HarmonicDrive®
HarmonicPlanetary®

Harmonic Drive Systems Inc.

[Head Office]
Ichigo Omori Bldg., 4F
6-25-3 Minami-Oi, Shinagawa-ku, Tokyo 140-0013 Japan
Phone: +81-(0)3-5471-7830
corp_comm@hds.co.jp
https://www.hds.co.jp/

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Scan here for our website.

Scan here for Global Site.

Harmonic Drive Systems Inc.

Corporate Guide

TOTAL MOTION CONTROL

202311-0R-300

The World of Motion Control Transformed by a Single Invention

- Creation of a product that inherits the heritage of a gifted inventor -

C.W. Musser, inventor of HarmonicDrive®

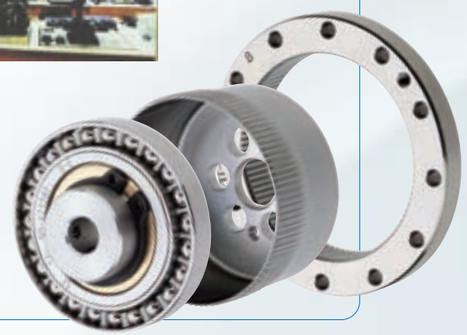
In 1955, the principle of HarmonicDrive® was developed by the gifted American inventor C. Walton Musser. His counterintuitive invention, which uses the elasticity of metal, gained the avid attention of the entire world.
Two companies tried to commercialize the revolutionary and unique principle: USM (the United Shoe Machinery Corporation) in the United States and Hasegawa Gear Works, Ltd., the predecessor of Harmonic Drive Systems.

For more information about C.W.Musser

Musser Heritage Room

The Musser Heritage Room was opened in October 2006.

Musser's wave-motion gearing mechanism was originally called "Strain-wave gearing" and was patented under that name.
Subsequently in Japan, Harmonic Drive Systems Inc. succeeded in commercializing the technology.
The technology today is generally referred to as a "wave-motion gearing mechanism," while the term HarmonicDrive® is a registered trademark that applies exclusively to the products manufactured by Harmonic Drive Systems Inc. This trademark is registered not only in Japan, but also Taiwan and South Korea.



1964: The Year the HarmonicDrive® Became a Practical Reality in Japan

In 1964, Hasegawa Gear Works, Ltd. entered into a technical agreement with USM Co., Ltd. and succeeded in creating a practical Harmonic Drive® system for the first time in Japan in 1965.
In 1970, the two companies established a joint-venture company which, in 1979, became Harmonic Drive Systems Inc. Meeting the needs of our customers in a wide range of fields with a product that had been unknown to the world required the pioneering spirit of our engineers who kept venturing into unknown possibilities.

The first unit of HarmonicDrive® manufactured in Japan (for Hitachi, Ltd.)
Hasegawa Gear Works vice president Kiichiro Hasegawa [1965]

Started manufacturing at the Matsumoto Factory in Toyoshina, Minamiazumi-gun, Nagano (currently Azumino-shi, Toyoshina)

Created the HarmonicDrive® R series (early products)

A Constant Search for Total Motion Control

We have been establishing total motion control by using the high-precision machining and control technologies we have acquired over many years of operation. To maximize the performance of HarmonicDrive®, we continue our efforts to improve it further toward higher levels of motion technology.

Our HarmonicDrive® technology has continued to evolve since its inception. Compared with the R-series HarmonicDrive® introduced to the market in 1982, today's CSF, CSG series is only three-fifths as tall, but capable of twice the power transmission. The latest of the CSD series is only one-third as tall as the R series, but still maintain a high level of torque and positioning accuracy.

Ultra-small strain wave gear speed reducer

High Torque Capacity and Accurate Positioning in a Compact, Lightweight Design

HarmonicDrive® gear utilizes the elastic mechanics of metals.

Comprised of just three basic components, HarmonicDrive® offers small angle feeding and superior positioning accuracy with no backlash due to its special teeth movement (operation principle) unlike the movement of common gears.
Because more than 30% of the teeth mesh simultaneously at the two opposing points, high torque transmission is possible.

[AR]
Scan the QR codes below to see 3D images.

