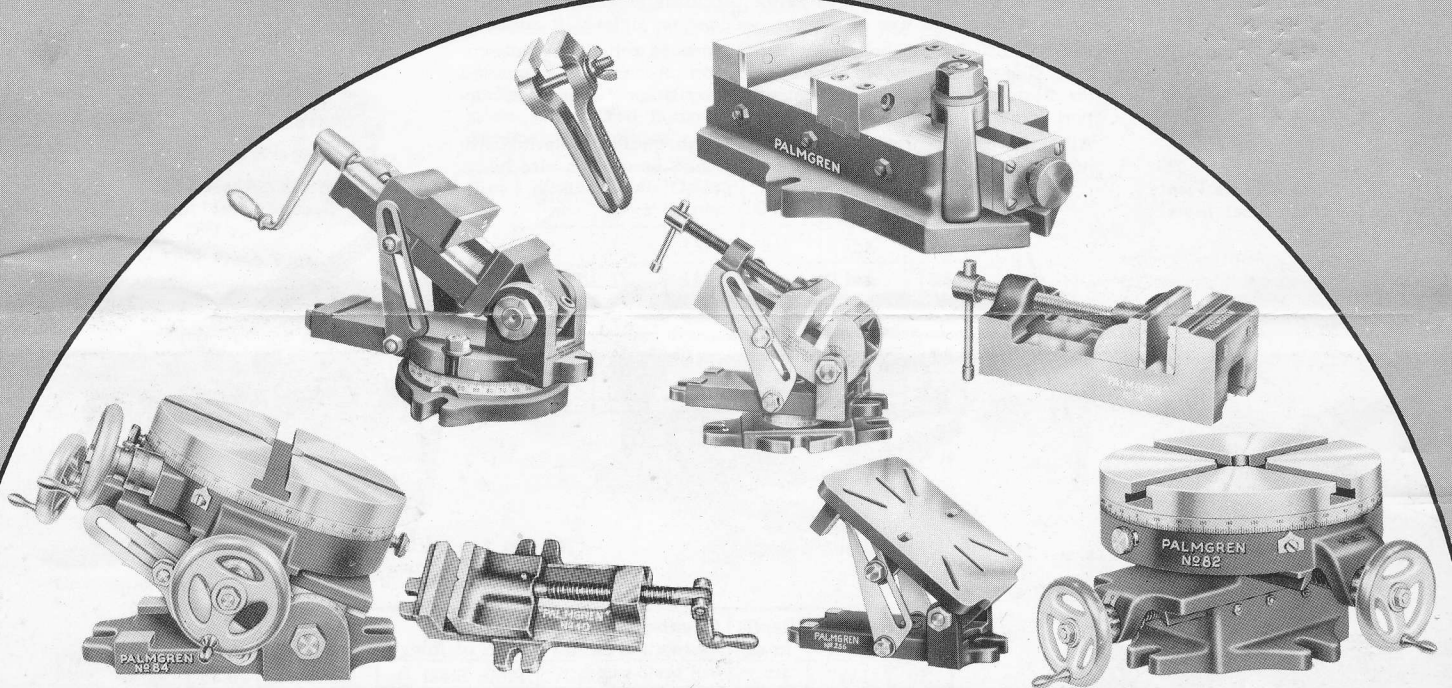
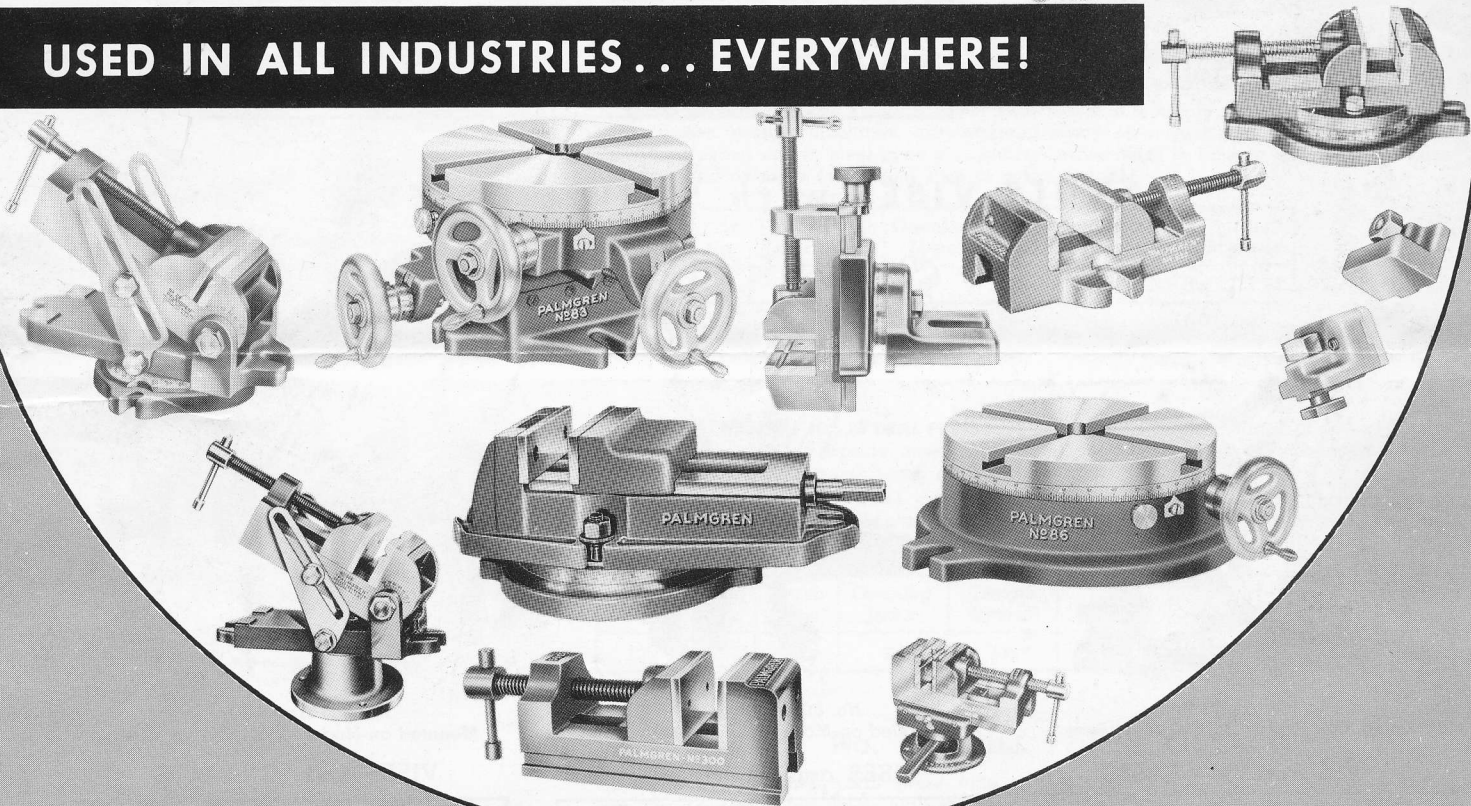


