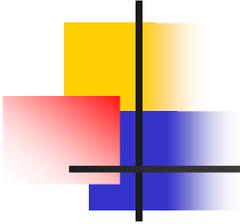


**Morehead Paddleballs, LLC.**



**THE FUN NEVER ENDS**



### **Founded**

MPB has been manufacturing fun since its inception in 2004.

### **Company**

With more than \$2 billion in global sales, MPB is the global leader in paddleball manufacturing and is now expanding to another location.

### **Headquarters**

Morehead, Kentucky, USA.

### **Employees**

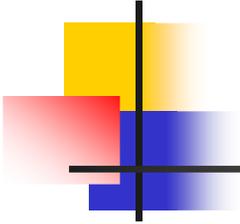
More than 500 associates worldwide.

### **Global Reach**

MPB serves customers in more than 160 countries across North America, Europe, Asia Pacific, Latin America, the Middle East and Africa.

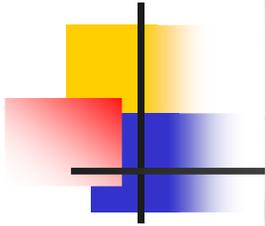
MPB delivers world class paddleballs and sponsors paddleball competitions all over the world.

## What do we manufacture?



Paddleballs; and lots of them

## What products do we use?



**Supplied by:  
Silicone Solutions, INC  
US**



**Reprocessed Nylon Granules**

**Supplied by:  
Dilip Plastic, PVT. LTD.  
India**

**Supplied by:**

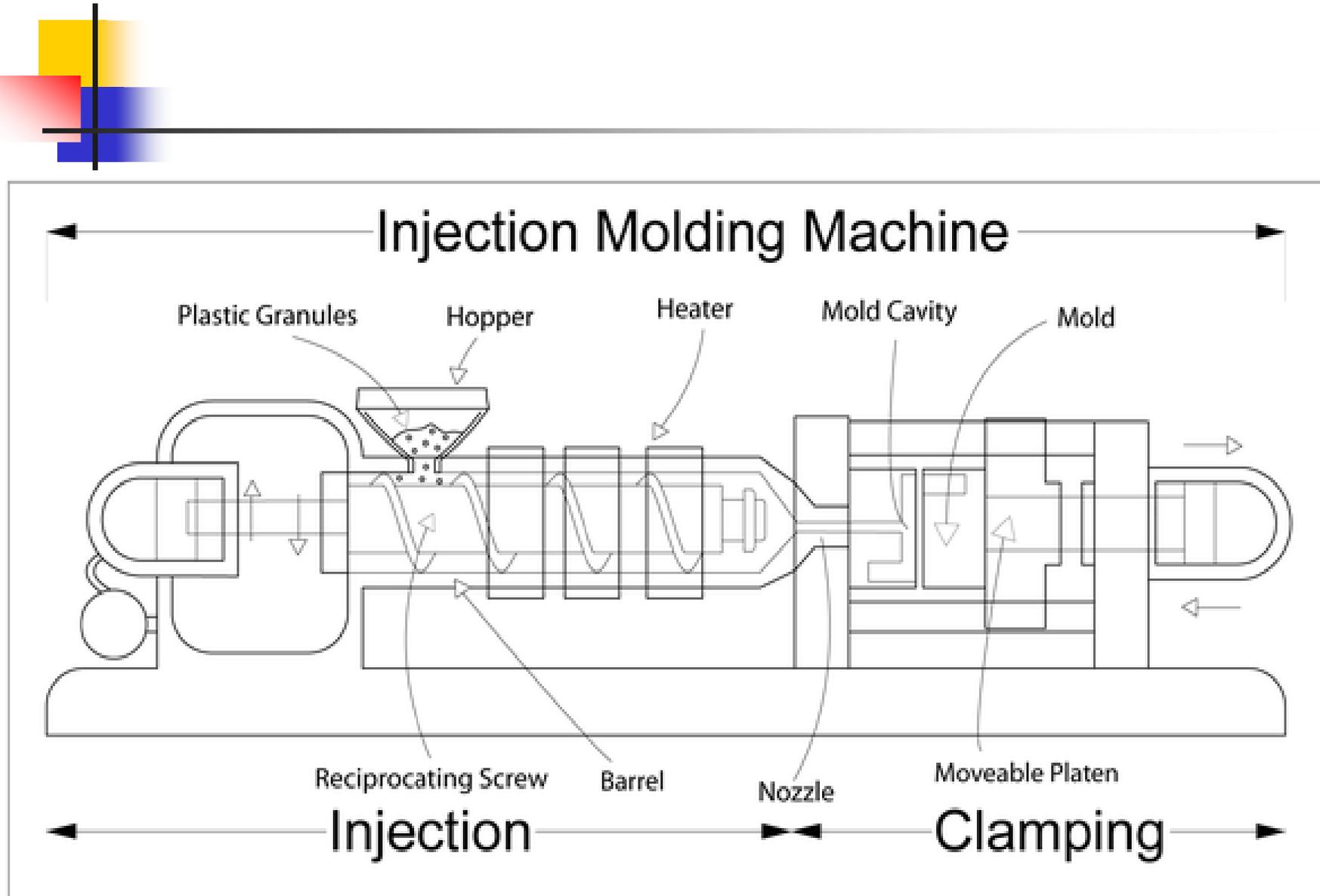
**TAIAN SHENGYUAN CORDAG CO.LTD  
China**

