

STANDARD ACCESSORIES

- ★ Tool Box
- ★ Call Light
- ★ Work Lamp
- ★ Chip Enclosure
- ★ Coolant System
- ★ Guideway Cover
- ★ Screw Conveyor
- ★ Cutting Air Blast
- ★ Auto Lube System
- ★ Movable Electronic Handwheels
- ★ Leveling Blocks And Bolts
- ★ ATC Armless Type 16 Tools
- ★ Mechanical, Electrical & Operating Manual
- ★ Spindle Cooling System (GMC-860 opt.)
- ★ Belt drive Spindle 8000 rpm

OPTIONAL ACCESSORIES

- a. CE
- b. Tranformer
- c. Flood Coolant
- d. Belt drive 10000/(GMC-860, 1020)12000 rpm
- d-1.Direct drive Spindle BT40/HSK63A: 10000/12000/15000/18000 rpm
BT50/HSK100A: 8000/10000/12000 rpm
- d-2.Built-in drive Spindle BT40/HSK63A: 18000/24000/30000 rpm
BT50/HSK100: 8000/10000/12000 rpm
- e. Coolant Thru Spindle
- f. 4th Axis Rotary Table
- g. Coolant Thru Tool Tip
- h. Chip Conveyor System
- i. TS27R Tool Setting Probe (Length Measurement)
- j. MP10/12 Inspection Probe Kits
- k. ARMLESS A.T.C.: 20/24 TOOLS
- l. (ARM Type)ATC.BT40 24 Tools/ 30 Tools/ 40 Tools
BT50 24 Tools/ 30 Tools
- m. A.T.C. (CHAIN TYPE) Tool to Tool (1.8sec)
- o. ZF 2 Speed Gear Box for spindle
- p. Spindle Cooling System
- q. Tailstock & Chuck
- r. Laser tool measuring
- s. Screw Type Chip Conveyor

Remarks: If Chain type ATC installed, the max. tool diameter is 75mm when full pocket.

