



# ED

## SERIES

High Precision Die Sinker  
ED400C CNC EDM  
Quotation  
Plus Technical Specification



# Gantry Type Movement

Die Sinking Electric Discharge Machine

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ED30C



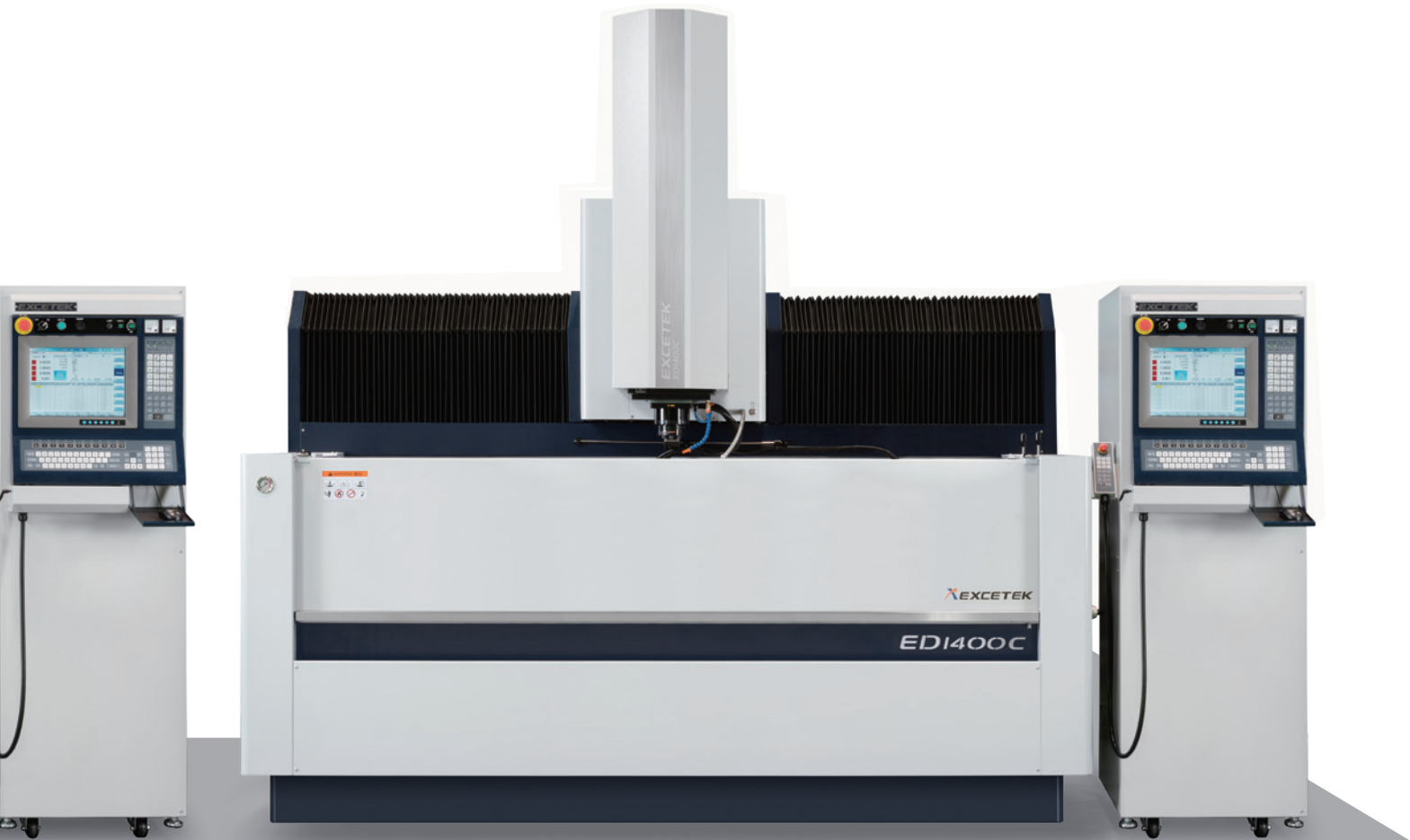
ED600C

Sharp performance with a wide range of machine models

**ED** SERIES

CNC EDM for Quality. Reliability

ED2200C-2H  
ED3000C-2H



ED800C/ED1000C/ED1400C

# Mechanical frame and features



## Multifunction

- 18 kinds of OB modes
- ATC system
