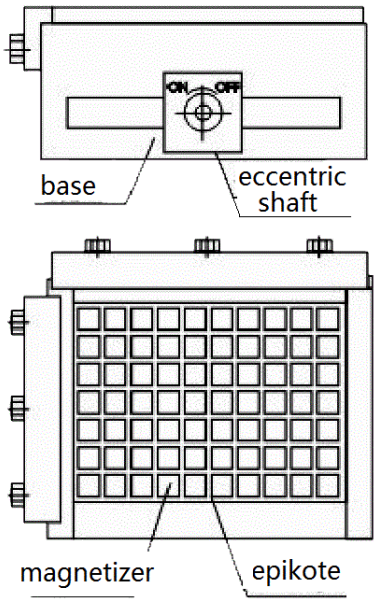
CATALOGUE

Attention: Please understand the manual carefully before use the product, anything is not very clear, please contact with us or distributor, Make it clear the operate it.

1 MAIN APPLICATION AND CHARACTERISTIC



PMQC series matrix permanent magnet chuck is a kind of new product of magnetic chuck, Adopt brand new workmanship. There are two types of the permanent magnetic chuck, normal type (GX series) is applied to grinding machine and facing machine, strong type is applied to and milling machine and CNC, Its particular magnetic structure gives full play to high magnetic induction intensity, high magnetic energy product, high compress and gathering ability of tombarthite magnet, make it to clamp the workpiece with maximum magnetic force. Holding force is more than 16kg/cm2. It is suitable for processing of high precision workpiece, sheet workpiece and mould.

The magnetic chuck has high precision itself; it can guarantee the precision of workpiece from 2um/100mm. As it doesn't need electricity, the workpiece won't move in no power supply condition. And won't generate heat even for long time using.

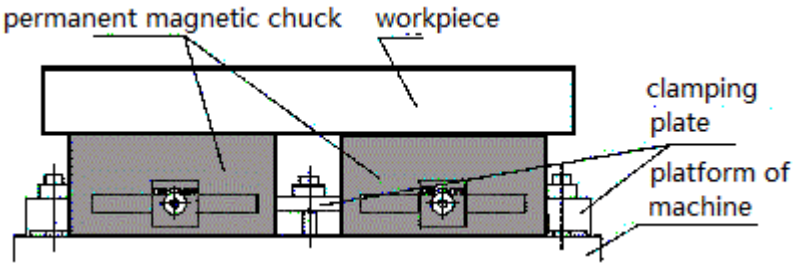
Distinctive design of magnetic circuit produces super strong and even attraction;

high-performance quality magnetic steel holds attraction for long time stability.

Strong attraction come from parallel poles combination, dense distribution of magnetic poles emerges intensive magnetic field. It releases the inner stress of workpieces to improve precision in processing simultaneously.

Poles combined as matrix, magnetic bundles are mutually perpendicular, interweave densely, permeate into the bottom of workpiece equality, magnetic bundles are shallow and magnetic circuit densely, it can attract more than 2mm thickness sheet for grinding or milling operation.

The permanent magnetic chuck can attract the workpiece which area is a little bigger than the platform of chuck. The chuck can be used independently, also available to be used by some combination of some sets for the purpose of big workpiece. As the following picture.



2 CONFIGURATION AND PARAMETERS

PMQC series matrix permanent magnet chuck is composed of magnetic components, flexible mount and base, rotate the eccentric shaft by hexagon wrench. Make the chuck in the status of “on” or “off”.

The size of chuck platform, the model of PMQC series based on the length and width of chuck platform, the unit is centimeter, For example, PMQC4080 indicates that the chuck platform length is 800mm as well as the width is 400mm.

holding force

Total holding force of chuck platform = 17.44 x n (n is the quantity of magnetic blocks of the platform) (kgf)

Attracted holding force = 17.44 x n1 (n1 is the quantity of magnetic blocks of the platform which contact to the surface of workpiece) (kgf)

For example, PMQC4040 has 240 magnetic blocks, the total holding force of the chuck is 17.44 x 240 = 4185 kgf. if the workpiece contacts to 165 block of them, the attracted holding force is 19.44 x 165 = 2877 kgf.

Geometric accuracy see follow table

Length of chuck platform	≤400mm	400 – 630mm	＞630mm
platform flatness	0.020 mm	0.025 mm	0.030 mm
Flatness of Platform against to mounting surface	0.030 mm	0.040 mm	0.050 mm

Remanence of chuck platform should not bigger than 5% of platform holding force.

Handle operation force see follow table

effective area of platform	≤450 cm²	450 – 700mm	＞700
Handle operation force	160N（16kgf）	200N（20kgf）	300N（30kgf）

Note: effective area of platform is the actual attracting area, do not include the border and pouring epikote.

3 OPERATION INSTRUCTIONS

Attention: do not use the chuck in light condition!

