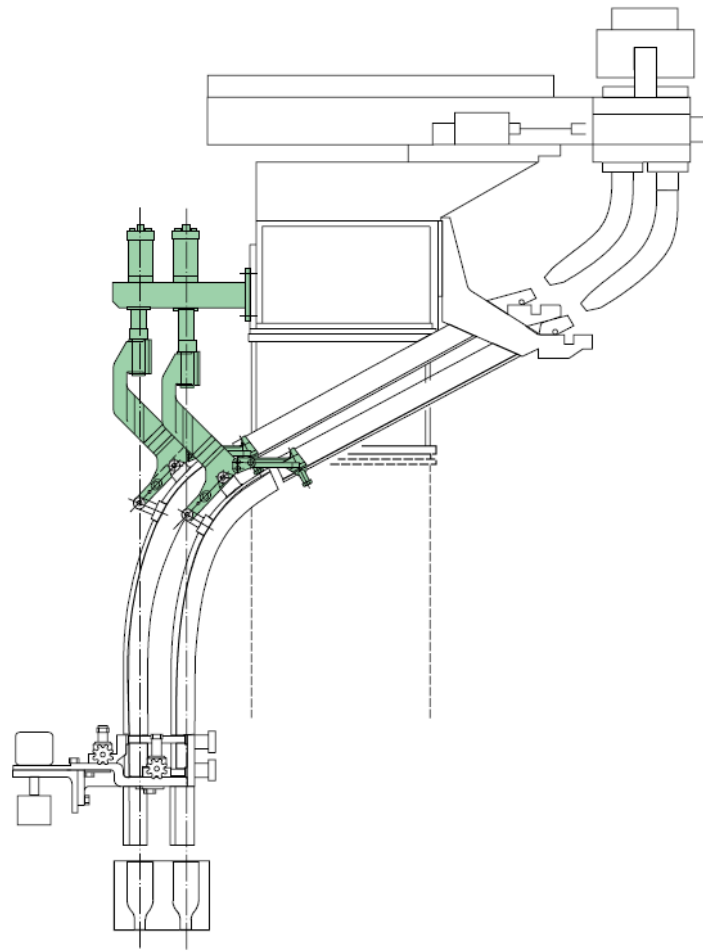


Technical News Bulletin

Steinhausen, April 1994



Delivery Suspension Support System

- Features independent support for each trough and deflector per cavity.
- Guarantees alignment of deflector exit/mold center line,
- All machines in the field can be conveniently upgraded with the new delivery suspension support system.

