



WELE

WELE MECHATRONIC CO., LTD

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WELE

WELE MECHATRONIC CO., LTD



GENERAL

CATALOGUE



WELE Profile

- **Established:** 2007 June 11
- **Paid-in Capital:** NT\$ 693M (US\$ 23.1M)
- **Majoring Investor:**
 - JTEKT Co., (37%)
 - WELE Investment Co., Managing Group, Employees (63%)
- **President:** Mr. Yong-Chang Kuan
- **Certification:** ISO9001, ISO14001, CE (TÜV Rheinland)
- **Factory:**
 - Hsinchu Head Quater (17,500 m²)
 - Taichung Branch (18,000 m²)
 - Suzhou Factory, China (17,000m²)

Mile Stone

2007/06/11	"WELE Mechatronic Co., Ltd" registered by major shareholder, WELE Investment. The president, Mr. Yong-Chang Kuan, also as General Manager with paid-in capital of US\$ 2.8 million by WELE investment Co.
2007/07/03	WELE opened at No.53, Chung-Tai Rd., Chu-Pei city, Hsin-chu county, and registered WELE Logo as 「WELE」
2007/10/27	WELE's Head quarter and Hsin-Chu factory had opening with total 103 employees at No.458, Shinsing Rd., Hukou town, Hsin-chu county.
2007/12/01	WELE Taichung #2 factory opened and established at No.206, Sec.1, Guofong Rd., Fong-Yuan Dist., Taichung City.
2008/01/16	WELE's President, Mr. Yong-Chang Kuan and JTEKT President, Mr. Motohiko Yokoyama both signed the cooperation agreement in the JTEKT headquarter in Nagoya, Japan.
2008/01/23	WELE first AA machining centers: AA1165 & AA1365, under TOYODA brand officially exhibited at Global Technical Fair by JTKET in Nagoya, Japan.
2008/01/31	WELE applied for capital increase to US\$ 24 million with paid-in capital US\$ 22 million. WELE investment Co. possess 60% stock ownership (US\$13.4 million) and JTEKT has 40% stock ownership (US\$ 8.6 million).
2009/03/03	UG550 won the Grand Champion Award in Research and Innovation at the category of Machining Center in TIMTOS 2009.
2011/03/02	WELE HB-430F, Horizontal Boring and Milling Machining Center won the Taiwan Machine Tools Industry Award 2011 for "Eminence Award" in Research and Innovation at Category of Machining Center. WELE VTC2500H, Vertical Multi-Tasking Turning Center won the Taiwan Machine Tools Industry Award 2011 for "Supreme Excellence Award" in Research and Innovation at all category.
2011/09/19	WELE firstly join the EMO Hannover 2011 (9/19 thru 9/24 2011) and exhibited the machines RB-312 & UG800 as WELE brand.
2012/12/31	Reached to US\$ 90 million annual turnover.
2013/03/04	WELE Taichung Branch opens at No.356, Sanfeng Rd., Houli Dist., Taichung City.
2013/03/06	WELE MT-16, Bridge type Multi-Milling-Turning Center won the Taiwan Machine Tools Industry Award 2013 for "Supreme Excellence Award" in Research and Innovation at all category.
2013/09/16	WELE MT-16W attend EMO 2013 (09/16 thru 09/23) in Hannover, Germany.
2014/12/19	The new WELE Suzhou factory opens at No.16, Fuhua Rd., Changshu Economic Develop Zone, Changshu City, Jiangsu Province, Zip 215513, P.R. China.
2015/10/05	WELE firstly join the EMO Milano 2015 (5th to 10th October 2015) and exhibited the machines DL-321 as WELE brand.
2016/09/12	WELE attend IMTS in Chicago, USA.
2017/03/06	WELE Overseas Dealer Meeting & Openhouse.
2017/03/07	WELE attend TIMTOS in Taipei. (New models: DG-320U, HMC500, HL200YS)
2017/09/18	WELE attend EMO 2017 (09/18 thru 09/23) in Hannover, Germany.
2019/03/03	WELE Overseas Dealer Meeting and attended TIMTOS in Taipei and HMC630 was announced.
2019/09/16	WELE attended EMO (09/16-09/21) in Hannover, Germany and exhibits HMC630.
2020/03/17	Construction starting ceremony for Headquarter & Hsinchu factory.
2022/11/26	HMC500 + PPS C5 got the 2023 Taiwan Excellence Award.

Message from the President

WELE Mechatronic Co., Ltd. was founded and formed from the initial concepts of "The investors and labors cooperate together." & "Tolerating mutually is the way to grow." We keep our own philosophy to construct the foundation of our long term and continuous operational entrepreneur. WELE local shareholders own 64% share and accepts the rest of 36% share by the JTEKT group (including TOYODA KOKI) who is sub-group of TOYOTA car maker.

WELE majority managing team members were derived from Mechanical Industrial Research Laboratory of Industrial technology Research Institute in Taiwan who had been working in the Machine Tool business operation for more than 25-year experience. WELE managing team is well-known in Taiwan machine tool industry of developing big size bridge machine and as the professional machine tool builder with advanced technology.

WELE has successfully developed more than 60 high level models of new products, including big bridge machines working range between 600mm and 18000mm in X direction, 500mm and 6000mm in Y direction with five sides, five axes, high speed machining functions and horizontal boring function. Especially the UG series five axes machining center won the excellent award in the machining center category of 2009 Taiwan Machine Tools development and innovation contest. And again, in the 2011 Taiwan Machine Tools Development and Innovation Contest, our own development: VTC series (Vertical Turning Center) and HB series (Horizontal Boring Machine), won the supreme excellence award and eminence award. In 2013, the vertical milling and turning center MT16W won the Supreme excellence award again.

When WELE announced those series of "five side family", "five axes family", and "high speed group" of various high level machine tools in the market, we well received and met the demanding diversities from various technology needed industrious customers. We sincerely appreciated you all very much.

WELE insists on our own philosophy with professional managing team achieving our core value to face the varied markets. WELE's excellent ability is to offer our customers the reliable products and innovative technology with rich and experimental service resources. WELE will always be your best partner. Thank you.



