



A collage of images related to the leather sector. It includes large rolls of red and brown leather, a close-up of a leather strap being worked on by a machine, a brown leather briefcase with a handle and buckle, and a pair of brown leather lace-up boots.

Stock Taking of the Existing Technologies  
for the Potential Entrepreneurs of

**LEATHER SECTOR**



Small & Medium Enterprise Foundation



# **Stock Taking of Existing Technologies for the Potential Entrepreneurs of Leather Sector**

**April 2017**



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# **Stock Taking of Existing Technologies for the Potential Entrepreneurs of Leather Sector**

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## **Foreword**

Small and Medium Enterprises (SMEs) play a very crucial role in employment creation and overall economic development of any country. Among the formidable barriers encountered by SMEs access to technology is a prominent one. In a developing country like Bangladesh, SMEs have fallen behind in terms of awareness, adoption and adaptation of updated technologies which prominently describes the productivity enhancement and overall competitiveness of the enterprise.

SME Foundation is working as the apex organization in Bangladesh with the aim of promoting the growth of SMEs of manufacturing and service-oriented field of prioritized sectors of national economy declared by the National Industry Policy 2016. In order to address the growing demands of technical information about prospective products and their production process from new and existing entrepreneurs, the SME Foundation has taken an initiative to develop sector-wise booklets and information stocks containing most basic technical information to develop any product. As a result, four publications from four priority sectors viz. i) Light Engineering Sector; ii) Plastic Sector; iii) Agro-Processing Sector and iv) Leather Sector have been prepared.

The sole purpose of this document is to facilitate entrepreneurs and/or potential investors by providing them with a general understanding of the prospective products, raw materials, required technology, necessary machineries, probable investment costs and broad description of sourcing ideas.

**SM Shaheen Anwar**  
General Manager  
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## **Disclaimer**

The information presented in this publication provides only a generic collection of ideas on the selected subject. The data were collected from various reliable sources based on certain assumptions and may differ from case to case in real life situations. There is limited warranty on the correctness of the collected data/information whence the publication has been faithfully reviewed by the expert on relevant subject matter. SME Foundation and its employees do not assume any liabilities resulting from any decision taken based on this document. The prospective users of this document are encouraged to undertake detail investigation, accumulate necessary information and consult professionals/technical experts prior to taking any decisive action.

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# Introduction to the Leather Sector of Bangladesh

The leather industry of Bangladesh was initiated with the establishment of a tannery at Narayanganj early back in 1940 but it was gradually relocated to Hazaribagh, Dhaka and expanded in large-scale from 1970 to 2017. Until the last quarter of 2016, so far 220 tanneries were reported to be producing finished and crust leather in Hazaribagh, in fact, only 113 tanneries were in effective operation, out of those 20 units were reported to be fairly large & 7 units be very large. As most of the tanneries did not have proper effluent plants and were generating about 20,000 m<sup>3</sup> tannery effluent and 232 tons' solid waste per day the industry was causing heavy pollution to the locality and the river 'Buriganga' for years (Paul, H. L., et.al. 2013)<sup>1</sup>. In 2003 BSCIC took a project of BDT 175.75 crore to relocate the tanning industry from Hazaribagh to Savar. Although the project cost ballooned up to Tk 1,078.71 crore and the relocation delayed for 15 years, from first quarter of 2017 about 155 tanneries by turn started to relocate their tanneries to Savar at a 200-acre Industrial Park equipped with modern CETP to minimize the pollution problem.

The major export items of tanneries include high quality finished & crust leather since the ban of raw and wet-blue export by the Government in 1990. Leather goods and footwear manufacturing industries also boomed to grow across the country since 1990 as soon as the value addition opportunities were realized by the policy makers. At present, there are about 30 modern shoe manufacturing plants engaged in the production of high-quality footwear, with over 2500 smaller footwear manufacturers. There are around 100 small-to-medium leather goods manufacturers, and a small number of larger leather goods factories. At present the sector directly employs more than 7 Lac workers with a significant proportion of female worker.

Leather sector in Bangladesh is tremendously growing which earned worth \$1.27 billion and \$1.34 billion respectively in 2014 and 2015. Although the overall sector's contribution to the world market is roughly as little as 0.5% where current world market size is nearly 250 Billion USD.<sup>2</sup>

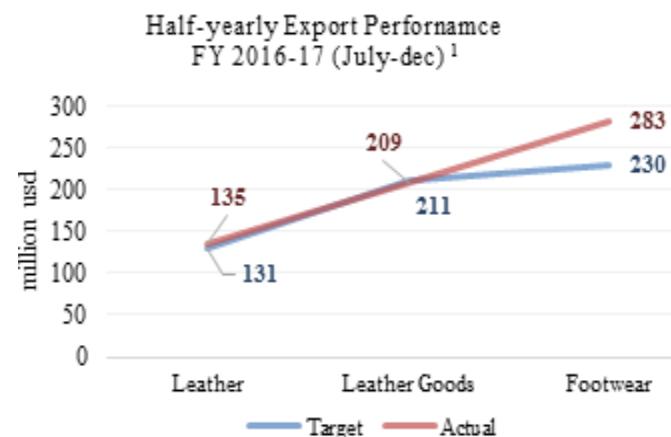
Sl	Region	Export 2012 (Billion USD)	Export 2013 (Billion USD)	Export 2014 (Billion USD)	Export 2015 (Billion USD)	Growth Rate	Trend	Market %
1	<b>World</b>	<b>230.44</b>	<b>253.91</b>	<b>266.96</b>	<b>249.44</b>	<b>2.7%</b>		<b>100%</b>
2	China	78.55	85.56	91.33	88.72	4.1%		35.6%
3	Vietnam	9.16	10.79	13.42	15.73	19.8%		6.3%
4	Italy	12.88	14.69	15.37	13.06	0.4%		5.2%
5	Germany	8.11	8.98	9.93	8.74	2.5%		3.5%
6	Belgium	5.77	6.85	7.24	6.90	6.2%		2.8%
8	India	5.07	6.47	6.91	6.30	7.5%		2.5%
12	Indonesia	3.99	4.34	4.57	4.95	7.5%		2.0%
7	<b>Bangladesh</b>	<b>0.80</b>	<b>1.06</b>	<b>1.27</b>	<b>1.34</b>	<b>19.0%</b>		<b>0.5%</b>
13	The Philippines	0.16	0.31	0.39	0.59	53.7%		0.2%
9	Cambodia	0.06	0.07	0.08	0.31	71.5%		0.1%
10	Myanmar	0.12	0.13	0.14	0.23	23.7%		0.1%
11	Ethiopia	0.10	0.14	0.14	0.14	11.4%		0.1%

<sup>1</sup> Paul, H. L., et.al. 2013. Bangladeshi Leather Industry: An Overview of Recent Sustainable Developments.

<sup>2</sup> ITC market analysis tool (<http://www.trademap.org>), Retrieved on 13/02/2017 4:21:47 PM

The chart shows a rough comparison of accumulated export of entire leather sector under HS group 41, 42, 43 and 64 over period 2012-2015. It clearly indicates a declining export potentiality of giant market players like China, Italy etc. Vietnam is incessantly capturing China's market share with a steady growth where Bangladesh is facing huge competition with Cambodia, Myanmar, The Philippines, Indonesia and India.

Fortunately, our export earnings showing a sign of steady growth since it exceeded the target by 9.64 percent in the first half of the 2016-17. The trend of July-Dec export performance shows positive vibe to reach export target of 1.22 Bill USD in FY 2017.<sup>3</sup>




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<sup>3</sup>Export Promotion Bureau (EPB), Export Data from July to December 2016.

## **Acronym**

BCPC	Bangladesh Central Product Classification
BDS	Bangladesh Standard
BFLLFEA	Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association
BGAPMEA	Bangladesh Garments Accessories and Packaging Manufacturers and Exporters Association
BSIC	Bangladesh Standard Industrial Classification
BSTI	Bangladesh Standards and Testing Institution
BTA	Bangladesh Tanners Association
CAD	Computer Aided Design
CETP	Central Effluent Treatment Plant
CLRI	Central Leather Research Institute
DIP	Direct Injection Process
EVA	Ethyl Vinyl Acetate
FOB	Free on Board
HS	Harmonized System
ISO	International Organization for Standardization
KW	Kilo Watt
LFMEAB	Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh
PE	Poly Ethylene
PU	Poly Urethane
PVC	Poly-Vinyl Chloride
RPM	Rotation per minute
SME	Small and Medium Enterprise
TPR	Thermoplastic Rubber

**Stock Taking of Existing Technologies  
for the  
Potential Entrepreneurs**

**of**

**‘Leather Sector’**

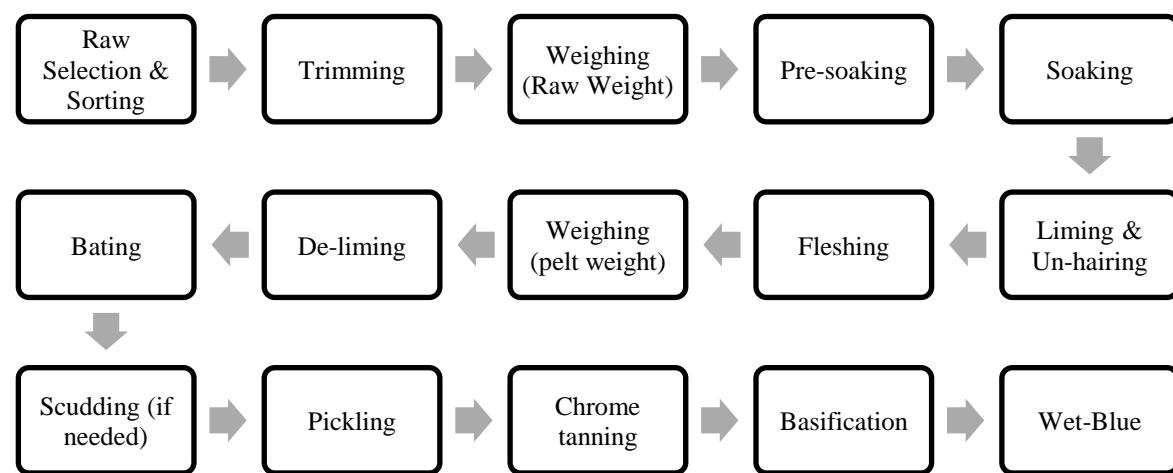


Sector	Sub-sector	Product Name	Product No
Leather	Leather	Wet-Blue Leather	060101
		<b>BSIC Code : 1511</b> <b>BCPC Code : 29120, 29130</b> <b>HS Code : 410410, 21, 22, 29, 31, 39</b> <b>                  410511, 12, 19, 20</b> <b>                  410611, 12, 19, 20</b> <b>                  410710, 21, 29, 90</b> <b>Wet blue leather is an intermediate product manufactured from putrescible hides/skins through chrome tanning. Due to resistant to biochemical attack it is non-perishable but can't be used in final products. It's major raw material for crust or finished leather.</b>	
<b>Raw Material</b>			
<ol style="list-style-type: none"> <li>1. Fresh or wet/dry salted raw hides from cow, goat, sheep, calf, buffalo and other animals and birds.</li> <li>2. Chemical Agents: Wetting agents, Soaking enzyme, Bactericide, Lime, Liming auxiliaries, De-greasing agent, Un-hairing agents, Common salt, Hypo, De-liming agent, Bating agent, Formic acid, Sulfuric acid/ Hydrochloric acid, Fungicides, Chrome/ Vegetable tanning agents, and Water.</li> </ol>			
<b>Source of Raw Materials</b>			
1. Fresh/Wet/Dry salted raw Hide/ Skins	1. Bangladesh Hide & Skin Merchants Association, 88/A, Water Works Road, Postha, Dhaka-1211, Tel: +88029663203		
2. Leather Processing Chemicals	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486		
<b>Machineries</b>			
<b>1. Flesing Machine</b>		FOB Price: US \$13,500 - 17,000 / Set Voltage: 3 phase 380 v,60 Hz Power(W): 55 KW (L*W*H):600x2800x2000 mm <sup>3</sup> <a href="http://www.alibaba.com/product-detail/leather-flesing-machine_1543190355.html?s=p">http://www.alibaba.com/product-detail/leather-flesing-machine_1543190355.html?s=p</a>	
<b>2. Processing Drum</b>		FOB Price: US \$2,000 - 40,000 / Piece Power(W): 30 KW Dimension: 3x3 m <sup>2</sup> Weight: 8 Tons <a href="http://www.alibaba.com/product-detail/Overloading-cow-leather-processing-drum_1105183480.html">http://www.alibaba.com/product-detail/Overloading-cow-leather-processing-drum_1105183480.html</a>	

## List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka-1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on tanning materials: Chrome tanned, Vegetable tanned, Pre-tanned, Wet white, Aldehyde tanned leather, etc.

## References for Further Reading

1. Tony Covington; "Tanning Chemistry -The Science of Leather" (2011), The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 0WF, UK.
2. Dutta, S.S.; "An Introduction to the Principles of Leather Manufacture" (1999) Fourth Edition Ilta, Mercantile Buildings, Lalbazar, Calcutta-700001, India.
3. Sarkar K.T.; "Theory and Practice of Leather Manufacture" Revised First Edition, 1981, Ajoy Sarkar, 4, Second Avenue, Mahatma Gandhi Road, Madras-600041, India.
4. Sharphouse J. H.; "Leather Technicians Handbook"
5. Harvey A. J.; "Footwear Materials & Process Technology"
6. Heidemann E.; "Fundamentals of Leather Manufacturing", Darmstadt 1993

Sector	Sub-sector	Product Name	Product No
Leather	Leather	Crust Leather	060102
		<b>BSIC Code : 1511</b> <b>BCPC Code : 29120, 29130</b> <b>HS Code : 411200</b> <b>411310, 20, 30, 90</b> <p>The re-tanned leather which has been dyed, fat-liquored and dried is known as crust leather. It can be used for making products and need to be finished. This leather is exportable and can be supplied to other tanneries for producing finished leather.</p>	

### Raw Material

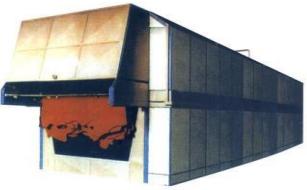
1. Wet blue leather of various source like domestic animals and birds.
2. Chemical Agents: Wetting agent, Re-tanning agent, Dye stuffs, Fat-liquoring agents, Fillers, Fixing agents, Water-proofing agents, etc.

### Source of Raw Materials

1. Wet Blue	1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a> , <a href="http://www.tannersbd.com">www.tannersbd.com</a>
2. Processing Chemicals	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486

### Machineries

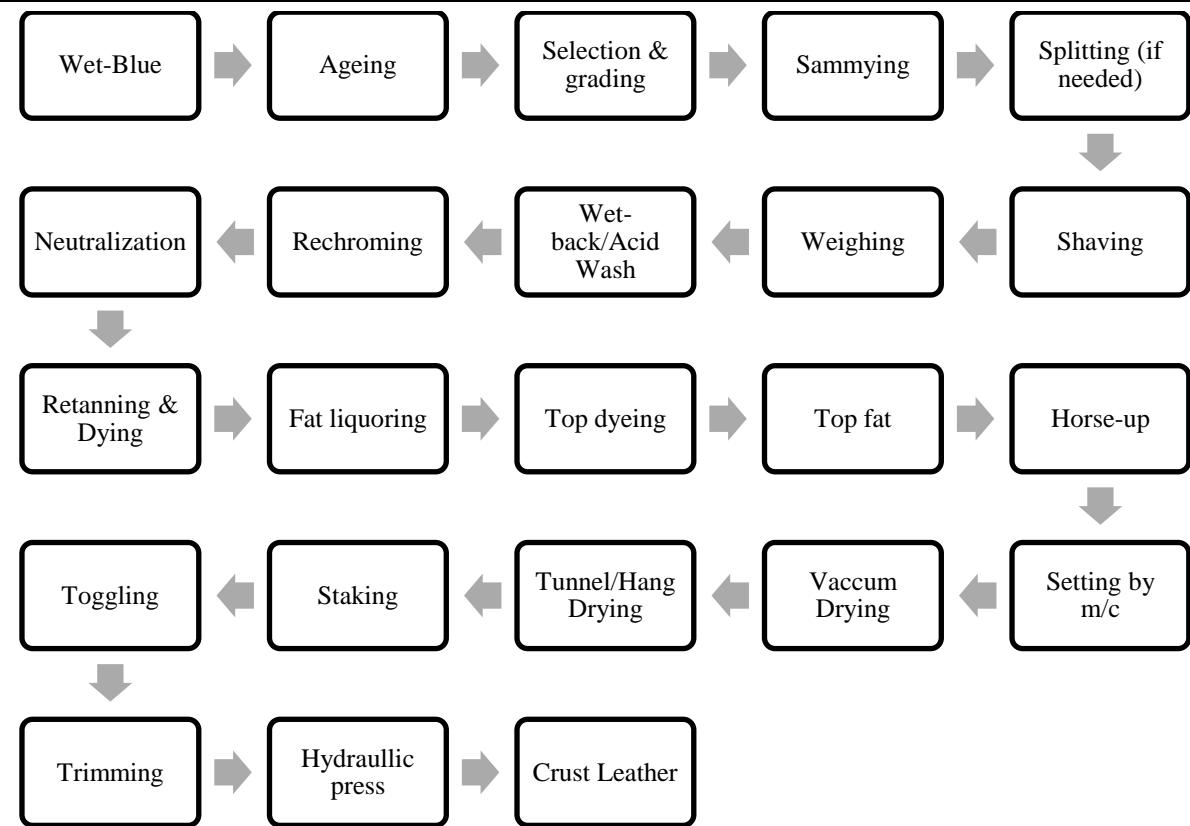
1. Sammying Machine		FOB Price: US\$10,000-12,000/ Set <a href="http://www.alibaba.com/product-detail/leather-machines_161045911.html">http://www.alibaba.com/product-detail/leather-machines_161045911.html</a> Power(W): 37KW (L*W*H): 5830*1600*1625 mm
2. Splitting Machine		FOB Price: US \$10,000-68,500 / Set <a href="http://www.alibaba.com/product-detail/leather-splitting-machine-for-wet-blue_1854838384.html?s=p">http://www.alibaba.com/product-detail/leather-splitting-machine-for-wet-blue_1854838384.html?s=p</a> Range: 1200 to 3200mm
3. Shaving Machine		FOB Price: US \$1,000 - 20,000 / Set <a href="http://www.alibaba.com/product-detail/shaving-machine-leather_1536848531.html?s=p">http://www.alibaba.com/product-detail/shaving-machine-leather_1536848531.html?s=p</a> Power: 20KW L*W*H: 2500x2000x2000 mm
4. Processing Drum		FOB Price: US \$2,000 - 40,000 / Piece <a href="http://www.alibaba.com/product-detail/Overloading-cow-leather-processing-drum_1105183480.html">http://www.alibaba.com/product-detail/Overloading-cow-leather-processing-drum_1105183480.html</a> Power(W): 30kw Dimension(L*W*H): 3x3m, Weight: 8t

5. Setting Machine		FOB Price: US \$10,000 - 62,000 / Set <a href="http://www.alibaba.com/product-detail/3200-China-best-leather-setting-out_617586342.html">http://www.alibaba.com/product-detail/3200-China-best-leather-setting-out_617586342.html</a> Power: 30KW (L*W*H): 5600x2000x1600mm
6. Vacuum Drying Machine.		FOB Price: US \$1,000 - 20,000 / Set <a href="http://www.alibaba.com/product-detail/processing-leather-for-hot-water-leather_1581758461.html">http://www.alibaba.com/product-detail/processing-leather-for-hot-water-leather_1581758461.html</a> Voltage: 3 phase,380v ,60HZ Power(W): 100KW
7. Tunnel Dryer		FOB Price: US \$10,000 - 30,000 / Set <a href="http://www.alibaba.com/product-detail/steam-tunnel-conveyor-leather-hanging_1571148410.html">http://www.alibaba.com/product-detail/steam-tunnel-conveyor-leather-hanging_1571148410.html</a> Voltage: 3 phase 380v (L*W*H): 3000x1000x3000mm, Weight:10t
8. Vibrating Stacking Machine		FOB Price: US \$10,000-62,000 / Set <a href="http://www.alibaba.com/product-detail/tannery-Vibration-staking-machine_613929700.html">http://www.alibaba.com/product-detail/tannery-Vibration-staking-machine_613929700.html</a> Voltage: 380v/3phase
9. Toggling Machine		FOB Price: US \$500 - 5,000 / Set <a href="http://www.alibaba.com/product-detail/2400mm-Auto-leather-toggling-drying-machine_1850972512.html">http://www.alibaba.com/product-detail/2400mm-Auto-leather-toggling-drying-machine_1850972512.html</a> Range: 2400mm Power(W): 22kw
10. Hydraulic plating Machine		FOB Price: US \$1,000 - 2,000/ Set <a href="http://www.alibaba.com/product-detail/embossing-press-leather_1530924508.html">http://www.alibaba.com/product-detail/embossing-press-leather_1530924508.html</a> Power(W): 7.5-37KW (L*W*H): 2800*1700*2700MM
11. Buffing Machine		FOB Price: US \$7,500 / Piece <a href="http://www.alibaba.com/product-detail/Dry-buffing-machine-for-tanneries-leather_137128947.html">http://www.alibaba.com/product-detail/Dry-buffing-machine-for-tanneries-leather_137128947.html</a> width: 1500 mm
12. Area measuring Machine		FOB Price: US \$2,500 - 3,500/ Set <a href="http://www.alibaba.com/product-detail/Computer-Control-Leather-Measuring-Machine_626075465.html">http://www.alibaba.com/product-detail/Computer-Control-Leather-Measuring-Machine_626075465.html</a> Working width: 2200 `mm Working speed: 25 m/min Motor Power: 0.75 kw

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2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Origin: Cow, Goat, Sheep, Calf, Buffalo, Exotic skins, etc.
2. Techniques: Full chrome, Semi-chrome, Chrome re-tanned and Full vegetable natural, full drum dyed or partial drum dyed crust leather.

## References for Further Reading

1. Tony Covington; "Tanning Chemistry -The Science of Leather" (2011), The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 0WF, UK.
2. Dutta, S.S.; "An Introduction to the Principles of Leather Manufacture" (1999) Fourth Edition Ilta, Mercantile Buildings, Lalbazar, Calcutta-700001, India.
3. Sarkar K.T.; "Theory and Practice of Leather Manufacture" Revised First Edition, 1981, Ajoy Sarker, 4, Second Avenue, Mahatma Gandhi Road, Madras-600041, India.
4. Sharphouse J. H.; Leather Technicians Handbook
5. Harvey A. J.; "Footwear Materials and Process Technology"
6. Heidemann E.; "Fundamentals of Leather Manufacturing", Darmstadt 1993

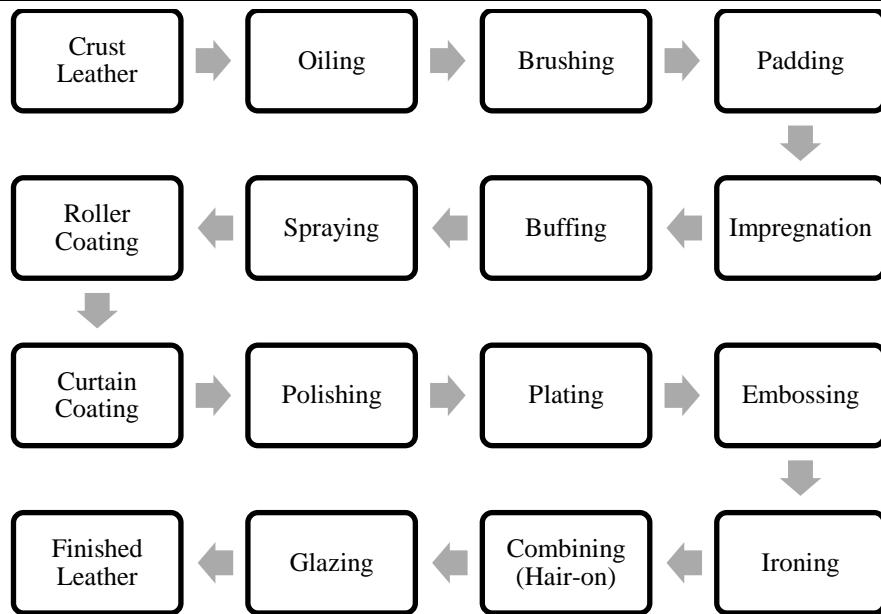
Sector	Sub-sector	Product Name	Product No
Leather	Leather	Finished Leather	060103
		<p><b>BSIC Code</b> : 1511  <b>BCPC Code</b> : 29110  <b>HS Code</b> : 410800, 410900  411200, 411310  411320, 30, 90  411410, 20</p> <p>Finishing operations give the final appearance to the crust leather and make it useful, attractive and appealing to its user. Finishes on leather also serve as a water-proof or protective coating. Finished leather is used for footwear and leather products making and can be exported.</p>	
<b>Raw Material</b>			
<ol style="list-style-type: none"> <li>Crust leather of various sources like domestic animals and birds.</li> <li>Chemical Agents: Auxiliaries, binders, pigments, lacquers (dull/shiny), solvents, thinner, plasticizers and various oils and waxes, dyes, modifiers, resin, penetrator etc.</li> </ol>			
<b>Source of Raw Materials</b>			
1. Wet Blue	1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a> , <a href="http://www.tannersbd.com">www.tannersbd.com</a>		
2. Processing Chemicals	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486		
<b>Machineries</b>			
1. Roller Coating Machine		<p>FOB Price: US \$1,000 - 25,000 / Set  <a href="http://www.alibaba.com/product-detail/1800mm-tannery-machine-forward-leather-roller_617558869.html">http://www.alibaba.com/product-detail/1800mm-tannery-machine-forward-leather-roller_617558869.html</a></p> <p>Power: 20 KW  (L*W*H): 3000x2500x2000 mm</p>	
2. Curtain Coating Machine		<p>FOB Price: US \$12,500 - 26,500 / Set  <a href="http://www.alibaba.com/product-detail/Lacquer-Curtain-Coating-Machine-Made-In_918103517.html?s=p">http://www.alibaba.com/product-detail/Lacquer-Curtain-Coating-Machine-Made-In_918103517.html?s=p</a></p> <p>width: 620mm - 1320mm  speed: 2-60m/min</p>	

3. Polishing Machine		FOB Price: US \$10,000 - 50,000 / Set <a href="http://www.alibaba.com/product-detail/1500mm-1800mm-Leather-polishing-machinery-for_1672372853.html">http://www.alibaba.com/product-detail/1500mm-1800mm-Leather-polishing-machinery-for_1672372853.html</a> Power: 20.62 kw (L*W*H): 2310x2170x1625 mm Weight: 3000 kg
4. Hydraulic plating Machine		FOB Price: US \$1,000 - 2,000/ Set <a href="http://www.alibaba.com/product-detail/embossing-press-leather_1530924508.html">http://www.alibaba.com/product-detail/embossing-press-leather_1530924508.html</a> Power (W): 7.5-37 KW (L*W*H): 2800*1700*2700 MM
5. Roller Embossing Machine		FOB Price: US \$10,000 - 22,000 / Set <a href="http://www.alibaba.com/product-detail/Roller-type-leather-ironing-and-embossing_1664428582.html">http://www.alibaba.com/product-detail/Roller-type-leather-ironing-and-embossing_1664428582.html</a> Power: 30kw (L*W*H): 2500x2500x1500mm, Wt.: 8 Tons
6. Auto Spray Machine		FOB Price: US \$10,000 - 500,000 / Set <a href="http://www.alibaba.com/product-detail/spraying-machine-tannery-1200-to3400mm-Reciprocating_647471214.html">http://www.alibaba.com/product-detail/spraying-machine-tannery-1200-to3400mm-Reciprocating_647471214.html</a> Width: 1200 – 3400 mm

#### List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka-1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Origin-wise: Cow, Goat, Sheep, Calf, Buffalo, Exotic skins, etc.
2. Technique-wise: Glaze, Plate, Glaze/ plate, Full Grain, Corrected grain, Embossed, Spray, Curtain coating, Spray, Roll coating, Film transfer, etc.
3. Effect-wise: Aniline, Semi-aniline, Opaque, Easy care, Two or multi tone, Brush off, Antique, Fancy, Invisible, Crackle, Padding, Foam, Solvent free or solvent poor, etc.
4. Material-wise: Casein, Polymer or binder, Nitro cellulose, Cellulose ester, Polyurethane, Patent, etc.

