

NIKKEN ROTARY TABLES

FOR BROTHER COMPACT MACHINING CENTER

SPEEDIO S500X1/S700X1/R450X1

brother®



LYNDEX
NIKKEN



CAT2014-BROTHER-SPEEDIO-RT

APR.2014

Our Mission: Advanced Technology and Leading Innovation

At Lyndex-Nikken, we have made it our mission to provide the two things our customers need most: advanced technology and the innovation to keep it moving forward.

With a history rich in innovation and a focus on the technology of the future, Lyndex-Nikken has become the leader in manufacturing innovation. Our industry-leading design and capabilities give us the power to create ground-breaking tools and machine tool accessories that will perform with amazing precision and reliability.

All of our products are made in Japan, ensuring an extremely high level of quality and long-term reliability. We are continually striving to improve our technology through constant innovation to enhance the respect and reliability that our products have thus far earned within their respective industries.

Not only are we committed to providing the highest quality of equipment, but also the highest quality of service and customer care. Our team of highly experienced technicians and product specialists offers unmatched customer service and engineering support to our customers worldwide.

As an international company with offices conveniently located throughout Europe, Asia, and North America, Lyndex-Nikken is there to serve you, no matter where you are.



Nikken Rotary Tables for SPEEDIO

Nikken Rotary Table Features Pg. 4-5

SPEEDIO S500X1/S700X1 Pg. 6-9

CNCZ180LSA-BR2, CNCZ260LSA-BR2 Pg. 6

5AX-130SA-BR2, 5AX-201SA-BR2 Pg. 7

CNCZ100-2W-105-120SABR-2,
5AX-2MT-105-120SABR-2 Pg. 8

DD250-LS-50 Pg. 9

SPEEDIO R450X1 Pg. 10

CNCZ180LSA-BR2, CNCZ180LSA-BR2 (TAT105N-135) Pg. 10

5AX-130BASA-BR, CNCZ105LSA-BR2 Pg. 11

Nikken Tailstock Support Table Pg. 12

NIKKEN TOOLING SYSTEM

SK Collet Chucks Pg. 13

Standard and High Speed Milling Chucks Pg. 14

Shell Mill Holders Pg. 15

ER Collet Chucks Pg. 15

NIKKEN Static Turning Tools Pg. 16

Lyndex-Nikken Catalogs Pg. 17

Lyndex-Nikken Service and Repair Pg. 18-19

Rotary Tables for Brother Speedios require a dedicated servo motor and a servo amp. Rotary Tables currently used on tapping centers cannot be transferred to be used on Speedios.

When placing an order, please specify exact machine model and rotary table model. As standard, left hand motor style (L Type) will be supplied.

SPEEDIO R450X1* (Pallet Change)	CNCZ105LSA-BR2
	CNCZ180LSA-BR2
	5AX-130BASA-BR2
SPEEDIO S500X1 S700X1	CNCZ105LSA-BR2
	CNCZ180LSA-BR2, CNCZ202LSA-BR2
	CNCZ260LSA-BR2, CNCZ302LSA-BR2
	CNCZ100-2W-105-120SABR-2
	5AX-130SA-BR2
	5AX-201SA-BR2
	5AX-2MT-105-120SABR-2
	DD250LS-50

* Being a pallet change machine, this machine can use two rotary tables



1.



Patented Solid Carbide Worm Screw and Heat Treated Steel Worm Wheel

- Hand matched and paired to maintain maximum thread engagement
- Four point bearing support system and eccentric housing structure
- Minimal wear compared to traditional bronze wheel configuration

2.

LYNDEX-NIKKEN

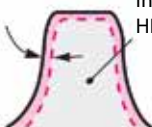
Nikken's unique design shrink fits the worm wheel onto the solid faceplate and quill body. This along with the hand pairing of the carbide worm screw eliminates backlash.



Much shorter distance from face plate to gear allows for greater torsional forces to be sustained

Fine pitch of the worm wheel contributes to 4 arc second repeatability

Depth 0.1mm
HV960



Worm Gear Teeth Hardness

Nikken Worm Gears are made of high quality steel reinforced by a special heat treatment method, and finished with an additional strengthening Ion Nitriding process. This results in smooth gear transmission and wear resistance to help maintain indexing accuracy and rigidity.

OTHER BRANDS

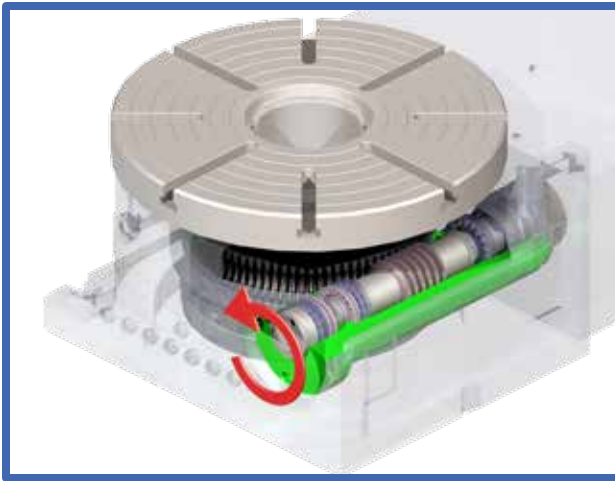
Bolt-on Phosphorous Bronze-Aluminum Bronze wheel to a two piece faceplate and quill design. Configuration relies on the malleability of the worm wheel to deform around the shape of the worm screw to eliminate backlash.



Bolt-on faceplate to quill base

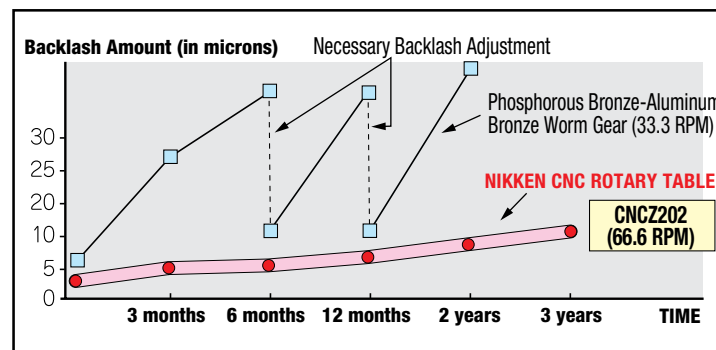
Soft worm wheels wear much quicker, resulting in indexing inaccuracies and unnecessary maintenance

3.



Unique Faceplate and Worm Wheel Assembly

- Unique shrunk fit worm wheel design onto solid faceplate and quill body for high precision concentricity
- Shorter distance from faceplate to gear allows for greater torsional forces to be sustained
- Fine pitch contributes to 4 arc second repeatability



4.



Independent Tubular Thrust and Radial Bearings

- Custom paired and matched for every rotary table
- Provide vibration dampening and internal gear protection
- Extreme rigidity and concentric accuracy from needle roller bearings

Nikken's patented worm screw and worm gear combination provides the highest wear resistance, rotational speed, and rigidity. Proven with performance, and guaranteed for success, let Nikken take your production performance to the next level.

