

Technical News Bulletin

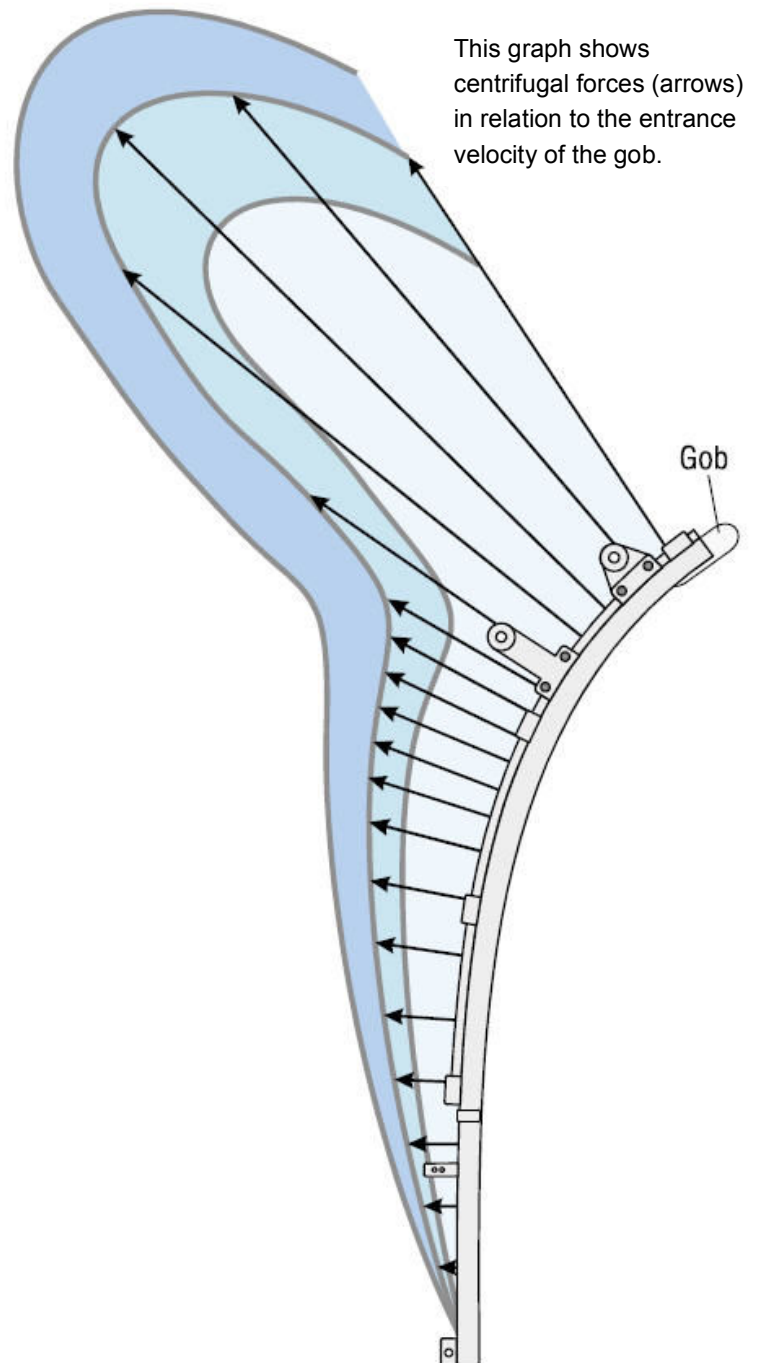
April 1996*

*This document supersedes TNB19 from November 1993

Deflector Series 18000

1. Introduction

Following the successful introduction of the Deflector Series 18000, EMHART announces a new deflector range which has been expanded to cover small ware applications. Consistent product streamlining and further refinements have resulted in the introduction of the EMHART Deflector Series 18000 for greater efficiency and improved gob loading. This new series is available within the range of 3/8" to 1-3/4" (increments of 1/8") and replaces the Naviculoid Series Deflectors. The expanded range now accommodates small ware applications.



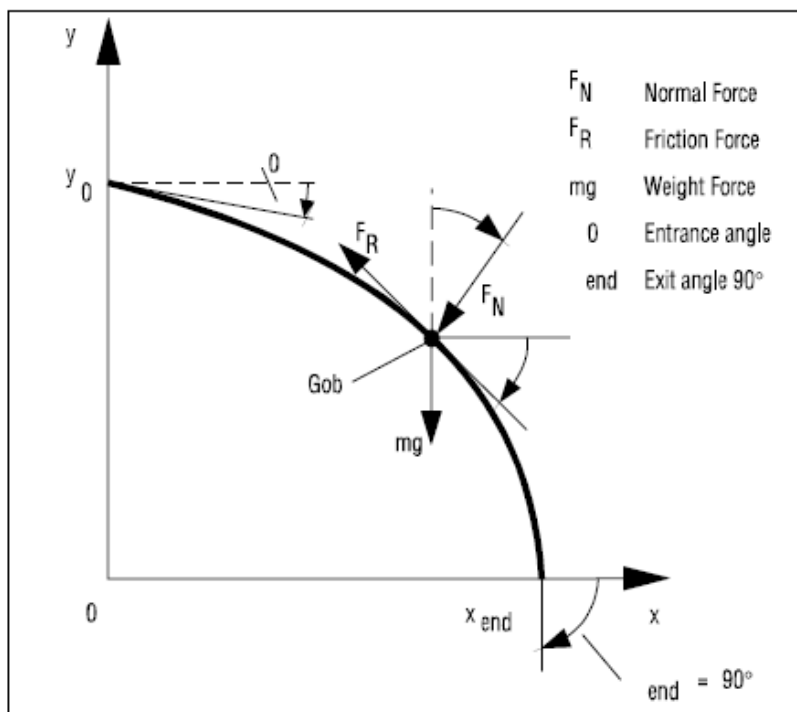
2. Technical Aspects

Deflector Improvements

The deflector curve for this new series was designed to provide optimum gob guidance for uniform, consistent and repeatable gob delivery to the blank mold with respect to the following parameters:

- Gob velocity
- Gob elongation factors
- Vertical gob drop
- Concentric gob delivery relative to the blank mold center

Optimal gob glide conditions prevail when the centrifugal forces acting on the gob gradually decrease to zero, ensuring a vertical gob drop after the gob exits the deflector and enters the blank mold.



