

WELE

WELE

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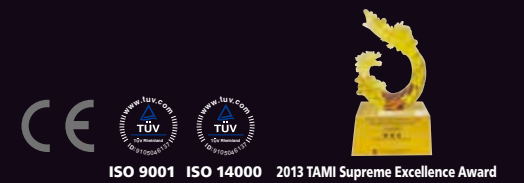
WELE

We lead the way by a new business model

MB SERIES



Double Column ▶▶▶▶▶
Precision 5-face
Machining Center



WELE MECHATRONIC CO., LTD

The Newest 5-face machining center to provide High Rigidity, High Performance, High Efficiency

- WELE Inherited from an excellent technical blood relationship of MIRL at Industrial Technology Research Institute.
- Professional Technique, Excellent Workmanship & Skill, Sincerely Services \ Quality Assurance.
- Z axis travel in 1000mm (STD), 1200mm, 1400mm (OPT)
- All axes are using Ultra-Heavy Roller Guideways.
- Full automatic Head Exchange/ Head Storage/ Auto tool exchange in vertical & horizontal/ 5 sides machining function.
- WELE = Smiling Faces + Newest Technique + Services
- A **TOYODA** strategic alliance company



- Above figure indicates the MB-525 machine with some accessories about four splash guard and hanging type operator panel.

Well consider Specification High Performance High Rigid Structure Excellent Service

- Thermal displacement symmetrical, uniform box type main structure.
- All series with linear scale feedback system on X, Y axes; Z axis (OPT).
- Recycling lubricating oil collector for 3 axes, follow the rule of environment protection.
- All series includes twin hydraulic counter balancer in Z axis (STD).
- Max. rapid feed rate is 20m/min (MB-x25 series, Y axis).



Automatic tool and head storage system

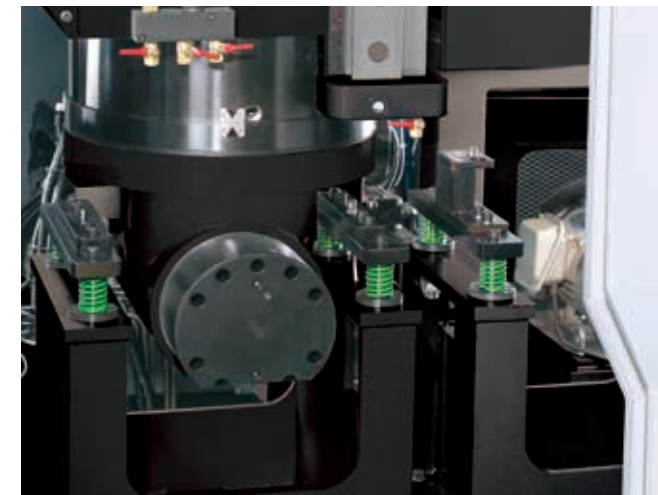


ATC in horizontal direction



ATC in vertical direction

- Individual ATC in vertical and horizontal direction.
- 60 tools capacity tool magazine as standard; 120 tools capacity tool magazine as option.
- Automatic multi head exchange system.
- Strict multi sensors checking system to keep, Head/Tool exchange safely.



