

# Technical News Bulletin

October 2006

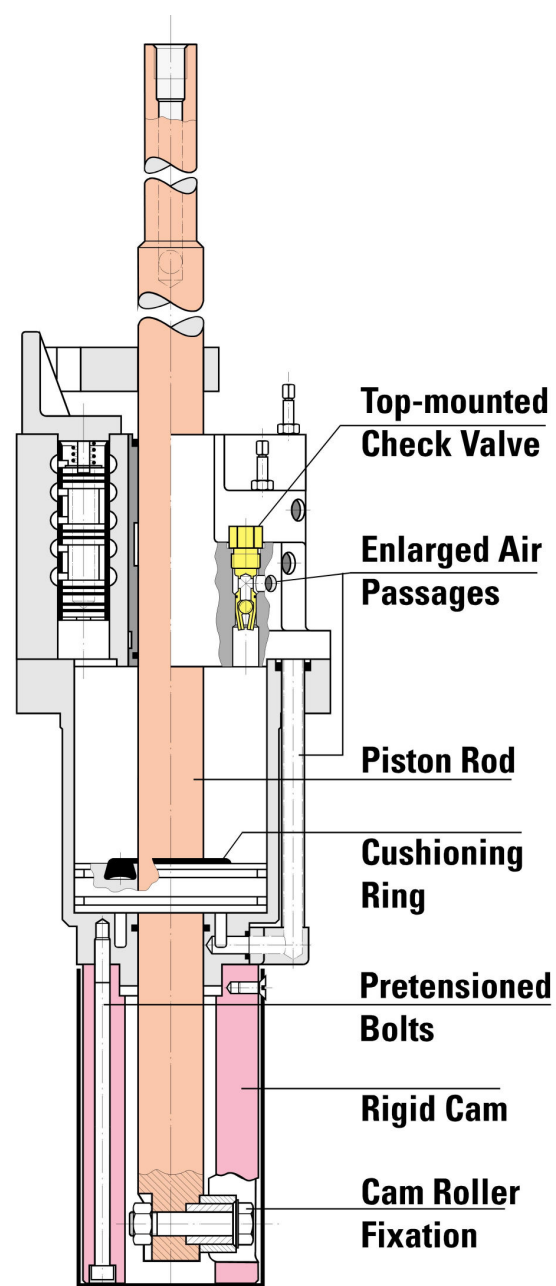
## Baffle Mechanism IS 5 1/2" & 6 1/4" and AIS

### 1. System Description

The Emhart Baffle Mechanism is the product of extensive research and development and exhibits faster and more precise baffle arm movement. Apart from the many advantages offered by this new series, there is significantly less wear on the mold, baffle and baffle lock ring. The performance characteristics of the new Series 210 can be further improved by using a pantograph baffle configuration.

Improved pneumatic operating behavior and enlarged operating air passages ensure more stable operating characteristics. During the final moment of piston upstroke, an elastomer ring dampens forces to protect the mechanism and its equipment.

The rigid cam which guides the cam roller of the piston rod features greater mechanical durability. Prolonged service life is attained through improved cam rigidity, thereby enabling it to better withstand static and dynamic forces.



## 2. Product Improvements of the Baffle Mechanism

The new Baffle Mechanism features several new improvements which positively affect the operating characteristics of the mechanism, prolong its service life and reduce wear on the blank mold equipment.

### 2.1 Rigid Cam

The rigid cam mounted on the cylinder base serves as a guide for the cam roller which is inter-connected with the piston rod and is responsible for the swing motion of the baffle arm.

The basic improvements involve greater mechanical durability of the cam which is CNC-machined from ball bearing steel. This greater rigidity enables the cam to better withstand static and dynamic forces acting on the cam and prolongs service life.

Correct positioning of the cam is achieved by a locating recess and a dowel pin. Rigid interconnection with the cylinder base is warranted by 5 pretension bolts which prevent loosening due to vibration.