PALMGREN

PRODUCTS



USED IN ALL INDUSTRIES... EVERYWHERE!



for Production-Tooling and Maintenance

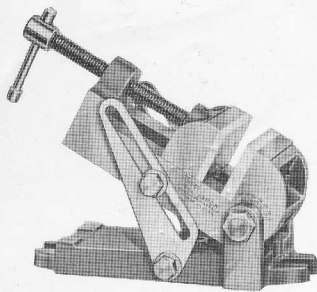
PALMGREN

ANGLE VISES

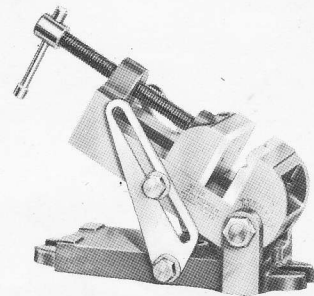
for Production-Tooling Maintenance

Vises shown on this page are essentially for Drill Press, Milling Machine, Grinder and Bench Work. Accurate set-ups are quickly made without the use of clamps, wedges or make-shift methods. PALMGREN Angle Vises can be adjusted to full 90 degrees or used like ordinary vises when horizontal. Accurately graduated for all angles and ready for instant use by locking adjustable support screws.

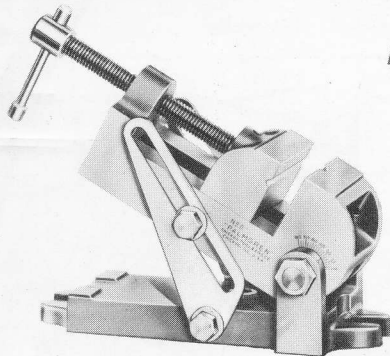
All parts are accurately machined of high quality materials. Adjusting screw has fine pitch thread and long bearing in vise body.



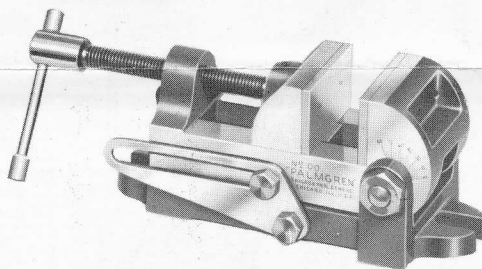
No. X0 Angle Vise
Plain Steel Jaws



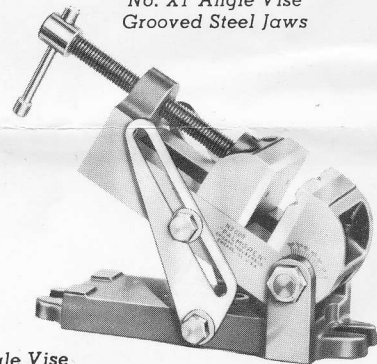
No. X1 Angle Vise
Grooved Steel Jaws



No. 0 Angle Vise
Cast Grooved Jaws



No. 00 Angle Vise
Plain Steel Jaws



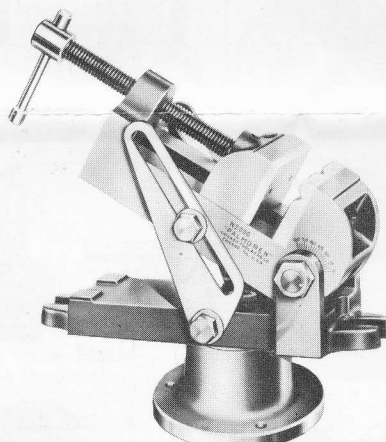
No. 000 Angle Vise
Grooved Steel Jaws

Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Overall Length	Kind of Jaws	Weight Vise Only	Net Price
X0	1 1/2"	1"	1 1/2"	6 5/8"	Plain Steel	4 lbs.	9.85
X1	1 1/2"	1"	1 1/2"	6 5/8"	Grooved Steel	4 lbs.	9.95
0	2 1/2"	1 1/2"	2 1/2"	9"	Grooved	10 lbs.	11.75
00	2 1/2"	1 1/2"	2 1/2"	8 7/8"	Plain Steel	10 lbs.	11.85
000	2 1/2"	1 1/2"	2 1/2"	9"	Grooved Steel	10 lbs.	11.95

ANGLE VISES with SWIVEL BASES



No. 000 Angle Vise
Mounted on Model 25M Swivel Base



No. 000 Angle Vise
Mounted on Model 25B Bench Base



No. 000 Angle Vise
Mounted on Model 25C Clamp Base

VICES and "M" BASES

Vise No.	Base No.	Price Vise and Base	Price Base Only
X0	15M	13.80	3.95
X1	15M	13.90	3.95
0	25M	16.70	4.95
00	25M	16.80	4.95
000	25M	16.90	4.95

VICES and "B" BASES

Vise No.	Base No.	Price Vise and Base	Price Base Only
X0	15B	13.80	3.95
X1	15B	13.90	3.95
0	25B	16.70	4.95
00	25B	16.80	4.95
000	25B	16.90	4.95

VICES and "C" BASES

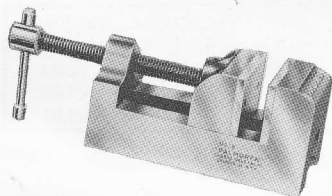
Vise No.	Base No.	Price Vise and Base	Price Base Only
X0	15C	13.80	3.95
X1	15C	13.90	3.95
0	25C	16.70	4.95
00	25C	16.80	4.95
000	25C	16.90	4.95

All Prices are f.o.b. our Plant.

