

ENERGY EFFICIENT SOLUTIONS

SMART CHOICES, EASY SAVINGS





At Applied Industrial Technologies, we are proud of our rich heritage of leadership in industrial distribution. Our legacy is built upon a strong foundation of quality brands, innovative solutions, dedicated customer service, sound ethics and a commitment to our core values.

As a distributor, we strive to maintain a light carbon footprint and support a healthy environment by helping our customers reduce their impact. We understand that your choice of industrial products can significantly affect your energy consumption. Therefore - where appropriate, we strive to advise customers on energy savings in their operations in critical areas to ensure we are doing our part in creating a sustainable future.

Building on our legacy also means being a responsible corporate citizen by implementing energy efficient practices in our own operations and committing to continuous learning across our organisation. We know that we continue to have an opportunity and a collective responsibility to further develop plans, actions and results that promote fair, honest and ethical practices across our business.

We are pleased to share our ongoing progress and demonstrated commitment to ensuring that Applied continues to enhance our position as a differentiated industrial distributor and extend our company's legacy for years to come - in every location where we do business.



A truly circular use of oil with Double Separation Technology

In light of the environmental challenges we are facing, it's clear that we all need to quickly minimize our dependency on fossil fuels.

What if you could reuse all your industrial oil?

How would it impact your CO2 footprint? How much money would you save? And how would it affect your performance?

SKF RecondOil can help turn your industrial oil from a costly, environmentally harmful consumable, into a circular and sustainable asset. SKF RecondOil uses Double Separation Technology (DST) which is a new technology for industrial oil regeneration. DST does not replace conventional filters. Instead, it is an addition that takes you beyond conventional filtering. Your oil becomes cleaner than ever before. And by removing even the smallest contaminants, it can prevent your oil from aging.

DST can remove the nanoparticles – and all other particles as well, for that matter – and create an ultra-clean oil that has a potentially endless life. In addition to prolonging the service life of oil, DST offers other benefits: ultra-clean oil can lead to improved product quality, thereby lowering scrap rates. When the oil is constantly clean, machinery wear and maintenance need are reduced.

Perhaps, most importantly, processes are stable and consistent, resulting in minimized unscheduled downtime. This means that the same oil can be used again and again. In some cases, indefinitely.

Besides saving you money, SKF RecondOil can also result in a significant reduction of your carbon footprint. In addition, for many processes, ultra-clean oil can bring substantial performance improvements and longer machine life. You might never have to buy new oil again. Or dispose of used oil.

Remanufacturing

Move from a linear to a circular economy

SKF's remanufacturing services are performed with environmentally responsible cleaning of bearings and handling of waste. This process of remanufacturing means significant savings for the environment. Depending on the amount of remanufacturing required, a remanufactured bearing reduces the carbon footprint by up to 90% compared to a new one. Remanufacturing also consumes up to 90% less energy.

As an added benefit, remanufacturing is often the quickest way to replace a bearing due to a breakdown, especially when it comes to bearings that are not in stock. The remanufacturing process is also faster, and ensures the same quality as the manufacturing process for new products.



As the world searches for more sustainable and environmentally considerate ways of providing power, increasing the energy efficiency of electric motors is one vital step in the right direction.

Electric motors consume over 45% of the world's electricity, and by 2040 the number of motors is predicted to double. The adoption of high-efficiency motor systems would cut global electricity consumption by up to 10% - meaning changing just one motor can, and will, make a difference.

ABB's range of Energy Efficient Motors are a cost-effective option that offers significant energy and economic savings over the product lifecycle, helping to incentivise the transition to more sustainable energy usage.

HEAVY DUTY MOTORS

Heavy Industry & Mining Safe area motor

IP66 0.37-1000 kW.

BENEFITS AND FEATURES

- High ingress IP66 protection ensures maximum tightness and protection against dust.
- High visibility in dusk ambients and maximum corrosion resistance.
- Maximum reliability while meeting the requirements set by the biggest mining operators.
- IE3 - High Efficiency according to Australian MEPS

HIGH GENERAL PERFORMANCE

Environmentally "Fit for purpose", Compact, most flexible design

IE3 0.25 -355 kW.

BENEFITS AND FEATURES

- High ingress Protection IP66 design.
- Innovative, reliable & tough built for the industry it serves.
- IE3 - High Efficiency according to Australian MEPS



SEGMENTS

- Mining
- Aggregate
- Quarry
- Steel
- Bulk material handling



SUGGESTED APPLICATIONS

- Pumps
- Fans
- Compressors
- Conveyors

Clean and efficient powered mobility solutions

If you're concerned about hazardous fumes in the work environment caused by forklifts or other petrol/diesel/gas powered movers, then an Electrodrive powered tug could be the ideal solution for you.

