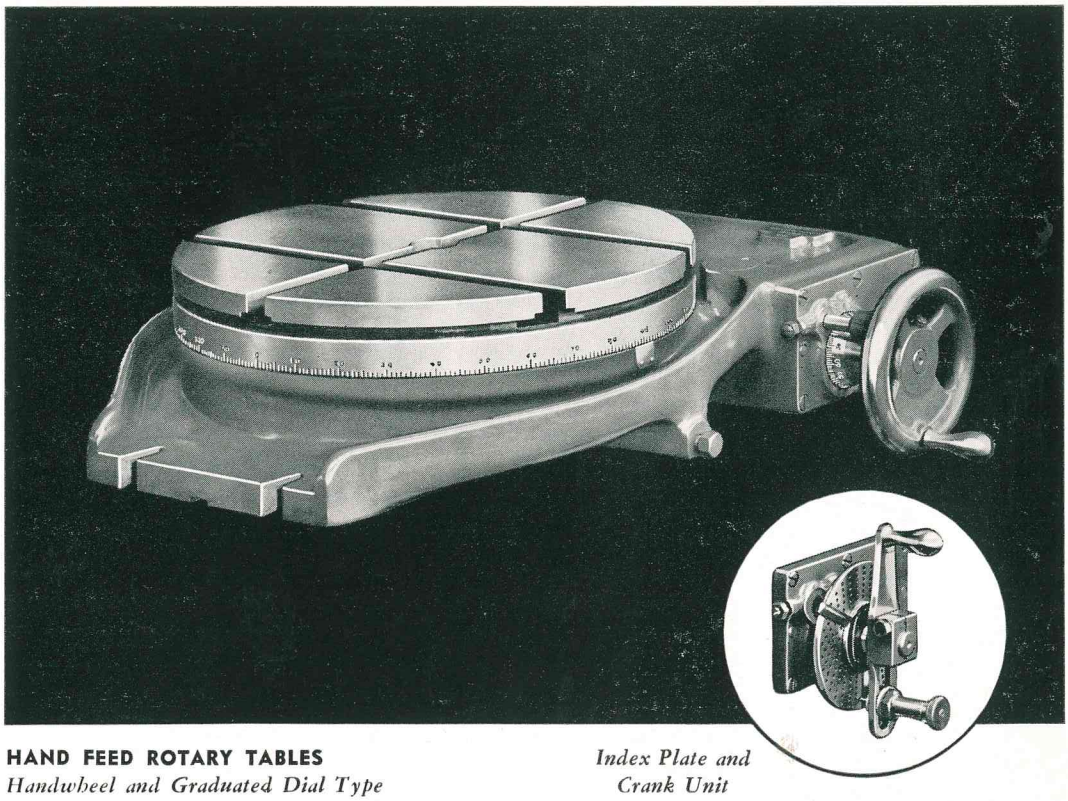
ROTARY TABLES

HAND FEED AND POWER FEED TYPES



HAND FEED ROTARY TABLES
Handwheel and Graduated Dial Type

Index Plate and Crank Unit

Rotary Tables were in use for many years without any appreciable improvement in design although their demand for toolrooms and on production lines had been steadily increasing. Kearney & Trecker Corporation believed that this attachment could be advantageously redesigned. Accordingly, they developed a Rotary Table with many new features and refinements which have greatly increased the usefulness of this type of attachment. The important changes are five-fold:

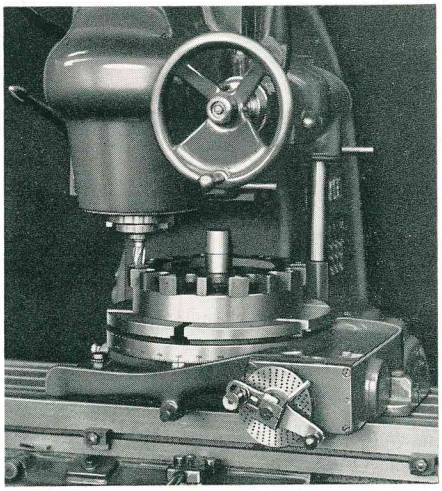
1—Reduction in height — giving maximum rigidity for all types of work.

2—Hand and power controls placed at the front of table, making it unnecessary for the operator to reach across workpiece — an important safety feature.

3—Lubrication from a single reservoir for trouble-free operation.

