

PALMGREN

PRODUCTS

USED IN ALL
INDUSTRIES
EVERYWHERE,
... SINCE 1919
FOR PRODUCTION,
TOOLING, AND
MAINTENANCE



15" POWER-DRIVEN
ROTARY TABLE
PAGE 26



15" ROTARY TILTING
CROSS SLIDE TABLE
PAGE 24



MODEL 14G
PRECISION GROUND
DRILL PRESS VISE
PAGE 7

ANGLE VISES • ROTARY and INDEXING TABLES

CATALOG 219

STOCKED BY:



Why are

PALMGREN PRODUCTS

used in all industries—everywhere?

*Quality...Reliability...
Dependability*

These are words tossed around quite freely these days. But it takes years of "results" to establish a reputation that will stand on these three words.

PALMGREN products, for more than fifty-two years, have been a standard of the metalworking industry. The dependability of PALMGREN is known from the largest aircraft manufacturer to individual hobbyists—from small schools to highly technical laboratories. Original equipment manufacturers offer PALMGREN vises and tables as standard accessory items.



Leading industrial distributors throughout the country are proud to carry PALMGREN products to better serve your every need.



All Palmgren products and accessories are manufactured in the United States

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Now you can solve all angle problems, dispense with clamps or wedges, and get a quick, accurate and positive set-up in a few seconds on your drill press, milling machine, or grinder.

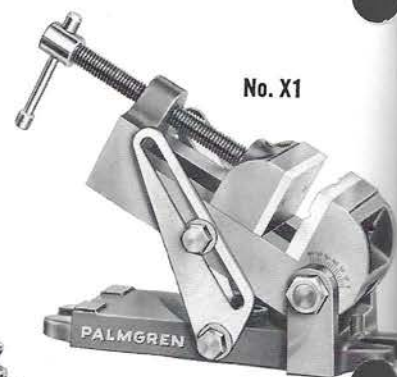
These Palmgren Angle Vises are built for rugged service. Made of finest materials, and accurately machined to secure quick set-ups for precision work at any desired angle up to 90°. Can also be used like ordinary Vise when lowered in horizontal position.

These Vises are equipped with ground steel jaws, either plain or grooved vertically and horizontally for holding round pieces. The adjusting screw has a fine pitch thread, and long bearing in body.

Three additional bases are available with these Angle Vises, the "M" Swivel Base has a keyway for machine mounting, and is graduated 360° for accurate rotational positioning at any angle. The "B" Bench Base provides 360° rotation, and can be permanently mounted on a bench, service cart, etc., and with the "C" Clamp Base you can clamp your Angle Vise on any appropriate surface.



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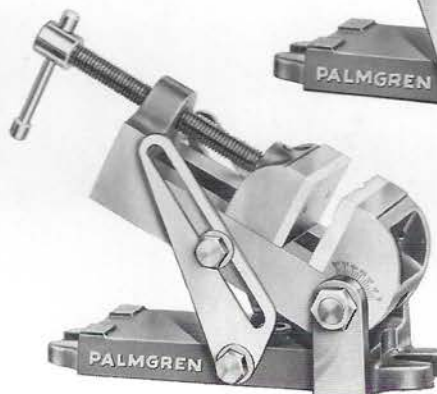
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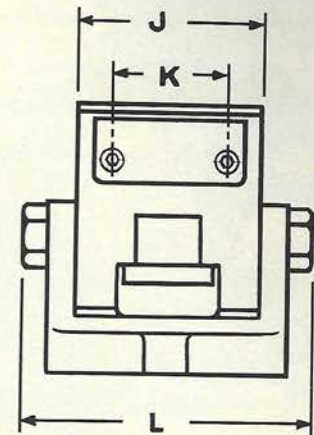
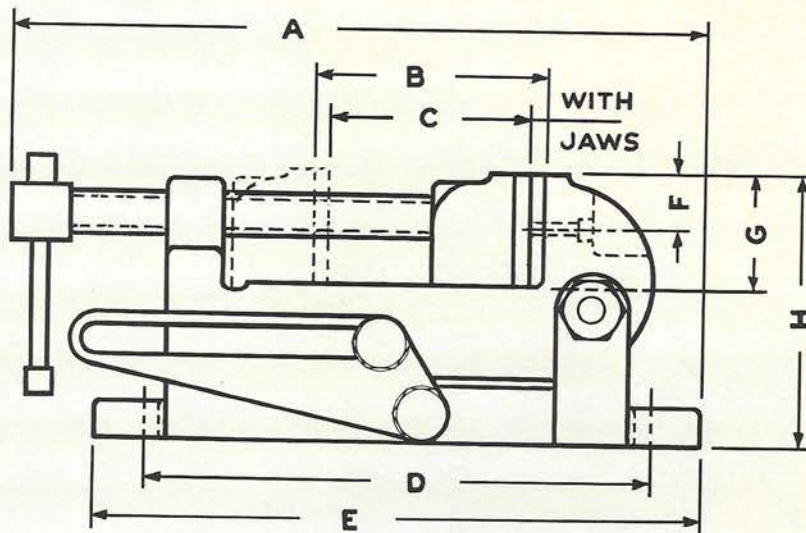


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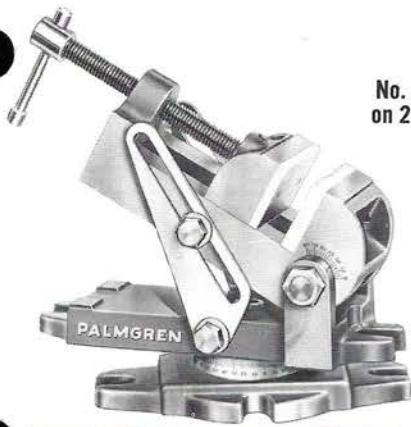


No. 000

ANGLE VISES PALMGREN



MODEL NO.	A	B	C	D	E	F	G	H	J	K	L	Kind of Jaws	Weight Vise Only
X0	6½"	1⅞"	1⅞"	5"	5¾"	½"	1"	2⅞"	1½"	⅞"	2⅞"	Plain Steel	4 lbs.
X1	6⅞"	1⅞"	1½"	5"	5¾"	½"	1"	2⅞"	1½"	⅞"	2⅞"	Grooved Steel	4 lbs.
0	9½"	2½"	—	6¼"	7⅞"	—	1½"	3⅞"	2⅞"	—	3⅞"	Grooved	10 lbs.
00	8⅞"	3"	2½"	6¼"	7⅞"	¾"	1½"	3⅞"	2⅞"	1½"	3⅞"	Plain Steel	10 lbs.
000	9"	3"	2½"	6¼"	7⅞"	¾"	1½"	3⅞"	2⅞"	1½"	3⅞"	Grooved Steel	10 lbs.



No. 000 Angle Vise
on 25M Swivel Base



No. 000 Angle Vise
on Model 25B Bench Base



No. 000 Angle Vise
on Model 25C Clamp Base

ANGLE VISES WITH SWIVEL BASES

WISE NO.	"M" BASE NO.
X0	15M
X1	15M
0	25M
00	25M
000	25M
WISE NO.	"B" BASE NO.
X0	15B
X1	15B
0	25B
00	25B
000	25B
WISE NO.	"C" BASE NO.
X0	15C
X1	15C
0	25C
00	25C
000	25C

PALMGREN HEAVY DUTY ANGLE VISES



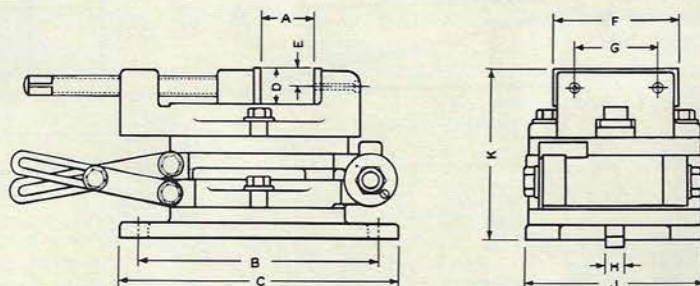
NO. 45V HEAVY DUTY ALL ANGLE VISE.

This Vise provides for 360° rotation of the Vise, 360° base swivel, and 0 thru 90° vertical angle adjustment and settings. The Palmgren No. 45V has a fine pitch Acme thread lead screw.

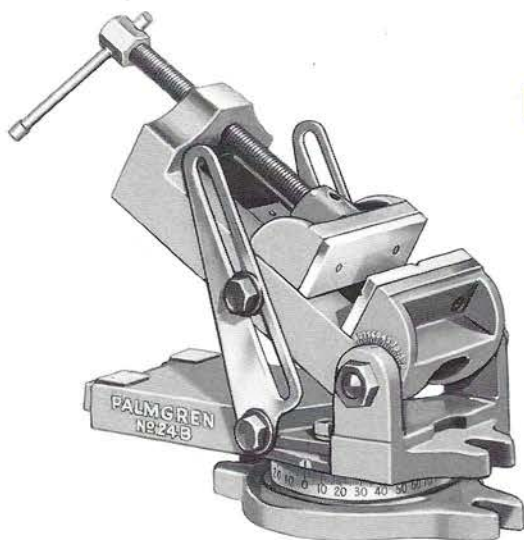
This combination of movements makes possible set-ups at practically any angle or combination of angles that may be required.

The angle, rotation, and swivel movements are calibrated for direct reading with the Vernier markings to 1° increments.

Base has $\frac{1}{8}$ " keyways and bolt slots for machine mounting.



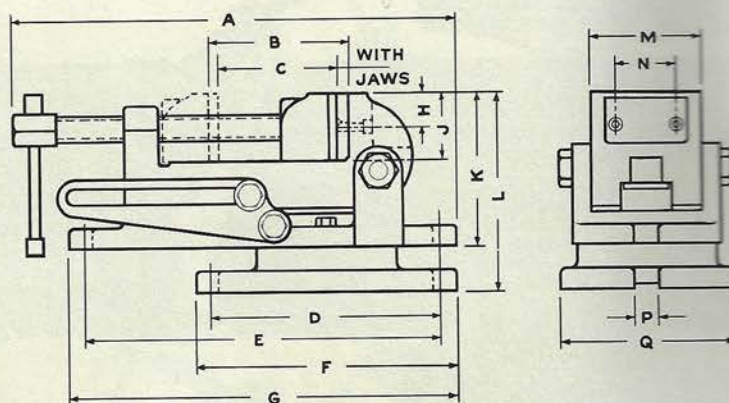
Vise No.	A	B	C	D	E	F	G	H	J	K	Weight Lbs.
45V	4"	8 $\frac{7}{16}$ "	10"	1 $\frac{1}{4}$ "	$\frac{5}{8}$ "	4 $\frac{1}{2}$ "	3"	1 $\frac{1}{16}$ "	6 $\frac{7}{16}$ "	5 $\frac{3}{8}$ "	52



NO. 23B-24B ADJUSTABLE ANGLE VISES.

These sturdy angle vises are indispensable on work that frequently requires angle setups for drilling, tapping, milling and grinding.

The body is calibrated for quick and accurate setting at any required angle from 0° horizontal to 90° vertical. Securely locked at required angle with four screws and two side plates. The swivel base provides complete rotation and is calibrated full 360°. Swivel base can be removed from the angle base. Castings of selected fine grain, high strength grey iron, are accurately machined. Hinge pin hole is precision drilled and reamed for smooth accurate angle settings, with no lateral end play. Bases have $\frac{5}{8}$ " keyway and two bolt slots for locating and mounting on machine table.



Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	Weight with Base
23B	12"	3 $\frac{9}{16}$ "	3"	6"	9"	7 $\frac{1}{4}$ "	10 $\frac{1}{4}$ "	$\frac{7}{8}$ "	1 $\frac{3}{4}$ "	4"	5 $\frac{3}{16}$ "	3"	1 $\frac{5}{8}$ "	$\frac{3}{8}$ "	4 $\frac{5}{8}$ "	22 lbs.
24B	13 $\frac{1}{4}$ "	4 $\frac{9}{16}$ "	4"	7"	10 $\frac{1}{4}$ "	8 $\frac{1}{4}$ "	12"	$\frac{7}{8}$ "	1 $\frac{3}{4}$ "	4 $\frac{3}{4}$ "	5 $\frac{1}{8}$ "	4"	2 $\frac{1}{4}$ "	$\frac{3}{8}$ "	5 $\frac{1}{8}$ "	36 lbs.

HEAVY DUTY ANGLE VISES | PALMGREN

NO. 2B-3B-4B



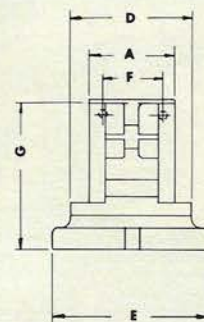
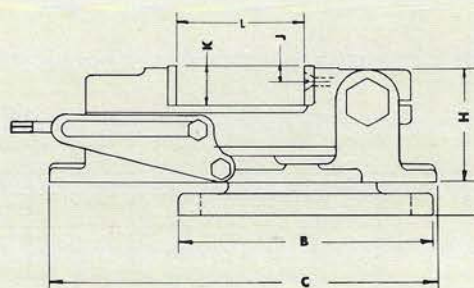
These Heavy Duty Angle Vises with extra heavy construction are manufactured to provide accuracy and durability. Accurate quick angular set-ups are assured without the use of blocks or wedges.

The oversize lead screws have precision cut Acme thread and replaceable thrust bushings. The two ground steel jaw plates are removable. Vises can be raised and securely locked at required angle by hardened nuts and side plates.

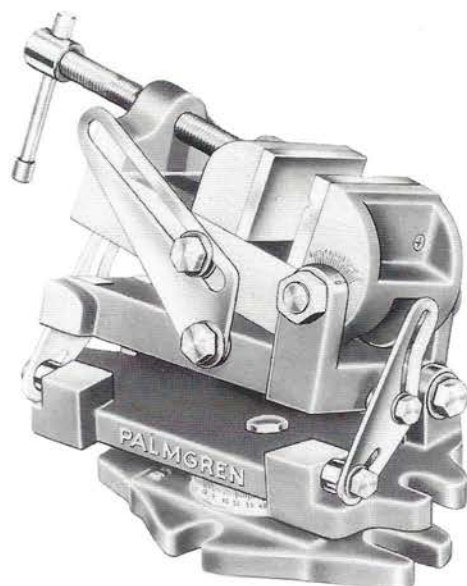
The angle base hinge boss is graduated from 0° to 90° for easy direct reading. Oversize hinge pins give smooth action and stability. Angle base has $\frac{1}{16}$ " keyways and four bolt slots for mounting parallel or at right angles to the machine table.

The removable swivel base is graduated a full 360° for complete rotation. Two bolts are provided for secure locking of vise at any desired position. The swivel base also has $\frac{1}{16}$ " keyways and two bolt slots for locating and mounting on machine table.

These vises are especially suited to heavy drilling, tapping, boring, milling, shaping and grinding operations. Indispensable time-saving equipment for work which frequently involves angle set-ups.



Vise with Swivel Base	A	B	C	D	E	F	G	H	J	K	L	Vise Only		
												Weight	Vise	Weight
2B	4"	9½"	14"	6½"	7¾"	2¼"	5¾"	4¾"	¾"	1½"	4"	59 lbs.	2	49 lbs.
3B	6"	12½"	18½"	8½"	8¾"	4"	7¾"	5¾"	1⅞"	2¾"	6"	130 lbs.	3	115 lbs.
4B	8"	15½"	21½"	11"	12¾"	6"	8¾"	6¾"	1½"	2¾"	8"	231 lbs.	4	190 lbs.



NO. 55 ALL ANGLE VISE

This is a universal angle vise that makes possible quick easy setup—for single angles and for compound angles. Adaptable for drilling, tapping, milling and grinding work. Body and base are calibrated 0° to 90° for ease of set-up. Locks securely in position for the angle or angles required.

Swivel base provides complete rotation and is graduated full 360°. The swivel base is detachable from angle base. Bases have $\frac{5}{16}$ " keyway and two bolt slots for mounting on machine table.

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Top Angle	Base Length	Weight Lbs.
55	2½"	1½"	2½"	90°	6"	18

PALMGREN DRILL PRESS VISES

NO. 5, 6, 10, 20, 30, 13, 14

These versatile drill press vises are just what you need for drilling, tapping, reaming, etc. They are available in sizes ranging from 1½" thru 4", with ground plain steel, or vertically and horizontally grooved steel jaw plates, or cast grooved jaw as shown.

Adjusting screws on Models 5, 6, 10, 20 and 30 are precision cut coarse thread while the heavier Models 13 and 14 have a rugged Acme thread.

All vises can be turned on either side or placed on end for general use. Models 13 and 14 can also be inverted.



No. 10



No. 20



No. 30



No. 13

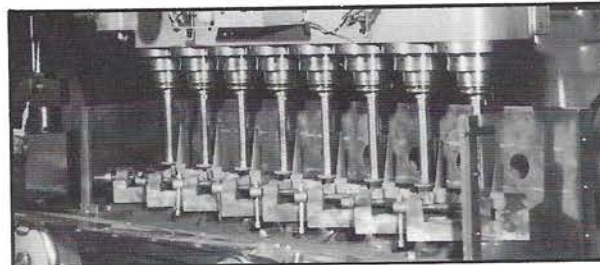
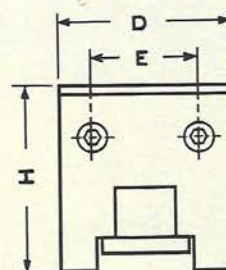
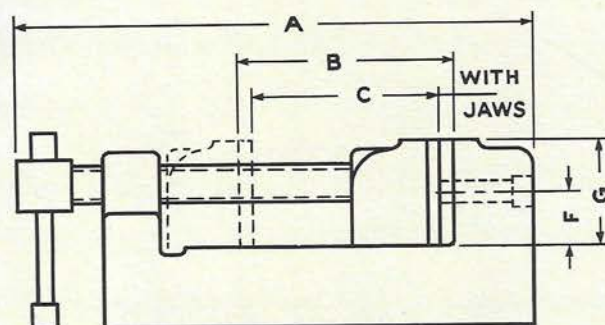


No. 14



No. 5

No. 6



Model No.	A	B	C	D	E	F	G	H	Net Weight
5	5	1½	1½	1½	¾	½	1	1⅜	2 lbs.
6	5½	1½	1½	1½	¾	½	1	1⅜	2 lbs.
10	7½	3	—	2⅞	1½	¾	1½	2½	5½ lbs.
20	7½	3	2½	2⅞	1½	¾	1½	2½	6 lbs.
30	7½	3	2½	2⅞	1½	¾	1½	2½	6 lbs.
13	7½	3½	3	3	1⅞	¾	1¾	3	11 lbs.
14	10¼	4⅞	4	4	2¼	¾	1¾	3¼	18 lbs.

