

FACTORY AUTOMATION

# MITSUBISHI CNC Software Tools



# CNC Software Tools

## *Development Tools*

### *Design*

**NC Servo Selection** ——— P4

**NC Designer2** ——— P5  
(Screen Design)

**NC Trainer2 plus** ——— P6  
(Customization Support)

### *Setup*

**NC Configurator2** ——— P7  
(NC Parameter Setup)

**NC Analyzer2** ——— P8  
(Servo Adjustment)

## MITSUBISHI

# CNC

## The Best Partner for Your Success

#### **Products**

Some of the items in this catalog are under development, therefore the software and CNC display are subject to change without notice.

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# User Support Tools

## Training

**NC Trainer2** ————— **P9**  
(Training Tool)

**NC Trainer2 plus** ————— **P9**  
(Training Tool)

## Operational Support

**NC Explorer** ————— **P10**  
(Data Transfer)

**NC Monitor2** ————— **P11**  
(Remote Monitoring)



# NC Servo Selection

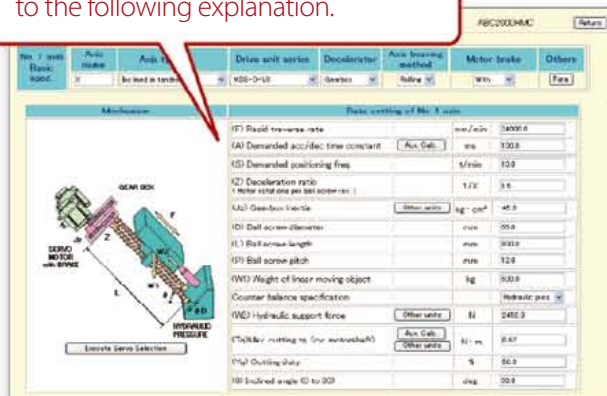
Charge-free



Of the various types of servo motors, which one is the best for my machine?

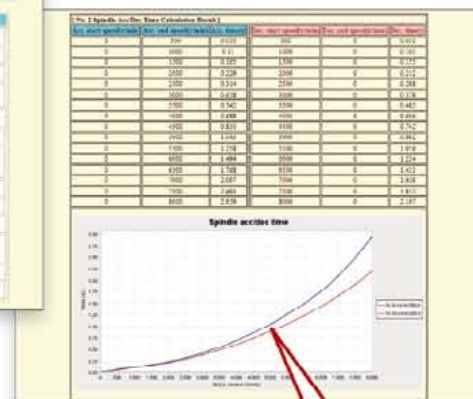
## Find it with NC Servo Selection!

Set the machine constants according to the following explanation.



Servo motor selection

Calculation results of the spindle acceleration/deceleration times



The spindle acceleration/deceleration times are shown in a graph.

**Input the machine constants for selection of the optimum servo motor.**

**This function automatically calculates spindle acceleration/deceleration times and selects the optimum power supply unit.**

**■ Main functions**

- Servo motor capacity selection
- Spindle acceleration/deceleration time calculation
- Power supply unit selection
- Power supply facility capacity calculation
- Multi-axis drive unit combination function
- Saves selected data

