



PHOENIX



BED TYPE CNC MILLING MACHINE

The best assistant for MOLD MAKING as well as versatile machining, tool room, development and maintenance.



CNC MILLING MACHINES

FM-160/205/255/300/305/340/395/495/600CNC/MH/ATC



FM-160ATC ▲

- ONE-PIECE rigid bed casting, EXTREMELY WIDE slide ways, FULLY LENGTH saddle supported & STRONG type work head ensured EXCELLENT HEAVY cutting.
- EXTENDABLE quill, more flexible for deeper pocket machining. (standard milling head)
- SWIVELABLE milling head, more flexible for angle machining. (standard milling head)



FM-205CNC ▶

- w/optional 3-Hand wheel operation panel.

CNC MILLING MACHINES

FM-160/205/255/300/305/340/395/495/600CNC/MH/ATC



FM-255CNC ▲

- ONE-PIECE rigid bed casting, EXTREMELY WIDE slide ways, FULLY LENGTH saddle supported & STRONG type work head ensured EXCELLENT HEAVY cutting.
- w/150mm LARGER quill dia. (maching center head)
- EXTENDABLE quill and SWIVELABLE milling head, more flexible for deeper pocket as well as angle machining. (standard milling head)
- Special designed LARGE & RIGID chip tray w/rear splash guards.
- Special designed operation panel cabinet w/base extended support arm, electric cabinet.



◀ FM-255MH

- w/optional 3-Hand wheel operation panel.

CNC MILLING MACHINES

FM-160/205/255/300/305/340/395/495/600CNC/MH/ATC



FM-300ATC ▲

■ w/optional tilting rotary table,3-Hand wheel operation panel.

- ONE-PIECE rigid bed casting, EXTREMELY WIDE slide ways, FULLY LENGTH saddle supported & STRONG type work head ensured EXCELLENT HEAVY cutting.
- w/150mm LARGER quill dia. (machining center head)
- Special designed LARGE & RIGID chip tray w/rear splash guards.



- Tilting rotary table (the 4th & 5th axes control)



◀ FM-305ATC

■ w/optional fast feed on 3 axes.

CNC MILLING MACHINES

FM-160/205/255/300/305/340/395/495/600CNC/MH/ATC



- ONE-PIECE rigid bed casting, EXTREMELY WIDE slide ways, FULLY LENGTH saddle supported & STRONG type work head ensured EXCELLENT HEAVY cutting.
- w/150mm LARGER quill dia. (maching center head)
- Special designed LARGE & RIGID chip tray w/rear splash guards.

FM-340ATC ▲
■ w/optional rotary table.



▶ **FM-395ATC**
■ w/optional arm type ATC. 4

CNC MILLING MACHINES

FM-160/205/255/300/305/340/395/495/600CNC/MH/ATC



FM-495MH ▲



FM-600MH ▲

CNC MILLING MACHINES

MACHINE FRAME CONSTRUCTION



▲ **FM-300ATC**
■ Machine frame construction



▲ **FM-395ATC**
■ Machine frame construction

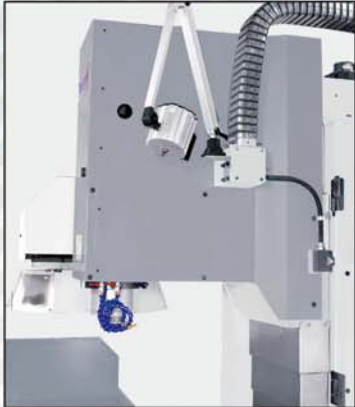


▶ **FM-600MH**
■ Machine frame construction

- ONE-PIECE HUGE and rigid bed casting w/4-BOX WAYS (340/395/495 series) / 6-BOX WAYS (600 series), EXTREMELY WIDE slide ways, FULLY LENGTH saddle supported & STRONG type work head ensured EXCELLENT HEAVY cutting and accuracy.
- Precision BALL SCREWS w/double nuts on 3 axes.
- Licensed MEEHANITE casting.
- HARDENED & GROUND on X, Y, Z slide ways & top surface of TABLE.
- TURCITE B coated on X, Y, Z slide ways and gibs.

