

Cotton Knitted Undergarments (Briefs, Panties, Vests)

PRODUCT CODE	: 260104000/260102008
QUALITY AND STANDARDS	: The following Indian Standards may be referred. IS 4663:1980, IS 4665:1975, IS 4809:1968, IS 4046:1981
MONTH AND YEAR OF PREPARATION	: November, 2002
PREPARED BY	: Small Industries Service Institute Janak Kuti, Chambaghat, Solan-173213 (H.P.)

INTRODUCTION

This project profile is for the setting up of unit for the manufacture of cotton undergarments such as vests, briefs and panties. Knitted undergarments are used and liked by the people because of its good drapability, stretchability, softness and absorbency of sweat characteristics. In this report, guidelines for setting up of unit for the manufacture of gents briefs, vests, ladies panties are given. Machinery and raw material required to set up this industry are indigenously available.

MARKET POTENTIAL

Hosiery industry is an ancient industry in the field of textile industry having very good potential in domestic market and also in the export market. There is increasing market demand for hosiery undergarments for its various advantages. Cotton undergarments are widely used by all classes of people because of its good absorbency,

cheaper prices and ready availability. These foundation garments are used by the people throughout the year under different climatic conditions. It is presumed that there will be no problem in marketing of knitted undergarments of good quality.

BASIS AND PRESUMPTIONS

This project is based on single shift basis with 8 hours and 300 working days in a year. The unit is proposed to be started in own building. Costs of machinery, equipment, raw material indicated in this report refer to a particular make and approximately to those prevailing at the time of preparation of this project and it is presumed that these rates are likely to vary from supplier to supplier and place to place. Cost of installation and electrification of plant and machinery is taken @ 10% of its cost.

Non-refundable deposits, project report cost, trial production cost,

security deposit with Electricity Board are taken under pre-operative expenses. Depreciation has been considered at 5% on building, 10% on plant and machinery, 15% on furniture and 15% on workshop accessories. Interest rate for the loan has been considered at 14% per annum.

IMPLEMENTATION SCHEDULE

Time period required for executing the project from preparation of project report to starting the trial run production will be 7 months period approximately. Considering that some of the many activities may be overlapping, the project implementation will take a total period of five months approximately for starting the actual production.

TECHNICAL ASPECTS

Process of Manufacture

The manufacturing process involves the following steps :

1. Procurement of Knitted Fabric

Dyed/bleached cotton knitted fabrics are to be procured from the open market. The fabric will be inspected by laying the fabric on the inspection table against light before cutting so that unevenness in colour/shades or any other fault if any visible in the fabric can be eliminated.

2. Cutting and Stitching

The inspected fabric is placed on the cutting table in layers and then the different parts of the respective garments are demarked by a chalk as per different sizes. Cutting of fabric layer is carried out by fabric cutting machine in order to have accurate dimensions.

Stitching of whole garment is carried out by the skilled workers with the help of overlock, sewing machines etc.

3. Washing, Checking, Pressing and Packing

Garments obtained from the sewing section will normally have some dirt/stains which are to be eliminated by treating them with mild soap solution in garment washing machine. Excess water is to be removed from the garments by charging in hydro-extractor and dried in garments drying tumbler.

Final checking is done by placing individual pieces on the checking table so that any fault and protruding thread in the piece may be removed. The individual pieces are pressed by pressing man to remove the wrinkle marks in the piece and packed in the paper board boxes specifically available for the purpose.

Quality Control and Standards

Necessary quality checking must be followed in each stage of manufacturing process in order to maintain the quality. BIS standards applicable for undergarments are given below:

Sl.No.	BIS No.	Title
1.	IS 4046:1981	Gents cotton knitted briefs
2.	IS 4809:1968	Cotton knitted string vests
3.	IS 4963:1980	Plain knitted cotton vests
4.	IS 4965(Part-1):1975	Interlock cotton knitted vests.

Production Capacity (per annum)

Product	Qty. (Dzs.)	Value (Rs.)
Vests and ladies panties	36,000	93,60,000
Briefs	18,000	50,40,000
Total	54,000	1,44,00,000

Motive Power

Total power of 22 HP is required to run this unit with proposed installed capacity. The above requirement of power is proposed to be obtained from State Electricity Board.

Pollution Control

Although not required, entrepreneurs are to contact State Pollution Control Board as a precautionary measure.

Energy Conservation

Wastage of energy should be minimised by proper house-keeping methods in order to keep the unit more competitive in the market.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building

Land	:	450 sq. mt.@Rs 150 psm. amounting Rs 67,500
	Factory shed	300 sq.mt.
Building Area	Store (Raw material)	50 sq.mt.
	Store (Finished goods)	50 sq.mt.
	Office etc.	
	Total covered area	25 sq.mt.
	Total construction cost Rs. 1,800/sq.mt.	7,65,000
	Total investment in land and building.	8,32,500

(ii) Machinery and Equipments

Sl. No.	Description	No.	Rate (In Rs.)	Amount (In Rs.)
(a)	Cutting machine (Power Operated)	1	65,000	65,000
(b)	Overlock machine (3 thread) with motor and stand (1/2 HP)	55	6,000	3,30,000
(c)	Folding machine with stand and motor (1/2HP motor)	4	12,000	48,000
(d)	Rib Cutting machine with stand and motor (1/2 HP motor)	2	5,000	10,000