4—Circular table designed with a flanged overlapping edge — preventing coolant or chips from entering lubricant reservoir.

5—Base constructed to guide coolant and chips onto the machine table away from the controls.



Speed and accuracy in multiple milling, drilling and boring operations with indexing type Rotary Table.

Two types of Rotary Tables were designed—one with hand feed only — the other for connection to power feed and power rapid traverse drive mechanism. Either of these tables can be furnished with a

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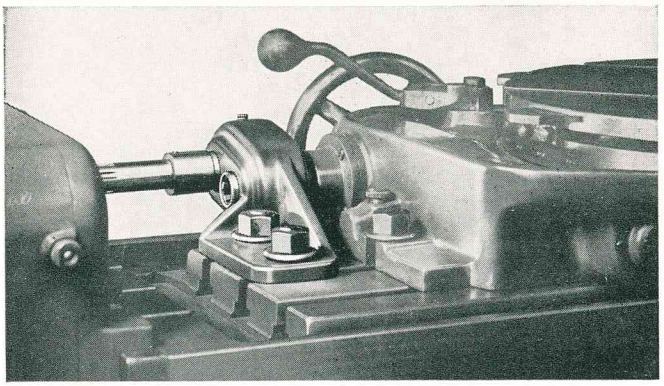


Adapter drive bracket for interchanging Rotary Tables between No. 4 Machines and No. 2 or 3 Machines.

handwheel and graduated dial unit, or with an indexing unit consisting of three plates, crank and chart for indexing purposes.

The handwheel and graduated dial type table makes many operations possible—a few of which are flat, circular, and angle milling—all done without disturbing the original setup. T-slots and segment outlines can be accomplished with speed and precision as the handwheel is provided with a micrometer dial, adjustable and graduated to 2 minutes or one-thirtieth of a degree. Rotary Tables equipped with an indexing unit enable the operator by use of index plates to accurately divide and to space holes, flanges, gear teeth, slots, or to do irregular forms of milling.

Kearney & Trecker Rotary Tables are of minimum height, providing a rigid foundation for the work. The T-slots are milled from the solid and are the same width as slots in the milling machine table. Long life for all moving parts is assured by their being submerged in oil. The wormwheel for the table movement is integral with the table and approximately the same diameter. It is of coarse pitch to withstand continuous and severe duty. A two-piece hardened and ground worm provides adjustment for wear. Worm thrust is taken by ball thrust bearings. The table is secured to the base by a large circular cone bearing.

The Rotary Table base has a circular flanged runway—carrying the coolant and chips directly to the machine table and away from the controls. The over-hanging tongue and groove construction at the bottom of table periphery prevents dirt, chips or coolant entering bearing or drive mechanism. The outer diameter of the table is graduated in degrees. All Rotary Tables are provided with a hole through the center from the bottom of the base to accommodate arbors for locating and clamping purposes. All Rotary Tables are provided with a lock to clamp the rotating element in any desired position.

POWER DRIVEN ROTARY TABLES

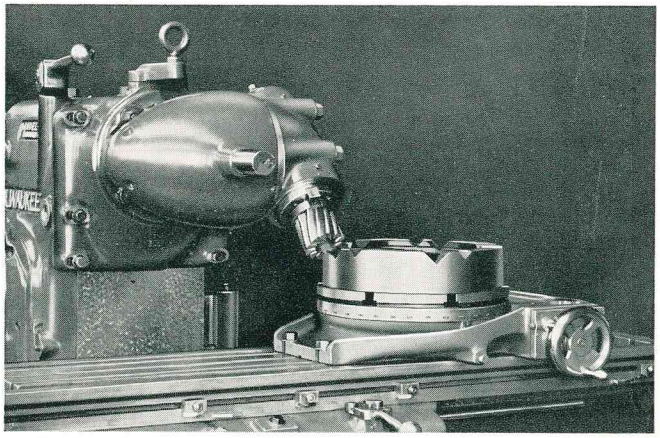
Kearney & Trecker Rotary Tables equipped with a power feed and power rapid traverse drive mechanism greatly increase productivity. These tables are equipped with two adjustable trip dogs and a tilting type reengaging power control lever. The handwheel automatically disengages when the directional lever for power drive to the table is engaged. With these features the operator can quickly and safely bridge the gap between cutter and workpieces. The table trip dogs can be readily removed for continuous milling operations.

