

# PALMGREN®

## ROTARY TILTING CROSS SLIDE TABLES

### DESCRIPTION

Palmgren Rotary Tilting Cross Slide Tables (32804 & 34103) accurately position work on the X and Y axis, as well as having a 360° top rotation and 0° to 90° angle. Rotary movement is calibrated in degrees around the full circumference of the top. Rotary feed dials are graduated in 3-minute increments. Tables can be locked against rotation. Cross travel screws are precision-cut Acme thread. All handles clear machine table work surface. Cross travel is 4" on both 8" and 10" models. These rugged, precision made tables of industrial quality will allow the operator to do milling, routing, shaping, indexing, cutting slots and keyways plus many other jobs.

### DIMENSIONS

Refer to Figure 1.

Stock No.		32804	34103
Overall Length	A	11 <sup>27</sup> / <sub>32</sub> "	12 <sup>25</sup> / <sub>32</sub> "
Overall Width	B	11 <sup>11</sup> / <sub>16</sub> "	12 <sup>5</sup> / <sub>8</sub> "
Table Centerbore	C	1 <sup>5</sup> / <sub>8</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Deep	1 <sup>5</sup> / <sub>8</sub> " x 3 <sup>3</sup> / <sub>4</sub> " Deep
Base Width	D	4 <sup>15</sup> / <sub>16</sub> "	4 <sup>15</sup> / <sub>16</sub> "
Top Diameter	F	8"	10"
Height	H	5 <sup>15</sup> / <sub>16</sub> "	5 <sup>7</sup> / <sub>8</sub> "
Base Keyway	I	5 <sup>5</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "
Top Keyway	J	5 <sup>5</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "
Handle Length	K	3"	3"
Base Length	L	9 <sup>3</sup> / <sub>16</sub> "	9 <sup>3</sup> / <sub>16</sub> "
Mounting Centers	M	8 <sup>1</sup> / <sub>8</sub> "	8 <sup>1</sup> / <sub>8</sub> "
Longitudinal Travel		4"	4"
Cross Travel		4"	4"
Dial Division-Linear		0.001"	0.001"
Linear Travel per Turn		0.100"	0.100"
Dial Division-Rotary		3 Minutes	3 Minutes
Rotation per Turn		9°	9°
Gear Ratio		40:1	40:1
Weight		45 lbs.	51 lbs.
Shipping Weight		48 lbs.	55 lbs.

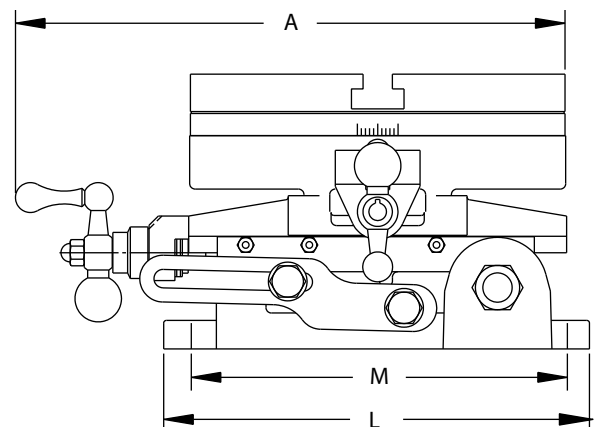
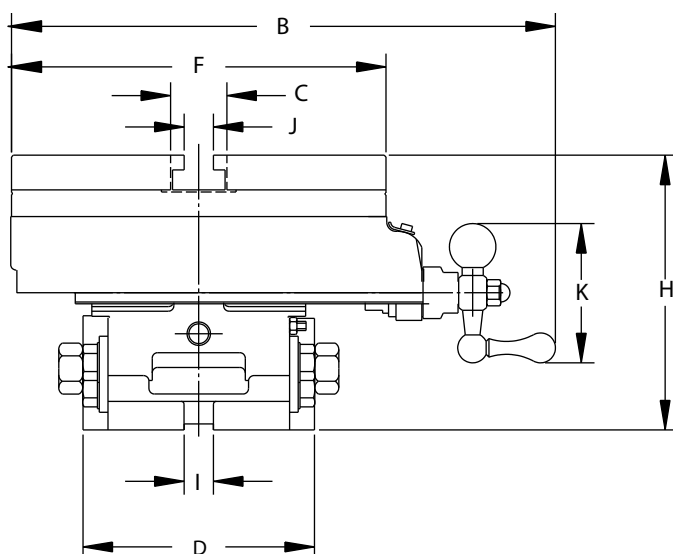


