



i Series **CNC/SERVO**

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The world standard CNC from FANUC powers a large installed base.

GENERAL CATALOG

FANUC

The world standard CNC from FANUC powers a large installed base.

FANUC *i* Series CNC/SERVO

State-of-the-Art Hardware

Ultra-thin, high-speed and high reliability are achieved by using state-of-the-art hardware, including ultra high-speed processors, high-speed CNC internal bus and optical fiber cables used for high-speed data transfer.

Using motors with the latest optimum magnetic circuit design and amplifiers with the latest low loss power device make machine tools high-speed, compact and energy saving.

Excellent Operability

O*i*-F and 30*i*-B series CNCs have common screens and operability. Various CNC data can be transferred easily by USB memory. An integrated guidance function helps an operator from creation of a part program to actual machining.

Various Network Functions

A management system using PCs or robots connected via Ethernet can be set up easily. Various types of field networks are also supported.

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Minimizing Downtime

Machining Performance

High-Speed and High Quality Machining Excellent Control Functions

- Nano CNC system combined with precise nano-calculation and leading-edge servo technology
- AI Contouring Control effective for high-speed and high precision machining
- Various functions enable a shorter cycle time for machining parts
- Servo HRV provides high-speed and high accuracy
- Spindle HRV has high acceleration and high response
- **FANUC SERVO GUIDE** with quick and smart tuning

Minimizing Downtime

Focusing on Minimizing Downtime High Reliability and Easy Maintenance

- Highly reliable hardware allows stable operation in a harsh factory environment
- Preventive maintenance to avoid machine from unexpected stop by sudden trouble; such as leakage detection function which detects the insulation deterioration of motor
- Various types of enhanced diagnosis functions improve maintainability so that the cause of trouble can be identified quickly

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The World Standard CNC/SERVO from FANUC

From the first products shipped in 1958, after more than half a century, FANUC has now produced 3.6 million CNCs and 17 million servo motors. As the world standard CNC / SERVO, these products are used to power machines around the globe. FANUC is dedicated to continuing to develop products and technology that earns the trust of our customers worldwide.

Product Line-up

A wide range of CNCs for simple machine tools to the most complex, as well as for other general industrial machines. The motor line-up is engineered for small to large machines. Depending on the application, the best system is designed to optimize machine tool performance.

Worldwide Customer Service and Support

FANUC has a world-class customer service and support network with over 250 offices worldwide. FANUC provides the highest quality service with prompt response from a strategically located office nearest you.

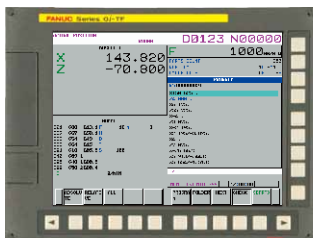
Ease of Use

Ease of Use

Pursuing Ease of Use Abundant CNC Functions and Operability

- Consistent support at shop floor,
FANUC iHMI
- Integrated Operation and Programming Guidance with extremely simplified operations
FANUC MANUAL GUIDE i
- Training of CNC operations on a PC
FANUC NCGuide
- 8.4/10.4/15/19 inch display units are available
- Loader is cost effective and easily configured with the new Loader Control function
- High-performance PMC function with Function Block and Extended PMC ladder instructions
- Safety achieved by Dual Check Safety embedded into the CNC
- Customize functions for each unique machine
- Tuning functions help easily set-up machine tool

CNC Line-up



FANUC Series 0i-MODEL F

Max. number of paths : 2 paths
 Max. total number of controlled axes : 9 axes/1 path system, 12 axes/2 path system
 Max. number of simultaneous controlled axes : 4 axes

Series 0i-MODEL F is a new model of 0i series CNC that is widely used in the world, it greatly enhances basic performance and has common operability of the 30i-B series CNC with the performance of the world's highest level.

