

THE BEST PARTS OF THE
AVIATION FLY
FROM THE OCEAN

A GLOBAL
AEROSPACE INDUSTRY
SPECIFIC BRAND



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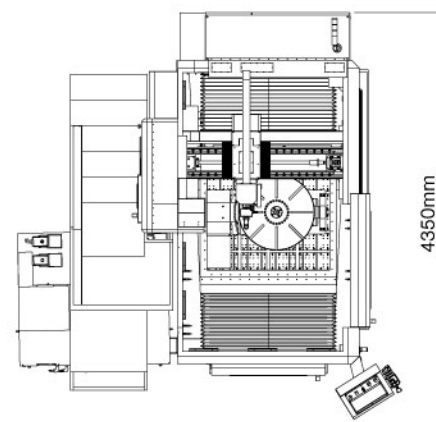
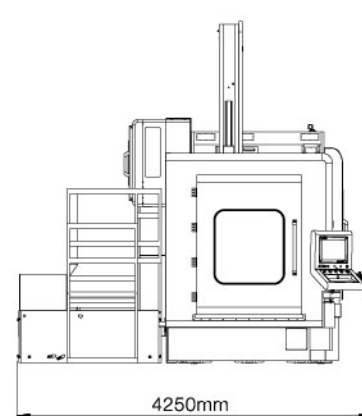