CNC MILLING MACHINES

ADVANTAGE / MAJOR FEATURES



- Clear oil level check window for tool clamp/unclamp.



- Special wipers under table guides.
- Sealing gaskets for 3 axes end cover/way cover.



- Strong and rigid support arm construction, special designed clamp fingers and combination type tool magazine construction; ensure the operation accuracy and also reduce the unexpected damage of magazine disk, due to the wrong sequence in action steps of ATC.



- European/ Japanese components, CE norms wiring and arrangement for the electricity control.



- Standard equipped Floor type power transformer w/cabinet.



- Pressure setting switch included
- Three-point assembly for safety ATC and Tool clamp/unclamp.
- CNC controlled also Manual adjusting Auto lubrication system.



- All machines are inspected and calibrated by laser test (X, Y, Z axes) and ball bar calibration (not only XY plane, but also on YZ and XZ planes) ; and are executed for at least 72 hours continuous running test before shipment.



- Protect cover/guarding for X and Y servo motors.
- Support brackets for flexible metal conduit.

CNC MILLING MACHINES

OPTIONAL ACCESSORIES / EQUIPMENTS



• Rotary table(the 4th axis control)



• 3-Hand wheel operation panel



• Cool light lamp provides superior lighting.



• Auger style chip conveyor makes chip disposal and collection easy; convenient.



▲ FM-305ATC

■ w/optional full enclosure guard.

▲ Full enclosure guard w/auger style chip conveyor, conforming with CE norms.

■ Rigid construction features w/simple installation.

■ One piece laser cut, protect railed 3-front+2-side windows design; features w/safety, wide field of vision and easy clean up.