Power feed and power rapid traverse can be applied to the Rotary Table or milling machine table independently or in conjunction with each other. A profitable feature which reduces fatigue and set-up time to a minimum.

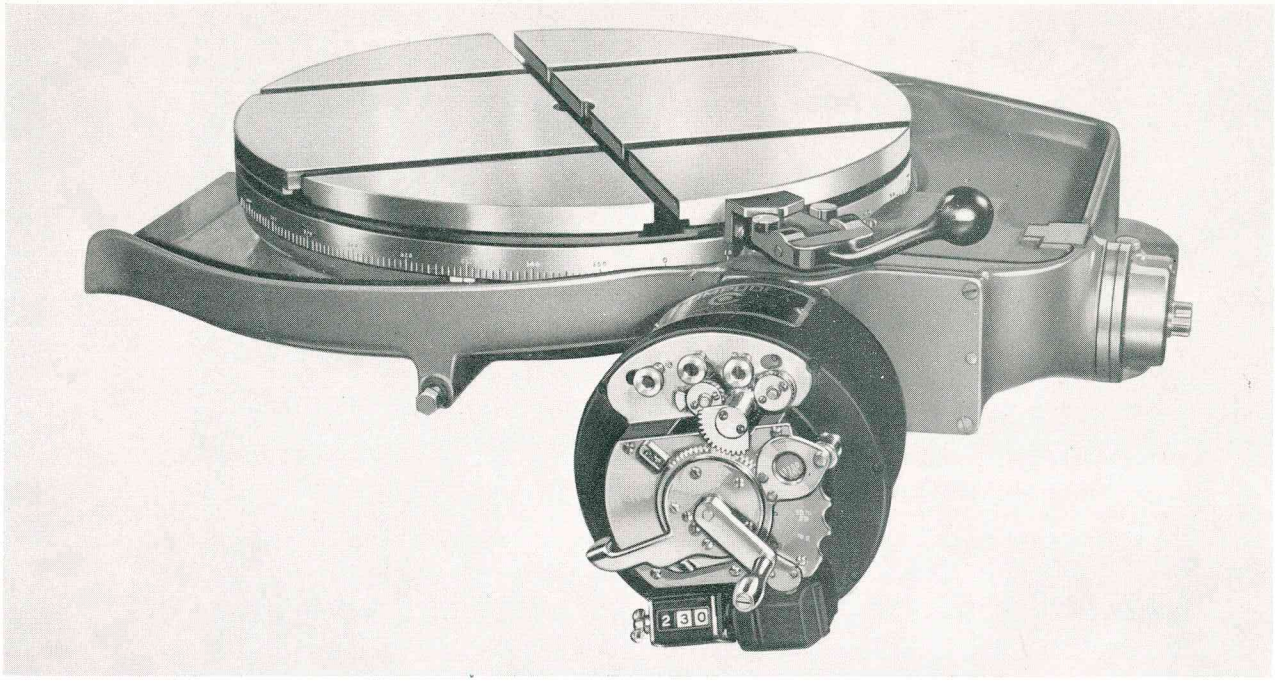
The power feed mechanism permits rapid milling in a circular plane on work of every description—obtaining accurate and fine finishes, due to the great variety of feeds available on the milling machine. On machines equipped with a Low Lead Attachment, it is possible to mill face cams, spirals, and scrolls.

The feed rate at the periphery of the table corresponds to the feed selected on the milling machine dial. The power rapid traverse rate at the periphery of the table is the same rate as provided for the table of the Plain, Universal and Vertical Machines.

The directional power feed lever and hand controls are located at the front of the table. The operator is not required to reach across the workpiece to actuate the controls—a safety feature of extreme importance. The power feed and power rapid traverse drive mechanism is of such design that the Rotary Table can be adjusted along the milling machine table to a point where the center of this attachment will be in line with the center line of the machine spindle.



Milling Vee Slots with Standard Rotary Table — using Heavy Duty Universal Milling Attachment.



COMPUDEX indexing computer — *Adapted to rotary table accurately divides by degrees to as low as 10 minutes of arc — makes rotary table a precision measuring instrument.*

GENERAL DATA

Regarding Adapter Drive Brackets*

A—For 12″ *power driven* Rotary Tables — *No* adapter drive bracket required on Nos. 1H, 1CH, 2HL, 2CHL, 2H or 2CH machines. Cannot be driven by power or any of the larger machines.

