

# *History of Hikari*

-Established 1990

-Total Staff : 36

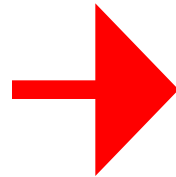
-ISO 9001 certify



-SAP Business One



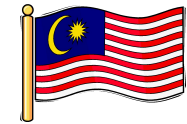
# Network of HIKARI



**\*Singapore**  
(Hikari Singapore)  
(FA-Tech)



**\*Malaysia**



**\*Indonesia**  
(PT Hikari)  
(PT Oriental)



**\*Thailand**



**\*Philippines**



**\*China**  
(Access Trading)



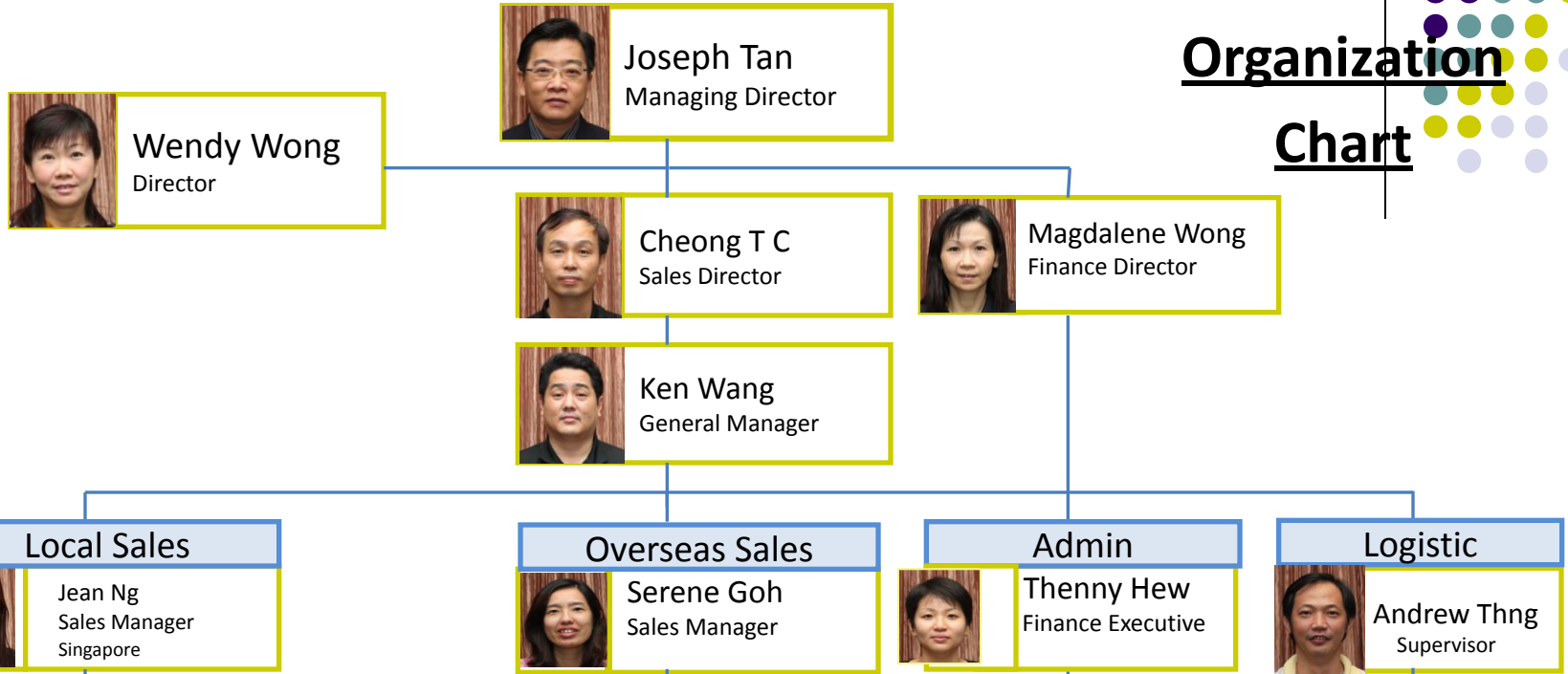
**\*India**



**\*Vietnam**



# Organization Chart



## Local Sales

Jean Ng  
Sales Manager  
Singapore

Roy Chew Asst. Sales Manager	Koh Sze Tong Snr. Application Engineer	Adam Kong Technical Sales Engineer
Wan Jing Sales Executive	Lawrence Tay Snr Field Engineer	Hasim Service Technician
Alex Koh Technical Sales Engineer	Than Win Hlaing Elect. Engineer	Eugene Sng Asst. Engineer
	Loh Mun Fye Technical Sales Engineer	

## Overseas Sales

Serene Goh  
Sales Manager

Dora Tay Asst. Manager India, China	Loh W Y Asst Manager Indonesia
Rain Lim Sales Executive Malaysia central	Joey Asst. Sales Executive Indonesia
Alison Ooi Sales Executive Malaysia	Joanne Sales Executive Philippines
	Michelle Tan Sales Support