## References and Further Reading

1. Tony Covington; “Tanning Chemistry -The Science of Leather” (2011), The Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 0WF, UK.
2. Dutta, S.S.; “An Introduction to the Principles of Leather Manufacture” (1999) Fourth Edition Ilta, Mercantile Buildings, Lalbazar, Calcutta-700001, India.
3. Sarkar K.T.; “Theory and Practice of Leather Manufacture” Revised First Edition, 1981, Ajoy Sarker, 4, Second Avenue, Mahatma Gandhi Road, Madras-600041, India.
4. Sharphouse J. H.; “Leather Technicians Handbook”.
5. Harvey A. J.; “Footwear Materials and Process Technology”.
6. Heidemann E.; “Fundamentals of Leather Manufacturing”, Darmstadt 1993.

Sector	Sub-sector	Product Name	Product No
Leather	Footwear	All Terrain Sandal	060201
		<p><b>BSIC Code : 1520</b>  <b>BCPC Code : 29320, 29330, 29340, 29341</b>  <b>HS Code : 640299, 640399, 640419 640510, 640520</b></p> <p><b>This sandal is meant for use in rafting, hiking, and is often waterproofed and with an all-terrain outsole.</b></p> <p><b>Category: Gents, Ladies, Children</b></p>	

#### Raw Material

1. Upper Materials: Finished Leather, Split / suede leather, Canvas, Textile Fabrics, EVA sheet, Synthetic Upper Materials etc.
2. Lining Materials: Leather, Split leather, textile fabrics, synthetic lining, EVA Sheet etc.
3. Bottom materials PVC/ TPR/ Rubber etc. as outsole. Foot-bed (EVA sheet as midsole, cellulose board etc. as insoles and leather/ synthetic/ textile as in-socks.)
4. Accessories: Threads- Nylon/Polyester, fastenings- buckle (metallic/plastic), Buttons (Metal/Plastic), Rivet and Eyelet (Metal/Plastic), Velcro (Plastic), PVC, PE or Rubber Stickers and trimmings, Adhesives (Water and Solvent Based), Shoe rooming agents, Dyes and Pigments etc.

#### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/lining and Bottom Components	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/textile upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Sole, Shoe Last and Bottom Materials	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383</li> </ol>

5. Thread	1. Bangladesh Sewing Thread Manufacturers & Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883
6. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>
7. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
8. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
9. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>

### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage:3 phase 380/220v, 50Hz
2. Travelling Head Cutting Press Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5KW (L*W*H): 1960*750*2020mm, Wt.: 1520kg
3. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3kw (L*W*H): 1850*610*1700mm Weight: 1750kg
4. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS

5. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114 mm Skiving Width: 4-15 mm Rotation Speed: 1100-1200 rpm Voltage: 220V/50 Hz
6. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5 KW dimensions (mm): 650*550*1600
7. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400w weight: 32/36kgs
8. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Max. Sewing Speed: 2500/min Max. Sewing Thickness: 10 mm Stitch Length: 7.0 mm Power: 370 W/250 W
9. Zig-Zag (Flat-Bed) Sewing Machine		FOB Price: US \$150 - 4,200/ Set <a href="http://www.alibaba.com/product-detail/new-electronic-zig-zag-sewing-machine_660338829.html">http://www.alibaba.com/product-detail/new-electronic-zig-zag-sewing-machine_660338829.html</a> Max. Sewing Speed: 5000 RPM Sewing Thickness: 5.5-10 MM Stitch Length: 5, Power: 370 W Dimensions: 540*250*370 CM
10. Cylinder bed Sewing Machine		FOB Price: US \$385 - 425 / Set <a href="http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html">http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html</a> Max. Speed: 2200 RPM Max. Thickness: 9.6 MM Stitch Length: 6 MM Power: 250 W

11. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5 kw (L*W*H): 1010*660*1550 mm
12. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37 KW Exterior Size: 760*520*1490 mm
11. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25 kw Speed :2800 rpm Dimensions: 730×800×1300 mm
12. Universal Sole Press Machine		FOB Price: US \$500 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html">http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html</a> Power: 1.5 Kw Net weight: 500 Kg Size: 1100*600*1800 mm
13. Sole Stitching machine		FOB Price: US \$5,000 / Set <a href="http://www.alibaba.com/product-detail/Double-threads-Sole-Stitch-Shoe-Making_212038657.html">http://www.alibaba.com/product-detail/Double-threads-Sole-Stitch-Shoe-Making_212038657.html</a> Horn size: 30 mmx50 mm Power: 370 W

#### List of Local Suppliers of Machineries

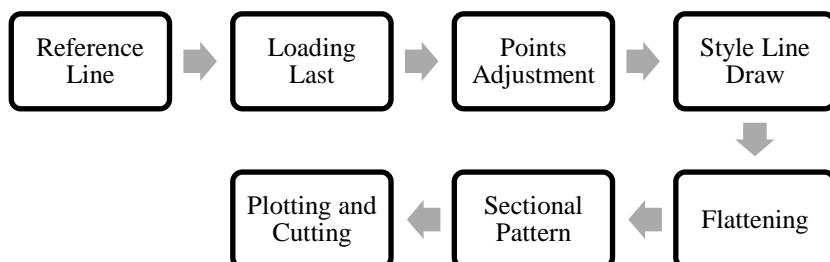
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka-1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

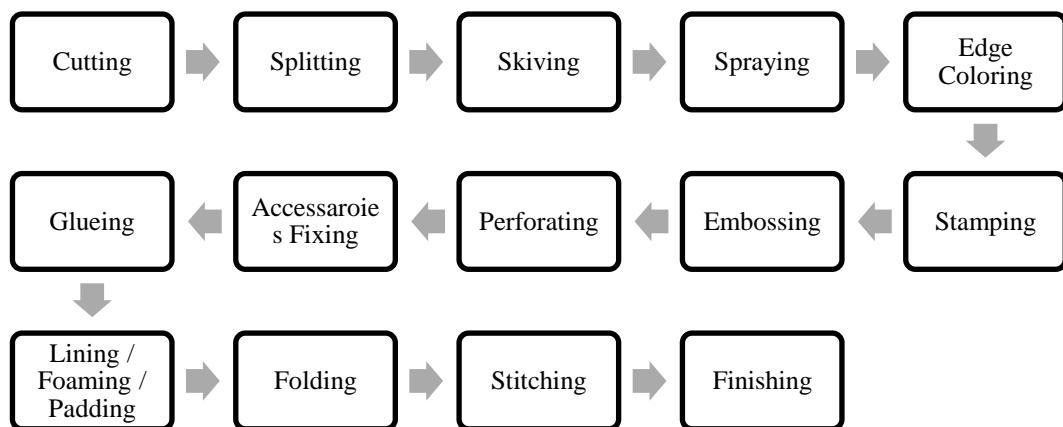
### Shoe Designing and Pattern Making: (Manual):



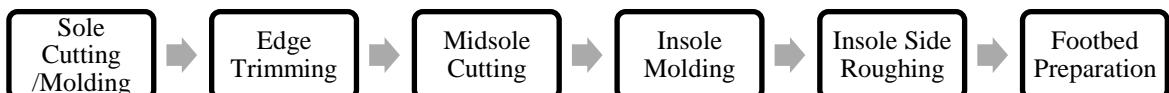
### Shoe Designing and Pattern Making: (CAD):



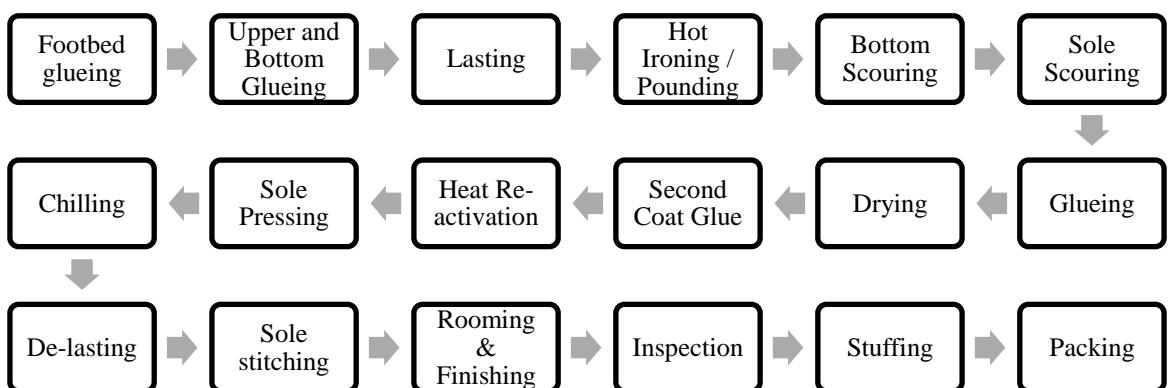
### Shoe Upper Preparation:

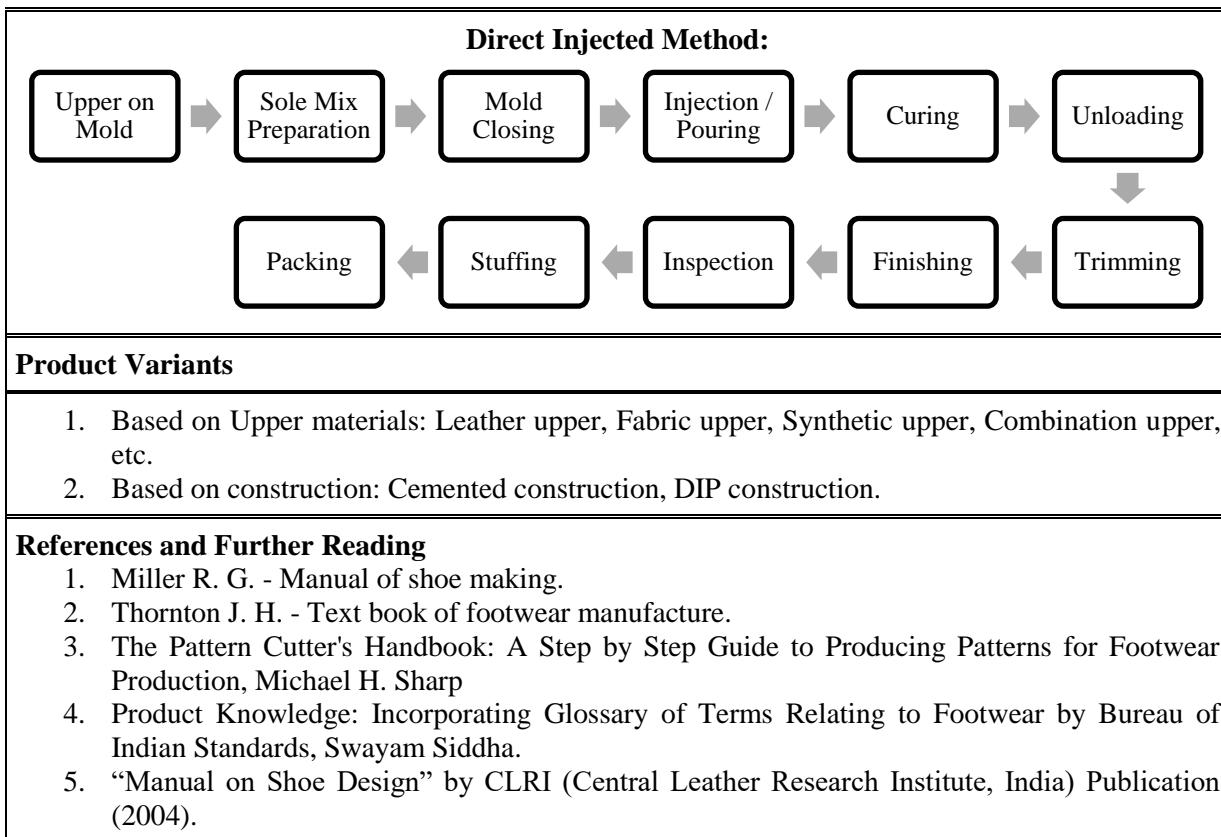


### Bottom Preparation:



### Lasting:





Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Athletic Shoe(Canvas)	060202A
		<b>BSIC Code</b> : 1520 <b>BCPC Code</b> : 29420 <b>HS Code</b> : 640411 <b>This is a type of athletic footwear made of canvas or denim fabrics. Mostly for casual walking, tennis, training and daily use.</b> <b>Category</b> : Unisex	

### Raw Material

1. Upper Materials: Canvas, Denim, Textile fabrics etc.
2. Lining Materials: Textile fabrics lining.
3. Bottom materials PVC/ TPR/ Rubber etc. as outsole with or without pre-formed toe cap. Mostly formed with upper by direct injection. PVC/Rubber raw granules for Injection.
4. Accessories: Threads –Nylon/Polyester, fastenings – Rivet and Eyelet (Metal/Plastic), Adhesives (Water and Solvent Based), Shoe laces, Back and toe stiffener, etc.

### Source of Raw Materials

1. Denim/ textile for upper/ lining	1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734
2. Sole, Shoe Last and Bottom Materials	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383</li> </ol>
3. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob: 01552-367883</li> </ol>
4. Accessories	<ol style="list-style-type: none"> <li>1. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
5. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>
6. Finishing Chemical	<ol style="list-style-type: none"> <li>1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486</li> </ol>
7. Shoe Box and Cartoon	<ol style="list-style-type: none"> <li>1. Bangladesh Corrugated Carton &amp; Accessories Manufacturers' &amp; Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a></li> </ol>

## Machineries

1. Canvas hydraulic pressure die cutting machine		FOB Price: US \$5,000 - 7,300 / Set <a href="https://www.alibaba.com/product-detail/Canvas-hydraulic-pressure-die-cutting-machine_60323707067.html">https://www.alibaba.com/product-detail/Canvas-hydraulic-pressure-die-cutting-machine_60323707067.html</a> Force: 25-50 tons work table: 610*1600mm Main motor power: 2.2-4 kw
2. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000 rpm Thickness: Heavy Power: 400 w weight: 32/36 kg
3. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/min Thickness: 10 mm Stitch Length: 7.0 mm Power: 370W/250 W
4. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?spm">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?spm</a> Power(W): 1.5kw (L*W*H): 1010*660*1550mm
5. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37 KW Exterior Size: 760*520*1490 mm
6. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6KW Dimensions: 1100*1000*1980 mm
7. DIP Molding Machine	 	FOB Price: US \$20,000 - 22,000 / Set <a href="http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html">http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html</a> Power (W): 11 kw and 15 kw (L*W*H): 4000*3600*2300 mm Workstation: 6 - 12

## List of Local Suppliers of Machineries

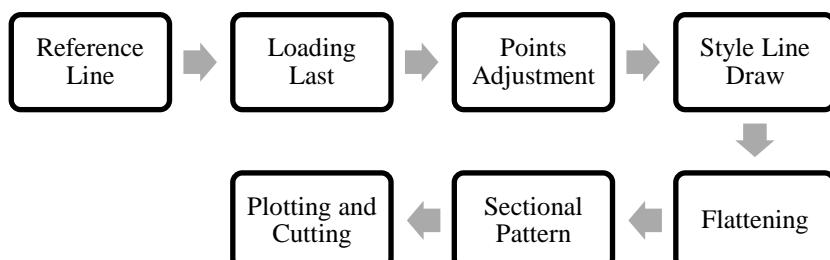
6. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
7. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
8. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
9. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
1. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

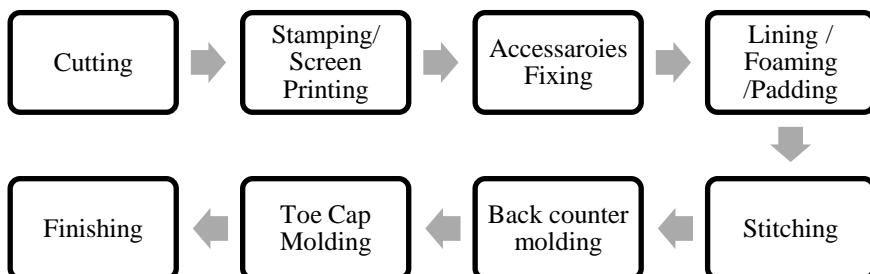
### Shoe Designing and Pattern Making: (Manual):



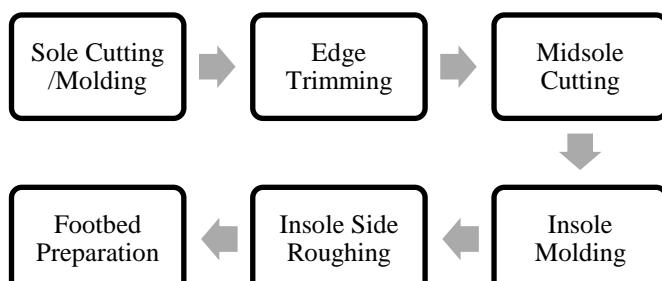
### Shoe Designing and Pattern Making: (CAD):



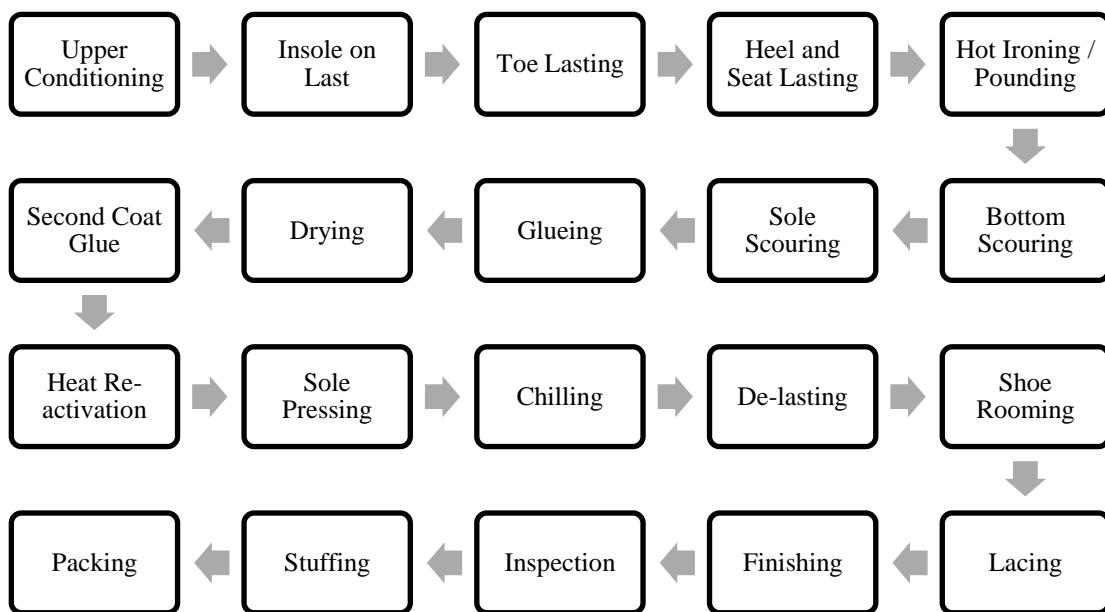
### Shoe Upper Preparation:



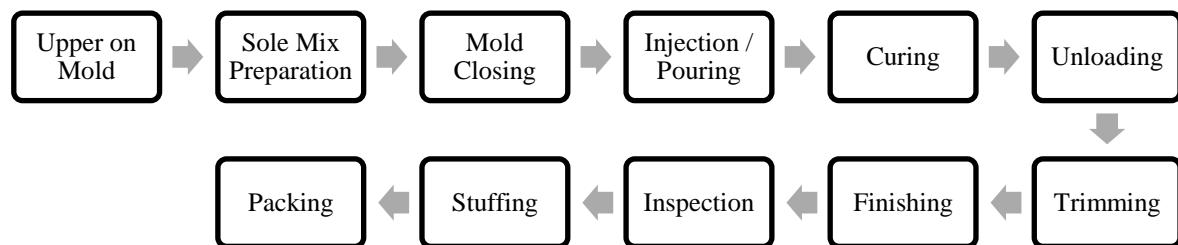
### Bottom Preparation:



## Lasting:



## Direct Injected Method:



## Product Variants

1. Based on gender: Gents, Ladies, Children and Unisex.
2. Based on Construction: Cemented construction, DIP construction.

## References and Further Reading

1. Miller R. G. - Manual of shoe making.
2. Thornton J. H. - Text book of footwear manufacture.
3. The Pattern Cutter's Handbook: A Step by Step Guide to Producing Patterns for Footwear Production, Michael H. Sharp
4. Product Knowledge: Incorporating Glossary of Terms Relating to Footwear by Bureau of Indian Standards, Swayam Siddha
5. "Manual on Shoe Design" by CLRI (Central Leather Research Institute, India) Publication (2004)

Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Athletic Shoe (Skateboarding)	060202B
		<p><b>BSIC Code</b> : 1520  <b>BCPC Code</b> : 29420  <b>HS Code</b> : 640319</p> <p>This is a type of athletic footwear made by leather or leather split used mostly for skateboarding and daily walk.</p> <p><b>Category</b> : Unisex</p>	

### Raw Material

1. Upper Materials: Suede leather, split leather, etc.
2. Lining Materials: Leather, split leather, textile fabrics, synthetic lining, etc.
3. Bottom materials PVC/ TPR/ Rubber etc. as outsole. Mostly formed with upper by direct injection. PVC/Rubber raw granules for Injection.
4. Accessories: Threads –Nylon/Polyester, Fastenings-Rivet and Eyelet (Metal/Plastic), Adhesives (Water and Solvent Based), Shoe laces, Back and toe stiffener, etc.

