



## *Toyota Industries Close-up*

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Materials Handling Equipment	82
Compressor Division	85
Vehicle Division	86
Engine Division	86
Electronics	87
Textile Machinery Division	88
Sub-Divisions	89

*Founded in 1926 by Japanese inventor Sakichi Toyoda as a manufacturing company of automatic looms, Toyota Industries Corporation has grown into a diverse enterprise covering a wide range of businesses, from automobiles to electronics. Today, the company is divided into four segments: Automobile, Materials Handling Equipment, Textile Machinery and Others. Each of these segments is further divided into various subcategories of businesses and operations. The following pages provide a closer look at our extensive range of business fields and product groups.*

## Materials Handling Equipment

### TOYOTA Material Handling Company

## A Solid Presence in World Markets

TOYOTA Material Handling Company ("TMHC") was formed in April 2001 when Toyota Industries took over Toyota Motor Corporation's ("TMC's") Industrial Equipment Sales Division and integrated it with the Industrial Vehicle Division and the Materials Handling System Division.

*Note: TMHC is an "in-house" company (a division of Toyota Industries) and not a legally incorporated entity.*

TMHC is a world leader in forklift trucks, with a full lineup of internal combustion and electric models ranging in capacity from 0.5 to over 40 tons. The company also develops and

manufactures a variety of other industrial vehicles, including tow tractors and skid steer loaders.

TMHC also manufactures and markets materials handling systems; i.e., products for storing, conveying, sorting and picking. Armed with the Toyota Production System's wealth of expertise, TMHC is developing a product range that includes racks, automated storage and retrieval systems, and automatic guided vehicle systems.

*Note: Toyota Industries' materials handling systems such as racks, automated storage and retrieval systems, and automatic guided vehicle systems are sold only in Japan.*

#### ■ Products for the Japanese Market — Industrial Vehicles



**GENEO (7FD25)**  
Internal Combustion  
Counterbalanced Forklift Truck



**GENEO-B (7FB15)**  
Electric Counterbalanced  
Forklift Truck



**GENEO-R (7FBR15)**  
Reach Truck

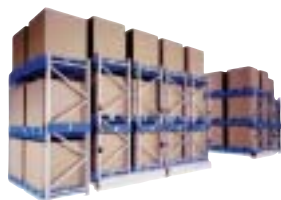


**Tow Tractor**  
(2TD20)



**Skid Steer Loader**  
(4SDKL8)

#### ■ Products for the Japanese Market — Materials Handling Systems



**Partner Rack**  
(Rail-Less Mobile Type)  
Rail-Less Mobile Rack



**Rack Sorter B**  
Automated Storage and  
Retrieval System  
(Plastic Container Type)



**Rack Sorter P**  
Automated Storage and  
Retrieval System (Pallet Type)



**2AFBR15**  
Automatic Guided  
Forklift Truck



**Road Sorter H**  
(ACBH10)  
Automatic Guided Vehicle  
System

■ Products for the North American Market



**7FGCU25**  
Internal Combustion Cushion Tire  
Counterbalanced Forklift Truck



**7FBCU25**  
Electric 4-Wheel Cushion Tire  
Counterbalanced Forklift Truck



**7FGCU35-BCS**  
Internal Combustion Cushion Tire  
Counterbalanced Forklift Truck—  
Boxcar Special Model



**7FBCU35**  
Electric 4-Wheel Cushion Tire  
Counterbalanced Forklift Truck



**7FDU35**  
Internal Combustion Pneumatic Tire  
Counterbalanced Forklift Truck

■ Products for the European Market



**7FGF/DFD25**  
Internal Combustion  
Counterbalanced Forklift Truck



**7FB15**  
Electric Counterbalanced  
Forklift Truck



**7FBRE**  
Reach Truck



**Easymover**  
Electric Pallet Truck



**SLL12.5**  
Stacker Truck with Folding Platform

## Materials Handling Equipment

### BT Industries AB

## Global Supplier of Warehouse Trucks

Headquartered in Sweden, BT Industries AB ("BT Industries") is the world's leading supplier of warehouse trucks. BT Industries manufactures in seven plants in Europe and North America, where the company has particularly strong customer bases. BT Industries' products contribute to efficient materials handling operations for customers in

approximately 70 countries. BT Industries meets the needs of the entire spectrum of materials handling, with products including hand pallet trucks, electric pallet trucks, reach trucks, very narrow aisle trucks, and counterbalanced forklift trucks. Some examples are shown below.



