

LOW-FRICTION BEARINGS

**Three Ways to Improve
Your Production Process**



Ritbearing
CORPORATION



A GOOD PRODUCTION PROCESS IS A SMOOTH PRODUCTION PROCESS. A SMOOTH PRODUCTION PROCESS IS ALSO A MORE PROFITABLE ONE.

While it's impossible to avoid every production problem before it happens, there are steps you can take to reduce your risk. One of the most overlooked areas of opportunity in this regard is bearing selection.

Today, we would like to focus on low-friction bearings and how they can help you cut production costs, improve productivity, and help your manufacturing process become more profitable.

REASON NO. 1: PREVENTS MACHINE FAILURE

Let's first define what we mean by "machine failure." In its simplest terms, machine failure means a machine (or component) has stopped functioning the way it was originally intended. This could be catastrophic failure or it could be a loss of effectiveness from a still-working machine. For example, a pump that was designed to move 100 gallons of water per minute that can now only move 50 gallons per minute would be classified as machine failure.

HOW DO LOW-FRICTION BEARINGS LIMIT MACHINE FAILURE?

It is estimated that 70 percent of machine failures result from surface degradation, and that the majority of surface degradation issues result from mechanical wear.

Although any bearing inherently reduces friction, a microscopic view of a bearing's surface will reveal rough imperfections that actually create friction.

Compared to standard bearings, low-friction bearings reduce frictional movement by 30 percent or more. This reduces surface degradation, which reduces the risk of machine failure.

HOW DOES THIS IMPROVE THE MANUFACTURING PROCESS?

The most obvious benefit of using low-friction bearings is cost. Because you **spend less on replacement parts** and because **employees don't lose productivity during downtime** periods, you're able to decrease your total cost of ownership of the machine.

There is also less opportunity cost. If a machine is operating at 50 percent efficiency, you simply can't produce as many widgets as possible in a given period. This not only creates

a hidden bottleneck that makes meeting production demands more difficult, it also means widgets that could be made are not. In other words, you have less product to sell and less revenue to show for your efforts.

Pretty compelling so far, eh? If the fact that low-friction bearings can help limit machine failure isn't enough for you, let's move on to the next section.

NO. 2: IMPROVES ENERGY EFFICIENCY

We already explained how low-friction bearings lead to less wear on machines, which improves uptime and lowers total cost of ownership. Now we'll focus on another benefit of low-friction bearings: energy efficiency.

HOW DO LOW-FRICTION BEARINGS IMPACT ENERGY DEMAND?

According to the International Energy Agency (IEA), the price of meeting the world's energy demands through 2030 is \$26.3 trillion. In order to pay for this increased demand, energy costs are rising.

It's likely that the machines you use in the production process account for a significant portion of your company's energy consumption. This is exactly where energy demand impacts your production process. In essence, it costs more to create the same product, which leaves you with a couple options: raise prices on the end product and/or find ways to cut production costs.

Fortunately, low-friction bearings can help you meet this challenge.

HOW DOES THIS IMPROVE MY PRODUCTION PROCESS?

Machines that use low-friction bearings require less

energy and therefore less money. This improves your company's cash flow, which means you can invest in new or upgraded machines, new employees, or some other critical business area.

As an added bonus, because Greenhouse Gas emissions are directly correlated with energy consumption, low-friction bearings are better for the environment.

To recap: Low-friction bearings cuts your energy bills and improves your cash flow.

REASON NO.3: IMPROVES EMPLOYEE PRODUCTIVITY

If lowering total cost of ownership and cutting production costs isn't enough to convince you that bearing selection is important, maybe we can convince you with this last reason. Low-friction bearings can improve employee productivity.

HOW DO LOW-FRICTION BEARINGS IMPACT MY EMPLOYEES AND PRODUCTION PROCESS?

If you're scratching your head about that last sentence, stick with us.

All operating machines create waste heat. This increases air temperature that, if left unchecked, can negatively impact employee productivity.

According to the Occupational Safety and Health Administration (OSHA), **the optimal working temperature is between 68 and 76 degrees Fahrenheit.** Working environments above this temperature range make it easier



for workers to feel fatigued and more difficult for them to concentrate.

Because low-friction bearings (you guessed it) reduce abrasion, your factory's machines produce less heat. This makes it easier – and less costly – to keep the working conditions at comfortable, more productive temperatures.

In other words, comfortable employees are happy employees. Happy employees are more productive employees.

WHAT DID WE LEARN HERE TODAY?

Choosing the right bearing for your application is hugely important. When it comes to your plant's production process, low-friction bearings provide a way to keep costs down long after the initial order is made because they: limit machine failure, are more energy efficient, and keep employees comfortable and more productive.

Author Bio

Chris Wilson is the Corporate Operations Manager at Ritbearing Corporation, an international distributor of ball and roller bearings. Founded in 1946, the company is now engaged in partnerships with 22 manufacturers that collectively offer a full range of bearing solutions. Ritbearing also specializes in custom-engineered bearing solutions for unique applications.

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