

PROJECT PROFILE ON ASSEMBLY OF ELECTRONIC B. P. MACHINE

- 1. Product : ELECTRONIC B. P. MACHINE**

- 2. Production Capacity : 3000 Nos per Annum**

- 3. Year of Preparation: : 2010-11**

- 4. Prepared By : Micro, Small& Medium Enterprises
Development Institute , Patliputra
Industrial Estate, Patna-800013**

1. Introduction:

Doctors to measure the blood pressure of Patient in the clinic use B.P. machines. Blood pressure is the pressure that the blood exerts against the walls of the arteries as it passes through them. The high and low points of this pressure waves are measured with the sphygmomanometer or blood pressure monitor and are expressed numerically in millimeter of mercury.

Pulse refers to the periodic ejection of blood from the heart left ventricle into the aorta. The left ventricle or chamber receives blood from the left atrium, another of the heart chambers. By contracting the left ventricle drives the blood into the aorta, a central artery through which blood is relayed into the arteries of all limbs and organs except lungs. Pulse transmitted through the arteries as a repeated pressure wave is the mechanism that moves blood through the body.

The high and low points of this pressure waves are measured with the sphygmomanometer or blood pressure monitor and are expressed numerically in millimeter of mercury. The higher number systolic pressure measures the maximum pressure exerted on arteries and the heart muscles the lower figure diastolic pressure measure the minimum pressure exerted.

2. Market Potential

Electronic B.P. machines have a wide market prospect. This is sold in local/national market and also there are avenues for export market.

3. Basis & 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 the first year and second year of operations the capacity utilization 60% and 80% respectively. The unit is expected to achieve full capacity utilization from the third year onward.
- iii) The salary and wages, cost of raw materials, utilization, rent etc are based on prevailing rate in and around Patna. These cost factors are likely to vary with time and location.
- iv) Interest on term loan and working capital loan must be preferably current rate. Otherwise the rate of interest on an average may be taken as 13%. This rate may vary depending upon the policy of financial institutions/agencies from time to time.
- v) The cost of machinery and equipments refer to a particular make model and prices are approximate.
- vi) The breakeven point percentage indicated is of full capacity utilization.
- vii) The project preparation cost etc wherever required could be considered under preoperative expenses.
- viii) The essential production machinery and test equipments required for the project have been indicated. The unit may utilize common test facilities available at electronic test & development center (ETDC) and electronic regional test laboratories and regional testing center (RTC).

4. Implementation schedule

The major activity in the implementation of project has been listed and the average time for implementation of the project is estimated at 12 months.

Period in months (suggestive)

| | |
|---|---|
| 1. Preparation of project report | 1 |
| 2. Registration and other formalities | 1 |
| 3. Sanction of loan by financial institutions | 3 |
| 4. Plant and machinery | |
| a. Placement of orders | 1 |
| b. Procurement | 2 |

| | |
|---|------------------|
| c. Power connection electrification | 2 |
| d installation of machinery/test equipments | 2 |
| 5. Procurement of raw materials | 2 |
| 6. Recruitment of technical person | 2 |
| 7. Trial production | 11 th |
| 8. commercial production | 12 th |

Note

- Many of the above activities shall be initiated concurrently.
- Procurement of raw material commences from 8th month onward.
- When imported plant and machinery are required the implementation period of the project may vary from 12 months to 15 months.

5. Technical aspect

Processes of manufacture

All the parts of electronic BP machine are assembled to form a complete BP Monitoring machine. The digital blood pressure machine has several parts including the display unit, the arm cuff and the air hose. The individual would likely purchase a digital blood pressure monitor because the physician has diagnosed him with high blood pressure.

Main unit

The main unit shows the digital information. It also has a setting button for the date and time. It has off and on button. This button is used to start the measuring process too. The unit has LCD display, which displays the blood pressure in digits, and also the pulse rate is displayed.

Air tube and plug

The component also includes the air plug and air tube. The air plug must be plugged into the unit to air up the blood pressure cuff. This air tube and plug are made from a black or gray durable piece of rubber tubing. The air tube is connected to air pressure cuff.

Blood pressure cuff

The blood pressure cuff is the part that does the actual measurement of blood pressure. The cuff has arrows showing how it should be aligned to the arm. The blood pressure cuff also has Velcro to tighten it to the arm. It must not be tightened too tight because it could cause a misread on the unit. These measurements are displayed on the display unit.

Other components

Most units have AC adapter and backup batteries, which keep the stored info from being lost.

6. 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 govt. of India since 1980. The energy conservation act 2001 has been enacted on 18th August 2001, which provides for efficient use of energy, its conservation & capacity building of Bureau of Energy Efficiency created under the act. The following steps may help for conservation of energy:

1. Adoption of Energy conserving technologies, production aids and testing facilities.
2. Efficient managements of process/manufacturing machineries and systems QC and testing equipments for yielding maximum energy conservation.

3. Using efficient temperature controlled soldering and disordering stations can obtain optimum use of electrical energy for heating, during soldering process.
4. Periodical maintenance of motors, compressors etc.
5. Use of power factor correction capacitors, proper selection and layout of lighting system, timely switching on off of the lights use of CFLs wherever Possible.

