

THE FACTORY AUTOMATION COMPANY

FANUC

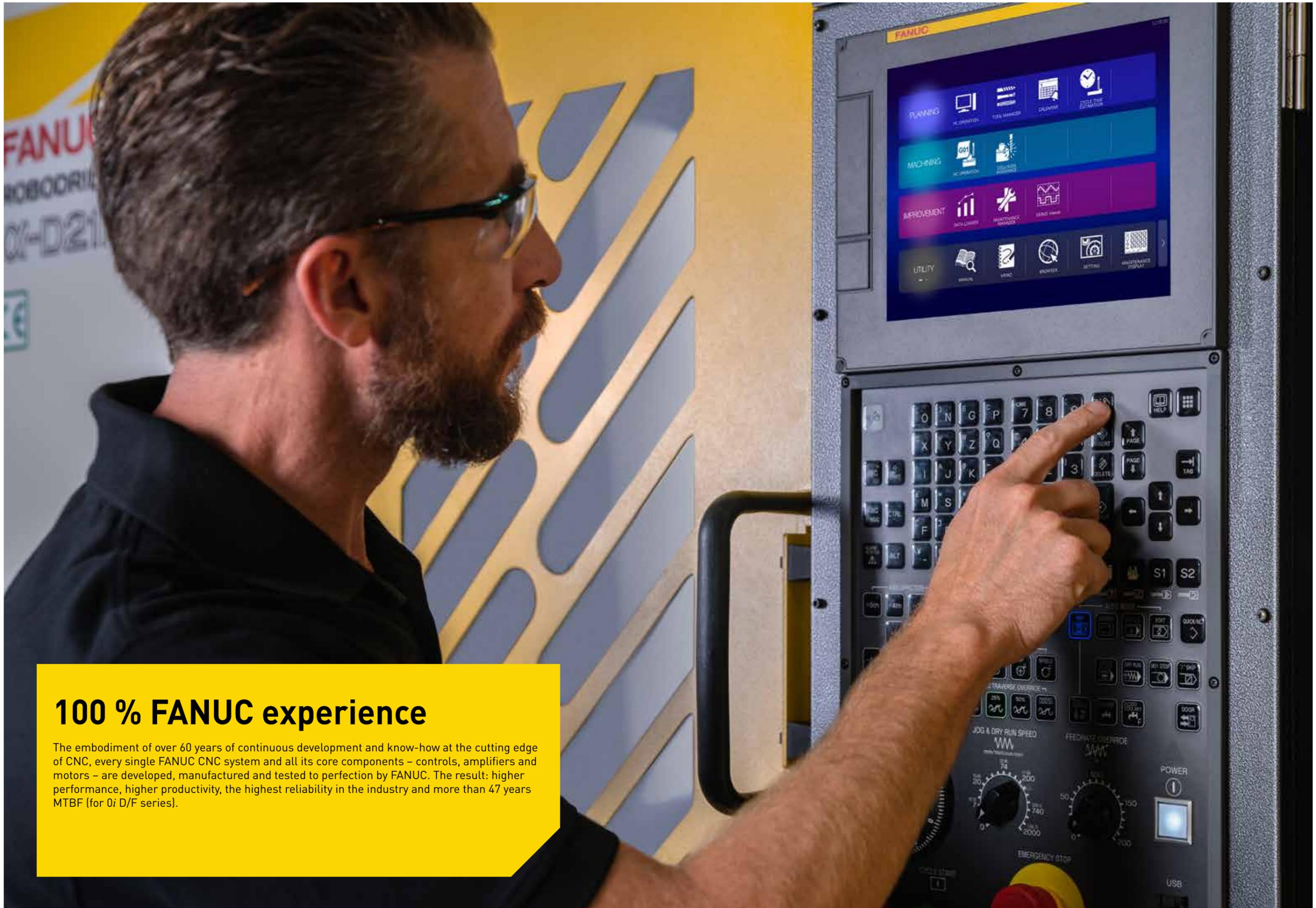
Seamless CNC

0i-F Plus series

30i-B Plus series



60 years of
CNC
technology



100 % FANUC experience

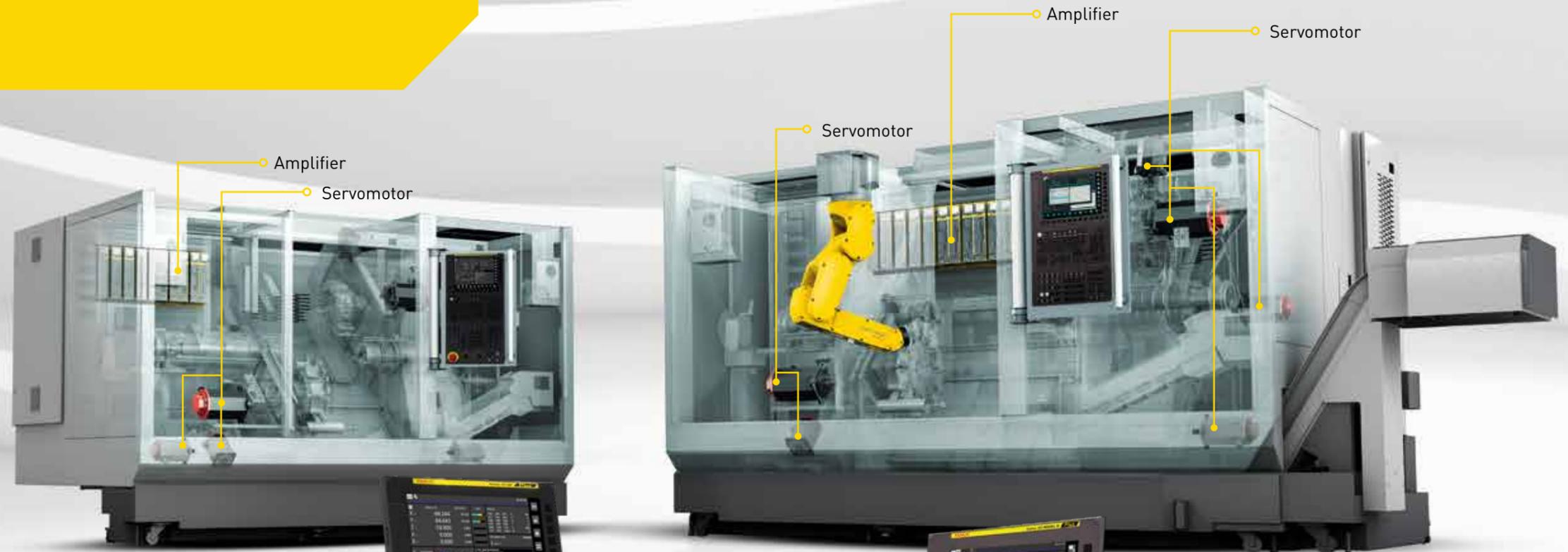
The embodiment of over 60 years of continuous development and know-how at the cutting edge of CNC, every single FANUC CNC system and all its core components – controls, amplifiers and motors – are developed, manufactured and tested to perfection by FANUC. The result: higher performance, higher productivity, the highest reliability in the industry and more than 47 years MTBF (for 0i D/F series).

Seamless CNC

Complete compatibility across all your controls

With the widest range of controls in the industry FANUC leads the way when it comes to flexible CNC solutions. Providing its customers with the ability to integrate CNCs seamlessly, FANUC has developed the 0i-F Plus series. This compact control has been specifically designed to provide a straightforward solution for multiple control applications. Combining unbeatable value for money with unrivalled performance and reliability, it includes features and functions usually associated with high-performance systems.

- **common** PMC
- **common** periphery or peripheral devices (servo axes, I/O)
- **common** screen
- **common** menus and commands
- **common** safety system FANUC DCS
- **common** network functions
- **common** programs across all controls
- **common** development tools
- **common** maintenance procedures
- **common** user interface *i*HMI



NEW: 0i-F Plus and 30i-B Plus series

Offering an incredible degree of compatibility, the new FANUC 0i-F Plus series integrates seamlessly into FANUC's 30i-B Plus series to provide users with perfectly matched machine control regardless of the application. Since all the hardware design and programming is shared – something that completely precludes the need for redundancies – the benefits of this ground-breaking approach are significantly lower development and setup costs. All of which is underscored by FANUC's unrivalled reliability.