90 degree head exchange mechanism

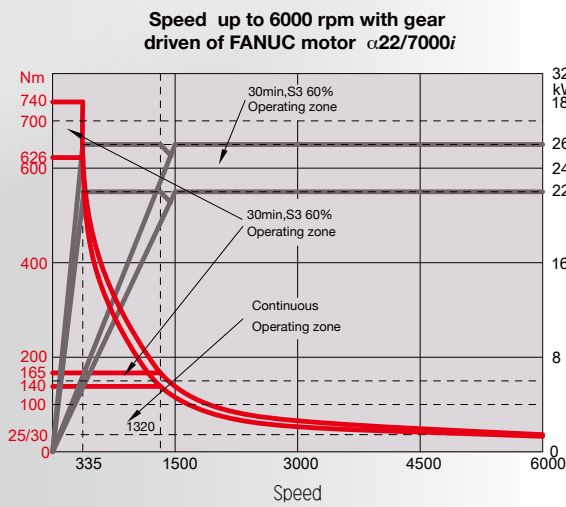


Vertical Spindle exchange mechanism

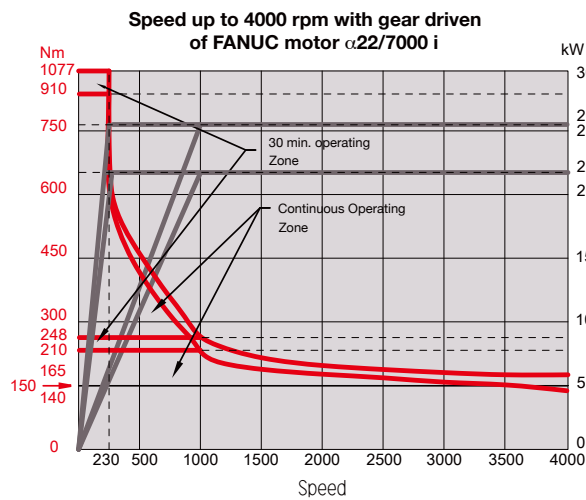


Automatic tool and head Storage system

Spindle output torque power chart

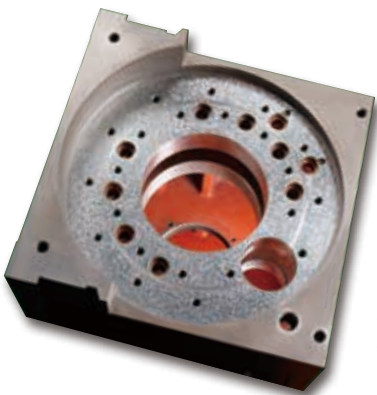


6000rpm geared spindle (Standard)



4000rpm geared spindle (Option)

Excellent quality Control And Assurance
Foundation of accuracy,the flatness
less than 3 micro meter (3 μ m) in 1.2m
square standard.
Strictly manufacturing and assembling
in precision, control every detail as
Japanese standard qualification.



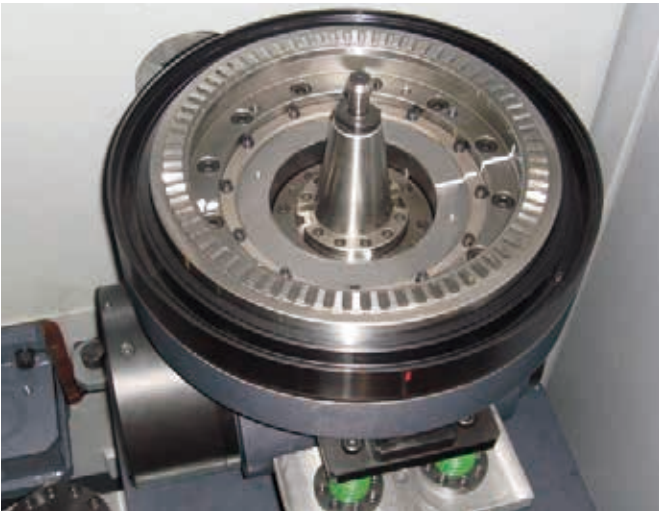
Contact point of the spindle mounting surface.



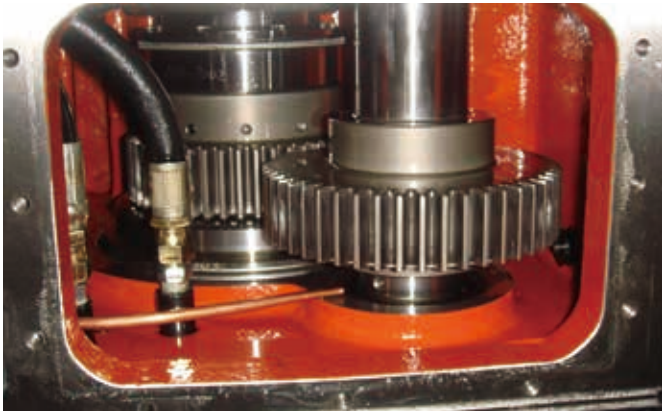
Optimized geared spindle design, may utilize in each kind of Z axis travel headstocks.



