ΠΑΧΠΙΙ

KOLOSSO Series

Bridge Type Machining Center



Maxmill Machinery CO., Ltd.

No.90, Alley 189, Wuguang Rd., Wuri District, Taichung City 41470, Taiwan Tel: +886-4-2338 8879 Fax: +886-4-2336 1750 E-mail: sales@maxmill-cnc.com.tw http://www.maxmill-cnc.com JUN 2021E





KOLOSSO Bridge Type Machine Center

High Rigidity Cross Beam

The cross beam is designed with high strength "Internal Circular Wall",which features excellent torsion-resistant capability,and suppresses cross beam's structural deformation caused by the big span between slideways.



High Rigidity Table

The table is double-wall constructed to enhance its rigidity and effeceively increases machining stability.



Rigid Saddle

The cross beam saddle is equipped with 5 slide roller blocks to enhance cutting rigidity and capacity of the Z-axis.





X,Y-axis roller ways Z-axis box way Outstanding Stability

The X and Y-axis are mounted with high speed heavy duty roller ways ; while the Z-axis is box way designed for heavy load. The Z-axis is designed with box ways to ensure outstanding stability during cutting



Oversized ball screws

The X and Y-axes ball screws are 63mm resulting in enhanced regidity.



High strength stop blocks

The 3 axes ball screw seats are supported with stop blocks to increase axial rigidity and enhance accuracy.



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KOLOSSO

Extreme Machining Ability



Coolant stop plate on X-axis

Automatic lubrication system

The centralized automatic lubrication

system features pressure detection to prevent oil blockageand to avoid severe

wear caused by lubrication failure.

The telescopic guard on X-axis is equipped with an additional plate that reduces the possibility of chips and coolant entering into the machine interior.



ATC Side-mounted chain type

32 tools (Standard)

- 40 / 60 tools (Optional)
- The ATC with automatic door is dependently mounted to avoid contamination from cutting chips and coolant.



- >> The magazine accommodates BT 50 tool shank.
- Random tool selection allows tool change to be accomplished quickly in only 8 seconds.



Characteristic

>> LED Working Lamp

The standard LED lamp features high brightness, long life and water-proof. (IP67 protection grade)

>> Control pendant

The ergonomic design of the control pendant provides added convenience of operation.

>> Pneumatic parts

The pneumatic systems are deployed together for convenient air regulating and easy maintenance.

>>> Stepped cross beam

The slideways on the cross beam is developed in step manner, capable of sustaining heavy load , and increased axial motion stability.

>> Absolute positioning control

The 3 axes are installed with external position encoder, providing a close-loop positioning control.

>> Linear scales on three axes (opt.)

Heidenhain or Fagor linear scales are avaliable to achieve better positioning accuracy.





>> Powerful gear-drive spindle

The spindle is driven by a powerful gearbox with 30mm thick gear (conventional gear thickness is 20-25 mm)resulting in heavy cutting capability.

>> Two hydraulic cylinders for counter-balance

The Z-axis feed is counter-balanced by two hydraulic cylinders. Automatic counter-balanced adjustment assures high accuracy.

>> Coolant through ball screw(opt.)

Coolant through ball screw is utilized to limit thermal deformation on the ball screw caused by thermal growth resulting in higher precision machining.

Roller way slide blocks

The machine is fitted with heavy duty roller way slide blocks.Distance between slide blocks is 500 mm.

>> The rated dynamic loading capacity is 130.5KN.



- 8 blocks layout for model with2-meter door width.
- >> 12 blocks layout for model with 3-meter door width.



Full splash guards (with top roof- opt.)

>> Full splash guards (with top roof-opt.) while door is closed.

- >> Wide door open space for workpiece loading/unloading.
- >> Movable doorstand between small door make more bigger .







