

PALMGREN®

a CH Hanson brand

Designed to do more.



Tools and Machines Catalog

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Vises

Palmgren Vises Designed to do more

Since 1919 Palmgren has the reputation of offering the best multi-function workholding and positioning products that deliver exceptional quality and money saving solutions. Palmgren offers you more choices and more value than any other source.

Drilling

We provide you with simple clamping or convert your drill press into a versatile precision machine for milling, routing, cutting slots and keyways, accurate indexing, shaping and forming.

Milling

We offer a wide variety of vises and tables for use in horizontal, vertical, simple or compound angle work on your milling machine or machining center. Our rotary action is smooth with angle adjustments and settings made quickly and accurately.

Grinding and EDM

Palmgren vises and tables are manufactured to reflect the precision and accuracy required in today's grinding and EDM applications.

Layout and Inspection

Everyday our vises and tables are used in a multitude of layout, positioning and inspection applications. The varied uses are limited only by your imagination.

Versatile Motion



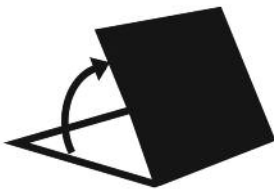
Rotary Motion - Indexing the Workpiece



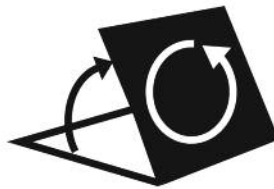
Linear Motion - Left to Right



Cross Slide Motion - Left to Right and Front to Back



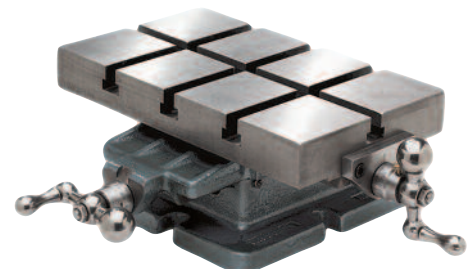
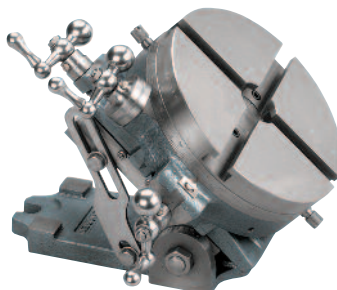
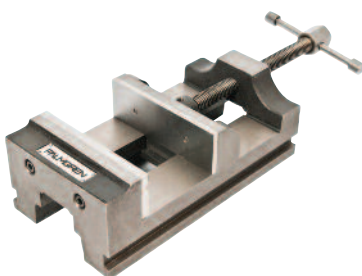
Simple Angular Inclination



Compound Angular Inclination



Clamping

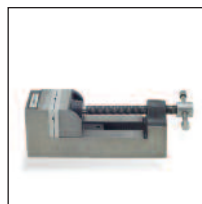
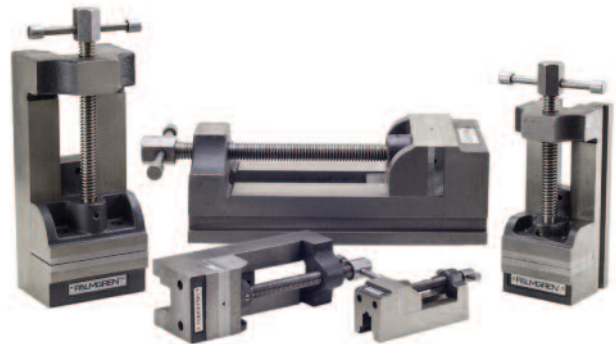


Vises

Traditional Drill Press Vises

These versatile drill press vises set the industry standard. They are what you need for drilling, tapping reaming, spot-facing, counter boring, and countersinking operations. They are available in sizes ranging from 1-1/2" through 6". This original design is used in all industries everywhere.

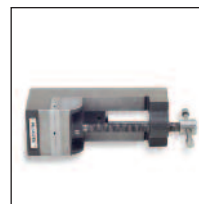
- ◆ Made from 30,000 PSI tensile strength, fine grain cast iron.
- ◆ Replaceable steel jaws
- ◆ Base and bed parallel to 0.001"
- ◆ Models 9612301, 9612401 & 9612602 have grooved bodies for easy mounting
- ◆ Center of base is open for holding work through the body of the vise
- ◆ All vises can be mounted on the base, either side or placed on end for general use
- ◆ LIFETIME GUARANTEE
- ◆ **U.S.A. Vise**



Base/bottom mount



Right side mount



Left side mount



End mount

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
Traditional Drill Press Vise	1-1/2	1-1/2	1	0.002" @ 2000 lb.	Grooved	V-Thread	1-13/16	9612152	6
Traditional Drill Press Vise	2-7/16	3	1-1/2	0.002" @ 2000 lb.	Grooved	V-Thread	2-9/16	9612251	10
Traditional Drill Press Vise	2-7/16	2-1/2	1-1/2	0.002" @ 2000 lb.	Grooved	V-Thread	2-9/16	9612253	30
Traditional Drill Press Vise	3	3	1-3/4	0.002" @ 2000 lb.	Smooth	Acme	3	9612301	13
Traditional Drill Press Vise	4	4	1-3/4	0.002" @ 2000 lb.	Grooved	Acme	3-1/4	9612401	14
Traditional Drill Press Vise	6	6	2	0.002" @ 2000 lb.	Grooved	Acme	4	9612602	16

General Purpose Vises

Handy, general purpose vise that every shop needs. Recommended for use on drill presses, mill/drills, milling machines and any other machine tool where secure mounting is required.

- ◆ Model 9612153 has two 3/8" bolt lugs and model 9612302 has two 9/16" bolt lugs on each side of the vise body for easy mounting
- ◆ Made from 30,000 PSI tensile strength, fine grain cast iron
- ◆ Replaceable steel jaws
- ◆ The replaceable jaw on the fixed side is horizontally and vertically grooved for holding round parts
- ◆ Center of base is open for holding work through body of vise
- ◆ Base and bed parallel to 0.001"
- ◆ LIFETIME GUARANTEE
- ◆ **U.S.A. Vise**



9612153

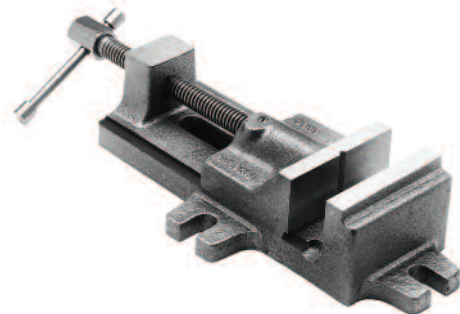
Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
General Purpose Vise	1-3/4	1-1/2	1	0.002" @ 2000 lb.	Grooved	V-Thread	1-15/16	9612153	120
General Purpose Vise	3	3	1-1/2	0.002" @ 2000 lb.	Grooved	V-Thread	2-5/8	9612302	320

Vises

Utility Vise

This sturdy compact vise has an overall height of 2-1/2". This is a general purpose vise recommended for use when a lower profile vise is preferred. It can be mounted on drill presses, milling machines, grinders and machine tools where secure mounting is essential.

- ♦ The base includes three 1/2" bolt lugs for versatility in mounting
- ♦ The moveable jaw is grooved vertically and horizontally for holding round parts
- ♦ Base to top of jaws are parallel to 0.001"
- ♦ Center of base is open for holding work through the body of the vise
- ♦ Made from 30,000 PSI tensile strength, fine grade cast iron
- ♦ LIFETIME GUARANTEE
- ♦ U.S.A. Vise



9612351

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
Utility Vise	3-1/2	4	1-1/2	0.002" @ 2000 lb.	Grooved	Acme	2-1/2	9612351	7

Low Profile Drill Press Vises

Incredibly tough, compact vises with low overall height for tight-clearance applications.

- ♦ Four slots for secure mounting to machine table
- ♦ Base and bed parallel to 0.001"



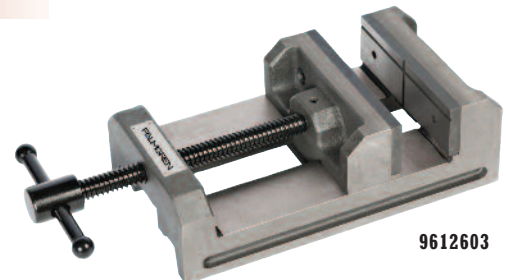
9612601

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Low Profile Vise	3	3	1-1/8	0.002" @ 2000 lb.	9612303	DPL30
Low Profile Vise	4	4	1-3/4	0.002" @ 2000 lb.	9612403	DPL40
Low Profile Vise	6	6	2	0.002" @ 2000 lb.	9612601	DPL60
Low Profile Vise	8	8	2	0.002" @ 2000 lb.	9612801	DPL80

Standard Drill Press Vises

These versatile, general purpose drill press vises are just what you need for drilling, tapping, reaming, etc. They can be used turned on either side or end.

- ♦ Center of base is open for holding work through body of vise
- ♦ Base and bed parallel to 0.001"



9612603

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Standard Drill Press Vise	4	4-1/2	1-1/2	0.002" @ 2000 lb.	9612352	DP40
Standard Drill Press Vise	6	6	2	0.002" @ 2000 lb.	9612603	DP60

Vises

Quick Release Vises

Quick-action mechanism for repetitive operations where the workpiece must be secured and released rapidly.

- ◆ Center of base is open for holding work through body of vise
- ◆ Jaw plates are parallel to 0.004" with recessed steps
- ◆ Machined step positioned below jaw plates for accurately holding part parallel to base



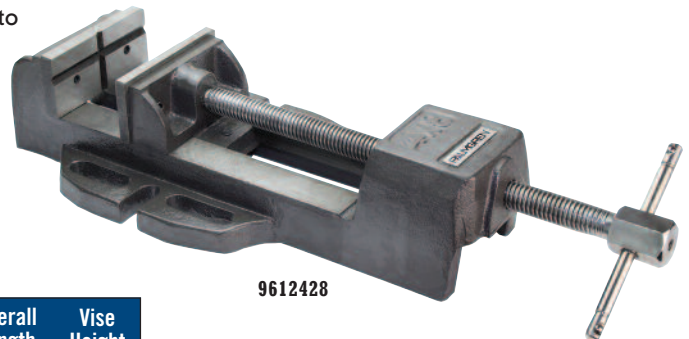
9612421

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Quick Release Vise	3	3	1	-	9612321	QV30
Quick Release Vise	4	4	1-3/8	-	9612421	QV40
Quick Release Vise	6	6	1-7/8	-	9612621	QV60
Quick Release Vise	8	8	1-5/8	-	9612821	QV80

Rapid Acting, Extra Capacity Machine Vises

Palmgren's extra capacity machine vises are designed to hold medium to large size workpieces for tool and die, maintenance as well as production applications. Our unique rapid action nut is ideal for repetitive operations where the workpiece must be secured and released rapidly.

- ◆ Rapid acting clamp and un-clamp of any size workpiece
- ◆ Turn the handle to the left to release the moveable jaw - pull back to open the vise - push forward to close the vise - turn the handle to the right to tighten and clamp the part
- ◆ 4,400 pounds of clamping force
- ◆ Replaceable hardened and ground steel jaws with step
- ◆ Jaws have horizontal & vertical groove for holding round parts
- ◆ Made from 30,000 PSI tensile strength, fine grain cast iron
- ◆ Four slots for secure mounting to machine table; Base and bed parallel to 0.001"



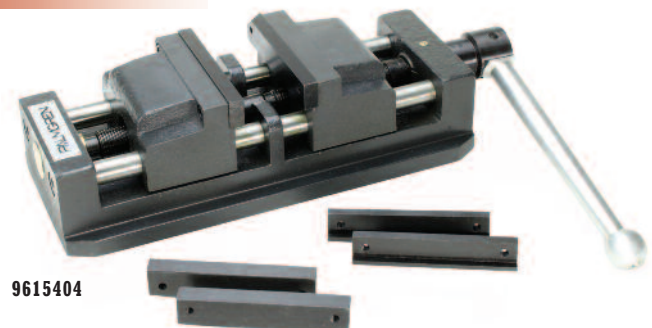
9612428

Item No.	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Leadscrew Type	Overall Length (In.)	Vise Height (In.)
9612428	4	8	1-7/8	0.002" @ 4000 lb.	Acme	16	3-1/4
9612628	6	10	1-7/8	0.002" @ 4000 lb.	Acme	18	4-1/4

Self-Centering Vise

This self-centering low profile machine vise is ideal to use with drilling and milling machines where quick, accurate centering of the work piece below the spindle is required.

- ◆ Constructed of close grained, high tensile strength, fine cast iron castings
- ◆ Moveable jaws are mounted on precision ground and hardened guide rails
- ◆ Each vise come with three sets of 4" jaws, 1 pair of steel hardened, 1 pair of steel soft and 1 pair of steel step jaws
- ◆ LIFETIME GUARANTEE



9615404

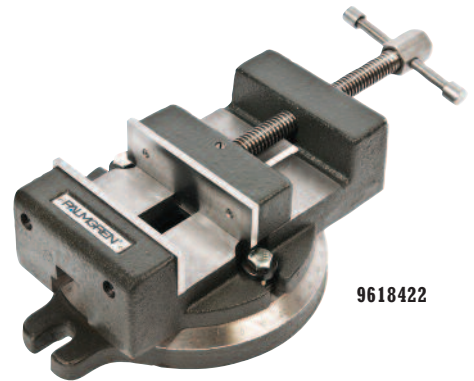
Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Type	Vise Height (In.)	Item No.	Model No.
Self-Centering Vise	4	4	3/4	3-types	3-3/8	9615404	SCV4

Vises

Low Profile Machine Vises

A rugged vise designed for low clearance applications. Model 9618422 comes with a 360° swivel base. Base is graduated in 1° increments.

- ◆ Used on drill presses, mill/drills, milling machines and grinders
- ◆ Made from 30,000 PSI tensile strength, fine cast iron
- ◆ Base and bed parallel to 0.001"
- ◆ Center of base open for holding work through body of vise
- ◆ For locating and mounting on machine table, the base has 7/16" keyway and two bolt slots
- ◆ LIFETIME GUARANTEE
- ◆ **U.S.A. Vise**



9618422

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
Low Profile Machine Vise	4-1/2	4	1-1/4	0.002" @ 4000 lb.	Smooth	Acme	2-3/8	9618421	425
Low Profile Machine Vise w/ Swivel Base	4-1/2	4	1-1/4	0.002" @ 4000 lb.	Smooth	Acme	3-1/2	9618422	425B

Milling Machine Vises

Intended for demanding vertical and horizontal machining tasks, such as milling and shaping, where strong clamping and secure mounting are all requirements.

- ◆ Can be used on drill presses, mill/drills, milling machines and grinders
- ◆ Models 9618402 and 9618602 have a 360° swivel base indicated in 1° increments
- ◆ Made from 30,000 PSI tensile strength, fine cast iron
- ◆ Base and bed parallel to 0.001"
- ◆ Center of the base is open for holding work through body of vise
- ◆ Replaceable steel jaw plates
- ◆ Fixed jaw is grooved horizontally and vertically for holding round stock
- ◆ 5/8" keyway in swivel base for accurate positioning
- ◆ LIFETIME GUARANTEE
- ◆ **U.S.A. Vise**



9618602

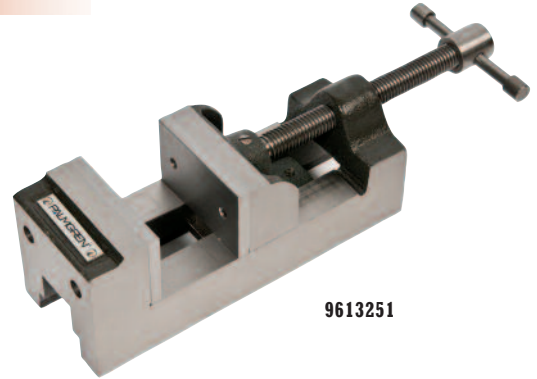
Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
Milling Machine Vise	4	4	1-3/4	0.002" @ 4000 lb.	Grooved	Acme	3-3/8	9618401	410
Milling Machine Vise w/ Swivel Base	4	4	1-3/4	0.002" @ 4000 lb.	Grooved	Acme	4-3/4	9618402	410B
Milling Machine Vise	6	6	2	0.002" @ 4000 lb.	Grooved	Acme	3-7/8	9618601	610
Milling Machine Vise w/ Swivel Base	6	6	2	0.002" @ 4000 lb.	Grooved	Acme	5-1/2	9618602	610B

Vises

Precision Ground Drill Press Vises

A precision vise for close-tolerance applications. Finely ground after machining for squareness and parallelism on five sides to 0.0002 of an inch.

- ◆ May be mounted on the base, either side, or placed on end
- ◆ Replaceable steel jaw plates are both plain
- ◆ Made of 30,000 PSI tensile strength, fine grain cast iron
- ◆ LIFETIME GUARANTEE
- ◆ U.S.A. Vise



9613251

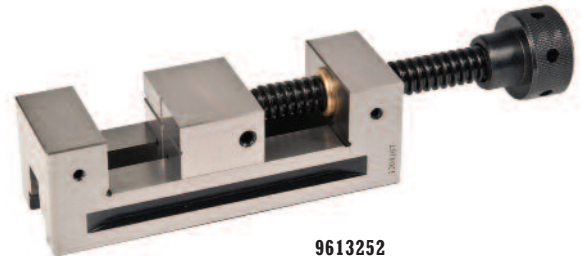
Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
Precision Ground Drill Press Vise	1-1/2	1-5/8	1	0.002" @ 2000 lb.	Smooth	V-Thread	1-3/4	9613151	11G
Precision Ground Drill Press Vise	2-7/16	3-1/8	1-1/2	0.002" @ 2000 lb.	Smooth	V-Thread	2-1/2	9613251	22G
Precision Ground Drill Press Vise	4	4	1-3/4	0.002" @ 2000 lb.	Smooth	Acme	3-1/4	9613401	14G

Toolmaker's Vises

These vises are built for ultra precision grinding and inspection applications. Solid one piece body, precision ground and heat treated to 55 HRC then tempered to ensure stability and durability.

- ◆ Screw type moveable jaw
- ◆ Top, sides and bottom are precision ground square and parallel
- ◆ Parallelism: 0.0001"
- ◆ Squareness: 0.0002"

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
2" Toolmaker's Vise	2	2-1/2	1	9613152
4" Toolmaker's Vise	4	4-15/16	1-3/4	9613154



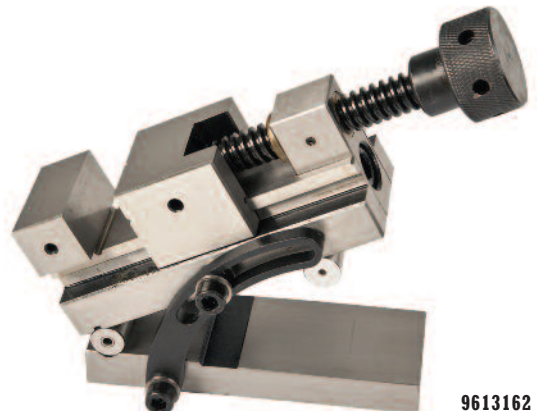
9613252

Angle Sine Vises

These vises are built for ultra precision grinding and inspection applications. Solid one piece body, precision ground and heat treated to 55 HRC then tempered to ensure stability and durability.

