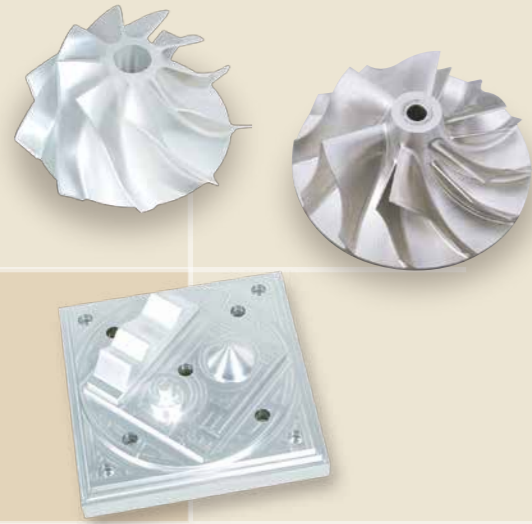


FullLand®



Rotary Table ø630mm
Encoder RCN226 & RCN226(op)

Fixed on X axis guideway



ZERO-BACKLASH Roller Cam

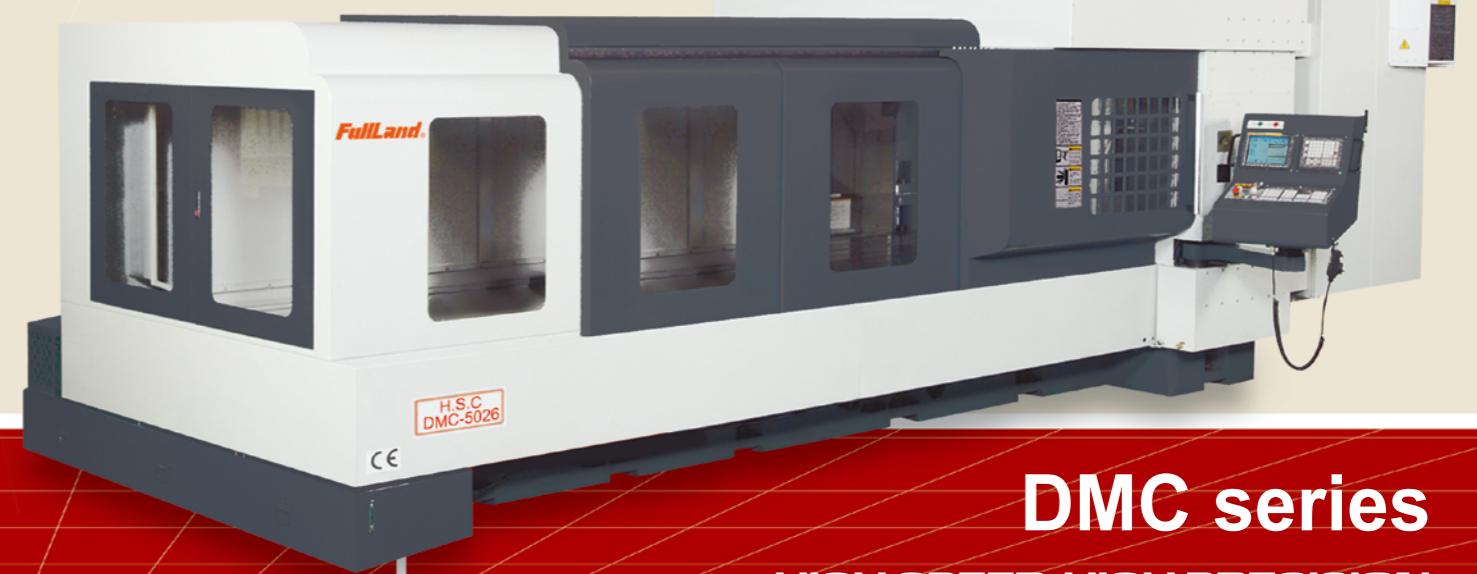


HEIDENHAIN CONTROLLER

HR 410 Handwheel

DMC-980-5XT		
ROTARY TABLE	Size	ø630mm (24.8")
	Max. loading weight	300kg
TRAVEL	X-axis	630mm (24.8")
	Y-axis	630mm (24.8")
	Z-axis	480mm (18.8")
	A-axis	+30°-120°
	C-axis	360°
	Distance between Columns	1000mm (39.3")
SPINDLE	Table surface to spindle nose	120-600mm (4.7"-23.6")
	Spindle taper	BT-40 HSK-A63(Opt)
	Spindle speed (Direct Drive)	12000rpm(Std) / 15000rpm(Opt) / 18000rpm
	Spindle Motor / Kw	10/12.5 kW
	Spindle speed (Build in Type)	18000rpm / 24000 (BT-40) / HSK-A63 / 30000rpm(BT-30)
FEEDRATE	Spindle Motor / Kw	19.4kw / 8.2kw
	Rapid traverse X/Y/Z	36/36/30 m/min
	Rapid traverse A/C	25/33 rpm
	Max. cutting feed	20 m/min
ATC	Guide way	Linear guide way
	Tool type	BT-40
	Magazine capacity	ARM-24T
	Max. tool length	250
	Max. tool diameter	75
DIMENSION	Max. tool weight	6
	Width x Depth	3520x3420 mm (138.5" x 134.6")
	Machine height	3300mm (129.9")
	Machine weight	9000kg / 10800 lbs

FullLand®



DMC series HIGH SPEED-HIGH PRECISION Double Column Milling and Machining Center

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

Awarded as A Proof of Excellence In Technical



Taiwan Machine Tools Industry Award 2007 For Excellence in Research and Innovation NC Lathe SECOND PRIZE
TEN MOST EXCELLENT INVENTOR 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