Machine Dimensions

									Unit : mm
		A	в	C		Е	F	G	н
KOLOSSO SERIES	Z-axis stroke	Between Two Columns	M/C Height	Width	M/C Length	Table to Ground	Height	tool center of 90° angular head to table (Horizontal)	Spindle to Table Top (Vertical)
BMC-2218 BMC-2221		1700 2000		4435 4735	6400				
BMC-3218 BMC-3221	850 (opt.1050)	1700 2000	4535 (opt.4935)	4435 4735	8400	850	2060	120~850 (opt.120~1050)	200~1050 (opt.200~1250)
BMC-4218 BMC-4221		1700 2000		4435 4735	10400				

* The content size by the standard specification desinition, specially heighten column, please inquiry separately.

** The tool center of 90 degree head to table is TYPE I. If would like to know other configurations, please contact with sales department.









KOLOSSO	Vcrt	ical Working	Arca	Horizontal Working Area						
SERIES	A	В	С	C	D	E	F	G		
BMC-2218 BMC-2221 BMC-3218 BMC-3221 BMC-4218 BMC-4221	1800 2100 1800 2100 1800 2100	2000 3000 4000	Gear type 200~1050 (opt.200~1250) D type #BT40 245~1095 (opt.245~1295) #BT50 223~1073 (opt.223~1273)	TYPE:I 120~850 (opt.120~1050) TYPE:IV 120~700 (opt.120~900)	718 868 718 868 718 868 868	718 868 718 868 718 868 868	1836 	120		

NOTE :

NOTE:
* The working area will be changed according to the choice accessories different. The related matters concerned please contact the sales personal of Maxmill.
** The height of vertical working area calculates by spindle nose to table. The working height will be reduced according to the using tool length.
*** D&E : Table center to Spindle Nose.
**** If the required travel is more than D&E. Please contact our sales person firstly.
***** Horizontal machining (for X axial) : Working area is between both spindle noses.
***** Horizontal machining of "C" is 90 degree head center to table.





If you choose 90 degree head. The controller will be a pendent control box as standard.

Unit : mm

Double Column Machining Center Specification : (X,Y axis : Linear Guide Way ; Zaxis: Box Way)