Figure 1 - Dimensions

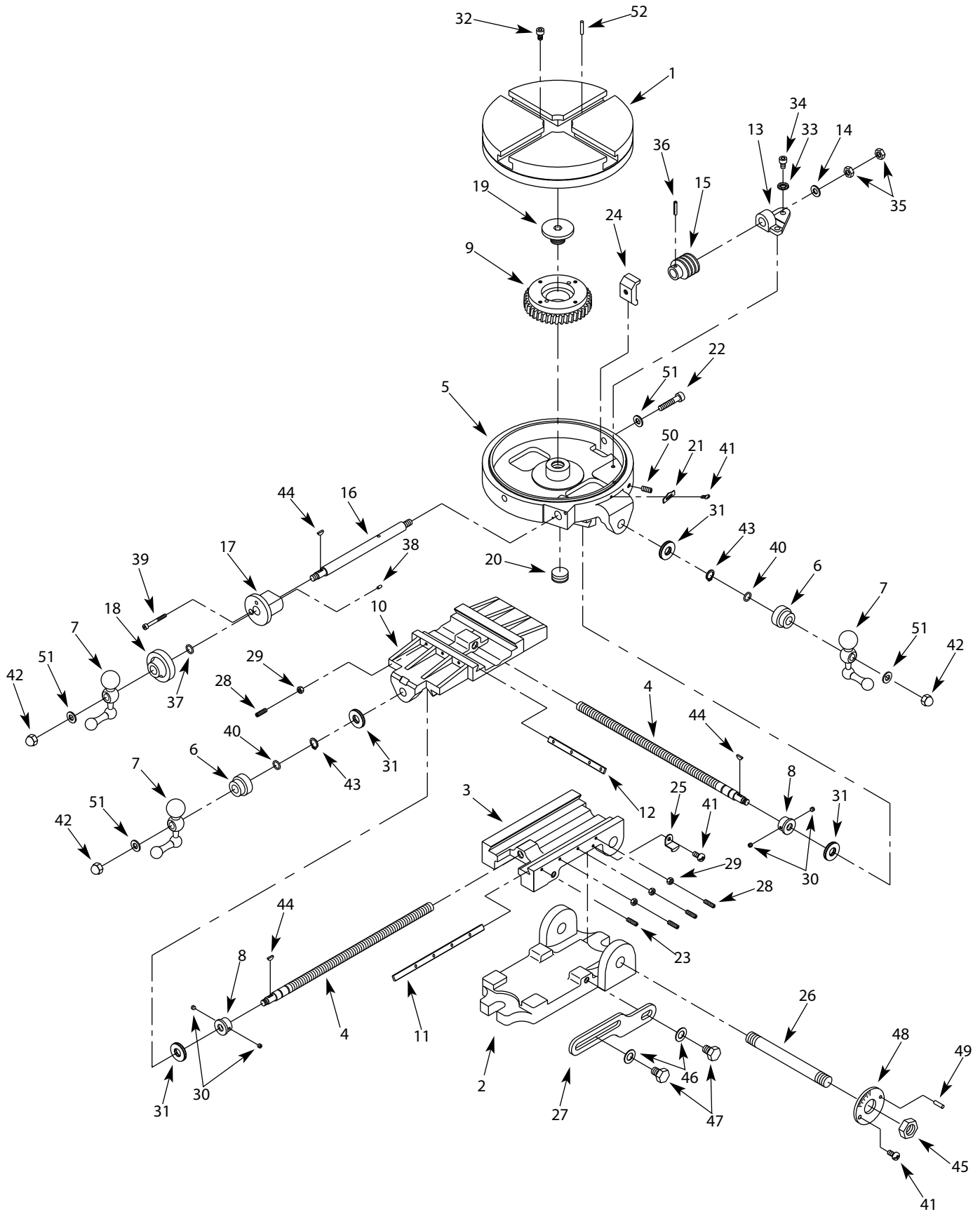


Figure 2 - Replacement Parts Illustration for Rotary Tilting Cross Slide Tables

## REPLACEMENT PARTS LIST FOR CROSS SLIDE ROTARY TABLES

Ref. No.	Description	Part Number for:		Qty.
		32804	34103	
1	Top	12817.00	12810.00	1
2	Angle Base	12806.09	12806.09	1
3	Angle Slide	12807.09	12807.09	1
4	Feed Screw	12838.00	12838.00	2
5	Top Slide	12803.09	12801.09	1
6	Dial	12826.00	12826.00	2
7	Handle	12934.00	12934.00	3
8	Threaded Collar	12830.00	12830.00	2
9	Worm Gear	12819.00	12819.00	1
10	Cross Slide	12922.09	12922.09	1
11	Gib Plate	12836.00	12836.00	1
12	Gib Plate	12834.00	12834.00	1
13	Worm Shaft Bracket	12809.00	12809.00	1
14	Spacer	12848.00	12848.00	1
15	Worm	12824.00	12824.00	1
16	Worm Shaft	12833.00	12821.00	1
17	Collar	12829.00	12822.00	1
18	Dial	12828.00	12828.00	1
19	Retainer Screw	12832.00	12832.00	1
20	Set Screw	12880.00	12880.00	1
21	Pointer	12878.00	12886.00	1
22	8-1.25 x 35mm Socket Head Bolt	*	*	2
23	5-0.8 x 10mm Set Screw	*	*	1
24	Locking Clamp	12812.00	12812.00	2