- ◆ Screw type moveable jaw
- ◆ Top, sides and bottom are precision ground square and parallel
- ◆ Parallelism: 0.0004"
- ◆ Squareness: 0.0004"
- ◆ Minute angle steps allow for very small angles to be set with ease using standard gauge blocks

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
2" Angle Sine Vise	2	2-3/8	1	9613162
4" Angle Sine Vise	4	4-15/16	1-3/4	9613164



9613162

Vises

General Purpose Angle Vises

These sturdy vises are indispensable for work that requires frequent angle setups, including drilling, tapping, reaming, milling and grinding.

- ◆ Setup at any vertical angle between 0 and 90°
- ◆ Model 9611255 comes with robust 360° swivel base
- ◆ Swivel base has 5/8" keyway
- ◆ Made from 30,000 PSI tensile strength, fine grain cast iron
- ◆ Base and bed parallel to 0.002"
- ◆ Vises have bolt lugs for easy mounting
- ◆ LIFETIME GUARANTEE
- ◆ **U.S.A. Vise**



9611253

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Lead Screw Type	Vise Height (In.)	Item No.	Model No.
General Purpose Angle Vise	1-1/2	1-1/2	1	0.002" @ 2000 lb.	Grooved	V-Thread	2-3/8	9611152	X1
General Purpose Angle Vise	2-7/16	2-1/2	1-1/2	0.002" @ 2000 lb.	Grooved	V-Thread	3-7/8	9611253	000
General Purpose Angle Vise w/Swivel Base	2-7/16	2-1/2	1-1/2	0.002" @ 2000 lb.	Grooved	V-Thread	4-9/16	9611255	000B

Industrial Angle Vises

Handy robust angle vises are indispensable for work that requires demanding frequent angle set-ups for drilling operations, milling and grinding work

- ◆ Angle hinge is graduated in 1° increments from 0 to 90°
- ◆ Base and bed parallel to 0.004"
- ◆ Jaw surface square to 0.002"
- ◆ Made from 30,000 PSI tensile strength, fine grain cast iron
- ◆ Hinge pin hole is precision drilled and reamed for smooth accurate angle settings, with no lateral end play
- ◆ Angle vise can be used with or without the swivel base
- ◆ Angle vise without the swivel base has two 5/8" mounting lugs located on the front and back end of the vise for easy mounting
- ◆ The swivel base provides complete 360° calibrated rotation
- ◆ The swivel base has 5/8" keyway and two 5/8" bolt slots for locating and mounting on the machine table
- ◆ LIFETIME GUARANTEE



9611405

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Industrial Angle Vise w/Swivel Base	4	4	1-3/4	0.004" @ 4000 lb.	9611405	AVS40
Industrial Angle Vise w/Swivel Base	6	7	2	0.004" @ 4000 lb.	9611602	AVS60

Vises

Cradle Angle Vises

These vises allow quick and easy adjustments on work that frequently requires angle setups. The fastest way to get your work from 0 to 90°.

- ◆ Trunnion style base
- ◆ Pin stops every 15° for quick angle setups
- ◆ Base and bed parallel to 0.004"
- ◆ Jaw surface is square to 0.002"



9611351

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Cradle Angle Vise	3	3	1-3/8	-	9611250	AVC30
Cradle Angle Vise	4	4	1-3/4	-	9611351	ACV40

Toolmaker's Universal Three Axis Machine Angle Vise

The combination and movement of three different compound axis settings makes possible setups in any angle. Adaptable for all your machining requirements.

- ◆ Vise has 2 angular side movements which allows the workpiece to be set at any desired angle up to 45° on either side of the 90° vertical index
- ◆ Calibrated vertical index can be securely locked anywhere from 0 to 90°
- ◆ Swivel base provides complete 360° calibrated rotation
- ◆ Base has 5/8" keyway and two 5/8" bolt slots for locating and mounting of the machine table
- ◆ Base and bed parallel to 0.004"
- ◆ Jaw surface square to .0002"
- ◆ Made of 30,000 PSI tensile strength, fine grain cast iron



9622704

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
Toolmaker's Universal Three Axis Machine Angle Vise	4	4-1/2	1-1/2	9622704

Vises

Angle Milling Vise

A truly heavy-duty angle vise for milling or other demanding machine applications. Solid iron construction with stress relieved design.

- ◆ Made from FC25 fine-grain, cast iron
- ◆ Trapezoidal-thread lead screw with large cast-iron crank handle
- ◆ Oversize angle hinge eliminates horizontal play
- ◆ Base and bed parallel to 0.004" (0.1 mm)
- ◆ Jaw surfaces square to 0.002" (0.05 mm)
- ◆ Less than 0.004" (0.1 mm) jaw deflection at 4,000 pounds clamping pressure
- ◆ 11/16" Keyway in angle base and swivel base
- ◆ Vise can be raised up to 45° and securely locked in place for rapid angular setups without the use of blocks or wedges
- ◆ Knurled socket-head bolts with lock washers on side plates for quick, secure locking
- ◆ Finely etched hinge boss is graduated in 1° increments from 0 to 45°
- ◆ Removable swivel base is graduated in 1° increments a full 360°
- ◆ Replaceable, smooth jaw plates constructed of hardened and ground tool steel
- ◆ Lugs in both vise and swivel base for mounting to machine table
- ◆ Vise can be used with or without swivel base
- ◆ LIFETIME GUARANTEE



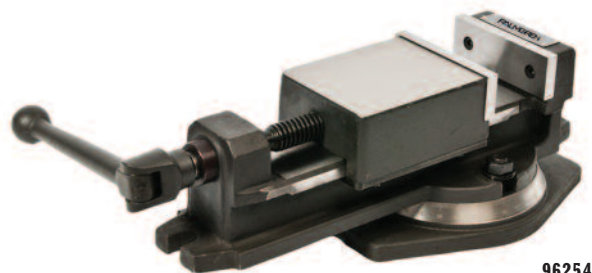
9622604

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Overall Length (In.)	Overall Height w/o Base (In.)	Overall Height w/ Base (In.)	Item No.
Angle Milling Vise	6	6	2	20	6	8	9622604

Standard Milling Vises

An economical, robust vise for a variety of milling and other demanding machine applications.

- ◆ Base and bed parallel to 0.002"
- ◆ 360° swivel base
- ◆ Vise can be used with or without swivel base
- ◆ Hardened moveable jaw plates are square to 0.0015"
- ◆ Extra large jaw opening
- ◆ Hardened and ground bed
- ◆ 11/16" Keyway in vise base and swivel base
- ◆ LIFETIME GUARANTEE

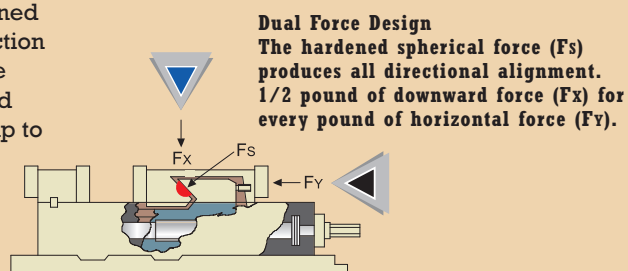


9625404

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Standard Milling Vise	4	4	1-1/2	0.002" @ 4000 lb.	9625404	MVS40
Standard Milling Vise	6	6	2	0.002" @ 4000 lb.	9626603	MVS60

Dual Force Vises

Palmgren's Dual Force line of precision machine vises are all designed for precision part clamping and are ideal for use in running production parts where datum's, flatness and parallelism is key. The Dual Force design allows the moveable jaw to deliver a 1/2 pound of downward force for every pound of horizontal force, reducing jaw deflection up to 80% while producing "all directional alignment" of the moveable jaw. This unique design prevents parts from lifting upward under heavy clamping and machining loads. All Dual Force vises deliver workholding efficiencies by providing the strength and rigidity to hold parts securely and accurately.



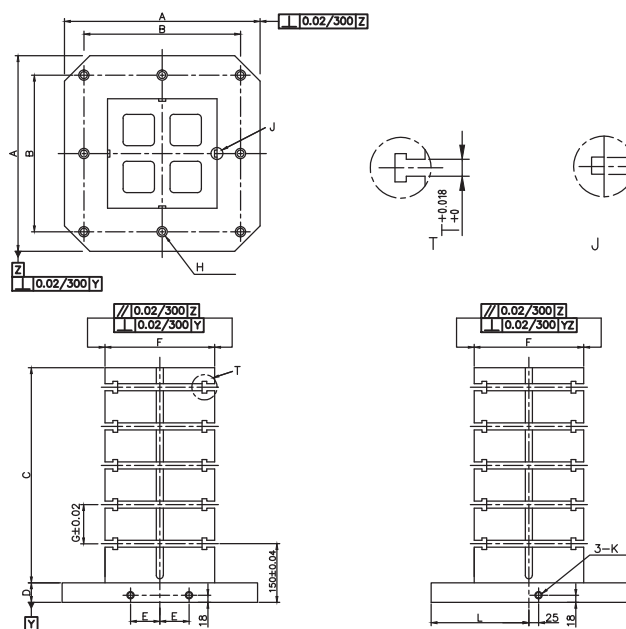
Palmgren Dual Force vises are manufactured in an ISO 9001:2008 registered facility.

Tombstones

Palmgren's tooling columns or tombstones provide a practical means of holding work accurately in a vertical or horizontal plane for CNC machining operations. They can be mounted directly on a machine table/pallet and come standard with key-way's running vertically and t-slots running horizontally on all four sides.

- ◆ FC300 Cast Iron / Heat treated (normalized)
- ◆ Excellent vibration dampening characteristics

- ◆ Strong, ridged construction
- ◆ Designed to fit all inch and metric pallets
- ◆ Fully machined on all sides
- ◆ Flat, parallel and square less than .001" over 12"
- ◆ 5/8" t-slots with 11/16" keyway
- ◆ Easy accepts machining center vises or standardized jig components



Tombstone Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	K	L	T	Wt. Lb.
9626650	15.75	12.60	17.71	1.97	2.16	9.84	3.94	M16	M16	7.87	0.69	343
9626651	19.68	15.74	21.65	1.97	2.95	11.81	3.94	M16	M16	9.84	0.69	587
9626653	24.80	19.68	25.60	1.97	3.94	13.78	4.92	M16	M16	12.40	0.69	808

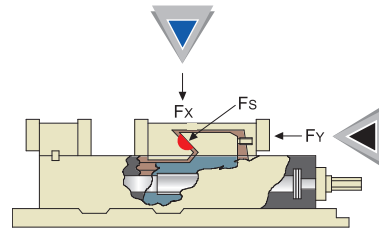
Item No.	Surface Datum A Base Flatness	Face Perpendicular to Base	Edge Locator Perpendicular	Face Dimension	Face Locator to Edge Parallelism
9626650	0.001	0.003	0.0015	10.00 ± 0.002	0.002
9626651	0.001	0.003	0.0015	12.00 ± 0.002	0.002
9626653	0.001	0.003	0.0015	14.00 ± 0.002	0.002

Dual Force Vises

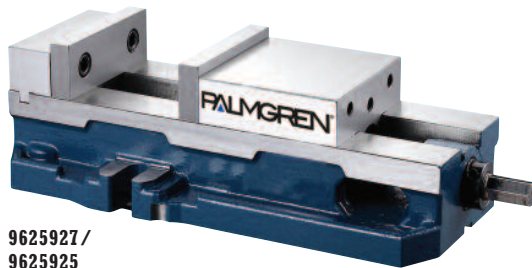
Dual Force Precision Premium Machine Vises

Palmgren's premium CNC vises combines quality, high precision and wide clamping capacities at an affordable price. Ideal for everyday use from high production environments to rapid prototyping machine shops. Our precision premium machine vises will optimize your manufacturing workholding processes.

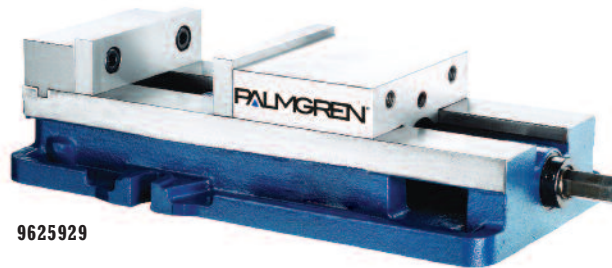
- ◆ Equipped with Dual Force anti-lift mechanism
- ◆ Sealed friction reducing needle thrust bearing help increase clamping pressure and reduce drag
- ◆ Vise nut does not extend beyond the end of the vise body
- ◆ Hardened jaw plates
- ◆ Hardened vise bed
- ◆ Repeatability within 0.001"
- ◆ Bed heights matched to +/- 0.0004"
- ◆ Parallelism of keyways on the bottom of the vise bed to the jaw face +/- 0.0008"
- ◆ 80,000 PSI stress relieved ductile iron castings
- ◆ LIFETIME GUARANTEE



Dual Force Design
The hardened spherical force (Fs) produces all directional alignment. 1/2 pound of downward force (Fx) for every pound of horizontal force (Fy).



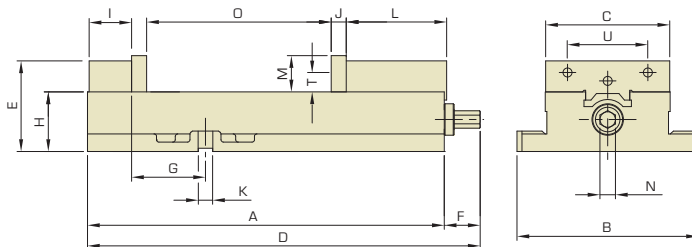
9625927 /
9625925



9625929



9625930



See optional Swivel Base on page 11.

Dual Force Precision Premium Machine Vises Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Wt. Lb.
9625927	12.638	6.299	4.173	14.212	3.372	1.575	2.795	2.250	1.382	0.590	0.550	4.016	1.378	0.551	6.024	0.689	2.500	31
9625925	14.488	7.638	5.000	16.339	3.819	1.850	3.346	2.500	1.595	0.670	0.630	4.724	1.500	0.630	7.008	0.810	3.126	47
9625928	17.008	9.252	5.945	18.740	4.371	1.732	4.252	2.875	2.047	0.709	0.688	4.843	1.752	0.748	7.559	0.937	3.874	80
9625929	17.205	8.740	5.945	18.937	4.371	1.732	3.563	2.875	2.047	0.709	0.688	4.843	1.752	0.748	8.898	0.937	3.874	80
9625930	21.850	11.614	8.110	23.032	5.279	1.181	4.950	3.310	2.284	0.953	0.813	6.181	2.205	0.748	10.433	1.260	4.724	151

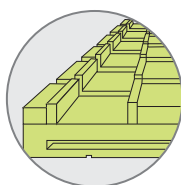
Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Dual Force Precision Premium Machine Vise w/Stationary Base	4	6	1.378	0.001" @ 4000 lb.	9625927	MPS40
Dual Force Precision Premium Machine Vise w/Stationary Base	5	7	1.500	0.001" @ 4000 lb.	9625925	MPS50
Dual Force Precision Premium Machine Vise w/Stationary Base	6	7.5	1.752	0.001" @ 4000 lb.	9625928	MPS67
Dual Force Precision Premium Machine Vise w/Stationary Base	6	8.9	1.752	0.001" @ 4000 lb.	9625929	MPS68
Dual Force Precision Premium Machine Vise w/Stationary Base	8	10	2.205	0.001" @ 4000 lb.	9625930	MPS80

Dual Force Vises

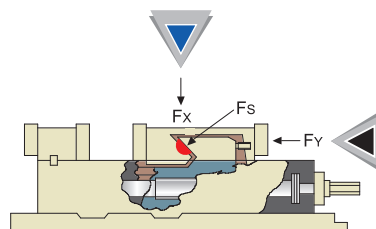
Dual Force Precision CNC Machine Vises

Built for use on all types of CNC machines where high precision part clamping is a necessity. This is an ideal vise for applications that require multiple vises to be mounted parallel to each other.

- ◆ Both sides are precision ground square to the bottom of the vise with in .0004"
- ◆ The vise can be mounted on its base/bottom, on either side or positioned on its end in the vertical position
- ◆ Parallelism of keyways on bottom of vise bed to the jaw face +/- 0.0008"
- ◆ 80,000 PSI ductile iron castings
- ◆ Hardened jaw plates
- ◆ Hardened vise bed
- ◆ Equipped with Dual Force anti-lift mechanism
- ◆ LIFETIME GUARANTEE



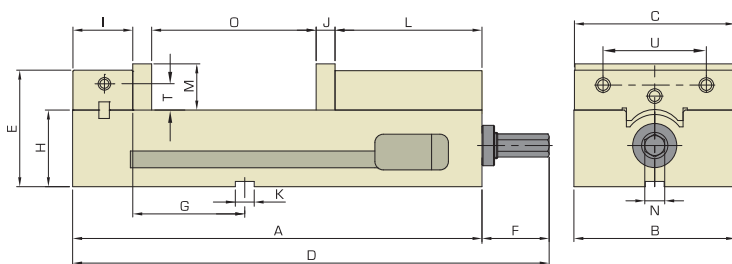
MULTIPLE VISES: Precise, easy alignment in multiples with guaranteed accuracy



Dual Force Design
The hardened spherical force (Fs) produces all directional alignment. 1/2 pound of downward force (Fx) for every pound of horizontal force (Fy).



9626600



Dual Force Precision CNC Machine Vise Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Wt. Lb.
9626600	12.992	4.134	4.016	14.646	3.937	1.654	3.606	2.677	1.843	0.827	0.709	4.173	1.575	0.551	4.921	0.689	2.500	46
9626610	15.354	6.063	5.945	17.913	4.370	2.560	4.200	2.874	2.244	0.709	0.709	5.512	1.752	0.748	5.827	0.937	3.874	81

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
Dual Force Precision CNC Machine Vise	4	5	1.575	9626600
Dual Force Precision CNC Machine Vise	6	6	1.752	9626610

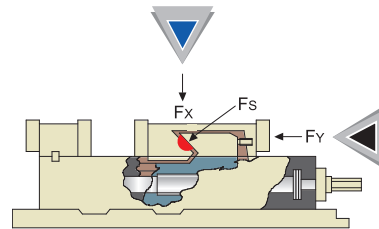
Dual Force Vises

Dual Force Precision Multi-Function Machine Vises



The Multi-Function line-up of vises provides a unique solution for quick and easy work piece clamping for most CNC machining applications. This lighter design makes the vise easier to mount and handle than other styles of vises.

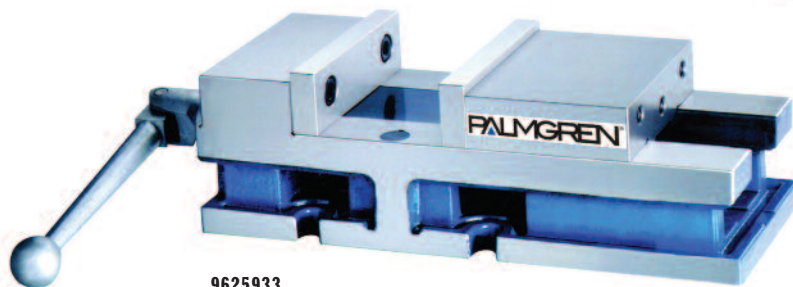
- ◆ Model 9625932 is standard with the traditional push style moveable jaw
- ◆ Model 9625933 is standard with a pull style moveable jaw. This configuration provides an added benefit of easier part programming in the "Y" axis. It also reduces the reach-over distance, making part loading and unloading safer and easier for the machine operator.
- ◆ The vises can be mounted on its base/bottom, on either side or upright. They can also be mounted back to back to create a fast, easy and economical vise tombstone.
- ◆ 0.0005" clamping repeatability
- ◆ Bed heights matched to +/- 0.0004"
- ◆ Parallelism of keyways on bottom of vise bed to the jaw face +/- 0.0008"
- ◆ Equipped with Dual Force anti-lift mechanism
- ◆ 80,000 PSI ductile iron castings
- ◆ LIFETIME GUARANTEE



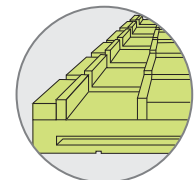
Dual Force Design
The hardened spherical force (Fs) produces all directional alignment. 1/2 pound of downward force (Fy) for every pound of horizontal force (Fx).