## Admin

Thenny Hew  
Finance Executive

Irene Teo Snr. Admin Executive
Tin Shili Admin Assistant
ZhiDan Admin Assistant
Emily Chia Receptionist

## Logistic

Andrew Thng  
Supervisor

Muh. Uzair Logistician	Zulfadli Logistician
Lu Fuliang Store keeper	Alvin Ong Logistician
Lee Leng Coordinator	Liting House keeping

# GENERATION NEXT



# FX3U Series Development Concept

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**Major design functions required of MODERN-day and FUTURE micro programmable controllers.**

- Small and compact size
- Good cost performance
- High speed and high precision control
- Advanced built-in functions
- Increased number of control points
- Advanced Special Function Blocks and improved backwards compatibility
- Extended communication ports and easy-to-use analog functions
- Extended memory capacity
- Standard models in conformance to international standards



# Basic product Specification Outline

## □ Equivalent Performance to FX3UC



High  
Speed  
CPU

High  
Speed  
Control

Large  
Memory  
capacity

Standard  
functions

- Basic performance enhanced.
- Memory and devices are extended.

- Improved standard built-in functions.

- Up to 384 I/O Points!!

- The FX3U Series conforms to the CE and UL (cUL) standards.

- Extensive Instruction Library

## □ Better than equivalent performance to FX3UC

Enhanced  
ability

Control scale  
384 points  
maximum

International  
standards



- Up to 384 I/O Points!!
- The FX3U Series conforms to the CE and UL (cUL) standards.

- Extensive Instruction Library

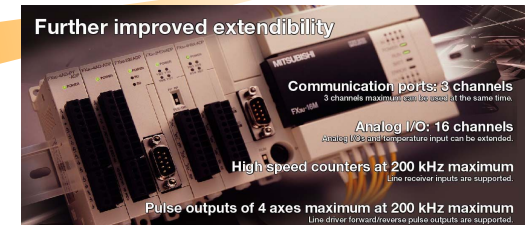
## □ Expandability

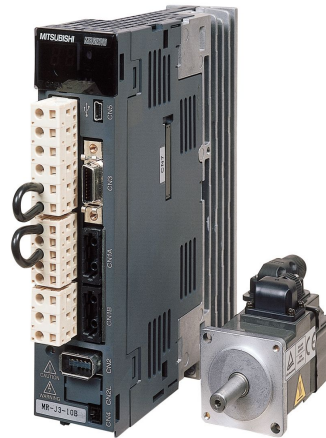
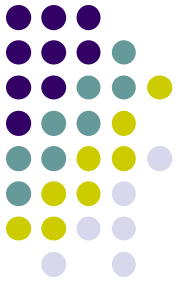
- RS Communication ports are extended to 3 channels.
- Analog Inputs and Outputs are easy to use.
- High speed counters □ 200 kHz
- Positioning □ 4 axes at 200 kHz

Expansion

Integrated  
functions

High-speed  
Control





**SERV0-J2S/J3**

# Super Performance with MELSERVO-J2-SUPER

## High Functionality, High Performance

**-High-resolution Encoder 131072p/rev (17bits)**

**-High-performance CPU Incorporated for Improved Response**

**-Absolute encoder is standard Equipment**

**-SSCNET, High-speed serial bus compatible: B type**





# Servo Amplifier Series and Servo Motor Models

Flexible specification corresponding to user's need



## General-Purpose Interface Mr-J2S\_A/B



## HC-KFS/MFS Series



## With Build In Positioning Function Mr-J2S\_CP/CL



## HC-SFS/LFS/RFS Series



## General-Purpose Interface Mr-J2M\_A/B



## HC-LFS/UFS Series



# Servo Amplifier Series and Servo Motor Models

Flexible specification corresponding to user's need  
Servo amplifier-wide product line from 50W-55KW



## General-Purpose Interface Mr-J3-\_A/B



## HC-KP/MP Series



## With Build In Positioning Function Mr-J3-\_B-RJ006/RJ004



## HC-SP/LP/RP/UP Series



## General-Purpose Interface Mr-J3-T



## HC-LP Series





**FR-A70**

**0**



# Features

- 1.Highest level of driving performance***
- 2.Long life parts and life check function***
- 3.Network connection as you desired***
- 4.Free of environmental worries***
- 5.Simple operation and easy maintenance***
- 6.Improved usability with full of useful functions***
- 7.Global compliance***



# FR-E700 series

New-generation compact and high performance inverter



Remarkable usability

Summit-level driving performance!