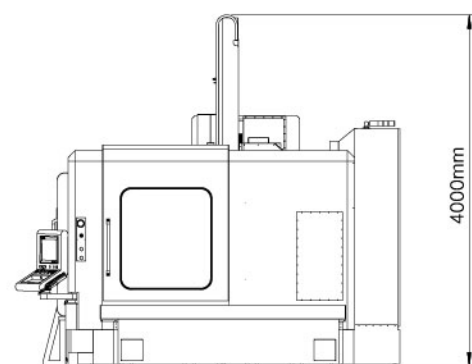
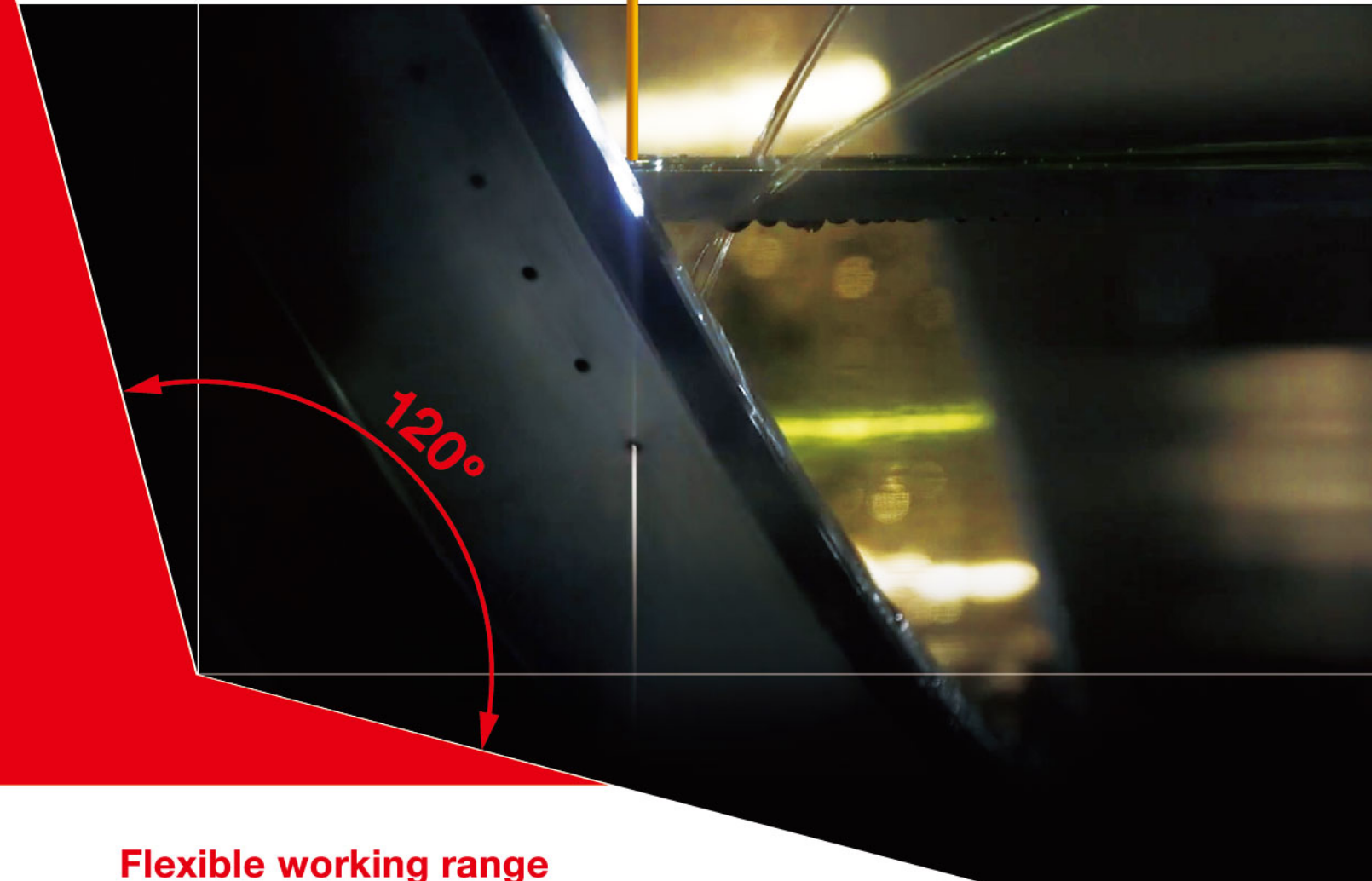
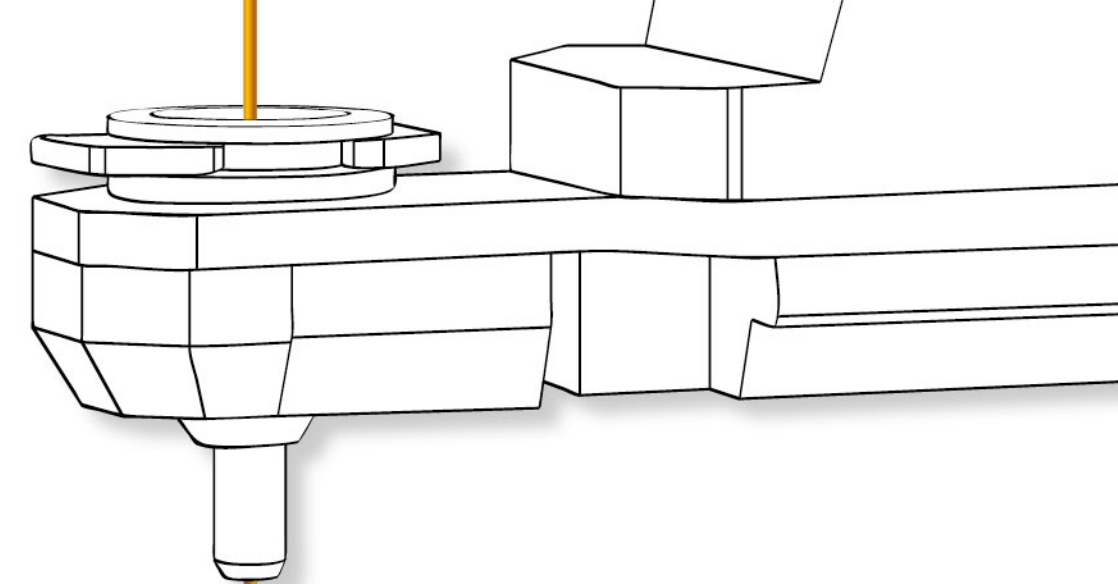
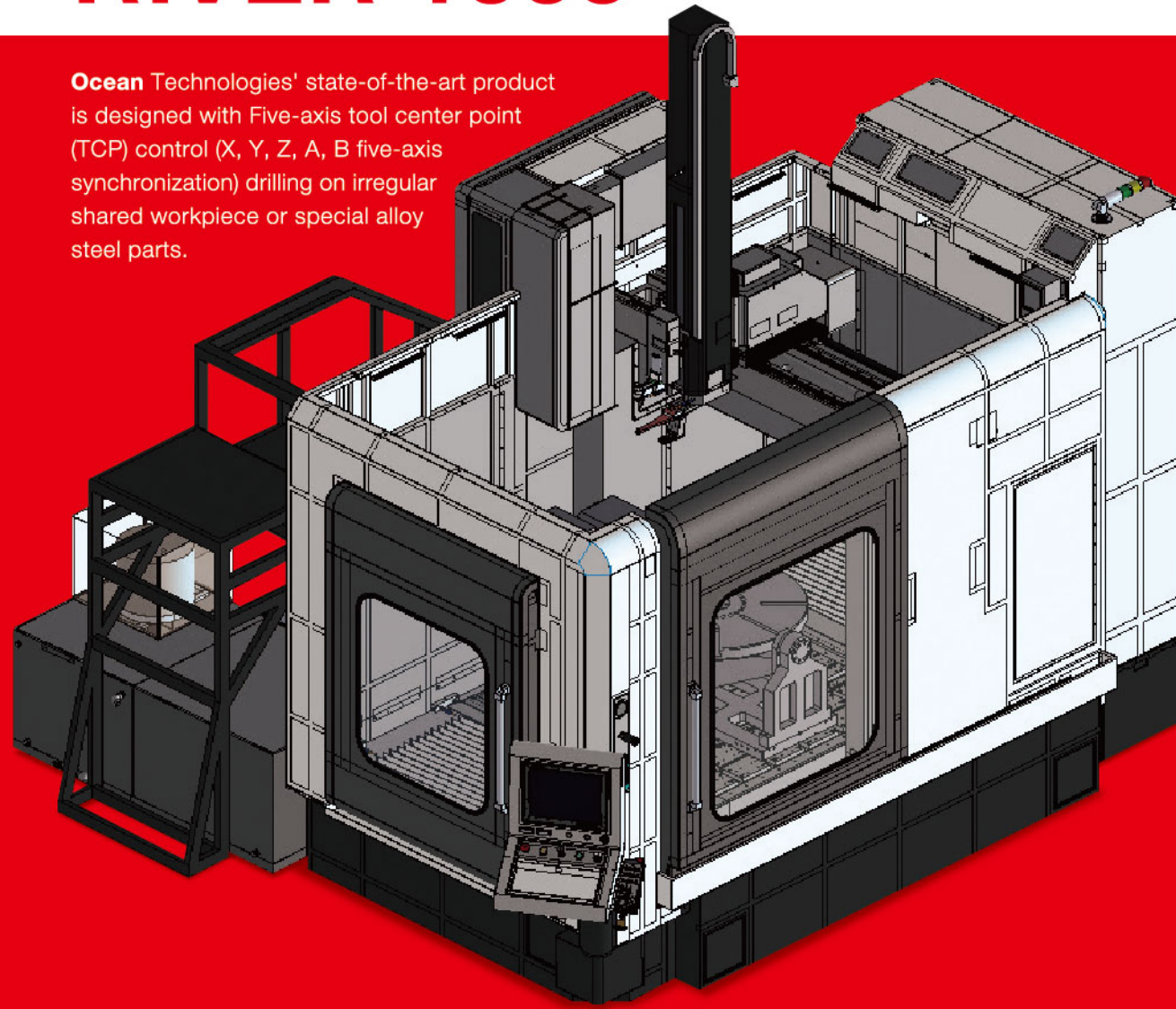
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A Global Aerospace Industry Specific Brand