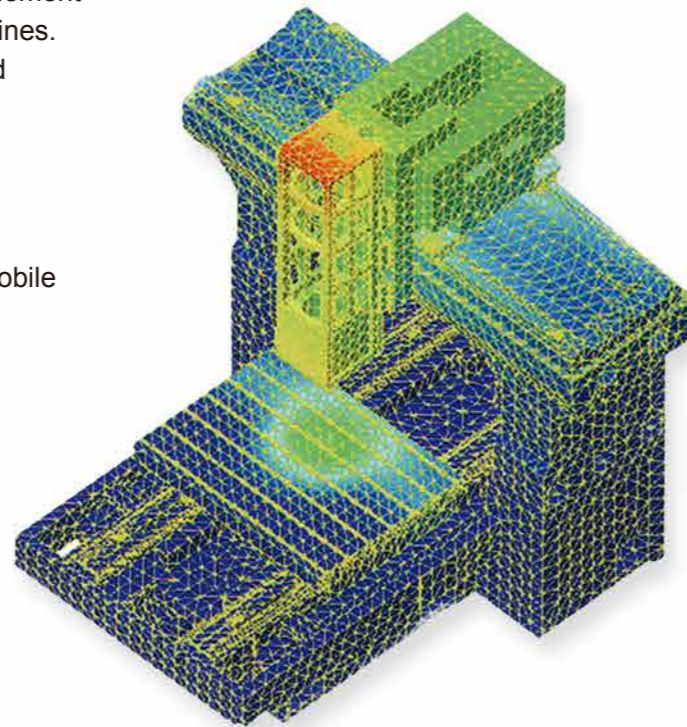
GEON CHENG TECHNOLOGY CO., LTD.
P.O.BOX 246 FENG YUAN TAICHUNG, TAIWAN
No.78, Sanshe Rd., Shengang Dist. Taichung City 429, Taiwan
TEL: +886-4-25316697 FAX: +886-4-25316657
E-mail: geontech@hibox.hinet.net
www.geontech.com.tw

Optimum structure of **GEOTECH DMC-SERIES** is designed by an excellent and experienced team of engineers. Using Finite Element Scheme with ANSYS SOFTWARE to ensure rigidity of machines. After the completion of assembling of whole machine, related geometric and kinematics tests are via precise instruments performed.

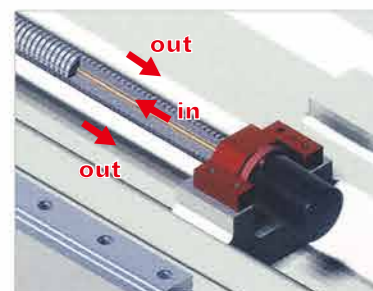
DMC-SERIES suit for 3-C products (Consumer Electronics, Communications and Computers) as well as complicated parts and moulds for injection, automobile and aerospace industries.

Patent approved by Germany, Taiwan, China.

- | | |
|---|--|
| <p>■ GERMANY PATENT NO.</p> <p>1. 20 2004 017 403.0
2. 20 2004 019 862.2
3. 20 2004 019 861.4</p> <p>■ CHINA PATENT NO.</p> <p>1. 676573</p> <p>■ JAPAN PATENT NO.</p> <p>1. 3108878</p> | <p>■ TAIWAN PATENT NO.</p> <p>1. M255100
2. M255096
3. M257251
4. M281740
5. M281742
6. M284464</p> <p>7. M284474
8. M284473
9. M290444
10. M294382
11. M294988
12. M296091
13. M297805</p> |
|---|--|



Work Pieces



Ball Screw Cooling System

Schematic drawing of internal cooling hollow ball screw

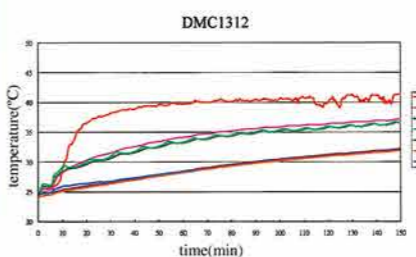
There is cooling provided throughout the DMC series including: Oil cooled guide ways, ball screws, spindle, spindle motor and bridge. Additionally there is a thermal compensation system which automatically adjusts the machine to compensate for thermal deviations which could affect cutting accuracy. (Standard for travel under 4M)

Accuracy & Rigidity Test

- Axis Traverse Acceleration Test
- Modal Test
- Spindle Rotation Vibration Test
- Spindle Radial and Axial Error Motion Test
- Spindle Thermal Stability Test
- Thermal Drift Testing of Feeding Mechanisms

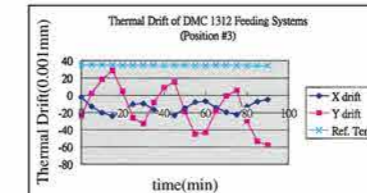
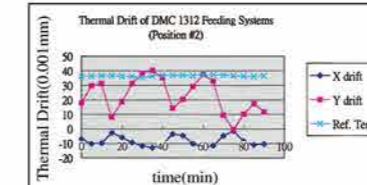
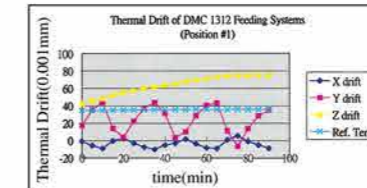


Spindle Thermal Stability Test

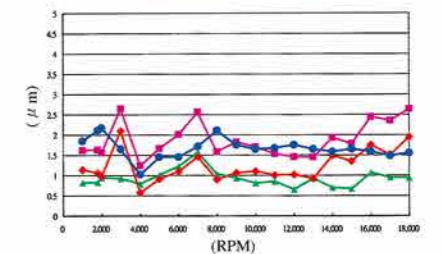


The temperature change result after 2.5 hours running.

2 Thermal Drift Testing of Feeding Mechanisms

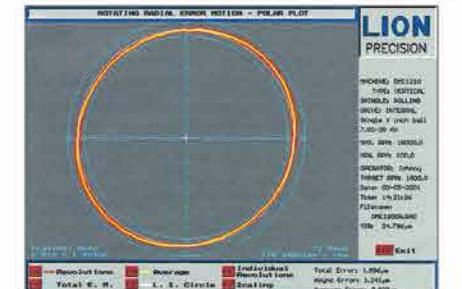


3 Spindle Radial and Axial Error Motion Test

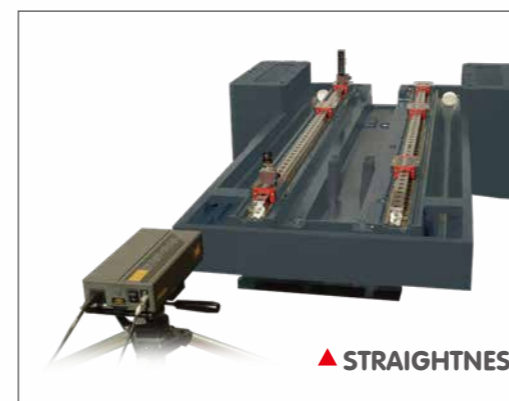


DMC1312 Testing Result of Spindle Radial and Axial Error Motion Under Various Speed.