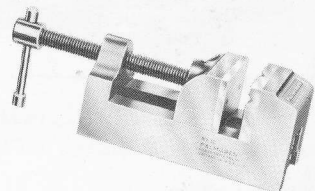
PALMGREN

DRILL PRESS VISES

These handy Drill Press Vises are designed for small articles or pieces when drilling. Ideal for toolrooms, machine shops, experimental rooms, school shops, home or repair shops. They are accurately machined from the best castings. The adjusting screws are made of steel with a fine pitch thread and long bearing in vise body. Made in several sizes, they are equipped with steel jaws, plain or grooved horizontally and vertically for holding round pieces.

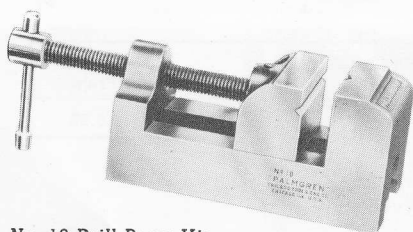


No. 5 Drill Press Vise
Plain Steel Jaws

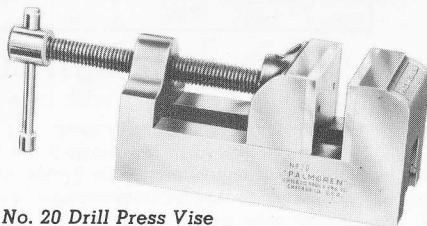


No. 6 Drill Press Vise
Grooved Steel Jaws

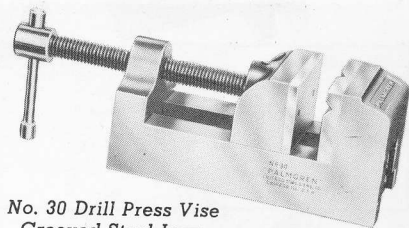
Vise No.	Width Jaws	Depth Jaws	Op'ing Jaws	Lgth. Ov'all	Weight	Net Price
5	1½"	1"	1½"	5½"	2 lbs.	7.85
6	1½"	1"	1½"	5½"	2 lbs.	7.95
10	2 ⁷ / ₁₆ "	1½"	2½"	7½"	6 lbs.	8.75
20	2 ⁷ / ₁₆ "	1½"	2½"	7½"	6 lbs.	8.85
30	2 ⁷ / ₁₆ "	1½"	2½"	7¼"	6 lbs.	8.95



No. 10 Drill Press Vise
Cast Grooved Jaws



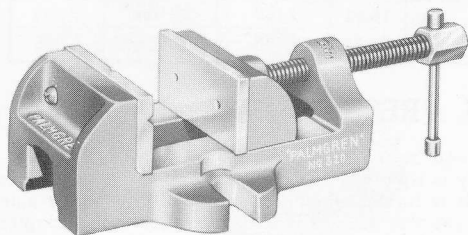
No. 20 Drill Press Vise
Plain Steel Jaws



No. 30 Drill Press Vise
Grooved Steel Jaws

No. 320 DRILL PRESS VISE

A handy general purpose Vise that every shop needs. It is highly recommended for use on drill presses, milling machines, grinders and many other machines. It has strong fine thread adjusting screw, steel jaws grooved for convenience in holding round pieces. Lugs are provided on sides for bolting Vise to machine table.

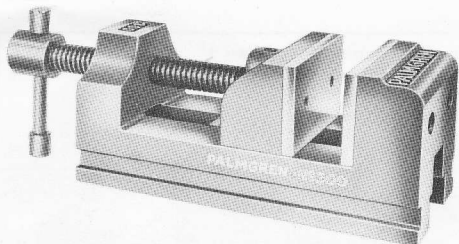


Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Weight	Net Price
320	3"	1½"	3"	8"	2¾"	8 lbs.	11.95

No. 13 DRILL PRESS VISE

The **PALMGREN No. 13 DRILL PRESS VISE** is machined on all sides and may be turned on either side, end, or upside down for special operations. It is recommended for use on drill presses, milling machines, grinders and other machines.

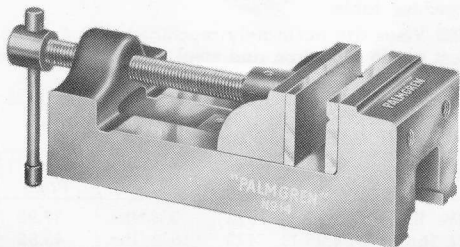
This Vise has removable steel jaw plates and a 5/8" Acme thread adjusting screw. Machined slots are provided on either side on the Vise to aid in clamping Vise to machine table. Accurately machined of semi-steel grey iron castings.



Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Width Overall	Height Overall	Net Weight	Net Price
13	3"	1¾"	3"	7½"	3"	3"	11 lbs.	16.95

No. 14 DRILL PRESS VISE

A medium size, sturdy drill press vise with 4" jaw width, opening to full 4 inches, the No. 14 vise is precision built for heavy duty service, such as Milling, Drilling, and Grinding. It is accurately machined, and the Acme thread adjusting screw has long bearing in body. Removable ground steel jaw plates are provided, one of which is V-grooved horizontally and vertically.