Ocean Technologies' State-of-the-art Product **RIVER 1000**

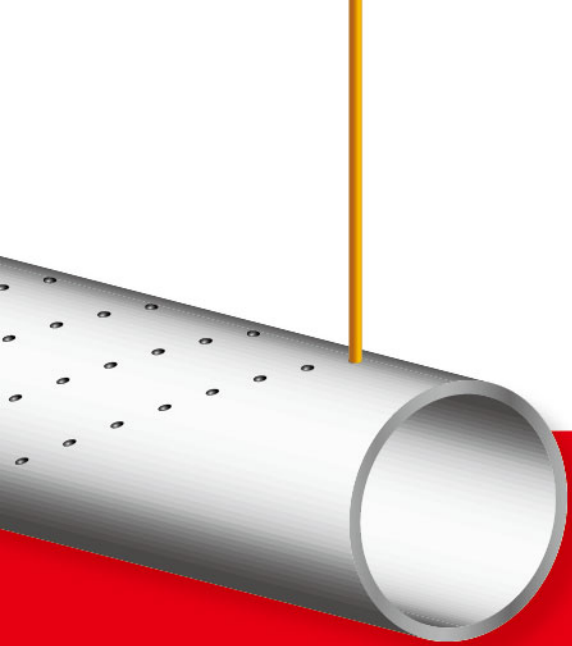
Ocean Technologies' state-of-the-art product is designed with Five-axis tool center point (TCP) control (X, Y, Z, A, B five-axis synchronization) drilling on irregular shared workpiece or special alloy steel parts.



