

Nipco Technology

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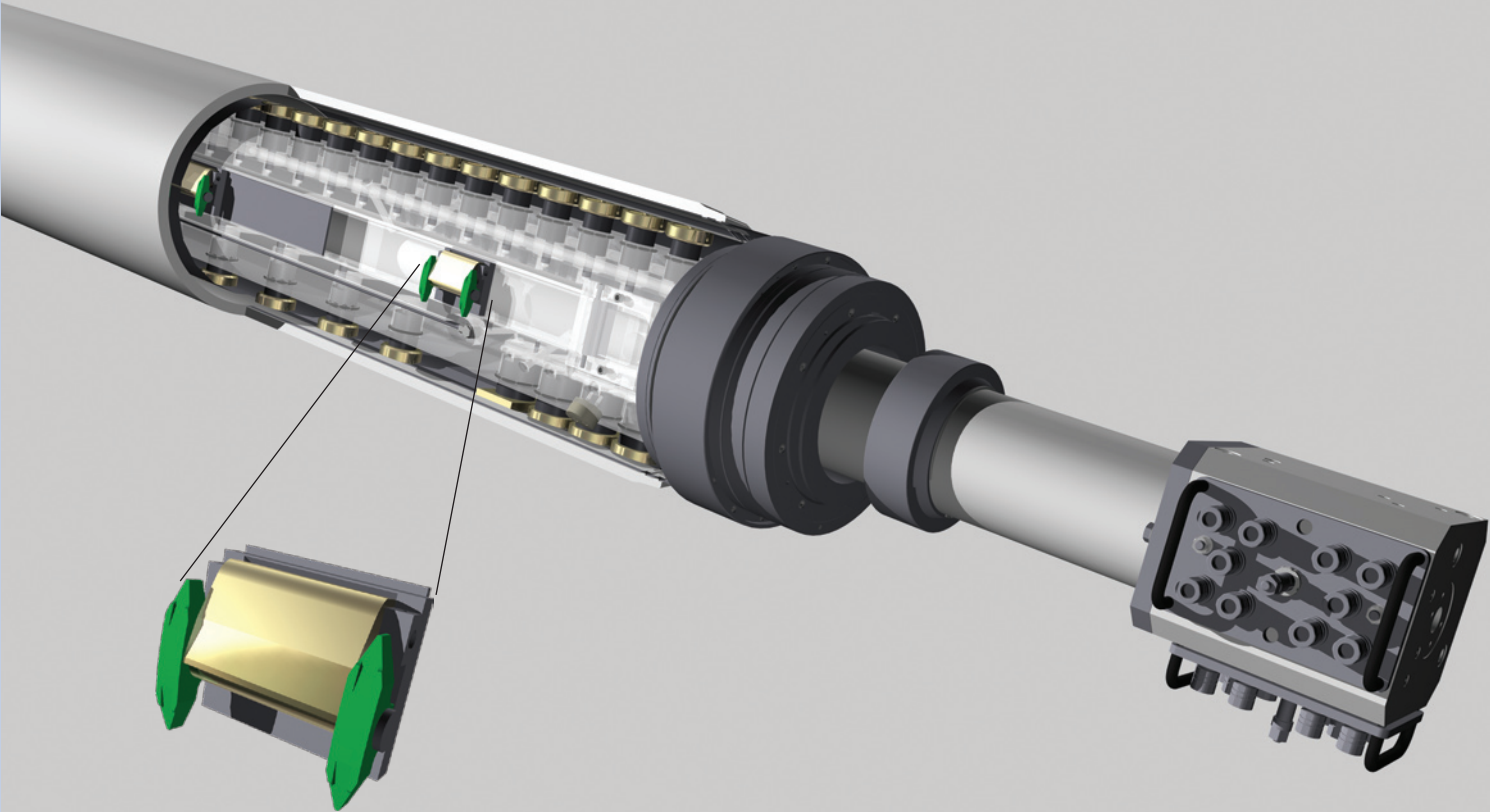
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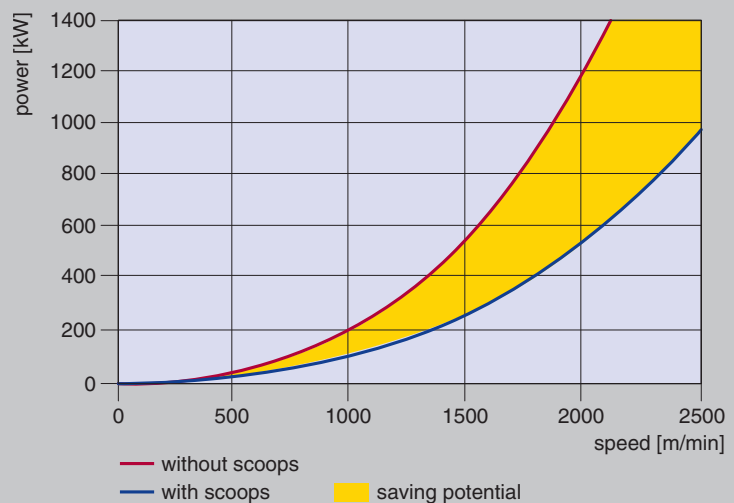
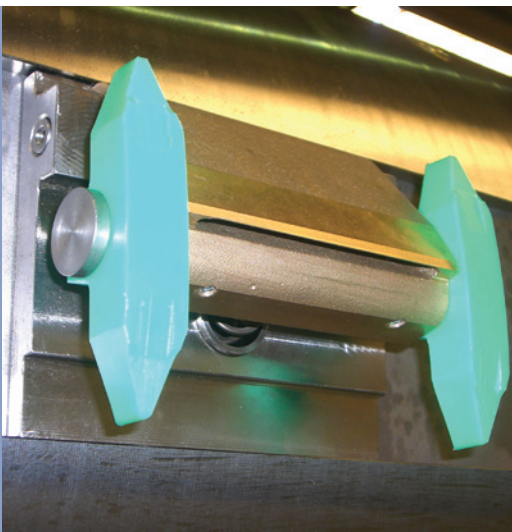
Nipco™ Upgrade Services
Oil scoop systems



