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## THE MAMATA GROUP



**The Flagship company of the group**

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**A joint venture: MAMATA MACHINERY & BRAMPTON ENGINEERING INC. CANADA** to make Multi layer Blown film lines and system elements including full CNC controls.

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**A joint Venture b/w Mamata Machinery & Span Flexopack** to make Spout Fixing lines and Filling lines for Pre-formed Pouches for Packaging Industry.

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**A Green field Project** to propagate Usage of Solar Energy for Purpose of Cooling & Heating applications.



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## THE MAMATA GROUP



**A Joint venture: Ferromatik Milacron Inc., USA, & MAMATA MACHINERY** to make Injection Moulding machines, Blow moulding machines in India.

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**A Joint venture : MAMATA MACHINERY and KLÖCKNER DESMA, Germany,** to make Rubber Injection moulding machines and Shoe Soling machines in India.

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**A Joint venture : MAMATA MACHINERY & KLÖCKNER HOLSTEIN SEITZ MACHINEN, GERMANY.** To manufacture high-tech state-of-art high speed Bottling line / packaging plants comprising of Bottle Washers, Filters Pre-mixers, Cap Sealers, Labeling Machines etc...

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### **A subsidiary of MAMATA MACHINERY**

providing Hi-tech computer software and hardware solutions. Authorized suppliers of IBM and Novell.

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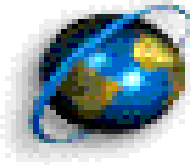
**MAMATA AIRWINGS**  
TRAVEL WITH PLEASURE

**In-house Travel Agency** providing all travel related services to the group companies.

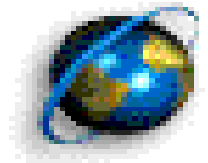


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**MAMATA  
MACHINERY**  
VALUE FOR TRUST  
S/1/1A, G.I.D.C., Phase-1, Vatva, Ahmedabad-382 445, India



*“ Innovation  
In  
Packaging of Liquids  
In  
Flexible Packaging”*



**By: Mamata Machinery Pvt. Ltd**



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**M** MAMATA  
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SI/1/A, G.I.D.C., Phase-1, Vatva, Ahmedabad-382 445, India



## Present Over view of Liquid Packaging:

### Types of Liquid Packaged :

- Fruit Juices / Fruit pulps
- Non aerated drinks
- Cosmetics & Toiletries
- Wines & Liqueur
- Edible / Lubricant Oils



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## Verity of materials Used to pack Liquid :

- Glass bottles
- Aluminum containers
- PET bottles
- Blow molded containers
- Coated paper containers etc..





## Over view of conventional types of Liquid packaging:

- Most conventional way of liquid packaging is glass bottles or PET bottles
- Presently glass bottle consumption. growth is decreasing very fast mainly due to the high rate of breakage and the inconvenience of returning the empty glass bottles after consumption.
- As a result glass containers recorded the lowest growth of only nearly 9% of the total packaging .



## Over view of conventional types of Liquid packaging:

- Paper containers have become more popular over glass bottles specially in flavored milk, fruit juices & drinks. Flexible packaging has taken over the fresh milk segment.
- PET bottles have made inroads into soft drinks, edible oils, water & alcoholic drink sectors
- In case of PET bottles key negative attribute is that PET does a poor job in keeping oxygen from permeating the container and reacting with the fill. This affects the flavor, fragrance & color of the drink.



*“ Today innovation has made it possible to replace glass, paper containers and PET bottles with flexible pouches in most of the applications.”*

These flexible pouches may have following features & advantages:

- Superior graphics and enhancement of product visibility and image
- Re-closeability by using closures like zips & variety of pours spouts.
- Savings on packaging cost
- Lesser breakages in transit
- Lower shipping & storage volumes
- Environment friendly & Energy savings



## Graphics & Visibility:

- The advantage of using laminated stand-up pouch is its ability to stand up on a shelf for maximum sales impact through its design & graphics, it enhances product visibility and image.
- Stand up pouch can replace the typical bag-in-box application. Many of the food & beverage processing companies experienced doubling of product sales by just changing the packaging this way.
- Further Innovation in Stand-up pouch is adding recloseble features like zippers & *“Pour Spout”*.



## Re-closeability:

- Earlier, regular pouches were used for food & beverages packing. These were cut or torn open and the contents had to be consumed in a single time or transferred to another jar or container.
- Recent development in this segment is a stand up pouch with closure system such as zippers or spouts. These make consumption of contents 'on the move' even easier.
- Zippers are the most commonly used closures for making the pouch re usable without any danger of air or moisture seeping in, however they have applications for packing of dry products only.
- **“Pour Spout”** is a latest Innovation in the segment of closures. Stand up pouch with a straight or angular fixed spout is very unique option for packing of liquids. The spouts can be closed and opened (like capped bottles) whenever required again & again, giving enormous convenience value to end user..



## Cost factors ( Analysis of 2006 U.S):

- For bottlers and manufacturers, packaging represents 40-45% of the cost of goods sold. But from a revenue perspective, new (stand-up pouch) packaging can raise the image of brand or lead to volume growth.
- Essential raw material prices for all three major liquid packing types – metal cans (aluminium), glass bottles (natural glass) and plastic bottles (PET) have increased substantially during past two years.
- Latest research of Citi group (U.S) indicates that the aluminium prices crossed 17-year highs, and their mining team recently raised its full-year price forecasts. This increasing pricing will in turn effect can-makers and their customers.
- The major glass bottle producers have been aggressively escalating prices due to growing energy costs.