Flexible working range

to suitable for all kinds of aero-engine blades and Aero-engine diffuser.
(5 axes synchronization drilling)





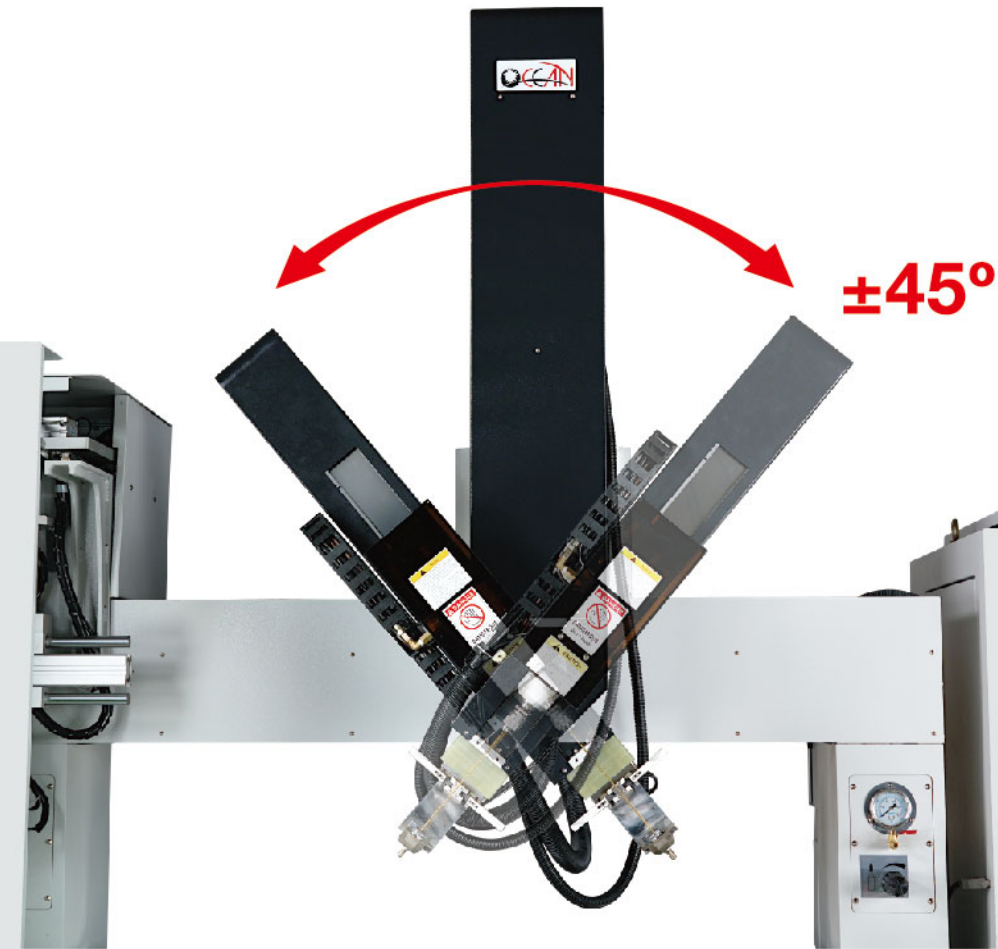
Gantry Type CNC Drilling EDM **RIVER 800**

The optimum structural design especially for **Aerospace** and **Automobile** industry.