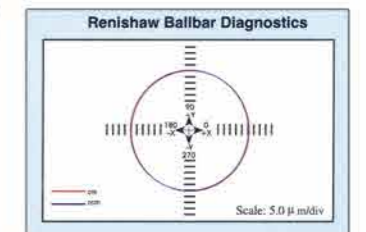
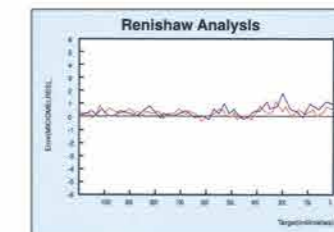
4 Spindle Radial and Axial Error Motion Test



High Accuracy Inspection ensure the life of machine



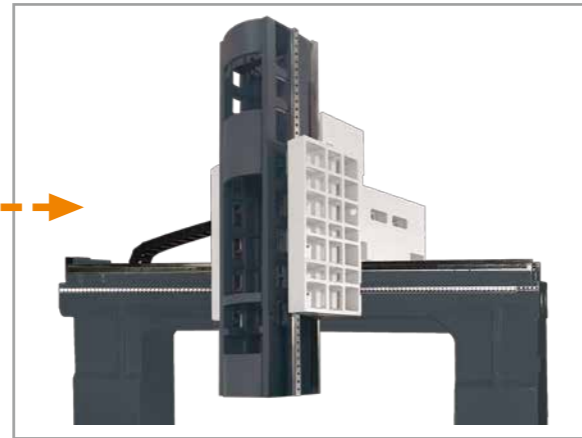
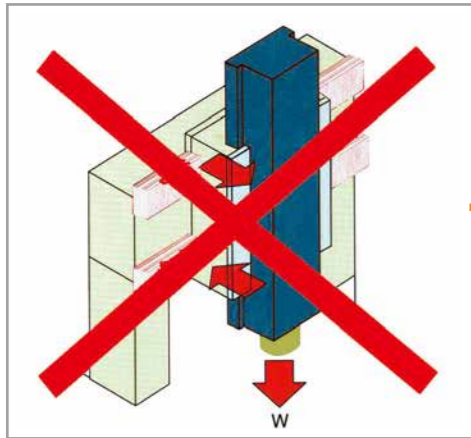
100% pitch error inspected by laser unit. 100% dynamic traverse inspected.



Reference Standards: VD13441 Positioning Accuracy: 0.004 / 300mm Repeatability: ±0.002mm

THE ABOVE ARE DATA WITHOUT LINEAR SCALE WHEN TESTING IN A NORMAL ROOM TEMPERATURE.

The Evolution Of Column, Head and Saddle



Y Axis slideway mounted on the top of cross rail to shorten the distance from spindle head to Y axis slideway.

Taiwan's First Origin by GEON CHENG

☆Saddle supported by 3 pieces of roller linear guides.
This design allows an increase of 25% in cutting capacity.



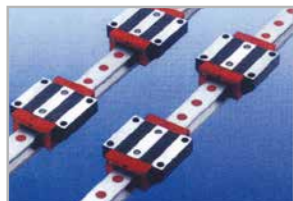
1. Germany Patent
2. China Patent
3. Taiwan Patent
4. Japan Patent

Hydraulic Balance



The Head on this machine features an adjustable hydraulic balance device to allow easy Z-axis movement and rapid positioning to ensure perfect conditions for highly accurate operations.

Roller Guide or Same rank



Door width more than 1800mm(standard), Unique one-piece casting column

☆Double ribs design.

☆Cutting Capacity:
S45C, 25cm³ / KW/ min. up

4 LINEAR ROLLER GUIDEWAYS

Mounting Four pieces of Linear Roller Guideways on Z axis so that the Radial & Axial strength is double and machining efficiency increased.
Surface finish < 0.5umRa
PATENT NO. M281740

Unique one-piece casting column
☆Double ribs design.

☆The distance between Column slideways and Z axis slideways is 190mm for the heavy duty cutting

