

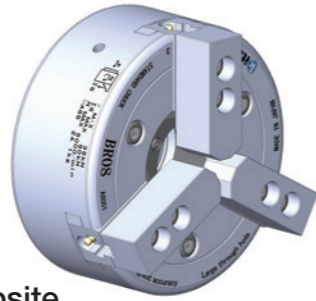


BR type Standard Chuck

Important

Obtain the Instruction Manual from our website

This document is NOT Instruction Manual. Be sure to download the instruction manual from the following URL or 2D code. Before using this product, be sure to read the instruction manual carefully to understand how to use it correctly. If you need an instruction manual of the booklet, please contact us or the dealer.



<https://BRchuck.com>



For Machine Manufacturer

Do not ship the product attached to the machine without this document or the instruction manual.

Important Safety Precautions

This document summarizes precautions that particularly you should know or follow. Please read them before starting to use the product.

! Danger Failure to follow the safety precautions below will result in death or serious injuries.

- Turn off the main power supply of the machine when installing, inspecting, greasing, or replacing the chuck. The chuck may rotate unexpectedly and entangle your body or clothing.
- Do not rotate the spindle with the door open. Provide an interlock to allow spindle rotation only when the door is closed. If the door is not closed, the rotating chuck may entangle your body or clothing or cause the workpiece to fly out.
- Do not turn OFF the hydraulic pump or operate the solenoid valve during spindle rotation. Before performing workpiece transfer during spindle rotation on an opposed 2-spindle lathe, confirm the machine manufacturer that the operation can be performed safely. Operating the solenoid valve during spindle rotation will drop or block the hydraulic pressure, causing the gripping force to drop suddenly and the workpiece to fly out.
- The rotational speed and input force must not exceed the limit in operation. Excessive rotational speed may cause the workpiece to fly out. Excessive input force may damage the chuck, causing the workpiece to fly out.
- Only the machine manufacturer or the user is to determine cutting conditions, gripping force, and rotational speed according to test cutting result. Adjust the hydraulic pressure so as to obtain the gripping force necessary for machining, and confirm that the necessary gripping force is obtained before starting machining. Insufficient gripping force may cause the workpiece to fly out.
- If you use a top jaw higher or heavier than the standard top jaw, determine the operating condition according to "3.2. Calculation of Operating Condition" on the instruction manual. Using a top jaw under excessive operating conditions may damage the chuck, causing the workpiece to fly out.

- For internal gripping, use the chuck with 1/2 or less of the max. permissible input force for external gripping. Excessive input force may damage the chuck, causing the workpiece to fly out.
- When using fixed jaws instead of one or two top jaws, the input force must be 2/3 or less or 1/3 or less of the max. permissible input force. Since the input force that is normally applied to three jaws evenly is concentrated in two or one jaw, the chuck may be damaged, causing the workpiece to fly out.
- The gripping diameter must be equal to or less than the body outside diameter. Using the chuck with the gripping diameter exceeding the body outside diameter may damage the chuck, causing the workpiece to fly out.
- When machining a workpiece with a long protrusion, support it with the steady rest or the tailstock. If not, the workpiece may turn at the end, causing the workpiece to fly out.
- Do not grip a workpiece with slope shapes or tapered shapes such as a cast. Otherwise, the workpiece may slip, causing it to fly out.
- If a workpiece or jig causes an unbalance, reduce the rotational speed or correct the state by mounting a balance weight. The recommended balance quality is G6.3 or less in JIS B 0905:1992. An unbalanced workpiece generates centrifugal force, causing the workpiece to fly out. Vibration generated by the unbalance may damage the chuck, causing the workpiece to fly out.
- Confirm that the chuck or workpiece does not interfere with the cutter or the turret at a low rotational speed before starting machining. A large impact on the chuck or workpiece by interference may damage the chuck, causing the chuck or workpiece to fly out.
- If an impact is given to the machine by interference between the chuck/workpiece and the cutter/turret due to malfunction or program errors, immediately stop rotation. Then thoroughly check for damage or crack on the parts by disassembling and cleaning them and perform repair or replacement if necessary. The impact may cause damage or crack on the parts. Continuous use of faulty parts may damage the chuck, causing the workpiece to fly out.
- Use the chuck and cylinder that are both manufactured by Kitagawa. If you must use the chuck together with a cylinder manufactured by another company, confirm Kitagawa or sales agents that the combination of the chuck and the cylinder is safe. Depending on the combination with a particular cylinder, the chuck and the cylinder may be damaged, causing the workpiece to fly out.
- Be sure to tighten the bolts with the specified torque listed in Table. Use a proper tool that can control torque such as a torque wrench. Use only the bolts attached to the chuck. Do not use other bolts. Rotating the chuck with the jaw mounting bolts loosened may cause the jaws and workpiece to fly out. If insufficient bolts are mounted, bolt length is wrong, or tightening torque is improper, the bolts may be damaged, causing the chuck and workpiece to fly out.

