

## PROJECT PROFILE ON AIR FILTERS FOR TWO WHEELS

NAME OF THE PRODUCT : **AIR FILTERS FOR TWO WHEELERS.**

QUALITY & STANDARD : As per Specification of Two Wheelers Manufacturers.

PRODUCTION CAPACITY : The production capacity of the unit at 75% capacity utilization.

Item	Quantity	Amount (In Rs.)
Air Filters for Two Wheelers.	96000 Nos.	53,40,000/-

MONTH & YEAR OF PREPARATION : February, 2011.

PREPARED BY : **MSME - Development Institute,**  
Ministry of Micro, Small & Medium Enterprises,  
Government of India  
107, Industrial Estate, Kalpi Road,  
**Kanpur-208012.**

Tele. 2295070, 2295071 & 2295073 (EPBAX)  
Tele. No. 2295072 (SENET & TRC)  
Tele/Fax No.: 0512- 2240143  
email: dcdi-kanpur@dcmsme.gov.in  
Website: msmedikanpur.gov.in

## **1. INTRODUCTION:**

Every Two Wheeler is fitted with an Air Filter. The function of an Air Filter is to filter air, which is being sucked by the engine during succession stroke. A filter removes dust and other suspended particles of air which may damage the engine of two wheelers. Hence the function of air filter is very vital.

The design of air filter is different for different models of two wheelers normally an air filter assembly consists of Aluminium Alloy/Zinc Alloy die casted top & bottom, sheet metal body surrounded by filter clothes.

## **2. MARKET POTENTIAL:**

The demand of the Air Filters is closely linked with production of two wheelers in the country. These are required mainly as original equipment but these components have also replacement demand as a spare part.

India is second largest two wheelers market in the world.

The production figures for two wheelers for past years are as follows:

Two Wheelers	Financial Year 2001-02	Financial Year 2002-03	Financial Year 2003-04	Financial Year 2004-05	Financial Year 2005-06
Motor Cycles	2906323	3876175	4355168	5193894	6201214
Scooters	937506	848434	935279	987498	1020013
Mopeds	427498	351612	332294	348437	379574

- Total production in the year 2006-07 was approx. 90,00,000.
  - In the year 2011-12 the market is forecasted to have a volume of 15.2 million units and increase of 79.5% since 2006-07.
  - Two Wheelers export has grown by 20.65 since financial year 2006.
- Per capita two wheeler possession (per thousand people)

Taiwan	-	590
Thailand	-	286
Malaysia	-	258
China	-	52
India	-	37

So there is a lot of scope for expansion of industries.

### **3. BASIS & PRESUMPTIONS:**

1. The scheme has been prepared on a single shift basis of 8 hours working per day and 300 working days per year.
2. The capacity utilisation of the unit has been taken as 75% for the first year and 100% onwards.
3. Promoter's contribution towards margin money is taken as nil.
4. Interest is calculated both on fixed and working capital at a simple rate of 12%.
5. Rate of machinery and equipment, raw material and other items are based upon the prices prevailing at the time of preparation of project profile.
6. Break even point is calculated at 100% capacity utilisation.
7. Provision for future expansion of the unit in general bodybuilding of vehicles and for servicing can also be undertaken.
8. Working capital is calculated on the basis of working capital cycle of 60 days.
9. The cost of building bodies on chassis of the truck is only considered on the project profile, not the cost of the chassis of the truck

### **4. IMPLEMENTATION SCHEDULE:**

The major activities in the implementation of the project have been listed and the estimated average time for implementation of the project is indicated for 12 months.

	(Period in week)
1. Preparation of project profile	
a) Calling of quotations	4
b) Preparation	2
2. Submission of Memorandum to DIC.	1
3. Sanction of loan by financial institutions	12
4. Registration of land and site development	4

5.	Construction of Workshop & Office Building.	8
6.	Purchase & Procurement of machinery and equipment	6
7.	Erection and Electrification	3
8.	Recruitment of personnel.	4
<b>Total:</b>		<b>46 weeks</b>

## **Technical Aspects:**

### **1) Process of Manufacture:**

- i) Casting of bottoms/tops by filling of dies with molten material. The material is melted in tilting furnace/pit furnace.
- ii) Processing of sheet on 5-ton power press.
- iii) Drilling of fitment holes on die casted bottoms/top.
- iv) Assembling by riveting and covering with filter cloth.
- v) Inspection and packing.

### **2) Production Capacity:**

Item	Quantity	Amount (In Rs.)
Air Filters for Two Wheelers.	96000 Nos.	53,40,000/-

### **3) Quality Control & Standards:**

The air filter manufacturer has to strictly follow the design of the two wheeler manufacturer because any deviation will lead to assembling problem. The casting should be blow hole, porosity and other defect free.

