

## TORMACH ROTARY PRODUCTS

We offer a complete line of rotary products and accessories including 4th Axis Kits for our PCNC mills, tailstocks, chucks, collets, motorized turntables, and more.

### 4<sup>TH</sup> AXIS KITS

A 4<sup>th</sup> axis kit extends your PCNC's capability to include rotation of the workpiece. It's essential for producing barrel cams, twist tracks, machined springs, cylinder engravings, milled screws, variable pitch screws, and turbine blades, among other features. It is also commonly used for rapid indexing or automatic positioning of work for multi-sided machining, eliminating unneeded handling of the part.

Each kit includes a motorized rotary table, electronic axis driver, and all necessary wires and connectors for seamless integration with your PCNC mill.

PN 30290: 6" 4<sup>TH</sup>  
AXIS KIT FOR  
PCNC

### Features

- Horizontal or Vertical Operation
- Removable 5/8" Locating Key
- Adjustable worm gear for backlash correction
- Pre-wired AMP CPC power connector
- Dual anti-rotation locks
- Quick release for engaging and disengaging motor drive

### Specifications

- 1800 degrees per minute (5RPM) maximum speed
- Hydrodynamic Bearings
- Manually operated table locks
- 30 arc seconds of backlash



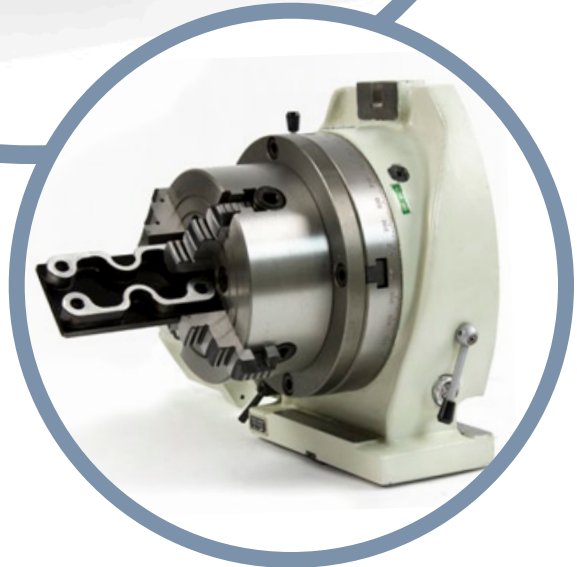
(SHOWN WITH OPTIONAL  
WORKHOLDING CHUCKS AND  
COLLET ADAPTOR)

# 4TH AXIS

Tormach's 4th axis kits are designed and built for machining operations that involve large forces, cutting fluids, and frequent operation. They utilize a high performance direct drive NEMA bipolar stepper motor. The motor mount has a sealing O-ring so electrical connections are resistant to cutting fluids. The turntable design is coolant resistant and suitable for operation with most typical flood or mist systems.

**PN 30289: 8" 4TH AXIS KIT FOR PCNC**

(SHOWN WITH OPTIONAL WORKHOLDING ACCESSORIES AND TAILSTOCK)



Specifications	8"	6"
Table Diameter	200 mm	160 mm
Taper of Center Hole	3MT	2MT
Width of T-slot	12 mm	10 mm
Adjacent Angle of T-slot	90°	90°
Width of Locating Key	5/8"	5/8"
Worm Ratio	90:1	90:1
Graduation / Vernier	1° / 10"	1° / 10"
Angle per Full Step	0.02°	0.02°
Motor Steps	200/rev	200/rev
Motor Winding	2 phase	2 phase
Motor Inductance	3.5 mH	5.73 mH
Motor Resistance	0.42 Ω	1.34Ω
Motor Phase Current	5.5 A	2.8 A
Motor Holding Torque	4.6 Nm	1.9 Nm
Motor Mount	NEMA 34	NEMA 23
Motor Shaft	1/2"	1/4"
Cable	10' high flex	10' high flex
Shipping Weight	91 lbs	72 lbs

# 4<sup>TH</sup> AXIS ACCESSORIES

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PRODUCT DATASHEET

## CHUCKS

3 jaw chucks are easy to use and self-centering. While 4 jaw chucks aren't self-centering, they offer versatility in that they can be used to hold square/rectangular stock and can be used for off-center work. Each Chuck comes with a precision machined adaptor plate for easy centering on the table.

- A) PN 30291: 3 JAW CHUCK (8")
- B) PN 30292: 3 JAW CHUCK (6")
- C) PN 30293: 4 JAW CHUCK (8")
- D) PN 31721: 4 JAW CHUCK (6")

## COLLETS

Collets are a great choice for holding slender round stock and will generally have less runout than 3 jaw chucks. We carry options for both the common 5C system.

### 5C COLLET ADAPTOR

5C Collet fixture utilizing traditional lathe style chuck.

- E) PN 30294: 5C COLLET ADAPTOR (8")

### 5C COLLET FIXTURE

Affordable 5C Collet fixtures utilizing spanner nut tightening system and tapered alignment pin.

- F) PN 31415: 5C COLLET FIXTURE (8")
- G) PN 31414: 5C COLLET FIXTURE (6")



### MT3 COLLET AND DRAWBOLT FOR 8" TABLE

The Center hole of the 8" rotary table has a #3 Morse taper (MT3). This collet and drawbolt allows mounting Tormach Tooling System® (TTS) holders on the rotary table, allowing TTS to hold a workpiece instead of a tool. Ideal for small diameter stock.

- PN 30233: MT3 COLLET AND DRAWBOLT (FOR 8" TABLE ONLY)



### 5C COLLET SET

15 Piece 5C round collet set  
- 1/8" TO 1" sizes by 1/16"  
increments.

- PN 30252: 5C COLLET SET



# 4<sup>TH</sup> AXIS ACCESSORIES

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## TAILSTOCKS

A tailstock is positioned opposite the rotary table to support the unchucked end of a long workpiece. Our tailstock for 6" Table features and integrated dead center. The tailstock for 8" Table uses a Morse Taper #3 collet for holding either dead or live centers and feature three adjustments for precise positioning.

**PN 30197: TAILSTOCK FOR 8" TABLE**

**PN 30272: TAILSTOCK FOR 6" TABLE**

## MOTORIZED ROTARY TABLES

We also sell our rotary table without the 4th axis integration kit for use by system integrators or custom machine builders.

**PN 30194: 8" MOTORIZED TABLE**

**PN 30267: 6" MOTORIZED TABLE**

## WARRANTY

All Tormach rotary products are warranted for 1 year from the date of purchase. Warranty and support for all Tormach products is limited to use consistent with the Intended Use Statement.

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## BULKHEAD CONNECTOR

A replacement panel mount receptacle matching the connector which comes with each motorized table. Included with the 4th axis kit, but can also be purchased separately for custom integration projects.

**PN 30236: BULKHEAD CONNECTOR**



## ENABLING YOUR IDEAS

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