B—For 16″ or 20″ *power driven* Rotary Tables — *No* adapter drive bracket required for Nos. 1H, 1CH, 2HL, 2CHL, 2H, 2CH, 2K, 2CK, 2CSM, 3H, 3CH, 210, 220, 310, 320, 315, 330, 415, 430TF, 3K, 3CK or 3CSM machines, but is required on all larger machines.

C—For 24″ *power driven* Rotary Tables — *No* adapter drive bracket required on Nos. 4H, 4CH, 4K, 4CK, 4CSM, 5H, 5HM, 5CH, 5CK, 5CSM, 6CK, 6CSM or 425, 450, 525, 550, 625, and 650TF machines, but is required on Nos. 2H, 2CH, 2K, 2CK, 2CSM, 3H, 3CH, 3K, 3CK, 3CSM, 210, 220, 310, 320, 315, 330, 415, 430TF machines.

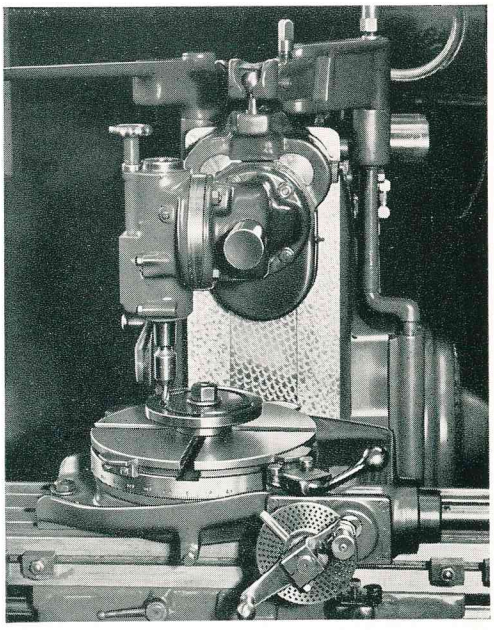
*NOTE: Where adapter drive brackets are required this item is in addition to the power drive mechanism.

The handwheel unit and the index plate unit are interchangeable on the same size Rotary Table. The index plate unit is not interchangeable between 12″ and 16″ sizes, but is interchangeable between 16″, 20″, and 24″ sizes. The handwheel unit is not interchangeable between various size tables. Power feed and power rapid traverse drive mechanism can be adapted to either the handwheel type table or the table equipped with the crank unit.

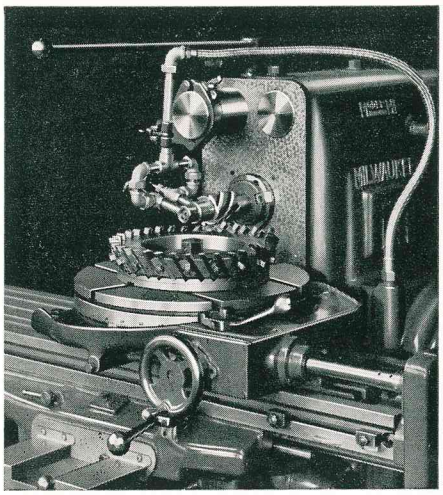
Rotary tables are available with either the handwheel unit or the indexing unit. Units can be quickly and easily interchanged on rotary tables of the same diameters.

Indexing units include 3 index plates which provide consecutive divisions from 2 to 50. They will additionally provide most divisions up to 100 and many more above 100. Available at extra cost are a set of four high number index plates which provide all divisions up to 100 and hundreds of additional divisions.

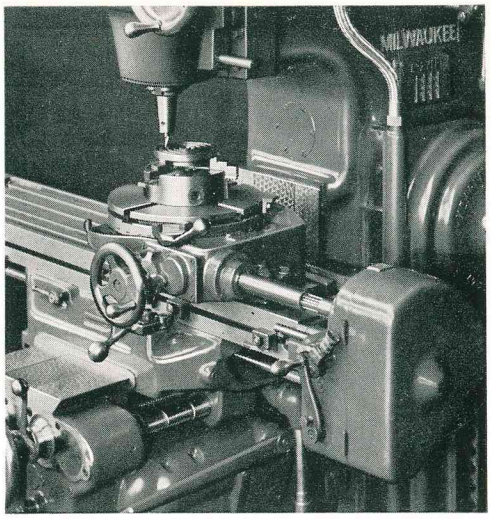
Indexing ratios vary with the sizes of the rotary tables. Ratios for the various tables are as follows: 12″ rotary table — 60 to 1, 16″ rotary table — 80 to 1, 20″ rotary table — 100 to 1, 24″ rotary table — 120 to 1. For example, on a 16″ table, 80 revolutions of the handcrank will produce 1 revolution of the rotary table.



