

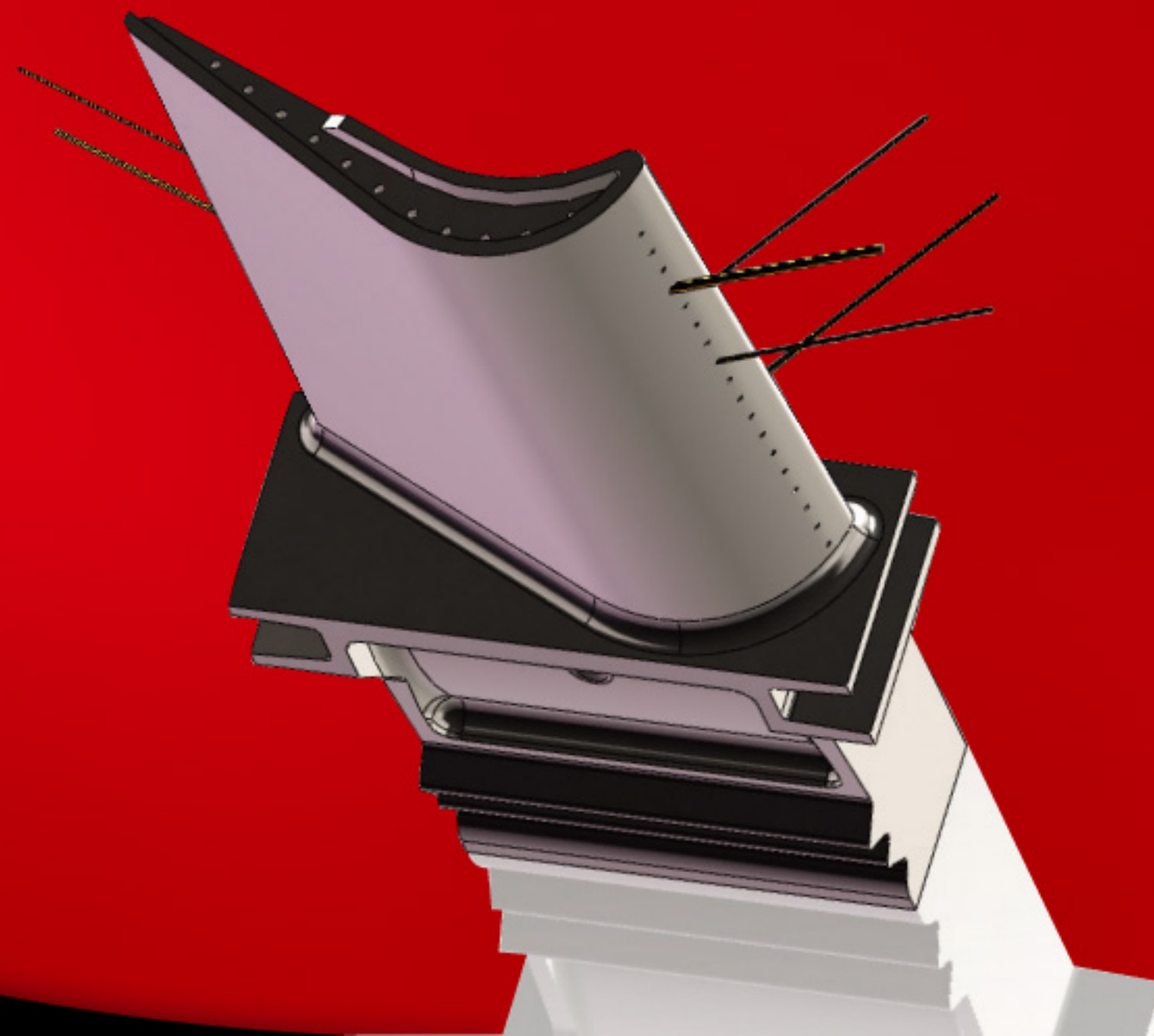
# SALES NETWORK

## All Over the World



## Big Technology Starts From Small Holes

### Fine Hole Drilling EDM



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OCEAN TECHNOLOGIES CO., LTD.