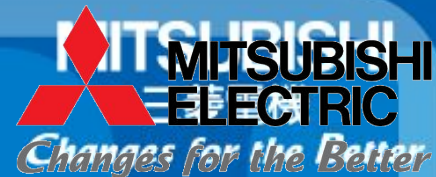
Compact body

# All-rounder

# Features

## ***FR-E700 series features***

- 1. Top level driving performance in compact dimensions**
- 2. Overriding operability**
- 3. Enhanced expandability**
- 4. Compact and space saving**
- 5. Ensured maintenance**
- 6. Environment-friendly**
- 7. Full of useful functions**



GRAPHIC OPERATION TERMINAL







# GOT1000

HMI Systems Department  
Mitsubishi Electric Corporation  
Nagoya Works, Japan

# GOT1000 line-up (44 models)

**GT15:** Full spec models covering a broad range of applications, to be used in stand-alone/network environments

High performance models

<p><b>15" TFT (高輝度・広視野角)</b> GT1595-XTBA <b>DC24V</b> GT1595-XTBD <b>DC24V</b></p> <p>解像度: XGA 1024×768 表示色: 65536色</p> 	<p><b>Video/RGB model</b></p> <p><b>12.1" TFT (高輝度・広視野角)</b> GT1585V-STBA <b>AC24V</b> GT1585V-STBD <b>DC24V</b></p> <p>解像度: SVGA 800×600 表示色: 65536色 ビデオ・RGB対応</p> 	<p><b>12.1" TFT (高輝度・広視野角)</b> GT1585-STBA <b>AC24V</b> GT1585-STBD <b>DC24V</b></p> <p>解像度: SVGA 800×600 表示色: 65536色</p> 
<p><b>Video/RGB model</b></p> <p><b>10.4" TFT (高輝度・広視野角)</b> GT1575V-STBA <b>AC24V</b> GT1575V-STBD <b>DC24V</b></p> <p>解像度: SVGA 800×600 表示色: 65536色 ビデオ・RGB対応</p> 	<p><b>10.4" TFT (高輝度・広視野角)</b> GT1575-STBA <b>AC24V</b> GT1575-STBD <b>DC24V</b></p> <p>解像度: SVGA 800×600 表示色: 65536色</p> 	<p><b>10.4" TFT (高輝度・広視野角)</b> GT1575-VTBA <b>AC24V</b> GT1575-VTBD <b>DC24V</b></p> <p>解像度: VGA 640×480 表示色: 65536色</p> 

Basic models

<p><b>10.4" TFT (高輝度・広視野角)</b> GT1565-VTBA <b>AC24V</b> GT1565-VTBD <b>DC24V</b></p> <p>解像度: VGA 640×480 表示色: 65536色</p> 	<p><b>10.4" TFT</b> GT1575-VNBA <b>AC24V</b> GT1575-VNBD <b>DC24V</b></p> <p>解像度: VGA 640×480 表示色: 256色</p> 	<p><b>10.4" TFT</b> GT1572-VNBA <b>AC24V</b> GT1572-VNBD <b>DC24V</b></p> <p>解像度: VGA 640×480 表示色: 16色</p> 	<p><b>11" TFT</b> GT1562-VNBA <b>AC24V</b> GT1562-VNBD <b>DC24V</b></p> <p>解像度: VGA 640×480 表示色: 16色</p> 
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Compact models

<p><b>NEW 5.7" VGA model</b></p> <p><b>5.7" TFT (高輝度・広視野角)</b> VGA GT1555-VTBD <b>DC24V</b></p> <p>解像度: 640×480 表示色: 65536色</p> 	<p><b>5.7" TFT (高輝度・広視野角)</b> CVGA GT1555-QTBD <b>DC24V</b></p> <p>解像度: 320×240 表示色: 65536色</p> 	<p><b>5.7" STN</b> CVGA GT1555-QSBD <b>DC24V</b></p> <p>解像度: 320×240 表示色: 4096色</p> 	<p><b>5.7" STN</b> CVGA GT1550-QLBD <b>DC24V</b></p> <p>解像度: 320×240 表示色: モノクロ16階調</p> 
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**GT11:** Stand-alone models containing basic functions