The latest preventive maintenance functions and easy maintenance, in addition to high reliability, contribute to the improvement of minimizing downtime of machine tools.

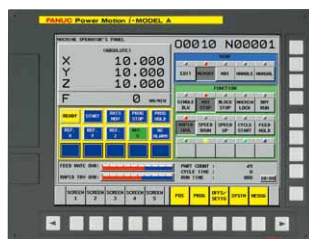


FANUC Series 30i/31i/32i/35i-MODEL B

Max. number of paths: 2 to 15
 Max. total number of controlled axes: 20 to 96
 Max. number of simultaneously controlled axes: 4 to 24

The 30i-B series, which has the world's highest level of performance, is the core FANUC CNC model.

With many available controlled axes and abundant functions including 5-axis machining functions, this series can flexibly support any types of machine tools ranging from standard lathes and machining centers to transfer lines and state-of-the-art multi-axis machine tools.



FANUC Power Motion i-MODEL A

Max. number of paths : 4
 Max. total number of controlled axes : 32
 Max. number of simultaneously controlled axes : 4

Power Motion i-A has the multi-axis high-response function which enables quick start/stop of axes and is a model suitable for industrial machines. This model is available for a wide range of applications including press machines, die-cushions, loaders, packing machines, and servo-type hydraulic mechanisms.



FANUC PANEL iH

Standard display unit for FANUC iHMI application execution

FANUC PANEL iH Pro

Display unit built-in Windows® PC functions suitable for high-end FANUC iHMI applications

Supports the use of commercially available Windows® applications.

(*) Registered trademark of Microsoft Corporation

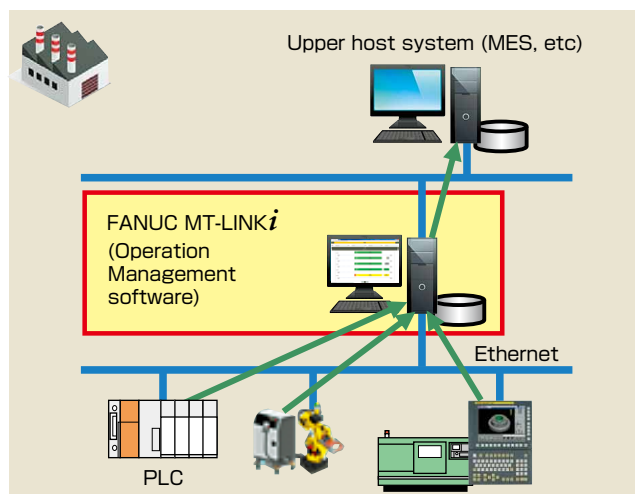
FANUC MT-LINK*i*

PC software that collects and visualizes information of machines in the factory

FANUC MT-LINK*i* is a PC software product that can collect and manage various information of machines in the factory connected via Ethernet and visualizes the data.

With FANUC MT-LINK*i*, you can connect not only machine tools with FANUC CNCs, but also other devices such as a PLC supporting OPC communication to collect information, which contributes to the introduction of the IoT for machines in the factory.

The collected data including operation results can be read from a third-party upper host system such as MES (Manufacturing Execution System) and user applications.



αi -B series SERVO

αi -B series SERVO is a high-speed, high precision and high efficiency servo system making machine tools high-speed, high precision, compact and energy saving. The wide range of 0.5kW to 220kW is designed for various types of machines.

FANUC AC SERVO MOTOR αi -B series

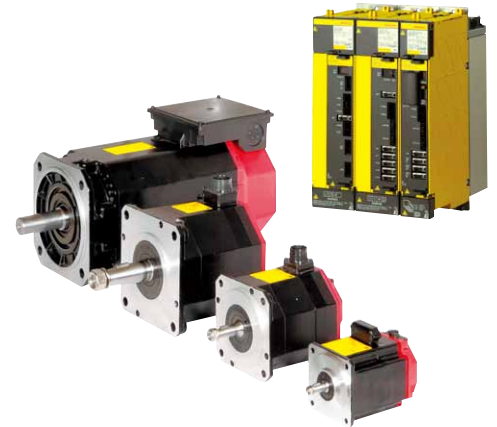
Ultra smooth rotation and quick acceleration AC SERVO MOTOR is best suited for axis feed in machine tools.