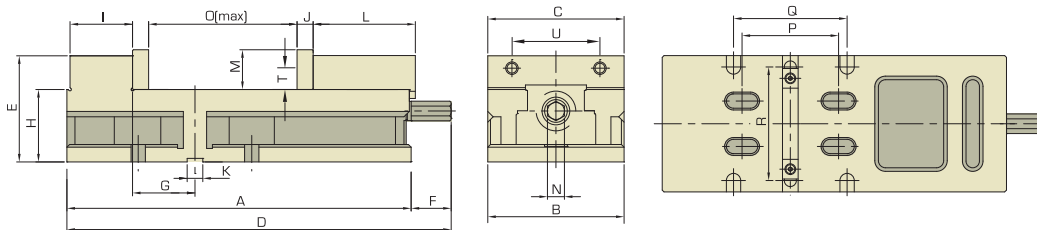
9625932



9625933



MULTIPLE VISES: Precise, easy alignment in multiples with guaranteed accuracy



Dual Force Precision Multi-Function Machine Vises Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	T	U	Wt. Lb.
9625932	15.158	6.002	5.945	17.000	4.673	1.843	2.750	3.190	2.752	0.709	0.709	4.500	1.752	0.748	6.417	4.250	5.0	5.0	0.937	3.874	69
9625933	15.158	6.002	5.945	17.000	4.673	1.843	2.750	3.190	2.752	0.709	0.709	4.500	1.752	0.748	6.417	4.250	5.0	5.0	0.937	3.874	69

Description	Item No.
Right Station Vise	9625932
Left Station Vise	9625933

Dual Force Vises

Dual Force Precision Mechanical Booster Machine Vises



- 1 LARGER OPENINGS:** Unique jaw design increases clamping capabilities and options
- 2 DUAL FORCE ANTI-LIFT MECHANISM:** Produces all directional alignment combined with $\frac{1}{2}$ pound of downward force for every pound of horizontal force
- 3 UNIQUE CHIP COVER DESIGN:** Advanced design protects the Spindle and nut while facilitating the evacuation of chips.
- 4 ADJUSTABLE CLAMPING FORCE REGULATION SYSTEM:** Precise clamping force regulation for simple, easy optimum clamping pressure all the time
- 5 MECHANICAL BOOSTER:** Delivers a consistent clamping force – resisting shocks and vibrations created under high machining pressure
- 6 MULTIPLE VISES:** Precise, easy alignment in multiples with guaranteed accuracy



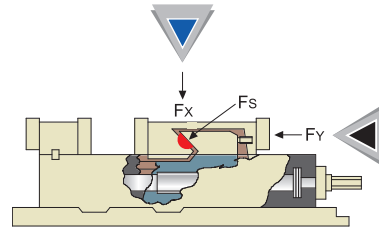
Dual Force Vises

Dual Force Precision Mechanical Booster Machine Vises

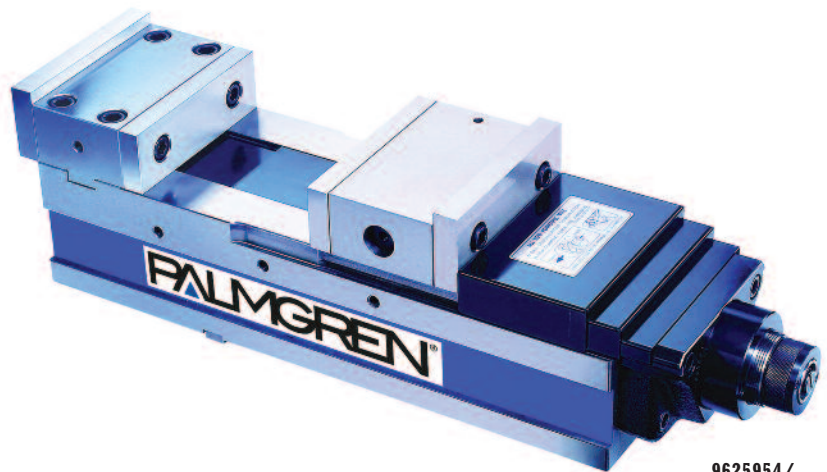


Palmgren's Dual-Force mechanical booster machine vises are simply a smarter vise. Equipped with a patented mechanical booster and adjustable clamping force system that delivers secure, accurate and efficient clamping without the need to over tighten the vise spindle. The adjustable clamping pressure provides consistent, continuous force of up to 11,200 pounds (50KN) maximum making part holding simple and easy.

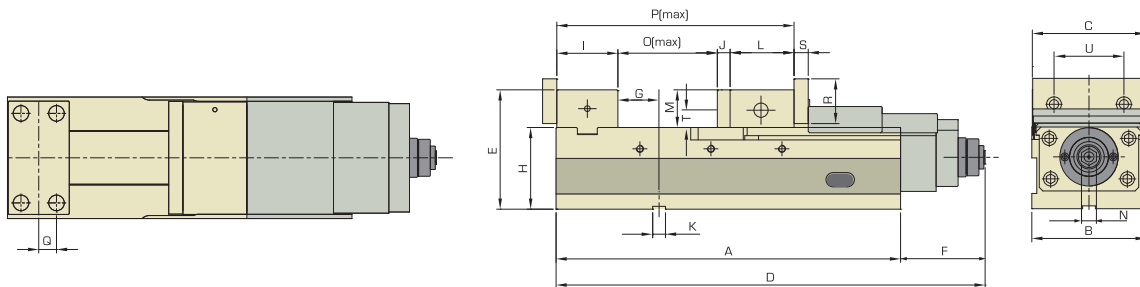
- ◆ Precise clamping force regulation (patented) is achieved by turning the force ring to one of three graduation settings and a simple turn on the handle provides precise clamping pressure every time.
- ◆ Mechanical booster (patented) delivers a steady clamping force and is equipped with an internal disc spring design that guards against shocks and vibrations maintaining consistent pressure during the machining operation.
- ◆ Incorporates the Dual-Force design of all directional alignment with a 1/2 pound of downward force for every pound of horizontal force.
- ◆ Precision ground and hardened jaw plates
- ◆ Precision ground and hardened vise body
- ◆ Clamping repeatability within 0.0005"
- ◆ Parallelism of keyways on bottom of vise bed to the jaw face 0.0006"
- ◆ Parallelism of the face to the vise bed 0.0004"
- ◆ Squareness from the bed to the jaw face 0.0008"
- ◆ Height tolerance is within +/- 0.0004"
- ◆ Unique chip cover protects the spindle and nut while facilitating the evacuation of chips
- ◆ 80,000 PSI ductile iron castings deliver the strength, rigidity and long term accuracy required while absorbing machine vibration
- ◆ LIFETIME GUARANTEE



Dual Force Design
The hardened spherical force (Fs) produces all directional alignment. 1/2 pound of downward force (Fx) for every pound of horizontal force (Fy).



9625954/
9625955



Dual Force Precision Mechanical Booster Machine Vises Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Clamp Force	Wt.
9625954	12.756	4.095	4.000	16.850	5.119	4.095	1.614	3.347	2.874	0.590	0.709	3.406	1.772	0.551	5.512	12.382	0.787	2.165	0.669	0.886	2.284	5,620 lb	66 lb
9625955	15.354	5.000	5.000	19.488	6.024	4.134	2.598	3.937	3.071	0.591	0.709	3.445	2.087	0.552	7.913	15.020	0.886	2.480	0.787	1.043	2.362	7,869 lb	102 lb
9625956	20.276	6.339	6.268	25.000	6.614	4.724	2.992	4.528	3.386	0.709	0.709	3.150	2.087	0.748	12.992	20.236	0.984	2.480	0.787	1.043	3.874	10,117 lb	166 lb
9625958	23.032	7.953	7.854	28.071	7.008	5.040	3.661	4.724	3.976	0.709	0.709	3.740	2.284	0.748	14.469	22.894	1.221	2.874	0.787	1.142	4.724	11,241 lb	238 lb

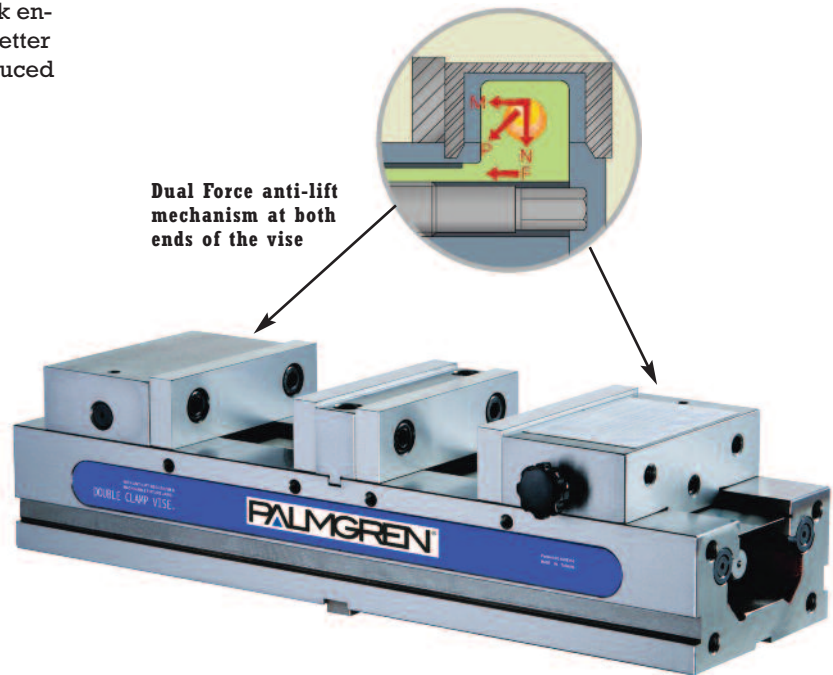
Dual Force Vises

Dual Force Precision Double Station Machine Vises



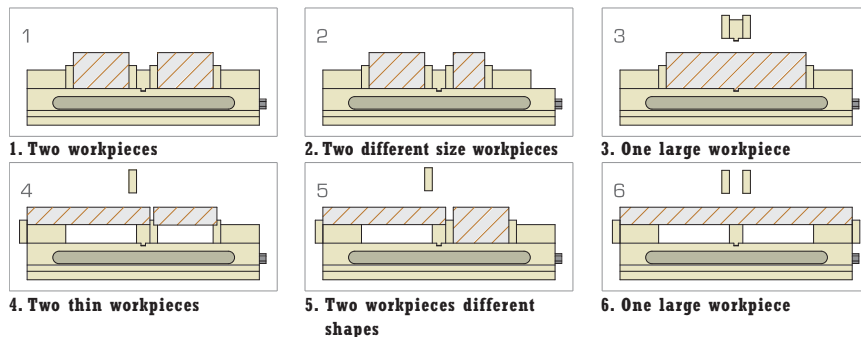
This double station vise offers cost saving productivity by maximizing the number of parts in the machines work envelope. It allows for multiple part workholding for better spindle utilization, reduced tool change time and reduced machine travel from part to part.

- ◆ 1/2 pound of downward force for every pound of horizontal force on both moveable jaws
- ◆ 80,000 PSI ductile iron casting deliver the strength, rigidity and long term accuracy required while absorbing machine vibration
- ◆ Can be mounted horizontally or vertically
- ◆ One handle operates the two moveable jaws
- ◆ Unit can clamp two of the same size parts or different size parts
- ◆ Clamping force equalization - the same force is applied to both parts whether they are the same size or not
- ◆ Precision ground on all sides
- ◆ Height tolerance is within $\pm 0.0004"$ so several vises can be lined up parallel to each other
- ◆ Repeat clamping accuracy of $.0002"$
- ◆ Fixed center jaw has a machined keyway for accurate alignment and set up
- ◆ 6 different work piece clamping applications
- ◆ LIFETIME GUARANTEE

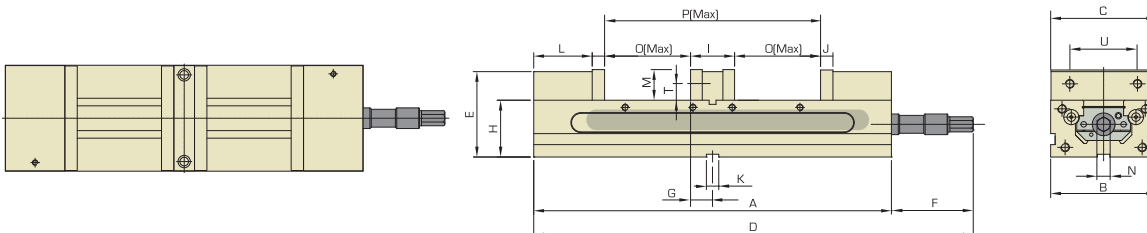


Dual Force anti-lift mechanism at both ends of the vise

CLAMPING APPLICATIONS



Patented auto memory mechanism gives you an advantage especially when clamping different size parts. The two jaws are auto set to the proper position for the two workpieces - than each time you open and close the vise the jaws maintain their set position allowing for quick repeat loading and unloading of the vise.



Dual Force Double Station Machine Vise Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T	U	Wt. Lb.
9625935	15.945	4.094	4.016	18.071	3.799	2.126	1.083	2.500	2.165	0.591	0.709	2.717	1.496	0.551	3.543	9.252	0.689	2.500	44
9625936	20.472	6.063	5.984	21.102	4.884	0.630	1.300	3.250	2.598	0.709	0.709	3.406	1.752	0.748	4.921	12.441	0.937	3.874	115

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
Dual Force Double Station Machine Vise	4	0-9.252	1.496	9625935
Dual Force Double Station Machine Vise	6	0-12.441	1.752	9625936

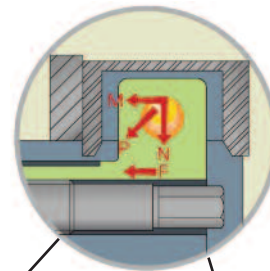
Dual Force Vises

Dual Force Precision Self-Centering Machine Vise

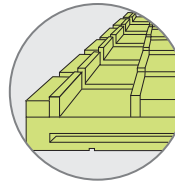
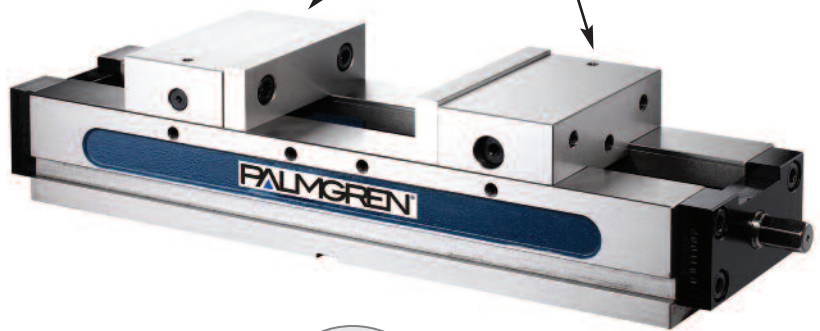


This self-centering vise can be used on both vertical as well as horizontal machining centers. Centering accuracy from minimum to maximum opening is 0.0006" with 0.0002" repeatability. Both moveable jaws incorporate the Dual Force design with zero deflection and lift while providing quick, accurate centering of the workpiece.

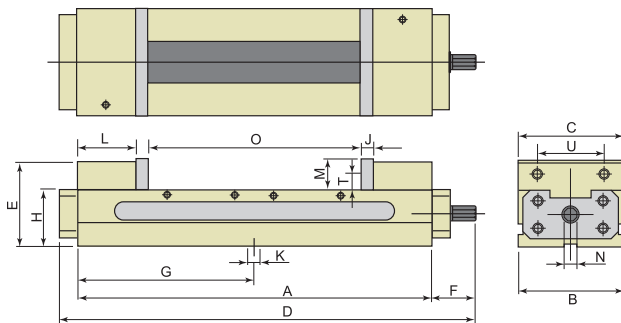
- ◆ Equipped with Dual Force anti-lift mechanism in both jaws
- ◆ Precision ground on all sides
- ◆ Height tolerance is within +/- 0.0004" so several vises can be lined up parallel to each other
- ◆ 80,000 PSI ductile iron castings deliver the strength, rigidity and long term accuracy required while absorbing machine vibration
- ◆ Hardened bed ways
- ◆ Hardened jaws
- ◆ LIFETIME GUARANTEE



Dual Force anti-lift mechanism at both ends of the vise



MULTIPLE VISES: Precise, easy alignment in multiples with guaranteed accuracy



Dual Force Precision Self-Centering Machine Vise Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T	U	Wt. Lb.
9625934	20.472	6.063	5.984	24.016	4.884	2.520	10.236	3.250	-	0.709	0.709	3.346	1.752	0.748	2.283-12.362	-	0.937	3.874	115

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
Dual Force Self-Centering Machine Vise	6	2.283-12.36	1.752	9625934

Dual Force Vises

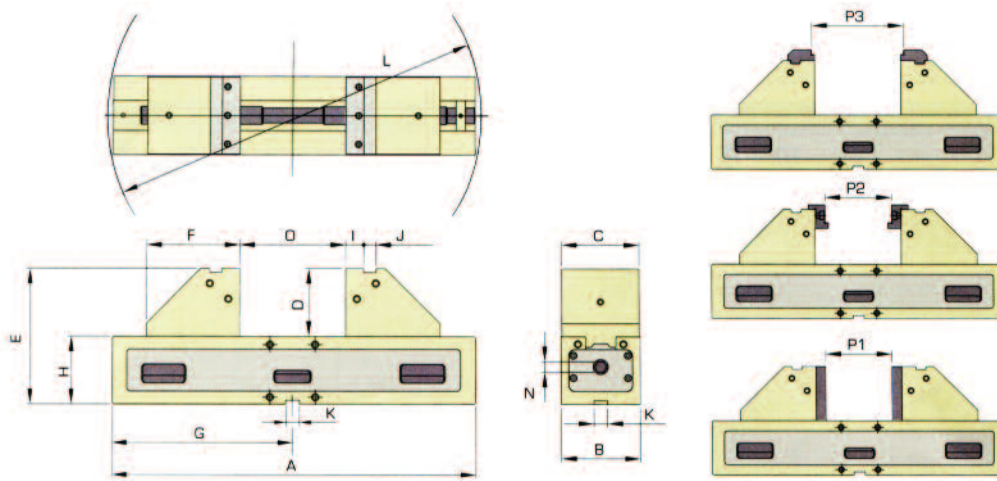
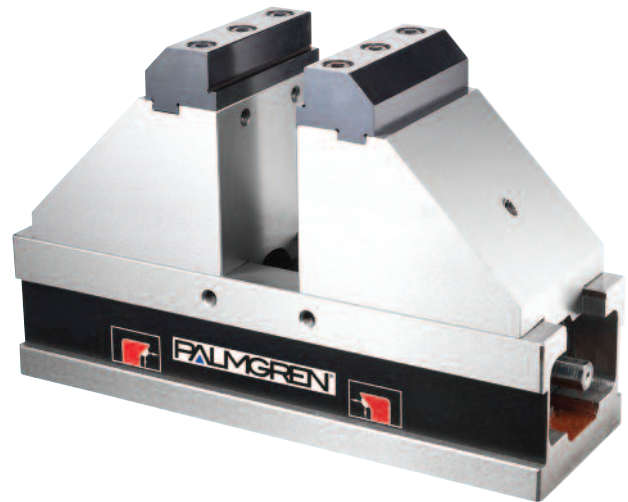
Dual Force Precision 5-Axis Machine Vises



Designed especially for multi-face machining of simple to complicated workpieces with a single clamping operation. These vises are small but have a large holding capacity making them ideal for 5-sided machining. Equipped with a variety of jaw options to cover a wide range of workholding applications. These unique vises deliver unrestricted all around access to the workpiece and are equipped with our Dual Force anti-lift mechanism to counter the lifting effect on the part while being machined.