- A variety of measurement functions

## High Precision

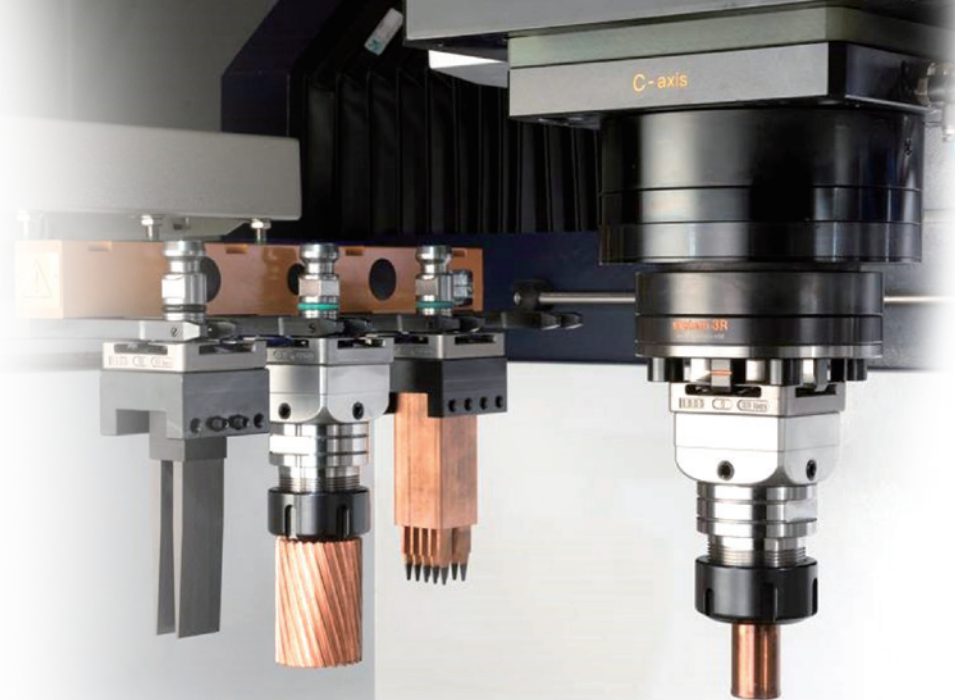
- Column structure design
- Floor-mounting design
- Z axis counterweight patented Structure

## Automation

- 4 & 6 optional ATC / 16 & 20 Robomatic ATC (Optional)
- Vertical Front-door design
- G-CODE auto-programming

## High Performance

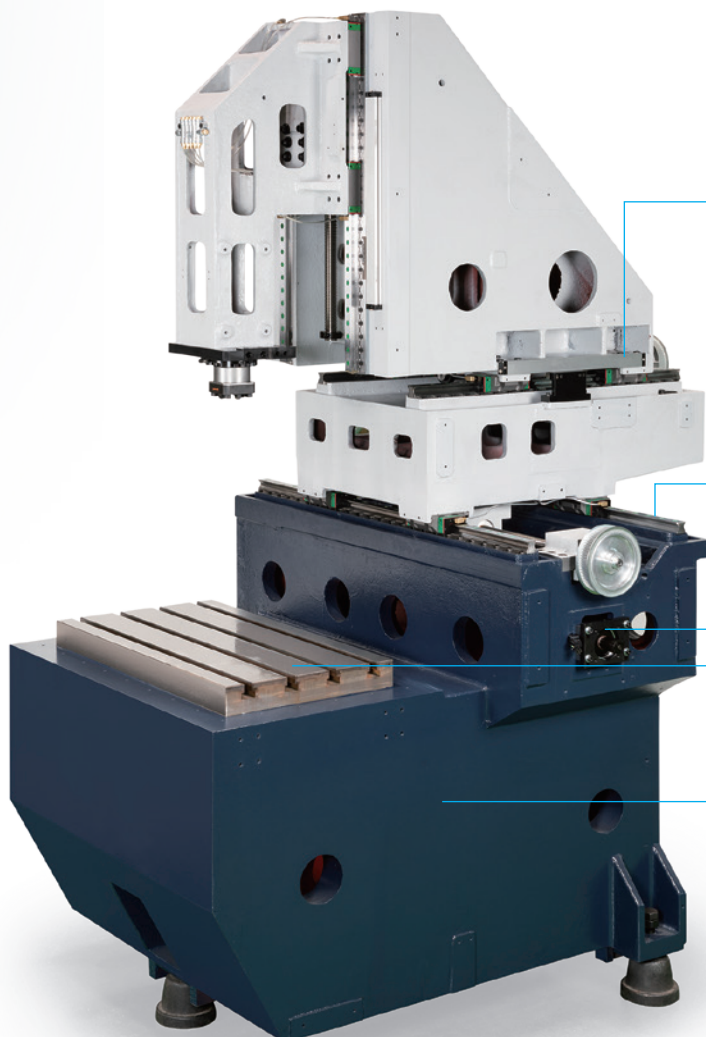
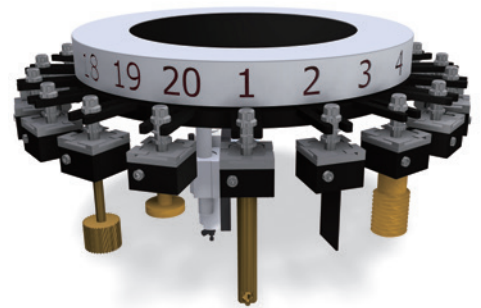
- Tungsten Carbide Sparking circuit (Optional)
- MOSFET Discharge circuit
- ARC protection
- APC protection



