

PROJECT PROFILE ON ADJUSTABLE HOSPITAL BEDS

(Action Plan Year 2020-21)

PRODUCT : ADJUSTABLE HOSPITAL BEDS

QUALITY & STANDARD : As per IS/Customer specification

**PRODUCTION CAPACITY (P.A.) : i) General Purpose Hospital Beds
- 150 Nos.
ii) Fowlers Hospital beds
- 250 Nos.**

Value : Rs.47.00 Lacs

MONTH AND YEAR OF PREPARATION : May , 2020

**PREPARED BY : MECHANICAL DIVISION
Micro Small & Medium Enterprises
Development Institute,
Patliputra Industrial
Estate,Patna-800013**

**Telephone: 0612- 22262186, 2262208,
2262568**

Fax: 0612-2262719

ADJUSTABLE HOSPITAL BED

I. PRODUCT & ITS USES

Adjustable hospital beds are made of steel & normally used in Govt. Hospital, Private Hospital, & Nursing homes etc. There are two types of hospital beds namely:

- i) General purpose Hospital Bed Steeds
- ii) Fowlers Hospital Beds

II. MARKET POTENTIAL

The demands for adjustable beds are increasing day by day due to the following reasons:

- i) Increase the number of Hospitals in private sector& their expansion
- ii) Increase in number of private & Government nursing homes & their expansion.

The Govt. is encouraging new hospitals & nursing homes in private sectors in order to increase treatment facilities in accordance with the development in public health sector & as such it is likely to be a steady increase in the demand for hospital furniture in view of COVID 19 pandemic throughout the country. However, the growth rate is expected to be more than 5% to 8% per year and as such it may be ideal for the existing steel furniture manufacturer units to take up this activity for not only as diversification but also better capacity utilization by installing a few balancing equipments.

III PRODUCTION TARGET

It is proposed to manufacturer 400 adjustable Beds per annum.

IV BASIS & ASSUMPTIONS

- i) This project profile is based on 8 working hours a day and 25 days in a month and the break even efficiency has been calculated on 75% capacity utilization basis.
- ii) The gestation period in implementation of the project may be about 8 to 12 months. This period included making all arrangements, completion of all formalities, market surveys and tie ups, financial arrangements, purchase of machines, recruitment of staff, commissioning of plant and trial production etc.
- iii) The normal wages and salaries being paid in the industry to various grades of personnel have been considered and also the provision of minimum wages has been taken care of.
- iv) The rate of interest both for fixed and working capital have been taken as 14% P.A.
- v) The pay back period for finance to the financial institutions may be about 8/10 years in case of term loan. The working capital loan may however be in a shape of rolling/limit based capital.

A. IMPLEMENTATION SCHEDULE:

Implementation of the project involve various activities like market surveys and tie-ups, procurement of know-how, arrangement of premises/ land, building, preparation of project report, registration, financing, purchase of machines, commissioning of project, recruitment of staff and training, arrangement of power, procurement of raw materials, packing materials, trial production etc. In order to implement the project efficiently and in the shortest period there is a need to initiate many activities simultaneously as far as possible. This will not only cut the slack period but also will give quick results and be cost effective. It is advised to follow PERT/CPM/NET WORK

analysis technique for implementation along with their estimated time requirement is given below:

S.No.	Activity	Estimated period required
1.	Market survey	15-20 days
2.	Procurement of know-how/experts	30 days
3.	Arrangement of premises	30-45 days
4.	Obtaining quotations and preparation of project report.	15-20 days
5.	Statutory Compliances and financing.	45-60 days
6.	Recruitment of personnel and training.	30-45 days
7.	Obtaining power connection.	15-30 days
8.	Procurement of machines and equipments.	45-60 days
9.	Installation and electrification of machinery.	20-30 days
10.	Procurement of raw materials, consumables, packing materials etc.	5-10 days
11.	Product development/trial production.	5-10 days
12.	Commercial production.	5 days.