The Optimal Solution for 5-Axis Machining:

- ◆ Designed for space saving, obstruction free 5-Axis machining allowing machining operations close to the workpiece with low risk of collision
- ◆ Simple, robust construction, smooth surfaces, easy cleaning
- ◆ 80,000 PSI Ductile iron castings for rigidity and dimensional stability
- ◆ All sides are hardened and ground
- ◆ Both clamping jaws move simultaneously, self-centering to shorten the clamp and un-clamp times
- ◆ From the center of the workpiece to the bed of the vise is perpendicular to 0.0004"
- ◆ Repeatable and controllable high clamping force up to 4500 lbs.
- ◆ Dual Force design completely prevents spreading of the clamping jaws and workpiece lift
- ◆ Suitable for raw or pre-machined, cubical, round or odd shaped parts are easily clamped

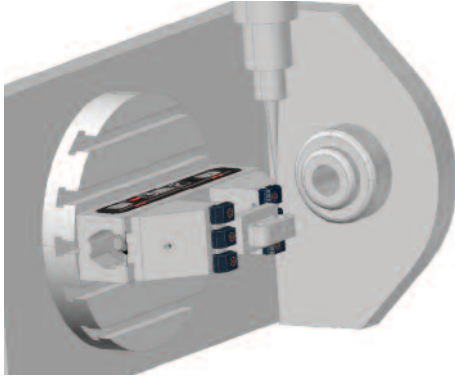


Dual Force Precision 5-Axis Machine Vises Dimensional Specifications																			
Item No.	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P1	P2	P3	Force	Wt.
9625940	12.755	4.095	4.016	3.543	7.087	4.921	6.378	3.543	0.945	0.630	0.709	13.780	0.551	2.913	1.732	1.654	3.307	4500 lb	44 lb
9625941	19.055	4.095	4.016	3.543	7.087	4.921	9.528	3.543	0.945	0.630	0.709	19.685	0.551	7.244	4.016	7.874	9.449	4500 lb	66 lb

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Item No.
Dual Force Precision 5-Axis Machine Vise	4	1.732-3.307	3.543	9625940
Dual Force Precision 5-Axis Machine Vise	4	4.016-9.449	3.543	9625941

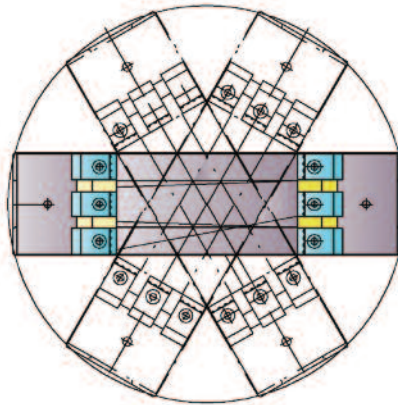
Dual Force Vises

Dual Force Precision 5-Axis Machine Vise Features



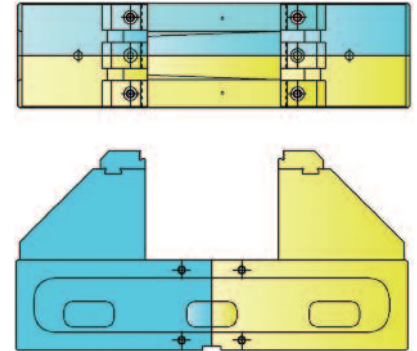
Obstruction Free 5-Axis Machining

These unique vises deliver unrestricted all around access from 5 sides to the workpiece



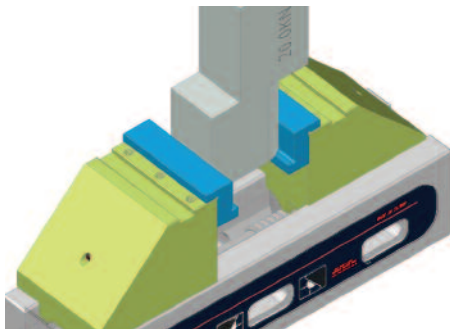
Space Saving Design

Within an operating window up to a 500mm diameter the spindle, nut or handle do not extend beyond the end of the vise body eliminating any interference.



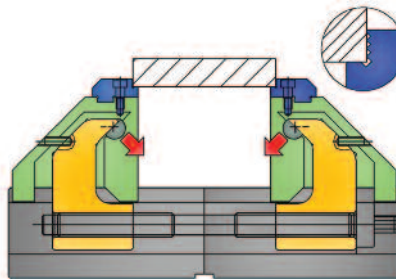
Symmetrical Positioning

The center line of the opening of the vise is symmetrical to the sides and the length of the vise body for accurate machining on multiple axis.



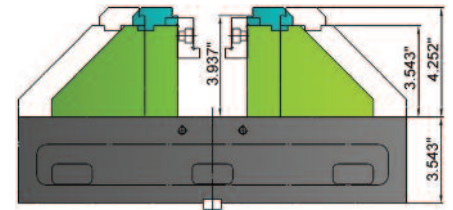
High Clamping Force

Repeatable and controllable clamping forces up to 4500 pounds.



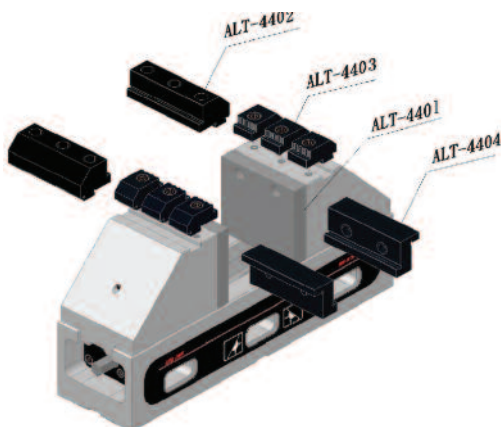
Dual Force Anti-Lift Mechanism

Dual force design produces all directional alignment with 1/2 pound of downward force for every pound of horizontal force.



Vise Structure

The higher structure delivers a well-balanced design that provides better clearance for movements of the machine spindle, the worktable, and the part itself, without creating interference areas.



Comprehensive Jaw Selection

Each Palmgren 5-axis vise comes with a versatile range of 4 different jaw sets.

ALT-4401 - Block Jaw Plates

ALT-4402 - Step Jaw Plates for small parts

ALT-4403 - Serrated Tooth Jaw Plates for round and odd shaped parts

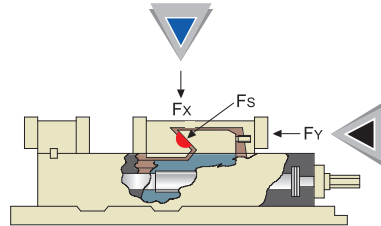
ALT-4404 - Step Jaw Plates for large parts

Dual Force Vises

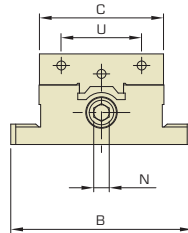
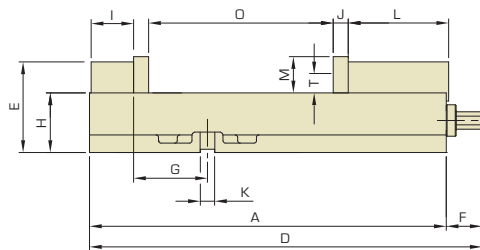
Dual Force Standard Machine Vises

This economical Dual Force standard machine vise is recommended for milling, drilling, boring, tapping and finishing operations on most parts. These vises can be used on your machining centers as well as your basic manual machine tools.

- ◆ Equipped with Dual Force anti-lift mechanism
- ◆ Friction reducing needle bearings reduce clamping friction
- ◆ Hardened jaw plates
- ◆ Hardened vise bed
- ◆ Semi-hard steel screw
- ◆ Extra-large opening
- ◆ 60,000 PSI ductile iron castings
- ◆ LIFETIME GUARANTEE



Dual Force Design
The hardened spherical force (Fs) produces all directional alignment. 1/2 pound of downward force (Fx) for every pound of horizontal force (Fy).



9626604

Dual Force Standard Machine Vises Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Wt. Lb.
9626604	17.205	8.740	5.945	18.937	4.371	1.732	3.563	2.875	2.047	0.709	.636 / .709	4.843	1.752	0.748	8.897	0.937	3.874	80
9626608	17.205	8.740	5.945	18.937	4.371	1.732	3.563	2.875	2.047	0.709	.636 / .709	4.843	1.752	0.748	8.897	0.937	3.874	80

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Item No.	Model No.
Dual Force Standard Machine Vise w/Swivel Base	6	8-3/4	1-3/4	0.001" @ 4000 lb.	9626604	MPS60SB
Dual Force Standard Machine Vise w/Stationary Base	6	8-3/4	1-3/4	0.001" @ 4000 lb.	9626608	MPS60S

Swivel Base

Swivel bases for use with Palmgren's Dual Force Standard Machine Vises.

- ◆ Allows positioning in 1° increments
- ◆ Comes with 11/16" keyways to align the vise to the machine table

Description	Item No.
Swivel Base for use with 9626608 6-in. Vise	9626609



360° swivel base with 1° increments



9626609

Vise Accessories

Speed Handles

Palmgren's speed handles reduce set-up and clamp times increasing machine productivity. Our handles do not interfere with the milling machine giving you rapid part loading and unloading. The steel construction will give you the versatility and reliability demanded by today's modern machine shops.

- Three spoke hand wheel for precise feel and proper tensioning
- Three sizes for our 4", 6" and 8" vises
- An integral part for your Dual Force machine vises
- Speed handles fit part numbers 9625927, 9625928, 9625929 and 9625930



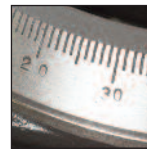
Description	Item No.
Speed Handle for use with 9625927 4-in. Vise	9625912
Speed Handle for use with 9625928 6-in. Vise	9625913
Speed Handle for use with 9625930 8-in. Vise	9625914

Swivel Bases

Swivel bases for use with Palmgren's Dual Force Premium Machine Vises.

- ♦ Allows positioning in 1° increments
- ♦ Comes with 11/16" keyways to align the vise to the machine table

Description	Item No.
Swivel Base for use with 9625927 4-in. Vise	9625911
Swivel Base for use with 9625925 5-in. Vise	9625915
Swivel Base for use with 9625928 6-in. Vise	9625921
Swivel Base for use with 9625930 8-in. Vise	9625931



360° swivel base with 1° increments



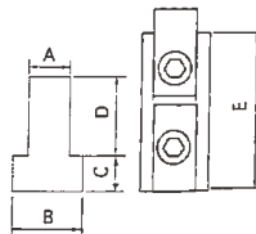
9626911

T-Slot Clamps

These low profile clamps are designed for use in the t-slots of machine tables. They provide 4,000 pounds of positive down force while maintaining a low profile. The hardened steel clamping element has a serrated clamping surface providing secure holding strength. The height of the clamp can be adjusted simply by turning the socket head adjusting screw.

- ♦ 5 t-slot sizes – 7/16", 1/2", 5/8", 11/16", 3/4"
- ♦ Each set has 4 t-slot clamps in a wooden storage box
- ♦ Quick, easy set-ups
- ♦ Small size allows more parts per load
- ♦ Simple low cost design

T-Slot Clamps Dimensional Specifications						
Item No.	T-Slot Size	A	B	C	D	E
9615500	7/16"	0.453	0.709	0.276	0.630	1.654
9615501	1/2"	0.531	0.866	0.315	0.709	1.654
9615502	5/8"	0.610	0.984	0.394	0.787	1.772
9615503	11/16"	0.689	1.102	0.433	0.945	1.772
9615504	3/4"	0.768	1.260	0.472	1.024	2.087



Vise Accessories

Parallels

Palmgren's parallel sets are engineered and made from tool steel, hardened and precision ground on all 6 faces to a precise surface finish. Ideal for use with a mill, drill, CNC machine or any other machining operation that requires work to be held in a vise or with clamps to keep the work parallel or raised evenly for accurate clearance and machining.

18 Piece 4" & 6" Combination Set – Item number 9638974

- ◆ Set includes – plastic case, 8 pair of parallels and 1 pair position clamps
- ◆ Hardness: HRC 50 to HRC55 degrees
- ◆ 2 pieces – 0.197" x 0.630" x 3.937"
- ◆ 2 pieces – 0.236" x 0.709" x 3.937"
- ◆ 2 pieces – 0.315" x 0.945" x 3.937"
- ◆ 2 pieces – 0.394" x 1.181" x 3.937"
- ◆ 2 pieces – 0.472" x 1.417" x 5.906"
- ◆ 2 pieces – 0.551" x 1.890" x 5.906"
- ◆ 2 pieces – 0.709" x 2.362" x 5.906"
- ◆ 2 pieces – 0.866" x 2.441" x 5.906"
- ◆ 2 pieces position clamp



9638974

18 Piece 6" Parallel Set – Item number 9638976

- ◆ Set includes – plastic case, 9 pair of parallels
- ◆ Hardness: HRC50 to HRC55 degrees
- ◆ 2 pieces – 0.335" x 0.551" x 5.906"
- ◆ 2 pieces – 0.335" x 0.630" x 5.906"
- ◆ 2 pieces – 0.335" x 0.787" x 5.906"
- ◆ 2 pieces – 0.335" x 0.945" x 5.906"
- ◆ 2 pieces – 0.335" x 1.181" x 5.906"
- ◆ 2 pieces – 0.335" x 1.260" x 5.906"
- ◆ 2 pieces – 0.335" x 1.417" x 5.906"
- ◆ 2 pieces – 0.335" x 1.575" x 5.906"
- ◆ 2 pieces – 0.335" x 1.732" x 5.906"



9638976

8 Piece 8" Parallel Set – Item number 9638978

- ◆ Set includes – wood case, 6 pair of parallels and 1 pair position clamps
- ◆ 2 pieces – 0.315" x 0.945" x 7.874"
- ◆ 2 pieces – 0.472" x 1.417" x 7.874"
- ◆ 2 pieces – 0.866" x 1.575" x 7.874"
- ◆ 2 pieces position clamp



9638978

Vise Accessories

Jack Screws

Very handy tool for leveling work on machine tables or fixtures, setting up machinery, and general use in the toolroom and machine shop.

- ◆ Each jack is designed with a quick acting height adjustment and a fine adjusting screw
- ◆ Height locking ring and capable of holding up to 2,000 pounds
- ◆ Available in standard and magnetic styles
- ◆ Magnetic style makes chip clean-up easier

Description	Height (In.)	Diameter (In.)	Item No.
Standard Adjustable Jack Screw	1.693 to 2.402	1.969	9638955
Standard Adjustable Jack Screw	2.559 to 3.150	1.496	9638956
Standard Adjustable Jack Screw	3.150 to 5.630	2.008	9638957
Standard Adjustable Jack Screw	4.921 to 9.450	2.126	9638958



Description	Height (In.)	Diameter (In.)	Item No.
Magnetic Adjustable Jack Screw	1.57 to 1.97	1.378	9638965
Magnetic Adjustable Jack Screw	1.97 to 2.56	1.378	9638966
Magnetic Adjustable Jack Screw	2.56 to 3.35	1.575	9638967
Magnetic Adjustable Jack Screw	3.35 to 4.33	1.575	9638968
Magnetic Adjustable Jack Screw	4.33 to 6.50	1.772	9638969



Jack Screw Sets

9638959 - Jack Screw Set Includes:

- ◆ 2 each – 2.75" to 3.74" jack screws
- ◆ 2 each – 3.94" to 5.90" jack screws
- ◆ 1 each – 6 different pads
- ◆ 1 each – storage rack

9638960 - Jack Screw Set Includes:

- ◆ 2 each – 3.94" to 5.90" jack screws
- ◆ 2 each – 5.51" to 9.06" jack screws
- ◆ 1 each – 6 different pads
- ◆ 1 each – storage rack

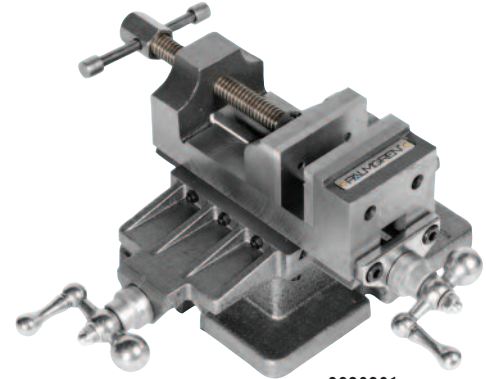


Cross Slide Vises

Cross Slide Vise

This unit accurately moves the work in two directions along the “X” and “Y” axis. This is ideal for positioning the workpiece from one machine location to another without losing squareness or alignment.

- ◆ Provides quick and precise positioning along the “X” & “Y” axis
- ◆ Built on the same cross-slide base as our cross-slide tables
- ◆ Feed screws are precision cut Acme threads
- ◆ Dials are graduated in 0.001” increments
- ◆ Counter-balanced steel ball crank handles clear the machine table
- ◆ Easily convert from a cross slide vise to a traditional vise by simply removing two screws and the base
- ◆ Made of 30,000 PSI tensile strength, fine grain cast iron
- ◆ LIFETIME GUARANTEE
- ◆ **U.S.A. Vise**



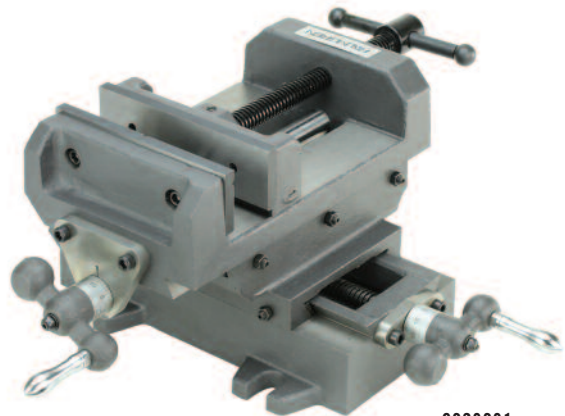
9630301

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	Jaw Type	Cross Slide Travel (In.)	Vise Height (In.)	Item No.	Model No.
Cross Slide Vise	3	3	1-3/4	0.002" @ 2000 lb.	Grooved	4 x 4	5-1/2	9630301	32

Cross Slide Vise

A cross slide table and vise built into one that accurately moves the work two directions. Makes workpiece positioning fast, easy and accurate.