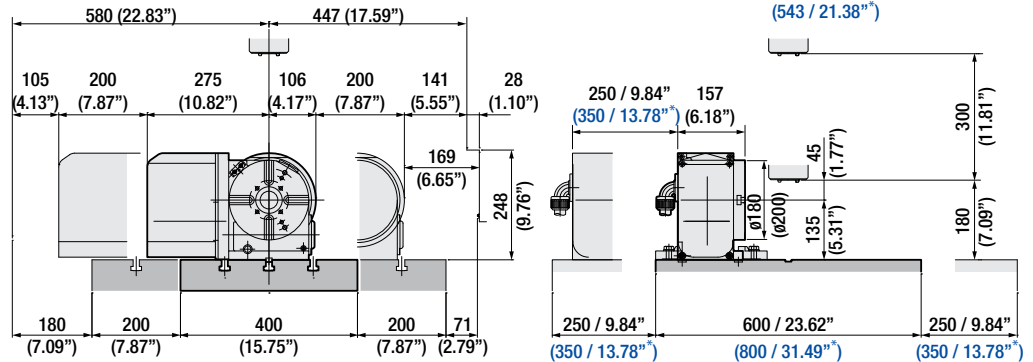
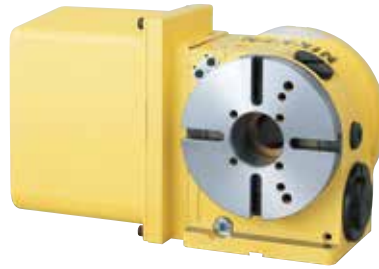
Nikken Rotary Tables for Speedio S500X1/S700X1



CNCZ180LSA-BR2

CNC180ZLSA-BR2 Specs

Rotary Table Diameter: 180mm
 Table Load Capacity: Horizontal 200kg
 Vertical 100kg
 RPM: 66.6 RPM (Z Type)*
 Indexing Accuracy (sec): +/- 20
 Brake Torque: 303 Nm
 Weight: 48kg
 Motor: R2AA08100HXPGA
 Center Bore: Dia. 60mm H7 X 40mm Deep

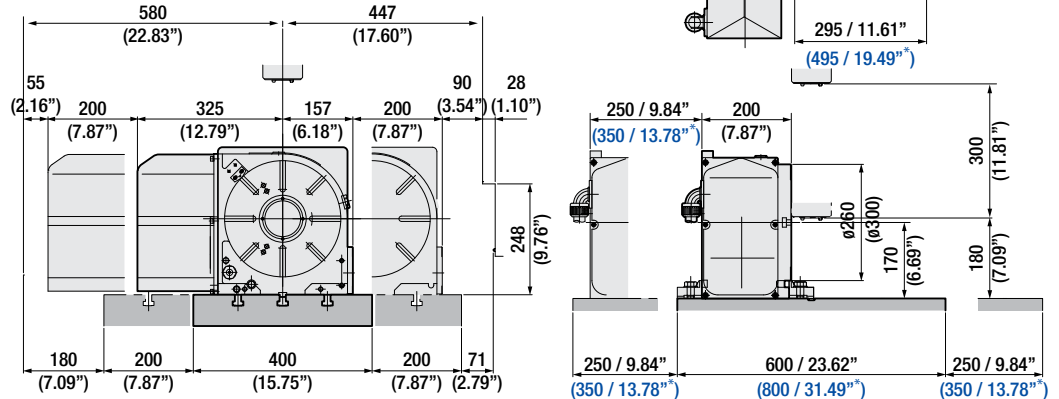


*Blue dimensions refer to S700X1 model

CNCZ260LSA-BR2

CNC260ZLSA-BR2 Specs

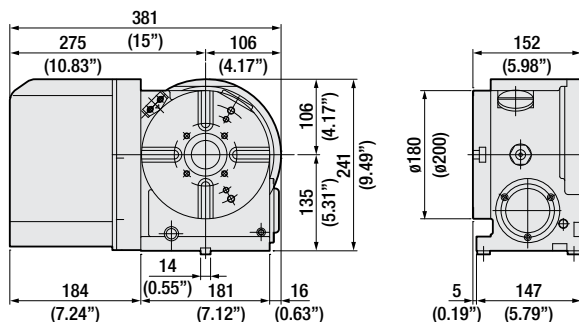
Rotary Table Diameter: 260mm
 Table Load Capacity: Horizontal 300kg
 Vertical 150kg
 RPM: 50RPM (Z Type)*
 Indexing Accuracy (sec): 20
 Brake Torque: 588 Nm (Pneumatic)
 1568 Nm (Hydraulic)
 Weight: 120kg
 Motor: R2AA08100HXPGA
 Center Bore: Dia. 80mm H7



*Blue dimensions refer to S700X1 model

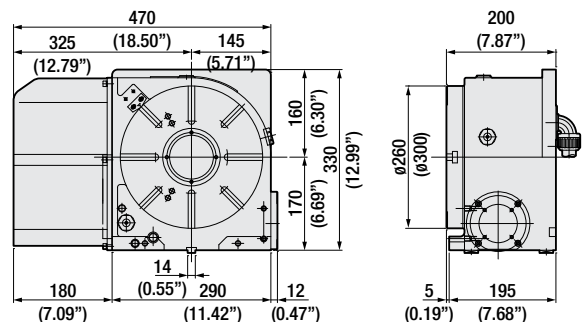
CNCZ180LSA-BR2

CNC202ZLSA-BR2 is also available



CNCZ260LSA-BR2

CNC302ZLSA-BR2 is also available



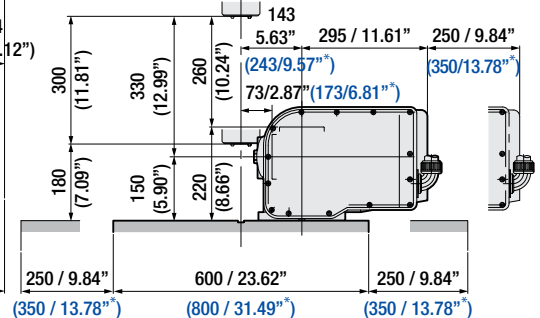
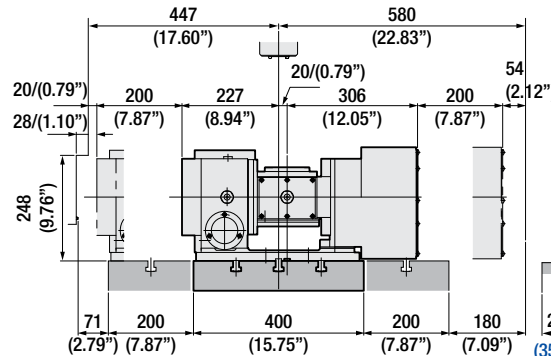
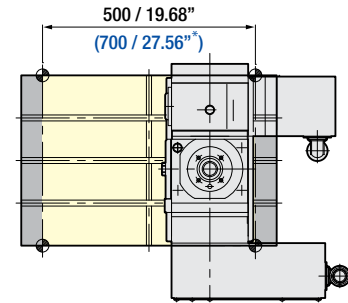
Nikken Rotary Tables for Speedio S500X1/S700X1



5AX-130SA-BR2

5AX-130SA-BR2 Specs

Rotary Table Diameter: 260mm
 Table Load Capacity: Horizontal 50kg
 Vertical 25kg
 RPM: 22.2 (Rotary) 11.1 (Tilt)
 Indexing Accuracy (sec): +/-30 (Rotary) 60 (Tilt)
 Brake Torque: 205Nm (Rotary)
 303Nm (Tilt)
 Weight: 115kg
 Motor: R2AA08100HXPGA (Rotary)
 R2AA08100HXPGA (Tilt)
 Center Bore: Dia. 60mm H7
 Tilt Range: 0~105 degrees