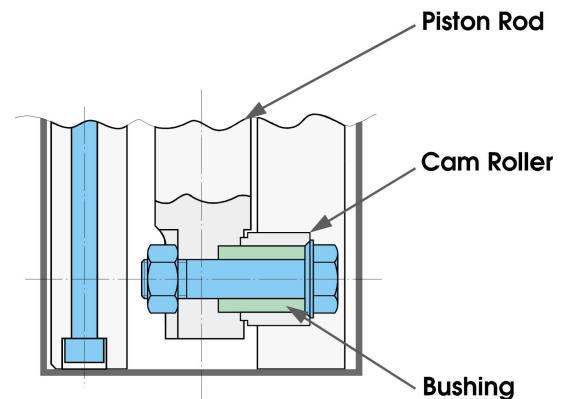


### 2.2 Cam Roller Fixation

The cam roller travels over the entire path of the cam track. It is mounted on a guide bushing and is mechanically connected to the lower end of the piston rod.

The new fixation configuration is designed to achieve optimal mechanical connection.

Greater modular standardization has been engineered into the individual parts of the cam roller fixation assembly since it can be used for all Baffles, Funnels and Blowheads of the 200 Series (EF 4 1/4" and EF 5" mechanisms) and the 210 Series (EF 5 1/2 and AIS - DG 6 1/4" and TG 4 1/4").



### 2.3 Top-mounted Check Valve

The ball check valve is mounted in the top of the cylinder head as a maintenance convenience.

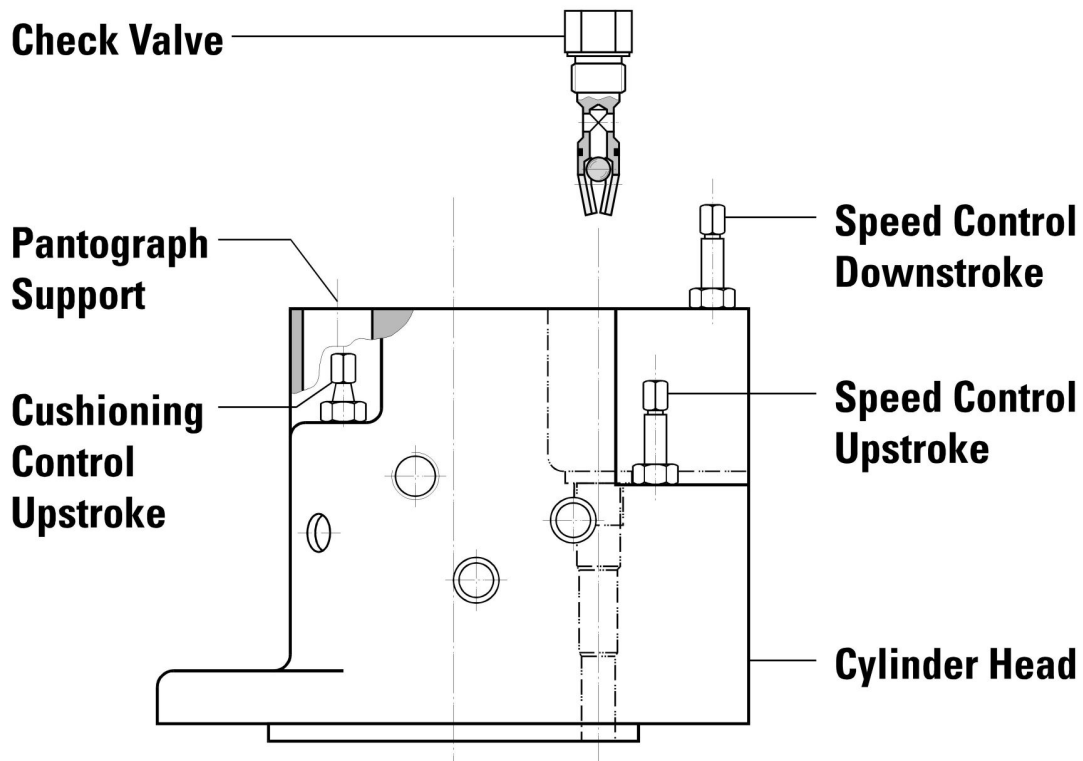
The patented design improves air flow characteristics, resulting in considerably higher operating air throughput, and better sealing improves upstroke cushioning.

