THE FACTORY AUTOMATION COMPANY

FANUC

ROBOCUT α -C *i*B series

High-Precision CNC Wire Electrical Discharge Machining





Extremely versatile wire EDMs

Enter the efficiency zone!

FANUC designs efficiency for your production processes in the form of CNC systems, drives, robots and production machines. All produced in one of the most highly automated factories in the world. Ready to integrate and backed by unrivalled support and service. It's how we give you a competitive edge. **Manufactured Efficiency ensures high productivity.**



Efficient products

All FANUC products involve manufactured efficiency. Fewer parts and lean technology make them reliable, predictable and easy to repair. They are made to run and provide you with the highest uptime on the market.

Efficient innovations

Manufactured efficiency is also at the heart of every FANUC innovation. Based on proven FANUC engineering, every product is designed to increase the efficiency of your production facilities.

Efficient support and service

Methods support and service is about manufactured efficiency too. We listen carefully to your needs and deliver on our promises. Personal and responsive, we help you achieve maximum efficiency.



RoboCut – fast, accurate, multipurpose wire EDM

Where wire EDM is concerned, accuracy has traditionally come at the cost of speed. That's why FANUC has developed a next generation RoboCut Wire EDM machine. The α -C /B series is comprised of three versatile models, including the first model with a 31.5" X-Axis stroke. With incredibly long mean times between failures, low maintenance, longevity and excellent uptimes, these FANUC RoboCut machines are designed to save time and drive down unit costs while ensuring superlative accuracy and cutting.

Designed for ultimate performance

- latest CNC and servomotor technology
- generator designed for maximum reliability
- capable of cutting thick, stepped and tapered parts
- multi-workpiece cutting
- easy-to-use **CORE STITCH** function for even longer unmanned machining
- wire threading in just 10 seconds
- automatic in-path wire re-threading
- accurate twin servo wire tension control

years of RoboCut technology

designed and built in Japan



Ultimate wire EDM versatility

Accuracy, speed, finish - no matter the demand or industry, the FANUC RoboCut can take on your everyday cutting tasks. RoboCut's extensive list of standard features and useful options make running a FANUC Wire EDM extremely easy and straight-forward.



Faster set up

FANUC's Set-up Guidance function ensures ultra fast set-ups and reduces downtime by flagging potential operator errors. Other timesaving features include an automatic front door (opt.) and a partial drain worktank that reduces turn change over times by allowing you to remove parts without completely draining the tank.



Easy maintenance

Maintenance is easy thanks to a well designed work table that allows access to the table from below. A clear and precise maintenance guide ensures correct maintenance can be carried out in just a few steps.

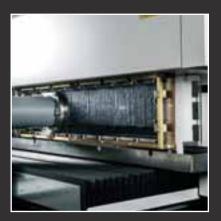


Servo driven drain gate (Unique to RoboCut)

RoboCut measures the water pressure at the bottom of the tank and regulates it according to the Z-Axis position using a servomotor. As a result, you benefit from fewer parts, less maintenance, more reliability and less vibration.

Unique pre-seal self-cleaning

Reducing cleaning times to less than an hour a week and helping to maintain accuracy, this separable unit comes with a patented pre-seal system that prevents sludge from adhering.



Accurate machining despite temperature fluctuations

Thanks to its Thermal Displacement Compensation feature, RoboCut consistently machines to the same exacting standards despite room temperature fluctuations. FANUC offers a 3-sensors solution for environments with high temperature fluctuations and a 7-sensors solution specifically designed for fine displacement adjustment on machines installed in temperature-controlled rooms.



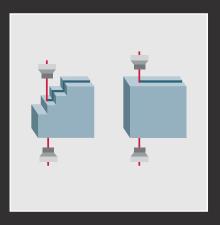
Optimal workspace utilization

Depending on the model, RoboCut's U and V axes can be traversed 3.54" beyond the table, leaving 0.394" between the wire midpoint and the inner edge of the table. This enables smaller workpieces to be machined without the need for expensive clamping devices.



Al Pulse Control

Minimizes the risk of wire breakages at high machining speeds, even under difficult conditions such as those involving wide nozzle distances or changing cutting heights.