HarmonicDrive®

Wave generator

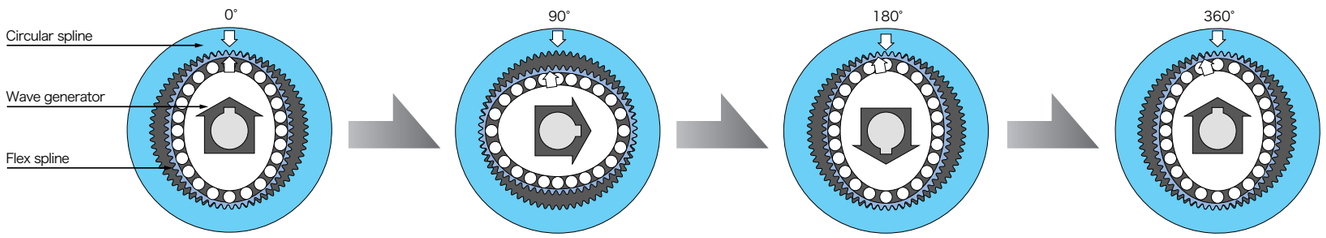
The wave generator consists of a thin ball and bearing that fit into the outer circumference of the elliptical cam. The inner ring of the bearing is fixed to the cam, while the outer ring deforms elastically via the ball. Normally, this is installed on the input shaft.

Flex spline

This is the thin, cup-like, metallic, and elastic body. The outer circumference of the opening has the teeth. The bottom of the flex spline (bottom of the cup shape) is referred to as the diaphragm, and is installed on the output shaft in the normal fashion.

Circular spline

This is the rigid and ring-shape component. The inner circumference has the teeth, and the number of teeth is higher than the flex spline by two teeth. Normally, it is fixed to the casing.



The wave generator deforms the flex spline elliptically. Therefore, the teeth of the long axis meshes with the circular spline teeth, while the short axis is completely separated from the circular spline teeth.

When the circular spline is fixed, and the wave generator (input) is rotated clockwise, the flex spline deforms elastically, and the position where the teeth of the flex spline meshes with the circular spline teeth moves sequentially.

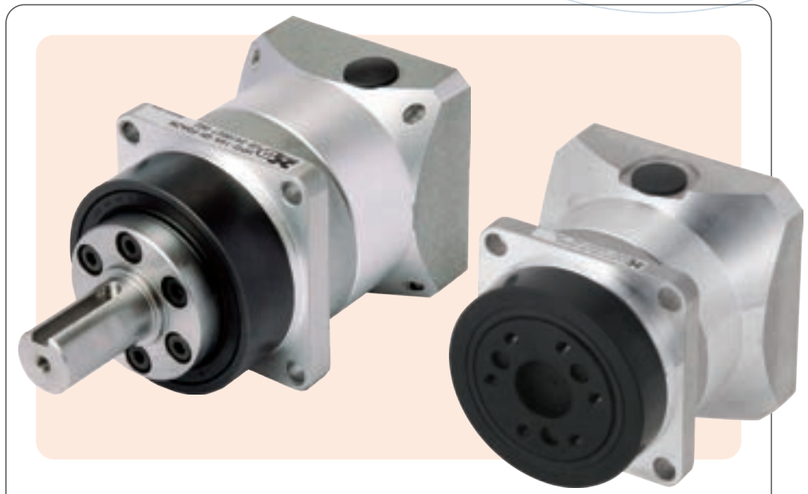
When the wave generator rotates clockwise up to 180 degrees, the flex spline moves counterclockwise only by one tooth.

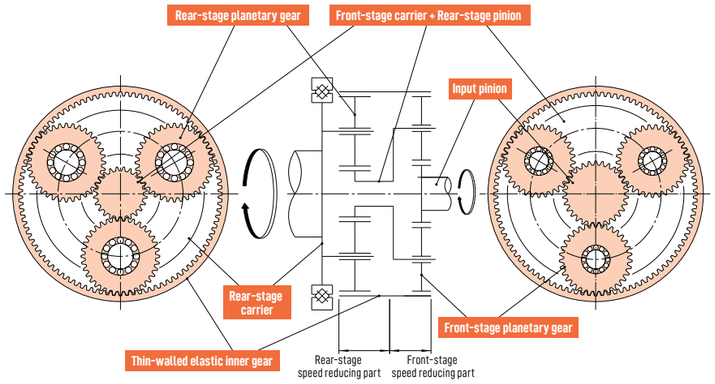
When the wave generator rotates one turn (360 degrees), the number of flex spline teeth is lower than the circular spline teeth by two teeth, and the flex spline moves counterclockwise only by these two teeth. Normally, this movement is used for an output.

Planetary speed reducers are made possible based on our expertise in precision machining technology.

Harmonic Drive Systems Inc. has used its extensive knowledge of HarmonicDrive® gearing to develop a highly precise and rigid epicyclic speed reducer called HarmonicPlanetary®.
Equipped with a unique backlash prevention mechanism, HarmonicPlanetary® delivers a high level of rotational accuracy.

HarmonicPlanetary®





Rear stage: Consists of a speed reducer mechanism with 3 planetary gears.

