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**China-Germany
Investment**

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01 Company Brief



KY MASTER is a China-Germany investment company specialized in designing and manufacturing high quality CNC machine tools under the supervision of Germany partner KRAFT. The company's technical team is strong, with an internal R&D technical team, and a professional R & D team in Germany for Synchronous online design and research. Western engineering combined with Asian manufacturing leads us into an advanced synergy effect. Sky master own management platform covers sales, R&D, product control, QC, after-service, which can make full-process information traceability. Operate strictly in accordance with modern management mode. The company has advanced testing equipment and processing equipment imported from Germany, UK, Japan and other countries, ensuring the precise accuracy and stable quality of each machine tool. The company gets the ISO9001 quality certificate and all machine get the CE certificate from TUV SUD company. Sky Master continuously hires domestic and foreign experts to guide the factory, and also establishes high-end CNC machine tool joint bases with Shanghai Jiaotong University and Zhejiang University. and our innovation never stops.

Our professional service team in all over the world keeps close contact with clients and supply technical support at any time. Take "Upright integrity, Excellent operation and High quality" as our management concept to produce each machine with our full heart, we are looking forward in achieving progress with you in the field of CNC machine tool.

The first professional high-speed machine production factory in China, provincial high-speed machine industry standard-setting company



01.1 Our Partner-KRAFT

GK Werkzeugmaschinen GmbH in Stockstadt am Rhein - Everything you need in one place, Everyone finds what they are looking for at KRAFT

In 1990 Gerhard Kraft founded GK Werkzeugmaschinen GmbH in Stockstadt am Rhein. Company founder Gerhard Kraft brought 25 years of knowledge and experience to the company. Since then, the company has grown into a flourishing enterprise with 10 professional designer who are focusing on CNC machine tool in different area, with 10 additional sales representatives in Germany, Austria, Italy, Netherlands and Switzerland for selling and serving KRAFT machine.

GK headquarters has the international standard factory with 8000sqm which is near to Rhein river ,it is very close to the Frankfurt airport.

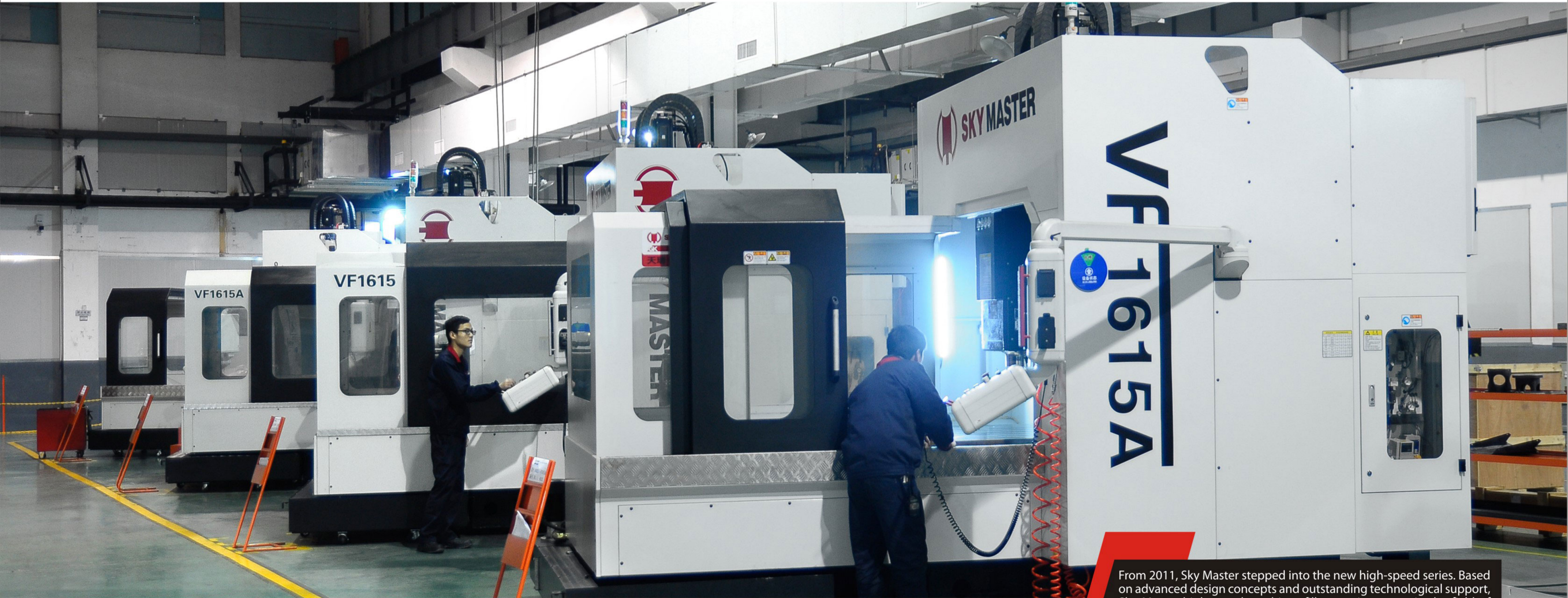


02 Products



High Speed Series

Use our know-how to work out the solutions for your most difficult issues



Temperature & humidity constant workshop

From 2011, Sky Master stepped into the new high-speed series. Based on advanced design concepts and outstanding technological support, Sky Master high-speed machines fill up various gaps in the field of domestic high-speed machines, and can reach up to 1.0 G acceleration and 0.005 mm repeated positioning accuracy.

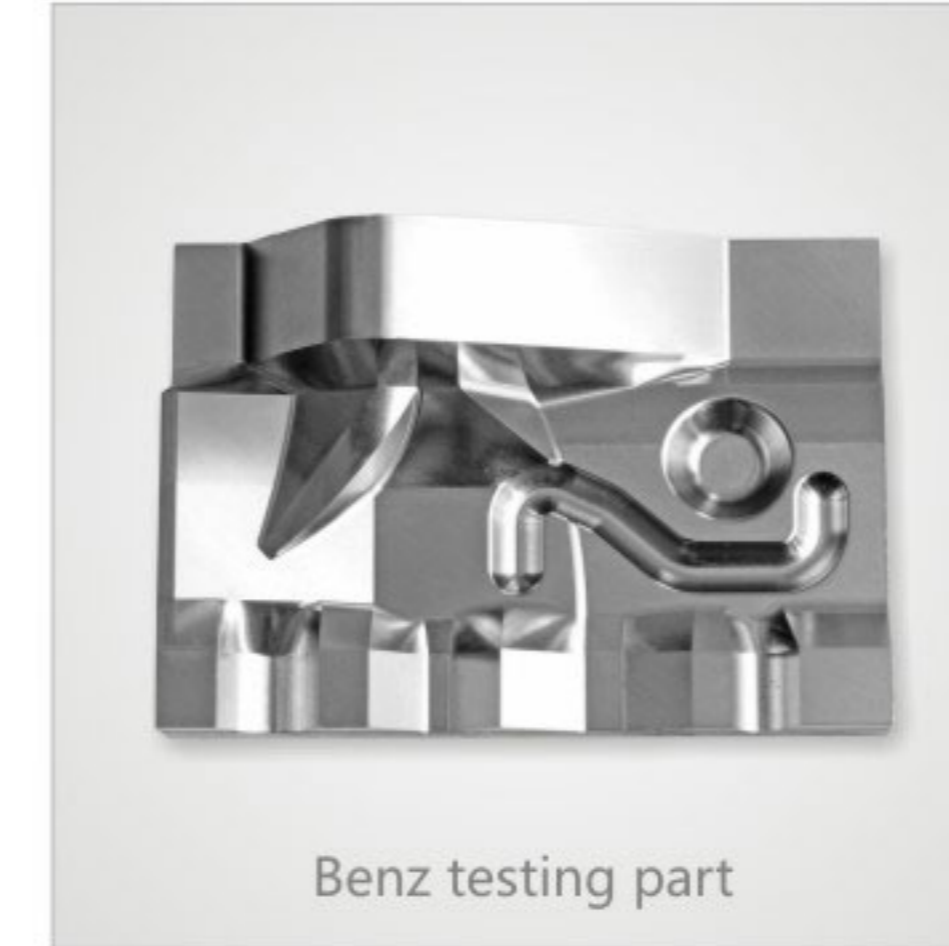


High Speed Series

- VF high speed vertical machine center is the new design for high precision mould cutting and nonferrous metal workpiece which need high speed machining.
- 15000RPM direct driven spindle with chiller and HSK A63 tool shank(BBT40 is option)which make the machine has excellent rotation precision, low vibration and high speed response.
- All three axis are driven by large motors to achieve synergy ability.
- The surrounding coolant and workpiece side flushing can put down the temperature of tool, workpiece and machine.
- The FANUC absolute type model 1 system with 15 inch display and high speed high quality machining package (including AICC II; Jerk control; Smooth tolerance; Machining quality level adjustment function).
- The grease lubrication system comes as standard, low maintenance budget, environmental friendly.
- Separated strong and weak electric cabinet, eliminate the electromagnetic field interference generated by working electrical components.

VF108

Optional draw type water tank



Benz testing part



0.15mm in diameter, 20mm in height needle machining performance, low vibration, quick response.



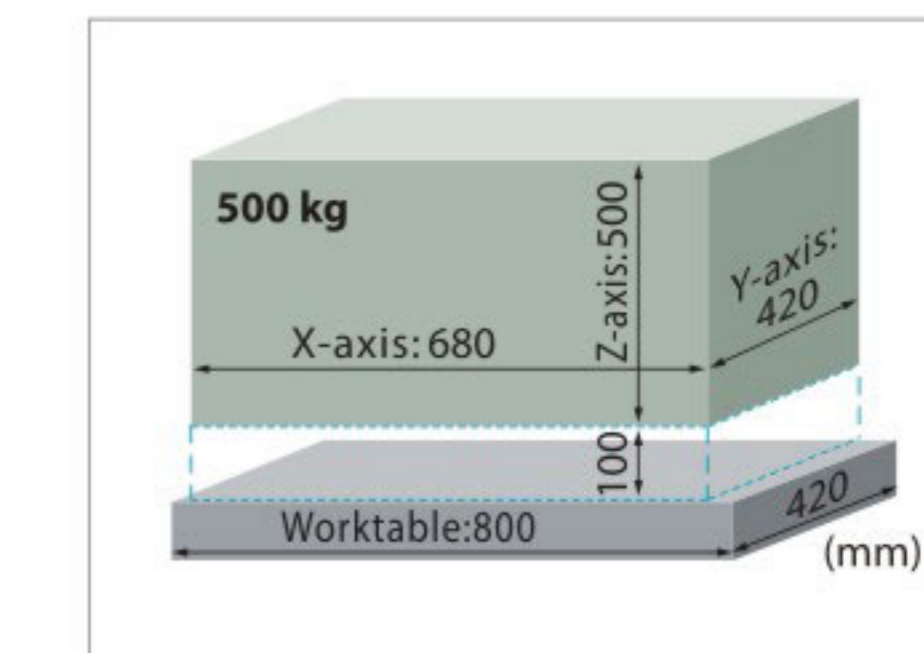
spiral linear machining, 3D error within 0.015mm

Technical Parameter

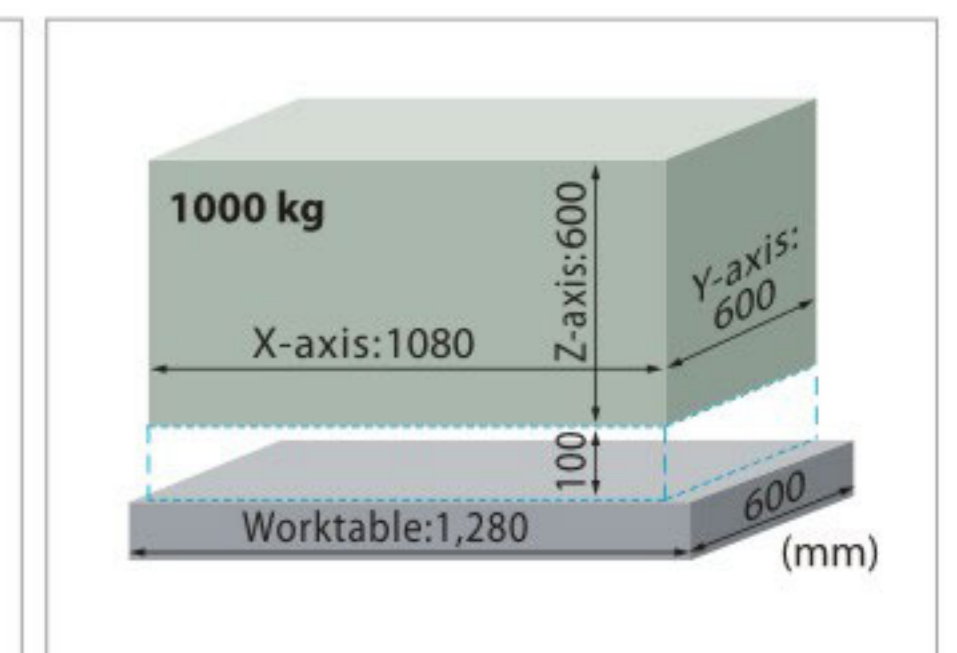
| Item | Unit | VF68 | VF108 | | |
|----------------------------|--|----------------------------------|----------------------|--------------|--|
| Standard controller | | FANUC 0i MF | | | |
| Travel | X axis travel(work-table) | mm | 1080 | | |
| | Y axis travel(saddle) | mm | 600 | | |
| | Z axis travel(spindle head) | mm | 600 | | |
| | Distance from spindle nose to table | mm | 100 ~ 600 | 100 ~ 700 | |
| | Distance from spindle center to column cover | mm | 480 | 630 | |
| Work table | Table size(length x width) | mm | 800 x 420 | 1280 x 600 | |
| | Max. table load | kg | 500 | 1000 | |
| | T slot size(width x distance x quantity) | mm | 14 x 80 x 5 | 18 x 100 x 5 | |
| Spindle | Spindle taper | | HSK-A63 | | |
| | Max. spindle speed | rpm | 15000(Direct driven) | | |
| | Spindle motor power (continual working/Max.) | kW | 9/15 | | |
| | Spindle torque | N.m | 57.3/120 | | |
| X/Y/Z | Rapid traverse X/Y | mm/min | 40000 | 36000 | |
| | Rapid traverse Z | mm/min | 32000 | 24000 | |
| | Cutting feed rate on X/Y/Z | mm/min | 1 ~ 10000 | | |
| ATC (Option) | ATC type | | Arm type | | |
| | Tool capacity | pcs | 24 | | |
| | Max. tool diameter | mm | ∅80/∅130 | | |
| | Max. tool length | mm | 300 | | |
| Accuracy | Max. tool weight | kg | 8 | | |
| | VDI/DGQ3441 | Full travel positioning accuracy | mm | P0.010 | |
| | | Repeatability accuracy | mm | Ps0.008 | |
| Air pressure | MPa | 0.6 ~ 0.8 | | | |
| Supply Voltage & Frequency | | 3/PE, AC380V, 50Hz | | | |
| Power requirement | kVA | 30 | | | |
| Machine size (L/W/H) | mm | 3900 x 3200 x 2700 | 4920 x 3510 x 2970 | | |
| Machine weight | kg | 4500 | 7250 | | |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

Moveable Area:



VF68



VF108



High Speed Series

- VF double column high speed high accuracy series is designed for precise mold base and nonferrous metal machining. Standard machine equips with high speed spindle.
- One piece cast iron machine bed and one piece cast iron bridge, the whole structure is analyzed by FEM which optimize the rigidity and accuracy.
- All three axis use world famous linear guide way and ball screw to provide precise accuracy and stable performance.
- Full enclosed splash guard with European operation box in safe and elegant outlook ,every design is for convenience operation.
- The grease lubrication system comes as standard, low maintenance budget, environmental friendly.

VF1615A



Technical Parameter

| Item | Unit | VF1290 | VF1290A | VF1290B | VF1615 | VF1615A | VF1615B |
|----------------------------|---|---------------------|----------------------|-----------------|--------------------|----------------------|-----------------|
| Standard controller | | FANUC 0i MF | MITSUBISHI.M800W | | FANUC 0i MF | MITSUBISHI.M800W | |
| Travel | X axis travel(work-table) | mm | 1200 | | 1600 | | |
| | Y axis travel(saddle) | mm | 800 | | 1300 | | |
| | Z axis travel(spindle head) | mm | 550 | | 700 | | |
| | Distance from spindle nose to table | mm | 150 ~ 700 | 200 ~ 750 | 200 ~ 900 | 225 ~ 925 | 250 ~ 950 |
| | Distance between columns/work piece access height | mm | 920/715 | | 1500/715 | | |
| Work table | Table size(length x width) | mm | 1320 x 800 | | 1800 x 1300 | | |
| | Max. table load | kg | 2000 | | 4000 | | |
| | T slot size(width x distance x quantity) | mm | 14 x 120 x 7 | | 22 x 160 x 8 | | |
| Spindle | Spindle taper | | HSK-A63 | | HSK-E50 | HSK-A63 | |
| | Max. spindle speed | rpm | 15000(Direct driven) | 24000(Build-in) | 36000(Build-in) | 15000(Direct driven) | 24000(Build-in) |
| | Spindle motor power (continual working/Max.) | kW | 9/15 | 30/39 | 20/26 | 15/38 | 25/33 |
| | Spindle torque(continual working/Max) | N.m | 57.3/120 | 29.1/37.8 | 10.4/13.5 | 70/150 | 68/89.5 |
| XYZ | Rapid traverse (X/Y/Z) | mm/min | 30000 | 40000 | | 30000 | |
| | Cutting feed rate (X/Y/Z) | mm/min | 1 ~ 10000 | | | | |
| ATC (Option) | Tool capacity | pcs | 20 | 24 | 20 | 24 | |
| | Max. tool diameter | mm | ∅100/∅130 | ∅80/∅120 | | ∅100/∅130 | |
| | Max. tool length | mm | 300 | 200 | 300 | | 200 |
| | Max. tool weight | kg | 8 | 4 | 8 | | 4 |
| Accuracy | VDI/DGQ3441 Full travel positioning accuracy | mm | P0.014 | | | | |
| | Repeatability accuracy | mm | Ps0.008 | | | | |
| Air pressure | MPa | 0.6 ~ 0.8 | | | | | |
| Supply voltage & frequency | | 3 /PE, AC380V, 50Hz | | | | | |
| Power requirement | kVA | 30 | 80 | | | | |
| Machine size (L/W/H) | mm | 4808 x 4773 x 3215 | | | 5657 x 5403 x 3954 | | |
| Machine weight | kg | 12000 | | | 22000 | | |

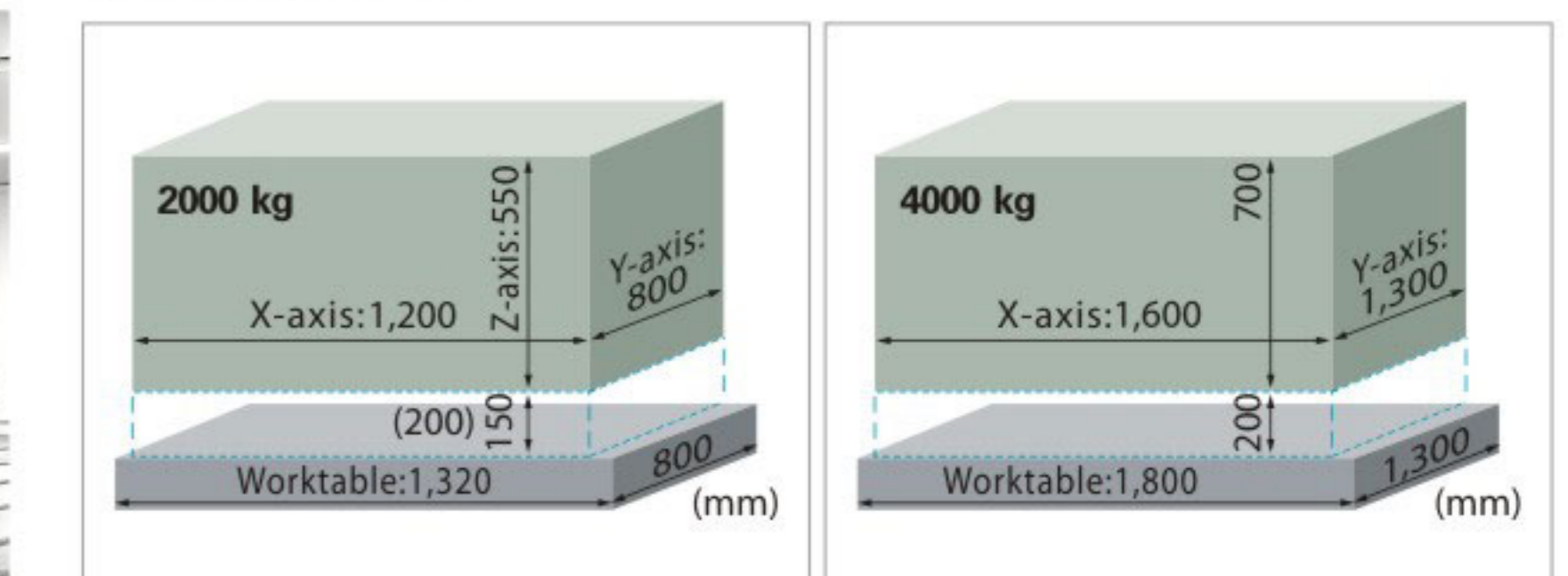
We reserve the right to change technical parameter for improvement of our products without giving notice to customers.