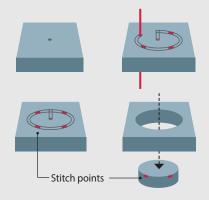




MANUFACTURED FEFICIENCY

CORE STITCH function





The Most Talked About Feature at IMTS

Fanuc's new RoboCut α -C/B Series comes standard with **CORE STITCH** function, which allows you to better plan your jobs and extend unmanned machining hours.

Stitch points are set by the operator without any pre-programming. This is the ideal solution for long, unmanned machining and multi-workpiece cutting processes. When the job is done you simply tap out the cores manually without any risk to the machine. No more glue tabs or magnets needed to hold slugs!



MANUFACTURED FEFICIENCY

New model with 800 mm table stroke for even more versatility



Efficient versatility

Capable of machining parts up to $49.2'' \times 38.4'' \times 11.8'' (19.7'' \text{ opt.})$, the RoboCut α -C800 iB is a future-rich answer to an unpredictable market: should workpiece design change suddenly, this machine can keep up.

Efficient space saving

Big but compact, the RoboCut α -C800 /B has the smallest footprint and lowest height in its class – it's your perfect space saving solution.

Versatile unmanned machining

The α -C800 /B model allows you to mount multiple pieces with just one set up and also offers the most advanced **CORE STITCH** function on the market, saving you time and driving down your unit costs.

Automatic threading in just 10 seconds

FANUC's unique AWF2 Automatic Wire Feed threading technology provides fast, reliable automatic threading in just 10 seconds. To ensure reliable threading and re-threading, wires are cut electrically leaving a pointed end that is absolutely straight and burr-free, even on soft wire. Aided by a jet of water, threading the wire is both simple and very fast.

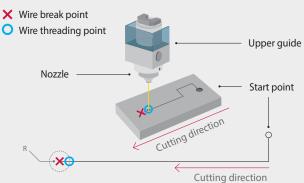
Quiet AWF Mode aids in reducing noisy operating levels.

Auto select between High Speed, Standard Speed, and Thick Workpiece.

MANUFACTURED EFFICIENCY Reliable re-threading

Reliable re-threading in the wire path



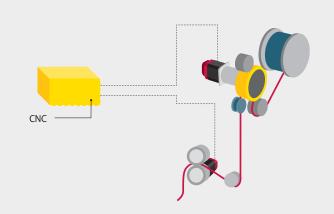


Unlike other machines, RoboCut does not need to return to the starting point after a wire break. This dramatically reduces machining times by re-threading automatically in the wire path on workpieces up to 5.9" thick.

MANUFACTURED EFFICIENCY

Consistent wire tension – improved overall reliability





Twin servomotors maintain the wire tension of your RoboCut. Made possible by FANUC digital servo technology, FANUC's unique twin servo wire tension control ensures consistent cutting by compensating for wire errors. Additional benefits are fewer wire breaks and reduced parts wear



Cutting-edge CNC controller

The centrepiece of every FANUC RoboCut is the most reliable CNC in the world. Designed for maximum precision, FANUC CNCs are extremely easy-to-use and program and offer unrivalled functionality. To date over 3.5 million units have been installed worldwide. To achieve exacting results on more demanding cutting operations, the FANUC 31 *i*-WB High-Performance Control supports up to 7 simultaneously controlled axes and, by monitoring them constantly, ensures continuous protection against collisions. Programming the 31 *i*-WB is simple, with the control's power save mode and energy recovery features making RoboCut especially economic to run.

easy-to-use, lightweight pendant control

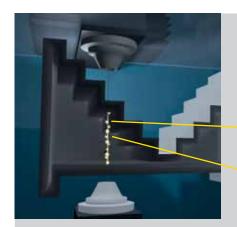
- fast auto diagnosis
- accurate auto correction
- precise predictive maintenance
- easy auto programming
- easy-to-use control screen
- supports multiple languages
 - easy-to-clean membrane keyboard
 - fibre optic cable for maximum reliability
 - energy saving switching electronics
 - mouse and keyboard interface
 - predefined shortcuts
 - keyboard and touchscreen



RoboCut efficiency highlights

Improved accuracy – less passes with AiP2 Discharge Control

The CiB-Series machines' Ai Pulse 2 Discharge control improves accuracy and surface finishes with a reduced number of passes. By accurately counting the number of effective discharges and monitoring the uniformity of energy density and the discharge gap, AiP2 enables high precision cutting at high speeds. The speed and precision of step shape cutting is enhanced with the AiP2 by detecting work thickness according to the number of discharge pulses. AiP2 optimizes cutting speeds in stepped, multi-level, and irregularly shaped work pieces.