3.1 Preparing before use

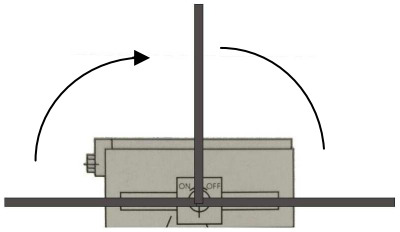
3.1.1 According to the quantity of magnetic block contacting with workpiece, use above computational formula to calculate chuck to workpiece attraction force, then on the basis of 1.5 safety factor to draw up the corresponding milling specification.

3.1.2 Clean the bottom (mounting surface) of chuck and machine platform, place the chuck in the machine platform, use clamping plate and T groove bolt, gasket and nut to fix the chuck in the machine platform.

3.1.3 Use dial indicator to measure the parallelism of chuck to platform, adjust the chuck according to machine requirement, if necessary may utilize machine self –machining function to adjust the chuck, to meet the required parallelism.

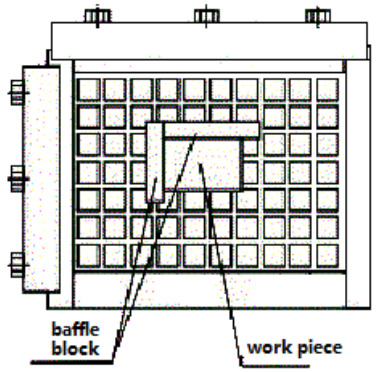
3.2 Hold the work piece by magnetic attraction

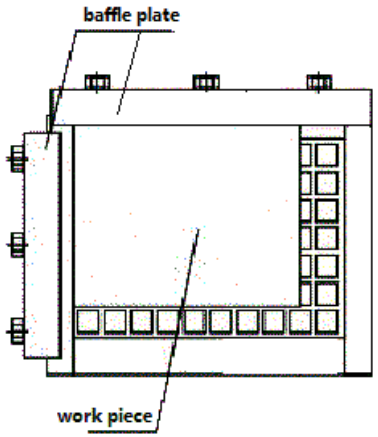
3.2.1 Place the work piece in the proper place of chuck surface, then use hexagon wrench (one of accessories) to rotate the eccentric shaft from “off” to “on” in anti-clockwise direction (about180°). The work piece will be attracted and held in the chuck, see right picture.



3.2.2 If the work piece is small, according to the milling and cutting direction, it allows to place assisted baffle block around the work piece, assisted baffle block should be placed together with work piece before it is attracted, and cling the sides of work piece, as follow-left picture shows.

3.2.3 There are two baffle plates in two sides of the chuck, except the machining precision requirement is not high, the baffle plates are not used as location tool, its main function is to counteract partial cutting force when the big work piece cling to the baffle plates. As follow-right picture shows.





3.3 Release work piece

3.3.1 When machining is complete, use hexagon wrench to rotate the eccentric shaft from “on” to “off”, that is the reverse operation of 3.2.1, Disconnect the

magnetic circuit, the work piece can be taken from the chuck.

3.3.2 When operate to attract or release the work piece, it must to clench the handle, do not loosen, lest the accident of handle self back cause by magnetic action.

3.4 Scope of work piece can be machined

3.4.1 The holding area of work piece should not be too small, the length and width of machined work piece should be more than 120mm.

3.4.2 The thickness of machined work piece should not be less than 5mm, without other block assists, the height of work piece should not more than half of its width.

3.4.3 The surface of work piece to contact to the chuck should be flat, no pit or groove.

4 MAINTENANCE

4.1 Avoid to damage the chuck in shipping, lest effect usability.

4.2 Keep the surface of magnetic chuck clean, disconnect the magnetic circuit after machining, smear slushing oil in the surface of chuck

4.3 If the chuck surface become rough after long time use, flatness is bad, should grind the chuck promptly to get well precision.

4.4 Lubricate the chuck after every 3 month using, the method: open the back cover and inject 2" lithium-based grease to all the rotating parts by oil injection gun.

4.5 During using chuck, if the handle is too heavy to wrench or the holding force is not enough, please contact with us.

INSPECTION SHEET

Product No.: _____ Model: _____

Product Date: _____

No.	Inspection item	Standard	Testing result
1	Platform flatness		
2	Flatness of Platform against to mounting surface		
3	Holding force		
4	Remanence		

The product is executes standard Q/JBKU4-2001，passed inspection，approve to deliver

Inspector: **Quality Controller:**

Date: **Date:**

Packing list

No.	Name	Quantity	Remark
1	Permanent magnetic chuck	1 set	
2	hexagon wrench	1 pc	
3	clamping plate, T groove bolt, gasket and nut	4 pc	
4	Instruction manual	1 pc	

Inspector:

Date: