

# TOOL SOLUTIONS 02/2024

The next-generation standard chuck reforms conventional machining methods.

**BR**  
SERIES



Forming of the jaws at  
setup change is no longer  
necessary.

Offer valid until  
30/04/2024

**kitagawa**  
EUROPE

## Further development of the global standard for performance, precision and cost savings

For decades the chucks of the B200 series and its close relatives of the BB200 series have been the industry standard for many lathes.

These chucks have established themselves through their reliable design and set the standard in the chuck industry. Kitagawa was busy developing a revolutionary new chuck, the BR series. It took years to test, refine and retest the design to ensure that it would truly revolutionise the market.

Many manufacturers claim that their standard chucks are "highly accurate", but none can surpass or match the accuracy of the BR series. The industry standard repeatability of a three-jaw wedge hook chuck with a set of shaped clamping jaws (where the clamping jaws are internally turned to match the diameter of the workpiece) was 20 microns between actuations (opening and closing the chuck on the workpiece). The BR series has improved this accuracy to less than 10 microns as standard – regardless of whether you are clamping with a 6-inch chuck (170 mm) or a 12-inch chuck (315 mm).

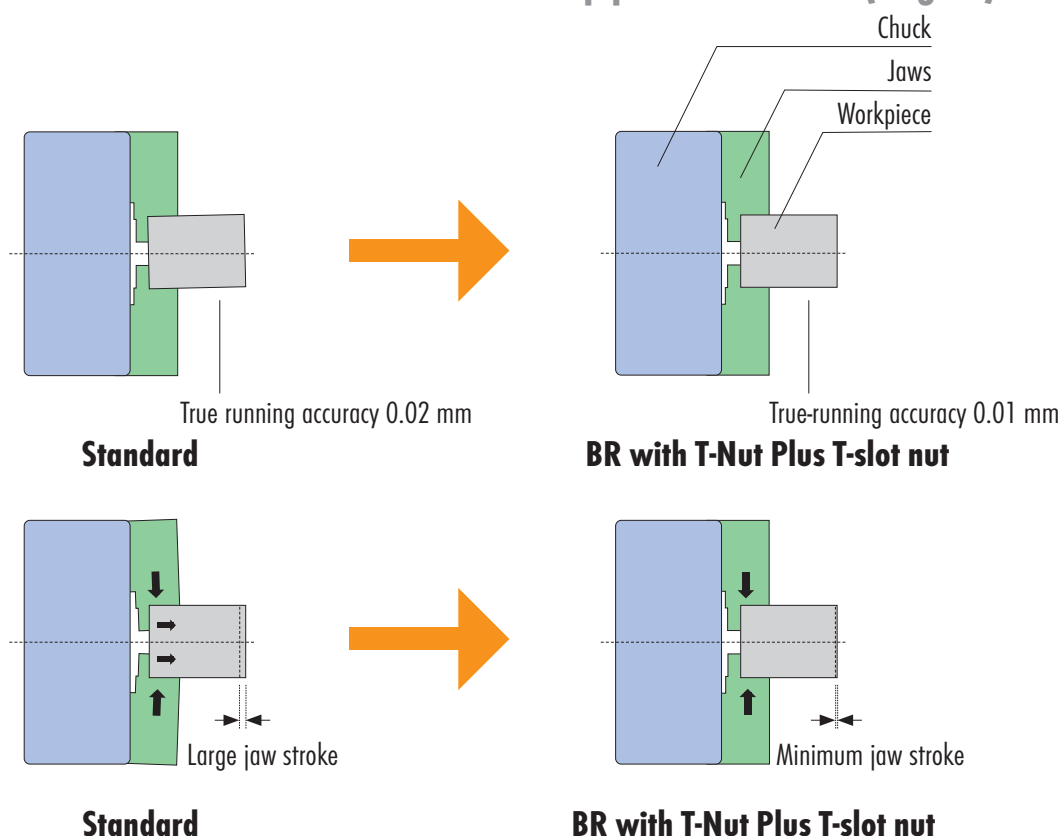
This level of accuracy eliminates the need for many special chucks, as the BR series can achieve the required accuracy as standard.