• SYNTEC controller



• FAGOR controller



• FANUC controller

SPECIFICATIONS

| MODEL | FM-160MH | FM-160ATC | FM-205CNC | FM-205MH | FM-205ATC | |
|--|---|--|---|---|--|---------------------------|
| TABLE | | | | | | |
| Working surface | 355x1270mm(14"x 50") | | 406x1372mm(16"x 54") | | | |
| T-slots(size x number x pitch) | 16mmx3x64mm(0.630"x 3x2.520") | | 16mmx3x64mm(0.630"x 3 x 2.520") | | | |
| Max. table load | 500kgs(1100 lbs) | | 800kgs(1760 lbs) | | | |
| TRAVEL | | | | | | |
| Longitudinal travel(X axis) | 800mm(31- 1/2") | | 1000mm(39- 3/8") | | | |
| Cross travel(Y axis) | 400mm(15- 3/4") | | 500mm(19- 1/16") | | | |
| Vertical travel(Z axis) | 450mm(17- 1/16") | | 620mm(24- 3/8") | | | |
| Distance from spindle end to table | 105~555mm(4- 1/8"~21- 3/16") | | 155~775mm(6- 1/8"~30- 1/2") | | 105~725mm(4- 1/8"~28- 9/16") | |
| Distance from spindle center to column | 430mm(16- 7/8") | | 500mm(19- 1/16") | | | |
| Distance from floor to table surface | 780mm(30- 1/16") | | 840mm(33- 1/16") | | | |
| SPINDLE | | | | | | |
| Spindle nose taper | BT40 | | NT40 | | BT40 | |
| Spindle speeds | vari 6000 r.p.m. (or 8000/10000 r.p.m., opt.) | | vari 4200 r.p.m., 2 ranges | | vari 6000 r.p.m. (or 8000/10000 r.p.m., opt.) | |
| FEED | | | | | | |
| Cutting feed rate (X, Y, Z axes) | 1~3000mm/min.(max.) [or 1~5000mm/min.(max.) (F-F),opt.] | | | | | |
| Rapid traverse (X, Y axes) | 5.0m/min.(max.) [or 10.0m/min.(max.) (F-F),opt.] | | | | | |
| Rapid traverse (Z axis) | 5.0m/min.(max.) [or 10.0m/min.(max.) (F-F),opt.] | | | | | |
| Gear ratio of motor pulley to ballscrew pulley on X, Y, Z axes | 1:2/1:1.33 [or direct coupled (F-F), opt.] | | | | | |
| ATC | | | | | | |
| Tool storage capacity | — | 16pcs (carrousel) | — | — | 16pcs (carrousel) | |
| Max. tool weight | — | 7kgs(15.4 lbs) | — | — | 7kgs(15.4 lbs) | |
| Max. tool size(dia. x length) | — | 89x250mm(3- 1/2"x9- 7/8") | — | — | 89x250mm(3- 1/2"x9- 7/8") | |
| Tool selection | — | Random | — | — | Random | |
| Tool shank | — | BT40 | — | — | BT40 | |
| Pull stud bolt | — | MAS-P40T-1 | — | — | MAS-P40T-1 | |
| Distance from gauge line of tool holder to table | — | 450mm(17- 3/8") | — | — | 555mm(21- 3/4") | |
| MOTOR | | | | | | |
| Spindle motor(AC servo) | 5.5/7.5KW (or 7.5/11 KW, opt.) | | 7.5/11KW (or 11/15 KW, opt.) | | | |
| X,Y,Z axes motor | AC servo , 1KW, 2000 r.p.m. [or 1.5KW, 2000 r.p.m.(F-F),opt.] | | | | | |
| Coolant pump motor | AC 1/6HP/ 1/4 HP(F.E.G.) | | | | | |
| GENERAL | | | | | | |
| Gross weight(Approx.) | 2800kgs(6160 lbs) | 3000kgs(6600 lbs) | 3200kgs(7040 lbs) | 3400kgs(7480 lbs) | | |