**GT10:** Compact models including all the basic functions required for a HMI display

Standard models

Compact models

<p><b>5.7" TFT</b> GT1155-OTBDQ <b>DC24V</b> Q/A拡張 CVGA GT1155-OTBDAQ <b>DC24V</b> Q/A拡張</p> <p>解像度: 320×240 表示色: 256色</p> <p><b>NEW</b></p> 	<p><b>5.7" STN</b> GT1155-QSBD <b>DC24V</b> Q/A拡張 GT1155-QSBDQ <b>DC24V</b> Q/A拡張 GT1155-QSBDQA <b>DC24V</b> Q/A拡張</p> <p>解像度: 320×240 表示色: 256色</p> <p><b>NEW</b></p> 	<p><b>5.7" STN</b> GT1150-QLBDQ <b>DC24V</b> Q/A拡張 CVGA GT1150-QLBDQ <b>DC24V</b> Q/A拡張 GT1150-QLBDAQ <b>DC24V</b> Q/A拡張</p> <p>解像度: 320×240 表示色: モノクロ16階調</p> <p><b>NEW</b></p> 	<p><b>ハンディGOT/STN</b> GT1105HS-QSBD <b>DC24V</b></p> <p>解像度: CVGA 320×240 表示色: 256色</p> 	<p><b>ハンディGOT/STN</b> GT1110HS-QLBD <b>DC24V</b></p> <p>解像度: CVGA 320×240 表示色: モノクロ16階調</p> 
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<p><b>4.5" STN</b> GT1030-LBD <b>DC24V</b> RS-422 GT1030-LBD2 <b>DC24V</b> RS-232C</p> 	<p><b>4.5" STN</b> GT1030-LBW <b>DC24V</b> RS-422 GT1030-LBW2 <b>DC24V</b> RS-232C</p> 	<p><b>3.7" STN</b> GT1020-LBD <b>DC24V</b> RS-422 GT1020-LBD2 <b>DC24V</b> RS-232C GT1020-LBL <b>DC24V</b> RS-422</p> 	<p><b>3.7" STN</b> GT1020-LBW <b>DC24V</b> RS-422 GT1020-LBW2 <b>DC24V</b> RS-232C GT1020-LBLW <b>DC24V</b> RS-422</p> 
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# Mitsubishi Graphic Operation Terminal:



## New 5.7" ultra-high resolution GOT release!

The compact body with clear and sharp display quality [VGA, 640x480 dots]



1

Four times as much information as that of conventional 5.7" QVGA (320x240) model

2

The same screen data format as 10.4" and 8.4" VGA models

3

Ladder Monitor and Intelligent Unit Monitor are included on 5.7" VGA model

4

Clear, sharp display and various functions are the same as large models

This high resolution model offers various functions that were not previously available on 5.7" models.

(E.g. Ladder Monitor in the above image)

\*For details of Ladder Monitor, refer to "Connection type when using Ladder Monitor function" on the reverse side.



# Products Line up

YAMAHA SINGLE-AXIS ROBOTS

## FLIP-X SERIES

YAMAHA single-axis robot more complete line-up than ever!!  
From the very compact size to extra long stroke





# Products Line up





# Products Line up

YAMAHA SINGLE-AXIS ROBOTS

## PICO SERIES

YAMAHA single-axis robot "Pico" series of low price, assuring ease of use and reliability.





# Products Line up

YAMAHA CARTESIAN ROBOTS

## XY-X SERIES

YAMAHA Robots provide your plant with stable support, focusing on the future production scheme as well.





# Products Line up

YAMAHA SCARA ROBOTS

## YK-X SERIES

**Faster, more flexible and more compact.  
YAMAHA pursues ideal forms of SCARA robots.**



# PHASER SERIES



# YAMAHA

Revolution for



**YAMAHA SCARA ROBOTS**

# YK-X SERIES



Faster, more flexible and more compact.  
YAMAHA pursues ideal forms of SCARA robots.





