

PRODUCT CATALOGUE

SERVING SINCE 2009



Deals In industrial Machinery

**PERSISTENCE TO
QUALITY ENSURES VALUE**





J.K. MACHINES

Deals In industrial Machinery



J.K. SHARMA
CEO

ABOUT US

J.K. MACHINES is a highly promising young business enterprise specializing in Electric Discharge Machine (EDM), CNC Wire Cut Machine, Tool Room Machines, Laser Welding, Cutting, Marking Machines & Injection Moulding Machine. It was started in the year 2009 by Mr. J.K.SHARMA (M.E.) having vast knowledge of the functioning, application and marketing of these products.

Apart from it, **J.K. MACHINES** also offer various other types of machines, tools and equipment's including CNC Machines, Testing & Measuring Equipment, Woodworking Machinery, Plastic Processing Machinery and machines for Engineering institute workshop.

The organization was incorporated with an aim to come up with the most innovative and high-tech range of machinery, sourced from across the globe, which in turn meets the exact requirements of our clients.

Customer understanding and our reciprocation to their needs by providing the right machining technology, Excellent after sales service that have helped us to become a reliable, multi-product and multi-location organization in a short span of time.

Owing to our excellent quality and ethical business norms, we are continuously associating new clients with our company. The quest for perfection and customer satisfaction urges us to bring in innovation in our products and finding new ways of benefiting our clients.

Since year 2009 we have dedicated association with industry. We will continue to bring the latest technology machines at affordable prices.



OUR PRODUCTS RANGE



CNC EDM (Pg. No. 03)



CNC EDM (Pg. No. 04)



ZNC EDM DC SERVO (Pg. No. 05)



ZNC EDM AC SERVO (Pg. No. 06)



CNC DRILL EDM (Pg. No. 07)



DRILL EDM (Pg. No. 08)



CNC WIRE CUT DC STEPPER (Pg. No. 09)



CNC WIRE CUT AC SERVO (Pg. No. 10)



LASER WELDING (Pg. No. 11)



HAND HELD LASER (Pg. No. 12)



FIBER LASER CUTTING (Pg. No. 13)



LASER MARKING/ENGRAVING (Pg. No. 14)



MIRO TIG WELDING (Pg. No. 14)



CNC ENGRAVING (Pg. No. 15, 16)



CNC WOOD ROUTER (Pg. No. 17)



SINGLE LIP GRINDER (Pg. No. 18)



Tapping Machine (Pg. No. 19)



DIGITAL READOUT (Pg. No. 19)



CONSUMABLES/SPARES (Pg. No. 20)



VERTICAL MOULDING (Pg. No. 21)



MILLING MACHINE (Pg. No. 22,23)



LATHE MACHINE
(Pg. No. 24,25, 26, 27)



RADIAL DRILL MACHINE
(Pg. No. 28, 29)



Tool and Cutter Grinder
(Pg. No. 30,31)

CNC EDM FIXED TABLE MOVING HEAD

Salient Features

- Panasonic AC servo for X, Y & Z axis. Improves efficiency
- 15 inch LCD screen
- Mirror processing special circuit (Optional)
- Automatic protection circuit for carbon deposition prevention
- Multi functional hand control box
- Compact elegant looks
- Axis resolution – 1 micron
- Smoke sensor and fire extinguisher
- High lifting height for ultra deep hole

Standard Accessories

- Axis Corrector
- Flat Electrode Holder
- Round Electrode Chuck
- Flushing Aids
- Clamping Kit
- Mounting/Leveling Pads
- Tool Kit

Optional Accessories

- Servo stabilizer
- Edm oil
- 60 AMP & 90 AMP Controller
- Magnetic Chuck



SINGLE HEAD



DOUBLE HEAD

Specification	Unit	CNC-540	CNC-850	CNC-1260	CNC-1470	CNC-1680	CNC-1880	CNC-2110
Work Tank (WxDxH)	mm	1370 x 720 x 450	1800 x 1100 x 600	2000 x 1300 x 700	2550 x 1300x 700	2550 x 1500 x 850	3000 x 1500 x 850	3800 x 1800 x 850
Working Table	mm	850 x 500	1050 x 600	1250 x 800	1500 x 900	1700 x 1000	2000 x 1000	2500 x 1200
Longitudinal Travel (X axis)	mm	500	800	1200	Single : 1400 Double : 850	Single : 1600 Double : 1100	Single : 1800 Double : 1200	Single : 2300 Double : 1450
Transverse Travel (Y axis)	mm	400	500	600	700	800	800	900
Quill Travel (Z axis)	mm	300	400	450	500	500	600	600
Quill to Working Table	mm	690	900	1000	1100	1150	1200	1250
Max. Electrode Weight	kg	150	200	300	400	400	400	450
Max. Workpiece Weight	kg	1800	3000	3500	5000	6000	6500	8000
Drive System for X,Y,Z Axis		AC Servo	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo	AC Servo
Machine Weight	kg	2500	4500	5500	Single : 9000 Double : 11000	Single : 9000 Double : 12000	Single : 13000 Double : 15000	Single : 15000 Double : 17000
Machine Dimension	mm							
Pulse Generator								
Max. Working Current	amp	30 (60AMP & 90 AMP OPTIONAL)						
Max. MRR	mm ³ /min	300						
Min. Electrode Wear	%	≤0.1						
Best Surface Finish (Ra)	μ	0.15						
Power Supply	volt	3 Phase, AC415V/50Hz						
Connected Load	kVA	8						
Dielectric tank								
Oil Tank Capacity	Ltr	800		1500		1800		
Oil Pump Motor Power	HP							

CNC EDM (INTERGATED TYPE)

Salient Features

- Panasonic AC servo for X, Y & Z axis.
- 15 inch LCD screen
- Automatic protection circuit for carbon deposition prevention
- Multi functional hand control box
- Compact elegant looks
- Axis resolution – 1 micron
- Smoke sensor and fire extinguisher
- High lifting height for ultra deep hole

Standard Accessories

- Axis Corrector
- Flat Electrode Holder
- Round Electrode Chuck
- Flushing Aids
- Clamping Kit
- Mounting/Leveling Pads
- Tool Kit

Optional Accessories

- Servo stabilizer
- Edm oil
- Mirror processing special circuit
- Magnetic chuck



Specification	Unit	CNC-30J	CNC-45J	CNC-50J	CNC-70J
Work Tank (WxDxH)	mm	870 x 570 x 320	1050 x 610 x 450	1150 x 690 x 480	1940 x 1050 x 600
Working Table	mm	500 x 300	700 x 450	800 x 500	1200 x 700
Longitudinal Travel (X axis)	mm	300	450	500	700
Transverse Travel (Y axis)	mm	200	350	400	600
Quill Travel (Z axis)	mm	200	250 + 250	250 + 250	300 + 300
Quill to Working Table	mm	520	700	760	1000
Max. Electrode Weight	kg	50	75	75	100
Max. Workpiece Weight	kg	400	600	800	1800
Drive System for X,Y,Z Axis		AC Servo	AC Servo	AC Servo	AC Servo
Machine Weight	kg	1350	1600	2200	3500
Machine Dimension	mtr	1.50 x 1.40 x 2.30	1.80 x 1.40 x 2.40	1.90 x 1.15 x 2.50	2.10 x 2.00 x 2.80
Pulse Generator					
Max. Working Current	amp	30 (60AMP & 90 AMP OPTIONAL)			
Max. MRR	mm ³ / min	300			
Min. Electrode Wear	%	≤0.1			
Best Surface Finish (Ra)	μ	0.30 (0.10 with mirror finish circuit)			
Power Supply	volt	3 Phase, AC415V/50Hz			
Connected Load	kVA	4	6	8	10
Dielectric tank					
Oil Tank Capacity	Ltr	300	400	500	600
Oil Pump Motor Power	HP	0.50	0.75	0.75	0.75

ZNC EDM (DC SERVO)

Salient Features

- Seven Segment
- Programmable Z axis
- 10 Step, 10 Programs storage
- Built in 3 axis DRO
- Integral design and compact footprint
- Precision co-ordinate table on flat & V type turcide coated guide ways driven by ball screw
- Double door large work tank for ease of loading & unloading of work piece
- Oil level alarm, Oil temperature alarm
- Highly accurate work head with the quill running on pre-loaded cross roller bearing
- High speed quill movement with DC servo motor
- Motorized back slide travel (ZNC-35 onwards)
- Hand held full function remote control (80A,100A & 40AL)
- X,Y,Z lock function
- Mm & inch function
- Reverse servo machining
- Safe & stable no arc machining
- Like to like material machining
- Calibrated EDM technology
- Fire extinguisher, Smoke detector alarm
- Sleep mode, Auto mode
- Power efficient high pressure dielectric pump
- Oil filtration with 20 micron paper filter

Standard Accessories

- Axis corrector with fine adjustment
- Flat electrode holder
- Round electrode holding chuck
- Machine lamp
- Flushing aids
- Clamping kit
- Leveling pad
- Tool kit



Job Sample



Optional Accessories

- Servo stabilizer
- Edm oil
- Orbital attachment
- Translatory head
- Magnetic chuck
- LCD color display

Technical Specification	Unit	ZNC-30	ZNC-35	ZNC-45	ZNC-50	ZNC-70
Working tank (W x D x H)	mm	850x550x320	980x560x380	1250x730x450	1460x880x530	2000x1100x600
Working table	mm	300x500	350x630	450x700	500x800	700x1200
Longitudinal travel (X)	mm	300	350	450	500	700
Transverse travel (Y)	mm	200	250	350	400	600
Quill travel (Z)	mm	200	200	250	250	300
Back slide travel	mm	-----	200	250	250	300
Quill to working table	mm	580	700	730	800	1000
Max. electrode weight	kg	50	50	75	100	150
Max. workpiece weight	kg	300	500	700	1000	2000
Oil tank capacity	Ltr.	300	350	400	500	600
Servo system for Z axis				DC Servo		
Machine weight	kg	1200	1300	1600	1900	3500
Machine dimension (LxWxH)	mm	1320x1150x2060	1350x1210x2100	1485x1420x2150	1600x1600x2200	2100x2000x2600
Pulse Generator						
		40A / 40AL		80A / 80AL		100A / 100AL
Max. working current	amp	40		80		100
Max. MRR	mm ³ /min	200		500		600
Min. electrode wear	%			<0.2		
Best surface finish	Ra			0.5		
Input power supply	V			3 Phase, AC 415V, 50 Hz		
Connected load	kVA	4		8		12
Controller weight	kg	110		200		250
Controller dimension (LxWxH)	mm	Fitted with machine		800x540x1700		800x540x2000

40A/80A/100A - 7 Segment Display | 40AL/80AL/100AL - LCD Display (Optional)

ZNC EDM (AC SERVO)



Salient Features

- 15" LCD color display
- Programmable Z axis
- 50 step, 100 program storage
- Mirror finishing special circuit (Optional)
- Built in 3 axis DRO resolution 1 micron
- Precision co-ordinate table on flat & V type turcide coated guide ways driven by ball screw
- Double door large work tank for ease of loading & unloading of workpiece
- Oil level alarm, Oil temrature alarm
- Highly accurate work head with the quill running on preloaded cross roller bearing and ball screw
- High speed quill moment with **Panasonic AC servo motor**
- Attractive compact looks
- Hand held multi function remote control
- Z axis lock function
- Mm and Inch display
- Reverse servo machining
- Safe & stable, No arc machining
- Like to like material machining
- Calibrated EDM technology
- Automatic lubrication system
- Fire extinguisher, Smoke detector alarm
- Self diagnostic trouble shooting with alarm
- Sleep mode, Auto mode
- Efficient dielectric system with double filtration

Standard Accessories

- Axis Corrector
- Flat Electrode Holder
- Round Electrode Chuck
- Flushing Aids
- Clamping Kit
- Mounting/Leveling Pads
- Tool Kit

Optional Accessories

- Servo stabilizer
- Edm oil
- Orbital attachment
- Translatory head
- Magnetic chuck

Specification	Unit	ZNC-30S	ZNC-35S	ZNC-45S	ZNC-50S	ZNC-70S
Work Tank (WxDxH)	mm	785 x 540 x 320	875 x 540 x 380	1205 x 600 x 450	1255 x 685 x 480	1940 x 1050 x 600
Working Table	mm	500 x 300	630 x 350	700 x 450	800 x 500	1200 x 700
Longitudinal Travel (X axis)	mm	300	350	450	500	700
Transverse Travel (Y axis)	mm	200	250	350	400	600
Quill Travel (Z axis)	mm	200	200 + 200	250 + 250	250 + 250	300 + 300
Quill to Working Table	mm	560	650	700	760	1000
Max. Electrode Weight	kg	50	75	75	100	150
Max. Workpiece Weight	kg	450	500	700	1000	2000
Drive System for Z Axis		AC Servo	AC Servo	AC Servo	AC Servo	AC Servo
Machine Weight	kg	1200	1300	1600	1900	3500
Machine Dimension	mtr	1.50 x 1.20 x 2.32	1.60 x 1.25 x 2.50	1.90 x 1.60 x 2.40	2.00 x 1.60 x 2.50	2.10 x 2.00 x 2.80
Pulse Generator						
Max. Working Current	amp	30 (60AMP & 90 AMP OPTIONAL)				
Max. MRR	mm³/ min	300				
Min. Electrode Wear	%	≤0.1				
Best Surface Finish (Ra)	μ	0.15 with mirror function / 0.40 without mirror function				
Power Supply	volt	3 Phase, AC415V/50Hz				
Connected Load	kVA	8				
Dielectric tank						
Oil Tank Capacity	Ltr	300	350	500	500	800