Car light part

Car light part

Moveable Area:

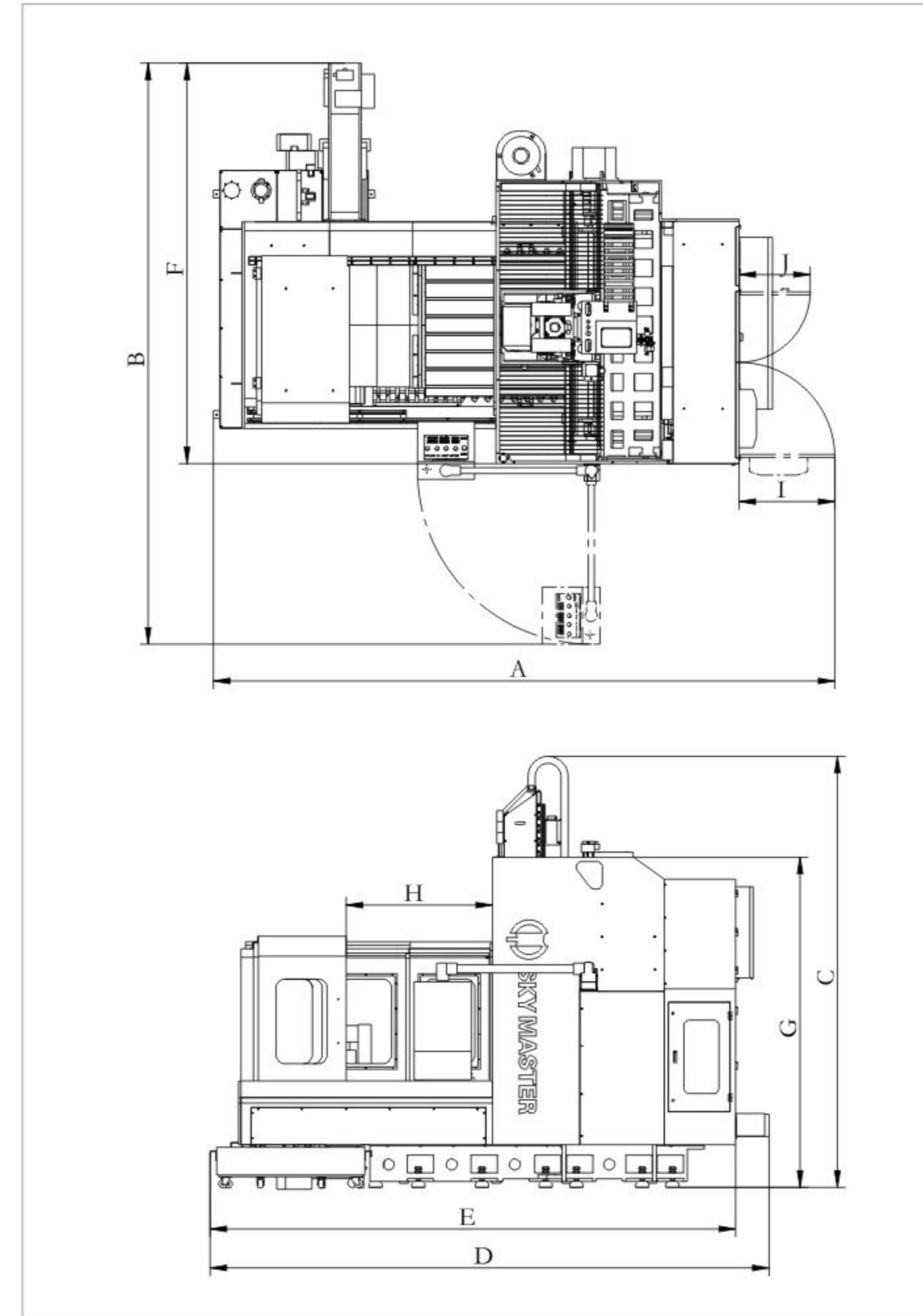


VF1290/1290A/1290B

VF1615/1615A/1615B

| Standard&Option | VF68 | VF108 | VF1290 | VF1290A | VF1290B | VF1615 | VF1615A | VF1615B |
|---|------|-------|--------|---------|---------|--------|---------|---------|
| FANUC Oi-MF absolute type 1, 15"LCD | ● | ● | ● | × | × | ● | × | × |
| HEIDENHAIN TNC620, 15"LCD | × | × | × | ○ | ○ | ○ | ○ | ○ |
| MITSUBISHI M80A, 15"LCD | ○ | ○ | ○ | × | × | × | × | × |
| MITSUBISHI M800W, 15"LCD | ○ | ○ | × | ● | ● | × | × | × |
| MITSUBISHI M800W, 19"LCD | × | × | × | × | × | ○ | ● | ● |
| Direct driven spindle 15000rpm HSKA63 | ● | ● | ● | × | × | ● | × | × |
| Direct driven spindle 15000rpm BBT40 | ○ | ○ | ○ | × | × | ○ | × | × |
| Electric spindle 24000rpm HSK A63 IBAG (MITSUBISHI M800W) | ○ | ○ | × | ● | × | × | ● | × |
| Electric spindle 36000rpm HSK A63 IBAG (MITSUBISHI M800W) | × | × | × | × | ● | × | × | ● |
| Arm type ATC HSKA63 24T (pneumatic) | ○ | ○ | × | × | × | × | × | × |
| Chain type ATC HSKA63 32T (pneumatic) | × | ○ | × | × | × | ○ | ○ | × |
| Chain type ATC HSKA63 40T (pneumatic) | × | × | × | × | × | ○ | ○ | × |
| Drum type ATC HSKA63 20T (pneumatic) | × | × | ○ | ○ | × | ○ | ○ | × |
| Drum type ATC HSKA50 24T (pneumatic) | × | × | × | × | ○ | × | × | ○ |
| Column raise 200 | × | ○ | × | × | × | ○ | ○ | ○ |
| Column raise 300 | × | ○ | × | × | × | × | × | × |
| Rigid tapping | ● | ● | ● | ● | ● | ● | ● | ● |
| Full-enclosed splash guard | ● | ● | ● | ● | ● | ● | ● | ● |
| Spindle chiller/ Coolant surrounding spindle | ● | ● | ● | ● | ● | ● | ● | ● |
| Spindle air sealing / Air blowing device | ● | ● | ● | ● | ● | ● | ● | ● |
| Working area light / 3 colors warning light | ● | ● | ● | ● | ● | ● | ● | ● |
| A/C for electric cabinet | ● | ● | ● | ● | ● | ● | ● | ● |
| Portable MPG | ● | ● | ● | ● | ● | ● | ● | ● |
| Grease lubrication device | ● | ● | ● | ● | ● | ● | ● | ● |
| Coolant system/pneumatic system | ● | ● | ● | ● | ● | ● | ● | ● |
| Chain chip conveyor | ● | ● | ● | ● | ● | ● | ● | ● |
| Coil chip conveyor | × | × | ● | ● | ● | ● | ● | ● |
| Air gun/water gun with flushing function | ● | ● | ● | ● | ● | ● | ● | ● |
| Oil skimmer | ● | ● | ● | ● | ● | ● | ● | ● |
| Automatically power off/Tool kit | ● | ● | ● | ● | ● | ● | ● | ● |
| Transformer | ● | ● | ● | × | × | ● | × | × |
| Adjustable level bolts and foundation block (with screws) | ● | ● | ● | ● | ● | ● | ● | ● |
| Safety door interlock / Operation manual | ● | ● | ● | ● | ● | ● | ● | ● |
| Roof spraying system | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Mass flow chip flushing function | ○ | ○ | × | × | × | × | × | × |
| Cutting view Window | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Drawer type water tank | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Buzzer alarm lamp | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Low temperature blowing device | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Air dryer | ○ | ○ | ○ | ● | ● | ○ | ● | ● |
| Oil mist collection machine (LOSMA) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Coolant through spindle center 20/30/70bar | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 3 axes ball screw hollow cooling | × | × | × | × | × | ○ | ○ | ○ |
| Voltage stabilizer | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Collision avoidance device | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Measuring system (tool, workpiece) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ● | ● | ● | ● | ● | ● | ● | ● |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Full enclosed iron box package | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Warranty prolong 1 year | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

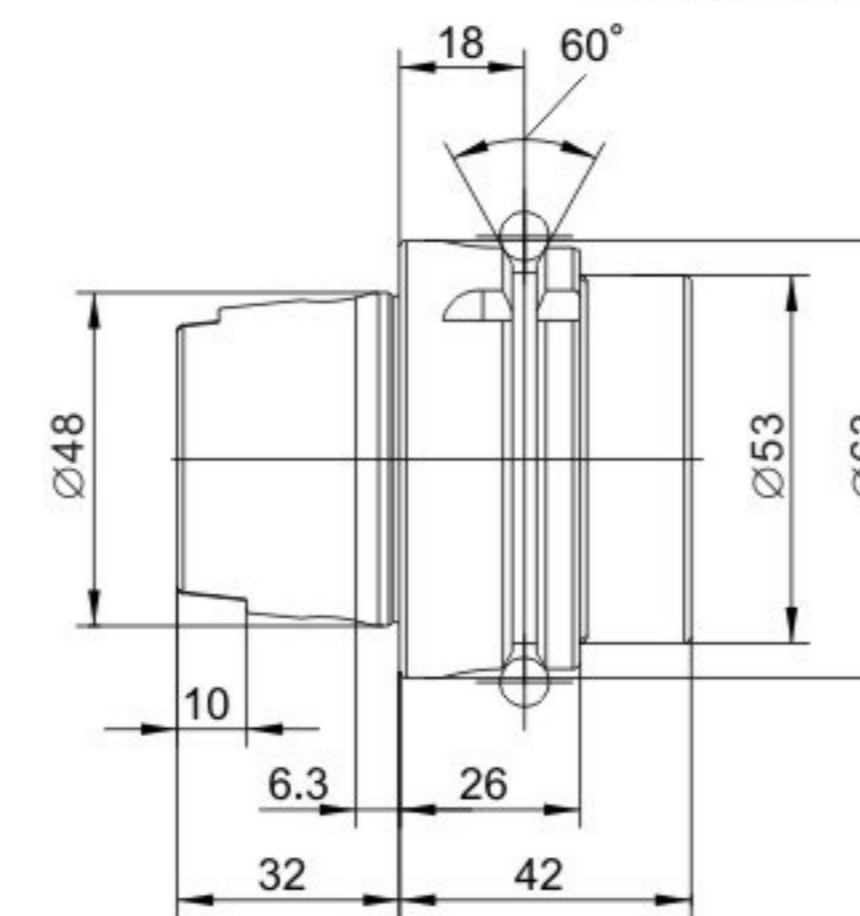
● Standard ○ Optional × Not available



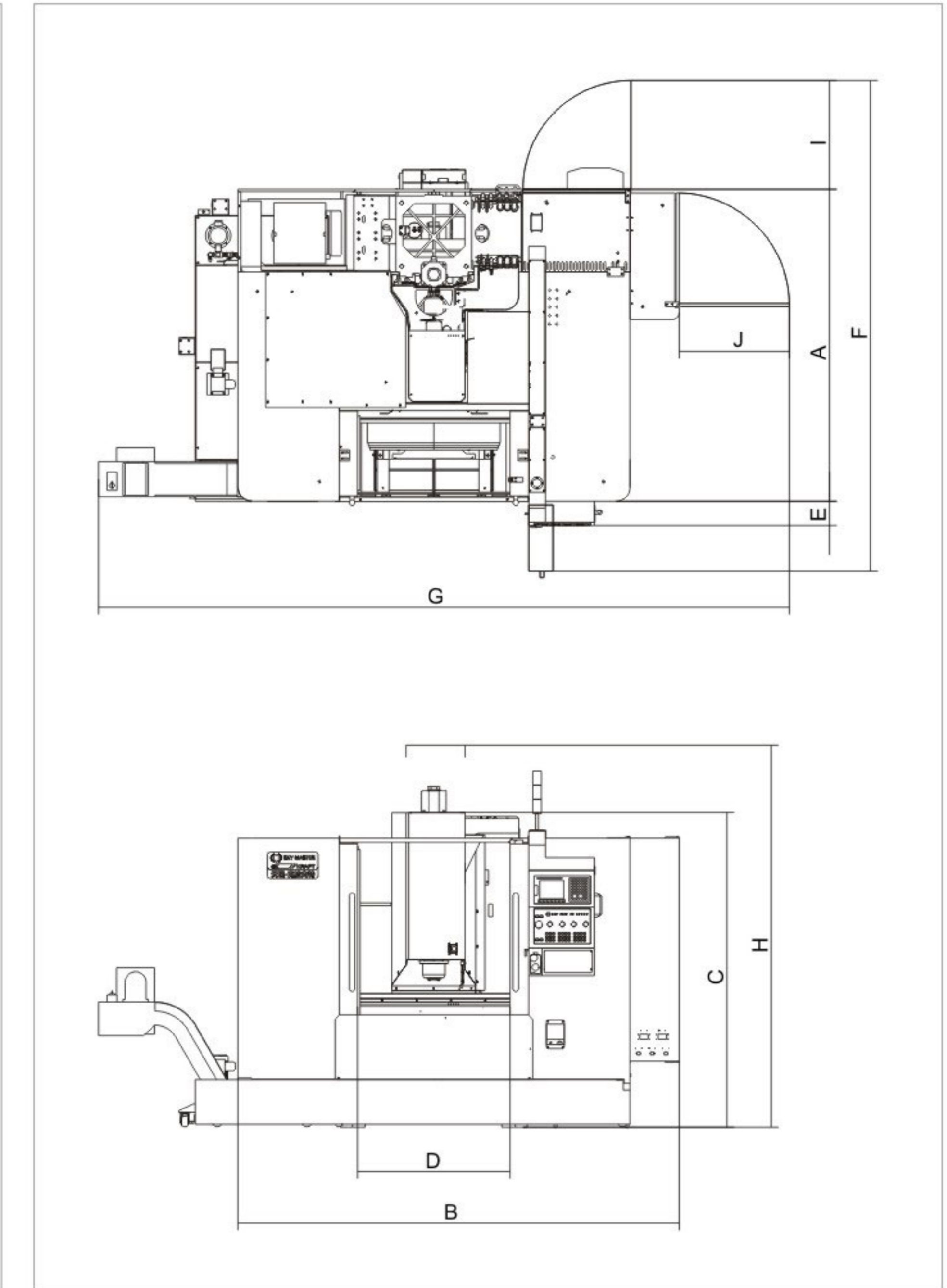
Dimensions

| | A | B | C | D | E | F | G | H | I | J |
|--------------------|------|------|------|------|------|------|------|------|-----|-----|
| VF1290/1290A/1290B | 4808 | 4773 | 3215 | 4066 | 3906 | 3567 | 2270 | 1260 | 870 | 740 |
| VF1615/1615A/1615B | 5657 | 5403 | 3954 | 5052 | 4785 | 3650 | 3010 | 1430 | 870 | 650 |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.



