



FOOD

FRUIT ELEVATOR FOR APPLE JUICE PRODUCTION



MEGADYNE

FRUIT ELEVATOR FOR APPLE JUICE PRODUCTION

INDUSTRY

FOOD

APPLICATION

FRUIT ELEVATOR FOR
APPLE JUICE PRODUCTION

PRODUCT

MEGASYNC™ Titanium

SITUATION/APPLICATION

A leading European fruit-juice producer, supplying major bottling companies, operated a continuous-duty fruit elevator used for apple-juice production. The elevator relied on 3/4" roller-chain drives to convey apples through an environment characterized by constant exposure to apple acid and weekly washdowns.

THE PROBLEM

The roller-chain drives consistently failed in less than a month, creating an unsustainable operational burden. Although the chains themselves were inexpensive, the cumulative cost of frequent replacements, labor, and production downtime was significant. Every failure brought the fruit-elevator system offline, interrupting output and directly reducing revenue. In addition, the corrosive application environment rapidly degraded the steel chains, accelerating wear and further shortening service life.

MEGADYNE SOLUTION:

MEGASYNC™ TITANIUM

To eliminate chronic failures, the company replaced three of the most problematic chain drives with the MEGASYNC™ Titanium 1800-TTM8-20 synchronous belt system.

Key parameters of the first converted drive included:

- 0.75 kW electric motor operating at 1440 rpm
- Driver pulley: 27 teeth, 48 mm shaft diameter
- Driven pulley: 15 teeth, 30 mm shaft diameter
- Center distance: 750 mm
- Continuous exposure to apple acid and weekly washdowns

The MEGASYNC™ Titanium belt offered a robust, acid-resistant, lightweight alternative engineered for long-life performance in harsh processing environments.

THE RESULT

The conversion delivered immediate and measurable improvements:

- Two years of uninterrupted operation, with no belt replacements or major maintenance required.
- 30% reduction in drive-component weight, lowering mechanical strain and contributing to longer system life.
- More than €1200 in annual maintenance-cost savings per drive, driven by the elimination of repeated chain changes and labor.
- Complete elimination of downtime related to drive failures, safeguarding production continuity and generating substantial additional revenue.

By providing a durable, acid-resistant, and high-performance solution, Megadyne has not only significantly reduced maintenance costs and eliminated downtime but also ensured a reliable and efficient flow of fruit for their premium apple juice production.



Contact our experts
to find out more