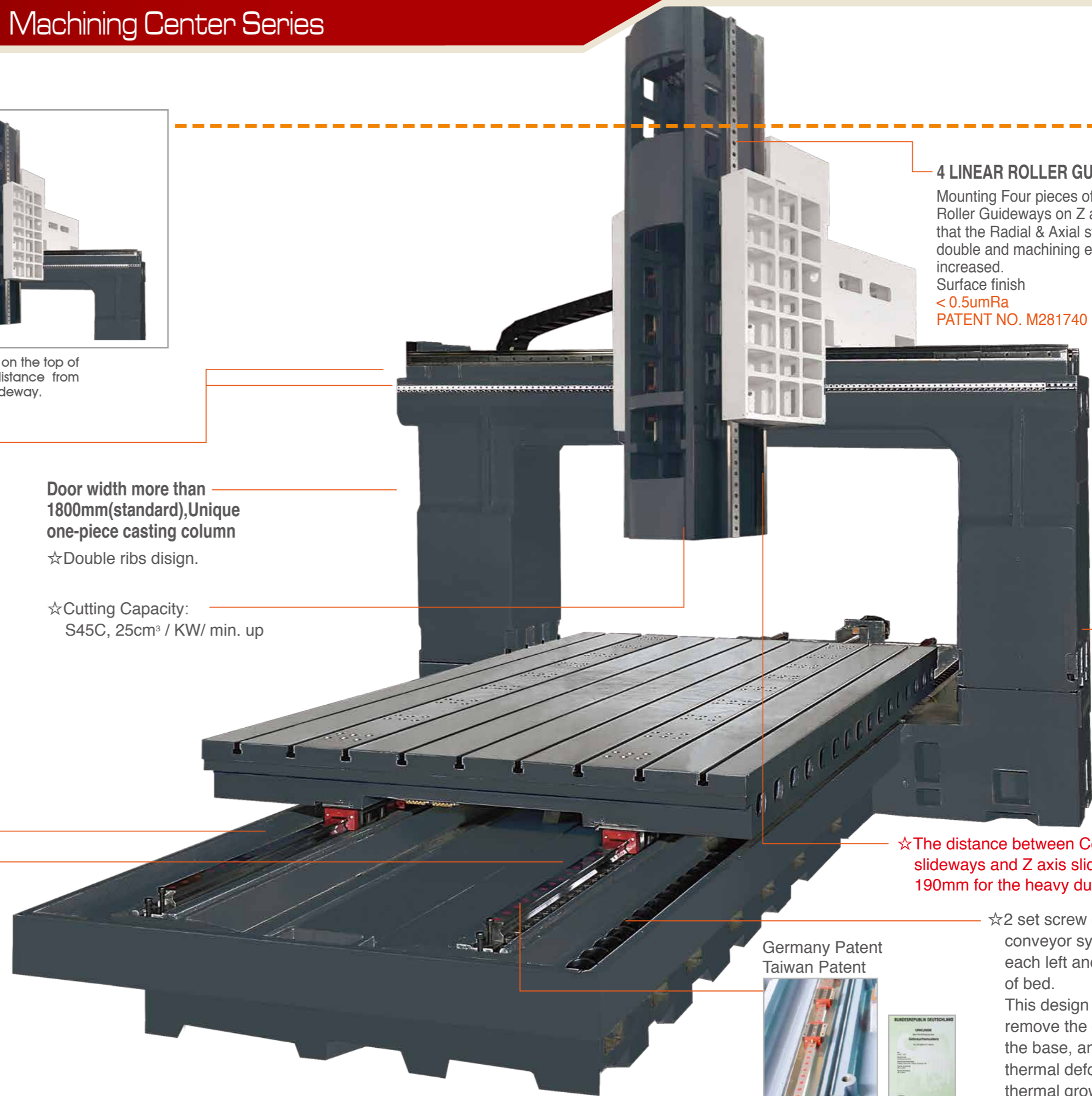
☆2 set screw chip conveyor system on each left and right side of bed.

This design help to remove the chips out of the base, and avoid the thermal deformation by thermal growth.

Germany Patent
Taiwan Patent



Pollution Proof Cap



OPTION



DMC -980

- X-axis: 900mm
- Y-axis: 800mm
- Z-axis: (op)670mm
- Distance between columns: 1000mm
- Spindle speed: 10000rpm~30000rpm

DMC -9120

- X-axis: 1200mm
- Y-axis: 900mm
- Z-axis: (op)670mm
- Distance between columns: 1000mm

DMC -9160

- X-axis: 1600mm
- Y-axis: 900mm
- Z-axis: (op)670mm
- Distance between columns: 1000mm



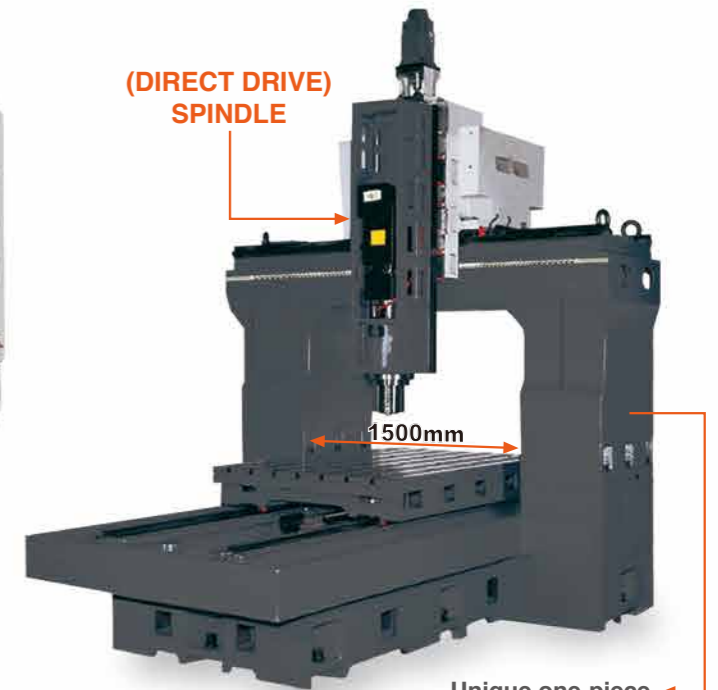
Unique one-piece casting column
☆Double ribs design.

DMC-9120 Rigid body



DMC -2015

- X-axis: 2000mm
- Y-axis: 1350mm
- Z-axis: 700mm / (op) 900mm
- Distance between columns: 1500mm



Unique one-piece casting column
☆Double ribs design.

DMC-2015 Rigid body

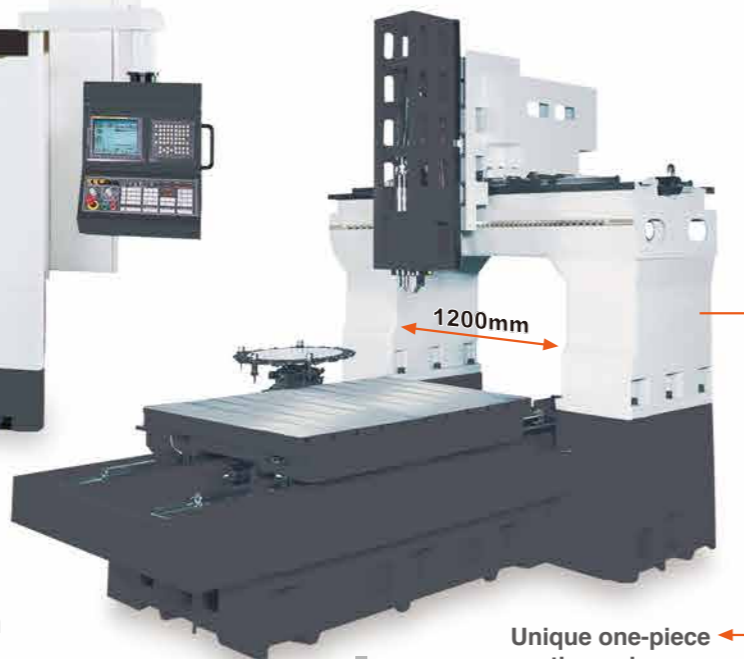


DMC -2212

- X-axis: 2200mm
- Y-axis: 1100mm
- Z-axis: 670mm
- Distance between columns: 1200mm

DMC -3212

- X-axis: 3200mm
- Y-axis: 1100mm
- Z-axis: 670mm
- Distance between columns: 1200mm



Unique one-piece casting column
☆Double ribs design.

