

BM SERIES



VISION WIDE TECH CO., LTD.

No. 1126-2, Bishan Rd., Caotun Township, Nantou 542, Taiwan
Tel: +886-49-2338888
Fax: +886-49-2330083

VISION WIDE (AH) TECH CO., LTD.

No. 1049, Dongcheng Road, Bowang District, Ma'anshan City,
Anhui Province 243131, China
Tel : +86-05552908886

E-mail: info@visionwide.com.tw
www.visionwide-tech.com



BM-E-202306

BM SERIES

Moving Beam Double Column Machining Center



Ultra-precision Moving Beam Double Column Machining Center

With Vision Wide tradition, BM series is unique by the features of moveable cross rail and synchronous cutting in W-axis.

BM series can be opted with various types of heads to achieve a wide range of multi-faced machining function.

- ▶ Cutting feed rate:
XYZ-axis 7m/min, W-axis 1m/min
- ▶ High torque gear type spindle:
3,000/4,000/5,500/6,000rpm
- ▶ Direct-driven type spindle:
8,000/10,000rpm
- ▶ X-axis travel: 4,100~10,100 mm
- ▶ Y-axis travel: 3,000/ 3,500/ 3,700/ 4,200 mm
- ▶ Z-axis travel: 1,000/ 1,200/ 1,400 mm
- ▶ W-axis travel: 1,000/ 1,200/ 1,500 mm
- ▶ Linear way for X-axis
- ▶ Box and linear way for Z-axis
- ▶ Box way for YW-axis



● Sheet metal guard (four-piece type) design

Moving Beam Large-Scale & Multi-Angle Machining Center

BM series is designed for providing large-scale machining. With the firm structure, the max. height for workpiece is 2,780mm, W-axis is provided with random point positioning and synchronization machining.

BM series is also offered the features of heavy workpiece loading capacity, large spindle output torque, auto multi-angle head attachments and auto head attachments tool changing to achieve auto application of heavy-duty machining.

Auto 5-face machining
Precision heavy cutting.

- ▶ Distance between column 3.5m
- ▶ Max. workpiece height 2.78m

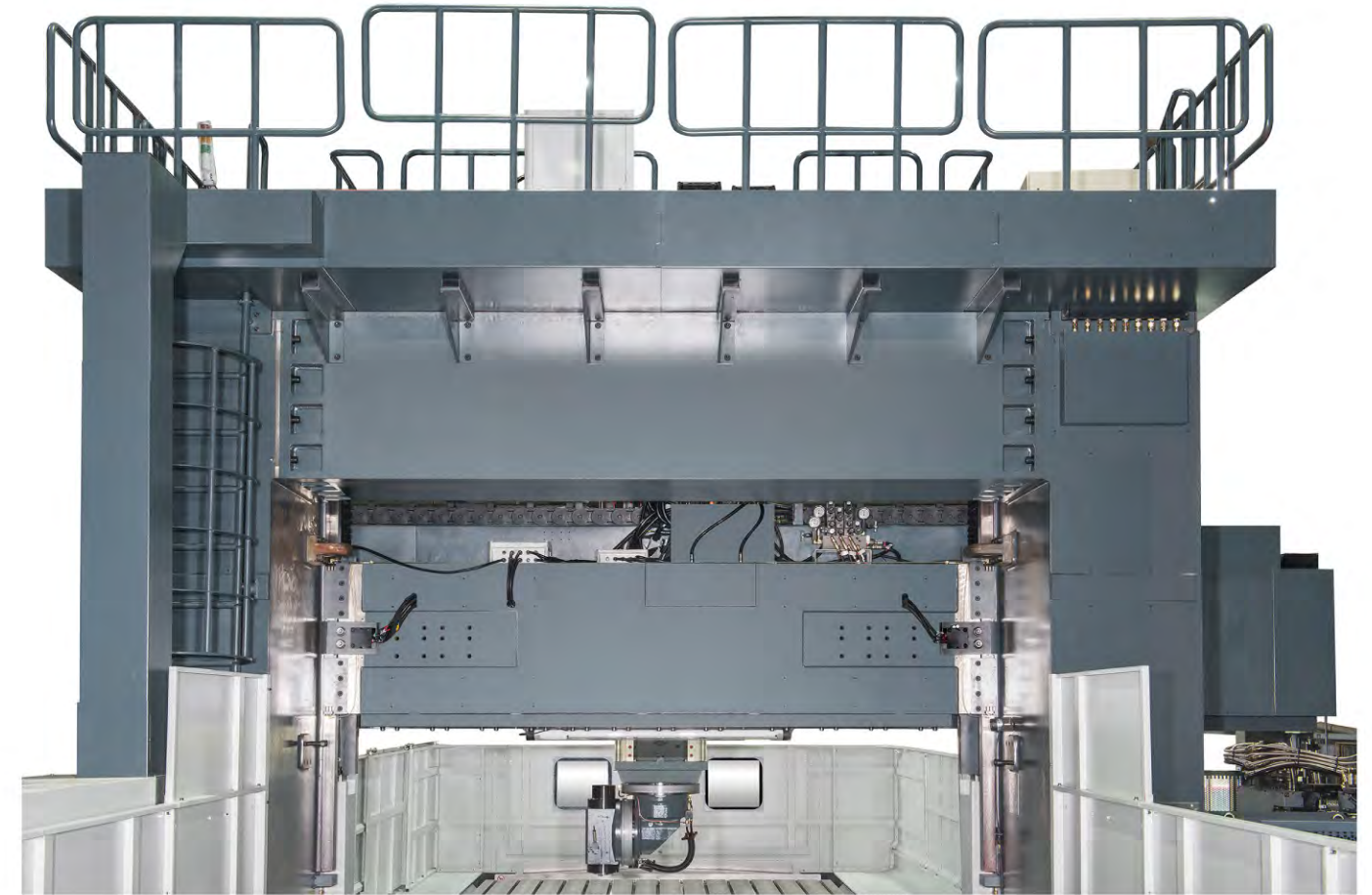
High Rigidity Structure Design

- Roller-linear guideway design enhances dynamic acceleration performance and low friction (high feed speed) and achieves the best rigidity and precision.
 - The 3-way base (X-axis) design is composed of 3 roller-type linear ways. This design is 30% stiffness higher than the ball-roller guideway (HIWIN or SCNEEBERGER), keeps a high dynamic level of accuracy, and provides the best feeding rigidity.
 - Gear reducer X-axis improves high table loading ability in acceleration/deceleration movement. Precision gears effectively transmit servo motor motion accuracy, and provide low backlash and high positioning accuracy.
-
- Y-axis thick beam with box guide way design ensures high rigidity.
 - To achieve the best rigidity and precision.
 - Large size column (700X1500mm) provides the beam the strongest support and achieves the best rigidity and precision.
 - MEEHANITE grade casting iron, stress relief heat treatment. Component machining stress eliminated by its natural frequency and resonance



Beam accuracy keep mechanism, improve the machining accuracy of any position in the Y-direction.

