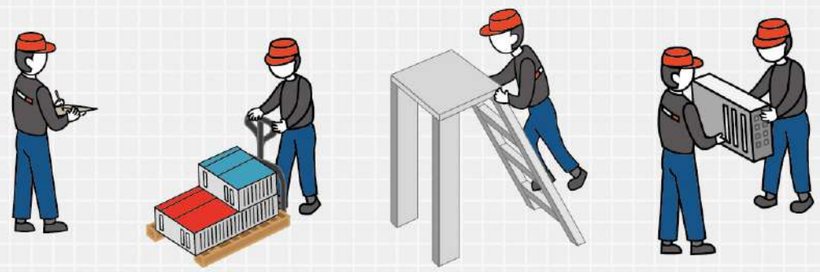
OSCARMAX
ELECTRICAL DISCHARGE MACHINE

NX/ZX

SINKER ELECTRICAL
DISCHARGE
MACHINE

NX/ZX



OSCARMAX
ELECTRICAL DISCHARGE MACHINE ®

OSCAR E.D.M. COMPANY LTD.
No. 359, Xuetian Rd., Wuri Dist., Taichung City 41451, Taiwan
TEL: +886-4-2338-5818 FAX:+886-4-2338-0035
Website:www.oscaredm.com.tw
Email:oscaredm@oscaredm.com.tw
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OSCARMAX
ELECTRICAL DISCHARGE MACHINE

/Persistent Quality and Performance
/Consistent Technology and Worth
/Service and Enthusiasm Oriented
/Keep Innovations and Breakthroughs

AIOT_

CONTENT

We are dedicated to develop the best EDM with Perfect Combination T-ON and T-OFF Just like how we should balance between work and life.

EROWA® Patented

HIWIN

minimum wear out 0.1%

Panasonic

Industrial IPC CPU

NSK

EZ spark for super hard alloys

FAGOR

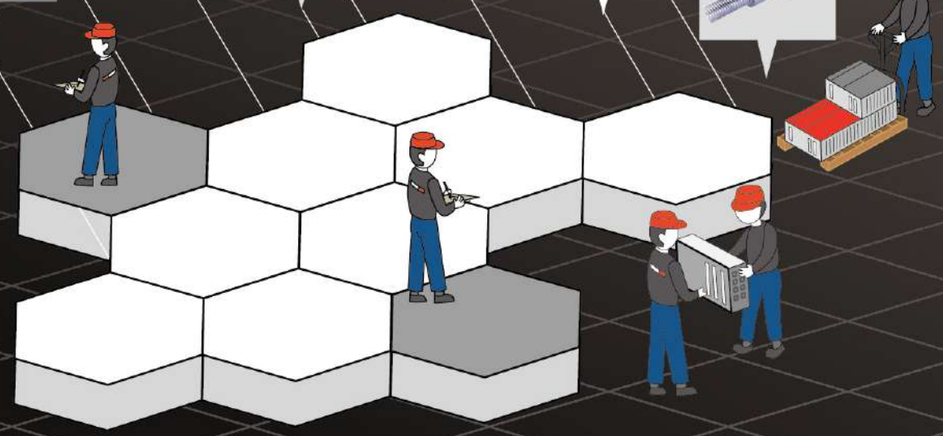
Surface Roughness : 0.15um/Ra

PMI

Easy program Fuzzy system

DELTA

GRUNDFOS



EXTREME EFFICIENCY OUTSTANDING QUALITY

Persistent Quality and Performance
Consistent Technology and Worth
Service and Enthusiasm Oriented
Innovations and Breakthroughs Resulting from Endless Endeavors

Introducing the Brand-New NX/ZX Series EDM Machines

In the post-pandemic era, the global mold market is significant shifts in demand. **OSCARMAX** continues to trends and evaluate diverse customer needs. Recognizing preference for high-precision, high-performance machines for small-batch production, we have focused on developing versatile EDM machines that cater to these emerging requirements.

With over 40 years of manufacturing expertise and a dedicated R&D team, **OSCARMAX** is proud to unveil the all-new NX Series and ZX Series EDM machines.

These new models offer the following key features:

- **User-Friendly and Intuitive Design:** Engineered for an enhanced user experience with an intuitive interface.
- **Less control:** Fewer operations, simpler commands, and maximum machine performance.
- **Smart Integration and Connectivity:** Developed on the Windows platform, enabling seamless integration with major systems and supporting smart factory applications.
- **Adaptability for Diverse Market Needs:** Designed to meet the varied demands of different industries and production scenarios.

At **OSCARMAX**, we prioritize not only technological innovation but also addressing the needs of our customers. The NX Series and ZX Series are tailored to provide exceptional manufacturing solutions and serve as your trusted partner in achieving market success.