NC Servo Selection Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese

# NC Designer2 (Screen Design)

M800

M80

M700V

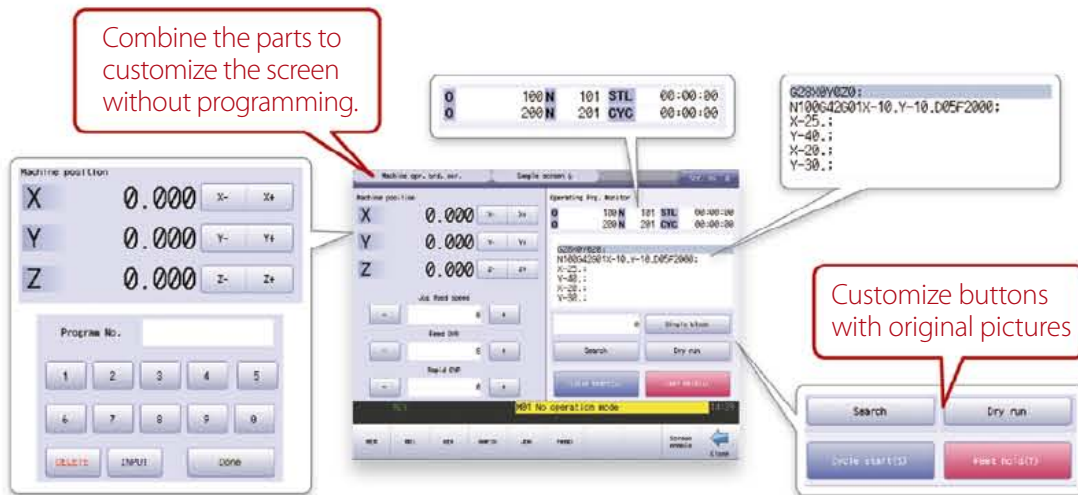
M70V

E70



What helps to create an original screen to differentiate the machine?

Easy to make with NC Designer2!



We provide a developmental environment where the MTB can customize screens easily.

Two types of screen development methods are available; the interpreter system (programming without C++) for simple screen development, and the compiler system (programming with C++) with a complex controller.

### ■ Main functions

- **Registration of screen created in CNC menu**  
Screen created with NC Designer2 can be registered in the main operation, setup and editing menus.
- **Macro function to add original processes easily**  
Since macro language can be used with NC Designer2, various original processes can be added easily without programming in C language.
- **C Language Library strongly supports in screen development**  
Besides drawing, this function strongly supports event controls such as mouse and key operations and the window function indispensable for creating GUI such as window system, etc.

### NC Designer2 Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese
Languages supported for original screen	English/Japanese/German/Italian/French/Spanish/
	Simplified Chinese/Traditional Chinese/Korean/Portuguese/Hungarian/
	Dutch/Swedish/Turkish/Russian/Czech/Polish
CNCs supported	M800/M80/M700V/M70V/E70 Series



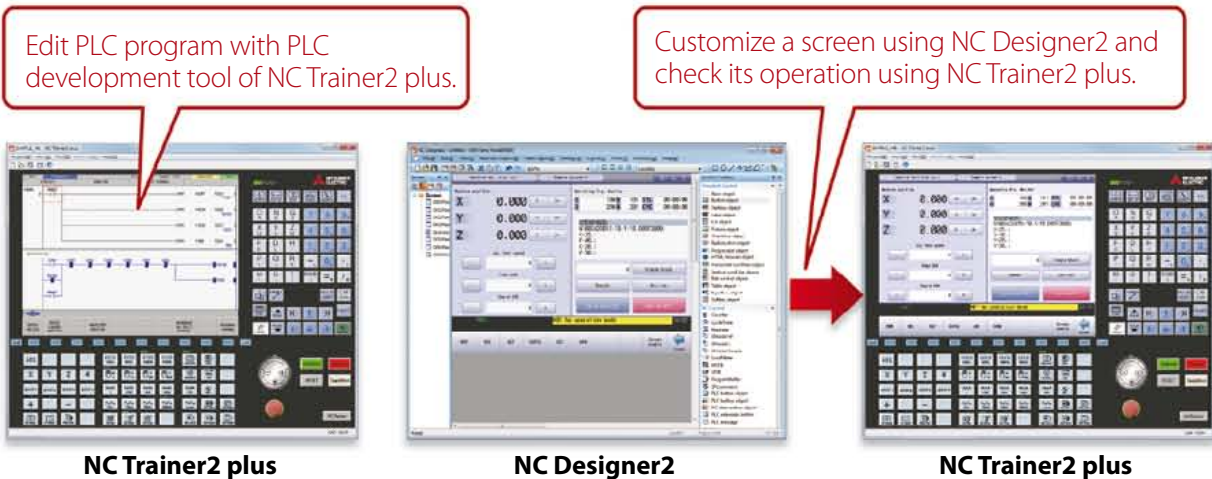
# NC Trainer2 plus (Customization Support)



M800 M80 M700V M70V E70

How can I check the operation of customized screens or PLC programs, etc. be conducted on my computer?