W-axis Servo Positioning and High-performance Braking Mechanism

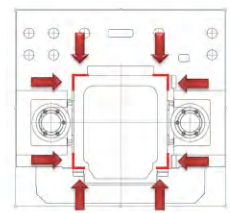


- Using dual servo direct-drive motors with high-speed reducers to replace the existing hydraulic counterbalance cylinder, improving performance and being environmentally friendly.
- Random Fixed Point Cutting at any point on W-axis stroke by Auto auxiliary braking mechanism can enhance the capacity of heavy cutting when W-axis doing fixed point cutting.
- Random position machining on a W-axis stroke by a high-performance braking mechanism can enhance the capacity of heavy machining.

Various Spindle Head Options

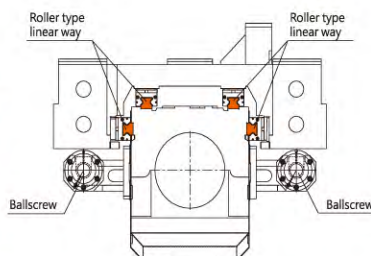


Enclosed Box Way (Dual Ballscrews)



- Dual ballscrews on Z axis drive enhances responsive speed and ballscrews' lifespan, and decrease motor's loading.
- Embracing type head is combined saddle with lightweight design to ensure optimal rigid structure.
- Four-sided constrained structure provides best rigidity for heavy cutting application.
- High rigidity ensure high precision cutting application with XZ accuracy 0.01mm/1,000mm.

Linear Way (Dual Ballscrews)



Enclosed Box Ram/ Dual ballscrews

- Transmission adopts dual servo motor and dual ballscrew.
- No counterweight design enhances response speed.
- Enclosed linear scale provides the optimum positioning accuracy.

Optimal Central Symmetric Spindle System Design Strong, Stable, Durable and Scalability

- Minimum distance between spindle center and Z-axis roller way not only shortens cutting lever arm but also significantly improves rigidity.
- Symmetric spindle gravity configuration, Z-axis ballscrew, spindle center and spindle motor configure at gravity point of Z-axis box structure centerline provide the best feed precision and thermal equilibrium.
- Gear spindles are made from Japan-made JIS-0 grade.
- 2-step gear type spindle provides high torque and high speed characteristics to ensure heavy cutting ability on surface finish.
- Various high speed spindle can be chosen
4,000/ 6,000 rpm



Cutting Ability



Face milling:

Tool dia.:125mm
Cutting feed:1,000mm/min
Cutting width:100mm
Cutting depth:6mm
Removal rate:600cc/min



High feed machining:

Tool dia.:40mmx4 inserts
Cutting speed:2,400rpm
Cutting feed:10m/min
Cutting depth:1mm
Cutting width:32mm
Removal rate:320cc/min



Indexable insert drilling:

Tool dia.:32mm
Cutting speed:1,500rpm
Cutting feed:500mm/min
Cutting depth:30mm
Removal rate:400cc/min
Coolant through spindle

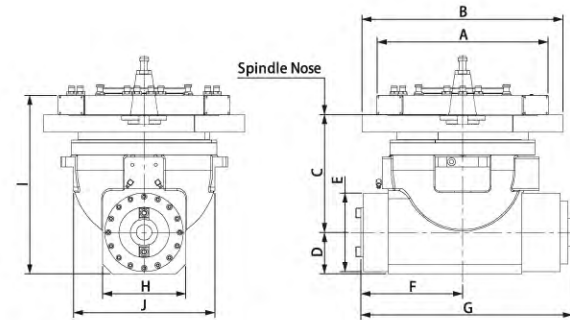
- Test specification: spindle power=22/26kW, speed=4,000rpm, material=S45C(mid carbon steel) position=1/2x (Z travel)

Auto Multi-Angle Head Attachment

AC 90° angular head



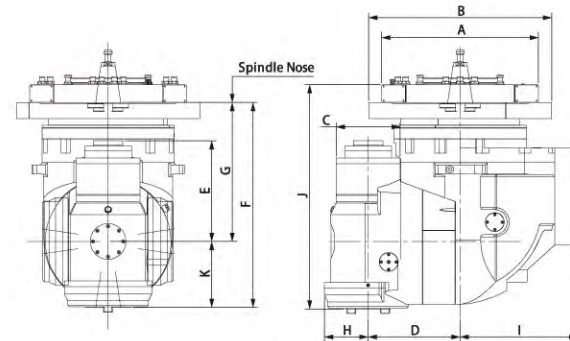
Item	AC 90° angular head	
	G2	G3
Max. speed	3,000rpm	5,000rpm
Max. power	26kW	
Tool clamping	Auto hydraulic clamping	
Head clamping	Auto hydraulic clamping	
C-axis indexing	Auto 1°/5°	
Machining coolant	External nozzle	External nozzle
Coolant Through Spindle(opt.)	20 bar. / 70 bar.	
A	Φ436	Φ435
B	Φ436	Φ512
C	300	300
D	100	106
E	Φ200	Φ200
F	259	259
G	515.7	539
H	212	212
I	486	455
J	Φ352	Φ360