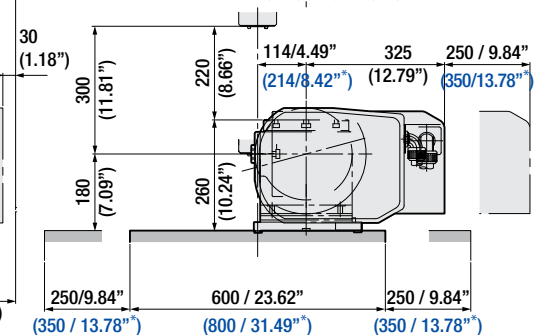
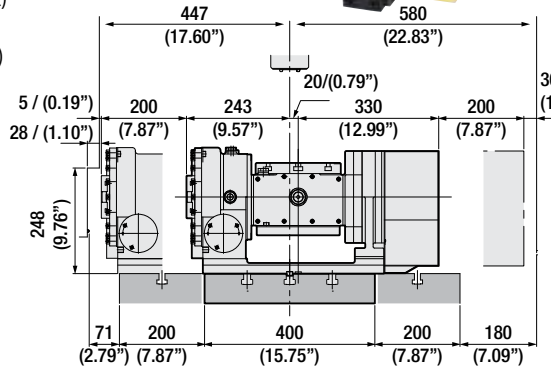
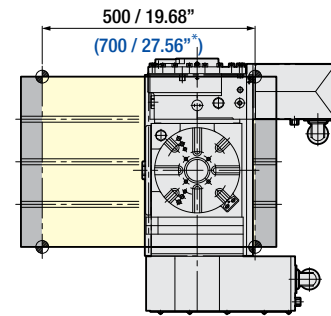


*Blue dimensions refer
to S700X1 model

5AX-201SA-BR2

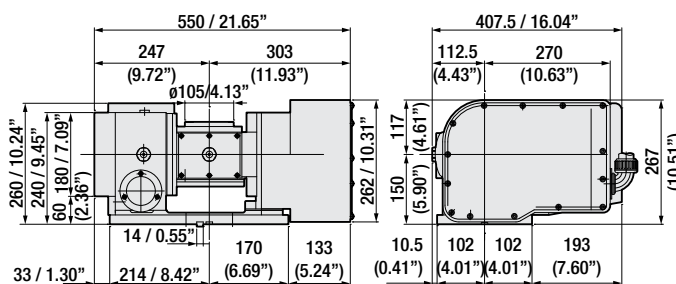
5AX-201SA-BR2 Specs

Rotary Table Diameter: 200mm
 Table Load Capacity: Horizontal 60kg
 Vertical 40kg
 RPM: 22.2 (Rotary) 16.6 (Tilt)
 Indexing Accuracy (sec): +/-20 (Rotary) 60 (Tilt)
 Brake Torque: 588Nm (Rotary) 608Nm (Tilt)
 (Hydraulic 3.5 Mpa)
 303Nm (Rotary) 303Nm (Tilt)
 (Pneumatic 0.5 Mpa)
 Weight: 160kg
 Motor: R2AA08100HXPGA (Rotary)
 R2AA08100HXPGA (Tilt)
 Center Bore: Dia. 60mm H7
 Tilt Range: 0~105 degrees

