

COMPARISON DOCUMENT

4TH AXIS TABLES

| TORMACH CNC MILL 4TH AXIS TABLES | microARC 4 | MOTORIZED ROTARY TABLE | | TILTING MOTORIZED ROTARY TABLE | | SUPER SPACER MOTORIZED ROTARY TABLE | |
|---|----------------------------|--|----------------------|-----------------------------------|------------------------|---|----------------------|
| SIZE | 3.9 in. (100 mm) | 6 in. (152 mm) | 8 in. (203 mm) | 6 in. (152 mm) | 8 in. (203 mm) | 6 in. (152 mm) | 8 in. (203 mm) |
| PART NUMBER | 38412 | 30267 | 30194 | 31847 | 31848 | 33089 | 33264 |
| PRICE | \$2,299 | \$1,395 | \$1,595 | \$2,195 | \$2,695 | \$2,295 | \$2,695 |
| SPECIFICATIONS | | | | | | | |
| Height (without Handle) | 5.7 in. (145 mm) | 9.5 in. (240 mm) | 11.7 in. (295 mm) | 10.5 in. (265 mm) | 11.875 in. (300 mm) | 10.25 in. (260 mm) | 11.2 in. (285 mm) |
| Height (with Handle) | 7 in. (178 mm) | N/A | | | | | |
| Weight | 38 lbs. (17 kg) | 76 lbs. (31 kg) | 94 lbs. (43 kg) | 97 lbs. (44 kg) | 148 lbs. (67 kg) | 110 lbs. (50 kg) | 141 lbs. (64 kg) |
| Diameter of Table | 4 in. (100 mm) Chuck | 6.3 in. (160 mm) | 7.9 in. (200 mm) | 6.3 in. (160 mm) | 7.9 in. (200 mm) | 6.3 in. (160 mm) | 7.9 in. (200 mm) |
| Table to Centerline | 3.1 in. (80 mm) | 4.9 in. (125 mm) | 5.9 in. (150 mm) | 4.125 in. (105 mm) | 4.75 in. (120 mm) | 4.6 in. (116 mm) | 5.9 in. (150 mm) |
| Horizontal Height for C-Axis Operation (without Chuck) | 10.2 in. (260 mm) | 3.2 in. (82 mm) | 4.4 in. (112 mm) | 6.5 in. (165 mm) | 7.25 in. (185 mm) | 6.0 in. (152 mm) | 6.25 in. (160 mm) |
| T-Slot Width | N/A | .39 in. (10 mm) | .47 in. (12 mm) | .39 in. (10 mm) | .47 in. (12 mm) | .48 in. (12 mm) | .47 in. (12 mm) |
| Gear Ratio | 1:50 | 1:90 | | | | | |
| Motor Phase Current | 4 Amps | 2.8 Amps | 5.5 Amps | 5.5 Amps | 5.5 Amps | 5.5 Amps | 5.5 Amps |
| Motor Mount | Custom | NEMA 23 | NEMA 34 | NEMA 34 | NEMA 34 | NEMA 34 | NEMA 34 |
| Through Bore Diameter | 0.75 in. (19 mm) | MT-2 Morse Taper | MT-3 Morse Taper | MT-2 Morse Taper | MT-3 Morse Taper | 1.55 in. (39 mm) | 2.47 in. (63 mm) |
| Angular Resolution | 26 arc-sec (0.0072°) | 7.2 arc-sec. (0.002°) | | | | | |
| Angular Resolution Examples* | 0.00025" @ 4" diameter | 0.0001 inch @ 6-inch diameter 0.00015 inch @ 8-inch diameter | | | | | |
| Backlash | 18 arc-sec (0.005°) | Setting Table to 60 - 80 Arc-Seconds (0.01667° - 0.02222°) is Recommended for Oil Penetration Between the Worm and Gear | | | | | |
| Backlash Example* | 0.00017" @ 4" diameter | | | | | | |
| Maximum Holding Torque | 28 ft-lb (39 Nm) | 90 ft-lb (122 Nm) | 90 ft-lb (122 Nm) | 90 ft-lb (122 Nm) | 90 ft-lb (122 Nm) | 90 ft-lb (122 Nm) | 90 ft-lb (122 Nm) |

***To convert rotational motion to linear distance:**

$$2 \times \pi \times r (\theta/360) = \text{Linear Motion}$$

Examples (These are both the same example):

$$\sin[26 \text{ arc-seconds}] \times 2" \text{ radius} = 0.00025"$$

$$\sin(0.0072^\circ) \times 2" \text{ radius} = 0.00025"$$

All prices subject to change without notice.

©2021 Tormach®. Specifications subject to change without notice.
tormach.com | 4thAxis_Comparison (0221)