AM50 Precision Cow Head EDM Machine Series

AM50

High precision mirror machine

- Windows control system (Chinese/English)
- Network transmission port
- PIKA ultra-precision mirror discharge circuit
- 60 workpiece coordinate systems





Item	A50
Worktable size(L×W)	800×500 (mm)
Liquid groove internal size (L×W×H)	1370×950×520(mm)
Workpiece Height	400(mm)
X、Y、Z axis travel	500×400×400(mm)
Max. electrode weight	25 Kg with C - Axis
Max. workpiece size	1260×800×400(mm)
Max. Workpiece weight	2500kg
The Max. and Min. distance surface to electrode plate	390/690mm
Positioning accuracy (JIS standard	5μm/(Arbitrarily)300mm
Repeat accuracy (JIS standard)	2μm
Overall size(L×W×H)	2500×2500×2700(mm)
Machine weight	4000kg
Reservor tank volume	600L
Processing liquid filter type	Switching Cartridge Filter
NC pulsed power supply unit	A50
Max. Current	50A
Total input power	9 KVA
Input Supply	415V, 3 Phase, 50Hz
Best surface roughness	Ra0.3μm
Min. electrode wear	0.1%
Max. productivity	Copper hit steel)350mm'/min (Graphite hit steel)500mm'/min
Standard process	Copper/steel.fine copper/steel, graphite/steel, copper tungsten /steel, fine copper tungsten/steel, steel/steel, coppertungsten/carbide, copper/aluminum graphite/heat-resistant alloys, graphite/titanium, copper/copper
Rapid Traverse X, Y, Z	1500mm/min
Each axis compensation	(Each axis respectively step error compensation ,clearance compensation)
Max. number of controlled axis	four simultaneous axis
Min. drive unit	1μm
Input type	Touch screen, u disk/(Net work transmission
Display type	15"LCD screen(TFT-LCD)
Manual control box	Standard point move(multistage switching)
Position command type	Absolute, incremental dual purpose



J.K.MACHINES



JS EDM
To be Perfect is Our Nature

Quality First

CNC

ELECTRIC DISCHARGE MACHINE

- High-Quality
- High-Stability
- High-Performance
- Easy-Operation
- Multi-Functions



JS EDM
To be Perfect is Our Nature



CNC-EB1000R • Patent Certificate : New type M 444236



ABOUT US

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Apart from it, **J.K. MACHINES** also offer various other types of machines, tools and equipment's including CNC Machines, Testing & Measuring Equipment, Woodworking Machinery, Plastic Processing Machinery and machines for Engineering institute workshop.

Feature :

- Select the industrial PC system (IPC) compatibility construct, it collocation the industrial C.F card (Compact Flash card) and support the USB copy / read data function, it will be save the date easy and convenient, reliable.
- Chinese & English display.
- Metric & British system display & program setting.
- 1,000 stations processing programs.
- Simplify the program editing; with one block command, you can finish the line multi-cavity machining and matrix multi-cavity machining.
- 10 files, and there are 256 sets processing parameter memory in each file; it can store the processing conditions.
- Automatically Edge finding, Home finding, Center or Inner hole finding, and Apex finding.
- The Conversation type program with Loop & Call, Note & Pause, Mark / Copy / Delete Block and Skip line function, It more easy to learn and write & edit the program.
- With Side Ioran function (X, Y axis), Angle Vector machining function, and ARC clockwise & ARC counter Clockwise function.
- Single or 3 axis lateral machining, Round orbiting, Square orbiting, Vector machining.
- Optional accessories A.T.C., C Axis (Including the helical-gear machining, C-X / C-Y axis lateral rock machining, and other applied machining commands).

Mirror Processing (Big Dimension) Controller Advantage :

- JSEDM original creation S.F (super Finishing), Mirror processing circuit, with high purity nanometer fine power of mix system, it machining small size work piece (sparking area) with best surface Ra 0.1 μ m, and the biggest size work piece with best surface Ra 0.2 ~ 0.3 μ m.
- The S. F function with the automatic control mix fine powder and filter the Iron powder, it easy to control the machining process and raise the machine work efficiency.
- DSP (Digital Signal Processors) servo control system speeds the response time up to 0.2ms in a location circuit control versus. (Traditional PC based control is 1ms in a versus.) DSP provides the more stable sparking and smooth machine movement.
- MOSFET transistors couple with responsive POWER SINK circuitry can reach the high processing with low wear and tear rate.
- Pulse circuit adopts the IC of FPGA, the latest generation of field programmable gate array, to ensure the fastest response and capability of "UNI-PULSE" monitor, thus ensure the better burning efficiency by "avoiding" carbon built up. (Less ARC condition.)
- Operator friendly interferes with "AI" logic to assist in setup and operation. Once the basic material, depth, and shape data are entered, the CNC fuzzy logic controller can set and adjust the optimum burning parameters to quickly and efficiently achieve the targeted results. Industrial C.F card (Compact Flash Card).
- Which can be wrote and read over 100,000 times at least.



CNC-EB600L(S.F)



CNC-EB433



CNC-EB600L



CNC-EB5435L



CNC-EB700L



CNC-EB860L



CNC-EB1060L



ELECTRIC DISCHARGE MACHINE



CNC-EB1270L



CNC-EB1470L



CNC-EB1675L



CNC-EB1880L



CNC-EB2010L



CNC-EB2210L



CNC-EB2210L-2H



CNC-EB3010L



CNC-EB3010L-2H

CNC ELECTRIC DISCHARGE MACHINE

High Rigidity and Thick Base

- The base is made by (Mechanic) cast iron and eliminated stress by heat treatment. The structure of base also is designed evenly with high rigidity and symmetry. The work table is processed with heat treatment and precision grinding, so the work table is wear-resistant and can maintain its certain flatness when it is weighted.
- The base is moving column (RAM type) structure and also can carry 4000kg work piece while ensuring flat movement of machine without any effect. In order to improve the processing accuracy. The design of thick base ensure when the machine face long time heavy item oppression, it will not have the occurrence of the deformation question.

Spacious Span of Linear Guide Way and Precision Ball Screw

- X - Y axis use linear guide way on a low coefficient of friction, in order to ensure the mechanical precision and smart operation under the machine movement. Using wide linear guide and span, make sure that the mechanical moving around a long time to do (especially machine doing rasming and vector processing), the positioning of the machine and the actual processing of feed data is more accurate to constantly maintain the machine accuracy. (Backlash value)
- X axis linear guide way (x45mm) is installed on the middle seat of machine, to ensure installation are flat and useful life are long for the linear guide way. And also is collocated with precision ball screw (Ø40mm) to ensure accuracy location while the machine moving in long period.
- Y axis linear guide way (x45mm) is installed on the upper seat of machine, to ensure lightweight guide way for reducing the coefficient of friction of guide way and extending the life period. Besides, the machine is collocated with precision ball screw (x32mm) to ensure the machine in accuracy.

Lightweight moving column (forward and backward displacement)

- Lightweight moving column designed, installed on top of the machine which can increase the machine processing travel and height. And to ensure that the machine to do forward and backward movement without tilting (forward and backward) problem, and don't affect the stability problem while the column is moving.

CNC-EB1000R



±45°

Precision of Spindle

- Spindle is integrated design casting, in order to ensure it is smooth movement with bigger electrode. And use alloy steel guide viny, collocate roller bearing with low coefficient of friction to increase accuracy feed and dexterity while moving.
- Don't use pull counterweight on spindle, but with 350W servo motor and the structure is designed 6 pcs of sliding block on spindle two sides. In order with keep correct position without vibration and improving the life of ball screw while the spindle is lepper processing.

Hydraulic pressure (oil type) function upper / down work door

- With automatic control equipment, allowing user to open and close door more simply, more easily, and it will be more durable and useful.

Select the steel cover protect the X axis

- The X axis used the steel cover as same the machine center that protect efficiency are better more than the traditional type (cloth and plastics material) the steel are more durable, fireproof, and not easy broken.

CNC EB1000R will be change the sparking process and increase efficiency Function :

Item	Function	Z axis with rotation function	Z axis is traditional vertical type
Work efficiency	The Z axis action by vertical function, that it can reduce the machining time and protect the work piece machining accuracy and quality.		Used edge side machining only, it will be short the machine use life, and delay machining process, the electrode will be easy wear also, besides, it with shake and position lost situation during process, of course, the work piece accuracy and quality not well.
Prepare the Electrode and wear situation	Electrode easy to made and wear rate lower		Electrode made need to consider the angle first, and with the angle electrode will be easy to wear during sparking process.
Safety & convenient	Work piece easy to set on the work table level type.		Setting the clamping tool and setting the work piece in the clamping tool, because the work piece had angle that it more danger during process.
Preparations		(a) Made the work piece angle datum plane process. (b) Made the electrode edge datum plane process. (c) Adjust the z axis rotation angle. (d) Adjust the work piece and electrode plane and start sparking process.	(a) Made the clamping tool for clamp work piece. (b) Need to use the CNC machine center and CNC Wire Cut EDM to made the clamping tools. (c) Made the work piece angle datum plane process. (d) Made the electrode edge datum plane process. (e) Made the work piece level plane process. (f) Addition the electrode extender part. (g) Edge two reference side and start sparking process.



1 Hour To Master The Control System

CNC EDM EB SERIES CONTROLLER ADVANTAGE

- DSP (Digital Signal Processors) servo control system speeds the response time up to 0.2ms in a location circuit control versus. (Traditional PC based control is 1ms in a versus.) DSP provides the more stable sparking and smooth machine movement.
- MOSFET transistors couple with responsive POWER SINK circuitry can reach the high processing with low wear and tear rate.
- Pulse circuit adopts the IC of FPGA, the latest generation of field programmable gate array, to ensure the fastest response and capability of "UNI-PULSE" monitor, thus ensure the better burning efficiency by "avoiding" carbon built up. (Less arc condition.)
- Operator friendly interfaces with "AI" logic to assist in setup and operation. Once the basic material, depth, and shape data are entered, the CNC fuzzy logic controller can set and adjust the optimum burning parameters to quickly and efficiently achieve the targeted results.
- With center of circle function, you can select three point key in the edge finding and automatic find the circle of center.
- The Z axis with diversification up (Deslagging) function, easy for machining depth, corner bigger area, thin slice, and taper type machining process.
- Special customize command, according controller that we can feasibility analysis customer request special machining process function and addition the customize function or command.

Superior Controller



FEATURE

- Industrial IPC system, ensure the best stability in any machining condition.
- 15" LCD screen, simplify the operation.
- Dialogued computer editing, easy to learn and use; understand.
- During machining, electrode moving path, time, and machining conditions are all clear displayed in the LCD screen.
- The computer controlled power system, higher efficiency, lower electrode wear rate, fine and delicate surface.

SAFETY

- Fluid height level protection will shut off the electricity automatically when fluid level is lower than preset high level.
- If improper use causes fire, then the machine shuts off automatically.
- When the work head reaches the preset depth, the work head will retract to its original position and shut off the electricity.
- When short circuit occurs, the machine shuts off automatically.

Model is mounted inside the spindle and therefore allows for greater Z axis clearance.



C-axis



ATC system

MACHINE STRUCTURE

- Sturdy and compact headstock for easy operation with high precision.
- Main shaft adopts of alloy steel guide rail to coordinate with ball bearing, low rate of friction to secure the precision of feeding.
- Auto depth position stop setting, it stops automatically when reaching the processing depth.
- X,Y saddles are stuck with linear way & ball screws, ensure the precision & delicate operation.
- Machine frame is constructed with tempered FC-30 casting under head treatment to keep accurate precision.
- With C axis accessory, the electrode can turn a arbitrary angle to make processing.
- With optional ATC accessory, the machining would be finished in no-attended condition.

FRIENDLY SYSTEM ASSURES OPERATION EASE



- "AI" function, with built-in the capacity of "ARTIFICIAL INTELLIGENCE," automatically adjusts for optimum performance.



- Alarm message, all alarms are recorded in processing log.



- 256 processing conditions allow the operator to amend the condition when processing.



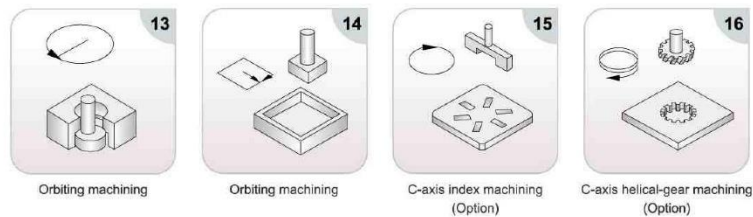
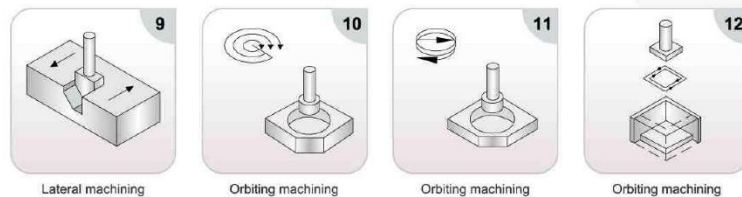
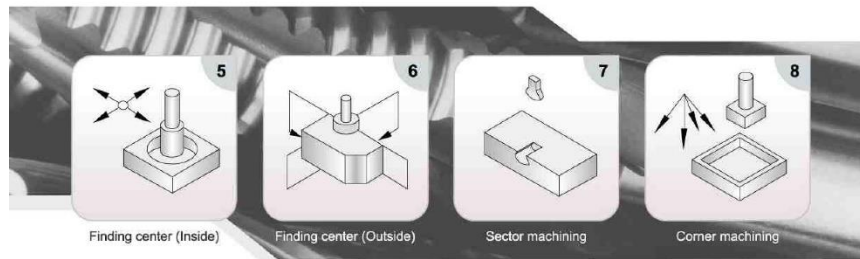
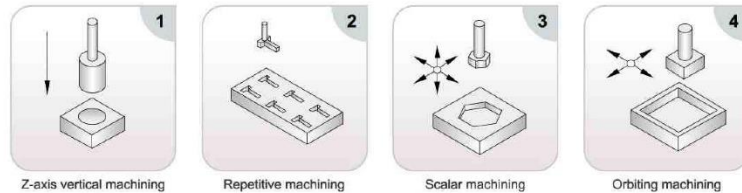
- LED display quickly helps for checking the input or output conditions of the machine.