25	Pointer	12894.00	12894.00	1
26	Hinge Pin	12887.00	12887.00	1
27	Side Plate	12866.00	12866.00	2
28	5-0.8 x 20mm Set Screw	*	*	6
29	5-0.8mm Hex Nut	*	*	6
30	5-0.8 x 5mm Set Screw	*	*	4
31	1226 Thrust Bearing Assembly	12864.10	12864.10	4
32	6-1.0 x 20mm Socket Head Bolt	*	*	4
33	6mm Serrated Washer	*	*	2
34	6-1.0 x 16mm Socket Head Bolt	*	*	2
35	8-1.25mm Hex Nut	*	*	2
36	4 x 20mm Dowel Pin	12863.00	12863.00	1
37	O-Ring	12898.00	12898.00	1
38	3 x 6mm Dowel Pin	12867.00	12867.00	1
39	4-0.7 x 12mm Socket Head Bolt	*		1
39	4-0.7 x 35mm Socket Head Bolt		12896.00	1
40	O-Ring	12885.00	12885.00	2
41	4-0.7 x 10mm Pan Head Screw	*	*	1
42	8-1.25mm Acorn Nut	*	*	3
43	3AMI-12 Retaining Ring	12860.00	12860.00	2
44	2.5 x 10mm Woodruff Key	12879.00	12879.00	3
45	16 x 1.5mm Hex Nut	12888.00	12888.00	2
46	Spacer	12889.00	12889.00	4
47	10-1.5 x 16mm Hex Head Bolt	*	*	4
48	Graduated Washer	12891.00	12891.00	1
49	Pin	12892.00	12892.00	1
50	6-1.0 x 16mm Set Screw	*	*	1
51	Spacer	12883.00	12883.00	5
52	5 x 25mm Dowel Pin	12852.00	12852.00	2

\* Standard hardware item available locally.