SPECIFICATION

ITEM	UNIT	GMC-860	GMC-1020	GMC-1070	GMC-1100	GMC-1265	GMC-1465	GMC-1680	GMC-1880	GMC-2080
TABLE										
Table Size	MM(inch)	960 x 460 (37.7"x18.1")	1120 x 510 (44"x20")	1260 x 510 (49"x20")	1200 x 500 (47.2"x19.6")	1260x600 (49.6"x23.6")	1500 x 600 (59"x23.6")	1700 x 800 (66.9"x31.5")	1900 x 800 (74.8"x31.5")	2100 x 850 (82.6"x33.4")
Working Area	MM(inch)	860 x 480 (33.8"x18.8")	1020 x 500 (40"x19.6")	1070 x 530 (42"x20.9")	1020 x 610 (40.3"x24")	1200x650 (47.2"x25.6")	1400 x 650 (55.1"x25.6")	1600 x 800 (63"x31.5")	1800 x 800 (70.8"x31.5")	2000 x 800 (78.7"x31.5")
Tee slots (CD x W x NO)	MM	CD 100x18x4	CD 100x18x4	CD 100x18x4	CD 100x18x5	CD 100x18x5	CD 100x18x5	CD 100x18x8	CD 100x18x8	CD 100x18x8
Table load (maximun)	KG(lbs)	450(990)	600(1320)	900(1980)	1000(2200)	1200(2640)	1500(3300)	2000(4400)	2000(4400)	3000(6600)
TRAVEL										
X-axis	MM(inch)	860(33.8")	1020(40")	1070(42")	1100(43.3")	1200(47.2")	1400(55.1")	1600(63")	1800(70.8")	2000(78.7")
Y-axis	MM(inch)	480(18.8")	530(21")	530(21")	610(24")	650(25.6")	650(25.6")	800(31.5")	800(31.5")	800(31.5")
Z-axis	MM(inch)	500(19.6")	610(24")	610(24")	610(24")	650(25.6")	700(27.6")	710(28")	710(28")	730(28.7")
Spindle nose to table surface	MM(inch)	100-600 (3.9"-23.6")	100-710 (3.9"-27.9")	100-700 (3.9"-27.6")	100-710 (3.9"-27.9")	100-710 (3.9"-27.9")	100-710 (3.9"-27.9")	100-830 (3.9"-32.6")	100-830 (3.9"-32.6")	100-830 (3.9"-32.6")
Spindle center to column surface	MM(inch)	520(20.4")	550(21.6")	550(21.6")	660(26")	740(29.1")	760(29.9")	875(34.4")	875(34.4")	875(34.4")
X.Y.Z. Axis Ball screws dia	MM	32xpitch12	40xpitch12	40xpitch12	40xpitch12	40xpitch12	40xpitch12	50xpitch12	50xpitch12	50xpitch12
SPINDLE										
Spindle taper		BT 40, ISO40, CAT40		BT 40, ISO40, CAT40 (Option: BT NO.50, CAT50)						
Spindle speed - standard access	RPM	Standard: 8000 Option: 10000/12000								
Belt drive		10,000(Standard), 12,000(Option)		BT40:10,000(Standard), BT50: 8000(Option)						
Direct drive Spindle	RPM	BT40/HSK63A: 10000/12000/15000/18000 rpm, BT50/HSK100A: 8000/10000/12000 rpm								
Built-in drive Spindle		BT40/HSK63A: 18000/24000/30000 rpm, BT50/HSK100: 8000/10000/12000 rpm								
FEEDRATE										
Cutting Feedrate (X, Y, Z axis)	MM/MIN	1-10000(Depending Controller)				1-10000(Depending Controller)				
3Axes Slideways		HARDENED GROUND				HARDENED GROUND				
Rapid Traverse Rates (X/Y/Z axis)	MM/MIN	24000/24000/15000				20000/20000/15000		15000/15000/15000		
ATC										
Capacity-standard access.	PCS	16(Armless) / Option 24 (Armless)				16(Armless)				
Capacity-optimal access.(ARM)	PCS	24/30(Disc Type), 32/40(Chain Type)								
Tool Selection		Bi-directional & min.path								
Maximum tool diameter x length	MM(inch)	Armless Type: 89 x 250(3.5"x9.8"), Arm Type: 80 x 250(3.14"x9.8")								
Maximum tool weight	KG(lbs)	6(13.2)								
Air Power required		6KG/cm ²								
Tool Shank		BT40, ISO40 or CAT40 (Option) ISO50 or CAT50								
MOTOR										
Spindle drive Motor	KW(HP)	Standard: 7.5KW(10HP), OPTION: 11KW(15HP), OPTION:ZF gear box				Standard: 15KW(20HP), OPTION: ZF gear box 11KW(15HP)				
Coolant Pump	HP	1/2								
Power Supply		STD: 20KVA				STD: 30KVA				
NET WEIGHT	KG(lbs)	3500(7700)	5000(11000)	5300(11660)	6600(14520)	7700(16940)	8200(18040)	12500(27500)	13500(29700)	17200(37840)

*FOUR SLIDEWAYS ON BASE

*All specifications and designs are subject to change without notice.

FullLand®



- ### Feature 4H+1R
- High Precision
 - High Rigidity
 - High Performance
 - High Speed
 - Reliable

GMC series HIGH SPEED CUTTING MACHINING CENTER

Awarded as A Proof of Excellence In Technical



Taiwan Machine Tools Industry Award 2007
For Excellence in Research and Innovation
NC Lothe SECOND PRIZE



TEN MOST EXCELLENT
INVENTER IN TAIWAN



Taiwan Machine Tools Industry Award 2007
For Excellence in Research and Innovation
Machining Center FIRST PRIZE



GOLD HAND
AWARD



NATIONAL TECHNOLOGY
INNOVATION AWARD
2008

GEON CHENG TECHNOLOGY CO., LTD.

P.O.BOX 246 FENG YUAN TAICHUNG, TAIWAN
No.18, Ln. 131, Minsheng St., Tanzi Dist., Taichung City 427, Taiwan
TEL:886-4-25392866 FAX:886-4-25392668
E-mail Address:geontech@hibox.hinet.net
www.geontech.com.tw

GMC-2080

- TRAVEL
- X: 2000mm (78.7")
- Y: 800mm (31.5")
- Z: 730mm (28.7")



Four slideways on base for GMC-2080

GMC-1880

- TRAVEL
- X: 1800mm (70.8")
- Y: 800mm (31.5")
- Z: 710mm (28")



GMC-1465



- TRAVEL
- X: 1400mm (55.1")
- Y: 700mm (27.6")
- Z: 650mm (25.6")