Different Height of Plane Drilling

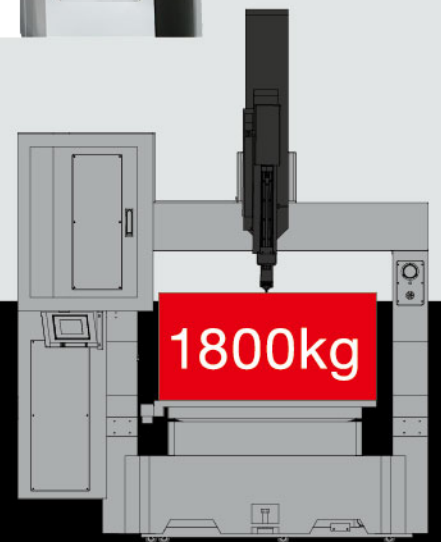
Diffuser Shape Drilling



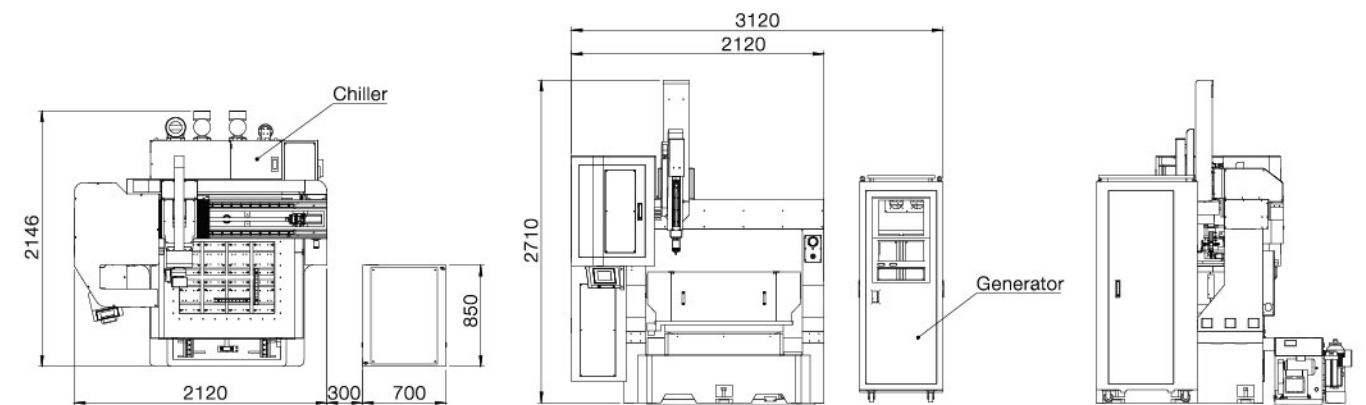
$\pm 45^\circ$

Gantry Type Construction Assures Outstanding **Rigidity** and **Stability**

- Gantry type construction assures outstanding Rigidity and Stability.
- Extra long W axis up to 700mm which is suitable for long or large workpiece.
- Super heavy duty table load of 1800 kgs
- ATC/AGC are optional.