| Packing size(LxWxH) | 2080x1800x2450mm(81- 7/8"x70- 7/8"x96- 3/8") | | 2670x2020x2530mm(105- 1/8"x79- 1/2"x99- 5/8") | | | |
| MODEL | FM-255CNC | FM-255MH | FM-255ATC | FM-300CNC | FM-300MH | FM-300ATC |
| TABLE | | | | | | |
| Working surface | 420x1600mm(16- 3/16"x 63") | | | 450 x 1800mm(17- 1/16"x 70- 7/8") | | |
| T-slots(size x number x pitch) | 16mmx5x60mm(0.630"x 5 x 2.362") | | | | | |
| Max. table load | 1000kgs(2200 lbs) | | | | | |
| TRAVEL | | | | | | |
| Longitudinal travel(X axis) | 1300mm(51- 3/16") | | | 1500mm(59") | | |
| Cross travel(Y axis) | 635mm (25") [or 610mm(24") direct coupled (F-F), opt.] | | | 650mm (25-9/16") [or 610mm(24") direct coupled (F-F), opt.] | | |
| Vertical travel(Z axis) | 620mm(24- 3/8") | | | | | |
| Distance from spindle end to table | 155~775mm(6- 1/8"~30- 1/2") | 105~725mm(4- 1/8"~28- 9/16") | | 155~775mm(6- 1/8"~30- 1/2") | 105~725mm(4- 1/8"~28- 9/16") | |
| Distance from spindle center to column | 630mm(24- 1/16") | | | | | |
| Distance from floor to table surface | 895mm(35- 1/4") | | | | | |
| SPINDLE | | | | | | |
| Spindle nose taper | NT40 | BT40 | | NT40 | BT40 | |
| Spindle speeds | vari 4200 r. p.m., 2 ranges | vari 6000 r.p.m. (or 8000/10000 r.p.m., opt.) | | vari 4200 r. p.m., 2 ranges | vari 6000 r.p.m. (or 8000/10000 r.p.m., opt.) | |
| FEED | | | | | | |
| Cutting feed rate (X, Y, Z axes) | 1~3000mm/min.(max.) [or 1~5000mm/min.(max.) (F-F),opt.] | | | | | |
| Rapid traverse (X, Y axes) | 5.0m/min.(max.) [or 10.0m/min.(max.) (F-F),opt.] | | | | | |
| Rapid traverse (Z axis) | 5.0m/min.(max.) [or 10.0m/min.(max.) (F-F),opt.] | | | | | |
| Gear ratio of motor pulley to ballscrew pulley on X, Y, Z axes | 1:2/1:1.33[or direct coupled (F-F), opt.] | | | | | |
| ATC | | | | | | |
| Tool storage capacity | — | — | 16pcs (carrousel) | — | — | 16pcs (carrousel) |
| Max. tool weight | — | — | 7kgs(15.4 lbs) | — | — | 7kgs(15.4 lbs) |
| Max. tool size(dia. x length) | — | — | 89x250mm(3- 1/2"x9- 7/8") | — | — | 89x250mm(3- 1/2"x9- 7/8") |
| Tool selection | — | — | Random | — | — | Random |
| Tool shank | — | — | BT40 | — | — | BT40 |
| Pull stud bolt | — | — | MAS-P40T-1 | — | — | MAS-P40T-1 |
| Distance from gauge line of tool holder to table | — | — | 555mm(21- 3/4") | — | — | 555mm(21- 3/4") |
| MOTOR | | | | | | |
| Spindle motor(AC servo) | 7.5/11KW (or 11/15 KW, opt.) | | | | | |
| X,Y,Z axes motor | AC servo ,1KW, 2000 r.p.m. [or 2KW, 2000 r.p.m.(F-F),opt.] | | | | | |
| Coolant pump motor | AC 1/6HP/ 1/4 HP(F.E.G.) | | | | | |
| GENERAL | | | | | | |
| Gross weight(Approx.) | 3900kgs(8580 lbs) | | | 4100kgs(9020 lbs) | | 4300kgs(9460 lbs) |
| Packing size(LxWxH) | 2700x2020x2530mm(106- 3/16"x79- 1/2"x99- 5/8") | | | | | |