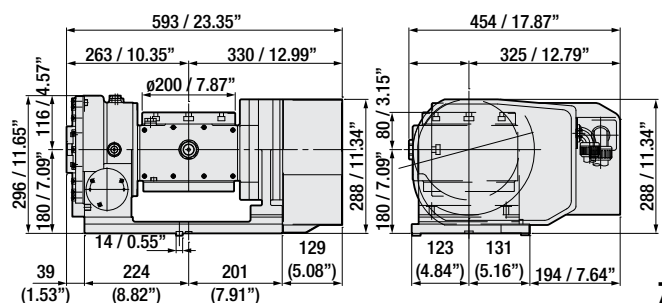


*Blue dimensions refer
to S700X1 model

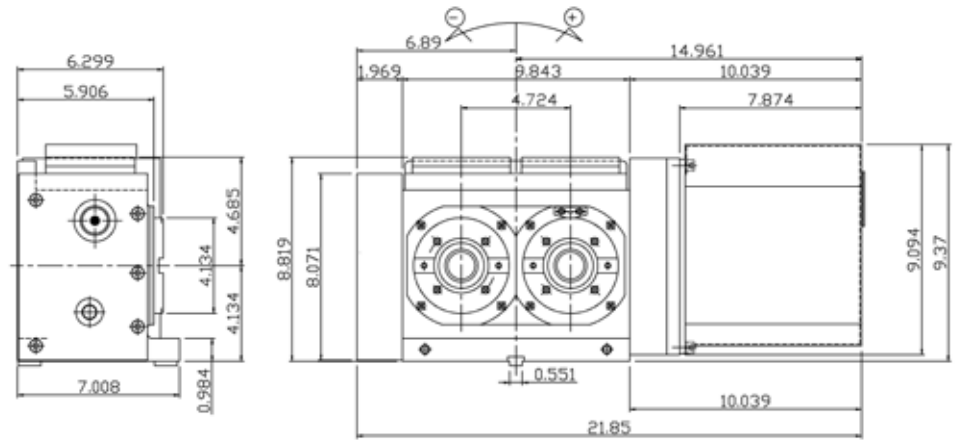
5AX-130SA-BR2



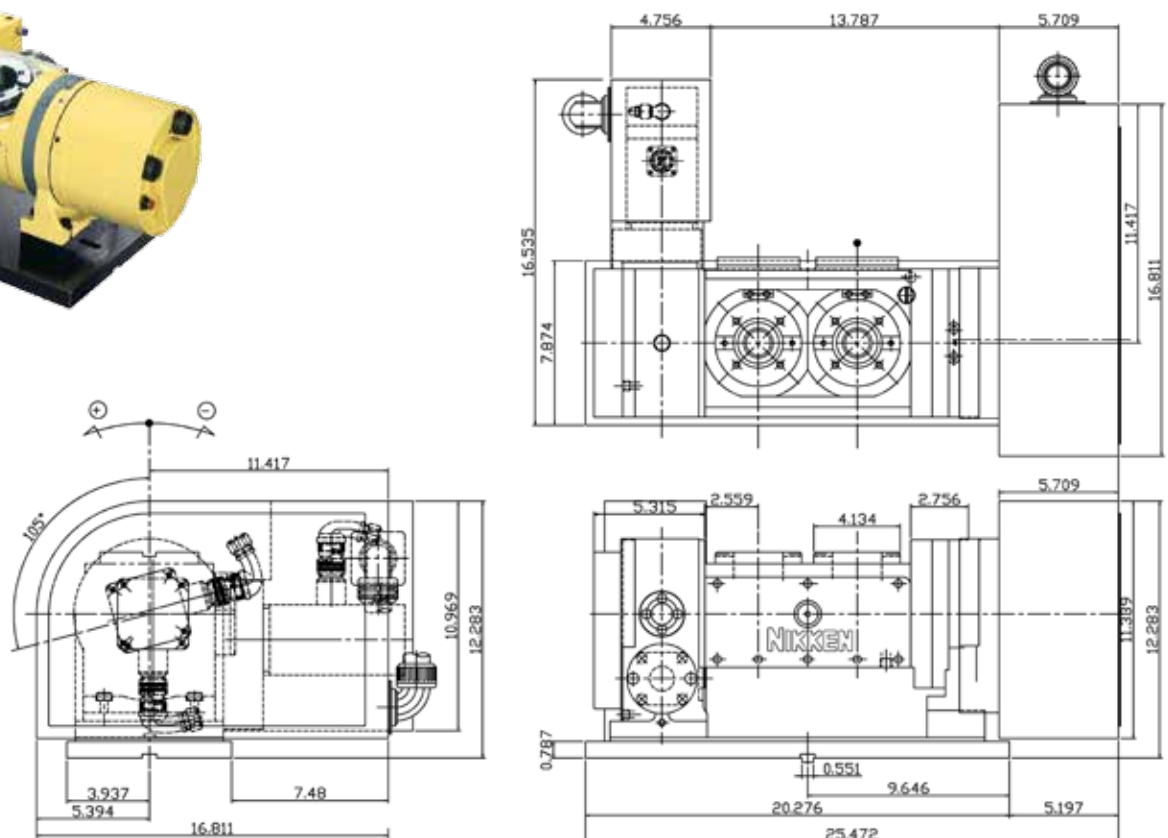
5AX-201SA-BR2



CNCZ100-2W-105-120SABR-2



5AX-2MT-105-120SABR-2



DD250-LS-50

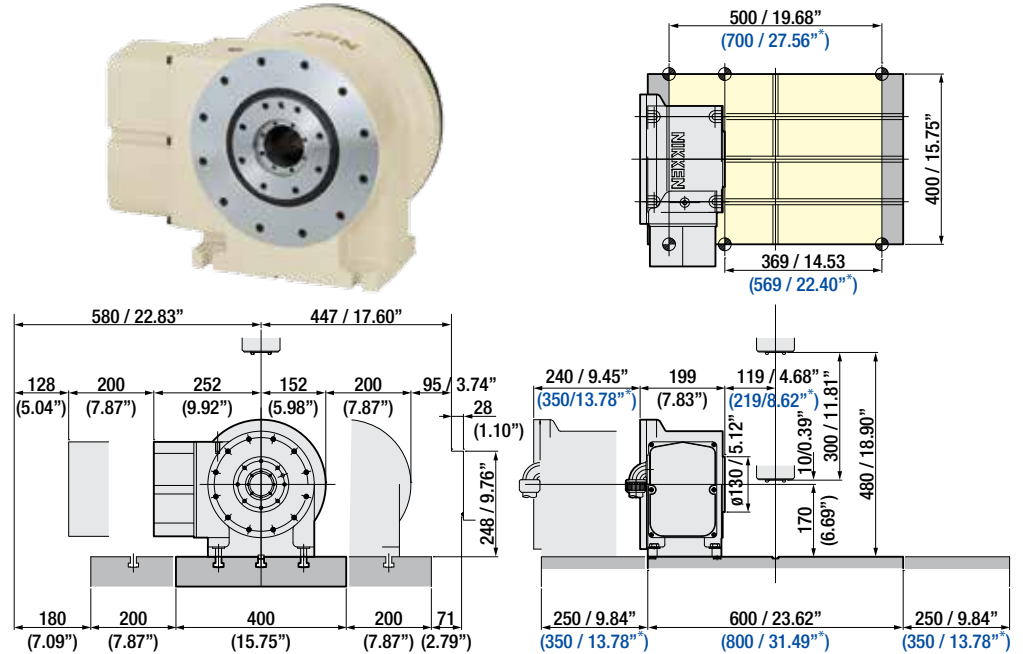
DD250LS-50 Direct Drive Motor Rotary Table

Rotary Table Diameter: 250 (Optional faceplate)
Spindle Outer Diameter: Dia. 130mm
RPM: 200
Indexing Accuracy (sec): 15
Brake Torque: 500Nm
Weight: 75kg
Motor: DB23A053021W00
Operating Torque: 50 Nm
Max Torque: 200 Nm
Center Bore: Dia. 53mm H7

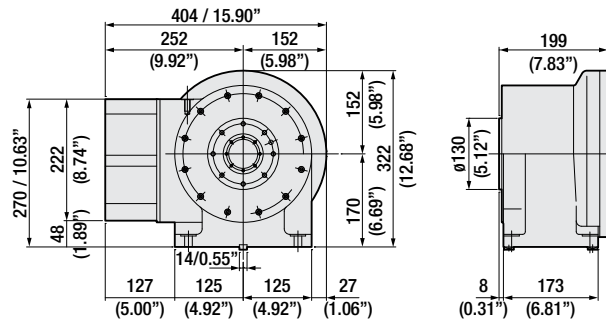
Additional Accessories (Sold Separately)

- 250mm face plate
- 6-port rotary joint

*Blue dimensions refer
to S700X1 model



DD250-LS-50

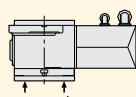


FOR HIGH PRODUCTION MANUFACTURING

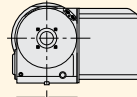
- For best results, all work pieces should be supported with a rotary support table.
- Swing of work pieces, fixtures, and other types of work holding must fit within the allowable work inertia of the rotary table. Excessive unbalance will not only effect indexing accuracy but also proper functioning of the unit.
- CNC105: 10Nm CNC180,202: 20Nm CNC260, 302: 30Nm**
- Please note that applications with unbalance that exceeds the allowable rating, the Z type rotary table is not suitable.
- If drawings and specifications of the workpiece and fixture are supplied, Nikken can provide engineering support to suggest the most suitable Rotary Table.
- For applications in high volumes of cutting fluid, Nikken can provide an air purge of 0.03 Mpa to prevent flooding within the motor cover. Please contact us for more details.
- Faceplates without T slots are also available. Please contact us for more details.

WHEN USING CRADLE FIXTURES:

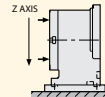
1. When utilizing a sub plate below the rotary table and support table, the following assembly tolerances must be kept:



The face of the rotary table must be parallel to the Y-axis within 0.01mm

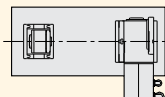


The rotary table base and sub plate center line must be in aligned within .02mm

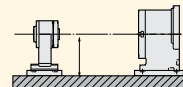


The rotary table faceplate must be perpendicular to the table of the machine within .02mm

2. When using a rotary table and support table together, the following tolerances should be met:



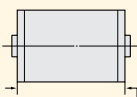
Concentricity within .02mm



Centerline height should be within .01mm

3. When designing fixtures or cradle plates to be held between centers, the following should be met and verified:

Verify perpendicularity and flatness

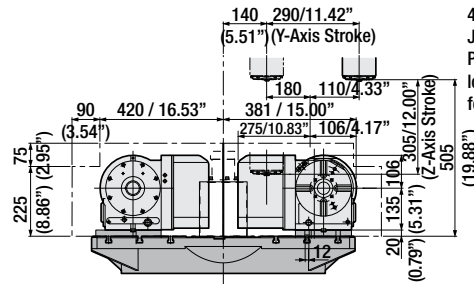
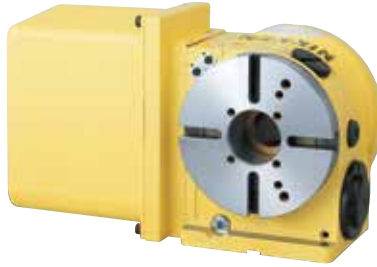