VI. PRODUCTION DETAILS & PROCESS OF MANUFACTURING:

The basic operations involved in the manufacturing of adjustable beds are as follows:

- i) Cutting & bending of pipes
- ii) Cutting of MS angles
- iii) Cutting of strips
- iv) Welding & Riveting
- v) Grinding
- vi) Assembly of elevating mechanism
- vii) Painting & baking

VII. INSPECTION & QUALITY CONTROL

IS: 7378-1974 specifies dimensional & other requirements of fowlers beds used in hospitals. The above specifications may be followed for quality control.

VIII. ENERGY CONSERVATION

This industry is not a large power consuming industry; however maximum care should be taken in utilization of electrical energy.

IX. POLLUTION CONTROL

These types of industries are not producing any effluents or any other polluting materials. Therefore pollution control measures are not taken into account.

X. PRODUCTION CAPACITY:

This unit is envisaged to produce 400 Nos. of different types of hospital beds to the worth of Rs. 47 Lacs.

XI. LAND & BUILDING

200 Sq. Mts. Built up shed rented @ Rs. 5000/- per month.

XII. MACHINERY AND EQUIPMENT

S.No.	Name of machine	Qty.	Rate (Rs.)	Amount(Rs.)
1.	Pipe bending machine hand operated with fixtures locally fabricated.	3 Nos.	30,000/-	90,000/-
2.	Arc welding set	1 Set	25,000/-	25,000/-
3.	Gas Cutting set with torch, regulators etc.	1 set	20,000/-	20,000/-
4.	Bench drill machine 13 mm capacity	1No.	25,000/-	25,000/-
5.	Portable drilling machine 13 mm capacity	1 No.	20,000/-	20,000/-
6.	Flexible shaft grinder 150 mm	1 No.	10,000/-	10,000/-

	wheels.			
7.	Double ended bench grinder 300 mm sizes.	1 No.	20,000/-	20,000/-
8.	Hand shearing machine 3 mm capacity	1 No.	10,000/-	10,000/-
9.	Baking oven 2.5 x 2 mts. X 2 mts. Size 20 Kw capacity.	1 No.	70,000/-	70,000/-
10.	Hand press No. 4	2 Nos.	7500/-	15,000/-
11.	Cleaning, pickling, phosphating tanks 2.5 x 2 x 2 mts.	L.S	L.S	1,00,000/-
12.	Compressor with spray gun unit for painting	1 No.	20,000/-	20,000/-
13.	Riveting m/c. portable type electrical operated.	1 No.	25,000/-	25,000/-
14.	Hand tools, instruments etc.	--	--	15,000/-
15.	Fixtures & dies.	--	--	50,000/-
16.	Electrification & installation @ 10% cost of machinery.	--	--	51,500/-
17.	Office equipments/work table etc.	--	--	75,000/-
18.	Pre-operative expenses	--	--	50,000/-
Total				6,91,500/-

XIII. STAFF & LABOUR

1.	Supervisor	1 No.	7,000/-	7,000/-
2.	Clerk/Accountant	1 No.	6,000/-	6,000/-
3.	Peon/Chowkidar	1 No.	4,000/-	4,000/-
4.	Skilled worker	2 Nos.	6,000/-	12,000/-
5.	Semi-skilled worker	2 Nos.	4,000/-	8,000/-
6.	Helpers	2 Nos.	3,500/-	7,000/-
7.	Labour benefits @ 20%	--	--	8,800/-

Total	52,800/-
-------	----------

XIV. RAW-MATERIAL (P.M)

1.	M.S. angle iron 40 mm x 40mm x3 mm & 38 mm x 38 mm x 3 mm 0.75 MT @ Rs. 35000/- per M.T.	26,250/-
2.	M.S.Tubes 38.10 mm OD x 1.6 mm/1.22mm thick 1.5 M.T @ Rs. 38,000/- per M.T.	57,000/-
3.	M.S.Tubes 25.40 mm OD x 1.6 mm/1.22mm thick 1.25 M.T @ Rs. 38,000/- per M.T.	47,500/-
4.	M.S.Tubes 19.5 mm OD x 1.22mm thick 0.75 M.T @ Rs. 38,000/- per M.T.	28,500/-
5.	M.S. Strips 1.25 mm x 25 mm 0.75 M.T @ Rs. 32,000/- per M.T.	24,000/-
6.	Castor wheels 200 Nos.	10,000/-
7.	Nuts, Bolts, Screws, Washers, Flats, Rubber items & paint etc.	20,000/-
Total		2,13,250/-