Electrodrive is an Australian made-and-owned manufacturer who designs and produces electronic mobility solutions that eliminate emissions in the workplace and make it safer for staff and visitors.

As an ISO certified company, Electrodrive is committed to delivering high quality products. They specialise in powered towing devices (tugs) which enable a single user to safely tow up to 10 tonnes with ease. They're battery powered, highly manoeuvrable and give off zero emissions which means they can safely be used in confined spaces, such as basement car parks, factories, warehouses or storage rooms. And unlike other brands, Electrodrive can guarantee that no tug (or any other product) contains toxic lead ballasts.



The powered tug's "front of load" ergonomic design ensures the operator maintains a "natural" walking position with maximum forward vision to avoid the risk of collisions.

Their tugs are fitted with deep-cycle, long-lasting, maintenance-free batteries, and can be easily recharged for longer run times and greater energy efficiency.

Replacing a forklift with a tug will remove chemical vapour and smoke from the workplace all together, whilst also reducing the risk of injury and strain. This can help improve productivity while also reducing downtime.

With Electrodrive, you can improve workplace safety and reduce your carbon footprint at the same time. Moreover, you'll be supporting an Australian-made business.

Air preparation and compressibility make pneumatics less efficient than other linear motion technologies. They encounter several internal and external losses in the conversion between pressure generation and linear movement while electromechanical actuators only require 2-3 steps in converting input energy into output power - providing greater energy efficiency.

In addition to greater energy efficiency when pushing a load, high efficiency electromechanical actuators can recuperate a significant part of the potential energy used when reversing a movement, depending on its function. This additional benefit can drastically improve the overall efficiency of the system.

Ewellix's CAHB Linear Actuators are engineered to operate in severe environments at temperatures from -40°C to $85^{\circ}\text{C}+$, and consist of robust metal gears with corrosion-resistant housings.

BENEFITS

- Higher productivity with fast and smooth movement.
- Easy and quick integration into customer equipment via CAN bus communication
- Higher reliability and protection
- Cost effective and virtually maintenance-free
- Monitoring and on-board diagnostics

FEATURES

- Absolute or incremental position feedback and limit switch
- Manual override (optional)
- Integrated overload and overheating protection
- Robust construction, protection class IP69K/66M, broad temperature range, corrosion resistant
- SmartX platform with integrated controller



Magnetic Filter Pads

Magnetic Filter Pads attach to existing disposable spin-on filters to trap the contamination (sludge) that wears on system failure. Capturing the wear contamination under 4 microns will extend fluid life (extending fluid change-out intervals) and equipment life (extending maintenance intervals) - assisting in enhancing your energy efficiency.



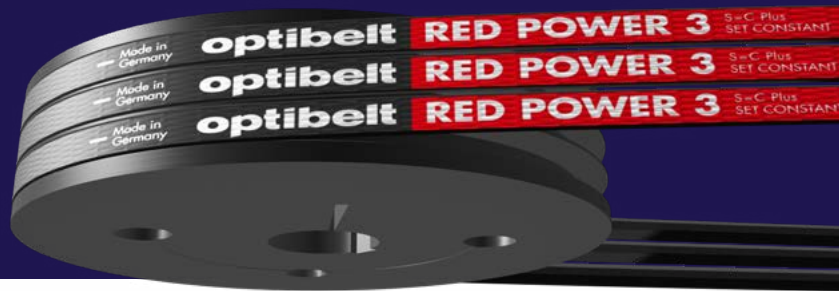
BENEFITS

- Extend the life of fluids and system components.
- Extend maintenance intervals.
- Reduce oil and fluid changes.
- Does not degrade from heat and vibration.



Optibelt Red Power 3

Maintenance free v-belt that requires no retensioning and is up to 97% efficient.



CASE STUDY: Textile Spinning Blowroom Filter

Application: Blower
Motor: 75kW, 1450 rpm
Belt: SPB 3000 RP

PROBLEM:

The customer was using a competitors v-belt on their existing drive, and was facing several problems:

- High maintenance & production downtimes
- Service life was not reliable
- Looking to save more on electricity

SOLUTION:

Switched to Optibelt Red Power 3 v-belt

RESULT:

- Continuous & maintenance free operation
- Customer reduced frequency of inverter from 50Hz to 45Hz with same output and got approximately 18% energy savings

	Electric Load
Competitor v-belt	112 Amp
Optibelt Red Power v-belt	91.8 Amp



Application: Blower
Motor: 75kW, 1450 rpm
Belt: SPB 4750 RP

PROBLEM:

- Belts were SPC 4750 x 4 pcs of various brands
- Re tension of belts were required at regular intervals to obtain the desired efficiency
- The customer wished to lower their energy costs

