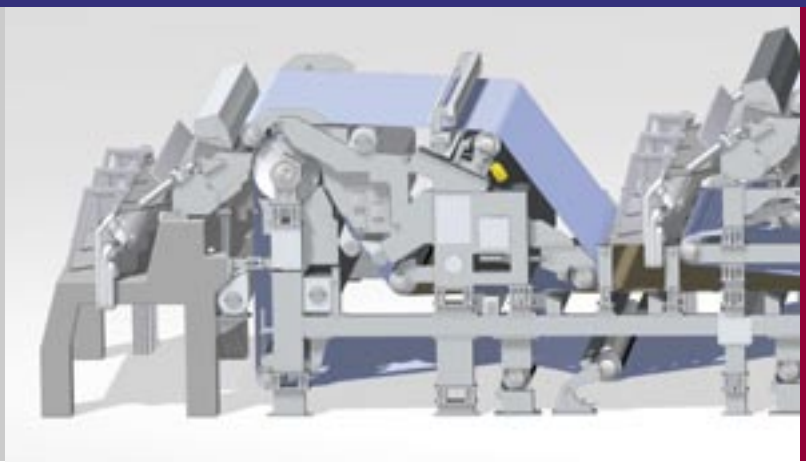
Voith Paper

VOITH

DuoFormer™ Base
Board and Packaging Papers



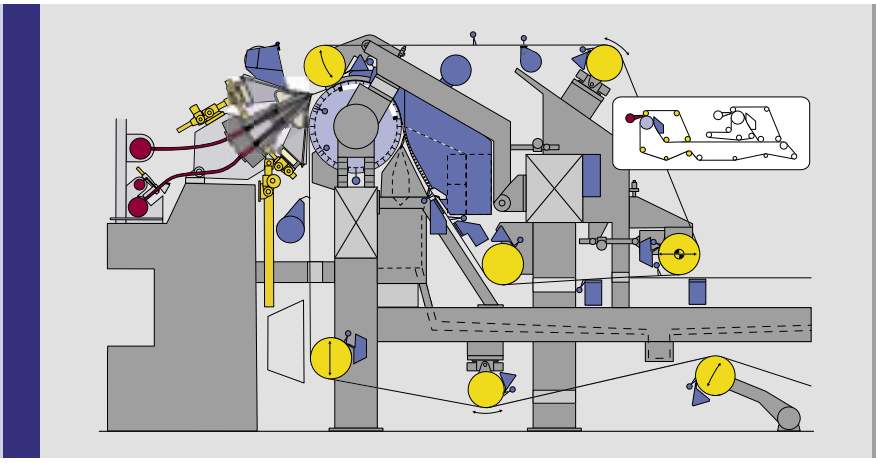
Concept

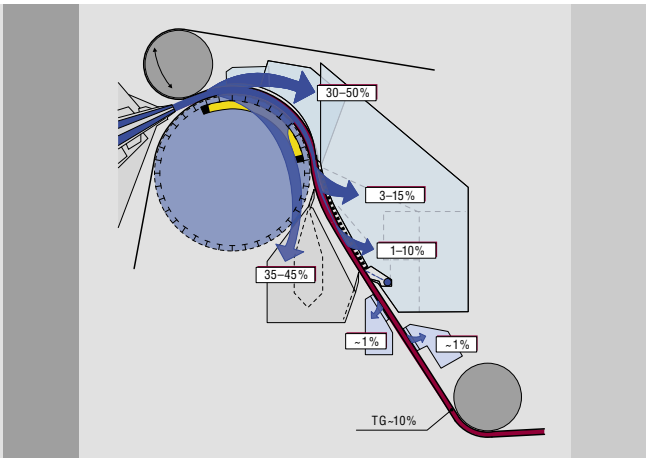
The paper quality is significantly influenced by the sheet formation in the former. Therefore, it is of particular importance to use efficient and advanced technologies especially at the beginning of the production process in order to receive an excellent final product in the end.

The DuoFormer™ Base incorporates proven elements of the DuoFormer™ CFD and is designed for the special requirements of board and packaging papers. The unique multi-layer technology permits distributing the different furnishes selectively over the thickness of the sheet in one forming unit. This means that multi-ply sheet formation at low and medium basis weights is replaced with multi-layer formation. Combined with the MasterJet™ M II two-layer headbox and its adapted lamella design, the DuoFormer™ Base ensures optimum sheet formation precisely tuned to the end product.