Y. C. Kuan

General Purpose Machining Application

600mm → 4060mm

AQ/VQ series
Linear Guideway Type
Vertical Machining Center



AA series
Box Way Type
Vertical Machining Center



HMC series
Horizontal Machining Center
(with pallet change system)



HMC500+PPS C5
got the award of
Taiwan Excellence
2023

FG series
Gantry Type High Speed
High Speed Machining Center



RB series
Rigidity Bridge Machine



VB series
High Rigidity Bridge Machine



Five Sides Machining Application

2120mm → 20000mm

SB/SB-M series
Super Bridge Machine



LB/LB-M series
Large Bridge Machine



MVB series
Moving Cross-rail Bridge Machine



MG/MF series
Moving Gantry Type Bridge Machine



Five Axes Machining Application

UQ400 series
Vertical Five Axes
Machining Center
(4+1 Axes)



UG series
Universal Gantry type
Five Axes Machining Center



UG630



UG550

Grand Champion Award in
Innovation Contest ● TIMTOS 2009

UA series
Fixed Column type
Five Axes Machining Center



MG-U series
Moving Gantry Type
Five Axes Machining Center



UB series
Bridge Type
Five Axes Machining Center



Multi-Functions Machining Application

HB/HB-F series
Floor type Horizontal Boring
Machining Center



HB-430F
Eminence Award in
Innovation Contest of ● TIMTOS 2011



VTC/VTM series
Vertical Turning Center



VTC2500
Supreme Excellence Award in
Innovation Contest ● TIMTOS 2011



MT/MT-W series
Bridge type Milling and
Turning Machining Center

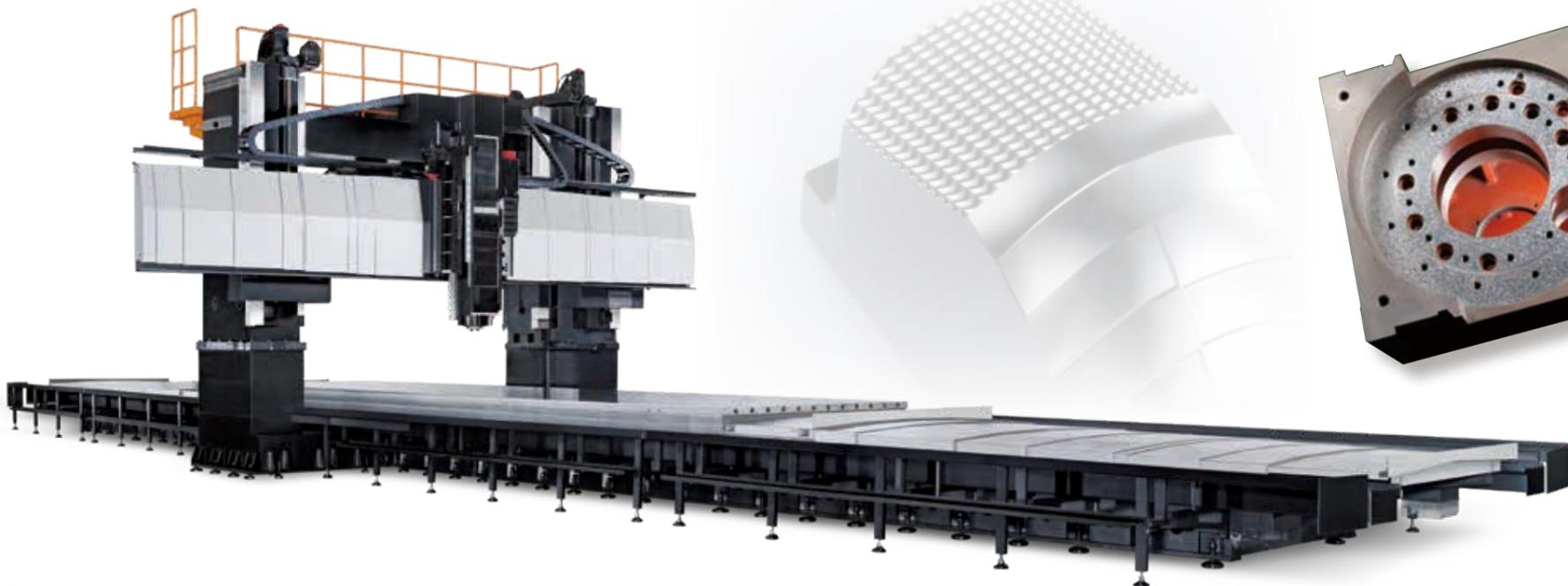
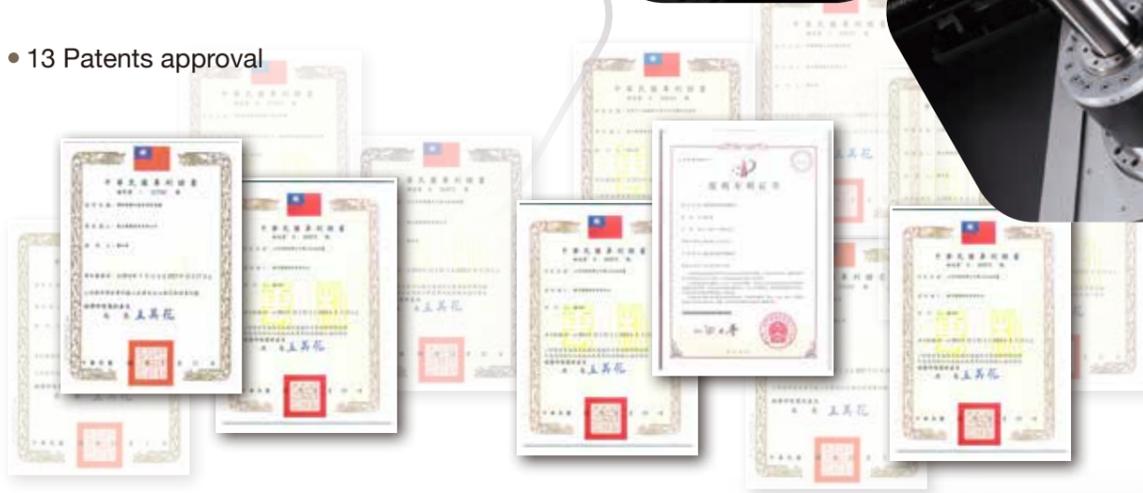


