

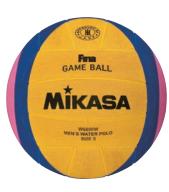




### MIKASA shares the joy of sports with people all over the world.













### MVA200

Official game ball for world volleyball events under the FIVB (Fédération Internationale de Volleyball), V premier league, and V challenge league.

### VLS300

Official game ball for world beach volleyball events under the FIVB (Fédération Internationale de Volleyball).

### W6000W

Official game ball for world water polo events under the Fédération Internationale de Natation

### MC5-WBL

Official game ball for football events under the Japan University Football Association

### CF7000

FIBA (Fédération Internationale de Basketball) approved

### HB3000

IHF (International Handball Federation) approved

- 1969 A Mikasa volleyball is designated as the official game ball by the FIVB (Fédération Internationale de Volleyball)
- 1970 A Mikasa volleyball is designated as the only official game ball for the European Volleyball Championship
- 1975 A color volleyball developed by Mikasa is chosen as the only official game ball for the IVA (Intermountain Volleyball Association)
- 1978 A Mikasa volleyball is chosen as the official game ball for the World Volleyball Championship (Italy) and World Women's Volleyball Championship.
- 1979 Mikasa volleyball is chosen as the only official game ball for the European Volleyball Championship (France).
- 1979 A Mikasa volleyball, football, basketball and water polo ball are chosen as the only official game balls for their respective sports at the Universiade in Mexico.
- 1980 The IHF (International Handball Federation) approves the Mikasa handball.
- 1981 A Mikasa volleyball is selected as the only official game ball for the World Volleyball Championship (Bulgaria)
- 1982 A Mikasa volleyball is selected as the only official game ball for the World Senior Volleyball Championship (men and women).
- 1982 A Mikasa volleyball, basketball, football, handball and water polo ball are selected as the only official game balls for their respective sports in the 9th Asian competition held in New Delhi.
- 1983 A Mikasa volleyball is selected as the only official game ball for the World Volleyball Championship (East Germany).
- 1985 Nakata Kuniichi, the president of Mikasa (from 19XX to 19XX), is commended by the FIVB (Fédération Internationale de Volleyball).
- 1994 A Mikasa volleyball and water polo ball are selected as the only official game balls for their sports in the 12th Asian 2014 Headquarter moved to Asa-cho, Asakita-ku, Hiroshima competition held in Hiroshima. Mikasa is accepted as the official corporate sponsor for the same event.
- 1997 A Mikasa volleyball is selected as the only official game ball for the Grand Champion Cup 1997 held in Japan.

- 1998 Mikasa establishes its Sports Promotion Institute.
- 1998 The Mikasa color volleyball is approved as the official game ball by the FIVB (Fédération Internationale de Volleyball).
- 1998 The Mikasa color volleyball is selected as the official game ball for the World Volleyball Championship held in Japan (1998).
- 1998 Under a contract with Mikasa, the FIVB (Fédération Internationale de Volleyball) selects a Mikasa volleyball as its only official game ball for five years, from 2000 to 2004.
- 1998 A Mikasa volleyball, beach volleyball, and water polo ball are selected as official game balls for the 13th Asian Competition held in Bangkok.
- 1999 The Mikasa size 4 volleyball is approved by the Japan Volleyball Association.
- 1999 The Mikasa color volleyball is selected as the official game ball for the World Cup (Japan)
- 2001 The Mikasa MVP200, a volleyball made from synthetic leather (MICFIBER), is approved internationally.
- 2002 Under a contract with Mikasa, the FIVB (Fédération Internationale de Volleyball) selects a Mikasa volleyball as its only official game ball for four years, from 2005 to 2008.
- 2006 Under a contract with Mikasa, the FIVB (Fédération Internationale de Volleyball) selects a Mikasa volleyball as its only official game ball for four years, from 2009 to 2012.
- 2007 A Mikasa futsal ball is selected as an official ball for the Japan Futsal league (F League).
- 2008 The MVA200, the newest volleyball by Mikasa, is selected as the only official game ball for volleyball events in the Beijing
- 2011 Under a contract with Mikasa, the FIVB (Fédération Internationale de Volleyball) selects a Mikasa volleyball as its only official game ball for four years, from 2013 to 2016.
- 2015 Under a contract with Mikasa, the FIVB (Fédération Internationale de Volleyball) selects a Mikasa volleyball as its only official game ball for four years, from 2017 to 2020.



