

FALK® QUADRIVE® PROVIDES 98% SAVINGS FOR HIGH CALCIUM LIME PRODUCER

CUSTOMER

Producer of high calcium lime products

INDUSTRY

Mining — limestone

APPLICATION

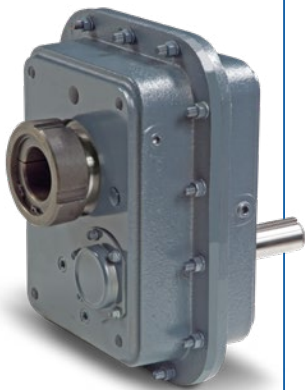
Conveying — belt conveyor

REGAL REXNORD SOLUTION

Falk Quadrive Gear Reducer

TOTAL ANNUAL SAVINGS

\$656,652



Falk Quadrive Shaft-mounted Gear Reducer

CHALLENGE

For nearly one hundred years, a major producer of high calcium lime has been mining from a limestone quarry. The producer was dissatisfied with the high rate of catastrophic gear reducer failures within the first year of operation on its conveyors:

- The gear reducers failed within the first year, forcing unplanned downtime of the conveyors, resulting in excessive costs, both in terms of gear reducer replacement and lost output due to downtime.
- The manufacturer declined to assist with troubleshooting or repair, recommending only that the mine should purchase all new shaft-mount gear reducers.
- The producer decided to seek expertise from a manufacturer more willing to understand the application.

REGAL REXNORD™ SOLUTION

Regal Rexnord replaced ten of the installed gear reducers with Falk Quadrive Shaft-mounted Gear Reducers. This solution was chosen for multiple reasons.

- **Robust, helical design** features high-hardness surface-finished teeth with a wider face to handle continuous and heavy demand on the system, while providing maximum load carrying capacity, eliminating downtime. The Falk Quadrive design also allowed the downsizing of some gear reducers relative to the installed units, resulting in a long-lasting solution with additional upfront cost savings.
- **Tapered roller bearings**, located both on the input and output shafts, provide large overhung and thrust load capacities to avoid unplanned downtime for gearbox service or replacement.
- **Severe-duty, grease-purged Viton®* seals** handle high temperatures, preventing oil leakage and entry of abrasive contaminants, preventing gear reducer failure.
- **Easy-to-install features** of the Falk Quadrive, like backstops factory-installed when shipped, result in a much easier install than competitive gear reducers — in this case requiring half the time and manpower as previously required. In addition, Regal Rexnord offers application engineering assistance, on-site installation supervision and repair capabilities as needed.

* Viton is believed to be the trademark and/or trade name of The Chemours Company FC, LLC and is not owned or controlled by Regal Rexnord Corporation or its affiliates.



REGAL REXNORD SOLUTIONS AND SAVINGS IN ACTION

Since installing the Regal Rexnord solution, the customer has:

- Reduced its total cost of ownership by 98 percent.
- Replaced a total of 30 installed gear reducers with Falk Quadrive Gear Reducers.
- Experienced no failures or unscheduled downtime of the gear reducers.

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Calculating the Annual Total Cost of Ownership (TCO)

Regal Rexnord worked with the customer to determine the current costs compared to the TCO using the Regal 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 (years)	Units Installed	Total
Current gear reducer	\$9,364	1/2 year	10	\$187,280
Falk Quadrive Gear Reducer	\$7,628	10 years	10	\$7,628

Annualized Savings \$179,652

Installation Costs

	Installation Cost	Installations/Year	Units Installed	Total
Current gear reducer	\$6,000	2 years	10	\$120,000
Falk Quadrive Gear Reducer	\$3,000	0.1 year	10	\$3,000

Annualized Savings \$117,000

Lost Production Cost

Eliminated unplanned downtime to remove the conveyors from service and replace the installed gear reducers.

	Events/Year	Downtime/Event Hrs	Downtime Cost/Hr	Total
Current gear reducer	6	12 hours	\$5,000	\$360,000
Falk Quadrive Gear Reducer	0	0	0	\$0

Annualized Savings \$360,000

Regal Rexnord Solution Annual Savings Summary

Total current cost	\$667,280
Total proposed cost	\$10,628
Total savings per year	\$656,652
TCO reduction percent	98%

**Total Cost of Ownership
Annual Savings: \$656,652**

FALK®

Industrial Powertrain Solutions
Regal Rexnord

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