Zero-Training Concept

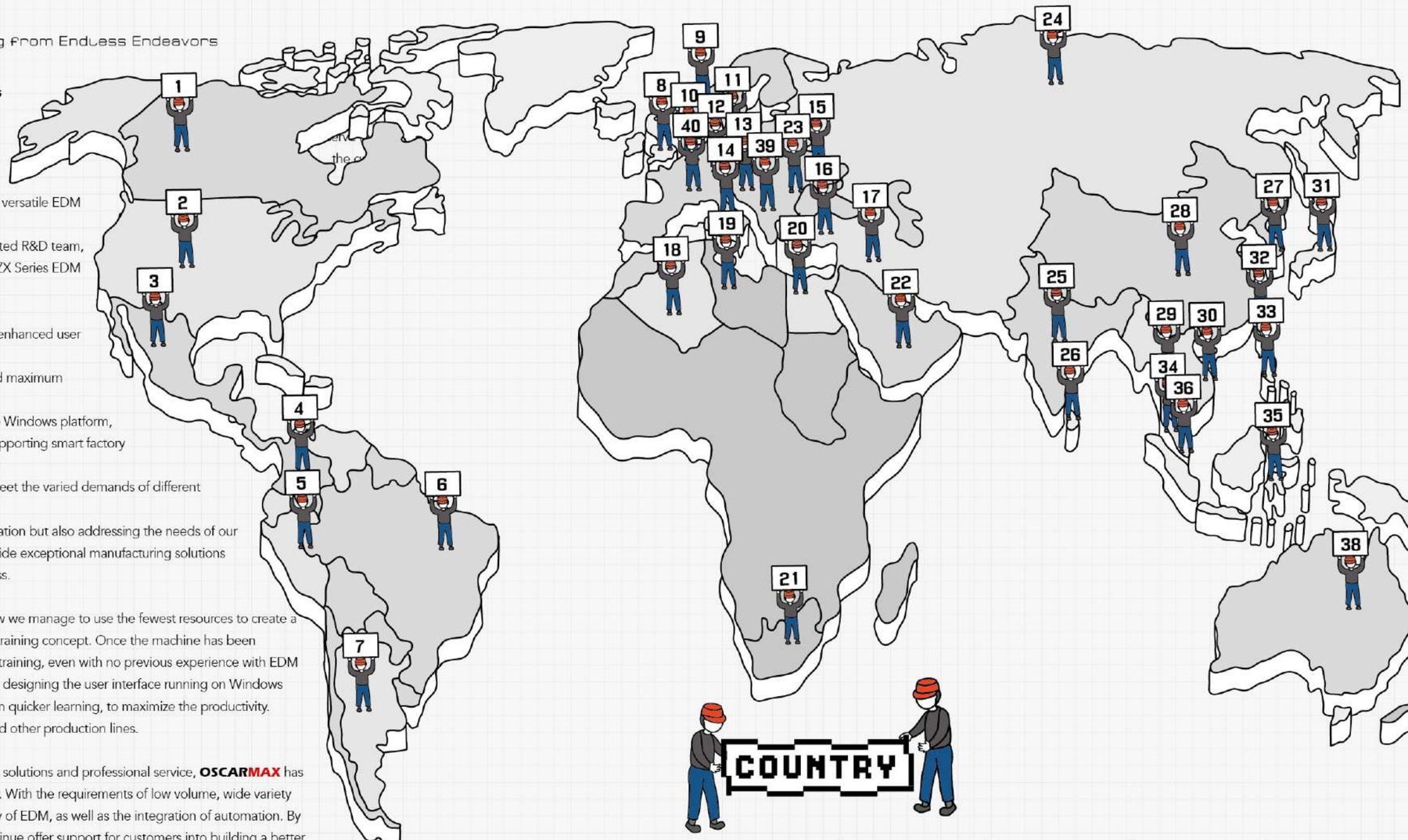
During our R&D process, we believe that "less is more", how we manage to use the fewest resources to create a maximum value. **OSCARMAX** aimed to promote a ZERO-training concept. Once the machine has been installed, it can be used directly with minimal time spent by training, even with no previous experience with EDM machining. By the rich experiences from previous machines, designing the user interface running on Windows platform for user-friendly and intuitive operation. Focused on quicker learning, to maximize the productivity. Therefore, engineers can focus more on products design and other production lines.

Build the Smart Industry

With the concept of Zero-training, latest advanced technical solutions and professional service, **OSCARMAX** has expanded its market from automotive to aerospace industry. With the requirements of low volume, wide variety market, **OSCARMAX** continues to enhance the technology of EDM, as well as the integration of automation. By choosing EX series EDM, **OSCARMAX** expect to continue offer support for customers into building a better industrial market. We are now in the fourth industrial revolution, also referred to as Industry 4.0. Characterized by increasing automation and the employment of smart machines and smart factories. Let's build the smart industry world together!

PROFILE_

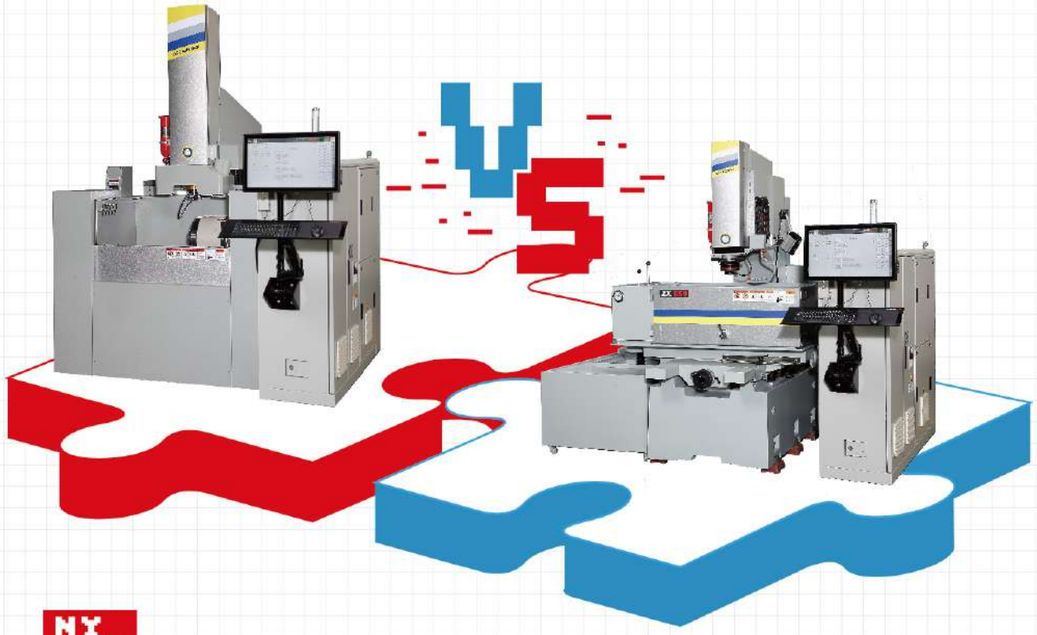
Excellent quality products with reasonable prices has been increasingly welcomed by worldwide buyer, OscarMax EDMs have been sold to over 40 countries in the world. With an aim to present excellence, we OscarMax has constantly conduct problem analysis in detail, conclusion and arrangement and execution adjustment.



(1) Canada	(9) Norway	(17) Lebanon	(25) India	(33) Philippines
(2) U.S.A.	(10) Germany	(18) Algeria	(26) Sri Lanka	(34) Malaysia
(3) Mexico	(11) Poland	(19) Tunisia	(27) Korea	(35) Indonesia
(4) Colombia	(12) Czech Republic	(20) Egypt	(28) China	(36) Singapore
(5) Peru	(13) Slovenia	(21) South Africa	(29) Thailand	(37) New Zealand
(6) Brazil	(14) Italy	(22) Saudi Arabia	(30) Vietnam	(38) Australia
(7) Argentina	(15) Ukraine	(23) Romania	(31) Japan	(39) Ukraine
(8) UK	(16) Turkey	(24) Russia	(32) Taiwan	(40) Switzerland

EX_

Advanced Unified Sinker EDM Machine — Exact precision , Excellent performance
Applications: Complex machining paths, automotive molds, various household appliance molds, electronic component molds, aerospace parts, etc.
****For more comprehensive details, refer to the EX Series catalog provided separately****



NX_

Mid-Range Automatic Sinker EDM Machine — Positioning, Side Discharge Machining, and Up to Three-Axis Control (No OB orbit Function)
Applications: High-volume repetitive parts or cavities. Without OB orbit function, it requires both rough and finish electrodes to achieve better sidewall surface finishes.

ZX_

Practical and Economical Sinker EDM Machine — Manual XY Positioning and Z-Axis Discharge Machining
Applications: Ideal for manufacturers with lower EDM processing needs, as well as for mold repair and related tasks.

Functions Series	APC	TURBO	EZ Spark	Control axes	OB orbit	User-friendly interface	PGM	Quick integrated	Automation	Movable control panel
EX	■	■	■	8	■	■	□	□	□	■
NX	■	■	■	3	X	■	□	□	□	□
ZX	■	■	■	1	X	■	□	□	□	□

■:Standard □: Option X:None

NX SERIES

- Suitable for high-repetition parts or cavities, with less stringent requirements for sidewall surface roughness.
- Three-axis AC servo control.
- Automatic edge detection.
- Side machining in X+, X-, Y+, and Y- directions.
- Supports arbitrary linear vector machining and point-to-point machining, ideal for casting holes, flow holes, or machining at special angles.
- Compared to the EX Series, the NX Series does not support OB orbit functionality.

ZX SERIES

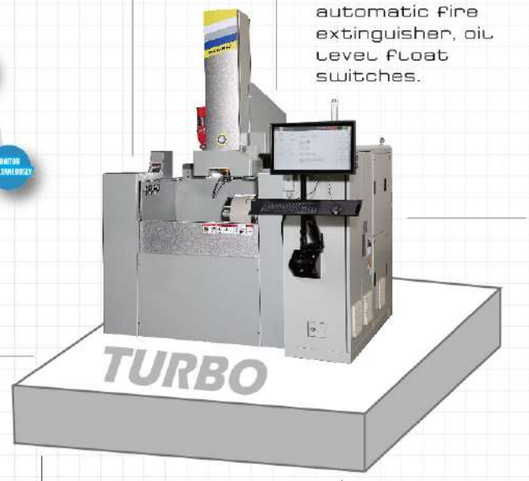
- Economical design with manual control for X and Y axes and AC servo motor control for the Z axis.
- Equipped with a handheld control box screen for quicker mold centering and electrode edge detection.
- Since the X and Y axes use manual handwheels, OB orbit functionality is not supported.

NX/ZX / SYSTEM FEATURES

APC adaptable parameters control
Check Page 9 to find out more!

ATC (option)

UV Fire Detection System
UV fire sensor, automatic fire extinguisher, oil level float switches.



DELTA AC
Delta A3 drive inside.

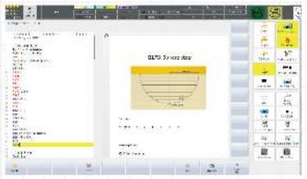
Automatic door (Option)
Programmable oil level.
Available for model 500-1060
Compatible with robot automation connection to load/unload workpiece.

Movable Controller with ECO stand-by mode for power saving.

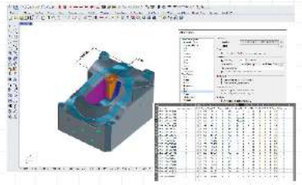
Ease of operation, touch screen on remote control box

APPLICATION FEATURES

- Conversational user interface – quick and easy program edit with pictures and description.
- Easy G-code insert for more complex programs.

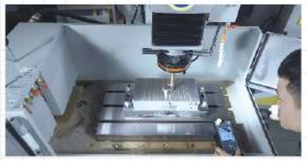


- Built-in search function – GM code generated by simply enter command.



- Able to process CAM software output through API, to generate a program that including parameters, positioning, mold edging etc. Hence, it saves time and eliminate human error.
[post processor is not included]

- FUZZY mode allows to simply choose materials and suggest the suitable program.
- Operators are allowed to edit the FUZZY parameters to optimize.



- Ergonomic remote controller with touch screen for easy operation and access inside the machine work space.

- Remote access allows OSCARMAX technicians assist with training, troubleshooting and problem diagnosis.

SYSTEM FEATURE

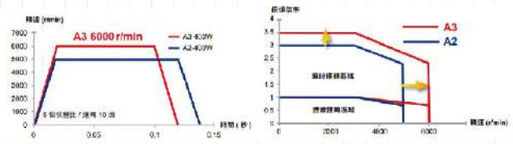
- Windows 10 Operating system with industrial CPU i3(or above)64-bit. 21.5" multi-touch screen with movable controller.
- Equipped with digital voltmeter, current meter etc., to monitor the machine status easily.
- Up to 6 axes control – XYZCUV – equipped by rotary table to satisfy complex job.
- Color touch-screen on remote controller, unique design improves user convenience.
- ECO stand-by mode: Equipped by a motion sensor for power saving.
- UV fire sensor.
- Suitable for Model 500-1060 only.
- Able to process CAM software output through API.
- Allow online training, problems diagnosis and system update remotely.

EtherCAT FEATURE

- EtherCAT, AC servo system and I/O control platform equipped.
- Delta ASDA-A3 Servo Drive: Higher responsiveness and shorter settling time.
- EtherCAT I/O card with great stability and easy for integration with other applications.
- Multi-touch screen with keyboard, easy for operation.

High speed motor with 6000 r/min and 350% peak torque

- Increase 1000 r/min compared to A2.
- Stable current output to achieve better accuracy and roughness.

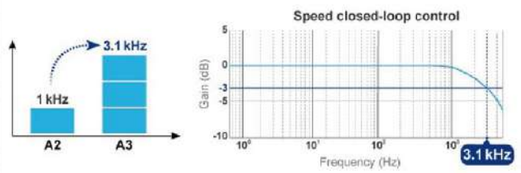


16,777,216 pulses for one single turn

46,603 pulses for one degree

3.1 kHz Bandwidth

- Prompt respond between driver and servo motor to achieve precise positioning.
- Higher responsiveness and shorter settling time increase productivity.