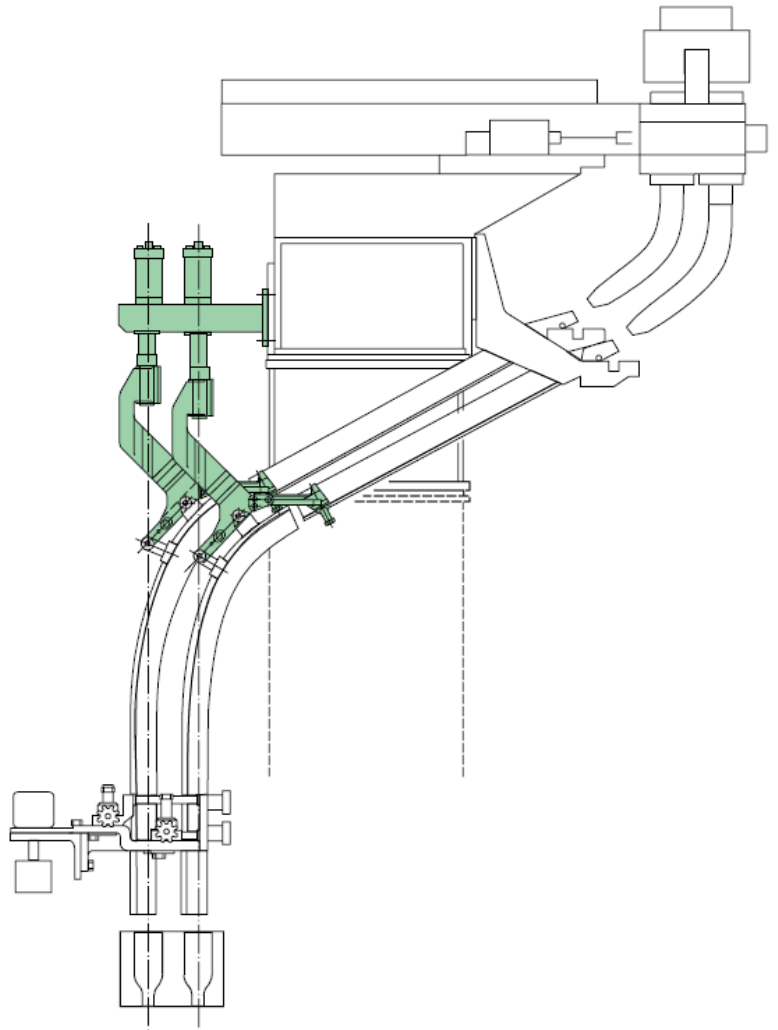
Introduction

EMHART's new Delivery Suspension Support System features independent support for each trough and deflector per cavity. The patented system permits precise vertical alignment of the deflector exit center line with that of the blank mold. Ensured by the suspension support, this precise alignment provides smooth and centered gob transition into the mold which is essential for high ware quality. Furthermore, the system design is such that the trough always remains in relation to the deflector for any adjustment operations.

Stable and improved gob loading is warranted for IS machines, regardless of the number of sections.

The new delivery suspension support system is fully compatible with standard delivery equipment such as the scoop, trough and deflectors, and only the deflectors require minimal modification.

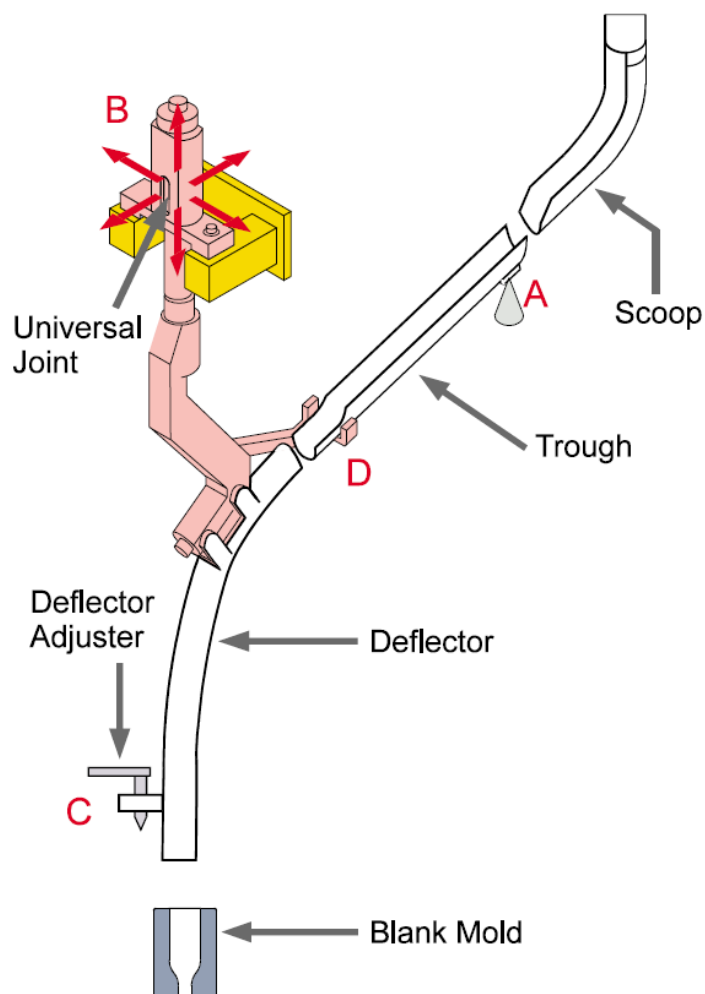
All machines in the field can be conveniently upgraded with the new delivery suspension support system.