The rear-stage pinion coupled with the front-stage carrier serves as an input to the rear-stage speed reducing part, and causes the orbital motion of the rear-stage planetary gears as in the front-stage speed reducing part. The orbital motion is transmitted to the rear-stage carrier (the inner ring of the cross roller bearing) and then outputted. The direction of rotation of the rear-stage carrier is the same as the input direction, as in the front-stage speed reducing part.

Front stage: Consists of a speed reducer mechanism with 3 planetary gears.

The rotation from the input pinion causes the orbital motion of the front-stage planetary gears that mesh with it. The orbital motion is transmitted to the front-stage carrier via the planetary shaft. The direction of rotation of the front-stage carrier is the same as the input direction.

To watch AR on iPhone

Step 1 Download the Adobe Aero app (for iOS) here.

Step 2 Scan here for AR.

To watch AR on Android

Step 1 COCOAR (for Android) Download the app here.

Step 2 Scan the images of the 3 components of HarmonicDrive® above with your camera to watch AR.

More information about HarmonicDrive® and videos about its principle

More information about HarmonicPlanetary® (HPG)

History of Harmonic Drive Systems Inc.

- From the creation of strain wave gearing to the current expansion of the diverse product lineup -

HDS GmbH: Harmonic Drive System GmbH(Germany) (currently Harmonic Drive SE)
HDSys : HD Systems, Inc. (U.S.)
HDL : HD Logistics, Inc.
HPI : Harmonic Precision Corporation
HAD : Harmonic AD, Inc
HDLLC : Harmonic Drive L.L.C. (U.S.)
WB : Winbel Corporation (currently Harmonic Winbel)
HDCH : Harmonic Drive Systems (Shanghai) Co., Ltd. (China)
HDSE : Harmonic Drive SE (Germany)
HDAG : Harmonic Drive AG (currently Harmonic Drive SE)
HWB : Harmonic Winbel

1955
C.W. Musser invented strain wave gearing

Organization

Current organization

Subsidiary of a U.S. company

Joint venture (USM and Hasegawa Gear Works)

1964 HD was introduced to Japan

1970 HDSI was established
HDS GmbH was established

1987 HDSys was established

1998 Listed on the over-the-counter market
1999 HDL and HPI were established

2002 Acquired shares in HDAG
2003 HAD was established
2004 Listed on the JASDAQ market
2005 HDLLC was established
2007 Capital alliance with WB
2008 Capital alliance with Ome Iron Casting Co., Ltd.
2010 OSE JQ (Standard)

2011 HDCH was established
2013 JSE JQ (Standard)
SAMICK ADM was established

2020 50th anniversary of HDSI

2021 HDLLC became a wholly owned subsidiary
HDSE became a wholly owned subsidiary
WB became a wholly owned subsidiary

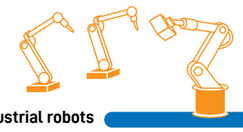
2022 TSE Standard Market

2023 WB changed its company name to HWB

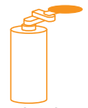
Expansion in applications

Machine tools

Industrial robots



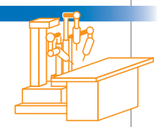
Semiconductor manufacturing equipment

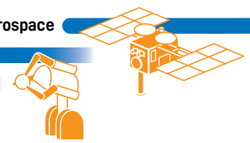


Flat panel display manufacturing equipment

Advanced medical devices

Co-robots, service robots





Mobility and aerospace

1955 - 1970 | 1971 - 1980 | 1981 - 1990 | 1991 - 2000 | 2001 - 2010 | 2011 - 2020 | 2021 -

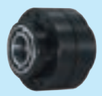
Products

HarmonicDrive® Speed Reducers
HarmonicDrive®

1965 - Completed the first domestically produced unit

1966 - Completed standard products

1972 - Introduced the phase adjustment differential unit FD type to the market



1977 - Created the R series (early products)

1985 - Introduced Size No. 5 to the market

1988 - Introduced the CSS series with the new IH tooth profile to the market

1992 - Introduced the CSF series to the market

1995 - Introduced the silk hat-type SHF series to the market
- Established the manufacturing technology for cross roller bearings

1999 - Developed the reduction ratio 1/30
- Introduced the CSG series with high torque capacity and long life to the market

2001 - Introduced the ultra-thin HarmonicDrive® CSD series to the market

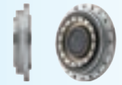
2002 - Introduced the SHG series with high torque capacity and long life to the market

2006 - Introduced the ultra-small precision speed reducer CSF-3 to the market

2015 - Introduced the CSF-mini ultra-flat/high-stiffness type (2UP) to the market