- ◆ Provides quick and precise positioning along the X and Y axis
- ◆ Dials are graduated in 0.1mm increments
- ◆ Cross slide travel is 3-1/2" x 4"



9630601

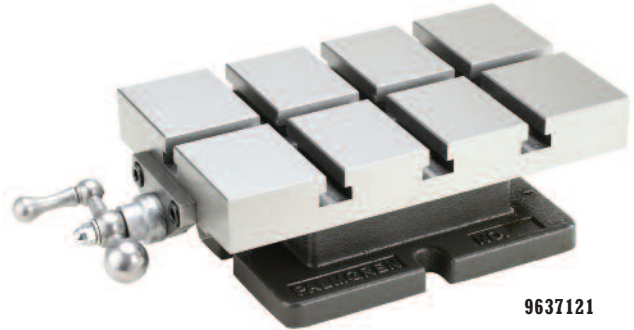
Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Jaw Deflection	X Axis Travel (In.)	Y Axis Travel (In.)	Item No.	Model No.
Cross Slide Vise	3	3	1-3/8	0.002" @ 2000 lb.	5	5	9630303	CV30
Cross Slide Vise	6	6	2	0.002" @ 2000 lb.	8	8	9630601	CV60
Cross Slide Vise	8	8	2	0.002" @ 2000 lb.	8	8	9630801	CV80

Positioning Tables

Single Axis Slide Tables

Palmgren's rigid precision built slide tables are used for inspection and layout as well as various machining and positioning operations. Single axis movement in the "X" or left to right direction. All tables are equipped with counter-balanced ball crank handles that provide rapid, accurate positioning.

- ◆ Precision ground table tops to 0.001" total indicator reading
- ◆ Dials are graduated in 0.001" increments
- ◆ Ball crank handles do not extend below the base to eliminate interference with the machine table
- ◆ Bases have bolt lugs and 5/8" keyways for locating and accurate, secure mounting
- ◆ Table tops have a longitudinal and three transverse T-slots. T-slots are 7/16"
- ◆ Dovetailed slides have adjustable steel gibs to compensate for wear



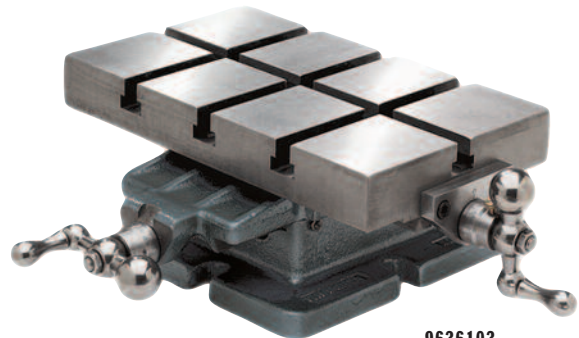
9637121

Description	Table Size (In.)	Height (In.)	Base Size (In.)	Table Travel (In.)	Weight (Lb.)	Item No.	Model No.
Single Axis Slide Table	10 x 6	3-1/2	7-5/8 x 6-3/8	6	34	9636101	90-10
Single Axis Slide Table	12 x 6	3-1/2	7-5/8 x 6-3/8	8	39	9637121	90-12

Cross Slide Tables

Palmgren's rigid precision built slide tables are used for inspection and layout as well as various machining and positioning operations. Dual axis movement in the "X" or left to right, and "Y" or front to back direction. All tables are equipped with counter-balanced ball crank handles that provide rapid, accurate positioning.

- ◆ Precision ground table tops to 0.001" total indicator reading
- ◆ Dials are graduated in 0.001" increments
- ◆ Ball crank handles do not extend below the base to eliminate interference with the machine table
- ◆ Bases have bolt lugs and 5/8" keyways for locating and accurate, secure mounting
- ◆ Table tops have a longitudinal and three transverse T-slots. T-slots are 7/16"
- ◆ Dovetailed slides have adjustable steel gibs to compensate for wear



9636103

Description	Table Size (In.)	Height (In.)	Base Size (In.)	Table Travel (In.)	Weight (Lb.)	Item No.	Model No.
Cross Slide Table	10 x 6	4-3/8	7-5/8 x 6-3/8	6 x 4	40	9636103	92-10
Cross Slide Table	12 x 6	4-3/8	7-5/8 x 6-3/8	8 x 4	44	9637123	92-12

Positioning Tables

Cross Slide Angle Table

Cross slide table 9637124 comes with the addition of angular inclination from 0° horizontal to 90° vertical. Angular position is indicated in 1° increments and locked via 4 bolts and 2 side plates.

- ◆ Dual axis movement in the “X” or left to right, and “Y” or the front to back direction



9637124

Description	Table Size (In.)	Height (In.)	Base Size (In.)	Table Travel (In.)	Weight (Lb.)	Item No.	Model No.
Cross Slide Angle Table	12 x 6	4-5/8	9 x 5	8 x 4	48	9637124	93-12

Milling Table

This table is a suitable accessory to many machine tools, especially by extending the scope of vertical drilling machines. Economy of time from quick, accurate positioning of workpieces provides quality finished products.

- ◆ Dovetailed slides have adjustable steel gibs to compensate for wear
- ◆ Hand wheel at each end of the table-top allows positioning from either side
- ◆ Dials are graduated in 0.001" increments
- ◆ Two longitudinal 14mm T-slots
- ◆ U-clamp set for clamping workpieces and vises to the table top



9649181

Description	Table Size (In.)	Height (In.)	Base Size (In.)	Table Travel (In.)	Weight (Lb.)	Item No.	Model No.
Milling Table	18-5/8 x 6	5-3/16	12 x 7-1/8	12 x 8	69	9649181	MT618

Positioning Tables

Rotary Indexing Table

Palmgren's rotary tables perform a variety of operations. They are very useful for cutting segments of circles, circular slots, cutting irregular-shaped slots as well as other similar operations. These tables permit accurate positioning of work under the machine spindle or for inspection and layout applications.

- ◆ Use in either the vertical or horizontal position
- ◆ The table top and the vertical and horizontal bases are ground for overall squareness
- ◆ Precision ground table top to 0.001" total indicator reading
- ◆ A 5/8" keyway and mounting lugs are provided on both the vertical and horizontal mounting surfaces
- ◆ Smooth worm gear drive provides positive rotary feed
- ◆ Balanced ball crank feed handle does not exceed below the base to eliminate interference with the machine table
- ◆ Rotary dial is graduated in 3 minute increments and 1 minute increments on the vernier



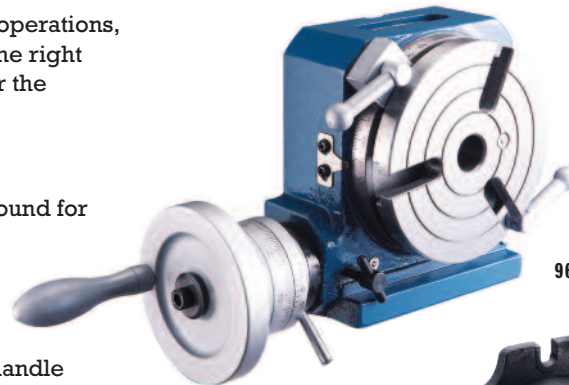
9634105

Description	Table Diameter (In.)	Height at 0° (In.)	Base (In.)	Gear Ratio (In.)	Weight (Lb.)	Item No.	Model No.
Rotary Indexing Table	8	3-7/8	12 x 9-1/2	40:1	44	9632806	862
Rotary Indexing Table	10	3-7/8	12 x 9-1/2	40:1	52	9634105	1062

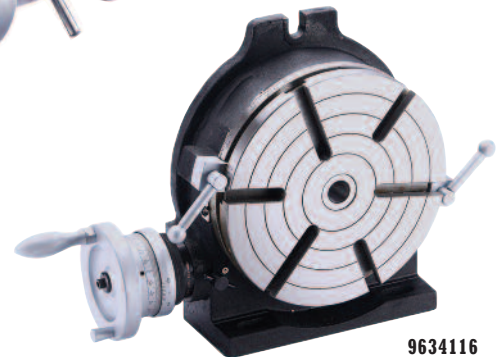
Horizontal / Vertical Heavy Duty Rotary Indexing Tables

For those more demanding circular cutting and positioning operations, Palmgren's heavy duty series of rotary indexing tables are the right choice. These tables permit rapid positioning of work under the machine spindle or for inspection and layout applications.

- ◆ Use in either the horizontal or vertical position
- ◆ Low profile dimensions
- ◆ The table top and the vertical and horizontal bases are ground for overall squareness
- ◆ Gear drive is immersed in oil
- ◆ Dual positive action locks
- ◆ Hardened and ground worm gear
- ◆ The work table is graduated a full 360° - One turn on the handle moves the table 4°
- ◆ The micro collar is graduated in steps of 1 minute on the dial and 10 down to 10 seconds on the vernier scale
- ◆ Flatness of clamping surface .0006" / Parallelism of clamping surface to base .0008" / Squareness of clamping surface to angle face .0008" / Squareness of clamping surface to center hole .0008"



9634114



9634116

Description	Table Diameter (In.)	Height at 0°	Base (In.)	Gear Ratio (In.)	Weight (Lb.)	Center Hole	Max Load Horizontal (Lb.)	Max. Load Vertical (Lb.)	Item No.
Heavy Duty Rotary Table	4	3.15	5.70 x 4.52	72 to 1	16.5	MT-2	80	40	9634114
Heavy Duty Rotary Table	6	3.15	7.87 x 6.30	90 to 1	29	MT-3	90	45	9634116
Heavy Duty Rotary Table	12	5.32	15.27 x 12.99	90 to 1	155	MT-4	265	132	9634118
Heavy Duty Rotary Table	16	6.1	16.69 x 16.93	90 to 1	280	MT-4	310	133	9634120

Positioning Table Accessories

Rapid Indexer

Palmgren's useful two directional rapid indexer is a good alternative to a machine vise for holding round, irregular or square parts for milling and drilling operations. It has a 3-jaw chuck fitted on the horizontal/vertical indexing base for accurate, secure clamping and rapid positioning.

- ◆ 5" self-centering 3-jaw chuck – with two sets of jaws
- ◆ Internal or external clamping
- ◆ Can be mounting either horizontally or vertically
- ◆ Table scale 1° for angular indexing
- ◆ Graduated 360° with 24 rapid notches at 15° each
- ◆ Locking handle
- ◆ Optional tailstock – Item number 9634214
- ◆ Optional dividing plate – item number 9634314



9634125

Description	Chuck Size (In.)	Number of Jaws	Table Bore (In.)	Clamping Range (In.)	Base Width & Length (In.)	Height Table to Jaws (In.)	Item No.
Rapid Indexer	5	3	1.181	0.118 to 4	6.340	5.590	9634125

Dividing Plates

Rapid indexing and positioning can be done with extreme precision through the use of these optional dividing plates.

9634314

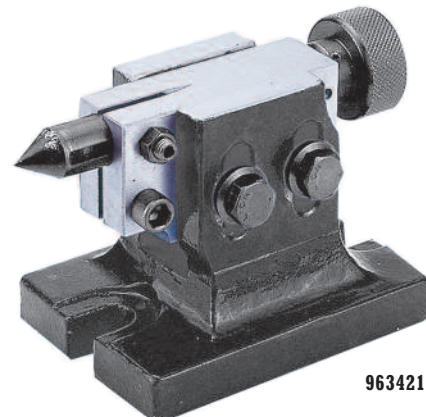
Description	Fits Diameter Table Size (In.)	Item No.
Dividing Plate Set	4" & 6"	9634314
Dividing Plate Set	8"	9634316
Dividing Plate Set	10", 12" & 16"	9634318

9634316

Tail Stock

An optional tailstock provides precision positioning on round work pieces for indexing, slotting and facing operations.

Description	Fits Diameter Table Size (In.)	Item No.
Tailstock	4" & 6"	9634214
Tailstock	8"	9634216
Tailstock	10" & 12"	9634218
Tailstock	16"	9634220



9634214

Positioning Tables

Cross Slide Rotary Tables

Palmgren's rotary cross slide tables have precise rotary, lateral and transverse feeds for rapid positioning of the workpiece. Bolted to a machine these tables increase your ability to mill, route, shape, cut slots and keyways, as well as grind. Intricate jobs become easy on metal, plastic, composites or wood.

- ◆ Accurately position work on the "X" and "Y" axis, as well as 360° table rotation
- ◆ Precision ground table top to 0.001" total indicator reading
- ◆ A 5/8" keyway and mounting lugs are provided for locating and accurate, secure mounting
- ◆ Smooth worm gear drive provides positive rotary feed
- ◆ Balanced ball crank feed handles do not exceed below the base to eliminate interference with the machine table
- ◆ 4" cross slide travel
- ◆ Cross slide dials are calibrated in 0.001" increments
- ◆ Rotary dials are graduated in 3 minute increments and 1 minute increment on the vernier



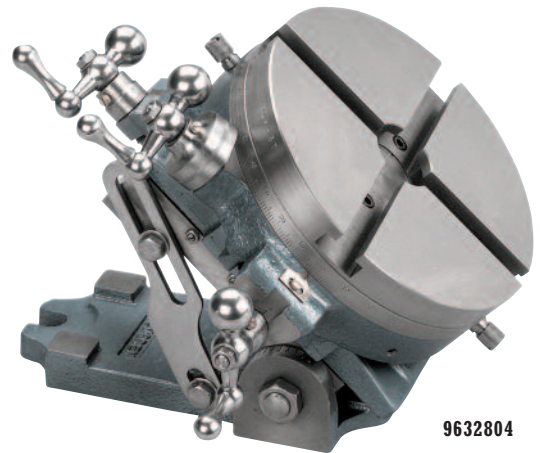
9632803

Description	Table Diameter (In.)	Height Overall (In.)	Top Grad. (In.)	Base Keyway (In.)	Gear Ratio	Table T-slots (In.)	Weight (Lb.)	Item No.	Model No.
Cross Slide Rotary Table	8	5-1/2	360°	5/8	40:1	5/8	40	9632803	83
Cross Slide Rotary Table	10	5-3/8	360°	5/8	40:1	5/8	52	9634102	183

Rotary Tilting Cross Slide Tables

These remarkably precise tilting rotary tables provide all the combinations of movements and positioning necessary to add increased versatility on drill presses, milling machines, surface grinders or a layout table. Rotary indexing, lateral and transverse cross feed and graduated angle settings all in one table.

- ◆ Accurately position work on the "X" and "Y" axis, as well as 360° table rotation
- ◆ Precision ground table top to 0.001" total indicator reading
- ◆ A 5/8" keyway and mounting lugs are provided for locating and accurate, secure mounting
- ◆ Smooth worm gear drive provides positive rotary feed
- ◆ Balanced ball crank feed handles do not exceed below the base to eliminate interference with the machine table
- ◆ 4" cross slide travel
- ◆ Cross slide dials are calibrated in 0.001" increments
- ◆ Rotary dials are graduated in 3 minute increments and 1 minute increment on the vernier
- ◆ Angular inclination from 0° horizontal to 90° vertical. Angular position is indicated in 1° increments and locked via 4 bolts and 2 side plates



9632804

Description	Table Diameter (In.)	Travel (X x Y) (In.)	Base (X x Y) (In.)	Height at 0° (In.)	Weight (Lb.)	Item No.	Model No.
Rotary Tilting Cross Slide Table	8	4 x 4	9 x 5	5	45	9632804	84
Rotary Tilting Cross Slide Table	10	4 x 4	9 x 5	5-3/4	54	9634103	184

Bench Vises

Common Vise Issues

Workholding vises used in the metalworking industry stand up to punishing day-to-day abuse, eventually leaving them worn, broken, cracked and in some cases, unsafe. - Two common problems may be affecting your workholding tools....

1) Spindle and cast nut threads wear, allowing the nut to become "egg-shaped". This ultimately accounts for the lost screw motion of the spindle turning before actually engaging the movable jaw. Another side effect of spindle wear is the phenomenon of the vise grip becoming loose as "play" in the spindle assembly allows the jaw to "back-off" under pressure. This may create hazards.

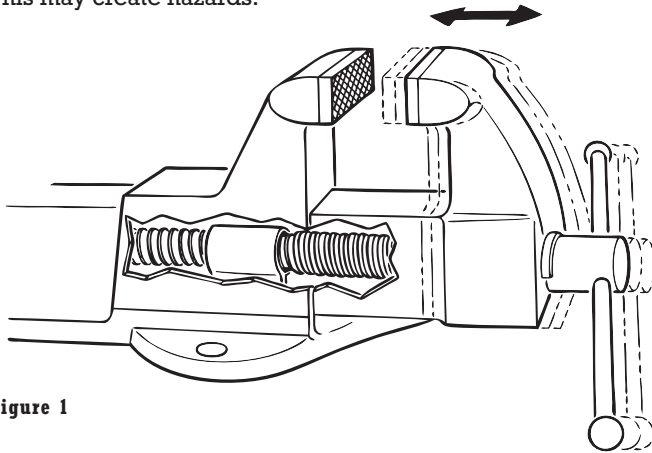


Figure 1

2) Some vise manufacturers sacrifice high quality tolerances on the slide bar and its fit in the vise's body/stationary jaw. A "wobble" effect in the moveable jaw is the result.