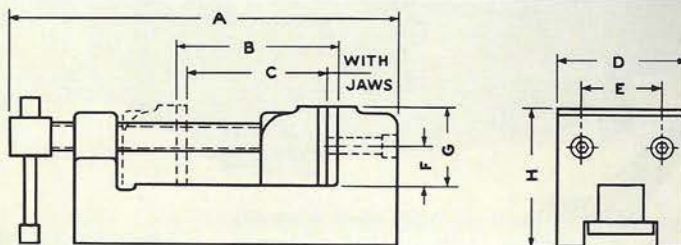
DRILL PRESS GROUND VISES | PALMGREN



GROUND VISES

These precision ground vises are machined and ground on all sides to assure accurate positioning for grinding and layout operations. They may be turned on either side, end or upside down.

All four vises are made of high grade gray iron and are precision ground for squareness and parallelism to $\pm .0001$ " per inch. The ground steel jaw plates are removable. Adjusting screws are steel, with fine pitch thread and long bearing in vise body.

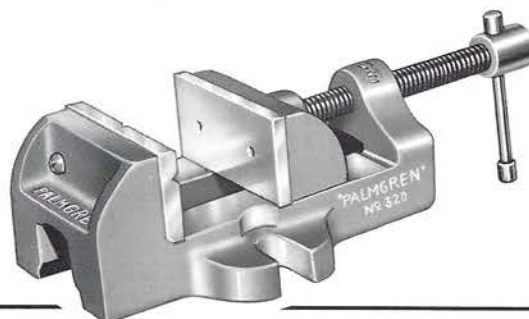


Model No.	A	B	C	D	E	F	G	H	Net Weight
11G	5"	1 1/8"	1 1/8"	1 1/2"	7/8"	1/2"	1"	1 1/16"	2 lbs.
22G	7 1/8"	3"	2 5/8"	2 7/16"	1 1/2"	3/4"	1 1/2"	2 5/8"	6 lbs.
13G	7 1/2"	3 1/2"	3"	3"	1 5/8"	3/8"	1 3/4"	3"	11 lbs.
14G	10 1/4"	4 3/16"	4"	4"	2 1/4"	3/8"	1 3/4"	3 3/4"	18 lbs.

NO. 120-320 DRILL PRESS VISES

Handy general purpose vises every shop needs. Highly recommended for use on drill presses, milling machines, grinders and many other machines. They have strong fine thread adjusting screws and ground steel jaws grooved horizontally and vertically for convenience in holding round pieces. Bolt lugs are provided for ridged mounting on machine table.

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Weight
120	1 1/2"	1"	1 1/2"	4 1/2"	1 1/4"	3 lbs.
320	3"	1 1/2"	3"	8"	2 3/4"	8 lbs.



NO. 7 UTILITY VISE

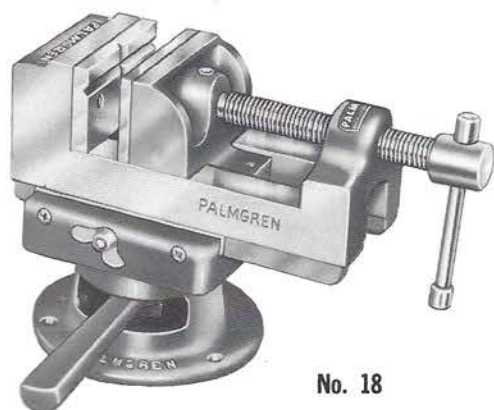
Milling, drilling, grinding are but a few jobs that can be done with this sturdy, compact vise. Overall height is only 2 5/8". The movable jaw is grooved vertically for holding round work. The heavy round steel adjusting screw has a coarse pitch Acme thread for fast action. Three bolt lugs are located on the vise base for mounting on the machine table.

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Weight
7	3 1/2"	1 1/4"	4"	14"	2 5/8"	13 lbs.



No. 12-18 Bench Drill Press Vises

These vises are extremely valuable dual purpose vises that operate on bench or drill press without removing work from vise. The vise body is square all around, and can be used on either side, on end or in horizontal position. Dovetail slots on either side of vise slide into bench base adapter. The vise and adapter assembly can be rotated and locked in any position on the bench swivel base by using cam lever which is easily locked and released.

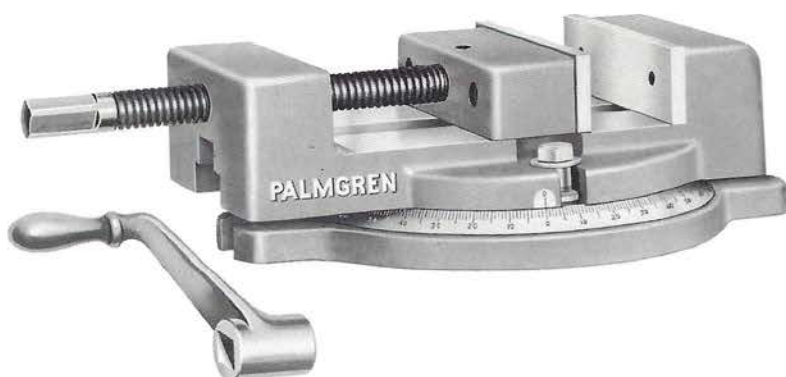


No. 18

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Weight
12	2 1/2"	1 1/2"	2 1/2"	8"	4 3/8"	11 lbs.
18	4"	1 3/4"	4"	11"	6 1/2"	33 lbs.

PALMGREN SWIVEL MACHINE VISES

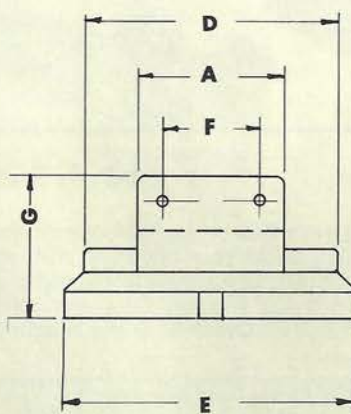
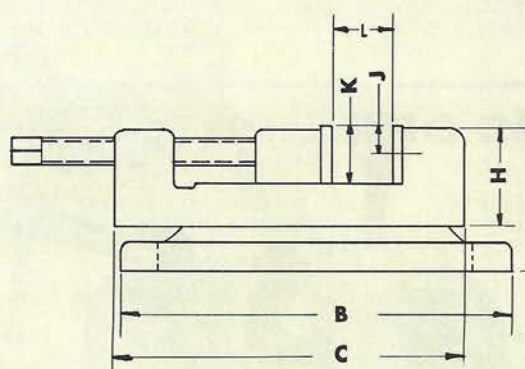
NO. 325 B-425 B "LOW BOY" SWIVEL MACHINE VISES



These rugged heavy duty vises are designed for applications where low overall height is necessary. Including swivel base these vises are only 3½" and 3½" in height. They are used on drill presses, milling machines, grinders and shapers.

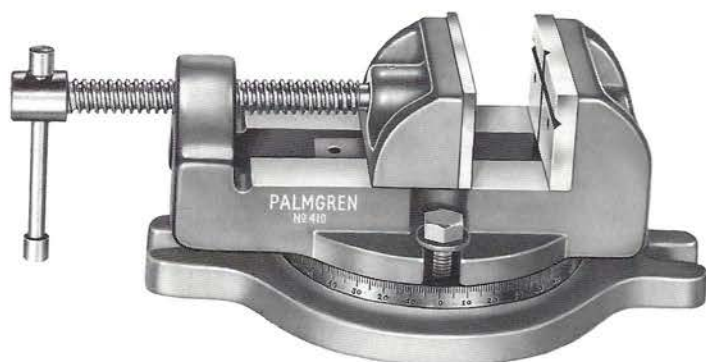
These vises are completely rotatable with swivel base graduated a full 360°. Two screws and swivel locking plate securely lock the vise at any position as required. The vise can be removed and used without the swivel base.

For locating and mounting on machine table the base has 7/16" keyway and two bolt slots. Lead screws have precision cut Acme thread and castings are high strength gray iron, accurately machined. Both the body and follower are equipped with ground steel jaw plates.



Vise with Swivel Base No.	A	B	C	D	E	F	G	H	J	K	L	Weight	Vise Only No.	Weight
325B	3¼"	8"	7¼"	5½"	6¼"	2"	3½"	1½"	½"	1½"	3"	13½ lbs.	325	9½ lbs.
425B	4½"	9½"	8¾"	6½"	7½"	3"	3½"	2½"	¾"	1¼"	4"	21 lbs.	425	15½ lbs.

NO. 310-410-610 SWIVEL MACHINE VISES



These durable vises are accurately machined of high grade iron castings with ground steel jaws to withstand hard usage.

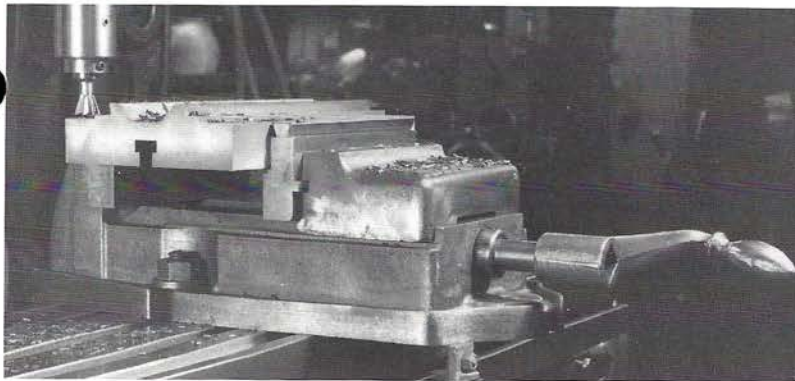
The body jaw-plate is extra heavy steel with one horizontal and one vertical groove. The steel adjusting screw has a precision cut Acme thread with extra long thread bearing in the body. The swivel base provides complete rotation to any horizontal angle and is graduated the full 360° for accurate angle settings. Two bolts and a steel swivel plate provide positive locking of body at required angle. The base has 5/8" keyway and two bolt slots for locating and mounting on machine table.

Excellent vises for milling, grinding, drilling and tapping operations.

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Net Weight with Base
310	3"	1½"	3"	9"	3¾"	11 lbs.
410	4"	1¾"	4"	11¼"	4½"	23 lbs.
610	6"	2"	6"	14½"	5½"	50 lbs.

SWIVEL MACHINE VISES | PALMGREN

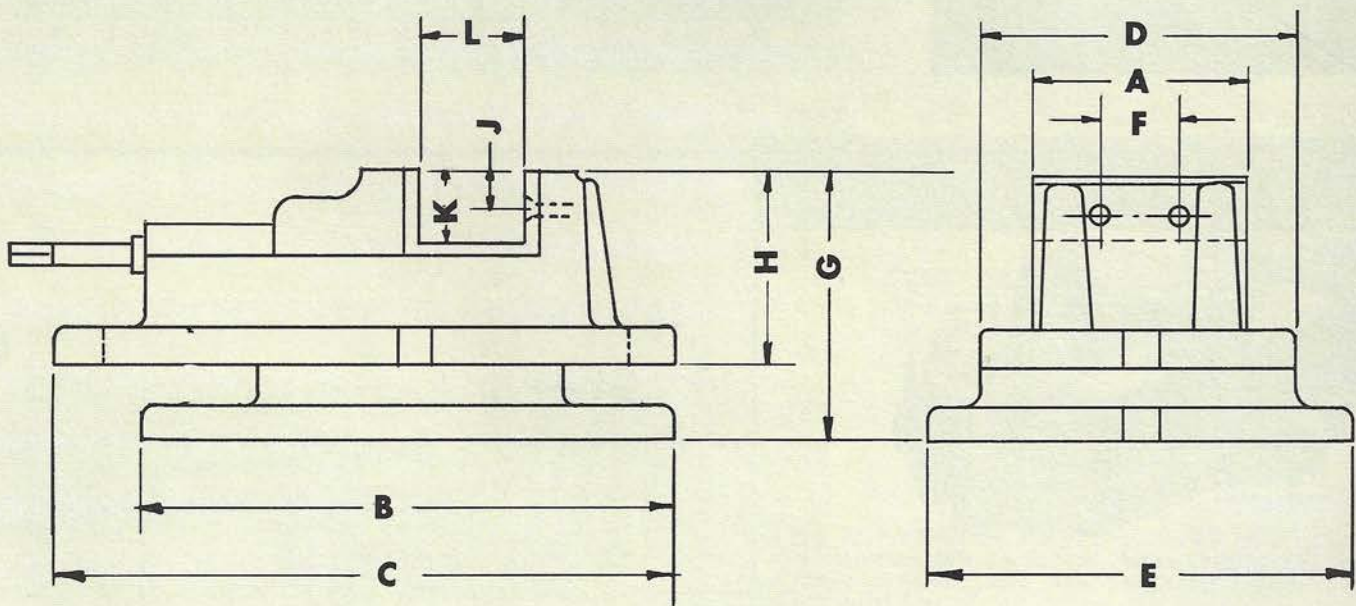
HEAVY DUTY NO. 40B-60B-80B



Palmgren Swivel Machine Vises are tough, rugged, heavy duty vises built for production, tooling and maintenance. Each body casting is equipped with an extra heavy, double ribbed forward section to provide unusual strength for milling, shaping, drilling and grinding.

A deep coolant trough which drains at front and back, and bolt lugs on all four sides, are provided on the flanged base. 11/16" keys are supplied to attach the vise parallel or at right angles to the machine table. The swivel base is equipped with 2 bolt lugs, as well as a keyway and keys.

The removable steel jaw plates are ground, and the Acme thread adjusting screw is equipped with a replaceable screw bushing and thrust collar. An adjustable brass point is located on the vise base to provide for quick, accurate degree setting. Each vise may be used with or without the 360° graduated swivel base.



Vise with Swivel Base No.	A	B	C	D	E	F	G	H	J	K	L	Weight Lbs.	Vise Only No.	Weight Lbs.
40B	4"	9 5/8"	13 1/4"	6 3/8"	7 1/4"	2 1/4"	5 1/2"	4"	3/4"	1 1/2"	4"	44	40	34
60B	6"	12 1/2"	18"	9"	10 1/2"	4"	6 3/8"	5"	1"	2"	6"	101	60	77
80B	8"	15 1/4"	21 1/2"	11"	12 1/2"	6"	7 3/8"	5 3/8"	1 1/8"	2 1/4"	8"	165	80	140

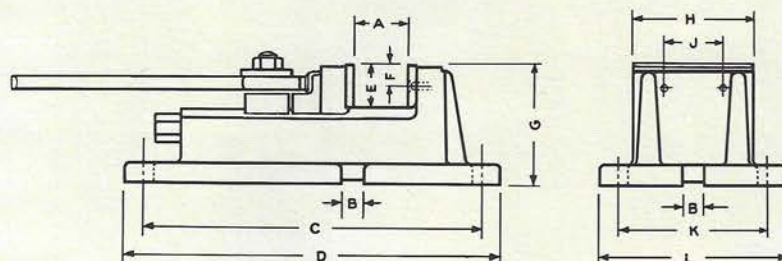
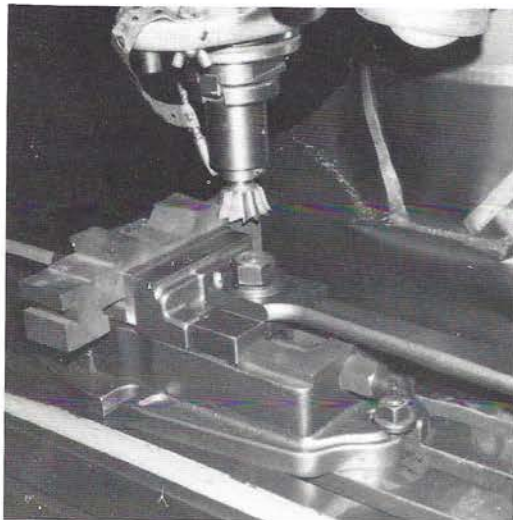
EXTRA HANDLES

No. 6H Crank Handle for 4" Vise, Wt. 1 1/2 lbs.
 No. 10H Crank Handle for 6" Vise, Wt. 2 lbs.
 No. 14H Crank Handle for 8" Vise, Wt. 2 1/2 lbs.

PALMGREN PRODUCTION VISES

NO. 404 PRODUCTION VISE

The No. 404 Production Vise is designed for long, trouble free operation with no valves, fittings or hoses to maintain. This fast mechanical production vise has a swing handle lock and retracts the moving jaw $\frac{3}{8}$ " for loading and unloading. Stationary jaw and body are of one piece cast iron construction. This vise is especially suited for drilling, tapping, milling, grinding and other production operations.