AC 2-axis head



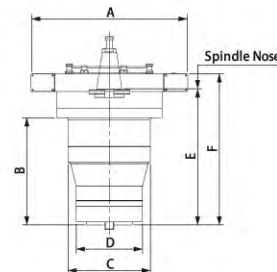
Item	AC 2-axis head	
	G2	G3
Max. speed	3,000rpm	4,000rpm
Max. power	26kW	
Tool clamping	Auto hydraulic clamping	
Head clamping	Auto hydraulic clamping	
C-axis indexing	Auto 1°/5°	Auto 1°/5°
B-axis indexing	Auto 5°	Auto 1°/5°
Machining coolant	External nozzle	Spindle ring cutting coolant system
Coolant Through Spindle(opt.)	20 bar. / 70 bar.	
A	Φ436	Φ435
B	Φ436	Φ512
C	Φ200	Φ178
D	350	258
E	300	281
F	573.5	559
G	388.5	330
H	122.5	106
I	329.5	206
J	627.3	585
K	259	185



AC extended head



Item	AC extended head 300mm		AC extended head 420mm	
	G2	G3	G2	G3
Max. speed	4,000rpm	5,000rpm	4,000rpm	5,000rpm
Max. power	26kW			
Tool clamping	Auto hydraulic clamping			
Head clamping	Auto hydraulic clamping			
C-axis indexing	Auto 1°/ 5°			
Machining coolant	External nozzle	External nozzle	External nozzle	External nozzle
A	Φ436	Φ435	Φ436	Φ435
B	300	300	427	427
C	Φ230	Φ230	Φ230	Φ230
D	Φ185	Φ185	Φ185	Φ185
E	374	381	501	501
F	423	423	570	570

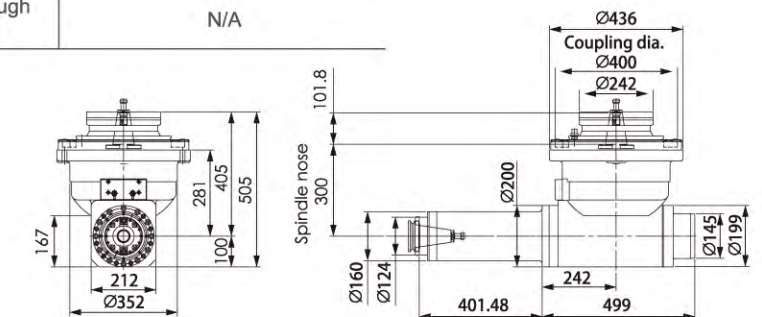


Powerful and Precision Boring Head Attachment

400mm AC 90° spindle extension head



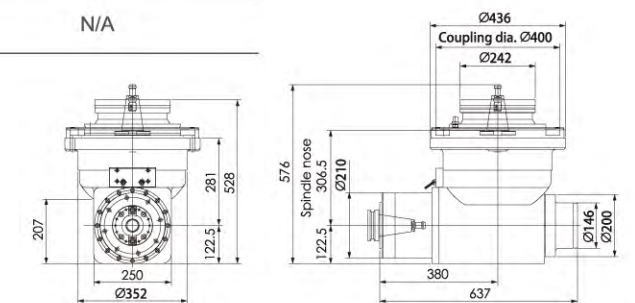
Item	600mm AC 90° spindle extension head
Max. speed	2000 rpm
Max. power	26 kW
Tool clamping	Manual hydraulic clamping
Head clamping	Auto hydraulic clamping
C-axis indexing	(1°) / 5°
Machining coolant	External nozzle
Coolant Through Spindle(opt.)	N/A



AC 90° angular head (Strong)



Item	AC 90° angular head (Strong)
Max. speed	3,000 rpm
Max. power	37 kW
Tool clamping	Auto hydraulic clamping
Head clamping	Manual /Auto hydraulic clamping
C-axis indexing	5°
Machining coolant	External nozzle
Coolant Through Spindle(opt.)	N/A



Intelligent Multi-face Machining

5-axis level tool point center management TPCM

Each type of head attachment with tool center point management, takes vertical workpiece as origin benchmark, and converts the workpiece coordinates to any new specified plane of workpiece coordinates automatically.

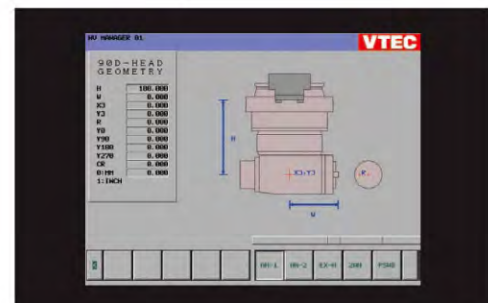
Auto coordinates tool axis 3D conversion

3-axis mechanical coordinates system can be automatically converted to machining coordinates system, easily achieving face milling, end milling, drilling and rigid tapping machining operations in different direction.

Head attachment dimensions correction

Intelligent compensation on each type of head attachments. The compensation including rotation center, tool size, workpiece coordinates system correction management. It greatly simplifies the complexity of programming and operation to achieve perfect auto multi-angle machining.

Auto Compensation Software



Auto compensation for attachment heads:

Auto compensating horizontal head center and spindle center.
Auto compensating mechanism mass center and revolution center.

3D coordinates management:

- 1.V/H tool length and diameter compensation.
- 2.V/H working coordinate affine transformation.
- 3.manual interrupting.
- 4.3D rigid tapping.