Sl. No.	Description	No.	Rate (Rs.)	Amount (In Rs.)
(e)	Sewing machine with motor stand (1/2 HP)	4	4,500	18,000
(f)	Scissors, measuring instruments, checking table and miscellaneous items	LS	25,000	25,000
(g)	Garment washing machine 12kg. capacity	1	65,000	65,000
(h)	Hydro-extractor 25 kg. capacity	1	70,000	70,000
(i)	Dryer Tumbler 25 kg. capacity	1	1,45,000	1,45,000
(j)	Washing room trolleys	4	9,000	36,000
(k)	Steam press portable type	6	18,000	1,08,000
(l)	Packing, forwarding, CST and Others	LS		92,000
	Total			10,12,000

(iii) Other Fixed Assets	(Rs.)
(a) Erection and installation	92,000
(b) Office furniture	30,000
(c) Pre-operative expenses	15,000
Total	1,37,000
Total Fixed Capital	11,49,000

B. Working Capital (per month)

(i) Staff and Labour Wages

Sl. No.	Designation	Nos.	Rate (Rs.)	Amount (In Rs.)
1.	Plant Manager	1	8,000	8,000
2.	Sales Representative	1	5,000	5,000
3.	Clerk/Store-keeper	1	3,000	3,000
4.	Peon	1	2500	2500
5.	Watchman	1	2500	2500
	Total			21000
<i>Production Staff</i>				
1.	Cutting Master	1	7,000	7,000
2.	Supervisor	1	4,000	4,000
3.	Skilled workers	67	3,500	2,34,500
4.	Pressing man	6	3,000	18,000
5.	Helpers	7	2,300	16,100
	Total			279600

S.Total	300600
<i>Perquisites @ 20%</i>	60120
G.Total	3,60,720

(ii) Raw Material

Sl. No.	Description	Qty. Unit	Rate (In Rs.)	Amount (In Rs.)
1.	Dyed/bleached knitted cotton cloth 40s count for vests and panties (kgs.)	2,520	140	352,800
2.	Dyed/bleached knitted cotton cloth 30s and 34s count for briefs (kgs.)	756	130	98,280
3.	Top elastic for briefs and panties (mts.)	18,000	4	72,000
4.	Leg elastic for briefs and panties (mts.)	21,000	1.5	31,500
5.	Labels, size label, polythene bag, brand boxes	LS 10,000		10,000
6.	Sewing thread	LS 8,000		8,000
7.	Detergent for washing	LS 5,000		5,000
	Total			5,77,580

(iii) Utilities (per month)	(Rs.)
Electricity bill	11,000
Water charges	1,000
Total	12,000

(iv) Other Contingent Expenses (per month) (Rs.)	
(a) Advertisement and Publicity	5,000
(b) Postage/stationery	500
(c) Repair and maintenance	7,667
(d) Transport/travelling charges	2,500
(e) Insurance	500
(f) Telephone bills	1,000
(g) Miscellaneous expenses	2,000
Total	19,167

(v) Total Recurring Expenses (per month) 9,69,467

(vi) Total Working Capital for 3 months 29,08,401

C. Total Capital Investment (Rs.)

(i) Land and building	8,32,500
(ii) Machinery and equipment	11,49,000
(iii) Working capital for 3 months	2908401
Total	4889901

MACHINERY UTILIZATION

Capacity utilisation of plant and machinery is considered as 70% of installed capacity. However, this can be improved to 80% during 3rd year of production.

FINANCIAL ANALYSIS

(1) Cost of Production (per year)	(Rs.)
Recurring expenses	11633604
Depreciation on building @ 5%	38,250
Depreciation on machinery @ 10%	92,000
Depreciation on office furniture @ 15%	4500
Interest on total investment @ 14%	684586
Total	1,24,52,940

(2) Turnover (per year) by Sales

Product	Qty. (Rs.)	Rate/Dz (Rs.)	Amount (Rs.)
Vest and Ladies panties	36,000	260	93,60,000
Briefs	18,000	280	5040,000
Total	54,000		1,44,00,000

(3) Net Profit (per year) Rs. 1947060

(4) Net Profit Ratio (Net Profit/Turnover (per year) Rs. 13.52%

(5) Rate of Return on Investment (Net Profit/Total Capital Investment) Rs. 39.81%

(6) Break-even Point

Fixed Cost	(Rs.)
Depreciation	1,34,750
Interest on capital investment	684586
40% of wages of staff and labour	1731456
40% of other contingent expenses	144800
Insurance	12000
Total	2707592

$$\begin{aligned}
 \text{B.E.P.} &= \frac{\text{FC} \times 100}{\text{FC} + \text{profit}} \\
 &= 58.16\%
 \end{aligned}$$

Kaikondanahalli,
Sarjapur Road,
Near Bellaandur Gate,
Bangalore-560035.

Addresses of Machinery and Equipment Suppliers

1. M/s. Paras Special Machine Co.
Madhopur Kucha No. 7,
Rohan Road, Ludhiana.
2. M/s. Vijay Sewing (P) Ltd.
17-D, Everest House, 46-C,
Chowringhee Road, Kolkata.
3. M/s. Industrial Machines Pvt. Ltd.
1/23 B, Asaf Ali Road,
New Delhi-110002.
4. M/s. Apparel and Leather
Techniques Pvt. Ltd.

5. M/s. Industrial Sewing Systems
30, Ramakrishna Street,
North Usman Road,
T. Nagar, Chennai.

Raw Material Suppliers

1. M/s. Vardhman Threads,
Mahavir Spinning Mills Ltd.
Chandigarh Road,
Ludhiana-141001.
2. M/s. Powerloom Cloth
Manufacturing Centre
Erode, Bhiwandi, Mumbai, Surat etc.