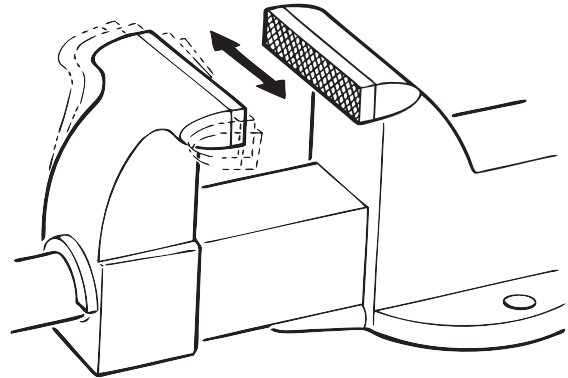


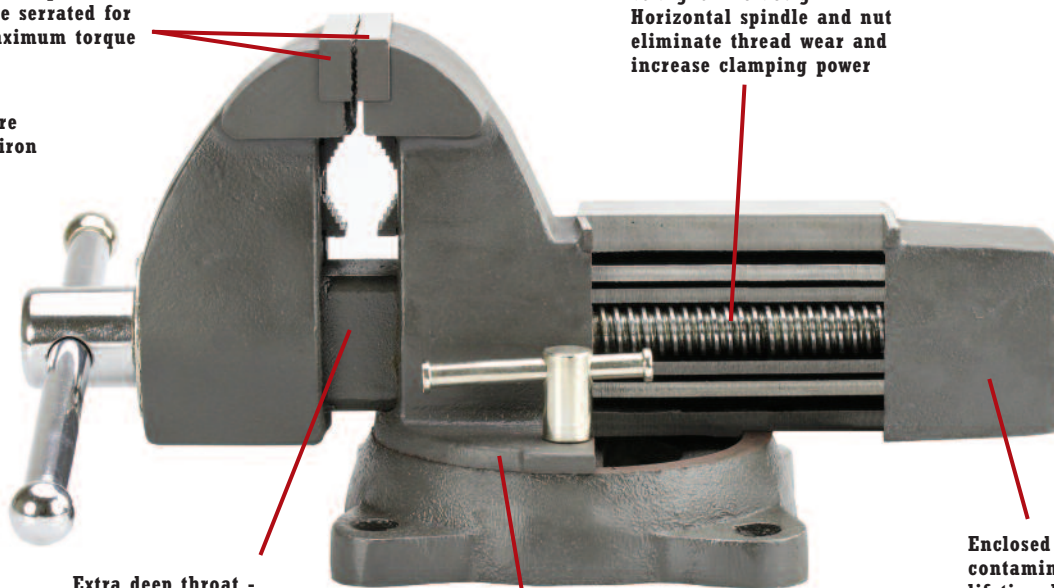
Figure 2

Palmgren's Superior Features

Hardened steel jaw - Replaceable inserts are machine serrated for safe grip under maximum torque

All casting parts are 65,000 PSI ductile iron

Straight line design - Horizontal spindle and nut eliminate thread wear and increase clamping power



Extra deep throat - Palmgren's design gives you more working room where it counts

Locking swivel base - 360° rotation enhanced by double lockdowns for non-slip holding

Enclosed design - Keeps contaminants out and lifetime lubrication provides smooth operation

Bench Vises

Combination Bench and Pipe Vise

Built different than conventional style vises, the Palmgren combination bench and pipe vises houses a super strong power tunnel with straight-line pull that assures a lifetime spindle and nut never to wear out. A precision fit of the slide bar eliminates side play and jaw wobble even when clamping with the jaws wide open. The vise spindle and nut are totally enclosed in a square tube casting that protects them from dust, chips and moisture, keeping them lubricated for life. The body is heavier and made of 65,000 psi ductile alloy stress parts. They're practically indestructible and are

- ◆ 65,000 PSI ductile castings
- ◆ Sealed construction
- ◆ Straight line pull power tunnel design
- ◆ Precision fit slide bar to 0.003"
- ◆ Replaceable serrated steel jaws
- ◆ Replaceable pipe jaws
- ◆ Large anvil
- ◆ 360° swivel base with dual lock downs
- ◆ LIFETIME WARRANTY

70% stronger than the competitive u-shaped styles. These vises have the throat depth to meet the toughest job requirements and come with both hardened and replaceable steel serrated jaws and pipe jaws. Reinforced large anvils are designed to handle additional non-clamping applications. A 360° swivel base with dual lock downs and 4 point mounting holes deliver secure, safe clamping. These vises are ideal for maintenance applications, tool and die shops, fabrication shops, automotive garages, tradesmen and construction sites. These vises can be used in indoor and outdoor applications.



9629746

Description	Jaw Width (In.)	Jaw Opening (In.)	Throat Depth (In.)	Pipe Jaw Capacities (In.)	Item No.	Model No.
4" Combo Bench and Pipe Vise	4	5	3-1/2	1/4 - 2	9629744	P744
5" Combo Bench and Pipe Vise	5	6	3-1/2	1/4 - 2-1/2	9629745	P745
6" Combo Bench and Pipe Vise	6	7	3-3/4	1/4 - 3-1/2	9629746	P746
8" Combo Bench and Pipe Vise	8	8-1/4	4-3/4	1/4 - 3-1/2	9629748	P748

Multi-Jaw Rotating Bench Vise

Probably the most versatile vise you will ever own.

- ◆ Vise swivels 360° on the base and locks in any position
- ◆ Made from FC25 fine grain cast iron
- ◆ The jaws rotates 360° and locks in any position
- ◆ Trapezoidal-thread lead screw
- ◆ Anvil on the vise provides a convenient work surface
- ◆ Replaceable hardened steel jaws
- ◆ Features parallel jaws, pipe jaws and V-jaws
- ◆ Bolt lugs on base for secure mounting



9629503

Description	Jaw Width (In.)	Max. Jaw Opening (In.)	Max. V-Jaw Opening (In.)	Throat Depth (In.)	Max. Pipe Jaw Capacity (In.)	Lead Jaw Type	Length (In.)	Height (In.)	Item No.	Model No.
Multi-Jaw Rotating Vise	5-1/8	4	4-1/2	3-1/2	3-1/2	Grooved	16-1/2	10-5/8	9629503	MJ50

Bench Vise Accessories

Pan and Box Brake Attachment

For box, pan and reverse bending of sheet metal applications.

- ◆ Designed for use with a bench vise the bending jaw lever handle delivers safe, easy movement
- ◆ The unit is equipped with easily removable fingers that permit angle, channel, box and other complex bending operations
- ◆ Use with any bench vise that has 4" / 5" / 6" / 8" wide jaws



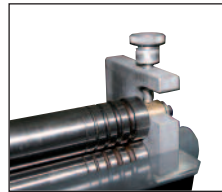
9629611

Description	Max. Material Width (In.)	Max. Sheet Thickness (In.)	Removable Finger Widths (In.)	Weight (Lb.)	Item No.	Model No.
Pan and Box Brake Attachment	12-1/2	1	5-7/8, 2-7/8, 2, 1	22	9629611	FP30

Slip Roll Attachment

Slip roll machine designed for use with a bench vise will roll sheet metal and wire.

- ◆ Three precision turned steel rollers are ground and polished
- ◆ Large adjusting screws and scales for positioning and lifting the rollers to adjust for material thickness
- ◆ Use with any bench vise that has 4" / 5" / 6" / 8" wide jaws



9629612

Description	Bending and Rolling of Wires (In.)	Max. Material Width (In.)	Bending Minimum (In.)	Bending Maximum (In.)	Weight (Lb.)	Item No.	Model No.
Slip Roll Attachment	1/32 to 3/16	12	1-3/8	Unlimited	22	9629612	BM3

Clamps

C-Clamps

Palmgren's high tech line of C-clamps gives you performance and features in C-clamps that count.

Built from state-of-the-art research, computer aided design, and new all steel spring tempered frame geometry – coupled with an advanced heat treating process creates C-clamps that provide a secure and accurate hold. Palmgren's all steel clamps are cost effective, versatile, durable and long lasting.

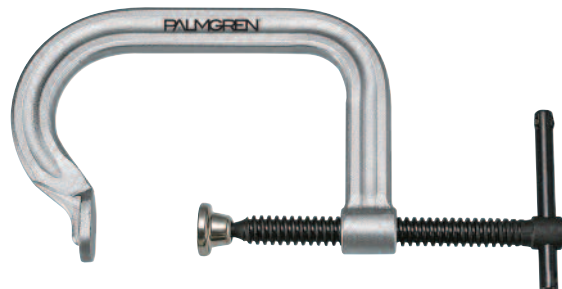
- ◆ High strength
- ◆ Lower weight
- ◆ Greater throat depth
- ◆ Lifetime guarantee against breakage



Regular Duty Square Throat C-Clamps

- ◆ Innovative spring tempered steel frames with square throat design. The clamp opening matches the throat depth.
- ◆ Black-oxide plated spindles that resist wear and tear while impeding rust
- ◆ Through hardened steel spindles provide greater loading capabilities and longer service life
- ◆ Bodies have a nickel and chrome plated finish
- ◆ Replaceable swivel pads

REGULAR DUTY - SQUARE THROAT / BLACK OXIDE SPINDLES					
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629133	0 - 3	3	3/4	2000	2
9629134	0 - 4	4	3/4	2200	3
9629136	0 - 6	6	3/4	3100	6
9629138	0 - 8	8	3/4	3300	9
9629140	0 - 10	10	3/4	3600	13



9629134

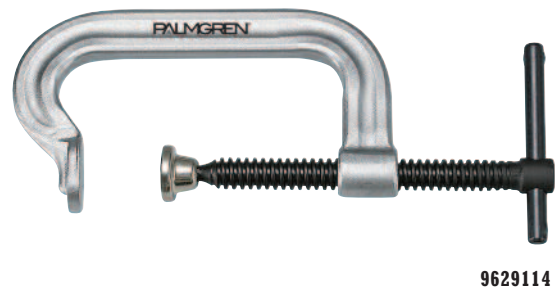


Clamps

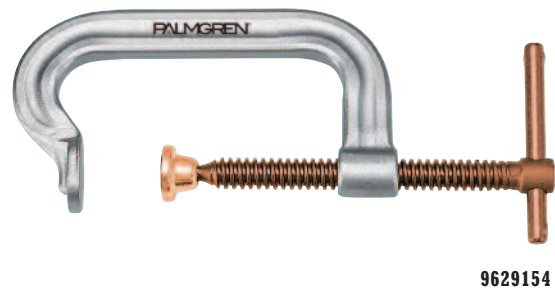
Regular Duty Deep Throat C-Clamps

- ♦ Innovative spring tempered steel frames with extra throat depth and high strength
- ♦ Both black-oxide or anti-splatter copper plated spindles that resist wear and tear while impeding rust
- ♦ Through hardened steel spindles provide greater loading capabilities and longer service life
- ♦ Bodies have a nickel and chrome plated finish
- ♦ Replaceable swivel pads

REGULAR DUTY - DEEP THROAT / BLACK OXIDE SPINDLES					
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629112	0 - 2	2	9/16	2200	1
9629113	0 - 3	2	9/16	2900	1.5
9629114	0 - 4	2-3/8	5/8	3300	2.5
9629116	0 - 6	3	3/4	4000	3.2
9629118	0 - 8	4	3/4	4900	5
9629120	0 - 10	4 - 1/2	7/8	8800	9
9629122	2 - 12	5	3/4	3600	7
9629124	2 - 14	6	7/8	4000	10.2
9629126	2 - 16	7	7/8	4400	14



REGULAR DUTY - DEEP THROAT / COPPER SPINDLES					
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629152	0 - 2	2	9/16	2200	1
9629153	0 - 3	2	9/16	2900	1.5
9629154	0 - 4	2-3/8	5/8	3300	2.5
9629156	0 - 6	3	3/4	4000	3.2
9629158	0 - 8	3-1/2	3/4	4900	5
9629160	0 - 10	4	7/8	8800	9
9629162	2 - 12	5	3/4	3600	7
9629164	2 - 14	6	7/8	4000	10.2
9629166	2 - 16	7	7/8	4400	14



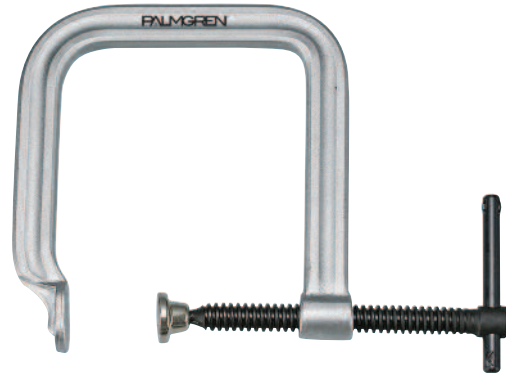
Clamps

Regular Duty Extra Deep Throat C-Clamps

- ◆ Innovative spring tempered steel frames with extra deep throats offering greater reach and flexibility
- ◆ Black-oxide plated spindles that resist wear and tear while impeding rust
- ◆ Through hardened steel spindles provide greater loading capabilities and longer service life
- ◆ Bodies have a nickel and chrome plated finish
- ◆ Replaceable swivel pads

REGULAR DUTY - EXTRA DEEP THROAT / BLACK OXIDE SPINDLES

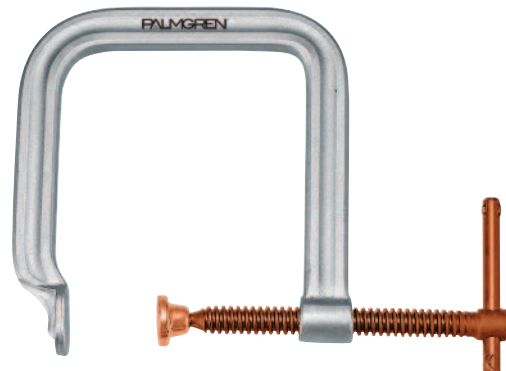
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629222	0 - 2	4	1/2	1350	1.5
9629223	0 - 3	5	9/16	1500	2
9629224	0 - 4	6-1/4	5/8	1600	3
9629226	0 - 6	9-7/8	3/4	1800	7
9629228	0 - 8	13-3/4	3/4	2000	12
9629230	0 - 10	15-3/4	7/8	2400	17



9629224

REGULAR DUTY - EXTRA DEEP THROAT / COPPER SPINDLES

Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629233	0 - 3	5	9/16	1500	2
9629234	0 - 4	6-1/4	5/8	1600	3
9629236	0 - 6	9-7/8	3/4	1800	7
9629238	0 - 8	13-3/4	3/4	2000	12
9629239	0 - 10	15-3/4	7/8	2400	17



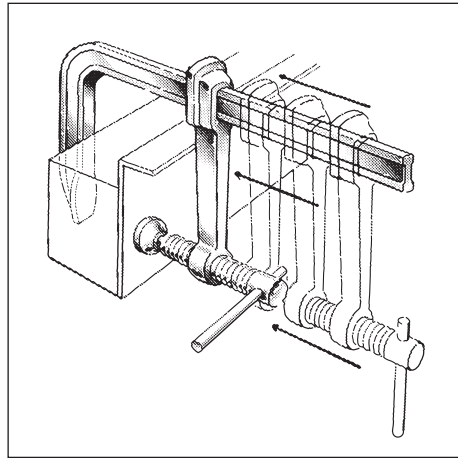
9629234



Clamps

L-Clamps

Palmgren's L-clamps save time, labor and increase productivity making them a perfect value. Just slide the clamping arm to the workpiece and tighten. When the job is complete simply loosen the spindle and slide the clamping arm back. L-clamps handle a wide variety of work sizes and shapes allowing you to clamp the workpiece quicker while using fewer clamps on each job.



Standard Duty L-Clamps

- ◆ Innovative spring tempered and hardened steel frames optimizes high static stress loadings
- ◆ Dropped forged sliding clamping arm for added strength and durability
- ◆ Through hardened steel spindles provide greater loading capabilities and longer service life
- ◆ Black-oxide plated spindles that resist wear while impeding rust
- ◆ Replaceable swivel pads
- ◆ One clamp accommodates a wide variety of sizes and shapes of workpieces
- ◆ Lifetime guarantee against breakage

REGULAR DUTY - EXTRA DEEP THROAT / BLACK OXIDE SPINDLES					
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629304	0 - 4	2-3/8	1/2	600	1
9629306	0 - 6	3-5/32	9/16	700	1.5
9629308	0 - 8	3-15/16	5/8	1000	2
9629310	0 - 10	3-15/16	5/8	1200	3
9629312	0 - 12	3-15/16	3/4	1200	4
9629316	0 - 16	3-15/16	3/4	1650	4.5



9629312

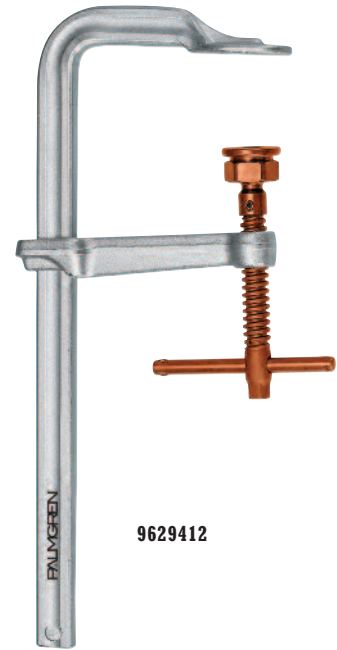


Clamps

Heavy Duty L-Clamps

- ◆ Innovative spring tempered and hardened steel frames optimizes high static stress loadings
- ◆ Dropped forged sliding clamping arm for added strength and durability
- ◆ Through hardened steel spindles provide greater loading capabilities and longer service life
- ◆ Anti-splatter copper plated spindles that resist wear while impeding rust
- ◆ Replaceable swivel pads
- ◆ One clamp accommodates a wide variety of sizes and shapes of workpieces
- ◆ Lifetime guarantee against breakage

HEAVY DUTY / COPPER SPINDLES					
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629408	0 - 8	4-3/4	3/4	2300	4.5
9629410	0 - 10	4-3/4	3/4	2300	5
9629412	0 - 12	4-3/4	3/4	2300	5
9629416	0 - 16	4-3/4	3/4	2300	5.5
9629420	0 - 20	4-3/4	3/4	2300	6
9629424	0 - 24	4-3/4	3/4	2300	6.5



9629412

Super Duty L-Clamps

- ◆ Innovative spring tempered and hardened steel frames optimizes high static stress loadings
- ◆ Dropped forged sliding clamping arm for added strength and durability
- ◆ Through hardened steel spindles provide greater loading capabilities and longer service life
- ◆ Anti-splatter copper plated spindles that resist wear while impeding rust
- ◆ Replaceable swivel pads
- ◆ One clamp accommodates a wide variety of sizes and shapes of workpieces
- ◆ Lifetime guarantee against breakage

SUPER DUTY / COPPER SPINDLES					
Item No.	Capacity (In.)	Throat Depth (In.)	Spindle Diameter (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629432	0 - 12	6-7/8	7/8	5000	12
9629434	0 - 16	6-7/8	7/8	5000	13.5
9629436	0 - 20	6-7/8	7/8	5000	15
9629438	0 - 24	6-7/8	7/8	5000	16



9629432



Clamps

Cantilever Clamps

Palmgren's cantilever clamps feature floating jaws that always stay parallel, making them ideal in tight spaces. These unique clamps are great for use on small projecting surfaces as well as confined spaces. The clamps will work on all types of materials and applications including inside clamping, clamping of unparallel parts or holding round or odd shaped parts securely.

- ◆ Pads supply 4 different holding surfaces
 - ✦ Smooth – for general purpose non-mar holding
 - ✦ Textured – for better gripping power between the pad and workpiece
 - ✦ V-Block – for clamping and holding round workpieces
 - ✦ X-Block – for clamping and holding angle iron and structural materials
- ◆ The 9629494 and 9629496 have a patented quick adjusting function that allows for rapid opening, closing and positioning of the jaws to the workpiece for faster, cost saving clamping.