DMC-2212 Rigid body



DMC -3018

- X-axis: 3000mm
- Y-axis: 1700mm
- Z-axis: 700mm / (op) 900mm
- Distance between columns: 1800mm



Unique one-piece casting column
☆Double ribs design.

DMC-3018 Rigid body



DMC -2518

- X-axis: 2500mm
- Y-axis: 1700mm
- Z-axis: 900mm
- Distance between columns: 1800mm



DMC -4018

- X-axis: 4000mm
- Y-axis: 1700mm
- Z-axis: 900mm
- Distance between columns: 1800mm

DMC -5018

- X-axis: 5000mm
- Y-axis: 1700mm
- Z-axis: 900mm
- Distance between columns: 1800mm



DMC -3022

- X-axis: 3000mm
- Y-axis: 2100mm
- Z-axis: 1000mm / (op)1200mm
- Distance between columns: 2200mm

DMC -4022

- X-axis: 4000mm
- Y-axis: 2100mm
- Z-axis: 1000mm / (op)1200mm
- Distance between columns: 2200mm

DMC -5022

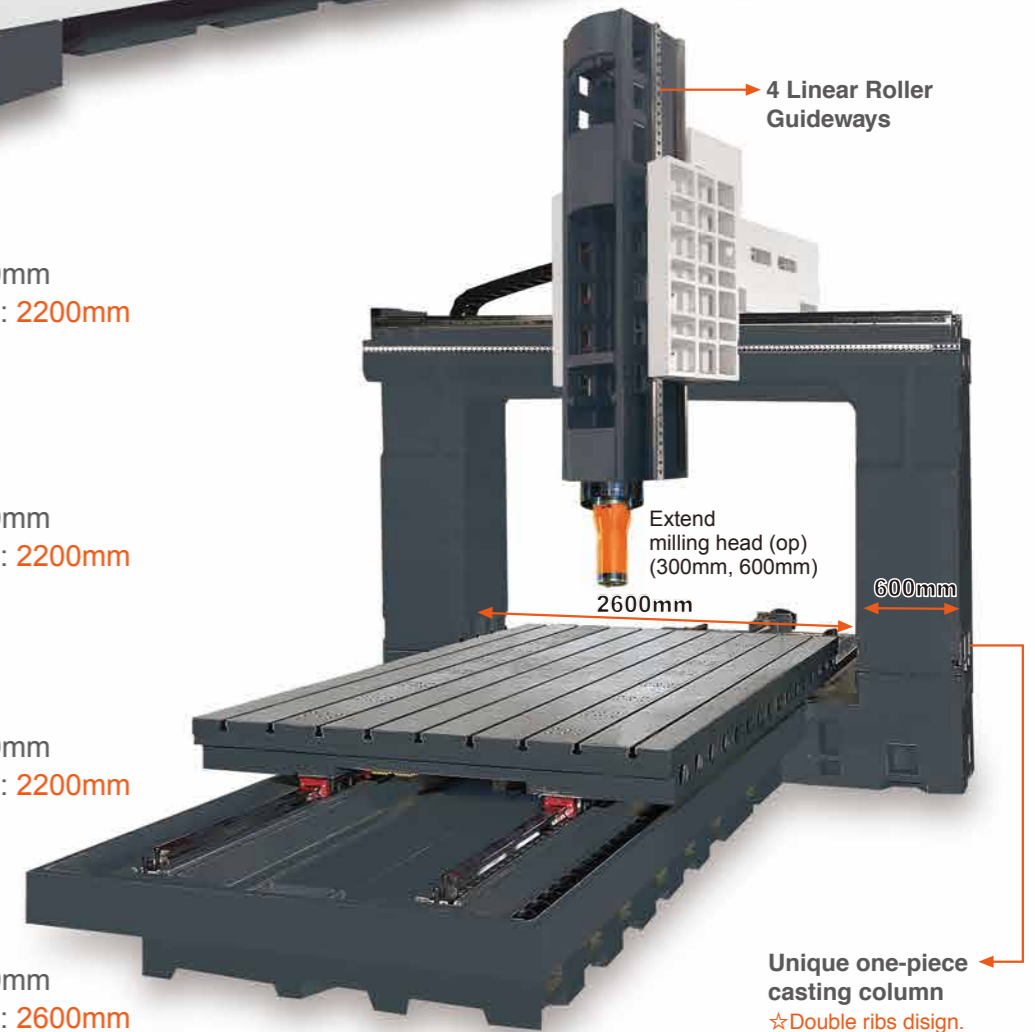
- X-axis: 5000mm
- Y-axis: 2100mm
- Z-axis: 1000mm / (op)1200mm
- Distance between columns: 2200mm

DMC -4026

- X-axis: 4000mm
- Y-axis: 2500mm
- Z-axis: 1000mm / (op)1200mm
- Distance between columns: 2600mm

DMC -5026

- X-axis: 5000mm
- Y-axis: 2500mm
- Z-axis: 1000mm / (op)1200mm
- Distance between columns: 2600mm