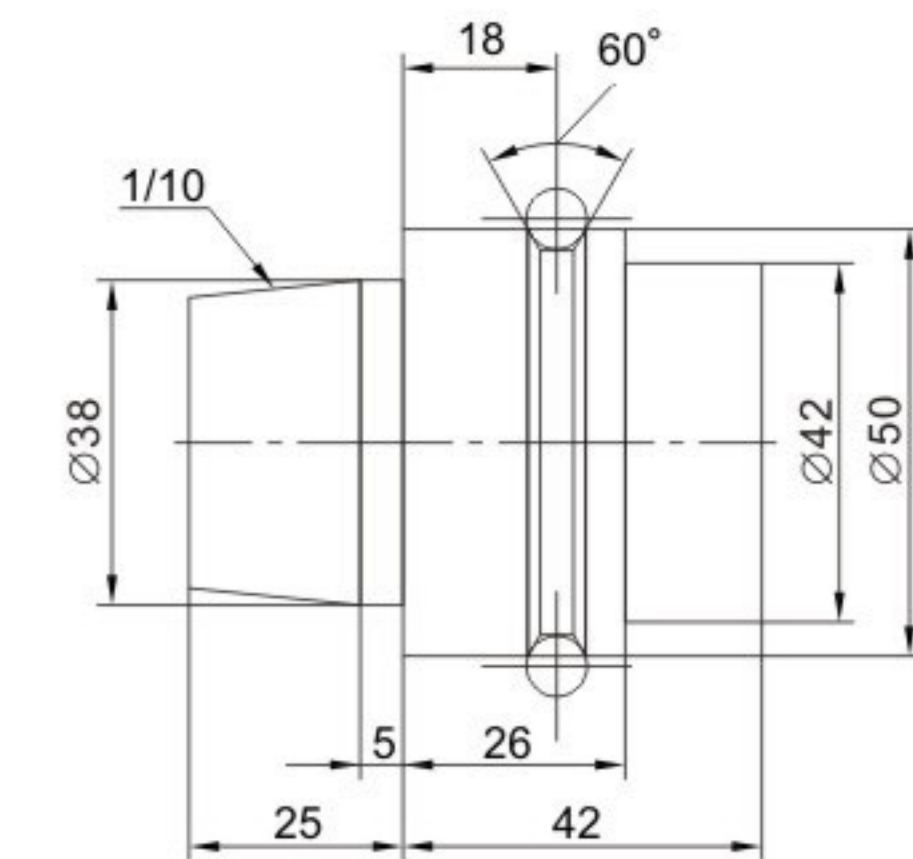
■ HSK-A63 Tool Shank



Dimensions

| | A | B | C | D | E | F | G | H | I | J |
|-------|------|------|------|------|-----|------|------|------|-----|-----|
| VF68 | 1915 | 2180 | 2200 | 650 | 175 | 3200 | 3900 | 2700 | 750 | 400 |
| VF108 | 2223 | 3144 | 2370 | 1100 | 180 | 3510 | 4920 | 2970 | 765 | 785 |

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■ HSK E50 Tool Shank

VU 5 Axis Series

- VU vertical 5 axis machining center is widely used in 5 axis type products components and complicated mold cutting.
- Designed with outstanding structure and high rigidity ,the world famous brand of linear guide way are used on all three axis to achieve high accuracy machining ability.
- The major parts are manufactured from high grade cast iron and released the stress by heat treatment , ensuring the best structural stability and positioning accuracy.
- Double support design on the A axis, compact structure, great rigidity, optimized loading capacity and precise positioning accuracy.
- Cradle type structure, higher machining efficiency, tool length has no effect on the machining accuracy; make sure the 3D space shape accurate.
- The grease lubrication system comes as standard, low maintenance budget, environmental friendly.

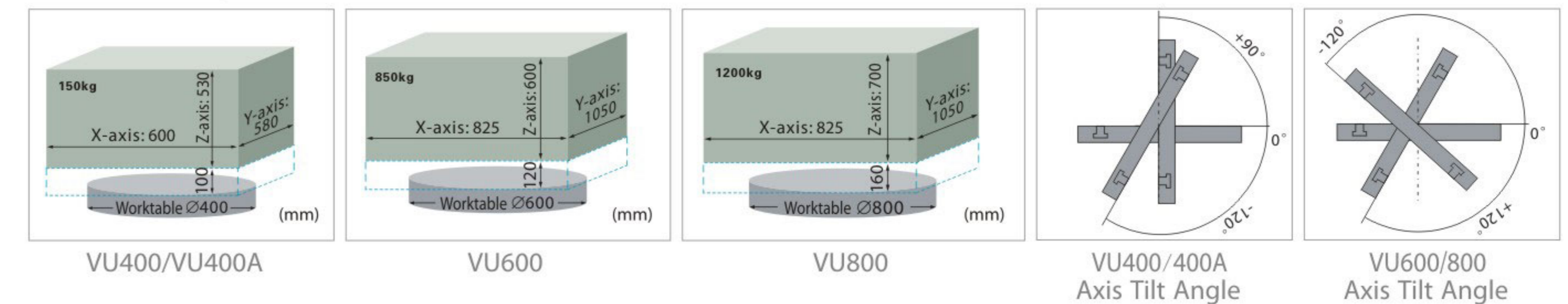


Technical Parameter

| Item | Unit | VU400 | VU400A | VU600 | VU800 |
|----------------------------|--|--|-----------------------|-------------------|-----------------------|
| Standard controller | | FANUC 0i MF (5 axis 4 axis synchronization) | HEIDENHAIN TNC620 | HEIDENHAIN TNC640 | |
| Travel | X axis travel(work-table) | mm | 600 | 825 | |
| | Y axis travel(saddle) | mm | 580 | 1050 | |
| | Z axis travel(spindle head) | mm | 530 | 600 | 700 |
| | Distance from spindle nose to table | mm | 100 ~ 630 | 120 ~ 720 | 160 ~ 860 |
| Work table | Table diameter | mm | Ø400 | Ø600 | Ø800 |
| | T slot size (quantity × width) | mm | 8X12 | 5X14 | 7X14 |
| | Workpiece max. diameter | mm | Ø600 | Ø960 | Ø1000 |
| | Max. table load | kg | 250 | 850 | 1200 |
| | Rotation angle | A axis | +90 ° ~ -120 ° | | +120 ° ~ -120 ° |
| | C axis | 360 ° | | | |
| Max. speed | A axis | rpm | 33.3 | 50 | |
| | C axis | rpm | 33.3 | 100 | |
| Spindle | Spindle taper | | BT40 | | HSK-A63 |
| | Max. spindle speed | rpm | 10000 (Direct driven) | | 15000 (Direct driven) |
| | Spindle motor power (continual working/Max.) | kW | 11/20.4 | | 10/17 |
| | Spindle torque(continual working/Max) | N.m | 52.5/130 | | 63.7/108.6 |
| X/Y/Z | Rapid traverse X/Y | mm/min | 36000 | | 40000 |
| | Rapid traverse Z | mm/min | 24000 | | 40000 |
| | Cutting feed rate on X/Y/Z | mm/min | 1 ~ 10000 | | |
| ATC | ATC type | | Arm type | | |
| | Tool capacity | pcs | 24 | | 32 |
| | Max. tool diameter | mm | Ø80/Ø130 | | Ø75/Ø130 |
| | Max. tool length | mm | 300 | | |
| Accuracy | Max. tool weight | kg | 8 | | |
| | VDI/DGQ3441 Full travel positioning accuracy | mm | P0.012 | | |
| | Repeatability accuracy | mm | Ps0.008 | | |
| Air pressure | MPa | 0.6 ~ 0.8 | | | |
| Supply voltage & frequency | | 3/PE, AC380V, 50Hz | | | |
| Power requirement | kVA | 30 | 60 | 80 | |
| Machine size (L/W/H) | mm | 4920 × 3510 × 3170 | | 5090X3250X3510 | |
| Machine weight | kg | 7650 | | 22000 | |

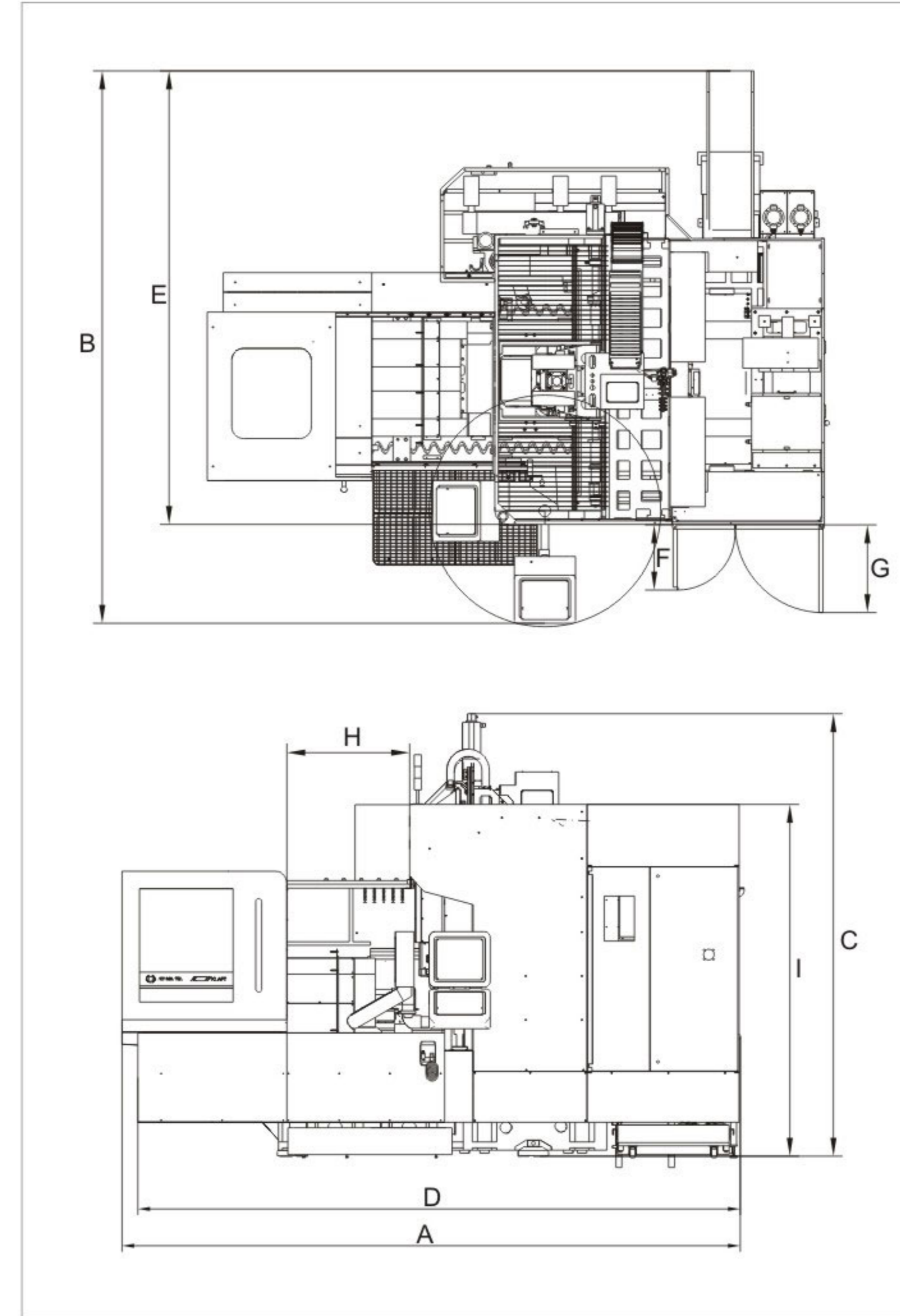
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Moveable Area:



| Standard&Option | VU400 | VU400A | VU600 | VU800 |
|--|-------|--------|---------|---------|
| HEIDENHAIN TNC620, 15"LCD | ○ | ● | ●TNC640 | ●TNC640 |
| FANUC Oi-MF, any 4 axis in synchronization, absolute type (without linear scale) | ● | × | ○ | ○ |
| Direct driven spindle 15000rpm HSKA63 | ○ | ● | ● | ● |
| Direct driven spindle 15000rpm BBT40 | ○ | ○ | ○ | ○ |
| Electric spindle 24000rpm HSK A63 IBAG (HEIDENHAIN) | × | ○ | ○ | ○ |
| Electric spindle 36000rpm HSK E50 IBAG (HEIDENHAIN) | × | × | ○ | ○ |
| Arm type ATC BT40 24T (pneumatic) | ● | × | × | × |
| Arm type ATC HSKA63 24T (pneumatic) | × | ● | × | × |
| Chain type ATC HSKA63 32T (pneumatic) | ○ | ○ | ● | ● |
| Chain type ATC HSKA63 40T (pneumatic) | × | × | ○ | ○ |
| Rigid tapping | ● | ● | ● | ● |
| Full-enclosed splash guard | ● | ● | ● | ● |
| Spindle chiller | ● | ● | ● | ● |
| Spindle air sealing | ● | ● | ● | ● |
| Air blowing device | ● | ● | ● | ● |
| Coolant surrounding spindle | ● | ● | ● | ● |
| Working area light/3 colors warning light | ● | ● | ● | ● |
| A/C for electric cabinet | ● | ● | ● | ● |
| Portable MPG | ● | ● | ● | ● |
| Grease lubrication device | ● | ● | ● | ● |
| Coolant system/pneumatic system | ● | ● | ● | ● |
| Chain chip conveyor | ● | ● | ● | ● |
| Coil chip conveyor | × | × | ● | ● |
| Air gun/water gun with flushing function | ● | ● | ● | ● |
| Oil skimmer | ● | ● | ● | ● |
| Automatically power off | ● | ● | ● | ● |
| Transformer | ● | × | × | × |
| Tool kit | ● | ● | ● | ● |
| Adjustable level bolts and foundation blocks | ● | ● | ● | ● |
| Safety door interlock | ● | ● | ● | ● |
| Operation manual | ● | ● | ● | ● |
| Roof spraying system | ○ | ○ | ○ | ○ |
| Mass flow chip flushing function | ○ | ○ | ○ | ○ |
| Cutting view window | ○ | ○ | ○ | ○ |
| Drawer type water tank | ○ | ○ | × | × |
| Buzzer alarm lamp | ○ | ○ | ○ | ○ |
| Low temperature blowing device | ○ | ○ | ○ | ○ |
| Air dryer | ○ | ○ | ○ | ○ |
| Oil mist collection machine (LOSMA) | ○ | ○ | ○ | ○ |
| Coolant through spindle center 20/30/70bar | ○ | ○ | ○ | ○ |
| 3 axes ball screw hollow cooling | × | × | ○ | ○ |
| Voltage stabilizer (CHNT) | ○ | ○ | ○ | ○ |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ○ | × | × | × |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ | × | × | × |
| Basic ball accuracy automatic compensation device (with hardware and software) | ○ | ○ | ○ | ○ |
| Collision avoidance device | ○ | ○ | ○ | ○ |
| Measuring system (tool, workpiece) | ○ | ○ | ○ | ○ |
| 3 axis absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ● | ● | ● |
| A/C axis absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ● | ● | ● |
| Full enclosed iron box package | ○ | ○ | ○ | ○ |
| Warranty prolong 1 year | ○ | ○ | ○ | ○ |

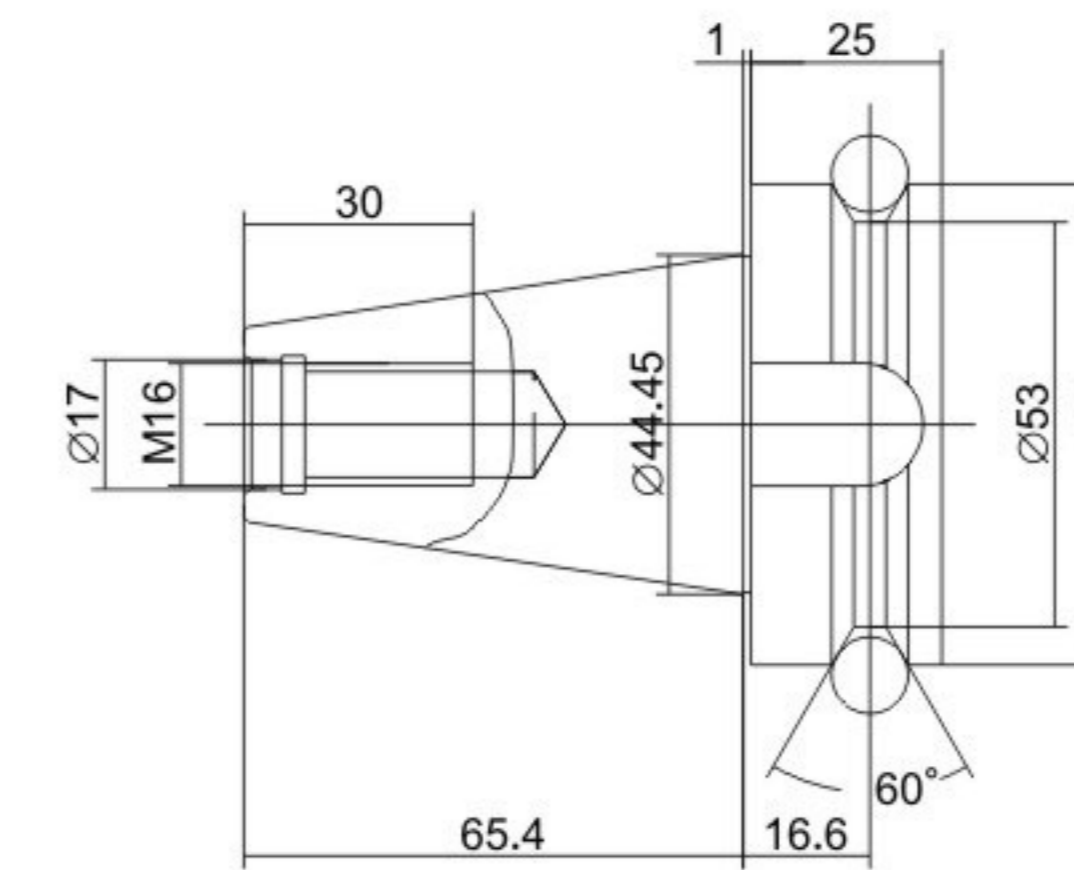
● Standard ○ Optional × Not available



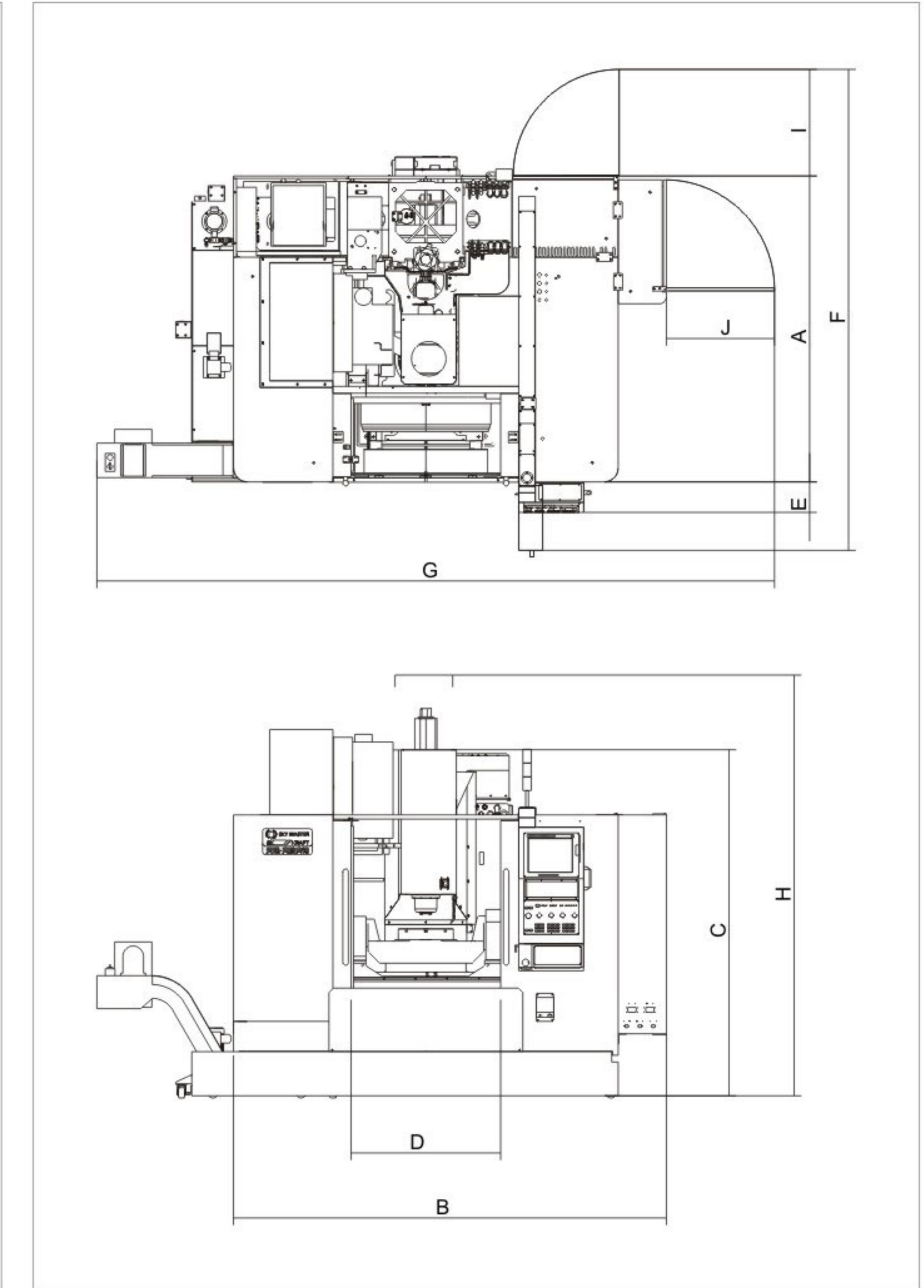
Dimensions

| | A | B | C | D | E | F | G | H | I |
|-------|------|------|------|------|------|-----|-----|------|------|
| VU600 | 5300 | 4730 | 4140 | 5133 | 3880 | 540 | 730 | 1050 | 2900 |
| VU800 | 5300 | 4730 | 4250 | 5133 | 3880 | 540 | 730 | 1050 | 3010 |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.