The chucks of the BR series offer a number of improved functions. Of course, they all have an extra large through hole (identical to the BB200 series). Thanks to the intelligent design, the jaw stroke was significantly reduced. This increased the suitability for the workpiece transfer from the main spindle to the counter spindle. The clamping force of the chuck at maximum speeds has improved by 10-15% and shows a lower loss of clamping force due to centrifugal forces. This is due to the revised and patented design of the base jaw.

The appearance of the BR series differs from all other Kitagawa chucks in that it has a rounded edge and a coloured Kitagawa K letter on the front. If you have this chuck on your machine, you will be able to work with a high degree of accuracy. Each chuck has a QR code on the side, which you can use to obtain all the necessary

data and manuals for this chuck directly from the Internet! Of course, the machine spindle interface of the BR series is identical to the B200, BB200, QJR series and many other Kitagawa chucks and is therefore interchangeable. You therefore do not need any additional hydraulic cylinders, draw tubes or adapters to replace one of these chucks with a new BR chuck. We can naturally supply a wide range of adaptations so that a BR series chuck can be installed on almost any machine.

## BR Series: True running accuracy 0.01 mm in conjunction with T-Nut Plus T-slot nuts and top jaws 420210... (Page 6)



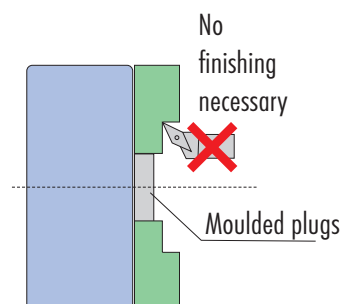
# Tnut-Plus

Save up to €14,000 annually  
with T-Nut Plus T-slot nuts!



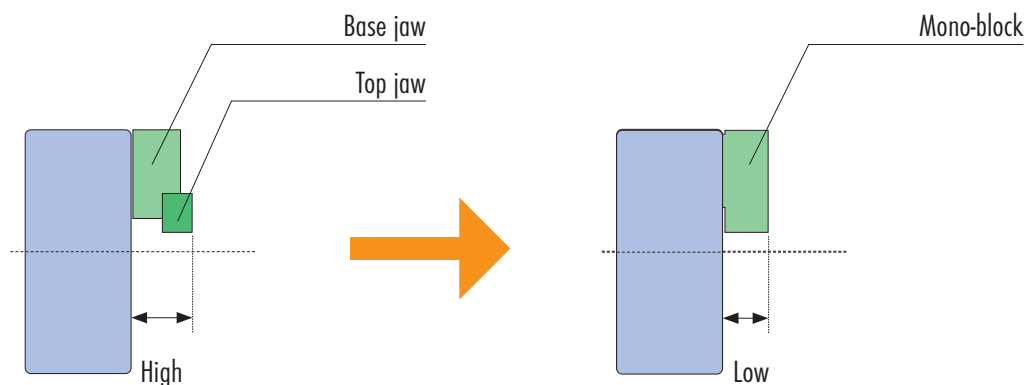
If extreme precision is required and costs need to be saved, you can purchase a special set of T-slot nuts labelled "Tnut-Plus". With these T-slot nuts, you can remove a set of internally turned soft jaws (Kitagawa SB jaws) and replace them with another set of internally turned soft jaws (Kitagawa SB jaws) while maintaining a repeatability of less than 10 microns. This means you only need to internally turn a set of soft jaws once, saving you time and eliminating the need to internally turn the jaws every time to achieve accuracy. This allows the machine operator to install a set of soft jaws (correctly!) and simply get started. For precise, disciplined operators, this means that you save a lot of time when internally turning jaws. Using the example of three setup changes per day, it takes about 30 minutes to unscrew the clamping jaws and you save 1.5 hours of machining time per day, which equates to around €14,000 per year – a considerable saving and much more than the purchase price of the chuck – just with the

special T-slot nuts! Kitagawa can only guarantee this level of accuracy if you use original Kitagawa jaws, as this is the only way Kitagawa can ensure that the soft jaws are manufactured to the same tolerance as the BR series chuck.