**New**

**Environmental  
Plating Chain**

**New Corrosion Resistant Chain**





# Environmentally Friendly

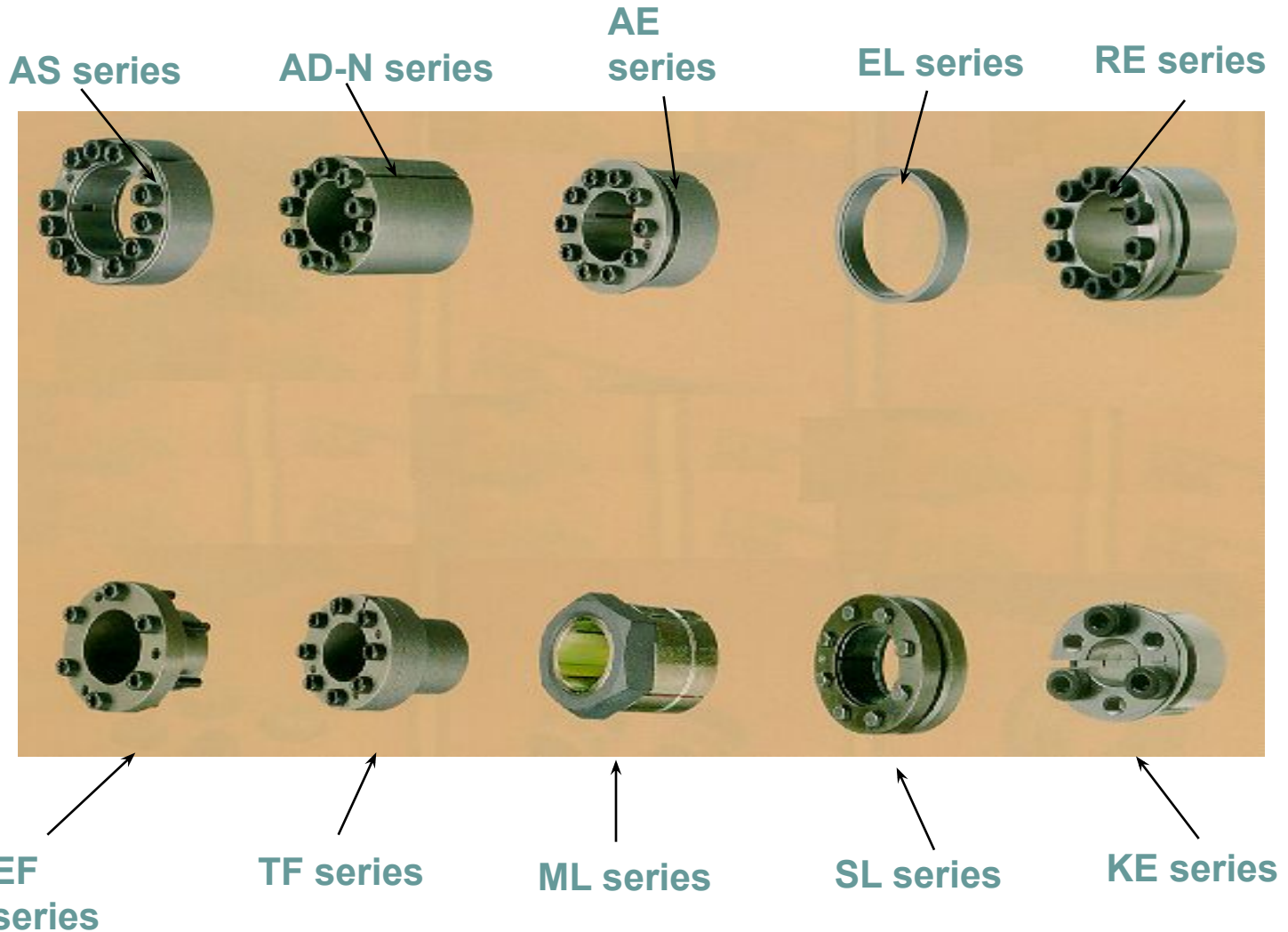


- Environmental Friendly  
(No chemical hazardous chromium)

Adoption RoHS substances such as hexavalent

NEP chain does not contain any chemical hazardous substances, which is regulated by RoHS, such as Hexavalent Chromium, Cadmium etc (There is also no Trivalent Chromium)

