



Customer
Cement producer

Industry
Cement, Aggregate & Construction

Application
Cement bucket elevator

Rexnord Solution:
Rexnord® SJM984 Sealed Joint Chain

Total Annual Savings
\$162,400

For a detailed cost analysis for your application, contact your local Rexnord Representative.

Sealed Joint Chain Reduces Cement Plant Chain Costs by Half

Challenge

A cement manufacturer was battling performance issues on an aging bucket elevator that handled cement and slag product. The elevator experienced chain failures related to excessive, premature pin and bushing wear.

- Cement production is corrosive, abrasive and thermally aggressive: a challenging environment for power transmission products.
- The cement producer’s elevator chain had to be replaced at least once per year due to failing pins.
- This particularly difficult application called for a unique product with specific attributes.

Rexnord Solution

Rexnord provided the cement producer with Rexnord SJM984 Sealed Joint Chain, which:

- **Offers an average of 30 percent more wear life** than a standard chain.
- **Uses pins that are induction-hardened** through a proprietary process that accurately controls the metallurgy of the pin. The resulting hardness features allow for both shock-loading strength and wear resistance in hostile environments.
- **Has a seal feature that acts as an additional shield** to exclude materials from between the pin and bushing gap. Seals are available in both nitrile and Viton®* material for high temperature applications.

Rexnord Solutions and Savings in Action

Since installing this Rexnord solution, the customer:

- Significantly reduced maintenance costs.
- Increased production by eliminating chain breakages that result in downtime.
- Achieved an operational payback period of 12 months.



SJM984 Sealed Joint Chain extends wear life in demanding applications.

*Viton is a registered trademark of DuPont Performance Elastomers L.L.C.

Calculating the Annual Total Cost of Ownership (TCO)

Rexnord partnered with the customer to determine the current costs compared to the TCO using the Rexnord solution. Factors considered were:

- Acquisition costs
- Installation costs
- Costs of lost production

Annual Cost Analysis Breakdown (in \$USD)

Acquisition Costs

	Purchase Price	Expected Life	Units Installed	Total
Current engineered steel chain	\$76,000	1 year	2	\$152,000
Rexnord SJM984 Sealed Joint Chain	\$85,600	2 years	2	\$85,600
Annualized Savings				\$66,400

Installation Costs

	Installation Cost	Installations/Year	Units Installed	Total
Current engineered steel chain	\$24,000	1.0	2	\$48,000
Rexnord SJM984 Sealed Joint Chain	\$12,000	0.5	1	\$12,000
Annualized Savings				\$36,000

Lost Production Costs

Reduced downtime needed for chain breakages.	Events/Year	Downtime/Event	Downtime Cost/Hour	Total
Current engineered steel chain	1.0	24 hours	\$5,000	\$120,000
Rexnord SJM984 Sealed Joint Chain	0.5	24 hours	\$5,000	\$60,000
Annualized Savings				\$60,000

Rexnord Solution Annual Savings Summary

Total current cost per year	\$320,000
Total proposed cost per year	\$157,600
Total savings per year	\$162,400
TCO reduction percent	51%

Total Cost of Ownership Annual Savings: \$162,400