Quadrive Shaft-Mounted Reducer saves lumber company over $30,000 per year.

Customer
Hardwood lumber manufacturer

Industry
Wood Products Manufacturing

Application
Wood chipper area

Rexnord Solution:
Falk Quadrive®
Shaft-Mounted Reducer

Total Annual Savings
$31,020

Challenge

A hardwood lumber supplier in Northern Pennsylvania learned the hard way that size matters when it comes to gearboxes. Unbeknownst to them, the company was using the wrong-sized gearbox with their wood chipper, which was used to process sawdust into wooden pellets for wood stoves. As a result of the incorrect service factor, they had to replace their shaft-mounted gearbox every three months. They tried another gearbox manufacturer and the results were the same.

This was an expensive problem that caused considerable costs and downtime. When their wood chipper was down, the conveyor carrying the end pieces to the chipper would continue to feed, causing the end pieces to pile up and spill onto the floor. Production would have to stop so that the wood piles could be cleaned up and manually removed to storage as there was no room for a forklift in the area.

Wood feeds into the chipper, where it is processed into pellets for wooden stoves.

A Falk Quadrive with the proper service factor was installed, delivering 94% savings per year.

Rexnord Solution

Rexnord was called in due to their industry expertise and application familiarity. The problem was identified as an insufficient service factor for this particular application. Rexnord recommended a properly-sized shaft-mounted Falk Quadrive reducer. Not only would the proper service factor of the Quadrive reducer provide a longer life and less downtime, the TA bushing arrangement would be easier to install and require less time.

Rexnord Solutions and Savings in Action

Even though the proposed product had a higher acquisition cost, the expense was easily justified by the longer life expectancy and decreased downtime. The total cost of ownership ultimately represented a 94% reduction in their current costs for this application.

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

Calculating the Annual Total Cost of Ownership (TCO)

Rexnord worked with the customer to determine their current cost of ownership and compared that to the cost of the Rexnord solution. Factors considered were:

- Acquisition costs of the gearbox
- Installation costs
- Longer life
- Lost production due to downtime

Annual Cost Analysis Breakdown

Acquisition Costs

	Purchase Price	Expected Life (years)	Units Installed	Total
Current product	$2,000	0.25	1	$8,000
Falk Quadrive	$3,500	2.00	1	$1,750
			Annualized Savings	**$6,250**

Installation Costs

	Cost/Install	Installations /Year	Units Installed	Total
Current product	$210	4.0	1	$840
Falk Quadrive	$140	0.5	1	$70
			Annualized Savings	**$770**

Lost Production

Occurred during gearbox replacement

	Events/Yr	Downtime/Event Hrs	Downtime/Cost Hr	Total
Current product	4	3	2,000	$24,000
Falk Quadrive	0	0	0	$0
			Annualized Savings	**$24,000**

Rexnord Solution Annual Savings Summary

Total current cost	$32,840
Total proposed cost	$1,820
Total savings per year	$31,020
TCO reduction percent	94%

Total Cost of Ownership Annual Savings: $31,020

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