9 * The machines could be supplied without controller and servo motor/drives as OEM FRAME.

SPECIFICATIONS

| MODEL | FM-305MH | FM-305ATC | FM-305MH-L | FM-305ATC-L | FM-340MH | FM-340ATC | FM-395MH | FM-395ATC |
|---|--|---|---|---|--|---|---------------------|---|
| TABLE | | | | | | | | |
| Working surface | 610x1854mm(24"x73") | | 800x1854mm(31-1/2"x73") | | 762x1830mm(30"x72") | | 813x2185mm(32"x86") | |
| T-slots(size x number x pitch) | 18mmx5x70mm(0.709"x 5 x2.756") | | 18mmx5x70mm(0.709"x 5 x2.756") | | 18mmx5x100mm(0.709"x5x3.9") | | | |
| Max. table load | 1500kgs(3300 lbs) | | 1500kgs(3300 lbs) | | 1800kgs(3960 lbs) | | | |
| TRAVEL | | | | | | | | |
| Longitudinal travel(X axis) | 1500mm(59") | | 1500mm(59") | | 1700mm(66-7/8") | | 2000mm(78-3/4") | |
| Cross travel(Yaxis) | 850mm(33-7/16") | | 1020mm(40-1/8") | | 850mm(33-7/16") | | | |
| Vertical travel(Z axis) | 710mm(28") | | 710mm(28") | | 710mm(28") | | | |
| Distance from spindle end to table | 95~805mm(3-3/4"~31-11/16") | | 95~805mm(3-3/4"~31-11/16") | | 95~805mm(3-3/4"~31-11/16") | | | |
| Distance from spindle center to column | 869mm(34-3/16") | | 1050mm(41-5/16") | | 870mm(34"-1/4") | | | |
| Distance from floor to table surface | 895mm(35-1/4") | | 785mm(30-7/8") | | 885mm(34-13/16") | | | |
| SPINDLE | | | | | | | | |
| Spindle nose taper | BT40(or BT50, opt.) | | BT40(or BT50, opt.) | | BT40(or BT50, opt.) | | | |
| Spindle speeds | vari 6000 r.p.m. (BT40) (or 8000/10000 r.p.m., opt.)(BT40) | | vari 6000 r.p.m. (BT40) (or 8000/10000 r.p.m., opt.)(BT40) | | vari 6000 r.p.m. (BT40) (or 8000/10000 r.p.m., opt.)(BT40) | | | |
| FEED | | | | | | | | |
| Cutting feed rate (X,Y, Z axes) | 1~3000mm/min.(max.) [or 1~5000mm/min.(max.)(F-F),opt.] | | 1~5000mm/min.(max.) | | 1~5000mm/min.(max.) | | | |
| Rapid traverse (X,Y axes) | 5.0m/min.(max.) [or 10.0m/min.(max.)(F-F),opt.] | | 10.0m/min.(max.) | | 10.0m/min.(max.) | | | |
| Rapid traverse (Z axis) | 5.0m/min.(max.) [or 10.0m/min.(max.)(F-F),opt.] | | 10.0m/min.(max.) | | 10.0m/min.(max.) | | | |
| Gear ratio of motor pulley to ballscrew pulley on X, Y, Z axes. | 1:2/1:1.33[or direct coupled (F-F), opt.] | | Direct coupled | | Direct coupled | | | |
| ATC | | | | | | | | |
| Tool storage capacity | — | 16pcs (or 20pcs, opt.)(BT40) (carrousel) | — | 16pcs (or 20pcs, opt.)(BT40) (carrousel) | — | 16pcs (or 20pcs, opt.)(BT40) (carrousel) | — | 16pcs (or 20pcs, opt.)(BT40) (carrousel) |
| Max. tool weight | — | 7kgs(15.4 lbs)/ 15kgs(33.1lbs)(BT50) | — | 7kgs(15.4 lbs)/ 15kgs(33.1lbs)(BT50) | — | 7kgs(15.4 lbs)/ 15kgs(33.1lbs)(BT50) | — | 7kgs(15.4 lbs)/ 15kgs(33.1lbs)(BT50) |
| Max. tool size(dia. x length) | — | 89x250mm(3-1/2"x9-7/8")/ 125x300mm(4-7/8"x11-3/4") (BT50) | — | 89x250mm(3-1/2"x9-7/8")/ 125x300mm(4-7/8"x11-3/4") (BT50) | — | 89x250mm(3-1/2"x9-7/8")/ 125x300mm(4-7/8"x11-3/4") (BT50) | — | 89x250mm(3-1/2"x9-7/8")/ 125x300mm(4-7/8"x11-3/4") (BT50) |
| Tool selection | — | Random | — | Random | — | Random | — | Random |
| Tool shank | — | BT40(or BT50, opt.) | — | BT40(or BT50, opt.) | — | BT40(or BT50, opt.) | — | BT40(or BT50, opt.) |
| Pull stud bolt | — | MAS-P40T-1/ MAS-P50T-1(BT50) | — | MAS-P40T-1/ MAS-P50T-1(BT50) | — | MAS-P40T-1/ MAS-P50T-1(BT50) | — | MAS-P40T-1/ MAS-P50T-1(BT50) |
| Distance from gauge line of tool holder to table | — | 645mm(25-3/8") | — | 645mm(25-3/8") | — | 645mm(25-3/8") | — | 645mm(25-3/8") |
| MOTOR | | | | | | | | |
| Spindle motor(AC servo) | 11/15KW (or 15/18.5 KW, opt.) | | 11/15KW (or 15/18.5 KW, opt.) | | 11/15KW (or 15/18.5 KW, opt.) | | | |
| X,Y, Z axes motor | AC servo , 1KW, 2000 r.p.m. [or 2KW, 2000 r.p.m.(F-F),opt.] | | AC servo, 3.5KW, 2000 r.p.m. | | AC servo , 3.5KW, 2000 r.p.m. | | | |
| Coolant pump motor | AC 1/6HP/ 1/4 HP(F.E.G.) | | AC 1/4HP | | AC 1/4HP | | | |
| GENERAL | | | | | | | | |
| Gross weight(Approx.) | 6000kgs(13200 lbs) | 6200kgs(13640 lbs) | 6300kgs(13860 lbs) | 6500kgs(14300 lbs) | 6700kgs(14740 lbs) | 6900kgs(15180 lbs) | 7000kgs(15470 lbs) | 7200kgs(15912 lbs) |
| Packing size(LxWxH) | 3200x2260x2550mm(126"x89"x100-3/8") | | 3600x2260x2550mm(142"x89"x100-3/8") | | 3000x2300x2545mm(118-1/8"x90-3/16"x100-3/16") +3030x2300x1060mm(119-3/16"x90-3/16"x41-3/4") | | | |