- Operator can do the vector processing according to the instruction, and also can set a starting angle to process with different step angles.



- Simultaneous 3 axes straight line processing.



STANDARD ACCESSORIES



OPTIONAL ACCESSORIES





SPECIFICATIONS	CNC-EB433	CNC-EB600L	CNC-EB600L(S.F)	CNC-EB5435L	CNC-EB700L	CNC-EB860L	CNC-EB1060L	CNC-EB1000R	CNC-EB1270L
Capacity of work tank	900x520x385mm	1100x600x400mm	1100x600x400mm	1250x800x520mm	1500x940x520mm	1800x1100x620mm	1900x1100x620mm	1960x1100x550mm	2100x1250x620mm
Work table size	600x350mm	700x400mm	700x400mm	850x450mm	1000x600mm	1200x700mm	1250x750mm	1100x700mm	1350x820mm
Longitudinal travel(X-axis)	400mm	400mm	400mm	500mm	600mm	800mm	1000mm	1000mm	1200mm
Cross travel(Y-axis)	300mm	300mm	300mm	400mm	450mm	600mm	600mm	600mm	700mm
Z axis travel(Z-axis)	300mm	300mm	300mm	350mm	400mm	500mm	500mm	500mm	500mm
Distance between platen to table	310~610mm	270~570mm	270~570mm	420~770mm	350~750mm	450~950mm	450~950mm	500~1000mm	510~1010mm
Max. Electrode weight	100kgs	100kgs	100kgs	200kgs	250kgs	350kgs	350kgs	100kgs/3kgs (Slope machining process)	400kgs
Max. Work piece weight	500kgs	1000kgs	1000kgs	2000kgs	3000kgs	4000kgs	4500kgs	4000kgs	5000kgs
Fluid tank capacity	300L	370L	370L	850L	1100L	1400L	1600L	1560L	1900L
Machine outside dimensions(WxDxH)	1700x1600x2350mm	1900x1750x2350mm	2700x1750x2350mm	2700x2250x2400mm	2850x2700x2610mm	3400x3250x3200mm	3600x3250x3200mm	3600x3200x3200mm	4000x3400x3250mm
Machine weight	1750kgs	2250kgs	2400kgs	2700kgs	3600kgs	4700kgs	5200kgs	5000kgs	6500kgs
Max. Machining current	60A 90A(Optional)	60A 90A(Optional)	60A 90A(Optional)	60A 90A(Optional)	60A 90A(Optional)	90A 120A(Optional)	90A 120A(Optional)	90A 120A(Optional)	90A 120A(Optional)
Max. Power input	7KVA 10KVA	7KVA 10KVA	7KVA 10KVA	7KVA 10KVA	7KVA 10KVA	10KVA 13KVA	10KVA 13KVA	10KVA 13KVA	10KVA 13KVA
Max. Machining rate(mm ³ /min)	400 600	400 600	400 600	400 600	400 600	600 800	600 800	600 800	600 800
Min. Electrode wear ratio	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%
Best surface / Ra	Ra 0.2 μm	Ra 0.2 μm	Ra 0.1 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm
Min. D. R. O. resolution(mm)	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm
Generator weight				320 kgs	320 kgs	350 kgs	350 kgs	350 kgs	350 kgs

SPECIFICATIONS	CNC-EB1470L	CNC-EB1510L	CNC-EB1675L	CNC-EB1880L	CNC-EB2010L	CNC-EB2210L	CNC-EB2210L-2H	CNC-EB3010L	CNC-EB3010L-2H
Capacity of work tank	2250x1350x620mm	2300x1700x800mm	2400x1320x700mm	2600x1320x700mm	2700x1700x800mm	2850x1700x800mm	2900x1700x800mm	3900x1700x800mm	3900x1700x800mm
Work table size	1850x1000mm	1580x1100mm	1850x1000mm	1850x1000mm	2250x1100mm	2250x1100mm	2250x1100mm	3100x1100mm	3100x1100mm
Longitudinal travel(X-axis)	1400mm	1500mm	1600mm	1800mm	2000mm	2200mm	1550(SM) 775(DM)mm	3000mm	2550(SM) 1275(DM)mm
Cross travel(Y-axis)	700mm	1000mm	750mm	800mm	1000mm	1000mm	1000mm	1000mm	1000mm
Z axis travel(Z-axis)	500mm	600mm	550mm	600mm	600mm	600mm	600mm	600mm	600mm
Distance between platen to table	550~1050mm	650~1250mm	500~1050mm	450~1050mm	660~1260mm	660~1260mm	720~1320mm	660~1260mm	720~1320mm
Max. Electrode weight	450kgs	500kgs	450kgs	500kgs	500kgs	500kgs	500kgs	500kgs	500kgs
Max. Work piece weight	6000kgs	11000kgs	6500kgs	7000kgs	9500kgs	9500kgs	10000kgs	16000kgs	16000kgs
Fluid tank capacity	2100L	3500L	2600L	2800L	3800L	4100L	4700L	5800L	6000L
Machine outside dimensions(WxDxH)	4300x3400x3250mm	4600x4800x3620mm	4800x3800x3200mm	5000x4000x3200mm	5200x4500x3570mm	5500x4600x3570mm	6500x4600x3570mm	6000x4600x3620mm	7000x4600x3620mm
Machine weight	8000kgs	14500kgs	8500kgs	9000kgs	12500kgs	13500kgs	15000kgs	19000kgs	21000kgs
Max. Machining current	90A 120A(Optional)	90A 120A(Optional)	90A 120A(Optional)	90A 120A(Optional)	90A 120A(Optional)	120A	120A	120A	120A
Max. Power input	10KVA 13KVA	10KVA 13KVA	10KVA 13KVA	10KVA 13KVA	10KVA 13KVA	13KVA	13KVA	13KVA	13KVA
Max. Machining rate(mm ³ /min)	600 800	600 800	600 800	600 800	600 800	800	800	800	800
Min. Electrode wear ratio	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%	0.12%
Best surface / Ra	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm	Ra 0.2 μm
Min. D. R. O. resolution(mm)	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm	0.001mm
Generator weight	350 kgs	350 kgs	350 kgs	350 kgs	350 kgs	380 kgs	380 kgs	380 kgs	380 kgs

Note : All specifications and design are subject to change without notice.

The data above is test result base on certain working condition. The actual result will be varied depends on the input voltage, shape and size of electrode, spark condition, material of work piece and working fluid.

DRILL EDM (NEXT GEN)



Salient Features

- Ball screw for X and Y axis
- L. M. guide for Z axis
- Parameter changing is allowable during operation
- Job material steel/copper/brass/aluminium/carbide
- Adjustable high pressure compact water pump with filtration
- 3 axis DRO with depth control
- Motorized work head movement
- Electrode dressing facility
- Job holding fixture & clamp
- Tap water is used as dielectric fluid
- Precise granite table
- Compact footprint
- Brass & copper electrodes can be used
- Machine lamp
- Automatic lubrication pump

Standard Accessories

- Leveling Pads : 4 Nos.
- Clamping Kit : 1 Set
- Tool Kit : 1 Set
- Water Can : 2 Nos.
- Guides : 3 Nos.
- Electrodes : 30 Nos.
- Rubber Seal : 5 Nos

Application

- Start hole for wire cut edm
- Gas discharge
- Ejector pins
- Cooling pins
- Air vent for forging die
- Jet hole
- Filter hole
- Remove broken tap

Water Pump



Swivel Head



Drill Head



Technical Specification	Unit	BH-4030	BH-5040
Dimension of working table (X x Y)	mm	400 x 600	440 x 630
Travel of working table (X x Y)	mm	300 x 400	400 x 500
Z axis travel (Z + W)	mm	400 + 350	400 + 350
Distance from quill to table	mm	85 - 435	85 - 485
Max. machining current	amp	30	30
Drilling range	mm	0.30 - 3.00	
Max. electrode length	mm	500	500
Max. workpiece weight	kg	200	300
Max. machining speed	mm/min	30 - 60	30 - 60
Max. power consumption	kVA	3.5	4
Drive system for Z axis		Servo Motor	
Input power supply	V	3 Phase, 415V , 50Hz	
Machine dimension	mm	1060 x 1050 x 1950	1250 x 1150 x 2100
Machine weight	kg	500	600

CNC DRILL EDM



Salient Features

- Ball screw for X & Y axis
- X & Y axis move to coordinate automatically as per program
- L. M. guide for Z axis
- Adjustable high pressure compact water pump with filtration
- Spindle motor drive greatly improve the machining efficiency
- Spindle run smoothly, Low noise
- Processing parameters of the digital display, simple & intuitive
- Operation buttons uses omron micro switch, the failure rate is greatly reduced.
- Parameter changing is allowable during operation
- Job material steel/copper/brass/aluminium/carbide
- Motorized work head movement
- Electrode dressing facility
- Job holding fixture & clamp
- Tap water is used as dielectric fluid
- Precise granite table
- Compact footprint
- Brass & copper electrodes can be used
- Machine lamp
- Automatic lubrication pump
- Windows base software

Standard Accessories

- Leveling Pads : 4 Nos.
- Clamping Kit : 1 Set
- Tool Kit : 1 Set
- Water Can : 2 Nos.
- Guides : 3 Nos.
- Electrodes : 30 Nos.
- Rubber Seal : 5 Nos

Application

- Start hole for wire cut edm
- Gas discharge
- Ejector pins
- Cooling pins
- Air vent for forging die
- Jet hole
- Filter hole
- Remove broken tap

Water Pump



Swivel Head



Drill Head



Technical Specification	Unit	CNC-4030	CNC-5040
Dimension of working table (X x Y)	mm	400 x 600	440 x 630
Travel of working table (X x Y)	mm	300 x 400	400 x 500
Z axis travel (Z + W)	mm	350 + 300	350 + 300
Distance from quill to table	mm	50 - 350	200 - 500
Max. machining current	amp	30	30
Drilling range	mm	0.20 - 3.00	
Max. electrode length	mm	500	500
Max. workpiece weight	kg	200	300
Max. machining speed	mm/min	30 - 60	30 - 60
Max. power consumption	kVA	3.5	3.5
Drive system for X, Y, Z axis		Servo Motor	
Input power supply	V	3 Phase, 415V , 50Hz	
Machine dimension	mm	1200 x 1000 x 2170	1300 x 1075 x 2320
Machine weight	kg	800	900

CNC WIRECUT (DC Stepper)

Salient Features

- XY axis on L. M. guide driven by ball screw
- Wire drum on L. M. guide
- Reciprocating molybdenum wire technology
- Fine pitch screw for UV axis moment
- Stepper motor for X, Y, U, V axis
- Flexible job stand for job mounting
- Variable speed AC motor for wire drum
- Sturdy base
- Low running cost
- User friendly software interface
- Color LCD display
- Display of machining time
- 2D/3D graphic simulation of wire path
- Centerlised Lubrication pump
- Display of operator help and error message
- Simultaneous control of X, Y, U, V axis
- Single block execution
- Rotation/mirror of program
- Automatic center find, edge find
- Program input from USB
- Wire brake protection mode
- Can cut complex profile job
- Industrial CPU
- Auto short-circuit recovery
- Z axis motorized
- Water tank with filter

Optional Accessories

- 10 & 15 degree taper
- Magnetic filter
- Servo motor

Job Sample



Standard Accessories

- High Speed Controller
- Wire Right Angle Block
- Drum Handle
- Molybdenum wire
- Jr3 Gel
- Clamping Kit
- Allen Keys
- Spanner
- Scissor



Parameter/Specification	Unit	ECO-20	ECO-25	ECO-35	ECO-45	ECO-50	ECO-63	ECO-80
Working table (X x Y)	mm	270 x 420	400 x 560	500 x 740	600 x 840	670 x 1000	770 x 1180	990 x 1360
Working travel (X x Y)	mm	200 x 250	250 x 320	350 x 450	450 x 550	500 x 630	630 x 800	800 x 1000
Max. thickness of work piece	mm	300	300	400	400	500	700	700
Max. taper	Deg./mm	±3 Deg /100						
Max. cutting speed	mm ² /min	120 / (200 High Speed Controller)						
Optimum roughness	um	1.50						
Electrode wire diameter	mm	0.12 To 0.18						
Power consumption	kVA	3	3	3	3	4	4	4
Input power supply	V	3 Phase. 415VAC, 50Hz						
Max. work piece weight	kg.	200	200	300	400	800	1000	1500
Working liquid		DM water						
Min. input command	mm	0.001						
Overall weight	kg.	800	900	1200	1400	2400	3200	4500
Dimension of machine	mtr	1.5x1.0x1.4	1.5x1.0x1.4	1.6x1.3x1.7	1.7x1.5x1.7	2.0x1.7x1.7	2.2x1.9x1.9	2.5x2.1x2.0

CNC WIRECUT (AC SERVO)