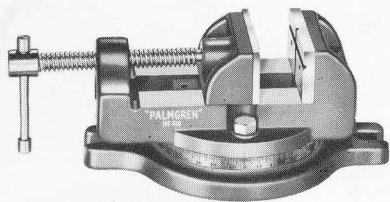


Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Weight	Net Price
14	4"	1¾"	4"	10¾"	3½"	18 lbs	21.95

PALMGREN

MACHINE VISES

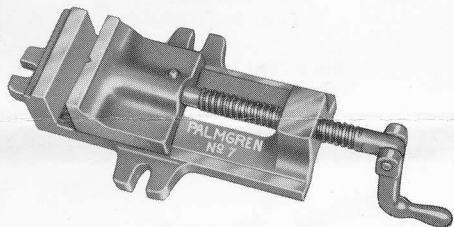
These Machine Vises are accurately machined and constructed for hard usage. They are made of the best materials obtainable and are guaranteed against defective material and workmanship. These Vises have ground steel jaws — one jaw has vertical and horizontal grooves for convenience in holding round pieces — one plain jaw. Designed for use on Milling Machines, Grinders, Drill Presses and Tapping Machines. Vises have acme thread adjusting screws. Furnished complete with 360° graduated Swivel Base. With two 5/8" keys and screws for base to fit machine table slots.



Vise No.	Width Jaws	Opening Jaws	Depth Jaws	Length Overall	Height Overall	Net Weight With Base	Net Price With Base
310	3"	3"	1 1/2"	9"	3 3/4"	11 lbs.	39.95
410	4"	4"	1 3/4"	11 3/4"	4 5/8"	23 lbs.	49.95
610	6"	6"	2"	14 1/2"	5 3/4"	50 lbs.	69.95

UTILITY VISE

This is a sturdy, compact Vise, designed for easy setups which would ordinarily require costly jigs and fixtures. Milling, drilling and grinding are but a few jobs that can be done with this Vise. The movable jaw is grooved vertically for holding work. The Vise is low-built — only 2 1/2" overall height. The heavy 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	Opening Jaws	Depth Jaws	Weight	Net Price
7	3 1/2"	4"	1 3/4"	13 lbs.	16.95

ADJUSTABLE ANGLE PLATES with or without Swivel Bases

Angle Plates are extremely useful for work that cannot be held conveniently in a Vise. Slots are provided in the Angle Plate top for holding work for drilling, milling, grinding, layout, and inspection. Angle Plates can be used with or without Swivel Base. The Angle Plate is graduated for angle setups and the swivel Base is graduated full 360°

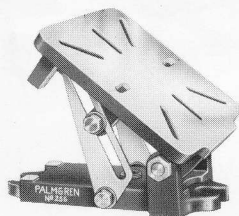


Plate Only

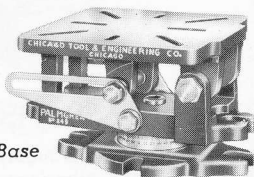
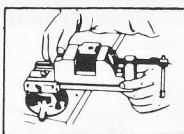
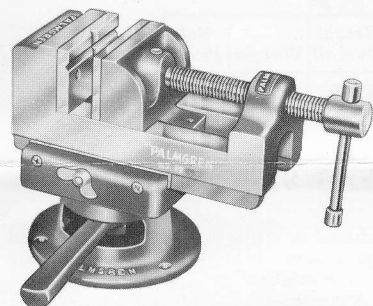


Plate with Base

Plate No.	Top Size	Base Length	Height Plate and Base	Plate Only		Plate No.	Plate with Base	
				Weight	Net Price		Weight	Net Price
246	6" x 6"	8"	4 5/8"	9 lbs.	16.95	246B	12 lbs.	21.95
249	9" x 9"	12 1/2"	6 3/4"	29 lbs.	34.95	249B	35 lbs.	42.95

BENCH-DRILL PRESS VISES

Here's a handy dual purpose vise that can be used on bench or drill press without removing work from the vise. The vise body is square all around and can be used on either side, on end, or in horizontal position. It is furnished with dovetail slots on either side which slide into the bench base adapter. The vise may be locked in position in the adapter by tightening thumb screw which forces a steel gib against the vise dovetail. The vise and adapter assembly can be rotated and locked in any position on the bench swivel base by using the cam lever which is easily locked and released. The vise has 2 1/2" jaws, 1" deep with removable steel jaw plates, one of which is grooved for holding round or irregular shaped pieces.



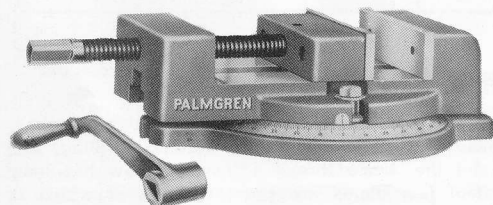
Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Kind of Jaws	Weight	Net Price
12	2 1/2"	1"	2 1/2"	Plain-Grooved	11 lbs.	19.95
18	4"	1 3/4"	4"	Plain-Grooved	29 lbs.	29.95

SWIVEL MACHINE VISES

THE NEW PALMGREN "LOW-BOY" No. 325B AND No. 425B VISES are designed for Milling, Drilling, Shaping, Grinding and other operations which require a rugged holding device.

These Palmgren "Low-Boy" Vises provide the answer to problem jobs in which overall height is critical. The Vises can be used with or without Swivel Bases. Vise body as well as base bolt slots for mounting to machine table.

The New Palmgren No. 325B and No. 425B Vises are accurately machined and built for long service. They are made of the highest grade gray iron and steel, and are equipped with Acme thread adjusting screws.

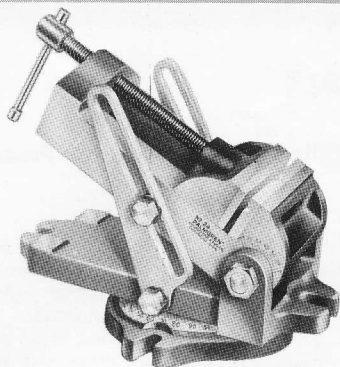


Vise No.	Width Jaws	Opening Jaws	Depth Jaws	VISE WITH SWIVEL BASE		Vise No.	VISE ONLY	
				Weight	Net Price		Weight	Net Price
325B	3 1/4"	3"	1 1/8"	13 1/4 lbs.	44.95	325	9 1/2 lbs.	37.95
425B	4 1/2"	4"	1 1/4"	21 lbs.	54.95	425	15 1/2 lbs.	45.95

PALMGREN

PRODUCTION ANGLE VISES

A rugged Angle Vise for quick, accurate angle setups for milling, drilling, grinding and also for checking and laying out work. Graduated and quickly adjusted to any angle and stays locked under the most severe service. This Vise is extremely useful for toolroom or production work — eliminating hours in making jigs and fixtures. It can be used as an ordinary Drill Press or Milling Machine Vise when lowered to horizontal position.