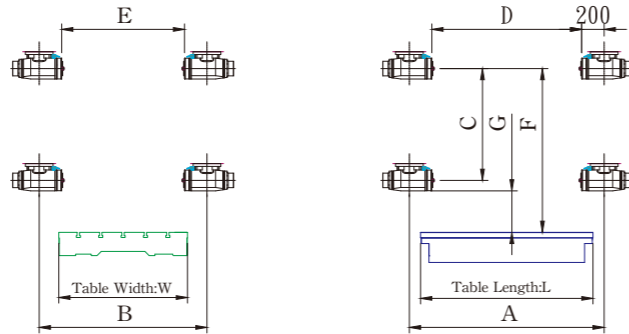


DMC-4026 Rigid body

A55 Auto. Change 90° Angle Head

•Division Angle=5° •Max. Speed = 3500 rpm

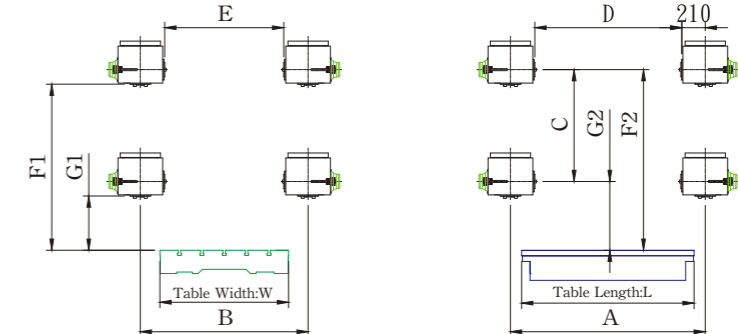
Distance Between Column	Height of column	A	B	C	D	E	F	G
mm	mm	mm	mm	mm	mm	mm	mm	mm
1500	1330	X axis travel	Y axis travel	700	A - 400	B - 400	1120	330
1800	1430	X axis travel	Y axis travel	900	A - 400	B - 400	1220	230
2200	1530	X axis travel	Y axis travel	1000	A - 400	B - 400	1320	230
2600	1530	X axis travel	Y axis travel	1000	A - 400	B - 400	1320	230
3000	1530	X axis travel	Y axis travel	1000	A - 400	B - 400	1320	230



F54 Five-Face Auto Milling Head

•Division Angle=5° •Max. Speed = 3500 rpm

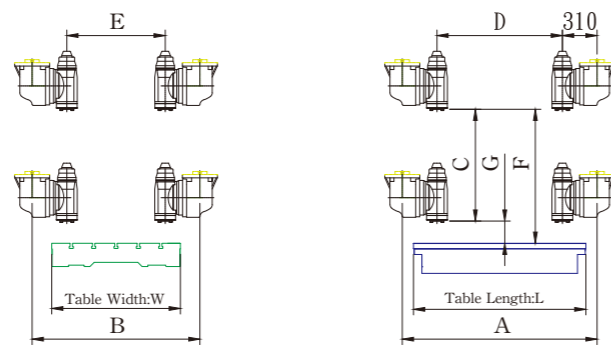
Distance Between Column	Height of column	A	B	C	D	E	F	G
mm	mm	mm	mm	mm	mm	mm	mm	mm
1500	1330	X axis travel	Y axis travel	700	A - 420	B - 420	F1=1260, F2=1390	G1=560, G2=690
1800	1430	X axis travel	Y axis travel	900	A - 420	B - 420	F1=1360, F2=1490	G1=460, G2=590
2200	1530	X axis travel	Y axis travel	1000	A - 420	B - 420	F1=1460, F2=1590	G1=460, G2=590
2600	1530	X axis travel	Y axis travel	1000	A - 420	B - 420	F1=1460, F2=1590	G1=460, G2=590
3000	1530	X axis travel	Y axis travel	1000	A - 420	B - 420	F1=1460, F2=1590	G1=460, G2=590



A58 Auto. Swiveling Head

•Division Angle=5°/5° •Max. Speed = 3500 rpm

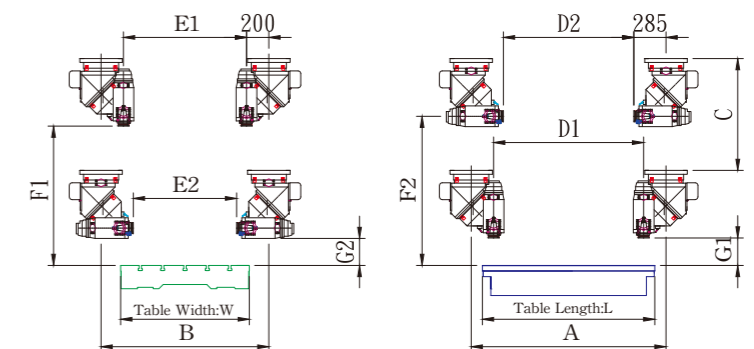
Distance Between Column	Height of column	A	B	C	D	E	F	G
mm	mm	mm	mm	mm	mm	mm	mm	mm
1500	1330	X axis travel	Y axis travel	700	A - 620	B - 620	830	130
1800	1430	X axis travel	Y axis travel	900	A - 620	B - 620	930	30
2200	1530	X axis travel	Y axis travel	1000	A - 620	B - 620	1030	30
2600	1530	X axis travel	Y axis travel	1000	A - 620	B - 620	1030	30
3000	1530	X axis travel	Y axis travel	1000	A - 620	B - 620	1030	30




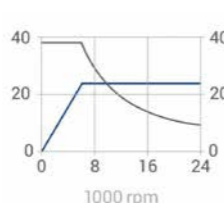

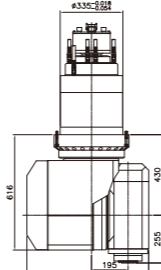
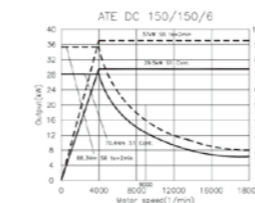

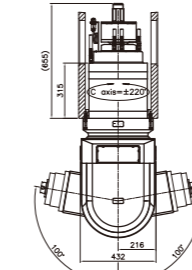
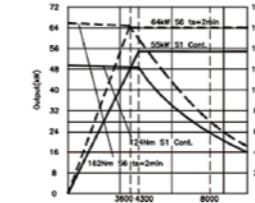

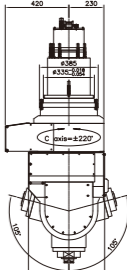
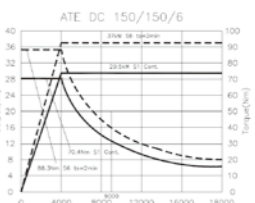
F59 Vertical Horizontal Auto Head