Salient Features

- “C” structure, “I” shape machine bed same as brass WEDM structure
- Reusable reciprocating technology
- Linear Guide & Ball Screw for X, Y, U, V, Z Axis & Wire Drum
- Special industrial computer with LCD color display
- **Panasonic/Mitsubishi AC servo motors** with close loop feedback on X,Y Axis
- Die electric tank with paper filter
- Multi cut, Multi cavity
- AutoCut controller system based on Window XP
- Automatic centerlised lubrication system
- Automatic wire tension system
- Motorized Z axis on L. M. guide
- LED working lamp
- Program input from USB, LAN online Incremental, Absolute command
- Linear & Circular interpolation
- Steps error, backlash error compensation
- Display of machining time & cutting rate
- 2D/3D graphic simulation of wire path
- Display of operator help & error message
- Simultaneous control of X,Y,U,V axis
- Single block execution
- Rotation/mirror of program
- Automatic center find, Edge find
- Wire brake protection mode
- Auto gap short recovery
- Alarm light
- Resumption of cutting from power fail position



Optional Accessories

- Bigger Taper
- Higher Z Height
- Magnetic Filter
- U & V Servo

Standard Accessories

- Wire Right Angle Block
- Drum Handle
- Molybdenum Wire
- DIC 206 Fluid
- Tool Kit
- Allen Keys
- Leveling Pads
- Spanner
- Scissor

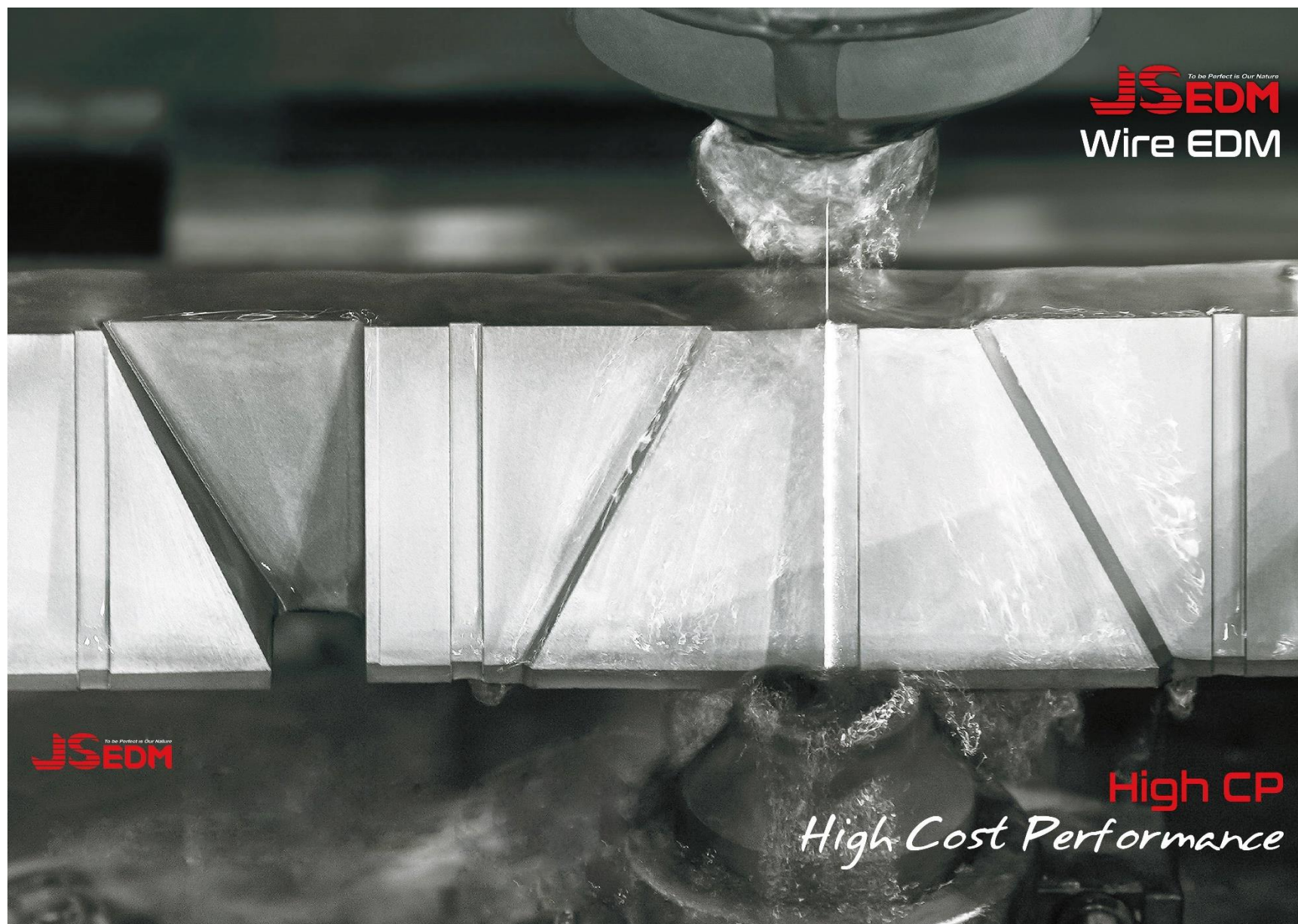
Job Sample



Specification	Unit	ECO-35S	ECO-45S	ECO-50S	ECO-63S	ECO-80S
Work Table Travel	mm	350 x 400	450 x 550	500 x 630	630 x 800	800 x 1000
Work Table Size	mm	550 x 800	570 x 880	650 x 1000	850 x 1350	980 x 1580
Max. Workpiece Thickness	mm	300	300	300	400	400
Max. Taper Angle	°/mm	±3°/80 (±6°/100 & ±10°/120 Optional)				
Max. Cutting Speed	mm ² /mm	300				
Positional Accuracy	mm	±0.005				
Max. Working Current	amp	10				
Optimum Roughness	μ Ra	1.50 Single Cut & 0.60 Multiple cutting				
Range of Wire Diameter	mm	0.12 - 0.25				
Wire Traveling Speed	m/mm	5 - 11				
Max. Workpiece Weight	kg	300	400	600	800	1500
Working Liquid		DM Water				
Input Power Supply	volt	3 Phase, AC415V/50Hz				
Power Consumption	kVA	2.5				
Machine Dimension	mtr	1.8x1.7x1.9	1.9x1.8x1.9	2.0x2.0x2.0	2.4x2.6x2.5	2.5x2.1x2.0
Machine Weight	kg	1800	2100	2700	4500	6500



J.K.MACHINES



JSED
Wire EDM

JSED

High CP
High Cost Performance

Efficient Controlling System Plus User-friendly Interface

JS-EDM



Automatic Parameters
System will generate suitable cutting parameters based on the input factors such as workpiece material, thickness and number of cutting pass.

Manual Mode
The specific interactive platform makes the operation fast and smooth.

Maintenance
Clearly shows all information and allows user to notice the time to do maintenance and replace consumables.

Machining Interface
The Utilization of 3D simulation with zooming function increases the convenience during tracking.

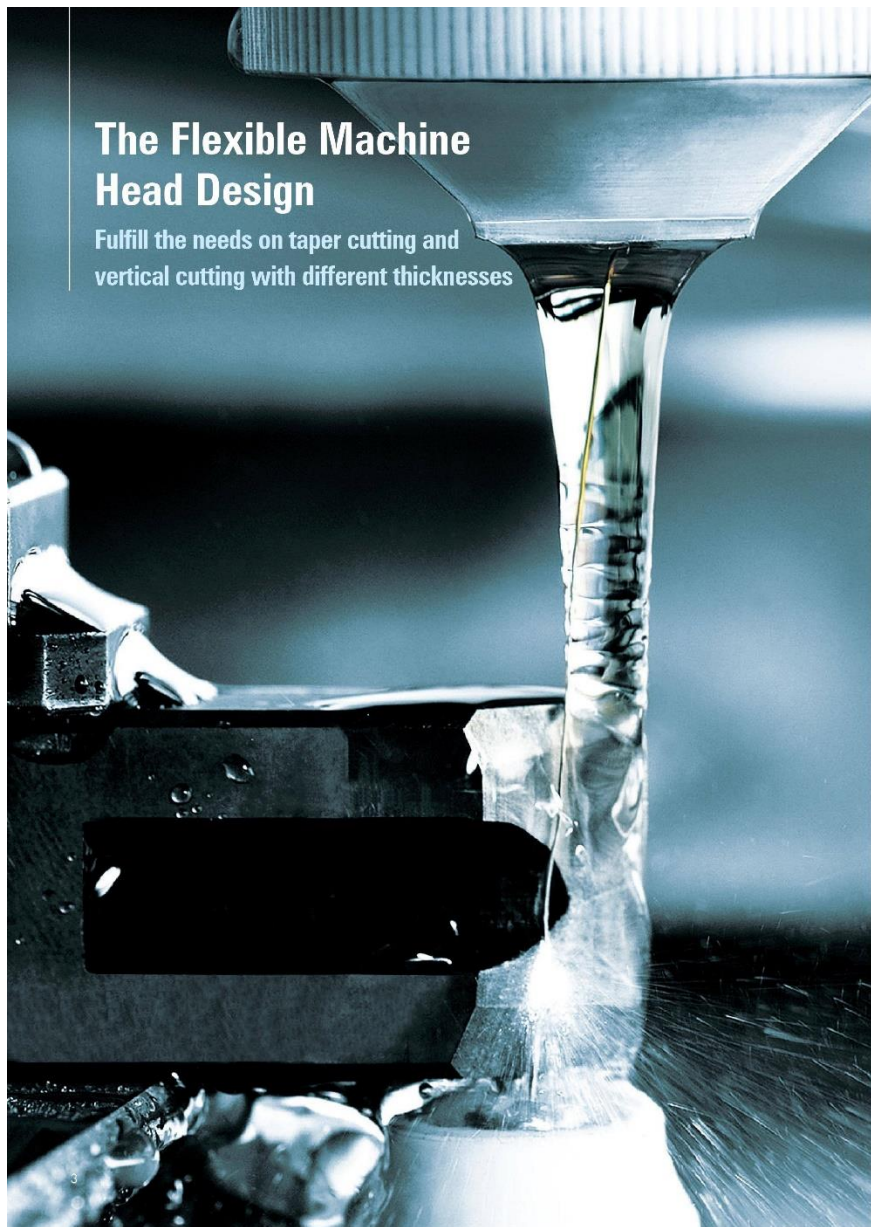
Program Selection
Using drawing and file name to choose the program.

Multi-functional Touch Screen
Capable of selecting anywhere during the operation which makes the system more convenient for users.



The Flexible Machine Head Design

Fulfill the needs on taper cutting and vertical cutting with different thicknesses



Advanced Precision Machining Technology

Unique Features Circular, Corner and Vertical Control Functions



Corner Comp

System compensates the drawing automatically to avoid over cut.



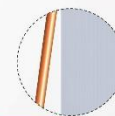
Circular Comp

The auxiliary function ensures the accuracy of the radian.



Wire Comp

U, V axes taper in a certain angle during cutting which avoid the workpiece tolerance causes by wire consumption. This can be activated without modifying the program.



For raising the accuracy, users may activate the compensation of circular, corner and wire consumption by adjusting the compensation value (D-Value) accordingly without further addition of G code.



High Rigidity Structure

Machine Design Analysis and Error Compensation



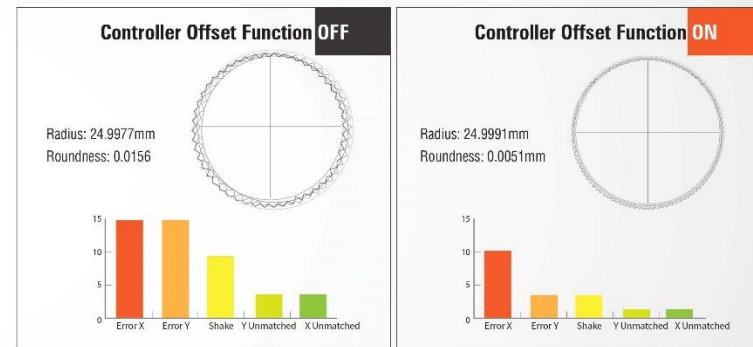
Functional U,V Axis & High Rigidity Spindle

U, V, Z axis strategically placed on the upper column enhances rigidity and ensures stability under high water pressure during rough cut as well as high precision operation.

High Accurate Linear Guide Way, Servo & Transmission System

We use high accurate linear guide ways and couple with our patented linear and block design. For the X, Y axis we adopt a spacious and strong machine structure design.

JSEDM



Circuit Function Verification Result: (Diameter 50mm, Speed: 400mm/min)

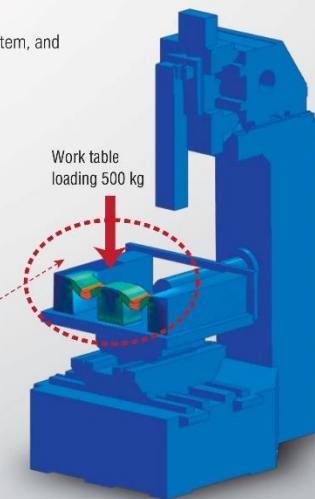
Work table loading and Speed change

The machine structure is designed and analyzed with CAE system, and simulation is carried out for all axis actions in this structure.