**BT LIFTER**  
Hand Pallet Truck



**BT MINIMOVER**  
Electric Pallet Truck



**BT ORION**  
Electric Pallet Truck



**BT IXION**  
Stacker Truck



**BT REFLEX AC**  
Reach Truck



**BT OPUS**  
Low Level Order Picking Truck



**BT OPAL**  
High Level Order Picking Truck



**BT VECTOR**  
Very Narrow Aisle Truck



**BT CARGO**  
Counterbalanced Truck



**Raymond Model 112**  
Pallet Truck  
Electric Pallet Truck



**Raymond**  
Reach-Fork Truck  
Reach Truck



**Raymond EASi™**  
Orderpicker Truck  
Order Picking Truck



**Raymond**  
Swing-Reach Truck  
Very Narrow Aisle Truck



## Compressor Division

# Compressors — the Core of Car Air Conditioners

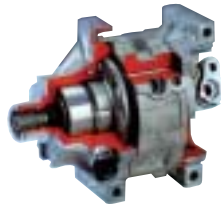
Toyota Industries' Compressor Division develops car air-conditioning compressors that are a cut above the competition. Our proprietary technology has allowed us to stay on top of the industry with various developments. These include swash plate compressors with fixed displacement, swash plate compressors with continuous variable displacement, scroll-type and vane-type compressors, and electric compressors for electric cars.



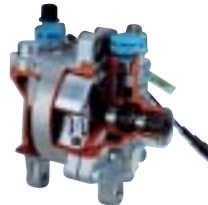
### ■ Fixed Displacement Type



**10S17 Compressor**  
(Fixed Displacement,  
Swash Plate Type)



**SCS06 Compressor**  
(Scroll Type)



**SV07 Compressor**  
(Vane Type)

### ■ Continuous Variable Displacement Type

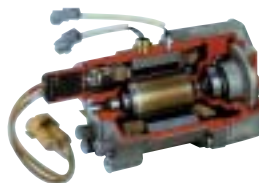


**7SBU16 Compressor**  
(Variable Displacement,  
Swash Plate Type)



**7SEU16 Compressor**  
(External Signal-Controlled,  
Variable Displacement,  
Clutchless Type)

### ■ For Electric Vehicles



**ES25 Electric Compressor**  
(Hermetic Scroll Type)

### ■ Auxiliary Car Heater



**Viscous Type Power Heater**  
(Vehicle Cabin Supplementary  
Heater)

## Vehicle Division

### Building Safe, Environmentally Friendly Cars

Toyota Industries currently assembles the Vitz (Yaris in Europe), the RAV4, and the bB Open Deck for TMC. The fuel-efficient, environmentally friendly Vitz is a strategic small car for TMC in global markets. The RAV4 sport utility vehicle is

exported to the U.S. and Europe. Available only in Japan, the bB Open Deck has open space in the back, like a pickup truck, that can be used for hauling bulky cargo.



**Vitz**  
(Yaris in Europe)



**RAV4**



**bB Open Deck**  
(available only in Japan)

## Engine Division

### From Small Cars to Large Industrial Vehicles

Toyota Industries manufactures car and industrial vehicle engines ranging in capacity from 1.5 to 5.2 liters. All the car engines we manufacture are sold to TMC and then fitted in TOYOTA cars. The diesel engines we manufacture for TMC offer plenty of power yet are easy on the environment thanks

to their light weight and low noise and vibration. Our industrial vehicle engines are fitted in forklift trucks and other industrial vehicles manufactured by TMHC and are a reason these products offer both high output and low environmental impact.

#### ■ Diesel Engines



**1CD Diesel Engine**  
(Displacement: 2.0 Liters,  
Used in the RAV4 for  
Europe and Corolla)



**1HD-FTE Diesel Engine**  
(Displacement: 4.2 Liters,  
Used in the Land Cruiser)

#### ■ Gasoline Engines



**2UZ Gasoline Engine**  
(Displacement: 4.7 Liters,  
Used in the Lexus LX470)



**1FZ-FE Gasoline Engine**  
(Displacement: 4.5 Liters,  
Used in the Land Cruiser)

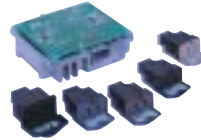
## Electronics

### Technology Development Center

The Technology Development Center carries out product planning, design, and manufacture of products related mainly to power supply and communications. The Center manufactures DC-DC converters fitted in TOYOTA PRIUS hybrid cars, DC-AC inverters that convert 12V-DC car battery current to 100V AC (standard Japanese household current), and inductive battery charging systems for electric vehicles. It also develops and manufactures SS wireless modems.



**DC-DC Converter  
for the PRIUS**



**DC-AC Inverter  
(Pre-Installed Type)**



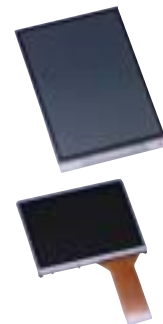
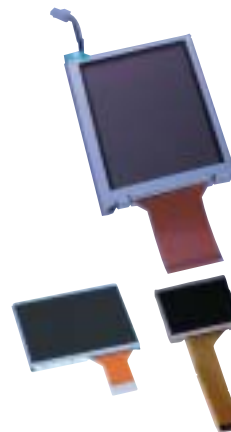
**Battery Charging System  
for EV**

## Electronics

### ST Liquid Crystal Display Corp.

ST Liquid Crystal Display Corp. ("ST-LCD") was established in October 1997 as a 50-50 joint venture with Sony Corporation ("Sony"). The company makes low-temperature polysilicon TFT-LCDs. The main rationale behind the joint venture was that it would create an optimum manufacturing system through a combination of Sony's superb LCD technology and Toyota Industries' expertise in quality control and manufacturing technology.