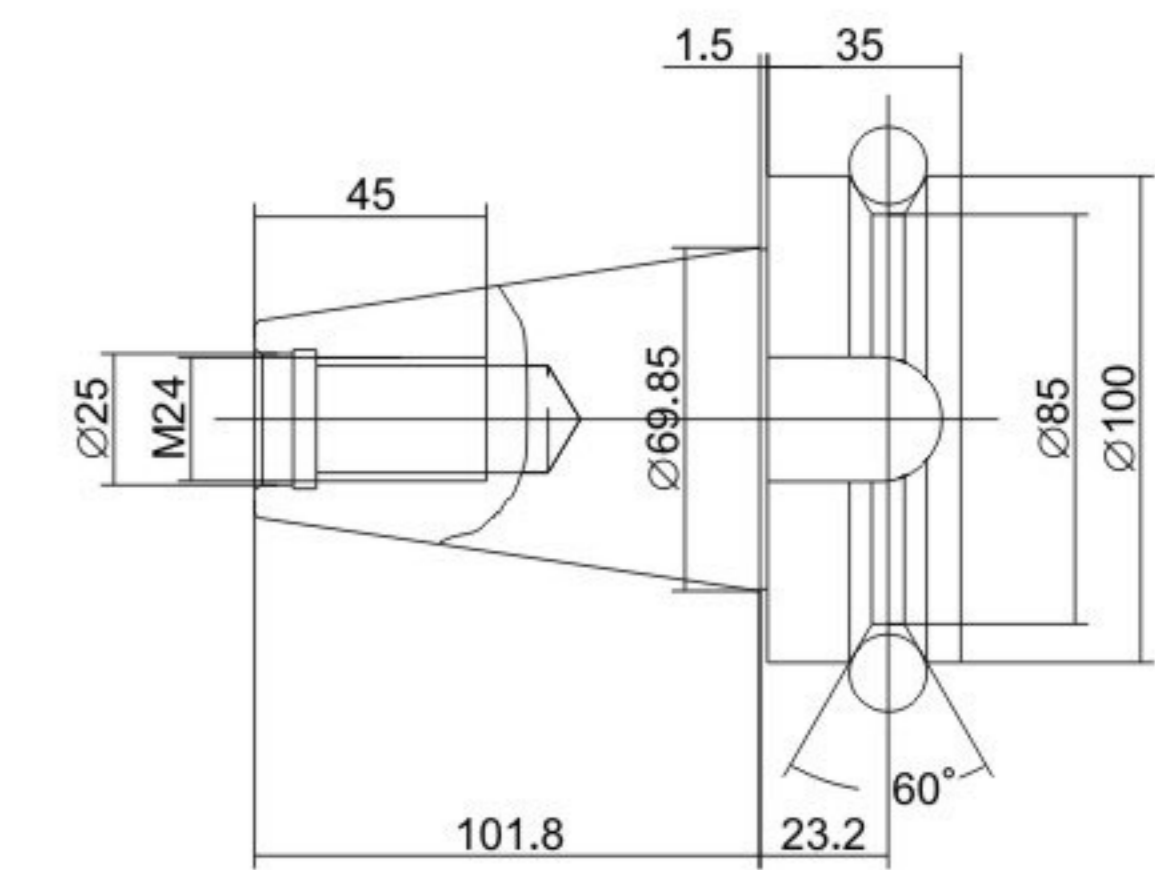
■ BBT40 Tool Shank



Dimensions

| | A | B | C | D | E | F | G | H | I | J |
|--------|------|------|------|------|-----|------|------|------|-----|-----|
| VU400 | 2223 | 3144 | 2570 | 1100 | 180 | 3510 | 3730 | 3170 | 765 | 785 |
| VU400A | 2223 | 3144 | 2570 | 1100 | 180 | 3510 | 4920 | 3170 | 765 | 785 |

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■ BBT50 Tool Shank



UM Five-axis Double Column Series

- Um series five axis double column machining center is widely used in precision machining of aerospace, automobile mold, complex curved surface and other industries.
- The main body is designed with a high rigidity double column structure, and the base casting is treated by three times of aging to ensure the long-term stability of mechanical accuracy.
- Both A and C rotating axes are driven by direct drive motor, with high speed, high response, no backlash and never wear performance.
- Five axis anti-collision function as standard, the response time is less than 10ms, which can effectively protect tools, workpieces and equipment.
- Machine is equipped with a fully enclosed safety cover, which has good sealing performance and can effectively prevent the splashing of iron chips and coolant. Ergonomics design, machine operation is comfortable and pleasant.

UM3018



Technical Parameter

| Item | Unit | UM3018 | UM3225A | | |
|--|--|----------------------------------|-----------------------|--------------------|--------|
| Standard controller | | FANUC -32i | SINUMERIK 840D | | |
| Travel | X axis travel(work-table) | mm | 3200 | 3200 | |
| | Y axis travel(saddle) | mm | 2000 | 2900 | |
| | Z axis travel(spindle head) | mm | 700 | 800 | |
| | Rotation Angle | A axis | | ± 110° | ± 110° |
| | | C axis | | ± 360° | ± 360° |
| | Distance from spindle nose to table | mm | 200~900 | 160~960 | |
| Distance from columns/work piece access height | mm | 1820/1500 | 2550/1500 | | |
| Work table | Table size(length × width) | mm | 3200 × 1600 | 3350 × 2200 | |
| | Max. table load | kg | 10000 | 15000 | |
| | T slot size(width × distance × quantity) | mm | 22 × 180 × 8 | 28 × 250 × 13 | |
| Spindle | Spindle taper | | HSK-A63 | HSK-A63 | |
| | Max. spindle speed | rpm | 18000 (Build-in) | 24000 (Build-in) | |
| | Spindle motor specification(rate) | kW | 18.5 | 40 | |
| | Spindle torque(rate) | N.m | 29 | 67 | |
| X/Y/Z | Rapid traverse X/Y/Z | mm/min | 20000/20000/12000 | 15000/12000/12000 | |
| | Cutting feed rate on X/Y/Z | mm/min | 1~10000 | 1~8000 | |
| | Max speed | A axis | rpm | 46.6 | 60 |
| | | C axis | rpm | | 60 |
| ATC (option) | ATC type | | | Arm type | |
| | Tool capacity | pcs | | 32 | |
| | Max. tool diameter | mm | | ∅75/∅130 | |
| | Max. tool length | mm | | 300 | |
| Max. tool weight | kg | | 8 | | |
| Accuracy | VDI/DGQ3441 | Full travel positioning accuracy | mm | P0.025 | |
| | | Repeatability accuracy | mm | Ps0.020 | |
| Air pressure | MPa | | 0.6~0.8 | | |
| Supply voltage & frequency | | | 3/PE, AC380 V , 50 Hz | | |
| Power requirement | kVA | 60 | 120 | | |
| Machine size (L/W/H) | mm | 8027 × 5535 × 4950 | 9731 × 6025 × 5898 | | |
| Machine weight | kg | 26500 | 47000 | | |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

Vertical Series

Smart, compact ,more utility



Sky Master constantly improves and renovates the structures and designs of the Vertical Series, updating the standard configurations to keep up with market standards while maintaining the highest quality.



Linear Guide Way Series

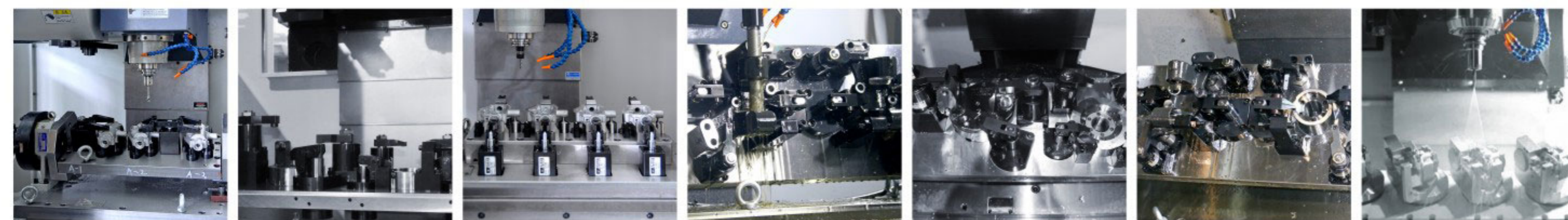
(automation solution integration)

- The VL-series vertical CNC machines is designed for effective and productive machining. Widely used for high precision plastic moulds, forging dies, auto, aerospace industry, electric and home appliance.
- The structure of this series is carefully developed and with high rigidity. Linear guide ways from REXROTH or THK guarantee excellent machining ability. The work table is strong supported to get the optimized dynamic precision and long life lasting.
- The major machine parts are made of top-grade cast iron to achieve high rigidity and stable quality.
- Pre-stressed precision double nut ball-screws C3 grade in all axis, directly driven by the servo motors in order to eliminate backlash and improve transmission efficiency as well as accurate position control. Inverted "Y" style column with large contact surface result in excellent strength.
- Z axis is driven by big power motor which can eliminate the defect of large current and mechanical balance run-out if with counter weight. It improves the response speed too.
- Patent column structure design provides extraordinary rigidity.

VL1100A



The automatic production is an inexorable trend since industry 4.0 been proposed. The Skymaster VL series can provide a full solution for automation by achieving work piece lifting, clamping, locating, machining, inspecting and other functions.

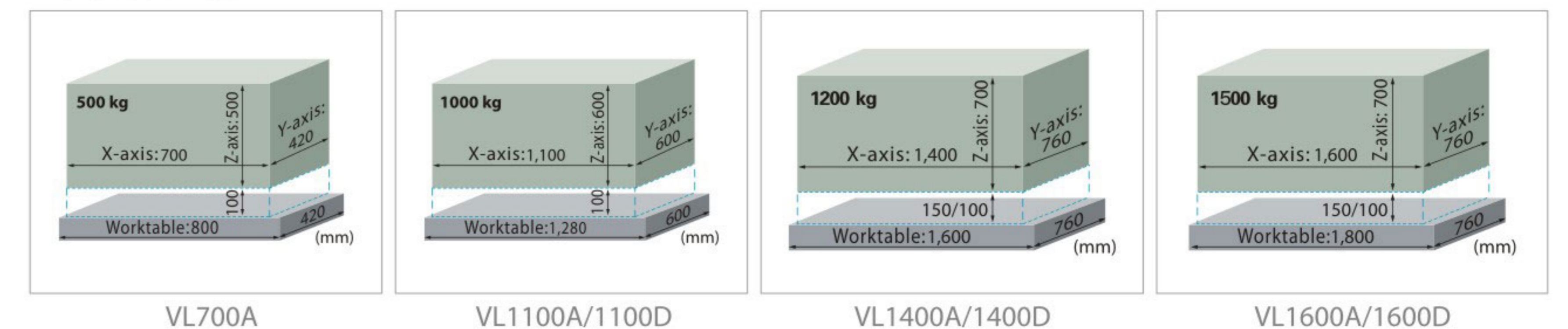


Technical Parameter

| Item | Unit | VL700A | VL1100A | VL1100D | VL1400A | VL1400D | VL1600A | VL1600D | |
|----------------------------|--|--------------------|----------------------|--------------|---------------------|-----------|------------|-----------|-----------|
| Standard controller | | FANUC Oi MF | | | | | | | |
| Travel | X axis travel(work-table) | mm | 700 | 1100 | 1400 | | 1600 | | |
| | Y axis travel(saddle) | mm | 420 | 600 | 760 | | | | |
| | Z axis travel(spindle head) | mm | 500 | 600 | 760 | | | | |
| | Distance from spindle nose to table | mm | 100 ~ 600 | 100 ~ 700 | 60 ~ 660 | 150 ~ 910 | 100 ~ 860 | 150 ~ 910 | 100 ~ 860 |
| | Distance from spindle center to column cover | mm | 480 | 630 | 780 | | | | |
| Work-table | Table size(length x width) | mm | 800 x 420 | 1280 x 600 | 1600 x 760 | | 1800 x 760 | | |
| | Max. table load | kg | 500 | 1000 | 1200 | | 1500 | | |
| | T slot size(width x distance x quantity) | mm | 14 x 80 x 5 | 18 x 100 x 5 | 18 x 125 x 5 | | | | |
| Spindle | Spindle taper | | BT40 | | BT50 | BT40 | BT50 | BT40 | BT50 |
| | Max. spindle speed | rpm | 10000(Direct driven) | | 6000(Direct driven) | 10000 | 6000 | 10000 | 6000 |
| | Spindle motor power (continual working/Max.) | kW | 11/20.4 | | | 11/20.4 | 15/20.4 | 11/20.4 | 15/20.4 |
| | Spindle torque | N.m | 52.5/130 | | | 52.5/130 | 143/259 | 52.5/130 | 143/259 |
| X/Y/Z | Rapid traverse X/Y | mm/min | 40000 | 36000 | 20000 | | | | |
| | Rapid traverse Z | mm/min | 32000 | 30000 | 20000 | | | | |
| | Cutting feed rate on X/Y/Z | mm/min | 1 ~ 10000 | | | | | | |
| ATC | ATC type | | Arm type | | | | | | |
| | Tool capacity | pcs | 24 | | | | 24 | | |
| | Max. tool diameter | mm | Ø80/Ø130 | | Ø110/Ø220 | Ø80/Ø150 | Ø110/Ø220 | Ø80/Ø150 | Ø110/Ø220 |
| | Max. tool length | mm | 300 | 350 | 300 | 350 | 300 | 350 | 350 |
| | Max. tool weight | kg | 8 | 20 | 8 | 20 | 8 | 20 | 20 |
| Accuracy | VDI/DGQ3441 Full travel positioning accuracy | mm | P0.010 | | | | P0.012 | | |
| | Repeatability accuracy | mm | Ps0.008 | | | | Ps0.010 | | |
| Air pressure | MPa | 0.6 ~ 0.8 | | | | | | | |
| Supply voltage & frequency | | 3/PE, AC380V, 50Hz | | | | | | | |
| Power requirement | kVA | 20 | 30 | 40 | | | | | |
| Machine size (L/W/H) | mm | 3900 x 3200 x 2700 | 4920 x 3510 x 2850 | | 4500 x 4300 x 3350 | | | | |
| Machine weight | kg | 4500 | 7250 | 7500 | 12200 | 12500 | 13200 | 13500 | |

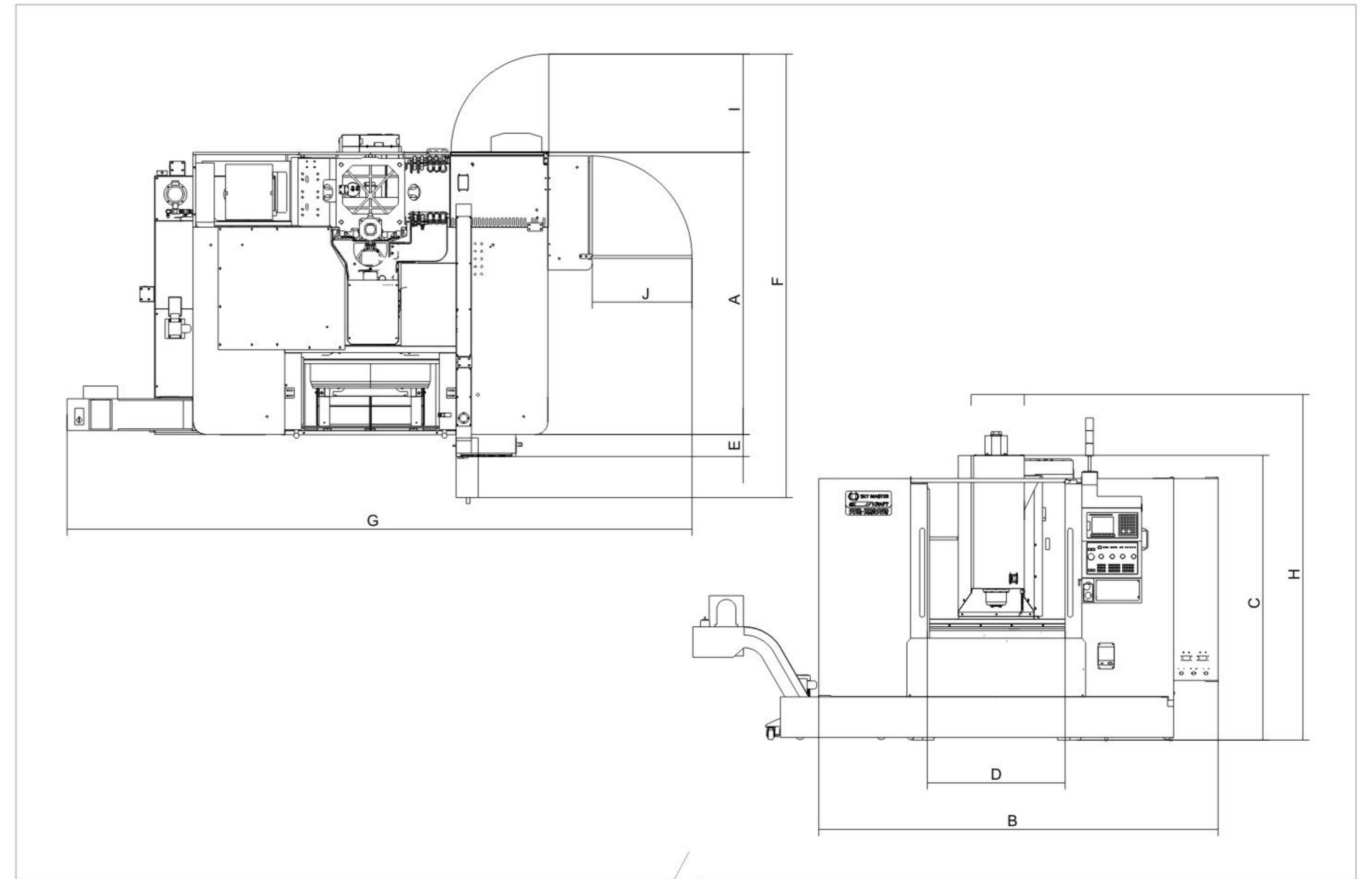
We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

