

Domestic Flour Mill

PRODUCT CODE (ASICC)	76222
QUALITY AND STANDARDS	As per Customers Specification
PRODUCTION CAPACITY	Qty: 2400 Nos. (Per annum)
VALUE :	Rs. 144,00,000
YEAR OF PREPARatioN :	2002 - 2003
PREPARED BY :	Small Industries Service Institute Opp. Okhla Industrial Estate New Delhi - 110020. and Office of the Development Commissioner Small Scale Industries Electrical and Electronics Division 7th Floor, Nirman Bhavan, New Delhi - 110 011.

Introduction

Domestic Flourmill is an electrical appliance used to grind flour from grains like wheat, corn, millet, rice etc. The appliance has gained acceptance as an household appliance which can produce pure and good quality flour of a desired size at very economical rate. It is a very safe and user-friendly appliance and does not produce any dust and the entire operation is automatic.

Market Potential

Domestic flourmill is extensively used in western part of India like Gujarat, Maharashtra, etc. but is slowly and steadily gaining popularity in northern and eastern part of India also. There are few manufacturers of this type of machine like M/s. Natraj, M/s. Miliscent etc. The various models available in the market are costing from Rs. 8,000 to Rs. 14,000 depending upon the capacity and facilities in the machine. The proposed appliance has got good potential in the market as it is very convenient and produces pure and high-grade flour at the doorstep. It has good export potential also.

Basis and Presumptions

i) The basis for calculation of production capacity has been taken on single shift basis on 75% efficiency.

ii) The maximum capacity utilization on single shift basis for 300 days a year. During first year and

are released for production. In the production line, the components are shaped and formed using appropriate tools and assembled.

The electro-mechanical components, switches, Push buttons, regulators, blades etc. are fixed in an enclosure and inter-connected as per design. The complete unit is then tested as per the relevant specification. The tested unit are then packed well for dispatch to the customer.

Quality Aspects of Assembly

1. All the incoming raw material and components shall be inspected for any defect before assembly.

2. The components that are used to control the functioning of the equipment shall be fixed in such a way that it should not cause any strain to the operator and shall be clearly accessible to the operator.

3. The enclosures shall have accessibility for assembly, maintenance and service etc.

Quality Control and Standards

Input Power :230V, AC, Single phase

Capacity of Grinding: Wheat-10 kg/hr

Rice _ 6 kg/hr

Rawa _ 30 kg/hr

Millet _ 4 kg/hr

Corn _ 5 kg/hr

Production Capacity (per annum)

Quantity : 2400 Nos.

Value : Rs. 144,00,000

Motive power 20 kW.

Pollution Control

The Government accords utmost importance to control environmental pollution. The small-scale entrepreneurs should have an environmental friendly attitude and adopt pollution control measures by process modification and technology substitution.

India having acceded to the Montreal Protocol in September, 1992, the production and use of Ozone Depleting Substances (ODS) like Chlorofluore Carbon (CFCs), Carbon Tetrachloride, Halons and methyl Chloroform etc. need to be phased out immediately with alternative chemicals/solvents. A notification for detailed Rules to regulate ODS phase out under the Environment Protection Act, 1986 have been put in place with effect from 19th July 2000.

Energy Conservation

With the growing energy needs and shortage coupled with rising energy cost, a greater thrust in energy efficiency in industrial sector has been given by the Government of India since 1980s. The Energy Conservation Act, 2001 has been enacted on 18th August 2001, which provides for efficient use of energy, its conservation and capacity building of Bureau of Energy Efficiency created under the Act.

The following steps may help for conservation of electrical energy:

- i) Adoption of energy conserving technologies, production aids and testing facilities.
- ii) Efficient management of process/manufacturing machineries and systems, QC and testing equipments for yielding maximum Energy Conservation.
- iii) Optimum use of electrical energy for heating during soldering process can be obtained by using efficient temperature controlled soldering and de-soldering stations.
- iv) Periodical maintenance of motors, compressors etc.
- v) Use of power factor correction capacitors. Proper selection and layout of lighting system; timely switching on-off of the lights; use of compact fluorescent lamps wherever possible etc.

Financial Aspects

A. Fixed Capital

(i) Land and Building

Sl.No.	Description	Qty.(Sq. Mtr.)	Amount(Rs.)
1.	Work Shed	200	

2.	Office Block	50	
Total Built up area on Rent (per month)250			
Total			10,000

(ii) Machinery and Equipments

Production Unit

Sl. No.	Description	Qty./Nos.	Rate(Rs.)	Total(Rs.)
1	Drill Machine 1/2"	2	7500	15,000
2	Bench Grinder	1	4000	4,000
3	Ball press No.2	1	8000	8,000
4	Hand Shearing Machine 36" blade	1	8000	8,000
5	Bench vice 6" Jaw	4	500	2,000
6	Brazing Equipment	1	10000	10,000
	Total			47,000

Testing Unit

Sl.No.	Description	Qty./Nos.	Rate(Rs.)	Total(Rs.)
1	Megger	1	1,500	1,500
2	Multimeter Digital	2	3,000	6,000
3	Clamp tester	1	1,500	1,500
4	Testing Panel consisting of Amp.Meter, Volt Meter, Frequency Meter and watt Meter With Variac 0-270V, 8 Amp.	1	15,000	15,000
5	HV Tester 0-3 kV	1	5,000	5,000
	Total			29,000
	Say			76,000

Other Misc. Expenses on Fixed Assets (Rs.)