## Debugging is easy with NC Trainer2 plus!



**NC Trainer2 plus supports customization development; it helps to program the ladder programming of the user PLC to be developed by machine tool builders and debug it and check the operations of customized screens.**

**■ Main functions**

- Development support for customized screens. (Even if there is no NC device, it can be debugged using a computer.)
- Development support for user PLC (ladder)
- Provides machine operating environment (customized machine operation panel) that meets the specifications of the user's machine tool.

NC Trainer2 plus Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese/Simplified Chinese/Traditional Chinese
CNCs supported	M800(equivalent to M830)/M80/M700V(equivalent to M730V)/M70V/E70 Series
Operational environment	CPU: 2.66GHz or higher and processor with 2 or more cores
	Memory: 2GB or more
	Available hard disk space: 400MB or more (excluding the free space necessary for running the OS)
	Display resolution : XGA (1024 × 768) or higher

# NC Configurator2 (NC Parameter Setup)

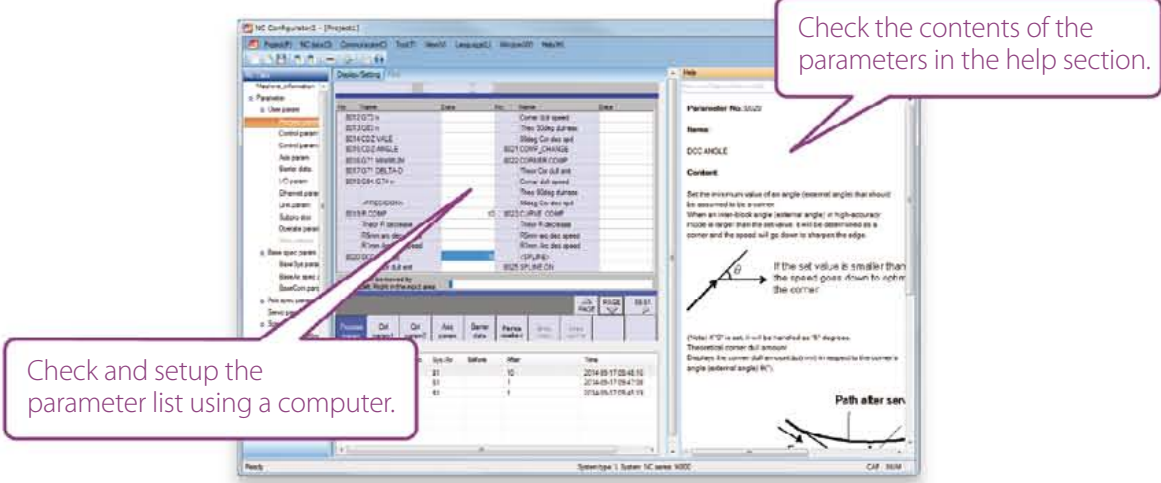
M800 M80 M700V M70V E70 C70

Free version is limited in function



It is hard to setup each parameter using the manual

## Easy setup using NC Configurator2!



NC Configurator2

**NC parameters required for NC control and machine operation can be edited on a computer.**

**Initial parameters can also be easily created by inputting the machine configuration.**

■ **Main functions**

- NC parameter setting/search
- Help (parameter explanation)
- Offline comparison of parameter
- input/output
- NC data input
- Printing

**The following are included the full-mounted version.**

- Parameter initial setting wizard
- Function parameters

NC Configurator2 Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1 *Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese/Simplified Chines
CNC connections	CNCs supported : M800/M80/M700V/M70V/E70/C70 Series Connection configuration : Ethernet (parameter read/write in serial communication)/RS-232C/USB (C70 Series only) Connectable CNCs : 8 (max.)
Precaution	Free version has limited in functions.