Moveable Area:



| Standard&Option | VL700A | VL1100A | VL1100D | VL1400A | VL1400D | VL1600A | VL1600D |
|---|--------|---------|---------|---------|---------|---------|---------|
| FANUC Oi-MF absolute type 1, 15" LCD | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| FANUC Oi-MF absolute type 1, 10.4" LCD | ● | ● | ● | ● | ● | ● | ● |
| Mitsubishi M80A, 15" touch type LCD | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| SIEMENS 828D, 10.4" LCD | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Fine quality machining package | ● | ● | ● | ● | ● | ● | ● |
| Spindle 6000rpm | x | x | ● | x | ● | x | ● |
| Spindle 8000rpm | ○ | x | ○ | x | ○ | x | ○ |
| Spindle 10000rpm | ● | ● | ○ | ○ | ○ | ○ | ○ |
| Column raise 200 | x | ○ | ○ | ○ | ○ | ○ | ○ |
| Column raise 300 | x | ○ | ○ | ○ | ○ | ○ | ○ |
| Arm type ATC 24T (pneumatic) | ● | ● | ● | ● | ● | ● | ● |
| Arm type ATC 30T (pneumatic) | x | ○ | x | ○ | ○ | ○ | ○ |
| Chain type ATC 32T (pneumatic) | x | ○ | x | ○ | ○ | ○ | ○ |
| BF/GTP gear box | x | ○ | ○ | ○ | ○ | ○ | ○ |
| Rigid tapping | ● | ● | ● | ● | ● | ● | ● |
| Full-enclosed splash guard | ● | ● | ● | ● | ● | ● | ● |
| Spindle chiller | ● | ● | ● | ● | ● | ● | ● |
| Spindle air sealing | ● | ● | ● | ● | ● | ● | ● |
| Air blowing device | ● | ● | ● | ● | ● | ● | ● |
| Working area light/3 colors warning light | ● | ● | ● | ● | ● | ● | ● |
| Heat exchanger in electrical cabinet | ● | ● | ● | ● | ● | ● | ● |
| Portable MPG | ● | ● | ● | ● | ● | ● | ● |
| Coolant system/Lubrication system/Pneumatic system | ● | ● | ● | ● | ● | ● | ● |
| Chain chip conveyor | ● | ● | ● | ● | ● | ● | ● |
| Coil chip conveyor | x | x | x | ● | ● | ● | ● |
| Air gun/water gun with flushing function | ● | ● | ● | ● | ● | ● | ● |
| Oil and water separator box | ● | ● | ● | ● | ● | ● | ● |
| Automatically power off | ● | ● | ● | ● | ● | ● | ● |
| Transformer | ● | ● | ● | ● | ● | ● | ● |
| Tool kit | ● | ● | ● | ● | ● | ● | ● |
| Adjustable level bolts and foundation blocks | ● | ● | ● | ● | ● | ● | ● |
| Safety door interlock | ● | ● | ● | ● | ● | ● | ● |
| Operation manual | ● | ● | ● | ● | ● | ● | ● |
| Coolant surrounding spindle (with separated pump) | ● | ● | ● | ● | ○ | ● | ○ |
| Drawer type water tank | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Mass flow chip flushing function | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Oil skimmer | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Automatic door | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Coolant through spindle center 20/30/70 bar | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| A/C for electric cabinet | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Buzzer alarm lamp | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Voltage stabilizer (CHNT) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Iron box package | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Warranty prolong 1 year | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

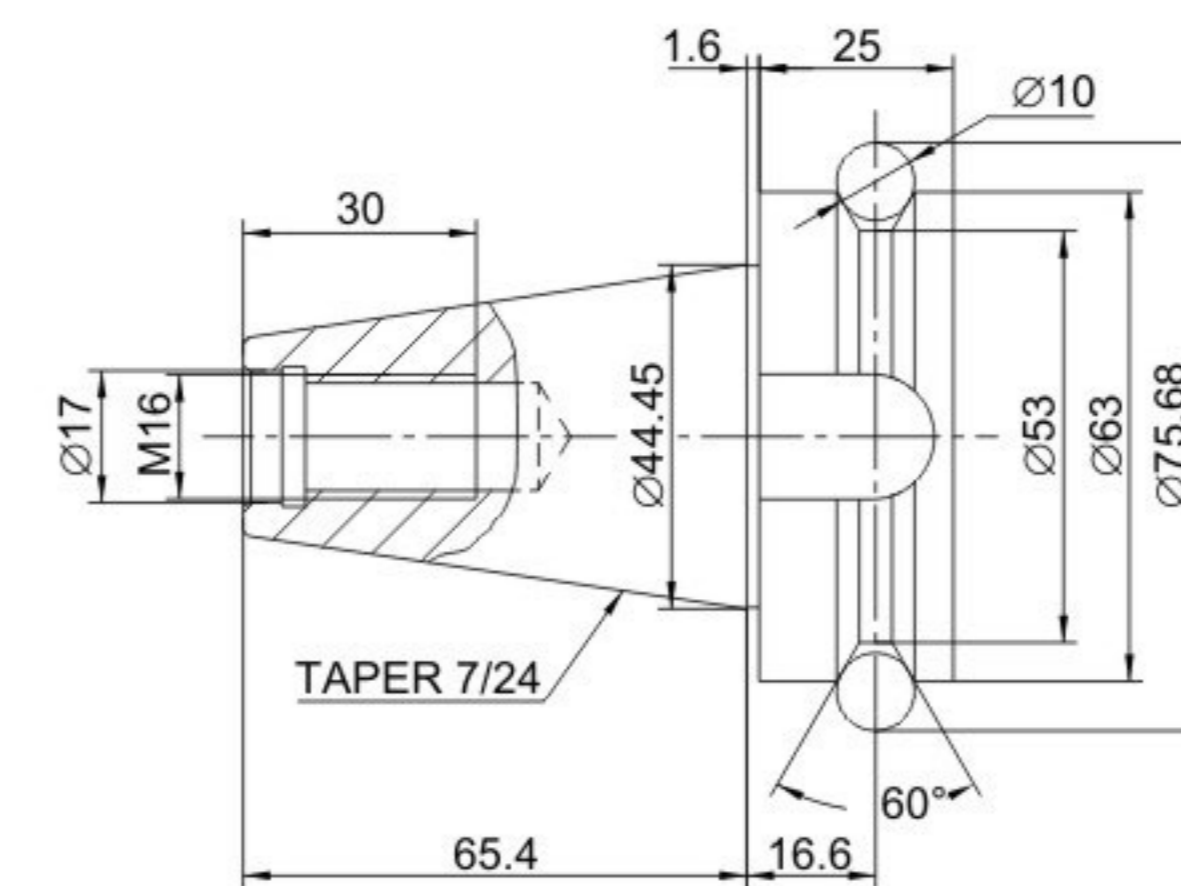
● Standard ○ Optional × Not available



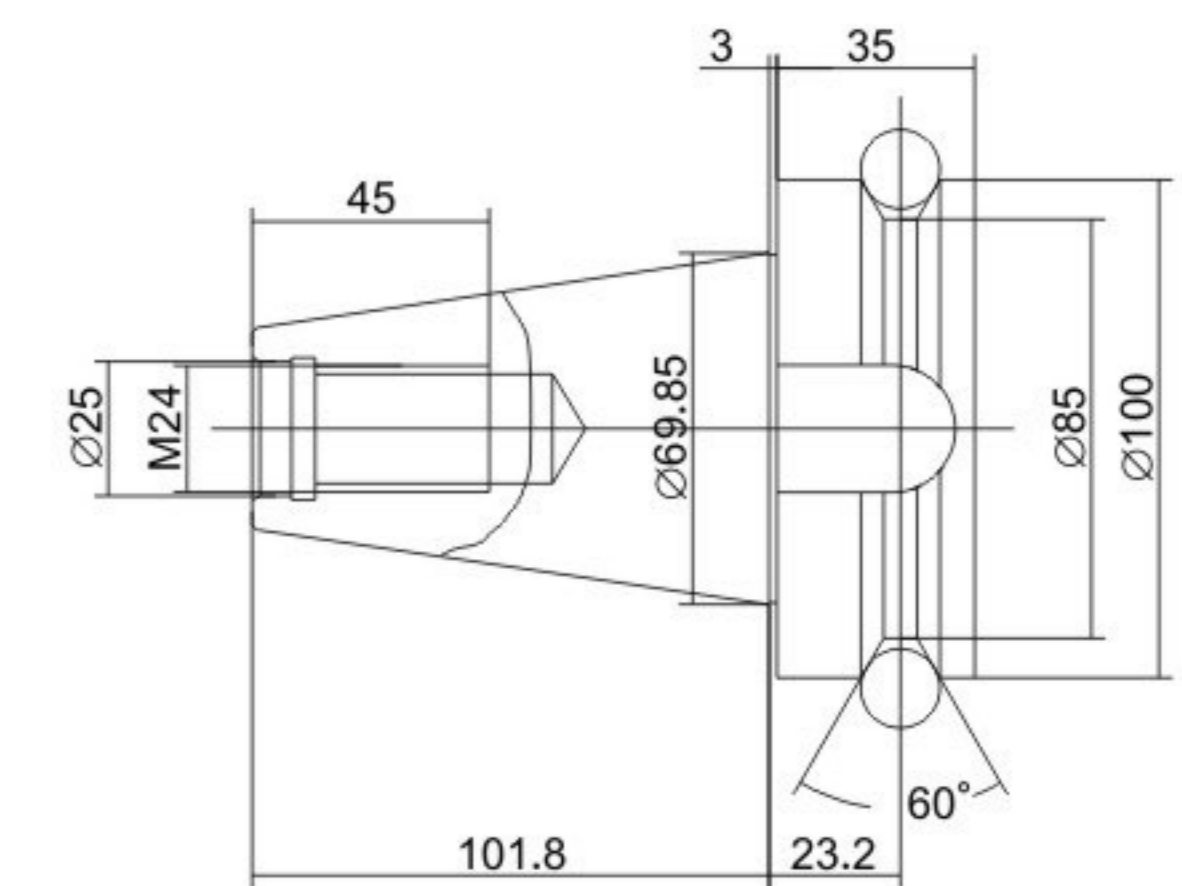
Dimensions

| | A | B | C | D | E | F | G | H | I | J |
|---------------|------|------|------|------|-----|------|------|------|-----|-----|
| VL700A | 1915 | 2180 | 2200 | 650 | 175 | 3200 | 3900 | 2700 | 750 | 400 |
| VL1100A/1100D | 2223 | 3144 | 2237 | 1100 | 180 | 3510 | 4920 | 2850 | 765 | 785 |
| VL1400/1400D | 2628 | 4123 | 2998 | 1570 | 600 | 4300 | 4500 | 3350 | 745 | 636 |
| VL1600/1600D | 2628 | 4123 | 2998 | 1570 | 600 | 4300 | 4500 | 3350 | 745 | 636 |

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■ BT40 Tool Shank



■ BT50 Tool Shank

Double Column Series Convenience in processing large products



Fully automatic head exchange AAC



Floor standing head storage device stand aside the machine independently, precise servo movement control, can be extended, store and exchange multiple heads.

Fully automatic horizontal and vertical ATC



Horizontal and vertical tool change motion can be achieved in one tool magazine, easier for automatic production and labor saving.



Manual orthogonal milling head

Prolong milling head

Orthogonal prolong milling head

Manual universal head

Automatic orthogonal milling head

Automatic swiveling head

The Double Column Series of Sky Master include such features as high rigidity and modularization. The spindle and BF/ZF gearbox are designed with unique direct driven to eliminate intermediate transmission, ensuring stability during heavy cutting.



VM double-column series

High efficient cutting equipment specialized for precision mould base

- Designed for the latest high precision mold base and components.
- The bed adopts an unique "M" type rib structure, even stress and stable bearing.
- Integrated structure for column and crossbeam, the box cavity is set with circular through cavity and "claw" type reinforcement ribs, machine with high anti-torque and anti-bending features.
- Equipped with 15 inch large screen color display and calculator as standard to improve the operator's operation experience.
- Select Japanese brand lubrication and pneumatic system to ensure high reliability, which is installed centrally in front of the machine, it's convenient for the operator to observe and maintain.
- Double door design to provide large loading and unloading space.

VM2000

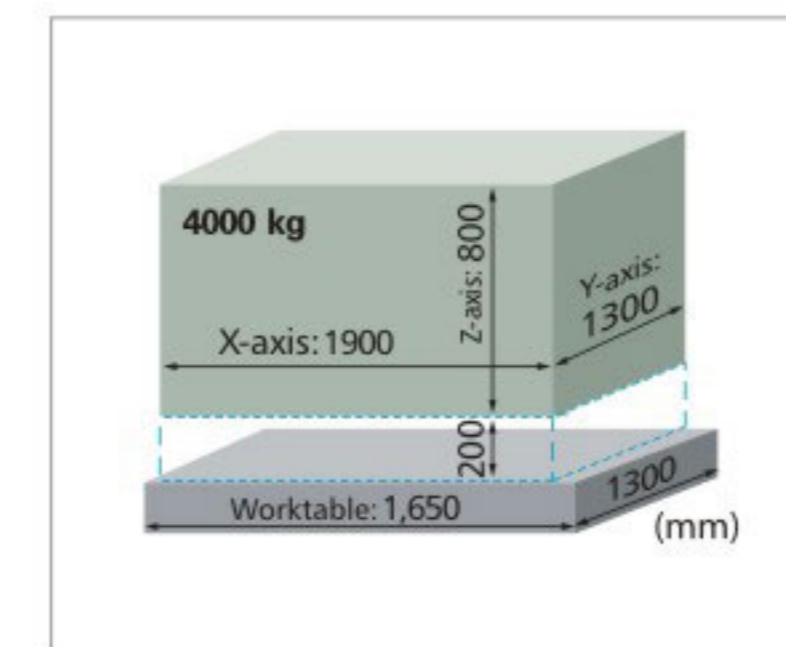


Technical Parameter

| Item | Unit | VM2000 |
|----------------------------|---|--|
| Standard controller | | FANUC Oi-MF absolute type model 1 15"LCD |
| Travel | X axis travel | 2000 |
| | Y axis travel | 1300 |
| | Z axis travel | 800 |
| | Distance from spindle nose to table | 200 ~ 1000 |
| | Distance between columns/ work piece access height | 1820/1000 |
| Work table | Table size(length x width) | 1650 x 1300 |
| | Max. table load | 4000 |
| | T slot size(width x distance x quantity) | 22 x 180 x 7 |
| Spindle | Spindle taper | BT50 |
| | Max. spindle speed | 6000(Direct driven) |
| | Spindle motor power (continual working/ Max.) | 15/36 |
| | Spindle torque | 427/1025 |
| XYZ | Rapid traverse X/Y/Z | 20000/20000/12000 |
| | Cutting feed rate on X/Y/Z | 1~10000 |
| ATC (Option) | ATC type | Chain type |
| | Tool capacity | 24/32/40/60 |
| | Max. tool diameter | ∅110/∅220 |
| | Max. tool length | 350 |
| | Max. tool weight | 20 |
| Accuracy | VDI/DGQ3441 Full travel positioning accuracy | mm P0.015 |
| | Repeatability accuracy | mm Ps0.010 |
| Air pressure | MPa | 0.6~0.8 |
| Supply voltage & frequency | | 3/PE, AC380V, 50Hz |
| Power requirement | kVA | 40 |
| Machine size (L/W/H) | mm | 4820 x 4800 x 4480 |
| Machine weight | kg | 18000 |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

Moveable Area :



VM2000

| Standard&Option | VM2000 |
|--|----------------|
| FANUC Oi-MF absolute type 1, 15" LCD | ● |
| Mitsubishi M800S, 15" touch type LCD | ○ |
| HEIDENHAIN TNC620, 15" LCD | ○ |
| Fine quality machining package | ● |
| Direct driven spindle with gear box 6000rpm (BF/GTP) | ● |
| Direct driven spindle 8000rpm (BBT50) | ○ |
| Direct driven spindle 10000rpm (BBT50) | ○ |
| 15000rpm direct driven spindle FANUC Oi-MF HSKA63-15000 (controller included) | ○ |
| 15000rpm direct driven Mitsubishi M800W HSKA63-15000 spindle (with controller, 19" touch type LCD) | ○ |
| Column integrated raise 200mm | ○ |
| Column separated raise 200mm | ○ |
| Column separated raise 300mm | ○ |
| Z travel enlarge to 1000mm (including column integrated raise 200mm) | ○ |
| Coolant through spindle center 20/30/70 bar | ○ GTP Gear box |
| Arm type ATC 24T (pneumatic) | ○ |
| Chain type ATC 32/40/60T (pneumatic) | ○ |
| Rigid tapping | ● |
| Double door | ● |
| Spindle chiller | ● |
| Spindle air sealing | ● |
| Air blowing device | ● |
| Coolant surrounding spindle | ○ |
| Working area light / 3 colors warning light | ● |
| Heat exchanger in electrical cabinet | ● |
| Portable MPG | ● |
| Tool coolant system/Lubrication system/Pneumatic system | ● |
| Chain chip conveyor | ● |
| Coil chip conveyor | ● |
| Air gun/Water gun with flushing function | ● |
| Automatically power off | ● |
| Transformer | ● |
| Tool kit | ● |
| Adjustable level bolts and foundation block (with screws) | ● |
| Safety door interlock | ● |
| Tool release pedal switch | ○ |
| Operation manual | ● |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ○ |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ |
| Buzzer alarm lamp | ○ |
| A/C for electric cabinet | ○ |
| Oil-feed tool shank port (15kg with water pump) | ○ |
| Oil skimmer | ○ |
| Grease lubrication | ○ |
| Voltage stabilizer | ○ |
| Absolute linear scale (FAGOR/HEIDENHAIN) | ○ |
| Full enclosed iron box package | ○ |
| Warranty prolong 1 year | ○ |

VM18 Double Column Series

Medium Size Component Machining Center

- It is widely used in milling, drilling, boring and tapping of large , medium-sized moulds and parts.
- Various spindle speed choice such as 6000/8000/10000/15000rpm.
- Integrated structure for column and crossbeam, machine has high anti-torque and anti-bending features.
- Optional extra milling head is able to enlarge the machining range of machine.
- Fully automatic chain and coil chip conveyor device, chips removal is convenient and high efficient.