### ATC system

- 4 & 6 optional ATC / 16 & 20 Robomatic ATC (Optional)
- Auto electrode offset compensation function

Robomatic Electrode Change System



- Linear scale with high- positioning accuracy



- Linear guide way with roller type  
The rigidity for roller type is 1.7 times higher than the ball type

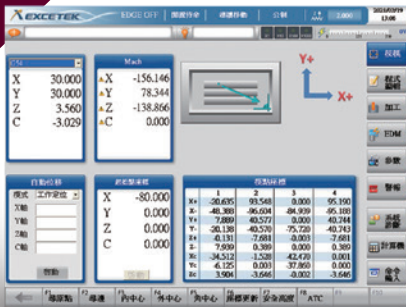
- High-resolution, AC servo motor

- Work table with Hardness HRC50

- High rigidity mechanical frame design optimized under FEM analysis



# Specialized Controller features



Measurement System

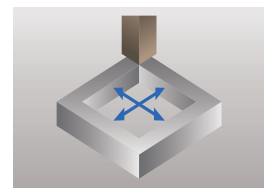
Auto tools changer & electrode offset compensation features

File Management

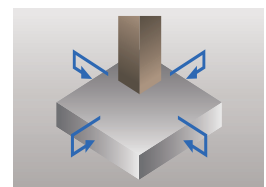


User Friendly Interface

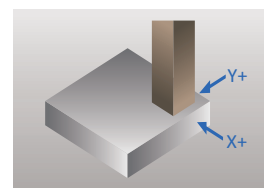
## Edge Finding Function



Inner Center Measure



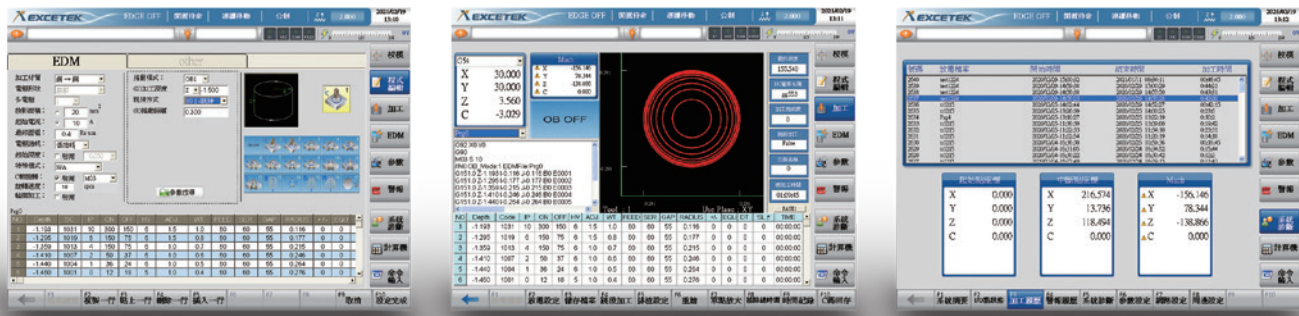
Outer Center Measure



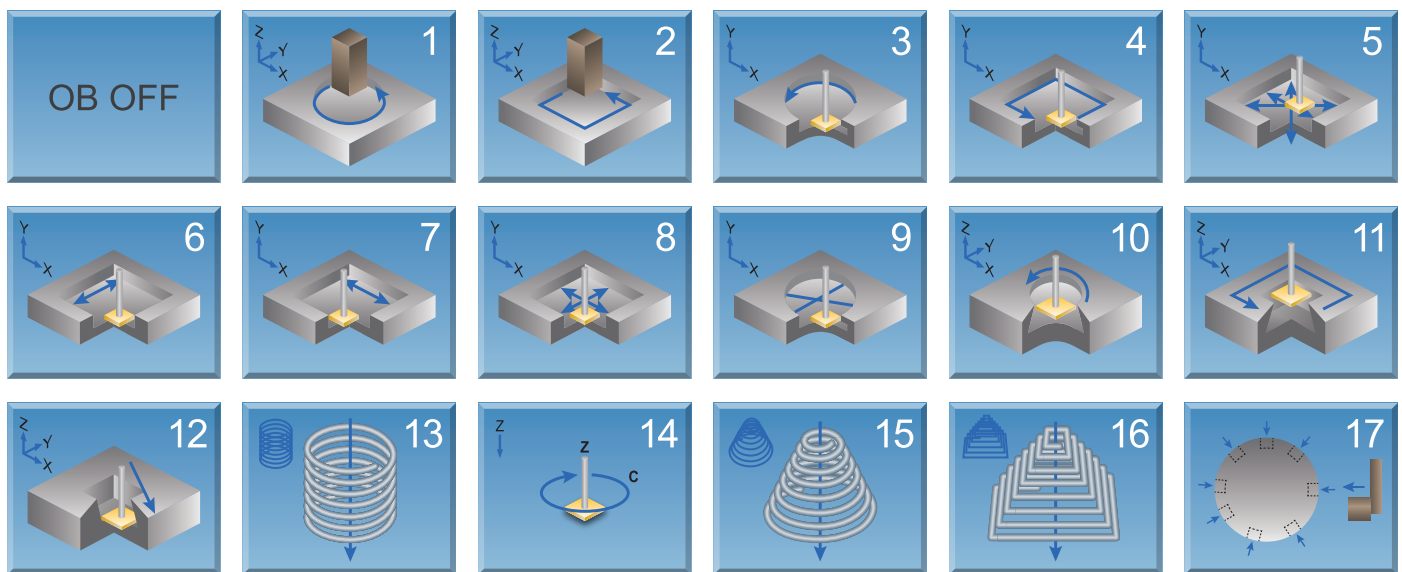
Corner Center Measure