FANUC AC SPINDLE MOTOR αi -B series

High performance AC SPINDLE MOTOR with high power at high speed is best suited for spindles in machine tools.

FANUC SERVO AMPLIFIER αi -B series

Compact and energy saving Servo Amplifier contributes to the reduction of the cabinet size.



βi -B series SERVO

βi -B series SERVO with high performance and value has suitable performance and functions for feed axis and spindle axis of machine tools.

FANUC AC SERVO MOTOR βi -B series

High performance and value AC SERVO MOTOR for feed axis of machine tools

FANUC AC SPINDLE MOTOR βi -B series

High performance and value AC SPINDLE MOTOR for spindle axis of machine tools

FANUC SERVO AMPLIFIER βi SVSP-B series

All-in-one (servo 3 axes + spindle 1 axis) packaged servo amplifier with high performance and value combined with Series Oi-MODEL F.



FANUC BUILT-IN SPINDLE MOTOR βi -B series

βi -B series offers high power up to high-speed range due to the speed range switching control and is suitable for every kind of machine tool spindle.

βi S-B series offers large torque at low speed with compact motor size by strong neodymium magnets, and is suitable for turning or gear cutting machine.

FANUC SYNCHRONOUS BUILT-IN SERVO MOTOR βi S-B series

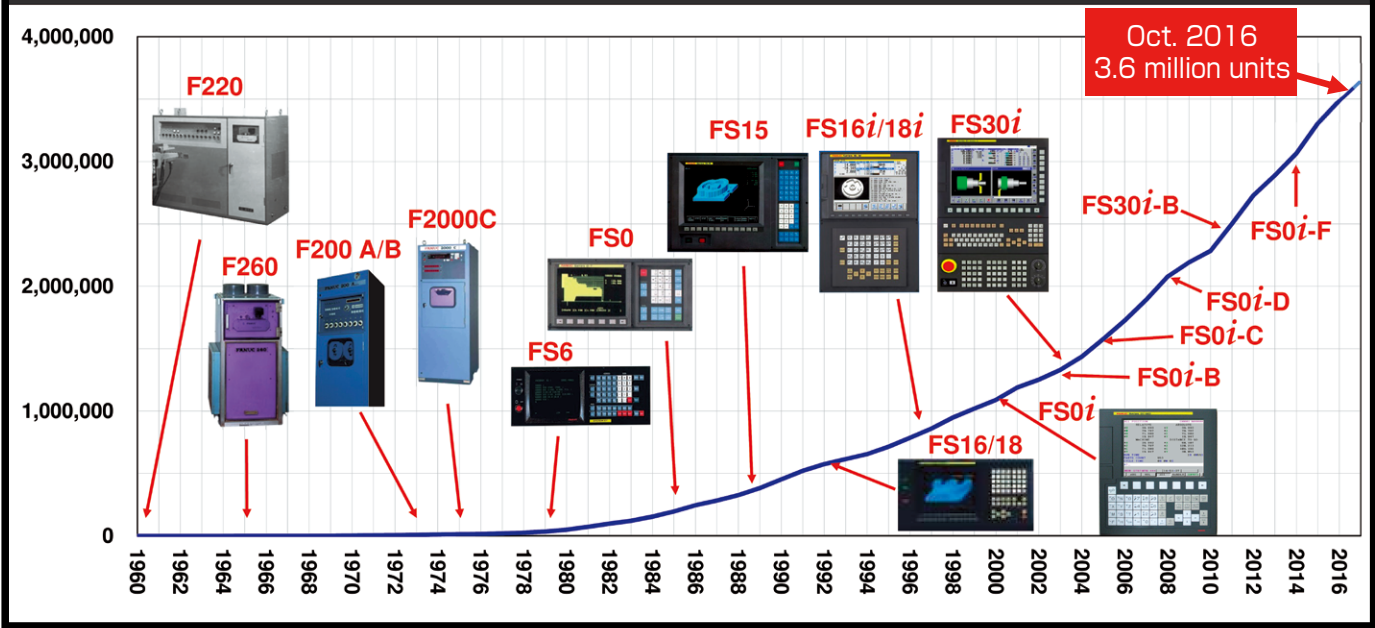
βi S-B series is a direct drive motor achieving large torque and smooth axis feed. It is designed to use with a rotary table in machine tools and a rotary axis in 5-axis machine tools to achieve high-speed and high precision - and also makes mechanical parts maintenance free.