Xaismmm(hch)2200 (86.0)2200 (86.0)3200 (12.0)3200 (12.0)4200 (16.5.4)4200	TRAVEL		BMC-2218	BMC-2221	BMC-3218	BMC-3221	BMC-4218	BMC-4221	
Yanis (+stand for tool -lange)Indivery (x)	X axis	axis mm(inch)		2200 (86.6)	3200 (126.0) 3200 (126.0)		4200 (165.4)	4200 (165.4)	
Zaisimmin(m)8500pt1050.0335 (ppt.413)8500pt1050.0335 (ppt.413)8500pt1050.0355 (ppt.413) </td <td colspan="2">Y axis (+travel for tool change) mm(inch)</td> <td>1,800 (+250) (70.8+9.9)</td> <td>2,100 (+250) (82.6+9.9)</td> <td>1,800 (+250) (70.8+9.9)</td> <td>2,100 (+250) (82.6+9.9)</td> <td>1,800 (+250) (70.8+9.9)</td> <td colspan="2">2,100 (+250) (82.6+9.9)</td>	Y axis (+travel for tool change) mm(inch)		1,800 (+250) (70.8+9.9)	2,100 (+250) (82.6+9.9)	1,800 (+250) (70.8+9.9)	2,100 (+250) (82.6+9.9)	1,800 (+250) (70.8+9.9)	2,100 (+250) (82.6+9.9)	
spindle nose to table(Gear type)mm(nck)200-1050(200-1250) 7.9-113 (7.9-42)200-1050(200-1250) 7.9-113 (7.9-42)2000 (7.0)2000 (7.0)Spindle note motion to the minimal type in the minima	Z axis mm(inch)		850(opt.1050) (33.5 (opt.41.3))						
Diatance between columsmm(inch)552 (21.7)552	Spindle nose to table(Gear type)	mm(inch)	200~1,050(200~1,250) 7.9~41.3 (7.9~49.2)						
Distance between columns m(nch) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (66.9) 2000 (78.7) 1700 (78.	Distance between Spindle center to column	mm(inch)	552 (21.7)	552 (21.7) 552 (21.7)		552 (21.7)	552 (21.7)	552 (21.7)	
SPINOLE v<	Distance between columns	mm(inch)	1700 (66.9)	2000 (78.7)	1700 (66.9)	2000 (78.7)	1700 (66.9)	2000 (78.7)	
Spindle speedrpmS0 -6.000S0 -6.000<	SPINDLE								
Spindle motor max ratifykw18.5 (OPT.26)18.5 (OPT.26)12.7 (2.5 (PT.26))12.7 (2.5	Spindle speed	rpm	50~6,000	50~6,000	50~6,000	50~6,000	50~6,000	50~6,000	
$ \begin{split} \begin{tabular}{ c c c c } \hline Table $$ Variable $$$	Spindle motor max. rating	kw	18.5 (OPT.26)	18.5(OPT.26)	18.5(OPT.26)	18.5(OPT.26)	18.5(OPT.26)	18.5(OPT.26)	
Number in the interval of	Taper size		BT-50	BT-50	BT-50	BT-50	BT-50	BT-50	
	TABLE								
Max. loading kgs 8.000 8.000 10.000 10.000 12.000 12.000 T.slot(No.XWidtx yitch) mm(inch) 10 x 22 x150 12 x 12 x 2x 150 12 x 12 x 12 x 12	Working area	mm(inch)	2,000 x 1,500 (78.8 x 59.1)	2,000 x 1,800 (78.8 x 70.9)	3,000 x 1,500 (118.1 x 59.1)	3,000 x 1,800 (118.1 x 70.9)	4,000 x 1,500 (157.5 x 59.1)	4,000 x 1,800 (157.1 x 70.9)	
T-starts/No.x With x pitchmm(inch)10 x 22 x 150 (10 x 0.8 x 6.0)10 x 22 x 150 (10 x 0.8 x 6.0)10 x 22 x 150 (10 x 0.8 x 6.0)10 x 22 x 150 (10 x 0.8 x 6.0)12 x 22 x 150 	Max. loading	kgs	8,000	8,000	10,000	10,000	12,000	12,000	
1 s 0 G (0 X W dth X plct)mm (mb)(10 x 0.8 x 6.0)(10 x 0.8 x 6.0)(10 x 0.8 x 6.0)(10 x 0.8 x 6.0)(10 x 0.8 x 6.0)FEER ATLESRapid in X/V/Z axism/min20 / 20 / 1510 / 10<	T slots(No v Width v nitch)	<i>c</i>	10 x 22 x 150	12 x 22 x 150	10 x 22 x 150	12 x 22 x 150	10 x 22 x 150	12 x 22 x 150	
FEED RATES Rapidi NX/V/2 axis m/min 20 / 20 / 15 20 / 20 / 20 / 15 20 / 20 / 20 / 15 20 / 20 / 20 / 15 20 / 20 / 20 / 15 20 / 20 / 20 / 15 20 / 20 / 20 / 20 / 20 20 / 20 / 20 / 20 / 20 20 / 20 / 20 / 20 / 20 20 / 20	1-slots(NO.x Width x pitch)	mm(inch)	(10 x 0.8 x 6.0)	(12 x 0.8 x 6.0)	(10 x 0.8 x 6.0)	(12 x 0.8 x 6.0)	(10 x 0.8 x 6.0)	(12 x 0.8 x 6.0)	
Rapid in X/Y/Z axism/min20 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1520 / 20 / 1510127 (5.0)127 (5.0)127 (5.0)127 (5.0)127 (5.0)127 (5.0)127 (5.0)127 (5.0)13 <th< td=""><td>FEED RATES</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	FEED RATES								
Cutting feedratem/min1010101010TOOL MAGAZIVETool MAGAZIVETool MAGAZIVEValuation of the second colspan="4">Valuation of the second colspan="4" <td cols<="" td=""><td>Rapid in X/Y/Z axis</td><td>m/min</td><td>20 / 20 / 15</td><td>20 / 20 / 15</td></td>	<td>Rapid in X/Y/Z axis</td> <td>m/min</td> <td>20 / 20 / 15</td>	Rapid in X/Y/Z axis	m/min	20 / 20 / 15	20 / 20 / 15	20 / 20 / 15	20 / 20 / 15	20 / 20 / 15	20 / 20 / 15