With AiP2

AiP2 monitors the effective discharge for high precision, high speed cutting.

Effective discharge

Less sludge

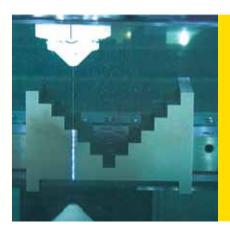


Without AiP2

Without discharge control, cuts are slower and surface quality is compromised.

Ineffective discharge

More sludge



Cutting Example

- Die Steel
- Thickness 0.039" to 3.15"
- Wire thickness Ø 0.008" brass
- 3 passes
- Accuracy ± 0.0002"



Remote monitoring with RoboCut-LINK i

Equipped with a new graphic interface, RoboCut-LINK *i* is an updated production and quality information management tool that allows you to monitor the status of up to 32 RoboCut machines in real time from remote PCs or smart devices. Specific information is available for each cutting job, and event driven push notifications can be sent to different devices. The extremely user-friendly and intuitive interface gives you access to preventive maintenance functions as well as consumable and repair services. It also allows you to transfer NC programs and run quality checks by comparing standard data to current cutting statuses.

Status monitor

- layout monitoring
- device detail monitoring

Operation results

- group operation results
- device operation results
- machining results

Diagnosis

- alarm history
- program history



The perfect package for PCD tool making

RoboCut α -C*i*B series machines are the world leader when it comes to cutting PDC tools and tips. The RoboCut PCD generator ensures superior cutting edges and microfine finishes. Combined with the PCD Edge software probe and CCR rotary table, the RoboCut wire EDM is the perfect all-in-one soluton to your PCD tool requirements











FANUC RoboCut for the electrical and IT parts industry

Extremely high accuracy on tooling, such as molds, is needed to make high precision and micro parts such as electrical connectors. Incredible levels of repeatability also ensure the same high standards are obtained time and time again.

Al Corner Control 2

FANUC's exclusive Corner Control 2 cutting technology ensures sharp and precise inside and outside corners without sacrificing cutting speed or requiring special programming.

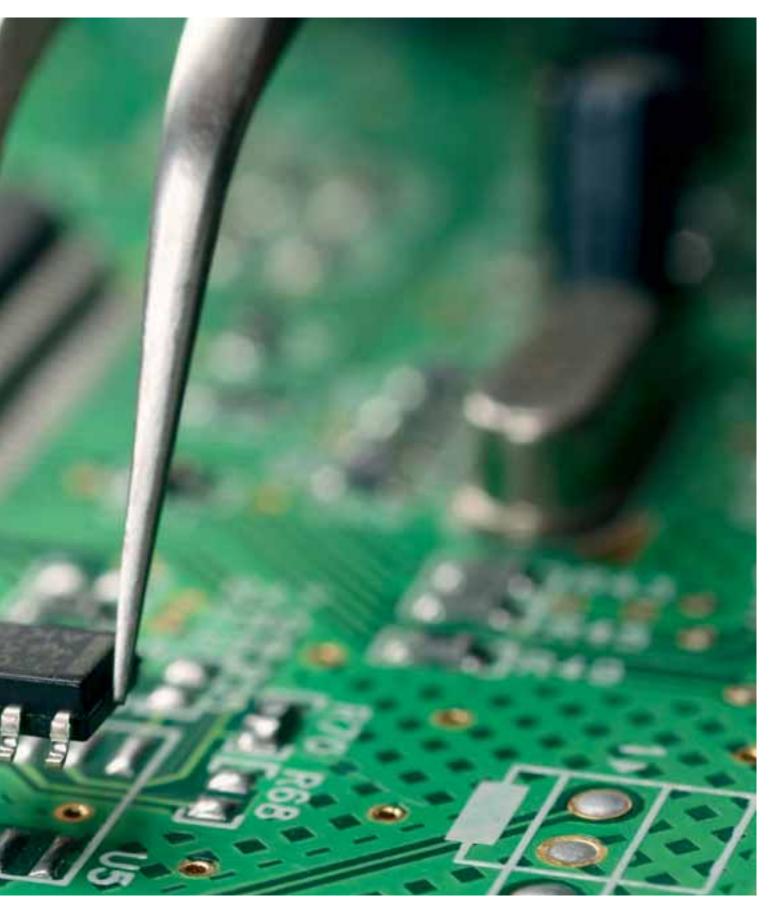
MF2 micro finish function (opt.)