FANUC LINEAR MOTOR βi S-B series

βi S-B series has the performance of 4m/s maximum speed and 30G maximum acceleration, enabling high precision by high gain servo, rigid long stroke, and maintenance free mechanism.



World's No.1 CNC Manufacturer

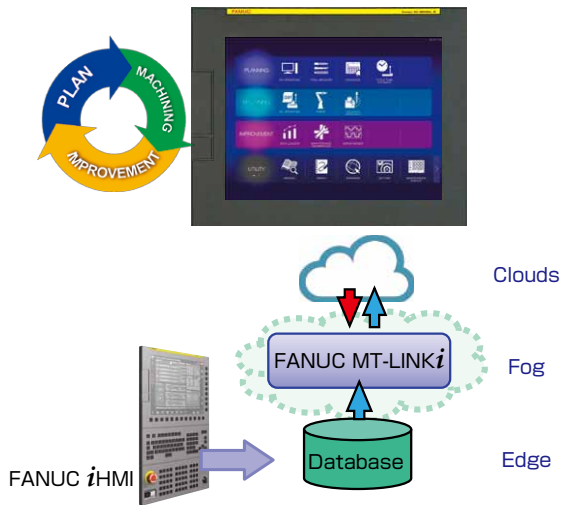


FANUC *i*HMI Ease of Use

New user interface which supports all jobs at shop floor consistently

FANUC *i*HMI supports all jobs at shop floor consistently, exceeding a limit of conventional CNC operation. In FANUC *i*HMI, the functions required for each of processes, "plan", "machining", and "improvement", performed in a shop floor are put into an integration screen called home. The functions can operate in cooperation with one another.

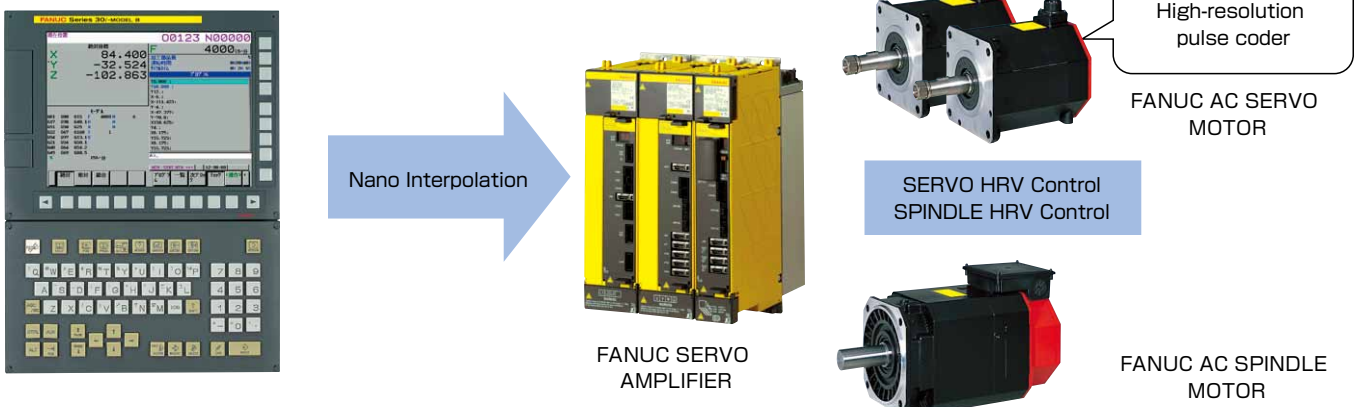
FANUC *i*HMI provides not only functions related to display and other operations, but also performance as a thin client including a function which uploads real-time machine tool information and other various types of information related to machining to the upper-level system in the network and a function which shares information accumulated in the database in the upper-level system. FANUC *i*HMI will act as a platform which plays core roles in the IoT introduced for machine tools.