GMC-1680



- TRAVEL
- X: 1600mm (63")
- Y: 800mm (31.5")
- Z: 710mm (28")

GMC-860



- TRAVEL
- X: 860mm (33.8")
- Y: 480mm (18.9")
- Z: 500mm (19.6")

GMC-1020



- TRAVEL
- X: 1020mm (40")
- Y: 530mm (21")
- Z: 610mm (24")

GMC-1265



- TRAVEL
- X: 1200mm (51.1")
- Y: 650mm (25.6")
- Z: 650mm (25.6")

Speedy and Reliable A.T.C

- ☆ 16 Tools Armless type (st)
Tool to Tool 7 Sec.
BT40/BT50/HSK 63A
- ☆ 24/30 Tools Arm type (op)
Tool to Tool 2.5 Sec.
BT40/BT50
- ☆ 32/40 tools chain type (op)
Tool to Tool 1.8 Sec.
BT40/BT50

Rigid Configuration Design

- ☆ Mighty MEEHANITE casting of all major components.
- ☆ Structure is analyzed by CATIA CAM and FEA (Finite Element Analysis)
- ☆ Strong Structure to extend rigidity, machining performance and long machine life

All 3 axes slideways are fitted with **Turcite-B**

High-efficiency Spindle

- ☆ Belt drive spindle speed
8,000rpm (standard)
10,000/12,000 rpm (option)
- ☆ Direct drive spindle speed
10,000rpm & 12,000/
15,000/ 20,000 (option)
- ☆ Built-in spindle speed
18,000rpm/ 24,000(option)

Precision Ball Screws

- ☆ X,Y,Z-axis with preload large Dia.
40mm pitch 12mm for 1000A,
32mm pitch 12mm for 850A
- ☆ Direct drive and Double nuts
- ☆ Design provides to reduce friction heat and thermal growth to maintain rigidity, stability.

■ MACHINE CONSTRUCTION FOR GMC-860, 1020, 1070



e Coolant Thru Spindle (2HP)(Pressure 20kg/cm²)



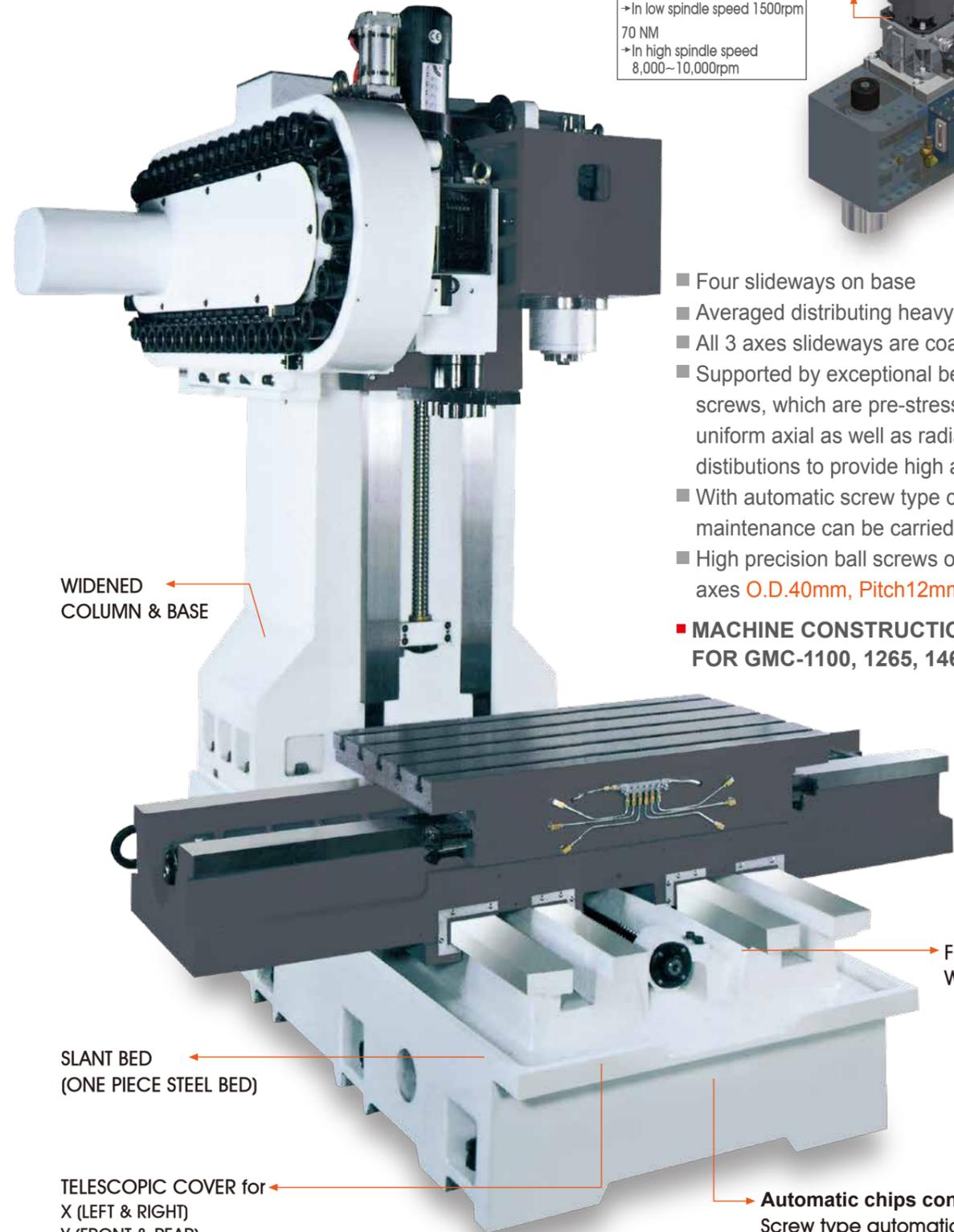
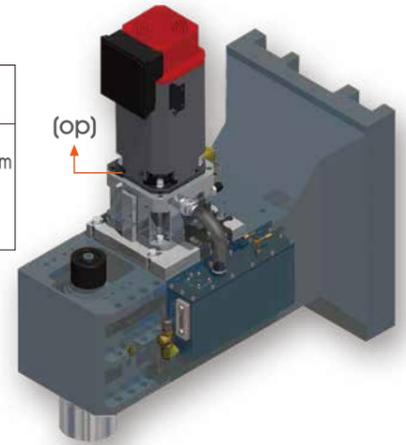
i TS27R Tool Setting Probe.