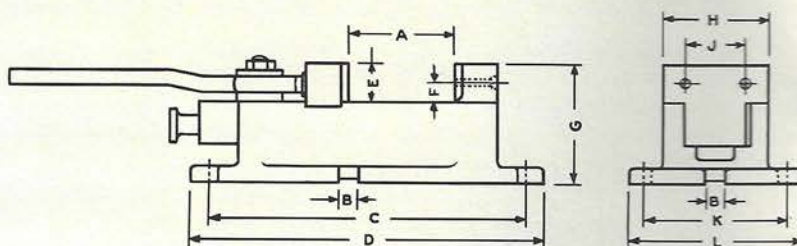


Vise No.	A	B	C	D	E	F	G	H	J	K	L	Weight Lbs.
404	3½"	1⅛"	11"	13⅞"	1½"	¾"	4"	4"	2¼"	5⅛"	6⅜"	28



NO. 33, 44, 66, 88 PRODUCTION VISES

Extremely rugged vises designed for fast production work. These vises have an adjustable cam locking lever which locks with speed and even surface pressure. The movable jaw is quickly adjusted to desired opening. They have adjustable gib plates to take up side wear. Bolt lugs and keyways are provided on both sides and ends for secure mounting on machine table. Plain steel jaws are furnished, but are easily removed for installation of special jaws to suit your own requirements.



Vise No.	A	B	C	D	E	F	G	H	J	K	L	Weight
33	3"	1⅛"	10"	11¼"	1¼"	¾"	4"	3"	1¾"	5⅞"	6½"	29 lbs.
44	4"	1⅛"	11½"	12⅞"	1¾"	1⅛"	4¾"	4"	2¼"	5⅞"	6½"	41 lbs.
66	6"	1⅛"	15"	16⅞"	1¾"	¾"	5¼"	6"	4"	7"	8⅞"	97 lbs.
88	8"	1⅛"	17½"	19⅞"	2"	1"	5⅞"	8"	6"	8¾"	11⅞"	167 lbs.

AIR VISES | PALMGREN

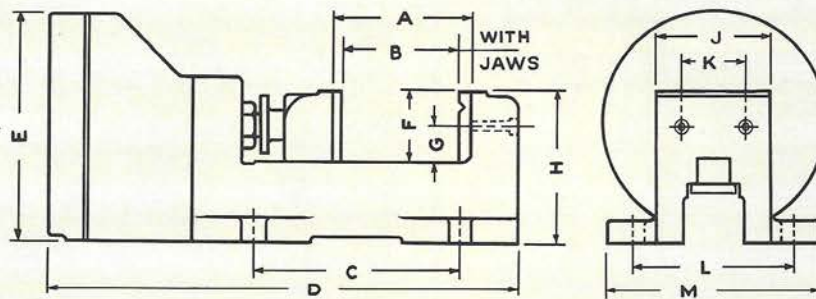
NO. 300 AIR VISE



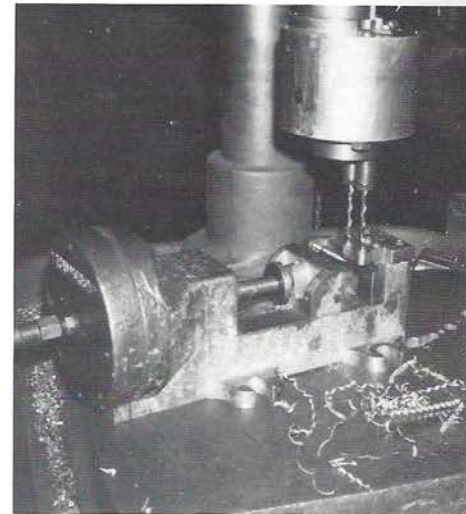
The No. 300 Air Vise, with 3" jaw, is designed for all types of machining operations: light, medium or heavy duty. Quick, easy set-ups for production, milling, drilling, grinding, tapping, sawing and assembly.

Foot pedal operation leaves both hands free to load and unload with speed.

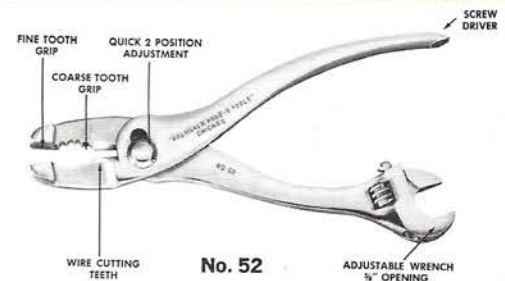
Vise is supplied with foot pedal, air hose and fittings. Ground steel jaw plates are provided, one of which is grooved horizontally and vertically for holding round work. These jaws can be easily removed to accommodate special jigs and fixtures. Clamping pressure is 15 times air pressure.



Model No.	A	B	C	D	E	F	G	H	J	K	L	M	Weight
300	3 1/16"	3"	5 1/4"	12"	5 3/4"	1 3/4"	3/8"	3 3/8"	3"	1 1/8"	4 1/8"	5 1/2"	37 lbs.



HAND TOOLS



NO. 52 PLIER-WRENCH slip joint, screwdriver, wire cutter and adjustable wrench in one trim tool. Hardened cutting edges. Forged alloy steel. Chrome plated. Overall Length 6 1/2". Capacity of Pliers 1". Weight 5 oz.



NO. 15 ALUMINUM HAND VISE. Ideal for holding small pieces for drilling, filing, grinding, polishing and hand tapping. All aluminum body and jaws, tempered steel spring holds jaws open to receive work piece.

NO.121-NO.321 AIR VISES

Designed for light drilling, milling, tapping and assembly, these Vises are equipped with stainless steel air cylinder with adjustable stroke. Air cylinder and vales are combined in one compact unit. Clamping pressure is .8 times air pressure for Model 121 and 1.7 times for Model 321.

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Weight Lbs.
121	1 1/2"	1"	1 1/2"	8"	4
321	3"	1 1/2"	3"	12"	8

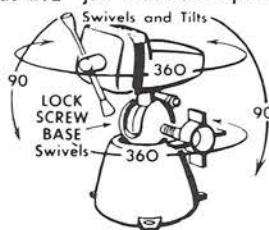
Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Weight Lbs.
15	1 1/2"	1/2"	1"	5"	7 oz.

No. 901 Work Holder and Positioner

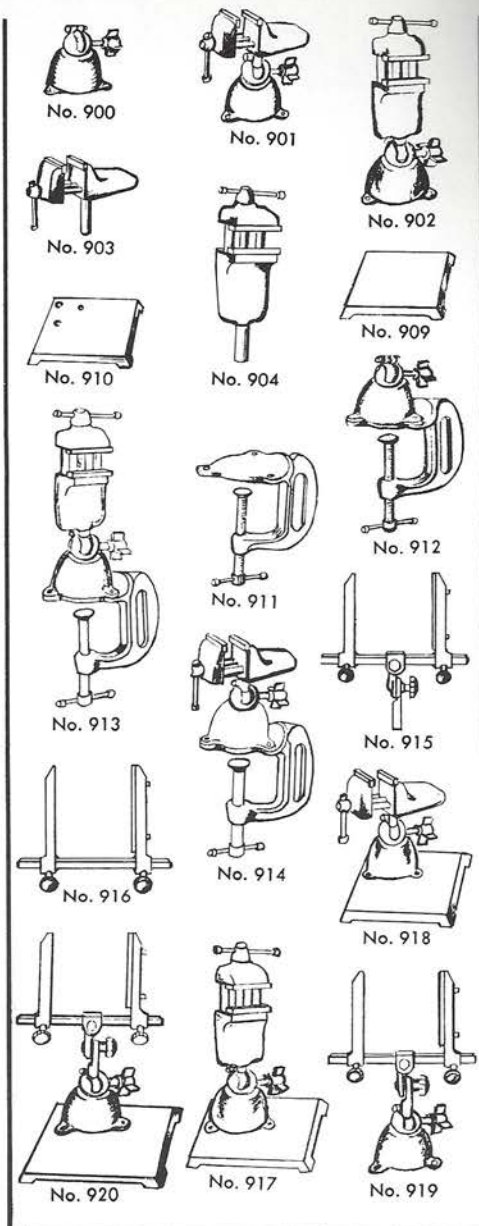


Perfectly suited for electronics, radio, laboratory and other fine work where speed and strength count. Vise head and screw lock base has complete turn of 360°. Vise head tilts fast and firm to any angle within 90° range.

Accessory items include bench clamp base, surface plates, end mount vise body and circuit board holder. Select from additional pieces pictured and described on this page. All attach quickly. Ideal for bench or conveyor assembly operations. Vise has 2½" jaw width and opening.



No.	Item	Weight
900	Positioner Base	3½
901	Horizontal Mount Vise and Positioner Base	5
902	Vertical Mount Vise and Positioner Base	5
903	Horizontal Mount Vise Only	1½
904	Vertical Mount Vise Only	1½
909	10" x 10" Gray Iron Surface Plate, Plain	10
910	10" x 10" Gray Iron Surface Plate, Tapped	10
911	Bench Clamp, Only	3½
912	Bench Clamp and Positioner Base	6
913	Bench Clamp, Positioner and Vertical Vise	7
914	Bench Clamp, Positioner and Horizontal Vise	7
915	Circuit Board Holder, Complete	1
916	10" Bar and Holder Arms Only	¾
917	Surface Plate, Positioner and Vertical Vise	15
918	Surface Plate, Positioner and Horizontal Vise	15
919	Board Holder and Positioner	5
920	Surface Plate, Positioner and Board Holder	15



No. 246B - No. 249B Adjustable Angle Plates



No. 246

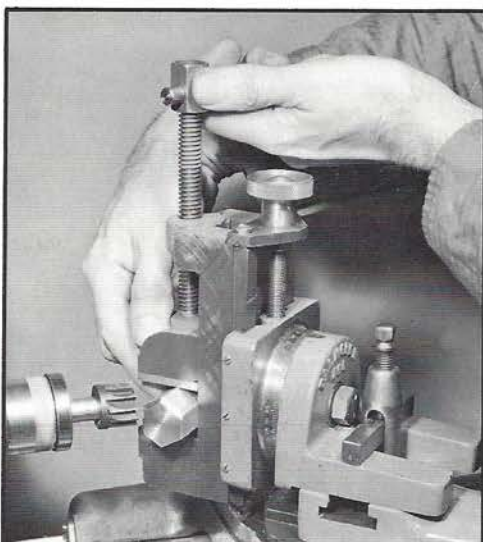
The 246 is designed to securely hold flat or irregular parts not adaptable to vise work. Table top positions and locks from 0° horizontal to 90° vertical. Precision drilled and reamed for hinge pin to give smooth movement without lateral play. Can also be furnished with 360° graduated swivel base.

The 249B is the heavy duty version of the No. 246. Its rugged construction insures against wear. The plate top tilts and holds from 0° horizontal to 90° vertical. Complete 360° swivel base allows freedom to work in any position desired. Base is accurately and clearly calibrated in degrees to allow quick settings.



No. 246B

Plate Only No.	Top Size	Base Length	Height Plate and Base	Weight Lbs.	Plate with Base No.	Weight Lbs.
246	6" x 6"	8"	4½"	9	246B	12
249	9" x 9"	12½"	6¾"	29	249B	35



Converts lathe for milling in 10 seconds



T-Slotting



End Milling



External Dovetail



Cutting Keyways



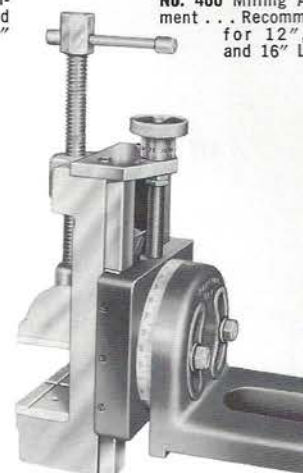
End Mill Angle Cut



No. 150 Milling Attachment . . . Recommended for 4" and 6" Lathes.



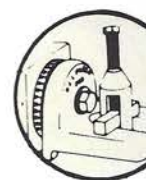
No. 250 Milling Attachment . . . Recommended for 8" and 10" Lathes.



No. 400 Milling Attachment . . . Recommended for 12", and 16" Lathes.

Milling Attachments can mill slots, keyways, grooves, flats, squares, hexagons, octagons, external and internal dovetails, sawing, grinding and drilling at any angle.

To set up on Lathe, remove the tool post ring around the "U" shaped base angle bracket, and the Milling Attachment straddles the tool post and is bolted down just like an ordinary tool holder.



Nos.	Fits Tool Posts Up To	Width Jaws	Depth Jaws	Opening Jaws	Weight Lbs.
150V	1" dia.	1½"	1"	1½"	4½
250V	1¼" dia.	2½"	1½"	2½"	11½
400V	2" dia.	4"	1¾"	4"	34

Milling Attachments for Engine Lathes



400P



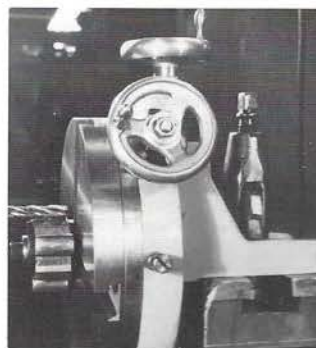
250P

Palmgren Milling Attachments for engine lathes will enable you to mill slots, keyways, grooves, flats, squares; also drilling, sawing and grinding at any angle. Fits any lathe that has a tool post. Set up in 10 seconds.

No.	Fits Tool Post up to	Plate Size	Weight Lbs.
250P	1¼"	6" x 6"	13
400P	2"	9" x 9"	22

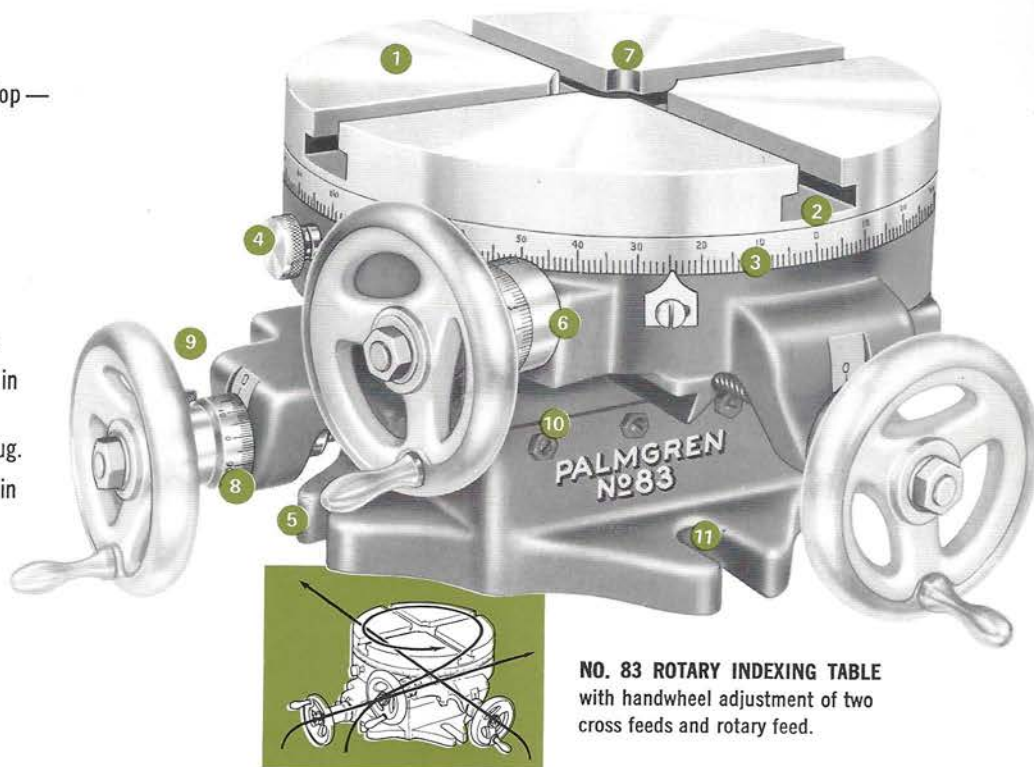
No. 800 Rotary Indexing Lathe Attachment with Vertical Feed

A compact, versatile unit provides an 8" diameter circular table surface for vise or fixture mounting. Rotary feed graduated in 3 minute intervals. Top rim graduated in degrees. Vertical slide adjusting screw is equipped with micrometer dial, calibrated in thousandths. Table top assembly similar to No. 83 Cross Slide Rotary Table. Table diameter is 8". Top graduation is 360°. Dials are 1" and 1¾". Gear ratio is 40:1. Table T-slots are ⅝". Fits tool post up to 2" in diameter. Vertical travel is 4". Rotary Feed Dial is graduated to 1/20° (3 min.). From tool post to face is 4⅜". From compound to face is 3⅝". Overall height is 11⅝". Adjustable Gib with (3) adjusting and locking screws. Two clamps to lock Face-Plate when required for straight cutting. Weight 27 lbs.



PALMGREN 8" ROTARY TABLES

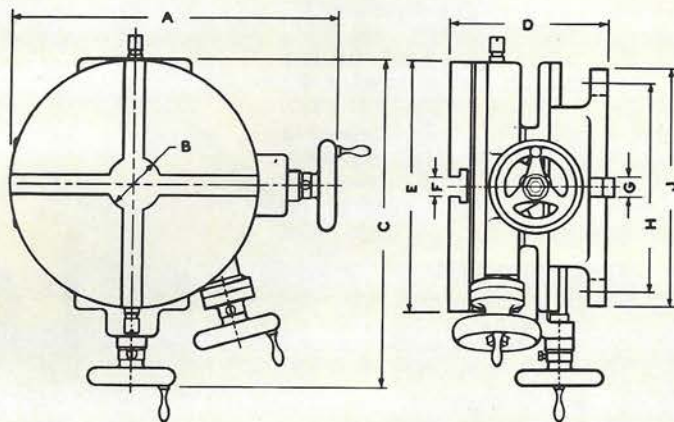
- (1) Heavy, cast, ribbed table top — precision ground.
- (2) T-Slots $\frac{5}{8}$ " x $\frac{1}{4}$ " x 1".
- (3) Graduated in degrees for full 360°.
- (4) 2 top locking screws.
- (5) Large base has 4 slots for bolting to drill press table.
- (6) Adjustable dial graduated in three minute increments.
- (7) Bored for $1\frac{5}{8}$ " locating plug.
- (8) Adjustable dial graduated in thousandths.
- (9) Locking screw for graduated dial.
- (10) 4 gib adjusting screws.
- (11) Base has $\frac{5}{8}$ " key to fit machine table slot.



