

# **STEEL FURNITURE**

## **1. INTRODUCTION:**

Furniture is a product of design of sizes, shapes and décor, in addition to provide functional role. Furniture items are essential item for better living and working conditions. Chairs, stools, and sofas, tables, and sleeping beds, etc function oriented designs have evolved over the centuries of human civilization.

Furniture items are made from many materials, like traditional wood and stone to modern materials like metal, plastic, etc. Cast Iron is used with decorative carving or engraving designs have been used since centuries but in modern times for mass requirements, metals like steel, stainless steel and plastics are used due to lower costs.

## **2. PRODUCT & ITS APPLICATION:**

Every household and commercial building requires furniture. There are a whole range of items like chairs, bed, tables sofa seats, shelves etc. are required for huge growing population for residences and work places, and public places viz hotels, cinema theaters, restaurants, airports, etc.

Since wood has become scare and costly, steel and plastic furniture has become popular due to its durability and reasonable cost. Steel Furniture is easy to make, aesthetic utilitarian furniture designs have evolved with the use of materials like mild steel, stainless steel, cast iron etc.

For steel furniture choosing the right finish is important to provide aesthetic appeal and durability. Paint, powder coating, anodizing, chrome plating etc. are used.

## **3. DESIRED QUALIFICATIONS FOR PROMOTER:**

Any ITI, Diploma or graduate preferably with fabrication or marketing experience.

#### **4. INDUSTRY OUTLOOK/TREND**

The outlook of furniture industry prospects remains optimistic, mainly driven by the demand from construction, household remodeling, commercial etc sectors; due to recent economic and industrial policies and measures taken by government. The furniture market in India is highly fragmented with majority of the revenue being generated from the local players. The unorganized sector, which includes onsite carpenters, independent furniture manufacturers and domestic retailers have accounted for nearly 85% of the furniture market revenue in the country. In the recent years, moulded plastic, wrought iron, board and bamboo furniture have been widely purchased by the households in India.

New trend of ready made furniture modules for standard home formats are now being offered. In order to cater to the rising requirements, special Home décor show rooms and even online shopping is making inroads in the country. Number of companies have stepped up effort for mass produced modular steel and wood furniture market in the last few years.

The Indian furniture market, which has grown at a CAGR of 17.2% in last decade. The economic growth and policies of house for all, huge infrastructure investments, etc is likely to see annual rate growth of 15 % for next 5~7 year period. Heavy demand of household items including furniture and furnishing products from the urban class has historically been conducive to the growth of furniture market in India. This trend is expected stay in the future as well, as greater number of people are even in semi urban and rural areas are aspiring to achieve rise in the standard of living.

#### **5. MARKET POTENTIAL AND MARKETING ISSUES. IF ANY:**

The furniture market in India has historically witnessed a healthy boom in the country due to rapid urbanization in all the states across India. There are a number of factors which have led to a growth in furniture demand in the Indian households in the last few years. The growing economy of the country has boosted spending capacity of the people, young generation is adapting to modern living standards demanding furniture items hitherto not used in past, and urban home designs are getting more and more standard including the standard set of furniture and interior furniture fitments. This trend in turn has impelled the sales of modular ready made furniture units offered by branded modular furniture manufacturers in the market.

The growing phase of infrastructure and real estate market has augmented the demand for furniture products in the country. In the organized retail segment, the market is occupied by leading companies such as Godrej Interio, Home centre, Nilkamal, Durian Furniture, Style Spa among others, which have over the years grabbed significant position in the domestic market. Furthermore, the entry of international brands like IKEA etc is likely to strengthen trend for modular design and brand awareness.

There is new as well as replacement / house remodeling demand for these items and its growth is linked with growth of residential, commercial and office building construction. The construction industry is growing at a rapid rate in the country. Therefore there is scope for these items. It is recommended to develop and produce aesthetic and modular design of furniture components with precision and good decor. The scope is good for furniture units in the recent that offer modular designs for furniture retailing in India.

## **6. RAW MATERIAL REQUIREMENTS:**

Structural steel sections, CR, galvanizes steel sheets of various thickness, Perforated sheets, angles, channels, rods, pipes, wire mesh etc. are used. Cast iron, Aluminum sections, brass, bronze and stainless steel may also be used in combination with traditional wood, plywood, particle board, laminates etc Other materials are surface coating plating, paints, powder coating, and etc. materials.

## **7. MANUFACTURING PROCESS:**

The process of manufacture involves operations as below.

- Cutting of material sheets, tubes, pipes, sections as per required dimensions in shear machine. Certain components like cast iron and steel rods may be machined.
- Bending twisting and of rods/ pipes and forming of sheets in bending machine, press brake or deep drawing as per need.

