

Checking necessary parts to replace existing chuck with BR

Attentions

This document is written with the following assumptions.

- Replacing with the same size Kitagawa standard chuck

*Through-hole 3-jaw chuck: BB200, B-200 and BS300

- Using the through-hole hydraulic cylinder you are currently using

*Please contact us if your chuck is not applicable to this manual.

*If the chuck currently being used is special, this manual might not be applicable. We recommend that you should consult us when anxieties or doubts arise.

Outline of checking procedure

1. Identifying the chuck currently used
2. Identifying the cylinder currently used
3. Identifying back plate
4. Identifying spindle nose of lathe
5. Choosing back plate
6. Choosing back plate mounting bolts
7. Choosing chuck mounting bolt length
8. Confirming draw pipe thread diameter and pitch
9. Confirming draw pipe extrusion length
10. Confirming other necessary parts

Check sheet

Checking necessary parts for replacement with BR chuck

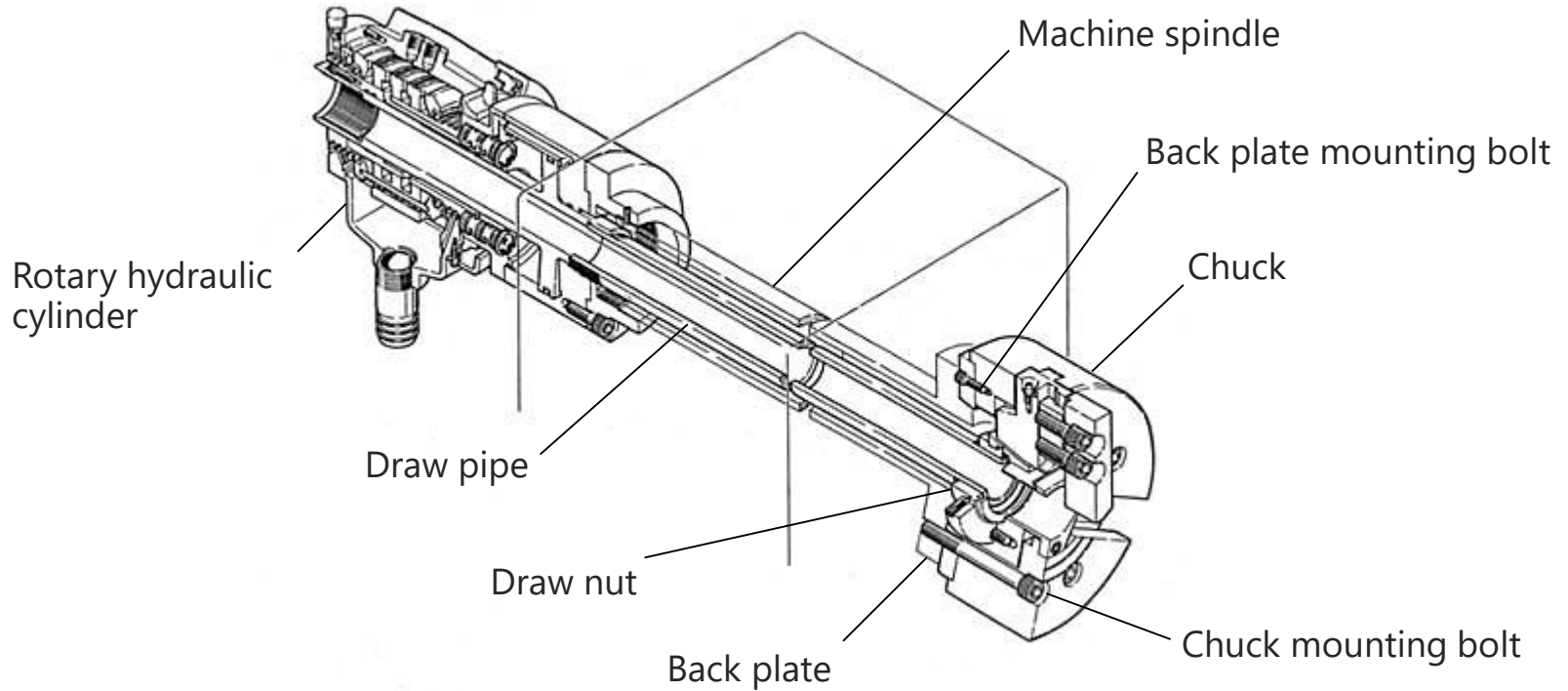
Proceed the procedure while filling in this sheet to confirm all necessary items without omission.

*Print this page and use it.