0i-F Plus series



30i-B Plus series

FANUC 0i-F Plus series

The compatible all-round control

The FANUC 0i-F Plus series CNC provides a straightforward, cost optimised solution for most general machining applications. Ready to use, it boasts latest-generation hardware and a complete package of standard software for most turning and milling processes. Customization functions are already included and offer an easy way to create HMI screens that are tailored to the application. The 0i-F Plus series is also completely compatible with older FANUC 0 and 0i CNCs and shares the same programming as more advanced FANUC controls. The advantage being that existing programs can be used immediately and that new programs can be developed without the need for costly redundancies. Providing the high-performance offered by FANUC servo technology, this CNC also offers the same user-friendly convenience over the complete range.

Your benefits at a glance:

- ultra compact design and less wiring
- comes with CNC functions for machining centres, lathes, grinding or punch press applications
- easily adjustable steps for maximum accuracy and smoothness
- ideally suited to retrofitting since most functions are already on board
- less need for training thanks to a simple programming language
- uses the same safety system as more advanced controls

NEW: multipaths control over the 2 CNC paths, up to 2 additional paths for load/unload parts smart, flexible and simple programming

NEW: large easy-to-read 15" screen also available with smaller 10.4" screen

- number of control axes: 12
- number of simultaneous control axes: 4
- number of paths: 2
- number of spindles: 6
- number of servos: 10



More than
47
 years
MTBF
 for 0i-D/F series

FANUC 30i-B Plus series Precision control for demanding applications

FANUC 30i-B Plus series controls are ideally suited to sophisticated, high-speed precision machines equipped with multiple axes and multipath functionalities. To meet the needs of various types of users, this range of CNCs combines user-friendly operation with exceptional levels of accuracy, reliability and efficiency across every perceivable kind of machine tool, including multi-axis lathes, 5-axis machining centers, gear cutting machines or transfer machines. Axes can be assigned flexibly, making various sophisticated machine concepts easy to achieve.

Customisation functions are included and offer an easy way to create iHMI screens that are tailored to the Application. And many packages and kits are available that combine optional functions in a meaningful way, e.g. packages for milling machines or lathes.

- number of control axes: 96
- number of simultaneous control axes: 24
- number of paths: 15
- number of spindles: 24
- number of servos: 96



Your benefits at a glance:

- multipath CNC – over the standard, 2 dedicated software versions for multi channels: 15 paths, 72 axes and 10 spindles
10 paths, 96 axes and 24 spindles
- ultimate accuracy with resolution down to 0.1nm
- integrated learning functions
- electronic gearbox to synchronise axes
- newly developed kinematic measuring cycle

Smart learning functions

The smart FANUC Parts Learning function learns servo errors over several machining cycles and actively compensates for them. In production mode, the CNC then applies the corrections it has learnt, reducing cycle times and ensuring maximum precision. Another powerful function FANUC's High-speed Cycle Learning achieved the top accuracies down to 0.1 nanometer, typically for cam spiral grinding applications.

Smart servo control

Smart servo control is a set of features that improve various machine control functions. What makes these functions „smart“ is that they automatically adapt to changing machine conditions in real-time. Shortest cycle times, highest precision and machining quality can be achieved sustainably.

Fine surface technology

In many applications such as milling of complex parts and free-form surfaces, the surface quality of the workpiece is crucial. FANUC's Fine Surface Technology is the ideal solution to achieve flawless workpiece surfaces.

Smart interpath functions

Such as Flexible Path Assignment for flexible axis configuration by exchanging control axes between paths.

Laser Control Function

The Laser Control Function enables integration of laser processes to milling or turning machines. This allows for example Direct Energy Deposition type additive manufacturing.

FANUC CNC for complex machining

FANUC CNCs provide the answer to demanding machining operations involving multiple axes and multiple paths. Sophisticated 5-axis applications can be achieved using simultaneous 6-axis transformation, with up to 24 axes being simultaneously programmable. From very small to very large workpieces, from very soft to very hard materials, FANUC CNC provides the ideal balance between utmost precision, flawless surface quality and the shortest possible cycle times. This translates into higher technical availability and eliminates the inaccuracies incurred in multiple-part setup operations.

High-response vector control also means FANUC CNCs can look up to 2000 blocks ahead. And to save you time and money, FANUCs newly developed kinematic measuring cycle measures the axis kinematics of your multi-axis machine tools. Setting up and fine-tuning your machining scenarios is also inherently easy.