NO. 83 ROTARY INDEXING TABLE
with handwheel adjustment of two
cross feeds and rotary feed.

CONVERTS YOUR DRILL PRESS INTO A VERSATILE PRECISION MACHINE TOOL

**FOR: milling, routing, cutting slots
and keyways, accurate indexing,
shaping, forming.**



Now you can do hundreds of jobs that were never before possible using a standard drill press. Simply bolt a PALMGREN Rotary Table directly to your drill press table, and you can use your drill press for milling; routing; shaping; indexing; cutting slots and keyways; surface, internal and external grinding; and for hundreds of intricate shaping jobs in wood, plastic and metal.

PALMGREN Rotary Tables are rugged, precision made tables of industrial quality. They accurately position work in one, two, three or four separate directions, depending on the model and how you use it. All movements are infinitely adjustable by turning the large handwheels, except for the Model 82 which has a manually positioned rotary table. You feed work into the spindle by using any combination of the movements, or use the table for accurate positioning of work below the spindle. The table may be locked against rotation by tightening two locking screws. The two cross feed handwheel controls on Models 82, 83 and 84 have micrometer dials that are graduated in thousandths of an inch, and each dial is adjustable to permit starting at 0 or any convenient reference point. The Rotary Table is calibrated in degrees around its full circumference and the adjustable dials on the rotary feed handles of Models 83, 84 and 86 are calibrated in 3 minute intervals. This permits precise positioning with repeatable accuracy. Worm gear drive gives the table extremely smooth action. Gib adjusting screws ensure continued accuracy. The No. 83 table has a 40:1 gear ratio. Cross slide travel is $4\frac{1}{4}$ ".

Table No.	A	B	C	D	E	F	G	H	J	Weight Lbs.
83	10 $\frac{3}{4}$ "	1 $\frac{1}{2}$ "	10 $\frac{1}{2}$ "	5 $\frac{1}{4}$ "	8"	$\frac{5}{8}$ "	$\frac{5}{8}$ "	6 $\frac{3}{4}$ "	7 $\frac{3}{4}$ "	40

6" AND 8" ROTARY TABLES

PALMGREN



NO. 84 ROTARY TILTING INDEXING TABLE

Same precision handwheel adjustment of cross feeds and rotary feeds as No. 83, plus adjustable angle base that can be locked in any position from 0 degrees horizontal to 90° vertical. Hinge boss of base is graduated in 2° increments. 40:1 gear ratio. Cross slide travel is 4¼".



NO. 86 PLAIN ROTARY TABLE

Very compact with low 3⅝" overall height. Smooth turning and minimum backlash are assured by precision cut worm gear. Dial is graduated in 3 minute increments. Thumb screw permits setting to 0 at start of work. Top is calibrated in 1° increments and has adjustable pointer. Two clamps lock top in any position.



NO. 82 DUAL FEED ROTARY TABLE

Similar to No. 83 with handwheel adjustment for cross feeds except top must be rotated by hand. Locks with 2 clamps. Circumference calibrated in 1° increments with adjustable pointer. 4¼" lateral and transverse feeds with dials graduated in .001" increments.



Only 2⅜" high. Ideal for jobs where overall height is critical. 6" diameter top has two ⅜" x ⅝" T-slots. Center hole in top is bored ⅝". Smooth, 60:1 worm gear drive provides positive rotary feed. Top is graduated 360° in 1 degree intervals. Rotary feed dial is graduated in 6 minute intervals. Base is flanged and slotted for ⅜" bolts and ⅞" keyway. Top may be locked by thumb screw. Maximum projection of handle from center line is 7".



NO. 81 ROTARY TILTING SLIDE TABLE

Top rotates, moves longitudinally along Y axis, and elevates for angular settings from 0° horizontal to 90° vertical. Rim is precisely calibrated in 1° increments. Adjustable pointer on body aids in establishing reference point. Large dial on rotary index shaft is calibrated to read in 3 minute intervals. Dial for longitudinal feed is graduated at intervals of .001" with 4¼" cross feed.

Hinge boss of base is graduated in 2° increments for direct reading of angular settings. 8" diameter top has 1⅝" diameter center bore and two ⅝" x 1" T-slots to assist in locating and mounting work. Base has a ⅝" keyway and two bolt slots for mounting to machine table.

Table No.	Table Diameter	Height Overall	Top Grad.	Base	Dials		Gear Ratio	Table T-Slots	Base Keyway	Weight Lbs.
					Cross Feed	Rotary Feed				
81	8"	5⅛"	360°	5" x 9¼"	1"	1¾"	40:1	⅝"	⅝"	49
82	8"	5¼"	360°	6⅞" x 7⅞"	1"			⅝"	⅝"	38
84	8"	5⅞"	360°	5" x 9¾"	1"	1¾"	40:1	⅝"	⅝"	45
86	8"	3⅝"	360°	9⅝" x 12"		1¾"	40:1	⅝"	⅝"	40

ROTARY TABLE ACCESSORIES



NO. 346 INDEXING ATTACHMENT for use with all 8" and 10" rotary tables. Equipped with two 2⅝" diameter plates having 3 sets of holes for maximum range.

Plate No. 1—36, 30, 24 holes.
Plate No. 2—40, 34, 25 holes.
Complete including plates . . .



NO. 1346 INDEXING ATTACHMENT for use on all 12" and 15" diameter rotary tables. Equipped with 2 plates having 9 sets of holes each.

Plate No. 1—23, 28, 30, 32, 38, 41, 47, 51, 59.

Plate No. 2—26, 29, 31, 37, 39, 43, 49, 53, 66.

Will index all numbers up to 100 except 61, 67, 68, 71, 73, 77, 79, 81, 83, 84, 88, 89, 91, 92, 93 and 97.



NO. 8 VISE JAW SET Convenient for holding various jobs. Adjustable and fixed jaw complete with T-slot bolts, washers, and nuts.



NO. 13 T-SLOT BOLTS consist of four T-slot bolts, nuts and washers. Specify size required.

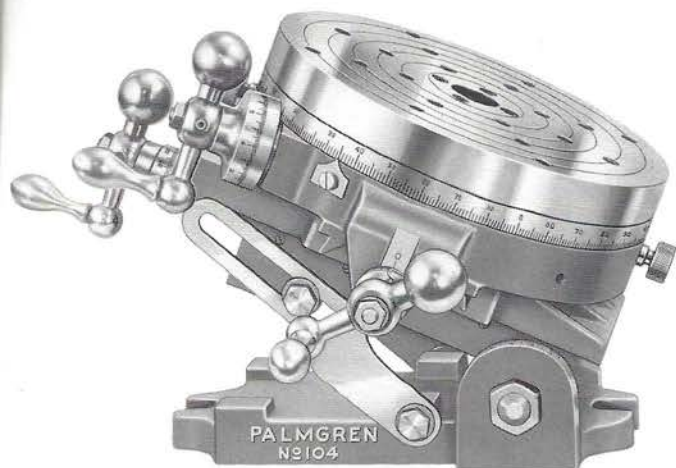
½—13 x 1½"
½—13 x 2"



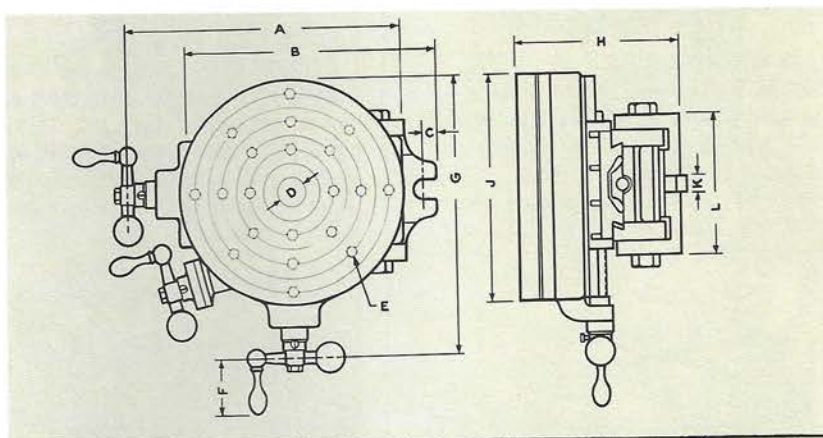
NO. 9 CENTERING PLUG BASE fits 1⅝" center of all rotary tables except No. 46. Base is 1⅝". stem is ½" x 1½".

PALMGREN 8" ROTARY TABLES

NO. 104 ROTARY TILTING CROSS SLIDE TABLE

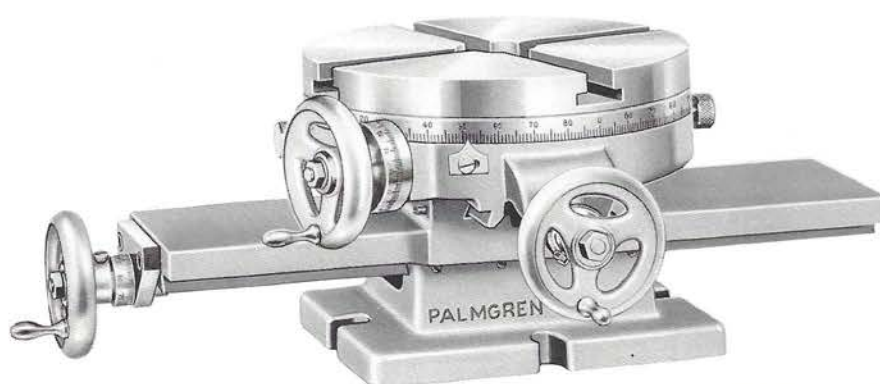


Provides all of the feeds and positioning in universal milling machines. Has two cross slides, rotary feed, and 0° to 90° tilting adjustment. Get quick, accurate angle set-ups for milling, drilling, grinding and also checking and layout work. Rotary and cross slide adjustments are the same as the No. 102 table, and the top surface is tapped as a locator plate in the same manner as the No. 103.



MODEL NO.	A	B	C	D	E	F	G	H	J	K	L	Weight
104	10"	9"	1/2"	1"	3/4"-16	2"	9 3/4"	5 5/8"	8"	5/8"	5"	44 lbs.

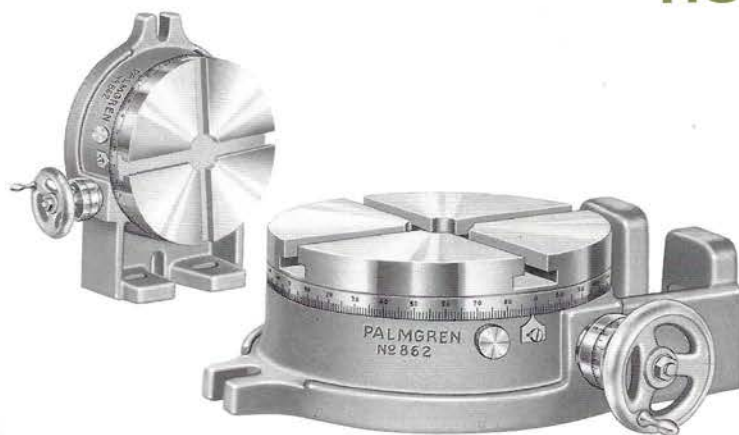
NO. 8315 DUAL CROSS SLIDE ROTARY TABLE



This precision table is ideal for use on drill press, milling machine, grinder and lay-out work where a long lateral feed is required. It features lateral travel of 11", transverse travel of 4 1/2" and 360° rotary feed. The 8" diameter top has a 1 5/8" diameter centerbore and two 5/8" x 1" T-slots for mounting work. The rim is graduated in 1° increments with an adjustable pointer and two clamps are provided for locking top in any position. The index dial is calibrated for accurate 3 minute readings and cross feed dials are graduated at .001 intervals. All dials have thumb screws for easy "0" setting. Worm and steel gibs can be adjusted for wear.

The large base has a 5/8" keyway and four bolt slots for mounting. It can be supplied with either 8" top or 10" diameter top.

NO. 862 VERTICAL HORIZONTAL INDEX TABLE



The dual position mounting makes this table exceptionally adaptable for many uses. Where work frequently requires accurate indexing, it is an indispensable item of shop equipment. It provides quick accurate set-ups for boring, drilling, reaming, tapping, grinding and milling operations.

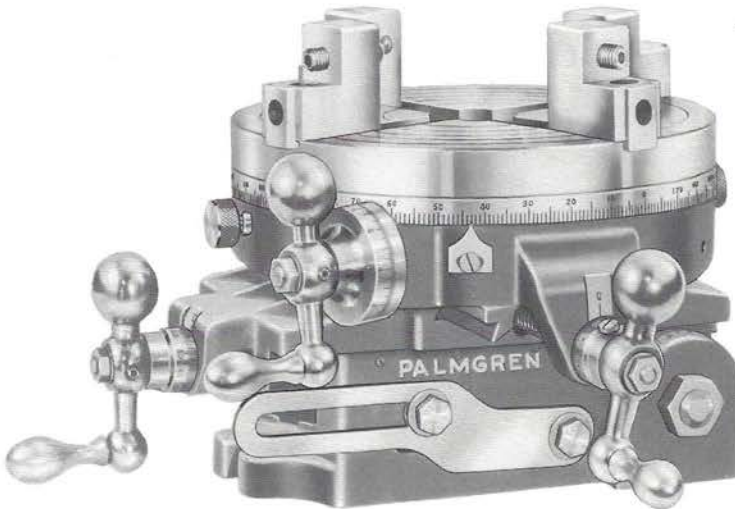
The 8" diameter top has a 1 5/8" diameter centerbore and two 5/8" x 1" T-slots for work holding. The rim of the top is precisely calibrated in 1° increments, and an adjustable pointer is provided on the body. The dial on the indexing shaft is graduated to 3 minutes for direct reading. A thumb screw permits setting this dial to "0" or any convenient reading at the start of work and two clamps secure the top without vibration or chatter during work operations. Precision cut worm and gear are used for indexing mechanism.

The base is provided with keyways and bolt slots for both horizontal and vertical mounting on machine table.

Table No.	Table Diameter	Height Overall	Top Grad.	Base	Dials	Gear Ratio	Table T-Slots	Base Keyway	Weight Lbs.
862-8	8"	3 1/2"	360°	9" x 11 1/2"	1 1/4"	40:1	5/8"	5/8"	41

8" ROTARY TABLES | PALMGREN

NO. 102 ROTARY TILTING AND CROSS SLIDE TABLE



This completely versatile table provides multiple usage for boring, milling, grinding, drilling and tapping operations. For accurate angle work it is essential equipment.

The No. 102 features rotary indexing thru a precision worm and gear, with dial calibrated to 3 minutes, and the table top graduated 360° with adjustable pointer for direct reading. The table has 4½" lateral and transverse cross feeds with dials graduated to .001" for accurate reading. The angle base is graduated to provide for quick, positive angle settings from 0° to 90°.

The 8" diameter top has a 1" diameter centerbore and two ⅝" keyways with tapped holes at ½" intervals. The top can be locked in any position by means of two clamps. Four reversible jaws are furnished which can be individually located to suit the work.

Slides have adjustable steel gibs, the Acme feed screws have adjustable thrust collars, and the rotary feed worm can be adjusted to compensate for wear.

The base has a ⅝" keyway and two bolt slots for positive location on the machine table.

NO. 103 ROTARY AND CROSS SLIDE TABLE



This compact, sturdy unit is designed for use on drill presses, grinders; milling machines and shapers, as well as layout work.

Rotary feed is positive and adjustment is provided for wear in worm and gear. Dial is calibrated in 3 minute intervals and top is graduated 360°.

Lateral travel, as well as transverse travel, is 4½" and slides are furnished with adjustable gibs for sustained accuracy and minimum wear. Dials are graduated in .001", and Acme feed screws have adjustable thrust collars to provide ease of travel to suit operation and material.

Top surface of table is tapped as a locator plate. Five concentric circles are scribed ½" apart from outer edge, converging on center. Four equally spaced holes are drilled and tapped on each circle to provide uniform positioning and location of work piece. Center is bored 1" diameter, ¾" deep for centering plug.

Large square base with keyway and four bolt slots and heavy ribbed bottom slide provide rugged construction to assure accurate performance.

NO. 106 ROTARY TILTING AND CROSS SLIDE TABLE



The new Palmgren No. 106 Compound Rotary Tilting Table with 4-Jaw Chuck is completely versatile for milling, drilling, grinding, and other machining operations, as well as checking and layout work. The No. 106 Table provides 4¼" longitudinal and transverse travel, 360° rotary feed, 0°-90° tilt positioning and 8" diameter independent 4-jaw chuck for holding work.

Cross slide dials are graduated in thousandths and rotary dial is calibrated in 3 minute (½°) intervals. The tilting base is graduated 0° to 90° and can be securely locked in any position.

Chuck top may be removed if not required.