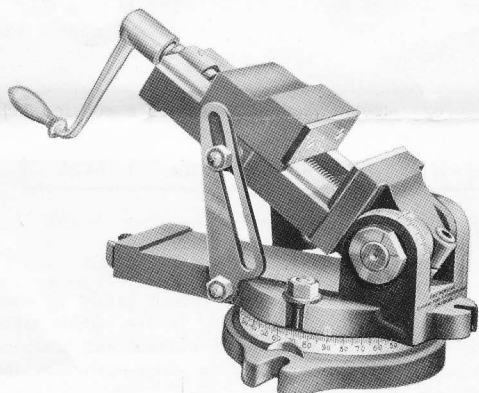


Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Length Overall	Height Overall	Weight With Base	Net Price
23B	3"	1 3/4"	3"	12"	5 1/4"	22 lbs.	32.95
24B	4"	1 3/4"	4"	12 3/4"	5 5/8"	36 lbs.	39.95

HEAVY DUTY ANGLE VISES

Palmgren 2B, 3B and 4B Vises are made for Milling, Drilling, Grinding, and Laying out and Checking Work.

The jaw opening equals or exceeds the jaw width, and the removable jaw plates are machined and ground. The extra heavy Acme thread adjusting screw is provided with a removable screw bushing. Each Vise can be used with or without the swivel base. In the lowered position the Vise can be used as an ordinary machine vise. The vise base is furnished with 4 bolt lugs and two 11/16" keyways with keys for machine mounting. Two bolt lugs with keyways are provided on the swivel base.



Vise No.	Width Jaws	Opening Jaws	Depth Jaws	Vise with Swivel Base		Vise No.	Vise Only	
				Weight	Net Price		Weight	Net Price
2B	4"	4"	1 1/2"	59 lbs.	134.95	2	49 lbs.	110.95
3B	6"	6"	2"	130 lbs.	229.95	3	115 lbs.	199.95
4B	8"	8"	2 1/4"	231 lbs.	279.95	4	190 lbs.	239.95

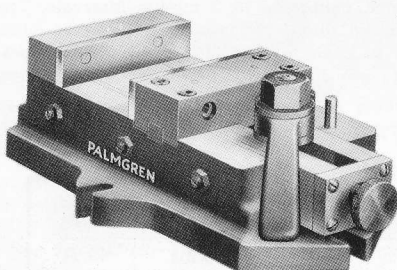
PRODUCTION VISES

Extremely rugged vise designed for fast production work. Has adjustable cam locking lever which locks with speed—and even surface pressure. Movable jaw is quickly adjusted to various size pieces.

Has adjustable wear plates to take up side wear. Lugs are provided on both sides and ends for secure bolting to machine table.

Plain steel jaws are furnished, but customer usually makes special jaws to suit their own requirements for irregular size and shaped pieces.

All movable parts are hardened to give long service. With two 11/16" keys and screws for base to fit machine table slots. Dimensional print will be supplied upon request.

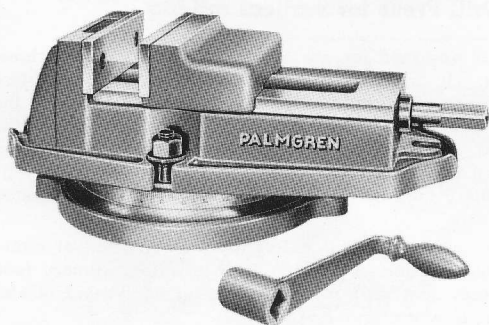


Vise No.	Width Jaws	Depth Jaws	Opening Jaws	Weight	Net Price
33	3"	1 1/4"	4"	29 lbs.	79.95
44	4"	1 3/8"	4 1/2"	41 lbs.	99.95
66	6"	1 3/4"	6 1/2"	98 lbs.	174.50
88	8"	2"	8 1/2"	167 lbs.	269.00

SWIVEL MACHINE VISES

Palmgren 40B, 60B, and 80B Heavy Duty Vises are built for production, tooling, and maintenance. The jaw opening of each vise equals or exceeds the jaw width; removable steel jaw plates are machined and ground.

The flanged base on each vise provides a deep coolant trough which drains at front and back. Four bolt lugs, as well as a keyway and keys, are furnished on the vise base. The swivel base is equipped with 2 bolt lugs, as well as a keyway and keys. The Acme thread adjusting screw is equipped with replaceable screw bushing and collar. Each vise may be used with or without the 360° graduated swivel base. An adjustable brass pointer is located on the vise base to provide for quick, accurate degree setting.