Excetek's Specialized exclusive controller system, brings enormous features and functions in sparking performance and automated technology.

- In order to simplify, we provide a feasible function by increasing Mold lead time and sparking energy automatically based on the set condition which gives high precision of molding.
- In addition, by using provided machining database conditions helps to establish a quick process of working along with the user set conditions.
- Used standard ISO G code format for easier understanding and working.



### OB-Mode



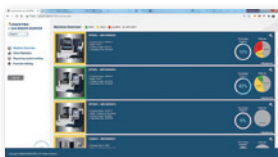
# Automation



## E-Link Server (Optional)



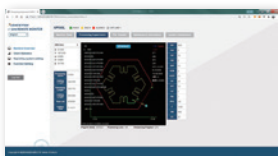
Machine view



Machine Status



Machining Monitor



NC file



Consumable Part Monitor



Utilization Rate Summary Graph



Through OPCUA international standard protocol interface link to another CNC system

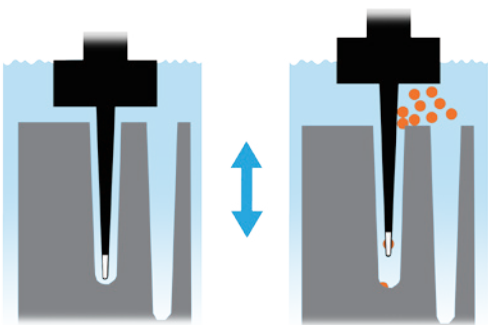
Example: Heidenhain, Delta DIA View, DZ Connect system....