## Avoid complicated supporting jaw combinations

The in-built stability and accuracy of this chuck with the special T-slot nuts also means that if you require customised top jaws for clamping irregular workpieces, the design of the top tooling can be simplified. This means that you only need the top jaws instead of complicated supporting jaw combinations.



## Kitagawa Wedge hook power chuck BR

- Model BR/successor model to the BB-200 series
- Enlarged through-hole
- Repeat accuracy of less than 10 µm when using T-Nut Plus T-slot nuts and Kitagawa jaws with article number 420210..., a repeat accuracy of less than 10 µm is achieved. Internally turned soft jaws for different clamping diameters can thus be exchanged with accuracy. This saves time and money!
- Patented base jaw: up to 10% increased clamping force at maximum rotational speeds
- Solid steel design
- Hardened and ground guides
- High true running accuracy
- Lubrication nipple in every base jaw
- Centre mount in accordance with DIN 6353
- Supplied without flange, **without top jaws**, with base jaw teeth 1.5 mm x 60°, standard T-slot nuts, chuck and jaw fastening screws, drawbar nuts without thread, special assembly spanner
- Threaded drawbar nuts and BR 12 available on request

# BR

SERIES



### 3-jaw version

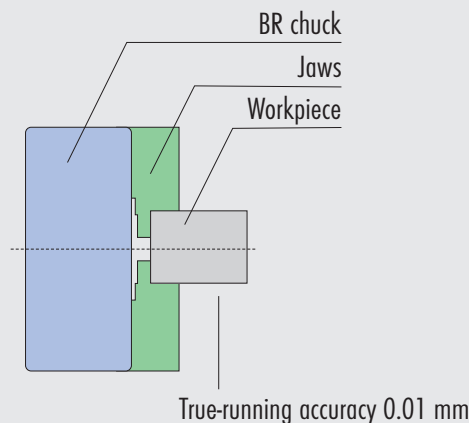
Designation	Centring diameter	Through-hole mm	Chuck body height (without jaws)	Diameter of pitch circle mm	Jaw stroke mm	Piston stroke mm	Rotational speed max. rpm	Clamping force max. kN	Clamping range	Actuation force max.	Connecting thread (for draw tube)	Weight kg	Art. no.	€
BR06 Ø170 mm	140 H6	53	81 mm	104.8	5.5 / Ø	12	6000	58.5	16 - 170 mm	23 kN	Max. M60 x 2	12.8	410102 1006	2.129.00
BR08 Ø210 mm	170 H6	66	91 mm	133.4	7.4 / Ø	16	5000	90	22 - 210 mm	35 kN	Max. M75 x 2	22.2	410102 1008	2.429.00
BR10 Ø254 mm	220 H6	81	100 mm	171.4	8.8 / Ø	19	4500	123	31 - 254 mm	49 kN	Max. M90 x 2	35.8	410102 1010	2.759.00

## BR + Tnut-Plus

SERIES

The Kitagawa BR series power chucks achieve a true running accuracy of 0.01 mm when using the T-Nut Plus T-slot nuts

and the 420210 top jaws



## ATORN T-Nut Plus T-slot nuts for BR power chucks

- for chuck types: BR
- Including cheese-head screws DIN 912-12.9
- Price per 3-piece set

# Tnut-Plus



For chuck diameter	Height mm	For T-slot width mm	For thread	Art. no.	€
175 mm	18.5	12	M10	420605 0006	255.00
210 mm	20.5	14	M12	420605 0008	270.00
254 mm	21.5	16	M12	420605 0010	280.00



## Kitagawa Wedge hook power chuck B/BT-200

DIN  
6353

- **Model B/BT-200**
- **with large through-hole**
- Solid steel design
- Hardened and ground guides
- High true running accuracy
- Lubrication nipple in every base jaw
- Centre mount in accordance with DIN 6353
- Supplied without flange, **without top jaws**, with base jaw teeth 1.5 mm x 60°, T-slot nuts, chuck and jaw fastening screws, drawbar nuts without thread, special assembly wrench
- Further sizes and models available on request
- **Threaded drawbar nuts available on request**