Milling four accurately spaced spiral grooves in locking plate — Rotary Table is driven through the low lead attachment.

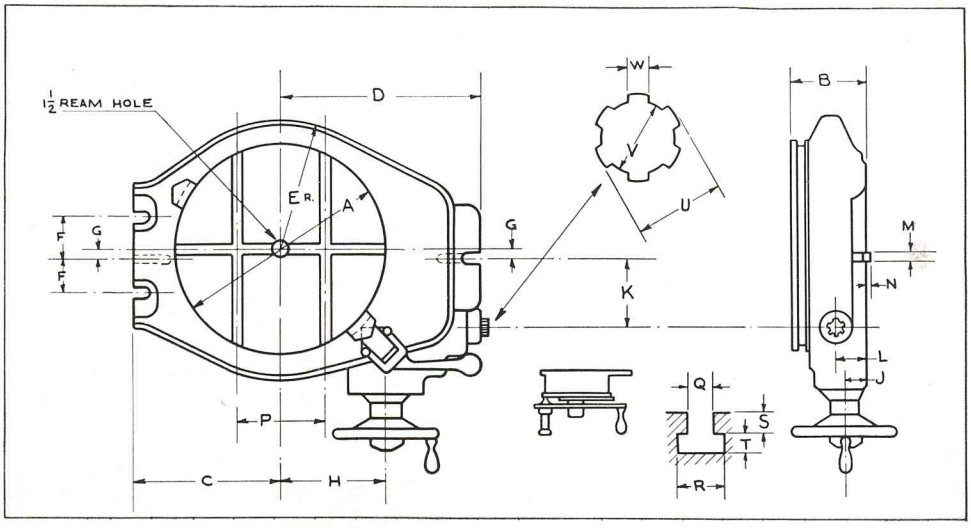


Milling angle on ends of high speed cutter blades held in fixture mounted on a power driven Rotary Table.



Milling a continuous spiral chuck scroll — this low lead is possible when using the low lead attachment drive.

DIMENSIONS AND SPECIFICATIONS



Size Rotary Table	Used on Machine	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	Approx. Wt.—Lbs.
12 in.	See Page 3 General Data	12	4 7/16	8 1/2	11 7/8	7 9/16	0	0	5.750	1 1/4	5	1 5/8	11/16	5/16	Two Slots at 90°	11/16	1 3/16	1/2	15/32	1	.8500 .8496	.245 .244	163
16 in.		16	5 1/2	11	14 5/8	9 3/4	2 1/4 2 3/4 2 3/4	1/2	7.6816	1 5/8	5 1/2	2.0347	11/16	5/16	6 1/2	11/16	1 3/16	5/8	1/2	1	.8500 .8496	.245 .244	346
20 in.		20	5 1/2	13 1/2	16 5/16	12	2 3/4	1/2	9.27	1 5/8	5 9/16	2.0347	11/16	5/16	8 1/2	11/16	1 3/16	5/8	1/2	1	.8500 .8496	.245 .244	500
24 in.		24	5 3/4	15 3/4	21 1/4	14 9/16	3 1/2	0	10.8165	1 7/8	7 9/16	2.4375	13/16	5/16	11	13/16	1 7/16	5/8	5/8	1	8500 .8496	.245 .244	800

NOTES: Rotary Tables arranged for connection to drive mechanism do not include the driving mechanism. Power feed and power rapid traverse drive mechanism not required if machine is equipped with Low Lead Attachment, as this attachment provides the necessary drive. (The Low Lead Attachment on Nos. 1H, 1CH, 2HL, 2CHL, and 2H, 2CH Universal Milling Machines provides power feed and power rapid traverse for 12-inch tables only. If 16-inch diameter tables are used on these machines and are wanted for power feed, a power drive unit is required even though the machines are equipped with a Low Lead Attachment as standard equipment.)

The manufacturer reserves the right to improve, change, or modify the construction of these milling machines or attachments or any part thereof as he may see fit, without incurring any obligation to make like changes on Kearney & Trecker—Milwaukee Milling Machines or attachments previously sold.

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