High loading capacity: **1800kg**

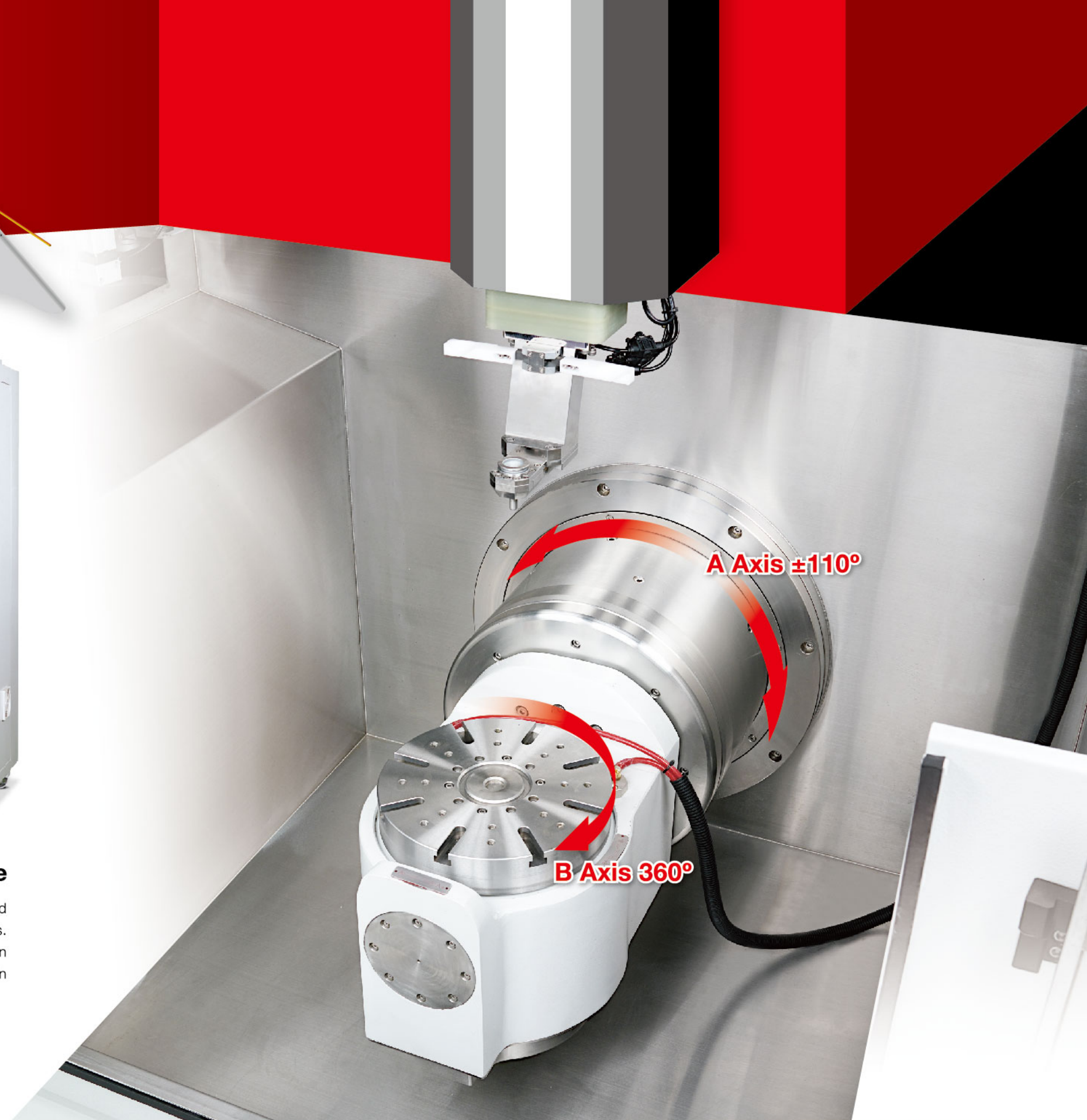
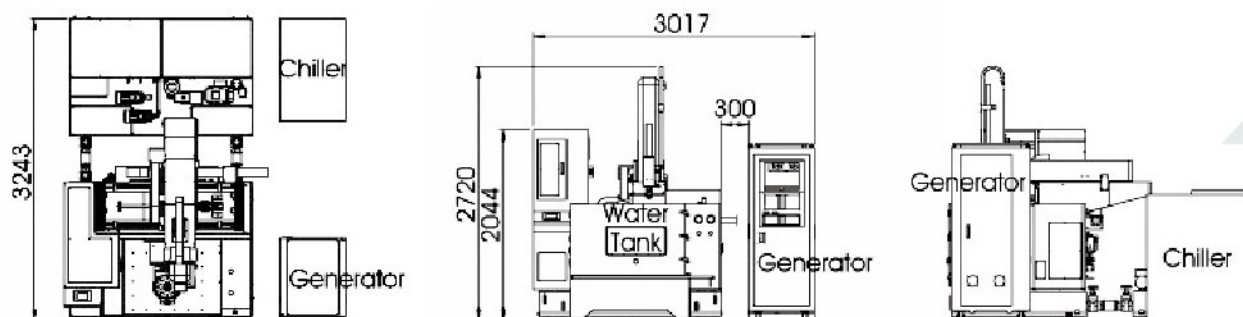


RAM Type CNC RIVER 700



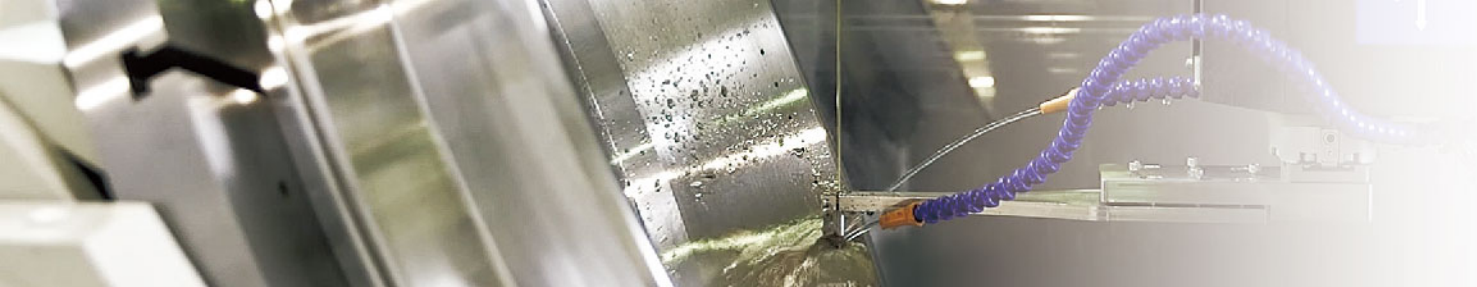
Submerged Type Water Tank Superior Workpiece Surface