For higher basis weights, a combination with multi-ply sheet formation is recommended. In this case, another former is installed on top of the DuoFormer™ Base. The number of forming units is reduced accordingly. No extra space is needed, allowing a reduction of the supporting wire length, i.e. the DuoFormer™ Base bottom wire. Compared to several fourdrinier wires, significantly higher speeds up to 1,600 m/min become possible while enhancing the quality at the same time.

DuoFormer™ Base – Gap former for optimum quality and performance for board and packaging papers





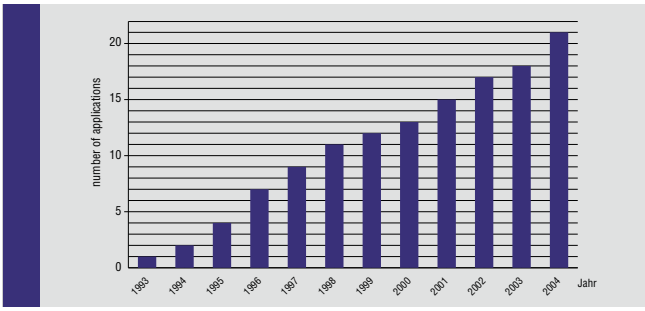
Drainage on DuoFormer™ Base.

Performance

Arranging the headbox at the highest point of the former simplifies the water flow towards the jet discharge channel. The portion of the jet going through the outer wire is captured in the channel very quickly and discharged on the drive side. In this area, jet energy and gravity are sufficient to ensure efficient drainage. No vacuum is applied to the jet discharge channel.

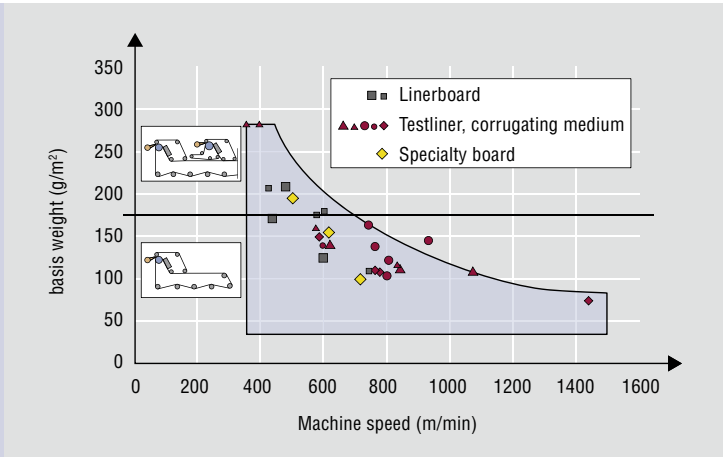
The wire suction box is divided into two separate zones, and the vacuum consumption is reduced due to gravity-supported drainage. The high headbox position also reduces the risk of stock flowing back, thus widening the low-speed operating range. In addition, the headbox area is clean and easily accessible during operation. The forming roll can be changed rather easily, requiring only the crane.

The DuoFormer™ Base concept is excellently suited for rebuilds, since the height of the existing fourdrinier wire is not as relevant as in previous concepts. With several previous designs, it was often difficult to fit in the headbox. This problem does not exist with this advanced forming concept.



Numerous successful applications demonstrate Voith Paper's leading position in gap forming for the production of board and packaging papers.

Coverage of two-layer packaging paper made on a gap former.



Current production range of DuoFormer™ Base and DuoFormer™ Top.

This former is very easy to handle for the operating personnel since – as opposed to fourdrinier wire concepts – most part of the sheet formation takes place in the area of the gently dewatering forming roll, requiring no major adjustments in the blade drainage area when changing the basis weight or increasing the speed.

Product benefits

- High strength values in CD direction, as the DuoFormer™ Base can be operated at a low MD/CD ratio (positive effect on SCTCD, RCTCD, ...).
- Uniform formation, even at high stock consistencies and low MD/CD ratio.
- Wide range of MD/CD ratios, adjustable.
- Excellent CD basis weight profiles.

Performance benefits

- Optimized water flow with high drainage capacity.
- High retention, low power consumption due to high stock consistency.
- Easy setting of MD/CD ratio.
- Good wire support (no ridges).
- Simple handling.

Main performance figures

- Max. basis weight: 180 g/m² (270 g/m²)*
- Speed: 300–1,600 m/min.

*DuoFormer™ Base + DuoFormer™ Top

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