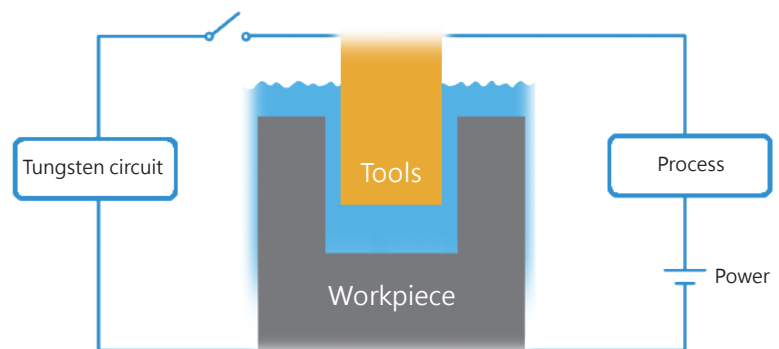


- **Generous function of erosion data base:** Automatic generator function which is featured to the provided erosion condition, where it works automatically according to the electrode material, size and erosion depth.
- **User-Friendly operation:** It is a user-friendly operation which is easier to operate and understand.
- **Auto- parameter function:** the auto-parameter function automatically adopts for quick erosion process and fine finish erosion process where the controller automatically calculates and provides best erosion condition to use which brings efficiency, accuracy and saves the working time.
- **Equal pulse generator:** For big electrode size or depth erosion, controller will calculate the servo speed and generates equal pulse for erosion which brings high accuracy after machining and helps in solving the sparking detect.
- **Special function:** for copper, graphite and tungsten carbide circuit helps to improve the erosion speed and less electrode wear.
- **ARC & Short circuit Protection:** Auto-monitor of erosion status where the ARC or Short Circuit, the generator helps to detect GAP feedback signal and auto rejects the flushing status and adjust erosion frequency.
- **Safety Protection:** Auto Fire detection system, ARC Protection, Oil Level Detection provide, safety security system and X/Y/Z axis use high resolution display system.

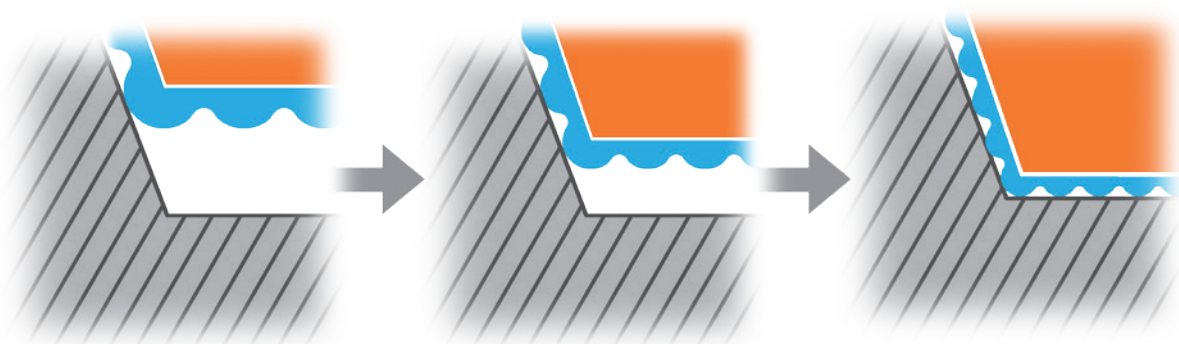
Using high pulse function the electrode sparking improves discharge efficiency and reduces the electrode wear from the material.



By Tungsten Carbide Sparking circuit, we can achieve high discharge efficiency and low electrode wear.



By equal discharge pulse circuit, it detects the real time Gap sparking status where it auto-adjust discharge condition to reduce electrode wear and improve discharge efficiency from rough surface to finished sparking surface.

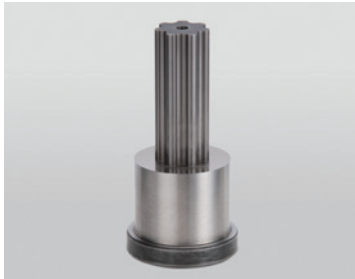


# Specifications

## Application



## Sample



Sample: Punch  
Material: Tungsten Carbide  
Electrode material: Copper  
Electrode quantity: 3  
Roughness: Ra0.3  $\mu\text{m}$



Sample: 50x50 Square  
Material: NAK80  
Electrode material: Copper  
Electrode quantity: 1  
Roughness: 0.12~0.15  $\mu\text{m}$



Sample: Graphite Rib  
Material: NAK80  
Electrode material: Graphite  
Electrode quantity: 1  
Electrode Wear: 1.98%

## Standard Equipment

- Alcohol Extinguisher
- Working Lamp
- Leveling Pad
- Flushing unit
- Paper Filter
- 1/2 Drill chuck
- Tools Box
- Clamp Jig

## Optional Equipment

- C-Axis
- Auto Tool Changer
- X/Y/Z Linear Scale
- Edge Finder Ball
- Oil Chiller
- Auto Voltage Regulator
- Permanent Magnetic Pedestal
- Tungsten Carbide Sparking Circuit

