Plant & Machinery	7.50
Furniture & Fixtures	1.00
Working Capital Requirement	5.55
Total	18.05

MEANS OF FINANCE

Particulars	Amount	
Own Contribution@10%	1.81	
Term Loan	11.25	
Working Capital	5.00	
Total	18.05	
	General	Special
Beneficiary Margin Money (% of Project Cost)	10%	5%

SURGICAL 3 PLY MASK



INTRODUCTION





Face Mask refers to a group of items which may have different shape and construction, but are used to cover up the entire or a portion of face. The face masks have a wide range of application ranging from fashion accessory to biological contamination protection.

One class of face mask is used for medical purposes, this class includes various mask ranging from surgical masks to biological contamination protection masks. This report focuses on one such mask which belongs to sub-class of multilayered masks called a non-woven surgical mask.

Surgical Masks are widely used by medical practitioner during any operation or medical procedure which involves direct treatment of any internal body parts, so as to prevent patient from bacterias which are present in exhaled breath of the practitioner, so as to prevent any possible infection to patient and on the flip side it protects practitioner from accidentally ingesting any bodily fluid during operation.

As these masks are to be used in medical procedure hence cleanliness protocol demands these masks be disposed after each such operation, thus they are use and throw masks, therefore have an essential financial requirement of being low cost product which is obtained by mass production and cheap raw material.

RAW MATERIAL

-  Spun-Bound Polypropylene Roll
-  Melt Blown Polypropylene Roll
-  Polyamide Elastic Band Reel
-  Packaging Material

MANUFACTURING PROCESS

The two spun-bound polypropylene rolls and a melt blown polypropylene roll are placed in roll feeding section at appropriate locations while, polyamide elastic band reel is placed in ear loop welding section of non-woven surgical mask making machine.

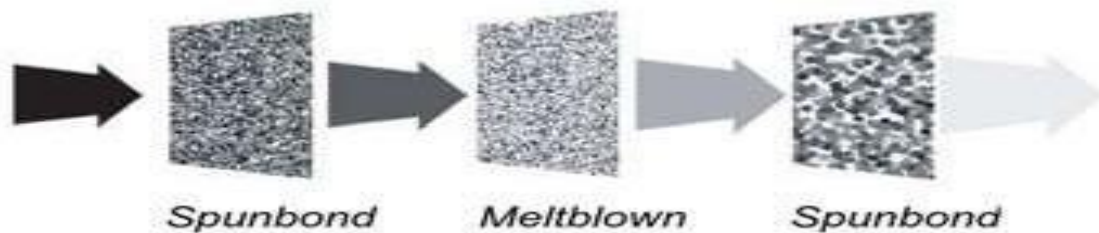
The non-woven surgical mask making machine unrolls the sheet of two spun-bound polypropylene and melt blown polypropylene simultaneously from their respective rolls and pulls them into edge seam welding section.

All these layers are welded at edges so as to obtain a continuous mask material; the outer most layer is made of spun bound polypropylene sheet and acts as external non-woven fabric sheet of mask, second layer is made of melt blown polypropylene sheet and acts as filtration layer of mask, while third layer is made of another spun-bound polypropylene sheet and form inner skin contact layer of mask.

This welded material is then feed to folding section which folds the mask so as to allow the mask to take appropriate shape required to cover users face when in application, in order to make the folds to set the mask material is passed through a hot press just after folding.

The mask material is then feed to cutting and welding section which cuts the mask material into the width of masks, which are then welded at edges so as to obtain the mask's body; these mask bodies are separated into multiple lines each having its own ear loop welding section which welds the ear loop onto the mask, cut from polyamide elastic band; thus surgical masks are obtained from machine.

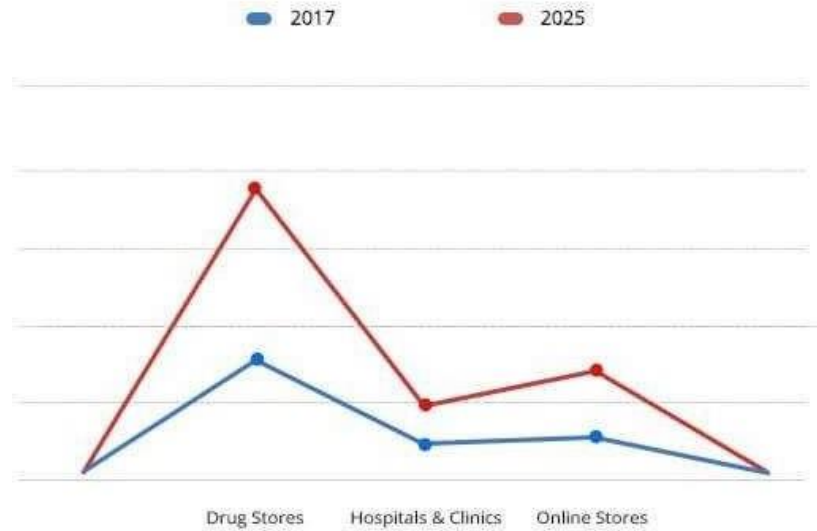
These surgical masks are then feed to packaging machine which simply packs them into an appropriate plastic packaging, followed by which masks are packed in cartons and sent for sale.