2020 - Introduced ultra-lightweight (ULW) to the market

2023 - Introduced CSD-ULW to the market



2023 - Added Size No. 7 to the compact unit type

Mechatronics Products
MECHATRONICS

1978 - Commercialized Hi.T Drive

1984 - Introduced the DC servo actuator RH series high power type to the market

1987 - Introduced the DC servo actuator RH mini series to the market

1989 - Introduced the linear actuator LA-30 to the market

1990 - Introduced the AC servo actuator FHA-25A to the market as the FH2000 series

1994 - Introduced the LSA-50A for laser scanners to the market

2000 - Introduced the FH2000 series Type C to the market

2003 - Added small hollow actuators to FH2000 (FHA-8C to 14C)

2006 - Introduced the ultra-small AC servo actuator RSF-3 to the market

2009 - Introduced the new flat hollow actuator SHA series to the market

2018 - Introduced the super flat brushless DC actuator FLA series to the market

2018 - Introduced the flat hollow AC servo motor HMA series to the market

2023 - Added the ULW type to the CSD/FHA-C mini series

Planetary Speed Reducers
HarmonicPlanetary®

1988 - Introduced the BP series to the market

1990 - Introduced the precision speed reducer HP series to the market

1999 - Introduced the planetary speed reducer HPG series to the market

2007 - Added the orthogonal shaft type to the HPG series

2015 - Introduced the HPG series helical gear type to the market

2017 - Introduced the HPN series to the market

2023 - Added Size No. 40 to the HPG series helical gear type

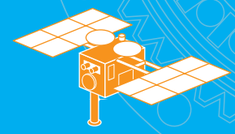
More information about our history

Watch videos

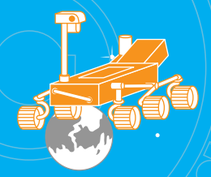
Our "Motion Technology" Supporting Technologies from the Underground to Space

HarmonicDrive® is a unique strain wave gear speed reducer.
It is widely used in many areas, including robots, semiconductor manufacturing equipment,
factory automation equipment, as well as aerospace applications that fulfill the dreams of humankind.

Space industry Lunar rover



Space industry Hayabusa; Hayabusa 2



Space industry Perseverance

eVTOL (flying cars)

Large-scale optical/ Infrared telescope "Subaru" on Mauna Kea in Hawaii

Semiconductor wafer transport robots

Drill steering systems for oil and gas industries

Humanoid robots

Surgical robots

Co-robots

Automated guided vehicles (AGVs)

Industrial robots

Power assist suits

Mobility vehicles

Small robot finger module

[Space industry] Hayabusa; Hayabusa 2

Courtesy of the Japan Aerospace Exploration Agency (JAXA)

[Space industry] Perseverance

Courtesy NASA/JPL-Caltech

Large-scale optical/Infrared telescope "Subaru"

Courtesy of Inter-University Research Institute Corporation, National Institutes of Natural Sciences, National Astronomical Observatory of Japan

Semiconductor wafer transport robots

Courtesy of DAIHEN Corporation

Co-robots

Courtesy of Techman Robot Inc.

Automated guided vehicles (AGVs)

eVTOL (flying cars)

Industrial robots

Power assist suits

Courtesy of Hashimoto Laboratory of Shinshu University

Mobility vehicles

Courtesy of Toyota Motor Corporation

Surgical robot

Small robot finger module

Courtesy of Ishikawa Group Laboratory of the University of Tokyo

Watch videos

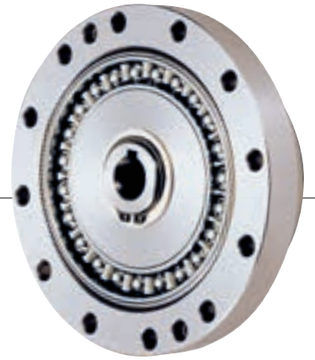
A Full Line of Products That Deliver Total Motion Control

- A diverse product lineup allowing for precise motion -

HarmonicDrive®

HarmonicDrive® Speed Reducers

The Harmonic Drive® is a speed reducer comprised of only three basic components, and is compact and lightweight, yet has high torque and high accuracy. It is used in a wide range of applications as a highly reliable precision speed reducer.



Component Type
CSF Series

GOOD DESIGN AWARD 2022

Unit Type
CSF-ULW Series

Unit Type
SHD-2SH Series

Unit Type
SHG-2UH Series

[Production base]

▶ **Hotaka Factory/Ariake Factory (Azumino-shi, Nagano)**

Located at the foot of Mt. Jonen-dake in the Northern Alps, Hotaka Factory offers manufacturing, development, and service functions as the mother factory that leads the production activities of HarmonicDrive®. Skilled workers are working toward improved performance of products by using our core technologies such as precision cutting, thin metal working, and small module gear machining. Ariake Factory has achieved high productivity by building production lines by actively adopting automation and labor saving.