VM3018A



ATC is designed with safety enclosure guard and safety switch in order to protect the operator(For example, if the door is opened during running, the machine will stop automatically)



One shaft line of spindle drive chain



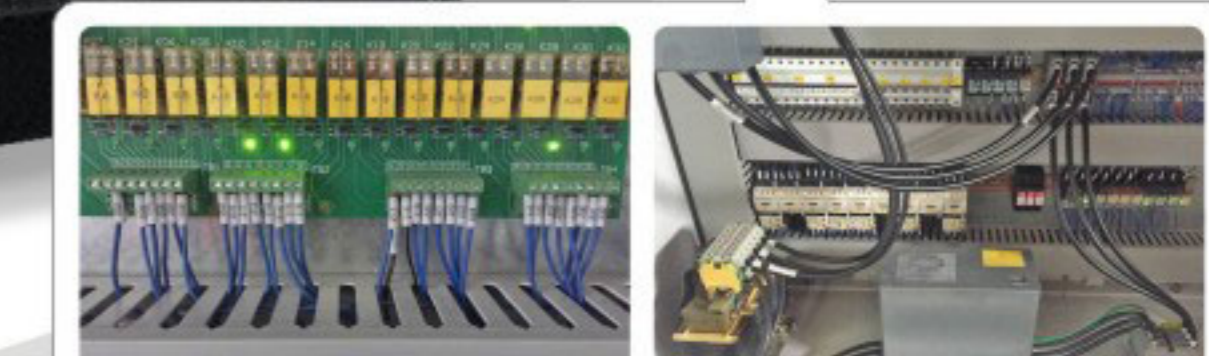
Tank chain cable tubing
All cable tubing inside the tank chain uses special made fixtures to avoid cable tangle and rubbing damage.



Vertical guideway layout for Y axis



Integrated chip removal groove in casting base



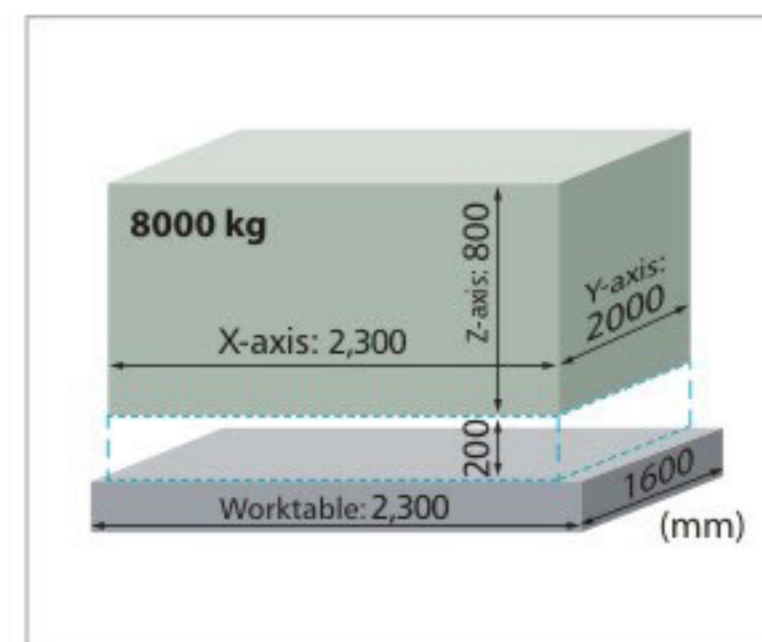
Use Germany IGUS cable and wire, Phoenix terminals, Schneider contactor, the whole machine's wire arrangement is according to European CE standard.

Technical Parameter

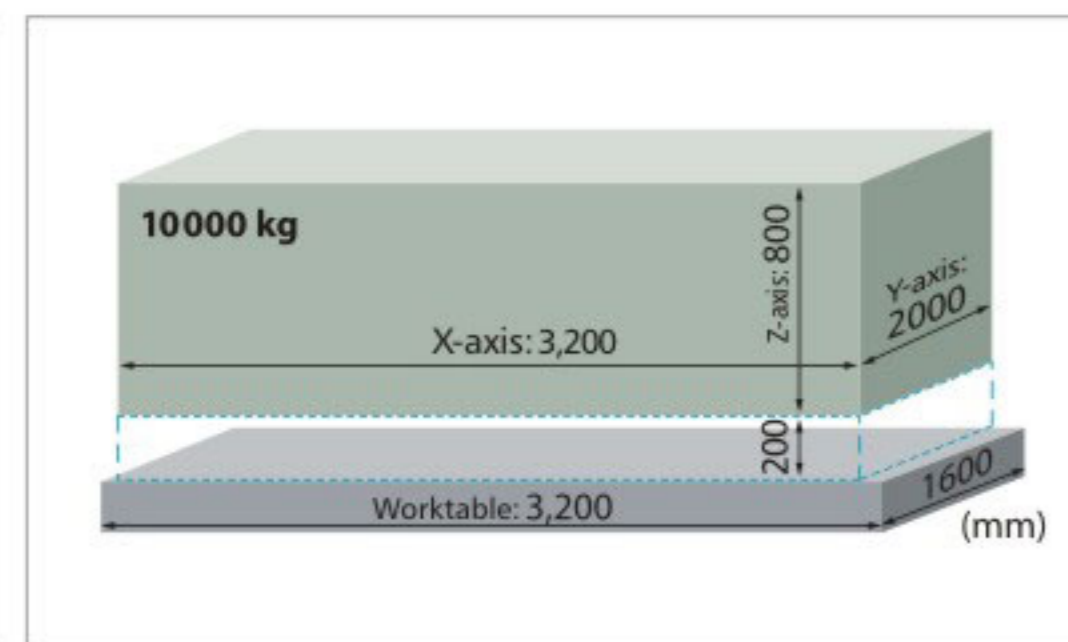
| Item | Unit | VM2018A | VM2018B | VM3018A | VM3018B | VM4018A | VM4018B |
|----------------------------|--|--|----------------------|---------------------|----------------------|---------------------|----------------------|
| Standard controller | | FANUC Oi-MF absolute type model 1 15"LCD | | | | | |
| Travel | X axis travel | 2300 | | 3200 | | 4100 | |
| | Y axis travel | 2000 | | | | | |
| | Z axis travel | 800 | | | | | |
| | Distance from spindle nose to table | 200 ~ 1000 | | | | | |
| | Distance between columns/ work piece access height | 1820/1000 | | | | | |
| Work table | Table size(length x width) | 2300 x 1600 | | 3200 x 1600 | | 4100 x 1600 | |
| | Max. table load | 8000 | | 10000 | | 12000 | |
| | T slot size(width x distance x quantity) | 22 x 180 x 8 | | | | | |
| Spindle | Spindle taper | BT50 | BBT50 | BT50 | BBT50 | BT50 | BBT50 |
| | Max. spindle speed | 6000(Direct driven) | 10000(Direct driven) | 6000(Direct driven) | 10000(Direct driven) | 6000(Direct driven) | 10000(Direct driven) |
| | Spindle motor power (continual working/ Max.) | 22/54 | 22/57.6 | 22/54 | 22/57.6 | 22/54 | 22/57.6 |
| | Spindle torque | 689/1692 | 140/344 | 689/1692 | 140/344 | 689/1692 | 140/344 |
| X/Y/Z | Rapid traverse X/Y/Z | 20000/20000/12000 | | | | 15000/20000/12000 | |
| | Cutting feed rate on X/Y/Z | 1~10000 | | | | | |
| ATC (Option) | ATC type | Chain type | | | | | |
| | Tool capacity | 24/32/40/60 | | | | | |
| | Max. tool diameter | ∅110 /∅225 | | | | | |
| | Max. tool length | 350 | | | | | |
| | Max. tool weight | 20 | | | | | |
| Accuracy | VDI/DGQ3441 Full travel positioning accuracy | P0.020 | | P0.025 | | P0.030 | |
| | Repeatability accuracy | Ps0.015 | | Ps0.020 | | Ps0.025 | |
| Air pressure | MPa | 0.6~0.8 | | | | | |
| Supply voltage & frequency | | 3/PE, AC380V, 50Hz | | | | | |
| Power requirement | kVA | 60 | | | | | |
| Machine size (L/W/H) | mm | 7027 x 5535 x 4450 | | 8927 x 5535 x 4450 | | 10327 x 5535 x 4450 | |
| Machine weight | kg | 23000 | | 26000 | | 29000 | |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

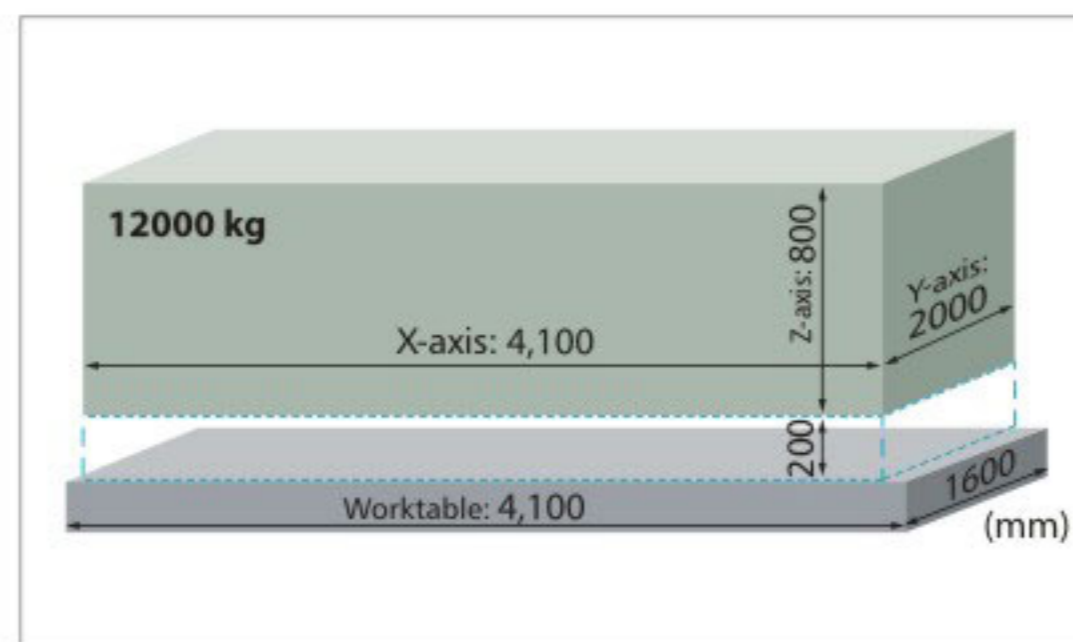
Moveable Area:



VM2018A/B



VM3018A/B



VM4018A/B

| Standard&Option | VM2018A | VM3018A | VM4018A | VM2018B | VM3018B | VM4018B |
|--|----------------|----------------|----------------|---------|---------|---------|
| FANUC Oi-MF absolute type 1, 15" LCD | ● | ● | ● | ● | ● | ● |
| Mitsubishi M800S, 15" touch type LCD | ○ | ○ | ○ | ○ | ○ | ○ |
| HEIDENHAIN TNC620, 15" LCD | ○ | ○ | ○ | ○ | ○ | ○ |
| Fine quality machining package | ● | ● | ● | ● | ● | ● |
| Direct driven spindle with gear box 6000rpm (BF/GTP) | ● | ● | ● | x | x | x |
| Direct driven spindle 8000rpm (BBT50) | x | x | x | ○ | ○ | ○ |
| Direct driven spindle 10000rpm (BBT50) | x | x | x | ● | ● | ● |
| 15000rpm direct driven spindle FANUC Oi-MF HSKA63-15000 (controller included) | x | x | x | ○ | ○ | ○ |
| 15000rpm direct driven Mitsubishi M800W HSKA63-15000 spindle (with controller, 19" touch type LCD) | x | x | x | ○ | ○ | ○ |
| Column integrated raise 200mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Column separated raise 200mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Column separated raise 300mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Z travel enlarge to 1000mm (including column integrated raise 200mm) | ○ | ○ | ○ | ○ | ○ | ○ |
| Coolant through spindle center 20/30/70 bar | ○ GTP Gear box | ○ GTP Gear box | ○ GTP Gear box | ○ | ○ | ○ |
| Arm type ATC 24T (pneumatic) | ○ | ○ | ○ | ○ | ○ | ○ |
| Chain type ATC 32/40/60T (pneumatic) | ○ | ○ | ○ | ○ | ○ | ○ |
| Rigid tapping | ● | ● | ● | ● | ● | ● |
| Full splash guard | ● | ● | ● | ○ | ○ | ○ |
| Multi laper door with full protective cover | ○ | ○ | ○ | ● | ● | ● |
| Spindle chiller | ● | ● | ● | ● | ● | ● |
| Spindle air sealing | ● | ● | ● | ● | ● | ● |
| Air blowing device | ● | ● | ● | ● | ● | ● |
| Coolant surrounding spindle | ○ | ○ | ○ | ○ | ○ | ○ |
| Working area light / 3 colors warning light | ● | ● | ● | ● | ● | ● |
| Heat exchanger in electrical cabinet | ● | ● | ● | ● | ● | ● |
| Portable MPG | ● | ● | ● | ● | ● | ● |
| Tool coolant system/Lubrication system/Pneumatic system | ● | ● | ● | ● | ● | ● |
| Chain chip conveyor | ● | ● | ● | ● | ● | ● |
| Coil chip conveyor | ● | ● | ● | ● | ● | ● |
| Air gun/Water gun with flushing function | ● | ● | ● | ● | ● | ● |
| Automatically power off | ● | ● | ● | ● | ● | ● |
| Transformer | ● | ● | ● | ● | ● | ● |
| Tool kit | ● | ● | ● | ● | ● | ● |
| Adjustable level bolts and foundation block (with screws) | ● | ● | ● | ● | ● | ● |
| Safety door interlock | ● | ● | ● | ● | ● | ● |
| Tool release pedal switch | ● | ● | ● | ● | ● | ● |
| Operation manual | ● | ● | ● | ● | ● | ● |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ |
| Buzzer alarm lamp | ○ | ○ | ○ | ○ | ○ | ○ |
| A/C for electric cabinet | ○ | ○ | ○ | ○ | ○ | ○ |
| Oil-feed tool shank port (15kg with water pump) | ○ | ○ | ○ | ○ | ○ | ○ |
| Oil skimmer | ○ | ○ | ○ | ○ | ○ | ○ |
| Grease lubrication | ○ | ○ | ○ | ○ | ○ | ○ |
| Voltage stabilizer | ○ | ○ | ○ | ○ | ○ | ○ |
| Absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ○ | ○ | ○ | ○ | ○ |
| Full enclosed iron box package | ○ | ○ | ○ | ○ | ○ | ○ |
| Warranty prolong 1 year | ○ | ○ | ○ | ○ | ○ | ○ |

● Standard ○ Optional × Not available

VM25/30

Double Column Series Large size double column series

- It is widely used in rough and fine machining of various large plates, plates, shells, boxes, moulds, etc.
- Optional automatic universal milling head is able to realize five-face machining.
- CAE analysis and design of main basic parts with high rigidity and large cross-section to ensure strong cutting and heavy load machining.

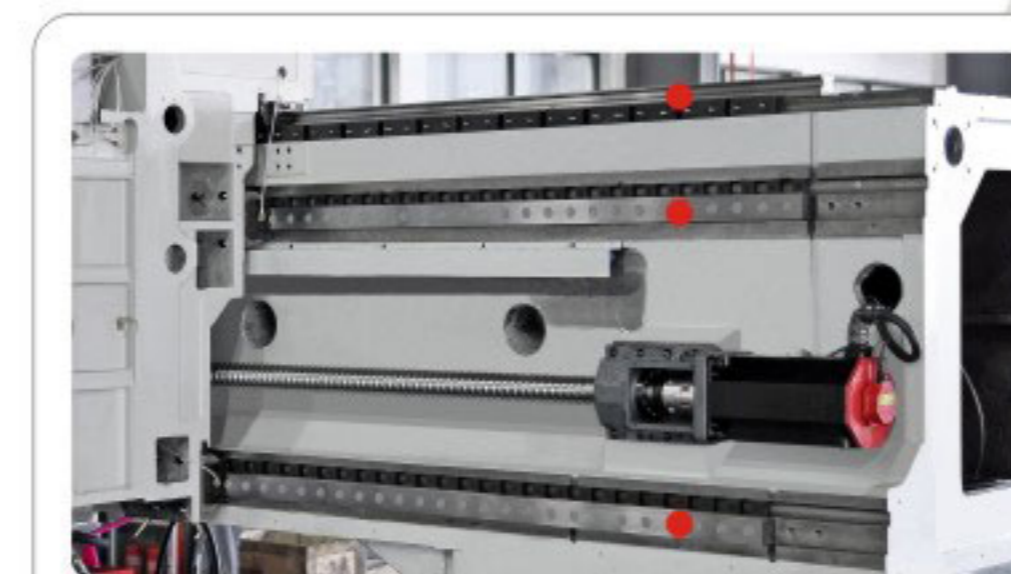
VM5225A



Available option:
Extended Z axis
(1300/1500mm)
travel with 4
linear guide ways
and square ram.



On the back, a ladder and other safety devices simplify maintenance of the machine. Seamless steel pipes provide clean, efficient and fast oil circulation.



Y axis use a special ladder design with three linear guide ways, combine with world well known brand roller type linear guide way, increases machine's rigidity and position accuracy dramatically.



Both X and Y axis equipped with high quality linear guide way, the machine bed use four linear guide ways to provide great support for the worktable, it also increases worktable's loading ability and lower the vibration while cutting.