MARKET OVERVIEW

The India surgical mask market accounted for ₹4,060 million approx. in 2017, and is projected to reach ₹ 6,650 million approx. by 2025, registering a CAGR of 6.1% from 2018 to 2025. Surgical masks are made of natural fiber, such as cotton or disposable linen or synthetic materials, such as polypropylene.

INDIA SURGICAL MASKS MARKET BY DISTRIBUTION CHANNEL



Drug Stores held a dominant position in 2017.

The India surgical mask market is driven by various factors, such as increase in elderly population, increase in adoption of surgical mask in the general population, and surge in prevalence of contagious and chronic diseases such as tuberculosis, asthma and **Corona Virus**. Furthermore, rise in the number of medical device manufacturing companies is also anticipated to supplement the growth of the surgical masks industry.

Online stores are the fastest growing distributors of surgical masks, followed by hospitals and drug stores. Online delivery of surgical masks via e-commerce is expected to significantly drive the sales during the forecast period, owing to convenience in providing the customers with bulk orders and ease of delivering the orders directly at the doorsteps. Online stores are followed by hospitals & clinics and drug stores in the distribution of surgical mask to the consumer.

SWOT ANALYSIS

STRENGTHS

- ✓ Huge Market
- ✓ Strong Financial Position
- ✓ High Quality
- ✓ Growing Private Hospital Sector
- ✓ Use of Modern Technology

WEAKNESS

- ✓ Expansion in healthcare Masks capacity may exert pricing pressure
- ✓ Untapped Rural Markets
- ✓ Less Advertisement Effort
- ✓ Inability to pass on full impact of any cost increase

OPPURTUNITY

- ✓ Demand for Surgical Masks to stay healthy
- ✓ Demand for healthcare Masks to grow by European
- ✓ Customized medical masks to provide growth driver
- ✓ Government Initiatives and Policies
- ✓ E-Commerce

THREATS

- ✓ Highly Competitive Market
- ✓ Volatility of Profit

PROJECTED BALANCE SHEET

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
<u>Capital Account</u>					
Opening Balance	-	2.68	4.39	6.59	9.49
Add: Additions	1.81	-	-	-	-
Add: Net Profit	1.57	2.97	4.69	6.90	9.09
Less: Drawings	0.70	1.25	2.50	4.00	6.00
Closing Balance	2.68	4.39	6.59	9.49	12.58
CC Limit	5.00	5.00	5.00	5.00	5.00
Term Loan	10.00	7.50	5.00	2.50	-
Sundry Creditors	0.34	0.39	0.45	0.51	0.58
TOTAL :	<u>18.01</u>	<u>17.28</u>	<u>17.03</u>	<u>17.50</u>	<u>18.15</u>
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	12.50	12.50	12.50	12.50	12.50
Gross Dep.	1.63	3.03	4.25	5.30	6.22
Net Fixed Assets	10.88	9.47	8.25	7.20	6.28
Current Assets					
Sundry Debtors	4.10	4.84	5.53	6.32	7.16
Stock in Hand	2.03	2.31	2.63	2.97	3.35
Cash and Bank	1.01	0.66	0.62	1.00	1.36
TOTAL :	<u>18.01</u>	<u>17.28</u>	<u>17.03</u>	<u>17.50</u>	<u>18.15</u>
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
<u>A) SALES</u>					
Gross Sale	35.16	41.49	47.43	54.19	61.39
Total (A)	35.16	41.49	47.43	54.19	61.39
<u>B) COST OF SALES</u>					
Raw Mateiral Consumed	14.64	16.91	19.37	22.03	24.91
Electricity Expenses	0.99	1.09	1.19	1.29	1.38
Repair & Maintenance	0.18	0.21	0.24	0.27	0.31
Labour & Wages	6.86	7.55	8.31	9.14	10.05
Depreciation	1.63	1.41	1.22	1.06	0.92
Cost of Production	24.29	27.16	30.31	33.78	37.56
Add: Opening Stock /WIP	-	0.57	0.62	0.69	0.77
Less: Closing Stock /WIP	0.57	0.62	0.69	0.77	0.86
Cost of Sales (B)	23.72	27.10	30.24	33.70	37.48
C) GROSS PROFIT (A-B)	11.44	14.39	17.19	20.49	23.91
	32.53%	34.68%	36.24%	37.82%	38.95%
D) Bank Interest (Term Loan)	1.22	1.00	0.72	0.45	0.17
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
E) Salary to Staff	6.34	6.97	7.67	8.43	9.28
F) Selling & Adm Expenses Exp.	1.76	2.90	3.56	4.06	4.60
TOTAL (D+E)	9.86	11.42	12.49	13.49	14.60
G) NET PROFIT	1.57	2.97	4.69	7.00	9.31
	4.5%	7.2%	9.9%	12.9%	15.2%
H) Taxation	-	-	-	0.10	0.22
I) PROFIT (After Tax)	1.57	2.97	4.69	6.90	9.09