• The manufacturer reserves the right to modify the design, specifications, mechanisms...etc. to improve the performance of the machine without prior notice. All the specifications shown above are just for reference.

OPTIONAL ACCESSORIES / EQUIPMENTS

- Air power draw bar(for NT40 spindle nose, CNC models)
- Protection guard for work table
- Spindle cooling device(for 6000/ 8000r.p.m., MH/ATC)
- 8000/10000 r.p.m. M/C head w/spindle cooling device(for MH/ATC)
- Fast feed on 3 axes(10 m/min.rapid, 5 m/min. cutting ; F-F)
- Bigger horse power spindle motor
- Bigger horse power 3 axes servo motor
- Coolant thru spindle (CTS)
- Arm type ATC (auto tool changer)
- Full enclosure guard w/auger style chip conveyer
- High pressure water scour for chip removal
- 3-Hand wheel operation panel
(not available for machine w/full enclosure guard)
- Rotary table (the 4th axis control)
- Tilting rotary table (the 4th & 5th axes control)
- ZF gear box
- Gear head (for 600MH/ATC)

* FM-205/ 255/ 300 CNC: **CNC** means the machine w/standard milling head.

* FM-205/255/300/305/340/395/495/600MH/305MH-L: **MH** means the machine w/machining center head.

* FM-205/255/300/305/340/395/495/600ATC/305ATC-L: **ATC** means the machine w/Auto Tool Changer as well as machining center head.

