New FloatLip Former™
Headbox for Cylinder Moulds
Technology

A centrifugal distributor is installed in the supply system of the FloatLip former™ to evenly distribute the suspension across the machine width. The step diffusor principle is applied to produce optimum turbulence in the mixing chamber. Replaceable turbulence tubes, so-called inserts, are used to adjust the microturbulence to the operating conditions and furnishes of the board or packaging paper machine. They can be replaced in the course of a rebuild later on.

The FloatLip former™ can be equipped with an optional system for adding dilution water locally to optimize the CD basis weight profile. Usually, the dilution water is added in the supporting beam area (see Figure) or, upon request, in the area of the centrifugal distributor.

Intelligent Solutions and Upgrading of Cylinder Forming Technology

The product quality of board and packaging papers largely depends on the FloatLip former™ concept and its mechanical accuracy. The innovative further development of the FloatLip former™ markedly upgrades the cylinder forming technology.
**Design**

Hoses of equal length arranged radially on the centrifugal distributor ensure uniform distribution of the suspension across the entire width. They supply the suspension at a constant pressure to the turbulence unit of the FloatLip former™. Since the fibrous suspension enters the centrifugal distributor tangentially, thus causing centrifugal forces, air and lightweight particles accumulate at the centre and are continuously discharged through a venting line.

The top lip is supported by air tubes over its entire length in the throat gap area. This type of support, in combination with a torsion-resistant stainless steel structure of the supporting beam, ensures a constant slice geometry independently of the operating pressure and, as a result, even profiles. By varying the pressure in the air tubes, the throat gap can be easily and quickly adjusted to suit the operating conditions and drainage behaviour.

The top lip is supported by hinge joints in the slice area. The arrangement of the pivots has been optimized so as not to influence the slice opening while increasing or reducing the throat gap, thus maintaining a constant slice opening adjustable by limit stops.
The FloatLip former™ is equipped with heating chambers to ensure thermal stability and a constant slice geometry even at high stock temperatures. A sealing strip of synthetic material easy and fast to replace is used to achieve optimum sealing of the bottom lip against the cylinder mould or suction cylinder. Optimized lateral seals of synthetic material avoid leakage at the edges.

To ensure optimal accessibility for cleaning and inspection purposes, the complete FloatLip former™ can be swung off the cylinder mould or suction cylinder by means of pneumatic cylinders. Machine-wide access is thus possible to the top lip and throat gap.

To meet the different requirements on production speed and raw material, the FloatLip former™ units allow for drainage, with and without vacuum being applied.

In principle, 3 FloatLip former™ types are used:
- Type N without vacuum
- Type NO with top exhaust system
- Type S designed as suction former with 3 vacuum zones.

All cylinder mould former types can easily be equipped with the FloatLip former™. Even existing cylinder mould formers can be equipped with the FloatLip former™.
**Product benefits**
- Quality formation with low power consumption
- Uniform and even profiles
- Adjustable MD/CD ratio for improved CD stiffness

**Performance benefits**
- Compact and space-saving design
- Optimum accessibility across the entire width
- Simple adjustment of throat gap opening during operation
- Constant slice geometry, and thus even profiles, due to top lip support by air tubes
- Uniform distribution of suspension across the width due to uniform pressure distribution in centrifugal distributor
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