PROJECTED CASH FLOW STATEMENT

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution@ 10%	1.81	-			
Net Profit	1.57	2.97	4.69	7.00	9.31
Depreciation & Exp. W/off	1.63	1.41	1.22	1.06	0.92
Increase In Cash Credit	5.00				
Increase In Term Loan	11.25	-	-	-	-
Increase in Creditors	<u>0.34</u>	<u>0.05</u>	<u>0.06</u>	<u>0.06</u>	<u>0.07</u>
TOTAL :	<u>21.59</u>	<u>4.43</u>	<u>5.97</u>	<u>8.12</u>	<u>10.29</u>
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	12.50	-	-	-	-
Increase in Stock	2.03	0.28	0.32	0.35	0.37
Increase in Debtors	4.10	0.74	0.69	0.79	0.84
Repayment of Term Loan	1.25	2.50	2.50	2.50	2.50
Taxation	-	-	-	0.10	0.22
Drawings	<u>0.70</u>	<u>1.25</u>	<u>2.50</u>	<u>4.00</u>	<u>6.00</u>
TOTAL :	<u>20.58</u>	<u>4.77</u>	<u>6.01</u>	<u>7.73</u>	<u>9.93</u>
Opening Cash & Bank Balance	-	1.01	0.66	0.62	1.00
Add : Surplus	1.01	- 0.34	- 0.04	0.38	0.36
Closing Cash & Bank Balance	<u>1.01</u>	<u>0.66</u>	<u>0.62</u>	<u>1.00</u>	<u>1.36</u>

COMPUTATION OF PRODUCTION OF 3 ply masks**Item to be Manufactured 3 PLY MASKS**

Manufacturing Capacity per Min		50	pcs
Manufacturing Capacity per Day		24,000	pcs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		7,200,000	pcs
Total Production per Annum		72,000	boxes of 100 pcs
Year		Capacity	SURGICAL 3 PLY MASKS
		Utilisation	
I		50%	36,000
II		55%	39,600
III		60%	43,200
IV		65%	46,800
V		70%	50,400

COMPUTATION OF RAW MATERIAL

Item Name	Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
PP Spun Bond Non woven Fabrics(2 Layers of 20 GSM and one layer of 15 GSM	13,250	kg	130	1,722,500.00
Ear Loop	2,160,000	mtr	0.5	1,080,000.00
20 mm Non Woven Belt	500	kg	250	125,000.00
Total	13,250.00			2,927,500.00
Total Raw material in Rs lacs	at 100% Capacity			29.28
Cost per Box of 100 pcs	(In Rs)			40.66
Raw Material Consumed	Capacity Utilisation	Rate	Amount (Rs.)	
I	50%	40.66	14.64	
II	55%	42.69	16.91	5% Increase in Cost
III	60%	44.83	19.37	5% Increase in Cost
IV	65%	47.07	22.03	5% Increase in Cost
V	70%	49.42	24.91	5% Increase in Cost

COMPUTATION OF SALE

Particulars	I	II	III	IV	V
Op Stock	-	840.00	924.00	1,008.00	1,092.00
Production	36,000.00	39,600.00	43,200.00	46,800.00	50,400.00
	36,000.00	40,440.00	44,124.00	47,808.00	51,492.00
Less : Closing Stock(7 Days)	840.00	924.00	1,008.00	1,092.00	1,176.00
Net Sale	35,160.00	39,516.00	43,116.00	46,716.00	50,316.00
Sale Price per box	100.00	105.00	110.00	116.00	122.00
Sale (in Lacs)	35.16	41.49	47.43	54.19	61.39