Work table loading (kg)		Max. Work table transformation (m)
1	100	0.832e-7
2	300	2.91e-7
3	500	4.16e-7
4	1000	8.32e-7

Max. Work table loading transformation is designed at 0.42 μ m

Maximum deformation position

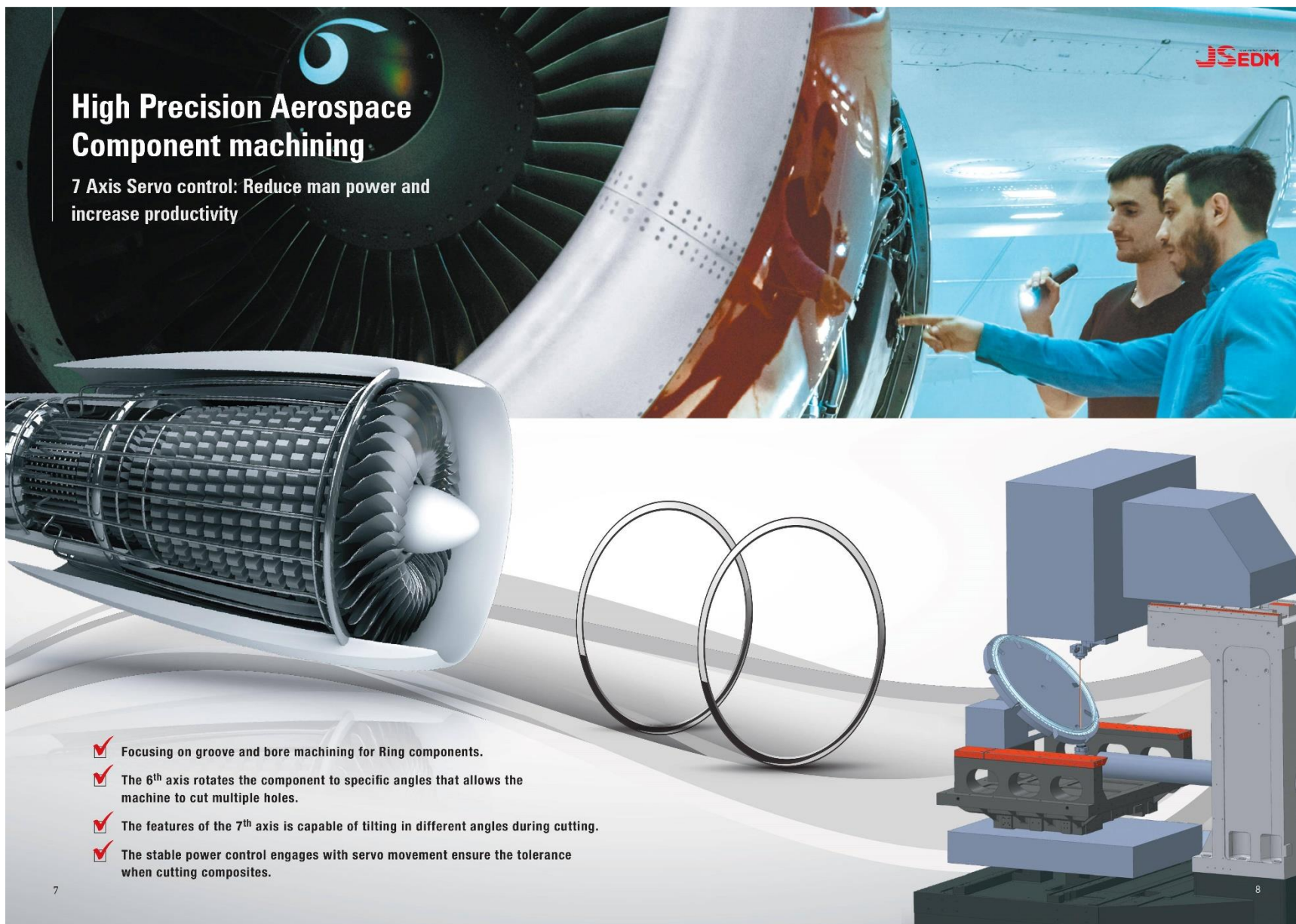




High Precision Aerospace Component machining

7 Axis Servo control: Reduce man power and increase productivity

JS EDM

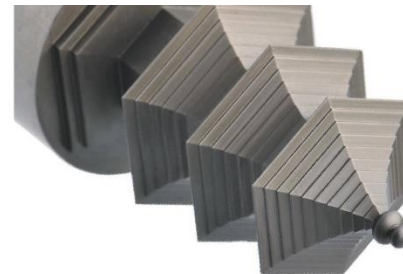


- ✓ Focusing on groove and bore machining for Ring components.
- ✓ The 6th axis rotates the component to specific angles that allows the machine to cut multiple holes.
- ✓ The features of the 7th axis is capable of tilting in different angles during cutting.
- ✓ The stable power control engages with servo movement ensure the tolerance when cutting composites.



High Precision Mold Machining

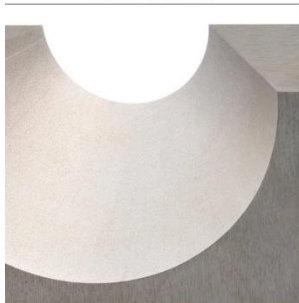
For Aerospace Technology, IC Electronics and Medical high technology applications



JSEDM

Special Application for
6 Axes or Above

Taper Cutting



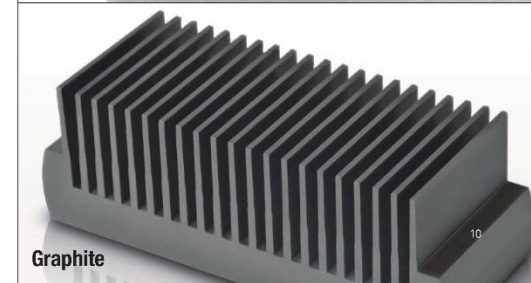
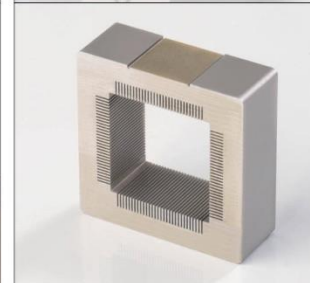
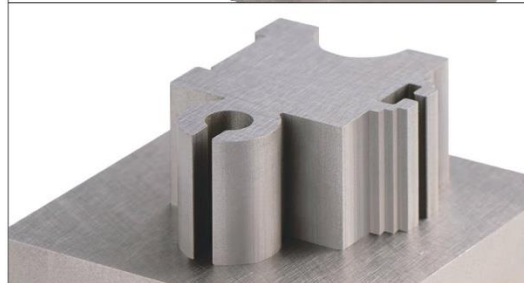
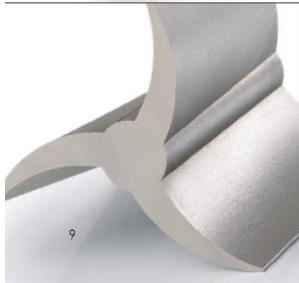
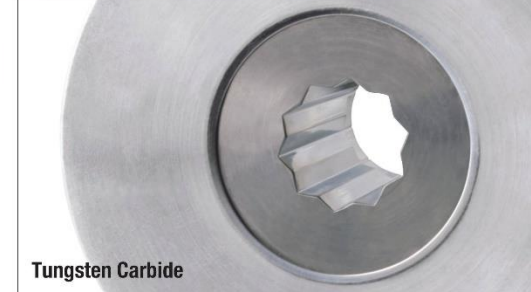
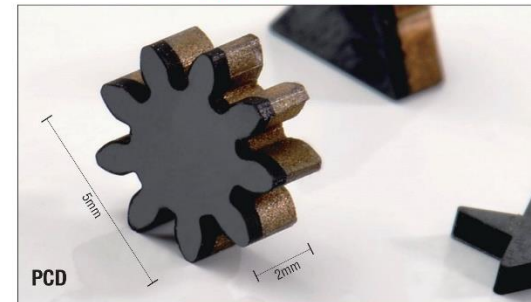
High Tolerance fitting



Ultra Thin Wire



Special Material





Specification



Flushing Type: WI-30E | WI-50E | WI-60E | WI-70E | WI-90E

Model	WI-30E	WI-50E	WI-60E	WI-70E	WI-90E
Max. Workpiece Size L x W x H	mm 760 x 520 x 295	870 x 520 x 295	1100 x 650 x 340	1170 x 680 x 295	1380 x 780 x 295
Work Table Size	mm 640 x 500	740 x 500	870 x 680	970 x 730	1120 x 730
Max. Working Load	kgs 500	700	1000	1000	1300
X / Y / Z Axis Travel	mm 400 / 300 / 300	500 / 300 / 300	600 / 450 / 350	750 / 500 / 300	900 / 500 / 300
U / V Axis Travel	mm 100 / 100	100 / 100	120 / 120	100 / 100	100 / 100
Wire Diameter Range	mm Ø 0.1 ~ 0.3	Ø 0.1 ~ 0.3	Ø 0.1 ~ 0.3	Ø 0.15 ~ 0.3	Ø 0.15 ~ 0.3
Max. Taper Angle / Workpiece Thickness	° / mm ± 22.5 / 100	± 22.5 / 100	± 22.5 / 130	± 22.5 / 100	± 22.5 / 100
Max. Wire Load	kgs 10	10	10	10	10
Water Tank Capacity	L 270	270	300	360	360
Net Weight	kgs 1950	2300	3400	4000	5200
Machine Layout W x D x H	mm 2300 x 2200 x 2150	2600 x 2200 x 2150	3000 x 2650 x 2250	3200 x 2700 x 2250	3600 x 2900 x 2300

11 Note: Continuing improvement will allow the maker to modify the design or specification without notice

Submerge Type: WI-200S | WI-430S | WI-530S | WI-640S

Model	WI-200S
Max. Workpiece Size L x W x H	mm 550 x 470 x 150
Work Table Size	mm 450 x 400
Max. Working Load	kgs 300
X / Y / Z Axis Travel	mm 210 / 200 / 155
U / V Axis Travel	mm 40 / 40
Wire Diameter Range	mm Ø 0.1 ~ 0.3
Max. Taper Angle / Workpiece Thickness	° / mm ± 15 / 70
Max. Wire Load	kgs 6
Water Tank Capacity	L 450
Net Weight	kgs 1700
Machine Layout W x D x H	mm 1800 x 1900 x 1850

Model	WI-430S	WI-530S
Max. Workpiece Size L x W x H	mm 700 x 540 x 295	870 x 540 x 295
Work Table Size	mm 640 x 500	740 x 500
Max. Working Load	kgs 500	700
X / Y / Z Axis Travel	mm 400 / 300 / 300	500 / 300 / 300
U / V Axis Travel	mm 100 / 100	100 / 100
Wire Diameter Range	mm Ø 0.1 ~ 0.3	Ø 0.1 ~ 0.3
Max. Taper Angle / Workpiece Thickness	° / mm ± 22.5 / 100	± 22.5 / 100
Max. Wire Load	kgs 10	10
Water Tank Capacity	L 570	570
Net Weight	kgs 2100	2450
Machine Layout W x D x H	mm 3100 x 2200 x 2150	3250 x 2200 x 2150

Model	WI-640S
Max. Workpiece Size L x W x H	mm 1000 x 720 x 345
Work Table Size	mm 870 x 680
Max. Working Load	kgs 1000
X / Y / Z Axis Travel	mm 600 / 450 / 350
U / V Axis Travel	mm 120 / 120
Wire Diameter Range	mm Ø 0.1 ~ 0.3
Max. Taper Angle / Workpiece Thickness	° / mm ± 22.5 / 130
Max. Wire Load	kgs 10
Water Tank Capacity	L 940
Net Weight	kgs 3500
Machine Layout W x D x H	mm 3550 x 2650 x 2300



12 Note: Continuing improvement will allow the maker to modify the design or specification without notice



Specification



Column Movement: Wi-1065SA

Model	Wi-1065SA
Max. Workpiece Size L x W x H	mm 1550 x 1050 x 515
Work Table Size	mm 1345 x 855
Max. Working Load	kgs 4500
X / Y / Z Axis Travel	mm 1000 / 600 / 520
U / V Axis Travel	mm 160 / 160
Wire Diameter Range	mm Ø 0.15 ~ 0.3
Max. Taper Angle / Workpiece Thickness	°/mm ± 22.5 / 160
Max. Wire Load	kgs 16 (Can be Customized)
Water Tank Capacity	L 2400
Net Weight	kgs 8000
Machine Layout W x D x H	mm 4200 x 4350 x 3250

Installation Requirements:

- Input Voltage : AC 380V 3 Ph / 50HZ / 60HZ
- Power Consumption: 15 KVA (Without Water Chiller)
- Environment: To insulate noise, electric wave and easy maintenance access
- Ground: Machine has to be ground to avoid abnormal inference voltage and stabilize machining condition ground of value > 10 Ω
- Temperature Control: 20 ± 1 c
- Humidity Control: Under 75% RH
- Vibration: Under 0.6mm / S2

13 Note: Continuing improvement will allow the maker to modify the design or specification without notice



Linear Motor: Wi-L400S | Wi-L500S | Wi-L600S

Model	Wi-L400S	Wi-L500S	Wi-L600S
Max. Workpiece Size L x W x H	mm 700 x 540 x 295	870 x 540 x 295	1000 x 720 x 345
Work Table Size	mm 640 x 500	740 x 500	870 x 680
Max. Working Load	kgs 300	500	700
X / Y / Z Axis Travel	mm 400 / 300 / 300	500 / 300 / 300	600 / 450 / 350
U / V Axis Travel	mm 100 / 100	100 / 100	120 / 120
Wire Diameter Range	mm Ø 0.1 ~ 0.3	Ø 0.1 ~ 0.3	Ø 0.1 ~ 0.3
Max. Taper Angle / Workpiece Thickness	°/mm ± 22.5 / 100	± 22.5 / 100	± 22.5 / 130
Max. Wire Load	kgs 10	10	10
Water Tank Capacity	L 570	570	940
Net Weight	kgs 2100	2450	3500
Machine Layout W x D x H	mm 2850 x 2200 x 2150	2950 x 2200 x 2150	3550 x 2650 x 2300

All series Standard Accessories

1. Automatic Vertical Alignment Jig: 1 Set
2. Power Feed Contact: 2 Pcs
3. Filter: 2 Pcs
4. Clamping Tool: 1 Set
5. Wire Guide (Ø 0.25 mm): 1 Set
6. Brass Wire (Ø 0.25 mm / 5kg): 1 Roll
7. Ionic Exchange Resin (5L / 10L)
8. Tool Box: 1 Set
9. X, Y axes linear scale are included in Wi-640S & Wi-1065SA
10. Wi-1065SA contains A.W.T System

All Series Optional Accessories

1. Wire Guide (Ø 0.1 ~ 0.2 mm)
2. 22.5° Nozzle
3. 3R/EROWA Clamping Tool
4. Parallel Bar
5. Water Chiller
6. Power Regulator
7. X, Y Axes Linear Scale
8. Auto Wire Threading System
9. Auto Wire Cutting System
10. CAD/CAM Software
11. PCD Professional Electric Circuit
12. 6 Axes Or Above Control
13. Wire Speed Meter
14. Wire Tension Meter
15. Water Resistance Meter

Note: No. 13 ~ 15 Are Calibration Equipments

14 Note: Continuing improvement will allow the maker to modify the design or specification without notice

LASER WELDING MACHINE

Salient Features

- High Accuracy, the welding rod diameter is 0.20 - 0.60 mm.
- Little affect area, no distortion of the processing parts.
- No etching effect after welding, low oxidation rate, the color of the processing parts is intact.
- No blow holes appeared after welding.
- Can process at the welding point, especially applicable to repair moulds & dies.
- Laser welding can be done on hard parts hardness up to 50-60 HRC.