SPECIFICATIONS

| MODEL | FM-495MH | FM-495ATC | FM-600MH | FM-600ATC |
|--|--|---|--|--|
| TABLE | | | | |
| Working surface | 813x2750mm(32"x108-1/4") | | 813x3200mm(32"x126") | |
| T-slots(size x number x pitch) | 18mm x 5 x 125mm(0.709"x 5 x 4.921") | | 18mmx7x100mm(0.709"x7x3.937") | |
| Max. table load | 2000kgs(4400 lbs) | | 2200kgs(4840 lbs) | |
| TRAVEL | | | | |
| Longitudinal travel(X axis) | 2500mm(98-1/2") | | 3000mm(118-1/8") | |
| Cross travel(Y axis) | 850mm(33-1/2") | | 900mm(35-7/16") | |
| Vertical travel(Z axis) | 710mm(28") | | 750mm(29-1/2") | |
| Distance from spindle end to table | 100~810mm(3-7/8"~31-7/8") | | 100~850mm(3-7/8"~33-7/16") | |
| Distance from spindle center to column | 870mm(34-1/4") | | 930mm(36-5/8") | |
| Distance from floor to table surface | 880mm(34-5/8") | | 955mm(37-9/16") | |
| SPINDLE | | | | |
| Spindle nose taper | BT40 (or BT50, opt.) | | BT50 | |
| Spindle speeds | vari 6000 r.p.m. (BT40) (or 8000/10000 r.p.m., opt.) (BT40) | | vari 4500 r.p.m. (or 6000 r.p.m., opt.) | |
| FEED | | | | |
| Cutting feed rate (X, Y, Z axes) | 1~5000mm/min.(max.) | | 1~5000mm/min.(max.) | |
| Rapid traverse (X, Y axes) | 10.0m/min.(max.) | | 10.0m/min.(max.) | |
| Rapid traverse (Z axis) | 10.0m/min.(max.) | | 10.0m/min.(max.) | |
| Gear ratio of motor pulley to ballscrew pulley on X, Y, Z axes | Direct coupled | | | |
| ATC | | | | |
| Tool storage capacity | — | 20pcs(BT40) (carrousel) (or 24pcs, arm type, opt.) | — | 20pcs(carrousel) (or 24pcs, arm type, opt.) |
| Max. tool weight | — | 7kgs (15.4 lbs)/ 15kgs (33.1lbs) (BT50) | — | 15kgs(33.1lbs) |
| Max. tool size(dia. x length) | — | 89x250mm (3-1/2"x9-7/8") / 125x300mm (4-7/8"x11-3/4") (BT50) | — | 125x300mm (4-7/8"x11- 3/4") |
| Tool selection | — | Random | — | Random |
| Tool shank | — | BT40 (or BT50, opt.) | — | BT50 |
| Pull stud bolt | — | MAS-P40T-1/ MAS-P50T-1(BT50) | — | MAS-P50T-1 |
| Distance from gauge line of tool holder to table | — | 645mm (25-3/8") | — | 704mm(27-11/16") |
| MOTOR | | | | |
| Spindle motor(AC servo) | 15/18.5KW(or 18.5/22 KW, opt.) | | 18.5/22KW(or 22/26 KW, opt.) | |
| X, Y, Z axes motor | 5KW, MHMA, 2000r.p.m. | | 5 KW, MHMA, 2000r.p.m. + i3 Speed Reducer | |
| Coolant pump motor | AC 1/4HP | | AC 1/2HP | |
| GENERAL | | | | |
| Gross weight(Approx.) | 10200kgs(22542 lbs) | 10400kgs(22984 lbs) | 21000kgs(46200 lbs) | 21500kgs(47300 lbs) |
| Packing size(LxWxH) | 3230x2300x2545mm(127-3/16"x90-9/16"x100-3/16") + 3030x2300x1060mm(119-5/16"x90-9/16"x41-11/16") | | 6000x2300x2550mm(236-3/16"x90-9/16"x100-3/8") + 6250x2300x1060mm(246"x90-9/16"x41-11/16") | |

*The manufacturer reserves the right to modify the design, specifications, mechanisms...etc. to improve the performance of the machine without prior notice. All the specifications shown above are just for reference.

STANDARD ACCESSORIES/EQUIPMENTS

- Draw bar (for CNC)
- Air tool clamp / unclamp device (for MH/ATC)
- Tools
- Tool box
- Chip tray
- Rear splash guard
- Telescopic sheet metal way covers on 3 axes
- Leveling screws w/blocks
- Precision ball screws w/double nuts on 3 axes
- Hardened and ground on X,Y,Z slide ways and top surface of table
- Turcite B coated on X,Y,Z slide ways and gibs
- Centralized auto lubrication device
- Coolant spraying device
- Halogen work lamp
- Power transformer w/cabinet (except OEM)

*The machines could be supplied without controller and servo motor/drives as OEM FRAME.



**FRANK PHOENIX
INTERNATIONAL CORP.**
Manufacturer, Exporter & Importer

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