## **Premium Gold Motor**

Z4

## Features

- The Premium Gold Motor has been developed by further advancing high-efficiency technology inherited from Japan's first induction motor in 1895. It realizes a high efficiency while maintaining the compatibility of mounting dimensions.
- This model is compatible with the "Top Runner Standards" by which the regulation began in 2015 and has achieved the efficiency level of IE3 (Premium Efficiency) under both of the domestic power supplies of 200 V-50 Hz and 200/220 V-60 Hz.

("Premium Gold Motor" is a trademark of Toshiba Industrial Products and Systems Corporation.)

## **Basic Concept or Summary**



## **Effects or Remarks**

◆ The loss has been reduced by 30 % to 40 % in comparison with induction motors.

The Premium Gold Motor has achieved an energy consumption efficiency that exceeds by far the Top Runner Standards value.



Loss ratio of Premium Gold Motor assuming the loss of a conventional Toshiba induction motor as 100 (Comparison between Toshiba products)



Comparison of energy consumption efficiency

Comparison of Top Runner Standards value and Premium Gold Motor efficiency

Example of energy saving effect (when a conventional induction motor was replaced with Premium Gold Motor)



- 1) The electric energy was calculated assuming continuous operation for 24 hours per day and 365 days per year (commercial power).
- 2) The running cost was calculated with an electric rate of 16 yen per kWh.
- 3) The CO<sub>2</sub> emission coefficient was calculated at 0.554 kg CO<sub>2</sub>/kWh.
- 4) 4P-200 V-50 Hz
- 5) 100 % load operation (not considering the motive power increase due to rotation speed differences)

Installation in Practice or Schedule			
Domestic	Ratios of main clients		
	Pump	25	%
	Blower fan	16	%
	Power transmission device	11	%
	Metalworking machine tool	11	%
	Transporting machine	11	%
	Compressor	10	%
	Other	16	%
Overseas	Parts cleaning plants, etc.		

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