7. FINANCIAL ASPECT

A. Fixed Capoitai

(i) Land and Building

| | |
|------------------------|-----------------|
| Built up Area | 2000 Sqft |
| Office, stores | 1000Sqft |
| Assembling and Testing | 1000Sqft |
| Rent Payable per annum | 48000 per annum |

(ii) Machinery and Equipment- The unit is supposed to carryout the assembling of BP machines therefore there is not specific requirement of Plant and Machinery.

| SN | Description | Indian/Imported | Qty | Value (Rs.) |
|----|--|-----------------|--------|-------------|
| 1 | Electronic measuring And testing equipment | Indian | 01 set | 30000 |
| 2 | Miscellaneous items | Indian | | 20000 |

| | | | | |
|--|--|--|--------------------------------|-------|
| | | | Total | 50000 |
| | | | Total Fixed Capital Rs. | |

B. WORKING CAPITAL PER MONTH

(i) Manpower

| SN | Designation | No of Persons | Salary Per Month | Total Salary Per Month |
|----|----------------|---------------|------------------|------------------------|
| 1 | Skilled Worker | 2 | 3000 | 6000 |
| 2 | Manager | 1 | 6000 | 6000 |
| | | | Total | 12000 |

(ii) Raw Material Requirement Per Month

| SN | Description | Indian/Imported | Qty | Rate | Value |
|----|------------------------------|-----------------|-----|-------|--------|
| 1 | Electronic Display Unit | Indian | 300 | 500 | 150000 |
| 2 | Air Tube & Plug | Indian | 300 | 50 | 15000 |
| 3 | Blood Pressure Cuff | Indian | 300 | 100 | 30000 |
| 4 | AC Adapter | Indian | 300 | 50 | 15000 |
| 5 | Battery and packing material | Indian | 300 | 40 | 12000 |
| | | | | Total | 222000 |

(iii) Utilities per month

| | |
|-------|------|
| Power | 2000 |
| Water | 1000 |
| Total | 3000 |

(iv) Other contingent expenditure per month

| SN | Description | Amount |
|----|--------------------------|--------|
| 1 | Rent | 4000 |
| 2 | Postage and stationary | 500 |
| 3 | Telephone/Fax | 500 |
| 4 | Repair and Maintenance | 500 |
| 5 | Transport and Conveyance | 1000 |
| 6 | Advt. And Publicity | 500 |
| 7 | Insurance and Taxes | 1000 |
| 8 | Miscellaneous expenses | 2000 |
| | Total | 10000 |

Total recurring expenditure per month (i+ii+iii+iv) = 247000/

C. Total capital Investment

| | |
|--------------------------------------|--------|
| Fixed Capital | 50000 |
| Working capital on three month basis | 741000 |
| Total | 791000 |

D. Financial Analysis

(I) cost of production per annum

| | |
|--|----------|
| Total recurring expenditure | 2964000 |
| Depreciation on machinery and equipment @10% | 5000 |
| Depreciation on tools, jigs, fixtures & office equipments @10% | Included |
| Interest on capital Investment @ 16% | 126560 |
| Total | 3095560 |

(II) Turnovers per annum

| Item | Qty (nos) | Rate/unit | Total sales (Rs.) |
|-----------------------|-----------|-----------|-------------------|
| Electronic BP Machine | 3000 | 1500 | 4500000 |

(III) Profit per annum (Before Taxes)

(Turnover per annum- cost of production per annum)= 4500000-3095560=
1404440

Profit ratio = profit per annum*100/Sales/Annum
=140444x100/4500000=31%

Rate of Return= Profit/Annumx100/ Total Capital Invest.
=140440x100/791000=178%

E. Break even Point

Fixed cost per annum

| | |
|--|----------|
| Rent per annum | 48000 |
| Depreciation on machinery and equipment @ 10% | 5000 |
| Depreciation on tools jigs and fixtures@25% | Included |
| Depreciation on office equipment furniture @ 20% | Included |
| Interest on total capital Investment@16% | 126560 |
| 40% of salary and wages | 57600 |
| 40% of other contingent & utilities | 62400 |
| Total Fixed cost | 299560 |

Break Even Point= fixed Cost*100/Fixed Cost+ Profit=
299560x100/299560+1404440=18%

List of Address of Supplier of Machinery and Raw material

For Blood pressure monitors

Medicare Products Inc.
C-53A, Mansarover Garden
New Delhi-110015
Tel: 011-25155540,65954347,65954347

Hospital Devices
A-33, DSIDC Engg. Complex
Mangolpuri Industrial Area
Phase 1 New Delhi-110083
Tel: 011-27921737

Leela Enterprises
Shop No 1 Varsha Building
Datta Pada Road, Opposite SBI, Borivali east
Mumbai, Maharastra
Tel; 022-28700501,32111211

Hospital Supply company
111,Chitaranjan Avenue
Kolkatta, west Bengal-700001
Phone: 033-22153349,22251141

SS Technomed Pvt. Ltd.
A-128, sector A-4, Tronica City, UPSIDC Industrial Area, Loni, Ghaziabad
UP Phones: 0120-2696390

HI-TEK Medical Solutions
346, Sultanpur,M.G. Road, New Delhi-110030
Phones: 9212388713

Shri Krishna International
A-85, Flat No 04, Paryavaran Complex
IGNOU Road, New Delhi
Phone: 01129253536