r Laser Tool Measurement

COMPUTER AIDED STRUCTURE DESIGN FOR PROCURING THE BEST RIGIDITY

Spindle drive motor (α 12i+ZF gear box)-1:4
280 NM
→In low spindle speed 1500rpm
70 NM
→In high spindle speed 8,000~10,000rpm



- Four slideways on base
- Averaged distributing heavy loading
- All 3 axes slideways are coated with **Turcite-B**.
- Supported by exceptional bearings and ball screws, which are pre-stressed to generate uniform axial as well as radial force distributions to provide high accuracy.
- With automatic screw type conveyor maintenance can be carried out easily.
- High precision ball screws on all three axes **O.D.40mm, Pitch12mm**

■ MACHINE CONSTRUCTION FOR GMC-1100, 1265, 1465

WIDENED COLUMN & BASE

FOUR SLIDE WAYS ON BASE

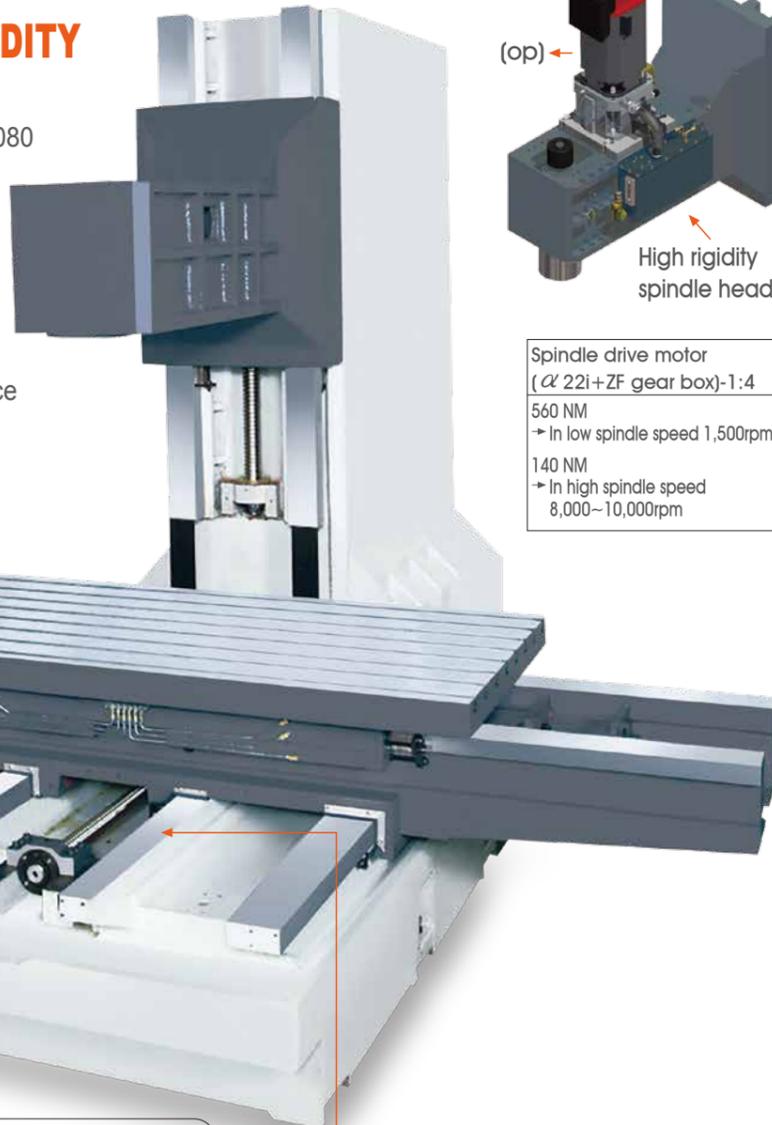
SLANT BED (ONE PIECE STEEL BED)

TELESCOPIC COVER for X (LEFT & RIGHT)
Y (FRONT & REAR)
Z (DOWN)

→ **Automatic chips conveying system**
Screw type automatic chip conveying system saves your cleaning time.

COMPUTER AIDED STRUCTURE DESIGN FOR PROCURING THE BEST RIGIDITY

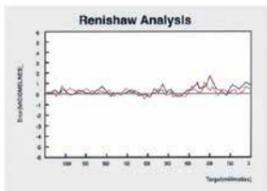
- Four slideways on base for GMC-2080
- Four slideways on base for GMC-1680, 1880, 2080
- Averaged distributing heavy loading