Heavy cutting ability

Cutting depth test demonstrated
excellent heavy cutting rigidity

test specification: 22/26kW 4,000rpm spindle

Head attachment	Extended head	90 degree angular head	2-axis head
Tool type	BT-50 face milling tool-diameter $\phi 125/5$ edge		
Cutting material	S45C		S45C
Spindle speed(rpm)	600		600
Feed rate(mm/min)	1000		1000
Machining width(mm)	100		100
Machining depth	4		5
Removal rate(cc/min)	400		500



TCPM0.04mm



Auto Head Storage Unit

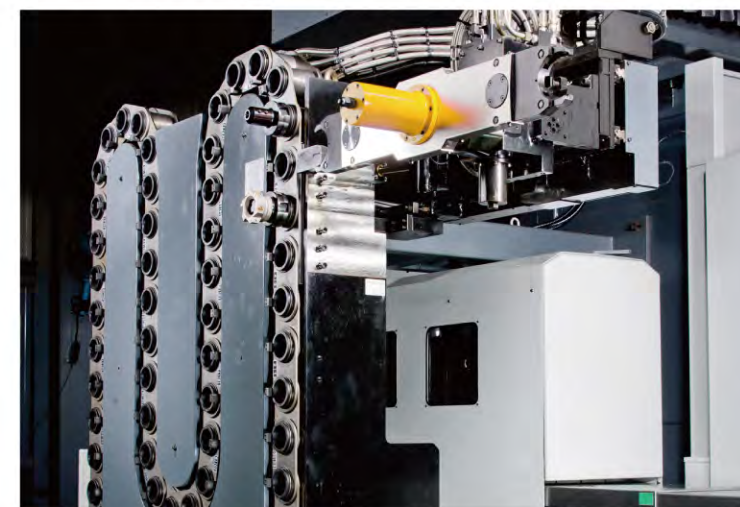


Table type head bracket



Multi-heads magazine(magazine side)

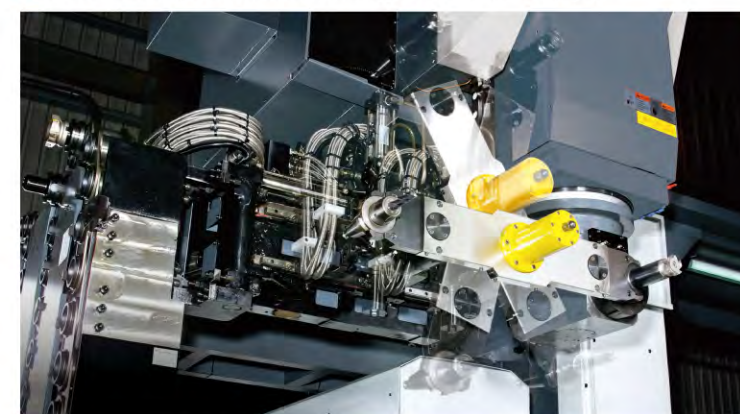
Tool Magazine



Floor-standing vertical-horizontal type tool magazine(opt.)



Floor-standing vertical type tool magazine(opt.)



Horizontal tool change for AC 90° angular head (opt.)



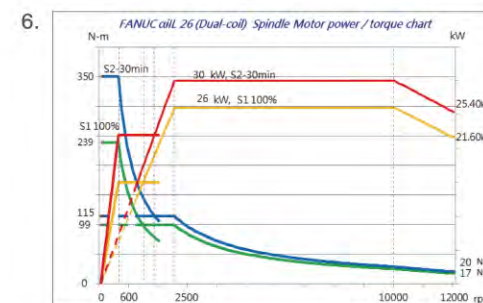
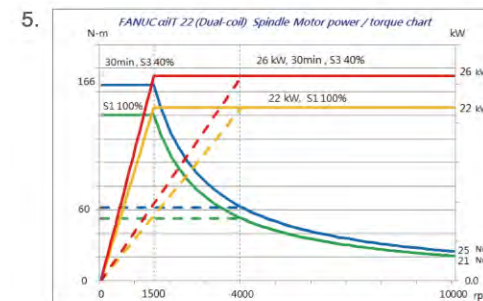
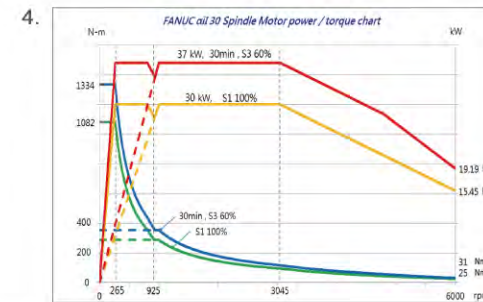
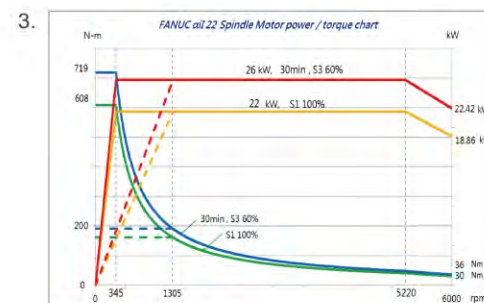
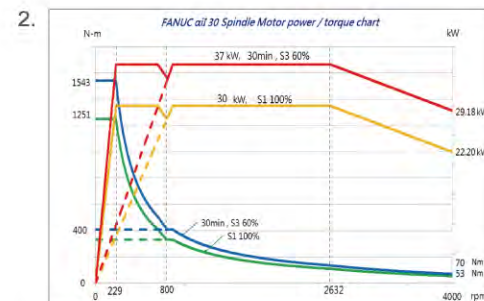
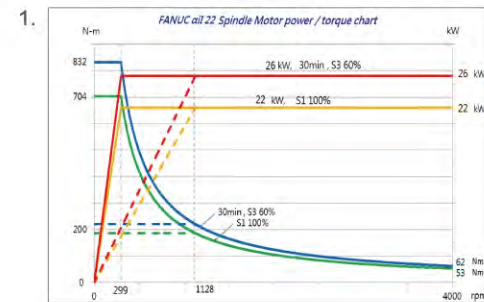
Extended head exchange on vertical type(opt.)