No.	Table Diameter	Height Overall	Top Graduation	Base Dimensions	Gear Ratio	Base Keyway	Weight Lbs.
102	8"	7"	360°	9¼" x 5"	40:1	⅝"	48
103	8"	5¼"	360°	7⅝" x 6⅝"	40:1	⅝"	40
106	8"	9½"	360°	9¼" x 5"	40:1	⅝"	65

PALMGREN 10" ROTARY TABLES

NO. 1062 VERTICAL OR HORIZONTAL INDEX TABLE

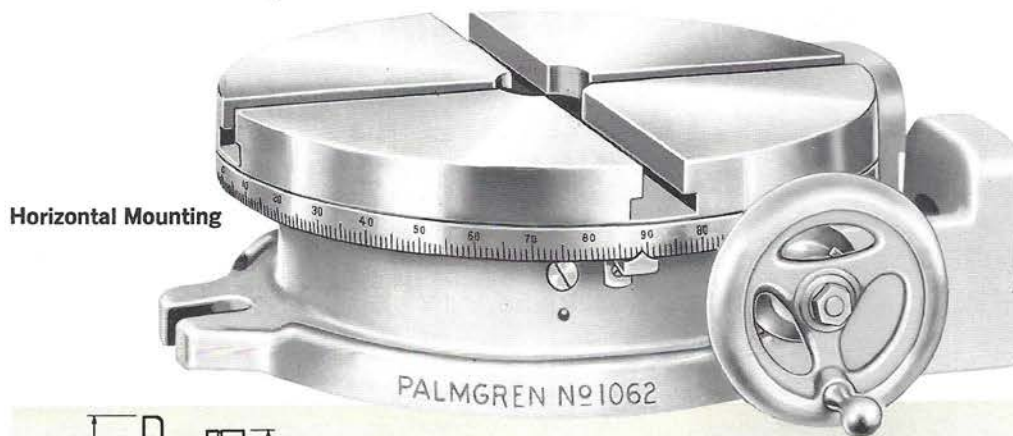
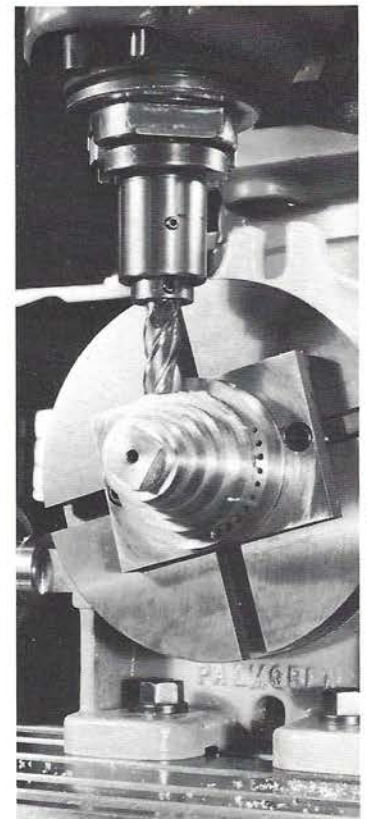


Vertical Mounting

The No. 1062 Vertical, Horizontal Index Table is a sturdy unit with dual position mounting which makes these tables exceptionally adaptable for many uses.

Table top diameter is 10" with two $\frac{5}{8}$ " x 1" T-slots and $1\frac{1}{2}$ " diameter centerbore for work holding. The rim of the top is graduated in 1° increments and a pointer is provided in the body. The dial collar on the index shaft is graduated for 1 minute readings. Adjustment for "0" setting is provided. Two thumb screw clamps secure the top firmly in any position. Precision cut worm and gear can be adjusted for wear.

The base is provided with keyways and two bolt slots for both horizontal and vertical mounting on machine table.



Horizontal Mounting

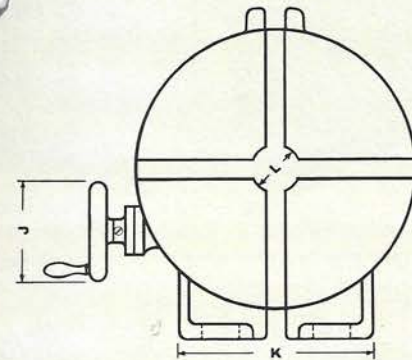
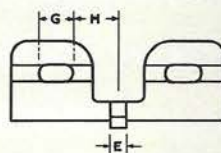
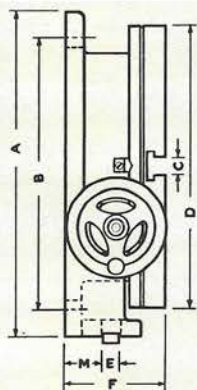


TABLE NO.	A	B	C	D	E	F	G	H	J	K	L	M	Weight
1062-10	12"	10 $\frac{1}{4}$ "	$\frac{5}{8}$ "	10"	$\frac{5}{8}$ "	3 $\frac{11}{16}$ "	1 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	50

NO. 186 ROTARY INDEXING TABLE



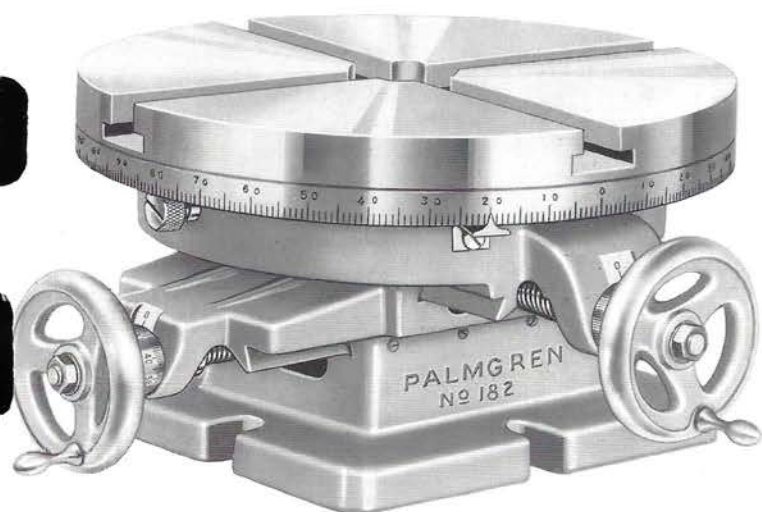
The No. 186 is an accurate rugged table. A very compact low unit 3 $\frac{1}{2}$ " overall height.

The 10" diameter top has a $1\frac{1}{2}$ " diameter centerbore with two $\frac{5}{8}$ " x 1" T-slots at 90°. The rim is calibrated to one degree increments. Precision cut worm and gear are used for the rotary index feed. The dial collar on worm shaft is $1\frac{1}{4}$ " diameter and calibrated at 1 minute intervals for direct reading. Take-up adjustment is provided to maintain free turning with minimum backlash. Two clamps are provided for locking top in any position.

The base has keyway and two bolt slots for location and mounting.

This superior quality table is essential equipment for work which requires accurate convenient indexing.

10" ROTARY TABLES | PALMGREN



NO. 182 ROTARY CROSS SLIDE TABLE

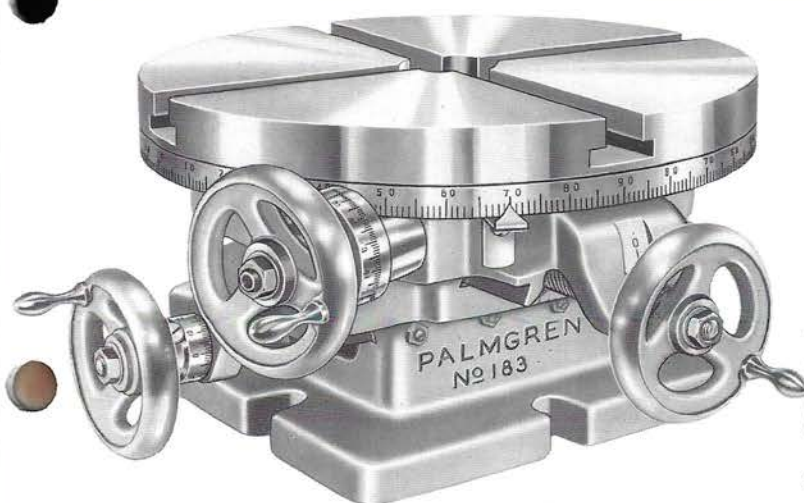
The No. 182 Table with 10" diameter top has many uses on drill presses, milling machines and grinders.

The table top can be freely turned in either direction and locked in desired position by two clamps with thumb screws. The top has a 1 5/8" diameter centerbore and two 5/8" x 1" T-slots. The rim is graduated in 1° increments for convenient setting.

Precision cut Acme thread screws with adjustable thrust collars are used for the lateral and transverse feeds. The direct reading dials on these screws are calibrated to .001". Overall travel is 4 1/2" for both feeds. The slideways have adjustable steel gibs to maintain accuracy and smooth operation.

This is a versatile unit for boring, milling, grinding, drilling, and tapping operations where work does not require a rotary index feed.

The base has a keyway and four bolt slots for mounting on machine table.



NO. 183 ROTARY CROSS SLIDE TABLE

This precision indexing table has a multiple of essential uses for boring, milling, grinding, drilling and tapping operations.

Indexing feed is by means of adjustable worm and gear. A dial collar on worm shaft is graduated to 1 minute increments. The rim of the 10" diameter top is calibrated at 1° intervals. A 1 5/8" diameter centerbore and two 5/8" x 1" T-slots are provided for location of work.

Precision cut Acme thread screws are used for both the lateral and transverse feeds, with overall travel of 4 1/2" for each. The dials on these feed screw shafts are graduated in .001" increments for direct reading. A thumb screw permits setting of dials at "0" or any convenient reading at the start of work. The slideways have adjustable steel gibs to maintain accuracy and smooth operation.

The large base is equipped with four bolt slots and a keyway for location and mounting on machine table.



NO. 184 ROTARY TILTING CROSS SLIDE TABLE

The rotary and dual cross feeds of the No. 183 have been built in conjunction with an adjustable tilting feature to provide a positioning table that is suited for all angle milling, grinding, shaping, tapping and drilling operations as well as layout work.

For convenience the hinge boss of the base is graduated 0° to 90° for direct reading. Two heavy side plates and four bolts are provided for locking at any angle.

Where the work frequently requires angle setting this table is essential equipment for fast, accurate setups. It is easily mounted on machine by means of two bolt slots and a keyway — can be raised, lowered and indexed without removing work piece.

Table No.	Table Diameter	Height Overall	Top Grad.	Base	Base Keyway	Base Bolt Centers	Gear Ratio	Table T-Slots	Weight Lbs.
182	10"	5 1/2"	360°	7 1/2" x 6 1/2"	3/8"	6 1/2" x 5 1/2"	—	3/8"	50
183	10"	5 1/2"	360°	7 1/2" x 6 1/2"	3/8"	6 1/2" x 5 1/2"	40:1	3/8"	52
184	10"	5 1/2"	360°	5" x 9 1/2"	3/8"	8"	40:1	3/8"	54
186	10"	3 1/16"	360°	9 1/2" x 12"	3/8"	10 1/2"	40:1	3/8"	45

PALMGREN 12" ROTARY TABLES



No. 1281



No. 1284

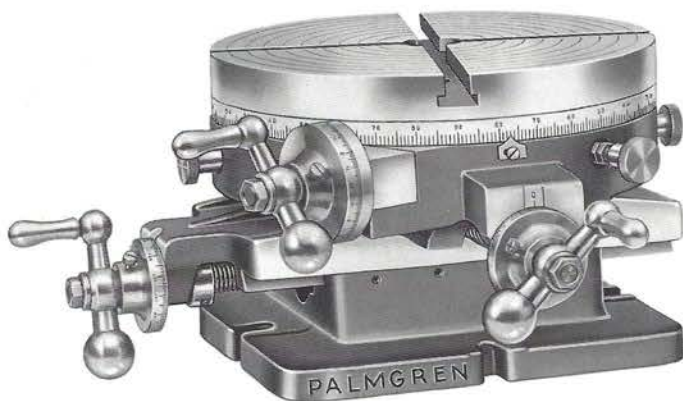
No. 1281, 1283, 1284 ROTARY INDEXING TABLES

These new heavy duty units are the latest addition to the Palmgren line of precision rotary indexing tables. No. 1281 has 360° rotary feed and 8" cross feed. No. 1283 has lateral feed, transverse feed and 360° rotary feed. The No. 1284 combines the features of the No. 1283 with a 0° to 90° tilting angle base.

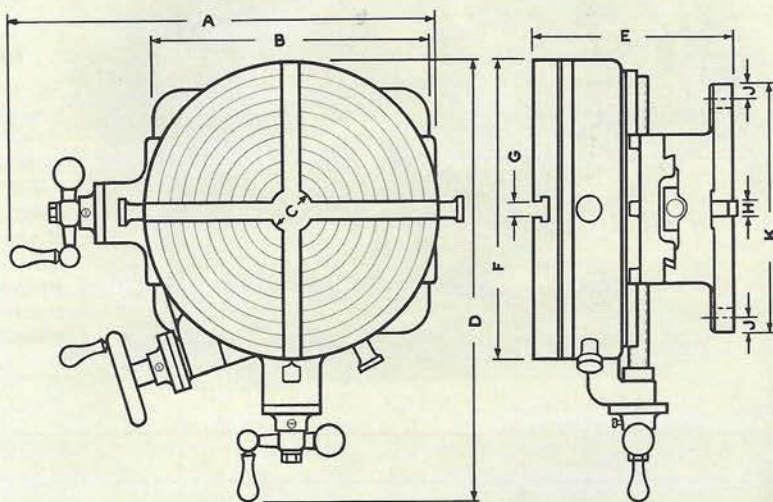
Rotary feed is by means of adjustable worm and gear which can be disengaged for quick rotation of the table top. The top, as well as all other surfaces, is ground parallel within .001" total indicator reading. Nine concentric scribed lines 1/2" apart, 1 5/8" center pilot, and two 5/8" x 1" T-slots are provided for positioning work. The rim of the 12" diameter top is precisely calibrated in 1° increments and adjustable pointer is provided on the body. Large, easy to read dials (2 1/2" diameter) are graduated in 1 minute increments for rotary feed and .001" intervals for lateral and transverse feeds. Two knurled clamps secure the top during work operations.

Roller thrust bearings are adjustable for backlash and smooth operation of precision Acme thread feed screws. Dovetails are provided with ground gib plates and screws for securely locking cross slides. Angle base is equipped with heavy steel side plates and four bolts for locking in any position from 0° horizontal to 90° vertical. Hinge boss is graduated every 2° for direct reading. Rectangular base and angle base have bolt slots and keyways for accurate mounting on machine table.

No.	Table Diameter	Height Overall	Top Grad.	Base Keyway	Gear Ratio	Table T-Slot	Wt. Lbs.
1281	12"	6 3/4"	360°	1 1/16"	90:1	5/8" x 1"	137
1284	12"	9 3/4"	360°	1 1/16"	90:1	5/8" x 1"	225

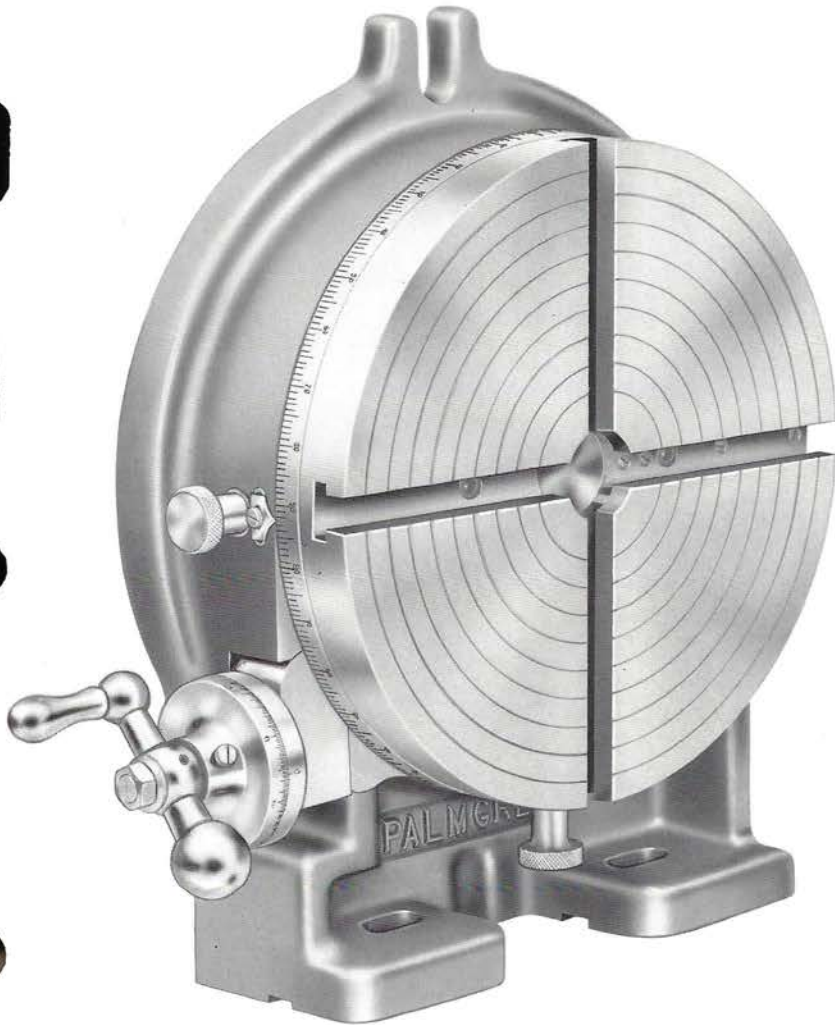


No 1283



MODEL NO.	A	B	C	D	E	F	G	H	J	K	Weight Lbs.
1283	17 1/2"	11 1/2"	1 3/8"	17 3/8"	8 3/4"	12"	3/8"	1 1/16"	5/8"	10"	165

12" ROTARY TABLES | PALMGREN



NO. 1262 VERTICAL OR HORIZONTAL ROTARY INDEXING TABLE

For use in either horizontal or vertical position, this new 12" diameter Two Position Rotary Table is rugged enough for the heaviest type of production work, yet is sensitive enough for precision tool room work.

Ideally suited for rotary milling operations, spacing of holes in a circle, indexing for milling slots, cutting contours, engraving, or any of a host of other uses, which will save time and money in your toolroom, inspection department, pattern shop, experimental laboratory, or the production line, or wherever a precision rotary table is required to get the job done.

High accuracy, easy reading of dials, functional arrangement of controls, sturdy design and low compact construction are the distinguishing features of this unit.