### 2-jaw version

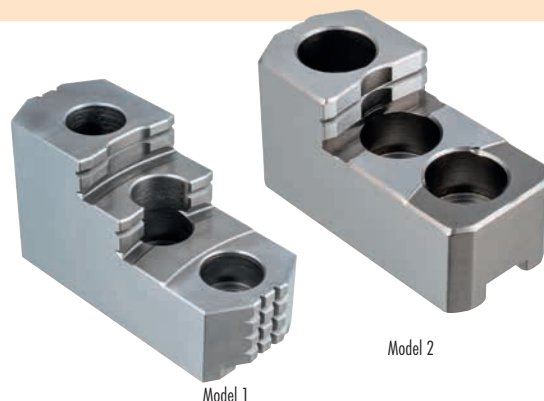
Designation	Centring diameter	Through-hole mm	Chuck body height (without jaws)	Diameter of pitch circle mm	Jaw stroke mm	Piston stroke mm	Rotational speed max. rpm	Clamping force max. kN	Clamping range	Actuation force max.	Connecting thread (for draw tube)	Weight kg	Art. no.	€
BT206 Ø169 mm	140 H6	45	81 mm	104.8	5.5 / Ø	12	6000	38	14 - 169 mm	14.5 kN	Max. M55 x 2	11.5	410110 0206	2.759.00
BT208 Ø210 mm	170 H6	52	91 mm	133.4	7.4 / Ø	16	5000	57.3	14 - 210 mm	23.2 kN	Max. M60 x 2	21.3	410110 0208	2.619.00
BT210 Ø254 mm	220 H6	75	100 mm	171.4	8.8 / Ø	19	4200	74	31 - 254 mm	28.5 kN	Max. M85 x 2	33.5	410110 0210	2.819.00

### 3-jaw version

Designation	Centring diameter	Through-hole mm	Chuck body height (without jaws)	Diameter of pitch circle mm	Jaw stroke mm	Piston stroke mm	Rotational speed max. rpm	Clamping force max. kN	Clamping range	Actuation force max.	Connecting thread (for draw tube)	Weight kg	Art. no.	€
B204 Ø100 mm	85 H6	26	59 mm	70.6	5.4 / Ø	10	8000	28.5	7 - 110 mm	14 kN	Max. M32 x 1.5	4	410101 0204	2.059.00
B205 Ø135 mm	110 H6	33	60 mm	82.6	5.4 / Ø	10	7000	36	12 - 135 mm	17.5 kN	Max. M40 x 1.5	6.7	410101 0205	2.119.00
B206 Ø169 mm	140 H6	45	81 mm	104.8	5.5 / Ø	12	6000	57	16 - 168 mm	22 kN	Max. M55 x 2	11.9	410101 0206	1.659.00
B208 Ø210 mm	170 H6	52	91 mm	133.4	7.4 / Ø	16	5000	86	13 - 210 mm	34.8 kN	Max. M60 x 2	22.3	410101 0208	1.739.00
B210 Ø254 mm	220 H6	75	100 mm	171.4	8.8 / Ø	19	4200	111	31 - 254 mm	43 kN	Max. M85 x 2	34.5	410101 0210	2.039.00

## ATORN Reversible top jaws, 1.5 mm x 60°

- **for chuck types: BT200 / B200 / BB200 / BR**
- **Hardened**
- Material 16 MnCr 5
- Price per 3-piece set
- **No reversible top jaws are available for BT204, BT205 and BT212**
- **Other sizes can be found via the clamping jaw finder on our website**



Model 1

Model 2

For chuck diameter	Length x width x height mm	Hole distance mm	Slot width mm	For thread	Weight kg	Model	Art. no.	€
165 mm	67 x 31 x 36	20	12	M10	1	2	420240 0006	220.00
210 mm	87 x 35 x 51	25	14	M12	2.5	1	420240 0008	320.00
254 mm	101 x 40 x 54	30	16	M12	3.5	1	420240 0010	355.00