- All 3 axes slideways are coated with **Turcite-B**.
- Supported by exceptional bearings and ball screws, which are pre-stressed to generate uniform axial as well as radial force distributions to provide high accuracy.
- With automatic screw type conveyor maintenance can be carried out easily.
- High precision ball screws on all three axes
O.D.50mm, Pitch12mm
- **MACHINE CONSTRUCTION FOR GMC-1680, 1880, 2080**



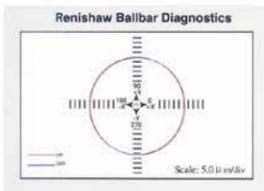
Spindle drive motor
(α 22i+ZF gear box)-1:4
560 NM
→ In low spindle speed 1,500rpm
140 NM
→ In high spindle speed 8,000~10,000rpm

PRODUCT INSPECTION

100% pitch error inspected by Laser unit.



100% dynamic traverse inspected.



All machines are measured by laser equipment to attain high positioning and repeated accuracy with pitch and backlash compensation.

Reference Standards: VDI 3441



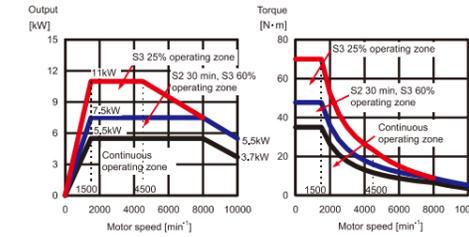
Testing the roundness by the ball bar tester.

FOUR SLIDWAYS ON BASE

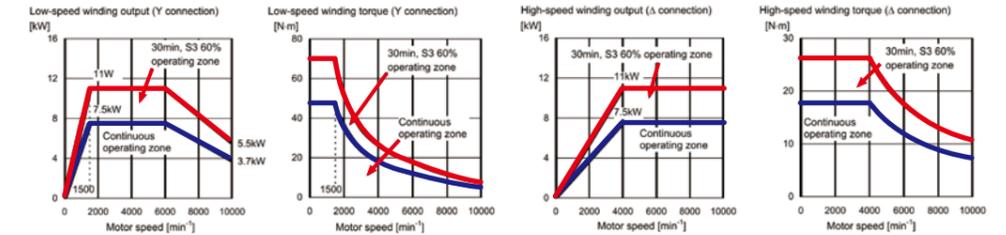
- Slideway surface has been processed hardening treatment then grind.
- When workpiece is offset, it will never twist, deflect, or warp load.
- Smooth traverse, Long machine life.
- Uniform weight distribution.
- Superior cutting performance.