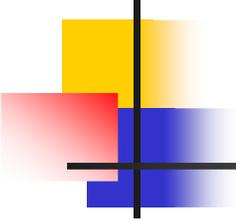


**Elastic String**



## How we make them



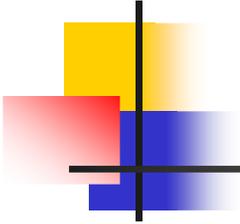


## **Process Characteristics:**

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- The process uses a ram or screw-type plunger to force material into a mold cavity.
- A thermal couple to heat the barrel to the desired temperature and maintain consistency of material flow from hopper to die injection.
- This produces a solid or open-ended shape which has conformed to the contour of the mold.
- This produces a parting line, sprue (the passage through which liquid material is introduced into a mold), and gate marks, which are minimized during the design phase.
- Ejector pin marks are usually present but are located in non critical areas.

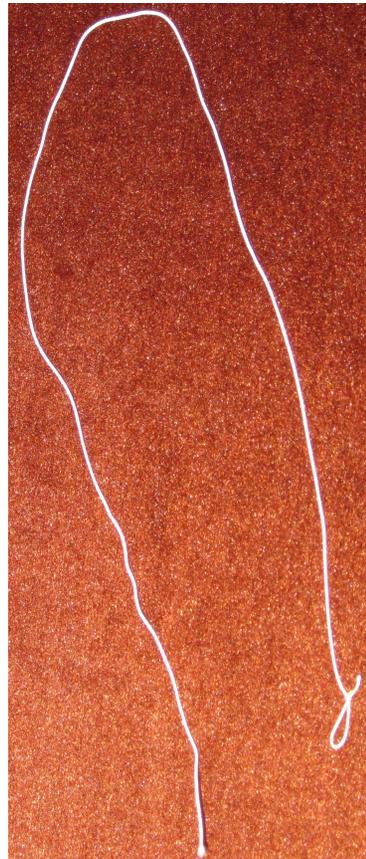
## Example Components



Paddle

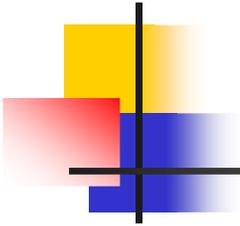


Elastic



Ball





## **Manufacturing Processes for paddles**

MPB uses reprocessed nylon polyamide granules to manufacture and supply our world class paddles. Our reprocessed nylon polyamide offers an excellent balance for molded parts with easy design and processing. The material can be used in a wide temperature range and in diverse operating environments. The reprocessed nylon granules provide optimum results because all moisture in the material is removed through a pre drying process. This material is manufactured and supplied by a sub-processor.



## **Manufacturing Processes for Balls**

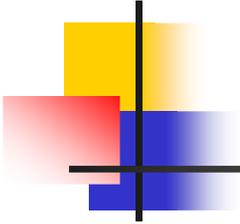
We use injection molding of liquid silicone rubber; (LSR) is a process to produce pliable, durable parts in high volume. Liquid silicone rubber is a high purity platinum cured silicone with low compression set, great stability and ability to resist extreme temperatures of heat and cold. Great for production parts where high quality is a must. Due to the thermosetting nature of the material, liquid silicone injection molding requires special treatment, such as intensive distributive mixing, while maintaining the material at a low temperature before it is pushed into the heated cavity and vulcanized; we manufacture our own balls.



## **Manufacturing Processes for Elastic**

Latex sap is harvested from Rubber Trees on rubber tree plantations it is strained and purified. Then acid is added to the latex sap and the mixture is stored in vats to coagulate and dry. Rubber slabs are formed and cut into blocks. Chemicals are added to vulcanize them and then the slabs of rubber are milled and flattened. The heated and flattened rubber is cut into strips and cured. It is later shaved to the proper size and rolled on to a spool for easy transport. We use a sub-supplier for this product.