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## Proven Quality with Outstanding Features

With more than 20 years of experience in electrical discharge technology, Ocean Technologies Co., Ltd. is established in Nov. 2000. The management team consists of engineers with expertise and enthusiasm for producing high performance and high accuracy EDM Drilling machines.

The proven quality of Ocean Technologies machines are widely applied in various high tech industries such as aero space, medical equipment, optical electronics and so on.

**GA Series**  
Gantry Type CNC Drilling EDM



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**RA Series**  
Ram Type CNC Drilling EDM



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**CA Series**  
CNC Drilling EDM



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**ZA / ZB Series**  
High Performance Drilling EDM



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**NA Series**  
Standard Drilling EDM



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**Standard / Optional Accessories**  
Consumable



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**Specifications**

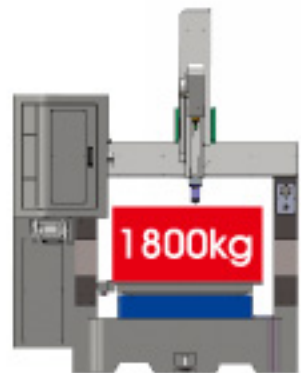
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## GA Series

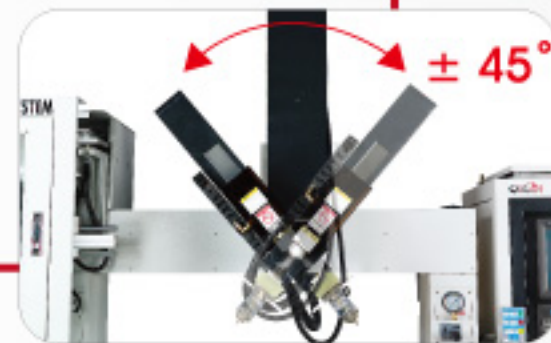
Gantry Type CNC  
Drilling EDM

### OCT-8060GA



High loading capacity : 1800 kg.

- Extra long W axis up to 700 mm which is suitable for large workpiece. (without tilting)
- Super heavy duty table load of 1800 kg.
- 3 axes employ high accuracy linear motion guideways.
- Capable of working with 5th or 6th axis rotary table for irregular shaped work pieces.
- ATC / AGC are optional.



The optimum structural design especially for aerospace and automobile industry.

## RA Series

Ram Type CNC Drilling EDM

Fixed Table Design for the  
Optimum Accuracy

Suitable for the coolant jet  
channel in the tooling



### OCT-6040RA



- Ram type structure features X/Y/Z axis moving on the main structure, the fixed table design allows heavy loads of up to 1200 kg.
- Long Z axis travel of 700 mm. (optional)
- 3 axes employ high accuracy linear motion guideways.
- Capable of working with 5th or 6th axis rotary table for irregular shaped work pieces.
- ATC / AGC are optional.

The Best Equipment for  
Tooling Makers

Rise and Fall Water Tank  
Submerge depth up to 500 mm. (optional)



The unique characteristic of Ram type structure offers an outstanding Z axis stroke up to 700 mm. Optional 700 mm. electrode tube is available