### Source of Raw Materials

1. Leather upper/lining	1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a> , <a href="http://www.tannersbd.com">www.tannersbd.com</a> 2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a>
2. Synthetic lining	1. Plastic & Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159
3. Denim/textile lining	1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734
4. Sole, Shoe Last and Bottom Materials	1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a> , <a href="http://www.lfmeab.org">www.lfmeab.org</a> 2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383
5. Thread	1. Bangladesh Sewing Thread Manufacturers & Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob: 01552-367883
6. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>

7. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
8. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
9. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>

### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150 mm Arm width: 350*550 mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50 Hz
2. Travelling Head Cutting Press Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5KW (L*W*H): 1960*750*2020 mm Weight: 1520 kg
3. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3kw (L*W*H): 1850*610*1700 mm Weight: 1750 kg
4. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS
5. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114 mm Skiving Width: 4-15 mm Rotation Speed: 1100-1200 rpm Voltage: 220V/50 Hz
6. Stamping Machine		FOB Price: US \$2,000-12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5 KW dimensions (mm): 650*550*1600

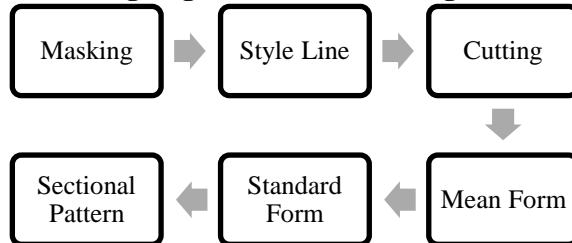
7. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000 rpm Thickness: Heavy Power: 400 w weight: 32/36 kg
9. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5kw (L*W*H): 1010*660*1550 mm
10. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37 KW Exterior Size: 760*520*1490 mm
11. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6 KW Dimensions: 1100*1000*1980 mm
12. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7 KW Air Pressure: 5-6 kg/cm2
13. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25 kw Speed :2800 rpm Dimensions: 730×800×1300 mm
14. DIP Molding Machine	 	FOB Price: US \$20,000 - 22,000 / Set <a href="http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html">http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html</a> Power(W): 11 kw and 15 kw (L*W*H): 4000*3600*2300 mm Workstation: 6 - 12

## List of Local Suppliers of Machineries

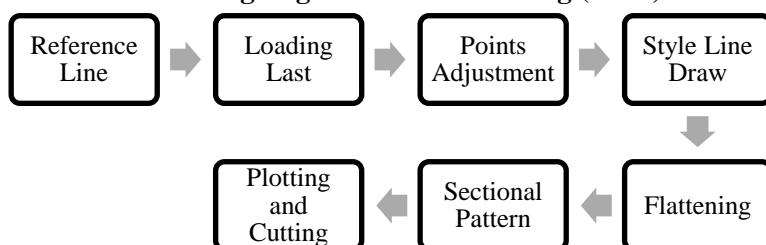
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

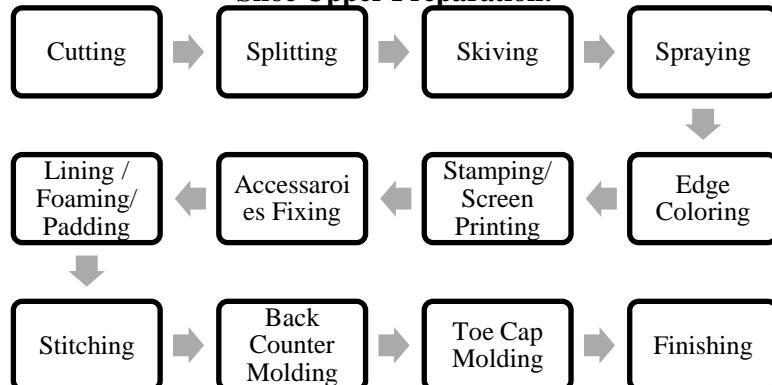
### Shoe Designing and Pattern Making (Manual):



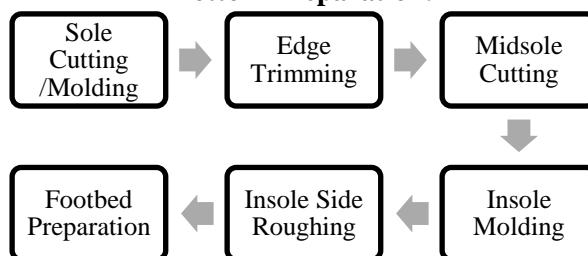
### Shoe Designing and Pattern Making (CAD):

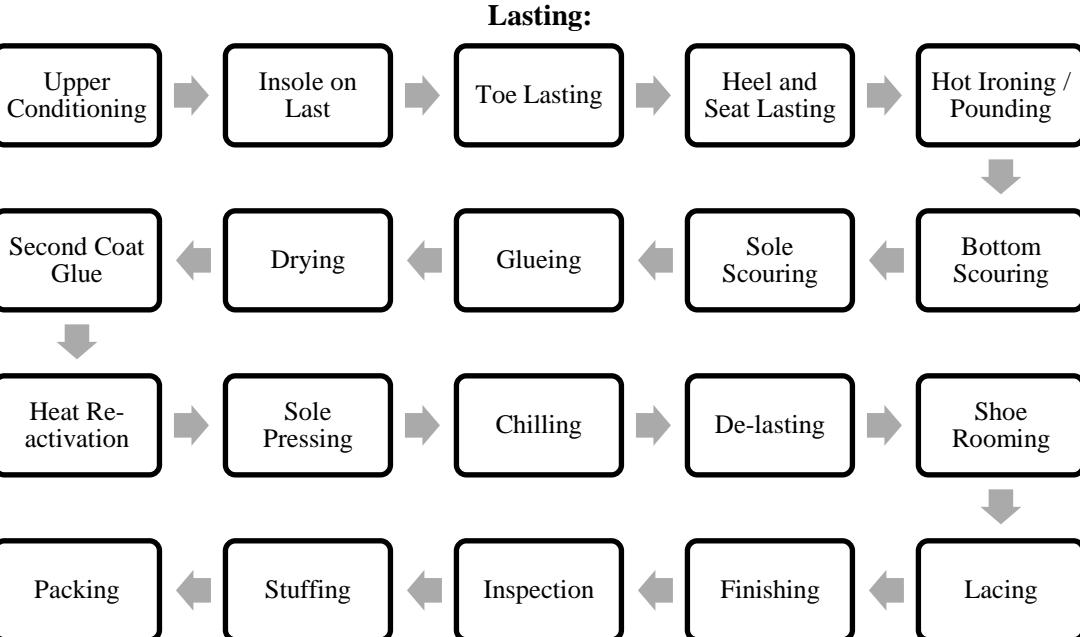


### Shoe Upper Preparation:

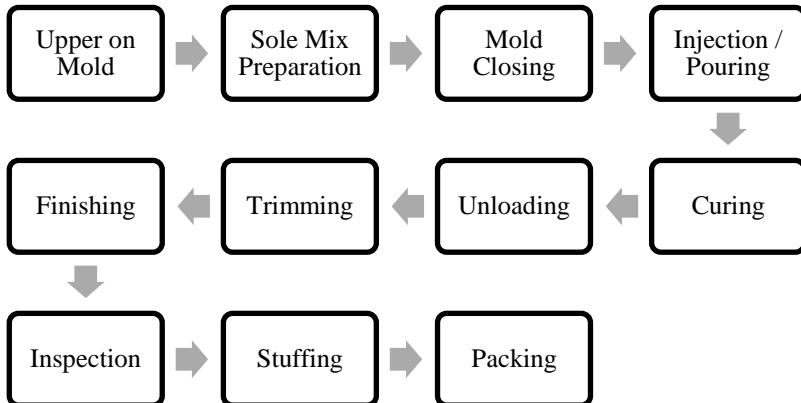


### Bottom Preparation:





**Direct Injected Method:**

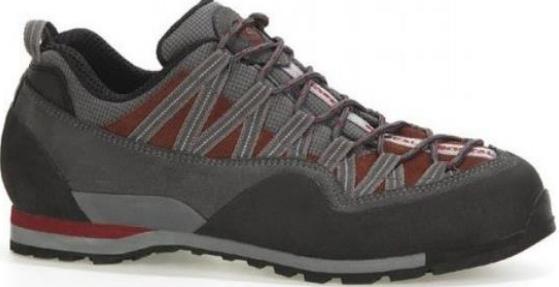


### Product Variants

1. Based on gender: Gents, Ladies, Children and Unisex.
2. Based on Construction: Cemented construction, DIP construction.

### References and Further Reading

1. Miller R. G. - Manual of shoe making.
2. Thornton J. H. - Text book of footwear manufacture.
3. The Pattern Cutter's Handbook: A Step by Step Guide to Producing Patterns for Footwear Production, Michael H. Sharp
4. Product Knowledge: Incorporating Glossary of Terms Relating to Footwear by Bureau of Indian Standards, Swayam Siddha
5. "Manual on Shoe Design" by CLRI (Central Leather Research Institute, India) Publication (2004)

Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Athletic Shoe(approach)	060202C
		<b>BSIC Code</b> : 1520 <b>BCPC Code</b> : 29420 <b>HS Code</b> : 640411, 640319 <b>It is a hybrid footwear with some characteristics common to both hiking boots and rock climbing shoes, comfortable while walking for long distances.</b> <b>Category</b> : Unisex	

#### Raw Material

1. Upper Materials: Finished leather, Split/suede leather, Canvas, Denim, Textile fabrics, Synthetic upper materials and combination of all etc.
2. Lining materials: Split leather, fabrics, synthetic lining, foams etc.
3. Bottom materials TPR/ Rubber etc. as outsole. EVA sheet as midsoles and cellulose board as insole, metal or plastic shank, split leather/ fabrics/ EVA-fabric sheet as in-socks. etc.
4. Accessories: Threads –Nylon/Polyester, fastenings – D/ O rings (metallic/plastic), Buttons (Metal/Plastic), Rivet and Eyelet (Metal/Plastic), Velcro (Plastic), fabric loops, Back and toe stiffener, Adhesives (Water & Solvent Based), Shoe rooming agents, Dyes and Pigments etc.

#### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/ textile lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Sole, Shoe Last and Bottom Materials	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383</li> </ol>
5. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob: 01552-367883</li> </ol>

6. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>
7. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
8. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
9. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>

### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150 mm Arm width: 350*550 mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Travelling Head Cutting Press Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5 KW (L*W*H): 1960*750*2020 mm Weight: 1520 kg
3. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3 kw (L*W*H): 1850*610*1700 mm Weight: 1750 kg
4. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS
5. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114 mm Skiving Width: 4-15 mm Rotation Speed: 1100-1200 rpm Voltage: 220V/50 Hz

6. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5 KW dimensions (mm): 650*550*1600
7. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000 rpm Thickness: Heavy Power: 400 w weight: 32/36 kg
9. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/ min Thickness: 10 mm Stitch Length: 7.0 mm Power: 370W/250 W
10. Zig-Zag (Flat-Bed) Sewing Machine		FOB Price: US \$150 - 4,200/ Set <a href="http://www.alibaba.com/product-detail/new-electronic-zig-zag-sewing-machine_660338829.html">http://www.alibaba.com/product-detail/new-electronic-zig-zag-sewing-machine_660338829.html</a> Max. Sewing Speed: 5000 RPM Sewing Thickness: 5.5-10 MM Stitch Length: 5, Power:370 W Dimensions: 540*250*370 CM
11. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5 kw (L*W*H): 1010*660*1550 mm
12. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37 KW Exterior Size: 760*520*1490 mm
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14. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7 KW, Air Pressure: 5-6 kg/cm2

15. Toe Lasting Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-Hydraulic-Toe-Lasting-Machine-Shoe_260469318.html">http://www.alibaba.com/product-detail/Shoe-Hydraulic-Toe-Lasting-Machine-Shoe_260469318.html</a> Voltage: 380 V capacity: 1600 pairs/8h
16. Heel and Seat lasting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/ABLD-589CM-Shoe-Heel-lasting-machine_200576495.html">http://www.alibaba.com/product-detail/ABLD-589CM-Shoe-Heel-lasting-machine_200576495.html</a> Power: 2.5 Kw Pneumatic supply : 4 Mpa Dimension: 1100/760/1630 mm
17. Pounding and Ironing Machine		FOB Price: US \$1,500 - 1,700 / Set <a href="http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html">http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html</a> LxWxH: 700*700*1300 mm Power: 1.8 kw Voltage: 380v/50
18. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25 kw Speed :2800 rpm Dimensions: 730×800×1300 mm
19. Heat Setting Machine		FOB Price: US \$4,900 - 5,200 / Set <a href="http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html">http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html</a> Dimension: 3200*950*1500 mm Pneumatic pressure: 6 kgf/cm2, Power: 18 kw
20. Heat Reactivation Unit		OB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html">http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html</a> Capacity:500 pairs/8 h Power: 6kw, Pneumatic supply: 0.5 Mpa Dimension: 610*600*1360 mm
21. Chiller Unit		FOB Price: US \$6,000 - 12,000 / Set <a href="http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html">http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html</a> Power(W): 4.5 kw Capacity: 1500-1800 pairs/8h
22. Universal Sole Press Machine		FOB Price: US \$500 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html">http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html</a> Power: 1.5Kw, Net weight: 500 Kg Size: 1100*600*1800 mm

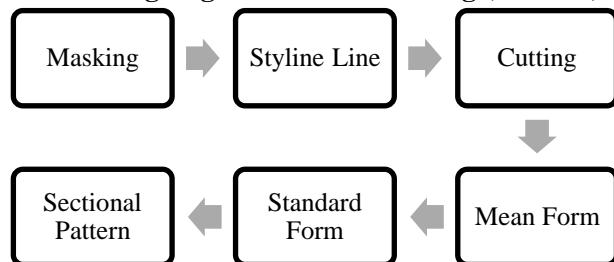
23. Last Puller Machine		FOB Price: US \$1,300 - 1,350 / Set <a href="http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html">http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html</a> Voltage: 1HP L*W*H: 720*560*1070 mm Weight: 120 kg
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### List of Local Suppliers of Machineries

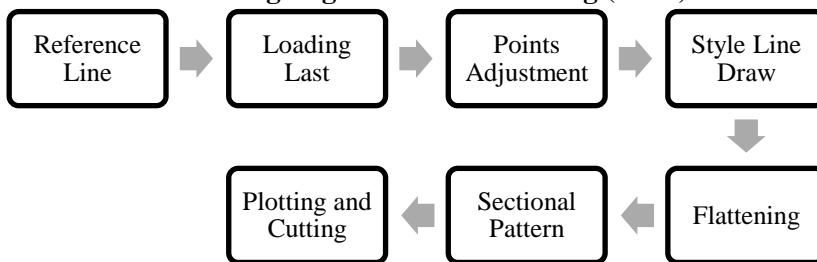
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited., Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

### Process Flow

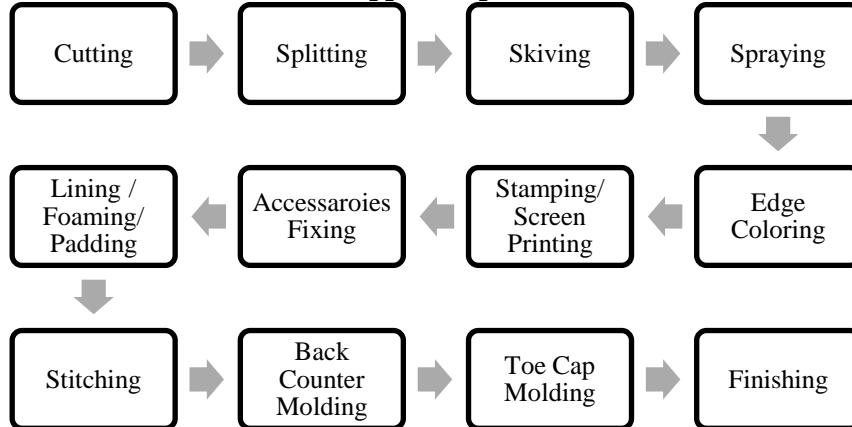
#### Shoe Designing and Pattern Making (Manual):

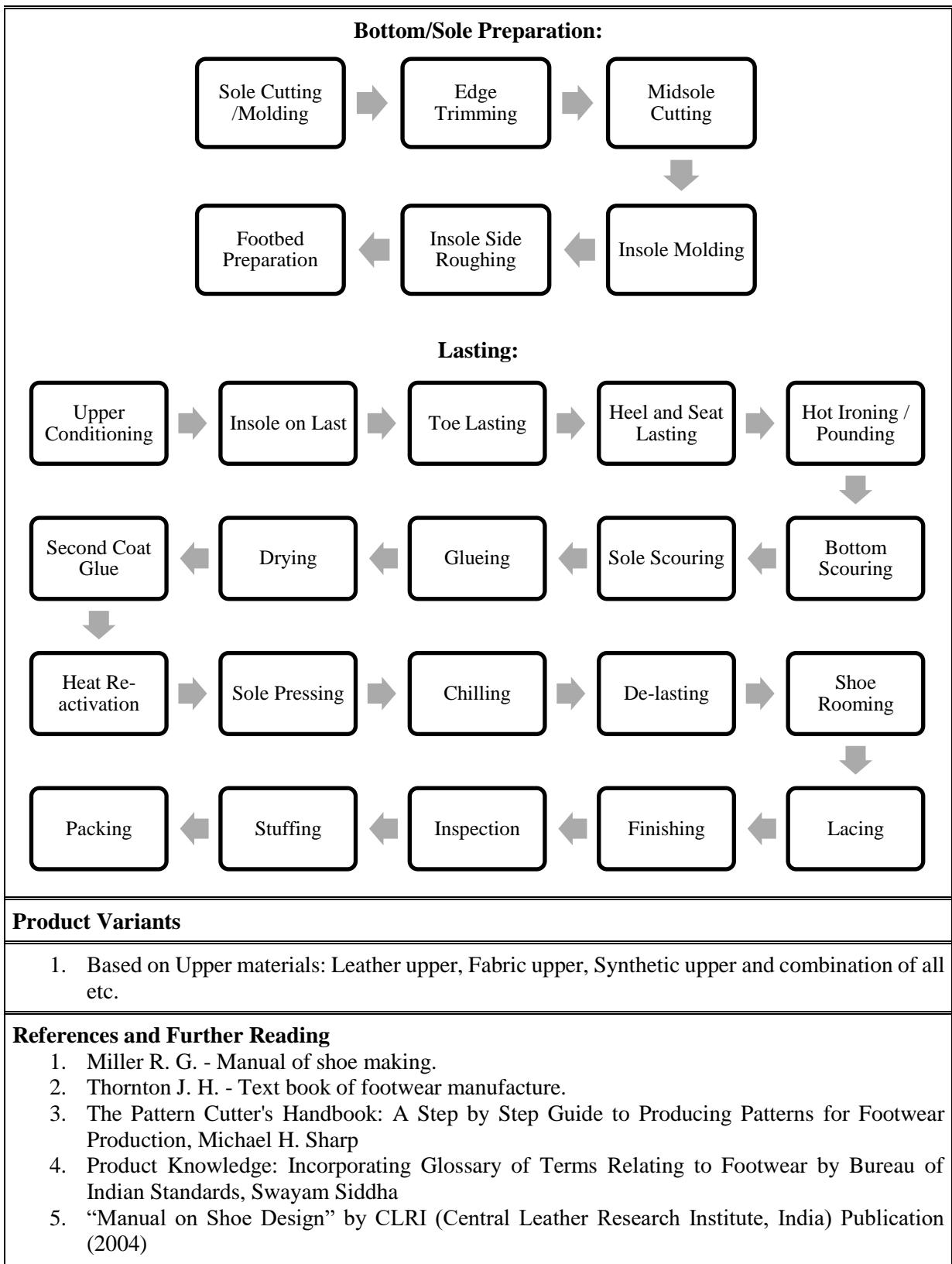


#### Shoe Designing and Pattern Making (CAD):



#### Shoe Upper Preparation:





Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Athletic Shoe(Trail Running)	060202D
		<b>BSIC Code</b> : 1520 <b>BCPC Code</b> : 29420 <b>HS Code</b> : 640411, 640319 <b>It's running type sports footwear with extra cushioning and traction outsole, comfortable while running for long distances.</b> <b>Category</b> : Unisex	

### Raw Material

1. Upper Materials: Canvas, Denim, Textile fabrics, Synthetic upper materials and combination of all etc.
2. Lining Materials: Fabrics, synthetic lining, foams etc.
3. Bottom materials TPR/ Rubber etc. as outsole. EVA sheet as midsoles and Cellulose board as insole, metal or plastic shank, split leather/ fabrics/ EVA-fabric sheet as in-socks. etc.
4. Accessories: Threads –Nylon/Polyester, fastenings – D/ O rings (metallic/plastic), Buttons (Metal/Plastic), Rivet and Eyelet (Metal/Plastic), Velcro (Plastic), fabric loops, Back and toe stiffener, Adhesives (Water & Solvent Based), Shoe rooming agents, Dyes and Pigments etc.

### Source of Raw Materials

1. Synthetic upper and lining	1. Plastic & Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159
2. Denim/ textile upper, lining	1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734
3. Sole, Shoe Last and Bottom Materials	1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a> , <a href="http://www.lfmeab.org">www.lfmeab.org</a> 2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383
4. Thread	1. Bangladesh Sewing Thread Manufacturers & Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob: 01552-367883
5. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>
6. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102

7. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>
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### Machineries

1. Travelling Head Cutting Press Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5KW (L*W*H): 1960*750*2020mm Weight: 1520kg
2. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3 kw (L*W*H): 1850*610*1700 mm Weight: 1750 kg
3. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400 w weight: 32/36 kg
4. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/ min Thickness: 10 mm Stitch Length: 7.0 mm Power: 370W/250W
5. Zig-Zag (Flat-Bed) Sewing Machine		FOB Price: US \$150 - 4,200/ Set <a href="http://www.alibaba.com/product-detail/new-electronic-zig-zia-sewing-machine_660338829.html">http://www.alibaba.com/product-detail/new-electronic-zig-zia-sewing-machine_660338829.html</a> Max. Sewing Speed: 5000 RPM Sewing Thickness: 5.5-10 MM Stitch Length: 5 Power: 370 W Dimensions: 540*250*370 CM

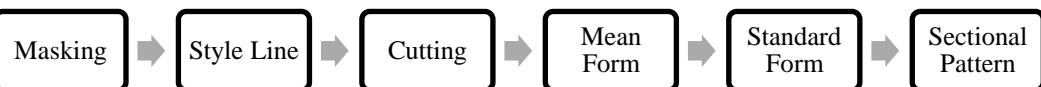
6. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5 kw (L*W*H): 1010*660*1550 mm
7. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37KW Exterior Size: 760*520*1490mm
8. 10. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6KW Dimensions: 1100*1000*1980 mm
9. 11. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7 KW Air Pressure: 5-6 kg/cm2
10. DIP Molding Machine		FOB Price: US \$20,000 - 22,000 / Set <a href="http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html">http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html</a> Power(W): 11 kw and 15 kw (L*W*H): 4000*3600*2300 mm Workstation: 6 - 12

#### List of Local Suppliers of Machineries

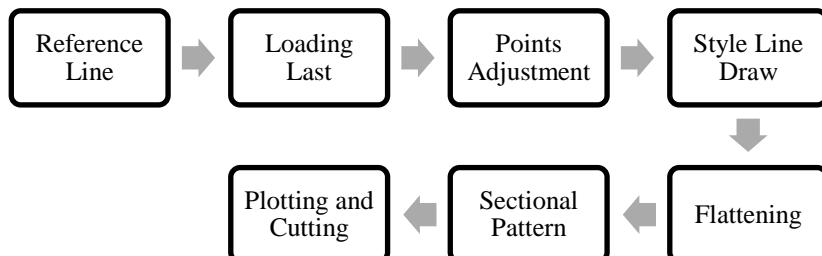
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited., Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

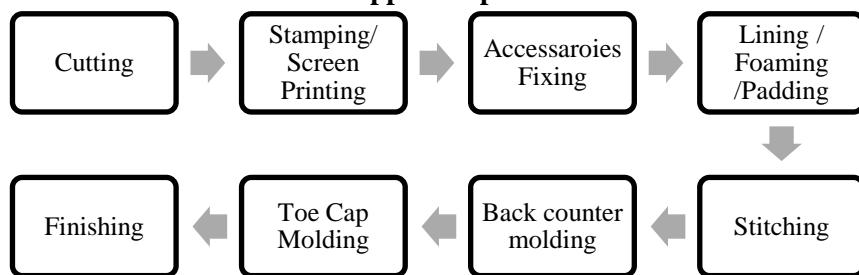
### Shoe Designing and Pattern Making: (Manual):



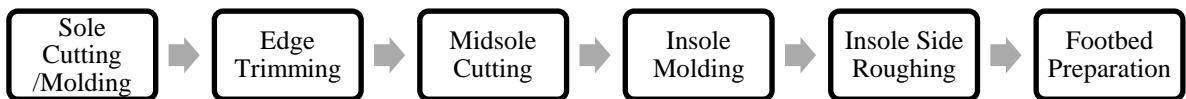
### Shoe Designing and Pattern Making: (CAD):



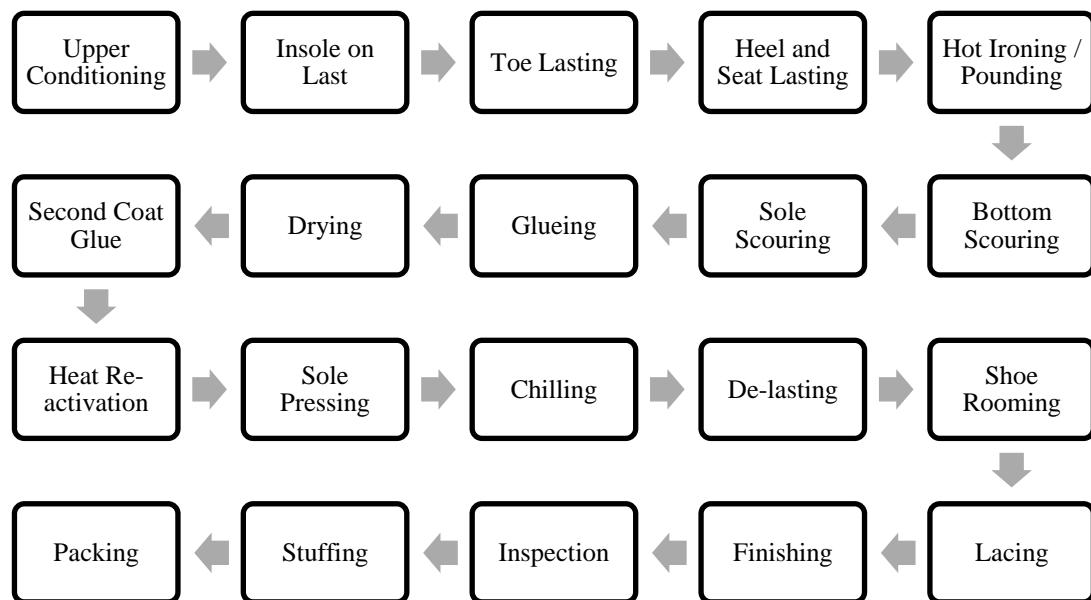
### Shoe Upper Preparation:



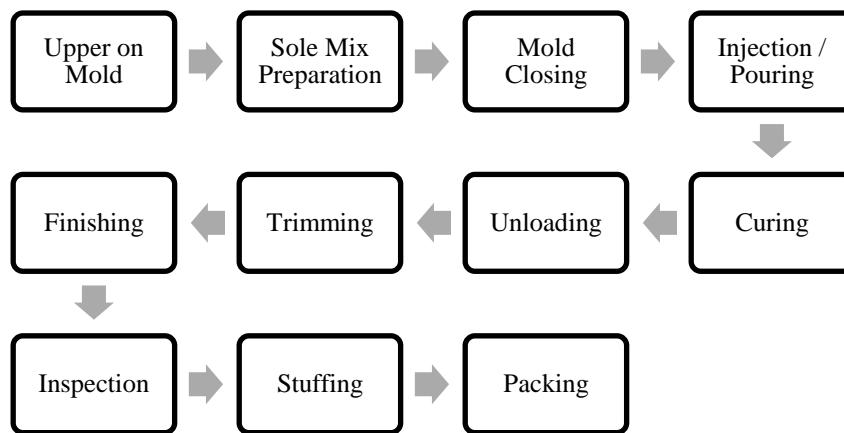
### Bottom Preparation:



### Lasting:



### **Direct Injected Method:**



### **Product Variants**

1. Based on Upper materials: Denim upper, Fabric upper, Synthetic upper and combination of all etc.
2. Based on Construction: Cemented construction, DIP construction.

