

PROJECT PROFILE

ON

AUTOMOBILE GASKETS

Month & Year
December 2009

**PREPARED BY
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AUTOMOBILE GASKETS

A. INTRODUCTION

The function of a gasket is to seal the two faces of components to avoid leakage of fluid and air in the system in automobiles and other pneumatic and hydraulic systems gaskets are used. Metallic and non metallic gaskets are used .There is large demanded for the Automobile gaskets for replacement and O.E markets.

B. PRODUCT USES AND SPECIFICATIONS

Bureau of Indian standards has not prescribed standards for the automobile gaskets. The main types of gaskets which are manufactured are as follows.

Cylinder head gaskets

Head Gasket

Full Set Gasket

Timing Kit Gasket

Rocker Cover Gasket

Rocker Cover Kit Gasket

Oil Seal Gasket

Ex-manifold Gaskets

Exhaust pipe Gaskets

Inlet Gasket

Oil Pan Gasket

- Oil Pan Set Gasket
- Flange Gasket
- Chamber gasket
- Spenting Roll Gasket
- Water Pump gasket
- CV Joints Boots
- Head Set
- Conversion Set
- Inlet- manifold

C. MARKET POTENTIAL

There are two types of demand for Automobile Gaskets 1. O. E.Demand and 2. Replacement demand. The O. E Demand will increase with the production of original vehicles. The replacement demand is dependent on the wear and tear and replacement of the vehicle owners as this is critical equipment and replacement is essential to run the vehicle, the replacement demand is bound to increase.

The Production and Sales trends for the past 7 years is given below:

Automobile Production Trends			(Number of Vehicles)				
Category	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Passenger Vehicles	723330	989560	1209876	1309300	1545223	1777583	1838697

Commercial Vehicles	203697	275040	353703	391083	519982	549006	417126
Three Wheelers	276719	356223	374445	434423	556126	500660	501030
Two Wheelers	5076221	5622741	6529829	7608697	8466666	8026681	8418626
Grand Total	6279967	7243564	8467853	9743503	11087997	10853930	11175479

Source: Society of Indian Automobile Manufacturers

Automobile Trends	Domestic Sales		(Number of Vehicles)				
Category	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Passenger Vehicles	707198	902096	1061572	1143076	1379979	1549882	1551880
Commercial Vehicles	190682	260114	318430	351041	467765	490494	384122
Three Wheelers	231529	284078	307862	359920	403910	364781	349719
Two Wheelers	4812126	5364249	6209765	7052391	7872334	7249278	7437670
Grand Total	5941535	6810537	7897629	8906428	10123988	9654435	9723391

Domestic Sales

The cumulative growth of the Passenger Vehicles segment during April 2007 – March 2008 was 12.17 percent. Passenger Cars grew by 11.79 percent, Utility Vehicles by 10.57 percent and Multi Purpose Vehicles by 21.39 percent in this period.

The Commercial Vehicles segment grew marginally at 4.07 percent. While Medium & Heavy Commercial Vehicles declined by 1.66 percent, Light Commercial Vehicles recorded a growth of 12.29 percent.

Three Wheelers sales fell by 9.71 percent with sales of Goods Carriers declining drastically by 20.49 percent and Passenger Carriers declined by 2.13 percent during April– March 2008 compared to the last year.

Two Wheelers registered a negative growth rate of 7.92 percent during this period, with motorcycles and electric two wheelers segments declining by 11.90 percent and 44.93 percent respectively. However, Scooters and Mopeds segment grew by 11.64 percent and 16.63 percent respectively.

Despite the slow down in production of automobiles the demand for the automobiles is expected to grow in coming years.

D. TECHNICAL ASPECTS

1. Installed Capacity

The proposed installed capacity of the unit is 4800 Kgs of Automobile Gaskets per annum .This is based on a capacity of 160 Kgs per day of single shift operation,8 hours per day, 300 days in a year.

2. Plant and Machinery

The following machineries are required for production.

Machine name	Quantity Nos	Value Rs lakhs
Power Press 10 Mt capacity	1	1.20
Bench grinder	1	0.20
Fly Press No 6.	1	0.15
Hand shearing machine	1	0.15
Portable Drilling machine	1	0.20
Dies and fixtures	1	0.75
Hand tools and Measuring Instruments		0.35
	Total	3.00

3. Manufacturing Process

Purchase of Gasket Sheets (Cork sheets, Asbestos sheets, Rubber sheets, etc)

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Cutting in shearing machine

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Gasket Punching in Power Press with use of dies and punches

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Drilling holes and grinding

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Finishing

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Packing

4. Raw Material

The raw materials required for the production of Automobile gaskets are Gasket Sheets of various thicknesses. This material can be procured from any reputed dealers of steel.

5. Land & Building

A rented place with 600 sqft area is required. The monthly rent is estimated at Rs.6,000 and also an advance of Rs.60 000.

6. Utilities

Power:

The total power requirement of the unit will be 20 HP

Water:

Water is required only for human consumption.

Man power:

Category	Nos	Monthl y salary	Total Salar y
Workers	2	6000	1200 0
Unskilled	1	4000	4000
Assistants	1	5000	5000
Security	1	4000	4000
Total			2500 0
Add 20%benefits			5000
Total			3000 0

Annually -> Rs 3.60 lakhs

7. Implementation Schedule

If financing arrangement is made available the project can be implemented with in three months period.