The TFT-LCDs made by ST-LCD are used mainly for Sony digital video and still cameras, and PDAs. These next-generation TFT-LCDs are expected to create huge demand for a wide range of display device applications, including digital video and still cameras, PDAs, mobile phones, and monitors for car navigation systems.

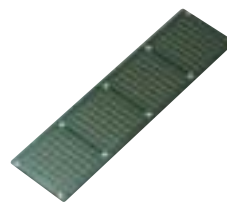


**Low-Temperature  
Polysilicon TFT-LCDs**

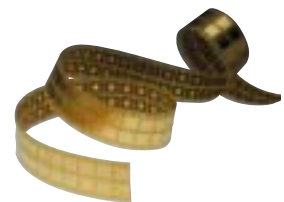
## Electronics

### TIBC Corporation

TIBC Corporation ("TIBC") was formed in 1998 as a joint venture between Toyota Industries and Ibiden Co., Ltd. TIBC makes ball grid array (BGA) plastic package substrates for IC chipsets, an indispensable component of PCs, mobile phones, and video game systems. TIBC also manufactures flexible printed circuit (FPC) substrates for IC cards.



**Ball Grid Array (BGA)  
Plastic Package Substrates  
for IC Chipsets**



**Flexible Printed Circuit (FPC)  
Substrates for Smart Cards**

## Textile Machinery Division

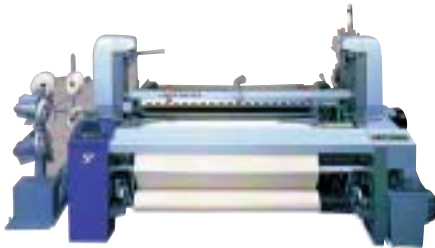
### Innovation in the Global Textile Industry

Toyota Industries traces its roots back to Sakichi Toyoda's invention of the automatic loom over 75 years ago. Since then, we have developed and manufactured spinning, weaving, and other textile machinery that are marketed to customers around the world. To stay ahead of ever-advancing market needs, the Textile Machinery Division is enhancing its

products with the latest communications, mechatronics, and other technologies.

The Textile Machinery Division continues its commitment to customer satisfaction with a complete range of high-quality products that meet the needs of today's global textile industry.

#### ■ Weaving Machinery



JAT610 Air-Jet Loom



LW600 Series Water-Jet Loom



Mackee Eagle  
Sizing Machine for Spun Yarn



Filamaster Express 610  
Sizing Machine for Filament Yarn

#### ■ Spinning Machinery



RX240NEW Ring Spinning Frame



FL100 Roving Frame



DX7A Drawing Frame



## Sub-Division

### Machinery & Tools Sub-Division

## Superior Press Die Manufacturing Technology



The Machinery & Tools Sub-Division designs and manufactures high-precision, high-quality automobile press dies, mainly for TMC. We will continue to contribute to TMC's business with press dies that offer quality, cost efficiency, and fast delivery times.

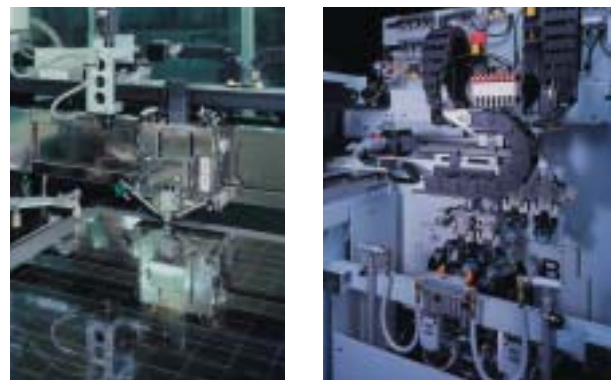
*The Machinery & Tools Sub-Division manufactures various types of automobile press dies and distributes them to Toyota Industries' Vehicle Division and TMC.*

## Sub-Division

### Mechatronics Engineering Sub-Division

## Designing and Producing Manufacturing Equipment for Toyota Industries

The work of the Mechatronics Engineering Sub-Division allows us to do more in-house manufacture of the all-important machining and assembly equipment. Through the design and production of superior manufacturing equipment, the Mechatronics Engineering Sub-Division supplies Toyota Industries' divisions and group companies with the advanced manufacturing technology that gives all of our businesses a competitive edge.



*Equipment developed and manufactured by the Mechatronics Engineering Sub-Division is utilized by Toyota Industries' compressor business and ST-LCD, enhancing the productivity and competitiveness of these operations.*