More information about HarmonicDrive® products

9001
14001
(Hotaka Factory)

HarmonicPlanetary®

Planetary Speed Reducers for Servo Motors

The thin-walled elastic gear technology has been applied to the inner gear of the planetary speed reducer.
Elastic deformation of the internal gear is used to realize lower backlash without the adjustment mechanism.

Gear Head Type
HPG Series

Input Shaft Type
HPG Series

Gear Head Type
HPN Series

Orthogonal Shaft Type
HPG Series

[Production base]

▶ **Toyoshina Factory, Harmonic AD, Inc. (Azumino-shi, Nagano)**

Toyoshina Factory, Harmonic AD, Inc. is a specialized manufacturer of planetary gear speed reducers for ongoing development of our planetary gear speed reducer business through the development of products that matched the needs of customers, further improvement of productivity, shorter delivery time, and cost competitiveness.

More information about Planetary Speed Reducers for Servo Motors

More information about Harmonic AD, Inc.

9001
14001

A Full Line of Products That Deliver Total Motion Control

- A diverse product lineup allowing for high-precision positioning -

MECHATRONICS

Mechatronics Products

Rotary Actuator
SHA Series

Our major product families include rotary actuators with a high-performance motor that provide high-precision positioning at ultra-high resolution and linear actuators that provide ultra-fine and high-precision positioning. We offer high-precision motion control with a full range of controllers that can elicit the optimal performance and characteristics of these actuators.

Rotary Actuator
FHA-C mini Series

Linear Actuator
LA Series

Rotary Actuator
RSF supermini Series

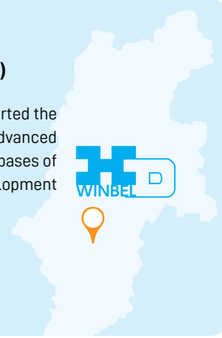
Optical Galvano Scanner
LSA Series

Driver
HA-800 Series

[Production base]

▶ Komagane Factory, Harmonic Winbel Inc. (Komagane-shi, Nagano)

In 2021, Komagane Factory, Harmonic Winbel Inc., started the manufacturing of various actuators of HDSI with advanced production technology as one of the manufacturing bases of our mechatronics products, in addition to the development of special motors.



More information about rotary actuators

More information about linear actuators

More information about Harmonic Winbel Inc.

9001
14001

CROSS ROLLER BEARING

Cross Roller Bearings

Cross Roller Bearing

Cross roller bearings are used on the output side of almost all of our unit type and gear head type speed reducer products. These cross roller bearings, which are indispensable to our products, are manufactured under consistent quality control throughout the HDSI Group.

HCBC Series

HCBD Series

HCBP Series

HCBS Series

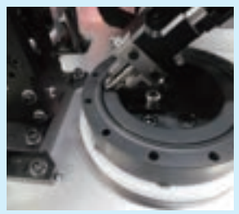
HXBC Series

Cross roller bearings offer more than 4 times the rigidity of the combined use of angular ball bearings. Since rollers have a longer area of contact compared to balls, the load capacity can be increased significantly.

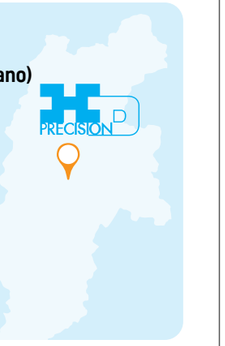
* These products are designed only for HDSI products and are therefore not sold to outside vendors.

[Production base]

▶ Matsumoto Factory, Harmonic Precision Corporation (Matsumoto-shi, Nagano)



Matsumoto Factory, Harmonic Precision Corporation was completed in 2019. It is located in the Matsumoto Rinku Industrial Complex near Matsumoto Airport. The factory has improved the production efficiency and achieved stable quality by introducing automated assembly lines.



More information about Harmonic Precision Corporation

9001
14001

Research & Development Organization for Pursuing a Higher Order of Perfection

- Creating compact, lightweight, and high-precision products -

[Research & Development Policies]

The ideal driving the research and development by the HDS Group is to provide more advanced motion control. To that end, in our R&D we carry out both research and development on next-generation technologies and also development and design tailored to customer needs, as we seek to cultivate and expand core technologies with an eye to the future, while improving our ability to provide solutions for today. We also devote considerable R&D efforts to production technology, in the form of engineering methods and equipment as manufacturing expertise necessary for production.

▶ I.K KAN Research Annex Aiming for Ten-fold Greater Accuracy (Azumino-shi, Nagano)

The I.K KAN research annex was completed on April 1, 2002 on the premises of the Hotaka Factory as the prototype of a next-generation manufacturing facility, for moving closer to ideal motion control with the HarmonicDrive®.
Targeting a ten-fold improvement in accuracy, we are pursuing sub-micron level processing precision by equipping the facility with machine tools and measuring instruments capable of high-precision processing and measurement.

More information about I.K KAN

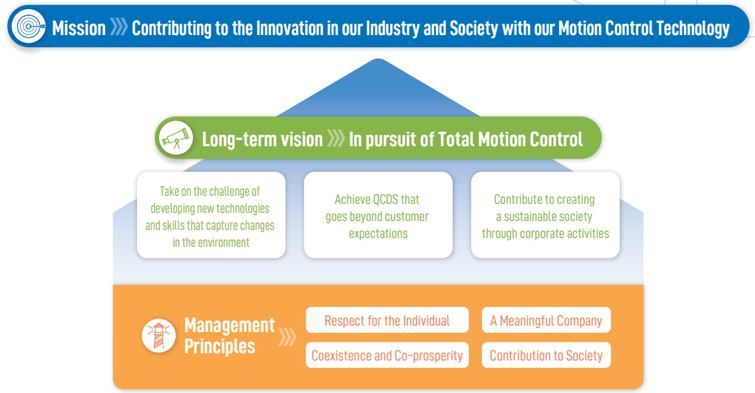
[Harmonic Drive International Symposium]

We have been holding an international symposium at five-year intervals ever since 1991, when we celebrated the 20th anniversary of our founding. The overall theme is motion control. Along with customers from around the world, we invite experts from universities and research institutes. The program features presentations on the latest technology trends and customer application examples, as well as reports by HDSI about our research and development, creating opportunities for exchanging information.

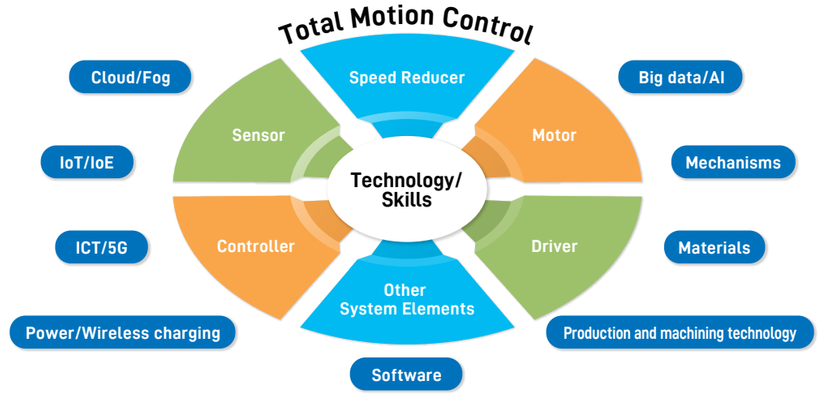
Introducing Details of Harmonic Drive International Symposium and Past Presentations

Contributing to Social and Industrial Innovation

- Creating a sustainable society with our "Motion Technology" -



The HDS Group's mission is to contribute to technological innovation through business in order to help solve various social issues and improve society. In fulfilling this mission, we base our management philosophy on four pillars: 1) Respect for the individual, 2) a company with purpose, 3) coexistence and co-prosperity, and 4) contribution to society. This management philosophy was created in the early days of HDS and has been passed down from generation to generation as the corporate culture of the Group.
We believe that our management philosophy is the foundation of our sustainability efforts, and that our corporate activities themselves contribute to the realization of a sustainable society.
Based on this management philosophy, we have established a Charter of Conduct, which sets forth the basic rules that all employees of the HDS Group must observe in order to ensure compliance with laws and regulations, conduct business ethically, and preserve harmony with various stakeholders.



In addition to addressing environmental, social, and governance issues based on the implementation of our management philosophy and Charter of Conduct, we believe that the HDS Group's sustainability hinges on contributing to the realization of a sustainable society by resolving social issues through the pursuit of "total motion control" through our business.