**Cost comparison of Different packaging types:**  
**( Based on International price data)**

<i>Type of Packaging</i>	<i>Container cost ( Rs.)</i>
Glass bottle	5.66
PET bottle	3.79
Aluminum can	6.87
<b>Flexible Pouch [ Stand-Up]</b>	<b>2.70</b>



## Less breakages during transits & handling :

- Being fragile, Glass Bottles breakage rate is very high.
- Glass bottle needs to be packed in a special rigid plastic container or a very thick corrugated box with separate partition for each bottle. It increases secondary packing cost.
- PET bottles and paper containers may get crushed during transit, or handling and it affects the shape of a pack.
- PET bottles are wrapped with a Label which is pasted on the circumference. The product loses visual image in case of crushing or loose labels.
- In case of pouch there is no breakage & de shaping, packed being *“Flexible”*.



## Lower storage volumes :

- Even though the weight of an empty 200 ml pouch is less than that of a sheet of copier paper, the pack is strong enough to meet tough drop and burst resistance tests.
- The remarkable light weight & flexible nature of the pack enables enormous both side transport & storage cost saving.
  - i.e the laminate is delivered in space saving reel form to convert in to pouch. The finished packed pouches can be packed in compact packages and thus save huge volume unlike bottles / cans, during transportation, saving huge costs compared to shipment of Bottles.

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## Lower Shipping volumes :

- When comparing the pay load of a truck load of standard 200ml glass bottles of a drink product, the product packed in 200ml Stand Up pouches, over 80% more product can be shipped in the same space.
- Independent studies checked by the German Environment Agency ( UBA) have concluded that the stand-up pouch is an environment friendly beverage pack with a similar environmental impact as a returnable glass bottle or paper container

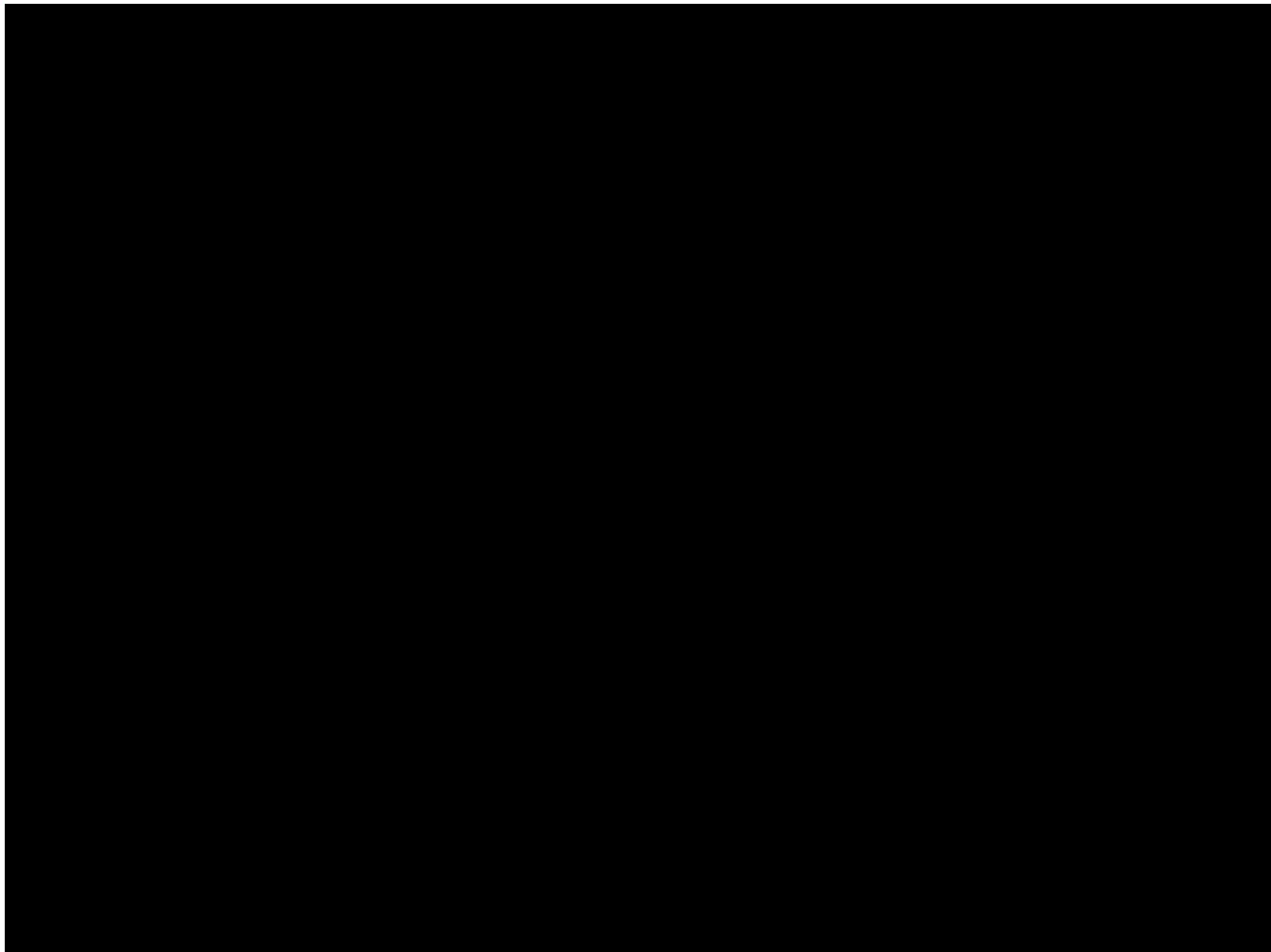




## Environment friendly packaging & energy saving:

- Flexible packaging is an environment friendly alternative to rigid forms of packaging.
- Compared to these traditional packages, flexible packaging reduces material to be recycled.
- Flexible packaging needs 75% less energy to produce and occupy very less space.

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*Thank You.*