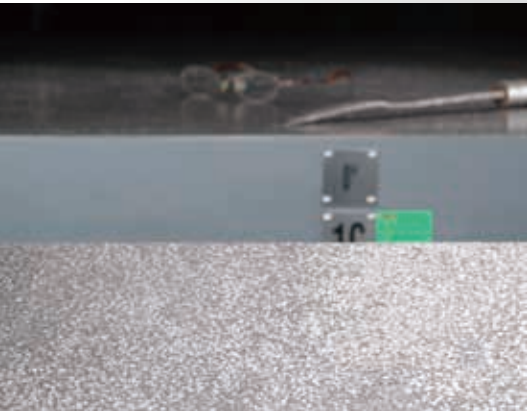
New generation, patented auto clamp & index mechanism



New generation indexing in every 5° on the multi-head.



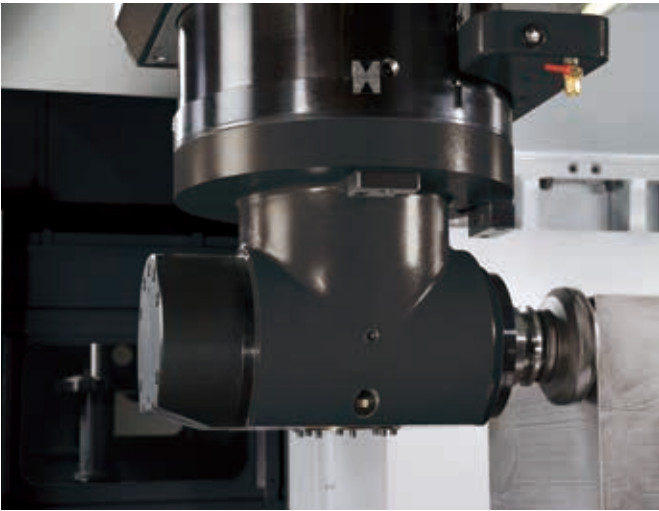
Each gear transmission through 8 hours warming up and 24 hours trial run tested.



Uniform contact surfaces in every square inch , which provide every machine keep high accuracy level.