## Time to Move

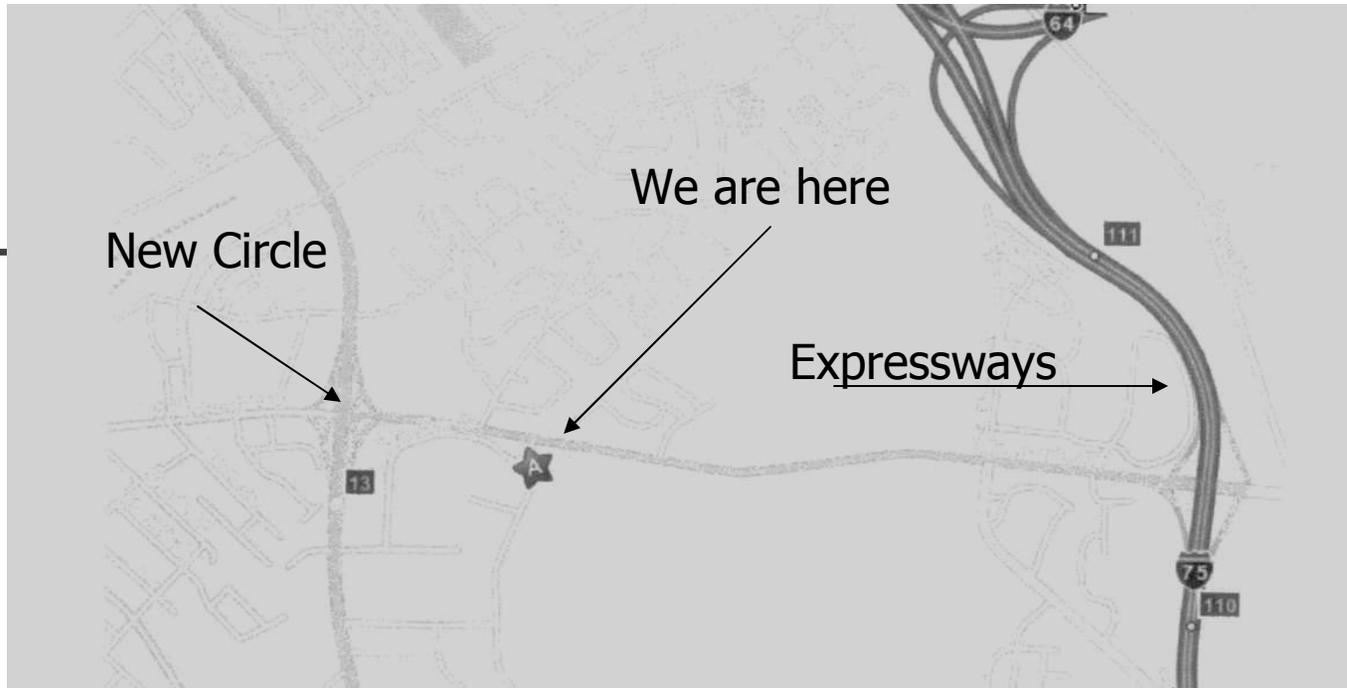
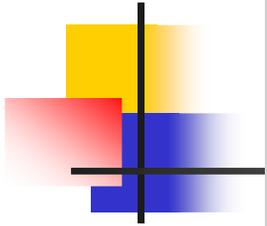


With capacities strained at our current location MPB has decided to expand its operations in North America. The new facility and new manufacturing equipment is proposed on the following slides.

## The new Facility

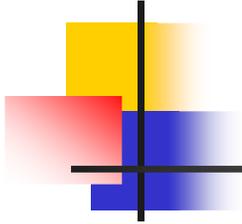


2320 Fortune Drive - Lexington, Kentucky - 40509.



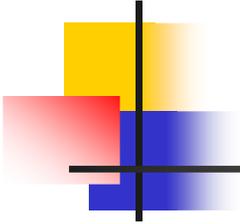
The facility is close to I-75 for north and south shipping –New Circle Road for local commuting and I-64 for east and west shipping. The facility has ample parking and is a good fit for the current business needs. The building is new construction and is to current code for industrial use. The facility is equipped with city water, gas, sewer; an Industrial electrical transformer is supplied from UK Utilities and is commercial ready.

## Demographics



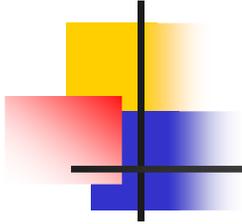
As of the census of 2000, there were 260,512 people, 108,288 households, and 62,915 families residing in the city. The population density was 915.6 people per square mile (353.5/km<sup>2</sup>). There were 116,167 housing units at an average density of 408.3/mi<sup>2</sup> (157.6/km<sup>2</sup>). The racial makeup of the city was 81.04% White, 13.48% African American, 0.19% Native American, 2.46% Asian, 0.03% Pacific Islander, 1.21% from other races, and 1.58% from two or more races. Hispanics or Latinos of any race were 3.29% of the population.

## Demographics



The median income for a household in the city was \$39,813, and the median income for a family was \$53,264. Males had a median income of \$36,166 versus \$26,964 for females. The per capita income for the city was \$23,109. About 8.2% of families and 12.9% of the population were below the poverty line, including 14.3% of those under the age of 18 and 8.6% of those ages 65 and older.

## Sources



**Silicone Solutions, INC. (web site)**

**Dilip Plastic, PVT. LTD. (web site)**

**TAIAN SHENGYUAN CORDAGE CO.LTD. (web site)**

**Ashland Precision Tooling, LLC. (web site)**

**WiKipedia, Web Site. (web site)**

**LBAR, Web Site. (web site)**

**Society of manufacturing Engineers. (web site)**

**United States Census Bureau. (web article)**

**Forbes magazine. (web article)**

**MPB**

**Mike Hopson Brian Bradley Edward Apley**

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**IET-120 Activity 3 Power point**