8. ASSUMPTIONS

Installed Capacity per annum	Automobile Gaskets 4800 Kgs p.a.
Capacity utilization – Year 1	60%
– Year 2	70%
– Year 3	80%
Selling price per piece	Automobile Gaskets – Rs 335 /Kg

Raw Material required per Kg	Value (Rs.)
Gasket sheets of various thicknesses 4900 Kgs @ Rs 90.00 per kg	4.41

Consumables cost p.a. at 100% (Rs.lakhs)	Rs.0.36 lakh
Power & Fuel at 100% (Rs.lakhs)	Rs.1.87 lakh p.a
Wages & Salaries (Rs.lakhs)	Rs.3.60 lakhs
Repairs & Maintenance per month	Rs.2,000 p.m
Depreciation	WDV method – 15%
Administrative & General expenses p.m.	Rs.5,000
Selling expenses	3%
Interest on Term loan and Working capital	13%

finance	
Income Tax Provision	34%

LIST OF MACHINERY SUPPLIERS

1. Orient Machine Tools
New 269(old no 130) Linghi Chetty Street
Chennai-600 001
2. Quality Machine Tools
New 238 Linghi Chetty Strret
Chennai 600 001
3. Gujrat Machine Tools
New 279, Linghi Chetty Street
Chennai 600 001
4. Premier Machine Tools
New 103 Armenian Street
Chennai 600 001
5. Machine Centre
New 214 linghi chetty Street
Chennai 600 001

LIST OF RAW MATERIAL SUPPLIERS

1. Brook Inc
576, Mount road
Chennai- 600018
2. National Core Products India
New 320, T.T.K.Road
Chennai-600 018
3. Anchor Cork Pvt Ltd

LOBO Compound
M.V. Road
Sakinaka
Mumbai-400 072

4. Rubber Sales Corporation
22 Mooker Nallamuthu Street
Chennai-600 001

5. Rusko International Products
22, Mooker nallamthu Street
Chennai-600 001

FINANCIAL ASPECTS

1. COST OF PROJECT

[Rs.lakhs]

Land & Building (Advance)	0.60
Plant & Machinery	3.00
Other Misc. assets	0.20
Pre-Operative expenses	1.00
Margin for WC	<u>0.63</u>
	<u>5.43</u>

2. MEANS OF FINANCE

Capital	3.18
Term Loan	<u>2.25</u>
	<u>5.43</u>

3. COST OF PRODUCTION & PROFITABILITY STATEMENTS

Years	1	2	3
Installed Capacity (Kgs.)	4800	4800	4800
Utilisation	60%	70%	80%
Production/Sales (Kgs.)	2880	3360	3840
Selling Price/kg (in Rupee)	335 per Kg.		
Sales Value	9.65	11.26	12.86
Raw Materials	2.65	3.09	3.53
Consumables	0.22	0.25	0.29
Power	1.12	1.31	1.50
Wages & Salaries	3.60	3.78	3.97
Repairs & Maintenance	0.24	0.25	0.26
Depreciation	0.45	0.38	0.33
Cost of Production	8.28	9.06	9.88
Admin, & General expenses	0.60	0.63	0.66
Selling expenses	0.29	0.34	0.39
Interest on Term Loan	0.29	0.26	0.18
Interest on Working Capital	0.08	0.08	0.08
Total	9.54	10.37	11.19
Profit Before Tax	0.11	0.89	1.67
Provision for tax	0.00	0.30	0.57
Profit After Tax	0.11	0.59	1.10
Add:			
Depreciation	0.45	0.38	0.33

Cash Accruals 0.56 0.97 1.43

4. WORKING CAPITAL:

	Months Consumption	Values	%	Margin Amount	Bank Finance
Raw Materials	0.75	0.17	25%	0.04	0.13
Consumables	1.00	0.02	25%	0.01	0.01
Finished goods	0.25	0.17	25%	0.04	0.13
Debtors	0.50	0.40	10%	0.04	0.36
Expenses	1.00	0.50	100%	0.50	0.00
		<u>1.26</u>		<u>0.63</u>	<u>0.63</u>

5. PROFITABILITY RATIOS BASED ON 80% UTILISATION

<u>Profit after Tax</u>	<u>1.10</u>	
Sales	12.86	9%
<u>Profit before Interest and Tax</u>	<u>1.93</u>	
Total		32%
Investment	6.06	
<u>Profit after Tax</u>	<u>1.10</u>	
Promoters' Capital	3.18	35%

6. BREAK EVEN LEVEL

Fixed Cost (FC):

	[Rs.lakhs]
Wages & Salaries	3.97
Repairs & Maintenance	0.26
Depreciation	0.33
Admin. & General expenses	0.66
Interest on TL	<u>0.18</u>
	<u>5.40</u>

Profit Before Tax (P) 1.67

$$\text{BEL} = \frac{\text{FC} \times 100}{\text{FC} + \text{P}} = \frac{5.40}{7.07} \times \frac{80}{100} \times 100$$

61% of installed capacity