PATENTED QUICK ADJUSTING FUNCTION ALLOWS FOR RAPID OPENING, CLOSING AND POSITIONING



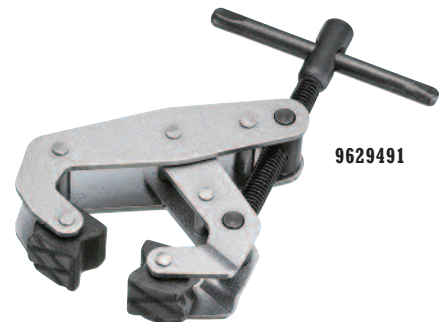
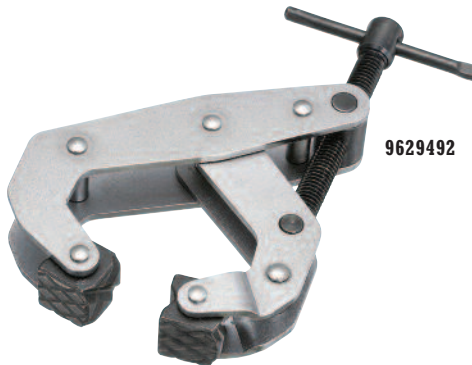
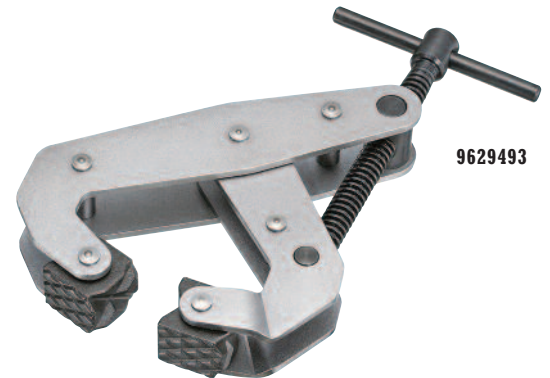
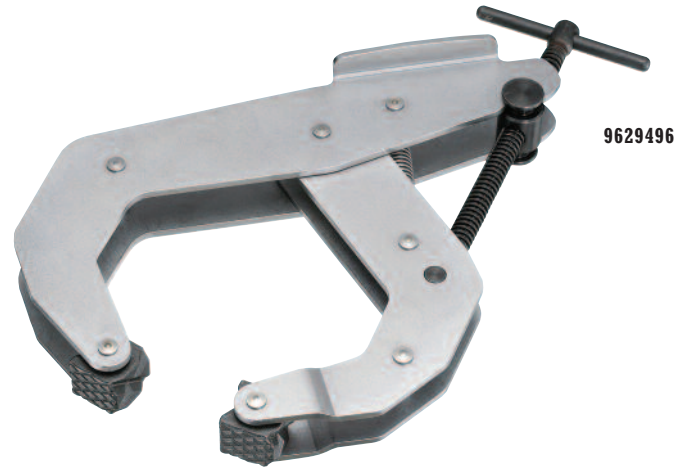
FOUR PADS FOR DIFFERENT HOLDING SURFACES



Clamps

Cantilever Clamps

- ◆ Provides the best features of C-clamps and parallel clamps
- ◆ The clamping handle is always outside the work area
- ◆ Body plates are made from Chrome-Molybdenum alloy steel
- ◆ Floating jaws always stay parallel to the workpiece
- ◆ Free floating jaws adjust to un-parallel surfaces
- ◆ Will not walk off-center when pressure is applied against the jaw because there is no unsupported screw or loose pad
- ◆ Black-oxide plated spindles resist wear and impede rust



CANTILEVER CLAMPS					
Item No.	Max. Jaw Opening (In.)	Throat Depth Opened (In.)	Throat Depth Closed (In.)	Clamp Pressure (Lb.)	Weight (Lb.)
9629491	1	.059	.787	300	.13
9629492	2	1.300	1.654	800	.55
9629493	3	1.378	1.929	1500	1.15
9629494	4.5	2.284	3.071	1700	1.80
9629496	6	4.331	5.039	2000	4.45



Pliers and Clamps

Automatic Pliers

- ♦ Automatically locks on any size without adjusting
- ♦ Grab thick grab thin without adjusting
- ♦ Easy squeeze release lever
- ♦ No slip texture grip
- ♦ LIMITED LIFETIME WARRANTY
- ♦ Package - Carded

Model #	Description	Jaw Opening	Throat Depth	Jaw Width
6" Automatic Pliers				
06100	Curved Jaw	1"	3/8"	3/8"
6" Automatic Pliers				
06105	Curved Jaw Soft Grip	1"	3/8"	3/8"
7" Automatic Pliers				
09300	Needle Nose	1 1/2"	2 1/4"	1/2"
7" Automatic Pliers				
09305	Needle Nose Soft Grip	1 1/2"	2 1/4"	1/2"
8" Automatic Pliers				
08100	Curved Jaw	1 3/4"	1 1/2"	1/2"
10" Automatic Pliers				
10100	Curved Jaw	2"	1 1/4"	1/2"
10" Automatic Pliers				
10105	Curved Jaw Soft Grip	2"	1 1/4"	1/2"
10" Automatic Pliers				
10110	Straight Jaw	2"	1 1/4"	3/4"



06100



06105



10100



09300



09305

Automatic Pliers Sets

Model # 80330 Package – Draw String Bag/Carded

4 pc. Automatic pliers set includes:
10" Curved Jaw (10100), 7" Needle Nose (09300),
6.5" (30600) & 9.5" (30900) Groove Pliers Dipped Handles

Model # 80305 Package – Carded

2 pc. Automatic pliers set includes:
10" Curved Jaw Soft Grip (10105) & 7" Needle Nose Soft Grip (09305)

Model # 80100 Package – Carded

3 pc. Automatic pliers set includes:
10" Curved Jaw (10100), 6" Curved Jaw (06100)
& 7" Needle Nose (09300)



80100



80305



Pliers and Clamps

Automatic Pliers Sets

Model # 80200

Package – Carded

2 pc. Automatic pliers set includes:

10" Curved Jaw (10100), 6" Curved Jaw (06100)

Model # 80300

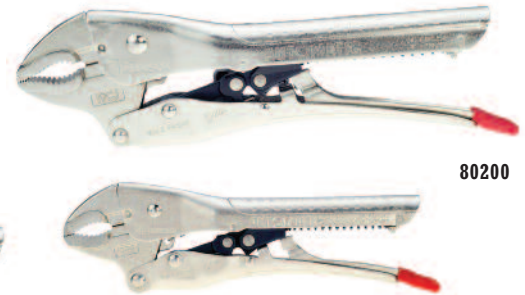
Package – Carded

2 pc. Automatic pliers set includes:

(10100) 10" Curved Jaw & (09300) 7" Needle Nose



80300



80200

Automatic Clamps

- ♦ Automatically locks on any size without adjusting
- ♦ No slip texture grip
- ♦ LIMITED LIFETIME WARRANTY
- ♦ Grab thick grab thin without adjusting
- ♦ Easy squeeze release lever
- ♦ Package - Carded

Model #	Description	Jaw Opening	Throat Depth	Jaw Width	Inside Clearance
7" Automatic Clamp					
06200	C-Clamp	2 1/2"	2 1/2"	1/4"	2 3/4"
7" Automatic Clamp					
06201	C-Clamp with Swivel Pads	2 1/2"	2 1/2"	3/4"	2 3/4"
7" Automatic Clamp					
06205	C-Clamp with Swivel pads Soft Grip	2 1/2"	2 1/2"	3/4"	2 3/4"
10" Automatic Clamp					
06206	Long Reach C-Clamp	4 1/2"	5"	1/4"	3 1/8"
10" Automatic Clamp					
06207	Long Reach C-Clamp with Swivel Pads	4 1/2"	5"	3/4"	3 1/8"
11" Automatic Clamp					
10200	C-Clamp	3 1/2"	3 3/4"	1/2"	4"
11" Automatic Clamp					
10201	C-Clamp with Swivel Pads	3 1/2"	3 3/4"	1"	4"
9" Automatic Clamp					
09500	Forked Jaw Welding Clamp	2 1/4"	2 3/4"	2 3/4"	—
19" Automatic Clamp					
18200	Long Reach C-Clamp	10"	11 1/4"	4 1/4"	4 1/4"
19" Automatic Clamp					
18201	Long Reach C-Clamp with Swivel Pads	9 3/4"	11 1/4"	1/2"	4 1/4"



06200



06201



06205



09500



Pliers and Clamps

C-Clamp Sets

Model # 80110 Package – Draw String Bag/Carded

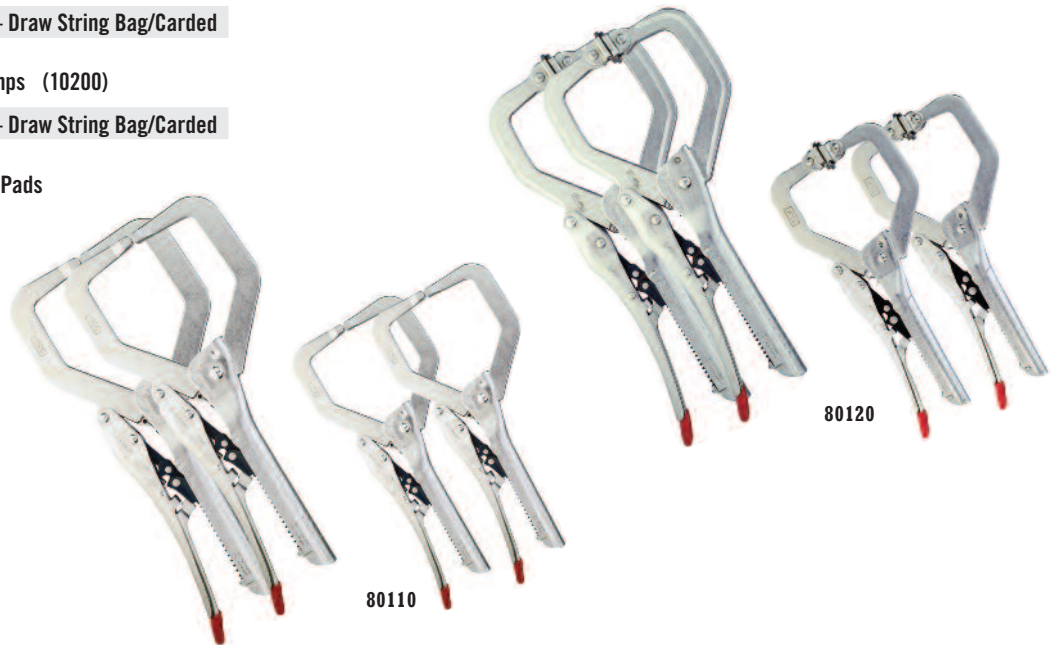
4 pc. C-Clamp set includes:

[2] (06200) 7" C-Clamps & [2] 11" C-Clamps (10200)

Model # 80120 Package – Draw String Bag/Carded

4 pc. C-Clamp set includes:

[2] 7" (06201) & [2] 11" (10201) w/Swivel Pads



Manual Pliers

10" Curved Jaw Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
71050	2"	1 1/2"	1/2"	Clam Shell

7" Curved Jaw Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70750	1 3/4"	1 1/4"	1/2"	Clam Shell

5" Curved Jaw Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70550	1 1/4"	1 1/4"	3/8"	Clam Shell

10" Straight Jaw Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
71000	1 3/4"	1 1/4"	5/8"	Clam Shell

7" Straight Jaw Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70700	1 1/2"	1 1/4"	1/2"	Clam Shell

9" Long Nose Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70950	2 3/4"	2 1/2"	3/8"	Clam Shell

6" Long Nose Locking Pliers

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70650	2"	2"	3/8"	Clam Shell



70550



70700



70650



Pliers and Clamps

Manual Pliers and Clamps

- ◆ Meets all ASME product specifications
- ◆ Constructed for quality, strength, and durability
- ◆ Durable nickel plate finish
- ◆ LIMITED LIFETIME WARRANTY

11" Locking C-Clamp

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
71100	3 1/2"	3 1/4"	1/2"	Clam Shell

6" Locking C-Clamp

Model #	Jaw Opening	Throat Depth	Jaw Width	Inside Clearance	Package
70600	2"	1 3/4"	2 3/8"	2 3/8"	Clam Shell

11" Locking C-Clamp w/pads

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
71120	3 1/2"	3 1/4"	1 1/4"	Clam Shell

6" Locking C-Clamp w/pads

Model #	Jaw Opening	Throat Depth	Jaw Width	Inside Clearance	Package
70620	1 3/4"	1 3/4"	3/4"	2 3/8"	Clam Shell

8" Locking Sheet Metal Clamp

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70800	1 1/2"	1 3/4"	3"	Clam Shell

9" Locking Welding Clamp

Model #	Jaw Opening	Throat Depth	Jaw Width	Package
70900	2"	2 1/2"	2 3/4"	Clam Shell

20" Locking Chain Clamp

Model #	Jaw Opening	Max Pipe Size	Package
72000	20"	5	Clam Shell

18" Locking C-Clamp

Model #	Jaw Opening	Throat Depth	Jaw Width	Inside Clearance	Package
71800	8"	10"	1/2"	4"	Carded

18" Locking C-Clamp w/pads

Model #	Jaw Opening	Throat Depth	Jaw Width	Inside Clearance	Package
71825	8"	10"	1 1/4"	4"	Carded



71100



70620



70800



70900



72000



Presses

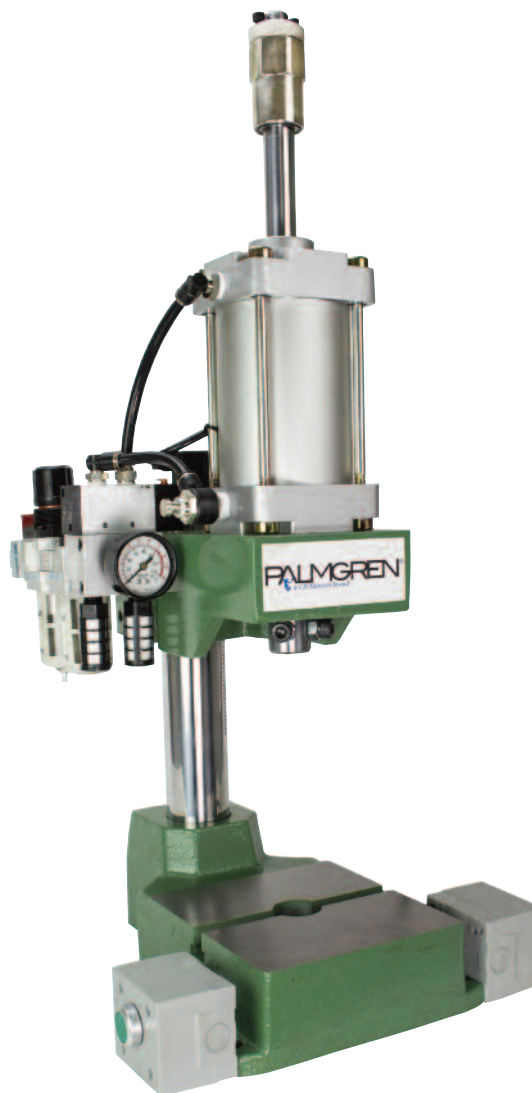
Air Operated Bench Press

Air operated bench presses offer economy and efficiency for pressing operations in assembly lines for transforming, joining and other assembly operations that require forces from a few pounds to tons of force.

They reduce the cost of both implementation and actual production in your assembly and pressing operations. These small compact presses are ideal when precision matters for your crimping, bending, forming, pressing, swaging, riveting and burnishing or any other task that may require the use of small pneumatic presses for your production floor.

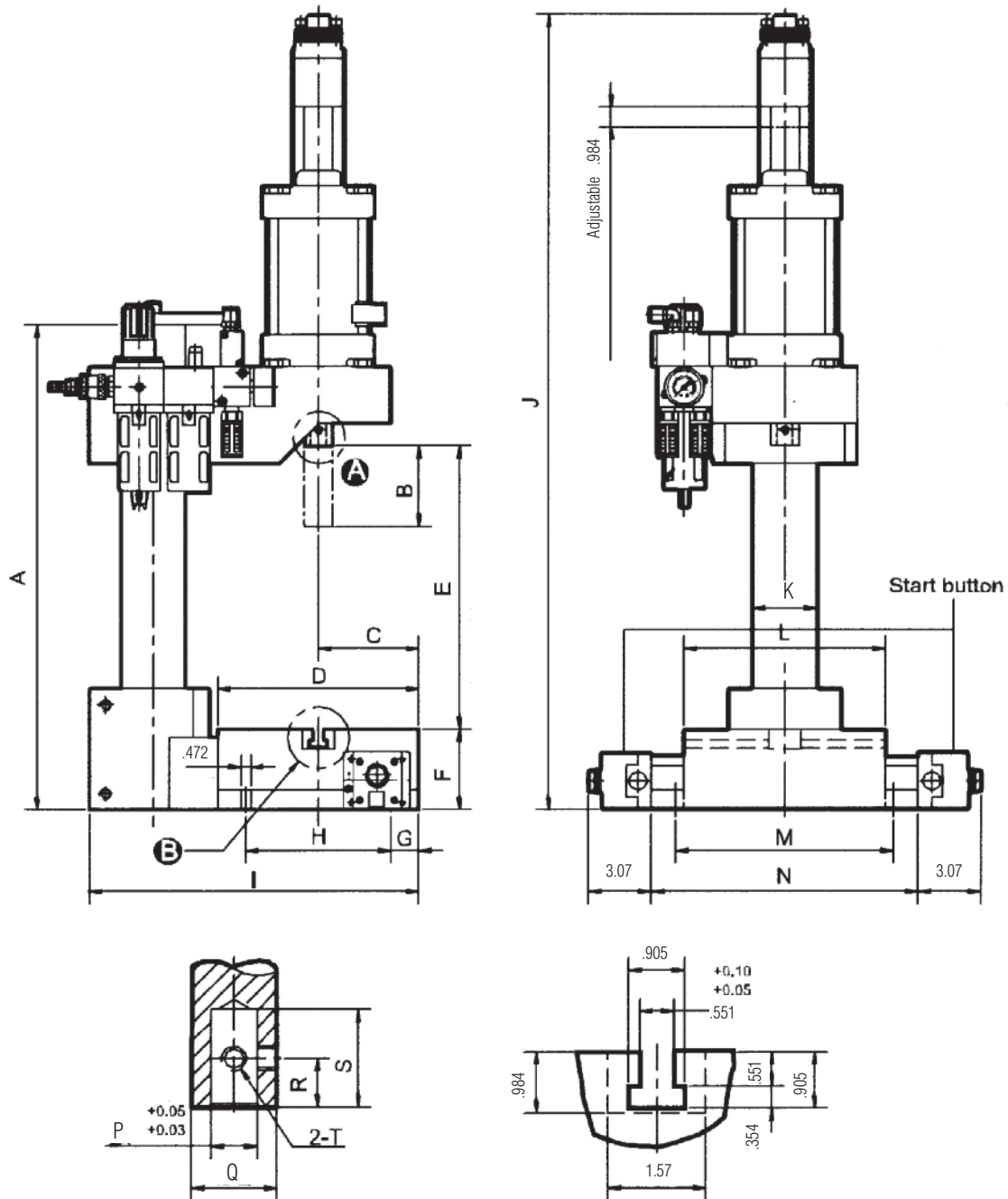
Standard Features:

- ◆ Easy hook-up — just attach to your shop air supply
- ◆ Heavy duty cast iron frame and t-slotted base ensure precision work
- ◆ Non-rotating double acting ram eliminates guide pins on most tooling
- ◆ Chrome plated piston rod resists rust and ensures long operating life
- ◆ Polyurethane rod wiper protects cylinders from dust and contaminants
- ◆ Air filter / regulator ensures clean and continuous air flow to press
- ◆ Easily adjusted ram speed, pressure and stroke allow accurate control of ram movement
- ◆ Easy change over to different tool and part heights via height adjustment crank
- ◆ Pre-drilled and counterbored hole in end of ram with two locking screws for easy and secure tool mounting
- ◆ Two hand safety circuitry — equipped with dual-palm push start buttons that require both to be engaged before the ram will move and cannot be mechanically by-passed



Item No.	RAM Travel/ Max. (In.)	Max. Work Height (In.)	Table Area (In.)	Cylinder Bore (In.)	Cylinder Stroke/max. (In.)	Adjustable Cylinder Stroke (In.)	Operating Pressure (PSI)	Theoretical Output (in lbs.) at:			
								57 PSI	71 PSI	85 PSI	100 PSI
9661600	6.299	7.874	5.905 x 5.905	2.480	2.953	0.984	57-100	247	309	371	433
9661602	6.299	7.874	7.087 x 7.874	3.937	3.937	0.984	57-100	649	811	974	1136
9661604	7.087	13.78	9.843 x 9.843	5.905	3.937	0.984	57-100	1479	1848	2218	2588

Presses



Air Operated Bench Press Dimensional Specifications

Item No.	A	B	C	D	E	F	G	H	I	J (Max.)	K	L	M	N	P	Q	R	S	T (Max.)
9661600	14.17	2.95	3.15	5.90	7.87-4.92	3.15	1.38	3.15	9.05	23.62	1.58	5.90	6.38	7.48	0.630	0.984	0.590	1.18	.50
9661602	15.75	3.94	3.94	7.87	7.87-3.94	3.15	0.984	5.90	13.58	30.70	2.36	7.09	8.27	9.05	0.630	1.18	0.787	1.58	.50
9661604	23.62	3.94	4.92	9.84	13.78-9.84	3.94	1.38	7.09	16.14	39.21	3.15	9.84	10.63	12.99	0.984	1.58	0.787	1.58	.50

Presses

Air Over Hydraulic "C" Frame Bench Press

For high speed, low cost operation our C frame presses are compact, affordable and fully self-contained benchtop gap framed presses. They are suitable for applications that require a uniform pressing load throughout the stroke making them the ideal choice to handle a wide variety of operations as assembly presses, blanking presses, coining presses, forming presses, punching presses, riveting or staking presses. Heavy duty frame construction that resists deflection and maintain better parallelism than most other designs.