Parts that need to be prepared separately	✓
Draw nut	
Back plate	
Back plate mounting bolts	
Chuck mounting bolts	
Draw pipe	

Checklist		Data	
Chuck currently used	Model	[A]	
	Draw nut position [mm]	[B]	MAX
Model of cylinder currently used		[C]	
Spindle nose of lathe		[D]	
Required back plate type		[E]	
Size and quantity of back plate mounting bolts		[F]	pcs
Size and quantity of chuck mounting bolts		[G]	3 pcs
Draw pipe thread diameter and pitch [mm]		[H]	
Draw pipe extrusion length [mm]		[J]	MAX
Draw pipe thread length [mm]		[K]	

Name of each part



1. Identifying the chuck currently used (1)

Confirming chuck model

Fill in the column [A] of the check sheet with the model number of chuck that you are currently using.

The model number can be found by one of the following.

- Specification drawings of chuck
- Marking on body surface of chuck

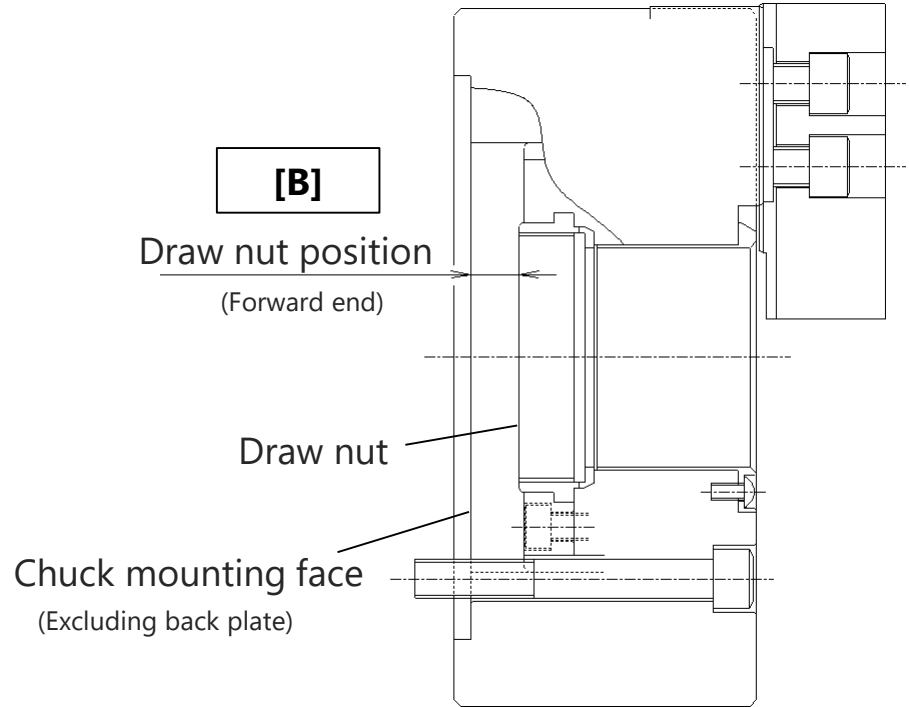
1. Identifying the chuck currently used (2)

Checking draw nut position

Fill in the column [B] of the check sheet with the distance between the chuck mounting face and the draw nut of the chuck that you are currently using.

The draw nut position can be found by one of the following.

- Specification drawing of the chuck
- Specification drawing of the lathe



1. Identifying the chuck currently used (3)

If the value [B] is the same as the right table;

The standard draw nut of BR chuck can be used with additional threading.

If the value [B] is not the same as the right table;

A dedicated draw nut may be required.

Put a check in the column "Draw nut" of "Parts that need to be prepared separately" on the check sheet.

