



DRIVEN BY POSSIBILITY™

# THIS IS EVOLUTION. THIS IS PROGRESS.

HOW GATES® SOLUTIONS HELP  
TO INCREASE PRODUCTIVITY  
AND DECREASE COSTS.



**The world is changing. With soaring energy prices comes even more of a need to find new ways to enhance productivity and reduce costs. Innovation and highly evolved technological solutions are the only way forward. It's time for businesses everywhere to evolve with Gates – a leading co-operative fruit auction and operation company located in St Truiden, Belgium, did just that.**

## **EMBRACING EXCELLENCE SINCE 1938**

Started back in 1938 as a local initiative of some fruit producers to market their fruit together in a cooperative enterprise, the focus throughout the years for this business has moved from pure fruit auctioning towards more and more intermediation between buyers and producers, making them an internationally valued partner on the market.

Through the intermediation, some new aspects of commercializing fruit are now part their offerings: sorting and packaging, storing fruit under the best conditions, creating added value products with fruit (like fruit salads), and many others.

## **WHAT WAS CRUCIAL TO THE BUSINESS:**



**INCREASED UPTIME**



**ENHANCED PRODUCTIVITY**



**AN ALL-ROUND MORE EFFICIENT WAY OF WORKING**

## THE COMPLETE GATES CONVERSION SOLUTION

By replacing 8 x SPC 3750 GoodYear Torque Flex V-belts with Poly Chain® Carbon™ 14M GTC-3500-68 belts, we were able to supply the total energy saving and maintenance cost reduction solution. An innovative, forward-thinking replacement for a costly, ineffective, outdated system, the benefits of Gates Poly Chain® are clear...



Gates Poly Chain® belt drive.

### OPTIMUM PERFORMANCE

Designed to offer you a long lasting and efficient drive, Poly Chain® belts are an excellent alternative in all applications, including high torque, low-speed drives.

### ZERO MAINTENANCE

No stretch. No re-tensioning. No lubrication. Ever.

### IMPROVES SAFETY

Poly Chain® belts eliminate the use of oil, meaning there is no risk of fire or injury due to slipping and falling. Fewer injuries lead to a stable workforce and employee satisfaction.

### CONTAMINATION COSTS

Poly Chain® belts require zero oil and never rust – eliminating the risk of regulatory fines, ground or water contamination and infected food handling spaces.

### EXCEEDING EXPECTATIONS

Carbon fibre tensile cords in Poly Chain® belts provide improved shock load and fatigue resistance, resulting in high strength and length stability.

### PREMIUM PERFORMANCE

Our Materials Scientists engineered Poly Chain® belts for maximum flexibility, efficiency, and extended life.

### NO RUST

Poly Chain® belts are inert to most acids, chemicals and water – making it an ideal solution for wet environments. Poly Chain® belts are rust free and safe for use in food processing facilities.

### LESS DOWNTIME

Poly Chain® belts have less maintenance and downtime than any other solution.

### IMPROVES OPERATING CONDITIONS

Poly Chain® belts are quiet, greatly reducing exposure to loud noise and creating a more pleasant work environment for employees.

