Multi-layer Extrusion for Technical Hoses

Business overview

- Tricoflex is a leading French producer of technical multi-layer hoses for industrial, garden, and food-grade applications, Their production facility in Vitry-le-François runs 24/5 and produces large volumes with strict quality requirements.
- With more than 65 years of experience, their facility produces over 100,000km of multi-layer hoses annually.

Business challenge

- Frequent weighing and screw-speed corrections caused downtime and inconsistent layer thickness.
- Their tandem line with two extruders for each the outer and inner layer made dosing difficult.
- Previous systems lacked reliable multi-line integration and required a high amount of operator involvement.

Business outcomes

- Eliminated a majority of manual checks, helping Tricoflex recover 30 minutes of uptime per day.
- Achieved higher weight-per-meter accuracy across all four layers.
- They have now freed up 120 operator hours annually by installing our dosing unit.

Capacity enabled

- Accurate dosing for four out of five hose layers.
- Continuous gravimetric measurement of main material and additives.
- Consistent throughput for their 24/5 production.

Business impact

- Revenue increase
- Costs decrease
- Increased product quality
- Increased efficiency
- Increased production capacity

Customer case

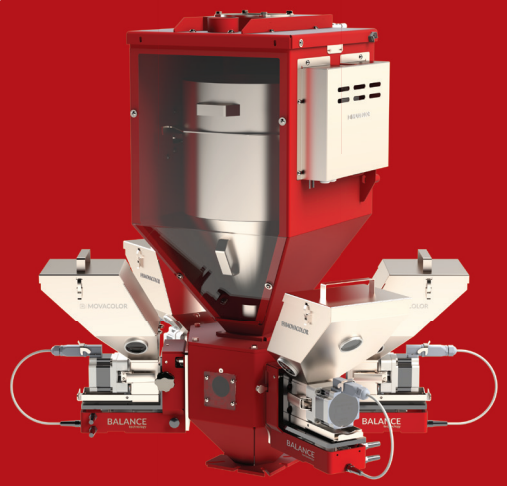
FARPI-FRANCE Activateur de Performance

TRICOFLEX

"The greatest achievement is that our line output now consistently meets the exact weight-per meter specifications, guaranteeing a product of the highest quality." - Vincent Caron, Lean Manager at Tricoflex

Business solution

Multi-layer Extrusion for Technical Hoses



Technology enablers

- Continuous gravimetric dosing via our MMS Weight and MDS Balance combined. Also known as our MCS Continuous Feeder.
- Closed loop control of material allows adjustments to dosing based on actual throughput and material consumption.
- Material usage and throughput automatically synchronizes along the full tandem extrusion line.

Capabilities

- Weight-based dosing compensated for density and throughput changes of the extruder.
- The ability to automatically adjust dosing rates based on main material throughput, helping achieve the optimal let-down ratio.

Benefits

- No more routine manual weighing or throughput corrections
- Faster, predictable startups with standard recipes for masterbatch.
- Up to 12,000kg of extra output per line per year. (depending on demand of hoses)

Requirements

- Required software change to factor in contraction of material after weighing the extruded product.
- Joint pilot and tuning with FARPI FRANCE across all four controlled layers.

Customer case

MOVACOLOR

Technology solution