

AUTOMATION / PLASTIC WRAP / MULTIAIR® BLOWERS

Removing Plastic Wrap from Production of Car Seats

A major French producer of children's car seats needed a safer and more efficient alternative to mechanical trim removal. Manual handling, frequent stoppages, and dust buildup disrupted production and increased risk. They needed an automated system that could move waste cleanly and continuously from all eight lines.

THE CHALLENGE

This French manufacturer produces around 20,000 children's car seats each day. Their mechanical conveying system for plastic wrap removal had become a bottleneck, requiring manual handling and frequent cleaning stops. With eight conveyor belts carrying 2,500 seats per day, every interruption caused significant productivity loss.

Key issues included:

- Manual removal of trim under and around belts
- Safety risks from reaching beneath moving equipment
- Dust generation affecting air quality and increasing maintenance
- Lower recycling recovery due to contamination
- Production area appearing less presentable to visitors

The customer needed a fully automated waste extraction solution that removed plastic trim at the source, eliminated manual handling, reduced downtime, and created a cleaner, safer working environment.



More space around the machines improves safety and productivity contributing to better working conditions.

THE FACTS

The new system needed to extract lightweight PE film efficiently from all eight production lines without interfering with throughput or requiring operators to handle material manually. The conveying distances, number of pick-up points, and waste characteristics required a stable, high-efficiency pneumatic conveying setup capable of eliminating dust and removing material directly at the source.

Material Specifications:

- Material: PE packaging film
- Thickness: 15 microns
- Waste size max: 1,000 mm × 150 mm

System specifications:

- Production speed: 7 rounds/min (approx. 400 rounds/hour)
- Number of machines: 8, each with two pick-up points
- Max transport distance: 60 m
- Max vertical lift: 6 m
- Number of elbows: 5



Plastic trim accumulating beneath the production line created safety risks, manual handling, and frequent downtime before the pneumatic solution was installed.



Each car seat is wrapped during production, generating plastic trim that must be removed efficiently and safely.

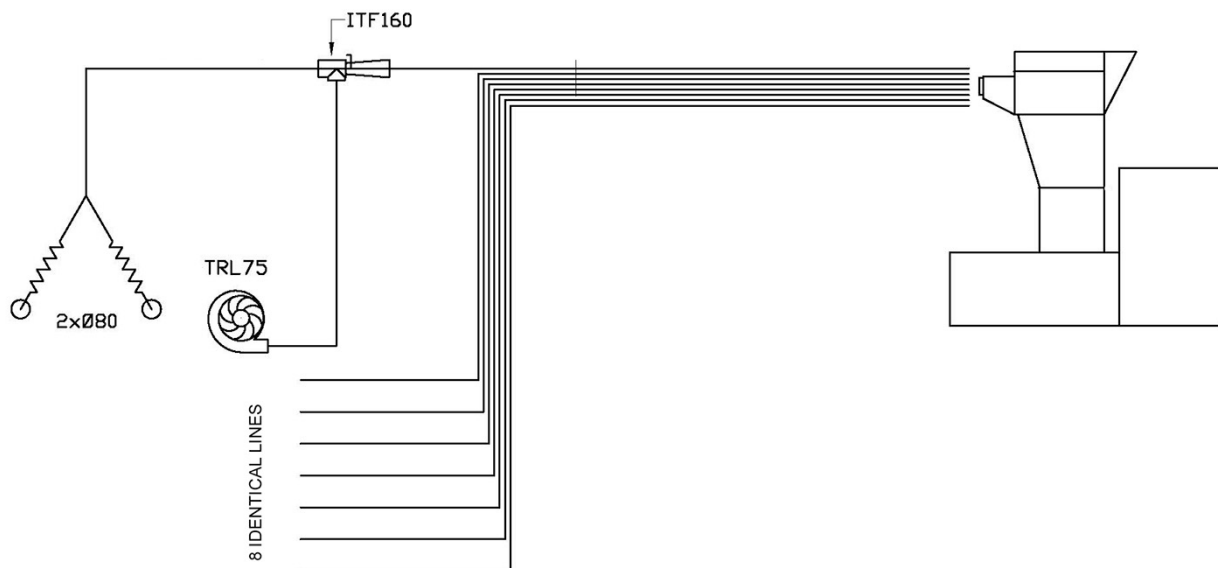
THE SOLUTION

Kongskilde implemented a pneumatic conveying solution designed to automate the removal of plastic wrap from all eight conveying lines. The system combines the MultiAir 1075T blower with the ITF 160 inline Venturi system, supported by FK 80, FK 120, and OK 160 piping for efficient material pick-up and transport.

Integration highlights:

- MultiAir 1075T provides stable airflow for continuous extraction
- ITF 160 Venturi enables long distance conveying of plastic trim from each machine
- FK and OK pipes route trim waste directly to the collection point
- Fully enclosed conveying system eliminates dust accumulation in the factory
- System connects seamlessly to existing production layout

This configuration enables fast, automated removal of PE film waste, eliminating manual handling, reducing downtime, and improving overall cleanliness around the production lines.



THE ADVANTAGES AND BENEFITS

The pneumatic conveying solution significantly improved safety by removing the need for operators to collect trim waste around or underneath machinery. With automated extraction from every line, the customer no longer requires labor to transport plastic waste to the outdoor container, directly increasing available workforce capacity.

- Continuous operation across all eight conveying belts improved production stability by removing dust and preventing accumulation of plastic waste or trim under the mechanical belts.
- The enclosed pneumatic system eliminated dust emissions, improving working conditions and making the production area more presentable to visiting customers.
- Material recovery is now more efficient and protected from external contamination because the closed system delivers the plastic waste directly to the compactor, improving recycling outcomes and reducing disposal-related losses.

Together, these benefits deliver a safer workplace, higher productivity, and lower operating costs, while freeing up space around the machines to create a more efficient and organized production environment.



The pneumatic solution secures efficient handling of the plastic trim from all eight conveying lines.

Ready to improve your production?

Start the conversation today and discover how a pneumatic solution can improve your operations.

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