# NC Analyzer2 (Servo Adjustment)

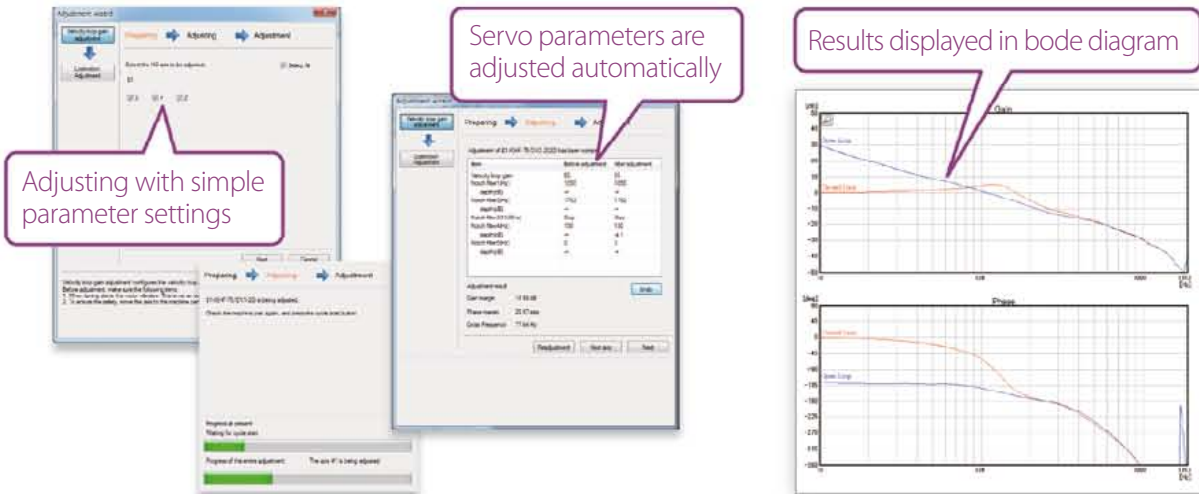
M800 M80 M700V M70V E70



Servo parameter adjustment sounds complicated...

I don't have a tool for measuring the machine's characteristics on hand...

## Easy adjustment and measurement with NC Analyzer2!



**NC Analyzer2 helps the servo parameter settings by measuring and analyzing the machine's characteristics.**

**Measurement and analysis can be done by running a servo motor using the machining program for adjustment, or using the vibration signal.**

**This function can sample various types of data.**

### ■ Main functions

- Adjustment wizard
- Speed loop gain adjustment
- Notch filter setting
- Circularity adjustment
- Display adjustment
- Display adjustment progress
- Graph
- Bode diagram
- measurement display
- Servo waveform measurement
- Display waveforms before/after adjustments
- Project management
- Measured waveforms batch management

### NC Analyzer2 Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese/Simplified Chinese/Korean
CNC connections	CNCs supported : M800/M80/M700V/M70V/E70 Series
	Connection configuration : Ethernet



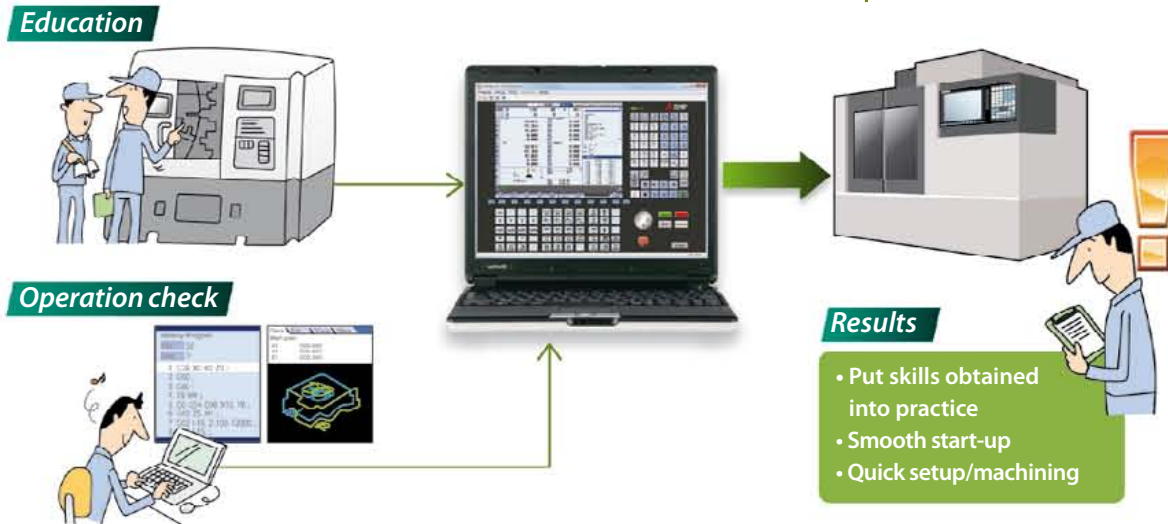
# NC Trainer2/NC Trainer2 plus (Training Tool)

M800 M80 M700V M70V E70



How can I train myself in CNC operation without access to the machine?