For customers who require fine finish surface, the RIVER 700 is the first choice. The submerged water tank allows quality and efficient sparking performance even on irregular shaped work pieces. In addition, the travel column structure features constant load on all 3 linear axes, the integrated design is perfectly suitable for aerospace component's mass production, especially the turbine blades in the turbo engine.

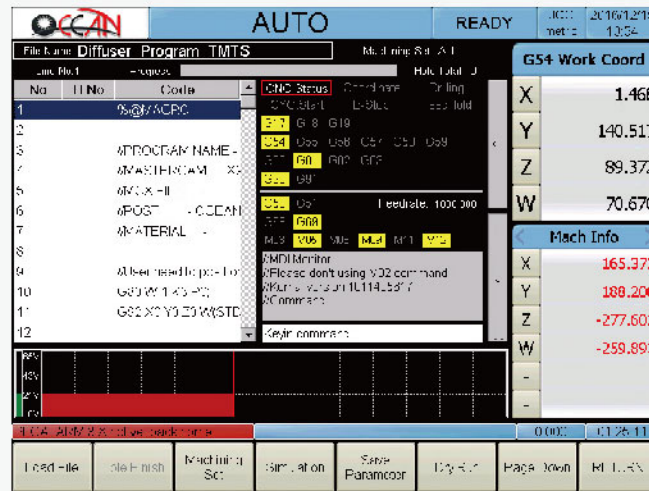


Oversized lower arm fully supports the rotary table unit, with the IP68 isolation class plus an external position encoder; the swiveling accuracy may reach **up to $\pm 25\text{sec}$** .





High Performance Ocean Technology Controller



Compact Hardware and High Quality Human-machine Interface

- 15" TFT LCD touch operation panel
- 4 axis closed-loop control (6 axis optional)
- SDRAM : 512MB , CF card 25MB * 2
- USB storage interface

Machining Program Edit

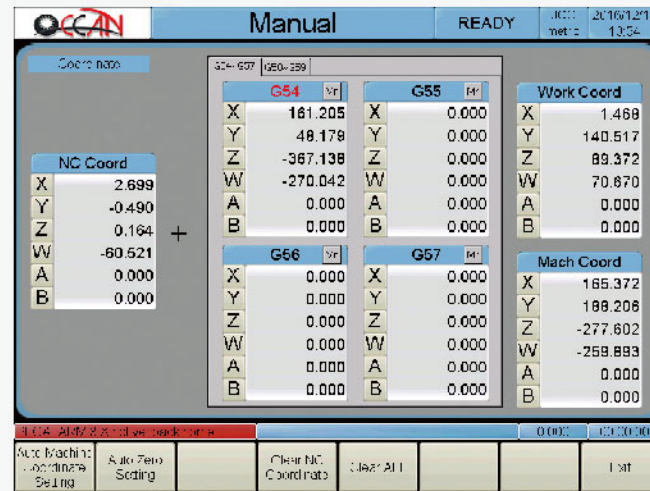
- G/M code capacity limited 190,000 block (File 8MB)
- In load, insert, delete, save, search, copy, etc. Functions
- Program simulation for "ALL MACHINE"
- Wire cut file transfer to nc program function
- Point coordinate input function from dxf file
- Special modular edit (Circle pattern, Rectangle Pattern)
- Teaching coordinate processing input function (optional)

Machining Parameter Setting

- Machining condition library
- Machining condition table
- Machining depth table

Manual Function

- Home search
- Automatic work piece angle correction function
- Auto edge probing
- Auto centering of two points
- Auto centering of circles
- Jog function (Incremental, Continuous, No-guard)