# CA Series

CNC Drilling EDM

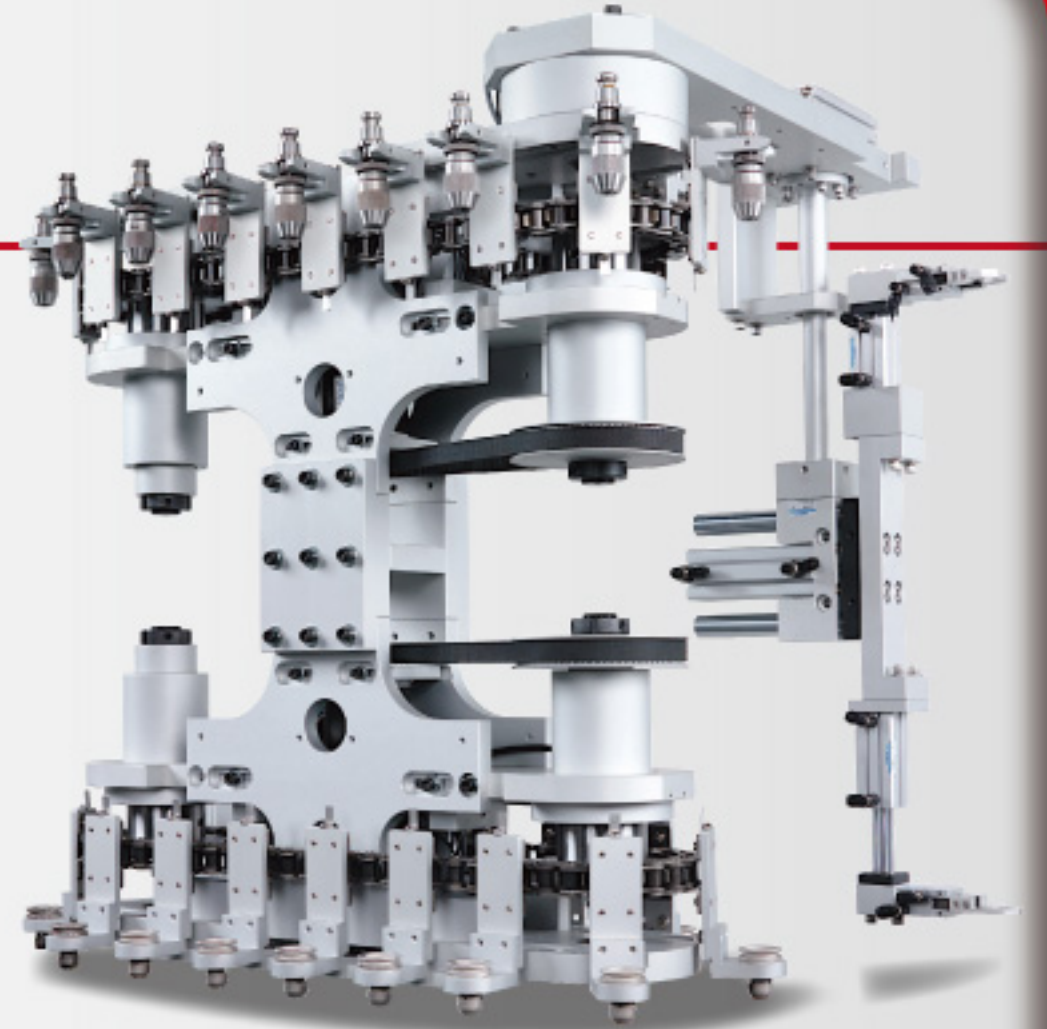
With Auto Tool / Electrode  
Changer (ATC) and Auto  
Guide Changer (AGC)



## OCT-3525CA

The classic model of all CA Series CNC Drilling Machines meet demands for job shops.

Water Tank with Filtration Cartridge



Automatic Tool / Electrode Changer : ATC

- Tool / Electrode capacity: 16 (std.) / 32 (opt.)
- Fully CNC controlled and servo driven.
- Auto compensation for new electrode.

Automatic Guide Changer : ATC

- Electrode guide capacity: 10
- Fully CNC controlled and servo driven.



# ■ Ocean Technologies Controller

## ■ MCS Function

- Able to revise custom parameters

## ■ Process Program Edit

- G/M code capacity limited 8M
- In load, insert, delete, save, search, etc. functions
- **Program simulation**
- Wire cut file transfer to NC program function
- Special module edit (circle, square)
- Point coordinate input function from DXF file

## ■ Process Parameter Setup

- Process condition stock
- Process condition list
- Process depth list

## ■ Manual Function

- Position
- Opposite coordinate moving
- Auto edge search
- Auto centering of two points
- Auto centering of four points
- Auto vertical edge search
- Continuous moving, little moving, un-protected moving

## ■ NC Function

- 4 axes closed circuit 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 restart**
- Multi-language change
- Inch and mm change
- Emg-stop during procession
- Choice program fulfill
- Program process start, pause, reset function
- Vice program called
- Revised parameter during procession
- **Work path display**
- Recorded and show out process time
- Software limit protect
- Dry running
- Auto error diagnose system
- Program process rotation G68
- Mirror