Applicable to material and field

Laser welding can be used in welding SS, H13, D2, D3, SKD11, SKD61, P20, STARVAX, ALUMINUM, COPPER, EN31, NICKEL etc.

Type of Table

- Manual
- Motorized
- Automatic

Job Sample



Optional Accessories



Magnetic Ball



Smoke Suction



Rotary



360° Rotate Lens

Optional Accessories

- Rotary Device
- Magnetic Vice
- Smoke Sunction Device
- LCD Screen

Structure of Machine

- Normal
- Crane Type



CRANE TYPE



NORMAL TYPE

Technical Specification		JKW-200	JKW-400
Average Laser Power	w	200	400
Max. Laser Power	w	240	440
Max. Energy of Single Pulse	j	75	90
Laser Wave lenght	nm	1064	
Pulse Width	ms	0.30 - 20	
Laser Welding Frequency	Hz	0.50 - 100	
Spot Size Range	mm	0.20 - 2.00	
Welding Size	mm	0.10 - 0.40	0.10 - 0.60
Input Power Supply	v	220v Single Phase 50Hz	380v 3 Phase 50Hz
Power Consumption	kw	6	15
Water Pressure Protection	mpa	0.025	
Cooling Water Temperature	degree	35	
Temperature Protection	degree	45	
Cooling Water Flow	L/min	10	
Cooling Way		Water Cooling	
Laser Type		Pulse	
Machine Over all Dimension	mm	1000 x 600 x 1500	
Machine Over all Weight	kg	300	

HAND HELD LASER WELDING

Salient Features

- The welding speed is 2-10 times faster than the traditional welding speed.
- It can help you to save at least two welders a year.
- Laser welding consumes less material and has a long-life.
- Easy to operate, no need welding work license
- New corner can also weld products beautifully.
- The welding seam is smooth and beautiful,
- which reduces the subsequent grinding process and saves time and cost.
- No deformation, no weld scar, welding firmly.
- Safer and more environmentally friendly.

Welding Depth Data

Power	Stainless Steel	Carbon Steel	Aluminum
1000W	1.50 mm	1.50 mm	0.50 mm
1500W	2.50 mm	2.50 mm	0.60 mm
2000W	3.00 mm	3.00 mm	0.80 mm



Job Sample



LASER HANDLE

AUTOMATIC WIRE FEEDER

Technical Specification	Unit	JK-1000W	JK-1500W	JK-2000W	JK-3000W
Max. Energy of single pulse	J	100	100	120	125
Laser Type		CW Continuous Laser			
Laser wavelength	nm	1064			
Laser welding frequency	HZ	1000			
Laser spot diameter	mm	0.40 - 2.00			
Weld penetration	mm	0.10 - 3.00			
Power can be adjustable	%	5 - 100			
Pulse width	ms	1			
Cooling water temperature	deg.	<35			
Temperature protection	deg.	40			
Cooling water flow	min.	15			
Protective gas		Nitrogen gas			
Input power supply	V	Single Phase 220v / 50Hz		Three Phase 380v/50Hz	
Machine weight	kg	390	390	420	560

FIBER LASER CUTTING

Salient Features

- Heavy Structure
- Raycus laser Source (IPG Optional)
- Panasonic/Yaskawa Servo Motors & Drives
- Auto Height Adjustment
- High Precision Taiwan TBI ball screw
- Easy to maintain and cutting surface is smooth, no burr, saving time and labor.

Standard Accessories

- Leveling Pads-6 Nos.
- Tool Kit-1 Set,
- Protect Glass-1 Nos.
- Nozzle-2 Nos.
- Ceramic Ring-1 Nos.
- Wrench-1 set

Laser Source



Industrial Chiller

Job Sample



Technical Specification	Unit	JK-1330FL	JK-1530FL
Travel of working table (X Axis)	mm	1300	1500
Travel of working table (Y Axis)	mm	3000	3000
Travel of working (Z Axis)	mm	120	120
Fiber Laser Power	w	1000/1500/2000/3000	
X, Y Position Accuracy	mm/min	± 0.02	
Max. Cutting Speed	mm/min	12000	
Max. Rapid Travel	mm/min	60000	
Graphic Format		BMP/PLT/DST/DXF/AI	
Compatible Software		Coral Draw/AutoCad/Photoshop	
Control System		AuTech	
Working Voltage	V	AC230V SINGLE PHASE / AC415V/50Hz 3 PHASE	
Connected Load	Kw	10	
Drive Motor		Servo Motor	
Machine Weight	Kg	1800	2000

FIBER LASER MARKING/ENGRAVING

Salient Features

- Fiber laser: high- speed scanning galvo mirror; English operation system.
- Strong software functions, convenient Control Panel, set and deal separately.
- Professional control software is compatible with AutoCAD, CorelDraw and Photoshop.
- It could achieve the auto arrangement and amendment of letter, symbol, pattern, figure, image, bar code, 2D code, serial number, and auto increasing, etc. It supports PLT, PCX, AI, DXF, BMP, JPG format pictures.
- It is also available by using TIF, SHX character code.

Specification	
Laser Type	FIBER / UV / MOPA / 3D
Laser Power	20W, 30W, 50W, 60W, 80W, 100W
Marking Area	100 x 100 mm (200 x 200 mm Optional)
Marking Depth	0.05 - 1.20 mm
Wavelength	1060 nm
Beam Quality	<1.50
Repeat Frequency	10KHz - 100KHz
Beam Divergence	- 0.30 - +0.30 mrad
Resolution	18um
Repeatability	50um
Linear Speed	800 Characters
Marking Linear Speed	12000 mm/s
Min. Line Width	0.012 mm
Min. Character Size	0.15 mm
Repeat Accuracy	+/- 0.003 mm
Input Power	0.60 Kw
Power Supply	Single Phase AC200V/50Hz

Job Sample



ROTARY

Optional Accessories

- Z axis motorized
- Portable type machine
- Online UPS

MICRO TIG WELDING MACHINE

Salient Features

- Firm: The welded area can sustain milling and filling without peeling off.
- Precise: 0.03 mm -0.22 mm less waste of filler, easier trimming afterward.
- Minimum Annealing: Heats only a tiny spot, minimize damage of annealing.
- Protection Function: Automatic protection against damage of mis-operation & accident.

Applications

Repairing wear, tear and erosion of moulds, die and tools, dents and bad corners, foundry defects, TIG defects, etc

Specification	Unit	JKMTW
Frequency Range		3-101 Hz Automatic adjustment
Output Power	W	30
Power Consume	W	5-900
Function		Precise / Normal / , Single / Continuous
Welding Mode		0 , 1 , 2 , 3 , 4 , 5
Power	V	AC220V/50Hz
Weight	Kg	15
Dimension	mm	350 x 210 x 150



CNC ENGRAVING MACHINES



Salient Features

- High precision ball screw/L.M. guide ways (Hiwin)
- Lead shine stepper motors & drives
- Advance PC based controller
- Automatic lubrication system
- Works with G code like .tap, .nc, .opt, .plt
- Suitable for engraving on Steel, Brass, Copper & Aluminum
- Double fixed column, Table movement for stable working
- Cast iron robust structure

Standard Accessories

- Tool length calibrator
- Automatic lubrication system
- Machine lamp
- Coolant system
- Clamping kit
- Levelling pad
- Spanners

Optional Accessories

- 4th Axis Rotary Attachment
- Auto Tool Changer
- Water Chiller
- Vacuum Table
- MPG hand remote

**NK105 CONTROLLER****SYNTEC CONTROLLER****NK280 CONTROLLER****NC STUDIO****DSP CONTROLLER****NC STUDIO****WATER CHILLER****ROTARY ATTACHMENT**

Parameter / Specification	Unit	JK-404	JK-606	JK-609
Working Table (X x Y)	mm	440 x 440	620 x 620	620 x 920
Working Travel (X x Y)	mm	400 x 400	600 x 600	600 x 900
Travel (Z axis)	mm	200	200	200
Feeding Height (Z axis)	mm	200	200	300
Position accuracy	mm	0.01 / 300		
Repeatability	mm	0.008		
Spindle speed	rpm	6000 - 24000		
Spindle power	kw	2.2 kw (Water cooling) 3.2 kw, 4.5 kw & 5 kw (Optional)		
Control system		NC Studio / DSP / NK105 / NK280 / SYNTEC 6MA		
Drive system		Stepper / Servo		
Max. rapid travel speed	m/min	6		
Max. working speed	m/min	3		
Input power supply	V	Single phase, 220VAC (3Phase 415VAC , 50Hz Optional)		
Gross weight	kg	500	800	1000
Over all dimension	mm	850 x 800 x 800	950 x 850 x 850	1000 x 1300 x 1000

CNC WOOD ROUTER

Standard Accessories

- Leveling Pads-6 Nos.
- Tool Kit-1 Set,

Salient Features

- Integrally Cast Iron Bed Structure, Robust and without distortion.
- Y axis Double Motor Driving System ensures Stable & Smooth Movement.
- High Precision Rack Gear Transmission ensures fast speed & High Accuracy.
- T-slot Alluminium Table with Dust Collector.
- Leadshine Stepper Motors & Drives.
- Lubrication System.
- High Precision Taiwan TBI ball screw.
- Easy to maintain, cutting surface is smooth, saving time and labor.

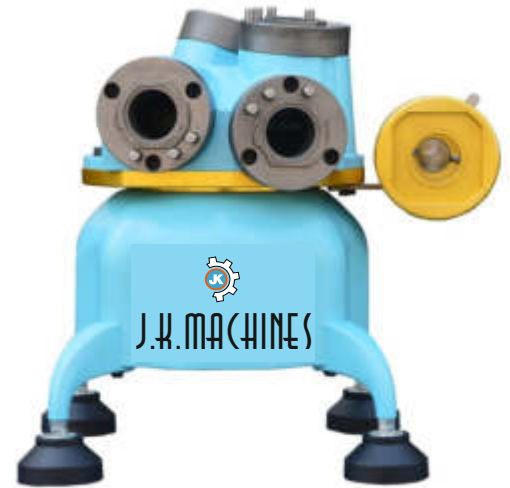
Job Sample



Technical Specification	Unit	JK-1325WR
Travel of working table (X Axis)	mm	1300
Travel of working table (Y Axis)	mm	2500
Travel of working (Z Axis)	mm	200
Spindle	Kw	3Kw Water Cooling
Spindle Rotating Speed	rpm	3000 ~ 24000
X, Y Position Accuracy	mm/min	± 0.05
Max. Cutting Speed	mm/min	20000
Max. Rapid Travel	mm/min	30000
Graphic Format		G-code / u00 / MMG / PLT
Compatible Software		Coral Draw / AutoCad / Photoshop
Control System		DSP / NC Studio
Working Voltage	V	AC230V SINGLE PHASE / AC415V/50Hz 3 PHASE
Connected Load	Kw	3
Drive & Motor		Stepper Motor & Drive
Machine Weight	Kg	1800

END MILL GRINDER

Specification	Unit	JKEM-03-13	JKEM-04-20
Range	mm	03-13	04-20
Motor	W	180	
Motor Speed	RPM	4800	
Diamond Wheel		CBN1203/300 (SSDC1203/3003)	
Collet		2 Flute, 3 Flute, 4 Flute - 1 Set each	
Power	V	AC220V/50Hz	
Weight	Kg	25	
Dimension	mm	350 x 230 x 240	



DRILL BIT GRINDER

Specification	Unit	JKDB-03-13
Range	mm	03-13
Motor	W	180
Motor Speed	RPM	4800
Diamond Wheel		CBN1203/300 (SSDC1203/3003)
Point Angle	Degree	95 - 135
Power	V	AC220V/50Hz
Weight	Kg	10
Dimension	mm	320 x 180 x 190



SINGLE LIP CUTTER GRINDER

Specification	Unit	JKSL-3-16
Collet Diameter	mm	3-16
Grinding Diameter	mm	3-16
Taper Angle	Degree	0-180
Relief Angle	Degree	0-45
Motor Speed	RPM	5200
Motor		220V/50Hz 1/3 HP
Weight	Kg	45
Dimension	mm	450 x 400 x 350