NC Function

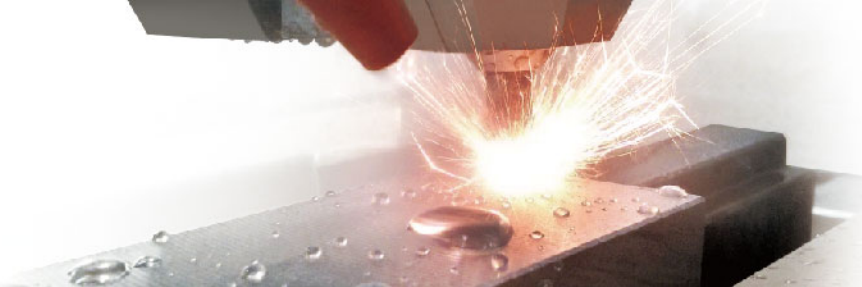
- 4 Axes closed loop control
- Servo feed rate control
- Auto electrode change
- Auto guide change
- Auto compensation of replacement new electrode
- Pitch error compensation
- Interrupt point and start point start point restart
- Multi-language change
- Inch and metric change
- Emg-stop during precession
- Choice program fulfill (Choice range machining)
- Program machining start, pause, reset function
- Sub program
- Revised parameter during machining
- Work path display
- Record and show out macining time
- Software limit protect
- Dry running
- Auto error diagnose system
- Program machining rotating
- Mirror function

Machining Way

- Single hole machining and position
- Multi-hole machining
- Single block machining, auto machining

Coordinate Display

- Machine coordinate
- Work coordinate
- Relative coordinate



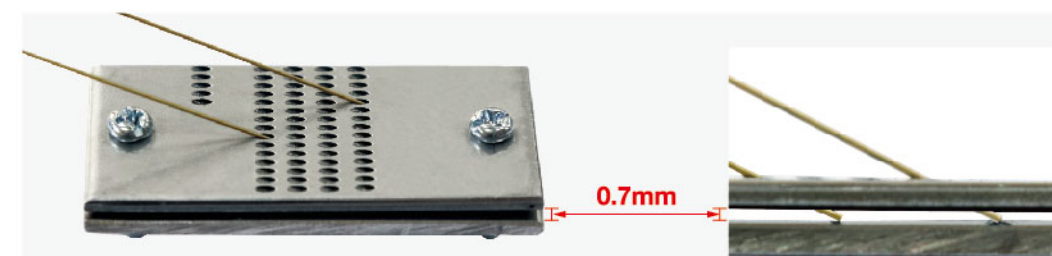
Specification		RIVER 1000	RIVER 800	RIVER 700
X, Y travel	mm	1000 x 1200	800 x 600	700 x 500
Working table	mm	1200 x 1250	800 x 600	Ø250
Z axis travel	mm	1000	500	500
W axis travel	mm	700	500	500
Max. average current	Amps	32 (64 Opt.)	32 (64 Opt.)	32 (64 Opt.)
Power input		According to local voltage	According to local voltage	According to local voltage
Power capacity	KVA	6	3.8	10
Electrode diameter	mm	0.1~3.0 (3.1~6.3 Opt.)	0.1~3.0 (3.1~6.3 Opt.)	0.1~3.0 (3.1~6.3 Opt.)
Machine net weight	kgs	7000	2500	3500
Max. workpiece height	mm	1100	500	340
Max. workpiece weight	kgs	3000 kgs (with tool fixture)	1800	40 (When Tiltling 30)
Depth / Width / Height	mm	4350 x 4250 x 4000	2250 x 2450 x 2520	2050 x 2200 x 2000

Standard Accessories

- Tool box * 1 pc
- Guide cover * 1 pc
- Ceramic guide : dia. 1.0mm * 1 pc
- Brass tube 300mm : dia. 1.0mm * 10 pcs
- Rubber seal * 5 pcs
- Filter * 1 pc
- Handle for filter * 1 pc
- Electrode holder BS type * 1 pc
- Remote controller * 1 pc
- Guide block (When order optional)

Optional Software

- HP1 sparking circuit
- Break through function
- Diffuser shape technology
- eTCP multi-axis synchronization
- 6 Axes EDM drilling / CAM software
- 6 Axes EDM milling CAM software
(Included EDM drilling CAM software)



Break though function drilling



5 Axes synchronization drilling