Spindle Power and Torque Charts

Linear way, Enclosed Box Ram/ Dual ballscrews

FANUC Controller

Drive type		Gear Spindle				Direct-Driven Spindle	
Pic. No.		1	2	3	4	5	6
Motor type	-	FANUC α il 22	FANUC α il 30	FANUC α il 22	FANUC α il 30	FANUC α il(T)22	FANUC α ilT 26
Speed	rpm	4,000	4,000	6,000	6,000	10,000	10,000/ 12,000
Power(Cont./30min.)	KW	22/ 26	30/ 37	22/ 26	30/ 37	22/ 26	26/ 30
Torque (Cont./30min.)	Nm	704/ 832	1,251/ 1,543	608/ 719	1,082/ 1,334	L: 140/ 166 H: 53/ 62	L: 239/ 350 H: 99/ 115
Tool type	-	BBT50	BBT50	BBT50	BBT50	BBT50	BBT50

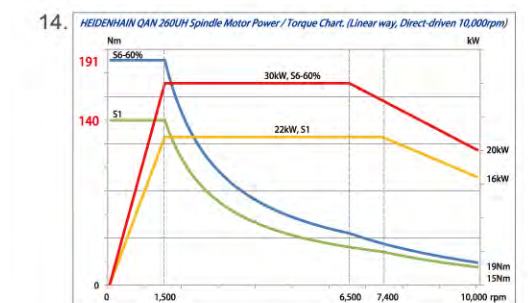
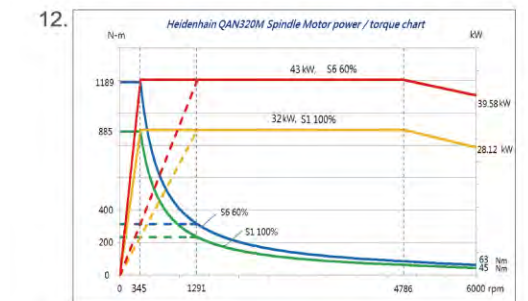
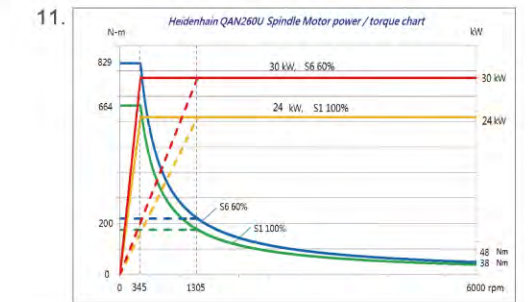
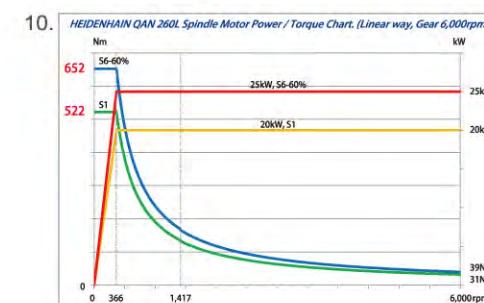
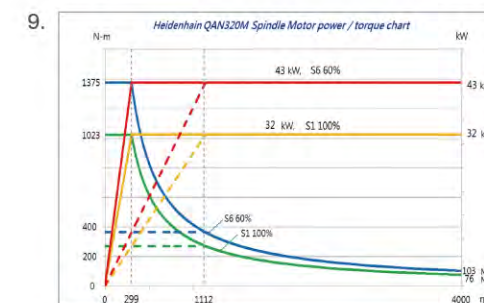
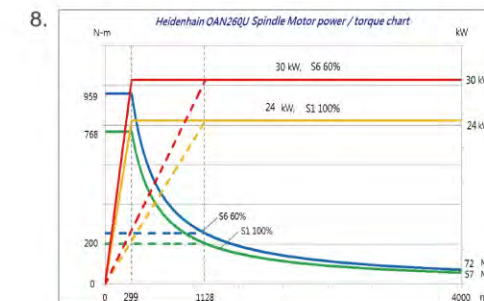
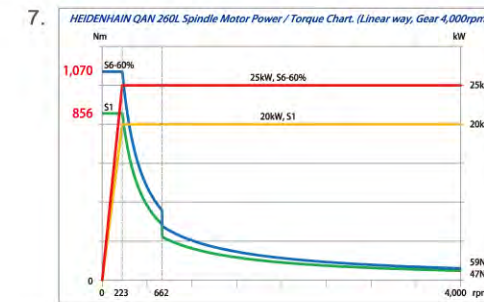


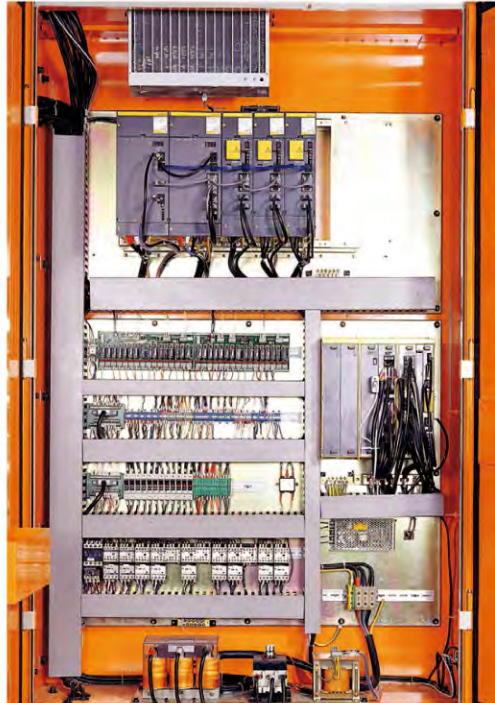
Spindle Power and Torque Charts

Linear way, Enclosed Box Ram/ Dual ballscrews

HEIDENHAIN Controller

Drive type		Gear Spindle						Direct-Driven Spindle	
Pic. No.		7	8	9	10	11	12	13	14
Motor type	-	QAN 260L	QAN 260U	QAN 320M	QAN 260L	QAN 260U	QAN 320M	QAN 260U	QAN 260UH
Speed	rpm	4,000	4,000	4,000	6,000	6,000	6,000	10,000	10,000
Power(Cont./30min.)	KW	20/ 25	24/ 30	32/ 43	20/ 25	24/ 30	32/ 43	24/ 30	22/ 30
Torque(Cont./30min.)	Nm	856/ 1,070	768/ 959	1,023/ 1,375	522/ 652	664/ 829	885/ 1,189	153/ 191	140/ 191
Tool type	-	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50





Safe, Friendly and Reliable Operation Device

- Safe and reliable electrical circuit design
- CE compliant safety circuit design
- CE compliant EU regulation electrical parts for whole machine
- Anti-interference design on motor power cables
- Heat exchanger for electrical cabinet
- Main power protecting device
- Ethernet and RJ45 interface
- USB port(opt.)



● Centralized auto lubrication system



● Coolant through spindle



● Contact automatic tool length measurement



● Modularized machine design for oil cooling device and hydraulic unit.