MT-16
Supreme Excellence Award in
Innovation Contest ● TIMTOS 2013

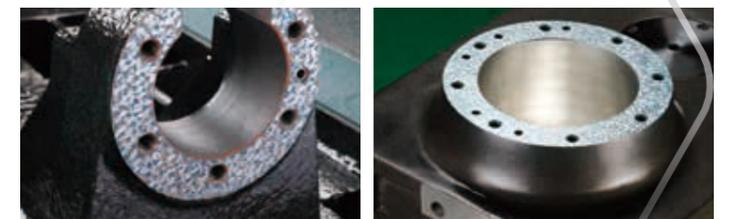
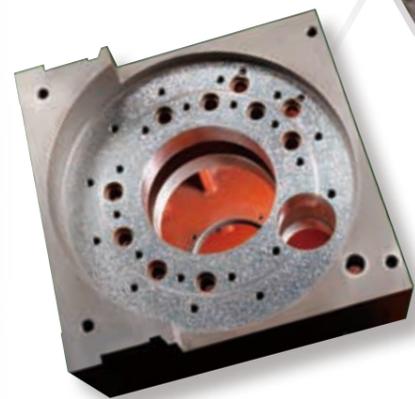


R&D Core Value Advanced Technology, Modular Design

• 13 Patents approval



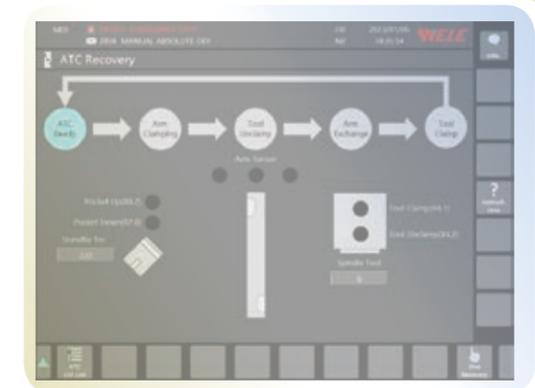
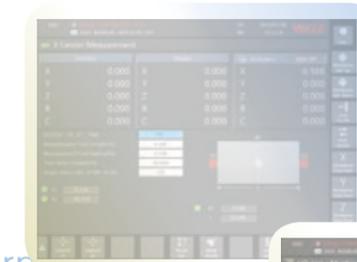
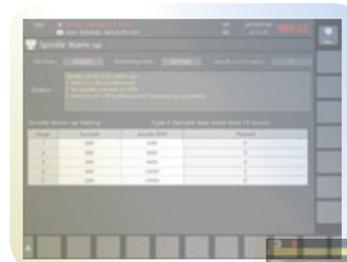
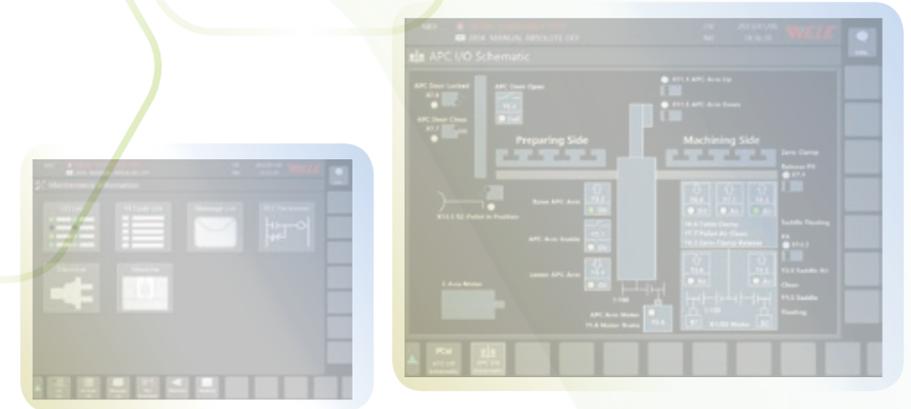
High Skill Manufacturing Technology



WELE Own-developed iSmartune Function Application



- >>>Q-Menu
- >>>Maintenance
- >>>Utilization
- >>>MotorInfo
- >>>Maintenance Information
- >>>ATCIO
- >>>Utilization
- >>>MotorInfo
- >>>ATCIO
- >>>
- >>>



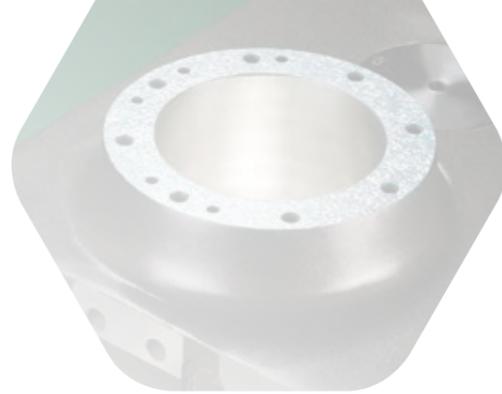
- >>>Maintenance Information
- >>>Utilization
- >>>MotorInfo
- >>>Q-Menu
- >>>Maintenance Information
- >>>Utilization
- >>>MotorInfo
- >>>ATCIO

WELE Production Plant



Exhibitions and Promotion





ITEM	UNIT	AA965	AA1165	AA1365	AA1565
X travel (Left & Right)	mm (in)	900 (35.4)	1100 (43.3)	1300 (51.2)	1500 (59.1)
Y travel (In & Out)	mm (in)		650 (25.6)		
Z travel (Up & Down)	mm (in)		600 (23.6)		
Table size (X Direction)	mm (in)	1100 (43.3)	1300 (51.2)	1450 (57.1)	1650 (65)
Table size (Y Direction)	mm (in)		650 (25.6)		
Table load capacity	kg (lb)	900 (1984)	1100 (2425)	1300 (2866)	1500 (3307)

ITEM	UNIT	AA1480	AA1680	AA1880
X travel (Left & Right)	mm (in)	1400 (55.1)	1600 (63)	1800 (70.9)
Y travel (In & Out)	mm (in)		800 (31.5)	
Z travel (Up & Down)	mm (in)	700 (27.6)	800 (31.5)	800 (31.5)
Table size (X Direction)	mm (in)	1550 (61)	1750 (68.9)	1950 (76.8)
Table size (Y Direction)	mm (in)		800 (31.5)	
Table load capacity	kg (lb)	1800 (3968)	2000 (4409)	2200 (4850)

ITEM	UNIT	AA1890	AA2090	AA2590
X travel (Left & Right)	mm (in)	1800 (70.9)	2000 (78.7)	2500 (98.4)
Y travel (In & Out)	mm (in)		900 (35.4)	
Z travel (Up & Down)	mm (in)		900 (35.4)	
Table size (X Direction)	mm (in)	1950 (76.8)	2150 (84.6)	2650 (104.3)
Table size (Y Direction)	mm (in)		900 (35.4)	
Table load capacity	kg (lb)	2000 (4409)	2200 (4850)	3000 (6614)



- ⚙️ Developed for high performance axial movement by ball/roller guide way, high response on feed system and higher spindle speed with 10000rpm or more.
- ⚙️ Well arrangement for light alloy material cutting and aluminum application.
- ⚙️ Y axis available to up to 650mm & X axis available to up from 1200mm to 1600mm.
- ⚙️ 48m/min rapid feed movement is to provide high response on this field.