## OPERATION AND MAINTENANCE

- Dovetail slides can be adjusted to move freely, or with minimum clearance as desired. Loosen the lock nuts (Ref. No. 29), and then adjust the gib screws (Ref. No. 28) until slide moves as desired. Tighten lock nuts to hold the setting.
- To lock the slide more securely during actual work, substitute a M5 slotted or socket head machine screw for the center gib screw. This can be tightened during work and loosened for moving the slide.
- The threaded steel collar (Ref. No. 8) on the acme threaded cross feed screws permit adjustment to minimize backlash.
- Adjustment of the worm and gear requires removal of the top (Ref. No. 1). First loosen the two locking clamp screws (Ref. No. 22) located on the outside rim to disengage the internal locking clamps (Ref. No. 24). To remove the top, take out the four socket head cap screws (Ref. No. 32) near the center. The top will then lift off. Be sure to lift the top straight up because of the snug fit of the two dowel pins (Ref. No. 52). Make a mark so that the tabletop and dowels will be replaced in the same location as originally assembled.
- To adjust the worm and gear loosen the two screws (Ref. No. 34) holding the worm shaft bracket (Ref. No. 13) and make adjustment with the back-up adjusting screw (Ref. No. 50) in the rim of the top slide casting. Tighten the bracket hold-down screws after adjustment is made and replace the top.
- Depending on usage, the dovetails, worm, and gear will require occasional lubrication. The worm gear (Ref. No. 9) can be lubricated from the underside by turning the table on its side. We recommend No. 2 grease to lubricate the worm and worm gear. Lubricate the dovetail slides with non-detergent SAE30 oil.
- The graduated collars (Ref. No. 6) on the feed screws provide for reading at .001" increments. These collars can be set at 0° or any other convenient reading at start of work operation.
- Indexing table tops are graduated the full 360 degrees , with the 0° marking to coincide with the axis of the T-Slots. The brass pointer (Ref. No. 21) has a slotted hole to provide for line up at start of work operation.
- The graduated dial collars (Ref. No. 18) on the index shaft are calibrated for direct reading at increments of 1/20 degrees (3 minutes).
- To tilt table, loosen hex head bolts (Ref. No. 47), lift angle slide (Ref. No. 3) to desired angle and tighten bolts. Angle scale and pointer (Ref. Nos. 25 and 48) can be used to set angle.
- Periodically wipe table with a rust-preventative oil.

## WARRANTY

Palmgren warrants their products to be free of deficiency in material or workmanship. The duration of this warranty is expressly limited to one year parts and labor unless otherwise noted beginning from the date of delivery to the original user. The following Palmgren products carry the following warranties on parts with a 1 year warranty on labor:

- USA Machine vises – Lifetime
- Imported Machine vises – 2 years
- Bench vises – 2 years
- Positioning tables – 2 years
- Bench grinders & buffers – 3 years
- Tapping machines – 2 years
- Drilling machines – 2 years
- Finishing machines – 2 years
- Band saws – 2 years
- Work stands – 2 years

The obligation of Palmgren is limited solely to the repair or replacement, at our option, at its factory or authorized repair agent of any part that should prove deficient. The warranty does not cover expendable and/or wear parts (i.e. v-belts, coated abrasives), damage to tools arising from alteration, abuse or use other than their intended purpose, packing and freight. Purchaser must lubricate and maintain the product under normal operating conditions at all times. Proper use and care instructions are provided in the operator's manual. Failure to follow these instructions will void the warranty.

This warranty is the purchaser's exclusive remedy against Palmgren for any deficiency in its products. Under no circumstances is Palmgren liable for any direct, indirect, incidental, special or consequential damages including lost profits in any way related to the use or inability to use our products. This warranty gives you specific legal rights which may vary from state to state.

## SERVICE & REPAIR

1. If a Palmgren product requires a repair or warranty service **DO NOT** return the product to the place of purchase.
2. All warranty related work must be evaluated and approved by Palmgren.
3. Prior to returning any item the user must obtain factory approval and a valid RGA number.
4. For instructions and RGA number call toll free (800) 621-6145.