DIGITAL READ OUT SYSTEM



DRO 3 AXIS EDM



DRO 2 AXIS LATHE/MILLING



DRO 3 AXIS LATHE/MILLING



DRO 3 AXIS LCD

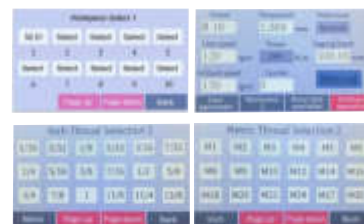


LINEAR GLASS SCALE



LINEAR MAGNETIC SCALE

TAPPING MACHINE



Touch Screen Display



Internal Tapping



Outer Circular Die



Chamfer of Inner Hole



Self Tapping Brass



**Magnetic Base
300 Kg / 600 Kg**

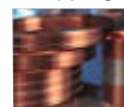
Various Materials can be Tapping



Steel



Aluminum



Copper

Specification	Unit	M3-M12	M3-M16	M6-M24	M6-M30	M6-M36	M6-M48
Working Table	mm	900x600x700					
Tap Capacity	mm	3 to 12	3 to 16	6 to 24	6 to 30	6 to 36	6 to 48
Motor		Servo					
Motor Power	W	600	600	1200	1200	1200	1200
Motor Speed	rpm/m	1000	375	200	200	125	50-250
Input Power	V	220V Single Phase 50Hz					
Weight	Kg	32	32	49	49	67	125
Machine Dimension	mm	700x660x220	700x660x220	810x770x220	810x770x220	810x770x220	1200x1020x240

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CONSUMABLES & SPARES

Drill EDM Spares Parts & Consumables



WATER AIR PUMP



WATER PUMP



BRASS/COPPER ELECTRODE



MULTI HOLE ELECTRODE



RUBBER SEAL



KEYLESS DRILL CHUCK



TAIWAN DRILL HEAD



CHINA DRILL HEAD



ELECTRONICA DRILL HEAD



DRILL CHUCK



DRILL GUIDES

WireCut EDM Spare Parts & Consumables



FILTERS



JR3JEL



WATER LIQUID



DIC-206



GUIDES/CARBIDES



ROLLER BALL BEARINGS



U&V MOTOR



X&Y MOTOR



BRASS ASSEMBLY



ROLLERS



RESIN



MOLYBDENUM WIRE

ZNC EDM Spares Parts & Consumables



SERVO STABILIZER



EDM OIL



PAPER FILTER



TRANSLATORY HEAD



ORBITAL ATTACHMENT



AXIS CORRECTOR



X,Y,Z BALL SCREW

Laser Welding Spare Parts & Consumables



XENON LAMP



LASER WIRES



PROTECTION GLASS



JOT STICK



YAG LASER



OTHER SPARES

Vertical Injection Molding (Standard Table)

Salient fetures

- Micro processor based Techmation / Porcheson controller.
- Nitrided steel screw & barrel directly driven by high torque hyd. motor
- Multi stage speed pressure & position for injection & clamping
- Screw cold start prevention
- Close loop barrel temperature control
- Molding condition monitoring with alarm
- Low pressure mold protection device
- Hydraulic RAM type clamping system
- Safety sensor for machine & operator safety
- Automatic purge system
- Emergency stop
- Proportional pressure & flow control valves
- Barrel cover
- Set of easy damage parts
- Level Pads / Tool kit set
- Steel Hopper



STANDARD SINGLE/DOUBLE/ROTARY SLIDE

Specification	Unit	ST-160		ST-200		ST-400		ST-550		ST-700		ST-900		ST-1200		ST-1600	
Screw Diameter	mm	22	25	28	32	32	36	32	36	36	42	36	42	45	50	50	55
Injection Pressure	kg/cm ²	1627	1260	1446	1107	1659	1311	1659	1311	1722	1265	1722	1265	1572	1275	1855	1533
Theoretical Shot Volume	cm ³	40	52	68	88	96	122	96	122	183	249	183	249	286	352	431	522
Max. Shot Weight	g/oz	36/1.30	46/1.60	61/2.10	79/2.70	86/3.00	109/3.80	86/3.00	109/3.80	164/5.70	224/7.80	164/5.70	224/7.80	259/9.00	316/11	387/13.5	470/16.4
Injection Rate	cm ³ /sec	36	46	50	65	57	73	57	73	91	124	91	124	150	185	159	193
Temperature Control	zone	2		3		3		3		4		4		4		4	
Material Hopper Capacity	L	15		15		15		15		30		30		60		60	
Clamping Force	T	16		20		40		55		70		90		120		160	
Opening Force	T	6.3		5		4		5		11		16		19		16.5	
Distance Between Tie Bars	mm	280 x 145		355 x 225		415 x 255		490 x 300		500 x 340		560 x 410		660 x 510		660 x 630	
Min. Mold Height	mm	120		100 (150 Optional)		150 (200 Optional)		150 (200 Optional)		200 (250 Optional)		200 (250 Optional)		250 (300 Optional)		300 (350 Optional)	
Opening Stroke	mm	160		180		200		200		250		270		300		300	
Max. Open Daylight	mm	280		280 (330 Optional)		350 (400 Optional)		350 (400 Optional)		450 (500 Optional)		470 (520 Optional)		550 (600 Optional)		600 (650 Optional)	
Ejector Force	T	1.30		1.30		1.30		1.30		2.70		2.70		3.90		5.40	
Ejector Stroke	mm	40		40		50		50		60		60		75		95	
Max. Hydraulic Pressure	kg/cm ²	140		140		140		140		140		140		140		140	
Pump Output	L	80		130		180		180		200		250		350		400	
Pump Motor Power	kw	3		4		5.50		5.50		11		11		15		18.50	
Barrel Heating Power	kw	2.10		2.70		3.60		3.60		4.50		4.50		7.70		10.50	
Total Wattage	kw	5.10		6.70		9.10		9.10		15.50		15.50		22.70		29	
Machine Weight	kg	760		1200		1700		1900		3000		4200		5800		7300	
Machine Dimension	mm	1300 x 800 x 2300		1400 x 900 x 2400		1800 x 1000 x 2400		1800 x 1000 x 2400		2000 x 1200 x 3100		2200 x 1300 x 3100		2600 x 1100 x 3600		2700 x 1200 x 3800	



VERTICAL MILLING MACHINE



**UNIVERSAL / HORIZONTAL
MILLING MACHINE**

**KNEE TYPE
MILLING
MACHINE**

Salient Features

- ☑ All casting of IS 210 grade FG 260 & stress relieved for sustained accuracy
- ☑ Power operated feeds & rapid traverses
- ☑ Wide range of feed & speeds with Servo Motors
- ☑ Table - slide with dovetail and cross - slide and knee - slide having · at guide ways provide strength to with stand heavy cutting forces
- ☑ Geometric is as per IS test chart 2200 / 2201
- ☑ Gears are made of alloy steel
- ☑ Central lubrication for guide ways and lead screws
- ☑ Splash lubrication for Speeds & Feed Gear Box
- ☑ Main spindle made of alloy steel mounted on taper roller bearings ensure vibration free cutting

Technical Specification

Specification		Universal / Horizontal Milling Machine		Vertical Milling Machine	
TABLE		SU-3S / SH-3S	SU-4S / SH-4S	SV-3S	SV-4S
Table overall size	mm	1550 x 310	1900 x 350	1550 x 310	1900 x 350
Table clamping area	mm	1350 x 310	1600 x 350	1350 x 310	1600 x 350
No./width of 'T' slots	mm	3/16	3/18	3 / 16	3 / 18
Center distance between 'T' Slots	mm	65	80	65	80
Longitudinal movement - power	mm	975	1200	975	1200
Longitudinal movement - manual	mm	1000	1300	1000	1300
Cross traverse - power	mm	290	330	290	330
Cross traverse - manual	mm	300	350	300	350
Vertical Movement - power	mm	400	400	400	400
Vertical Movement - manual	mm	425	425	425	425
MILLING SPINDLE					
Spindle nose taper	-	ISO - 40	ISO - 50	ISO - 40	ISO - 50
Quill Movement	mm	-	-	100	100
Swivel of milling head	Degree	-	-	45	45
SPEEDS					
Speed	steps	18	18	18	18
Speed range	rpm	35 - 1800	35 - 1800	35 - 1800	35 - 1800
FEEDS					
Feed	steps	20	20	20	20
Feed range Longitudinal & Cross	mm / mm	16 - 800	16 - 800	16 - 800	16 - 800
Feed range Vertical	mm / mm	4 - 200	4 - 200	4 - 200	4 - 200
*RAPID TRAVERSE					
Longitudinal & Cross	mm / min	3200	3200	3200	3200
Vertical	mm / min	800	800	800	800
POWER					
Spindle Motor	kW / HP	5.5 / 7.5	7.5 / 10	5.5 / 7.5	7.5 / 10
Feed Motor	kW / HP	2.25 / 3	3 / 4	2.25 / 3	3 / 4
OVERALL SIZE					
Maximum length	mm	1880	2340	1880	2340
Maximum width	mm	2060	2310	2060	2310
Maximum Height	mm	1830	1855	2210	2340
WEIGHT					
Net approx.	kg.	3150	4200	3150	4200
Gross approx.	kg.	4000	5000	4000	5000

Note : Swivel of table is 45 degree on either sides for UNIVERSAL Model Only.

Standard Accessories for Milling Machine

- ☒ Electric Motors with Control Gears.
- ☒ All Axis Auto Feed Box Equipped with Servo Motor
- ☒ Long Milling Arbor Size : 25.40 mm for Universal & Horizontal Model Only
- ☒ Coolant System
- ☒ Machine Lamp
- ☒ Set of Requisite Tools
- ☒ Instruction & Spare Parts Manual

List of Optional Accessories

- ☒ Universal Dividing Head of Size : 135 mm
- ☒ Face Milling Cutter Size : 125 mm without Indexable Inserts with Suitable Arbor
- ☒ Rotary Table Size : 300 mm
- ☒ Swivel Machine Vice
- ☒ Collet Chuck
- ☒ Stub Arbor Size : 16, 22, 27, 32 mm for Vertical Milling Head
- ☒ Conical Type Collets
- ☒ Digital Readout System (DRO)
- ☒ Vertical Milling Attachment (For Universal & Horizontal Only Model)
- ☒ Rack Cutting Attachment for Universal & Horizontal Model
- ☒ Slotting Attachment (For Universal & Horizontal Model)
- ☒ Vertical Head Mounting Attachment on Column (For Universal & Horizontal Model)
- ☒ Long Milling Arbor 22, 27, 32 mm Each (For Universal & Horizontal Model only)
- ☒ Anti - Vibration Mount (4 Nos.)



 **J.K. MACHINES**

HEAVY DUTY ALL GEARED LATHE MACHINE



TECHNICAL SPECIFICATION

CAPACITIES						
MODEL		AG-1	AG-2	AG-3	AG-4	
Height of center	MM	250 300	350	400	450	500
Swing over bed	MM	480 580	680	780	880	980
Swing over cross slide	MM	300 380	500	500	600	650
Swing in gap	MM	800 900	1000	1100	1200	1300
Width of bed	MM	325 (12 ¾")	375 (15")	450 (18")	500 (20")	
Width of gap in front of faceplate	MM	220	220	220	220	
BED LENGTH						
		ADMIT BETWEEN CENTER				
	7'	1000 mm	1000 mm	700 mm	700 mm	
	9'	1560 mm	1560 mm	1300 mm	1300 mm	
	10'	1900 mm	1900 mm	1600 mm	1600 mm	
	12'	2500 mm	2500 mm	2200 mm	2200 mm	
	14'	3100 mm	3100 mm	2800 mm	2800 mm	
	16'		3700 mm	3400 mm	3400 mm	
	18'		4300 mm	4000 mm	4000 mm	
	20'		4900 mm	4600 mm	4600 mm	
HEAD STOCK						
(HARDENED & GROUND GEARS)						
Spindle Nose	DIA/Threads	104 / 6 T.P.I.	104 / 6 T.P.I.	104 / 6 T.P.I.	104 / 6 T.P.I.	
Spindle Nose (OPTIONAL)	DIA/Threads	----	----	146/6T.P.I.	146/6T.P.I.	
Spindle Bore	MM	50	80	80	80	
Spindle Bore (OPTIONAL)	MM	----	----	100	100	
Taper in Spindle Nose Sleeve		MT-4	MT-4	MT-4	MT-4	
No. of Spindle Speeds / RANGE		12 / (70 – 1200)	12 / (70 – 1200)	12 / (70 – 1200)	12 / (70 – 1200)	
No. of Spindle Speeds / RANGE (OPTIONAL)		-----	-----	08 / (70 - 825)	08 / (70 - 825)	
THREAD						
Metric threads nos./range	MM	20/0.5-15	20/0.5-15	15/1-15	15/1-15	
With worth threads nos./range	T.P.I	40/60-2	40/60-2	38/30-2	38/30-2	
Lead Screw	DIA /T.P.I.	38 / 4	38 / 4	50 / 2	50 / 2	
CARRIAGE						
Cross slide travel	MM	250	350	450	500	
Top slide travel	MM	125	140	175	175	
Max tool shank size	MM	25 X 25	32 x 32	38x38	38 x 38	
TAIL STOCK						
Tail stock sleeve taper		MT 4	MT 4	MT 5	MT 5	
Sleeve dia	MM	60	60/75	75	75	
Sleeve travel	MM	150	150	250	250	
GENERAL						
Main Motor Power	HP/KW	3 / 2.2	5 / 3.75	5 / 3.75	5 / 3.75	
Main Motor Power(OPTIONAL)	HP/KW	---	---	7.5 / 5.5	7.5 / 5.5	

(We reserve the rights for modifications concerning design, dimension & weight. Pictures are not Binding)

SPECIAL HEAVY DUTY LATHE AT EXTRA HEIGHT OF CENTRE, APART FROM ABOVE MODEL IS AVAILABLE ON REQUEST.