ITEM	UNIT	AQ850	AQ1050	AQ1265	AQ1465	AQ1665
X travel (Left & Right)	mm (in)	800 (31.5)	1020 (40.2)	1200 (47.2)	1400 (55.1)	1600 (63)
Y travel (In & Out)	mm (in)		510 (20.1)		650 (25.6)	
Z travel (Up & Down)	mm (in)		510 (20.1)		610 (24)	
Table size (X Direction)	mm (in)	1000 (39.4)	1200 (47.2)	1400 (55.1)	1600 (63)	1750 (68.9)
Table size (Y Direction)	mm (in)		510 (20.1)		650 (25.6)	
Table load capacity	kg (lb)	500 (1102)	600 (1323)	1000 (2205)	1000 (2205)	1000 (2205)

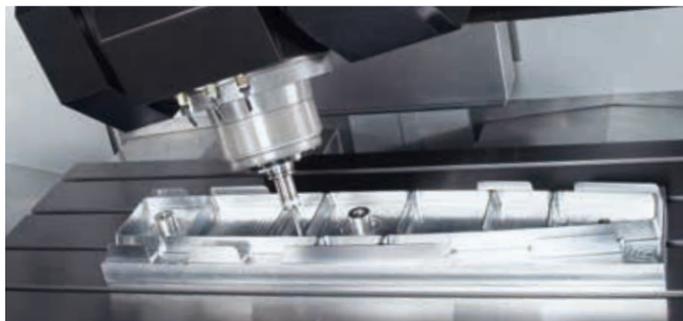
FIVE AXES MACHINING CENTER

UA series



● UA2090

- ⚙ Robust design for 5 axes simultaneous application jobs for aerospace parts machining.
- ⚙ High rigid design of AB tilting head with max torques of 4950Nm/3650ft-lb on A axis and 7960Nm/5870ft-lb on B axis.
- ⚙ Dual driven feed system on Y axis provides heavy movement performance.



ITEM	UNIT	UA2090	UA2590
X travel (Left & Right)	mm (in)	2000 (78.7)	2500 (98.4)
Y travel (In & Out)	mm (in)	900 (35.4)	
Z travel (Up & Down)	mm (in)	900 (35.4)	
A travel (Rotating)		± 30° (BBT50), 40° (BBT40)	
B travel (Tilting)		± 30° (BBT50), 40° (BBT40)	
Clamping area	mm (in)	2150x900 (84.6x35.4)	2650x900 (104.3x35.4)
Table load	Nm (lb)	2200 (4400)	2500 (5500)
Spindle Speed/Torque	rpm (Nm/ft-lb)	8000 (600 / 132.2)	
Spindle Speed/Torque	rpm (Nm/ft-lb)	12000 (420 / 92.5)	

FIVE AXES MACHINING CENTER

UG series



● UG800



● UG630

- ⚙ Compact design for 5 sides & 5 axes simultaneous application jobs: Aerospace and general parts machining.
- ⚙ Overhead moving gantry by twin driving system on Y axis.
- ⚙ Own developed Trunion AC table provide max torque of 6000Nm on A, 2000Nm on C axis.
- ⚙ Max. tool capacity of 60 is optional available.
- ⚙ Heidenhain and FANUC controller both available on this field.

- ⚙ The UG630 equips with SIEMENS 840D controller.
- ⚙ The B & C axis are equipped with a high gear ratio with roller cam and consist of high torque servo motor with maximum torques of 5760 Nm on B axis and 960 Nm on C axis
- ⚙ The clamping force is 4,490 Nm on B axis and 2,570 Nm on C axis whenever the power is lose.
- ⚙ 32 tools magazine is standard; 40,48,60 tools as optional available.

ITEM	UNIT	UG800	UG630
X travel (Left & Right)	mm (in)	800 (31.5)	640 (25.1)
Y travel (In & Out)	mm (in)	950 (37.4)	520 (20.4)
Z travel (Up & Down)	mm (in)	650 (25.6)	460 (18.1)
Swivel axis (Rotation)	degree	A axis: +30 / -120	B axis: -50/+110
C travel (Rotation)	degree	360	360
Table diameter	mm (in)	800 (31.5)	650 (25.9)
Table for divide degree	degree	0.001	0.001
Table load capacity	kg (lb)	1000 (2205)	200/300 (440/660)

RB series



● RB212

- ⚙️ Developed for high precision, heavy duty, and high performance on the smallest bridge range.
- ⚙️ All axes are using ultra-heavy roller guideway.
- ⚙️ Super wide operator door (full open). Easy to load and unload the workpiece.
- ⚙️ Max. rapid feed up to 24m/min.



● Above photo is SB's main structure without splash guarding system.

SB series



● SB316M

- ⚙️ The most economical equipment for 3 axes machining on this field.
- ⚙️ Economical multi-head exchange & storage with tool exchange function automatically upgrade to 5 sides function optional available on this series (M type).
- ⚙️ 5 sides work coordinate plane convert system auto attach with this optional function.
- ⚙️ Bridge casting made in one piece.