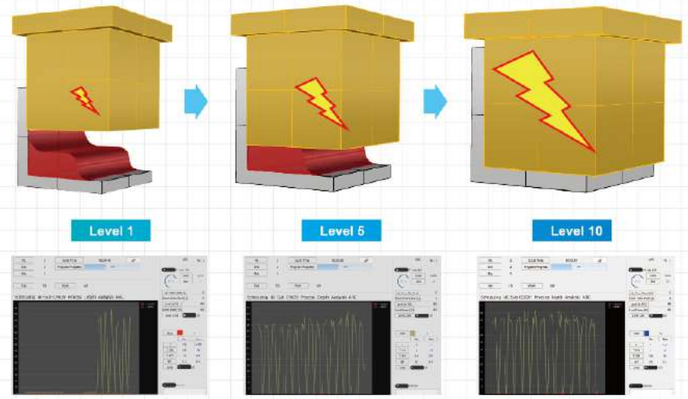
24-bit Absolute Type Encoder

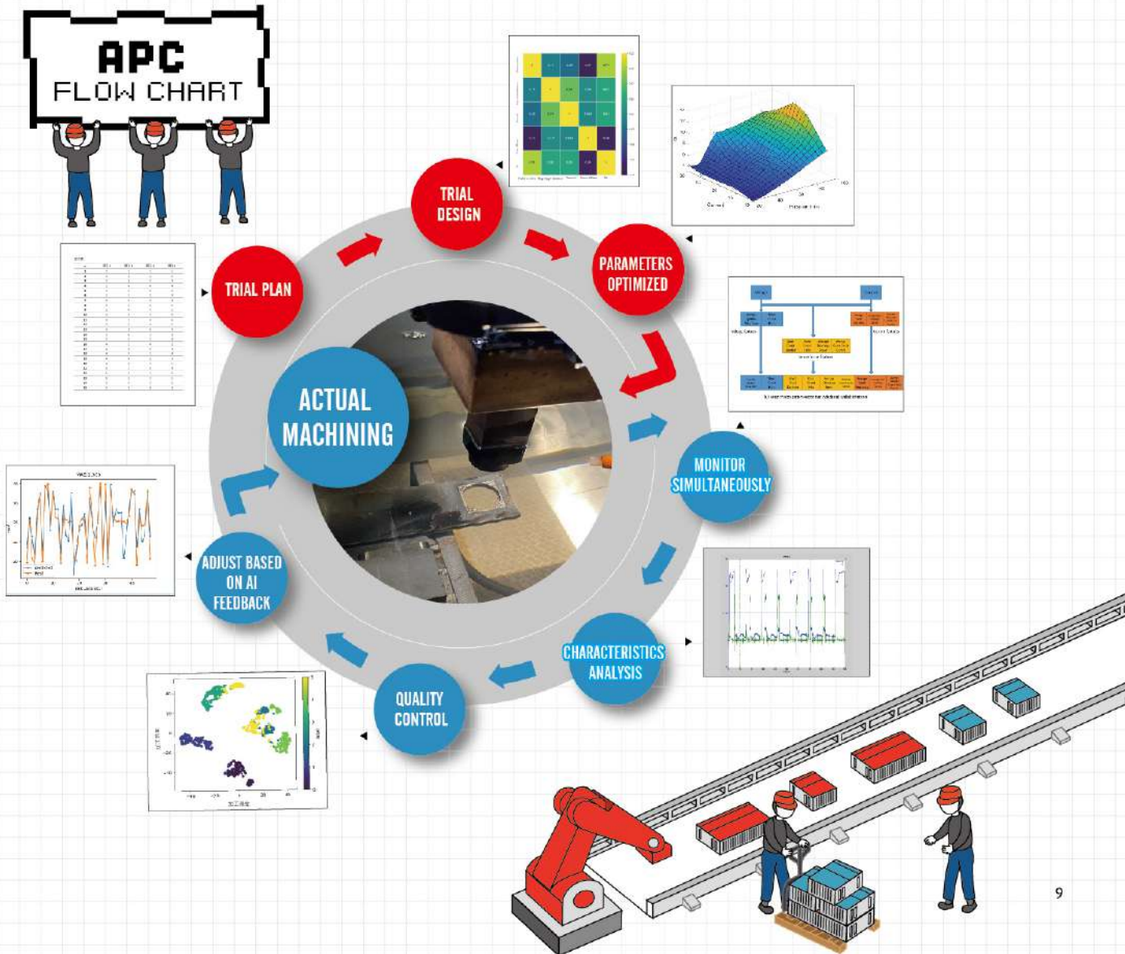
- 16,777,216 pulses/turns ensure precise positioning.
- Steady performance at low-speed enhances machining quality.
- Keeps motor's position during power shortage.

APC DESCRIPTION.