FANUC's MF2 micro finish generator not only enables you to achieve extremely fine surfaces and mirror finishes but also ensures maximum accuracy and efficient cutting. This is ideally suited to producing the molds used in electrical injection molding to make high quality electrical components such as connectors.

















RoboCuts deliver the highest level of reliability and repeatability required to mass produce medical instruments and implants. In many cases, customers have reported no recast, even at 1000X magnification. FANUC RoboCuts also have a very small footprint, maximizing valuable factory floor space.

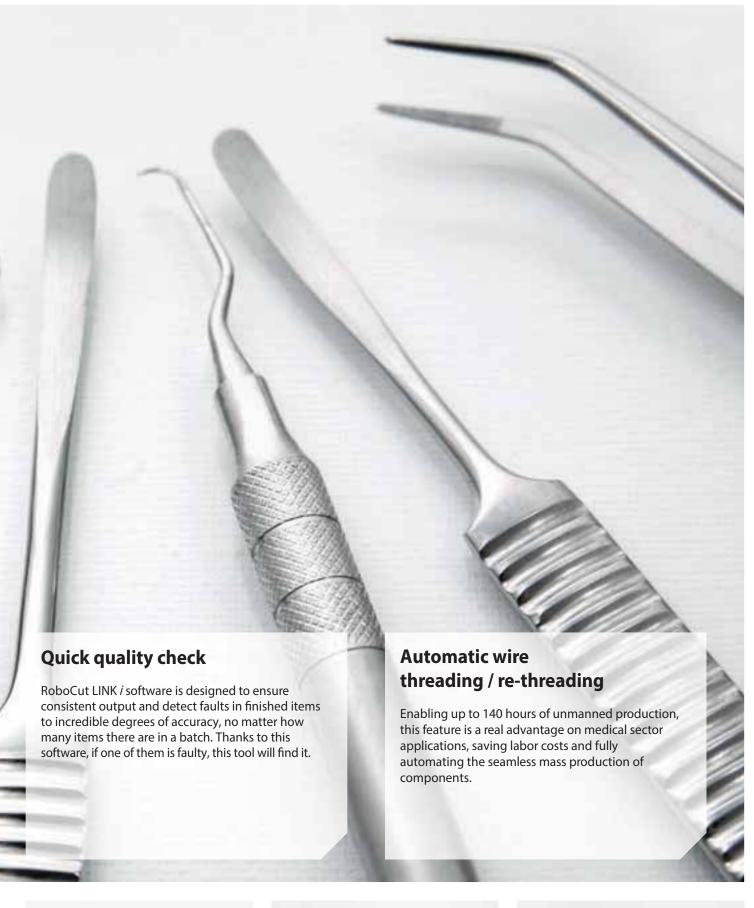


FANUC CCR rotary table (opt.)

For maximum precision and versatility, this compact, lightweight universal rotary table comes with high-resolution glass scales and for maximum concentricity provides optimum travel between the U and V axes. Saving time on machining processes by dispensing with the need to manually rotate the workpiece, FANUC CCR rotary table is ideally suited to the production of medical products. It is perfectly insulated to avoid water entering and comes with flood detection as standard.













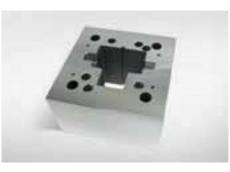
FANUC ROBOCUT for tool and die, mold makers, and job shops

RoboCuts are versitile and reliable, making them the perfect choice for these industries. Superior finishes and accuracy are the name of the game and FANUC RoboCuts deliver year after year. FANUC wire EDM's prove why they outproduce the competition while still commanding a reputation for reliability and low cost of ownership.

Now the α -CiB series raises the bar again with the RoboCut CORE-STITCH function. This standard feature on all CiB machines allows true unattended cutting of tools and dies.

Taper cutting RoboCut comes with a range of features designed to reduce cycle times on taper cutting processes and guarantee continuous unmanned machining. These include advanced taper cutting compensation, FANUC's soft wire AWF2 and twin servo wire tension control. Keyway cutting function Input the data, push the button and create the program. Cutting keyways is that easy. Once the cycle has started, positioning and cutting are automatic, making this the convenient way to cut keyways.