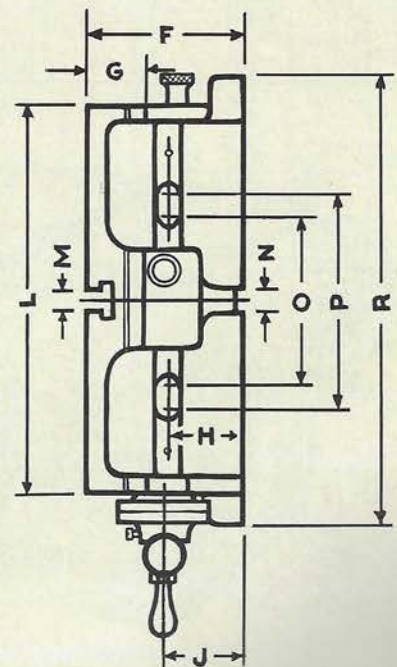
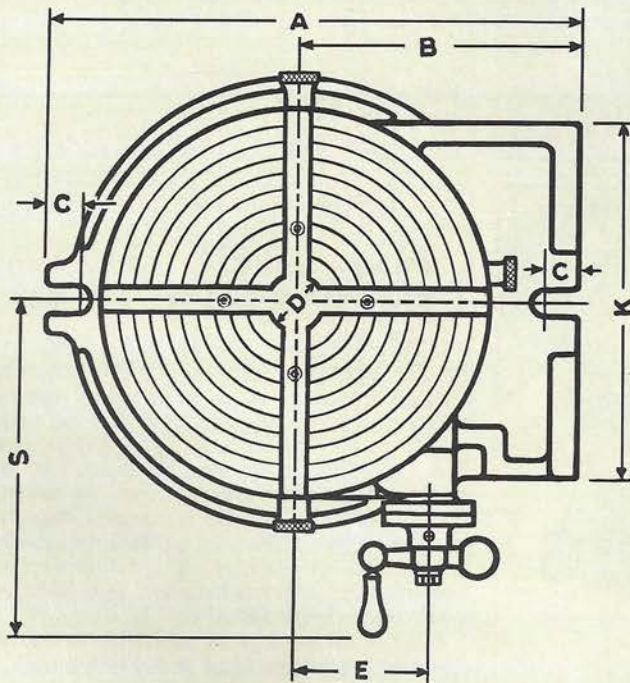
The precision worm, which is mounted in needle roller bearings, can be quickly disengaged for free table rotation, and precisely re-engaged to the same position.

Table top can be solidly locked in any position without affecting table setting, by means of the two clamps located at 180° intervals.

The large dial is adjustable and is graduated in one minute intervals. All graduations are accurately cut on a special graduating machine.

Full enclosure of drive mechanism prevents any contamination from coolant, chips, or dirt, etc. Nine concentric scribed lines $\frac{1}{2}$ " apart, $1\frac{1}{8}$ " dia. center pilot, and two $\frac{5}{8}$ " x 1" T-slots are provided for positioning work.

Maximum run-out in center hole is .001". Maximum parallelism error through 360° rotation of table is .001".



MODEL No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	Weight
1262	17"	9"	1 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	4 $\frac{1}{4}$ "	4 $\frac{1}{4}$ "	1 $\frac{3}{4}$ "	2 $\frac{1}{4}$ "	2 $\frac{3}{8}$ "	11"	12"	$\frac{5}{8}$ "	1 $\frac{1}{16}$ "	5 $\frac{1}{4}$ "	6 $\frac{1}{4}$ "	14"	10 $\frac{1}{2}$ "	136



Vertical Mounting

NO. 1562 VERTICAL OR HORIZONTAL ROTARY INDEXING TABLE

The model 1562 two position rotary indexing table is ideally suited for those heavy duty milling and drilling jobs where precise indexing is required.

The 15" dia. top has ample T-slots for clamping and concentrically scribed lines along with a 1 5/8" dia. center pilot for accurately centering work.

The large dial is divided in 1 minute increments and is adjustable for zero setting.

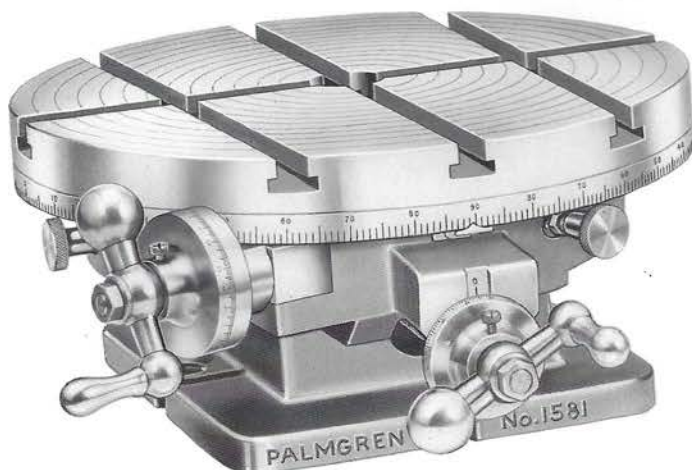
The precision worm, which is mounted in needle roller bearings, can be quickly disengaged for free table rotation.

Maximum run-out in center hole is .001". Maximum parallelism error through 360° rotation of table is .001".



Horizontal Mounting

No.	Table Diameter	Height Overall	Top Grad.	Base Keyway	Gear Ratio	Table T-Slot	Wt. Lbs.
1562	15"	4 3/4"	360°	1 1/8"	90:1	5/8" x 1"	203



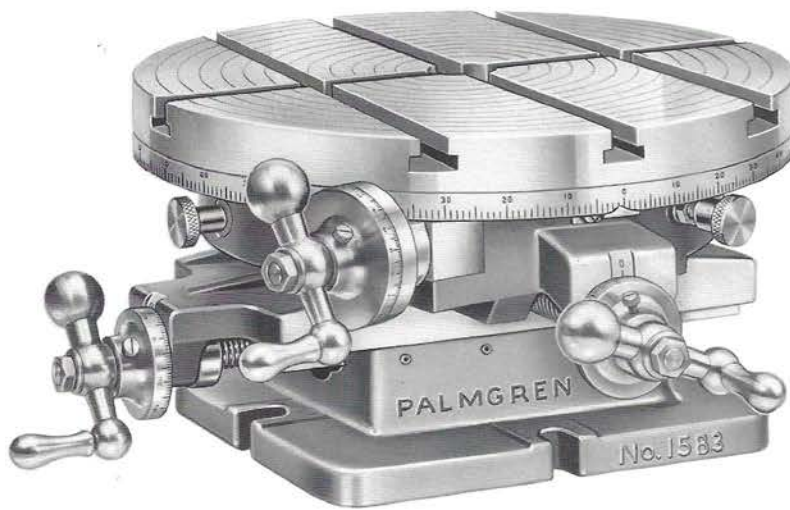
NO. 1581 ROTARY INDEXING TABLE

The No. 1581 has lateral feed, and 360° rotary feed.

Rotary feed is by means of adjustable worm and gear which can be disengaged for quick rotation of the table top. The top, as well as all other surfaces is ground parallel within .001" T.I.R. Concentric scribed lines 1/2" apart, 1 5/8" dia. center pilot and four 5/8" x 1" T-slots are provided for positioning work. The rim of the 15" dia. top is precisely calibrated in 1° increments and adjustable pointer is provided on the body. Large easy to read dials are graduated in 1 minute increments for rotary feed and .001" intervals for lateral feed. Two clamps secure the top during work operations.

Roller thrust bearings are adjustable for backlash and smooth operation of precision Acme thread feed screws.

No.	Table Diameter	Height Overall	Top Grad.	Base Keyway	Gear Ratio	Table T-Slot	Wt. Lbs.
1581	15"	6 3/4"	360°	1 1/8"	90:1	5/8" x 1"	220

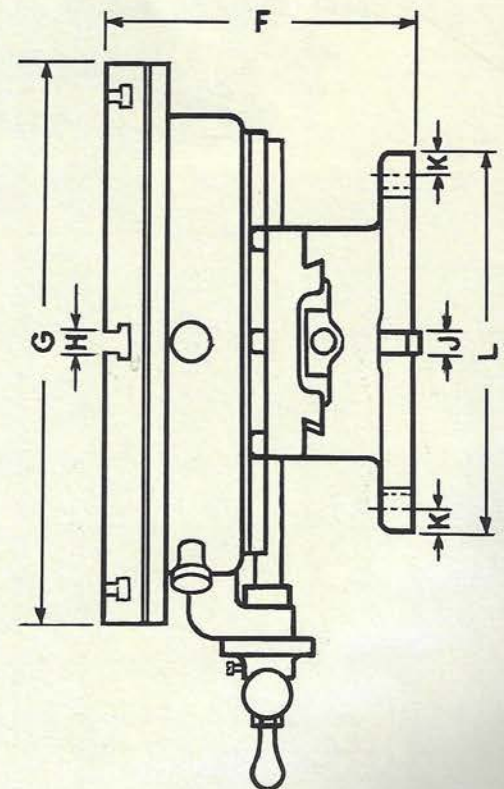
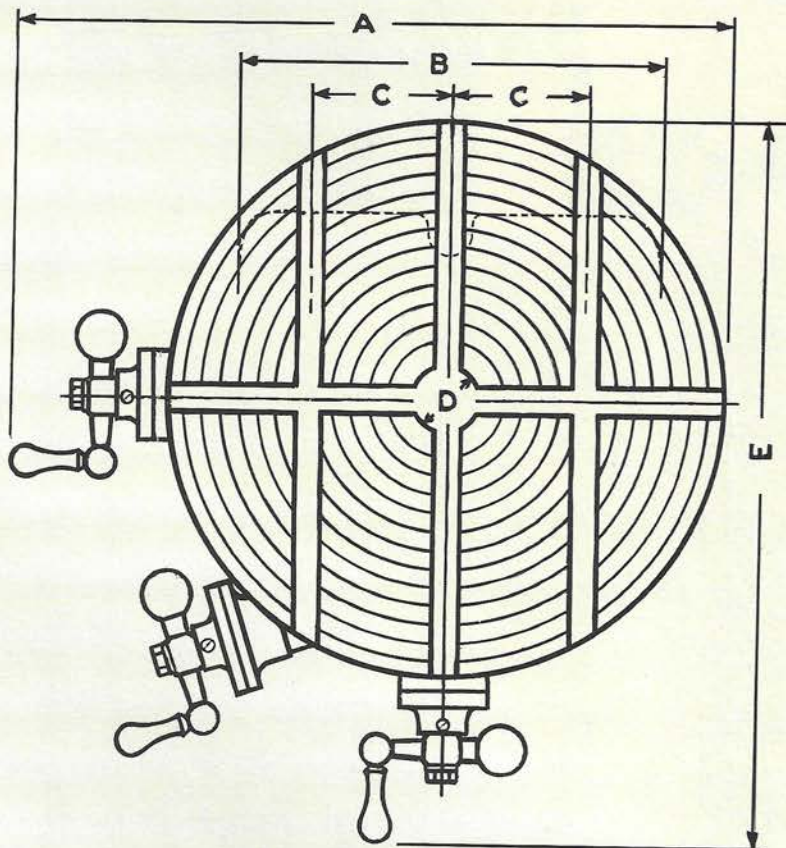


NO. 1583 ROTARY CROSS SLIDE INDEXING TABLE

The No. 1583 has lateral feed, transverse feed, and 360° rotary feed.

Rotary feed is by means of adjustable worm and gear which can be disengaged for quick rotation of the table top. The top, as well as all other surfaces is ground parallel within .001" T.I.R. Concentric scribed lines 1/2" apart, 1 5/8" dia. center pilot and four 5/8" x 1" T-slots are provided for positioning work. The rim of the 15" dia. top is precisely calibrated in 1° increments and adjustable pointer is provided on the body. Large easy to read dials are graduated in 1 minute increments for rotary feed and .001" intervals for lateral and transverse feeds. Two clamps secure the top during work operations.

Roller thrust bearings are adjustable for backlash and smooth operation of precision Acme thread feed screws.



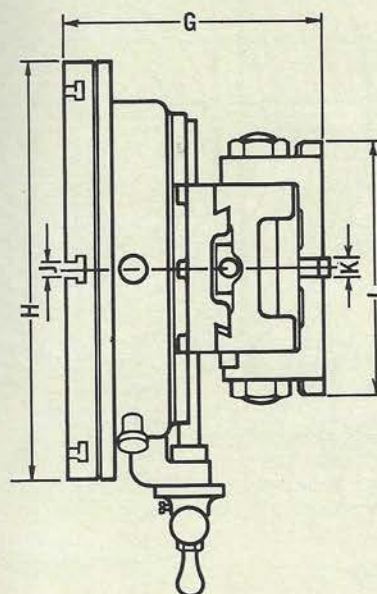
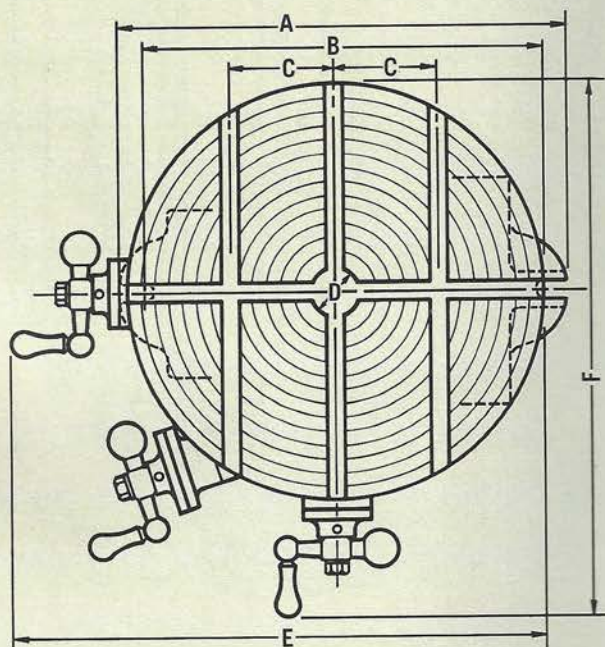
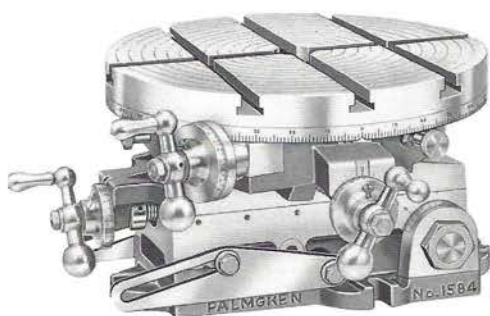
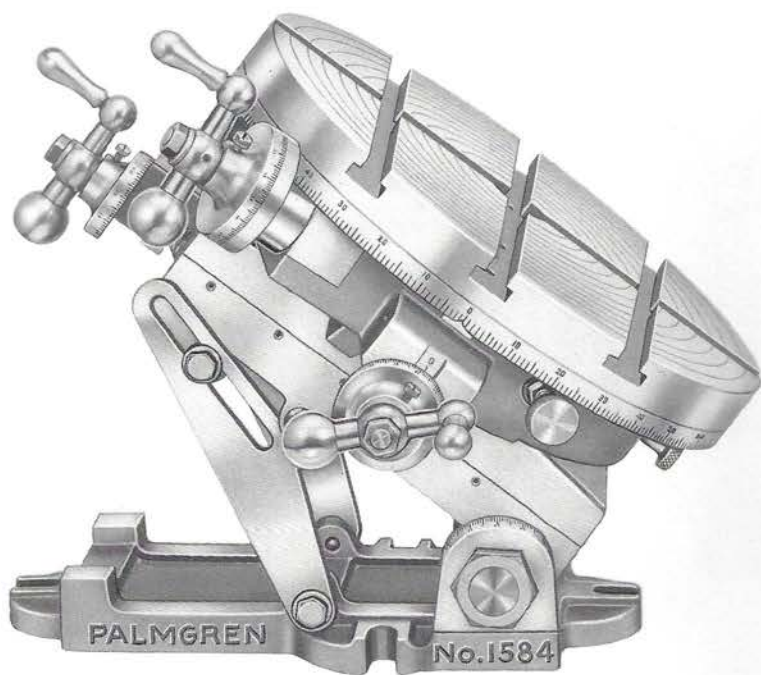
No.	A	B	C	D	E	F	G	H	J	K	L	Gear Ratio	Wt. Lbs.
1583	19 1/4"	11 1/2"	3 3/4"	1 5/8"	19 1/8"	8 1/4"	15"	5/8"	1 1/16"	5/8"	10"	90:1	232

NO. 1584 ROTARY TILTING CROSS SLIDE TABLE

The No. 1584 Rotary Tilting Cross Slide Table is one of the most versatile Rotary Tables on the market. The 8" lateral and transverse feed, 360° rotary feed combined with 0° to 90° tilting feature makes this Table ideally suited for your tool room, inspection department, pattern shop, experimental laboratory, production line or wherever a precision Rotary Table is required.

Some of the distinguishing features of this unit are large easy-to-read dials, which are adjustable for quick zero setting. Rotary feed reads directly to one minute. Lateral and transverse feeds are calibrated in .001" increments. The precision worm can be quickly disengaged for free table rotation. 15" dia. top has four 5/8" x 1" T-slots and concentrically scribed lines spaced at 1/2" intervals which provide for convenient clamping and location of work. Table top can be solidly locked in any position without affecting table setting, by means of two clamps located at 180° intervals. Angle base is equipped with heavy steel side plates and four bolts for locking in any position from 0° horizontal to 90° vertical. Hinge boss is graduated every 2° for direct reading. The top, as well as all other surfaces, is ground parallel within .001" total indicator reading. Dovetails are provided with ground gib plates and screws for securely locking cross slides. Thrust bearings are adjustable for backlash and smooth operation of precision Acme thread feed screws.

High accuracy, sturdy design and construction make this unit ideally suited for rotary milling operations, hole spacing, indexing for slots, contour cutting or engraving, just to name a few of its innumerable uses.