## ■ Process Way

- Single hole process and position
- Multi hole process
- Single section process

## ■ Show Out Position

- Machine coordinate
- Work piece coordinate
- Relative coordinate

## ■ G Cord

- G00 Fast positioning
- **G01 Linear interpolation**
- G04 Hold for seconds
- G28 Reference point return
- G30 Block skip cancel
- G31 Block skip active
- **G36 Start to work**
- **G38 Condition table change**
- G53 Machine coordinate position
- **G54-G59 Working coordinate**
- G68 Program coordinate rotation
- G80 Edge searching
- G82 Locate groove center
- G83 Locate inner hole
- G84 Locate outer center
- G85 Locate circular cylinder center
- G86 Locate vertex angle
- G90 Absolute coordinate
- G91 Relative coordinate
- G92 Work coordinate point setting

## ■ M Cord

- M01 Program hold
- M02 Program end
- M03 Spindle CW
- M05 Spindle stop
- M06 Auto guide change
- M08 Fluid supply start
- M09 Fluid supply stop
- M11 Auxiliary fluid on
- M12 Auxiliary fluid off
- M20 Auto electrode change
- M30 Program finished
- **M36 Start to work**
- M98 Call sub-program
- M99 Sub-program end

# Ocean Controller





## ■ ZA / ZB Series

High Performance  
Drilling EDM

### OCT-3525ZA

(Optional with tilting Head)



#### NC Features

- 10 sets of work piece coordinates.
- 10 memory sets of sparking parameters.
- Sparking parameter can be fine tuned.
- Automatic / manual work piece surface / edge sensing.
- Automatic / manual electrode compensation.
- Metric / inch conversion.



### OCT-3525ZB

(Standard tilting Head  
and Submerge Tank)



## ■ NA Series



#### NC Features

- 5 sets of work piece coordinates. (Optional 10 sets)
- Sparking parameter can be fine tuned.
- EDP Function: Point sparking (Surface sparking)
- Display mode: DSP, Wear, Depth, End, Pn
- Automatic / manual work piece surface sensing.
- Automatic / manual electrode compensation.
- Metric / inch conversion.


OCT-3525NA





# SPECIFICATIONS

## PARTS & ACCESSORIES

	Model	Model
 Rubber Seal	Rubber seal (big) for ER holder C type	<ul style="list-style-type: none"> <li>Without hole (no range)</li> <li>With hole: range: 0~0.5mm, 0.6~1.0mm, 1.1~2.0mm, 2.1~3.0mm, 2.6~3.0mm, 3.1~4.0mm, 4.1~5.0mm, 5.1~6.0mm, 6.1~6.3mm</li> </ul>
	Rubber seal (small) for electrode holder B type, BS type	<ul style="list-style-type: none"> <li>Without hole (no range)</li> <li>With hole: range: 0~0.5mm, 0.5~1.2mm, 1.2~1.5mm, 1.6~2.0mm, 2.1~2.5mm, 2.6~3.0mm</li> </ul>

	BS type	C type	
 Ceramic Guide	 Electrode Holder	 ER Holder	 Electrode Tube
<ul style="list-style-type: none"> <li>Size: 0.1 mm, 0.13 mm, 0.15 mm, 0.2 mm~6.3 mm, (0.1 mm each size)</li> </ul>	<ul style="list-style-type: none"> <li>∅0~3.0 mm (stainless)</li> </ul>	<ul style="list-style-type: none"> <li>∅0~6.3 mm</li> </ul>	<ul style="list-style-type: none"> <li>Brass/Copper, Single hole/multi-hole</li> <li>Size: 0.1 mm, 0.13 mm, 0.15 mm, 0.2 mm~6.3 mm (0.1 mm each size)</li> </ul>