# Protect the environment, make impressions, and delight! Mikasa's industrial materials are environment-friendly.





### Water lubricated bearing for Marine and Pump use



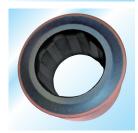
### Rubber Bearing

Mikasa's rubber bearing is made with a synthetic rubber as a sliding intermediate. The material forms a water screen for enhanced slide. This rubber is flexible, shares local load, and is extremely resistant to abrasion.



### F.F. Bearing

The FF Bearing is composed of three layers of PTFE with synthetic rubber in between as a sliding intermediate. It retains the flexibility of rubber and low friction performance even under low-speed conditions when water screens are less likely to form. Better still, it saves energy and can be used in place of Mikasa's oil bearing.



### Ceramic Bearing

The Mikasa Ceramic Bearing is composed of three layers of ceramic (Sic) with synthetic rubber intermediates. The WC sleeve worked into the design confers high resistance against wear and strong performance and endurance under conditions with heavy sand slurry.



### Propeller shaft

The ebonite material of the rubber-covered propeller shaft is extremely tough, has high water resistance, and never breaks away from the shaft. It also strongly resists elastic shaft deformation due to temperature fluctuations and torsion due to turning torque



### Synthetic Rubber roll

Rubber rolls for steel and paper mills. Our original rubber formulation and forming technology promise highly reliable performance. These rolls are ideal for use under tough conditions such as heavy load, high temperatures, and abundant contact with solvents.



### Rubber Parts For Bowling Pin-Setter Machine

Mikasa's accumulated rubber technologies are now applied for the manufacture of various special-purpose bowling accessories.



## The customer's belief in Mikasa is proof of Mikasa's technology. Mikasa quality comes from Mikasa's long



history and talented staff.

Produce based on special technology and reliable quality control accepted by the world.

Our main products are water lubricated bearing which is used for marine vessel and pumps, rubber rolls which is used for manufacturing line of steel paper and plastic plates and rubber parts for bowling pin-setter machine. Water lubricated bearings use water as lubricant and does not use oil. Therefore, it is widely used by various kinds of vessels as environmentally friendly bearings. By using special process of high pressure molding, synthetic rubber arranged in the sliding portion of rubber bearing adhered stably and made the rubber bearing durable for long term use. We are the only rubber lining manufacturer in Japan whose rubber lining technology is certified by ship's classification and our stable and less internal flaw technology sustained by using together with ribbon extruder and high pressure warm water vulcanizing is trusted by many customers. We keep our best effort to offer the forefront products as fast as possible and as low-cost as possible under our motto of customer first.



## MIKASA's global mission is to forever protect and preserve our precious planet - Earth.



### Mikasa's environment-friendly water-lubricated bearings have one-fourth the friction and four times the abrasion.

Mikasa's FF bearing made with PTFE has one-fourth the friction of a conventional rubber bearing. The minimized energy loss and reduced fuel consumption attained by the bearing curbs global warming by reducingemissions of CO<sub>2</sub>. Its abrasion resistance is fourfold higher than a rubber bearing, so it depletes rubber resources four times less.



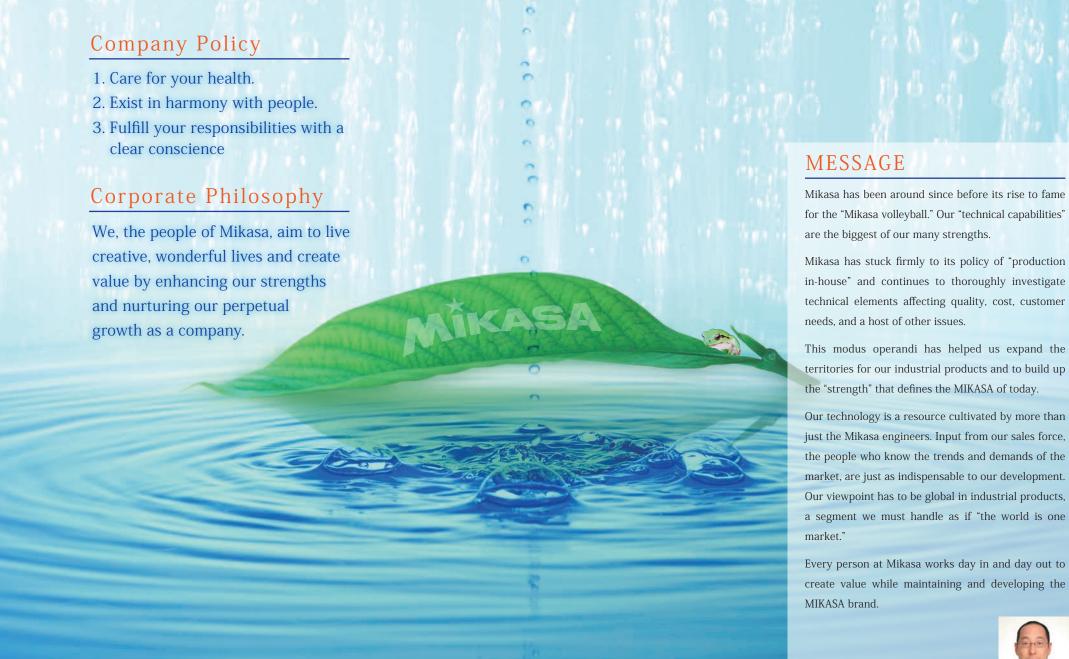
### Our Company Policy of Contributing to Society