No.	A	B	C	D	E	F	G	H	J	K	L	Gear Ratio	Wt. Lbs.
1584	16"	14 1/4"	3 3/4"	1 1/2"	19 1/2"	19 1/2"	9 3/4"	15"	5/8"	1 1/16"	9"	90:1	260

8" & 10" **POWER DRIVEN** PALMGREN ROTARY TABLES



PD-862 and PD-1062 POWER DRIVEN ROTARY TABLES

Now you can mill grooves, slots, radii, semicircles and cams with constant power feed. Cuts down time, and speeds production. Also can be used for inspection work, checking bolt circles, concentricity. Speed is infinitely variable from 0 to 2.0 R.P.M. Stops in less than 3 minutes of rotation. Clockwise or counterclockwise rotation.

Can be instantly reversed without damage to motor. Dial reads directly to 3 minutes. Can be used in either vertical or horizontal position. Used properly, it will pay for itself in a very short time.

Available in two models, the PD-862 with 8" diameter top, and the PD-1062 with 10" diameter top.



Compact power unit with functional arrangement of controls: Width, 12"; depth, 7"; height, 9"; 115 V.; 60 C.

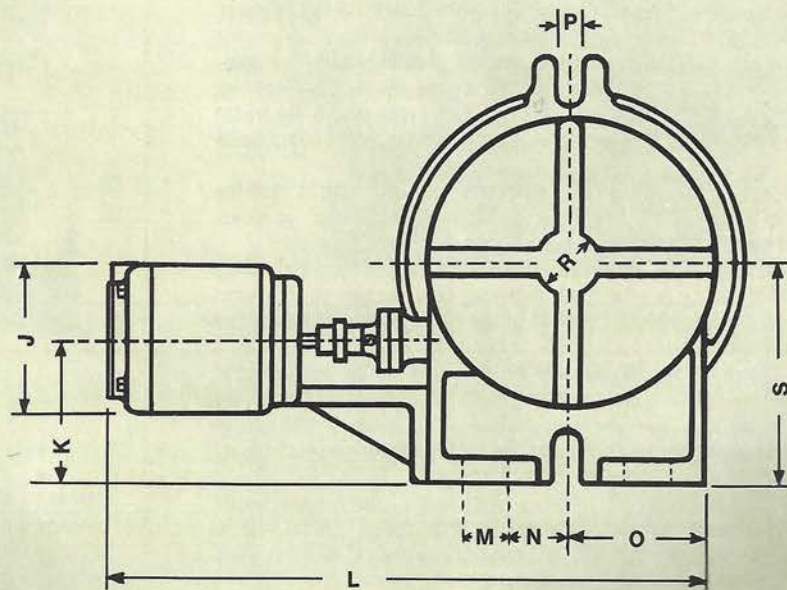
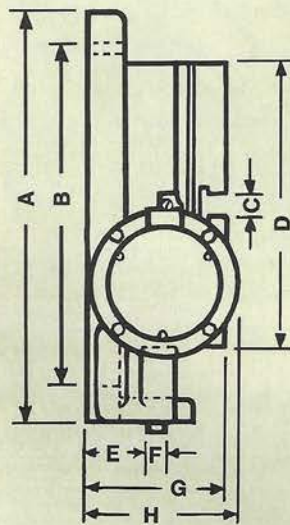
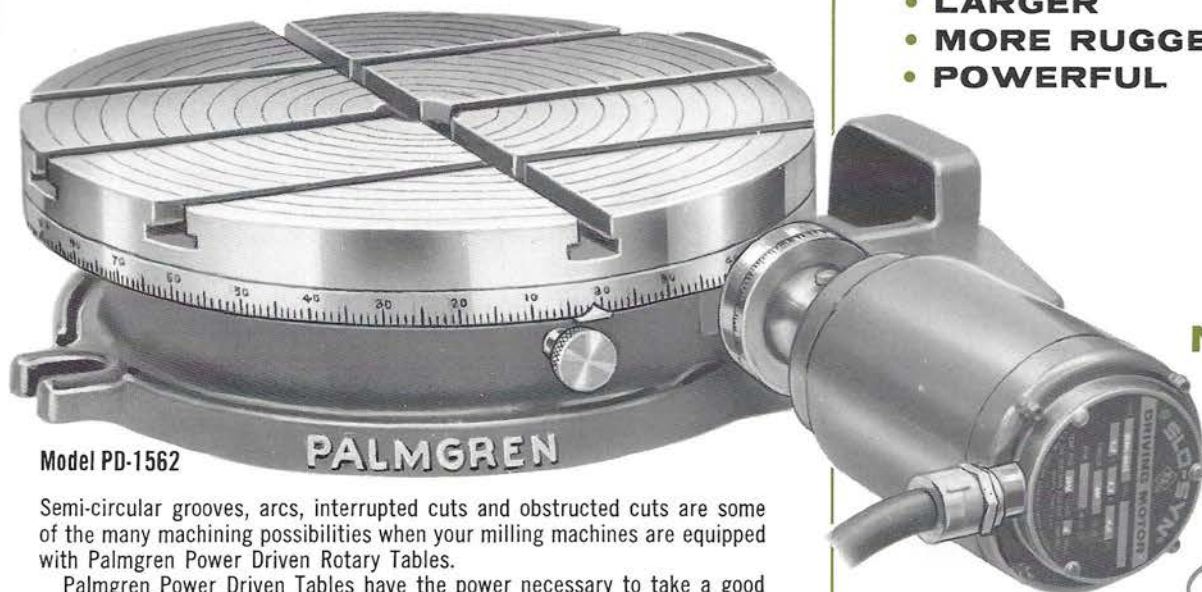


TABLE NO.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	Weight Lbs.
PD-862	12"	10 1/4"	3/8"	8"	1 1/16"	5/8"	3 29/32"	4 1/4"	4 3/16"	4"	18 3/4"	1 1/4"	1 3/4"	3 15/16"	5/8"	1 5/8"	6 3/16"	66
PD-1062	12"	10 1/4"	3/8"	10"	1 1/16"	5/8"	3 29/32"	4 1/4"	4 3/16"	4"	18 3/4"	1 1/4"	1 3/4"	3 15/16"	5/8"	1 5/8"	6 3/16"	75

PALMGREN

POWER DRIVEN ROTARY TABLES 12" and 15" Diameter...

**Model PD-1562****PALMGREN**

Semi-circular grooves, arcs, interrupted cuts and obstructed cuts are some of the many machining possibilities when your milling machines are equipped with Palmgren Power Driven Rotary Tables.

Palmgren Power Driven Tables have the power necessary to take a good cut. And they offer accurate control of table rotation and instant reversal to make "impossible" cuts "possible" or even "easy."

The key to the accurate control and smooth, powerful drive of the Palmgren Power Driven Table lies in its DC stepping motor and worm gear drive. Each step of 1.8° of the motor is accurate within $\pm 3\%$ non-cumulative. The motor has a maximum torque of 400 ounce inches when the motor is operating at lowest r.p.m. and 225 ounce inches at maximum r.p.m. Output, however, is 90 times this amount because of the 90:1 gear reduction of the worm drive. This provides ample power for toolroom jobs and many short run production jobs.

An accurately cut worm drive makes table rotation smooth and dependable. The cast iron worm wheel has bronze sleeve bearings which ride on a hardened center boss. Both sides of the worm wheel ride on needle bearings. The hardened and ground worm has needle thrust bearings at each end.

A simple screw adjustment makes it possible to eliminate backlash of the worm drive. This is extremely valuable for climb milling since elimination of backlash reduces chatter marks.

The circumference of the table is calibrated in 1° increments, and there's a pointer to establish a zero reference point. The motor shaft dial is calibrated in 1 minute increments to make accurate readings possible.

The table may be quickly rotated to the exact degree required. The operator first sets the motor at high speed stopping at the approximate setting. Then he lowers the speed and observes the 1 minute increments on the motor shaft dial. With a little practice he can quickly learn to stop at the exact point desired.

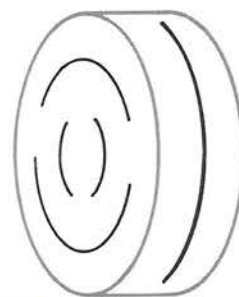
Another advantage of the Palmgren Power Driven Rotary Table is that the table may be instantly reversed without damage to the motor or drive. There's a control switch on the motor control panel for this purpose.

The internal gears and drive mechanism are well protected from dirt, chips and abrasives. Maintenance is simplified by having two oil cups on the worm plus four set screw covered holes in the top of the table for lubrication of the bearings and worm wheel.

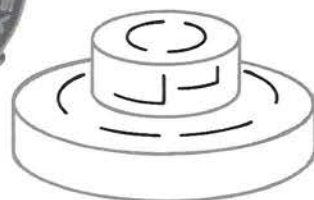
These power driven rotary tables may be mounted either vertically or horizontally to tables of milling machines, grinders, drill presses, cross slides of lathes, etc., to do jobs like grinding, milling, drilling holes around circumferences, routing circular paths, machining cam surfaces, inspecting for concentricity and contour, and for contour machining.

The compact power unit (only 12" wide, 9" high and 7" deep) operates on 115 volt 60 cycle AC and features infinitely variable speed control, clockwise or counterclockwise rotation and instantaneous reversal without damage to the drive. Speeds range from 0 to 0.8 r.p.m.

- **LARGER**
- **MORE RUGGED**
- **POWERFUL**



**Now
make cuts
like
these...**

**Compact Power Unit**

has functional arrangement of controls and features infinitely variable speed control, clockwise and counterclockwise rotation and instantaneous reversal. Width 12", depth 7", height 9". 115 volt, 60 cycle.

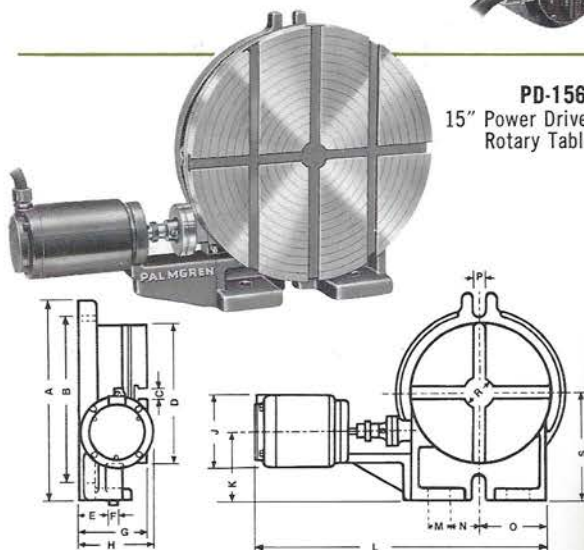
**PD-1262
12" Power Driven
Rotary Table.****PD-1562
15" Power Driven
Rotary Table.****DIMENSIONS AND SPECIFICATIONS**

Table No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	Weight Lbs.
PD-1262	12"	14 1/4"	5/8"	12"	1 1/8"	1 1/16"	4 3/4"	4 1/2"	4 3/16"	4 3/4"	22 13/16"	1 1/2"	2 1/4"	5 1/2"	1 1/16"	1 3/8"	9"	185
PD-1562	15"	14 1/4"	3/4"	15"	1 1/8"	1 1/16"	4 3/4"	4 1/2"	4 3/16"	4 3/4"	22 13/16"	1 1/2"	2 1/4"	5 1/2"	1 1/16"	1 3/8"	9"	220

10" & 12" CROSS SLIDE TABLES PALMGREN

NO. 90, 91, 92, 93 MILLING TABLES

These precision built slide tables are essential for accurate boring, drilling, grinding and milling operations.

The No. 90 has a single axis lateral feed while the No. 91 provides a tilting feature along with the single slide. The No. 92 is equipped with extremely versatile two-axis positioning and the No. 93, similar to the No. 92, also has a tilting angle base.

All tables can be furnished with either 6" x 10" or 6" x 12" table top surface. Either size has one longitudinal T-slot and three equally spaced cross T-slots. Precision Acme feed screws have adjustable thrust collars for smooth operation and minimum backlash. Dials are graduated in .001" increments and have thumb screws for easy "0" setting. Dovetailed slides have adjustable steel gibs to compensate for wear. Heavy side plates and four bolts are provided for positive locking at any angle. Hinge boss is graduated 0° to 90° for direct reading. All bases have bolt slots and keyways for accurate positioning on machine table.

NO. 45P NEW HEAVY DUTY ALL ANGLE SURFACE PLATE. This Surface Plate provides for 360° rotation of the top plate, 360° base swivel, and 0° thru 90° vertical angle adjustment.

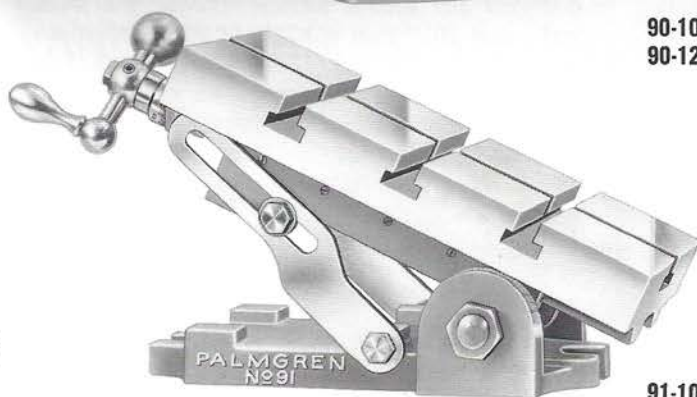
This combination of movements makes possible set-ups at virtually any angle or combination of angles that may be required.

The surface plate top is 6" x 10½" with one ¾" x ¾" central T-slot, two transverse T-slots, and a 1½" diameter center pilot.

The angle, rotation, and swivel movements are calibrated for direct reading with Vernier markings to 1°. Base has ⅝" keyways and bolt slots for machine mounting.



90-10
90-12



91-10
91-12



92-10
92-12



93-10
93-12



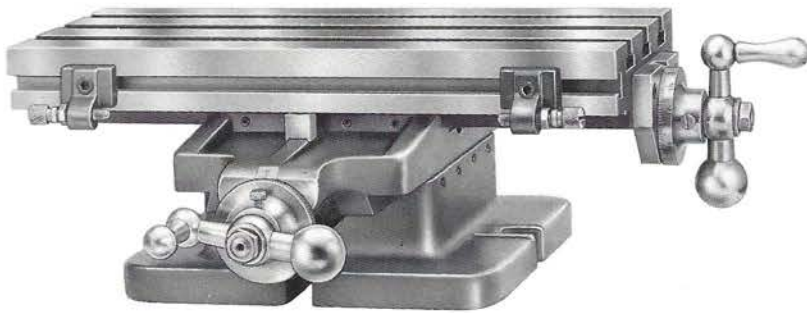
No. 45P

No.	Table Size	Base Size	Travel	Keyways and T-Slots	Angle Base Graduations	Overall Height	Weight Lbs.
90-10	10" x 6"	7⅞" x 6⅞"	6"	⅝" - 7/16"		3½"	34
90-12	12" x 6"	7⅞" x 6⅞"	8"	⅝" - 7/16"		3½"	40
91-10	10" x 6"	9" x 5"	6"	⅝" - 7/16"	0°-90°	3¾"	36
91-12	12" x 6"	9" x 5"	8"	⅝" - 7/16"	0°-90°	3¾"	42
92-10	10" x 6"	7⅞" x 6⅞"	6" x 4½"	⅝" - 7/16"		4⅜"	40
92-12	12" x 6"	7⅞" x 6⅞"	8" x 4½"	⅝" - 7/16"		4⅜"	45
93-10	10" x 6"	9" x 5"	6" x 4½"	⅝" - 7/16"	0°-90°	4⅜"	42
93-12	12" x 6"	9" x 5"	8" x 4½"	⅝" - 7/16"	0°-90°	4⅜"	48

NO. 45P NEW HEAVY DUTY ALL ANGLE SURFACE PLATE.

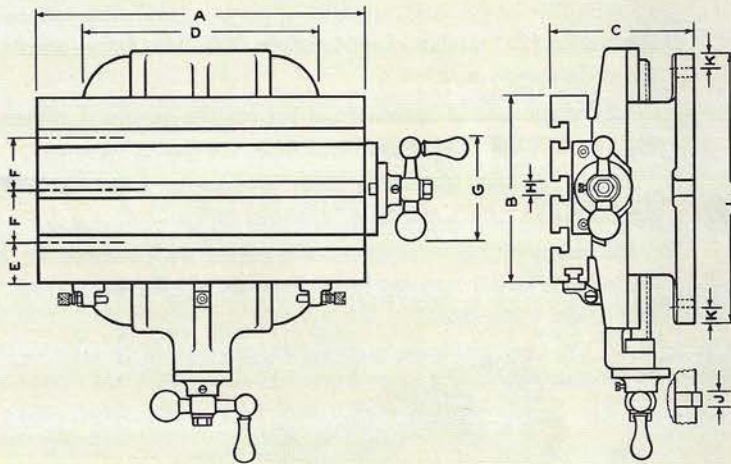
No.	Plate Size	T-Slots	Surface Plate Rotation	Swivel Base Rotation	Angle Base Adjustment	Overall Height	Weight Lbs.
45P	10" x 6"	7/16" x ¾"	360°	360°	0°-90°	5"	55

PALMGREN 14" AND 16" SLIDE TABLES



No. 192-14, No. 192-16 Dual Slide Machine Tables

Positioning on both "X" and "Y" axis is provided on these rugged tables.



Model No.	A	B	C	D	E	F	G	H	J	K	L	Travel	Weight Lbs.
192-14	14	8	6 1/2	10	1 1/4	2 1/4	4 1/2	3/8	1 1/16	3/8	11 1/2	8" x 8"	140
192-16	16	8	6 1/2	10	1 1/4	2 1/4	4 1/2	3/8	1 1/16	3/8	11 1/2	8" x 10"	149

Where precision work is required, these new heavy duty slide tables combine accuracy with greater working surface and rugged construction.