Nipco™ Upgrade Services

Oil scoop systems

Upgrading existing Nipco rolls with an oil scoop system significantly reduces drive power requirements and brings a fast return on investment. This also facilitates higher production speeds without increasing the installed drive power capacity.



Basis

The paper industry today demands ever-increasing dependability and product quality, grade change flexibility, paper roll diameters and production speeds. But because so many factors influence the papermaking process, it is not always easy to meet these needs.

In particular, higher production speeds require absolutely reliable Nipco roll systems to prevent operating faults and downtime.

Existing Nipco roll systems can be upgraded to take account of heavy-duty service by installing the latest technology and optimizing the system settings.

Our oil scoop upgrading concept also enables higher production speeds without increasing the installed drive power capacity.

Our solution

An oil scoop system continuously removes oil fed to the rotating Nipco roll from the hydrostatic support elements and cooling pipes inside it. This ensures a precisely defined oil ring inside the rotating roll sleeve by removing and recirculating the superfluous oil.

Draining oil from the roll sleeve significantly reduces losses resulting from oil whirling, so that less drive power is required accordingly. Another benefit is that less air enters the oil inside the roll sleeve.

Fig. 1: Oil scoop

Fig. 2: Performance improvement / drive power reduction diagram

Fig. 3: Roll sleeve with oil scoops

Fig. 4: Oil scoop system arrangement



Upgrade procedure

- Modification of the roll shaft for installing the oil scoop system
- Installation of oil scoop system
- Installation of roll sleeve ventilation and interior cooling systems
- Application of wear-resistant materials, including standard overhaul of the Nipco roll
 - Leakage testing
 - Concentricity measurement
 - Vibration measurements
 - Temperature profile measurement
 - Performance and power consumption testing /
- Short upgrade time thanks to reutilization of existing components

Your benefits

- Energy savings thanks to significantly lower Nipco roll drive power consumption
- Higher production speeds possible without increasing the installed drive power capacity
- No modifications required to peripheral equipment
- No vacuum formation inside the roll sleeve
- Wear-free operation thanks to oil film on the inside surface of the roll sleeve
- Fast return on investment