Vertical machining



Horizontal machining



Strictly spindle assembly procedure

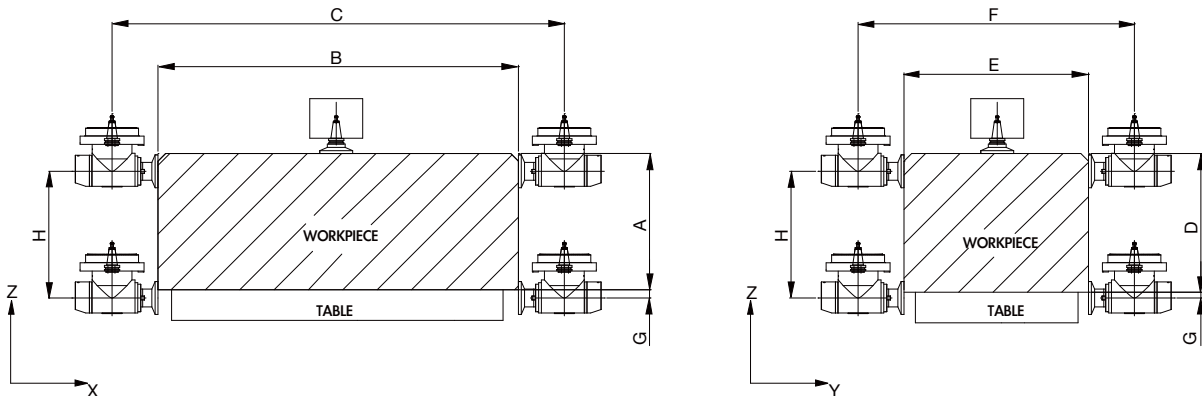


Each spindle through balancing tested

Machine specification

Specification/ Model	Unit	MB-425	MB-525	MB-625	MB-725	MB-432	MB-532	MB-632	MB-732
X travel (Left & right)	mm (in)	4060 (159.8)	5060 (199.2)	6060 (238.6)	7060 (278)	4060 (159.8)	5060 (199.2)	6060 (238.6)	7060 (278)
Y travel (in & out)	mm (in)	3200 (126)			3200 (126)	3900 (153.5)			
Z travel (up &down)	mm (in)	1000 (39.4)			1000 (39.4)	1000 (39.4)			
Distance from spindle nose to table top	mm (in)	200-1200 (7.9-47.2)			200-1200 (7.9-47.2)	200-1200 (7.9-47.2)			
Distance from horizontal spindle center line to table top	mm (in)	0-984 (0-38.7)			0-984 (0-38.7)	0-984 (0-38.7)			
Distance between columns	mm (in)	2500 (98.4)			2500 (98.4)	3200 (126)			
Table szie (X direction)	mm (in)	4000 (157.5)	5000 (196.9)	6000 (236.2)	7000 (275.6)	4000 (157.5)	5000 (196.9)	6000 (236.2)	7000 (275.6)
Table szie (Y direction)	mm (in)	2000 (78.7)			2000 (78.7)	2400 (94.5)			
Table T slot size (width x distance x number)	mm (in)	28 x 200 x 10 (1.1x7.9x10)			28 x 200 x 10 (1.1x7.9x10)	28 x 200 x 12 (1.1x7.9x12)			
Table load capacity	kg (lb)	15000 (33000)	18000 (39600)	20000 (44000)	20000 (44000)	15000 (33000)	18000 (39600)	20000 (44000)	20000 (44000)
Spindle speed_vertical	rpm	10-6000 (Standard) 10-4000 (Option)			10-6000 (Standard) 10-4000 (Option)	10-6000 (Standard) 10-4000 (Option)			
Spindle speed_horizontal	rpm	2400			2400	2400			
Spindle motor (cont./30 min. rating)	kW (HP)	22/26 (30/35)			22/26 (30/35)	22/26 (30/35)			
Spindle taper		#50 (ISO 50)			#50 (ISO 50)	#50 (ISO 50)			
Spindle clamping force	kg (lb)	1800 (3960)			1800 (3960)	1800 (3960)			
Index degree	degree	every 5° index			every 5° index	every 5° index			
Rapid traverse rate (X axis)	mm (in) / min	18000 (708.7)	12500 (492.1)	9000 (354.3)	6000 (236.2)	18000 (708.7)	12500 (492.1)	9000 (354.3)	6000 (236.2)
Rapid traverse rate (Y axis)	mm (in) / min	20000 (787.4)			20000 (787.4)	15000 (590.6)			
Rapid traverse rate (Z axis)	mm (in) / min	12000 (472.4)			12000 (472.4)	12000 (472.4)			
Cutting feedrate	mm (in) / min	1-10000 (0.04-393.7)			1-10000 (0.04-393.7)	1-10000 (0.04-393.7)			
Tool magazine capacity	pcs	60 (120 Option)			60 (120 Option)	60 (120 Option)			
Max. tool diameter / adjacent pocket empty	mm (in)	127/215 (5/8.5)			127/215 (5/8.5)	127/215 (5/8.5)			
Max. tool length	mm (in)	400 (15.7)			400 (15.7)	400 (15.7)			
Max. tool weight	kg (lb)	20 (44)			20 (44)	20 (44)			
Positioning accuracy (JISB6338)	mm (in)	±0.015 (0.0006) / full travel			±0.015 (0.0006) / full travel	±0.015 (0.0006) / full travel			
Positioning accuracy (VDI/DGQ 3441)	mm (in)	P 0.030 (0.001)	P 0.040 (0.0016)	P 0.050 (0.002)	P 0.060 (0.0024)	P 0.030 (0.001)	P 0.040 (0.0016)	P 0.050 (0.002)	P 0.060 (0.0024)
Repeatability (JISB6338)	mm (in)	±0.003 (0.0001)			±0.003 (0.0001)	±0.003 (0.0001)			
Repeatability(VDI/DGQ 3441)	mm (in)	Ps 0.025 (0.0001)	Ps 0.030 (0.0012)	Ps 0.035 (0.0014)	Ps 0.045 (0.0018)	Ps 0.025 (0.0001)	Ps 0.030 (0.0012)	Ps 0.035 (0.0014)	Ps 0.045 (0.0018)
Coolant tank capacity	liter (gallon)	750 (198.1) with 1.5 HP			750 (198.1) with 1.5 HP	850 (224.5) with 1.5 HP			
Lubrication oil tank capacity	liter (gallon)	6 (1.58)			6 (1.58)	6 (1.58)			
Pneumatic pressure requirement	kg (cm²)	5			5	5			
Total required power (AC220V ± 10%, 50/60 Hz, 3 Phase)	kVA	60			60	60			
Machine weight	kg (lb)	41000 (90200)	46000 (101200)	51000 (112200)	56000 (123200)	42000 (92400)	48000 (105600)	53000 (116600)	59000 (129800)

