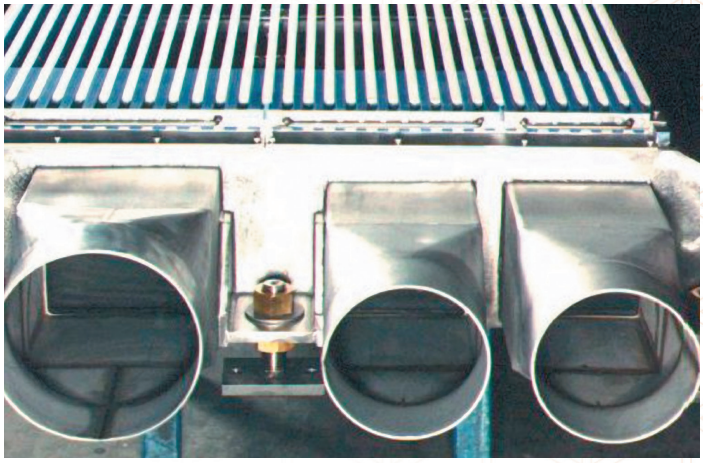
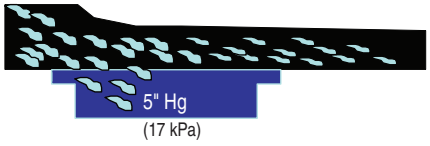
Multi-Compartment Suction Boxes

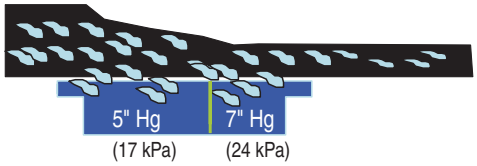


Suction boxes were designed on the basis of the structural requirements for spanning the paper machine. Wider machines meant wider boxes; even if the extra cover width did little or nothing to improve water removal. The concept of multi-compartment boxes (pioneered by Kadant) lead to the study of what the optimum dwell time would be at each vacuum level. Pilot machine trials provided Kadant with the paper grade and basis weight dependent formula required to optimize water removal while minimizing energy consumption.

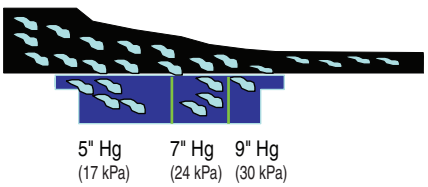
Single Compartment Suction Boxes
Long exposure to a single level of vacuum wastes energy giving no value in return for drag load and air flow applied.



Dual Compartment Suction Boxes
As vacuum levels increase, optimum dwell time decreases.



Triple Compartment Suction Boxes
High vacuum compartments need only a few slots to perform their job, thereby minimizing both drag load and air flow while maximizing dryness.



Overview

Features

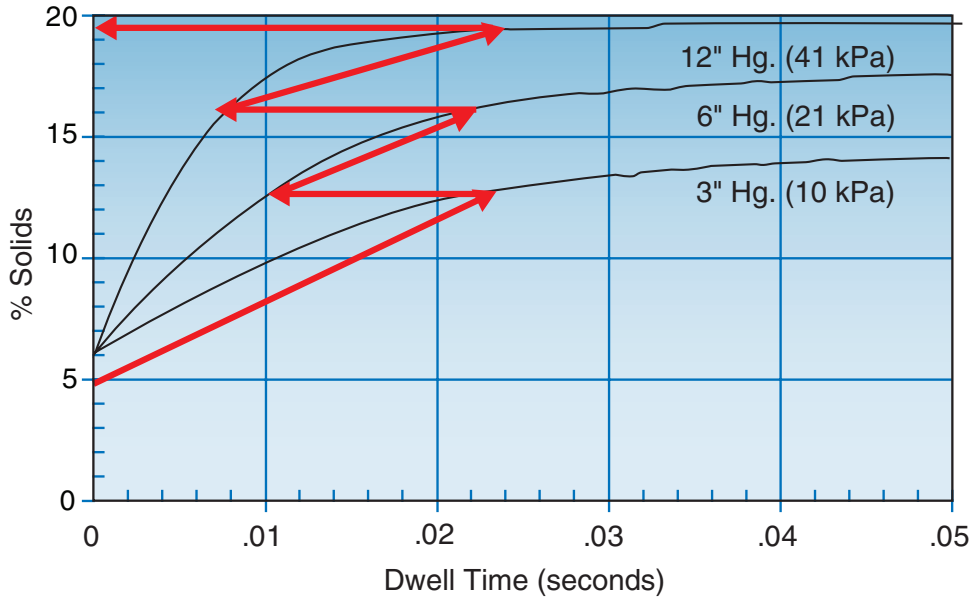
- Optimum open area based on hi-vacuum modeling
- Rugged design with 316 stainless steel construction
- Multiple ceramic wear surfaces available
- Efficient use of available machine space

Benefits

- Minimize drag load by graduating vacuum
- Increased sheet dryness to the couch roll
- Optimize available CFM and vacuum
- Reduced energy usage
- Minimize drag load and maximize dewatering

Multi-Compartment Suction Boxes

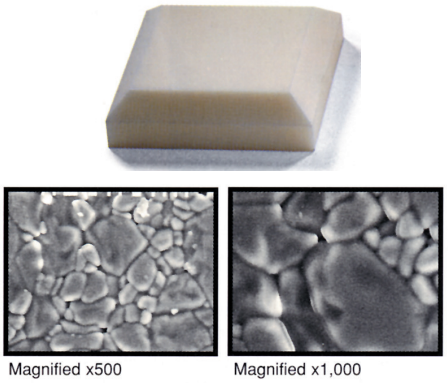
Optimization Graph (grade and basis weight dependent)



Ultrawear AL™ High Performance Ceramics

Aluminum Oxide
Advantages: Low cost; good wear and corrosion resistance; moderate machine drag.

Applications: Fourdrinier, except on flatboxes when calcium carbonate is used.

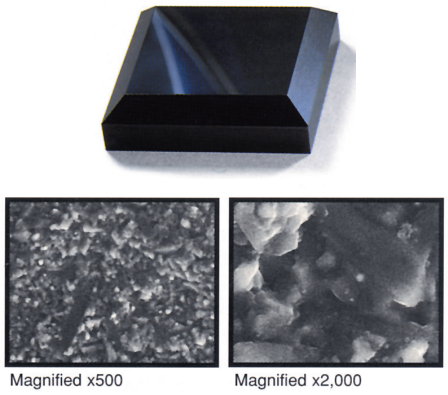


Ultrawear SN™ High Performance Ceramics

Silicon Nitride

Advantages: High thermal shock resistance; low fabric wear, low drive load; best all-around combination of wear, chip, and corrosion resistance.

Applications: High stress applications, like suction boxes and felt strips; all applications where calcium carbonate is used.



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Replaces All Previous Versions