## OPTIONAL ACCESSORIES: (for NA, ZA, ZB type) (for CNC type)

- Working current: 64 Amps
- ER holder: working capacity 0.2 ~ 6.3 mm
- Ceramic guide: 0.1 ~ 6.3 mm
- Filtering and coolant system for NA type
- 2 Axes linear scale for NA type
- Electrode holder B type
- Electrode holder BS type (Stainless)
- ER holder C type
- Tilting head for ZA type
- Interface for rotary table or robot
- Working current: 64 Amps
- ER holder: working capacity 0.2 ~ 6.3 mm
- Ceramic guide: 0.1 ~ 6.3 mm
- Auto Tool Change (16 tools, 32 tools)
- Auto guide change for CNC
- Auto guide holder for CNC
- Auto guide block for CNC
- Remote control

## MACHINE UNITS:

MODEL	OCT-3020NB OCT-3020ZB	OCT-3525NA OCT-3525ZA	OCT-3525ZB (submerge 300mm)	OCT-4030NA OCT-4030ZA	OCT-4535NA OCT-4535ZA	OCT-5540NA OCT-5540ZA
Table travel (X,Y axes)	300 x 200 mm	350 x 250 mm	350 x 250 mm	400 x 300 mm	450 x 350 mm	550 x 400 mm
Work table size	350 x 250 mm	600 x 300 mm	600 x 300 mm	600 x 300 mm	600 x 300 mm	800 x 450 mm
Z axis travel	350 mm	350 mm	500 mm	345 mm	345 mm	345 mm
W axis travel	200 mm	200 mm	350 mm	200 mm	200 mm	250 mm
The maximum height	180 mm	330 mm	500 mm	330 mm	330 mm	420 mm
Max. workpiece weight	150 kgs	250 kgs	250 kgs	250kgs	600 kgs	1000 kgs
Power input	According to local voltage	According to local voltage	According to local voltage	According to local voltage	According to local voltage	According to local voltage
Maximum average	32 Amps	32 Amps	32 Amps	32 Amps	32 Amps	32 Amps
Power capacity	3.8 KVA	3.8 KVA	3.8 KVA	3.8 KVA	3.8 KVA	3.8 KVA
Electrode diameter	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm
Machine net weight	600 kgs	800 kgs	1400 kgs	1000 kgs	1000 kgs	1500 kgs
Depth / Width / Height	1100x1200x2100 mm	1100x1200x2100 mm	1100x1320x2100 mm	1350x1490x2250 mm	1600x1600x2300 mm	2000x1800x2200 mm

## MACHINE UNITS:

MODEL	OCT-3525CA	OCT-4030CA	OCT-4535CA	OCT-5540CA	OCT-6040 (RAM Type)	OCT-8060 (Gantry Type)
Table travel (X,Y axes)	350 x 250 mm	400x 300 mm	450 x 350 mm	550 x 400 mm	600 x 400 mm	800 x 600 mm
Work table size	600 x 300 mm	600 x 300 mm	600 x 300 mm	800 x 450 mm	850 x 650 mm	800 x 600 mm
Z axis travel	200 mm	200 mm	200 mm	250 mm	700 mm	500 mm
W axis travel	350 mm	345 mm	345 mm	345 mm	500 mm	500 mm
The maximum height	330 mm	330 mm	330 mm	420 mm	650 mm	500 mm
Max. workpiece weight	250 kgs	250 kgs	600 kgs	1000 kgs	1200 kgs	1800 kgs
Power input	According to local voltage	According to local voltage	According to local voltage	According to local voltage	According to local voltage	According to local voltage
Maximum average	32 Amps	32 Amps	32 Amps	32 Amps	32 Amps	32 Amps
Power capacity	3.8 KVA	3.8 KVA	3.8 KVA	3.8 KVA	3.8 KVA	3.8 KVA
Electrode diameter	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm	0.1 ~ 3.0 mm
Machine net weight	800 kgs	1000 kgs	1000 kgs	1500 kgs	5000 kgs	2500 kgs
Depth / Width / Height	1100x1200x2100 mm	1350x1490x2250 mm	1600x1600x2300 mm	200x1800x2200 mm	2180x1980x2500 mm	2250x2450x2520 mm

▶ Due to continuous research and development, all specifications and design characteristics are subject to change without prior notice.