Environmental pollution and global warning are epic challenges for humankind. Mikasa practices a management policy of contributing socially by designing products that cope with these environmental challenges. While the bearings used in today's oil lubrication systems are designed with vastly improved oil-sealing technologies, water will be polluted by leaking oil will as long as the bearing systems rely on oil as lubricant. Ship owners and shipyards are addressing this problem by widely introducing environment-friendly bearing systems lubricated with water.



### Supporting human life with environment-friendly technology

Mikasa's water-lubricated bearing uses no oil, grease, or other lubricants that stress the environment. Unlike oil-lubricated bearing systems, which pose a constant threat of leaking, Mikasa's water-lubricated bearings are environmentally safe. The Mikasa technology built into the pumps integrating Mikasa bearings are widely used in human lifeline infrastructures such as hydraulic and electric power.



President and CEO Yuji Saeki



### Corporate

Company Name Location MIKASA CORPORATION 1, Kuchi, Asa-cho, Asakita-ku, Hiroshima, Japan

Representative President and CEO Yuji Saeki

Date of Establishment May 1917

Capital 12 Annual Sales 8. Factory Site 8,

120 million yen (as of November, 2015) 8.2 billion yen (actual result in 2015)

8,880 square meters Floor area total 19,350 square meters

Number of Employees 138 persons (as of November, 2016) Financing Banks Sumitomo Mitsui Banking

Sumitomo Mitsui Banking Corporation Hiroshima Branch; The Iyo Bank, Ltd., Hiroshima Branch; The Yamaguchi Bank, Ltd.,

Hiroshima Branchi; The Hyakujushi Bank, Ltd.,

Hiroshima Branch; The Chugoku Bank, Ltd., Hiroshima Branch; The Hiroshima Bank, Ltd.,

Yokogawa Branch

### Main Customers

- Japan Maritime Self-Defense Force
- Japan Coast Guard
- Kubota Corporation
- Nippon Steel Corporation
- TORISHIMA PUMP MFG. CO., LTD.
- Ebara Corporation
- Mitsubishi Heavy Industries, Ltd.
- Mitsui Engineering & Shipbuilding Co., Ltd.
- Kawasaki Shipbuilding Corporation
- Universal Shipbuilding Corporation
- Hitachi Plant Technologies, Ltd.
- IHI Marine United Inc.
- Nippon Paper Industries Co., Ltd.
- Mitsubishi-Hitachi Metals Machinery, Inc.
- DMW Corporation
- JFE Steel Corporation
- Akasaka Diesels LimitedToyo Kohan Co., Ltd
- HANSHIN DIESEL WORKS, LTD.
- Nisshin Steel Co., Ltd.
- Niigata Power Systems Co., Ltd.
- Yodogawa Steel Works, Ltd.
- Daihatsu Diesel Mfg. Co., Ltd. ■ KURARAY CO., LTD
- Mitsubishi Rayon Engineering Co., Ltd.

### INDUSTRIAL EQUIPMENT

- A. Bearings for both marine propulsion shaft and vertical pump shaft.
   Kind of Bearing:Rubber Bearing / Friction-free
- B. Rubber covering on propeller shaft anti-corrosive covering for protecting shaft from seawater.

Bearing / Ceramic Bearing

C. Rubber covered rollers for steel processing lines and paper mills.



Among the above, our bearings especially are well accepted by large sized ferry boats, navy vessels, patrol boats, cargo boats, fishing vessels etc. and as for vertical pump use, are used in power station, atomic or steam and in water services widely.



FAST MARINE SERVICES DENIZCILIK LTD. STI.

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