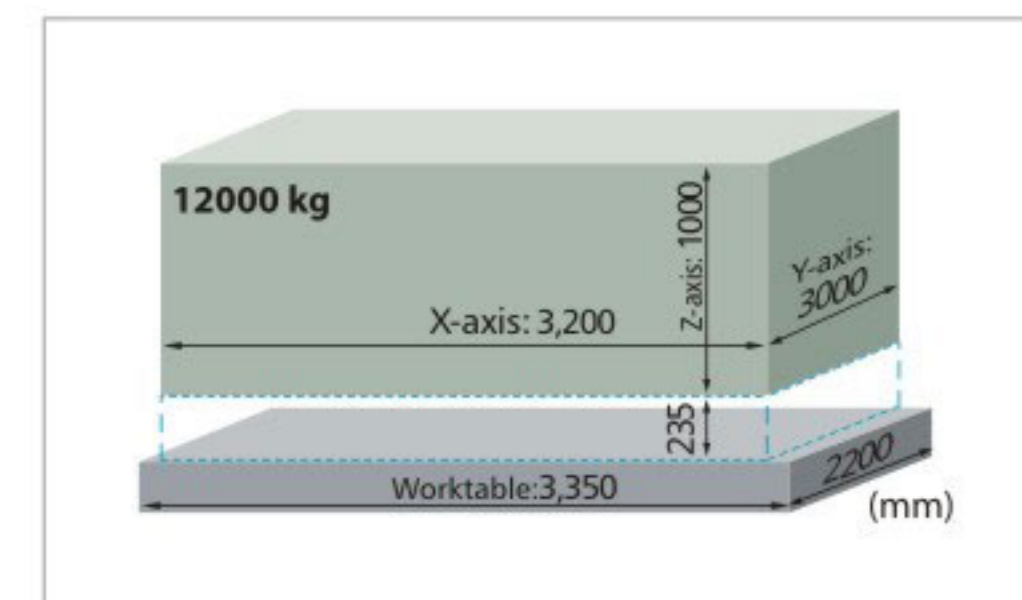
Separated strong and weak electric can eliminate the electromagnetic field interference generated by working electrical components; lower the electrical cabinet's temperature; increases electrical component's life span and system stability.

Technical Parameter

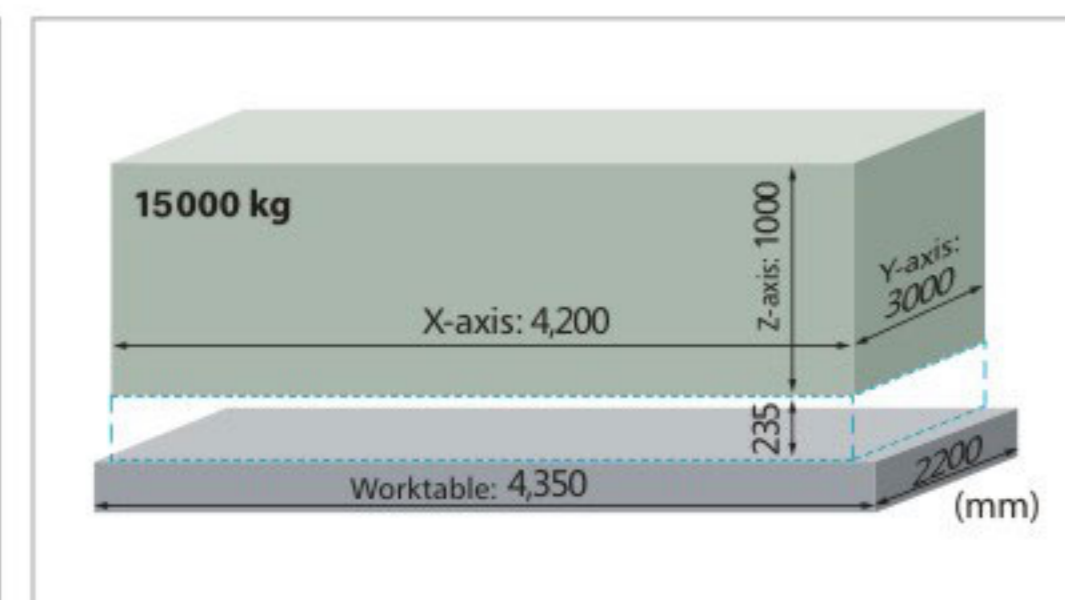
| Item | Unit | VM3225A | VM3225B | VM4225A | VM4225B | VM5225A | VM5225B | VM3230A | VM4230A | VM5230A | | |
|---|--|--|----------------------|---------------------|----------------------|---------------------|----------------------|---------------------|---------|---------------------|--------|--|
| Standard controller | | FANUC Oi-MF absolute type model 1 15"LCD | | | | | | | | | | |
| X axis travel(work-table) | mm | 3200 | | 4200 | | 5100 | | 3200 | | 5100 | | |
| Y axis travel(saddle) | mm | | | 3000 | | | | 3400 | | | | |
| Z axis travel(spindle head) | mm | 1000 | | | | | | | | | | |
| Distance from spindle nose to table | mm | 235 ~ 1235 | | | | | | | | | | |
| Distance between columns/work piece access height | mm | 2550/1235 | | | | 3050/1235 | | | | | | |
| Table size(length x width) | mm | 3350 x 2200 | | 4350 x 2200 | | 5350 x 2200 | | 3350 x 2500 | | 4350 x 2500 | | |
| Max. table load | kg | 15000 | | 18000 | | 21000 | | 15000 | | 21000 | | |
| T slot size(width x distance x quantity) | mm | 28 x 250 x 13 | | 28 x 250 x 17 | | 28 x 250 x 21 | | 28 x 250 x 13 | | 28 x 250 x 17 | | |
| Spindle taper | | BT50 | BBT50 | BT50 | BBT50 | BT50 | BBT50 | BT50 | | | | |
| Max. spindle speed | rpm | 6000(Direct driven) | 10000(Direct driven) | 6000(Direct driven) | 10000(Direct driven) | 6000(Direct driven) | 10000(Direct driven) | 6000(Direct driven) | | | | |
| Spindle motor power (continual working/ Max.) | kW | 22/54 | 22/57.6 | 22/54 | 22/57.6 | 22/54 | 22/57.6 | 22/54 | | | | |
| Spindle torque | N.m | 689/1692 | 140/344 | 689/1692 | 140/344 | 689/1692 | 140/344 | 689/1692 | | | | |
| Rapid traverse X/Y/Z | mm/min | 15000/18000/12000 | | | 12000/18000/12000 | | | 15000/15000/12000 | | 12000/15000/12000 | | |
| Cutting feed rate on X/Y/Z | mm/min | 1 ~ 8000 | | | | | | | | | | |
| ATC type | | Arm type | | | | | | | | | | |
| Tool capacity | pcs | 32/40/60 | | | | | | | | | | |
| Max. tool diameter | mm | ∅110/∅225 | | | | | | | | | | |
| Max. tool length | mm | 350 | | | | | | | | | | |
| Max. tool weight | kg | 20 | | | | | | | | | | |
| Accuracy | VDI/DGQ3441 Full travel positioning accuracy | mm | P0.025 | | P0.030 | | P0.040 | | P0.025 | | P0.040 | |
| | Repeatability accuracy | mm | Ps0.020 | | Ps0.025 | | Ps0.030 | | P0.020 | | P0.030 | |
| Air pressure | MPa | 0.6 ~ 0.8 | | | | | | | | | | |
| Supply voltage & frequency | | 3/PE, AC380V, 50Hz | | | | | | | | | | |
| Power requirement | kVA | 60 | | | | | | | | | | |
| Machine size(L/W/H) | mm | 9120 x 6488 x 4833 | | 11120 x 6488 x 4833 | | 13120 x 6488 x 4833 | | 9120 x 6738 x 4833 | | 11120 x 6738 x 4833 | | |
| Machine weight | kg | 42000 | | 47000 | | 52000 | | 45000 | | 55000 | | |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

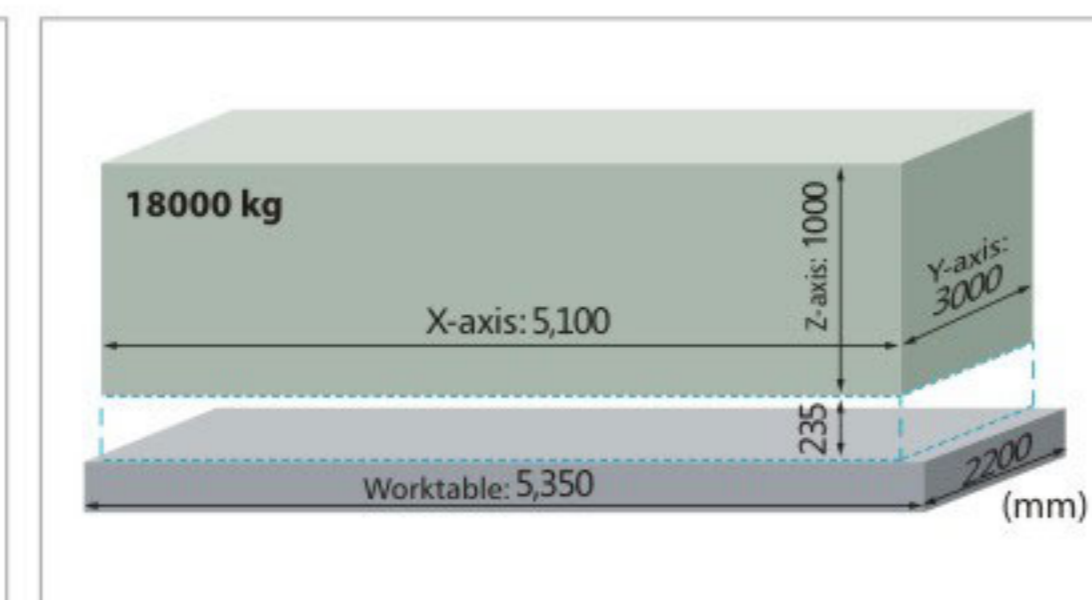
Moveable Area:



VM3225A/3225B



VM4225A/4225B



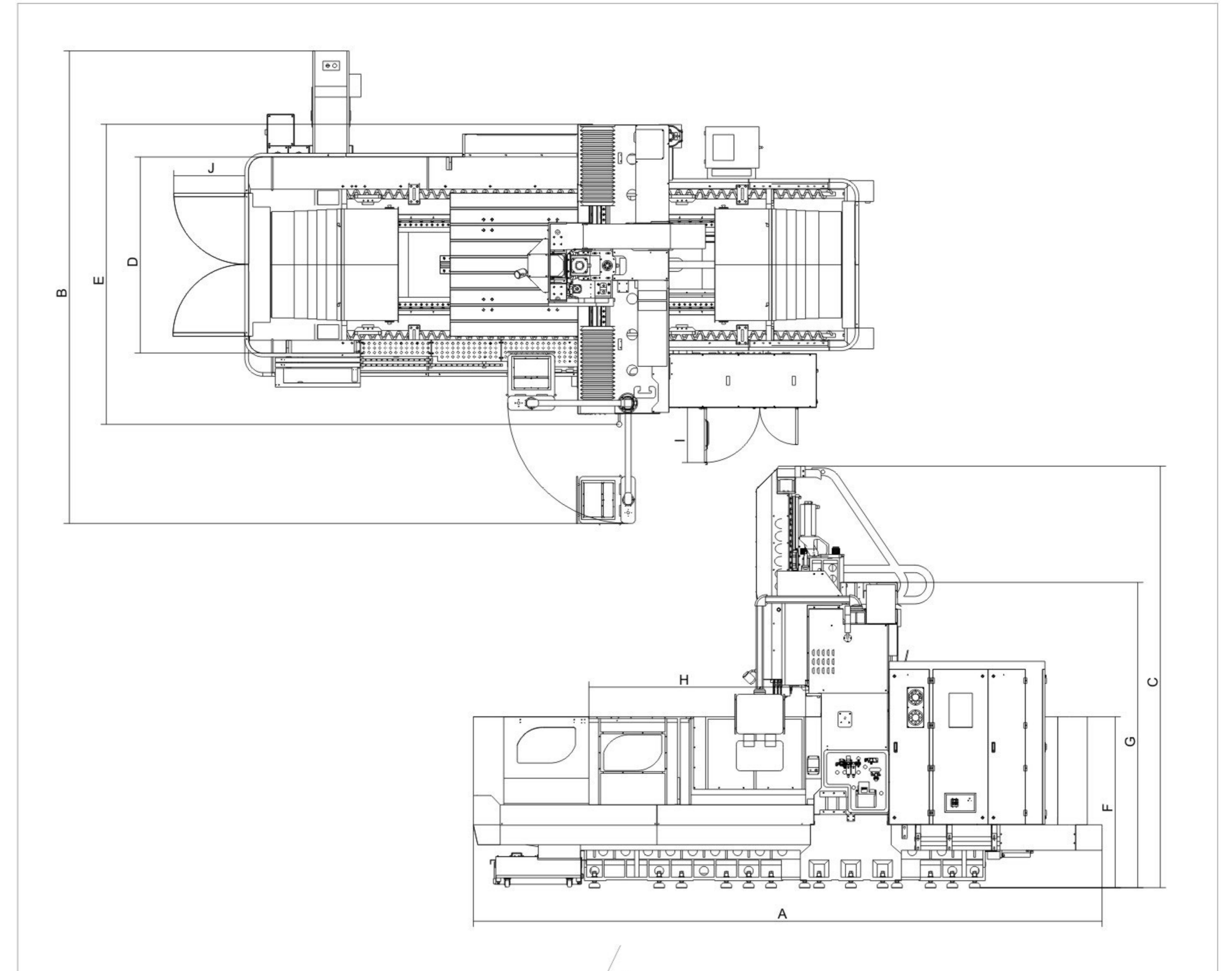
VM5225A/5225B

| Standard&Option | VM3225A | VM3225B | VM4225A | VM4225B | VM5225A | VM5225B |
|--|----------------|---------|----------------|---------|----------------|---------|
| FANUC Oi-MF absolute type 1, 15" LCD | ● | ● | ● | ● | ● | ● |
| Mitsubishi M800S, 15" touch type LCD | ○ | ○ | ○ | ○ | ○ | ○ |
| HEIDENHAIN TNC620, 15" LCD | ○ | ○ | ○ | ○ | ○ | ○ |
| Fine quality machining package | ● | ● | ● | ● | ● | ● |
| Direct driven spindle with gear box 6000rpm (BF/GTP) | ● | x | ● | x | ● | x |
| Direct driven spindle 8000rpm (BBT50) | x | ○ | x | ○ | x | ○ |
| Direct driven spindle 10000rpm (BBT50) | x | ● | x | ● | x | ● |
| 15000rpm direct driven spindle FANUC Oi-MF HSKA63-15000 (controller included) | x | ○ | x | ○ | x | ○ |
| 15000rpm direct driven Mitsubishi M800W HSKA63-15000 spindle (with controller, 19" touch type LCD) | x | ○ | x | ○ | x | ○ |
| Column integrated raise 200mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Column separated raise 200mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Column separated raise 300mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Z travel enlarge to 1300mm | ○ | ○ | ○ | ○ | ○ | ○ |
| Z travel enlarge to 1500mm (including column integrated raise 200mm) | ○ | ○ | ○ | ○ | ○ | ○ |
| Coolant through spindle center 20/30/70 bar | ○ GTP Gear box | ○ | ○ GTP Gear box | ○ | ○ GTP Gear box | ○ |
| Chain type ATC 32/40/60T (pneumatic) | ○ | ○ | ○ | ○ | ○ | ○ |
| Rigid tapping | ● | ● | ● | ● | ● | ● |
| Full splash guard | ● | ● | ● | ● | ● | ● |
| Full enclosed guard with roof with multi layer doors | ○ | ○ | ○ | ○ | ○ | ○ |
| Spindle chiller | ● | ● | ● | ● | ● | ● |
| Spindle air sealing | ● | ● | ● | ● | ● | ● |
| Air blowing device | ● | ● | ● | ● | ● | ● |
| Coolant surrounding spindle | ○ | ○ | ○ | ○ | ○ | ○ |
| Working area light / 3 colors warning light | ● | ● | ● | ● | ● | ● |
| Heat exchanger in electrical cabinet | ● | ● | ● | ● | ● | ● |
| Portable MPG | ● | ● | ● | ● | ● | ● |
| Tool coolant system/Lubrication system/Pneumatic system | ● | ● | ● | ● | ● | ● |
| Chain chip conveyor | ● | ● | ● | ● | ● | ● |
| Coil chip conveyor | ● | ● | ● | ● | ● | ● |
| Air gun/Water gun with flushing function | ● | ● | ● | ● | ● | ● |
| Automatically power off | ● | ● | ● | ● | ● | ● |
| Transformer | ● | ● | ● | ● | ● | ● |
| Tool kit | ● | ● | ● | ● | ● | ● |
| Adjustable level bolts and foundation block (with screws) | ● | ● | ● | ● | ● | ● |
| Safety door interlock | ● | ● | ● | ● | ● | ● |
| Tool release pedal switch | ● | ● | ● | ● | ● | ● |
| Operation manual | ● | ● | ● | ● | ● | ● |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ | ○ | ○ | ○ |
| Buzzer alarm lamp | ○ | ○ | ○ | ○ | ○ | ○ |
| A/C for electric cabinet | ○ | ○ | ○ | ○ | ○ | ○ |
| Oil-feed tool shank port (15kg with water pump) | ○ | ○ | ○ | ○ | ○ | ○ |
| Oil skimmer | ○ | ○ | ○ | ○ | ○ | ○ |
| Grease lubrication | ○ | ○ | ○ | ○ | ○ | ○ |
| Voltage stabilizer | ○ | ○ | ○ | ○ | ○ | ○ |
| Absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ○ | ○ | ○ | ○ | ○ |
| Full enclosed iron box package | ○ | ○ | ○ | ○ | ○ | ○ |
| Warranty prolong 1 year | ○ | ○ | ○ | ○ | ○ | ○ |