Customize your RoboCut

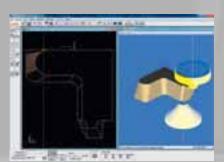
Designed to enhance the productivity of your RoboCut across an enormous range of applications, FANUC's range of dedicated software and hardware accessories give you the freedom to tailor your machining processes to your needs precisely. Like all FANUC products, FANUC accessories exhibit extreme reliability, are simple to use and have been designed to help you get the most out of your RoboCut. Using them will allow you to increase output and maintain exacting quality standards regardless of how challenging your machining processes might be.



Programming made easy with RoboCut-CAM i

The FANUC RoboCut-CAM i system makes programming cylindrical, conical and 4-axis machining routines easy. You can mirror RoboCut-CAM i software directly to the CNC screen by using the remote desktop function. RoboCut-CAM i also offers multiple languages and a number of 2D or 3D data import options such as DXF, IGES and STEP files.

Your advantages with RoboCut-CAM i



- RoboCut-CAM i software can be mirrored to the CNC screen
- · huge range of post-processing options
- simple program transfer via Ethernet interface
- automatic default settings reduce set up times
- simple programming of involute gearing, top and bottom shapes, coreless cutting



Turn and Burn

RoboCut is available with a FANUC CCR rotary table. This lightweight universal rotary table comes with high-resolution glass scales and, for maximum concentricity, provides optimum travel between the U and V. Designed for a range of applications: Medical, Aerospace, and PCD tooling.



Renishaw touch

For precise automatic positioning and workpiece alignment.



Auto grease lubrication system

Lubricates according to specification, reducing the need for manual maintenance (factory option).



MF2 function

FANUC's MF2 micro finish generator not only enables you to achieve extremely fine surfaces and mirror finishes but also ensures maximum accuracy and efficient cutting.



Thermal displacement compensation with 7 sensors

Thermal displacement compensation is also available with 7 sensors for ultimate thermal stability.



Wire chopper

For long hours of unmanned cutting.



0.002 in and 0.003 in thin wire option

Finer than standard 0.004 in wire, this is available as an option on C400 *i*B only to produce very small and thin parts.



PCD Edge Programming Software

Powered by GTR ProfDia, this software is the industry's choice for programming cutter profiles on flat and / or rotary cutting tools.



Automatic front door

Time saving option that dispenses with the need to completely drain the water.



Tilt or tilt rotary tables

Adding a single axis FANUC CCR or twin axis table is simple and will increase the productivity of your RoboCut C/B series wire EDM.



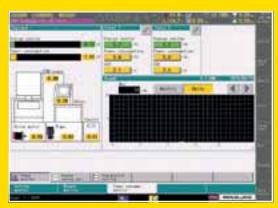
66 lbs wire auto loader

Retrofittable for up to 140 hours of extended unmanned operation.



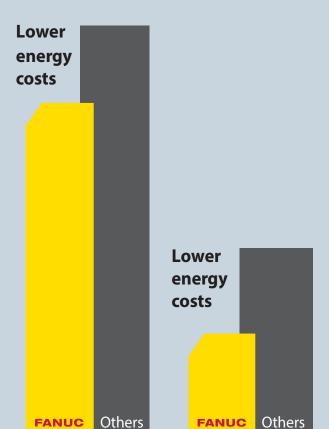
LED triple alarm light

Energy saving function



The energy saving function makes it possible to track precisely the amount of energy being consumed during machining or on standby. Power saving interventions such as switching off flushing or filter pumps can also be set, with features such as screen savers, sleep mode, auto start-up by timer and auto power off, all contributing to additional savings.

- lower energy consumption and costs
- reduce machine running costs
- increase the lifetime of the machine



Power monitor

This energy saving feature provides an overview of how much energy is being consumed and shows where savings can be made.

Sleep mode

This feature saves energy by automatically putting the machine into sleep mode during periods of inactivity.

Designed to save energy

FANUC RoboCuT CNCs, motors, amplifiers, generators and pumps are engineered to deliver the lowest possible energy consumption through the use of intelligent energy management. Every component has been chosen to provide the highest possible performance for the least possible energy. Additional smart features to reduce energy consumption further include power monitoring, sleep mode, LED lighting, inverter pumps and cooling and power regeneration.