**Product specifications and accessories are subject to change without notice.
**Specially order like MB-6525,MB-6532 etc.are also available on request



Max. Cutting range Unit: mm (inch)

Model \ Item	A	B	C	D	E	F	G	H
MB-425	1050 (41.3)	3360 (132.3)	4060 (159.8)	1050 (41.3)	2500 (98.4)	3200 (126.0)	16 (0.6)	1000 (39.4)
MB-525	1050 (41.3)	4360 (171.7)	5060 (199.2)	1050 (41.3)	2500 (98.4)	3200 (126.0)	16 (0.6)	1000 (39.4)
MB-625	1050 (41.3)	5360 (211.0)	6060 (238.6)	1050 (41.3)	2500 (98.4)	3200 (126.0)	16 (0.6)	1000 (39.4)
MB-725	1050 (41.3)	6360 (250.4)	7060 (278.0)	1050 (41.3)	2500 (98.4)	3200 (126.0)	16 (0.6)	1000 (39.4)
MB-432	1050 (41.3)	3360 (132.3)	4060 (159.8)	1050 (41.3)	3200 (126)	3900 (153.5)	16 (0.6)	1000 (39.4)
MB-532	1050 (41.3)	4360 (171.7)	5060 (199.2)	1050 (41.3)	3200 (126)	3900 (153.5)	16 (0.6)	1000 (39.4)
MB-632	1050 (41.3)	5360 (211.0)	6060 (238.6)	1050 (41.3)	3200 (126)	3900 (153.5)	16 (0.6)	1000 (39.4)
MB-732	1050 (41.3)	6360 (250.4)	7060 (278.0)	1050 (41.3)	3200 (126)	3900 (153.5)	16 (0.6)	1000 (39.4)

**The dimension of tool : length100mm X diameter 215mm
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Standard and optional accessories