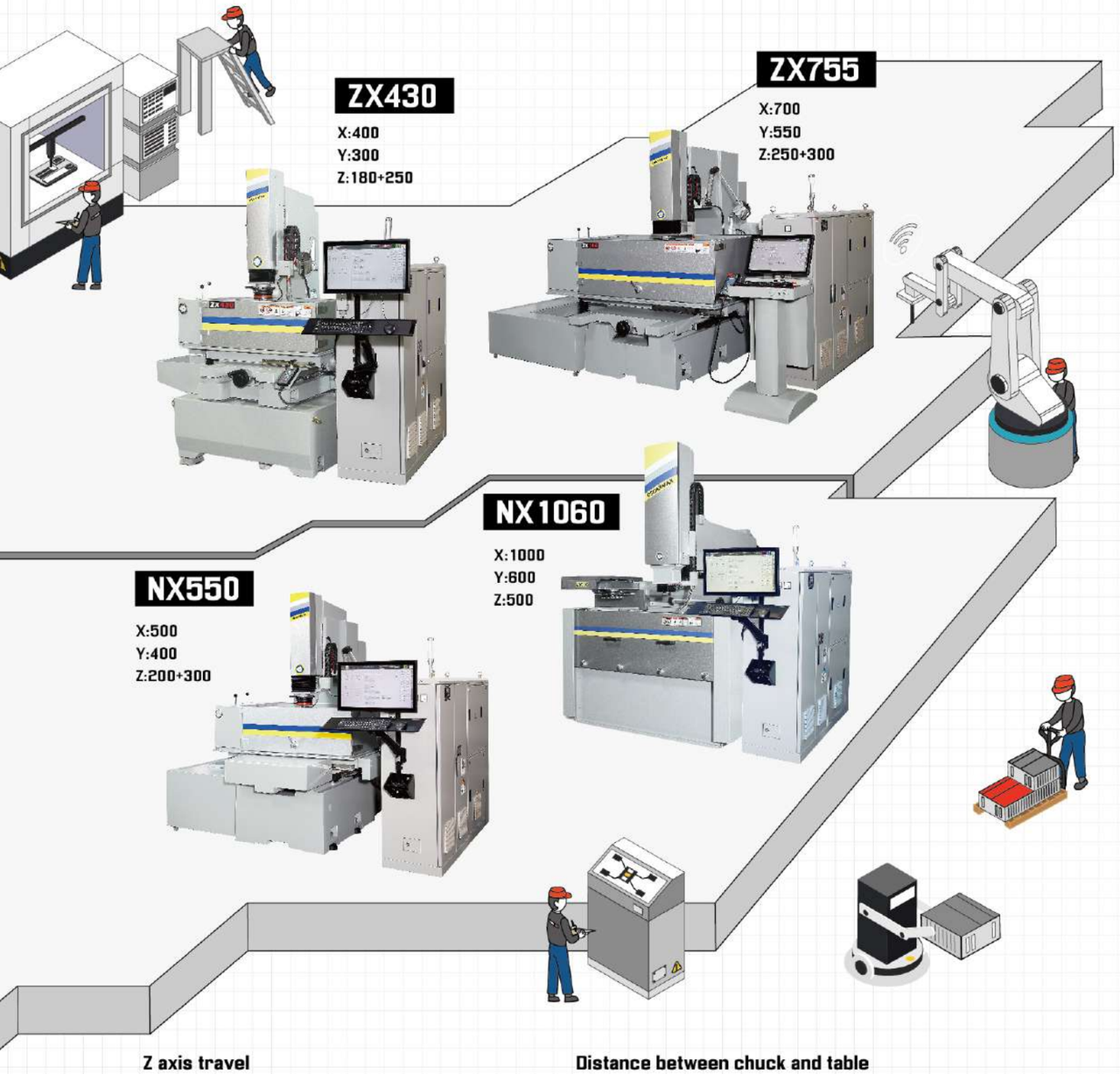
APC — Adaptable parameters control

- Massive efficiency improvement based on the real time condition monitoring.
- When an electrode is approaching a workpiece, there are usually sharp corners and small contact area. For this reason, parameters had to be selected carefully and were held throughout entire roughing process. APC can automatically (by voltage and ampere feedback) adjust sparking conditions to avoid arcing in the beggining of process and later increase the power to reach maximum possible speed.

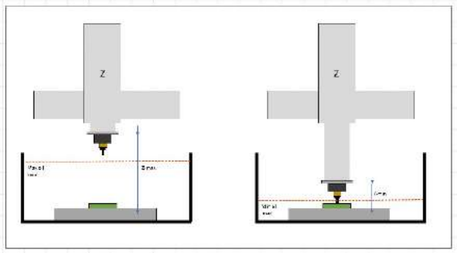




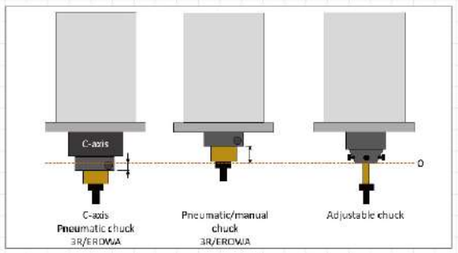
NX/ZX / MACHINE FEATURES



Z axis travel



Distance between chuck and table



Structure				Table-Moving type			Column-Moving type		
Model (by size)				NX/ZX430	NX/ZX550	NX/ZX755	NX500	NX750	NX1060
Specification	Table Travel	X	mm (inch)	400(16)	500(20)	700(28)	500(20)	700(28)	1000(40)
		Y		300(12)	400(16)	550(22)	400(16)	500(20)	600(24)
		Z		180(7)	200(8)	250(10)	450(18)	500(20)	500(20)
	Second spindle travel		mm (inch)	250(10)	300(12)	300(12)	–	–	–
	Max. workpiece dimensions (W x D)		mm (inch)	945×510 (37×20)	1100×630 (44×25)	1630×950 (40×28)	1020x710 (40x28)	1370x850 (54x34)	1670x990 (66x39)
	Max. filling height of dielectric tank		mm (inch)	215(8.6)	260(10.4)	385(14)	355(14)	355(14)	460(18.4)
	Distance between chuck and table		mm (inch)	20-450 (0.8-17)	100-600 (4-23)	190-740 (5-19)	130-480 (5-19)	80-580 (3-23)	260-760 (10-30)
	Max. workpiece weight		kg	550	1350	2000	2300	3000	4500
	Max. electrode weight		kg	120	220	250	200	250	350
	Table Size (W x D)		mm (inch)	650×350 (26×14)	800×450 (32×18)	1100×600 (44×24)	850x450 (34x18)	1000x600 (40x24)	1250x750 (49x29)
	Machine weight		kg	1200	1950	3100	3000	4500	5500
Filter	Tank capacity		l	380	520	1120	850	1090	1610
	Filter density		μm	20	20	20	20	20	20
	Filter elements		Pcs	3	3	4	6	6	6
Generator	Max. working current		A	60	60	60	60	60	120
	Overall power consumption		KVA	6	6	6	10	10	12
	Weight		kg	320	320	320	350	350	380