Designed for easy automation

FANUC RoboCuts and FANUC Robots combine to make the perfect unattended machining solution. All FANUC products speak the same language, and share common servo and control platforms - making learning your robotic cell extremely easy. Methods Automation Group will work closely with you to design and build an automated EDM solution, tailored specifically for your needs.

α-C400 iB Technical Data

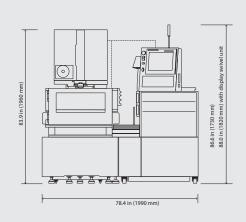


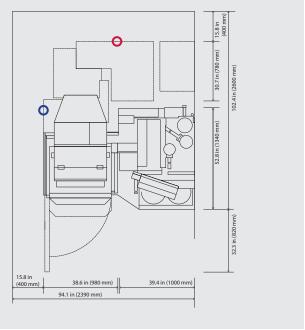
Standard Features	Inches/Pounds	Millimeters/Kilograms
Maximum workpiece dimensions	28.7 x 24.8 x 9.8 in	730 × 630 × 250 mm
Maximum workpiece weight	1100 lbs	500 kg
X Y axis table travel	15.7 x 11.8 in	400 × 300 mm
Z axis travel	10.2 in	255 mm
U V axis travel	± 2.362 in	120 × 120 mm
Maximum taper angle	±30° / 3.15 in	±30° /80 mm
Minimum step increment of the drives	0.000004 in	0.0001 mm
Wire diameter	Ø 0.004 ~ Ø 0.012 in	Ø 0.10 ~ Ø 0.30 mm
Maximum wire weight	35 lbs	16 kg
Footprint (W/D)	94 x 105 in	1990 × 2200 mm
Machine weight (approx.)	4000 lbs	1800 kg
Controller	FANUC 31 <i>i</i> -WB	FANUC 31 <i>i</i> -WB
Part program storage size [MB]	4	4
Acoustic noise level		
LPA [dB]	64	64
LPCpeak [dB]	81	81
Optional Features		
Thin wire		
Wire diameter	Ø 0.002 ~ Ø 0.003 in	Ø 0.05 ~ Ø 0.07 mm
45° die guide		
Maximum taper angle	±45°/1.6 in	±45°/40 mm
30 kg wire feed unit		
Maximum wire weight	66 lbs	30 kg

Outer dimensions | Floor plan

O Power input position (200V AC,3-phase)

O Compressed air input position
* The values in parentheses < > are when the safety cover is open.





^{*)} The above floor plan is that of a standard type machine. Contact Methods if you wish to order options such as 66 lbs wire feed unit and thin wire option. Some equipment may not be shown.

α -C600 *i*B Technical Data (12"/16")

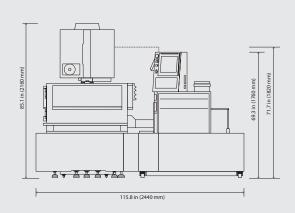


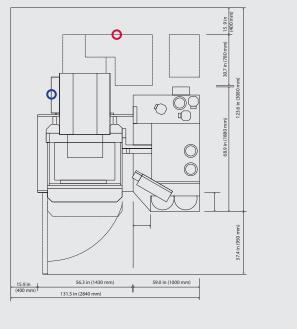
Standard Features	Inches/Pounds	Millimeters/Kilograms
Maximum workpiece dimensions	41 x 32 x 12 in	1050 × 820 × 300 mm
Maximum workpiece weight	3550 lbs	1600 kg
X Y axis table travel	23.6 x 15.7 in	600 × 400 mm
Z axis travel	12.2 in	310 mm
U V axis travel	±3.93 in	200 × 200 mm
Maximum taper angle	±30° / 6.4 in	±30°/150 mm
Minimum step increment of the drives	0.000004 in	0.0001 mm
Wire diameter	Ø 0.004 ~ Ø 0.012 in	Ø 0.10 ~ Ø 0.30 mm
Maximum wire weight	35 lbs	16 kg
Footprint (W/D)	112 x 131 in	2440 × 2680 mm
Machine weight (approx.)	6700 lbs	3000 kg
Controller	FANUC 31 <i>i</i> -WB	FANUC 31 <i>i</i> -WB
Part program storage size [MB]	4	4
Acoustic noise level		
LPA [dB]	64	64
LPCpeak [dB]	81	81
Optional Features		
Z axis 400		
Z axis travel	16 in	410 mm
Maximum workpiece dimensions	41 x 32 x 15.7 in	1050 × 820 × 400 mm
Footprint	112 x 131 in	2790 × 2680 mm
45° die guide		
Maximum taper angle	±45°/ 3.75 in	±45°/ 70 mm
30 kg wire feed unit		
Maximum wire weight	66 lbs	30 kg