TORQUE POWER CHART

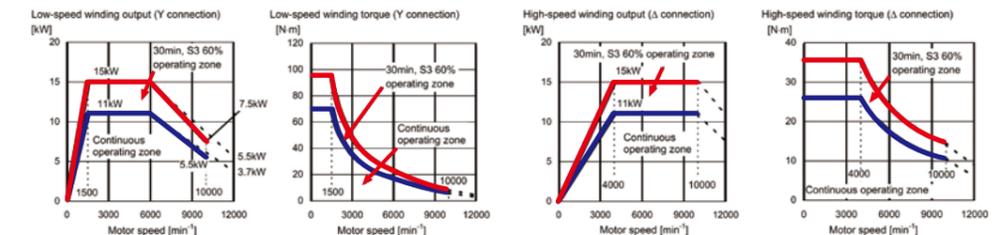
MODEL α i16



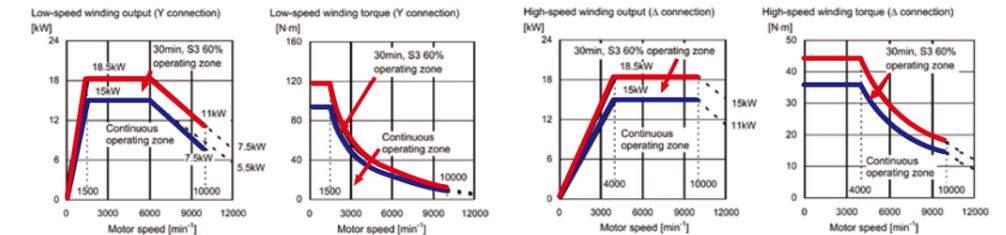
MODEL α i18



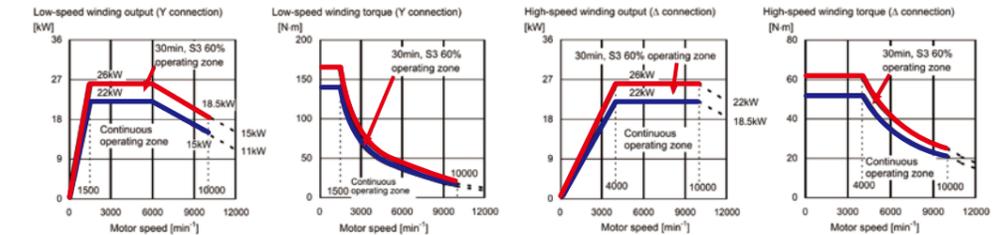
MODEL α i112



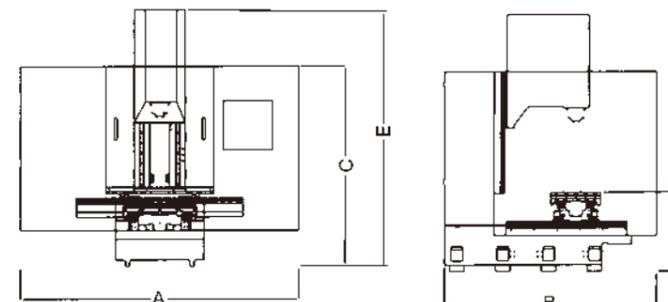
MODEL α i115



MODEL α i122



DIMENSION



unit:cm

MODEL	GMC-860	GMC-1020	GMC-1100	GMC-1265
A	270	302	310	340
B	212	220	223	223
C	180	180	200	200
D	75	75	80	80
E(Bell/Direct Spindle)	272/282	310/320	310/320	310/320

MODEL	GMC-1465	GMC-1680	GMC-1880	GMC-2080
A	380	425	470	520
B	223	250	250	250
C	200	210	210	210
D	81	81	81	81
E(Bell/Direct Spindle)	320/330	320/330	330/340	330/340