ITEM	UNIT	RB-212	RB-312	SB-216(Y)(M)	SB-316(Y)(M)	SB-416(Y)(M)
X travel (Left & Right)	mm (in)	2120 (83.5)	3060 (120.4)	2120 (83.5)	3060 (120.4)	4060 (159.8)
Y travel (In & Out)	mm (in)		1200 (47.2)		1600 (62.9) as standard / 2300 (90.5) as option	
Z travel (Up & Down)	mm (in)		800 (31.4)		800 (31.4) as standard, 1000 (39.4) as option	
Table size (X Direction)	mm (in)	2000 (78.7)	3000 (118.1)	2000 (78.7)	3000 (118.1)	4000 (157.4)
Table size (Y Direction)	mm (in)		1100 (43.3)		1500 (59.0)	
Table load capacity	kg (in)	3500 (7716)	4500 (9921)	8000 (17637)	10000 (22046)	12000 (26455)

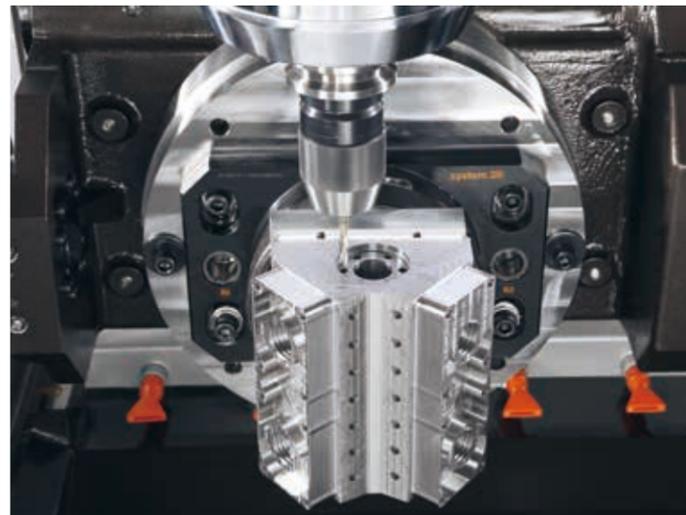
4+1 AXES MACHINING CENTER

UQ series



● UQ400

- ⚙ Uses WELE own design trunnion table which have backlash free mechanism for high precision provided.
- ⚙ 4+1 axes machining purpose.



ITEM	UNIT	UQ400
X travel (Left & Right)	mm (in)	400 (15.7)
Y travel (In & Out)	mm (in)	650 (25.5)
Z travel (Up & Down)	mm (in)	485 (19.0)
A axis travel (Rotate Along X axis)	degree	+30 / -120
C axis travel (Table Rotation)	degree	360
Table diameter	mm (in)	320 (12.5)

FIVE AXES MACHINING CENTER

UB series



- ⚙ An additional tilting head available on all sizes of LB series machines called as UB series five axes simultaneous bridge machines.
- ⚙ Own design or purchased tilting head are all available as required.
- ⚙ Tilting angle range of $\pm 110^\circ$ on A axis and $\pm 360^\circ$ on C axis.
- ⚙ Z axis travel in 800mm as STD, 1000mm, 1200mm & 1400mm available as options.
- ⚙ The UB machine is mainly for European and US markets.
- ⚙ Equipping with FANUC/HEIDENHAIN controllers are available in tilting head made in Germany.

ITEM	UNIT	UB-421Z	UB-425YZ2
X travel (Left & Right)	mm (in)	4060 (159.8)	4060 (159.8)
Y travel (In & Out)	mm (in)	2150 (84.6)	3200 (126.0)
Z travel (Up & Down)	mm (in)	1000 (39.4)	1200 (42.4)
A travel (Rotation)	degree	± 110	± 110
C travel (Rotation)	degree	± 360	± 360
Table size (X Direction)	mm (in)	4000 (157.5)	4000 (157.5)
Table size (Y Direction)	mm (in)	2000 (78.7)	2400 (94.5)
Table load capacity	kg (lb)	15000 (33000)	15000 (33000)

VQ series



● VQ1060 with caterpillar type chip conveyor(OPT)



- ⚙ High speed and general machining purpose. VQ machine is suitable for aluminum parts machining.
- ⚙ 3 axes uses linear ball way.
- ⚙ Casting in one piece for ball screw bearing supports on all axes.



● VQ650

ITEM	UNIT	VQ650	VQ1060
X travel (Left & Right)	mm (in)	650 (25.6)	1020 (40.2)
Y travel (In & Out)	mm (in)	510 (20.1)	600 (23.6)
Z travel (UP & Down)	mm (in)	510 (20.1)	600 (23.6)
Table size (X direction)	mm (in)	800 (31.5)	1150 (45.3)
Table size (Y direction)	mm (in)	510 (20.1)	600 (23.6)
Table load capacity	kg (lb)	500 (1,102.3)	700 (1,543.2)

VB series



● VB-215

- ⚙ Z axis boxway design for VB machine.
- ⚙ Bridge in one piece design.



● Above photo is VB-215's main structure without splash guarding system.

ITEM	UNIT	VB-215	VB-315	VB-320	VB-420
X travel (Left & Right)	mm (in)	2020 (79.5)	3020 (118.9)	3020 (118.9)	4020 (158.2)
Y travel (In & Out)	mm (in)	1500 (59.1)		2000 (78.7)	
Z travel (Up & Down)	mm (in)	800 (31.5)		800 (31.5)	
Table size (X direction)	mm (in)	2100 (82.7)	3100 (122)	3100 (122)	4100 (161.4)
Table size (Y direction)	mm (in)	1400 (55.1)		1800 (70.8)	
Table load capacity	kg (lb)	8000 (17637)	10000 (22046)	10000 (22046)	12000 (26455)



- ⚙️ Economical multi-head exchange & storage with tool exchange function automatically upgraded to 5 sides function on this field.
- ⚙️ 5 side work coordinate plane convert system auto attached with this optional function as M type. Named as LB_ _M.
- ⚙️ Z travel with 800mm as STD; 1000mm, 1200mm & 1400mm available as an option.
- ⚙️ X travel can be provided up to 10 meter as required.



