Consumer Products

The focus of Toshiba is on the development of "Simplicity & Comfort First" home appliances based on various core technologies such as inverter technology, technology promoting high-efficiency and long life, refrigeration cycle technology, power electronics technology and antibacterial/deodorization technology. We also offer human/environmentfriendly amenity products such as large household appliances like refrigerators, washing machines, etc. and the world's first square-shaped fluorescent lamps.

GR-W41FA Non-Fluorocarbon Refrigerator, Named the SENZOHKO™

This year marks the 75th year since Toshiba developed the first electric refrigerator in Japan. As a product designed to commemorate this occasion Toshiba HA Products Co., Ltd. has developed the GR-W41FA, named the SENZOHKOTM with excellent performance in deodorization and bacteria elimination, which keeps the original delicious taste of the food by maintaining food freshness in clean air.

Discontent among users with bad smells coming from their refrigerator is very common, and about 60% of people use a refrigerator deodorant. Our newly developed refrigerator incorporates "Nano-optical Plasma", a technology that performs high-power deodorization and bacteria elimination, and maintains deodorization performance equivalent to 10 times that of the conventional deodorization method for a period of about 12 years, which is the normal replacement cycle.

Furthermore, the deterioration in food freshness due to changes in temperature has been reduced by adopting the "Parallel Engine", which we developed independently, and energy savings have been further improved by adopting the DSP (Digital Signal Processor) inverter as well as by the effect of vacuum insulation. Ease of use has also been enhanced by the increased refrigeration compartment capacity compared with the existing model.

The main features are as follows:

• "Nano-optical Plasma": Not only bad smell elements of the nitrogen family, but also those of the sulfur family like Kimchi (Korean pickles) or garlic are deodorized by the effect of high-power deodorization and bacteria

elimination, and "Nano-

catalyst".

 Food freshness is maintained by controlling changes in temperature inside the refrigerator with the "Parallel Engine".

• The capability of the freezer compartment of the refrigerator to maintain freshness is improved by "Frost Guard Freezing".



GR-W41FA non-fluorocarbon refrigerator, named the SENZOHKO™

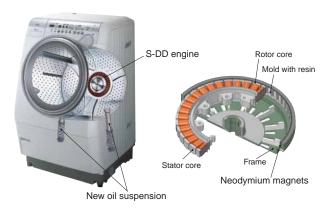
THE FRONT IN DRUM™ TW-130VB Automatic **Washer Dryer**

The swing in the number of consumers switching to automatic washer dryers is increasing every year. There is a tendency for consumers to want not only basic performance features like "Washing", "Spinning" and so on from their automatic washer dryer, but also features like "Finishing", "Low operation noise" and "Energy saving" according to the analysis of voice of the customer (VOC) results.

In response to this voice of the customer, the TW-130VB model equipped with a newly developed S-DD (Super Direct Drive) engine (motor) was put on the market in February, 2005.

The features of the machine are as follows:

- The incorporation of the S-DD engine, which adopts the use of neodymium magnets in the motor that drives the
- Washing and drying finish are improved by controlling drum rotation optimally with the S-DD engine, which uses the latest DSP control technology.
- Low operation noise and vibration are achieved by adopting the S-DD engine with DSP control and the new oil suspension.
- The amount of water, power consumption, operating time from washing to drying are reduced by the S-DD engine with DSP control in which a high-speed spin of 1,400 rpm is adopted. These performance specifications rank this as the No. 1 machine in the industry for a washer dryer of the 6 kg class from washing to drying.
- Illumination inside the drum is also adopted.



TW-130VB automatic washer dryer

S-DD engine (S-DD motor)

New "Digital Inverter", Light Commercial Use Inverter Air-conditioner for Overseas

Toshiba Carrier Corporation has introduced this "Digital Inverter" range of inverter air-conditioners for light commercial use for overseas markets adopting a high efficiency DC twin compressor, vector control inverter technology, and the new refrigerant R410A. This time, we have developed an even more sophisticated new "Digital Inverter", and we launched a series of outdoor models of 5.6 kW (2 HP), 8.0 kW (3 HP), 11.2 kW (4 HP), and 14.0 kW (5 HP) capacity in March 2005.

The main specifications are as follows:

- The 8.0 kW (3 HP) model delivers a volume reduction of about 45% and weight reduction of 13 kg compared with its predecessor by adopting a new compact large capacity high-efficiency compressor, and by optimizing the refrigerant control.
- The 14.0 kW (5 HP) model delivers a volume reduction of about 40% and weight reduction of 8 kg compared with its predecessor by adopting a compact and highefficiency heat exchanger and a new high-static-pressure propeller fan.
- Installation work has been improved by utilizing compact and lightweight design in the outdoor units, which translates into a substantial reduction in the time and cost required for installation.
- The outdoor operating-temperature range in cooling has been widened from −5°C to −15°C by applying the sophisticated control of fan and compressor in all models.



The Neo-Slim Z Square[™] T5 Square-Shaped Fluorescent Lamp for High Frequency Operation Only and the Neo Grid[™] Luminaire

Toshiba Lighting & Technology Corporation has developed the first square shaped fluorescent lamps in the world, the T5 (16 mm in diameter) Neo-Slim Z SquareTM for high frequency operation only and the Neo-GridTM luminaire.

The features of the Neo-Slim Z Square[™] are as follows:

· High efficiency

Because the length of luminescent tube is greater compared with a T5 circular fluorescent lamp of the same external dimension, the lamp is brighter and higher in efficiency. The newly developed product with the type name FHG70EN has an efficiency of 103 lm/W at an ambient temperature of 35°C.

• Eco-friendly

Saving resources: the lifetime is 15,000 hours, which is about 1.25 times longer than that of the conventional T5 circular fluorescent lamp.



Neo-Slim Z Square™ fluorescent lamps

The features of the Neo Grid[™] luminaire for grid system ceilings are as follows:

The grid system is one of the ceiling construction methods utilized in today's intelligent office. The newly developed luminaire is designed for installation in ceiling grids with a board size of 600 mm square, and has the flexibility which makes installation easy to perform and enables arrangement at any position. The height of light fixtures which adopt the T5 (16 mm in diameter) fluorescent lamp is reduced by about 40% (from 87 mm to 55 mm) compared with those using a conventional 40 W fluorescent lamp.



Neo Grid™ luminaire for grid system ceilings