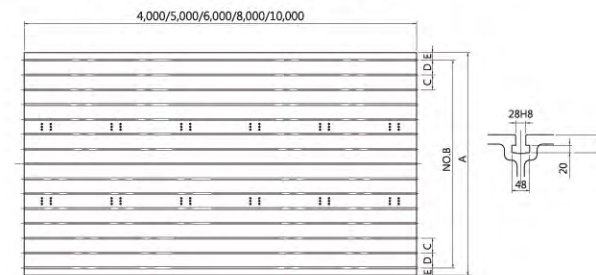


● Fluid nozzle for spindle provides best spray angle.
(not available for head attachment)



● Tool length measurement device at magazine side for mold cutting to change tool fast.

Table Dimension

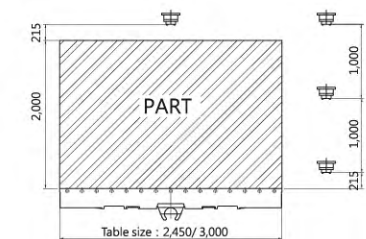


Unit:mm

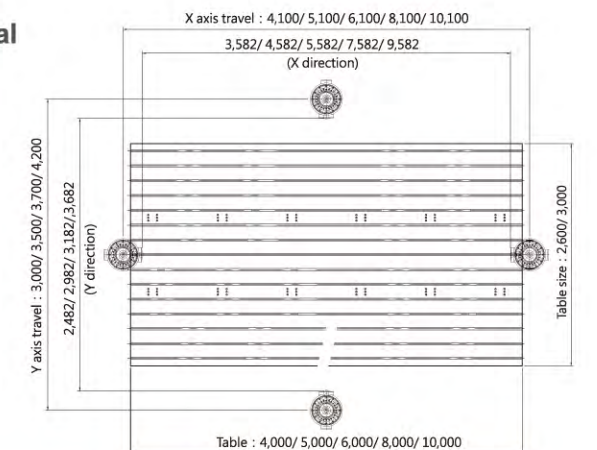
Model	A	B	C	D	E
BM-xx30/37	2,450	13 (pcs)	200	150	150
BM-xx35/42	3,000	13 (pcs)	250	150	100

Working Range

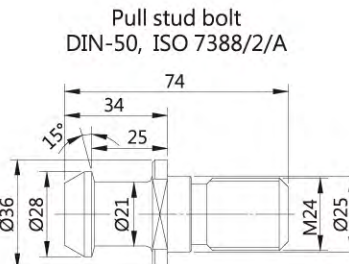
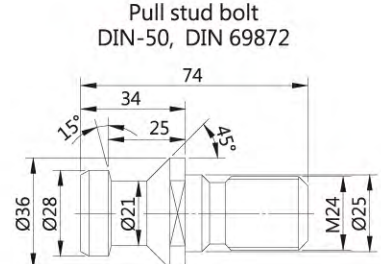
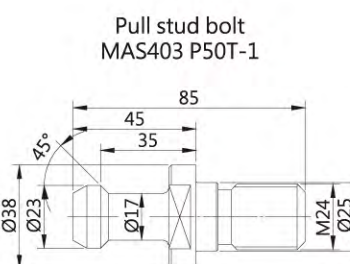
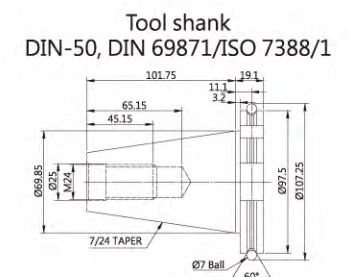
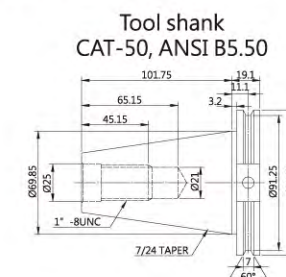
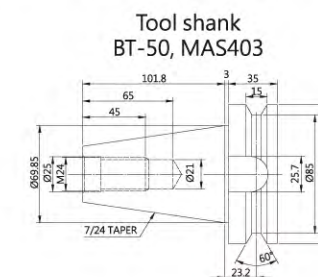
Vertical