More information about our management policy and structure

Achieving a Sustainable Society

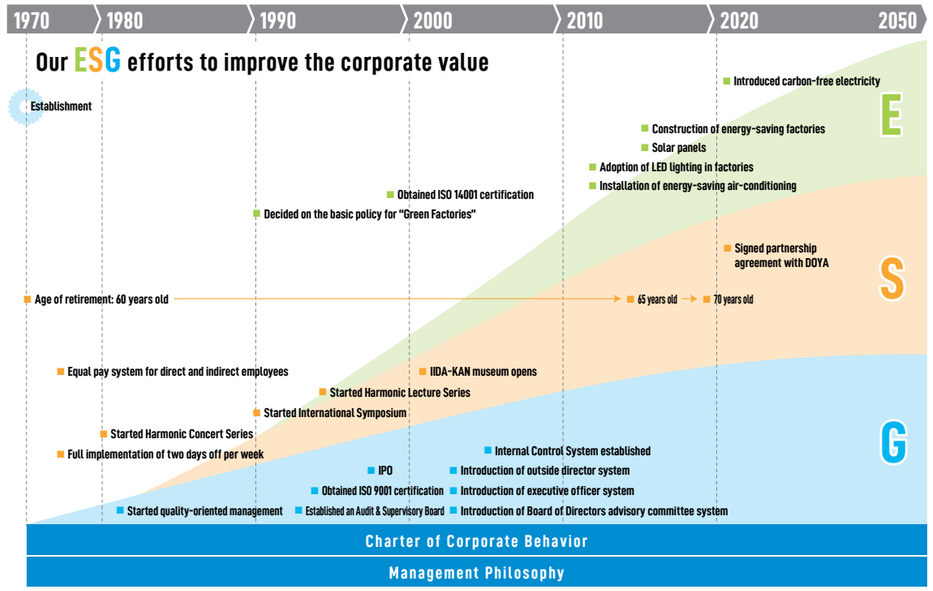
- Having an impact on society with technological innovation to better people's lives -

As a first step, with the aim of realizing a sustainable society and enhancing our corporate value over the medium term, we have formulated the following Basic Policy of Sustainability, which was approved by our Board of Directors on March 25, 2022.

Basic Policy of Sustainability

As a technology and skills-based organization in pursuit of Total Motion Control, the HDSI Group aims to enhance corporate value and realize a sustainable society by contributing to technological innovation for the betterment of society. We intend to achieve these goals based on our management philosophy comprising four pillars: Respect for the individuals, be a meaningful company, coexistence and co-prosperity, and contribution to society.

[Our path to sustainability]



One tenet of the HDS Group management philosophy is coexistence and coprosperity with the employees, shareholders, customers, suppliers, and local communities who support our efforts. To this end the Group companies strive through our corporate activities to contribute to the betterment of society and to improve the environment and quality of the local communities to which we belong.
The mission of the HDS Group, as a technology and skills team providing total motion control, is to give birth to future technologies from new ideas. The people involved in research and development need to have a passion for making things and the sensitivity for producing creative ideas.
In 2020, Harmonic Drive Systems Inc. celebrated its 50th anniversary. Over the years since our founding, through various cultural activities we have refined the sensitivity demanded for making things.

[TRIAD IIDA KAN]

This art gallery, completed in 2002, exhibits the works of Yoshikuni Iida, an innovative sculptor representative of post-war Japan. HDSI believes that a strong will and rich sensitivity are essential when we are pursuing not just high precision but are looking beyond it to true art. The IIDA KAN Gallery was built so that the people involved in developing our technology can go at any time for inspiration toward enhancing these traits. IIDA KAN is one of the museums and galleries located along the Azumino Art Line in Azumino City, and is open to the public for free.

* The management of TRIAD IIDA-KAN was taken over by the Harmonic Ito Foundation in 2018.

[Harmonic Concert Series]

This classical concert series was inaugurated to commemorate the 10th anniversary of the founding of Harmonic Drive Systems Inc. Proceeds from the concerts are donated to Azumino City for the purchase of books for the city's elementary and middle schools.

* The Harmonic Concert Series has been sponsored by the Harmonic Ito Foundation and co-sponsored by HDSI since 2018.

[Harmonic Lecture Series]

Each year experts from various fields are invited to speak on timely themes such as education, economics, and business.

* The Harmonic Lecture Series has been sponsored by the Harmonic Ito Foundation and co-sponsored by HDSI since 2019.

More information about our efforts towards sustainability

More information about Harmonic Ito Foundation

More information about the past Harmonic Concerts and Harmonic Lectures

Worldwide Group Realizing Stable Production and Supply Networks

- Working on sound manufacturing with QCDS in mind to provide high-quality products to the world -

▸ **Overseas group companies**

U.S.A.

HD Systems, Inc.
Harmonic Drive L.L.C.

Germany

Harmonic Drive SE

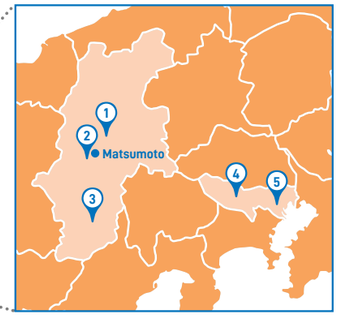
Korea

SAMICK ADM CO., LTD.