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	I	II	III	IV	V
<u>Finished Goods</u>					
(7 Days requirement)	0.57	0.62	0.69	0.77	0.86
<u>Raw Material</u>					
(30 Days requirement)	1.46	1.69	1.94	2.20	2.49
Closing Stock	2.03	2.31	2.63	2.97	3.35

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	2.03		
Less:			
Sundry Creditors	0.34		
Paid Stock	1.69	0.17	1.52
Sundry Debtors	4.10	0.41	3.69
Working Capital Requirement			5.21
Margin			0.58
MPBF			5.21
Working Capital Demand			5.00

BREAK UP OF LABOUR

Particulars	Wages Per Month	No of Employees	Total Salary
Skilled Worker	10,000.00	2	20,000.00
Unskilled Worker	8,000.00	4	32,000.00
			52,000.00
Add: 10% Fringe Benefit			5,200.00
Total Labour Cost Per Month			57,200.00
Total Labour Cost for the year (In Rs. Lakhs)		6	6.86

BREAK UP OF SALARY

Particulars	Salary Per Month	No of Employees	Total Salary
Administrative Staff	12,000.00	4	48,000.00
Total Salary Per Month			48,000.00
Add: 10% Fringe Benefit			4,800.00
Total Salary for the month			52,800.00
Total Salary for the year (In Rs. Lakhs)		4	6.34

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	4.00	7.50	1.00	12.50
	-	4.00	7.50	1.00	12.50
TOTAL		4.00	7.50	1.00	12.50
Less : Depreciation	-	0.40	1.13	0.10	1.63
WDV at end of Ist year	-	3.60	6.38	0.90	10.88
Additions During The Year	-	-	-	-	-
	-	3.60	6.38	0.90	10.88
Less : Depreciation	-	0.36	0.96	0.09	1.41
WDV at end of IIInd Year	-	3.24	5.42	0.81	9.47
Additions During The Year	-	-	-	-	-
	-	3.24	5.42	0.81	9.47
Less : Depreciation	-	0.32	0.81	0.08	1.22
WDV at end of IIIrd year	-	2.92	4.61	0.73	8.25
Additions During The Year	-	-	-	-	-
	-	2.92	4.61	0.73	8.25
Less : Depreciation	-	0.29	0.69	0.07	1.06
WDV at end of IV year	-	2.62	3.92	0.66	7.20
Additions During The Year	-	-	-	-	-
	-	2.62	3.92	0.66	7.20
Less : Depreciation	-	0.26	0.59	0.07	0.92
WDV at end of Vth year	-	2.36	3.33	0.59	6.28

REPAYMENT SCHEDULE OF TERM LOAN

11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	11.25	-	11.25	0.31	-	11.25
	Iind Quarter	11.25	-	11.25	0.31	-	11.25
	IIIrd Quarter	11.25	-	11.25	0.31	0.63	10.63
	Ivth Quarter	10.63	-	10.63	0.29	0.63	10.00
					1.22	1.25	
II	Opening Balance						
	Ist Quarter	10.00	-	10.00	0.28	0.63	9.38
	Iind Quarter	9.38	-	9.38	0.26	0.63	8.75
	IIIrd Quarter	8.75	-	8.75	0.24	0.63	8.13
	Ivth Quarter	8.13		8.13	0.22	0.63	7.50
					1.00	2.50	
III	Opening Balance						
	Ist Quarter	7.50	-	7.50	0.21	0.63	6.88
	Iind Quarter	6.88	-	6.88	0.19	0.63	6.25
	IIIrd Quarter	6.25	-	6.25	0.17	0.63	5.63
	Ivth Quarter	5.63		5.63	0.15	0.63	5.00
					0.72	2.50	
IV	Opening Balance						
	Ist Quarter	5.00	-	5.00	0.14	0.63	4.38
	Iind Quarter	4.38	-	4.38	0.12	0.63	3.75
	IIIrd Quarter	3.75	-	3.75	0.10	0.63	3.13
	Ivth Quarter	3.13		3.13	0.09	0.63	2.50
					0.45	2.50	
V	Opening Balance						
	Ist Quarter	2.50	-	2.50	0.07	0.63	1.88
	Iind Quarter	1.88	-	1.88	0.05	0.63	1.25
	IIIrd Quarter	1.25	-	1.25	0.03	0.63	0.63
	Ivth Quarter	0.63		0.63	0.02	0.63	-
					0.17	2.50	
	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>	3.20	4.37	5.91	7.96	10.01
Interest on Term Loan	1.22	1.00	0.72	0.45	0.17
Total	4.42	5.37	6.63	8.40	10.18
<u>REPAYMENT</u>					
Repayment of Term Loan	1.25	2.50	2.50	2.50	2.50
Interest on Term Loan	1.22	1.00	0.72	0.45	0.17
Total	2.47	3.50	3.22	2.95	2.67
DEBT SERVICE COVERAGE RATIO	1.79	1.54	2.06	2.85	3.81
AVERAGE D.S.C.R.			2.36		

COMPUTATION OF ELECTRICITY**(A) POWER CONNECTION**

Total Working Hour per day		Hours	8	
Electric Load Required		KW	6	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				1.08
Add : Minimim Charges (@ 10%)				
(B) DG set				
No. of Working Days			300	days
No of Working Hours			0.5	Hour per day
Total no of Hour			150	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			1,200	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.78	
Add : Lube Cost @15%			0.12	
Total			0.90	
Total cost of Power & Fuel at 100%				1.98
Year		Capacity		Amount
				(in Lacs)
I		50%		0.99
II		55%		1.09
III		60%		1.19
IV		65%		1.29
V		70%		1.38

BREAK EVEN POINT ANALYSIS

Year	I	II	III	IV	V
Net Sales & Other Income	35.16	41.49	47.43	54.19	61.39
Less : Op. WIP Goods	-	0.57	0.62	0.69	0.77
Add : Cl. WIP Goods	0.57	0.62	0.69	0.77	0.86
Total Sales	35.73	41.55	47.50	54.27	61.47
Variable & Semi Variable Exp.					
Raw Material & Tax	14.64	16.91	19.37	22.03	24.91
Electricity Exp/Coal Consumption at 85%	0.84	0.92	1.01	1.09	1.18
Wages & Salary at 60%	7.92	8.71	9.58	10.54	11.60
Selling & administrative Expenses 80%	1.41	2.32	2.85	3.25	3.68
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
Repair & Maintenance	0.18	0.21	0.24	0.27	0.31
Total Variable & Semi Variable Exp	25.53	29.62	33.59	37.73	42.22
Contribution	10.20	11.92	13.91	16.54	19.25
Fixed & Semi Fixed Expenses					
Electricity Exp/Coal Consumption at 15%	0.15	0.16	0.18	0.19	0.21
Wages & Salary at 40%	5.28	5.81	6.39	7.03	7.73
Interest on Term Loan	1.22	1.00	0.72	0.45	0.17
Depreciation	1.63	1.41	1.22	1.06	0.92
Selling & administrative Expenses 20%	0.35	0.58	0.71	0.81	0.92
Total Fixed Expenses	8.63	8.96	9.22	9.54	9.95
Capacity Utilization	50%	55%	60%	65%	70%
OPERATING PROFIT	1.57	2.97	4.69	7.00	9.31
BREAK EVEN POINT	42%	41%	40%	37%	36%
BREAK EVEN SALES	30.22	31.21	31.48	31.30	31.76

FINANCIAL INDICATORS					
PARTICULARS	I	II	III	IV	V
TURNOVER	35.16	41.49	47.43	54.19	61.39
GROSS PROFIT	11.44	14.39	17.19	20.49	23.91
G.P. RATIO	32.53%	34.68%	36.24%	37.82%	38.95%
NET PROFIT	1.57	2.97	4.69	7.00	9.31
PAT/SALES RATIO	4.47%	7.15%	9.89%	12.92%	15.16%
CURRENT ASSETS	7.14	7.82	8.78	10.30	11.87
CURRENT LIABILITIES	5.34	5.39	5.45	5.51	5.58
CURRENT RATIO	1.34	1.45	1.61	1.87	2.13
TERM LOAN	10.00	7.50	5.00	2.50	-
TOTAL NET WORTH	2.68	4.39	6.59	9.49	12.58
DEBT/EQUITY	3.74	1.71	0.76	0.26	-
TOTAL NET WORTH	2.68	4.39	6.59	9.49	12.58
TOTAL OUTSIDE LIABILITIES	15.34	12.89	10.45	8.01	5.58
TOL/TNW	5.73	2.93	1.59	0.84	0.44
PBDIT	4.97	5.92	7.18	9.05	10.94
INTEREST	1.77	1.55	1.27	1.00	0.72
INTEREST COVERAGE RATIO	2.81	3.83	5.65	9.09	15.17
WDV	10.88	9.47	8.25	7.20	6.28
TERM LOAN	10.00	7.50	5.00	2.50	-
FACR	1.09	1.26	1.65	2.88	-

PLANT & MACHINERY

PARTICULARS	QTY.	RATE	AMOUNT IN RS.
Inner Ear loop Face Mask Making Machine	1	750000	750,000.00
Total Cost			750,000.00

DISCLAIMER

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