Castings are the finest quality Gray Iron. Accurately machined and ground surfaces provide tolerances well within .001" total in length of travel. Table tops have three equally spaced longitudinal T-slots. Precision Acme thread feed screws are equipped with needle roller thrust bearings for smooth operation. Backlash is controlled by adjustable feed screw collars. Extra large balanced cranks with revolving handles are provided for ease of operation. Large easy to read dials (2 1/2" diameter) are graduated in .001" increments and are equipped with thumb screws to permit setting to "0" or any convenient reading at start of work. Two adjustable travel stops are mounted on side of table top. Base and cross slide are provided with ground gib plates and screws for securely locking top and cross slide at any position. Angle base is equipped with heavy heat treated steel side plates and four bolts for locking in any position from 0° horizontal to 90° vertical. All bases have bolt slots and keyways for accurate positioning on machine table.

These precision built slide tables are essential equipment for the tool room, laboratory, production line, or wherever accurate positioning is required.



No. 190-14, No. 190-16 Single Slide Machine Tables

These new Heavy Duty Tables provide precision positioning on the "Y" axis.

Model No.	Table Size	Travel	Keyways	T-Slots	Overall Height	Weight Lbs.
190-14	14" x 8"	8"	1 1/16"	3/8" x 1"	4 1/2"	95
190-16	16" x 8"	10"	1 1/16"	3/8" x 1"	4 1/2"	105

PALMGREN MACHINE VISES AND TABLES

Net Resale

prices*

EFFECTIVE
APRIL 1, 1971

Tables and slides of other types and sizes for special application, manufactured to fit the job. Submit specifications and prints for quotations.

* This price list supersedes all previous quotations and is subject to change without notice.

MODEL NO.	DESCRIPTION	PAGE NO.	WEIGHT LBS.	NET PRICE EA.
XO	Angle Vise	2	4	\$ 14.25
X1	Angle Vise	2	4	14.45
O	Angle Vise	2	10	15.10
OO	Angle Vise	2	10	15.30
OOO	Angle Vise	2	10	15.50
2	Heavy Duty Angle Vise	5	49	216.25
2B	Heavy Duty Angle Vise With Base	5	59	238.30
2H	Crank Handles for #325, #425B	8	¾	5.20
3	Heavy Duty Angle Vise	5	115	262.45
3B	Heavy Duty Angle Vise With Base	5	130	293.95
4	Heavy Duty Angle Vise	5	190	367.45
4B	Heavy Duty Angle Vise	5	250	419.95
5	Drill Press Vise	6	2	10.20
6	Drill Press Vise	6	2	10.30
6H	Crank Handles for #2B, #40B	9	1½	7.30
7	Utility Vise	7	13	24.10
8	Jaw Set	15	3	9.40
9	Centering Plug	15	½	20.95
10	Drill Press Vise	6	6	11.25
10H	Crank Handles for #3B, #60B	9	2	10.45
11G	Ground Vise	7	2	26.20
12	Bench-Drill Press Vise	7	9	31.45
13	Drill Press Vise	6	11	26.20
13G	Ground Vise	7	11	62.95
13T	T-Slot Bolts	15	1	7.30
14	Drill Press Vise	6	19	27.25
14G	Ground Vise	7	18	78.70
14H	Crank Handles for #4B, #80B	9	2½	13.60
15	Aluminum Hand Vise	11	½	5.20
15B	Base for 1½" Angle Vise	3	2	6.85
15C	Base for 1½" Angle Vise	3	2	7.30
15M	Base for 1½" Angle Vise	3	2	6.25
18	Bench-Drill Press Vise	7	33	52.45
20	Drill Press Vise	6	6	11.35
22G	Ground Vise	7	6	36.70
23B	Adjustable Angle Vise	4	22	49.30
24B	Adjustable Angle Vise	4	36	62.95
25B	Base for 2½" Angle Vise	3	4	7.90
25C	Base for 2½" Angle Vise	3	2	8.35
25M	Base for 2½" Angle Vise	3	4	8.75
30	Drill Press Vise	6	6	11.45
33	Production Vise	10	29	136.45
40	Heavy Duty Machine Vise	9	34	88.15
40B	Heavy Duty Machine Vise With Base	9	45	109.95
44	Production Vise	10	41	199.45
45P	Heavy Duty All Angle Surface Plate	27	52	283.45
45V	Heavy Duty All Angle Vise	4	48	304.45
46	Rotary Table	15	16	104.95
52	Plier Wrench	11	½	5.20
55	All Angle Vise	5	18	54.95
60	Heavy Duty Machine Vise	9	80	125.95
60B	Heavy Duty Machine Vise With Base	9	103	167.95
66	Production Vise	10	100	293.95
80	Heavy Duty Machine Vise	9	150	209.95
80B	Heavy Duty Machine Vise With Base	9	190	262.45
81	Rotary Table	15	40	152.20
82	Rotary Table	15	38	110.20
83	Rotary Table	14	40	136.45
84	Rotary Table	15	45	167.95
86	Rotary Table	15	40	125.95
88	Production Vise	10	167	419.95
90-10	Slide Machine Table	27	34	125.95
90-12	Slide Machine Table	27	40	136.45
91-10	Slide Machine Table	27	37	146.95
91-12	Slide Machine Table	27	40	157.45
92-10	Slide Machine Table	27	38	178.45
92-12	Slide Machine Table	27	45	188.95
93-10	Slide Machine Table	27	43	199.45
93-12	Slide Machine Table	27	47	209.95
102	Rotary Table	17	50	293.95
103	Rotary Table	17	43	188.95
104	Rotary Table	16	44	241.45
106	Rotary Table	17	73	398.95
120	Drill Press Vise	7	3	12.55

Continued on following page

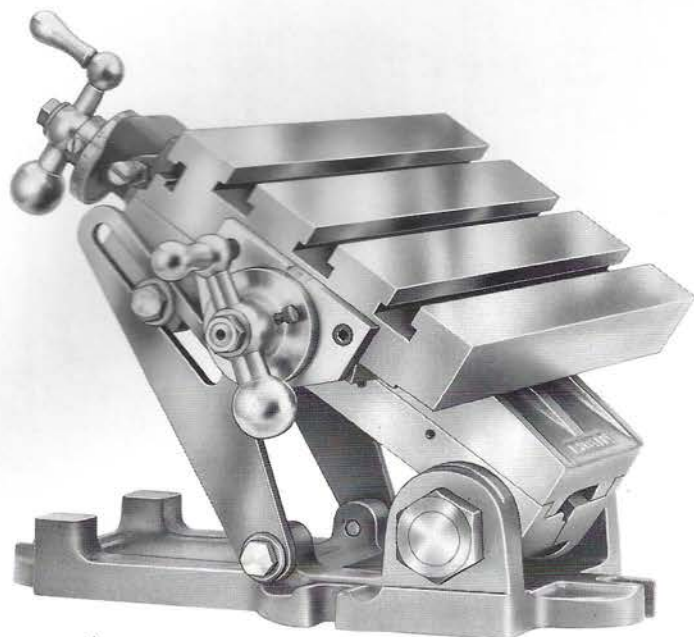
MODEL NO.	DESCRIPTION	PAGE NO.	WEIGHT LBS.	NET PRICE EA.
121	Air Vise	11	4	\$ 26.20
150V	Milling Attachment	13	4 1/2	41.95
182	Rotary Table	19	50	167.95
183	Rotary Table	19	52	188.95
184	Rotary Table	19	54	209.95
186	Rotary Table	18	45	157.45
190-14	Slide Machine Table	28	92	414.75
190-16	Slide Machine Table	28	99	446.25
191-14	Slide Machine Table	31	121	624.75
191-16	Slide Machine Table	31	129	656.25
192-14	Slide Machine Table	28	140	493.50
192-16	Slide Machine Table	28	149	525.00
193-14	Slide Machine Table	31	170	703.50
193-16	Slide Machine Table	31	190	735.00
246	Adjustable Angle Plate	12	9	18.85
246B	Adjustable Angle Plate	12	12	26.15
249	Adjustable Angle Plate	12	29	41.95
249B	Adjustable Angle Plate	12	35	49.30
250P	Milling Attachment	13	12	45.10
250V	Milling Attachment	13	12	52.45
300	Air Vise	11	39	76.95
310	Machine Vise	8	11	41.95
320	Drill Press Vise	7	8	16.75
321	Air Vise	11	8	52.45
325	"Low-Boy" Swivel Machine Vise	8	10	39.85
325B	"Low-Boy" Swivel Machine Vise	8	14	47.20
346	Indexing Attachment	15	2	52.45
400P	Milling Attachment	13	36	57.70
400V	Milling Attachment	13	36	62.95
404	Production Vise	10	33	136.45
410	Machine Vise	8	23	52.45
425	"Low-Boy" Swivel Machine Vise	8	18	48.25
425B	"Low-Boy" Swivel Machine Vise	8	24	57.70
610	Machine Vise	8	50	83.95
800	Milling Attachment	13	35	104.95
862	Rotary Table	16	42	136.45
PD 862	Power Driven Rotary Table	25	66	850.00
900	Base	12	3	11.95
901	Vise & Base	12	4	19.95
902	Vise & Base	12	4	19.95
903	Vise	12	1 1/2	11.30
904	Vise	12	1 1/2	11.30
909	Plate, Plain	12	10	17.55
910	Plate, Tapped	12	10	17.55
911	Clamp	12	3	7.65
912	Clamp & Base	12	6	19.60
913 or 914	Clamp, Base & Vise	12	7	27.60
915	Board Holder	12	1	16.45
916	10" Bar & Holder	12	3/4	10.40
917	Plate, Base & Vise	12	15	40.80
918	Plate, Base & Vise	12	15	40.80
919	Base & Holder	12	5	28.40
920	Plate, Base & Holder	12	15	45.95
1062	Rotary Table	18	53	178.45
PD 1062	Power Driven Rotary Table	25	93	900.00
1262	Rotary Table	21	175	419.95
PD 1262	Power Driven Rotary Table	26	216	1120.00
1281	Rotary Table	20	164	577.50
1283	Rotary Table	20	194	834.75
1284	Rotary Table	20	229	997.50
1346	Indexing Attachment	15	5	115.45
1562	Rotary Table	22	192	472.45
PD 1562	Power Driven Rotary Table	26	227	1170.00
1581	Rotary Table	22	215	787.50
1583	Rotary Table	23	210	1044.75
1584	Rotary Table	24	265	1207.50
8315-8	Rotary Table	16	62	262.45
8315-10	Rotary Table	16	70	293.95

PALMGREN
MACHINE VISES
AND TABLES

DIVISION OF
CHICAGO TOOL
AND ENGINEERING
COMPANY

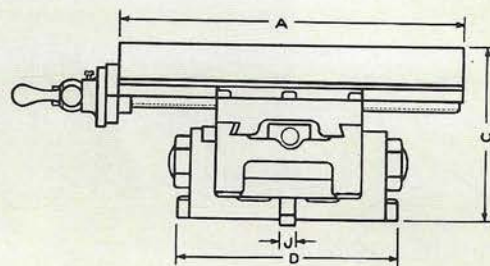
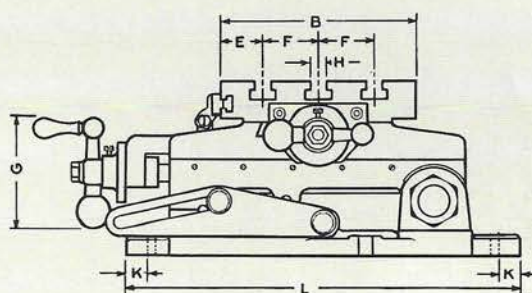
8383 SOUTH
CHICAGO AVENUE
CHICAGO, ILL. 60617
312/721-9675-6-7

14" AND 16" SLIDE TABLES | PALMGREN



No. 193-14, No. 193-16 Adjustable Angle Dual Cross Slide Machine Table

With this combination you have "X" and "Y" axis positioning plus 0°-90° angle adjustment.



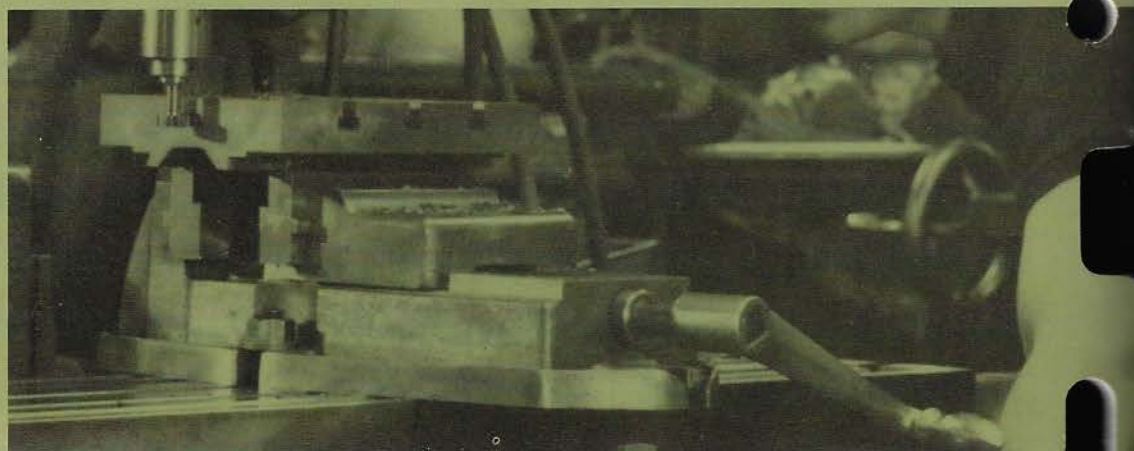
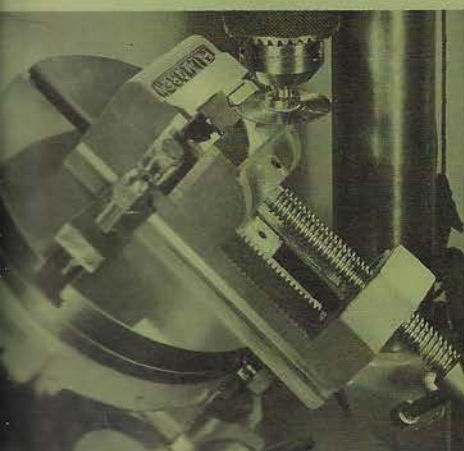
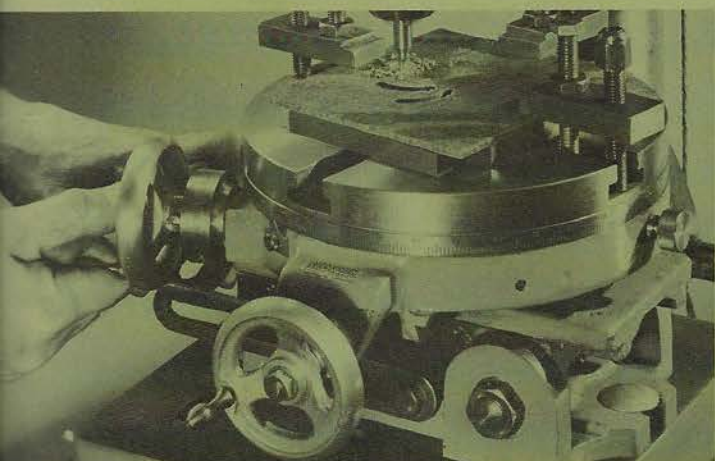
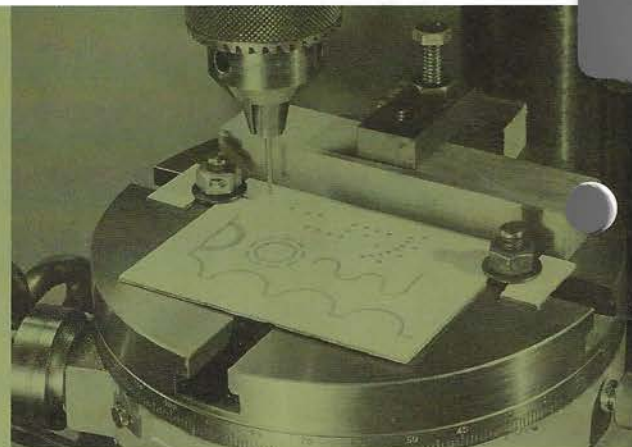
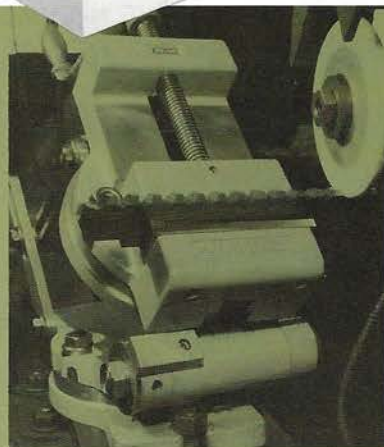
Model No.	A	B	C	D	E	F	G	H	J	K	L	Travel	Weight Lbs.
193-14	14	8	7 $\frac{1}{8}$	9	1 $\frac{1}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$	$\frac{3}{8}$	1 $\frac{1}{16}$	$\frac{7}{8}$	16	8" x 8"	170
193-16	16	8	7 $\frac{1}{8}$	9	1 $\frac{1}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{2}$	$\frac{3}{8}$	1 $\frac{1}{16}$	$\frac{7}{8}$	16	8" x 10"	190



No. 191-14, No. 191-16 Adjustable Angle Single Slide Machine Tables

In addition to "Y" axis positioning, these tables provide 0°-90° angle adjustment.

Model No.	Table Size	Travel	Keyways	T-Slots	Angle Base Graduation	Overall Height	Weight Lbs.
191-14	14" x 8"	8"	1 $\frac{1}{16}$ "	$\frac{5}{8}$ " x 1"	0°-90°	6"	115
191-16	16" x 8"	10"	1 $\frac{1}{16}$ "	$\frac{5}{8}$ " x 1"	0°-90°	6"	130



PALMGREN MACHINE VISES AND TABLES

DIVISION OF

CHICAGO TOOL AND ENGINEERING CO. 8383 SOUTH CHICAGO AVENUE, CHICAGO, ILLINOIS 60617

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