ITEM	UNIT	LB-321(Y)	LB-421(Y)	LB-521(Y)	LB-325(Y)	LB-425(Y)	LB-525(Y)	LB-625(Y)	LB-533(Y)	LB-633(Y)
X travel (Left & Right)	mm (in)	3060 (120.4)	4060 (159.8)	5060 (199.2)	3060 (120.4)	4060 (159.8)	5060 (199.2)	6060 (238.5)	5060 (199.2)	6060 (238.5)
Y travel (In & Out)	mm (in)	2150 (84.6) as standard / 2800 (110.2) as option			2550 (110.3) as standard / 3200 (126.0) as option.			3300 (129.9) / 4000 (157.4)		
Z travel (Up & Down)	mm (in)	800 (31.4) as Standard, 1000 (39.3), 1200 (47.2), 1400 (55.1) as Option				800 (31.4) as Standard, 1000 (39.3), 1200 (47.2), 1400 (55.1) as option				
Table size (X Direction)	mm (in)	3000 (118.1)	4000 (157.4)	5000 (196.8)	3000 (118.1)	4000 (157.4)	5000 (196.8)	6000 (236.2)	5000 (196.8)	6000 (236.2)
Table size (Y Direction)	mm (in)	2000 (78.7)			2400 (78.7)			2400 (78.7)		
Table load capacity	kg (lb)	12000 (26455)	15000 (33069)	18000 (39683)	12000 (26455)	15000 (33069)	18000 (39683)	20000 (44092)	18000 (39683)	20000 (44092)

CROSS RAIL UP & DOWN FIVE SIDES MACHINING CENTER

MVB series

- Special design for extra size machining purpose.
- Z travel can be extended to 1400mm (55.1in) Max. height of distance between spindle nose and table top is 2400mm (94.4in)
- Minimize the overhang of the cross-rail and spindle carriage combination to increase the rigidity of the cutting performance.
- Max length of X travel can be up to 10000mm (393.7in).
- Dismantle before shipment is necessary. Any installation assistance might cost extra.



ITEM	UNIT	MVB-532	MVB-632	MVB-832	MVB-539	MVB-639	MVB-839	MVB-1039
X travel (Left & Right)	mm (in)	5060 (199.2)	6060 (238.5)	8060 (317.3)	5060 (199.2)	6060 (238.5)	8060 (317.3)	10060 (396.1)
Y travel (Carriage Forward & Reverse)	mm (in)	3200 (125.9)	3200 (125.9)	3200 (125.9)	3900 (153.5)	3900 (153.5)	3900 (153.5)	3900 (153.5)
Z travel (Spindle Up & Down)	mm (in)		1000 (39.4)			1000 (39.4)		
W travel (Cross Rail Up & Down)	mm (in)		1200 (47.2)			1200 (47.2)		
Between columns	mm (in)		2600 (102.3)			3300 (129.9)		
Distance between spindle & table	mm (in)		200~2400 (7.87~94.48)			200~2400 (7.87~94.48)		
Table size (X x Y Direction)	mm (in)	5000x2000 (196.8x78.7)	6000x2000 (236.2x78.7)	8000x2000 (314.9x78.7)	5000 x 2400 (196.8 x 94.4)	6000 x 2400 (236.2 x 94.4)	8000 x 2500 (314.9x98.4)	10000 x 2500 (314.9x98.4)
Spindle Speed (Geared)	rpm		6000			6000		

MOVING GANTRY BRIDGE
MACHINING CENTER

MG / MG-U



FANUC/HENDENHAIN controllers are available in tilting head made in Germany. (MG-U series).



- ⚙ Moving overhead gantry bridge machine with max up to 20m in X axis and 5m in Y axis is available.
- ⚙ Twin driven feed system on X axis travel up to 6000mm with ball screw; rack and pinion driven feed system available with travel 6000mm above.
- ⚙ Automatic multi-head exchange and storage system, AC tilting head with 5 axes simultaneous control are all optional available on the field.
- ⚙ Max. table load of 2500kg/m² is provided.
- ⚙ Special foundation at the customer site is required.
- ⚙ Patented backlash eliminated mechanism is applied on the X axis travel.



ITEM	UNIT	MG-530	MG-630	MG-830	MG-1030	MG-640	MG-840	MG-1040	MG-650	MG-850	MG-1050	MG-1250	MG-1450	MG-1650	
X travel (Left & Right)	mm (in)	5000 (196.9)	6000 (236.2)	8000 (314.9)	10000 (393.7)	6000 (236.2)	8000 (314.9)	10000 (393.7)	6000 (236.2)	8000 (314.9)	10000 (393.7)	12000 (472.4)	14000 (551.1)	16000 (629.9)	
Y travel (Left & Right)	mm (in)	3000 (118.1)					4000 (157.4)					5000 (196.8)			
Z travel (Up & Down)	mm (in)	1000 (39.3) as standard, 1200 (47.2), 1400 (55.1) as option													
Table size (X Direction)	mm (in)	5000 (196.9)	6000 (236.2)	8000 (314.9)	10000 (393.7)	6000 (236.2)	8000 (314.9)	10000 (393.7)	6000 (236.2)	8000 (314.9)	10000 (393.7)	12000 (472.4)	14000 (551.1)	16000 (629.9)	
Table size (Y Direction)	mm (in)	2800 (110.2)					3800 (149.6)					4800 (188.9)			
Table load capacity	kg/m ² (lb/ft ²)	7500 (177,933)					7500 (177,933)					7500 (177,933)			

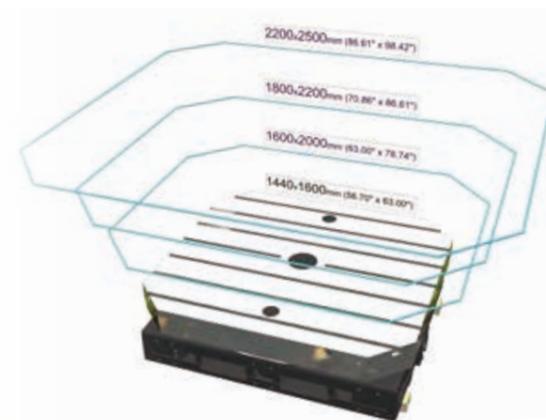
HORIZONTAL BORING
MILLING MACHINING CENTER

HB / HB-F



- Two kinds of spindle, $\varnothing 110\text{mm}$ (W travel with 500mm) and $\varnothing 130\text{mm}$ (W travel with 700mm) quill type and Ram type combined with quill travel, provides all kinds of applications.
- Specified Hydro-static bearing offered heaviest loaded on the index table.