### **References and Further Reading**

1. Miller R. G. - Manual of shoe making.
2. Thornton J. H. - Text book of footwear manufacture.
3. The Pattern Cutter's Handbook: A Step by Step Guide to Producing Patterns for Footwear Production, Michael H. Sharp
4. Product Knowledge: Incorporating Glossary of Terms Relating to Footwear by Bureau of Indian Standards, Swayam Siddha
5. "Manual on Shoe Design" by CLRI (Central Leather Research Institute, India) Publication (2004)

Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Athletic Shoe (Football Boot)	060202E
		<b>BSIC Code</b> : 1520 <b>BCPC Code</b> : 29420 <b>HS Code</b> : 640319 <b>This is athletic sports footwear with extra traction sole often incorporating cleated treads or plastic/metallic cleats on outsole, comfortable while playing football.</b> <b>Category</b> : Unisex	

#### Raw Material

1. Upper Materials: Leather, Synthetic upper materials or combination of both.
2. Lining Materials: Split leather, fabrics, synthetic lining etc.
3. Bottom materials TPR/ Rubber/ PVC etc. as outsole. Eva as midsole and Cellulose board as insole, metal or plastic shank, split leather/ fabrics/ EVA-fabric sheet as in-socks. etc.
4. Accessories: Threads –Nylon/Polyester, fastenings – D/ O rings (metallic/plastic), Buttons (Metal/Plastic), Rivet and Eyelet (Metal/Plastic), Velcro (Plastic), fabric loops, Shoe laces, Back and toe cap stiffeners, Adhesives (Water and Solvent Based), Shoe rooming agents, Dyes and Pigments etc.

#### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/textile lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Sole, Shoe Last and Bottom Materials	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383</li> </ol>
5. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob: 01552-367883</li> </ol>

6. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>
7. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
8. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
9. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>

### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150 mm Arm width: 350*550 mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50 Hz
2. Travelling Head Cutting Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5KW (L*W*H): 1960*750*2020 mm Weight: 1520 kg
3. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320 mm N.W/G.W: 620 KGS/680 KGS
4. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114 mm Skiving Width: 4-15 mm Rotation Speed: 1100-1200 rpm Voltage: 220V/50 Hz
5. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5 KW dimensions (mm): 650*550*1600

6. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000 rpm Thickness: Heavy Power: 400 w weight: 32/36 kg
7. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/min Thickness: 10 mm Stitch Length: 7.0 mm Power: 370W/250 W
8. Zig-Zag (Flat-Bed) Sewing Machine		FOB Price: US \$150 - 4,200/ Set <a href="http://www.alibaba.com/product-detail/new-electronic-zig-zag-sewing-machine_660338829.html">http://www.alibaba.com/product-detail/new-electronic-zig-zag-sewing-machine_660338829.html</a> Max. Sewing Speed: 5000 RPM Sewing Thickness: 5.5-10 MM Stitch Length: 5 Power: 370 W Dimensions: 540*250*370 CM
9. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?spm">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?spm</a> Power(W): 1.5kw (L*W*H): 1010*660*1550 mm
10. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37 KW Exterior Size: 760*520*1490 mm
11. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6KW Dimensions: 1100*1000*1980 mm
12. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7 KW Air Pressure: 5-6 kg/cm2

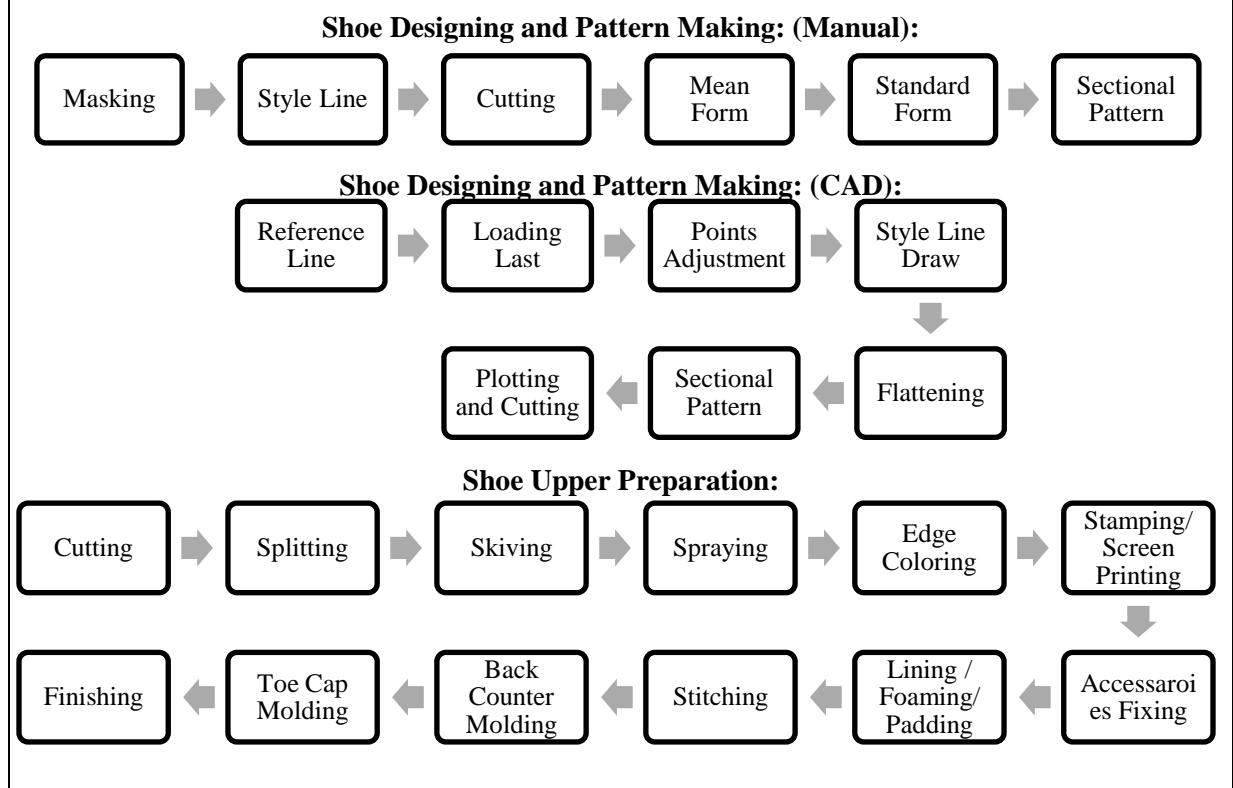
13. Toe Lasting Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-Hydraulic-Toe-Lasting-Machine-Shoe_260469318.html">http://www.alibaba.com/product-detail/Shoe-Hydraulic-Toe-Lasting-Machine-Shoe_260469318.html</a> Voltage: 380 V capacity: 1600 pairs/8h
14. Heel and Seat Lasting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/ABLD-589CM-Shoe-Heel-lasting-machine_200576495.html">http://www.alibaba.com/product-detail/ABLD-589CM-Shoe-Heel-lasting-machine_200576495.html</a> Power: 2.5 Kw Pneumatic supply : 4 Mpa Dimension: 1100/760/1630 mm
15. Pounding and Ironing Machine		FOB Price: US \$1,500 - 1,700 / Set <a href="http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html">http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html</a> L×W×H: 700*700*1300 mm Power: 1.8 kw Voltage: 380v/50
16. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25kw Speed :2800 rpm Dimensions: 730×800×1300mm
17. Heat Setting Machine		FOB Price: US \$4,900 - 5,200 / Set <a href="http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html">http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html</a> Dimension: 3200*950*1500 mm Pneumatic pressure: 6 kgf/cm2 Power: 18 kw
18. Heat Reactivation Unit		OB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html">http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html</a> Capacity:500 pairs/8h Power: 6 kw Pneumatic supply: 0.5Mpa Dimension: 610*600*1360 mm
19. Chiller Unit		FOB Price: US \$6,000 - 12,000 / Set <a href="http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html">http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html</a> Power(W): 4.5 kw Capacity: 1500-1800 pairs/8h

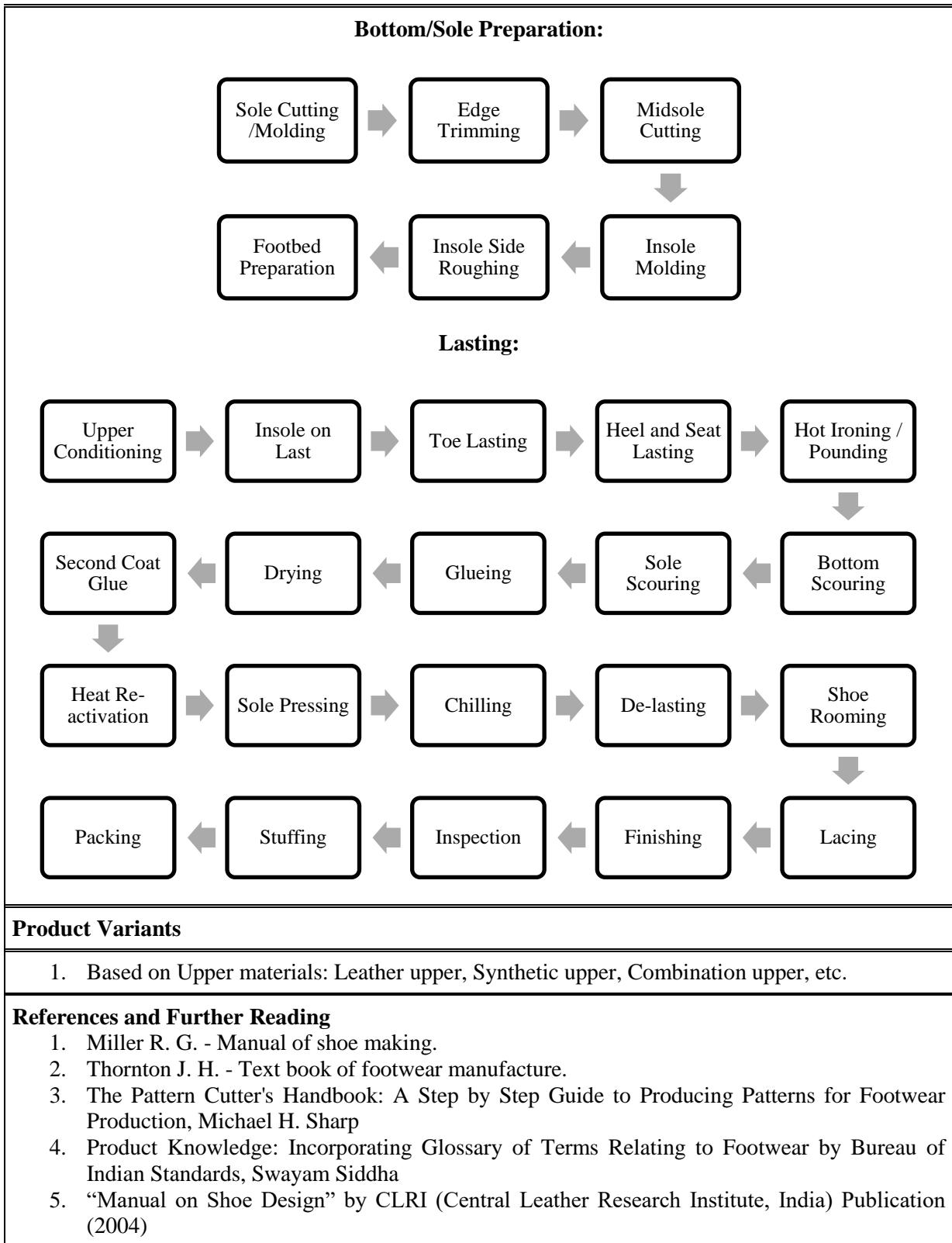
20. Universal Sole Press Machine		FOB Price: US \$500 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html">http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html</a> Power: 1.5 Kw Net weight: 500 Kg Size: 1100*600*1800 mm
21. 23. Last Puller Machine		FOB Price: US \$1,300 - 1,350 / Set <a href="http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html">http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html</a> Voltage: 1HP L*W*H: 720*560*1070 mm Weight: 120kg

### List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

### Process Flow





Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Dress Shoe (Oxford)	060204A
		<p><b>BSIC Code</b> : 1520  <b>BCPC Code</b> : 29330  <b>HS Code</b> : 640351, 640391</p> <p><b>Oxfords (British), or Balmorals (American), lace up and tie to keep them on the wearer's foot, and have a closed lacing, where the pieces of leather joined by the laces are sewn together at the bottom. Many Oxfords toe cap and wear with most suits.</b></p> <p><b>Category</b> : Gents, Children.</p>	

### Raw Material

1. Upper Materials: Finished leather, synthetic upper materials and combination.
2. Lining Materials: Lining/ Split leather, fabrics, synthetic lining, foams etc.
3. Bottom materials TPR/ Rubber/PU/TPU etc. as outsole. Cellulose board as insole, metal or plastic shank, leather/ synthetic material sheet as in-socks. etc.
4. Accessories: Threads –Nylon/Polyester, Eyelet (Metal/Plastic), Back & toe stiffener, Adhesives (Water & Solvent Based), Shoe rooming agents, Shoe laces, Dyes & Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Sole, Shoe Last and Bottom Materials	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235, 8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob: 01552-367883</li> </ol>
5. Accessories	<ol style="list-style-type: none"> <li>1. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>

7. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
8. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>

### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Travelling Head Cutting Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5 KW (L*W*H): 1960*750*2020 mm Weight: 1520 kg
3. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3 kw (L*W*H): 1850*610*1700 mm Weight: 1750 kg
4. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension (L*W*H): 149*84*120 work width: 320 mm N.W/G.W: 620KGS/680 KGS
5. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114 mm Skiving Width: 4-15 mm Rotation Speed: 1100-1200 rpm Voltage: 220V/50 Hz
6. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5 KW dimensions (mm): 650*550*1600

7. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000 rpm Thickness: Heavy Power: 400 w weight: 32/36 kgs
8. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/min Thickness: 10 mm Stitch Length: 7.0 mm Power: 370W/250 W
9. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5 kw (L*W*H): 1010*660*1550 mm
10. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37 KW Exterior Size: 760*520*1490 mm
11. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6KW Dimensions: 1100*1000*1980 mm
12. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7 KW Air Pressure: 5-6 kg/cm2
13. Toe Lasting Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-Hydraulic-Toe-Lasting-Machine-Shoe_260469318.html">http://www.alibaba.com/product-detail/Shoe-Hydraulic-Toe-Lasting-Machine-Shoe_260469318.html</a> Voltage: 380V capacity: 1600pairs/8h
14. Heel and Seat Lasting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/ABLD-589CM-Shoe-Heel-lasting-machine_200576495.html">http://www.alibaba.com/product-detail/ABLD-589CM-Shoe-Heel-lasting-machine_200576495.html</a> Power: 2.5 Kw Pneumatic supply: 4 Mpa Dimension: 1100/760/1630 mm

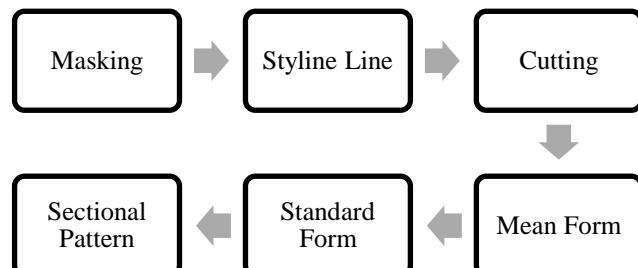
15. Pounding and Ironing Machine		FOB Price: US \$1,500 - 1,700 / Set <a href="http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html">http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html</a> LxWxH: 700*700*1300 mm Power: 1.8 kw Voltage: 380v/50
16. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25 kw Speed :2800 rpm Dimensions: 730×800×1300 mm
17. Heat Setting Machine		FOB Price: US \$4,900 - 5,200 / Set <a href="http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html">http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html</a> Dimension: 3200*950*1500 mm Pneumatic pressure: 6kgf/cm2 Power: 18 kw
18. Heat Re-activation Unit		OB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html">http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html</a> Capacity:500 pairs/8h Power: 6 kw Pneumatic supply: 0.5Mpa Dimension: 610*600*1360 mm
19. Chiller Unit		FOB Price: US \$6,000 - 12,000 / Set <a href="http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html">http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html</a> Power(W): 4.5kw Capacity: 1500-1800pairs/8h
20. Universal Sole Press Machine		FOB Price: US \$500 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html">http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html</a> Power: 1.5 Kw Net weight: 500 Kg Size: 1100*600*1800 mm
21. Last Puller Machine		FOB Price: US \$1,300 - 1,350 / Set <a href="http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html">http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html</a> Voltage: 1 HP L*W*H: 720*560*1070 mm Weight: 120 kg

## List of Local Suppliers of Machineries

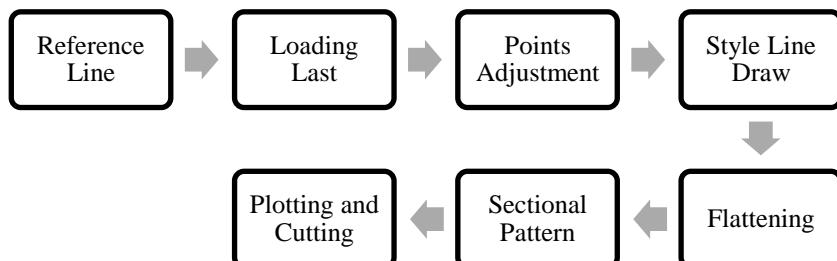
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

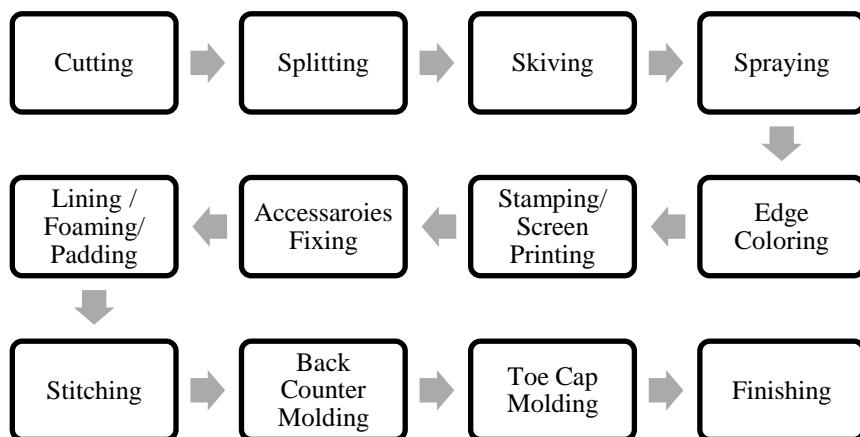
### Shoe Designing and Pattern Making (Manual):



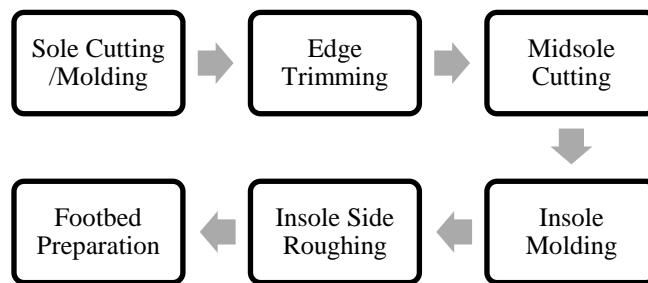
### Shoe Designing and Pattern Making (CAD):



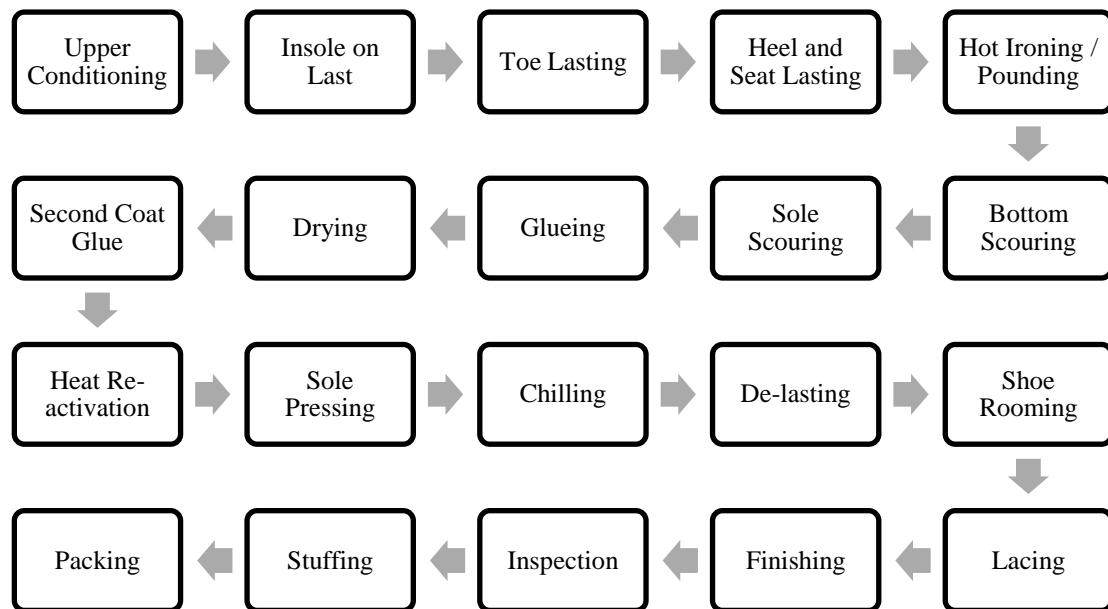
### Shoe Upper Preparation:



### Bottom/Sole Preparation:



### Lasting:



### Product Variants

1. Based on Upper materials: Leather upper, synthetic upper and combination etc.
2. Based on style: Oxford, Derby, Slip-on, Monk, Brogue etc.

