TOSHIBA

When Time, Money & Efficiency Matters in Driven Machines...

Toshiba has the solution!

High Efficiency Ultra Series Motors for Quality OEMs

Toshiba High Efficiency Motors

Industrial Fans & Blowers

The relationship between fans & blowers and electric motors are inseparable. Toshiba OEM motors are able to deliver the required starting torque for large axial blowers, as well as being suitable for efficiently driving conventional centrifugal fans & blowers. The high efficiency design of Toshiba OEM motors ensures that significant amounts of energy (and money) can be saved over the design-life of the fan. Typically, the motor cost is less than 0.5% of the design-life running cost, with payback periods often being less than one year.

Packaging Machines

Most modern industrial manufacturing facilities have automated packaging machines that are compact, modular, light-weight and efficient. Electric motors incorporated within these machines play a vital role in their smooth and reliable operation, year after year. Carefully designed and critically tested, Toshiba OEM motors offer peace of mind that any quality OEM manufacturer demands.

Printing Machines

Large automated machines used for printing using media such as paper, fabric, foil etc, use electric motors as the heart and soul of the machine. Carefully balanced rotors, smooth response to process control commands and efficient operation, define the desired characteristics of such motors. Toshiba OEM motors have these precise features to offer smooth and fast operation for large printing machines.

Industrial Pumps

Pumps are used in virtually all industry sectors, designed to move fluids (liquid, gas, slurry) from one place to another. Large or small, many pumps are operated by an electric motor. Toshiba OEM motors are ideally suited for either centrifugal type or positive displacement type pumps, operating efficiently to convert electrical energy into mechanical work. Typically, the motor cost is less than 0.5% of the design-life running cost of Toshiba OEM motors, as their high efficiency design delivers payback periods often less than one year.

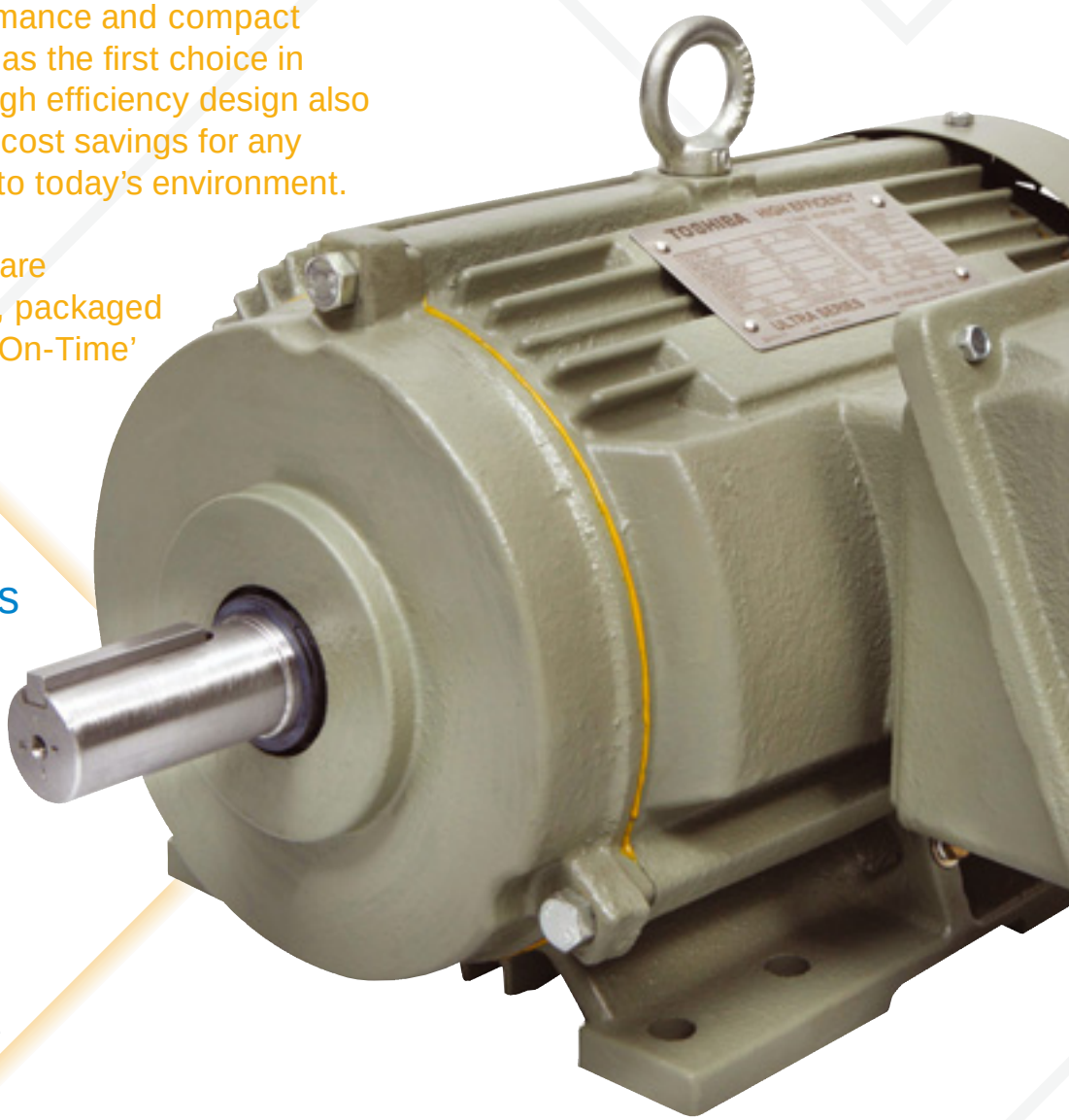
To Suit Various Applications...

