

# ALUMINIUM UTENSILS



## 1. INTRODUCTION:

Food preparation in kitchen involves tasks like cutting food items to size, heating food on an open fire or on a stove, baking, grinding, mixing, blending, and measuring, boiling, stirring, frying; etc. and utensils are made for each task. Also different containers are also required for storing the processed and cooked food. Besides the utensils are also required for meal serving and eating.

These utensils are made from variety of materials ranging from clay, ceramics, glass, to metals like gold, silver, copper, brass, bronze, cast iron, steel, stainless steel and aluminum alloys. In addition utensils are also made from new materials like food grade plastics.

Utensils may be classified as cooking utensils that are put on fire i.e. cooking containers, or Kitchen processing utensil and Dining utensils consisting of containers and cutlery items and finally the food item storage containers. Liquids like water and beverages require a separate design class of utensils.

## 2. PRODUCT & ITS APPLICATION:

Several size and shape of utensils and containers like pans, boiling cooker, frying pans, baking pans, etc. are used in cooking. Serving utensils consist of containers, trays, etc. Dining utensils include various sizes of plates, bowls and cutlery items like spoons, fork, spatula, knives etc.

These products are made from clay, glass, ceramics, wood, and metals like cast iron, brass, bronze, copper, mild steel, stainless steel, and aluminum. Modern materials like plastics are also popular for non-cooking utensils.

Aluminum has advantages over other materials due to better strength with lower weight, higher heat conductivity, resistance to heat, and easy pliability to shape.

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

Any person, preferably with manufacturing or marketing experience and ITI, Diploma or graduation in technical field.

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

From the traditional to the modern society, across the globe, housewares have always existed as a major product category in the marketplace. Due to high degree of urbanization, proliferation of nuclear families and technological advancement, there have been far-reaching changes in the nature of housewares products. In India, globalization has also brought about significant changes in cooking, serving and dining habits. India is also witness to a major shift in buyer or consumer base for house-ware products. For young working couples in the urban setting, there have been wide ranging changes in lifestyle, in their socializing and food habits. Factors like healthy cooking, convenience, safety, functionality, time-saving devices and cookware are now driving the purchase decision.

House-ware is a growing category in the Indian domestic retail market with an annual growth of 25-30%. The future trends are likely to remain focused around products and retail formats. In terms of product range, non-stick cookware, healthy eating, wider range of cutlery and storage containers are some of the areas where we should see interesting developments in the near future.

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

Aluminum is quick to heat up food and has lower cost, thereby making it affordable to consumers. Aluminum utensils are used for dining and other uses, in low income

strata of population. However cooking utensils like cookers, pans, skillets etc. are used across the income strata and Products from over 100 brands are available from India. Branded products offering designs and quality are increasingly finding favour with Indian consumers in all segments of the market. Overall demand is growing between 20-30% depending on the sub-category. Despite competition, new design products are finding favors due to convenience and utility.

Government of India's "Housing for all by 2022" scheme is likely to see construction of over 30 million new homes over the next 8 years and will certainly provide a major boost to demand for home textiles, furnishing, home décor and house-ware products, which even currently is growing at a healthy 25% annually. With growing population there will always be new demand generation. In Kitchen, utensils are essential and almost each house hold and restaurants /hotels etc. require utensils. Besides there is a specific life cycle for utensils requiring replacement every 6 - 7 years. Therefore there is new and replacement demand in domestic market. Besides there is very good export demand in developed as well as developing markets that can be met by good quality manufacturers.

An entrepreneur needs to decide on the type of kitchen utensils he wants to manufacture. There are over 135 kitchen utensils design varieties available in the market. Success and profitability is ensured mostly on the product mix and design selection.

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

Aluminum Sheets of Various grades and thickness are required in sheet or coil form. Some components are pressure or gravity die cast. Other materials are consumables for process like lubricants for press forming, spin forming, polishing and anodizing. Rivets and fasteners are also required to assemble final products.

## **7. MANUFACTURING PROCESS:**

Utensil manufacturing involves metal forming /shaping process in press or through spin forming often involving complex geometries with straight sides and as well as curvatures of different radii.

These process steps may include:

- Blanking, Punching and piercing to cut out portion of metal.
- Deep drawing to shape and size metal sheet as per required design.
- Metal forming by spinning along the die surface to get desired profile.
- Bulging process to expand metal is forced to protrude.
- Beading and Curling to roll Metal under a die to create ring of material along the edge
- Coining or embossing to reduce thickness (max. up to 30%) of base thickness.
- Extruding where a pilot hole is pierced, and punch is pushed through, to expand the metal and grow in length.
- Necking and Rib Forming to create an inward or outward protrusion of metal on surface.
- Trimming to remove excess metal from the part is cut away to get the finished part.
- The utensils are anodized, polished and inspected.
- The finished utensils of various sizes are bunched in to set of utensils and packed for dispatch.

## 8. MANPOWER REQUIREMENT:

The unit shall require highly skilled service persons. The unit can start from 14 employees initially and increase to 30 or more depending on business volume.