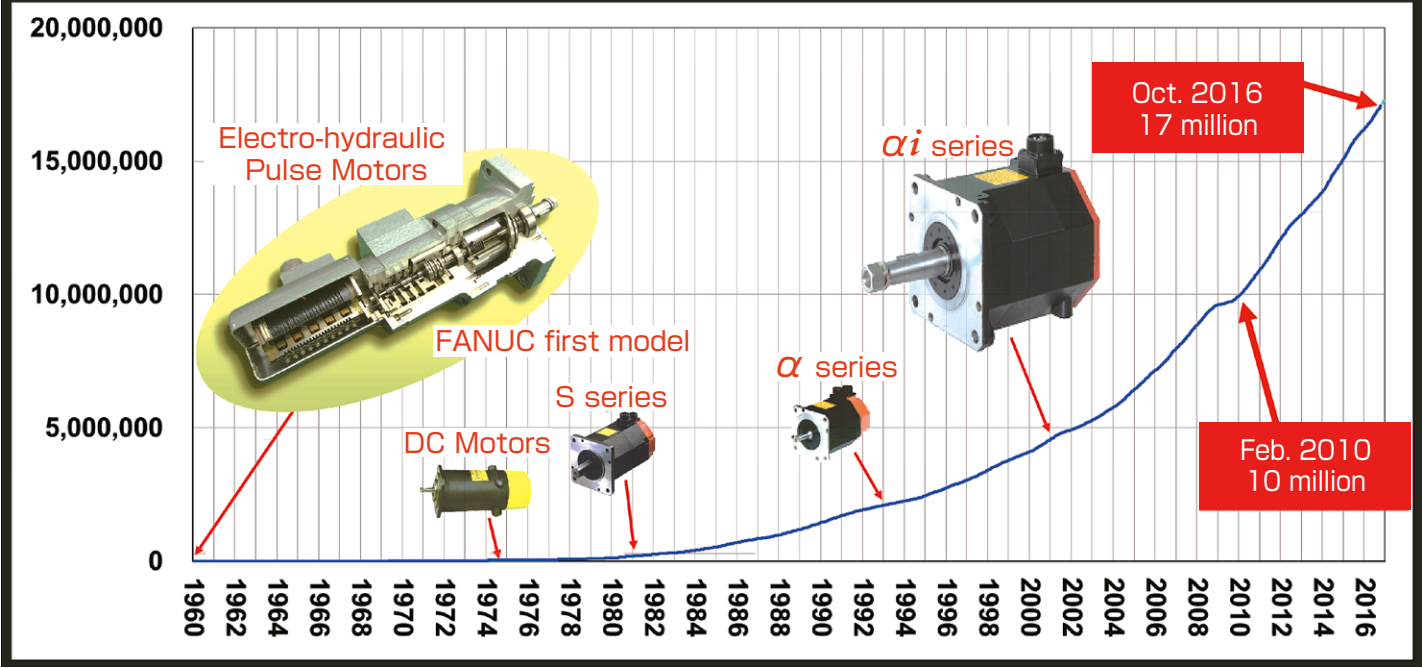
Nano CNC System Machining Performance

High quality machining achieved by coordination between high precision operation in nanometers and state-of-the-art servo technology

Nano interpolation that computes position commands for the digital servo control unit in nanometers, SERVO HRV Control and SPINDLE HRV Control for which the control cycle is made faster, and FANUC AC SERVO MOTOR with a high resolution pulse coder are used and make up Nano CNC System, which achieves high quality machining.