## Hone operating skills with NC Trainer2/NC Trainer2 plus!



This is an application for **operating the CNC screen and machining programs on a computer without the CNC control unit or a special display unit.**

It can also be used for **learning CNC operation and checking machining programs.** The machining programs created on NC Trainer2/NC Trainer2 plus can be used on actual CNCs.

### ■ Main functions

- Create projects that reproduce a variety of machining environments.
- Not only the NC screen, but also the NC keyboard and the operation panel are displayed on the computer.

### NC Trainer2/NC Trainer2 plus Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese/Simplified Chines/Traditional Chinese
CNCs supported	M800(equivalent to M830)/M80/M700V(equivalent to M730V)/M70V/E70 Series
Operational environment	CPU: 2.66GHz or higher and processor with 2 or more cores
	Memory: 2GB or more
	Available hard disk space: 400MB or more (excluding the free space necessary for running the OS)
Precaution	Display resolution : XGA (1024 × 768) or higher
	Before executing machining programs on an actual CNC, sufficient review should be conducted to prevent interference or any other errors.

# NC Explorer (Data Transfer)

M800

M80

M700V

M70V

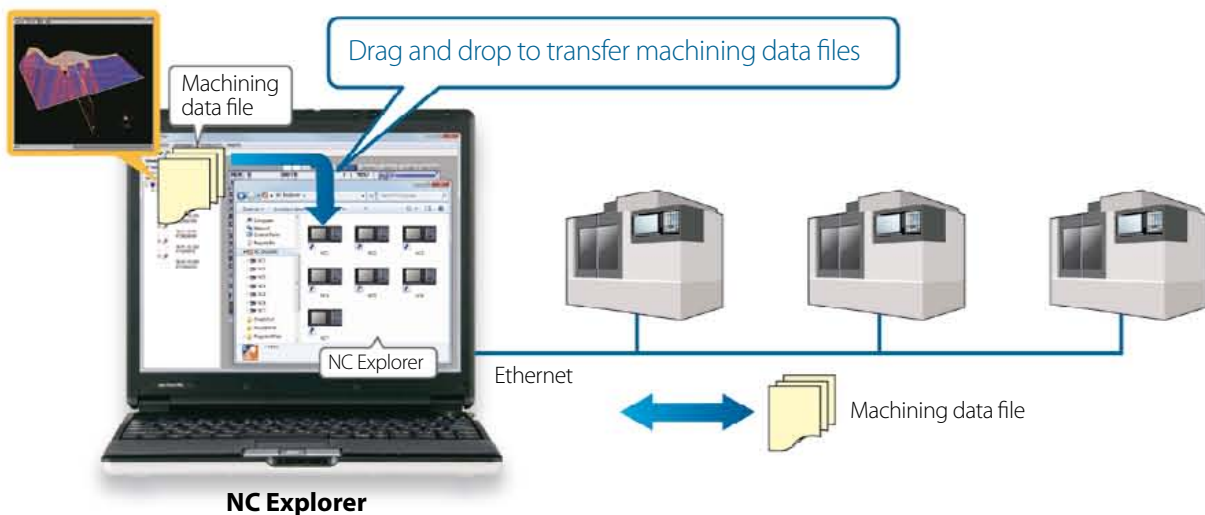
E70

Charge-free



How can I transfer data prepared on a computer to a CNC?

## Easy data transfer using NC Explorer!



**CNC machining data file can be operated using Windows® Explorer on a computer when the computer is connected with multiple CNCs via Ethernet.**

### ■ Main functions

- **Registration of screen created in CNC menu**  
Operational CNCs are displayed as folders on Windows® Explorer.  
Drag and drop to transfer the files.