● Standard ○ Optional × Not available

| Standard&Option | VM3230A | VM4230A | VM5230A |
|--|----------------|----------------|----------------|
| FANUC Oi-MF absolute type 1, 15" LCD | ● | ● | ● |
| Mitsubishi M800S, 15" touch type LCD | ○ | ○ | ○ |
| HEIDENHAIN TNC620, 15" LCD | ○ | ○ | ○ |
| Fine quality machining package | ● | ● | ● |
| Direct driven spindle with gear box 6000rpm (BF/GTP) | ● | ● | ● |
| Direct driven spindle 8000rpm (BBT50) | ○ | ○ | ○ |
| Direct driven spindle 10000rpm (BBT50) | ○ | ○ | ○ |
| 15000rpm direct driven spindle FANUC Oi-MF HSKA63-15000 (controller included) | ○ | ○ | ○ |
| 15000rpm direct driven Mitsubishi M800W HSKA63-15000 spindle (with controller, 19" touch type LCD) | ○ | ○ | ○ |
| Column integrated raise 200mm | ○ | ○ | ○ |
| Column separated raise 200mm | ○ | ○ | ○ |
| Column separated raise 300mm | ○ | ○ | ○ |
| Z travel enlarge to 1300mm | ○ | ○ | ○ |
| Z travel enlarge to 1500mm (including column integrated raise 200mm) | ○ | ○ | ○ |
| Coolant through spindle center 20/30/70 bar | ○ GTP Gear box | ○ GTP Gear box | ○ GTP Gear box |
| Chain type ATC 32/40/60T (pneumatic) | ○ | ○ | ○ |
| Rigid tapping | ● | ● | ● |
| Full splash guard | ● | ● | ● |
| Full enclosed guard with roof with multi layer doors | ○ | ○ | ○ |
| Spindle chiller | ● | ● | ● |
| Spindle air sealing | ● | ● | ● |
| Air blowing device | ● | ● | ● |
| Coolant surrounding spindle | ○ | ○ | ○ |
| Working area light / 3 colors warning light | ● | ● | ● |
| Heat exchanger in electrical cabinet | ● | ● | ● |
| Portable MPG | ● | ● | ● |
| Tool coolant system/Lubrication system/Pneumatic system | ● | ● | ● |
| Chain chip conveyor | ● | ● | ● |
| Coil chip conveyor | ● | ● | ● |
| Air gun/Water gun with flushing function | ● | ● | ● |
| Automatically power off | ● | ● | ● |
| Transformer | ● | ● | ● |
| Tool kit | ● | ● | ● |
| Adjustable level bolts and foundation block (with screws) | ● | ● | ● |
| Safety door interlock | ● | ● | ● |
| Tool release pedal switch | ● | ● | ● |
| Operation manual | ● | ● | ● |
| Smart spindle temperature compensation (Fanuc/Mitsubishi) | ● | ● | ● |
| Smart 3 axis temperature compensation (Fanuc/Mitsubishi) | ○ | ○ | ○ |
| Buzzer alarm lamp | ○ | ○ | ○ |
| A/C for electric cabinet | ○ | ○ | ○ |
| Oil-feed tool shank port (15kg with water pump) | ○ | ○ | ○ |
| Oil skimmer | ○ | ○ | ○ |
| Grease lubrication | ○ | ○ | ○ |
| Voltage stabilizer | ○ | ○ | ○ |
| Absolute linear scale (FAGOR/HEIDENHAIN) | ○ | ○ | ○ |
| Full enclosed iron box package | ○ | ○ | ○ |
| Warranty prolong 1 year | ○ | ○ | ○ |
| | ○ | ○ | ○ |

● Standard ○ Optional × Not available



Dimensions

| | A | B | C | D | E | F | G | H | I | J |
|---------------|-------|------|------|------|------|------|------|------|-----|------|
| VM2000 | 4632 | 4802 | 4750 | 2740 | 3438 | 2300 | 3213 | 1350 | 740 | 0 |
| VM2018A/2018B | 7027 | 5535 | 4450 | 2190 | 3400 | 1920 | 3750 | 2400 | 620 | 800 |
| VM3018A/3018B | 8927 | 5535 | 4450 | 2190 | 3400 | 1920 | 3750 | 3000 | 620 | 800 |
| VM4018A/4018B | 10327 | 5535 | 4450 | 2190 | 3400 | 1920 | 3750 | 3000 | 620 | 800 |
| VM3225A/3225B | 9120 | 6488 | 4833 | 3284 | 4514 | 2137 | 4060 | 3000 | 740 | 1200 |
| VM4225A/4225B | 11120 | 6488 | 4833 | 3284 | 4514 | 2137 | 4060 | 4000 | 740 | 1200 |
| VM5225A/5225B | 13120 | 6488 | 4833 | 3284 | 4514 | 2137 | 4060 | 4000 | 740 | 1200 |
| VM3230A | 9120 | 6738 | 4833 | 3784 | 4514 | 2137 | 4060 | 3000 | 740 | 1400 |
| VM4230A | 11120 | 6738 | 4833 | 3784 | 4514 | 2137 | 4060 | 4000 | 740 | 1400 |
| VM5230A | 13120 | 6738 | 4833 | 3784 | 4514 | 2137 | 4060 | 4000 | 740 | 1400 |

We reserve the right to change technical parameter for improvement of our products without giving notice to customers.

03 Workshop & Equipment

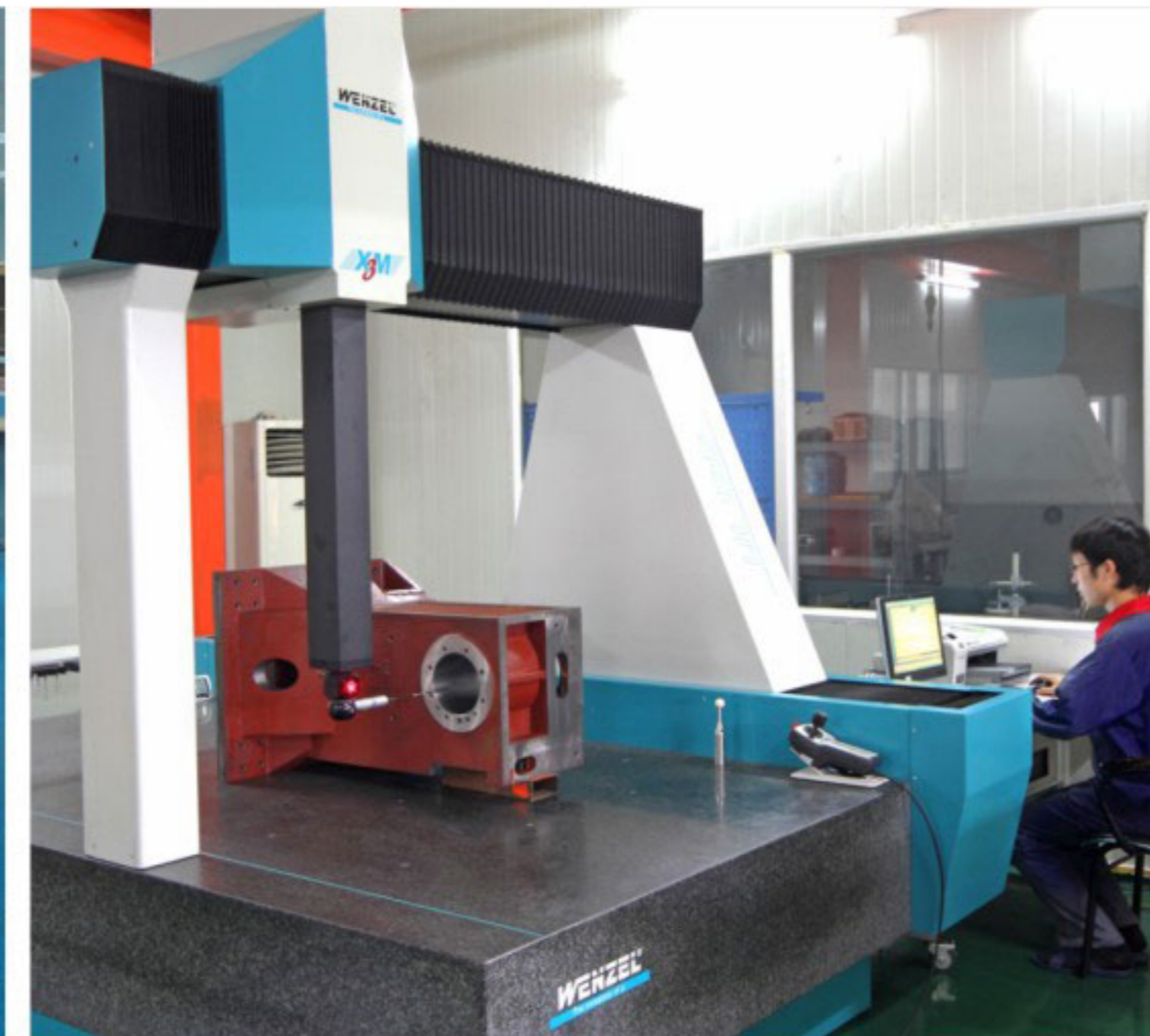
Decades experience and Germany technology keep Sky Master always supplying reliable products.



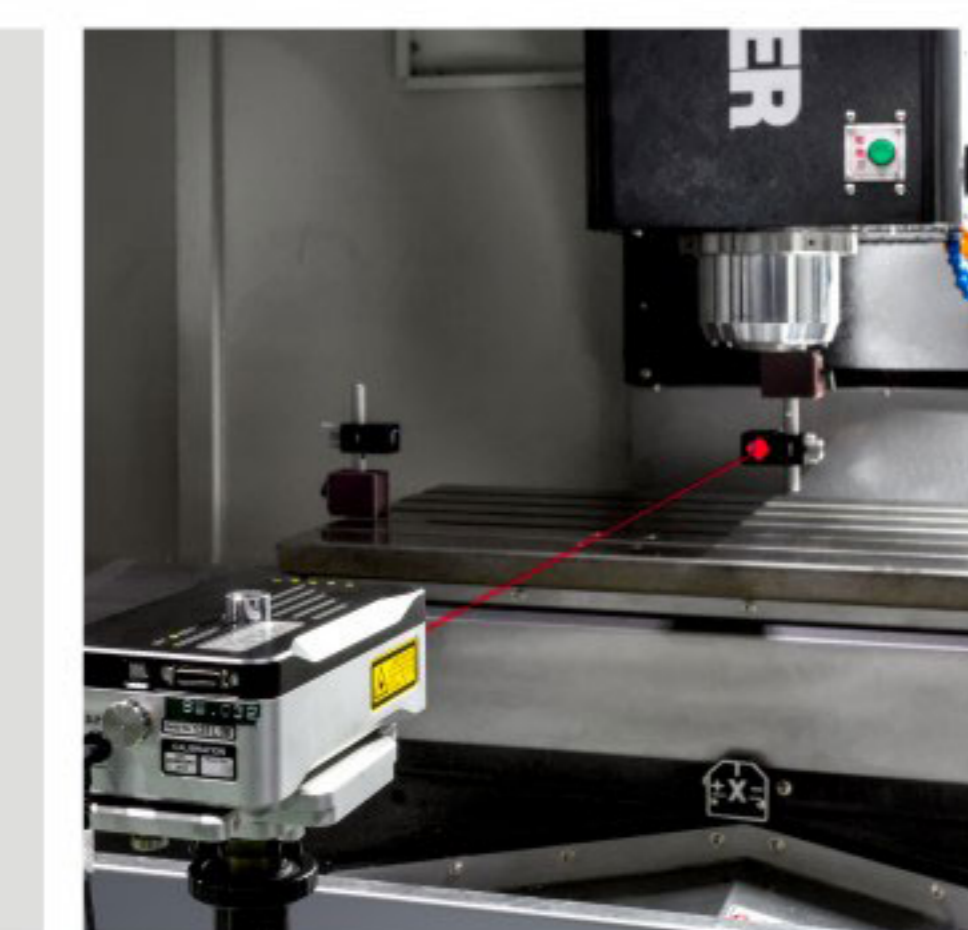
04 R&D,Manufacture

Small steps make large distance

- Sky Master work steadily in a spirit of responsibility for clients.
- Every machine is under strict quality control and inspection in order to keep the accuracy.
- We understand quality is essential to a company and more understand that product is important to the client.



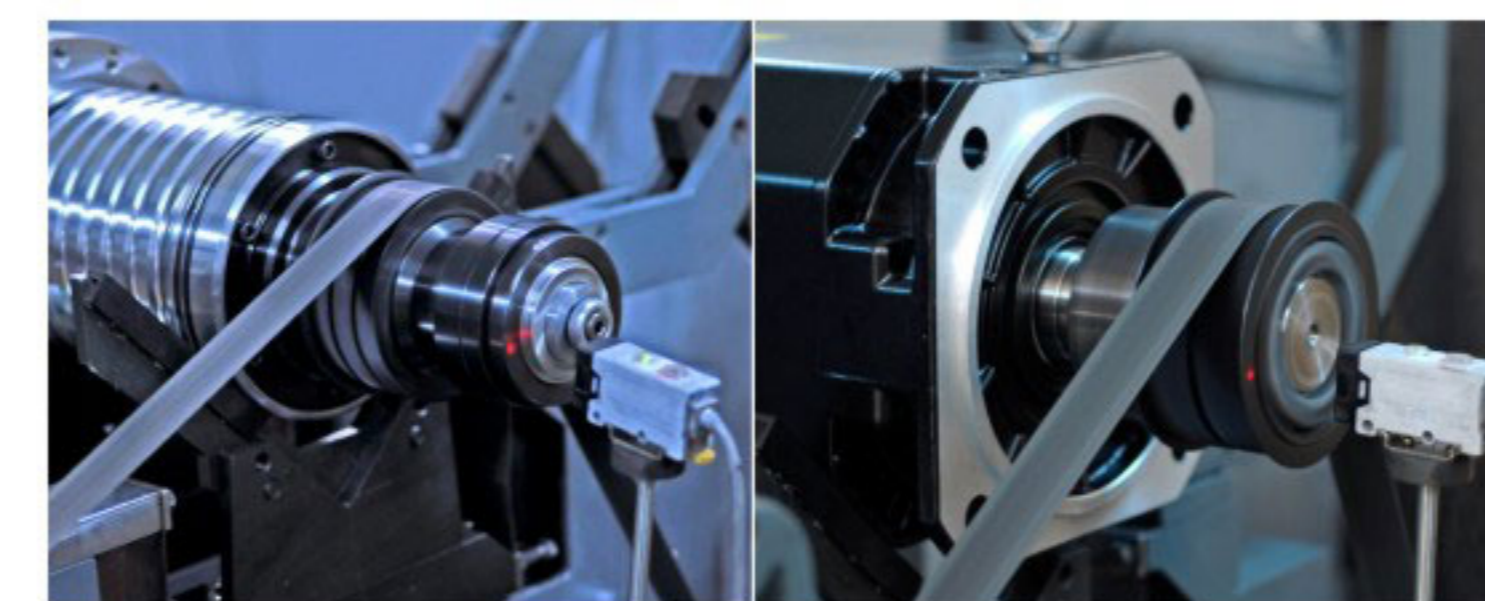
Quality! Control every detail always



innovate
Development



Different types of technical experience exchanges with various industries and departments from China and abroad accumulate valuable wealth for our development.



Professional scraping technology to improve the stability of precision machine tools.



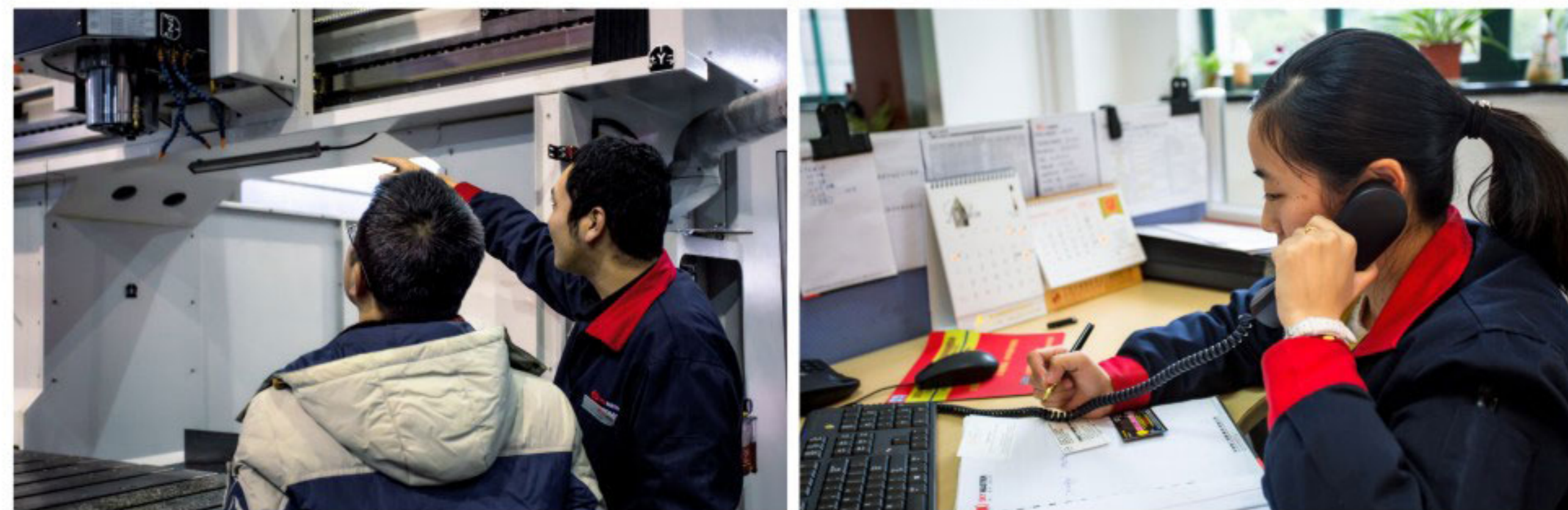
Mr. neckermann, a famous shoveling and scraping master in Germany, come to give us guidance.

05 Service

Use our wisdom to supply you the best solution



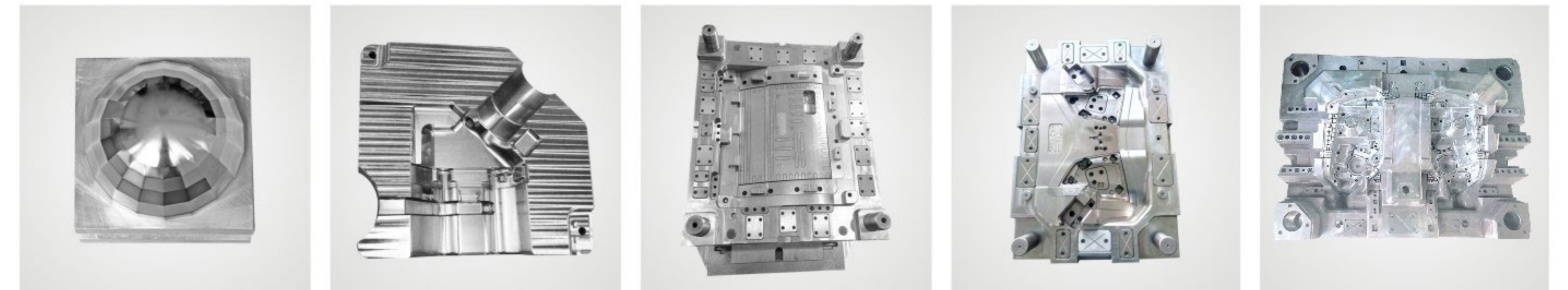
Union



Efficiency

05.1 Trial Processing

Supply the trial processing for clients



Round testing sample

Aluminum die casting mould

Auto interior decoration mould

Auto lamp mould

Auto lamp mould

06 Trust & Support

Gain the customers reliance and support by manufacturing with heart always



Your suggestion is our development direction; your trust is our growth power.