# Power-Lock Product Line up

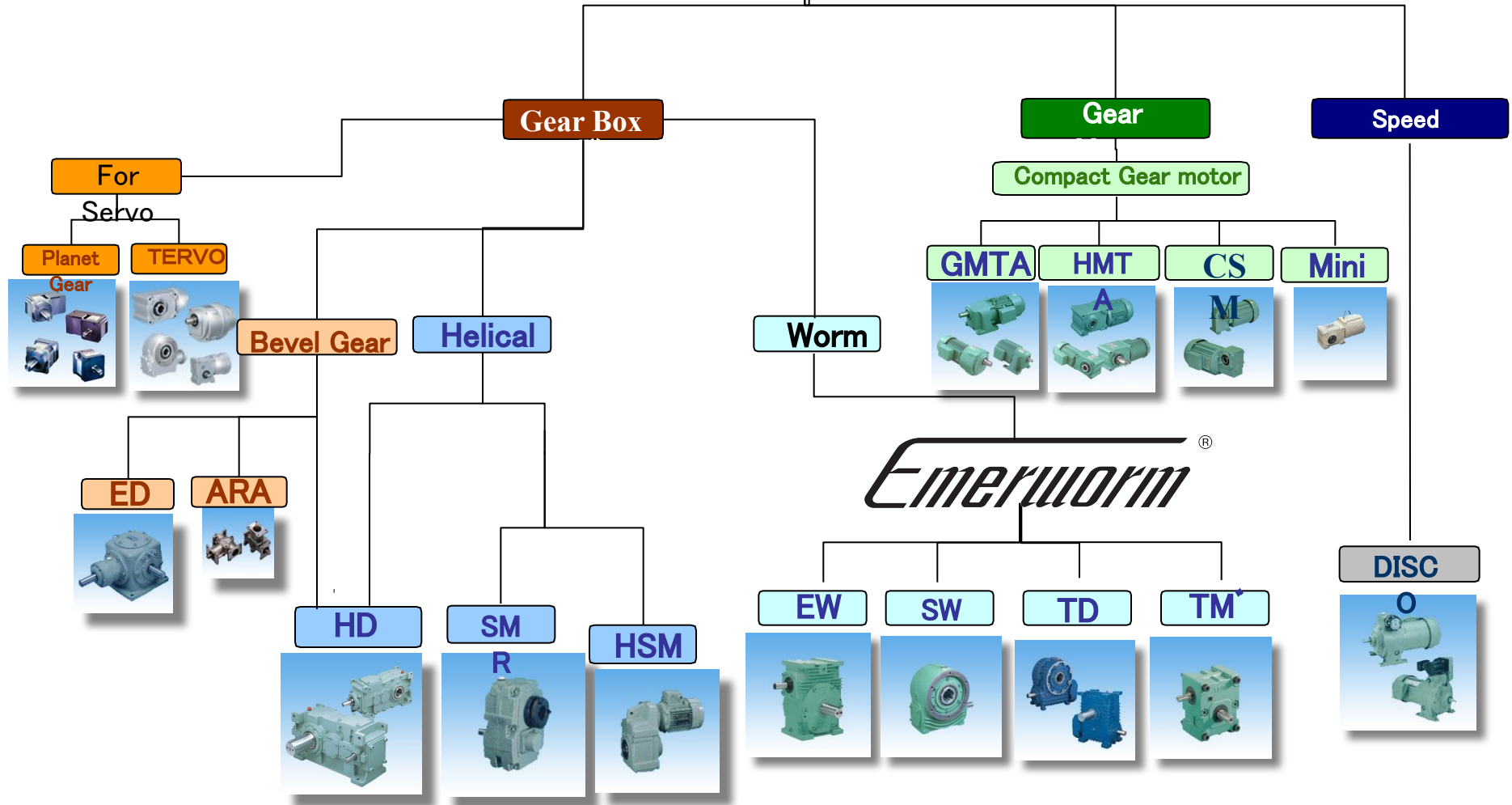


## Power-Lock Features

1. Suitable for shock loads
2. Easy and precise positioning
3. Applicable for hollow shafts
4. Excellent with long shafts
5. Suitable for multiple load operations
6. Simple installation and removal



# TEW Reducers



# TEM Gear motor



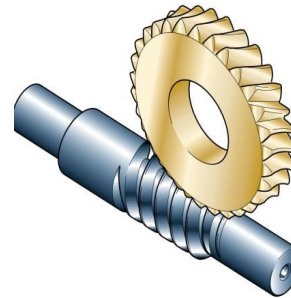
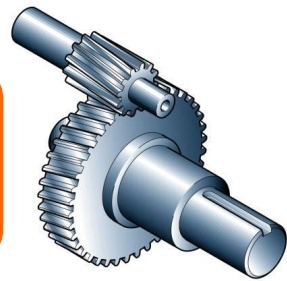
Gear Motor  
TA series  
0.1kW~5.5kW