Structure				Column-Moving type					
Model (by size)				NX1270	NX1510	NX1880	NX2210	NX2610	NX3010
Specification	Table Travel	X	mm (inch)	1200(47)	1500(59)	1800(71)	2200(87)	2600(102)	3000(118)
		Y		700(28)	1000(39)	800(31)	1000(39)	1000(39)	1000(39)
		Z		500(20)	600(24)	600(24)	600(24)	600(24)	600(24)
	Max. workpiece dimensions (W x D)		mm (inch)	1860x1120 (73x44)	2070x1570 (81x61)	2420x1220 (95x48)	2710x1580 (106x62)	3290x1690 (129x66)	3915x1580 (154x62)
	Max. filling height of dielectric tank		mm (inch)	460(18.4)	585(23)	505(19.8)	605(23.8)	585(23)	605(23.8)
	Distance between chuck and table		mm (inch)	395-895 (15-35)	580-1180 (22-46)	305-905 (12-35)	575-1175 (22-46)	560-1160 (22-45)	560-1160 (22-45)
	Max. workpiece weight		kg	5000	11000	7000	9500	10000	16000
	Max. electrode weight		kg	400	500	500	500	500	500
	Table Size (W x D)		mm (inch)	1350x820 (53x32)	1580x1100 (62x43)	1850x1000 (73x39)	2250x1100 (89x43)	2700x1100 (106x43)	3100x1100 (122x43)
	Machine weight		kg	6500	14700	9000	13500	16500	19500
Filter	Tank capacity		l	1875	3410	2715	4035	5400	5580
	Filter density		μm	20	20	20	20	20	20
	Filter elements		Pcs	6	6	8	8	8	8
Generator	Max. working current		A	120	120	120	120	120	120
	Overall power consumption		KVA	12	12	12	12	12	12
	Weight		kg	380	380	380	380	380	380

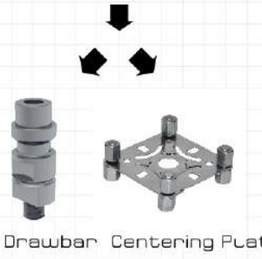
ADVANTAGE OF TOOLING SYSTEMS_

Tooling systems offer quick and precise electrode change reduce the time and increase the accuracy.

COMMON ACCESSORIES_

system 3R EROWA systemsolutions HIRSCHMANN

ATC



Practical example:

a : Oil cooling unit with circulating system help to stabilize the tem□ perature of processing and increase the stability of the job.

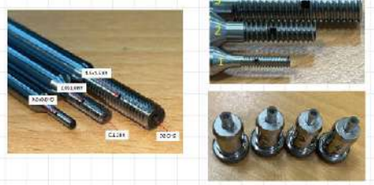
b : 3 X 220V electricity input with optional transformer. Stabilizer to ensure works' quality and better protection for the gener□ ator.

MACHINING / SAMPLES

■ Super hard alloy application

■ Forging tools

■ Special components application



■ Die & mold spotting

■ Petrochemical industrial application

■ Automobile mold application

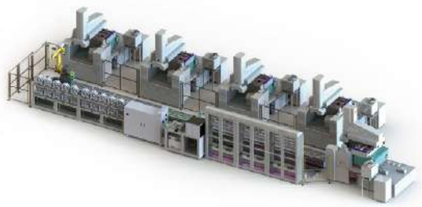
■ Ribs machining application

■ Precise components & Molds application

Auto-Production Line Integration manufacturing execution system

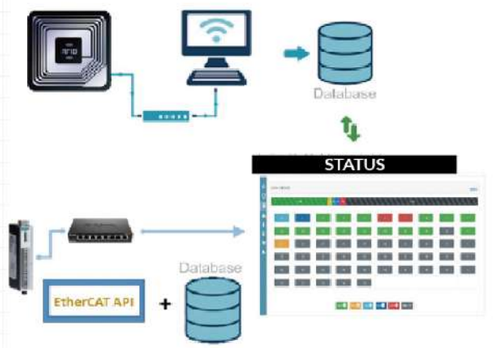
- MES can be displayed via API where available to collect the information of all production lines, utilization rate, status, and processes.
- Available to support on customized tools design projects.

- Integration with online measurement, ware-house management. With RFID tag, all information can be updated instantly .
- By equipping RFID, able to manage the tools and display work details, easy to manage and track.



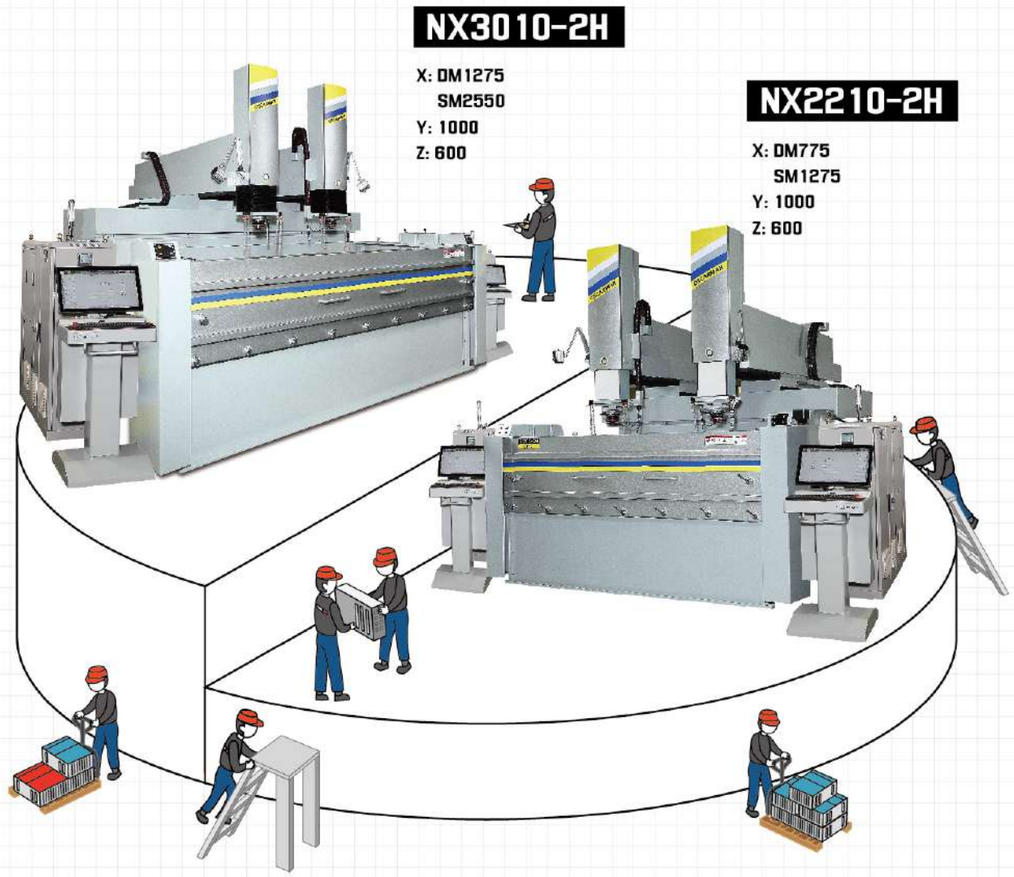
Tools and Workpiece Management

Easy management with real time information. Tools can be inserted in random position, RFID tags are scanned by robot and sorted according to scheduled operations and priorities.