SOLUTION:

The drive was redesigned to Optibelt Red Power 3 - SPB-4750 x 4 pcs. On new pulleys. The drive was installed, tensioned and aligned in accordance to Optibelt recommended practices and procedures

RESULT:

- Improved efficiency and service factor (now 1.66)
- No need to re-tension – maintenance free operation
- Customer was able to reduce the frequency of the inverter from 50Hz to 47.5Hz and obtained a 6.5% energy savings with same output

	Electric Load
Competitor v-belt	118 Amp
Optibelt Red Power v-belt	110.9 Amp

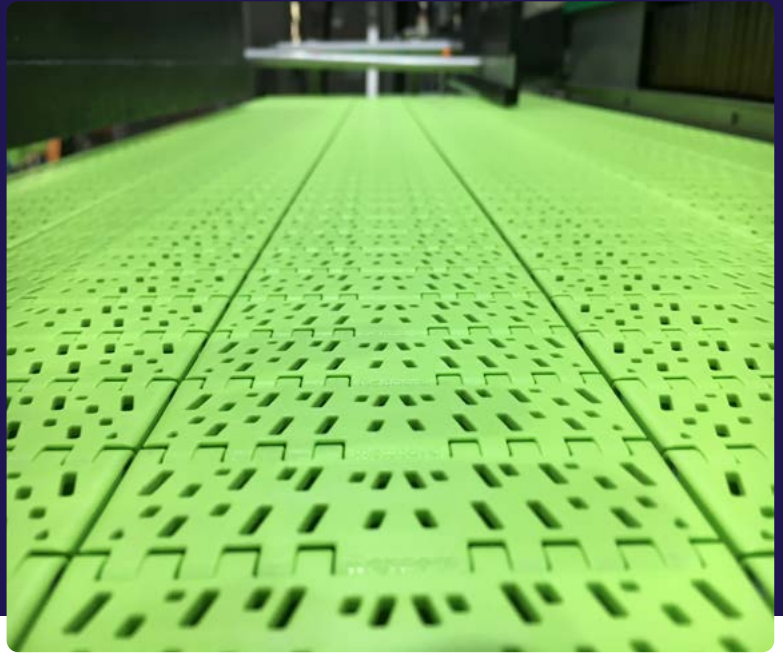


Conveyor Modular Belt Material

Conveyors have been successfully running dry for over 20 years using Rexnord's superior conveyor modular belt material, which is typically used within the Food and Beverage industry where excessive amounts of water are used to lubricate the belt during its operation.

Using ULF Wearstrips with the Rexnord DRY-PT series TableTop and MatTop chains creates less friction between chain and wear strips, resulting in a significant reduction of chain tensioning in corners.

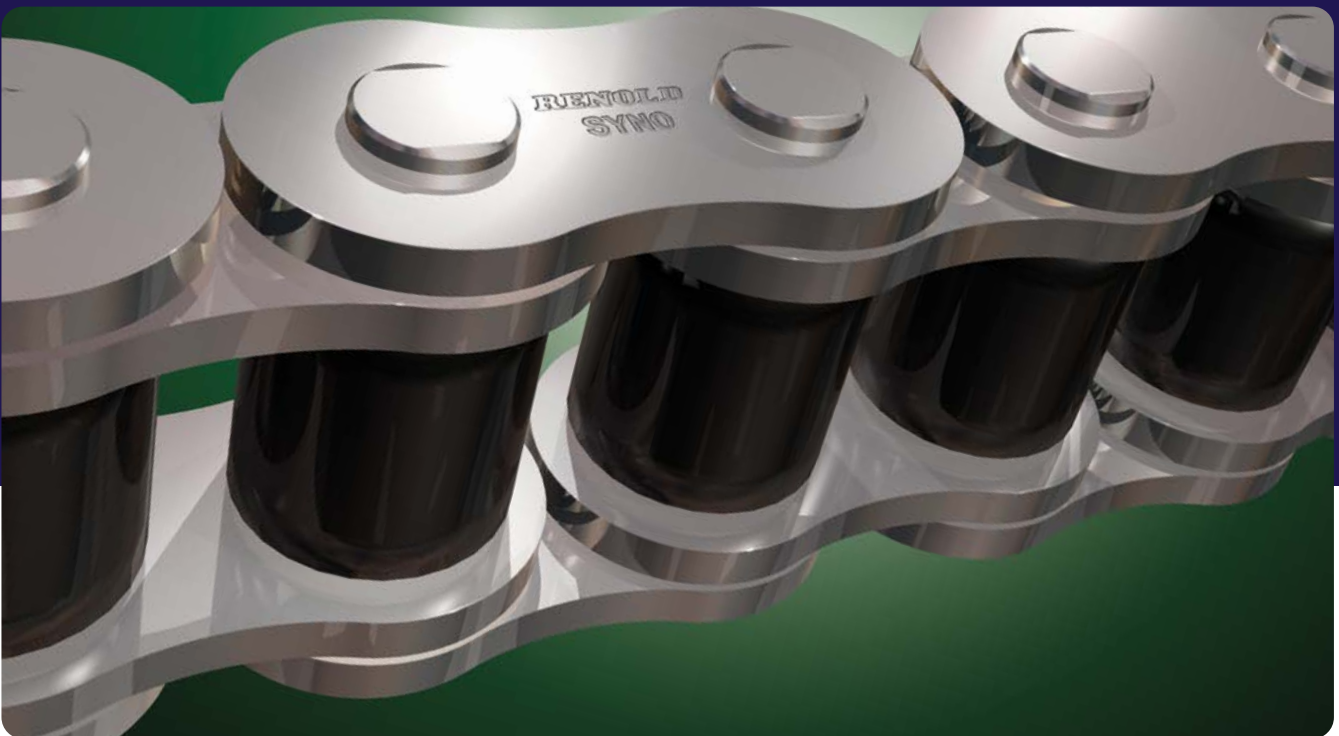
This results in reduced noise and increased energy savings through reduced head shaft tension, and zero energy cost previously associated with water consumption and recovery.



Renold's No Lube Product Solutions

Renold's lubrication free syno chain avoids the use of contaminating lubricants, reducing the risk to the environment and quality of customers' products.

Renold's Hi-Tech Couplings offer excellent energy saving benefits to the customer as they require no consumption, storage or disposal of lubricants – thus eliminating any unnecessary waste. Another significant benefit is that only the rubber elements require replacement as they are the only wear parts in the coupling itself.



This means only a fraction of the energy used to manufacture the entire coupling is needed to manufacture the rubber elements, so it has a lower manufacturing environmental footprint impact than gear or grind couplings – which use metal wear elements that will require more or all the coupling to be manufactured as replacements over the same lifetime.

Renold's HiTec Couplings have a lower carbon footprint in operation, as well as over their lifecycle of operation, making them the logical choice for the energy conscious consumer.



CorrosionX, CorrosionX XD, CorrosionX HD

CorrosionX utilises a technology called Polar Bonding that doesn't just slow down corrosion, but stops it completely. As CorrosionX offers lubrication about three times better than engine oil, you can expect friction between moving parts to be greatly reduced during the lifetime of lubrication. This reduces the energy needed to drive any machine, and evidently your carbon footprint.



MAIN FEATURES:

- Penetrates, lubricates, and protects against corrosion
- Waterproofs old and new electronics/electrics in all machinery, trucks and vehicles
- Safe to 39,000V



It's important to note that bearings that don't achieve their maximum designed life can consume significant amounts of energy, especially toward the end of their lifespan. Many bearings don't achieve their intended service life

By choosing Lubcon long service life lubricants, you can ensure that your bearings operate at their optimal level, reducing the risk of premature failure and minimizing end-of-bearing life energy waste.

In a standardized test, Lubcon electrical motor greases outperformed conventional lithium-based electrical motor greases by up to 80 times.

For more information about our energy waste audit, speak with your local representative.

SINTONO LS 16

SINTONO LS 16 electrical motor grease delivers exceptional longevity, up to 80 times longer service life than lithium-based electrical motor greases.

TURMOSYNTHGREASE ALN SERIES

Turmogrease ALN Series is a high-performance food-grade grease that outperforms most standard products by up to 8 times in service life. Our advanced formula delivers exceptional longevity, reducing re-lubrication frequency and associated maintenance costs. Choose Turmogrease ALN Series for long-lasting performance in demanding food and beverage applications.

TURMOGEOIL OM SERIES

Introducing Turmogearoil OM series - the high-performance gear oil that delivers exceptional efficiency and reduced friction, thanks to our special additive, Turmotec. With its unique surface-smoothing properties, Turmotec can reduce friction by up to 30% compared to conventional CLP gear oils, resulting in reduced wear, and lower operating temperature resulting in lower energy consumption. Turmogearoil OM series is available in all viscosity grades.

TURMOFLUID ED 13

Introducing Turmofluid ED 13 - the synthetic lubricant with a special formulation designed for exceptional penetration and lubrication properties. With its advanced dewatering properties, Turmofluid ED 13 can even be used on wet chains. Its high metal affinity ensures long-lasting lubrication of internal chain parts, and low dust attraction extending chain life. Our product has been proven to reduce friction and energy consumption in industrial chains of all sizes and loads. Trust in our quality and choose Turmofluid ED 13 for reliable and efficient chain lubrication.

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