4TH AXIS TABLES

| TORMACH CNC MILL 4TH AXIS TABLES | microARC 4 | MOTORIZED ROTARY TABLE | | TILTING MOTORIZED ROTARY TABLE | | SUPER SPACER MOTORIZED ROTARY TABLE | |
|--|--|---------------------------|-------------------|-----------------------------------|-------------------|---|-------------------|
| | 3.9 in. (100 mm) | 6 in. (152 mm) | 8 in. (203 mm) | 6 in. (152 mm) | 8 in. (203 mm) | 6 in. (152 mm) | 8 in. (203 mm) |
| SIZE | | | | | | | |
| PART NUMBER | 38412 | 30267 | 30194 | 31847 | 31848 | 33089 | 33264 |
| PRICE | \$2,299 | \$1,395 | \$1,595 | \$2,195 | \$2,695 | \$2,295 | \$2,695 |
| FEATURES | | | | | | | |
| Nidec-Shimpo Harmonic Gearbox | ✓ | | | | | | |
| Mounts for Vertical (A-axis) and Horizontal (C-axis) Operation | | ✓ | | ✓ | | ✓ | |
| Manual Tilting Stage | | | | ✓ | | ✓ | |
| Includes ER40 Collet Fixture | ✓ | | | | | | |
| Includes Reversible 3-jaw Chuck | ✓ | | | | | ✓ | |
| MACHINE COMPATIBILITY | | | | | | | |
| 1100M/MX | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 770M/MX | ✓ | ✓ | | ✓ | | ✓ | |
| PCNC 440 | ✓ | | | | | | |
| PCNC 1100 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PCNC 770 | ✓ | ✓ | | ✓ | | ✓ | |
| RELATED PARTS (Required) | | | | | | | |
| 38954 | 4th Axis Driver/Installation Kit (770M/MX, 1100M/MX) | \$200 | \$200 | \$200 | \$200 | \$200 | \$200 |
| 30266 | 4th Axis Integration Kit (PCNC 770/1100) | \$300 | \$300 | \$300 | \$300 | \$300 | \$300 |
| 38712 | 4th Axis Driver/Wiring Kit (PCNC 440) | \$200 | N/A | N/A | N/A | N/A | N/A |

All prices subject to change without notice.

©2021 Tormach®. Specifications subject to change without notice.
tormach.com | 4thAxis_Comparison (0221)



TORMACH®

4TH AXIS TABLES

| TORMACH CNC MILL 4TH AXIS TABLES | microARC 4 | MOTORIZED ROTARY TABLE | | TILTING MOTORIZED ROTARY TABLE | | SUPER SPACER MOTORIZED ROTARY TABLE | | |
|-------------------------------------|--|---------------------------|-----------------------------|-----------------------------------|-------------------|---|-------------------|-------------------|
| | | 3.9 in. (100 mm) | 6 in. (152 mm) | 8 in. (203 mm) | 6 in. (152 mm) | 8 in. (203 mm) | 6 in. (152 mm) | 8 in. (203 mm) |
| SIZE | | | | | | | | |
| PART NUMBER | 38412 | 30267 | 30194 | 31847 | 31848 | 33089 | 33264 | |
| PRICE | \$2,299 | \$1,395 | \$1,595 | \$2,195 | \$2,695 | \$2,295 | \$2,695 | |
| 4TH AXIS ACCESSORY COMPATABILITY | | | | | | | | |
| | 100 mm 3-Jaw Chuck | Included | | | | | | |
| | Standard and Reversible Jaws | Included | | | | | | |
| | ER40 Collet Face Plate | Included | | | | | | |
| | PCNC 440 Mounting Hardware | Included | | | | | | |
| 31921 | 4th Axis Homing Kit | | PCNC 770 and PCNC 1100 Only | | | | | |
| 34726 | 4th Axis Mounting Kit for Tombstone | ✓ | ✓ | ✓ | ✓ | | | |
| 33146 | Cast Iron Tombstone | ✓ | ✓ | ✓ | ✓ | | | |
| 30197 | Adjustable Tailstock (Tall) | | ✓ | | | | ✓ | |
| 32622 | 2-Jaw Chuck for 6" Table | | ✓ | | ✓ | | | |
| 32677 | Upgrade/Replacement Motor for 6" Table | ✓ | | ✓ | | | | |
| 32627 | 2-Jaw Chuck for 6" Table | ✓ | | ✓ | | | | |
| 34104 | MT-1 Live Center | ✓ | | ✓ | ✓ | ✓ | | |
| 34105 | MT-3 Live Center | | ✓ | | ✓ | | | |
| 31415 | 5C Collet Fixture for 8" Rotary Table | | ✓ | | ✓ | | | |
| 31414 | 5C Collet Fixture for 6" Rotary Table | ✓ | | ✓ | | | | |
| 30294 | 5C Collet Adapter for 8" Table | | ✓ | | ✓ | | | |
| 31721 | 4-Jaw Chuck for 6" Table | ✓ | | ✓ | | | | |
| 30292 | 3-Jaw Chuck for 6" Table | ✓ | | ✓ | | | | |
| 30291 | 3-Jaw Chuck for 8" Table | | ✓ | | ✓ | | | |
| 30293 | 4-Jaw Chuck for 8" Table | | ✓ | | ✓ | | | |
| 30272 | Adjustable Tailstock (Med.) | ✓ | | ✓ | ✓ | | | |
| 33129 | MT-1 Arbor for Medium Tailstock | ✓ | | ✓ | ✓ | | | |
| 31077 | Interchangeable Point Live Center Set | | ✓ | | | | ✓ | |
| 34385 | MT-3 Alignment Kit for ER40 Collet Fixture | | ✓ | | ✓ | | | |
| 34383 | MT-3 Alignment Kit for ER32 Collet Fixture | | ✓ | | ✓ | | | |
| 34384 | MT-2 Alignment Kit for ER40 Collet Fixture | ✓ | | ✓ | | | | |
| 34382 | MT-2 Alignment Kit for ER32 Collet Fixture | ✓ | | ✓ | | | | |

All prices subject to change without notice.

©2021 Tormach®. Specifications subject to change without notice.
tormach.com | 4thAxis_Comparison (0221)