The mesh size of filter cloth should be as per specification. Higher size will lead to passes of dust to engine whereas lower size will lead to higher friction to air flow.

### **4) Pollution Control**

Not required.

### **5) Energy Conservation**

A capacitor circuit can be incorporated in the electricity supply network for improvement of power factor. CFL fittings can be used in place of bulbs & tube lights to save power consumption.

#### **Motive Power Requirement:**

8 HP

### **F) FINANCIAL ASPECTS:**

#### **A) Fixed Capital:**

##### **(i) Land & Building:**

Land 250 sq. mtr. 150 sq.mtr. covered area, remaining open area. **Rs. 10,000/-**

Rented

Two months deposit **Rs. 20,000/-**

##### **(ii) Machinery & Equipment:**

Sl. No	Item	Qty. (Nos.)	Amount (In Rs.)
1.	Treadle Guillotine Shearing Machine Capacity 2000mm X 2.5mm with 5 KW motor & electricals.	1	2,25,000/-
2.	Power Press 50 Ton capacity with 3 KW motor & electricals	2	3,00,000/-
3.	Power Press 5-10 Ton capacity with 2.5 KW motor & electricals	2	2,00,000/-
4.	Tilting Furnace 10 Kgs Aluminium melting capacity HSD fired with 1 KVA Blower	1	1,25,000/-
5.	Lathe Adda Type with 1 KW motor & electricals	1	40,000/-
6.	Milling Machine Adda Type with 1 KW motor & electricals	1	80,000/-
7.	Surface Grinding Machine Manual Feed with 2 KW motor & electricals	1	2,50,000/-
8.	Fly Press of different sizes	4	60,000/-
9.	Hand Shearing Machine (Sheet Cutter)	2	18,000/-
10.	Spot Welding Machine 1 KVA	1	28,000/-
11.	Gas Welding Sets	2	12,000/-
12.	Buffing Machine 8" dia of wheel	2	10,000/-
13.	Bench Drilling Machine 13 mm cap.	1	5,000/-
	<b>Total:</b>		<b>13,53,000/-</b>
14.	Electro-Civil Installation @ 10% of the cost of machinery		1,35,300/-
15.	Moulding Dies, Punches, Jigs and Fixtures, Hand Tools & Measuring Instruments etc.		1,00,000/-
16.	Office Furniture, Computer with UPS and Printer and other appliances		75,000/-
	<b>Total:</b>		<b>16,63,300/-</b>

**(iii) Pre-operative Expenses** **25,000/-**

**Total Fixed Capital= (i+ii+iii)** **Rs. 17,08,300/-**

No Pressure die casting machine is proposed

**B) Working Capital (Per Month):**

**(i) Personnel:**

Sl. No.	Designation	No.	Salary	Total (Rs.)
1.	Manager / Supervisor	1	10000/-	10,000/-
2.	Skilled Workers	2	6000/-	12,000/-
3.	Semi-Skilled Workers	3	5000/-	15,000/-
4.	Contractual Workers	LS		30,000/-
<b>Total:</b>				<b>67,000/-</b>
Add Perquisites @ 15% of salary & wages.				10,050/-
<b>Total:</b>				<b>77,050/-</b>

**(ii) Raw Materials Requirements:**

Sl. No.	Particulars	Ind/ Imp	Quantity	Rate	Amount (In Rs.)
1.	HR/CRCA Steel Sheets of various thickness	Ind	1.5 MT	40000/MT	60,000/-
2.	Aluminium/Zinc Alloy for Die Casting, Filter Fabric/Paper, Rivets, Screws etc.	Ind		LS	1,60,000/-
3.	Zinc Plating and other surface treatment from market			LS	8,000/-
4.	Packing material & other consumables			LS	8,000/-
<b>Total:</b>					<b>2,36,000/-</b>

**(iii) Utilities:**

1.	Power 2000 KWH @ Rs. 5/- per KWH	10,000/-
2.	Water	1,000/-
<b>Total:</b>		<b>11,000/-</b>

**(iv) Other Contingent Expenses (P.M.):**

1	Rent	10,000/-
2	Telephone/Cell phone	500/-

3	Postage & Stationery	500/-
4	Repairs & Maintenance	1,000/-
5	Transportation charges	3,000/-
6	Insurance	1,000/-
7	Sales expenses	4,000/-
8	Misc. expenses	1,000/-
	<b>Total:</b>	<b>21,000/-</b>

**(v) Working Capital / Total Recurring Expenditure (P.M.):**

1.	Personnel	77,050/-
2.	Raw Materials	2,36,000/-
3.	Utilities	11,000/-
4.	Other Contingent Expenses	21,000/-
	<b>Total:</b>	<b>3,45,050/-</b>