Thread size	M5	M6	M8	M10	M12	M14	M16	M20	M22	M24
Tightening torque [N · m]	7.5	13	33	73	107	171	250	402	539	666

※ Strength classification: M20 or smaller = 12.9, M22 or larger = 10.9

Thread size	M3	M4	M5	M6	M8	M10	M12	M16
Tightening torque [N · m]	1.4	3.2	6.4	10.8	26.3	52.1	90.9	224

- Prevent your hands and fingers from being caught when gripping a workpiece with the chuck. Otherwise, your hands and fingers may be crushed or cut off.
- If any of the abnormalities shown below suddenly occurs during operation, it may be a sign of damage of the chuck.
 - ✓ The workpiece slips.
 - ✓ Machining accuracy has become worse.
 - ✓ Chuck gripping force is reduced.
 - ✓ Chattering occurs.
 - ✓ Machine vibration has been increased.
 (Gripping force is not increased even by increasing hydraulic pressure.)
- If the status is not improved even after taking the measures described, immediately stop using the chuck. Continuous use of faulty parts may damage the chuck, causing the workpiece to fly out.
- If the cylinder combined is to be changed due to such as model change of a rotary hydraulic cylinder, change the hydraulic pressure accordingly so as to obtain proper gripping force. Use of the chuck under low hydraulic pressure leads to insufficient gripping force, causing the workpiece to fly out. Use of the chuck under high hydraulic pressure leads to damage of the chuck, causing the workpiece to fly out.

- The draw pipe must have sufficient strength with respect to the operating conditions, not causing run-out and unbalance. The thread accuracy must be 6H / 6g. Tighten the thread securely with a sufficient penetration length. Insufficient strength of the draw pipe, vibration due to unbalance, and looseness of the thread may damage the draw pipe. If the draw pipe is broken, the gripping force is lost instantaneously, causing the workpiece to fly out.
- Use a lock valve (check valve) built-in type cylinder. Design the hydraulic circuit so that the solenoid valve holds the gripping port position when the current is not applied. Sudden drop or interruption of hydraulic pressure due to power failure or hydraulic pump failure will lose the gripping force instantaneously, causing the workpiece to fly out.
- Use a stroke control sensor built-in type cylinder. If the jaw stroke becomes insufficient due to chips accumulating inside the chuck or loosened draw nut, the chuck may not grip the workpiece, causing the workpiece to fly out.

! Warning Failure to follow the safety precautions below could result in death or serious injuries.

Perform additional machining of tapped holes and pin holes on the chuck only within the allowable range. Additional machining performed out of the allowable range may damage the chuck, causing the workpiece to fly out. Especially, additional machining to the master jaws and T-nut directly causes fly-out of the workpiece.

Supply grease every day. When supplying grease, turn OFF the machine main power and be sure to use the specified grease. Insufficient greasing or use of grease other than the specified one may drop the gripping force, causing the workpiece to fly out.

Specified grease			
Type	Specified grease	Grease nipple	Grease amount per one point [g]
BR06	CHUCK GREASE PRO	JIS B 1575 : 2000 type 1 (M6 × 0.75)	4
BR08			6
BR10			10

Disassemble and clean the chuck every six months or 100,000 strokes (cast machining: every two months). Omitting the disassembly and cleaning and use of the chuck with chips and coolant remaining inside the chuck will lead to insufficient stroke and gripping force drop, causing the workpiece to fly out.

Remove the eye bolts and wrench from the chuck after use. Rotating the chuck without removing the eye bolts and wrench may cause them to fly out.

Use rustproof coolant. Otherwise, rust that will be formed inside the chuck may drop the gripping force, causing the workpiece to fly out.

When stopping the machine for a long time or when storing the chuck without using it for a long period, supply grease and rustproof them beforehand. Otherwise, rust that will be formed inside the chuck may drop the gripping force, causing the workpiece to fly out.

Do not wear clothing or accessories such as gloves and necktie which are easy to be caught in. Otherwise, your body or clothing may be entangled.

Do not perform the work after drinking alcohol or taking medicine. Impaired judgment or operation mistake may cause serious hazards.

! Caution Failure to follow the safety precautions below may result in minor or moderate injuries.

Do not touch machined workpieces with bare hands. Touching workpieces with bare hands may cause a burn because the workpieces may be very hot.

Remove the workpiece from the chuck when stopping the machine for a long time. Failure to do so may lead to drop or interruption of hydraulic pressure or malfunction of the cylinder, causing the workpiece to drop.

When attaching/detaching the chuck to/from the machine, use appropriate lifting devices such as eye bolts and a floor-operated crane. Lifting a heavy chuck by hands will cause a backache. Slipping and dropping the chuck from hands may result in a bruise.