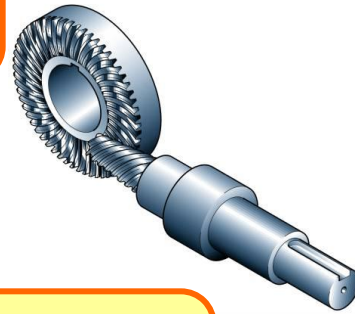
Mini series Gear motor  
40W~90W



Croise Motor  
0.1kW~3.7kW



Mini series  
Hypoid Motor  
40W~90W

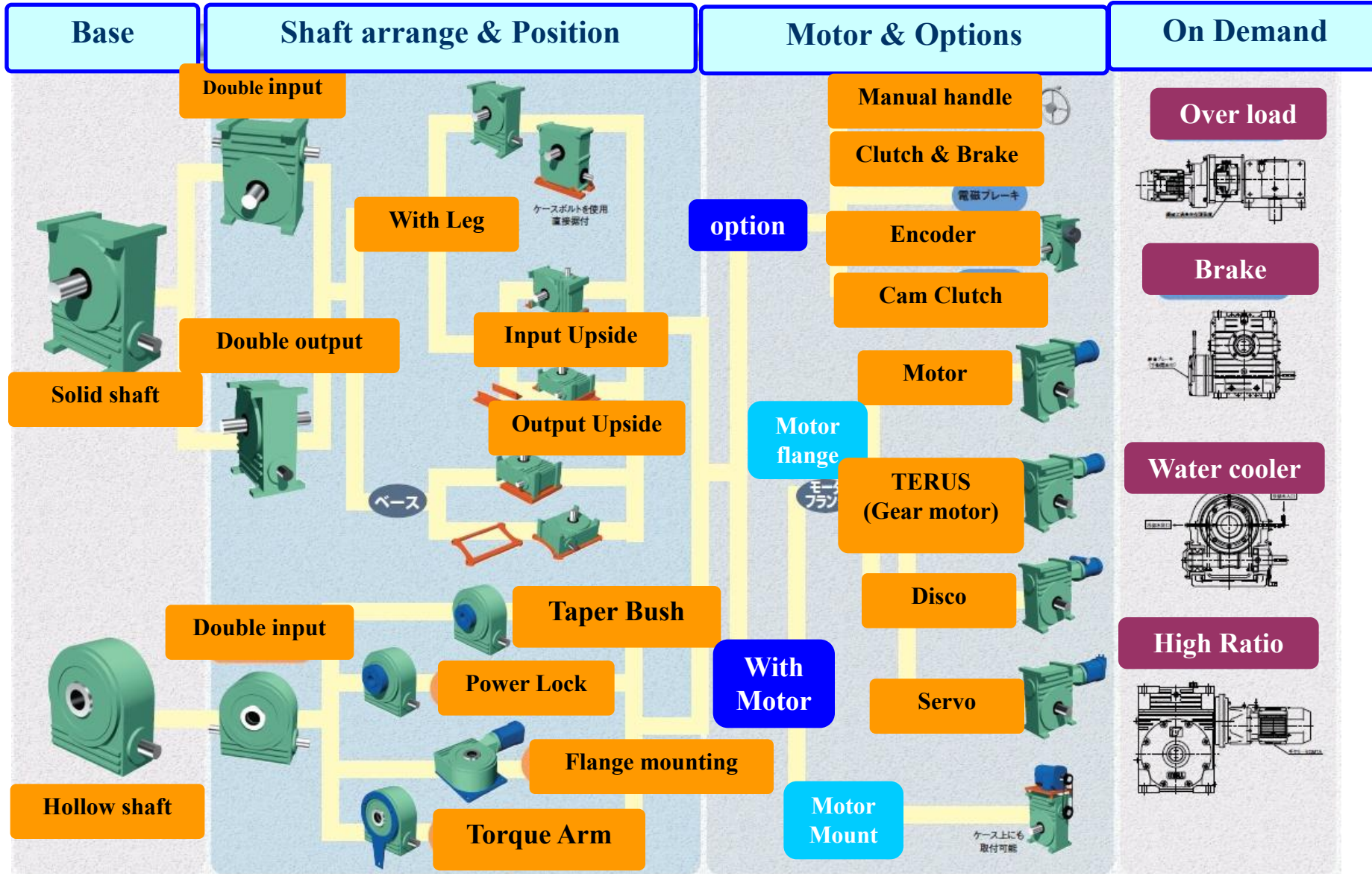


Select gears for  
applications



Hypoid Motor  
TA series  
0.1kW~5.5kW

# Various Options



# Coupling





# Metal Element



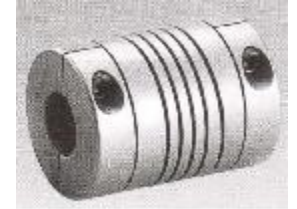
**Disk**



**Bellows**



**Diaphragm**



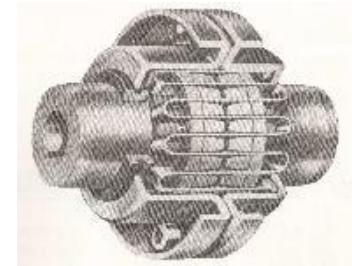
**Beam**



**Chain**



**Gear**



**Grid**

# Plastic or Rubber element



**Jaw**



**Rubber bush**



**Donuts  
(Non clump)**



**Tire**



**Oldham**

For servomotor,  
especially for  
machining

汎用モータとの連結用途に最適  
●ポンプなどに

汎用カップリング

高剛性カップリング

**BE-FLEXカップリング**  
●62ページ  
シンプルで最適なサーボモータ用ベロースカップリング。サーボモータ出力軸に対応した軸穴径を標準。

**パワーリジッドカップリング**  
●88ページ  
NEW  
サーボモータ運動時の高剛性リジッドカップリング。サーボモータ出力軸に対応した軸穴径を標準。

**エモフレックスカップリング**  
●10ページ  
アモルブ樹脂製のサーボモータとの連結に最適。運動にも使用可能。幅広い用途で活躍している代表的な高剛度カップリング。ディスクカップリングの決定版。

**ジョウフレックスカップリング**  
●72ページ  
2つのハブとインサートから成るシングル構造。安全。ハブは黒鋼・アルミ・インサートは3種選べる。高剛度。

**ネオフレックスカップリング**  
●84ページ  
ゴムブッシュにより取付誤差を吸収するカップリング。振動吸収性あり。

**オルダムカップリング**  
●68ページ  
NEW  
高剛性で最適なサーボモータ用ベロースカップリング。

**ベロースカップリングミニ**  
●34ページ  
高剛性で最適なサーボモータ用ベロースカップリング。

**カップリング**  
ドロフリース  
●17ページ  
アルミ合金製のハブを使用した小形ディスクカップリング。

For Induction  
motor, Long seller

For small servo motor,  
stepping motor, encoder

小形サーボモータ・ステッピングモータ・エンコーダとの連結に最適  
●半導体製造装置などに  
小形精密カップリング



# Pilot Operated 4/5 Port Solenoid Valves



4  
Port-SJ



5  
Port-SV



Large Size 5  
Port-VP



5  
Port-VQ1000/2  
000



5  
Port-VQ  
C



5  
Port-VQ  
Z



5  
Port-VQ  
D



5 Port - ISO  
VQ



Explosion Proof 3/5  
Port



# Standard Cylinder



**Air Cylinder  
CJ1**



**Pin Cylinder CJP2/CJP**



**Air Cylinder  
CJ2**



**Air Cylinder  
CM2**



**Air Cylinder  
CG1**



**Air Cylinder  
MB**



**Square Tube  
Cylinder mb1**



**Air Cylinder  
CS1**



**Air Cylinder  
CS2**



# Compact Cylinder



Mini Free  
Mount  
Cylinder CUJ



Free Mount  
Cylinder  
CUJ



Compact Cylinder  
CQS



Compact Cylinder  
CQ2



Compact Cylinder  
With Air Cushion RQ



Compact Cylinder  
Guide Rod Type  
CQM



Plate Cylinder MU



# Rodless Cylinder



Mechanically Jointed  
MY1



Mechanically Jointed  
With Protective Cover  
MY1xW



Mechanically Jointed  
MY2



Mechanically Jointed  
MY3



Magnetically Coupled  
CY3



Magnetically Coupled  
CY1



Magnetically Coupled  
CY1F



Clean Rodless  
CYP



# Table Cylinders



Compact Slide  
MXH



Air Slide  
MXS



Air Slide  
MXQ



Long Profile  
Slide Table  
MXF



Air Slide Table  
MXW



Air Slide Table  
MXJ



Air Slide Table MXP



Air Slide Table  
MXY



Precision Cylinder  
MTS



# Guide Cylinders



Miniature Guide  
Rod  
MGT



Guide  
Table  
MGF



Slide Unit  
CX2



Compact Guide  
Rod  
MGP



Non  
Rotating  
MGZ/MG  
ZR



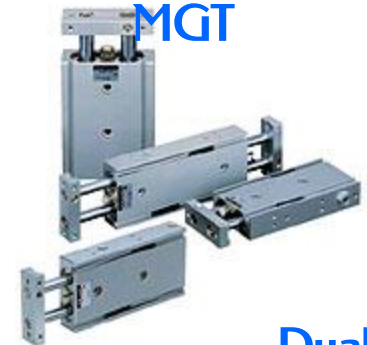
Slide Unit  
CXW



Compact Guide  
Rod  
MGP



Cylinder  
With  
Turntable  
MGT



Dual  
Rod





# Lock Cylinders



Fine Lock CLx/CDLx



Guide Cylinder  
MLGC



Cylinder With Lock  
MNB



Cylinder With Lock  
CNS



Cylinder With Lock  
CLS



Compact Cylinder  
With Lock CLQ



Plate Cylinder With  
Lock  
MLU



Compact Cylinder With  
Lock  
MLCD



Mechanically Jointed  
With Brake  
MLIC



# Rotary Actuators



**Rotary Cylinder  
CDR2**



**Rotary Actuator  
CRBU2**



**Rotary Actuator  
CRB1**



**Rotary Table  
MSU**



**Mini Actuator  
CRA1**



**Compact Rotary Actuator  
CRQ2**



**Rotary Table MSQ**



**Rotary Actuator CRA1**



**Rotary Actuator MRQ**



# Air Grippers



Linear Guide Parallel  
MHZx2



Cross Roller Guide Parallel  
MHQx2



Low Profile  
MHF2



Wide Type  
MHL2



Rotary Actuated  
2-Finger MHR2/MDHR2



Wedge Cam Operation  
Side Guide MHK2



Side Guide Round Body  
MHS2



Angular Style Compact Type  
MHC2



Rotary Gripper  
MRHQ



# Vacuum Ejector



Compact Vacuum ZA



Vacuum Module ZX



Large Size Vacuum Modular ZR



Vacuum Ejector ZM



Vacuum Ejector With Solid State Timer ZMA



Vacuum Ejector ZH



Vacuum Ejector In Line ZU



Multistage Ejector ZL



Ejector Valve Unit ZYY/ZXY



# Air Preparation Filter



**Water Separator  
AMG**



**Main Line Filter  
AFF**



**Super Mist Separator  
AME**



**Clean Air Filter/  
Hollow Fiber  
Element**



**Clean Air Module  
LLB**



**Auto Drain Valve  
AD**



**Motor Operated Auto  
Drain  
ADM**



**Heavy Duty Auto  
Drain  
ADH**



**Differential Pressure  
Gauge  
GD40**



# Modular F.R.L. Unit



Modular Type F.R.L. Unit  
AC



Air Filter



Mist Separator AFM



Regulator AR



Lubricator AL



Filter Regulator AW



Mist Separator  
Regulator AWM



Modular Type F.R.L. Unit  
ACG



Filter Regulator with  
Build In Pressure Gauge  
AWG



# Regulators



**Pilot Operated Regulator  
AR**



**Compact Manifold Regulator  
ARM5**



**Direct Operated  
Precision Regulator ARP**



**Precision Regulator  
IR**



**Vacuum Regulator IRV**



**Power Valve Precision  
Regulator VEX**



**Precision Clean  
Regulator SRP**



**Clean Regulator/  
Fluoresin Type SRF**



**Direct Operated Regulator  
For 6Mpa VCHR**



# Speed Controller



Elbow type Universal type

Elbow Type/Universal Type AS



Elbow Type Metal Body AS



In Line Panel Mount Type AS



In Line Type AS



Large Flow In Line Type AS



In Line Push Locking Type AS



Residual Pressure Release Valve AS



Stainless Steel Series AS



Pilot Check Valve ASP