Utilizing forefront design technology, the new EMHART deflectors yield:

Improved gob guidance

- Gob is always in contact with the deflector, to the very exit point.

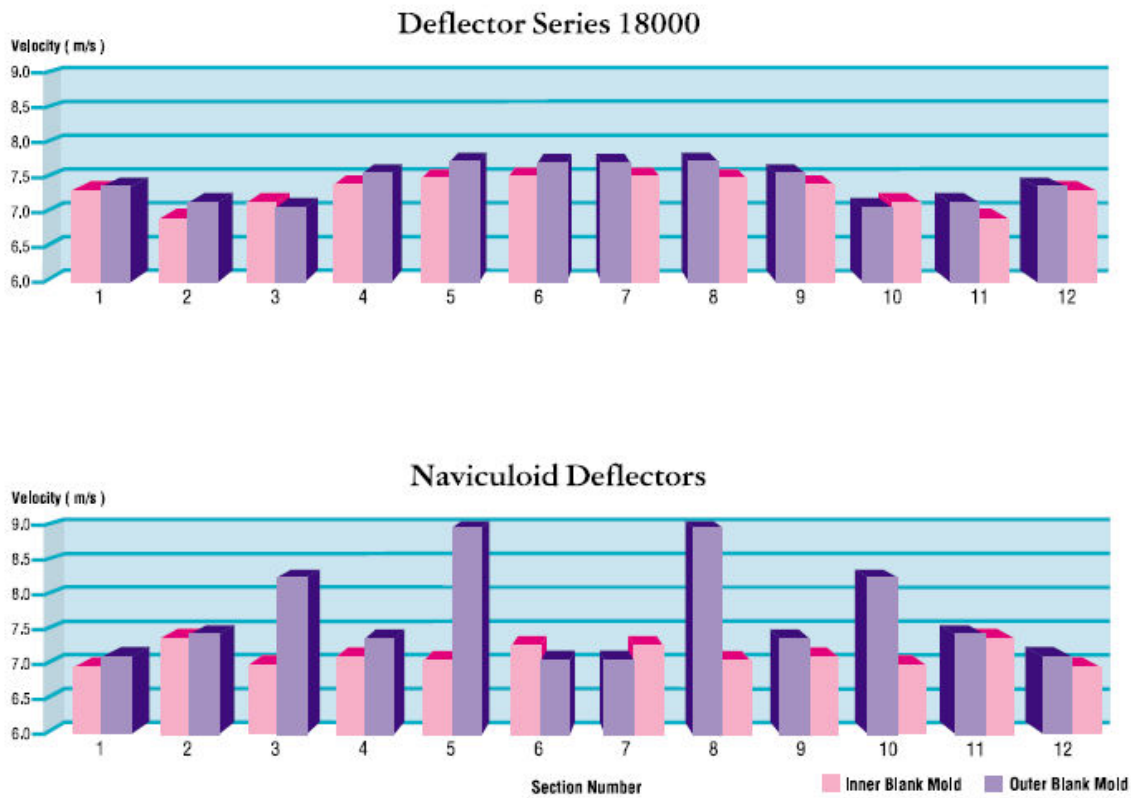
Gradual and uniform reduction of radial forces

- Achieved with mathematically determined curvature based on kinematic analyses

In multiple gob operation, simultaneous, improved gob loading in the inner and outer blank molds yields less dwell in the blank loading cycle. Hence, the baffleon time can be set more precisely and earlier. The ultimate benefit of improved timing, precise and uniform gob loading of all molds is improved ware quality and higher percent pack. The potential for increasing production speed lies in the reduction of timing parameters.

3. Field Tests

A comparison between gob loading with the new Deflector Series 18000 and Naviculoid type deflectors clearly indicates a marked improvement in gob delivery.



Greater consistency in gob velocity and mold loading achieved by the Deflector Series 18000 shows significant improvement in the uniformity of gob arrival in the outer and inner molds.

4. Availability

The complete product line of the Deflector Series 18000 ranging from 3/8" to 1-3/4" (increments of 1/8") is available for all DG and TG machines, regardless of the mold and delivery center distance (except the 12-section machine whose range is 7/8" - 1-3/4"). Naviculoid Deflectors must be used for size requirements exceeding 1-3/4" and for all SG applications. The only exception to this case is the 6-section TG 3" machine using the Non-Naviculoid delivery system.

Please refer to Customer Information ZG 380/0395 E Rev. A for further information.

Features

- New longitudinal deflector curve
- CNC-machined over entire inner profile surface
- Deflector exit at same height above all sections
- Mounting identical to Naviculoid deflectors
- Reduced number of parts through standardization

Benefits

- Consistent, precise and repeatable gob loading
- Stable gob and extended guidance over entire deflector length
- Accurate vertical gob drop into blank mold
- Simultaneous gob loading into inner and outer blank molds
- No modifications required