Outer dimensions | Floor plan

- O Power input position (200V AC,3-phase)
- O Compressed air input position

 * The values in parentheses < > are when the safety cover is open.





^{*)} The above floor plan is that of a standard type machine. Contact Methods if you wish to order options such as 66 lbs wire feed unit and thin wire option. Some equipment may not be shown.

α -C800 iB Technical Data (12"/20")

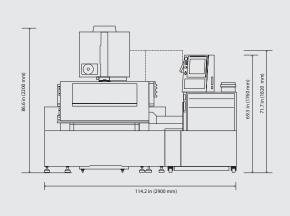


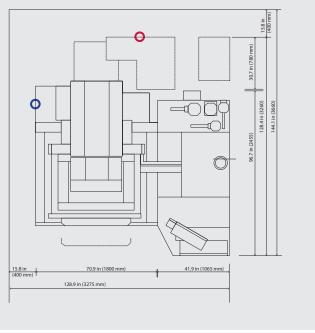
Standard Features	Inches/Pounds	Millimeters/Kilograms
Maximum workpiece dimensions	49.2 x 38.3 x 11.8 in	1250 × 975 × 300 mm
Maximum workpiece weight	6600 lbs	3000 kg
X Y axis table travel	31.5 x 23.6 in	800 × 600 mm
Z axis travel	12.2 in	310 mm
U V axis travel	±3.94 in	200 × 200 mm
Maximum taper angle	±30°/6 in	±30° / 150 mm
Minimum step increment of the drives	0.000004 in	0.0001 mm
Wire diameter	Ø 0.004 ~ Ø 0.012 in	Ø 0.10 ~ Ø 0.30 mm
Maximum wire weight	35 lbs	16 kg
Footprint (W/D)	113 x 129 in	2900 × 3260 mm
Machine weight (approx.)	9260 lbs	4200 kg
Controller	FANUC 31 <i>i</i> -WB	FANUC 31 <i>i</i> -WB
Part program storage size [MB]	4	4
Acoustic noise level		
LPA [dB]	64	64
LPCpeak [dB]	81	81
Optional Features		
Z axis 500		
Z axis travel	20.1 in	510 mm
Maximum workpiece dimensions	49.2 x 38.3 x 19.6 in	1250 × 975 × 500 mm
Footprint	113 x 129 in	2790 × 2680 mm
45° die guide		
Maximum taper angle	±45°/ 1.6 in	±45°/ 40 mm
30 kg wire feed unit		
Maximum wire weight	66 lbs	30 kg

Outer dimensions | Floor plan

- O Power input position (200V AC,3-phase)
- O Compressed air input position

 *The values in parentheses < > are when the safety cover is open.







Efficient service

Wherever you need us, Methods' network of sales, applications, and service are close by. That way you can be sure you have quick response and local, factory trained representatives that speak your language.



Efficient long time productivity: Methods Maintenance Services

To minimize impact on production and get the most out of your machine, we offer maintenance services designed to lower your machine's TCO. Whatever your production scenario, Methods solutions keep your machine running via dedicated preventive, predictive and reactive maintenance procedures that maximize uptime and keep downtime to a bare minimum.

Efficient training: Methods Training Department

The Methods Training Department offers everything you need to upskill your teams and increase productivity – from introductory programs for beginners through courses tailored to the needs of expert users and specific applications. Fast and effective learning make up the extensive educational offering.



Boston Charlotte Chicago Detroit Los Angeles Memphis Phoenix San Francisco



Efficient supply: Lifetime OEM spare parts

As long as your machine is in service FANUC will provide you with original spare parts – for a minimum of 25 years. With more than 20 parts centers all over the world, dedicated service engineers and direct online access to FANUC parts centers, availability checks and ordering, we keep you running whatever happens.