FANUC CNCs offer a range of compensatory features including:

- Tool Center Point Control
- Cutting Point Control
- High-speed Smooth TCP
- Workpiece Setting Error Compensation
- Tilted Working Plane Command with Guidance
- Thermal Growth Compensation

Versatile CNC solutions

Versatile CNC systems save you time and money by dispensing with the need for hardware and software redundancies. Sharing one common platform, all FANUC solutions are designed with this firmly in mind. FANUC controls are open and freely configurable to your own specific needs. With the introduction of the 0i-F Plus series CNC, FANUC has taken this even further by ensuring seamless compatibility between this low-cost, yet extremely capable model and its more advanced CNCs. Backed by the industry's widest range of motors, a wide variety of I/Os and fieldbuses, FANUC not only offers enormous versatility across a vast range of applications but, thanks to its one common platform approach, also reduces your operating costs and makes adding robots very easy indeed.



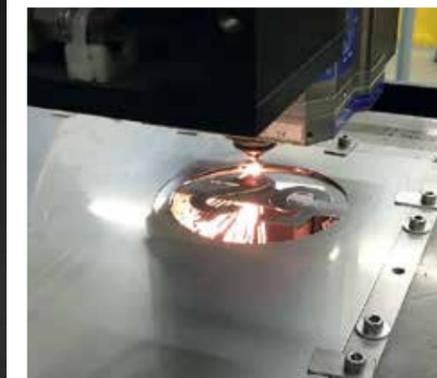
Grinding – tools and curved surfaces



Complex lathes



Jig grinding



Laser-cutting sheet metal



5-axis machining

Smart tools for MTBs

Built using an open system and designed firmly with the needs of users in mind, FANUC CNCs are easy to customise and develop – a process that is made even easier by FANUC's range of intelligent tools.

Powerful:

CNC GUIDE allows MTBs to simulate, develop and execute the customised CNC, PMC and machine. A perfect tool to spend more time on valuable development including customised HMI, testing program, PMC debugging like on a real machine.



FANUC Picture

FANUC Picture offers an easy way to create customised operator and HMI screens for complex processes and provides all the functions and features of modern HMI software tools. It supports objects, animations, data and multi language, and features a macro language to run routines to perform tasks. Screens are compiled and stored in the CNC Flash-ROM (F-ROM) memory and rendered directly by the CNC without requiring a Windows® operating system or runtime. Picture reduces operator errors, simplifies operator work, improves productivity and makes machine and process control easier.

C Executor

Using the C Language Executor as a powerful programming language for machining or machine management purposes enables you to develop customised CNC screens, functions and programs, and also efficient Human Machine Interfaces (HMI). It also allows you to add new functionality to your CNC, with machine control functions written in C, and you can modify macro programs to follow machine and production evolution.

Macro Executor

Your powerful programming language for machining or machine management purposes, the Macro Executor function converts, loads and executes custom macro programs (P-CODE macro) into F-ROM (CNC Flash Memory). The benefits of this language include high code execution speeds, maximum program safety, easy call procedures and extension of the CNC control function set.

FANUC iPC for easy high-performance display

Comes equipped with solid-state drives (SSDs) for enhanced reliability and a wide range of touch panel displays up to 24".

User-friendly operation

FANUC CNCs provide users with a wealth of functionalities, good diagnostic capabilities, plus a wide range of additional functions designed to make using FANUC CNC systems particularly easy.

NEW: machine status monitoring

FANUC MT-LINK*i* provides monitoring and an integrated database for easy analysis. Machine status is always available, ensuring better predictability and easy preventive maintenance. With the Shock Sensor module, temperature, speed, acceleration, crashes and another signals can be registered. The Rechargeable Battery Unit is the smart environment friendly solution to ensure the necessary energy to keep data during power off.

Program Transfer Tool (PTT)

Simplify data transfer with a smart PC-based program between network and CNC as well as a fast data server that enables to manage part programs for multiple machines at a central location.