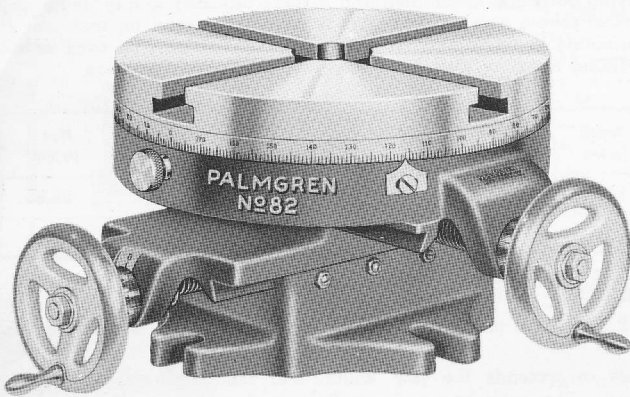


Vise No.	Width Jaws	Opening Jaws	Depth Jaws	VISE WITH SWIVEL BASE		Vise No.	VISE ONLY	
				Weight	Net Price		Weight	Net Price
40B	4"	4"	1 1/2"	44 lbs.	89.95	40	34 lbs.	69.95
60B	6"	6"	2"	101 lbs.	119.95	60	77 lbs.	89.95
80B	8"	8"	2 1/4"	165 lbs.	199.95	80	140 lbs.	169.95

No. 6H Crank Handle for 4" Vise (extra) Wt. 1 1/2 lbs.....	4.95
No. 10H Crank Handle for 6" Vise (extra) Wt. 2 lbs.....	7.10
No. 14H Crank Handle for 8" Vise (extra) Wt. 2 1/2 lbs.....	9.95

PALMGREN

No. 82 DUAL CROSS SLIDE MILLING TABLE



Designed for use on Milling Machines, Drill Presses, Grinders, and Shapers

The No. 82 Table has an 8" diameter top that can be turned freely 360° and secured in any position by tightening two lock clamps with knurled thumb screws. Center of Table top is bored to depth of T-slot for 1-5/8" locating plug. The Table top is also graduated 360 T-slots are 5/8" x 1" x 5/16" for keys. Both dovetailed cross slides are furnished with adjustable gibs to compensate for wear, and assure ease of travel to suit operation and material. Cross slide screws are 1/2" Acme thread with take-up adjustments for backlash. Dials are 1" diameter, graduated in thousandths. Cross slides are at right angles and maximum travel of each is 4-1/4". The base is 6-1/2" x 7-1/2" and provides long bearing for the dovetailed slide. The base has 5/8" keyways and keys for machine slot mounting.

No.	Table Diameter	Height Overall	Top Graduations	Base Diameter	Base Bolt Centers	Dials	Base Keyway	Table T-Slots	Weight	Net Price
82	8"	5 1/8"	360°	6 1/2" x 7 1/2"	5 1/2" x 6 1/2"	1"	5/8"	5/8"	31 lbs.	64.95

No. 86 ROTARY TABLE



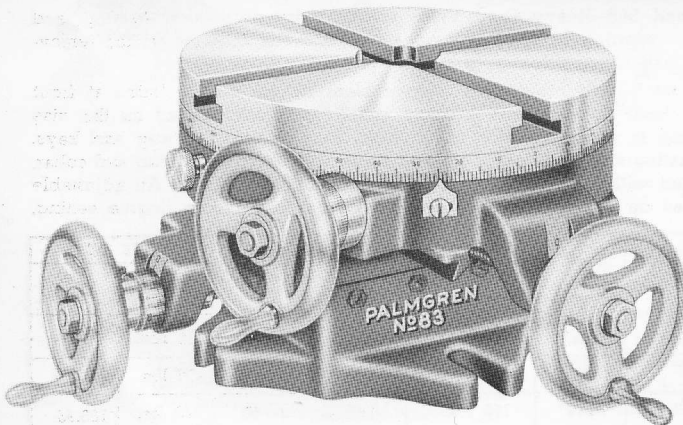
The No. 86 Table is ideal on jobs in which overall height of work is critical. Many operations require a vertical fixture, which takes up too much of the limited distance between spindle and machine table. Only 3-1/4" high, the No. 86 Rotary Table provides the answer to these problem jobs.

The table diameter is 8", and two 5/8" x 1" x 5/16" T-slots cross at center to divide Table surface into quadrants. The center of top is bored 1-5/8" diameter to depth of T-slot for centering plug. The Table top is graduated 360°, and 'worm-gear ratio is 40:1 with positive rotary feed. The worm and gear may be adjusted for wear. The rotary dial is 1-3/4" diameter, calibrated in 3 minute intervals. Two hold down clamps with knurled thumb screws are located at either side of table to lock the top in position after indexing. Base keyway is 5/8" and keys and screws are provided for machine-slot mounting.

The No. 346 Palmgren Indexing Attachment may be quickly attached to the rotary feed shaft. The hand wheel and rotary dial are easily removed.

No.	Table Diameter	Height Overall	Top Graduations	Base Diameters	Base Bolt Centers	Dials	Gear Ratio	Table T-Slots	Base Keyway	Weight	Net Price
86	8"	3 1/4"	360°	9 1/4"	10 1/2"	1 3/4"	40-1	5/8"	5/8"	28 lbs.	69.95

No. 83 ROTARY TABLE WITH DUAL CROSS SLIDES



Two Cross Feed Slides and Rotary Feed
Converts your Drill Press for vertical milling

The No. 83 Table is designed for use on drill press, milling machine, grinder, or shaper. It provides compound slides as well as rotary feed in one compact unit, and is actually a combination of the Palmgren No. 82 and No. 86 Tables. Cross feed screws are 1/2" Acme thread, and provide transverse and longitudinal travel of 4-1/4". Cross feed dials are 1" diameter, graduated in thousandths of an inch. The rotary feed dial is 1-3/4" diameter, and is calibrated in 3 minute intervals.

Hold down clamps with knurled thumb screws are located at either side of Table to lock the top in position after indexing. Rotary feed is positive and worm gear ratio is 40:1. Take-up adjustment is also provided for wear in worm and gear.

The base is 6-1/2" x 7-1/2" and provides a long bearing for the dovetail slide. Each slide is furnished with adjustable gibs.

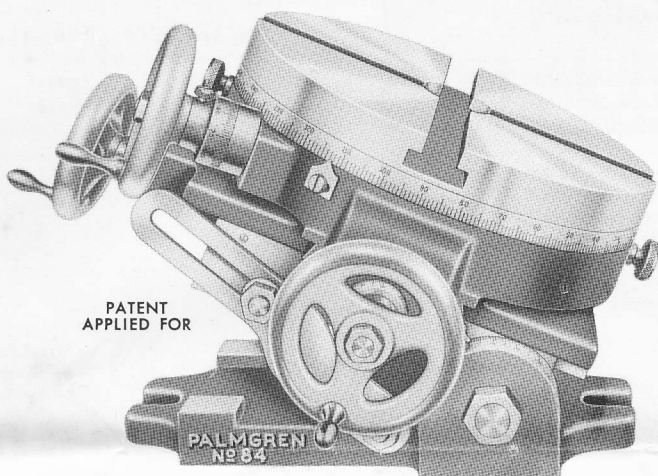
The No. 346 Palmgren Indexing Attachment can be quickly attached to the rotary feed shaft. The hand wheel and rotary dial are easily removed.