## ATORN Top jaws, 1.5 mm x 60°

- for chuck types: BT200 / B200 / BB200 / BR
- Material C15
- Price per 3-piece set
- Aluminium jaws and other sizes can be found via the clamping jaw finder on our website

For chuck diameter	Length x width x height mm	Hole distance mm	Groove width mm	For thread	Weight kg	Model	Art. no.	€
110 / 135 mm	52 x 22 x 24	14	10	M8	0.5	2	420210 0205	43.70
110 / 135 mm	52 x 24 x 50	14	10	M8	1.1	2	420210 2055	41.10
169 mm	72 x 30 x 31	20	12	M10	1.2	1	420210 0006	36.50
169 mm	82 x 30 x 31	20	12	M10	1.2	2	420210 0601	48.40
169 mm	72 x 30 x 50	20	12	M10	2	2	420210 0650	52.00
210 mm	95 x 35 x 37	25	14	M12	2.2	2	420210 0008	43.00
210 mm	95 x 35 x 37	25	14	M12	2.2	1	420210 0108	43.30
210 mm	102 x 35 x 37	25	14	M12	2.9	2	420210 0801	50.50
210 mm	95 x 35 x 79	25	14	M12	5	2	420210 0810	54.50
254 mm	110 x 40 x 42	30	16	M12	3.5	2	420210 0010	45.70
254 mm	125 x 40 x 42	30	16	M12	4.1	2	420210 1001	54.10
254 mm	90 x 40 x 60	30	16	M12	4.2	1	420210 1010	58.50
254 mm	110 x 40 x 60	30	16	M12	5.2	2	420210 1060	58.50
254 mm	110 x 40 x 79	30	16	M12	8.1	1	420210 1080	69.00



## ATORN T-slot nuts

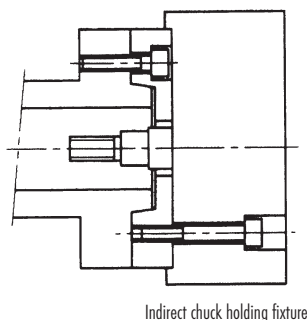
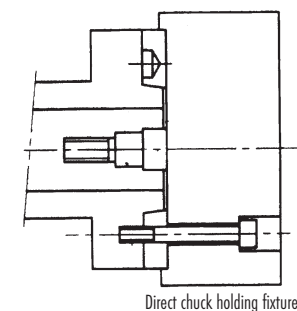
- for chuck types: BT200 / B200 / BB200 / BR
- Including cheese-head screws DIN 912-12.9
- Price per 3-piece set

For chuck diameter	Height mm	For T-slot width mm	For thread	Art. no.	€
135 mm	15	10	M8	420603 0005	70.50
169 mm	18.5	12	M10	420603 0020	75.50
210 mm	20.5	14	M12	420603 0030	78.00
254 mm	21.5	16	M12	420603 0040	85.00



## Kitagawa Flange for power chuck

- Precision flange featuring an all-steel design
- **For chucks with centre mounts in accordance with DIN 6353**
- **Spindle-side design: Short taper in accordance with DIN 55026 and DIN 55021**
- **for chuck types: BT200 / B200 / BR Series**
- Supplied without flange fastening screws



Designation	Flange diameter	Taper shank size	Diameter min. mm	Diameter max. mm	For BT-200 Series		For BT-200 / BR Series	
					Art. no.	€	Art. no.	€
BT-206 / B-206 / BR-06	140	5	79.7	82.563	413010 1005	239.00	413001 1005	231.00
BT-206 / B-206 / BR-06	140	6	103	106.375	413010 1006	239.00	413001 1006	239.00
BT-208 / B-208 / BR-08	170	5	79.7	82.563	413010 2005	295.00	413001 2005	295.00
BT-208 / B-208 / BR-28	170	6	103	106.375	413010 2006	295.00	413001 2006	295.00
BT-210-212 / B-210-212 / BR-10 BR-12	220	6	103	106.375	413010 3006	403.00	413001 3006	403.00
BT-210-212 / B-210-212 / BR-10 BR-12	220	8	136	139.719	413010 3008	403.00	413001 3008	387.00



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