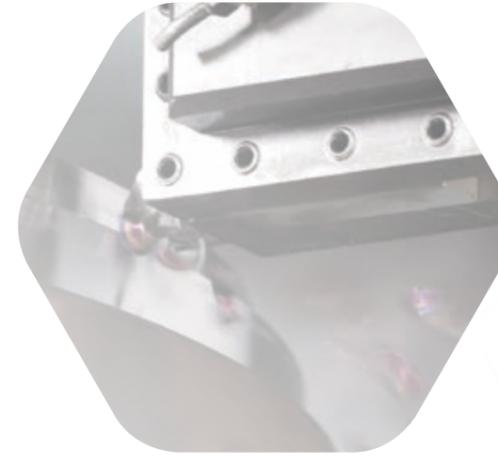
- 4000rpm geared spindle with 1,076Nm/793ft-lb offered as STD, 8000rpm built-in spindle with 600Nm/442ft-lb as Option.
- Patented backlash eliminated mechanism gives index table backlash free on the table smaller than 1600x2000mm, two servo motors convert on the table bigger than 2200x2500mm.



ITEM	UNIT	HB1416-110	HB1620-130	HB-315F	HB430-F	HB535-F
X travel (Left & Right)	mm (in)	2000 (78.7)	3000 (118.1)	3000 (118.1)	4000 (157.4)	5000 (196.8)
Y travel (Up & Down)	mm (in)	1800 (70.8)	2100 (82.6)	1500 (59.1)	3000 (118.1)	3500 (137.7)
Z travel (In & Out)	mm (in)	1300 (51.2)	1500 (59.1)	1500 (59.1)	1500 (59.1)	1500 (59.1)
W travel (Quill or Ram In & Out)		500 (19.6)	700 (27.5)	800 (31.4)	800 (31.4)	800 (31.4)
B travel (Rotation)	degree	360	360	360 (OPT)	360 (OPT)	360 (OPT)
Distance btwn spindle & table edge	mm (in)	200~2000 (7.8~78.7)	80~2280 (3.1~89.7)	400 (15.7)	400 (15.7)	400 (15.7)
Distance btwn spindle & table center	mm (in)	0~1800 (0~70.8)	0~2100 (0~82.6)	700 (27.5)	700 (27.5)	700 (27.5)
Table size (X Direction)	mm (in)	1440 (56.7)	1600 (63)	2200 (86.6)	2200 (86.6)	2200 (86.6)
Table size (Y Direction)	mm (in)	1600 (63)	2000 (78.7)	2500 (98.4)	2500 (98.4)	2500 (98.4)
Table load capacity	kg (lb)	8000 (17637)	12000 (26455)	20000 (44092.5)	20000 (44092.5)	20000 (44092.5)

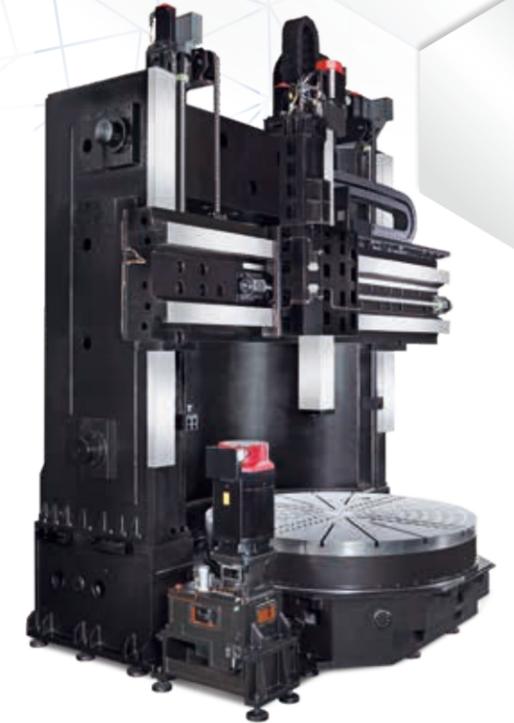
VERTICAL TURNING & MILLING CENTER

VTC series



- Vertical Turning center equipped with three-axis control (X, Z, W) and table indexing enable mechanism.
- Robust machine bed, double column, 260 to 320mm square ram, and curvic coupling tool adaptor for high rigidity.
- With the B-axis indexable rotation table, the single machine can functional as a vertical turning, vertical, horizontal machining center and light grinding purpose. One setup can finish whole process.
- Own developed hydro-static bearing offered heaviest loaded on the rotating table.

- Rotating table equipped with geared driven which provided 139766Nm/103086ft-lb (max.) torque at Ø2500mm table.
- Patented ATC storage can be assigned randomly as quantity needed such as angular head, grinding head, turning tool and vertical tools combination which we named "Puzzle ATC storage".
- Heavy-duty angular head enables five-sides machining with high rigidity.



ITEM	UNIT	VTC1612-20	VTC-1616-20	VTC2016-24	VTC2020-24	VTC2520-30	VTC2525-30	VTC3025-35	VTC3032-35
Turning table diameter	mm (in)	1600 (62.99)		2000 (78.74)		2500 (98.43)		3000 (118.11)	
Max. turning height capacity	mm (in)	1200 (47.24)		1600 (62.99)		2000 (78.74)		2500 (98.43)	
Max. swing diameter	mm (in)	2000 (78.74)		2400 (94.49)		3000 (118.11)		3500 (137.8)	
Distance from table to ram's surface	mm (in)	1400 (55.12)	1800 (70.87)	1800 (70.87)	2200 (86.61)	2200 (86.61)	2700 (106.3)	2700 (106.3)	3400 (133.86)
X axis travel	mm (in)	-810 to 1180 (-31.89 to 46.46)		-1010 to 1380 (-39.76 to 54.33)		-1260 to 1680 (-49.61 to 66.14)		-1510 to 2000 (-59.45 to 78.74)	
Z axis travel	mm (in)	1050 (41.34)	1050 (41.34)	1050 (41.34)	1250 (49.21)	1250 (49.21)	1500 (59.06)	1500 (59.06)	2500 (98.43)
W axis travel	mm (in)	800 (31.5)	1100 (43.31)	1200 (47.24)	1500 (59.06)	1500 (59.06)	1900 (74.8)	1900 (74.8)	2500 (98.43)

MULTI-MILLING & TURNING BRIDGE MACHINE

MT / MT-W

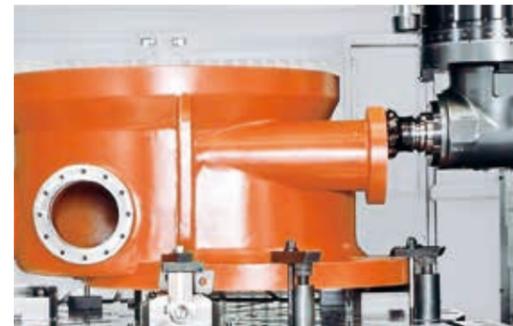


● MT-16 with some optional accessories.