No.	Table Diameter	Height Overall	Top Graduations	Base Diameter	Base Bolt Centers	Dials	Gear Ratio	Table T-Slots	Base Keyway	Weight	Net Price
83	8"	5 1/8"	360°	6 1/2" x 7 1/2"	5 1/2" x 6 1/2"	1" 1 3/4"	40-1	5/8"	5/8"	35 lbs.	79.95

PALMGREN

No. 84 TILTING INDEXING AND ROTARY TABLE

Combines Rotary Feed and Two Cross Feeds in One Unit together with a 90° Angle Tilting Feature



PATENT APPLIED FOR

PALMGREN No. 84

The No. 84 Table is an extremely versatile tool that incorporates the rotary and dual cross feeds of the No. 83 with the new Palmgren 0° to 90° adjustable tilting feature. This universal Table is ideal for all angle Milling, Grinding, Shaping, Tapping, and Drilling operations, as well as layout work.

Easy to read graduations are marked on the hinged base. The Table may be locked securely and accurately in any position.

The Table top is 8" diameter and two 5/8" x 1" x 5/16" T-slots cross at center to divide table surface into quadrants. The center is bored 1-5/8" diameter to depth of T-slot for centering plug.

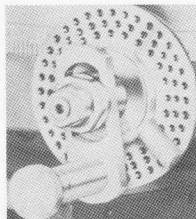
Rotary feed is positive and worm gear ratio is 40:1. The worm and gear may be adjusted for wear. The rotary dial is 1-3/4" diameter, calibrated in 3 minute intervals. Top slide is furnished with two hold down clamps and knurled thumb screws to lock the top in position after indexing.

The base is 5" wide and 9-3/4" long to provide firm bearing for dovetailed slide.

The No. 346 Palmgren Indexing Attachment can be quickly attached to the rotary feed shaft. The hand wheel and rotary dial are easily removed.

No.	Table Diameter	Height Overall	Top Graduations	Length Base Dia.	Width Base Dia.	Length Base Bolt Centers	Dials	Gear Ratio	Table T-Slots	Base Keyway	Weight	Net Price
84	8"	5-11/16"	360°	9 3/4"	5"	8"	1"	40-1	5/8"	5/8"	41 lbs.	139.50

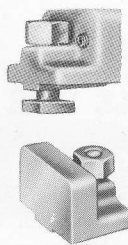
No. 346 INDEXING ATTACHMENT



For use with Nos. 83, 84 and 86 TABLES, merely remove the rotary hand wheel and attach the Indexing Attachment. Furnished complete with two 2 5/8" diameter plates, each plate having 3 sets of holes which gives a wide range of divisions. No. 1 Plate has 36, 30 and 24 holes. No. 2 Plate has 40, 35 and 25 holes.

Complete including plates.....\$39.95

No. 8 VISE JAW SET



Convenient Jaw Set for holding certain types of work.

1 adjustable and 1 fixed jaw, complete with "T" slot bolts, washers and nuts.

Price.....\$6.95 per set

No. 13 T SLOT BOLTS



Each set consists of four T-slot Bolts complete with nuts and washers. Specify size required.

1/2—13 x 1 1/2"
1/2—13 x 2"

Price...\$5.95 per set

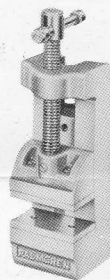
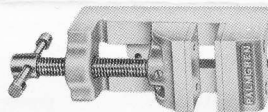
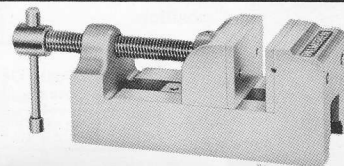
No. 11 and No. 22 PRECISION GRINDING VISES

PALMGREN grinding 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.

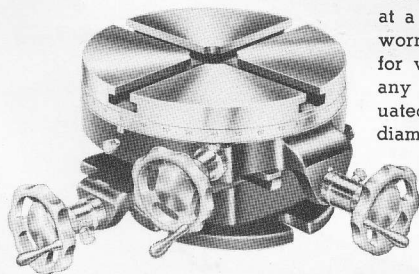
Both are precision ground to .0005", and are made of high grade grey iron. The ground steel jaw plates are removable. Adjusting screws are steel, with fine pitch thread and long bearing in vise body.

No. 11 Saw Width 1 1/2" Jaw Opens 1 1/2".....\$24.95

No. 22 Saw Width 2 1/2" Jaw Opens 2 1/2".....\$34.95



No. 381 ROTARY TABLE

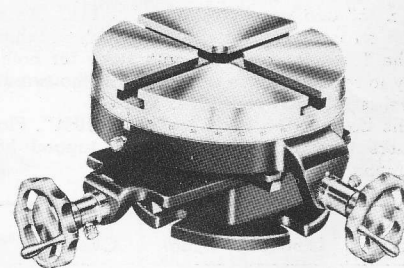


Two cross slides and rotary feed

The No. 381 Palmgren Rotary and Cross Slide Milling Table has the universal features of the No. 83 Table, but at a fraction of the cost. Rotary feed is positive with 40:1 worm gear ratio. The worm and gear may be adjusted for wear. Table top is 8" diameter and may be locked in any position. The rotary dial is 1" diameter and is graduated in 15 minute intervals. Cross slide dials are 1" diameter, graduated in thousandths.