World's No.1 Servo Motor Manufacturer



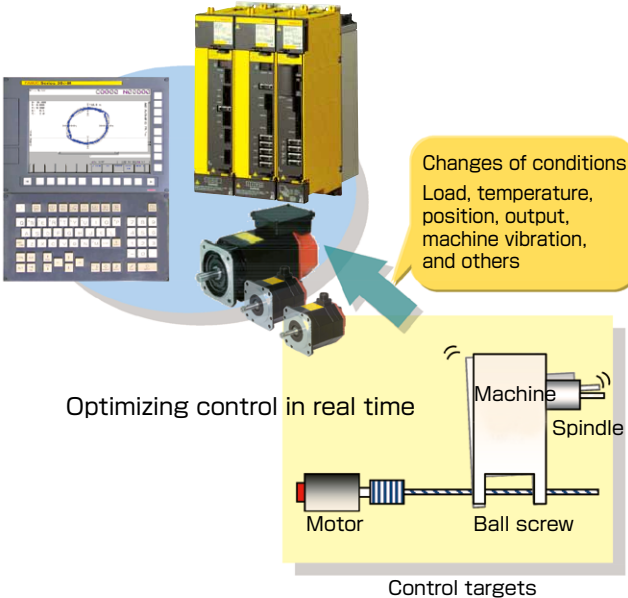
Smart Machine Control Machining Performance

Optimizing control in real time

Smart machine control is function group which realizes high-speed, high-precision, and high-quality machining by optimizing its control in real time according to changes of machine conditions such as load, temperature, and position.

Smart machine control for feed axes realize high-precision, high-quality machining by controlling the axis optimally according to the motor operating status and machine characteristics.

Smart machine control for spindles realize high-speed machining with the best use of the short-time rated power of the spindle motors.



Preventive Maintenance

Unexpected system downtime can be prevented by predictive trouble detection and warning indication.

Leakage Detection Function

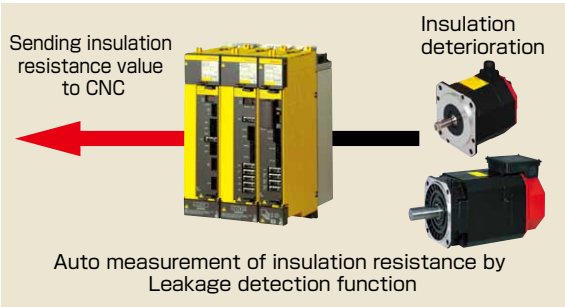
Insulation deterioration sometimes causes abnormal machine stop when cutting fluid infiltrates the motor, especially in a severe machining environment. The leakage detection function built-in αi -B amplifier, as standard, automatically measures insulation resistance of the motor and detects insulation deterioration when it reaches an abnormal level, this function contributes to preventive maintenance.

In addition, the optional hardware unit is also available for systems which leakage detection function is not built-in.

Cooling Fan Warning Function

A decrease in rotational speed of each cooling fan motor of the CNC and the amplifier is detected as a warning.