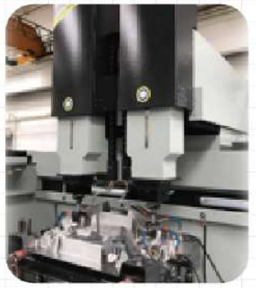
Real-time description

NX / TWIN HEAD



- DM = DM travel distance which allow both heads work without interrupting each other
- SM = One head longest travel

Examples of Application



One mold sparked simultaneously by two spindles can greatly reduce processing time.

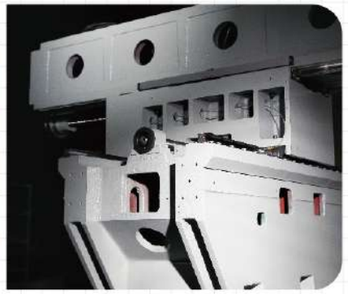
2 spindles with independent ball-screws share the work tank therefore save space and machine cost (compare to 2 machines)

Long axis travel allows to spark wide range of workpiece sizes. From large molds to small precise parts.

KEY FEATURES

X, Y, Z assembled with AC servo motor where all the travel positioning speed able to reach 5M/min, increase the utilization rate.
Ergonomic remote controller with touch screen for easy operation and access inside the machine work space.
Strong, rigid FC25 cast iron body designed to ensure accuracy and stability.
All axes have independent double nut ball-screw (grade C5 or above) and extended P-class linear guides to ensure precision and increase machine life-time.
Quick work tank oil filling with automatically operated pumps to shorten the idle time.
Special design for manual sliding door, easy open and close without fail.(NX1270-NX3010-2H)
65 HRC heat treated work table.





Structure				Specification of Twin-Head Column-Moving type			
Model (by size)				NX1510-2H	NX2210-2H	NX2610-2H	NX3010-2H
Specification	Table Travel	X	mm (inch)	430/860(17/34)	775/1550(31/61)	1075/2150(42/85)	1275/2550(50/100)
		Y		1000(39)	1000(39)	1000(39)	1000(39)
		Z		600(24)	600(24)	600(24)	600(24)
	Max. workpiece dimensions (W x D)		mm (inch)	2070×1570	2890×1590	3290×1690	3830×1590
				(81×61)	(113×62)	(129×66)	(150×62)
	Max. filling height of dielectric tank		mm (inch)	585(23)	585(23)	585(23)	585(23)
	Distance between chuck and table		mm (inch)	560-1160	575-1175	560-1160	560-1160
				(22-45)	(22-46)	(22-45)	(22-45)
	Max. workpiece weight		kg	11000	10000	10000	19000
	Max. electrode weight		kg	500	500	500	500
	Table Size (W x D)		mm (inch)	1580×1100	2250×1100	2700×1100	3100×1100
				(62×43)	(89×43)	(106×43)	(122×43)
	Machine weight		kg	16200	15000	18000	21000
Filter	Tank capacity		l	3410	4655	5400	5910
	Filter density		μm	20	20	20	20
	Filter elements		Pcs	12	12	12	12
Generator	Max. working current		A	120	120	120	120
	Overall power consumption		KVA	12	12	12	12
	Weight		kg	380	380	380	380

STANDARD ACCESSORIES

Item	Moving Table	Moving Column (NX500-NX3010-2H)
X、Y、Z axis Double Nuts Ballscrews	NX √ / ZX –	√
X、Y、Z P-Type Linear Guide way	√	√
X、Y、Z axis Servo Motor	ZX Only Z axis / NX √	√
21.5" touch screen	√	√
Auto Fire Extinguisher	√	√
UV sensor	√	√
Stainless Oil Level Sensor	√	√
LED Work Lamp	√	√
Clamping Plate	√	√
Leveling Pad	√	√
Flushing Nozzle	√	√
Adjustable Electrode Holder	√	√
Filter	√	√
Tool Box & Basic Tools	√	√
Remote Controller	√	√
Signal Tower Light	√	√
Groundfos Pump	√	√
Automatic door	–	√ Model 500-1060
Automatic lubrication system	√	√
EZ spark circuit for extra hard materials.	√	√
TURBO high speed circuit	√	√
Automatic Parameter Control	√	√

√:Standard □: available —:unavailable

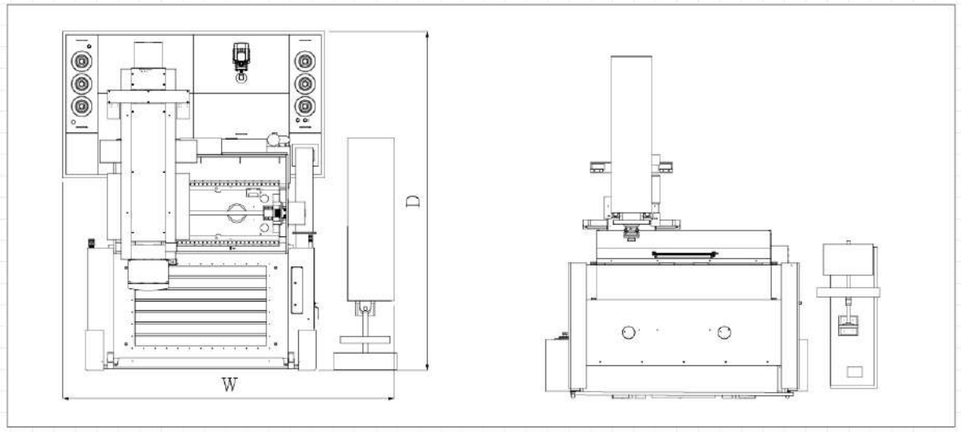
OPTIONAL ACCESSORIES

Item	Moving Table	Moving Column (NX500-NX3010-2H)
3R/EROWA - wheel type ATC 16/20	–	□ NX Moving Column models only
3R/EROWA - linear type ATC 4/6	NX430 ATC4 / NX550~755 ATC4/6	□
3R/EROWA - Manual Chuck	□	□
3R/EROWA - Automatic Chuck	□	□
Oil Mist Collector	□	□
AB axes rotary table	□	□
ROBOT - 180 Tool Changer	□	□
EDM oil cooler	□	□
Permanent Magnetic Table	□	□
Measuring Probe	□	□
Electrode Holder 75 & 100 type	□	□
Transformer 3Ø - 380V、400V、415V	□	□
Uninterruptible Power Supply	□	□