Fixture support ends must be within 0.01mm

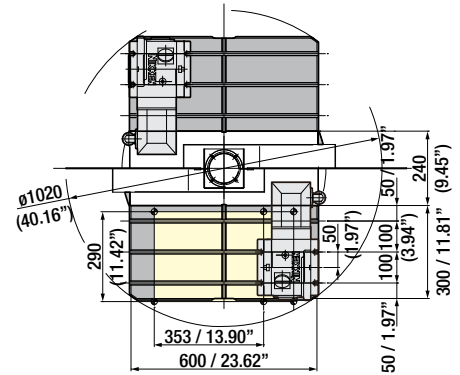
CNCZ180LSA-BR2

CNC180ZLSA-BR2 Specs

Rotary Table Diameter: 180mm
Table Load Capacity: Horizontal 200kg
Vertical 100kg
RPM: 66.6 RPM (Z Type)*
Indexing Accuracy (sec): +/- 20
Brake Torque: 303 Nm
Weight: 48kg
Motor: R2AA08100HXPGA
Center Bore: Dia. 60mm H7 X 40mm Deep



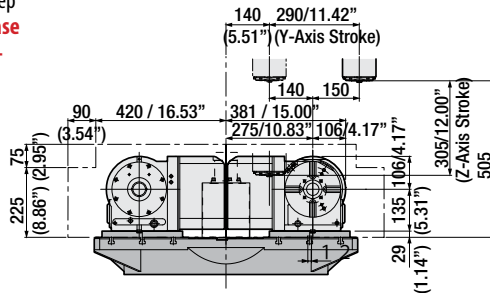
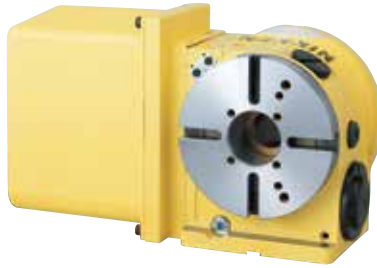
4 Port Hydraulic Rotary Joint option available. Please contact your local Brother dealer for more details.



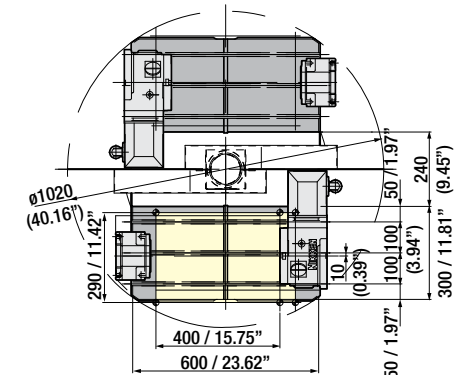
CNCZ180LSA-BR2 (TAT105N-135)

CNC180ZLSA-BR2 Specs

Rotary Table Diameter: 180mm
Table Load Capacity: Horizontal 200kg
Vertical 100kg
RPM: 66.6 RPM (Z Type)*
Indexing Accuracy (sec): +/- 20
Brake Torque: 303 Nm
Weight: 48kg
Motor: R2AA08100HXPGA
Center Bore: Dia. 60mm H7 X 40mm Deep



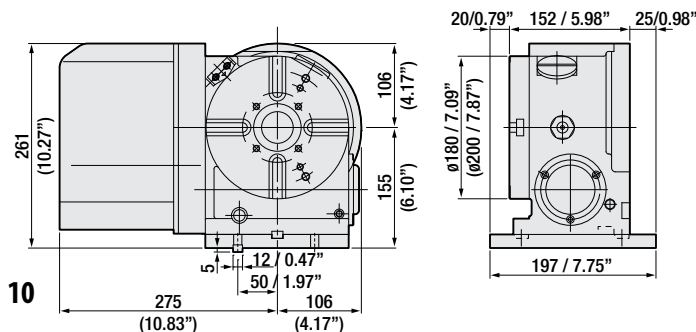
4 Port Hydraulic Rotary Joint option available. Please contact your local Brother dealer for more details.



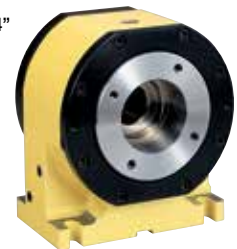
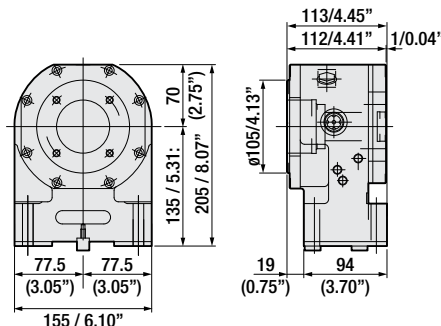
Sub Plate is not included. Please prepare sub plate in accordance to your application

CNCZ180LSA-BR2

CNCZ202LSA-BR2 is also available



TAT105N-135



TAT105N

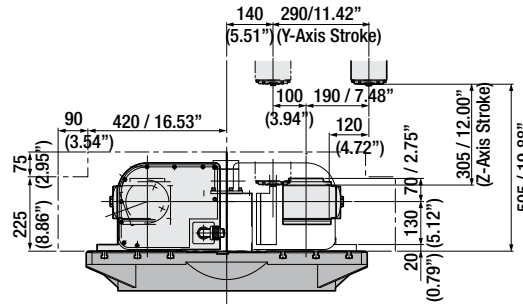
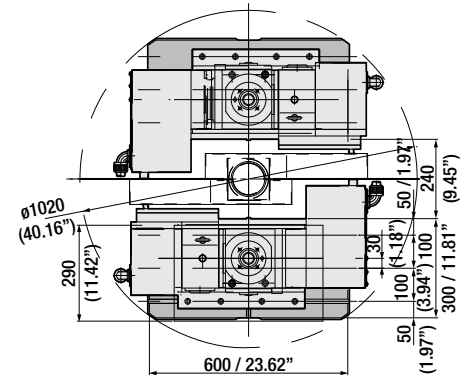
Nikken Rotary Tables for Speedio R450X1



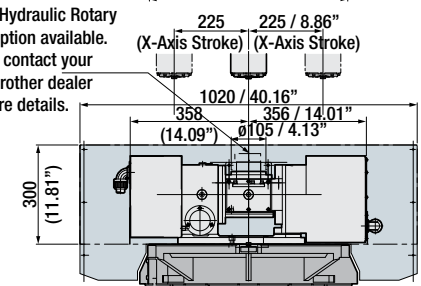
5AX-130BASA-BR

5AX-130BASA-BR Specs

Rotary Table Diameter: 260mm
 Table Load Capacity: Horizontal 50kg
 Vertical 25kg
 RPM: 22.2 (Rotary) 11.1 (Tilt)
 Indexing Accuracy (sec): +/-30 (Rotary) 60 (Tilt)
 Brake Torque: 205Nm (Rotary) 303Nm (Tilt)
 Weight: 115kg
 Motor: R2AA08100HXPGA (Rotary)
 R2AA08100HXPGA (Tilt)
 Center Bore: Dia. 60mm H7
 Tilt Range: 0~105 degrees



4 Port Hydraulic Rotary Joint option available. Please contact your local Brother dealer for more details.

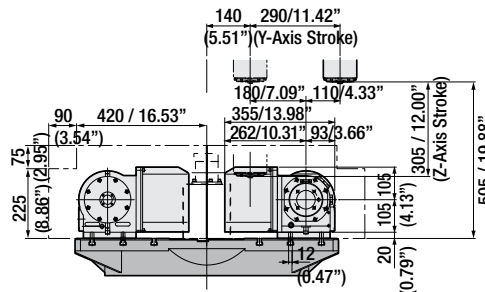


In order to utilize 2 X 5AX-130 tables, the machine must have 200kg capacity option