China

Harmonic Drive Systems (Shanghai) Co., Ltd.

Japan



1. Harmonic AD, Inc.
   HD Logistics, Inc.
2. Harmonic Precision Corporation
3. Harmonic Winbel Inc.
4. Ome Iron Casting Co., Ltd.
5. GK HD Management

▸ **Sales bases** * For the latest information, scan the QR codes below.

Tokyo Office

Ichigo Omori Bldg., 4F
6-25-3 Minami-Oi, Shinagawa-ku, Tokyo 140-0013 Japan
Phone: +81-(0)3-5471-7830

Chubu Office

TM21 Bldg., 2F
21 Terugaoka, Meito-ku, Nagoya-shi, Aichi 465-0042 Japan
Phone: +81-(0)52-773-7451

Overseas Sales Division

5103-1 Hotakaariake, Azumino-shi, Nagano 399-8301 Japan
(in Ariake Factory)
Phone: +81-(0)263-81-5950

Tokyo Office Kitakanto Team

Ichigo Omori Bldg., 4F
6-25-3 Minami-Oi, Shinagawa-ku, Tokyo 140-0013 Japan
Phone: +81-(0)3-6410-8485

Kansai Office

Shin-Osaka Ueno Toyo Bldg., 3F
7-4-17 Nishi-Nakajima, Yodogawa-ku, Osaka-shi, Osaka 532-0011 Japan
Phone: +81-(0)6-6885-5720

Harmonic Drive Systems Inc. Taiwan Representative Office

G219, 11F., No.209, Sec.1, Civic Blvd., Datong Dist., Taipei City 10351, Taiwan (R.O.C.)
Phone: +886-2-2181-1640
* Representative office of Harmonic Drive Systems, Inc.

Kohshin Office

5103-1 Hotakaariake, Azumino-shi, Nagano 399-8301 Japan
(in Ariake Factory)
Phone: +81-(0)263-81-5940

Kyushu Office

NMF Hakata-Ekimae Bldg., 7F
1-15-20 Hakata Ekimae, Hakata-ku, Fukuoka-shi, Fukuoka 812-0011 Japan
Phone: +81-(0)92-451-7208

▸ **Corporate Information** * For the latest information, scan the QR codes below.

Corporate Name	Harmonic Drive Systems Inc.
Head Office	Ichigo Omori Bldg., 4F 6-25-3 Minami-Oi, Shinagawa-ku, Tokyo 140-0013 Japan Phone: +81-(0)3-5471-7830
Representative	Akira Nagai, President, Representative Director Akira Maruyama, Representative Director

Capital	¥7,100 million (as of March 31, 2023)
Our Business Domain	Production and sales of mechatronics products and the following speed reducer brands for incorporation in industrial robots, semiconductor manufacturing equipment, and other systems. - High-precision Control Speed Reducer "HarmonicDrive®" - High-precision Planetary-gear Speed Reducer "HarmonicPlanetary®"

▸ **Domestic manufacturing bases and group companies** * For the latest information, scan the QR codes below.

Hotaka Factory

1856-1 Hotakamaki, Azumino-shi, Nagano 399-8305 Japan
Phone: +81-(0)263-83-6800

❶ Harmonic AD, Inc.

4034 Toyoshina, Azumino-shi, Nagano 399-8205 Japan
Phone: +81-(0)263-71-6330

❸ Harmonic Winbel Inc.

8172-60 Akaho, Komagane-shi, Nagano 399-4117 Japan
Phone: +81-(0)265-81-6300

Ariake Factory

5103-1 Hotakaariake, Azumino-shi, Nagano 399-8301 Japan
Phone: +81-(0)263-81-5959

❷ Harmonic Precision Corporation

4020-18 Wada, Matsumoto-shi, Nagano 390-1242 Japan
Phone: +81-(0)263-40-2272

❶ HD Logistics, Inc.

1856-1 Hotakamaki, Azumino-shi, Nagano 399-8305 Japan
Phone: +81-(0)263-83-8700

❹ Ome Iron Casting Co., Ltd.

3-11-1 Nagaoka, Mizuho-machi, Nishitama-gun Tokyo 190-1232 Japan
Phone: +81-(0)42-555-3100

❺ GK HD Management

Ichigo Omori Bldg., 4F
6-25-3 Minami-Oi, Shinagawa-ku, Tokyo 140-0013 Japan
Phone: +81-(0)3-5471-7800

Access to the sites

More information about HDSI officers

Latest corporate information

Aerial videos of the factories

More information about our group companies