Chuck model	Compare with column [B]
BR06	11
BR08	14.5
BR10	8.5
BR12	8

2. Identifying the cylinder currently used

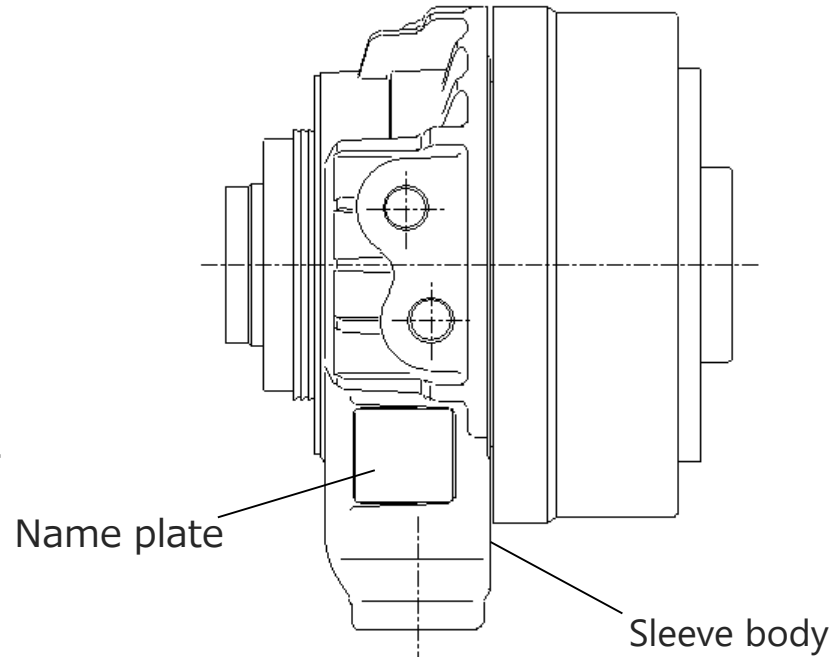
Confirming cylinder model

Fill in the column [C] of the check sheet with the model number of cylinder that you are currently using.

The model number can be found by one of the following.

- Specification drawings of the cylinder
- Name plate of cylinder

*SR series does not have a name plate but a laser marking on a sleeve body.



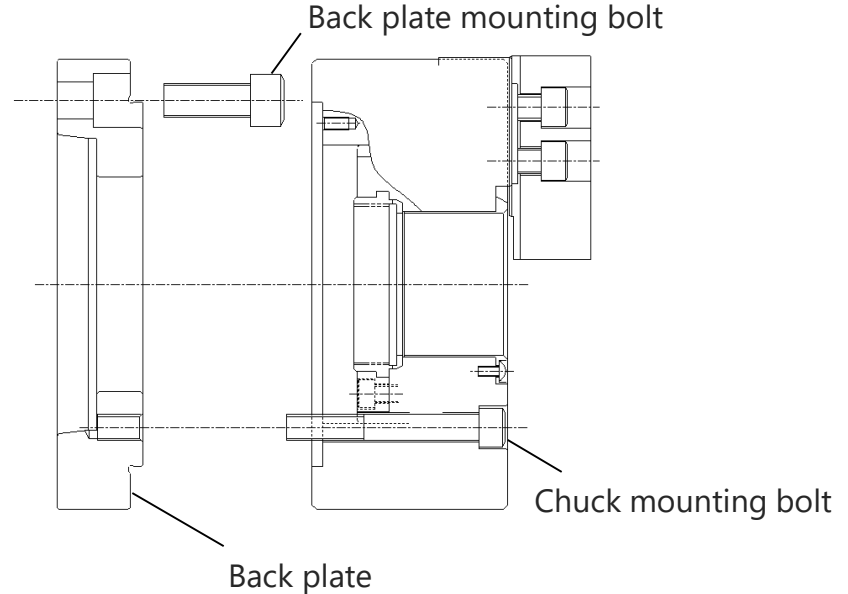
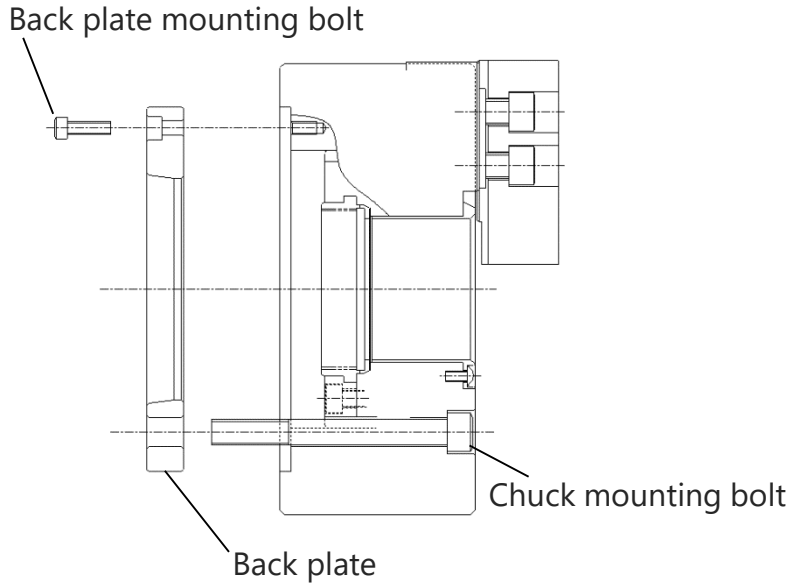
Outside view of through-hole rotary hydraulic cylinder

3. Identifying back plate (1)

There are two types of back plate as follows depending on mounting way.

a. Back plate to be attached to the chuck first

b. Back plate to be attached to the spindle first



3. Identifying back plate (2)

In case that the chuck being used is BB200 series;

All of back plate, back plate mounting bolts, chuck mounting bolts currently being used can be used with BR chuck as they are. In the columns [D] to [G] of the check sheet draw diagonal lines and proceed to step 8.