Grinding Machines

Grinding machines often utilize electric motors to perform their function. Many grinders require electric motors to operate at ‘high torque – low speed’ as well as ‘low torque – high speed’ operating modes. Sudden and impacting loads add another dimension to these machines characteristics. Toshiba OEM motors have the capabilities to run at both low and high speeds, producing the required levels of torque in both cases.

The versatility of Toshiba OEM motors make them suitable for most industrial applications. With their high performance and compact size positioning them as the first choice in electric motor, their high efficiency design also contributes to overall cost savings for any business operating into today’s environment.

Toshiba OEM motors are manufactured, tested, packaged and shipped with an ‘On-Time’ delivery commitment.



Quality Motor for Quality OEM’s

- Wire Drawing Machines
- Compressors
- Feeders
- Mixers
- Conveyors
- Shredders
- Slicers
- Planers
- Crushers
- Palletisers

and many more applications

High Efficiency Ultra Series Motor Advantages...

Motors for Quality OEM's

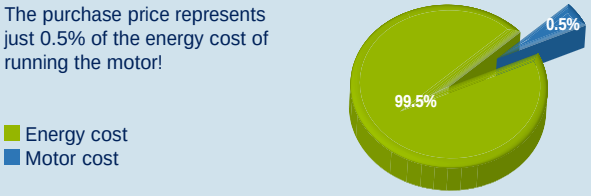
Energy Consumption & Running Cost

Purchase price of any motor is generally insignificant when compared to its running costs over a 20 year life cycle. For example:

Typical 30kW, 4P Motor Price	$2,370
Typical Motor Efficiency @ 100% F/L	91.6%
Estimated Annual Hours of Use	4000 hrs
Average Energy Price	$0.14/kWh
Hence, Annual Cost of Energy Consumption at 100% Full Load	$18,341
Cost of Energy Consumed over 20 Years Service Life	$366,812

Lifetime Energy Cost & Motor Cost Comparison
(for 30kW motor)

The purchase price represents just 0.5% of the energy cost of running the motor!



Efficiency Comparison

Motor efficiency is one factor that can significantly affect the running costs of any motor operating under a given set of conditions. Small improvements in efficiency can result in large savings in annual running costs. Consider the following comparison of running costs between a Minimum Efficiency motor versus a High Efficiency motor complying with MEPS 2006 (Minimum Efficiency Performance Standards as per AS1359:5)

Using a typical 30kW 4 pole motor as an example, the cost saving estimates can be as follows:

	Typical Motor	Ultra Series Motor
Power	30	30
Operating Hours (conservative)	4000 p.a.	4000 p.a.
Energy Cost	$0.14/kWh	$0.14/kWh
Efficiency (%)	91.6	94.8
Load Factor (%)	100	100
Annual Running Cost*	$18,341	$17,722
Annual Savings	–	$619
Annual CO_2 Saving (kgs)	–	4,070

*Running Cost = $\frac{\text{kW x Load Factor x Energy Rate x Op. Hours}}{\text{Efficiency}}$

Thus,
LIFETIME COST SAVINGS# = $12,380
LIFETIME CO_2 SAVINGS (kgs)# = 81,370 (for 20 year service)

Pay-Back

Typical Cost of Toshiba 30kW, 4P Ultra Series Motor	$2,520
Price Difference between Ultra Series Motor & Avg. 30kW, 4P Motor	$160
Yearly Power Cost Saving (at 4000 hrs)	$619
Pay-Back on Premium for Toshiba Ultra Series Motor	3 mths

Conclusion

When evaluating motors for purchase, motor users should place a high value on the running cost savings advantages as compared to the purchase price. Any initial purchase price premium will be quickly recovered by the reduced running costs of Toshiba High Efficiency motors.

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