XV. UTILITES:

1.	Power (L.S)	5,000/-
2.	Water (L. S)	2,000/-
Total		7,000/-

XVI. OTHER EXPENSES (P.M)

1.	Rent	5,000/-
2.	Postage & Stationery (L.S.)	2,000/-
3.	Telephone (L.S)	2,000/-
4.	Repair & Maintenance (L.S)	2,000/-
5.	Consumable Stores (L.S)	3,000/-
6.	Transport Charges (L.S)	3,000/-
7.	Advertisement & publicity (L.S)	2,000/-

8.	Insurance (L.S)	2,000/-
9.	Sales Expenses (L.S)	10,000/-
	Total	31,000/-

XVII. WORKING CAPITAL (P.M):

1.	Staff & Labour	52,800/-
2.	Raw Materials	2,13,250/-
3.	Utilities	7,000/-
4.	Other Expenses	31,000/-
	Total	3,04,050/-

Working Capital for 3 Months = 3, 04,050/- x 3 = 9, 12,150/-

XVIII. TOTAL CAPITAL INVESTMENT:

1.	Machinery & equipment	6,91,500/-
2.	Working capital for three months `	9,12,150/-
	Total	16,03,650/-

XXI. COST OF PRODUCTION (P.A)

1.	Recurring Expenses	36,48,600/-
2.	Depreciation on machinery @ 10%	46,500/-
3.	Depreciation on jigs & fixtures @ 20%	10,000/-
4.	Depreciation on office equipment, furniture @ 20%	15,000/-
5.	Interest on total capital @ 14%	2,24,511/-
	Total	39,44,611/-

XXII. TOTAL SALE (P.A)

1.	By Sale of 250 Nos. Fowlers' hospital beds @ 15,000/- each.	37,50,000/-
2.	By Sale of 150 Nos. General purposes hospital beds @	9,00,000/-

	6,000/- each.	
3.	By sale of scrap (L.S)	50,000/-
	Total	47,00,000/-

XXIII. PROFIT:

$$\begin{aligned} \text{Profit} &= \text{Total Sale} - \text{cost of production} \\ &= 47,00,000 - 39,44,611 \\ &= 7,55,389/- \end{aligned}$$

PERCENTAGE OF PROFIT ON SALE:

$$= \frac{\text{Profit} \times 100}{\text{Total Sale}} = \frac{7,55,389 \times 100}{47,00,000} = 16.07\%$$

PERCENTAGE OF RETURN OVER INVESTMENT

$$= \frac{\text{Profit} \times 100}{\text{Total Capital investment}} = \frac{7,55,389 \times 100}{16,03,650} = 47\%$$

BREAK EVEN POINT (B.E.P)

$$= \frac{\text{Annual Fixed cost} \times 100}{\text{Annual fixed cost} + \text{profit}}$$

ANNUAL FIXED COST

1.	Rent	60,000/-
2.	Interest	2,24,511/-
3.	Depreciation on machinery & equipment @10%	46,500/-
4.	40% of salaries	2,53,440/-
5.	40% of other expenses including utilities & excluding rent & insurance.	1,24,800/-
	Total	7,09,251/-

$$\text{B.E.P} = \frac{7,09,251 \times 100}{7,09,251 + 7,55,389} = 48.42\%$$

ADDRESSES OF MACHINERY SUPPLIERS

1. M/s. Kwaliti Machine Tools, No. 25, J.C. Road, Near VSL Building, Bangalore-2
2. Nanny and Co., 125, Bilious Road, Howrah-711101.
3. Parked Machine tools, 5, Khetra Das Lane, Besides Broadway Holes, Howrah.
4. Atlas Works (P) Ltd, 100, Rippon Street, Calcutta-16.
5. M/s. K.G. Khosla & Co. Mathura Road, Badarpur, Delhi
6. M/s. Indian Oxygen Ltd., Nagaraj Road, New Delhi