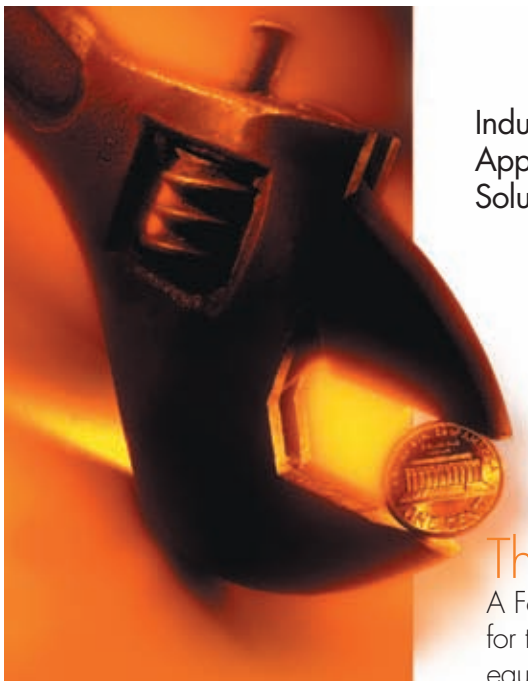

Industry: Forest Products
Application: Lapsiding Conveyors
Solution: DODGE® QUANTIS® Gearing

DOCUMENTED SAVINGS

CASE STUDY NO. 11

The Challenge

A Forest Products facility located in northern Wisconsin installed additional conveyors for their wood siding product. The Rexnord (Rex) Planetgear was specified as standard equipment. The Rex Mercury was the smallest case size available for the application, therefore alternative solutions were requested.

The Baldor Solution

As an alternative, the local distributor account manager and the Baldor sales engineer sized the DODGE® QUANTIS® as the ideal solution for the application. This gave the customer an optimal solution for an optimal price.

The Savings (General Case)

Customers have several options on gearbox case size and configuration. For example: available options are DODGE QUANTIS In-Line Helical (ILH) and Right Angle Helical Bevel (RHB). There are also options for Reliance™ Variable Frequency Drives (VFD) that will achieve the application's speed flexibility requirements. See the example chart below for available QUANTIS choices.

3 HP Motor with a 17:1 Gearbox Ratio				
Unit	Output Torque (lb-in)	Input HP	Unit Cost	Savings
Rex Mercury	6,000	10.01	$2060	
DODGE QUANTIS				
ILH HB38	1,947	3.12	$340	$1720
RHB BB38	2,213	3.41	$1005	$1055
ILH HB48	3,738	5.91	$490	$1570
RHB BB48	3,985	6.59	$1130	$930
ILH HB68	6,136	9.56	$770	$1290
RHB BB68	6,305	10.36	$1360	$700

The RHB examples are priced as hollow bore, with twin-tapered bushings for ease of installation and removal. For added output speed flexibility, a Reliance MD60 VFD can be purchased for approximately $560. This results in a total package with a broader speed range, all at the push of a button, and still for less money. In addition to purchase price, the DODGE QUANTIS solution saves on other power transmission components and also eliminates safety hazards:

- Eliminates Rex Motor Mount component with QUANTIS C-face (ILH and RHB)
- Eliminates sheaves and belts on gearbox input (ILH and RHB)
- Eliminates sheaves and belts or couplings on gearbox output (RHB)

The Step-by-Step Calculation

General Case Summary

By sizing the gearbox based on the application need, customers can save money by using the DODGE QUANTIS solution. QUANTIS can exceed the HP and torque needs of the Rex Planetgear and still save the customer money with a reliable, efficient solution. Other unnecessary components and costs can be reduced or eliminated by using QUANTIS. Baldor can provide other components like motors and VFDs for added flexibility. Baldor's System -1 team can also provide packages with base plates for easy retrofits. No matter which way you slice it, the DODGE QUANTIS is a better solution and a money saver.

The Savings (Actual Case)

The facility specified a 3 HP application with 6:1 and 8:1 ratios. Based on the OEM conveyor design, they chose to use solid shaft and sheaves on the output. The customer was provided a QUANTIS RHB BB38 by a local distributor and Baldor.

Rex Mercury	$2060
DODGE QUANTIS RHB BB38	$ 910
Savings Each	$1150
Total Savings (23 Gearboxes)	**$26,450**

The Conclusion (Actual Case)

By using DODGE QUANTIS, the customer saved money on the initial purchase, and will continue to save money by reducing the need for other components. The conveyors were installed in late 2003, and are still running, problem free.

The distributor and Baldor completed the conveyor package with Reliance C-face motors and DODGE bearings, sheaves, and bushings. This adds to the savings and shows that Baldor is a total solution provider for power transmission needs.

Note: costs are approximate and are not to be used for quotation purposes.

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