In case that the chuck being used is B-200 or BS300 series;

Proceed to the next page.

In case that the chuck being used is neither BB200, B-200 or BS300;

Contact Kitagawa distributor to check if back plate, back plate mounting bolts, an chuck mounting bolts can be used or not.

Then if you need to prepare parts separately, put checks in columns of "Parts that need to be prepared separately" and proceed to step 8.

4. Identifying spindle nose of lathe

Identifying spindle nose

Fill in the column [D] of the check sheet with spindle nose number.

The spindle nose number can be found by one of the following.

- Specification document of the lathe
- Lathe catalogue

Example of spindle nose number

- A₂-5 ... Type A₂ Nose 5
- A₂-6 ... Type A₂ Nose 6
- A₂-8 ... Type A₂ Nose 8
- A₂-11 ... Type A₂ Nose 11

For details of the spindle nose number, refer to JIS B 6109-1: 2005 "Machine tools - Connecting dimensions of spindle noses and work holding chucks - Part 1: Conical connection".

5. Choosing back plate

Find the necessary back plate type on the table and fill in the column [E] of the check sheet.

If the back plate currently being used cannot be used, put a check in the column "Back plate" of "Parts that need to be prepared separately" on the check sheet.

Chuck type	Spindle nose	Back plate type or part number [E]	Possibility to use the existing back plate	
			B-200	BS300
BR06	A ₂ -5	CBB-06A05	No	No
	A ₂ -6	CBB-06A06	No	No
BR08	A ₂ -5	CBB-08A05	No	No
	A ₂ -6	61P363755	No	Yes
	A ₂ -8	CBB-08A08	No	No
BR10	A ₂ -6	CB-10A06	Yes	No
	A ₂ -8	CB-10A08	Yes	No
BR12	A ₂ -6	61P393994	No	-
	A ₂ -8	CB-15A08	No	-
	A ₂ -11	61Q349363	No	-

6. Choosing back plate mounting bolts

Find the size and quantity of back plate mounting bolts on the table and fill in the column [F] of the check sheet.

If the bolts currently being used cannot be used, put a check in the column "Back plate mounting bolts" of "Parts that need to be prepared separately" on the check sheet.

Chuck type	Spindle nose	Back plate mounting bolts [F]		Possibility to use the existing back plate mounting bolts	
				B-200	BS300
BR06	A ₂ -5	M6×16	3 pcs	Yes	Yes
	A ₂ -6	M12×35	6 pcs	Yes	Yes
BR08	A ₂ -5	M10×25	6 pcs	Yes	No
	A ₂ -6	M6×20	3 pcs	Yes	Yes
	A ₂ -8	M16×40	6 pcs	Yes	Yes
BR10	A ₂ -6	M12×30	6 pcs	Yes	Yes
	A ₂ -8	M8×20	3 pcs	Yes	Yes
BR12	A ₂ -6	M12×35	9 pcs	No	-
	A ₂ -8	M16×40	6 pcs	No	-
	A ₂ -11	M10×25	3 pcs	No	-

7. Choosing chuck mounting bolt length

Find the necessary chuck mounting bolts on the table and fill in the column [G] of the check sheet.

If the bolts currently being used nor the standard attached bolts of BR chuck cannot be used, put a check in the column "Chuck mounting bolts" of "Parts that need to be prepared separately" on the check sheet.

Chuck type	Spindle nose	Chuck mounting bolts [G]	Possibility to use the existing chuck mounting bolts	
			B-200	BS300
BR06	A ₂ -5	M10×95	Yes	No
	A ₂ -6	M10×80	Use the standard bolts attached to BR06	
BR08	A ₂ -5	M12×90	Use the standard bolts attached to BR08	
	A ₂ -6	M12×110	No	Yes
	A ₂ -8	M12×90	Use the standard bolts attached to BR08	
BR10	A ₂ -6	M16×100	Use the standard bolts attached to BR10	
	A ₂ -8	M16×120	Yes	No
BR12	A ₂ -6	M20×110	Use the standard bolts attached to BR12	-
	A ₂ -8	M20×110		-
	A ₂ -11	M20×150	No	-