### References and Further Reading

1. Miller R. G. - Manual of shoe making.
2. Thornton J. H. - Text book of footwear manufacture.
3. The Pattern Cutter's Handbook: A Step by Step Guide to Producing Patterns for Footwear Production, Michael H. Sharp
4. Product Knowledge: Incorporating Glossary of Terms Relating to Footwear by Bureau of Indian Standards, Swayam Siddha
5. "Manual on Shoe Design" by CLRI (Central Leather Research Institute, India) Publication (2004)

Sector	Sub-sector	Product Name	Product No	
Leather	Footwear	Dress Shoe (Court Shoe)	060204B	
		<b>BSIC Code</b> : 1520 <b>BCPC Code</b> : 29330 <b>HS Code</b> : 640351, 640391 <b>Court shoes/ pumps</b> are typically thought of as a staple in any woman's wardrobe, and come in a variety of colors and styles. They can have a rounded or pointed toe, and are usually made of leather. They have a heel of at least 5 cm (2 inches). <b>Category:</b> Ladies, Children.		
<b>Raw Material</b>				
<ol style="list-style-type: none"> <li>Upper Materials: Finished leather, synthetic upper materials and combination.</li> <li>Lining Materials: Lining/ Split leather, fabrics, synthetic lining, foams, etc.</li> <li>Bottom materials TPR/ Rubber/PU/TPU etc. as outsole. Cellulose board as insole, metal or plastic shank, leather/ synthetic material sheet as in-socks. etc.</li> <li>Accessories: Threads –Nylon/Polyester, Back &amp; toe stiffener, Adhesives (Water and Solvent Based), Shoe rooming agents, Other accessories and trimmings, Dyes &amp; Pigments etc.</li> </ol>				
<b>Source of Raw Materials</b>				
1. Leather upper/lining	<ol style="list-style-type: none"> <li>Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>			
2. Synthetic lining	<ol style="list-style-type: none"> <li>Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>			
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4. Thread	<ol style="list-style-type: none"> <li>Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>			
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### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Travelling Head Cutting Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5KW (L*W*H): 1960*750*2020mm Weight: 1520kg
3. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3kw (L*W*H): 1850*610*1700mm Weight: 1750kg
4. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS
5. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114mm Skiving Width: 4-15mm Rotation Speed: 1100-1200rpm Voltage: 220V/50Hz
6. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5KW dimensions(mm): 650*550*1600

7. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400w weight: 32/36kgs
8. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/min Thickness: 10mm Stitch Length: 7.0mm Power: 370W/250W
9. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5kw (L*W*H): 1010*660*1550mm
10. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37KW Exterior Size: 760*520*1490mm
11. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6KW Dimensions: 1100*1000*1980 mm
12. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7KW Air Pressure: 5-6kg/cm2
13. Strobel Stitching Machine		FOB Price: US \$100 - 200 / Set <a href="http://www.alibaba.com/product-detail/G450High-capacity-string-lasting-heavy-duty_721019328.html">http://www.alibaba.com/product-detail/G450High-capacity-string-lasting-heavy-duty_721019328.html</a> Speed: 2800/Min Power: 250W or 370W

14. Pounding and Ironing Machine		FOB Price: US \$1,500 - 1,700 / Set <a href="http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html">http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html</a> L×W×H: 700*700*1300 mm Power: 1.8kw Voltage: 380v/50
15. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25kw Speed :2800 rpm Dimensions: 730800×1300mm
16. 17. Heat Setting Machine		FOB Price: US \$4,900 - 5,200 / Set <a href="http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html">http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html</a> Dimension: 3200*950*1500mm Pneumatic pressure: 6kgf/cm2 Power: 18kw
17. 18. Heat Reactivation Unit		OB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html">http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html</a> Capacity:500pairs/8h Power: 6kw Pneumatic supply: 0.5Mpa Dimension: 610*600*1360mm
18. 19. Chiller Unit		FOB Price: US \$6,000 - 12,000 / Set <a href="http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html">http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html</a> Power(W): 4.5kw Capacity: 1500-1800pairs/8h
19. 20. Universal Sole Press Machine		FOB Price: US \$500 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html">http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html</a> Power: 1.5Kw Net weight: 500Kg Size: 1100*600*1800mm
20. 21. Last Puller Machine		FOB Price: US \$1,300 - 1,350 / Set <a href="http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html">http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html</a> Voltage: 1HP L*W*H: 720*560*1070 mm Weight: 120kg

## List of Local Suppliers of Machineries

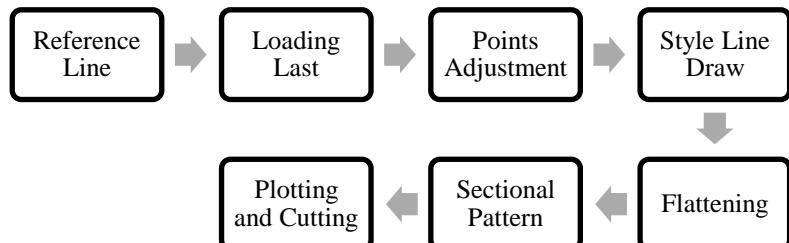
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

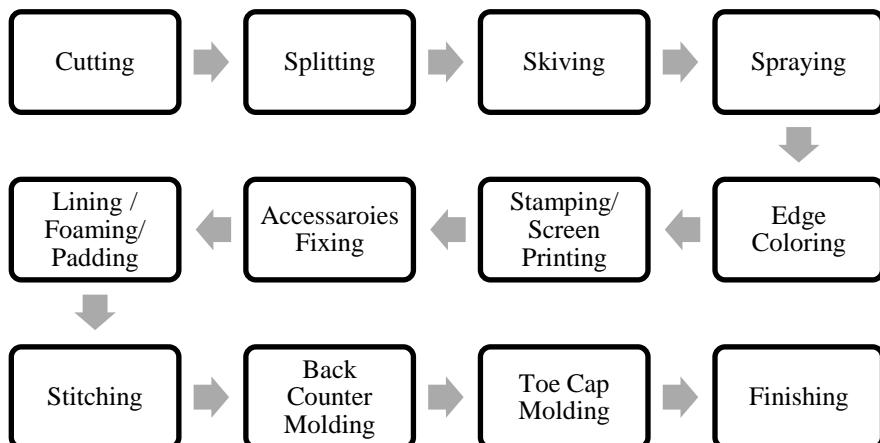
### Shoe Designing and Pattern Making: (Manual):



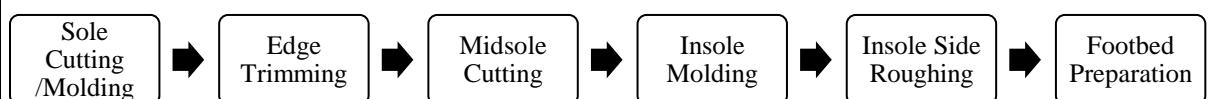
### Shoe Designing and Pattern Making: (CAD):

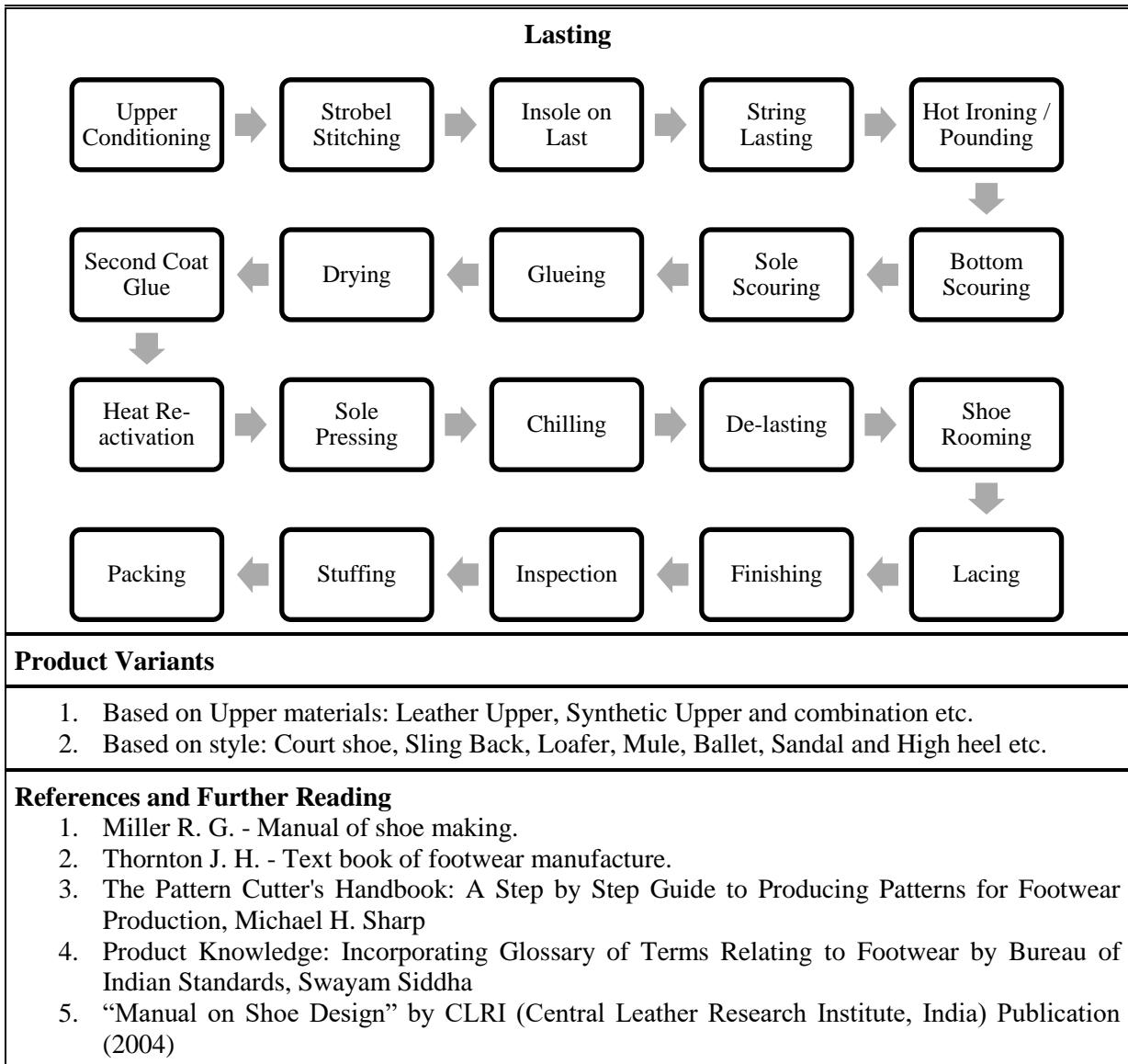


### Shoe Upper Preparation:



### Bottom/Sole Preparation:





Sector	Sub-sector	Product Name	Product No
Leather	Footwear	Ballerina Flat Shoe	060203
		<p><b>BSIC Code : 1520</b>  <b>BCPC Code : 29320,29330,29340,29341</b>  <b>HS Code : 640299, 640359, 640399, 640419, 640420, 640510, 640520</b></p> <p>This is a lady's style footwear with a big opening and a flat sole. A ballet-style flat meant for everyday wear.</p> <p><b>Category : Ladies</b></p>	

### Raw Material

1. Upper Materials: Leather, Split leather, synthetic upper, denim or textile, plastic, jute or combination in a diversified way.
2. Lining Materials: Split leather, fabrics, synthetic lining etc.
3. Bottom materials TPR/ Rubber/ PVC/EVA etc. as outsole. Cellulose board as insole, metal or plastic shank, split leather/ fabrics/ EVA-fabric sheet as in-socks. etc.
4. Accessories: Threads –Nylon/Polyester, fastenings – D/ O rings (metallic/plastic), Buttons (Metal/Plastic), Buckles, Rivet and Eyelet (Metal/Plastic), Velcro (Plastic), fabric loops and other trimmings, Toecap and back stiffeners, Adhesives (Water and Solvent Based), Shoe rooming agents, Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a> , <a href="http://www.tannersbd.com">www.tannersbd.com</a> 2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a>
2. Synthetic upper/lining	1. Plastic & Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159
3. Denim/textile lining	1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734
4. Sole, Shoe Last and Bottom Materials	1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a> , <a href="http://www.lfmeab.org">www.lfmeab.org</a> 2. Bangladesh Polymer Importers' Association, 315/B, Tejgaon Industrial Area, Dhaka. Tel: 8822235,8821665(Off), Fax: 880-2-8829177, Mob: 01711-567383
5. Thread	1. Bangladesh Sewing Thread Manufacturers & Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883
6. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link

	Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>
7. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
8. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
9. Shoe Box and Cartoon	1. Bangladesh Corrugated Carton & Accessories Manufacturers' & Exporters Association, "SONARTARI TOWER" (9th Floor), Plot No.12, Biponon C/A, Sonargaon Road (Link Road), Dhaka, Tel: 9666763, 8621200, <a href="mailto:bccamea@gmail.com">bccamea@gmail.com</a>

### Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Travelling Head Cutting Machine		FOB Price: US \$6,500 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html">http://www.alibaba.com/product-detail/CH-858-30ton-Hydraulic-travelling-head_1063749599.html</a> Power: 1.5KW (L*W*H): 1960*750*2020mm Weight: 1520kg
3. Hydraulic Plane Cutting Machine		FOB Price: US \$5,000 - 7,000 / Set <a href="http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html">http://www.alibaba.com/product-detail/CH-835-35t-Plane-Hydraulic-press_1052389816.html</a> Power: 3kw (L*W*H): 1850*610*1700mm Weight: 1750kg
4. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS
5. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114mm Skiving Width: 4-15mm Rotation Speed: 1100-1200rpm Voltage: 220V/50Hz

6. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5KW dimensions(mm): 650*550*1600
7. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Power: 400w weight: 32/36kgs
8. Post Bed Sewing Machine		FOB Price: US \$100 - 3,000 / Piece <a href="http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html">http://www.alibaba.com/product-detail/Single-needle-Roller-feed-post-bed_345305050.html</a> Speed: 2500/min Thickness: 10mm Stitch Length: 7.0mm Power: 370W/250W
9. Zig-Zag (Flat-Bed) Sewing Machine		FOB Price: US \$150 - 4,200/ Set <a href="http://www.alibaba.com/product-detail/new-electronic-zig-zia-sewing-machine_660338829.html">http://www.alibaba.com/product-detail/new-electronic-zig-zia-sewing-machine_660338829.html</a> Max. Sewing Speed: 5000RPM Sewing Thickness: 5.5-10MM Stitch Length: 5 Power: 370W Dimensions: 540*250*370CM
10. Insole Molding Machine		FOB Price: US \$2,000 / Set <a href="http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p">http://www.alibaba.com/product-detail/2014-new-design-shoe-insole-moulding_1825702426.html?s=p</a> Power(W): 1.5kw (L*W*H): 1010*660*1550mm
11. Insole Riveting Machine		FOB Price: US \$100 - 100,000 / Set <a href="http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html">http://www.alibaba.com/product-detail/AB-100A-TWIN-INSOLE-RIVETING-MACHINE_208562591.html</a> Power of Motor: 0.37KW Exterior Size: 760*520*1490mm
12. Back Counter Molding Machine		FOB Price: US \$3,000 - 6,000 / Set <a href="http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html">http://www.alibaba.com/product-detail/CH-605-Hot-cold-back-part_1151500161.html</a> Power: 5.6KW Dimensions: 1100*1000*1980 mm

13. Toe Forming Machine		FOB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html">http://www.alibaba.com/product-detail/Shoe-machine-Toe-Cap-Moulding-Machine_252038525.html</a> Dimensions: 90*160*170 cm Power: 2.7KW Air Pressure: 5-6kg/cm2
14. Strobel Stitching Machine		FOB Price: US \$100 - 200 / Set <a href="http://www.alibaba.com/product-detail/G450High-capacity-string-lasting-heavy-duty_721019328.html">http://www.alibaba.com/product-detail/G450High-capacity-string-lasting-heavy-duty_721019328.html</a> Speed: 2800/Min Power: 250W or 370W
15. Pounding and Ironing Machine		FOB Price: US \$1,500 - 1,700 / Set <a href="http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html">http://www.alibaba.com/product-detail/Lasted-Shoe-Edge-Pounding-Machine_1623567315.html</a> LxWxH: 700*700*1300 mm Power: 1.8kw Voltage: 380v/50
16. Sole and Bottom roughing and Scouring machine		FOB Price: US \$800 - 1,600 / Set <a href="http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html">http://www.alibaba.com/product-detail/shoe-roughing-machine_272086217.html</a> Power :2.25kw Speed :2800 rpm Dimensions: 730×800×1300mm
17. Heat Setting Machine		FOB Price: US \$4,900 - 5,200 / Set <a href="http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html">http://www.alibaba.com/product-detail/XDXR-rapid-shoe-heat-setting-machine_1092727867.html</a> Dimension: 3200*950*1500mm Pneumatic pressure: 6kgf/cm2 Power: 18kw
18. Heat Reactivation Unit		OB Price: US \$800 - 1,500 / Set <a href="http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html">http://www.alibaba.com/product-detail/Cement-Reactivating-Machine-shoe-machine_334740913.html</a> Capacity:500pairs/8h Power: 6kw Pneumatic supply: 0.5Mpa Dimension: 610*600*1360mm
19. Chiller Unit		FOB Price: US \$6,000 - 12,000 / Set <a href="http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html">http://www.alibaba.com/product-detail/chilling-machine-shoes-high-speed-cooling_1557267058.html</a> Power(W): 4.5kw Capacity: 1500-1800pairs/8h
20. Universal Sole Press Machine		FOB Price: US \$500 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html">http://www.alibaba.com/product-detail/Shoe-sole-press-machine-shoemaking-machine_575549048.html</a> Power: 1.5Kw Net weight: 500Kg Size: 1100*600*1800mm

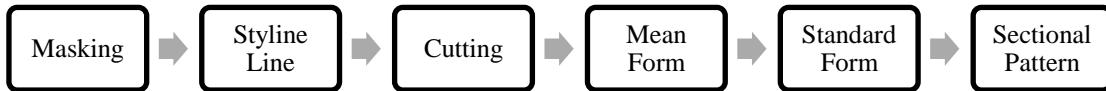
21. Last Puller Machine		FOB Price: US \$1,300 - 1,350 / Set <a href="http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html">http://www.alibaba.com/product-detail/Oil-pressure-last-slipping-machine_1597362761.html</a> Voltage: 1HP L*W*H: 720*560*1070 mm Weight: 120kg
22. DIP Molding Machine		FOB Price: US \$20,000 - 22,000 / Set <a href="http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html">http://www.alibaba.com/product-detail/Advanced-type-Single-color-TPR-sole_803846861.html</a> Power(W): 11kw and 15kw (L*W*H): 4000*3600*2300 mm Workstation: 6 - 12

### List of Local Suppliers of Machineries

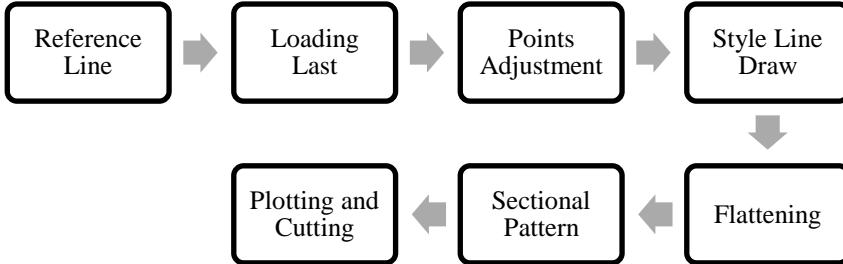
1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

### Process Flow

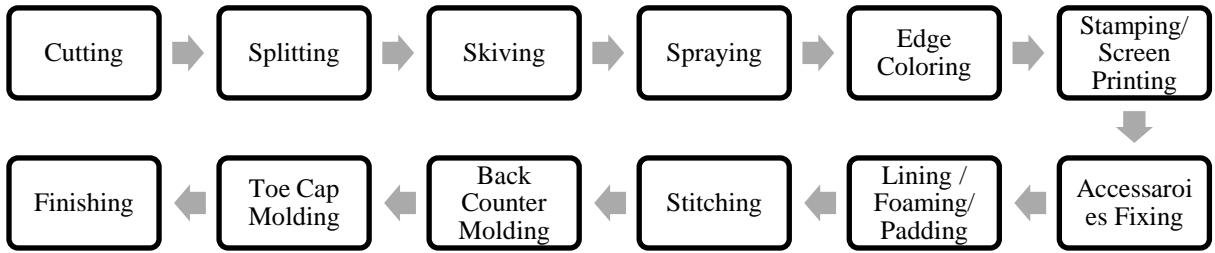
#### Shoe Designing and Pattern Making (Manual):

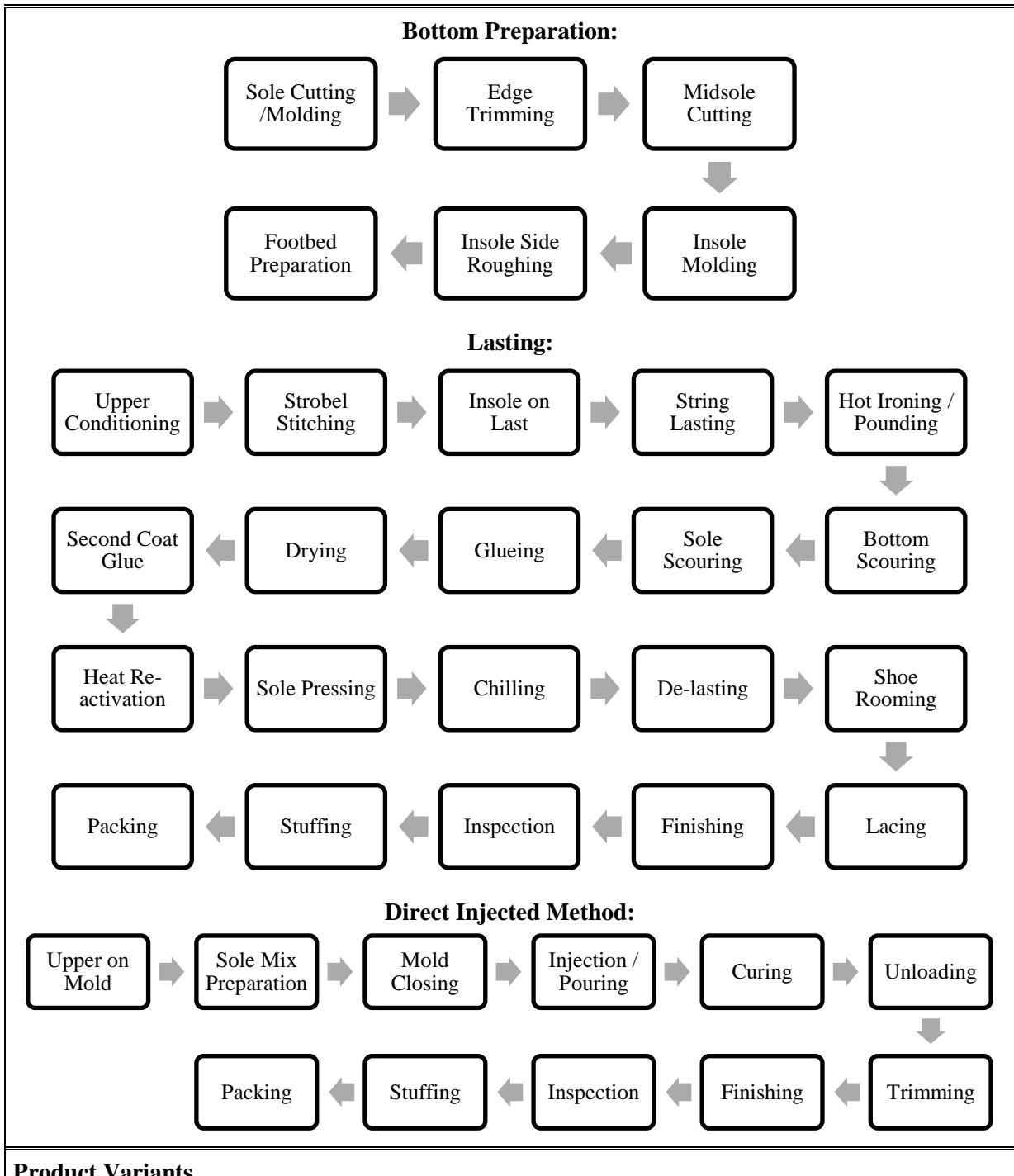


#### Shoe Designing and Pattern Making (CAD):



#### Shoe Upper Preparation:





### Product Variants

1. Based on Upper materials: Leather upper, Synthetic upper, Textile upper, Jute upper, Plastic upper etc.

### References and Further Reading

1. Miller R. G. - Manual of shoe making.
2. Thornton J. H. - Text book of footwear manufacture.
3. The Pattern Cutter's Handbook: A Step by Step Guide to Producing Patterns for Footwear Production, Michael H. Sharp
4. Product Knowledge: Incorporating Glossary of Terms Relating to Footwear by Bureau of Indian Standards, Swayam Siddha
5. "Manual on Shoe Design" by CLRI (Central Leather Research Institute, India) Publication (2004)

Sector	Sub-sector	Product Name	Product No
Leather	Leather Goods	Gents Wallet	060301
		<b>BSIC Code</b> : 1512 <b>BCPC Code</b> : 29290 <b>HS Code</b> : 420231, 420232, 420239 <b>These Leather/ Synthetic upper made goods are used to keep currency, cards etc. safe. Also has aesthetic use.</b> <b>Category: Bi-fold, Tri-fold, Long, Short etc.</b>	

### Raw Material

1. Upper Materials: Finished leather, Split / suede leather, Textile fabrics, Synthetic upper etc.
2. Lining Materials: Leather, Split leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads— Nylon/Polyester, fastenings—Buttons (Metal/Plastic), Rivet (Metal/Plastic), Velcro (Plastic), PE or Rubber Stickers, Stiffeners, Adhesives (Water and Solvent Based), Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/textile upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners and other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax:880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>
7. Finishing Chemical	<ol style="list-style-type: none"> <li>1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486</li> </ol>

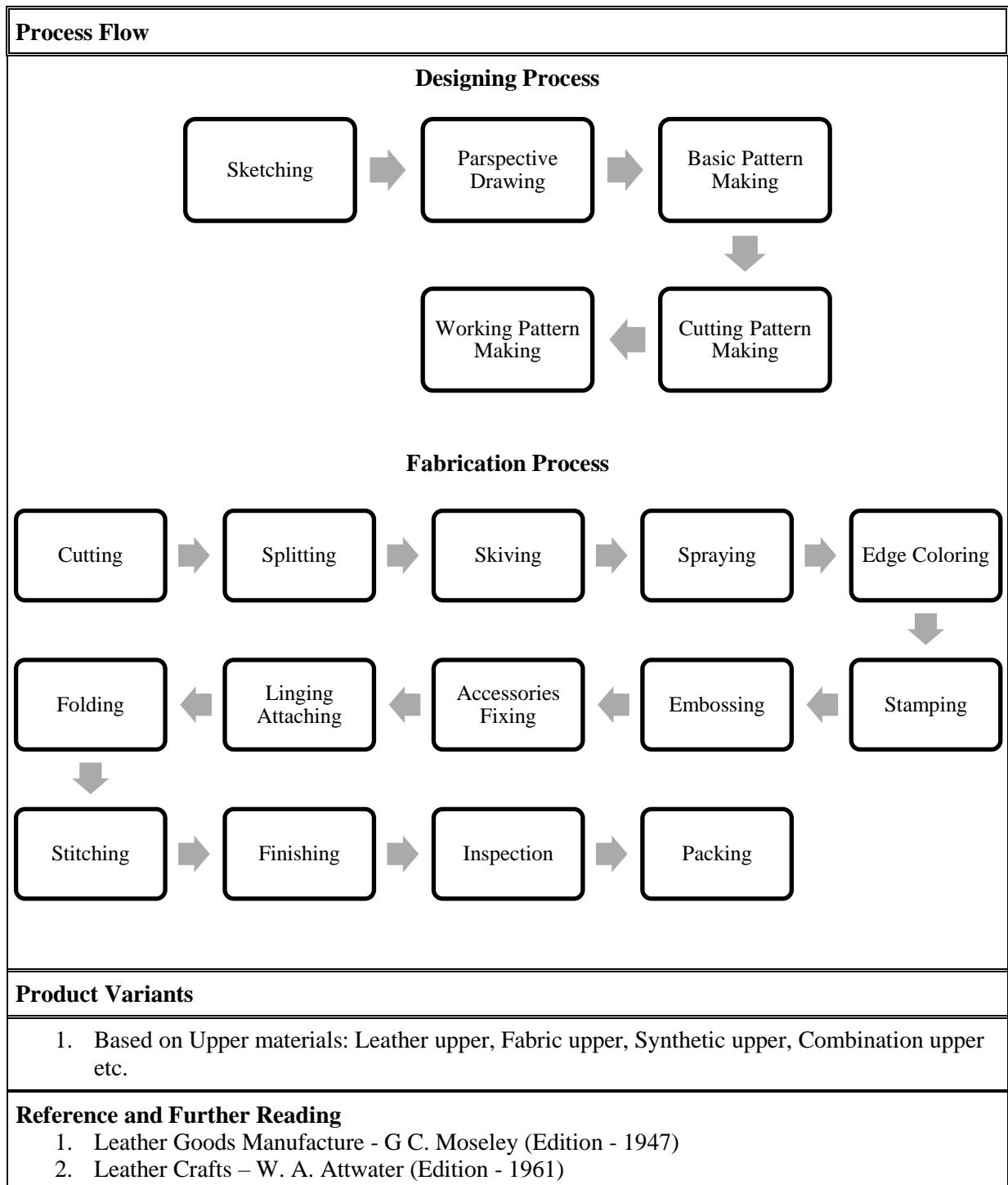
## Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Splitting Machine		FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS
3. Skiving Machine		FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114mm Skiving Width: 4-15mm Rotation Speed: 1100-1200rpm Voltage: 220V/50Hz
4. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5KW dimensions(mm): 650*550*1600
5. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Power: 400w weight: 32/36kgs

## List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on Upper materials: Leather upper, Fabric upper, Synthetic upper, Combination upper etc.

## Reference and Further Reading

1. Leather Goods Manufacture - G C. Moseley (Edition - 1947)
2. Leather Crafts – W. A. Attwater (Edition - 1961)

Sector	Sub-sector	Product Name	Product No
Leather	Leather Goods	Ladies Wallet	060302
		<p><b>BSIC Code : 1512</b>  <b>BCPC Code : 29290</b>  <b>HS Code : 420231, 420232, 420239</b></p> <p><b>These Leather/ Synthetic upper made goods are used to keep currency, cards etc. safe. Also has aesthetic use.</b></p> <p><b>Category: Bi-fold, Tri-fold, Long and Short</b></p>	

#### Raw Material

1. Upper Materials: Finished leather, Split / suede leather, Textile fabrics, Synthetic upper etc.
2. Lining Materials: Leather, Split leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads— Nylon/Polyester, fastenings—Buttons (Metal/Plastic), Rivet (Metal/Plastic), Velcro (Plastic), PE or Rubber Stickers, Stiffeners, Adhesives (Water and Solvent Based), Dyes and Pigments etc.

#### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/textile upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners and other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEA), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>
7. Finishing Chemical	<ol style="list-style-type: none"> <li>1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh,+88-02-8622608, 8624009, 01986-842486</li> </ol>

## Machineries

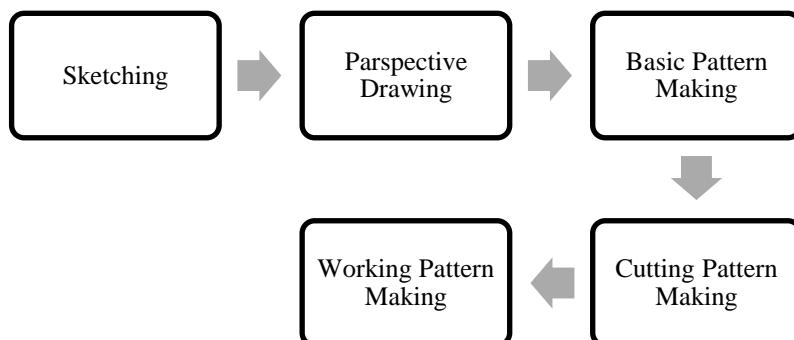
1. Swing Arm Cutting Machine		<p>FOB Price: US \$2,000 - 2,500 / Set  <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a></p> <p>Tension distance: 60-150mm          Arm width: 350*550mm          work table: 1000*500 mm          Voltage: 3 phase 380/220v, 50Hz</p>
2. Splitting Machine		<p>FOB Price: US \$6,226 - 6,449 / Set  <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a></p> <p>Dimension(L*W*H): 149*84*120          work width: 320mm          N.W/G.W: 620KGS/680KGS</p>
3. Skiving Machine		<p>FOB Price: US \$550 - 580 / Set  <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a></p> <p>Knife: 117*54*114mm          Skiving Width: 4-15mm          Rotation Speed: 1100-1200rpm          Voltage: 220V/50Hz</p>
4. Stamping Machine		<p>FOB Price: US \$2,000 - 12,000 / Piece  <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a></p> <p>area: 400*500 mm          power: 5.5KW          dimensions(mm): 650*550*1600</p>
5. Flat Bed Sewing Machine		<p>FOB Price: US \$150 - 170 / Set  <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a></p> <p>Max. Speed: 5000rpm          Power: 400w          weight: 32/36kgs</p>
6. Cylinder bed Sewing Machine		<p>FOB Price: US \$385 - 425 / Set  <a href="http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html">http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html</a></p> <p>Max. Speed: 2200 RPM          Max. Thickness: 9.6MM          Stitch Length: 6MM          Power: 250W</p>

## List of Local Suppliers of Machineries

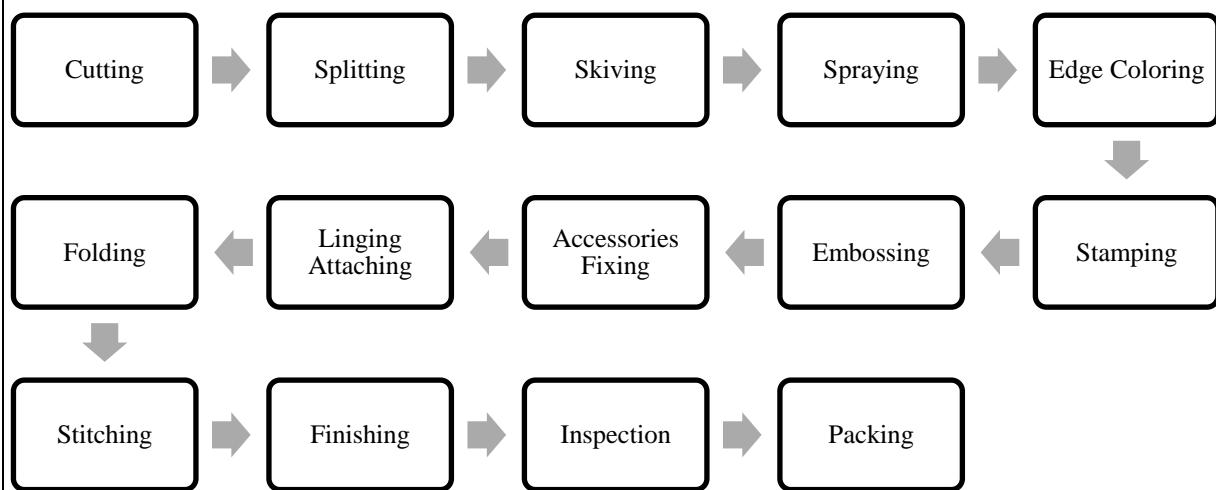
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5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

### Designing Process



### Fabrication Process



## Product Variants

1. Upper Materials: Finished leather, Nubuck / suede leather, Softy upper leather, etc.

## Reference and Further Reading

1. Leather Goods Manufacture - G C. Moseley (Edition - 1947)
2. Leather Crafts – W. A. Attwater (Edition - 1961)

Sector	Sub-sector	Product Name	Product No
Leather	Leather Goods	Executive Office Bag	060303
		<b>BSIC Code : 1512</b> <b>BCPC Code : 29220</b> <b>HS Code : 420221, 420222, 420229</b> <b>These Leather/ Synthetic Upper made goods are used to keep documents, laptop and other officially necessary items safe. These also has aesthetic importance.</b> <b>Category : Gents</b>	

### Raw Material

1. Upper Materials: Finished leather, nubuck / suede leather, synthetic materials, etc.
2. Lining Materials: Leather, split leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads –Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Buckles (metal), Stiffeners (Cellulose Board, Eva Sheet, Woods and Plastics etc.), Rings (O and D rings), Dog hooks (Metal/), Rivet (Metal/Plastic), Velcro (Plastic), PE or Rubber Stickers, Adhesives (Water and Solvent Based), Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
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4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
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6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>

7. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
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### Machineries

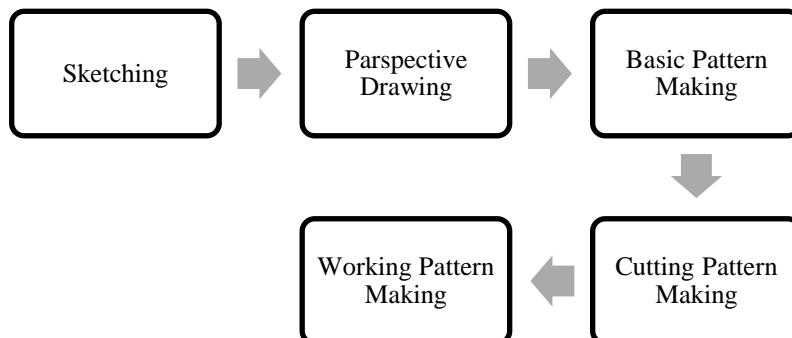
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4. Stamping Machine		<p>FOB Price: US \$2,000 - 12,000 / Piece  <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a></p> <p>area: 400*500 mm          power: 5.5KW          dimensions(mm): 650*550*1600</p>
5. Flat Bed Sewing Machine		<p>FOB Price: US \$150 - 170 / Set  <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a></p> <p>Max. Speed: 5000rpm          Power: 400w          weight: 32/36kgs</p>
6. Cylinder bed Sewing Machine		<p>FOB Price: US \$385 - 425 / Set  <a href="http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html">http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html</a></p> <p>Max. Speed: 2200 RPM          Max. Thickness: 9.6MM          Stitch Length: 6MM          Power: 250W</p>

## List of Local Suppliers of Machineries

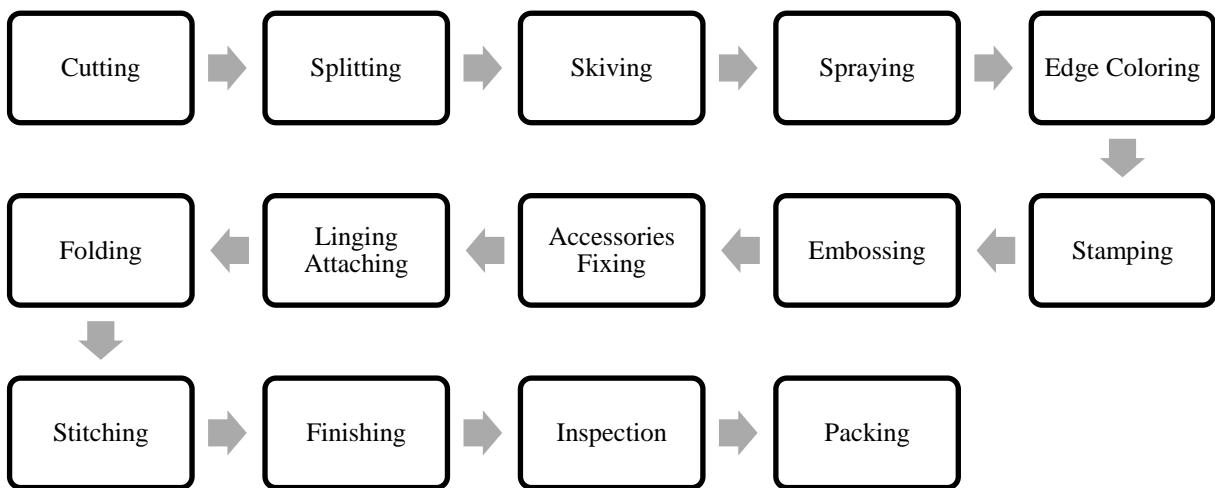
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## Process Flow

### Designing Process



### Fabrication Process



## Product Variants

1. Based on Upper materials: Leather Upper, Fabric Upper, Synthetic Upper etc. Combination Upper etc.

## Reference and Further Reading

1. Leather Goods Manufacture - G C. Moseley (Edition - 1947)
2. Leather Crafts – W. A. Attwater (Edition - 1961)

Sector	Sub-sector	Product Name	Product No
Leather	Leather Goods	Casual Ladies Handbag	060304
		<p><b>BSIC Code : 1512</b>  <b>BCPC Code : 29220</b>  <b>HS Code : 420231, 420232, 420239</b></p> <p><b>This leather goods are used to keep currency, cards, notebooks, other ladies daily needed items inside. Also has aesthetic importance.</b></p> <p><b>Category: Ladies</b></p>	

### Raw Material

1. Upper Materials: Finished leather, split / suede leather, textile fabrics, synthetic upper, etc.
2. Lining Materials: Leather, split leather, textile fabrics, synthetic lining, etc.
3. Accessories: Threads –Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Rivet (Metal/Plastic), Rings (O and D rings), Dog Hooks (Metal), Velcro (Plastic), PE or Rubber Stickers, Adhesives (Water and Solvent Based), Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/ lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/ textile upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners and other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>
7. Finishing Chemical	<ol style="list-style-type: none"> <li>1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486</li> </ol>

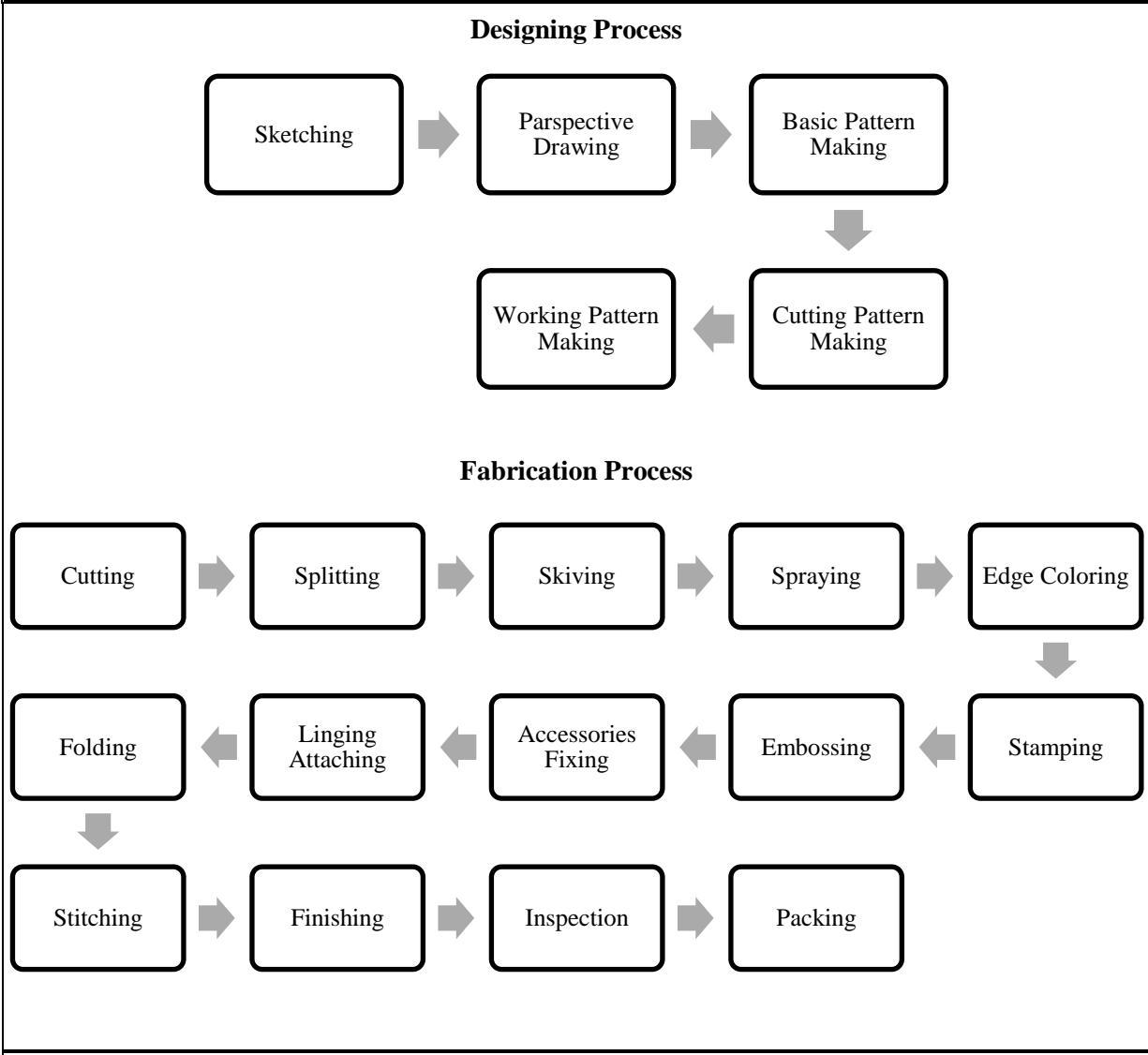
## Machineries

1. Swing Arm Cutting Machine		<p>FOB Price: US \$2,000 - 2,500 / Set  <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a></p> <p>Tension distance: 60-150mm          Arm width: 350*550mm          work table: 1000*500 mm          Voltage: 3 phase 380/220v, 50Hz</p>
2. Splitting Machine		<p>FOB Price: US \$6,226 - 6,449 / Set  <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a></p> <p>Dimension(L*W*H): 149*84*120          work width: 320mm          N.W/G.W: 620KGS/680KGS</p>
3. Skiving Machine		<p>FOB Price: US \$550 - 580 / Set  <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a></p> <p>Knife: 117*54*114mm          Skiving Width: 4-15mm          Rotation Speed: 1100-1200rpm          Voltage: 220V/50Hz</p>
4. Stamping Machine		<p>FOB Price: US \$2,000 - 12,000 / Piece  <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a></p> <p>area: 400*500 mm          power: 5.5KW          dimensions(mm): 650*550*1600</p>
5. Flat Bed Sewing Machine		<p>FOB Price: US \$150 - 170 / Set  <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a></p> <p>Max. Speed: 5000rpm          Power: 400w          weight: 32/36kgs</p>
6. Cylinder bed Sewing Machine		<p>FOB Price: US \$385 - 425 / Set  <a href="http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html">http://www.alibaba.com/product-detail/Cylinder-Bed-Leather-Sewing-Machine-BMA_210617771.html</a></p> <p>Max. Speed: 2200 RPM          Max. Thickness: 9.6MM          Stitch Length: 6MM          Power: 250W</p>

## **List of Local Suppliers of Machineries**

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
  2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
  3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
  4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
  5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on upper materials: Leather upper, Fabric upper, Synthetic upper, Combination upper etc.

## Reference and Further Reading

1. Leather Goods Manufacture - G C. Moseley (Edition - 1947)
  2. Leather Crafts – W. A. Attwater (Edition - 1961)

Sector	Sub-sector	Product Name	Product No
Leather	Leather Goods	Office Accessories	060305
		<b>BSIC Code</b> : 1512 <b>BCPC Code</b> : 29290 <b>HS Code</b> : 420291, 420500 <p>These are various kinds of necessary office accessories including desk pad, file folder, mouse pad, photo frame, corner file, file rack, card stand, slip stock, pen holder, trash bin etc. All these are of everyday use in every office everywhere. These items can be also used for personal use at home.</p> <p><b>Category:</b> Desktop, Handheld.</p>	

#### Raw Material

1. Upper Materials: Finished leather, synthetic upper materials, etc.
2. Lining Materials: Leather, split leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads- Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Rivet (Metal/Plastic), Velcro (Plastic), PE or Rubber Stickers, Stiffeners (Cellulose board, Paper board, Leather board or Plastic board etc.), Adhesives (Water and Solvent Based), Dyes and Pigments etc.

#### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/ lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/ textile upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners and other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>

6. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
7. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486

### Machineries

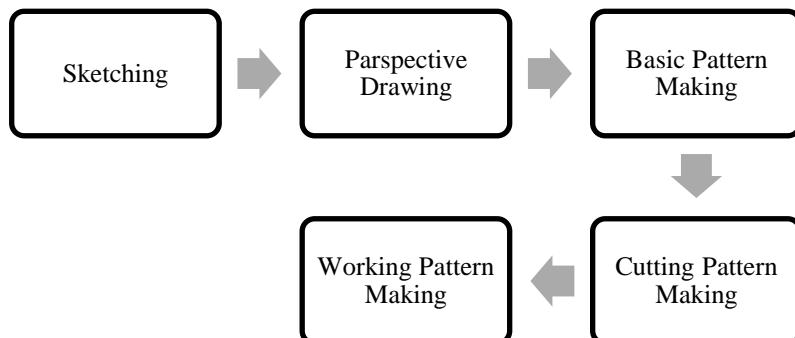
1. Swing Arm Cutting Machine	 A swing arm cutting machine with an orange top panel and a green base unit containing a motor and control components.	FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Splitting Machine	 A large industrial splitting machine with a red cabinet and a central work area featuring a black leather sample.	FOB Price: US \$6,226 - 6,449 / Set <a href="http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html">http://www.alibaba.com/product-detail/high-quality-leather-splitting-machine_1813900040.html</a> Dimension(L*W*H): 149*84*120 work width: 320mm N.W/G.W: 620KGS/680KGS
3. Skiving Machine	 A skiving machine with a grey frame and a vertical metal arm holding a sharp blade.	FOB Price: US \$550 - 580 / Set <a href="http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html">http://www.alibaba.com/product-detail/Adjustable-Speed-Leather-Skiving-Machine_504766736.html</a> Knife: 117*54*114mm Skiving Width: 4-15mm Rotation Speed: 1100-1200rpm Voltage: 220V/50Hz
4. Stamping Machine	 A stamping machine with a vertical hydraulic press and a control panel at the bottom.	FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5KW dimensions(mm): 650*550*1600
5. Flat Bed Sewing Machine	 A flat bed sewing machine with a white frame and a dark leather bed.	FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Power: 400w weight: 32/36kgs

## List of Local Suppliers of Machineries

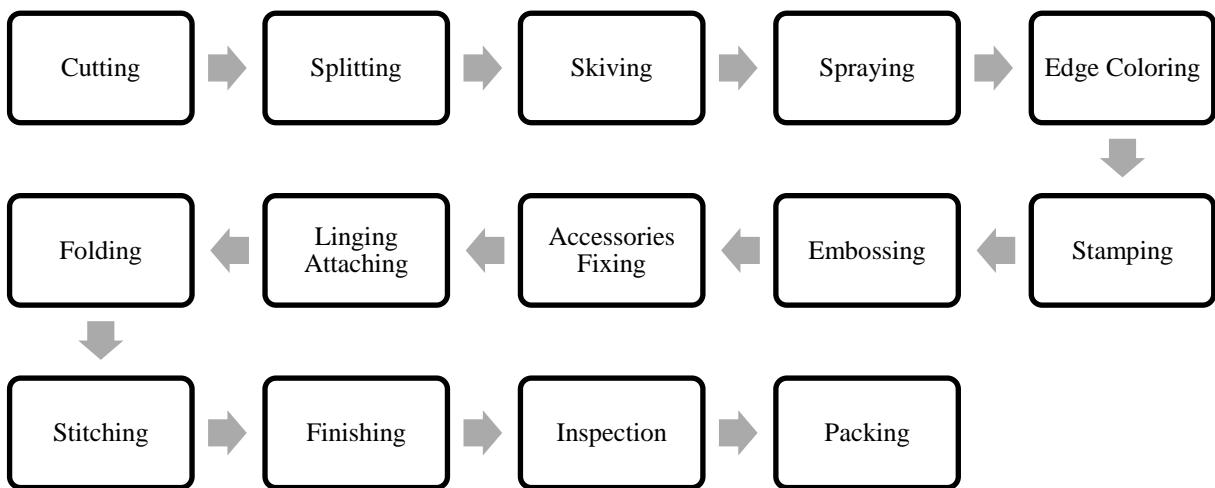
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3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow

### Designing Process



### Fabrication Process



## Product Variants

1. Based on Upper materials: Leather Upper, Synthetic Upper and Combination etc.

## Reference and Further Reading

1. Leather Goods Manufacture – G. C. Moseley (Edition - 1947)
2. Leather Crafts – W. A. Attwater (Edition - 1961)

Sector	Sub-sector	Product Name	Product No
Leather	Leather Garments	Leather Jacket	060401
		<p><b>BSIC Code</b> : 1512  <b>BCPC Code</b> : 29290  <b>HS Code</b> : 420310, 430310</p> <p>It is a waist or hip length coat that is usually worn on top of other apparel, and made from special type garment leather. The leather material is typically dyed black, or various shades of brown, but a wide range of colors is possible.</p> <p><b>Category:</b> Gents, Ladies, Children</p>	

### Raw Material

1. Upper Materials: Grain garments leather, suede garments leather, Synthetic Upper, leather/ denim/ textile/ jute combination etc.
2. Lining Materials: Suede leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads –Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Zippers (Metal/ Plastic), Rivet (Metal/Plastic); PE or Rubber Stickers, Adhesives (Water and Solvent Based), Fusing (Woven and Non-woven), Elastic Band (Rubber), Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/ lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/ textile/ Jute Hessian upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners, fusing other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>

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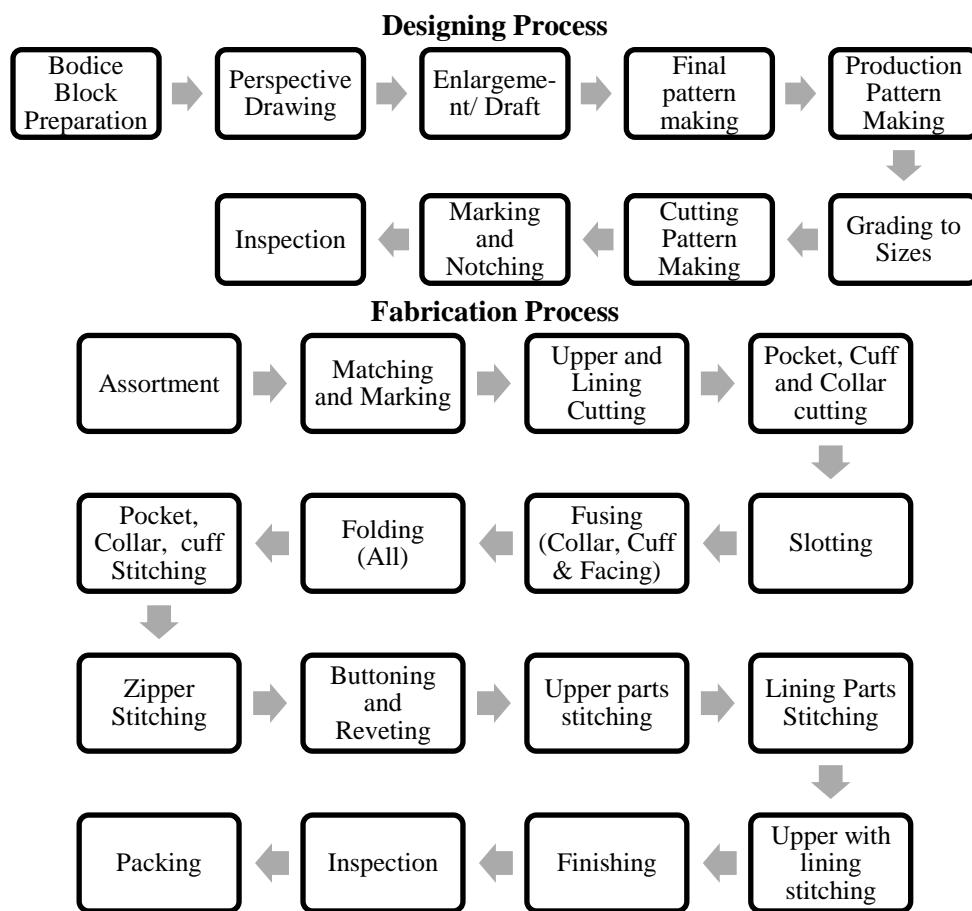
### Machineries

1. Swing Arm Cutting Machine	 A swing arm cutting machine with an orange top panel and a green base unit containing a motor and fan.	FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Buttoning Machine	 A buttoning machine with a central vertical column and a horizontal work table at the top.	FOB Price: US \$800 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html">http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html</a> SPEED: 1800r/m Dimension: 1200*500*1200 mm Punch distance: 34mm
3. Over locking Machine	 An overlocking machine with a white cabinet and a grey base.	FOB Price: US \$155 - 220 / Piece <a href="http://www.alibaba.com/product-detail/FH737-industrial-high-speed-used-leather_1876625830.html">http://www.alibaba.com/product-detail/FH737-industrial-high-speed-used-leather_1876625830.html</a> Speed: 6000r.p.m Thickness: 6mm Stitch Length: 2mm,4mm Power: 250W/400W Dimensions: 470*330*480mm
4. Fusing Machine	 A heat press machine with a blue top panel and a white base with wheels.	FOB Price: US \$1,000 - 3,000 / Set <a href="http://www.alibaba.com/product-detail/Heat-Press-Garment-leather-Fusing-Machine_1548832746.html">http://www.alibaba.com/product-detail/Heat-Press-Garment-leather-Fusing-Machine_1548832746.html</a> Power: 220V; 4.5Kw Temperature: normal~200°C Pressure: 0.15MPa Width: 500mm
5. Flat Bed Sewing Machine	 A flat bed sewing machine with a white cabinet and a black work area.	FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400w weight: 32/36kgs

## List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
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5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on Upper materials: Leather Upper, Synthetic Upper, Combination Upper etc.
2. Based on gender: Gents, Ladies and Children.
3. Based on Style: Bolero, Waistcoat (Gilet), Short jacket, Spencer, Blouson, Lumber, Tyrolean, Long waistcoat, Cardigan style, Donkey jacket, Flared, Long blouson, Coat jacket, Tailored, Blazer, Shirt jacket, Safari style, Parka, Anorak.

## Reference and Further Reading

1. Clothing Technology -Roland Kilgus, second Edition
2. Leather Apparel Design By Francesca Sterlacci
3. Pattern Cutting And Making By Martein M Shoben
4. Metric pattern cutting for Men's wear, Women's Wear and Children's wear By Winifred Aldrich.

Sector	Sub-sector	Product Name	Product No
Leather	Leather Garments	Leather Skirt	060402
		<b>BSIC Code</b> : 1512 <b>BCPC Code</b> : 29290 <b>HS Code</b> : 420310 <p>A leather skirt is a skirt made of leather. Although durable material, the particular combination of style and material makes for a certain fashion statement. Leather skirts appear in a variety of lengths and styles.</p> <p><b>Category</b> : Ladies</p>	

### Raw Material

1. Upper Materials: Grain garments leather, suede garments leather, Synthetic Upper, leather/ denim/ textile/ jute combination etc.
2. Lining Materials: Suede leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads –Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Zippers (Metal/ Plastic), Rivet (Metal/Plastic); PE or Rubber Stickers, Adhesives (Water and Solvent Based), Elastic Band (Rubber), Dyes and Pigments etc.

### Source of Raw Materials

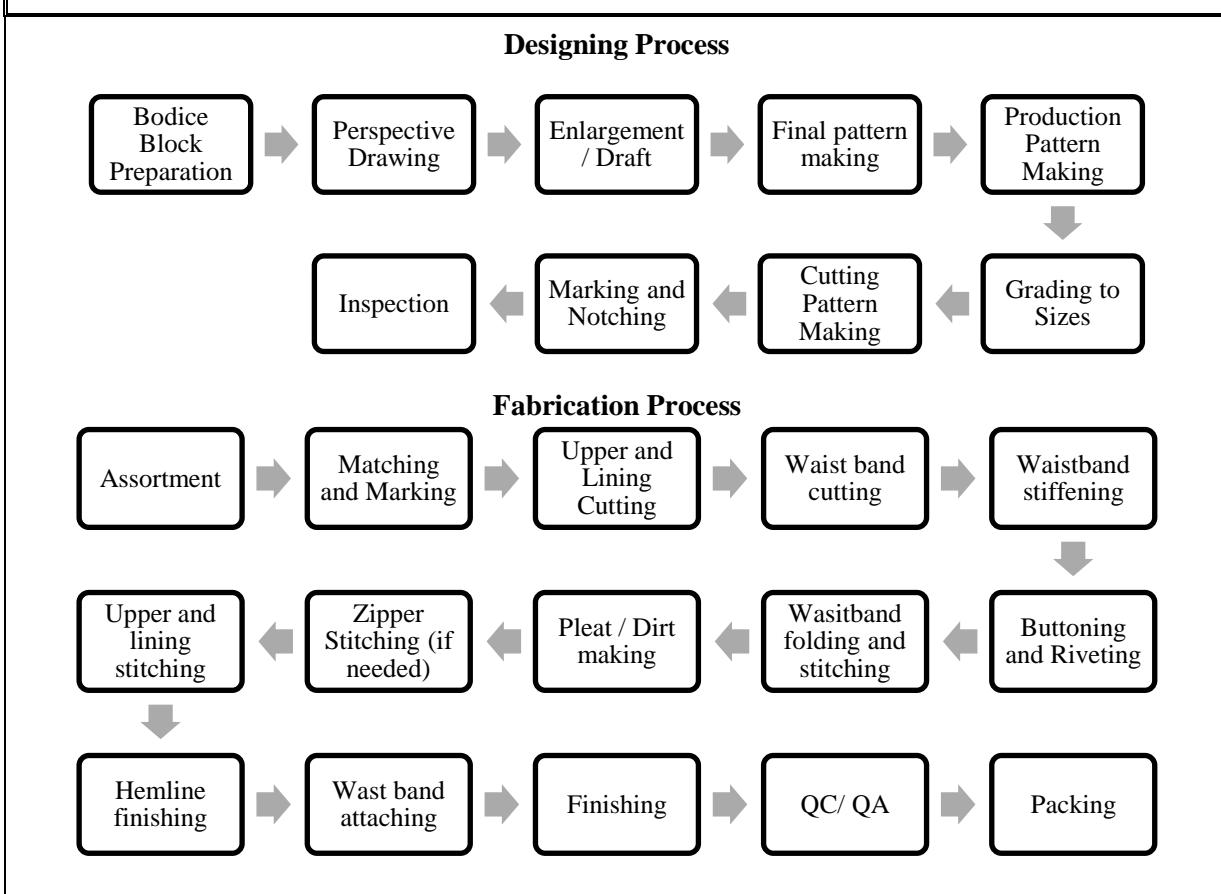
1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/ lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/ textile/ Jute Hessian upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners, fusing other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>

7. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486		
<b>Machineries</b>			
1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage:3 phase 380/220v, 50Hz	
2. Buttoning Machine		FOB Price: US \$800 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html">http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html</a> SPEED: 1800r/m Dimension: 1200*500*1200 mm Punch distance: 34mm	
3. Over locking Machine		FOB Price: US \$155 - 220 / Piece <a href="http://www.alibaba.com/product-detail/FH737-industrial-high-speed-used-leather_1876625830.html">http://www.alibaba.com/product-detail/FH737-industrial-high-speed-used-leather_1876625830.html</a> Speed: 6000r.p.m Thickness: 6mm Stitch Length: 2mm,4mm Power: 250W/400W Dimensions: 470*330*480mm	
4. Fusing Machine		FOB Price: US \$1,000 - 3,000 / Set <a href="http://www.alibaba.com/product-detail/Heat-Press-Garment-leather-Fusing-Machine_1548832746.html">http://www.alibaba.com/product-detail/Heat-Press-Garment-leather-Fusing-Machine_1548832746.html</a> Power: 220V; 4.5Kw Temperature: normal~200°C Pressure: 0.15MPa Width: 500mm	
5. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400w weight: 32/36kgs	

## List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on Upper materials: Leather Upper, Synthetic Upper, Combination Upper etc.
2. Based on gender: Ladies
3. Based on length: Micro, Mini, Midi, Maxi
4. Based on style: Flared, Pleated, A-line skirt, Pencil, Bell shape, Circle, Hobble skirt etc.

## Reference and Further Reading

1. Clothing Technology -Roland Kilgus, second Edition
2. Leather Apparel Design by Francesca Sterlacci
3. Pattern Cutting And Making by Martein M Shoben
4. Metric pattern cutting for Men's wear, Women's Wear and Children's wear By Winifred Aldrich

Sector	Sub-sector	Product Name	Product No
Leather	Leather Garments	Leather Gloves	060403
		<p><b>BSIC Code</b> : 1512  <b>BCPC Code</b> : 29290  <b>HS Code</b> : 420321, 420329, 430390</p> <p>A leather glove is a garment covering the whole hand. Gloves have separate sheaths or openings for each finger and the thumb and used for fashion, sports and safety purposes. It is mostly popular in colder countries as fashion accessories.</p> <p><b>Category</b> : Gents, Ladies, Children</p>	

### Raw Material

1. Upper Materials: Gloving leather, suede/ nappa leather, synthetic upper, leather/ denim/ textile/ jute combination etc.
2. Lining Materials: Suede leather, textile fabrics etc.
3. Accessories: Threads –Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Zippers (Metal/ Plastic), Rivet (Metal/Plastic), Adhesives (Water and Solvent Based), Elastic Band (Rubber), Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a> , <a href="http://www.tannersbd.com">www.tannersbd.com</a> 2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a>
2. Synthetic upper/lining	1. Plastic & Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 01711-439159
3. Denim/textile upper/lining	1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734
4. Thread	1. Bangladesh Sewing Thread Manufacturers & Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883
5. Accessories	1. Bangladesh Garments Accessories & Packaging Manufacturers & Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a> , <a href="http://www.bgapmea.org">www.bgapmea.org</a>
6. Adhesives	1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102
7. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486

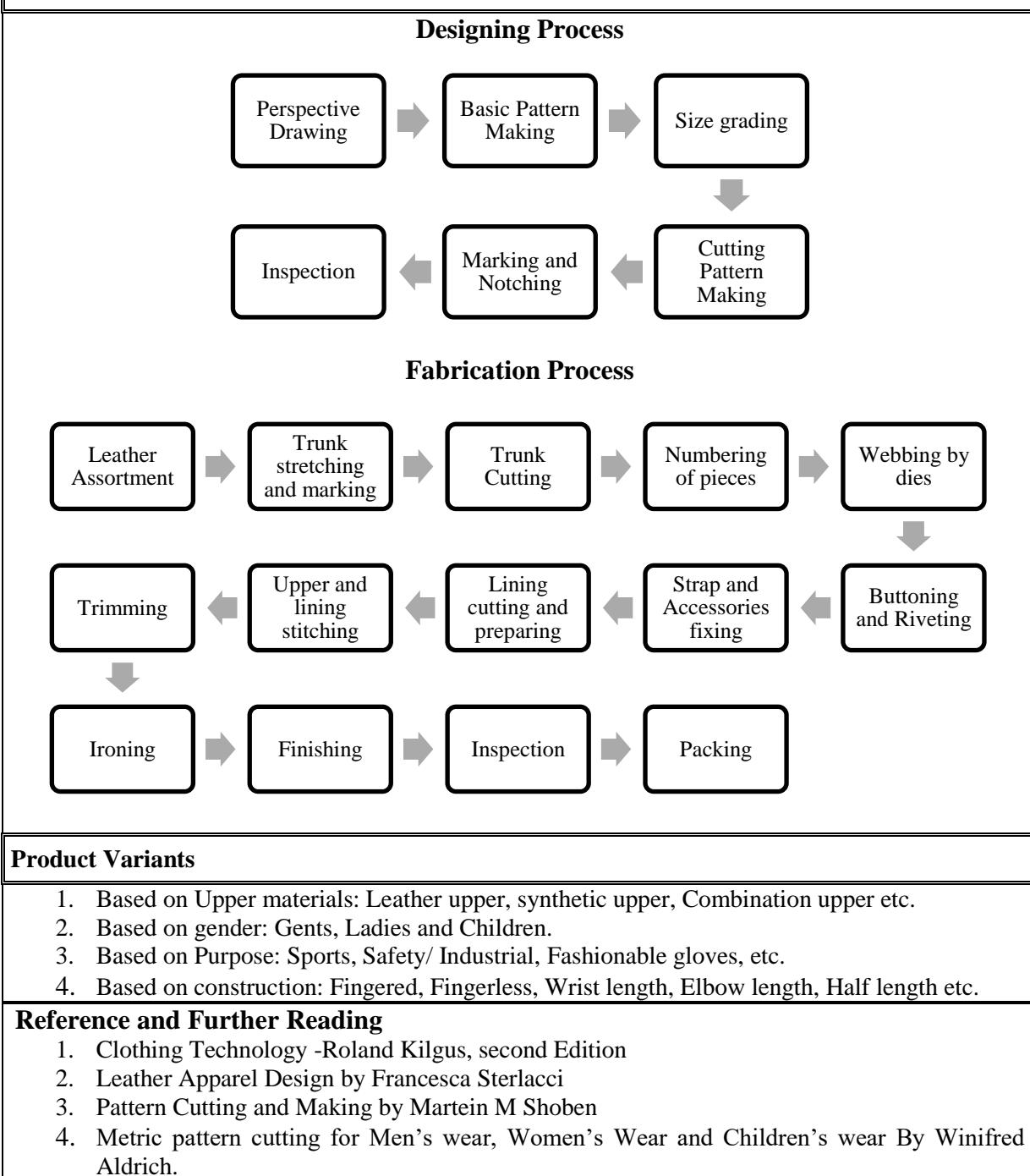
## Machineries

1. Swing Arm Cutting Machine		FOB Price: US \$2,000 - 2,500 / Set <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a> Tension distance: 60-150mm Arm width: 350*550mm work table: 1000*500 mm Voltage: 3 phase 380/220v, 50Hz
2. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400w weight: 32/36kgs
3. Stamping Machine		FOB Price: US \$2,000 - 12,000 / Piece <a href="http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html">http://www.alibaba.com/product-detail/ZS-22-leather-PU-PVC-cardboard_519866693.html</a> area: 400*500 mm power: 5.5KW dimensions(mm): 650*550*1600
4. Buttoning Machine		FOB Price: US \$800 - 1,000 / Set <a href="http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html">http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html</a> SPEED: 1800r/m Dimension: 1200*500*1200 mm Punch distance: 34mm
5. Strobel Stitching Machine		FOB Price: US \$100 - 200 / Set <a href="http://www.alibaba.com/product-detail/G450High-capacity-string-lasting-heavy-duty_721019328.html">http://www.alibaba.com/product-detail/G450High-capacity-string-lasting-heavy-duty_721019328.html</a> Speed: 2800/Min Power: 250W or 370W

## List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



Sector	Sub-sector	Product Name	Product No
Leather	Leather Garments	Leather Waist Belt	060404
		<p><b>BSIC Code : 1512</b>  <b>BCPC Code : 29290</b>  <b>HS Code : 420310, 430310</b></p> <p><b>A belt is a flexible band or strap, typically made of leather or heavy cloth, and worn around the waist. A belt supports trousers or other articles of clothing.</b></p> <p><b>Category: Gents, Ladies</b></p>	
<b>Raw Material</b>			
<ol style="list-style-type: none"> <li>Upper Materials: Finished leather, Suede leather, Synthetic Upper, leather/ denim/ textile/ jute combination etc.</li> <li>Lower Part Materials: Suede leather, Finished belting leather, Synthetic material etc.</li> <li>Accessories: Threads – Nylon/Polyester, fastenings – Rivet (Metal/Plastic), Buckles (Metal: Press and Pronged); Adhesives (Water and Solvent Based), Dyes and Pigments etc.</li> </ol>			
<b>Source of Raw Materials</b>			
1. Leather upper/lining	<ol style="list-style-type: none"> <li>Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>		
2. Synthetic upper/ lining	<ol style="list-style-type: none"> <li>Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>		
3. Denim/textile upper/lining	<ol style="list-style-type: none"> <li>Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>		
4. Thread	<ol style="list-style-type: none"> <li>Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>		
5. Accessories	<ol style="list-style-type: none"> <li>Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>		
6. Adhesives	<ol style="list-style-type: none"> <li>Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>		
7. Finishing Chemical	<ol style="list-style-type: none"> <li>Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486</li> </ol>		

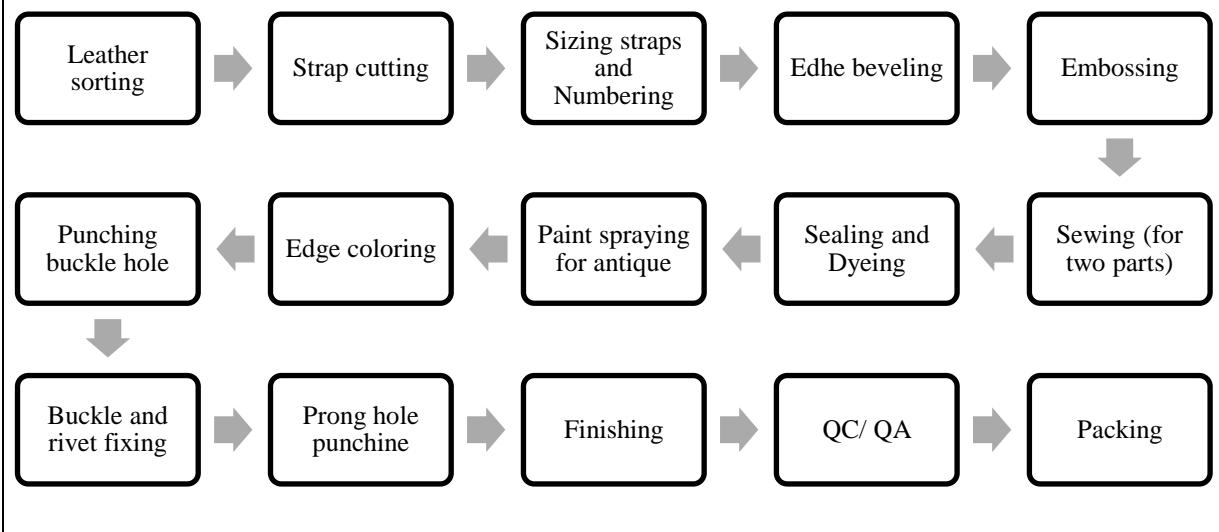
## Machineries

1. Strap cutting machine		FOB Price: US \$656 - 896 / Set <a href="http://www.alibaba.com/product-detail/high-quality-belt-make-machine-leather_1800152694.html">http://www.alibaba.com/product-detail/high-quality-belt-make-machine-leather_1800152694.html</a> cutting width: 5mm-340mm Motor speed: 2850 r/min Power(W): 400 w L*W*H: 120*52*112 cm
2. Embossing Machine		FOB Price: US \$490 - \$699/ Piece <a href="http://www.tandyleatherfactory.com/en-usd/home/department/tools/leather-belt-embossing-machine-r/3800-00.aspx">http://www.tandyleatherfactory.com/en-usd/home/department/tools/leather-belt-embossing-machine-r/3800-00.aspx</a> Detail up to 2", Weighs under 14 lbs
6. Flat Bed Sewing Machine		FOB Price: US \$150 - 170 / Set <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a> Max. Speed: 5000rpm Thickness: Heavy Power: 400w weight: 32/36kgs
4. Hole Punching machine		FOB Price: US \$899 - 1,199 / Set <a href="http://www.alibaba.com/product-detail/automatic-leather-belt-punching-machine-ZX_855602208.html">http://www.alibaba.com/product-detail/automatic-leather-belt-punching-machine-ZX_855602208.html</a> (L*W*H): 640*720*320 mm Weight: 1380kg

### List of Local Suppliers of Machineries

1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)
2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)
3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510
4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212, [4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on Upper materials: Leather Upper, Synthetic Upper, Combination Upper etc.
2. Based on gender: Gents, Ladies and Children.
3. Based on Style: Bolero, Waistcoat (Gilet), Short jacket, Spencer, Blouson, Lumber, Tyrolean, Long waistcoat, Cardigan style, Donkey jacket, Flared, Long blouson, Coat jacket, Tailored, Blazer, Shirt jacket, Safari style, Parka, Anorak.

## Reference and Further Reading

1. Clothing Technology -Roland Kilgus, second Edition
2. Leather Apparel Design By Francesca Sterlacci
3. Pattern Cutting And Making By Martein M. Shoben
4. Metric pattern cutting for Men's wear, Women's Wear and Children's wear By Winifred Aldrich.

Sector	Sub-sector	Product Name	Product No
Leather	Leather Garments	Leather Trouser	060405
		<b>BSIC Code</b> : 1512 <b>BCPC Code</b> : 29290 <b>HS Code</b> : 420310 <b>Trousers or generally called pants made out of leather and worn from the waist, which is the skin of lambs, cows, or horses. Generally black is the favored color for these pants but brown and white have also become popular.</b> <b>Category: Gents, Ladies, Children</b>	

### Raw Material

1. Upper Materials: Grain garments leather, suede garments leather, Synthetic Upper, leather/denim/ textile/ jute combination etc.
2. Lining Materials: Suede leather, textile fabrics, synthetic lining etc.
3. Accessories: Threads –Nylon/Polyester, fastenings –Buttons (Metal/Plastic), Zippers (Metal/Plastic), Rivet (Metal/Plastic); PE or Rubber Stickers, Adhesives (Water and Solvent Based), Fusing (Woven and Non-woven), Elastic Band (Rubber), Dyes and Pigments etc.

### Source of Raw Materials

1. Leather upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Tanners Association (BTA), House # 88, Road # 7/A, Flat # A-1 (1st floor), Dhanmondi, Dhaka-1209. Tel: 88-02-913 84 62, Fax: 88-02-9138476, <a href="mailto:info@tannersbd.com">info@tannersbd.com</a>, <a href="http://www.tannersbd.com">www.tannersbd.com</a></li> <li>2. Bangladesh Finished Leather, Leather Goods and Footwear Exporters Association (BFLLFEA), House # 32/A, Road # 2, Flat # B-2, Dhanmondi R/A, Dhaka., Tel: + 880-(0)2-8622167 Fax: + 880-(0)2-8622168, <a href="mailto:bflfea@yahoo.com">bflfea@yahoo.com</a></li> </ol>
2. Synthetic upper/ lining	<ol style="list-style-type: none"> <li>1. Plastic &amp; Rubber Shoe Merchants Association of Bangladesh, 17/2, Mawlana Mufti Din Mohammad Road (Urdhu Road), Dhaka, Tel: 7319212, 7310215, Mob: 001711-439159</li> </ol>
3. Denim/ textile/ Jute Hessian upper/lining	<ol style="list-style-type: none"> <li>1. Bangladesh Textile Mills Association, Unique Trade Center (Level-8), 8 Panthapath, Kawran Bazar, Dhaka-1215, Tel: 9143461, Fax: 880-2-9125338, Mob: 01711-527734</li> </ol>
4. Thread	<ol style="list-style-type: none"> <li>1. Bangladesh Sewing Thread Manufacturers &amp; Exporters Association, Youth Tower, 822/2, Rokeya Sarani, Dhaka-1216. Tel: 8052343, Fax: 8052351, Mob:01552-367883</li> </ol>
5. Stiffeners, fusing other accessories	<ol style="list-style-type: none"> <li>1. Leather goods and Footwear Manufacturers and Exporters Association of Bangladesh (LFMEAB), Erectors House, 18, Kemal Ataturk Avenue (9th Floor), Banani, Dhaka. Tel: 880-29821418, Fax: 880-29821420, <a href="mailto:info@lfmeab.org">info@lfmeab.org</a>, <a href="http://www.lfmeab.org">www.lfmeab.org</a></li> <li>2. Bangladesh Garments Accessories &amp; Packaging Manufacturers &amp; Exporters Association (BGAPMEA), Sonartori Tower (9th floor), 12, Sonargaon Link Road, Banglamotor, Dhaka. Tel: +88-02-9632700, Fax: +88-02-9632718, <a href="mailto:bgapmea@gmail.com">bgapmea@gmail.com</a>, <a href="http://www.bgapmea.org">www.bgapmea.org</a></li> </ol>
6. Adhesives	<ol style="list-style-type: none"> <li>1. Bangladesh Adhesive Manufacturers Association, Zaman Chamber (3rd floor), 47, Dilkusha C/A, Dhaka-1000, Tel: 9563518, 9566837, Mob: 01711-042102</li> </ol>

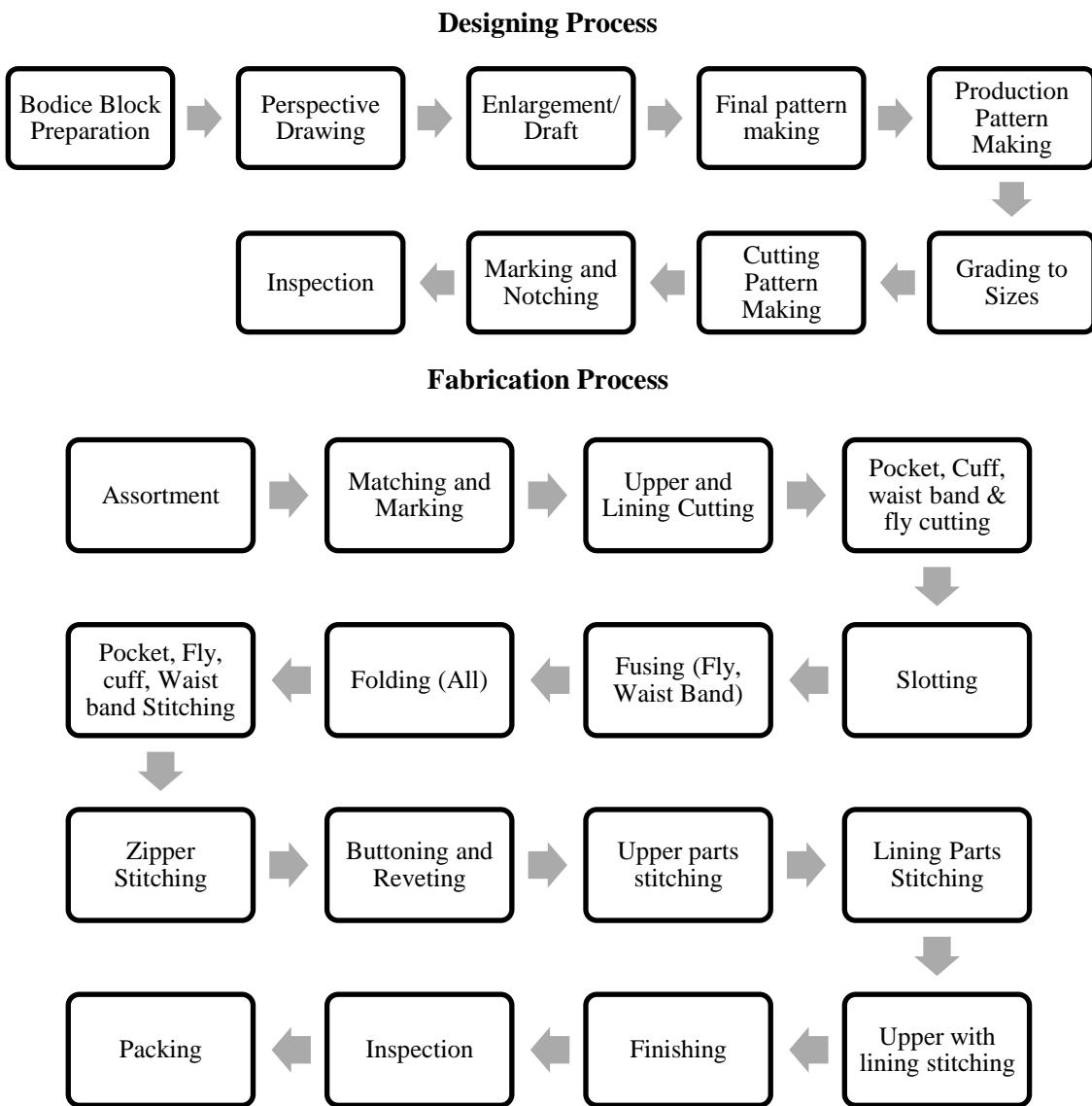
7. Finishing Chemical	1. Bangladesh Chemical Importers and Merchants Association, 124, Hazaribagh (Dhaka Tannery Moor), Dhaka-1205, Bangladesh, +88-02-8622608, 8624009, 01986-842486
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<b>Machineries</b>		
1. Swing Arm Cutting Machine		<p>FOB Price: US \$2,000 - 2,500 / Set  <a href="http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html">http://www.alibaba.com/product-detail/Hydraulic-Swing-Arm-Cutting-Machine-20_1289093843.html</a></p> <p>Tension distance: 60-150mm        Arm width: 350*550mm        work table: 1000*500 mm        Voltage: 3 phase 380/220v, 50Hz</p>
2. Buttoning Machine		<p>FOB Price: US \$800 - 1,000 / Set  <a href="http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html">http://www.alibaba.com/product-detail/ZS-808-Leather-goods-shoes-handbag_677270226.html</a></p> <p>SPEED: 1800r/m        Dimension: 1200*500*1200 mm        Punch distance: 34mm</p>
3. Over locking Machine		<p>FOB Price: US \$155 - 220 / Piece  <a href="http://www.alibaba.com/product-detail/FH737-industrial-high-speed-used-leather_1876625830.html">http://www.alibaba.com/product-detail/FH737-industrial-high-speed-used-leather_1876625830.html</a></p> <p>Speed: 6000r.p.m, Thickness: 6mm        Stitch Length: 2mm,4mm, Power: 250W/400W,        Dimensions: 470*330*480mm</p>
4. Fusing Machine		<p>FOB Price: US \$1,000 - 3,000 / Set  <a href="http://www.alibaba.com/product-detail/Heat-Press-Garment-leather-Fusing-Machine_1548832746.html">http://www.alibaba.com/product-detail/Heat-Press-Garment-leather-Fusing-Machine_1548832746.html</a></p> <p>Power: 220V; 4.5Kw        Temperature: normal~200°C        Pressure: 0.15MPa        Width: 500mm</p>
5. Flat Bed Sewing Machine		<p>FOB Price: US \$150 - 170 / Set  <a href="http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html">http://www.alibaba.com/product-detail/Industrial-Sewing-Machine-for-Leather_964687631.html</a></p> <p>Max. Speed: 5000rpm        Thickness: Heavy        Power: 400w        weight: 32/36kgs</p>

<b>List of Local Suppliers of Machineries</b>
<ol style="list-style-type: none"> <li>1. LIMEX Technologies Ltd. (Mir Noor Square, 103A (3<sup>rd</sup> Floor), House # 43, Road # 2/A, Dhanmondi, Dhaka, Tel: +880-2-8615564)</li> <li>2. Maximization Ltd., Flat No #3E, 3rd Floor, House no # 57/A, Road # 4/A, Dhanmondi, Dhaka-1209, Bangladesh (+880-2-58613876, +880-2-8629735)</li> <li>3. Overseas Marketing Corporation (Pvt.) Limited, Unique Trade Center (UTC), 15th level, 8 Panthapath, Dhaka - 1215, Bangladesh, Tel: +88-02-58154510</li> </ol>

4. 4S ADVANCE TECHNOLOGIES LTD., Ka-80, Mohakhali, South Zone, Dhaka – 1212,  
[4stradinghouse@gmail.com](mailto:4stradinghouse@gmail.com)
5. Alibaba Machinery Network: [www.alibaba.com/Leather-Production-Machinery\\_pid4306](http://www.alibaba.com/Leather-Production-Machinery_pid4306)

## Process Flow



## Product Variants

1. Based on upper materials: Leather upper, synthetic upper, combination upper etc.
2. Based on gender: Gents, Ladies and Children.
3. Based on Length: Knee height, Ankle height, Midi Height, Shorts etc.

## Reference and Further Reading

1. Clothing Technology -Roland Kilgus, second Edition
2. Leather Apparel Design By Francesca Sterlacci
3. Pattern Cutting And Making By Martein M. Shoben
4. Metric pattern cutting for Men's wear, Women's Wear and Children's wear By Winifred Aldrich.

## List of 155 Products Brought Under BSTI Mandatory Certification Marks Scheme

### A. Food and Agricultural Products (64 items):

Sl.	Name of the products	Standard No.
1.	Fruit Juice & Nectars	BDS CAC 247:2008
2.	Ice Cream	BDS 1083 :2006
3.	Concentrated Fruit Juice	BDS 527:2007
4.	Chilies, Whole and Ground	BDS 1017:2001
5.	Fruit Squash	BDS 506:2002
6.	Soya bean Oil	BDS 909:2000
7.	Jam, (Fruit Preserves) & Jelly's	BDS CAC 79:2008
8.	Mustard Oil	BDS 25:2000, Amend: 3, 2007
9.	Citrus Marmalade	BDS CAC 80: 2008
10.	Turmeric Powder	BDS 991: 2001
11.	Vinegar	BDS CAC 162:2007
12.	Edible Palm Oil	BDS 999:2000
13.	Fruit Syrup	BDS 528:2006
14.	Sugar	BDS CAC 212:2006
15.	Honey	BDS CAC 12:2007
16.	Suji (Semolina)	BDS 190:1991, Amend 1: 2001
17.	Canned & Bottled Fruit	BDS 503:2006
18.	Pasteurized Milk	BDS 1702:2002
19.	Fruit Cordial	BDS 508:2006
20.	Chips/Crackers	BDS 1556:1997, Amend 1: 2004
21.	Sauce (Fruits or Vegetable)	BDS 512:2007
22.	Chanachur	BDS 1564:1997, Amend 1: 2004
23.	Tomato Paste	BDS 517:2002
24.	Lachha Semai	BDS 1620:2000
25.	Pickles	BDS 520:2001
26.	Soft Drink Powder	BDS 1586:2007
27.	Canned Pineapple	BDS CAC 42:2007
28.	Banaspati	BDS 804:2001
29.	Tomato Ketchup	BDS 530:2002
30.	Instant Noodles	BDS 1552:2007
31.	Infant Formula & Formulas for Special Medical purposes intended for infants	BDS CAC-72-2008
32.	Processed cereal based food for infants & Young Children	BDS CAC 74 :2007
33.	Milk Fat Products	BDS CAC A:2:2008
34.	Edible Sun Flower Oil	BDS CAC 23: 2002
35.	Butter	BDS CAC-A-1:2002
36.	Mosquito Coil	BDS 1089: 2007
37.	Milk Powder and Cream Powders	BDS CAC 207:2008
38.	Malathion 57% (W/V) (Emulsifiable Concentrates)	BDS 1179: 2001
39.	White Bread	BDS 382:2001
40.	Plywood for General Purposes	BDS 799: 2006
41.	Biscuit	BDS 383:2001
42.	Plywood Tea-Chest	BDS 18:2006
43.	Lozenges	BDS 490:2001, Amend 1: 2007
44.	Safety matches in boxes	BDS 1040:2006

45.	Toffees	BDS 1000:2001
46.	Wheat Bran	BDS 997:2006
47.	Black Tea Definition & Basic requirements	BDS ISO:3720:2008
48.	Condensed Milk and Condensed Skim Milk	BDS CAC A-4:2002
49.	Liquid Glucose (Glucose Syrup)	BDS CAC 9:2006
50.	Refined Palm Olein	BDS 1567:2007
51.	Dextrose Monohydrate	BDS CAC 8:2007
52.	Yoghurt and Sweetened Yoghurt	CAC-A-11(a):2002
53.	Maida	BDS 381:2007
54.	Curry Powder	BDS 1205: 2006
55.	Wheat Atta	BDS 380:1980, Amend 1: 2001
56.	Fortified Soybean Oil	BDS 1769:2006, Amend 1: 2008
57.	Carbonated Beverages	BDS 1123:2002, Amend 1: 2007
58.	Fortified Edible Palm Oil	BDS 1770:2006, Amend 1:2008
59.	Noodles	BDS 1106:2001
60.	Refined Sugar	138: 2006
61.	Iodized Salt	BDS 1236:2001, Amend 1: 2007
62.	Cake	BDS 1574: 2006
63.	Drinking Water	BDS 1240:2001
64.	Natural Mineral Water	BDS 1414:2000

#### B. Chemical Products (40 items):

Sl.	Name of the products	Standards No.
65.	Coconut Oil	BDS 99:2007
66.	Carbolic Soap	BDS 181:02Amend1:02
67.	Stencil Paper	BDS 1030:98 Amend 1: 06
68..	Ink, Duplicating	BDS 146:2002
69.	Writing and Printing Papers	BDS 405:96 Amen1:06
70.	Ferro-gallo tannate Fountain Pen Ink	BDS 88:91Amend 1:06
71.	Pencils	BDS 330:93 Amen 1:06
72.	Ceramic Tableware	BDS 485:2000 Amend 1,2,3 :06
73.	Ready Mixed Paint, brushing, finishing semi gloss for general purpose.	BDS 402:1989 Amend 1 ,2: 2007,
74.	Tableware Made of Melamine Plastics	BDS 1425 :2009
75.	Shoe Polish, Paste	BDS 1006:1981 Amend 1: 06
76.	Skin Cream	BDS 1382:1992Amend 1,2,3: 06
77.	Coal Tar Black Paint (Alquatra)	BDS 69 Part-2):91 Amend 1 : 06
78.	Shaving Cream	BDS 1241:1989 Amend 1,2 : 06
79.	Toilet Soap	BDS 13:06 Amend 1:08
80.	After Shave Lotion	BDS 1524:2006
81.	Laundry Soap Powder	BDS 329: 2006
82.	Lipstick	BDS 1424:1993 Amend 1,2 : 06
83.	Laundry Soap	BDS 12:2006
84.	Hair Oils	BDS BDS 1339:91Amend:1 :06
85.	Ink Stamp Pad	BDS 90:2002
86.	Shampoo, Synthetic Deter-gent based	BDS 1269:02 Amend 1: 03
87.	News Print	BDS 845:94 Amend 1:06
88.	Ammonium Sulfate (Fertilizer)	BDS 36:93 Amend 1:08
89.	Urea (Fertilizer)	BDS 217:1993
90.	Ball Point Pens	BDS 1384:2002

91.	Aluminium Sulphate, Non Ferric	BDS 149:1990
92.	High Speed Diesel	BDS 344:1991 Amendment 1:2000, 2:03
93.	Triple Super Phosphate (T.S.P.)	BDS 216:1991 Amend 1, 2 : 07,
94.	Unleaded Motor Gasoline-Premium	BDS 346:99Amend1:03
95.	Ribbons, Type writer	BDS 236: 2006
96.	Unleaded Motor Gasoline-Regular	BDS 347:1999 Amend 1 : 06
97.	Water Resistant Vegetable Tanned Sole Leather	BDS 340:1991
98.	Tooth Powder	BDS 1370:1992 Amend 1 : 06
99.	Carbon Paper for type writer	BDS 411:89Amend1:06
100.	Skin Powder	BDS 1337:1991Amend 1 :06
101.	Tooth Paste	BDS 1216:2001 Amend 1,2,3 : 06
102.	Cement Paints	BDS 1706:2002
103.	Synthetic Detergent Powder	BDS 1445:2003
104.	Tableware urea molding compound	BDS 1825:2011

#### C. Jute and Textile Products (11 items):

Sl.	Name of the products	Standards No.
105.	Rubber conveyor and elevator belting of ply construction.	BDS 1200(Part 1:2005
106.	Polyester Cotton Shirting	BDS 1148:2003
107.	Cotton Sewing Thread	BDS 33:1989
108.	Polyester blend Suiting	BDS 1175:2002
109.	Industrial Sewing Thread made wholly or partly from synthetic fibre	BDS 1221:2001
110.	Rubber Flat Transmission Belting of Textile	BDS 1199:2006
111.	Umbrella cloth	BDS 1125:2005
112.	Poplin Fabric	BDS 32:2001
113.	Textiles Color Fastness Ratings Specification	BDS 1758:2006
114.	Cotton Canvas	BDS 319:2005
115.	Fastness of Dyes on Textile to Steaming	BDS ISO 105-E 11:2004

#### D. Electronics and Electrical Products (25 items):

Sl.	Name of the products	Standards No.
116.	Two-Pin Plugs & Socket-Outlets	BDS 102:1990 Reaffirmed 2005
117.	Three-Pin Plugs & Socket-Outlets	BDS 115:1989 Reaffirmed 2005
118.	Aluminium Conductors steel Re-inforced for Overhead Power Transmission	BDS 1037 : 2003
119.	Bare Aluminium and Aluminium alloy Conductors for overhead power transmission	BDS 1036:2006
120.	Winding Wires: a) Part 1 Enameled round copper winding wires b) Part-2 Enameled rectangular copper winding wires c) Part 3 Enameled round Aluminium winding wires d) Part-4 Enameled rectangular Aluminium winding wires e) Part-5 Test Method	BDS 1034 (Part-1):2006 BDS 1034 (Part-2):2006 BDS 1034 (Part-3):2006 BDS 1034 (Part-4):2006 BDS 1034 (Part-5):2006
121.	(a) Insulated Flexible Cords (Part-1) General requirements (b) Insulated Flexible Cords (Part-2) Requirements for rubber insulated flexible cords	BDS 899 (part-1) :2000 BDS 899 (part-2) :2001

	(C) Insulated Flexible Cords (Part-3) Requirements for PVC Insulated Flexible cords (d) Insulated Flexible Cords (Part-4) Flexible cords Insulated with varnished glass fiber. (e) Insulated Flexible Cords (Part-5) Methods of test. (f) Insulated Flexible Cords (Part-6) Methods of test.	BDS 899 (part-3) :2001 BDS 899 (part-4) :2001 BDS 899 (part-5) :2001 BDS 899 (part-6):2001
122.	Three phase Induction Motors	BDS 1139:1986 Amendment 1:2006
123.	Power Cables with extruded insulation and their accessories for rated voltage from 1kv up to 30kv  1. Part 1 Cables for rated voltage of 1 kv and 3 kv 2. Part-2 Cables for rated voltage from 6kv up to 30 kv 3. Part-4 Test requirement of accessories for 6kv up to 30 kv	BDS IEC 60502-1:2005 BDS IEC 60502-2:2005 BDS IEC 60502-4:2005
124.	(a) Lead acid starter batteries (Part-1) General requirements and methods of test. (b) Lead acid starter batteries (Part-2) Dimensions of batteries and dimension and marking of terminals. (c) Lead acid starter batteries (Part-3) Dimension of batteries for heavy commercial vehicles.	BDS 206 (Part-1) :2002 BDS 206 (Part-2) :2002 BDS 206 (Part-3) :2002
125.	Porcelain Insulator for overhead power lines with a nominal voltage Up to and including 1000 V	BDS 1543:2006
126.	Electricity Metering Equipment (AC) –Particular Requirements (Part-11), Electromechanical Meters for Active Energy (Class 0.5.1 and 2)	BDS IEC 62053-11 :2004
127.	Switches for household and similar fixed electrical installation Part-1 General requirement	BDS IEC 60669-1:07
128.	Self-Ballasted Lamps for General Lighting Services- Performance Requirements	BDS 1734:2003
129.	Electronic Ballasts for Tubular Fluorescent Lamps- Performance Requirements	BDS IEC 60929:05
130.	Cut-Out Switches (Main Switches)	BDS 1395:1993 Reaffirmed 2005
131.	Ceiling Roses	BDS 116:2006
132.	Electronic Type Fan Regulators	BDS 1323:1991 Amendment 1:2006
133.	Ballast for Tubular Fluorescent Lamps performance requirements	BDS IEC 60921:2005
134.	Electric Irons for household or similar use methods for measuring performance	BDS IEC 60311:05
135.	PVC Insulated Cables (non armoured for electric power and lighting)	BDS 900 : 2000
136.	Tungsten Filament Lamps for domestic and similar general lighting purposes performance requirements	BDS 17:2006
137.	Electric circulating Fans & Regulators (ceiling and deck head fans, pedestal fans & table/cabin fans within built regulators)	BDS 818:1998 Amendment 1: 2006
138.	Primary Batteries: 1. Part-1 General 2. Part-2 Physical and Electrical Specification 3. Part-3 Watch Battery 4. Part 4 Safety and lithium Batteries 5. Part-5 Safety of Batteries with Aquas Electrolyte	BDS IEC 60086-1:2005 BDS IEC 60086-2:2005 BDS IEC 60086-3:2005 BDS IEC 60086-4:2005 BDS IEC 60086-5:2005
139.	Insulators for overhead lines with a nominal voltage over 1000 V 1. Part-1 Ceramic or glass Insulator units for ac systems- definitions, test methods and acceptance criteria 2. Part-2 Insulator strings and insulator sets for ac systems- definition, test methods and acceptance criteria	BDS IEC 600383-1:2006 BDS IEC 600383-2:2006
140.	Double capped Fluorescent Lamps performance requirements	BDS IEC 60081:06

**E. Engineering Products (15 items):**

<b>Sl.</b>	<b>Name of the products</b>	<b>Standards No.</b>
141.	Mild Steel Pipe and G.I. Pipe	BDS 1031:2006
142.	Protective Helmets for Scooter & Motor Cycle Riders	BDS 1136:1986 Reaffirmed 07
143.	Safety Razor Blades	BDS 219:2002
144.	Sanitary ware appliances	BDS 1162:2006
145.	Pipes and fittings made of un-plasticized polyvinyl chloride (PVC-U) for water supply - Part 1: General - Part 2: Pipes (with or without) integral sockets - Part 3: Fittings and Joints	BDS ISO 4422-1 :2008 BDS ISO 4422-2 :2008 BDS ISO 4422-3:2008
146.	Steel for the Re-enforcement of Concrete (Part-1 & Part-2)	BDS ISO 6935-1:2006 BDS ISO 6935-2:2006
147.	G P Sheet (with Corrugation)	BDS 1122:1987 Reaffirmed 2007
148.	Portable Fire Extinguisher	BDS 825:1991 Reaffirmed 2007
149.	Gas Mantles	BDS 1197:1988 Reaffirmed 2007
150.	Bi-cycle Rim	BDS 986:2006
151.	Bitumen and Bituminous Binders Paving Grade Bitumen Bitumen and Bituminous Binders Cationic Bituminous Emulsions	BDS EN 12591:2009 BDS EN 13808:2009
152.	Cement part 1 Composition. Specifications and Conformity criteria for common Cement	BDS EN 197-1:2003
153.	Common Building Clay Bricks	BDS 208:1980
154.	Ceramic Tiles	BDS ISO 13006:2006
155.	Aluminium and Aluminium alloys-Extruded rod/bar tube and profiles-Profiles, tolerances on dimensions and form.	BDS 1825: 2011





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