- Welding of sections, pipes and sheets
- Drilling and threading of components
- Pickling and surface treatment like phosphating, anodizing, hard chrome plating etc. to provide surface finish to components.
- Painting and polishing of components.
- Assembly of parts with fasteners.
- Inspection and packing for dispatch.

The project should also focus on development of aesthetic designs of furniture for different uses in residential as well as commercial purposes. Also surface finishes viz anodizing, hard chrome plating, copper, brass, etc. in addition to paints, is important.

## 8. MANPOWER REQUIREMENT:

The unit shall require highly skilled service persons. The unit can start from 11 employees initially and increase to 26 or more depending on business volume.

Sr No	Type of Employees	Monthly Salary	No of Employees				
			Year 1	Year 2	Year 3	Year 4	Year 5
1	Skilled Operators	16000	3	4	6	6	8
2	Semi-Skilled/ Helpers	7000	6	8	10	12	12
3	Supervisor/ Manager	20000	0	0	0	1	1
4	Accounts/ Marketing	15000	1	1	2	2	2
5	Other Staff	7000	1	2	2	3	3
	<b>TOTAL</b>		11	15	20	24	26

## 9. IMPLEMENTATION SCHEDULE:

The unit can be implemented within 6 months from the serious initiation of project work.

Sr No	Activities	Time Required in Months
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1	Acquisition of Premises	2
2	Construction (if Applicable)	2
3	Procurement and Installation of Plant and Machinery	2
4	Arrangement of Finance	2
5	Manpower Recruitment and start up	1
	Total Time Required (Activities run concurrently)	6

## 10. COST OF PROJECT:

The unit will require total project cost of Rs 72.79 lakhs as shown below:

Sr No	Particulars	In Lakhs
1	Land	15.00
2	Building	25.00
3	Plant and Machinery	20.84
4	Fixtures and Electrical Installation	1.05
5	<i>Other Assets/ Preliminary and Preoperative Expenses</i>	1.00
6	Margin for working Capital	9.90
	TOTAL PROJECT COST	72.79

## 11. MEANS OF FINANCE:

The project will require promoter to invest about Rs 25.63 lakhs and seek bank loans of Rs 47.17 lakhs based on 70% loan on fixed assets.

Sr No	Particulars	In Lakhs
1	Promoters Contribution	25.63
2	Loan Finance	47.16
	TOTAL:	72.79

## 12. WORKING CAPITAL REQUIREMENTS:

Working capital requirements are calculated as below:

Sr No	Particulars	Gross Amount	Margin %	Margin Amount	Bank Finance
1	Inventories	5.22	40	2.09	3.13
2	Receivables	5.09	40	2.03	3.05
3	Overheads	2.73	100	2.73	0.00
4	Creditors	7.63	40	3.05	4.58
	<b>TOTAL</b>	20.66		9.90	10.76

### 13. LIST OF MACHINERY REQUIRED:

Sr No	Particulars	UOM	Qty	Rate	Total Value
	<b>Main Machines/ Equipment</b>				
1	Rod/ flat strip Twisting machine	Nos	1	25000	25000
2	Hand Shear Machines	Nos	2	12000	24000
3	Mech Power Press	Nos	2	23000 0	460000
4	Press brake	Nos	2	30000 0	600000
5	Sheet Shearing Machine	Nos	1	25000	25000
6	Manual Sheet Folding Machines	Nos	2	30000	60000
7	Fly Press	Nos	3	25000	75000
8	Sand Blasting Facility	Nos	1	80000	80000
9	Pickling and Surface treatment	Nos	1	25000 0	250000
10	Spray / powder Painting Facility	Nos	2	50000	100000
11	Rod / Flat/ Pipe Bending Bench	Nos	2	20000	40000
12	Pillar Drill	Nos	1	30000	30000
13	Lathe	Nos	1	45000	45000
14	Spot /Seam/ TIG Welding Machine	Nos	4	30000	120000
15	Paint Baking oven	Nos	1	70000	70000
	<u>Subtotal:</u>				<u>2004000</u>
	<b>Tools and Ancillaries</b>				
1	Misc. equipment Dies tools etc.	LS	1	50000	50000
2	Hand Tools and gauges	LS	1	30000	30000
	<u>Subtotal:</u>				<u>80000</u>
	<b>Fixtures and Elect Installation</b>				
	Storage and transport bins	LS	1	10000	10000

	Office Furniture	LS	1	5000	5000
	Telephones/ Computer	LS	1	15000	15000
	Electrical Installation	LS	1	75000	75000
	<u>Subtotal:</u>				<u>105000</u>
	Other Assets/ Preliminary and Preoperative Expenses	LS	1	10000 0	100000
	<b>TOTAL PLANT MACHINERY COST</b>				<b>2289000</b>

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of dies and tooling to have modern and flexible utensil designs. It may be worthwhile to look at reconditioned imported machines, dies and toolings. Some of the machinery and dies and toolings suppliers are listed here below:

1. Yashwant Industries  
440/7-A, G.I.D.C.,  
Nr.Neptune Textile, Odhav, Ahmedabad - 382 415.
2. Amritsar Machine Tools  
Plot No. 542, Part - A, M. I. E.,  
Bahadurgarh-124507, Haryana, India
3. Arpan Machine Tools  
No. 12/3, Atika Industrial Area, Near Jaydev Foundry  
Atika Industrial Area, Rajkot- 360002 Gujarat, India
4. RAJESH MACHINE TOOLS PVT. LTD.  
New Nehrunagar Main Road, 2 - Kailashpati Society, Plot No. 7, Dhebar Road  
(South), "ATIKA" Industrial Area,, Rajkot, Gujarat, India  
<http://www.rajeshpowerpressindia.com>

The above list of machine supplier is illustrative. There are many machinery, dies and tools suppliers and consultants at several industrial clusters all over India

where you may find suppliers of services and machineries for a chosen product mix.

#### 14. PROFITABILITY CALCULATIONS:

Sr No	Particulars	UOM	Year Wise estimates				
			Year 1	Year 2	Year 3	Year 4	Year 5
1	Capacity Utilization	%	40	50	60	70	80
2	Sales	Rs. Lakhs	61.04	76.30	91.56	106.81	122.07
3	Raw Materials & Other Direct Inputs	Rs. Lakhs	41.74	52.18	62.61	73.05	83.48
4	Gross Margin	Rs. Lakhs	19.30	24.12	28.94	33.77	38.59
5	Overheads Except Interest	Rs. Lakhs	9.78	9.78	9.78	9.78	9.78
6	Interest	Rs. Lakhs	6.60	6.60	6.60	6.60	6.60
7	Depreciation	Rs. Lakhs	4.79	4.79	4.79	4.79	4.79
8	Net Profit Before Tax	Rs. Lakhs	-1.87	2.95	7.77	12.60	17.42

The basis of profitability calculation:

The Unit will have capacity of 15000 units of modular steel furniture items per year with product mix consisting of standard products with designs that use combination of stainless steel / carbon steel, aluminum, brass, particle board/ plywood, glass, etc. The bulk /Distributor sales prices for average price range of product is taken at Rs 1000 to Rs 15000 depending type of module, size, design, materials, grade, etc. The raw material used are mild steel, brass, aluminum, as well as particle boards, plywood, etc as per bulk order specified by retailers. The direct costs of raw material costs and manufacturing for these products are taken at 65 ~ 75 %. The material requirements are considered with wastage/ scrap of 6 ~ 14 % of finished products, which can be sold at @ Rs 15 to 30 per Kg. and the income of same is added. Energy Costs are considered at Rs 7 per Kwh. The



depreciation of plant is taken at 10 % and Interest costs are taken at 14 -15 % depending on type of industry.

## **15. BREAK EVEN ANALYSIS**

The project is can reach break-even capacity at 43.88 % of the installed capacity as depicted here below:

<b>Sr No</b>	<b>Particulars</b>	<b>UOM</b>	<b>Value</b>
1	Sales at Full Capacity	Rs. Lakhs	152.59
2	Variable Costs	Rs. Lakhs	104.35
3	Fixed Cost incl. Interest	Rs. Lakhs	21.17
4	Break Even Capacity	% of Inst Capacity	<b>43.88</b>

## **16. STATUTORY/ GOVERNMENT APPROVALS**

The unit shall need industrial unit registration of state. The industry registration and approval for factory plan, safety for Fire requirement, registration as per Labor laws ESI, PF etc shall be required as per rules and applicability. Before starting the unit will also need GST registration for procurement of materials as also for sale of goods. There are no pollution control requirements, while unit will have to ensure solid waste/ scrap disposal in proper manner. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

## **17. BACKWARD AND FORWARD INTEGRATION**

The machines and equipments offer scope for diversification in to producing tailor made products for consumer for their industrial parts/ components by using the spare capacities and machine capabilities which may be attempted. As such there is not much scope for organic backward or forward integration.

## **18. TRAINING CENTERS/COURSES**

There are no specific training centers for this product design or production technology. However the dies and Tools development courses run by several centers of excellence viz Indo German Tool Room at Ahmedabad, Rajkot, Chennai, and CTTC Bhubaneshwar shall be helpful.

The most important scope of learning is in new product design and development by associating with institutes like NID etc. Entrepreneur may also study the new product designs, product range, features and specifications of leading Brands / competitors across the world by scanning the Internet and downloading data. Viz. North American, Europe, China etc markets.

Udyamimitra portal ( link : [www.udyamimitra.in](http://www.udyamimitra.in) ) can also be accessed for hand-holding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

**Disclaimer:**

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.

Source:- Udyami Mitra/Sidbi