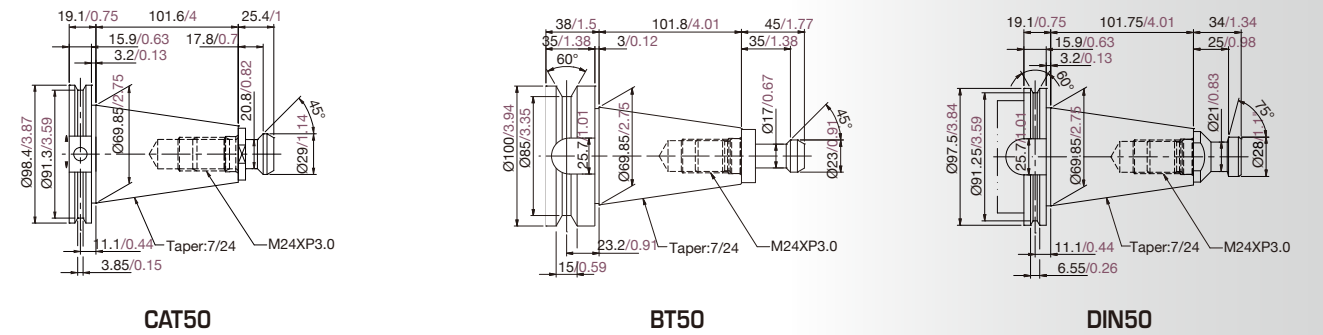
● : Standard ○ : Option

Specification / Model	MB-x25 series	MB-x32 series
BT50 spindle taper	●	●
DIN50 spindle taper	○	○
CAT50 spindle taper	○	○
6000 rpm stepless speed geared spindle (two steps)	●	●
4000 rpm stepless speed geared spindle (two steps)	○	○
Automatic index in every 5° mechanism	●	●
30° head	○	○
Universal head	○	○
Extension head	○	○
Automatic head exchange system and one horizontal head	●	●
Z travel extend to 1200mm (47.2") (Distance from spindle nose to table top 200-1400mm)	○	○
Z travel extend to 1400mm (55.1") (Distance from spindle nose to table top 200-1600mm)	○	○
Spindle oil-cooling requipment	●	●
External pulse decoder in Z axis	●	●
Adjustable torque-limit clutch (3 axes)	●	●
Centralized automatic lubricating system	●	●
Dust-proof cover for vertical spindle	●	●
Four splash guard	●	●
Full splash guard	○	○
Rear half splah guard + two doors	○	○
Recycling lubricating oil collector for 3 axes	●	●
Flood coolant system (include pump & tank)	●	●
Twin screw type chip conveyor	●	●
Blade type chip conveyor	○	○
Caterpillar type chip conveyor & bucket	●	●
Arm type automatic tool exchanger (vertical & horizontal axes)	●	●
60 tools capacity of tool magazine	●	●
120 tools capacity of tool magazine	○	○
Footswitch for tool clamping	●	●
Twin hydraulic cylinder balance spindle head	●	●
Work light	●	●
Operation cycle finish and alarm lights	●	●
RS232 interface	●	●
Spray hose for chip wash down	●	●
Foundation bolt kit	●	●
Machine manuals	●	●
Linear scale feedback system of X,Y axes (Fagor)	●	●
Linear scale feedback system of Z axis	○	○
Coolant through the tool adapter	○	○
System of hydraulic	●	●
System of Pneumatic(non-including air source and external hose)	●	●
Spindle air blast curtain	●	●
Electrical cabinet and heat exchanger	●	●
Hanging type operator panel (moveable in four direction)	●	●
Moveable remote handwheel control	●	●
Heat exchanger to refit air-conditioning for electric cabinet	○	○
4th axis interface prepared	○	○
CNC Rotary table	○	○
Disc type oil skimmer	○	○
Coolant through the spindle (FORM A)	○	○
Tank for coolant through the spindle	○	○
Automatic tool length measurement	○	○

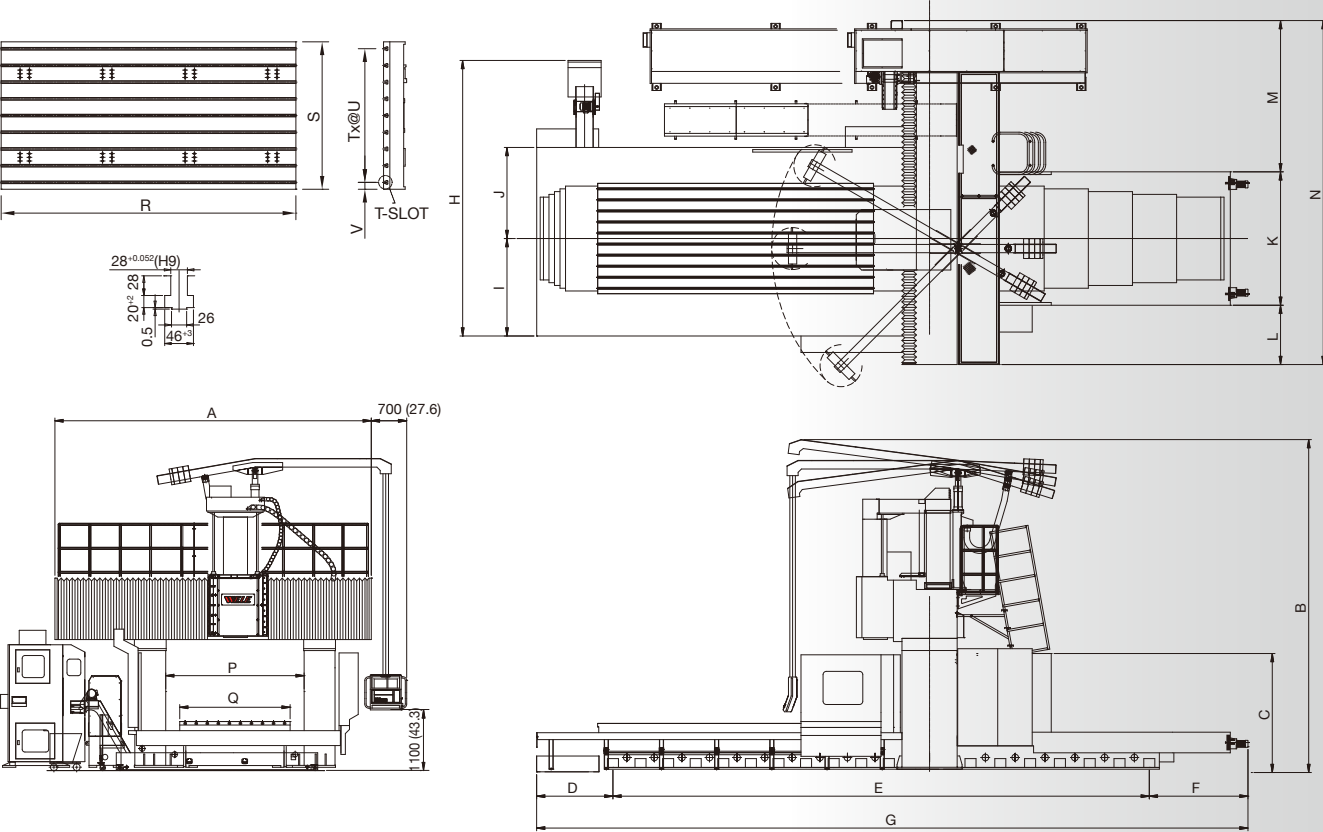
**Product specifications and accessories are subject to change without notice.