### NC Explorer Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
CNC connections	CNCs supported : M800/M80/M700V/M70V/E70 Series
	Connection configuration : Ethernet

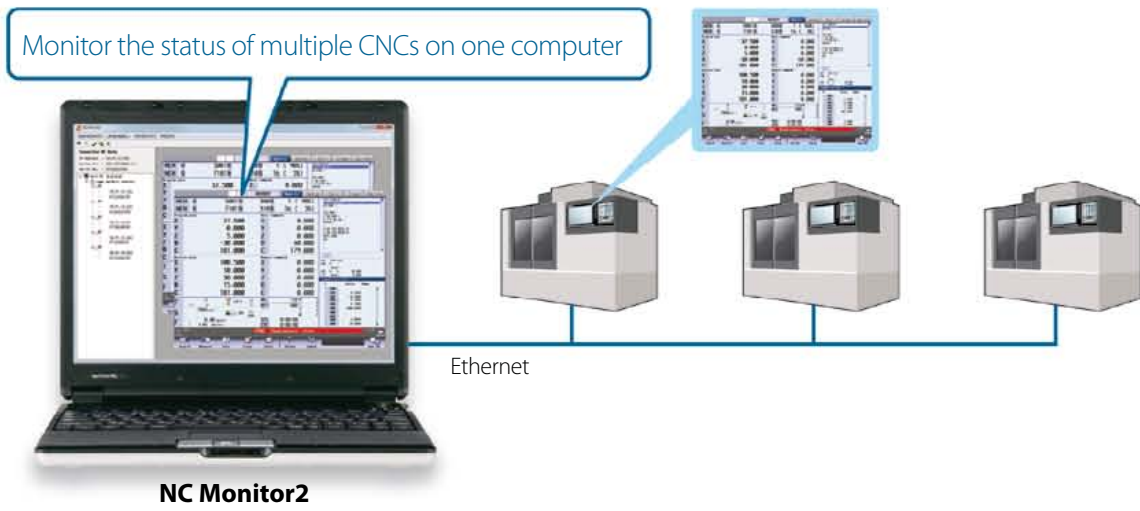
# NC Monitor2 (Remote Monitoring)

- M800
- M80
- M700V
- M70V
- E70



How can I monitor a CNC on a computer in the office without visiting the factory?

## Easy monitoring with NC Monitor2!



**Taking advantage of the network in a plant, CNC operation status can be monitored from remote locations.**

**Several CNCs can be connected and monitored simultaneously.**

### ■ Main functions

- **Adopts the same screen structure**  
The monitoring display is constructed to mirror the CNC display unit is. Note that the screen structure of 10.4-type display is applied when 15-type or 19-type display is connected.  
Possible to select a monitoring screen that is not synchronized with display of the CNC in operation.
- **Limit display/setting operation of CNCs**  
By setting parameters in a CNC, the availability of displaying and setting using this software can be restricted.
- **Connectable CNCs are automatically listed**  
Connectable CNCs in a network group are automatically displayed in a list, and the CNCs can be connected by selecting them.

### NC Monitor2 Main specifications

OS supported	Windows® 7 SP1 or later/Windows® 8/Windows® 8.1
	*Supports 32-and 64-bit OS (WOW64 available for 64-bit)
Languages	English/Japanese
CNC connections	CNCs supported : M800/M80/M700V/M70V/E70 Series
	Connection configuration : Ethernet
	Connectable CNCs : 10 (max.)
Precaution	Please use the Remote Monitor Tool for the C70.



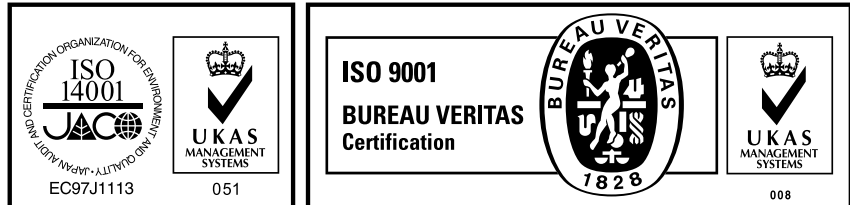
## Global Partner. Local Friend.



### Safety Warning

To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO 14001 (standards for environmental management systems) and ISO9001 (standarts for quality assurance management systems)



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