New, precision needle valves which are integrated in the cylinder head are used for fine adjustment of the speed control and upstroke cushioning of the piston rod.

Greater air throughput through the check valve and the enlarged air passages in cylinder and the cylinder head result in improved pneumatic operating behavior which permits faster operation. In addition, it provides more precise and smoother mechanism movement, resulting in reduced wear on mold equipment.

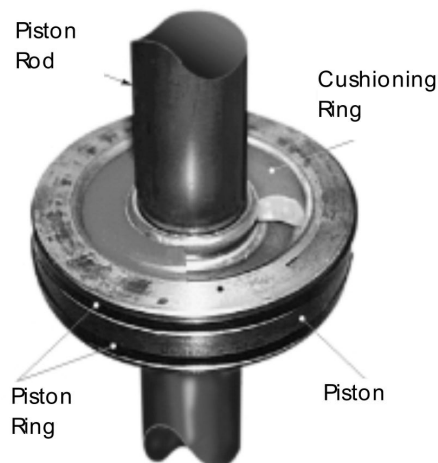
### 2.4 Pantograph Support

The new baffle mechanism features an integrated support in the cylinder head for the pantograph baffle application. The support is used for the guide rod of the pantograph. The baffle mechanism can be operated either with the standard baffle arm or the pantograph.



## 2.5 Piston Rod Cushioning Ring

The damping effect of the elastomer ring during the final movement of upstroke cushioning prolongs the service life of both the mechanism and baffle lock rings.



## 3. Availability

As of October 1994, baffle mechanism series 210-146-1 will be supplied standard.

**The new Baffle 210-146-1 replaces 23-230, and 23-781.**

Phased-out mechanisms will no longer be manufactured after December 1994. Only the new baffle mechanism type 210-146 will be commercially available after this date. Wear parts for phased-out mechanisms will be available until the end of 1999.

## 4. Installation Requirements

### 4.1 Mounting on EF 5 1/2 IS machines

Due to the centering ring 23-6779, no modification is required for installing the 210-146-1 Baffle Mechanism Series in EF 5 1/2 machines. In this manner, standard mold equipment and accessories can be used.

### 4.2 Mounting on F machines (DG 5 1/2, DG 6 1/4 and TG 4 1/4)

Due to the centering ring 23-6779, the new baffle mechanism can be installed in the F-Type section without any modification. Standard mold and baffle equipment can be used. However, a Conversion Kit is required for installing the remote controls for the baffle speed adjustments. Please refer to Drawing 210-667 for further information with regard to the remote controls.

To replace the 23-781 baffle mechanism on F-type machine (DG 6 1/4 and TG 4 1/4), with centering ring 23-6779 and rotary cushioner unit 191-7685, Emhart recommends the installation of the new baffle mechanisms 210-146-1 in conjunction with the pantograph baffle arm. This configuration does not require the rotary cushioner unit which, in turn, has to be replaced with the standard outboard bearing. For a direct replacement of the 23-781 baffle mechanism with the rotary cushioner unit please order the baffle mechanism 210-280.

## **5. Baffle Mechanism Features and Benefits**

### **5.1 Features**

- Improved design of cam and cam roller fixation
- Enlarged air passages
- Optimized upstroke piston rod cushioning
- Precise mechanism movement
- Improved pneumatic behavior
- Top-mounted check valve
- Totally compatible with previous EF + F mechanism
- Standardized mechanisms and spare parts
- Lower support for guide rod integrated in cylinder head
- (Pantograph Baffle application)

### **5.2 Benefits**

- Less wear on mold equipment
- Prolonged service life of baffle and baffle lock ring
- Prolonged mechanism service life
- Reduced inventories for baffle mechanisms and spare parts
- No modification of baffle mechanism for pantograph arm operation
- Greater maintenance convenience
- Compatibility with existing accessories and mold equipment