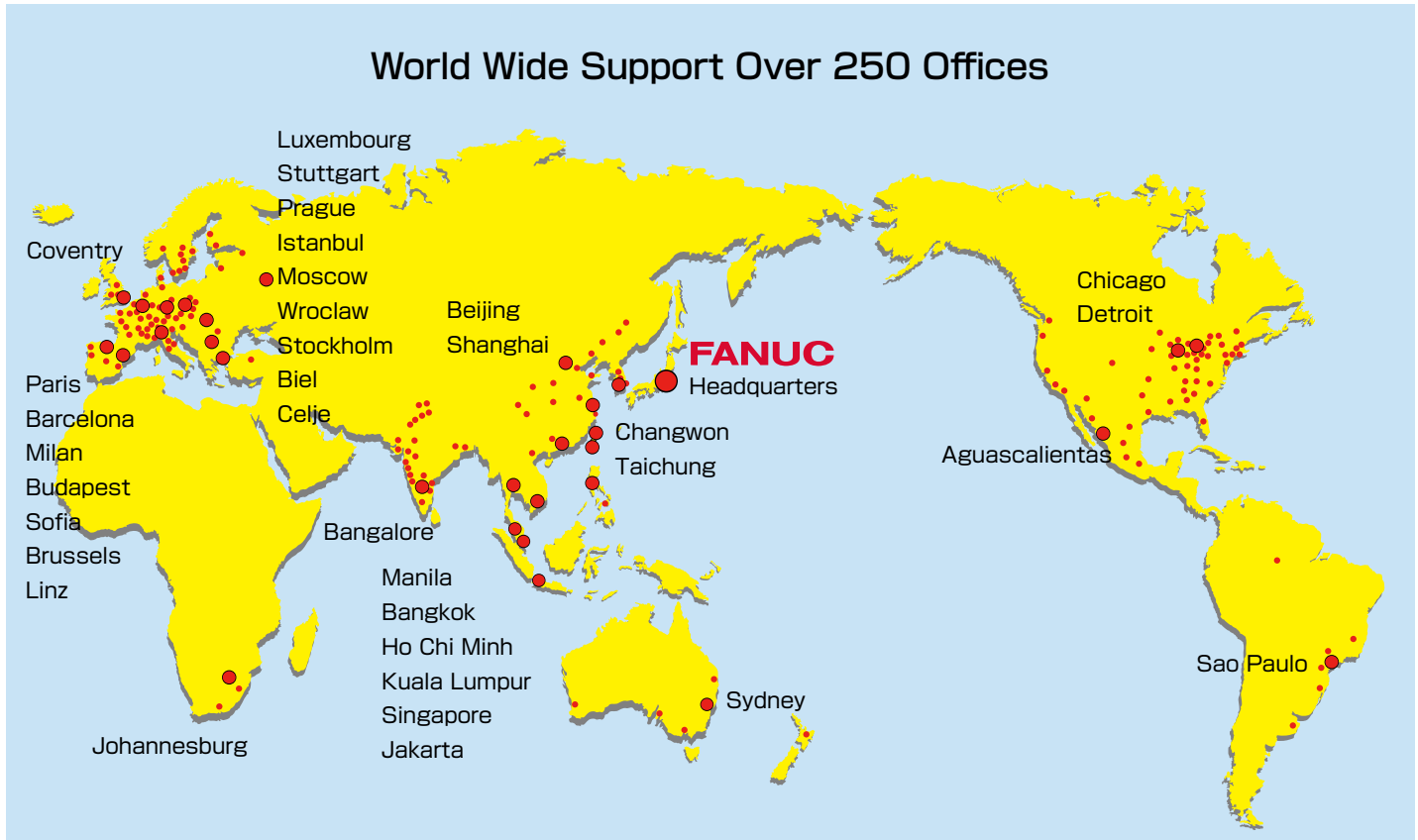
Also the status of fan motors can easily be monitored on the fan monitor screen, and this function contributes to preventive maintenance.



Maintenance and Customer Support

Worldwide Customer Service and Support

FANUC operates customer service and support network worldwide through subsidiaries and affiliates. FANUC provides the highest quality service with the prompt response at any location nearest you.



FANUC Training Center

FANUC Training Center operates versatile training courses to develop skilled engineers effectively in several days.

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