Tool Shank and Pull Stud Dimension

Unit: mm/inch



Machine dimension and space requirement



Unit: mm/inch

Model / Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V
MB-425	5740 226	5850 230	1950 76.8	1385 54.5	7644 300.9	1561 61.5	10590 416.9	5300 208.7	1915 75.4	1790 70.5	2720 107.1	1115 43.9	2920 115	6755 265.9	2500 98.4	2000 78.7	4000 157.5	2000 78.7	10	200 7.9	100 3.9
MB-525	5740 226	5850 230	1950 76.8	1400 55.1	9720 382.7	1790 70.5	12910 508.3	5300 208.7	1915 75.4	1790 70.5	2720 107.1	1115 43.9	2920 116	6755 265.9	2500 98.4	2000 78.7	5000 196.9	2000 78.7	10	200 7.9	100 3.9
MB-625	5740 226	5850 230	1950 76.8	1560 61.4	11626 457.7	1814 71.4	15000 590.6	5300 208.7	1915 75.4	1790 70.5	2720 107.1	1115 43.9	2920 117	6755 265.9	2500 98.4	2000 78.7	6000 236.2	2000 78.7	10	200 7.9	100 3.9
MB-725	5740 226	5850 230	1950 76.8	1620 63.8	12695 499.8	1905 75.0	16220 638.6	5300 208.7	1915 75.4	1790 70.5	2720 107.1	1115 43.9	2920 118	6755 265.9	2500 98.4	2000 78.7	6000 236.2	2000 78.7	10	200 7.9	100 3.9
MB-432	6440 254	5850 230	1950 76.8	1385 54.5	7644 300.9	1561 61.5	10590 416.9	6000 236.2	2265 89.2	2140 84.3	3420 134.6	1115 43.9	2920 119	7455 293.5	3200 126.0	2400 94.5	4000 157.5	2400 94.5	12	200 7.9	100 3.9
MB-532	6440 254	5850 230	1950 76.8	1400 55.1	9720 382.7	1540 60.6	12660 498.4	6000 236.2	2265 89.2	2140 84.3	3420 134.6	1115 43.9	2920 120	7455 293.5	3200 126.0	2400 94.5	5000 196.9	2400 94.5	12	200 7.9	100 3.9
MB-632	6440 254	5850 230	1950 76.8	1560 61.4	11626 457.7	1564 61.6	14750 580.7	6000 236.2	2265 89.2	2140 84.3	3420 134.6	1115 43.9	2920 121	7455 293.5	3200 126.0	2400 94.5	6000 236.2	2400 94.5	12	200 7.9	100 3.9
MB-732	6440 254	5850 230	1950 76.8	1620 63.8	12695 499.8	1655 65.2	15970 628.7	6000 236.2	2265 89.2	2140 84.3	3420 134.6	1115 43.9	2920 122	7455 293.5	3200 126.0	2400 94.5	6000 236.2	2400 94.5	12	200 7.9	100 3.9