Location:
Coca Cola Dongen,
the Netherlands.

Challenge:
Eliminate the need for external lubrication on 30.000 bottles per hour (bph) PET filling line.

Solution:
Existing conveyor system retrofit with Rexnord DRY-PT material chain.

Summary:
- Complete line runs without external lubrication from filler to packers.
- Savings on lubrication costs.

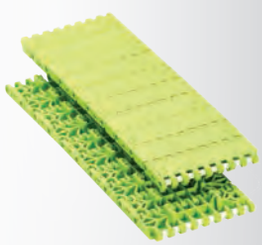
Rexnord Dry-PT Material
Run Dry Solution for PET Containers

Coca-Cola is operating a 30.000 bph PET filling line built by Krones AG for bottles sizes varying from 1 to 2 Liter. Since 2014 all bottle conveyors on this line are equipped with Rexnord® conveyor chain in DRY-PT® material. This state-of-the-art material has been developed by Rexnord to convey PET bottles without the need for external lubrication.

In 2010 Rexnord started a development project to find a new engineered plastic for conveyor chains, with the goal to make "dry running" with PET bottles possible. The development included an extensive test program and, next to internal laboratory testing, several field tests in a high-speed PET filling line at Coca-Cola Dongen.

In 2014 the best performing material in the tests was selected for a final validation test with the duration of one year. The line started up without any issues, but the critical key for success was if the required low friction level could be maintained over time.

Performance
The performance of the dry running high-speed PET filling line at Coca Cola in Dongen has closely been monitored by Rexnord and Coca-Cola for a duration of more than one year, to validate the DRY-PT material performance. The results have been excellent!



Conveyor equipped with Rexnord 1000 Series FlatTop in DRY-PT material

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Low Friction
The line has been running without external lubrication for the complete duration of the validation test. Fixed measurement points in various positions in the line, showed the friction level of the DRY-PT material could be kept at a constant low level and, in case of conveyor contamination, a simple cleaning with water restored the original friction values on the chain. The constant low friction is important to maintain the optimal bottle flow and have minimal backline pressure on the bottles during accumulation.

Wear Resistance
The chains in DRY-PT material show minimal wear after more than 1 year of continuous use. No replacement is therefore required for the near future. This means costs for maintenance to the conveyors are not impacted, giving Coca-Cola the full benefit of the dry running solution and savings on expensive lubrication.

Conclusion
The excellent performance of DRY-PT material in the high-speed PET filling line at Coca-Cola Dongen, The Netherlands, proves that it is definitely possible to convey instable PET bottles conveyors without external lubrication. Rexnord chains in DRY-PT material ensure optimal conveyor performance and durability.

How can Rexnord help you?

Contact your local Rexnord FlatTop representative to request a technical survey of your production line by an experienced application engineer to identify opportunities for sustainable improvements.

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