

Emhart AutoSet™ system solution increases production throughput and wipes out labor related injuries.

Application: Pet Cages and Sports Equipment Cases

## Challenge

A leading manufacturer of pet cages and sports equipment cases required a more efficient means of increasing assembly production throughput. Current manufacturing procedures use solid riveting machines that require access to both sides of the work piece, creating a labor-intensive operation. This fastening method is not ergonomically friendly and has resulted in liability issues due to operators having to lift a heavy product and carry it to the riveting station. Moreover, the riveting machines have become increasingly expensive to maintain with virtually no service or support from the manufacturer.

## Customer Requirements

- Reliable auto-feed system
- Increase throughput
- Improve ergonomics
- Consistent joint clamp force
- 40 lbs minimum joint tensile strength
- Eliminate liability hazard
- Cosmetic flexibility

## Solution

Customer realizes greater process efficiency and higher reliability.

Emhart engineers recommended AutoSet™, an automatic blind riveting system, to replace the current solid riveting process. By standardizing assembly to AutoSet™, lifting the product over to a separate riveting station was eliminated. Emhart engineers also recommended the use of a POP® brand, pre-finished multi-grip style blind rivet to accommodate a wide grip range. This allowed the customer to use a single fastener for several applications, reducing costs and inventory, without requiring access to both sides of the work piece. In addition, Emhart engineers were on site during the system installation and reconfigured the production line to create a more efficient workflow and ergonomically friendly system.



## Features & Benefits

- Single side access for installation
- Automation efficiency
- Decreased in-place cost
- Standardized rivet assembly to one tool
- Pre-finished fastener
- Reduced operator fatigue



## Cost Benefit Analysis

### PET CAGE APPLICATION

Fasteners per Unit.....28  
 Annual Unit Build.....70,000  
 Total Annual Fasteners.....1,960,000

**Installed Cost Analysis** ..... **Solid Rivet** ..... **AutoSet**  
 Total Cost per Installed Fastener .....\$0.090 .....\$0.052  
 Cost per Unit .....\$2.52 .....\$1.46  
 Savings per Unit with AutoSet .....\$1.06  
 Annual Cost Savings.....\$75,460.00

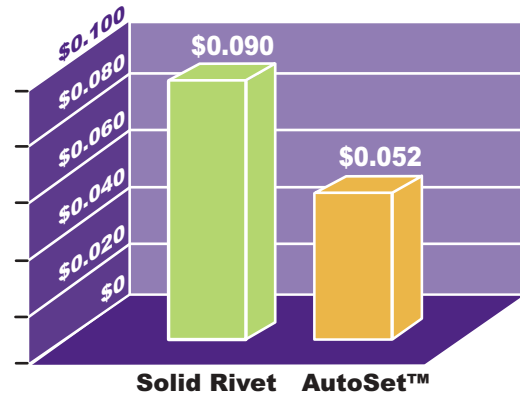
### GUN & BOW CASE APPLICATION

Fasteners per Unit.....48  
 Annual Unit Build.....100,000  
 Total Annual Fasteners.....4,800,000

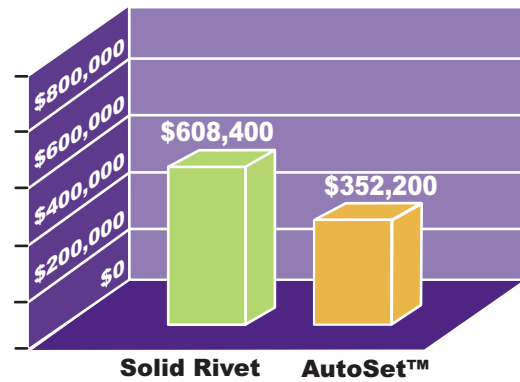
**Installed Cost Analysis** ..... **Solid Rivet** ..... **AutoSet**  
 Total Cost per Installed Fastener .....\$0.090 .....\$0.052  
 Cost per Unit .....\$4.32 .....\$2.50  
 Savings per Unit with AutoSet .....\$1.82  
 Annual Cost Savings.....\$182,000.00

Using the AutoSet™ system and POP® brand rivets, the company was able to achieve a total cost savings of 42 percent.

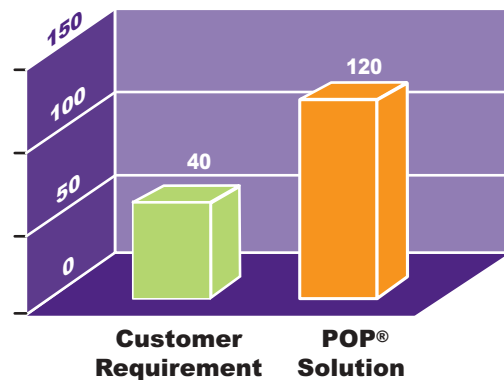
### Total Installed Cost Per Fastener



### Total Installed Cost (Pet Cage & Gun/Bow Case)



### Tensile Strength (lbs)



**Emhart  
Teknologies**

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