**(vi) Total working capital for 3 months = Rs.10,35,150/- Say: Rs. 10,35,000/-**

**C) TOTAL CAPITAL INVESTMENT:**

I.	Fixed Capital	17,08,300/-
II.	Working Capital for 1½ months	10,35,000/-
	<b>Total:</b>	<b>27,43,300/-</b>

**G) FINANCIAL ANALYSIS:**

**i) Cost of Production (Per annum)**

Sl. No.	Particulars	Value(Rs.)
i.	Total recurring expenditure	41,40,600/-
ii.	Depreciation on machinery and equipment @ 10%	1,35,300/-
iii.	Depreciation on Dies, Tools, Fixtures, Office Equipment & appliances etc. @ 20%	35,000/-
iv.	Interest on Total Capital Investment @ 15%	4,11,500/-
	<b>Total: -</b>	<b>47,02,400/-</b>
	<b>Say</b>	<b>47,02,000/-</b>

**ii) Sales/Turnover (Per Annum)**

Sl. No.	Item	Value (Rs.)
1.	By the sale of different type of Air Filters 96,000 filters at average rate of Rs.55/- per filter	<b>52,80,000/-</b>
2.	By sale of Scrap/minor products from scrap (per month)	<b>55,000/-</b>
		<b>53,35,000/-</b>
	<b>Turn over (per annum)</b>	<b>53,35,000/-</b>

**iii) NET PROFIT (Per annum) Before Taxation:**

Turn Over	(-)	Cost of Production	=	<b>6,33,000/-</b>
53,35,000/-	(-)	47,02,000/-		

**iv) PROFIT RATIO ON SALES (Per Annum):**

$$\frac{\text{Profit/annum} \times 100}{\text{Turnover/Annum}} = \frac{6,33,000/- \times 100}{53,35,000/-} = 11.85 \%$$

**v) RATE OF RETURN (Per Annum):**

$$\frac{\text{Net Profit/annum} \times 100}{\text{Total Capital Investment}} = \frac{6,33,000/- \times 100}{27,43,300/-} = 23 \%$$

**BREAK EVEN POINT**

**Fixed Cost:**

1.	Total Depreciation	Rs.	1,70,300/-
2.	Interest on Investment @ 15%	Rs.	4,11,500/-
3.	40% of Salary & Wages	Rs.	30,820/-
4.	40% of other contingent expenses (excluding rent & insurance)	Rs.	52,800/-
5.	Rent	Rs.	1,20,000/-
	<b>Total:-</b>	<b>Rs.</b>	<b>7,85,420/-</b>

**B.E.P.**



$$\frac{\text{Fixed Cost} \times 100}{\text{Fixed Cost} + \text{Profit}} = \frac{7,85,420/- \times 100}{6,33,000/- + 7,85,420/-} = 55 \%$$

**Additional Information:**

- a. The project profile may be modified/tailored to suit the individual entrepreneurship qualities/capacity, production programme and also to suit the locational characteristics, wherever applicable.
- b. Quality today is not only confined to the product or service alone. It also extends to the process and environment in which they are generated. The ISO-9000 defines standards for quality management systems for acceptability at international level. The unit may adopt ISO-9000 standards for global competition.
- c. The unit may contact the respective State Pollution Control Board and the Central Pollution Control Board for guidance on pollution control measures.
- d. Conservation of energy is of national importance and the unit may strictly adhere to the energy conservation measures.
- e. Prior SSI registration with Director of Industries/Industries Commissioner/ Respective District Industries Centre is required for manufacturing the product.

**Names & Address of Machinery & Equipment Suppliers:**

1. M/s Shikovi Therm –O- Equip.  
1/6 Gobriel Gomes, Opp. Nutan Naga, Karijumarg (East) Mumbai-42.  
Email: response@shilovi.com
2. M/s Therm-Process Engineering  
Shri Sai Anand Bhawan,  
Nea Drug Employees CHS, Opp. K. K. Gram, Saamata Nagar,  
Pokhara Road, No.1, Thane – 400 606.  
Email: thermprocess @ yahoo.com
3. M/s Vishwakala Machine Tools  
Gondal Road, Near S. T. Workshop, Rajkot – 360004  
Telephone 0281 – 2386780
4. M/s Izzy Welding & Safety Equipments,  
7 J. N. Shopping Centre, Station road, Valsad – 396001  
Tel. No. 02632 – 242235
5. Local Machinery Supplier

**Names & Address of Raw Material Suppliers:**

1. M/s Kumar Enterprises, Latouche Road, Kanpur.
2. M/s Local Market.