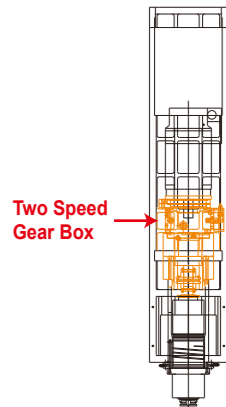
•Division Angle=5°/5° •Max. Speed = 3500 rpm •A-axis Swiveling Angle = 0°~180° •C-axis Rotary Angle -90°~+270°

Distance Between Column	Height of column	A	B	C	D	E	F	G
mm	mm	mm	mm	mm	mm	mm	mm	mm
1500	1330	X axis travel	Y axis travel	700	D1=A-400, D2=B-570	E1=B-400, E2=B-570	F1=1040, F2=1130	G1=340, G2=340
1800	1430	X axis travel	Y axis travel	900	D1=A-400, D2=B-570	E1=B-400, E2=B-570	F1=1140, F2=1230	G1=240, G2=240
2200	1530	X axis travel	Y axis travel	1000	D1=A-400, D2=B-570	E1=B-400, E2=B-570	F1=1240, F2=1330	G1=240, G2=240
2600	1530	X axis travel	Y axis travel	1000	D1=A-400, D2=B-570	E1=B-400, E2=B-570	F1=1240, F2=1330	G1=240, G2=240
3000	1530	X axis travel	Y axis travel	1000	D1=A-400, D2=B-570	E1=B-400, E2=B-570	F1=1240, F2=1330	G1=240, G2=240



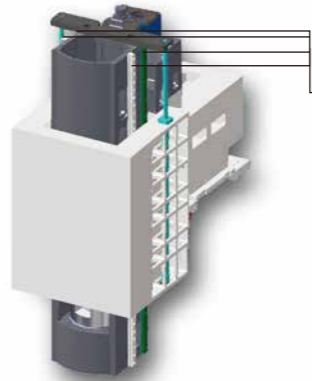
Two-axis Orthogonal Milling Head

Model	HSD-H678 (WORM GEAR)	C67 (DD MOTOR)	C68 M02 (DD MOTOR)	C66 M01 (WORM GEAR)
Description	 	  	  	  
Max. Power Kw(HP)	24kw 38.2NM S1	29.5kw 70.4NM S1	55kw 124NM S1	29.5kw 70.4NM S1
Vertical Spindle Max. Speed	24000rpm	18000rpm	10000/ op 12000 rpm	15000rpm
Tool interface	HSK A63	HSK A63	HSK A100	HSK A63
Lubrication		Oil air	Grease/ op oil air	Grease
Rotary Angle	A: ±120° C:±245°	A: ±105° C:±220°	A: ±100° C:±220°	A: ±105° C:±220°
A.C axis Max torque	1400 MM	993 MM	1320 MM	1000 MM
A.C Axis Braking torque	1450 Nm	2000 Nm	2000 Nm	1250 Nm
Precision of positioning	±30"	±10"	±10"	±10"
Precision Repeatability	10"	12"		12"
Vertical Max Tool Dia * length(mm)	75x200 mm	80x250 mm	100x300 mm	80x250 mm
Vertical Spindle Head Center to spindle nose end (mm)	250mm	255mm	420mm	330mm



IMPROVED SPINDLE TRANSMISSION
PATENT NO. M284464
(DIRECT DRIVE)

Spindle drive motor
(α 221+gear box)-1:4
560 NM
→ In low spindle speed 1500rpm
140 NM
→ In high spindle speed
8,000~10,000rpm

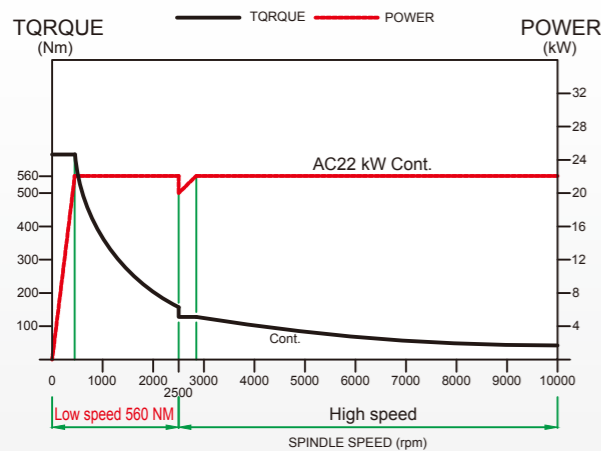


4 LINEAR ROLLER GUIDEWAYS

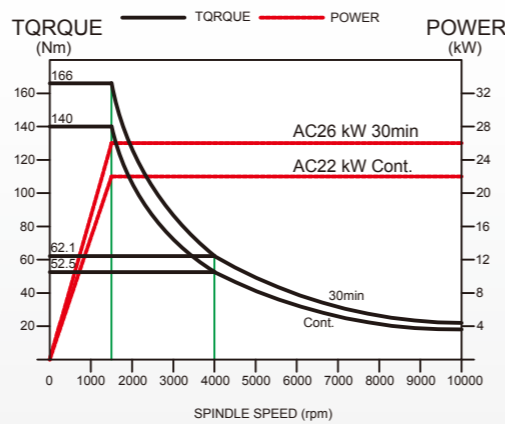
Mounting Four pieces of Linear Roller Guideways on Z axis so that the Radial & Axial strength is double and machining efficiency increased.
Surface finish
< 0.5umRa
PATENT NO. M281740

TORQUE POWER CHART

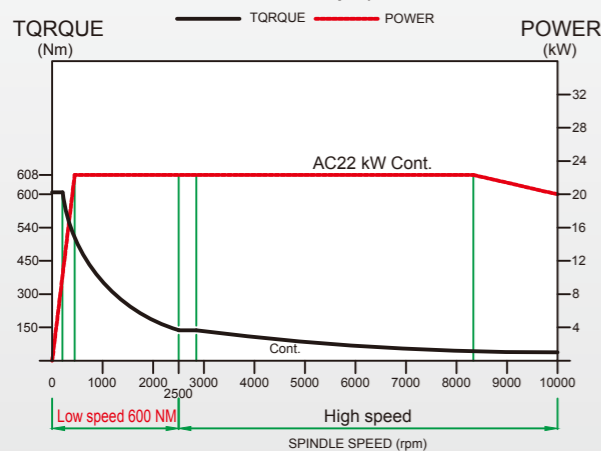
TWO SPEED BT-50 GEAR SPINDLE 10000rpm(MITSUBISHI SJ-V26-01ZT-04)