Sr No	Type of Employees	Monthly Salary (Rs.)	No of Employees				
			Year 1	Year 2	Year 3	Year 4	Year 5
1	Skilled Operators	18000	6	8	10	12	12
2	Semi-Skilled/ Helpers	7000	6	8	10	12	12
3	Supervisor/ Manager	30000	0	0	0	1	1
4	Accounts/ Marketing	16000	1	2	3	3	3
5	Other Staff	7000	1	3	5	5	5
	TOTAL		14	19	26	30	30

## 9. IMPLEMENTATION SCHEDULE:

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

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

## **10. COST OF PROJECT:**

The unit will require total project cost of Rs 80.74 lakhs as shown below:

<b>Sr. No</b>	<b>Particulars</b>	<b>In Lakhs</b>
1	Land	0.00
2	Building	25.00
3	Plant and Machinery	24.30
4	Fixtures and Electrical Installation	1.90
5	Other Assets/ Preliminary and Preoperative Expenses	1.50
6	Margin for working Capital	28.04
	TOTAL PROJECT COST	80.74

## **11. MEANS OF FINANCE:**

The project will require promoter to invest about Rs 41.22 lakhs and seek bank loans of Rs 39.53 lakhs based on 70% loan on fixed assets.

<b>Sr No</b>	<b>Particulars</b>	<b>In Lakhs</b>
1	Promoters Contribution	41.22
2	Loan Finance	39.53
	TOTAL:	80.74

## **12. WORKING CAPITAL REQUIREMENTS:**

Working capital requirements are calculated as below:

Sr. No	Particulars	Gross Amount	Margin %	Margin Amount	Bank Finance
1	Inventories	26.60	40	10.64	15.96
2	Receivables	19.37	40	7.75	11.62
3	Overheads	2.57	100	2.57	0.00
4	Creditors	17.73	40	7.09	10.64
	TOTAL	66.26		28.04	38.22

### 13. LIST OF MACHINERY REQUIRED:

(Rs.)

Sr. No	Particulars	UOM	Quantity	Rate	Total Value
	Main Machines/ Equipment				
1	Hydraulic Press	Nos	1	500000	500000
2	Hydraulic Deep Drawing Press	Nos	1	900000	900000
3	Utensil spinning Lathes	Nos	3	45000	135000
4	Power Press	Nos	1	120000	120000
5	Profile cutting Machine	Nos	1	180000	180000
6	Edge trim/ beading/ curling m/c	Nos	2	40000	80000
7	Spot welding machine	Nos	1	65000	65000
8	Surface treatment tank	Nos	1	100000	100000
9	Riveting Machine	Nos	1	15000	15000
10	Polishing machines	Nos	3	20000	60000
11	Swaging /Embossing machine	Nos	1	20000	20000
12	Pillar drilling machine	Nos	1	25000	25000
	Subtotal:				2200000
	Tools and Ancillaries				
1	Misc. equipment Dies tools etc.	LS	1	200000	200000
2	Hand Tools and gauges	LS	1	30000	30000
	Subtotal:				230000

	Fixtures and Elect Installation				
	Storage transport bins and trolleys	LS	1	60000	60000
<b>Sr. No</b>	<b>Particulars</b>	<b>UOM</b>	<b>Quantity</b>	<b>Rate</b>	<b>Total Value</b>
	Office Furniture	LS	1	20000	20000
	Telephones/ Computer	LS	1	30000	30000
	Electrical Installation	LS	1	80000	80000
	Subtotal:				190000
	Other Assets/ Preliminary and Preoperative Expenses	LS	1	150000	150000
	<b>TOTAL PLANT MACHINERY COST</b>				<b>2770000</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>

5. Atlas Machines (India)  
20, Ambalal Dohi Marg, (Hammam St.),  
Fort, Mumbai, Maharashtra, India  
<http://www.atlasmachinesindia.com>
6. Pacific Engineering Corporation  
A-297, MIDC-Mahape, Near Mahape Bus Depot,  
Anthony Garage, Thane-Belapur Road, Mahape Midc,  
Navi Mumbai-400710, Maharashtra, India
7. Other well-known machine manufacturers who can be searched from internet are:  
Batliboi Ltd. Mumbai  
Bharat Fritz Werner Ltd.  
HMT Machine Tools Ltd.  
Praga Tools Ltd.  
Toolcraft Systems Pvt. Ltd.

#### 14. PROFITABILITY CALCULATIONS:

(Rs. Lakh)

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	Ra Lakhs	232.42	290.52	348.63	406.73	464.84
3	Raw Materials & Other Direct Inputs	Ra Lakhs	212.78	265.98	319.18	372.37	425.57
4	Gross Margin	Rs. Lakhs	19.63	24.54	29.45	34.36	39.27
5	Overheads Except Interest	Rs. Lakhs	9.86	9.86	9.86	9.86	9.86
6	Interest	Rs. Lakhs	5.53	5.53	5.53	5.53	5.53
7	Depreciation	Rs. Lakhs	5.27	5.27	5.27	5.27	5.27
8	Net Profit Before Tax	Rs. Lakhs	-1.03	3.88	8.79	13.70	18.61

The basis of profitability calculation:



The Unit will have capacity of 220 MT of Aluminum utensils with product mix consisting simple kitchen utensils of which approx. 45% consisting of modern designs viz pans, cookers and skillets with Bakelite handles per year. The running sizes /types/ designs will be selected. The bulk /Distributor sales prices of Aluminum utensils range from Rs 195 to Rs 225 per kg, while the modern designs are sold from Rs 270 to Rs 400 per kg depending on type/design/volume and customer base. The Aluminum sheets / circles used for utensils cost range from Rs 175 to Rs 215 per Kg. The material requirements are considered with wastage/ scrap of 15 % of finished products and scrap to be sold at @ Rs 90 ~ 110 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 42.09 % 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	581.05
2	Variable Costs	Rs. Lakhs	531.96
3	Fixed Cost incl. Interest	Rs. Lakhs	20.66
4	Break Even Capacity	% of Inst Capacity	42.09

## **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 Labour 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.

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

The machines and equipments offer scope for diversification in to producing other

consumer and 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 Utensil 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 etc. 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.

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