## Specifications

MACHINE MODEL		ED30C
X/Y Travel	mm	300x250
Z Travel	mm	300
Work Table	mm	650x350
Max. Work Piece Size	mm	720x450
Max. Work Tank Size	mm	770x500x300
Max. Work Piece Weight	kg	550
Max. Electrode Weight	kg	50
Machine Weight	kg	1450
Outside Dimensions (Machine body+Travel+Tank+Generator)	mm	2340x1690x2250
Electrode Head to Work Table Distance		280 ~ 580
OIL FILTER TANK		
Tank Capacity	L	350
Tank Weight	kgs	-
Paper Filter		2
Outside Dimensions	mm	Built-in

\*The content of this catalogue is subject to be change by the factory

## Column Movement Specifications

	ED400C	ED600C	ED800C	ED1000C
X/Y Travel	400x300	650x450	800x600	1000x600
Z Travel	350	400	500	500
Work Table	700x400	1000x600	1200x700	1250x750
Max. Work Piece Size	850x580	1290x700	1600x1000x500	1800x1000x500
Max. Work Tank Size	950x700x450	1390x700x500	1650x1050x550	1850x1050x550
Max. Work Piece Weight	1000	3000	4000	4500
Max. Electrode Weight	50	50	350	350
Machine Weight	2800	3900	5000	5500
Outside Dimensions (Machine body+Travel+Tank+Generator)	2344x2110x2410	2791x2669x2666	3260x3320x3200	3450x3320x3200
Electrode Head to Work Table Distance	300 ~ 650	300 ~ 700	420 ~ 920	420 ~ 920
OIL FILTER TANK				
Tank Capacity	450	1200	1500	1700
Tank Weight	115	350	450	500
Paper Filter	3	4	4	4
Outside Dimensions	1320x550x680	2020x530x1060	2200x1400x580	2300x1400x580

## Column Movement Specifications

MACHINE MODEL		ED1400C	ED1600C	ED1800C	ED2200C	ED2200C-2H	ED3000C-2H
X/Y Travel	mm	1400x700	1600x750	1800x800	2200x1000	1550 (775)x1000	2550 (1275)x1000
Z Travel	mm	500	550	600	600	600	600
Work Table	mm	1700x950	1850x1000	1850x1000	2250x1100	2250x1100	3100x1100
Max. Work Piece size	mm	2100x1200x500	2100x1200x500	2500x1200x600	2700x1600x700	2700x1600x700	3700x1600x700
Work Tank Capacitor	mm	2150x1250x550	2150x1250x550	2550x1250x650	2750x1650x750	2750x1650x750	3750x1650x750
Max. Work Piece Weight	kg	6000	6000	7000	9500	10000	16000
Max. Electrode Weight	kg	450	450	500	500	500	500
Machine Weight	kg	8000	8500	9000	13500	15000	21000
Outside Dimensions (Machine body+Travel+Tank+Generator)	mm	3700x3930x3260	3740x3930x3260	3750x3930x3260	4000x4600x3960	5350x4610x3960	6500x4610x3700
Electrode Head to Work Table Distance		550 ~ 1050	550 ~ 1050	450 ~ 1050	660 ~ 1260	760 ~ 1360	760 ~ 1360
OIL FILTER TANK							
Tank Capacity	L	2200	2600	3000	4000	5000	6500
Tank Weight	kgs	600	700	750	950	1050	1150
Paper Filter		8	8	8	8	8	8
Outside Dimensions	mm	2600x1600x580	3000x1580x640	3050x1650x640	3300x1800x780	3700x1850x780	4700x1850x780

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## Generator Specifications

MACHINE MODEL		50N	75N	100N	150N	200N	300N
Max. Erosion Current.		50A	75A	100A	150A	200A	300A
Max. Stock Remove Rate.	mm <sup>3</sup> /min	400	600	800	1100	1400	1700
Max. Power Input.	KVA	4.5	6	8	12	14	20
Max. Electrode wear.		0.2 %	0.3 %	0.4 %	0.4 %	0.5 %	0.5 %
Best of surface Roughness		0.20	0.30	0.50	0.70	0.70	0.70
Generator Weight	kg	200	300	330	330+300	330+300	330+300+300
Generator Dimension (LxWxH)	mm	610x610x1885	610x610x1885	610x610x1885	(610x610x1885)x2	(610x610x1885)x2	(610x610x1885)x3

# ED

## SERIES

High Precision Die Sinker EDM Series



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