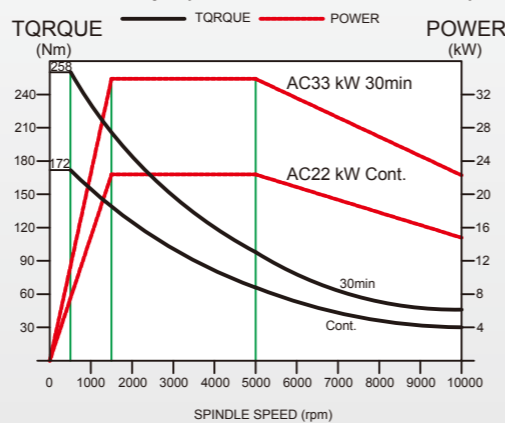
BT-50 10000rpm(MITSUBISHI SJ-VK30-21ZT)



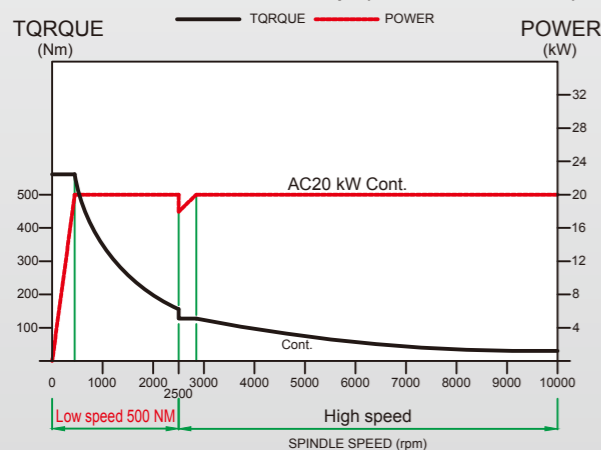
TWO SPEED BT-50 GEAR SPINDLE 10000rpm(SIEMENS 1PH8137-□□ F □□)



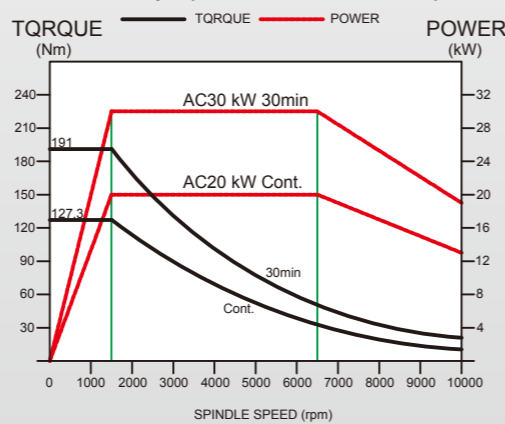
BT-50 10000rpm(SIEMENS 1PH8137-□□ F □□)



TWO SPEED BT-50 GEAR SPINDLE 10000rpm(HEIDENHAIH QAN260L)



BT-50 10000rpm(HEIDENHAIH QAN260L)



STRICT QUALITY CONTROL SYSTEM

▶ CONTROLLER



Fanuc Control



Siemens Control



Mitsubishi Control

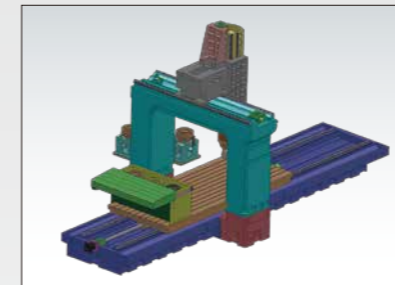


Heidenhain Control
ITNC 530

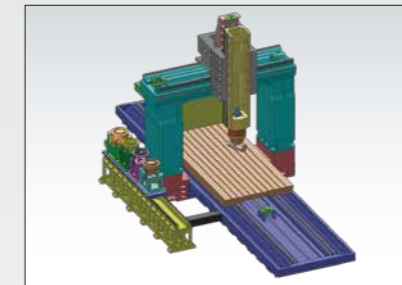


Fagor Control
8070 CNC

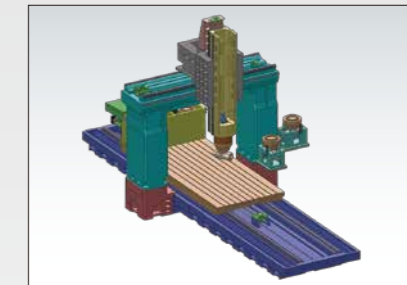
Automatic Head Change System



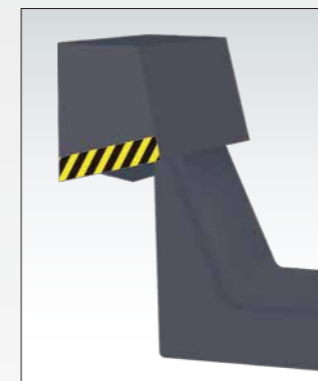
h1. On the working table



h2. On the ground



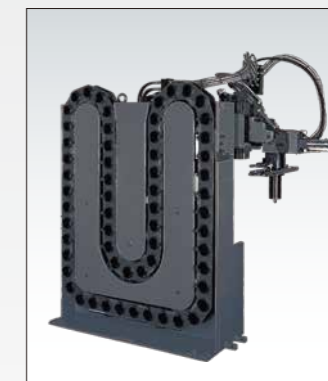
h3. Fix on the column



h. Chip Conveyor System



m. Chain Type
Tool Magazine



m-1. Two-Way(Horizontal &
Vertical) Tool Magazine



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



i. TS27R Tool Setting Probe.



g. BLUM Laster Control for tool
setting and breakage detection.

SPECIFICATION

Table with columns for model numbers (DMC-980 to DMC-8040) and rows for specifications such as Travel, Spindle, Feederate, Linear guide, Ballscrew, A.T.C., and Machine weight.

A SPECIAL CUSTOM-MADE SPECIFICATION IS ACCEPTABLE

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

DIMENSION

Table showing dimensions (A-G) for various DMC models from 980 to 8040.