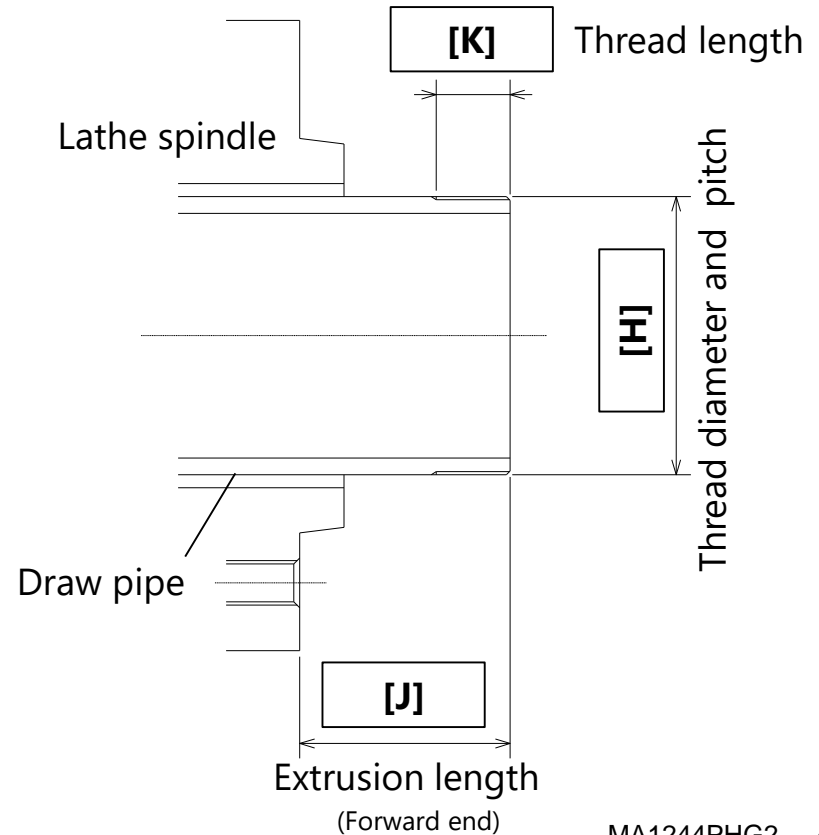
8. Confirming draw pipe thread diameter and pitch

Thread diameter and pitch of draw pipe

Fill in the column [H] of the check sheet with thread diameter and pitch of draw pipe.

The thread diameter and pitch of draw pipe can be found by one of the following.

- Specification document of the lathe
- Specification drawing of the chuck
- Remove the chuck from lathe and measure the draw pipe thread.



9. Confirming draw pipe extrusion length (1)

In case that the chuck being used is BB200 series;

The draw pipe currently being used can be used with BR chuck as it is. In the column [J] of the check sheet draw diagonal line and proceed to step 10.

In case that the chuck being used is not BB200 series;

Fill in the column [J] of the check sheet with the extrusion length of draw pipe at its forward end. (See the figure on the previous page)

The extrusion length can be found by one of following.

- Specification document of the lathe
- Remove the chuck from lathe and measure the extrusion length.

9. Confirming draw pipe extrusion length (2)

If both values of columns [H] and [J] are larger than values in the right table,

The draw pipe may be too long to install the chuck properly due to interference with draw nut.

Put a check in the column "Draw pipe" of "Parts that need to be prepared separately" on the check sheet.

Fill in the column [K] of the check sheet with thread length of draw pipe.

Chuck type	Spindle nose	Compare with column [H]	Compare with column [J]
BR06	A ₂ -5	M52	43
	A ₂ -6		69
BR08	A ₂ -5	M65	56
	A ₂ -6		51
	A ₂ -8		74
BR10	A ₂ -6	M80	58
	A ₂ -8		51
BR12	A ₂ -6	M105	81
	A ₂ -8		68
	A ₂ -11		75

10. Confirming other necessary parts

Parts that need to be prepared separately

In order to replace the chuck currently being used with BR chuck the parts with checkmarks on "Parts that need to be prepared separately" will be needed.

Especially if the draw nut and/or draw pipe are marked, we recommend that you should consult Kitagawa distributor to minimize the replacement cost.

Regarding draw nut threading

The draw nut of BR chuck needs to be threaded in accordance with the draw pipe thread (column [H] of check sheet).

It is possible for a customer to machine the draw nut in accordance with the procedure on instruction manual or of course it is also possible to order to Kitagawa distributor.