Easy integration

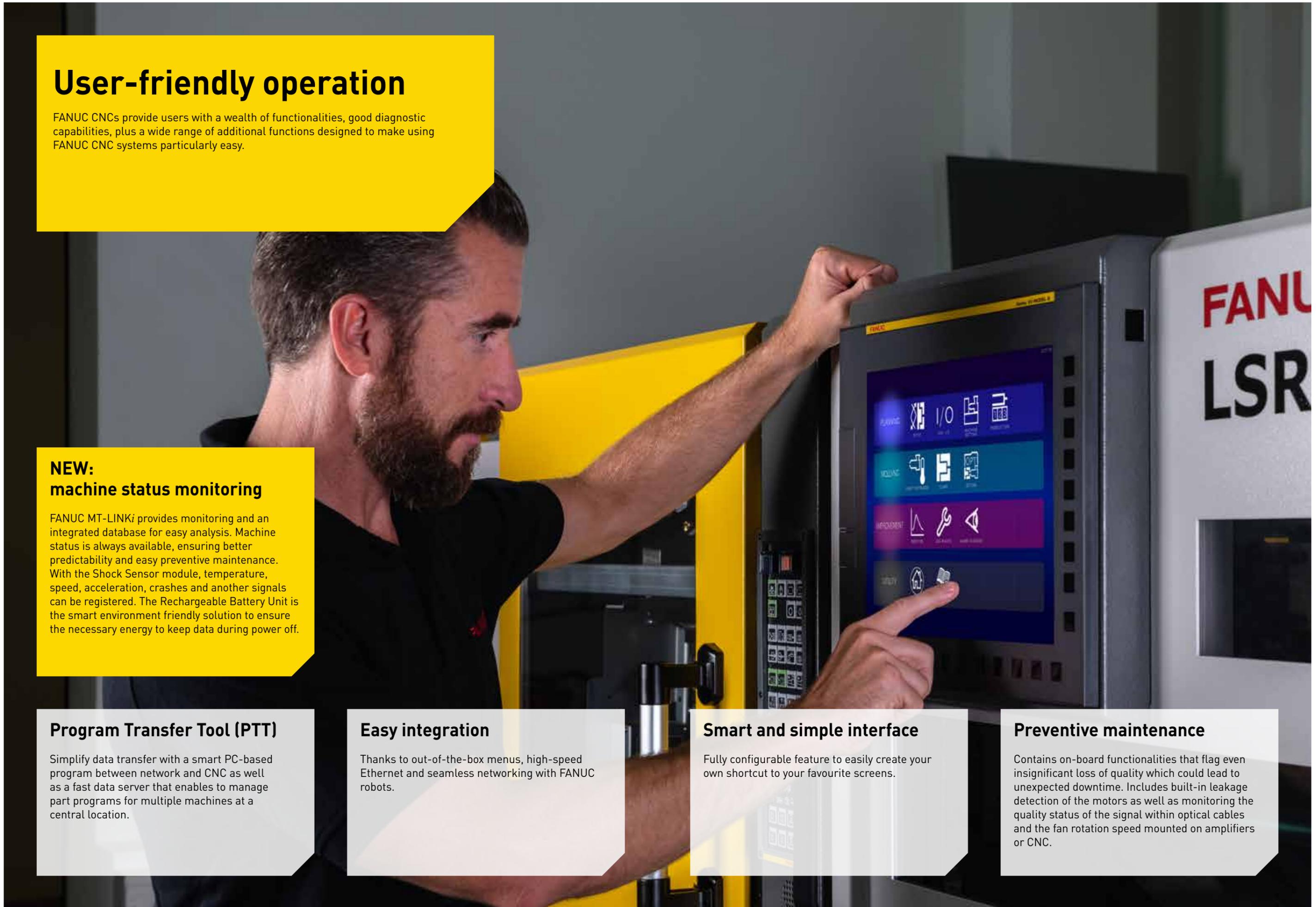
Thanks to out-of-the-box menus, high-speed Ethernet and seamless networking with FANUC robots.

Smart and simple interface

Fully configurable feature to easily create your own shortcut to your favourite screens.

Preventive maintenance

Contains on-board functionalities that flag even insignificant loss of quality which could lead to unexpected downtime. Includes built-in leakage detection of the motors as well as monitoring the quality status of the signal within optical cables and the fan rotation speed mounted on amplifiers or CNC.



One common servo and control platform – Infinite opportunities THAT'S FANUC!



FA

CNCs,
Servo Motors
and Lasers

ROBOTS

Industrial Robots,
Accessories
and Software

ROBOCUT

CNC Wire-Cut
Electric Discharge
Machines

ROBODRILL

Compact
CNC Machining
Centres

ROBOSHOT

Electric CNC
Injection Moulding
Machines

IoT

Industry 4.0
solutions