The No. 281 Dual Cross Slide Milling Table is similar to the No. 82 Table, and may be used on Milling Machines, Drill Presses, Grinders, or Shapers. Table does not have a rotary feed, but the 8" diameter top may be turned freely 360° and locked in any position. Maximum travel of each slide is 4-1/4". Dials are 1" diameter, graduated in thousandths.

No. 281 CROSS SLIDE TABLE



Two cross slides

No.	Table Diameter	Height Overall	Base Diameter	Table T-Slots	Base Keyway	Weight	Net Price
381	8"	5"	6 1/4"	5/8"	5/8"	33 lbs.	65.95
281	8"	5"	6 1/4"	5/8"	5/8"	31 lbs.	54.95

PALMGREN

MILLING ATTACHMENTS For Use on Engine Lathes

PALMGREN Milling Attachments for engine lathes will enable you to do hundreds of milling operations on your lathe. You can mill slots, keyways, grooves, flats, squares, hexagons, octagons, external and internal dovetails, sawing, grinding and drilling at any angle.

The Milling Attachment is quickly and easily set up on your Lathe in 10 seconds. To set up on your 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. Vertical adjustment has graduated collar in thousandths. Graduated for vertical rotation to any angle. Fits South Bend, Atlas, Logan, Sheldon, Craftsman, and other Lathes. Thousands now in use by all industries. Vise has grooved jaw, for holding round pieces. Recommended for use on all kinds of material, production work as well as tool-room, laboratory and hobby work.

Just A Few Operations You Can Do On Your Lathe!



T-Slotting



End Milling



External Dovetail

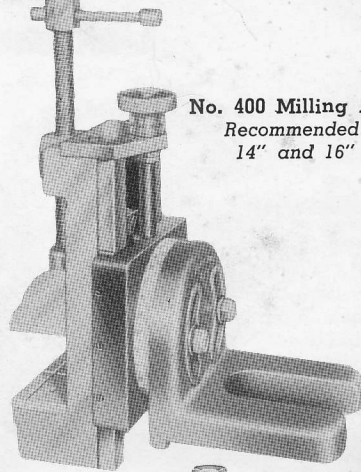


End Mill Angle Cut

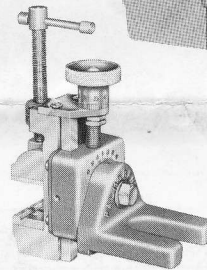


Cutting Keyways

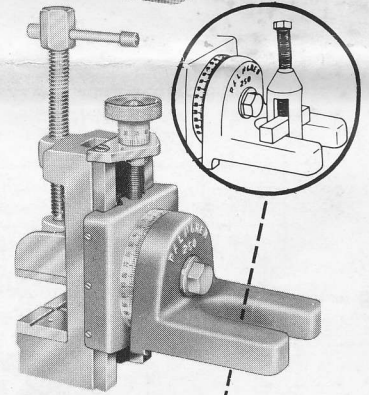
Nos.	Fits Tool Post Up To	Width Jaws	Jaws Open	Depth Jaws	Weight	Net Price
150	1 in. dia.	1½"	1½"	1"	4½ lbs.	21.95
250	1¼ in. dia.	2½"	2½"	1½"	12 lbs.	29.95
400	2 in. dia.	4"	4"	1¾"	34 lbs.	39.95



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



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

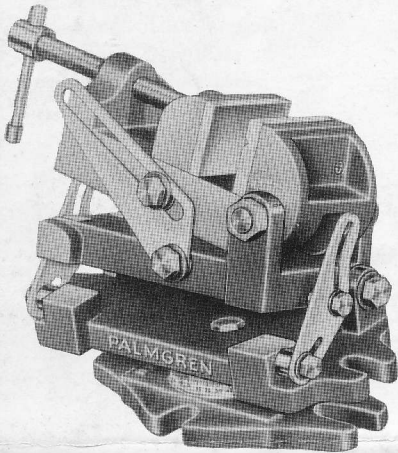


No. 250 Milling Attachment
Recommended for 8" and 10" Lathes.

ALL ANGLE VISE for Grinding, Drilling and Milling

The PALMGREN No. 55 ALL ANGLE VISE provides a quick, easy set-up for any machining operation that requires a simple or compound angle. Difficult angle milling, drilling, grinding, reaming and checking operations may be performed with an absolute minimum of time required for set-up. Work is held rigidly and Vise can be securely locked in any position.

Vise No.	Width Jaws	Opening Jaws	Depth Jaws	Swivel Base Graduations	Top Angle	Bottom Angle	Base Length	Weight	Net Price
55	2½"	2½"	1½"	360°	90°	90°	6"	18 lbs.	34.95

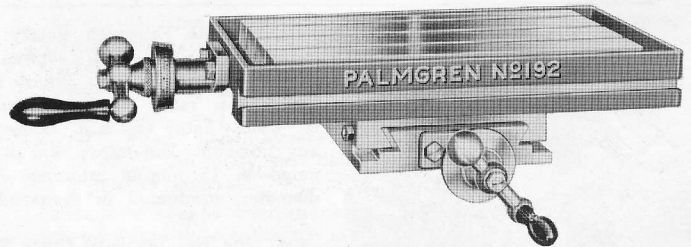


CROSS SLIDE MILLING TABLE

The PALMGREN No. 192 CROSS SLIDE MILLING TABLE is designed for Milling and Grinding. The No. 192 has a center keyway ½" x ⅝" and two "T" slots ⅝" x 1¼". An extra "T" slot is provided on front vertical side of the work table.

The Table is equipped with stops for both cross feeds. Large, easy to read dials are graduated in thousandths. The longitudinal travel is 11", and cross feed is 6½".

The base of the table is 7¾" x 10¾". Flanges located at the corners together with four ⅜-16 tapped holes insure positive mounting.



No.	Table Length	Table Width	Height Overall	Dials	Table Top Keyway	Table T-Slots	Weight	Net Price
192	18"	9⅝"	4½"	2⅞"	⅝"	⅝"	112 lbs.	249.95

CHICAGO TOOL AND ENGINEERING CO.

Manufacturers of PALMGREN PRODUCTS for Over 30 Years

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