Continuous Doctor Blade System

Overview

Applications
The continuous doctor blade system is designed for rolls and belts that are an integral part of continuous processes. Applications with existing doctor blades subject to rapid wear benefit the most. Additionally, if frequent blade changes affect line yield, reduce process efficiency, impact operator safety, or unnecessarily consume overall operational resources, this system will help reduce these issues.

Features
- Customized system components to match process pay-out and take-up
- Application-specific blade materials and coatings

Benefits
- “Hands-off” blade dispensing cartons improve safety
- Less downtime associated with blade changes
- Maintains product specifications
- Increased yield through less product waste

Built on more than 80 years of experience, Kadant is a global leader in the design and manufacturing of doctor blade systems, including continuous blade systems, for a variety of industries and applications.

The continuous doctor blade system is typically used with thin (0.010”/0.250 mm to 0.020”/0.50 mm), sharp, or square edge metal blade material. The doctor blade width varies from 1” (25 mm) to 1.5” (38 mm) with lengths up to 1600 ft. (500 m). Other material thicknesses, widths, and coil lengths are possible depending upon application.

Purchased coils can be loaded onto aluminum mandrels that are provided with the system. For enhanced safety, the coils can be preloaded in “use and dispose” cardboard cartons.

The base system is manually operated. More advanced systems use electric drives and automation features and can fully integrate with existing PLC or DCS controls for a more customized and automatic operation. This level of refinement is determined by customer application, specific process, and safety needs.

The automated systems include indicators showing material used and material remaining so that coil switch over can be preplanned. Metal doctor blade tension and traverse speed are also shown.

The doctor blade holder has a removable and replaceable blade carrier that allows for micro adjusting for precise profiling and radiusing of the blade on to and off of the roll or belt to prevent edge wear.

The complete doctor and coil support assembly is designed to attach and move with the belt tension pulley support and guiding mechanism if required.
CONTINUOUS DOCTOR BLADE SYSTEM

Applications
- Food processing
- Tape manufacturing
- Laminating and particle board manufacturing
- Tobacco manufacturing
- Pharmaceuticals manufacturing
- Any process belt system requiring continuous product removal or belt cleaning

Additional Features
- Control system
- Pulleys designed to direct blade travel
- Guarded doctor blade for operator safety

“Use and dispose” blade coil and carton shown in housekeeping enclosure

Blade guards removed to illustrate blade routing

Typical drive cabinet

Assembly shown attached to belt tension assembly

Customized “ClearVu” style blade guard with access doors

“Use and dispose” blade coil and carton shown in housekeeping enclosure

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KADANT is a global supplier of high-value, critical components and engineered systems used in process industries worldwide.

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