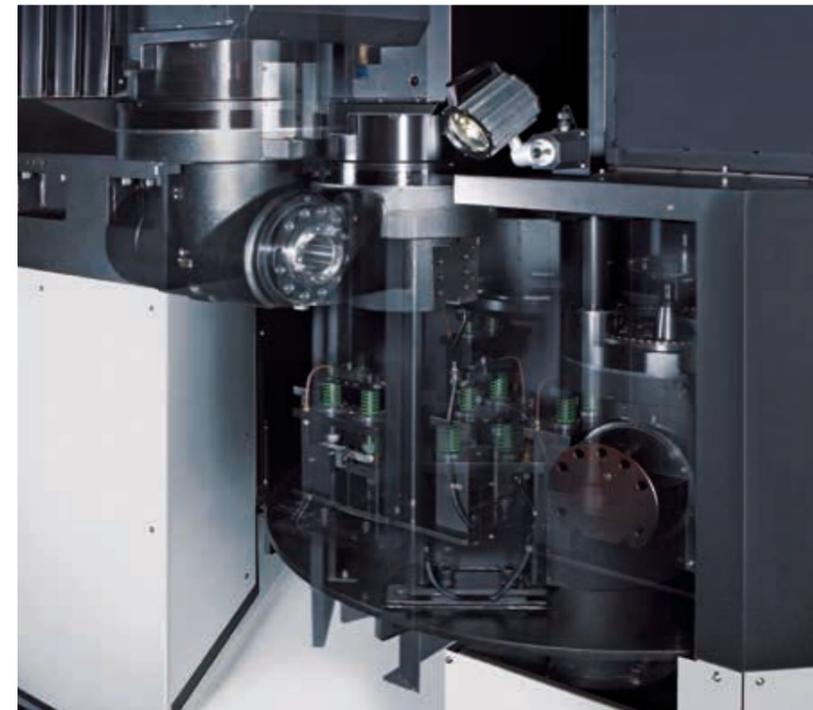


● MT-16W with some optional accessories.

- ⚙️ Multi-task purpose provides various applications and demands : 5 sides milling and turning machining purposes for customers.
- ⚙️ MT series of all in one design concept offers multiple machining procedures: milling, turning, boring, and drilling etc.
- ⚙️ WELE own developed hydro-static bearing of rotary table unit provides the heavy loading and keep long term precise accuracy.
- ⚙️ The rotary table's Cs axis backlash eliminated design reaches indexing in 0.001 degree incrementally.
- ⚙️ Automatic head/ tools exchange system well prepared for milling & turning purposes.
- ⚙️ Angular head storage along W axis any position: Automatic tool & head exchange available. (Only for MT-16W or MT-20W)



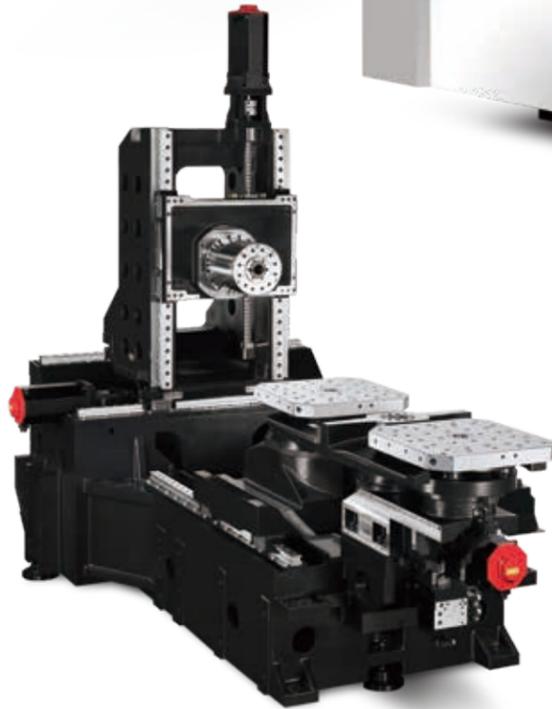
ITEM	UNIT	MT-16 / MT-16W	MT-20 / MT-20W
X axis travel	mm (in)	2800 (110.2)	3200 (126.0)
Y axis travel	mm (in)	2600 (102.4) / 3060 (120.5)	3000 (118.1) / 3500 (137.8)
Z axis travel	mm (in)	800 (31.5)	
W axis travel	mm (in)	1000 (39.4) only for MT-16W, MT-20W	
Turning diameter	mm (in)	1600 (63.0)	2000 (78.7)
Max. turning height	mm (in)	700 (27.6) / 1700 (66.9) only for MT-16W, MT-20W	
Max. swing diameter	mm (in)	2100 (82.7)	2500 (98.4)



⚙️ Automatic head exchange system in vertical/ horizontal/ turning head.



⚙️ Automatic tool exchange system in vertical/ horizontal/ turning tool.



- ⚙️ Main structure and key components are WELE own development and manufacturing.
- ⚙️ Rapid federate for 60m/min and rapid tool exchanging (T to T) as 1.7 sec.
- ⚙️ Equipped with WELE own design high speed built-in spindle(15,000rpm).
- ⚙️ Available extended to FMS (Flexible Manufacturing System) for 6~10 pallets.

ITEM	UNIT	HMC500	HMC630
X axis travel (Front & Rear)	mm (in)	640 (25.2)	1050 (41.3)
Y axis travel (Up & Down)	mm (in)	610 (24)	900 (35.4)
Z axis travel (Left & Right)	mm (in)	680 (26.8)	870 (34.3)
B axis indexing	degree	0.001 degree	1 degree (STD), 0.001 degree (OPT)
Pallet size	mm (in)	500*500 (19.7*19.7)	630*630 (24.8*24.8)
Spindle speed	rpm	Built-in, 15000 rpm	Built-in, 12000 rpm



⚙️ Pallet Pool System (PPS C5) and its operation panel.

- ⚙️ The HMC500+PPS C5 has got the award of "Taiwan Excellence 2023".
- ⚙️ WELE Own developed the Pallet Pool System with additional 5 pallets (PPS C5) which has intelligent and friendly design concept.
- ⚙️ The operator interface has combine users 'habit and smart control as much close to users' friendly operation.