1	Dies Mould	LS	LS	30,000
2	Tool/Jigs/Fixture	LS	LS	10,000

3	Installation and electrification charges @ 10% of cost of machinery and equipment	LS	LS	7,600
4	Office equipment furniture	LS	LS	60,000
5	Pre-operative expenses	LS	LS	10,000

Total **1,17,600**

Total Fixed Capital **1,93,600**

B. Working Capital (per month)

(i) Raw Materials (per month)

Sl.No.	Description	Qty.(Set/No.)	Rate(Rs.)	Value(Rs.)
1	Motor 1hp/750 phase, 230 volts	200	2,000	400,000
2	Teak wooden Cabinet	200	1,000	200,000
3	Squeezing Blade	200	450	90,000
4	Micro Sieve	200	200	40,000
5	SS Sheet 18 SWG	200	400	80,000
6	GI Sheet 18 SWG	200	150	30,000
7	Electrical push buttons, Magnetic Regulator, Cooling Blades, Grinding Chamber, Delivery/ Storage Chamber and others miscellaneous items	200	800	160,000
	Total			1,000,000

(ii) Salary and Wages (per month) (Rs.)

1	Supervisor	1	6,500	6,500
2	Marketing executive/ servicing personnel	1	6,000	6,000
3	Skilled labour	4	5,000	20,000
4	Un-skilled Labour	2	4,000	8,000
5	Helper	2	3,000	6,000
	Total			46,500

(iii) Utilities (per month)		(Rs.)
1	Power	10,000
2	Water	500
	Total	10,500
	<i>Perquisites @ 15% of salary</i>	6,975
	Total	53,475

(iv) Other Contingent Expenses (per month)		(Rs.)
1	Rent	10,000
2	Insurance	1,000
3	Advertisement and Publicity expenses	7,000
4	Travelling expenses	5,000
5	Repair and Maintenance	2,000
6	Postage and Stationery	1,000
7	Telephone expenses/ Internet expenses	1,000
8	Misc. expenses	1,000
	Total	28,000

(v) Total Recurring Expenditure (per month)

(i)+ii)+iii)+iv) 1,091,975

(vi) Total Working Capital

(3 Months Basis) 3,275,925

C. Total Capital Investment

(i) Fixed Capital	1,93,600
(ii) Working Capital	3,275,925
Total	34,69,525
Say	34,69,500

Financial Analysis

(1) Cost of Production (per year)	(Rs.)
i) Total recurring cost	13,103,700
ii) Depreciation on machinery and equipments @10%	7,600
iii) Depreciation on officefurniture @20%	30,000
iv) Depreciation on Tools and Dies @25%	10,000
v) Interest on total capital investment @16%	5,55,120
Total	1,37,06,420
Say	1,37,06,000

(2) Turnover (per year)

Sl. No.	Item	Qty.	Rate (Rs.)	Total(Rs.)
	Domestic flour mill	2,400	6000	14,400,000
	Total			14,400,000

(3) Net Profit (per year)

$$= \text{Turnover} - \text{Cost of Production} = \text{Rs. } 694,000$$

(4) Net Profit Ratio

$$= \frac{\text{Net Profit} \times 100}{\text{Total Turn Over}}$$

$$= \frac{6,94,000 \times 100}{14,400,000}$$

$$= 4.82 \%$$

(5) Rate of Return

$$= \frac{\text{Net Profit} \times 100}{\text{Total Investment}}$$

$$= \frac{6,94,000 \times 100}{34,69,500}$$

$$= 19.99 \%$$

= 20%

(6) Break-even Point

Fixed Cost (per annum)	(Rs.)
i) Depreciation on machinery and equipments @10%	7,600
ii) Depreciation on office equipment and furniture @20%	30,000
iii) Depreciation on Tools and Dies @25%	10,000
iv) Interest on total capital investment @16%	555,120
v) 40% of salary and wages	256,680
vi) 40% of Other Contingent expenses and utilities (excluding rent and insurance)	132,000
vii) Rent + Insurance	132,000
Total	11,23,400

B.E.P.

= Fixed Cost x 100

Fixed Cost + Profit

= 1,123,400 x 100

1,123,400 + 694,000

= 1,123,400 x 100

1,817,400

= **61.81%**

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. The Electrical Technology is undergoing rapid strides of change and there is need for regular monitoring of the national and international technology scenario. The unit may, therefore, keep abreast with the new technologies in order to keep them in pace with the developments for global competition.

c. 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 and ISO 14001 defines standards for Environmental Management System for acceptability at international level. The unit may therefore adopt these standards for global competition.

d. The margin money recommended is 25% of the working capital requirement at an average. However, the percentage of margin money may vary as per bank's discretion.

Addresses of Plant and Machinery Suppliers

1. M/s. Crompton Greaves Co.
Vandana, 11, Tolstoy Marg,
New Delhi-110011.

2. M/s. Hindustan Motors Manuf. Co.
F-1/5, Ganga Triveni Apartments,
Sector_9, Rohini,
Delhi-110085

Instrument Suppliers

1. M/s. Essma Electricals
26-G.F, Netaji Subhash Marg,
Daryaganj,
Delhi-110002.

2. M/s. Gama Instrument (P) Ltd.
1779/2, Bhagirath Place,
New Delhi-110006.