TOOL MAGAZIVE Tool number image: state stat	Cutting feedrate	m/min	10	10	10	10	10	10	
Tool number is 32(OPT.40/60)	TOOL MAGAZINE								
Max. tool diameter mm(inch) 127 (5.0) 127 (5.0) 127 (5.0) 127 (5.0) 127 (5.0) 127 (5.0) Max. tool weight kgs 15 15 15 15 Max. tool length mm(inch) 300 (11.8) <	Tool number		32(OPT.40/60)	32(OPT.40/60)	32(OPT.40/60)	32(OPT.40/60)	32(OPT.40/60)	32(OPT.40/60)	
Max. tool weight kgs 15 15 15 15 Max. tool length mm(inch) 300 (11.8) 300 (11.8) 300 (11.8) 300 (11.8) 300 (11.8) Tool to tool (charget meter) sec 8 8 8 8 8 8 8 ACCURACY Positioning VDI 3441 mm(inch) P0.02 (0.008) P0.02 (0.008) P0.02 (0.008) P0.025 (0.01) P0.03 (0.012) P0.03 (0.012) Repeatability VDI 3441 mm(inch) P0.02 (0.008) P0.02 (0.008) P0.02 (0.008) P0.02 (0.008) P0.02 (0.008) P0.03 (0.012)	Max. tool diameter	mm(inch)	127 (5.0)	127 (5.0)	127 (5.0)	127 (5.0)	127 (5.0)	127 (5.0)	
Max. tool length mm(inch) 300 (11.8) 80 8	Max. tool weight	kgs	15	15	15	15	15	15	
Tool to tool (charjetime) sec 8 8 8 8 8 ACCURACY Account VD1 3441 mm(inch) P0.02 (0.0008) P0.02 (0.0008) P0.025 (0.001) P0.025 (0.001) P0.03 (0.0012) P0.03 (0.0012) Repeatability VD1 3441 mm(inch) P0.02 (0.0008) P0.025 (0.001) P0.025 (0.001) P0.03 (0.0012) P0.03 (0.0012) Repeatability VD1 3441 mm(inch) P0.0015 (0.0006) P0.025 (0.0010) P0.025 (0.0010) P0.025 (0.0010) P0.025 (0.0010) CHERS Start Source required kg/cm² 6	Max. tool length	mm(inch)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)	300 (11.8)	
ACCURACY Positioning VDI 3441 mm(inch) P0.02 (0.0008) P0.02 (0.0008) P0.025 (0.001) P0.03 (0.0012) P0.03 (0.0012) Repeatability VDI 3441 mm(inch) Ps0.015 (0.0006) Ps0.015 (0.0006) Ps0.02 (0.0008) Ps0.02 (0.0008) Ps0.025 (0.0010) Ps0.025 (0.0010) CHERS VIII 3441 Kg/cm ² 6 6	Tool to tool (change time)	sec	8	8	8	8	8	8	
Positioning VDI 3441 mm(inch) P0.02 (0.008) P0.02 (0.008) P0.025 (0.001) P0.03 (0.012) P0.03 (0.0012) Repeatability VDI 3441 mm(inch) Ps0.015 (0.0006) Ps0.02 (0.008) Ps0.02 (0.008) </td <td>ACCURACY</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	ACCURACY								
Repeatability VDI 3441 mm(inch) Ps0.015 (0.0006) Ps0.02 (0.0008) Ps0.02 (0.0008) Ps0.025 (0.0010) Ps0.025 (0.0010) OTHERS Air source required kg/cm ² 6 6 6 6 6 Machine weight kg 24,000 25,500 27,500 29,000 31,000 32,500 Power source required KVA 50 50 50 50 50 50	Positioning VDI 3441	mm(inch)	P0.02 (0.0008)	P0.02 (0.0008)	P0.025 (0.001)	P0.025 (0.001)	P0.03 (0.0012)	P0.03 (0.0012)	
OTHERS Air source required kg/cm ² 6 6 <t< td=""><td>Repeatability VDI 3441</td><td>mm(inch)</td><td>Ps0.015 (0.0006)</td><td>Ps0.015 (0.0006)</td><td>Ps0.02 (0.0008)</td><td>Ps0.02 (0.0008)</td><td>Ps0.025 (0.0010)</td><td>Ps0.025 (0.0010)</td></t<>	Repeatability VDI 3441	mm(inch)	Ps0.015 (0.0006)	Ps0.015 (0.0006)	Ps0.02 (0.0008)	Ps0.02 (0.0008)	Ps0.025 (0.0010)	Ps0.025 (0.0010)	
Air source required kg/cm ² 6 6 6 6 6 Machine weight kg 24,000 25,500 27,500 29,000 31,000 32,500 Power source required KVA 50 50 50 50 50 50 50	OTHERS								
Machine weight kg 24,000 25,500 27,500 29,000 31,000 32,500 Power source required KVA 50 10,900, 4,435, 4,455	Air source required	kg/cm ²	6	6	6	6	6	6	
Power source required KVA 50 50 50 50 50 Power source required KVA 50 </td <td>Machine weight</td> <td colspan="2">kg 24,000</td> <td>25,500</td> <td>27,500</td> <td>29,000</td> <td>31,000</td> <td>32,500</td>	Machine weight	kg 24,000		25,500	27,500	29,000	31,000	32,500	
C 000 v 4 425 v 4 525 C 000 v 4 725 v 4 525 C 000 v 4 425 v 4 525 C 000 v 4 425 v 4 525 C 10 000 v 4 425 V 4 525 C 10 000 v 4 425 C 10 000 v 4	Power source required	KVA	50	50	50	50	50	50	
Floor space(L x W x H) mm(inch) mm(inch	Floor space(L x W x H)	mm(inch)	6,800 x 4,435 x 4,535	6,800 x 4,735 x 4,535	8,800 x 4,435 x 4,535	8,800 x 4,735 x 4,535	10,800 x 4,435 x 4,535	10,800 x 4,735 x 4,535	