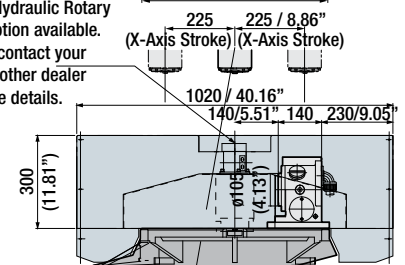
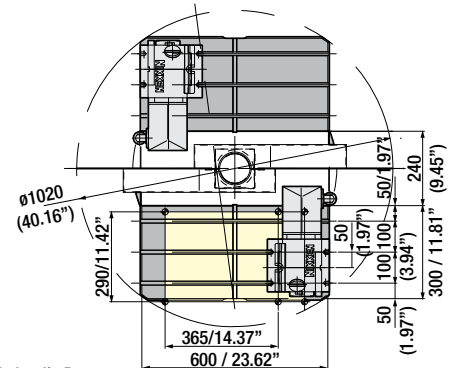
CNCZ105LSA-BR2

CNC105LSA-BR2 Specs

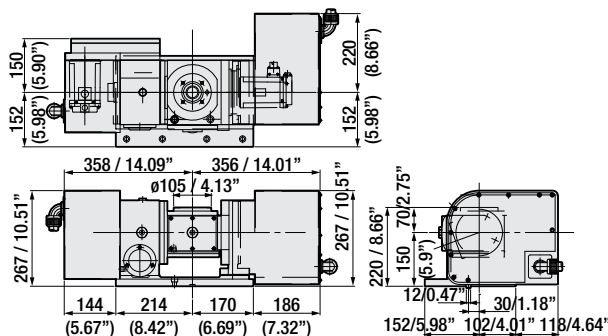
Rotary Table Diameter: 105mm
 Table Load Capacity: Horizontal 30 kg
 RPM: 66.6 RPM (Z Type)*
 Indexing Accuracy (sec): +/- 20
 Brake Torque: 205Nm
 Weight: 30kg
 Motor: Q2AA08050DXP3S
 Center Bore: Dia. 60mm H7 X 30mm Deep



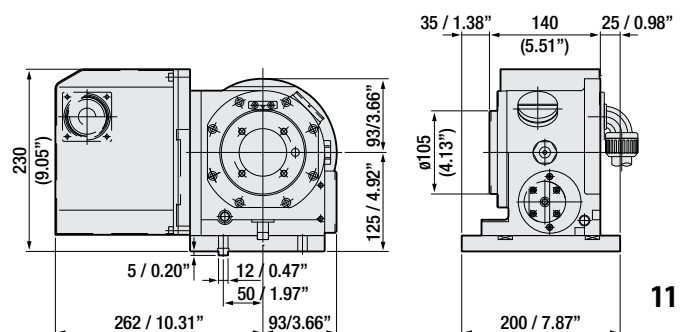
4 Port Hydraulic Rotary Joint option available. Please contact your local Brother dealer for more details.



5AX-130BASA-BR

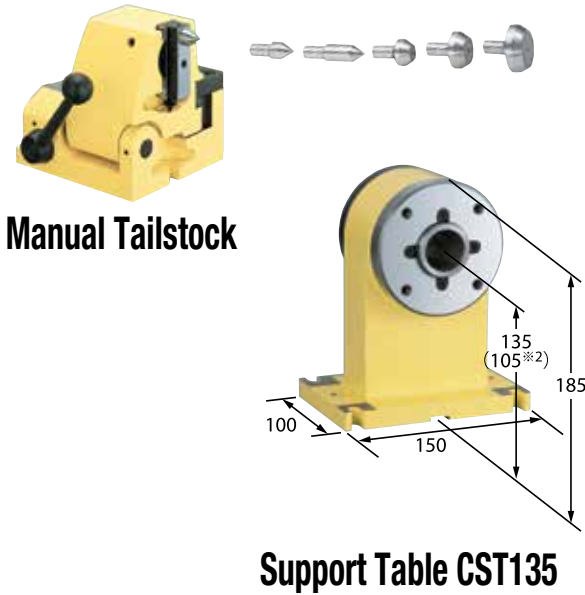


CNCZ105LSA-BR2



Nikken Tailstock Support Table

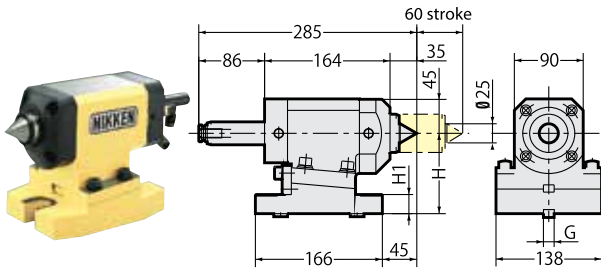
Tailstock-Support Table Options



Rotary Table Model	Tailstock Type Center Height	Manual	Air/Hyd. Tailstock	Support Table	
		Stroke: 15mm	Stroke: 60mm	CST (no brake)	TAT (with brake)
CNC105L	105	P-105SL	PBA-105	CST105	TAT105
CNC180L, 202L	135	P-125SL	PBA-135	CST135	TAT170
CNC260L, 302L, DD250LS	170	P-170SL	PBA-170	*1	TAT250
5AX-130	150	P-150S*3	PBA-150		-
5AX-201	180	P-170S*3	PBA-180		

- *1 - With the use of a base plate, the center height can be adjusted
- *2 - This is the center height for CST105
- P-150S, P-170S, and 170SL have 5 center options available
- *3 - Left handed style (handle on the opposite end) available

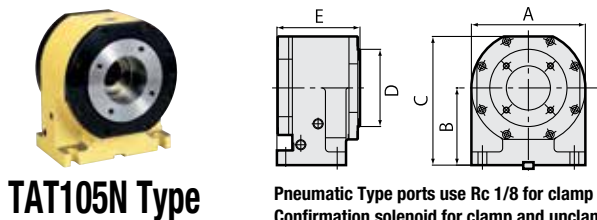
Pneumatic-Hydraulic Compact Tailstock



Code No.	Center Height H	H ₁	G	Thrust (N)		Weight (Kg)
				Air 0.5MPa	Hyd. 2MPa	
PBA-105	105	25	14	1176	4733	15
PBA-135	135	55	14	1176	4733	20
PBA-150	150	70	18	1176	4733	22
PBA-170	170	90	18	1176	4733	24.5

- Compact tailstocks come with live centers
- Quill type with Morse Taper adapters are also available. Please contact us for more details.
- Different stroke lengths can also be provided. Please contact us for more details.
- Center Height H can be adjusted by 0.35mm

Support Tables



Pneumatic Type ports use Rc 1/8 for clamp and unclamp.
Confirmation solenoid for clamp and unclamp are not included.