STANDARD ACCESSORIES

Face Plate, Chuck Plate, Dead Centers, Center Adaptor, thread Dial Indicator, Set of Change Gears, Set of Spanner Electrical Motor with Rev/Fwd Switch, Splash Guard upto 10' BED LENGTH only.

OPTIONAL ACCESSORIES

Steady rest, Follow rest, Coolant Pump, Machine Lamp, Taper Turning Attachment, Quick Change Tool Post, Revolving Center.3 jaw self centering chuck, 4 jaw independent chuck. A2-6/A2-8 Type Spindle Nose, Electricals (Panel Board), Rapid Saddle Movement

ALL GEARED PRECISION LATHES



BED

2V & 2 Flat type made of close grained cast iron. Robust and heavily ribbed walls with wide openings to facilitate easy flow of chip. Guide ways are hardened and precision ground.

HEAD STOCK

All geared type. Gears are made from alloy steel & are hardened & precision ground.

FEED BOX

Universal feed box to cut metric Module inch & D. P. Treads

TAIL STOCK

Moves on 'V' & flat guide of the bed. Cross movement is incorporates for turning of slight tapers.

MAIN SPINDLE

Made from alloy steel hardened & ground. Supported by precision taper roller bearings.

STANDARD EQUIPMENT

Electrical suitable for standard 3 phase 415 V, 50 Hz. AC supply. Slotted tool block. Back plate. One reduction sleeve metric MT5-MT3 Centres. set of service tools instruction manual.

STANDARD ACCESSORIES

1) Electrical equipment suitable for 415 Volts, 3 phase, 50 Hz AC Supply 2) Swarf tray 3) Splash guard 4) Set of Spanner
5) Operating instructions & Spare parts Manual. 6) Chuck Plate 7) Spindle Reduction Sleeve 8) Dead Center -2 Qty

SPECIFICATIONS		SIGMA 400/1000	SIGMA 500/1000	SIGMA 500/1500
CAPACITIES				
Height of center	mm	200	250	250
Swing over bed	mm	400	500	500
Swing over cross slide	mm	210	280	280
Movement of cross slide	mm	200	250	250
Distance between center	mm	1000	1000	1500
CAPACITIES				
Bed type		2V & 2 Flat	2V & 2 Flat	2V & 2 Flat
Bed width	mm	279	279	279
MAIN SPINDLE				
Type & size of spindle nose		Threaded	Threaded	Threaded
Taper bore in spindle		MT 5	MT 6	MT 6
Bore in spindle	mm	40	50	50
TAIL STOCK				
Spindle diameter	mm	60	60	60
Taper bore in spindle sleeve		MT 3	MT 4	MT 4
Spindle travel	mm	140	140	140
TOOL OR TOP SLIDE				
Travel of top slide	mm	100	100	100
Tool shank section	mm	25 x 25	25 x 25	25 x 25
SPEEDS				
No. of speed		8	8	8
Range of RPM		40 – 1000	40 – 1000	40 – 1000
FEEDS				
No. of feed		54(0.028-1.59)	54(0.028-1.59)	54(0.028-1.59)
THREAD NO. / RANGE				
Metric	mm	20 / 0.5 -15	20 / 0.5 -15	20 / 0.5 -15
Module		20/0.1 to 2.25	20/0.1 to 2.25	20/0.1 to 2.25
Inch. TPI		32 /60 – 4	32 /60 – 4	32 /60 – 4
D.P.		32/12 to 60	32/12 to 60	32/12 to 60
ELECTRICAL				
Main motor		2.2/3 kw / H.P.	2.2/3 kw / H.P.	2.2/3 kw / H.P.
Power supply		415 Volts, 3 phase, 50 Hz AC Supply	415 Volts, 3 phase, 50 Hz AC Supply	415 Volts, 3 phase, 50 Hz AC Supply
GENERAL				
Weight (appx.)		1080 kg.	1180 kg.	1200kg.

Special Heavy-Duty Lathe with extra Height, Speed, Feeds, apart from above model are available on request.
(We reserve the rights for modifications concerning design, dimension & weight. Pictures are not binding.)

HEAVY DUTY PRECISION RADIAL DRILLING MACHINE



Model : RDM 50/1200, 50/1500, 50/1900, 50/2300

Model : RDM 60/1200, 60/1500, 60/1900, 60/2300

Salient Features :

- Double Column Construction for Rigidity and effortless centering.
- Generously proportional & well Adequately ribbed base plates, column and arm for maximum rigidity and minimum deflection
- Major casting are stress relived and Sufficiently rigid to meet Requirements of IS : 2199.
- Arm guide Surfaces are precision ground.
- Hardened and ground gears for Minimum wear and tear.
- Precision hardened and ground spindle.
- Friction type disc clutch is adapted to observed Impact force caused by vertical movement of spindle and effectively protects all transmission units inside gear box.
- Disc clutches is employed for starting and stopping the spindle.
- Special arm elevating safety device is provided to prevent arm from down, when machine is used for long time.
- Machine tested as per IS : 2199.

TECHNICAL SPECIFICATIONS

	Unit	RDM 50 / 1200 RDM 60 / 1200	RDM 50 / 1500 RDM 60 / 1500	RDM 50 / 1900 RDM 60 / 1900	RDM 50 / 2300 RDM 60 / 2300
CAPACITY					
Drilling Capacity in Steel /CI for 50 mm Drilling Machine		50/60	50/60	50/60	50/60
Drilling Capacity in Steel/CI for 60 mm Drilling Machine		60/70	60/70	60/70	60/70
Tapping Capacity:					
Metric Treads fine pitch	mm	48 x 3	48 x 3	48 x 3	48 x 3
Any other Threads fine pitch	inch	1 3/4"	1 3/4"	1 3/4"	1 3/4"
Light boaring capacity in Steel	mm	120	120	120	120
DRILL HEAD					
Taper in spindle		MT5	MT5	MT5	MT5
Number of spindle speed / range	rpm	12 / 40 – 1700	12 / 40 – 1700	12 / 40 – 1700	12 / 40 – 1700
Number of feed / range	mm/rev	6 / 0.12 – 1.25	6 / 0.12 – 1.25	6 / 0.12 – 1.25	6 / 0.12 – 1.25
WORKING RANGE					
Drilling radius: Min. / Max.	mm	505 / 1200	530 / 1500	530 / 1890	550 / 2350
Drill head traverse	mm	695	970	1360	1800
Distance between spindle axis & column face: Min. / Max.	mm	355 / 1050	355 / 1325	355 / 1715	355 / 2150
Distance between base plate & spindle :	mm				
Maximum		1420	1425	1425	1625
Minimum (Spindle retracted)		695	675	675	705
Spindle travel	mm	325	325	325	325
Diameter of column	mm	300	350	350	400
Arm traverse	mm	725	750	750	940
BASE PLATE					
Working surface of base plate (lx w)	mm	1300 x 800	1490 x 910	1720 x 910	2300 x 1000
Height of base plate	mm	210	210	210	220
Overall size base plate	mm	2000 x 830	2220 x 935	2420 x 925	3100 x 1015
Nominal size of T slots	mm	22	22	22	22
Number of T slots / Spacing	No./mm	3 / 250	3 / 250	3 / 250	3 / 250
ELECTRICAL					
Power supply A.C.	V.ph. Hz	415, 3, 50	415, 3, 50	415, 3, 50	415, 3, 50
Power of drill head motor	Kw	3.6 / 4.5	3.6 / 4.5	3.6 / 4.5	3.6 / 4.5
Arm Elevating Motor	Kw	1.5	1.5	1.5	2.2
DIMENSIONS & WEIGHT					
All Over Length	mm	2090	2400	2750	3310
All Over Width	mm	995	1010	1010	1025
All Over Height	mm	3100	3150	3150	3400
Dimension of Packing case Length		2265	2520	3020	3600
Width	mm	1200	1230	1230	1350
Height	mm	2800	2800	2800	3200
Net weight (approx)	kg.	3200	3500	4000	4600
Gross weight (approx)	kg.	4000	4550	5200	5800

STANDARD ACCESSORIES:



OPTIONAL ACCESSORIES:



(We reserve the rights for modifications concerning design, dimension & Weight. Pictures are not binding.)

TOOL & CUTTER GRINDER



Machine Introduction

Universal tool and cutter Grinder are used to sharpen milling cutters and tool bits. Our sigma UTC series is extremely versatile machine useful for surface grinding and grinding of complex shapes. Our sigma UTC series comes with variety of optional accessories and fixtures. set-up can be created and combined to complete many operations.

Universal Tool and Cutter Grinder

✓ Sigam UTC 250TM ✓ Sigam UTC 250T ✓ Sigam UTC 280T

Machine Features

Functional Versatility

The machine basically designed for sharpening and reconditioning wide range of high speed and carbide tipped tool as side & Face Milling Cutters, Cylinders cutters, Angel Cutters, convex & concave cutters, gear hobs, End mills, shell mills, Reamers, Drill, Taps etc.

Main Construction of Machine

Wheel Head : It is of rigid construction and holds the spindle assembly. it can be fitted horizontal and swiveled vertically full 360 degree, for quick setting of compound angles. wheel head is mounted on the rigid column, which can be raised/lower up/ down wheel head also can be adjusted 150mm on cross direction.

Wheel head spindle : Alloy steel hardened and ground spindle is mounted on precision pre-load radial ball bearings, which are greased packed. The grinding wheels can be mounted on both side of the spindle and the wheels mount design is such that the spindle can be reversed.

Work Table : This is mounted on the carriage and can be swiveled 45 degree on either side of the column. This table has a smooth and rapid movement longitudinally on the carriage through LM Guide ways which enable smooth, sensitive and accurate longitudinal movement even with heavy jobs Auxiliary.

Universal Work Head : This can be swiveled full 360 degree in both Horizontal and Vertical planes. Its spindle nose has ISO 50/MT 5 tapers and the spindle is mounted to taper roller bearings.

Standard Accessories

- ✓ Universal Cutter Head with
- ✓ MT-3 Adaptor & Dead Centre
- ✓ Right Hand Tail Stock. (Spring Loaded)
- ✓ Left Hand Centre Tail Stock
- ✓ Diamond Holder
- ✓ Plain Tooth Rest with Micro Adjustment
- ✓ Universal Tooth Rest
- ✓ Centre Height Gauge
- ✓ Wheel Guards
- ✓ Grinding Wheels - 3 Nos.
- ✓ Cutter Arbor Dia 25.4
- ✓ Wheel Flanges - 3 Nos.
- ✓ All Necessary Spanners and Wrenches
- ✓ Suitable Electrical
- ✓ Maintenance and Instructions Manual

Optional Accessories

- ✓ Radius Grinding Attachment
- ✓ Cylindrical External & Internal Grinding Attachment
- ✓ Face Milling Cutter Grinding Attachment
- ✓ Extra Precision Spindle for Internal Grinding Attachment
- ✓ Drill Point & Top Lead Attachment
- ✓ Flute Grinding or Spiral or Hob Grinding Attachment
- ✓ Long Reamer Grinding Attachment
- ✓ Dust Collector Unit Complete with Electricals
- ✓ Radius Grinding Attachment for Die Sinking Cutter
- ✓ Cylindrical External Grinding Attachment
- ✓ Water Cooling Device
- ✓ Blade Grinding Attachment
- ✓ Permanent Magnetic Chuck 10" x 5"
- ✓ Milling Gear Cutter Grinding Attachment
- ✓ Universal Three Way Vice
- ✓ Wheel Balancing Unit
- ✓ Indexing Attachment with Plate 4 Pcs.
- ✓ 4" Self Centering Chuck with Flange
- ✓ Universal Two Ways Vice
- ✓ Angular Wheel Dressing Attachment
- ✓ Radius Dressing Attachment
- ✓ Universal Vice 100 mm
- ✓ Collets Attachment
- ✓ Machine Lamp with Electricals
- ✓ Raising Block
- ✓ MT-5 Cutter Arbor for Various Sizes
- ✓ Wheel Flange Optional Size
- ✓ Extension Pieces for Internal Grinding
- ✓ Spindle Dia : 6,10,11 or 14 mm
- ✓ Diamond Dresser
- ✓ Collets

Technical Specification

		SIGMA UTC 250TM	SIGMA UTC 250T	SIGMA UTC 280T
CAPACITY				
Max. swing on std. Centre	mm	250	250	280
Swing with Raising Blocks		350	350	380
Length between Workhead and RH Tailstock	mm	330	520	610
Admit between Centers		440	670	760
Max. Height Center of wheel above Table	mm			
TABLE				
Longitudinal Traverse	mm	400	480	510
Cross Traverse		200	250	250
Swivel either side of Centre (End Scale)	degree	-	9	9
Swivel LH/RH of Column (Centre Scale)				
Size of Table	mm	850 x 115	920 x 140	1040 x 140
WHEEL HEAD				
Vertical adjustment of Wheel Head	mm	210	210	290
Swivel	degrees	360°	360°	360°
Tilting in either Direction	degrees	180°+	180°+	180°+
	r.p.m.	3800 5600	3800 5600	3800 5600
Motor Power	KW/HP	0.75 / 1	0.75 / 1	0.75 / 1
SHIPPING DIMENSIONS				
Net weight of the Machine	kg.	750	1150	1250
	kg.	900	350	1450
Overall size of Machine L x W x H	mm	1075 x 1100 x 1400	1425 x 1470 x 1580	1425 x 1470 x 1580
Overall size of Packing case L x W x H		141 300 550	575 575 650	575 x 575 x 650

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