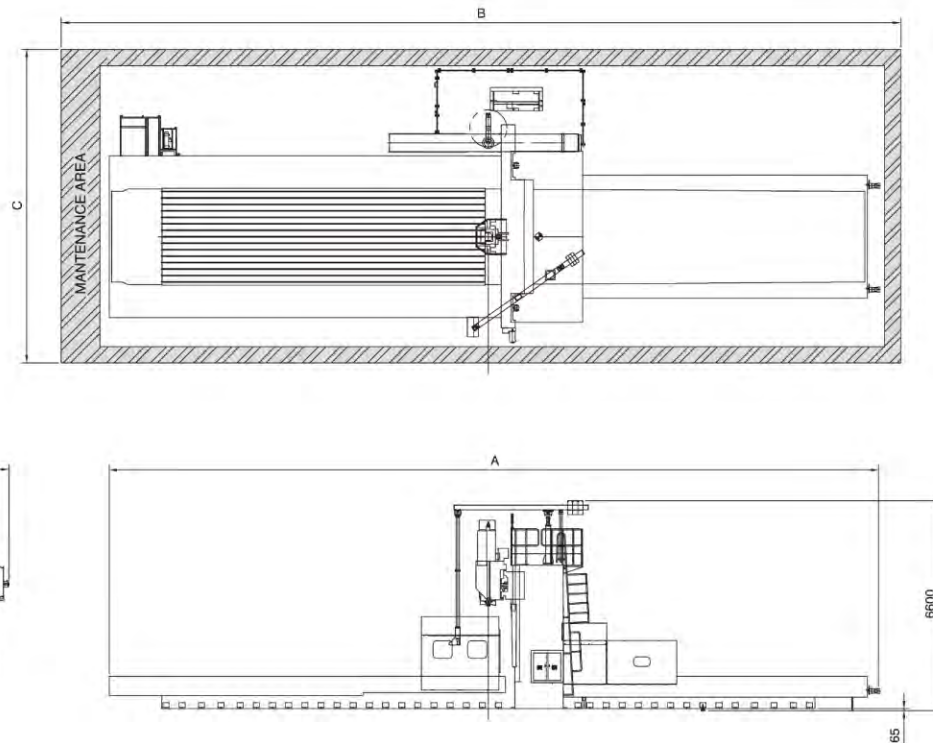
Horizontal



Tool Shank & Pull Stud



Machine Dimension



Unit:mm

MODEL	A	B	C	D
BM-4030	12,000	14,000	8,700	7,500
BM-5030	14,000	16,000		
BM-6030	16,000	18,000		
BM-8030	20,000	22,000		
BM-10030	24,000	26,000		
BM-4037	12,000	14,000	9,200	8,000
BM-5037	14,000	16,000		
BM-6037	16,000	18,000		
BM-8037	20,000	22,000		
BM-10037	24,000	26,000		
BM-4035	12,000	14,000	9,200	8,000
BM-5035	14,000	16,000		
BM-6035	16,000	18,000		
BM-8035	20,000	22,000		
BM-10035	24,000	26,000		
BM-4042	12,000	14,000	9,700	8,500
BM-5042	14,000	16,000		
BM-6042	16,000	18,000		
BM-8042	20,000	22,000		
BM-10042	24,000	26,000		

BM Specification | BM-xx30/37 Series

Model			Unit	BM-4030 BM-4037	BM-5030 BM-5037	BM-6030 BM-6037	BM-8030 BM-8037	BM-10030 BM-10037
Travel								
X axis			mm	4,100	5,100	6,100	8,100	10,100
Y axis			mm	3,000 / 3,700				
Z axis	Linear way		mm	1,000 / 1,200(opt.) /1,400(Opt.)				
W axis			mm	1,000 / 1,200(opt.) /1,500(Opt.)				
Distance from spindle nose to table	Linear way & enclosed box ram / dual ballscrews (2-step gear / direct driven)	Z axis =1,000/ W axis=1,000	mm	295~2,295			245~2,245	
		Z axis =1,200/ W axis=1,200	mm	95~2,495 (column heightened by 200 mm)			45~2,445 (column heightened by 200 mm)	
		Z axis =1,400/ W axis=1,500	mm	15~2,795 (column heightened by 500 mm)			15~2,745 (column heightened by 500 mm)	
Distance between columns (port width)			mm	3,000				
Table								
Table size (X direction x Y direction)			mm	4,000x2,450	5,000x2,450	6,000x2,450	8,000x2,450	10,000x2,450
T-slot (width x number x pitch)			mm	28 x 13 x 200(150)				
Max. table load			kg	16,000	20,000	22,000	24,000	26,000
Spindle								
Spindle speed	2-step gear		rpm	22 / 26 kW: 4,000 / 6,000 (Opt.)				
	Direct-driven		rpm	8,000 (Opt.) / 10,000 (Opt.)				
Spindle power(cont./30 min.)			kW	22 / 26 (30 / 37 Opt.)				
Spindle taper			-	BBT-50				
Feed								
Cutting feed rate			mm/min	XYZ:1-7,000 W:1,000				
Rapid traverse			m/min	10 / 10 / 12 / 2			8 / 10 / 12 / 2	
4 axes motor power (FANUC) (X/Y/Z/W)			kW	9 / 9 / 4.5 x 2 / 9 x 2				
Accuracy								
Positioning accuracy (JIS B6333)			mm	±0.015 Full travel				
Positioning accuracy (ISO-230-2 & VDI 3441)			mm	Ps0.045 P0.050				
Repeatability (JIS B6333)			mm	±0.003				
Repeatability (ISO-230-2 & VDI 3441)			mm	Ps0.035 Ps0.040				
ATC *								
Tool magazine capacity	Floor-standing vertical type tool change		pcs	40 / 60(Opt.) / 90(Opt.)				
	Floor-standing type vertical-horizontal tool change (fixed)		pcs	40(Opt.) / 60(Opt.) / 90(Opt.)				
	Floor-standing type vertical-horizontal tool change (random)		pcs	40(Opt.) / 60(Opt.) / 90(Opt.)				
Max. tool weight			kg	20				
Max. tool diameter (full / next pockets empty)			mm	Ø125 / Ø125				
Max. tool length			mm	450				
Tool shank			-	BBT-50				
Pull stud			-	P50T-1				
General								
Power requirement			kVA	85				
Pneumatic requirement			kg/cm ²	6				
Machine net weight			kg	60,000 / 62,000	64,000 / 66,000	70,000 / 72,000	82,000 / 84,000	90,000 / 92,000
Floor space (LxWxH)	Floor-standing vertical type tool change		m	14x8.7x6.6	16x8.7x6.6	18x8.7x6.6	22x8.7x6.6	26x8.7x6.6
	Floor-standing type vertical-horizontal tool change		m	14x9.2x6.6	16x9.2x6.6	18x9.2x6.6	22x9.2x6.6	26x9.2x6.6