Theory

In terms of theoretical applications, the new support system is based on a flat plane determined by 3 points, A, B and C. Point A is fixed, point B represents a universal joint, and point C represents the connection between the deflector and the deflector adjuster.

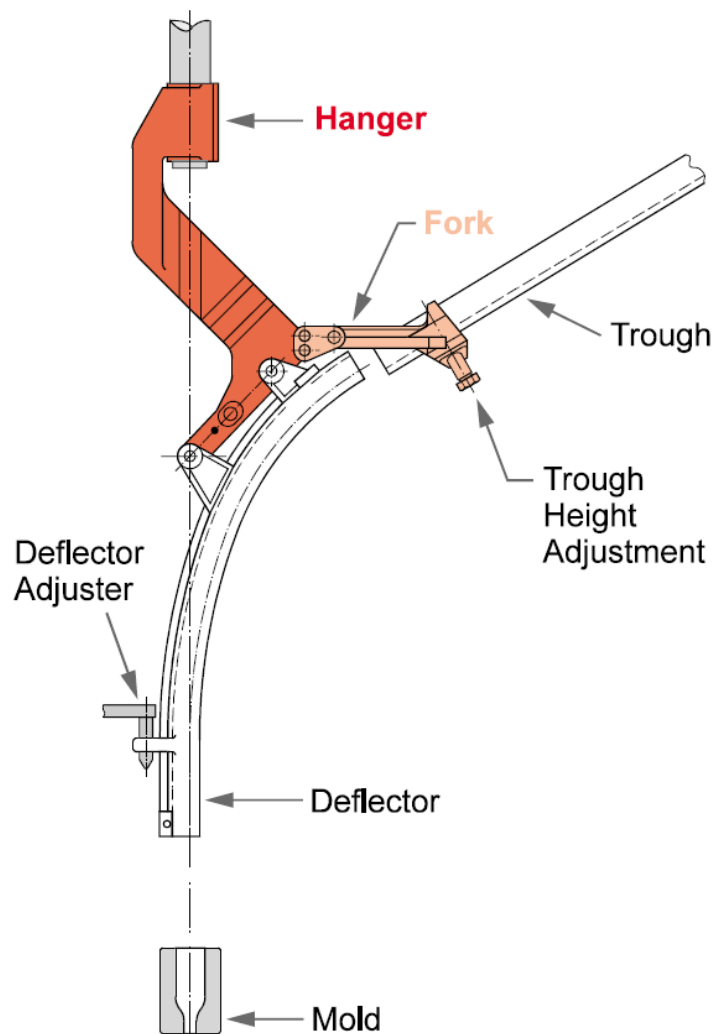
This principle permits precise positioning of the deflector outlet during production by means of the deflector adjuster at point C, wherein the trough, represented here by line A-D always remains in-line with the deflector axis.



Hanger and Fork Assemblies

The hanger assembly has both center line or offset mounting options and can be oriented either to the right or left-hand sides, depending on the section and the cavity. Since the housings are aligned on the suspension supports, hangers must be installed and the troughs must be adjusted to the desired angle of the trough in relation to the scoop. The deflector outlets are precisely in-line with the mold centers, due to the prealigned housings. The fork ensures that the trough is always relative to the deflector when the deflector adjuster is used.

Regardless of the center distance, delivery configuration, machine application or forming technique, the system's design permits the convenient upgrade of existing delivery support with only a limited number of different parts.



Product Availability

EMHART'S new delivery suspension support system will be supplied as the standard delivery support as of June 1, 1994. The system is designed for full compatibility with all EMHART IS Machine types.

All machines equipped with the naviculoid delivery system do not require any modification for mounting the new support system; only deflectors require minimal changes.

Features / Benefits

Features

- Guarantees alignment of deflector exit/mold center line
- Cavity-based support system
- Correct position maintained between trough and deflector
- Standard delivery equipment used
- Prompt conversion for delivery application (SG, DG, TG)
- Upgrade possible for all IS machines in the field

Benefits

- Precise vertical alignment of deflector
- Uniform and consistent gob loading
- Reduced downtime for process conversion
- Reduced parts inventories due to modular design