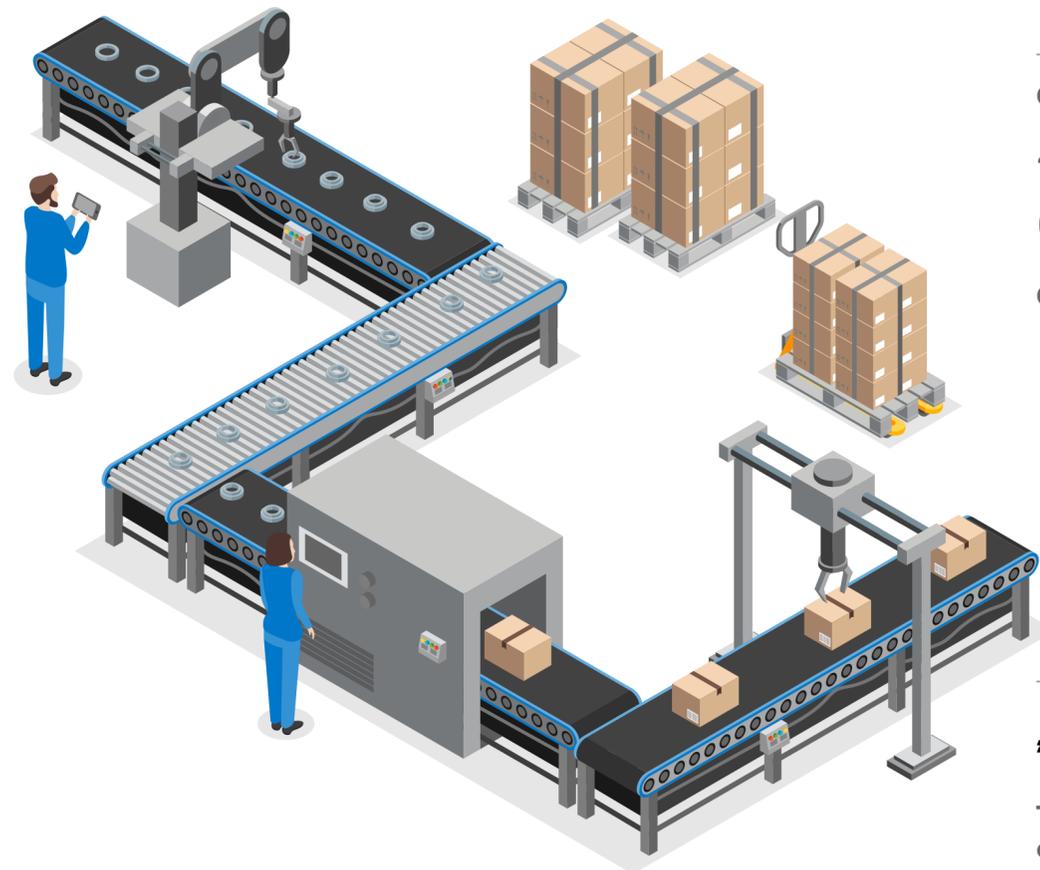
### IMPROVES ERGONOMICS

Poly Chain® belts are easier to lift, move and carry. Lighter weight reduces employee fatigue and strain, makes installation easier, and replacement more manageable.



# WITH GATES® POLY CHAIN® THE SAVINGS REALLY ADD UP

Better for your people, your profits and the planet, switching from outmoded v-belts to state-of-the-art Gates Poly Chain® belts could make a real difference to your bottom line. See for yourself how much they helped this business save, thanks to reduced maintenance and better energy efficiency:



### CALCULATED ENERGY AND MAINTENANCE COST SAVINGS

Calculated energy savings  
47,234 kWh/year  
(4%)

Calculated 3 year energy savings  
141,702 kWh

**€15,850.00**

Total CALCULATED cost savings over 3 years



### MEASURED ENERGY SAVINGS (MEASURING THE ACTUAL AMOUNT OF CONSUMED ELECTRICITY)

Measurement at start-up  
1.64%

After 10 minutes (5 minutes running)  
6.88%

After 25 minutes (5 minutes running)  
6.53%

*Thereafter, constant measurements.*

**5.01%**

Average MEASURED energy savings



### 3 YEAR ENERGY AND MAINTENANCE COST SAVINGS

Measured energy savings  
59,160 kWh/year  
(5.01%)

Over 3 years total  
177,480 kWh

**€19,428.00**

Total cost savings based on measurements of energy and maintenance over 3 years



### COST SAVINGS SIGN OFF DETAIL

Investment:  
Gates® Poly Chain® Carbon™ drive  
€2,464.00

Investment:  
GoodYear Torque Flex V-Belt drive  
€728.00

Net investment cost  
€1,736.00

Over 3 years (Calculated cost minus net investment cost)  
€15,850.00 minus €1,736.00

**€14,114.00**

Net cost saving per drive

## THE SAVINGS KEEP ON BUILDING

Conversion of the 5 other 132 kw compressor drives was agreed – so their estimated savings were six fold, at €84,684.00.\* They then converted 6 other compressor drives...

- 4 x 3 cylinder compressors (75kW motors)
- 2 x 2 cylinder compressors (50kW motors)

This gave a potential estimated saving of €42,768.00.\*\*

Due to the successful conversion of the initial compressor drives, the company also planned to convert 11 other compressors, resulting in even more impressive savings:

- 6 drives on 8 & 6 cylinder compressors (132kW) = €84,684.00
- 4 drives on 3 cylinder compressors (75kW) = €32,076.00
- 2 drives on 2 cylinder compressors (50kW) = €10,692.00

**Total (estimated) saving of €127,452.00.**

\* Based on 4% calculated savings or €106,066.00 based on 5.01% measured savings with investments already taken into consideration.

\*\*Based on the 4% calculated savings, 4 x €14,114 x 75/132 = €32,076.00 and 2 x €14,114 x 50/132 = €10,692.00.

### V-BELT TO POLY CHAIN® CARBON™ THE CONVERSION IN DETAIL:

Working specifically on Ammonia compressor drives, the application consisted of

- 6 compressor drives
- 3 x 8 cylinder
- 3 x 6 cylinder

Drives are responsible for compressing NH3 (ammonia) which is used for cooling fruit storage areas. Located in separate compressor room and all two-point drives.

#### DRIVE SPECIFICS

##### DriveR

- E-motor 132kW 1470 RPM
- Pulley Dp = 300mm

##### DriveN

- 8- cylinder compressor
- Pulley Dp = 450mm

##### Centre Distance

- 1290 +/- 170mm

#### CALCULATIONS AND PREPARATION

Target: Energy & maintenance savings

#### BELTS BEFORE CONVERSION

- 8 x SPC 3750 on 8- cylinder
- 10 x SPC 3750 on 6-cylinder
- GoodYear Torque Flex

#### BELTS AFTER CONVERSION

- Belt size 14MGTC 3500 68
- DR pulley 50 t (222.8mm)
- DN pulley 80 t (356.5mm)
- Gates® Poly Chain® Carbon™

## IT'S TIME TO EVOLVE, WITH GATES

**By switching from GoodYear Torque Flex V-belts to Gates Poly Chain® Carbon™ 14M GTC-3500-68, the results were exceptional. Less downtime. More efficiency. Increased cost and energy savings. Along with a host of other unparalleled benefits that were better for their business and their employees. They evolved their way of working to adapt to an ever-changing world. Isn't it time you joined them?**



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