BM Specification | BM-xx35/42 Series

Model			Unit	BM-4035 BM-4042	BM-5035 BM-5042	BM-6035 BM-6042	BM-8035 BM-8042	BM-10035 BM-10042
Travel								
X axis			mm	4,100	5,100	6,100	8,100	10,100
Y axis			mm	3,500 / 4,200				
Z axis	Linear way		mm	1,000 / 1,200(opt.) / 1,400(Opt.)				
W axis			mm	1,000 / 1,200(opt.) / 1,500(Opt.)				
Distance from spindle nose to table	Linear way & enclosed box ram / dual ballscrews (2-step gear / direct driven)	Z axis =1,000/ W axis=1,000	mm	215~2,215				
		Z axis =1,200/ W axis=1,200	mm	15~2,415 (column heightened by 200 mm)				
		Z axis =1,400/ W axis=1,500	mm	15~2,715 (column heightened by 500 mm)				
Distance between columns (port width)			mm	3,500				
Table								
Table size (X direction x Y direction)			mm	4,000x3,000	5,000x3,000	6,000x3,000	8,000x3,000	10,000x3,000
T-slot (width x number x pitch)			mm	28 x 13 x 250(150)				
Max. table load			kg	20,000	24,000	28,000	32,000	26,000
Spindle								
Spindle speed	2-step gear		rpm	22 / 26 kW: 4,000 / 6,000 (Opt.)				
	Direct-driven		rpm	8,000 (Opt.) / 10,000 (Opt.)				
Spindle power(cont./30 min.)			kW	22 / 26 (30 / 37 Opt.)				
Spindle taper			-	BBT-50				
Feed								
Cutting feed rate			mm/min	XYZ:1-7,000 W:1,000				
Rapid traverse			m/min	10 / 10 / 12 / 2		8 / 10 / 12 / 2		
4 axes motor power (FANUC) (X/Y/Z/W)			kW	9 / 9 / 4.5 x 2 / 9 x 2				
Accuracy								
Positioning accuracy (JIS B6333)			mm	±0.015 Full travel				
Positioning accuracy (ISO-230-2 & VDI 3441)			mm	Ps0.045 P0.050				
Repeatability (JIS B6333)			mm	±0.003				
Repeatability (ISO-230-2 & VDI 3441)			mm	Ps0.035 Ps0.040				
ATC *								
Tool magazine capacity	Floor-standing vertical type tool change		pcs	40 / 60(Opt.) / 90(Opt.)				
	Floor-standing type vertical-horizontal tool change (fixed)		pcs	40(Opt.) / 60(Opt.) / 90(Opt.)				
	Floor-standing type vertical-horizontal tool change (random)		pcs	40(Opt.) / 60(Opt.) / 90(Opt.)				
Max. tool weight			kg	20				
Max. tool diameter (full / next pockets empty)			mm	Ø125 / Ø215				
Max. tool length			mm	450				
Tool shank			-	BBT-50				
Pull stud			-	P50T-1				
General								
Power requirement			kVA	85				
Pneumatic requirement			kg/cm ²	6				
Machine net weight			kg	66,000 / 68,000	70,000 / 72,000	76,000 / 78,000	90,000 / 92,000	98,000 / 100,000
Floor space (LxWxH)	Floor-standing vertical type tool change		m	14x9.2x6.6	16x9.2x6.6	18x9.2x6.6	22x9.2x6.6	26x9.2x6.6
	Floor-standing type vertical-horizontal tool change		m	14x9.7x6.6	16x9.7x6.6	18x9.7x6.6	22x9.7x6.6	26x9.7x6.6

Standard & Optional Accessories

Standard

- 1 FANUC 0iMF Plus Controller
- 2 4,000 rpm 2-step gear type spindle
- 3 Z axis travel 1,000 mm
- 4 Spindle cooling system
- 5 Air blast through spindle
- 6 X/Y/Z axis absolute pulse coder feedback
- 7 Dual linear scales for W axis
- 8 Twin hydraulic cylinders with pressured nitrogen assistance counterweight system for Z axis
- 9 Twin hydraulic cylinders with automatic pressure tuning for W axis
- 10 Hydraulic braking system for W axis
- 11 X/Y axis ball screw supporting device (X axis travel ≥ 4 m, Y axis travel ≥ 3 m)
- 12 Cutting fluid cooling system
- 13 Centralized auto lubrication system
- 14 Independent lubrication oil collector
- 15 Floor-standing vertical type tool magazine 40 tools
- 16 Sheet metal guard (four-piece type)
- 17 Swiveling arm type operation panel
- 18 Movable manual pulse generator
- 19 Screw type chip conveyor on table sides
- 20 Steel belt chip conveyor / water tank
- 21 Heat exchanger for electrical cabinet
- 22 Wash gun and pneumatic interface
- 23 Vision Wide FX graphical user interface
- 24 RJ45 interface
- 25 Working lamp
- 26 Operation cycle finish and alarm light
- 27 Remote monitoring software (standard)
- 28 Foundation pads and bolts kits
- 29 Adjustment tool and tool kits
- 30 Technical manuals (operation, maintenance manual and circuit diagram)

Optional

- 1 FANUC 31iB / HEIDENHAIN TNC 640 / SIEMENS 828D / SIEMENS ONE / MITSUBISHI M80 TypeA / MITSUBISHI M830 Controller
- 2 Enclosed Box Ram 4,000 / 6,000 rpm 2-step gear type spindle
- 3 Enclosed Box Ram 110,000 / 12,000 rpm direct driven spindle
- 4 Enclosed Box Ram 8,000 / 12,000 rpm built-in spindle
- 5 Z axis travel 1,200 / 1,400 mm (enclosed Box Ram)
- 6 Column heightened by 200 / 300 / 400 mm (W axis travel 1,200 mm)
- 7 Column heightened by 500 mm (W axis travel 1,500 mm)
- 8 Coolant through spindle system 20 / 70 bar
- 9 The interface of coolant through spindle
- 10 Coolant through tool holder 5 / 18 bar cutting fluid system
- 11 X/Y/Z axis linear scale
- 12 Oil skimmer
- 13 Oil mist cooling device (MQL)
- 14 Floor-standing vertical type tool magazine 60 / 90 tools
- 15 Floor-standing vertical-horizontal type tool magazine 40 / 60 / 90 tools
- 16 Enclosed sheet metal guard (without roof)
- 17 Overhead pendulum type operation panel
- 18 XYZ axis independent manual pulse generator (only for FANUC)
- 19 Air conditioning for electrical cabinet
- 20 Auto tool measurement
- 21 Auto workpiece measurement
- 22 Interface reserved for fourth axis
- 23 Sub working table
- 24 Rotary table
- 25 Transformer
- 26 Anti-collision and proecess simulation software
- 27 Remote monitoring software (professional)
- 28 Tool axis retract function at power failure

Optional Accessory for Auto Head Attachment

- 1 Auto AC 90° angular head / AC 2-axis head / AC extended head
- 2 Auto AC milling head / small head / customized head attachment
- 3 Auto AC 90° angular head / AC 2 axis head / AC extended head offered the CTS system
- 4 40/60/90T vertical-horizontal type fixed point tool changing (for BM-xx37 / 42 series)
- 5 40/60/90T vertical-horizontal type random point tool changing (for BM-xx37 / 42 series)
- 6 Auto multi-heads magazine on magazine side (only for BM-xx37 / 42 series)