*Distance from spindle nose to table, Direct driven Spindle: #50 taper:188~1038 (opt.188~1238) / #40 taper: 245~1095 (opt. 245~1295)

STANDARD ACCESSORIES

- Fanuc 0i-MF controller
- » BT-50 / Spindle speed 6,000 rpm (Gear)
- » 32 tools chain-type tool change
- » Twin screw and one link chip conveyor with chip bucket
- Full splash guard (Without top roof)
 Heat exchanger for electric cabinet
- Foot switch for tool clamping / unclamping
- Twin hydraulic counter weight cylinders
- Cycling lubricating oil collector for 3 axes
- Automatic lubricating system
- » Automatic lubricating system
- » Spindle air blast system (M code)

- » X,Y axes linear way (Roller Type) ; Z axis: box way
- » Coolant gun and air socket
- Foundation bolt kit
- » Remote manual & pulse generator (M.P.G.)
- » LED light
- » Rigid tapping
- » Cycle finish indicator and alarm lights
- » RS-232 interface with cable (10m) (M/F)
- » Oil skimmer
- » Operational and maintenance manual
- Transformer (M/F)

OPTIONAL ACCESSORIES

- » Controller (MITSUBISHI / SIEMENS / HEIDENHAIN)
- » Z axis travel up to 1,050 mm
- » ATC (24 / 40 / 60 tools)
- » Spindle speed 10,000 rpm (Direct drive)
- » 30 HP spindle motor upgrade
- >> Ball screw cooling system (X/Y/Z axis)
- » Manual 90 degree head
- » Manual universal head
- » Automatic tool length measuring device
- » Automatic work piece measurement system
- » Coolant through spindle (CTS) 20bar / 70bar

% (M/F)=(Mitsubish/Fanuc Controller)

- » Linear scales (X/Y/Z axis)
- » CNC rotary table and tailstock
- Full splash guard (With top roof)