√:Standard □: available —:unavailable

COLUMN-MOVING TYPE

Type	L(mm / inch)	W(mm / inch)	H(mm / inch)
NX500	2493(98.5)	2810.5(110.65)	2778(109.37)
NX750	2831(114.5)	3081.5(121.3)	2990(117.7)
NX1060	2997(118)	3234.5(127.3)	3172.5(125)
NX1270	3214(126.5)	3636(143.15)	3273(128.86)
NX1510	3747(147.5)	3944(155.3)	3374(132.8)
NX1880	3567(140.4)	4454(175.4)	3670(149.8)
NX2210	4037(159)	4554(179.3)	3680(144.9)
NX2610	4787(188.5)	4652(183.1)	3680(144.9)
NX3010	5327(209.7)	4554(179.3)	3680(144.9)



TWIN HEAD COLUMN-MOVING TYPE

Type	L(mm / inch)	W(mm / inch)	H(mm / inch)	SM(mm / inch)	DM(mm / inch)
NX2210-2H	5184(204.1)	4554(179.3)	3680(144.9)	1550(61)	775(30.5)
NX2610-2H	5584(219.8)	4652(183.1)	3680(144.9)	2150(84.6)	1075(42.3)
NX3010-2H	6124(241.1)	4554(179.3)	3680(144.9)	2550(100.4)	1275(50.2)

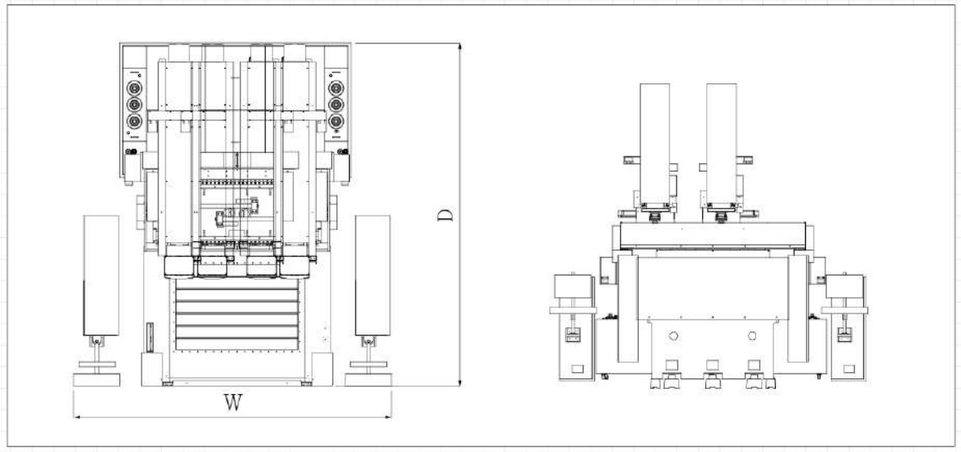
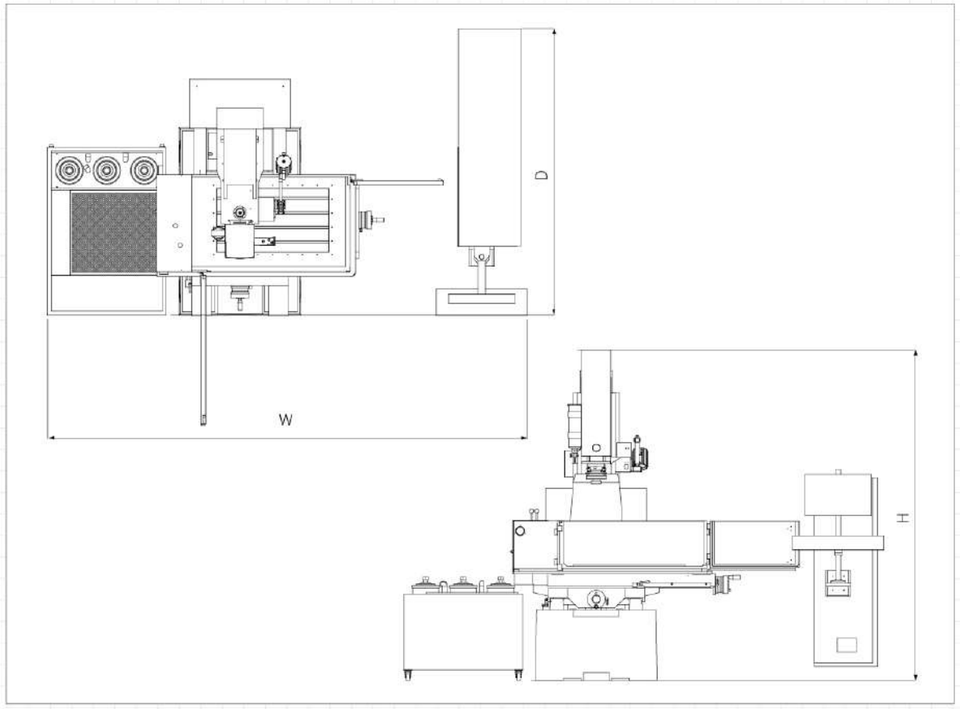


TABLE- MOVING TYPE

Type	L(mm / inch)	W(mm / inch)	H(mm / inch)
NX/ZX430	2242(88.27)	2407(94.76)	2368(93.23)
NX/ZX550	2831(114.5)	3081.5(121.3)	2990(117.7)
NX/ZX755	2997(118)	3234.5(127.3)	3172.5(125)



■ **Generator/EX system**