Code No.	A	B	C	D	E	Clamping System	Brake Torque	Weight
TAT105N	155	105	175	105	113	Air	205	16
TAT170N	155	135	220	170	138	Air	205	25
TAT250	250	170	295	250	145	Air/Hyd	112/784	50

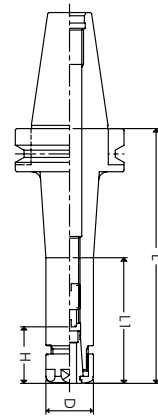
(N • m) (kg)

- Air Pressure to clamp and unclamp is 0.5 Mpa
- TAT105 and TAT170 utilizes Nikken's brake clamp pressure multiplier
- Rotary Joints are available for all models



STANDARD

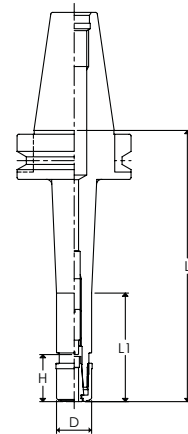
Part Number	Collet Series	Wrench	L	L1	H	D	Back Up Screw
BT30-SK6-60	SK6	SKL-6W	2.362"	1.299"	0.827-1.378"	0.768"	SKG-8
BT30-SK6-90	SK6	SKL-6W	3.543"	2.205"	0.827-1.378"	0.768"	SKG-8
BT30-SK10-45	SK10	SKL-10	1.772"	0.866"	1.181-1.969"	1.083"	SKG-12S
BT30-SK10-60	SK10	SKL-10	2.362"	1.378"	1.181-1.969"	1.083"	SKG-12L
BT30-SK10-90	SK10	SKL-10	3.543"	2.559"	1.181-1.969"	1.083"	SKG-12L
BT30-SK16-60	SK16	9HC16	2.362"	1.457"	1.772-2.362"	1.575"	SKG-12L
BT30-SK16-90	SK16	9HC16	3.543"	2.638"	1.772-2.559"	1.575"	SKG-12



Also available in dual face contact Taper Plus holders

HIGH SPEED

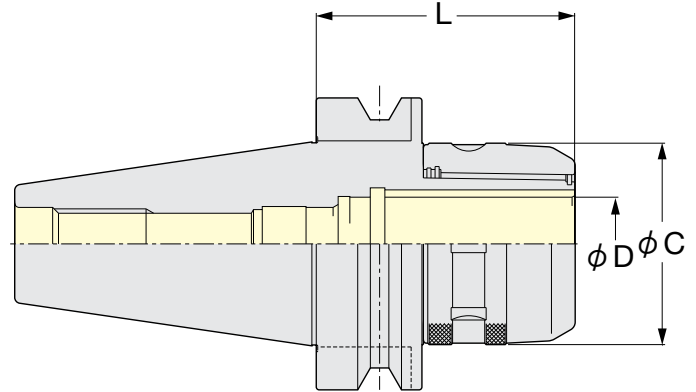
Part Number	Collet Series	Wrench	L	L1	H	D	Back Up Screw
BT30-SK6-60P	SK6	GH6	2.362"	1.496"	0.827"-1.378"	0.768"	SKG-8
BT30-SK6-90P	SK6	GH6	3.543"	2.480"	0.827"-1.378"	0.768"	SKG-8
BT30-SK10-45P	SK10	GH10	1.772"	0.906"	1.181"-1.969"	1.083"	SKG-12S
BT30-SK10-60P	SK10	GH10	2.362"	2.677"	1.181"-1.969"	1.083"	SKG-12L
BT30-SK10-90P	SK10	GH10	3.543"	1.496"	1.181"-1.969"	1.083"	SKG-12L
BT30-SK16-60P	SK16	GH16	2.362"	1.496"	1.772"-2.362"	1.575"	SKG-12L
BT30-SK16-90P	SK16	GH16	3.543"	2.677"	1.772"-2.362"	1.575"	SKG-12



Also available in dual face contact Taper Plus holders

For information regarding our collets, please reference the Lyndex-Nikken Tooling System Catalog

MILLING CHUCKS

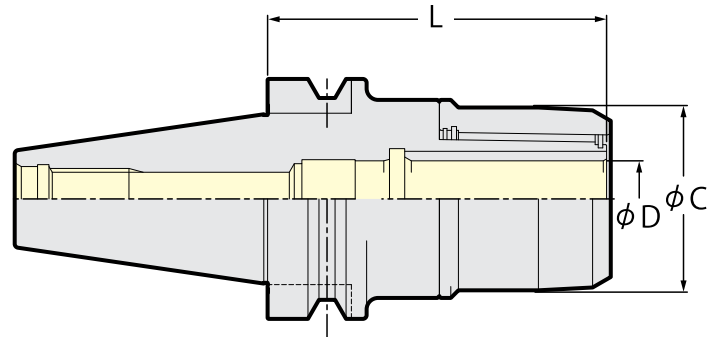


Part Number	Collet Series	Wrench	Clamping Range	D	L	C
BT30-C3/4-75	KM3/4 or CCK3/4	9HC22	0.125 - 0.750"	0.75"	2.953"	2.047"
BT30-C1-80	KM1 or CCK1	9HC25	0.125 - 1.0"	1.0"	3.15"	2.165"



Also available in dual face contact Taper Plus holders

HIGH SPEED MILLING CHUCKS



Part Number	Collet Series	Wrench	Clamping Range	D	L	C
BT30-C3/4-75G	KM3/4 or CCK3/4	GH20	0.125 - 0.750"	0.75"	2.953"	1.89"
BT30-C1-80G	KM1 or CCK1	GH25	0.125 - 1.0"	1.0"	3.15"	2.165"



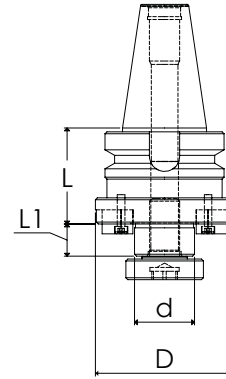
Also available in dual face contact Taper Plus holders

For information regarding our collets, please reference the Lyndex-Nikken Tooling System Catalog



BT30 - INCH

Part Number	d	L	D	L1	Key Size	Arbor Thread
B3001-0500-1.19	1/2"	1.19"	1.378"	0.57"	1/4"	1/4"-28
B3001-0750-1.19	3/4"	1.19"	2.929"	0.67"	5/16"	3/8"-24
B3001-1000-1.19	1"	1.19"	2.382"	0.67"	3/8"	1/2"-20

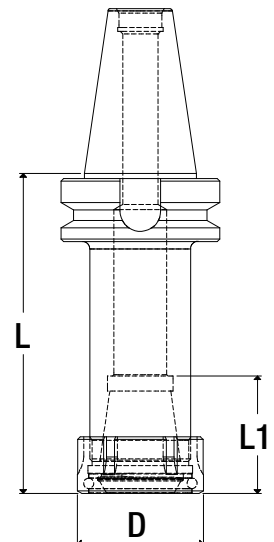


Nikken Tooling - ER Collet Chucks



BT30 - INCH

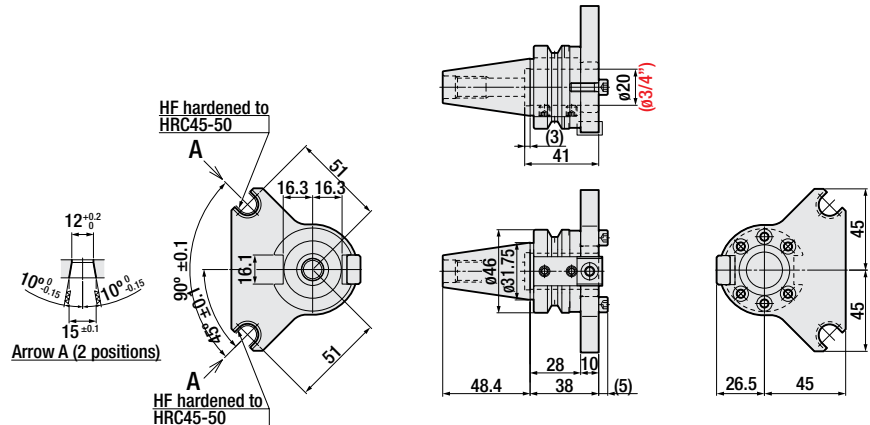
Part Number	Collet Series	Wrench	Clamping Range	D	L	C
B3007-0008-2.00	ER8	.019-.196"	08-NASPAN	2.00"	0.51"	0.47"
B3017-0008-4.00	ER8	.019-.196"	08-NASPAN	4.00"	0.51"	0.47"
B3007-0011-2.00	ER11	.019-.275"	011-HEX	2.00"	0.65"	0.75"
B3017-0011-4.00	ER11	.019-.275"	011-HEX	4.00"	0.65"	0.75"
B3007-0016-2.36	ER16	.019-.406"	016-SPAN	2.36"	0.87"	1.26"
B3017-0016-4.00	ER16	.019-.406"	016-SPAN	4.00"	0.87"	1.26"
B3007-0020-2.50	ER20	.039-.511"	020-SPAN	2.50"	1.06"	1.38"
B3017-0020-4.00	ER20	.039-.511"	020-SPAN	4.00"	1.06"	1.38"
B3007-0025-2.00	ER25	.039-.629"	025-SPAN	2.00"	1.18"	1.65"
B3017-0025-4.00	ER25	.039-.629"	025-SPAN	4.00"	1.18"	1.65"



BT30-BHC20-38 BT30-BHC3/4-38



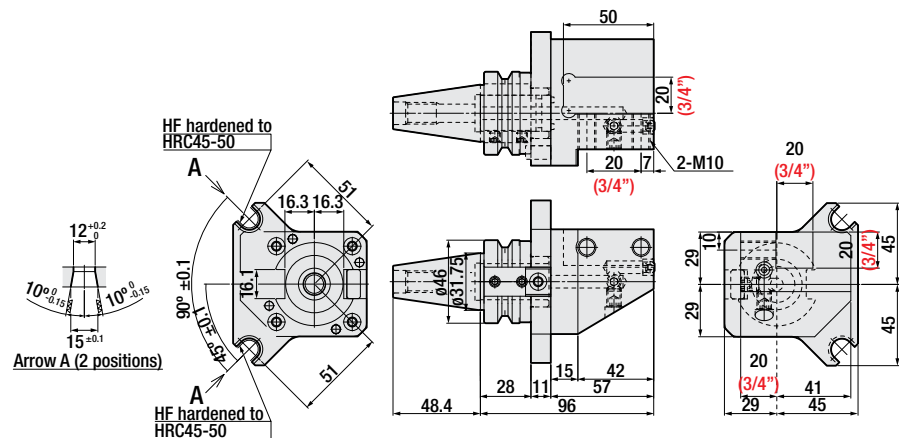
ROUND BYTE HOLDER



BT30-BHS20-96 BT30-BHS3/4-96



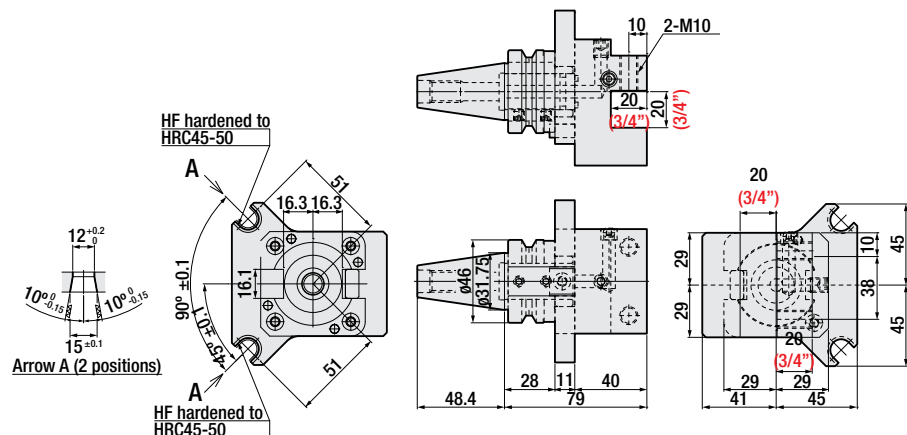
SQUARE BYTE HOLDER



BT30-BHSH20-79 BT30-BHSH3/4-79



SQUARE BYTE HOLDER



For more Catalogs, including Nikken Rotary Tables for Brother CNC Tapping Centers, visit our catalog download page at: www.lyndexnikken.com/Online-Catalogs

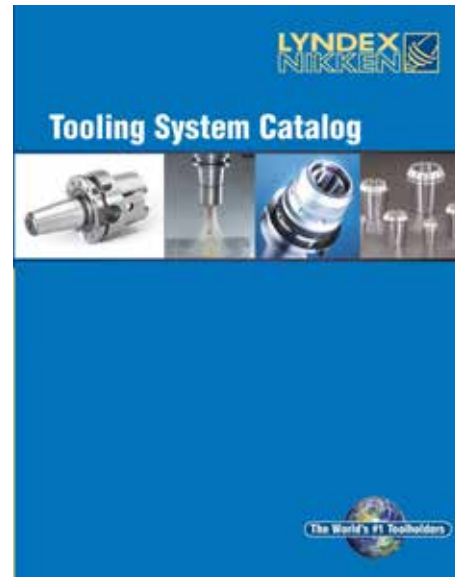
Contact us for more information on our products lines.

Shrink Fit Catalog



CAT2012-SHRINK

Tooling System Catalog



CAT2011-TC

Modular Angle Head Catalog



CAT2014-MRAM

Taper Plus Catalog



CAT2014-TAPERPLUS

A team of experts dedicated to provide 100% customer satisfaction

Lyndex-Nikken is dedicated to providing not only the highest quality products, but also the highest quality of service and customer care. Our fully equipped service department has over 30 years experience enabling complete and timely support for all Lyndex-Nikken products including: CNC rotary tables, CNC machining center tooling, Live and Static tools.

Lyndex-Nikken implements training certification programs in order to standardize a thorough understanding of our products. Our certified service engineers provide high quality service, technical support and training, and look forward to satisfying your industrial needs.

Before purchasing a rotary table, it's important to go through preliminary steps which will insure that you choose the right table to fit your machine and meet your manufacturing expectations.

Lyndex-Nikken regional managers will guide you through these different steps and assist you with table selection, brake system selection and machine fit, guaranteeing complete customer satisfaction.

The highest quality hardware and components

We only use superior hardware and components to guarantee the best results and trouble-free, long term reliability for our products.

- Genuine Brother parts
- Cut and wear resistant Waterproof Cabling
- Cable management

Installation Kit

Our installation kit includes the following:

- Drive Installation
- Parameter Changes
- Communication Cables
- Fiber Optic Cables
- Bulkhead Cable Set
- Documentation
- Sheet Metal (where required)



Lyndex-Nikken In-house Services:

- Fault diagnosis and repair work
- Motor fitment and CNC M/C preparation
- Cable manufacture and guard modifications
- Brake boosters upgrades
- Rotary Table retrofit service for installation on different machining centers
- Tool repair and calibrations
- Complete rotary table refurbishment
- Customer training and support

Our comprehensive technical and repair services is here to protect your investment. Please contact us to arrange a visit or discuss any requirements in more detail.





www.lyndexnikken.com

1468 Armour Boulevard

Mundelein, IL 60060

E-mail: inquiries@lyndexnikken.com

Phone: (847) 367-4800

Fax: (847) 367-4815

CAT2014-BROTHER-SPEEDIO-RT