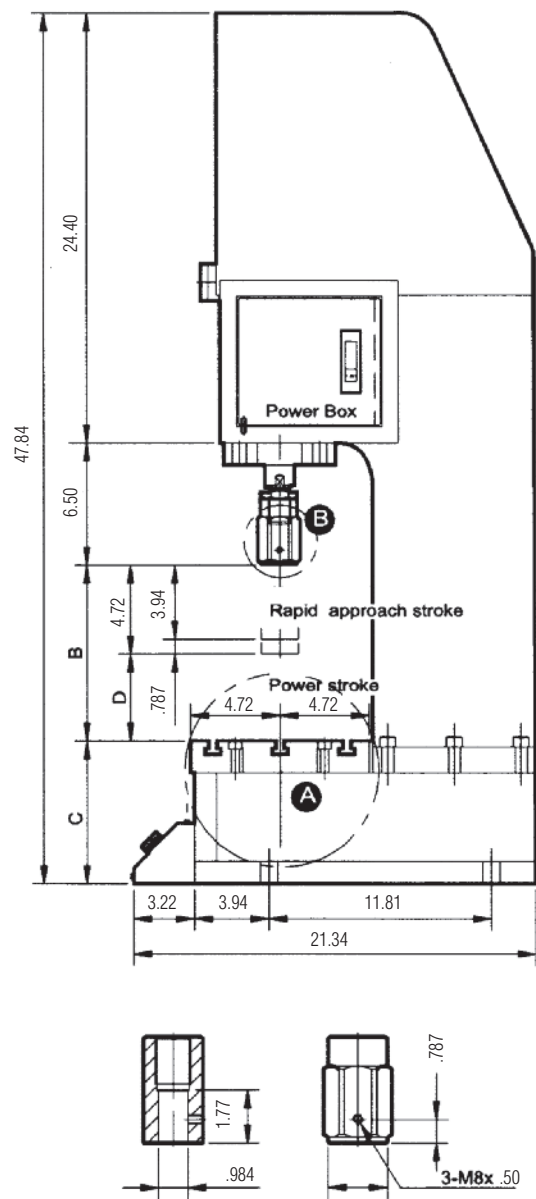
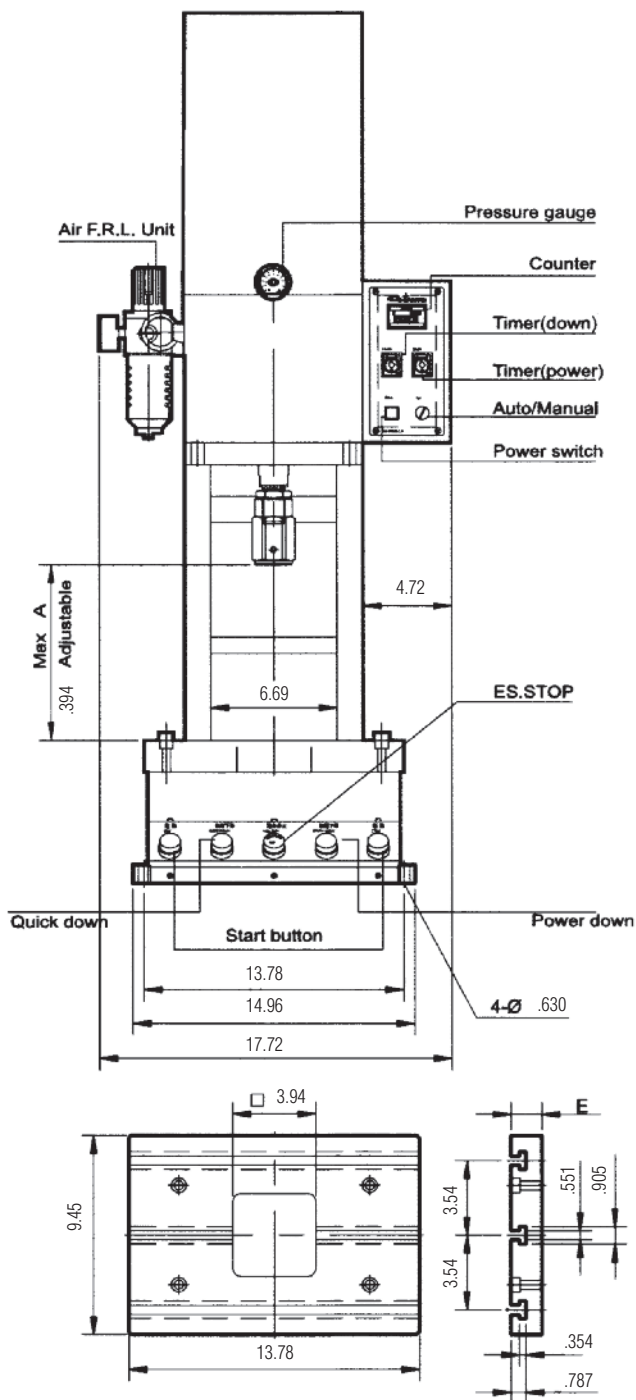
Standard Features:

- ◆ Heavy duty cast iron frame ensures precision work
- ◆ Frame design optimizes strength plus provides a smaller foot print while delivering a larger work area making it ideal for production line applications
- ◆ Open frame allows unlimited part length both front to rear and side to side
- ◆ Ground t-slotted cast iron table makes the mounting of fixtures quick and easy
- ◆ Hydro-Pneumatic operation ideal for short, medium or high production applications
- ◆ Front mounted pressure gauge
- ◆ Remote pressure adjustment easily sets maximum pressure desired
- ◆ A two post guided tool plate to simplify your tooling connection and to support the ram ensuring accuracy and a stable ram movement
- ◆ Manual ram operation — rapid approach, power or pressing stroke, ram return all adjustable permitting accurate control of ram movement
- ◆ Standard ram end utilizes coupler with bored hole and two locking screws for easy and secure tool mounting
- ◆ Resettable parts counter
- ◆ Electric timer to automate the interval between the ram's power stroke and return stroke for production applications
- ◆ Two hand safety circuitry — equipped with dual push start buttons that require both to be engaged before the ram will move and cannot be mechanically by-passed



Item No.	Max. Work Height (In.)	Rapid Approach Stroke (In.)	Power Stroke (In.)	Stroke Cycles/Minute	Table Area (In.)	Power for Counter & Electric Auto Cycle	Operating Pressure (PSI)	Theoretical Output (in lbs.) at:			
								57 PSI	71 PSI	85 PSI	100 PSI
9661606	9.645	1.969–3.937	0.182–.0787	20	9.45 x 13.78	110/220V	57–100	5660	7089	8489	9900
9661608	9.45	1.969–3.937	0.182–.0787	20	9.45 x 13.78	110/220V	57–100	13,825	17,287	20,727	24,188

Presses



Air Over Hydraulic "C" Frame Bench Press Dimensional Specifications

Item No.	A	B	C	D	E
9661606	9.65	9.25-9.65	7.28	4.92	1.38
9661608	9.45	9.05-9.45	7.60	4.72	1.69

Arbor Presses

Arbor Presses

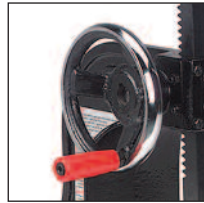
Delivers the heavy force needed for riveting, squeezing, punching, bending, and other pressing applications. Removable machined steel anvil provides accurate work support in four slot positions. Depth stop securely clamps to the ram and withstands full pressure. A lockable fine adjustment adjusting screw accurately limits the depth of the ram stroke.

Punches or tools may be added to the end of the ram with the aid of a magnetic insert. The ram is reversible with one end solid and the other end with a hole and magnet to hold bits and tools.

- ◆ Sturdy, cast-iron construction
- ◆ Rugged steel ram is driven by a machined pinion
- ◆ Base drilled for mounting on a bench or pedestal
- ◆ Includes three piece bit set - 1 pointed, 1 round and 1 square end bit, and a removable steel anvil
- ◆ The base is machine to hold the three bit set



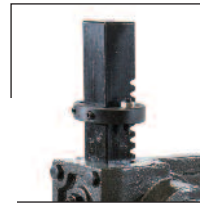
9661101



9661101 is equipped with a handwheel to perform light and quick press work



Three piece bit set standard on all Arbor Presses



Depth Stop standard on all Arbor Presses



9661301



9661051



9661201



9661401

Model Number	Force (Ton)	Lever Ratio	Swing (In.)	Anvil Diameter (In.)	Maximum Work Height (In.)	Ram Dimensions (In.)	Height (In.)	Base Dimensions (In.)	Weight (Lb.)
9661051	0.5	18.1:1	6-1/2	3-1/2	4-5/8	3/4 x 3/4	9-1/4	5-1/8 x 9-5/16	19
9661101	1.0	18.0:1	8	4-7/16	6	1 x 1	11	6-1/8 x 10-9/16	34
9661201	2.0	19.0:1	10-3/8	6-3/4	7-7/8	1-1/4 x 1-1/4	15-1/8	8 x 16	70
9661301	3.0	16.9:1	11-3/4	6-3/4	12-1/2	1-1/2 x 1-1/2	21-1/2	9-1/2 x 17-3/4	135
9661401	4.0	25.7:1	16-7/8	9-3/4	15-3/8	1-3/4 x 1-3/4	27-1/8	10-3/4 x 21	207

Arbor Press and Stand

Ratcheting Arbor Press

Allows the operator to maintain the arm in the optimal leverage position with consistent application of force. In addition, it has more clearance over the table for broaching or pressing large items. It is counterweighted for rapid handle return and has a quick ram advance via the press's side-mounted handwheel.

Delivers the heavy force needed for riveting, squeezing, punching, bending, and other pressing applications. Removable machined steel anvil provides accurate work support in four slot positions. A lockable fine adjustment adjusting screw accurately limits the depth of the ram stroke.

Punches or tools may be added to the end of the ram with the aid of a magnetic insert. The ram is reversible with one end solid and the other end with a hole and magnet to hold bits and tools.

- ◆ Sturdy, cast-iron construction
- ◆ Rugged steel ram is driven by a machined pinion
- ◆ Base drilled for mounting on a bench or pedestal
- ◆ Includes three piece bit set - 1 pointed, 1 round and 1 square end bit, and a removable steel anvil
- ◆ The base is machine to hold the three bit set



Item Number	Force (Ton)	Lever Ratio	Swing (In.)	Anvil Diameter (In.)	Maximum Work Height (In.)	Ram Dimensions (In.)	Height (In.)	Base Dimensions (In.)	Weight (Lb.)
9661302	3.0	38.6:1	13-3/4	8	17-3/4	1-1/4 x 1-1/4	27-3/4	10 x 21-3/8	230

Arbor Press Stand

The Palmgren Arbor Press #70 I 03 Arbor Press Stand provides a sturdy base and optimal height for easy operation. It has a slot on the top for pieces which need to extend below the base of the press table.

- ◆ Stand comes with built-in cup for catching expressed pieces
- ◆ Base and top are cast iron with a body of welded steel
- ◆ Fits all 2, 3 and 4 ton presses



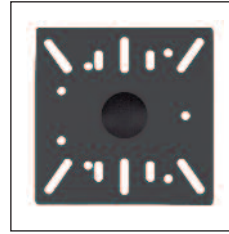
Description	Top Dimension (In.)	Base Dimension (In.)	Height (In.)	Weight (Lb.)	Item No.
Arbor Press Stand	11-3/4 x 21-15/16	11-15/16 x 22-3/16	36	88	9670103

Stands

Bench Tool Stand

The Palmgren Bench Tool Stand is designed to accommodate 6", 7", 8", and 10" bench grinders and bench buffers, and 1", 2" and 4" belt grinders.

- ◆ Base and top are made of heavy-duty cast iron
- ◆ Adjustable steel column is 3-1/2" diameter
- ◆ Built-in water pot provides quenching for workpiece
- ◆ Unique design allows mounting with 4 bolts



Top viewed from above



9670101

Description	Diameter (In.)	Table Size (In.)	Height (In.)	Base Size (In.)	Weight (Lb.)	Item No.	Model No.
Bench Tool Stand	3-1/2	10 x 11	31-3/4	15 x 16-1/2	59	9670101	GS32

Material Support Stands

The Palmgren material support stands are made of heavy duty cast iron and steel for handling heavy loads of stock up to 2,000 pounds. A clamping mechanism on the column allows for quick and easy height adjustments. Locking screws provide added safety.

9670141 Stand comes with a Horizontal Head. 9670181 Stand comes with a V-Roller Head. Replacement heads are available and are interchangeable.

The Horizontal Head has two chrome-plated, 2 x 14" ball bearing roller heads and is designed to smoothly move up to 2,000 pounds of flat stock.

The V-Roller Head has two chrome-plated, 2 x 5" ball bearing roller heads and is designed to smoothly move up to 2,000 pounds of round stock 1" to 18" in diameter.



9670182 Interchangeable Horizontal Head. Pedestal not included.



9670183 Interchangeable V-Roller Head. Pedestal not included.



9670141



9670181

Description	Weight Holding Capacity (Lb.)	Length of Horizontal Roller (In.)	Minimum Stock Dia. (In.)	Maximum Stock Dia. (In.)	Height Range (In.)	Base Size (In.)	Weight (Lb.)	Item No.	Model No.
Stand w/ Horizontal Head	2,000	14	—	—	23 - 38-1/2	15 x 16-1/2	47	9670141	MSH14
Stand w/ Vertical Head	2,000	5	1	18	23 - 38-1/2	15 x 16-1/2	47	9670181	MSV18
Horizontal Head Only	2,000	14	—	—	—	—	15	9670182	MHR14
V-Roller Head Only	2,000	5	1	18	—	—	15	9670183	MVR18

Palmgren Machines

Discover more and make Palmgren your brand of choice

Palmgren offers you a wide selection of innovative, high quality machines designed to meet the broad needs of the metalworking market. Preferred by machinists and professionals, these are the machines to make your operations more productive and profitable.

Abrasive Finishing Machines

Palmgren offers a full range of multi-purpose abrasive grinding, sanding, deburring, chamfering and finishing machines. Versatility is a major advantage as most machines can be used for heavy stock removal to finishing operations. Our product offering includes bench grinders, buffers, belt grinders, disc finishing machines and combination belt and disc machines.

Sawing Machines

Palmgren has the right saw for any job and budget. We offer horizontal, miter and vertical models all engineered to deliver the highest productivity and accuracy at the lowest cost per cut. Multiple models to choose from that provide problem-free performance year after year.

Tapping

Palmgren's revolutionary parallel arm tapping machines make tapping fast and easy. You get better efficiency, higher quality threads and increased productivity by 30% to 40% over conventional tapping methods. With the added use of our adjustable clutch, quick change tap holders' broken taps are a thing of the past.

Drilling Machines

When it comes to hole making Palmgren offers you full selection of drilling machines that are built to perform all your drilling and hole finishing operations. You get more power, greater accuracy and wider speed ranges to handle a wide range of maintenance and production drilling applications.

Lathes

We specialize in small bench top engine lathes built and inspected to the DIN 8606 toolmakers precision lathe standard assuring accuracy and superior performance. Palmgren's lathes can be used for all your external and internal cylindrical machining processes.

Milling Machines

Palmgren's line up of milling machines deliver the precision, power and versatility to handle a wide range of machining operations normally performed by much larger and more expensive milling machines. These versatile all-purpose mills are ideal for a variety of operations including milling, boring, drilling, tapping and angle applications. We offer a range of machines from Mill/Drills to gear head variable speed vertical and horizontal spindle models.



Finishing

POWERGRIND & POWERGRIND-XP bench grinders are built with high quality motors for heavy duty use and long duty cycles. Our stated horsepower is actual sustained horsepower under 100% loads. Designed to do more, Palmgren bench grinders under full load provides you with 4 to 7 times longer duty cycles and 8 times less speed degradation than all other competitors.

6" Heavy Duty Bench Grinders

POWERGRIND™

Palmgren's line up of industrial grade bench grinders provide smooth, quiet power for all grinding, cleaning, deburring, chamfering and sharpening jobs. Designed to handle heavy stock removal to finishing applications these powerful units are built for continuous, efficient use all day, every day.

- ◆ Heavy duty capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground easily
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Large adjustable tool rests for safe, efficient tilt and angle grinding
- ◆ Adjustable safety eye shields, and spark guards easily positioned with hurricane bolts
- ◆ Exclusive single port dust collection system, on selected models
- ◆ Maximum performance, accuracy and value
- ◆ CSA approved OSHA compliant
- ◆ 9682061 comes with wheel guards with no dust collection ports
- ◆ 9682062 comes with wheel guards with dust collection ports
- ◆ 9682064 variable speed model with wheel guards and dust collection ports. Variable speed model is the right choice for all your sharpening applications.



9682061



9682062



9682064

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
6" Grinder	6	No	3/4	1/2	—	14-1/4	18-1/2	10	1/3	115/230	1	3450	3.5/1.75	9682061
6" Grinder	6	Yes	3/4	1/2	2-1/2	14-7/8	19-1/4	10-1/2	1/3	115/230	1	3450	3.5/1.75	9682062
6" Grinder	6	Yes	3/4	1/2	2-1/2	14-7/8	19-1/4	10-1/2	1/3	115	1	2000-3300	3.5	9682064

See page 46 for tool stands and accessories.

Finishing

7" Heavy Duty Bench Grinder

POWERGRIND™

Palmgren's line up of industrial grade bench grinders provide smooth, quiet power for all grinding, cleaning, deburring, chamfering and sharpening jobs. Designed to handle heavy stock removal to finishing applications these powerful units are built for continuous, efficient use all day, every day.

- ♦ Heavy duty capacitor motors that supply the extra current required during the start-up and operation under load
- ♦ Extended wheel-to-wheel clearance which allows longer items to be ground easily
- ♦ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ♦ Large adjustable tool rests for safe, efficient tilt and angle grinding
- ♦ Adjustable safety eye shields, and spark guards easily positioned with hurricane bolts
- ♦ Exclusive single port dust collection system
- ♦ Maximum performance, accuracy and value
- ♦ CSA approved OSHA compliant



9682071

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
7" Grinder	7	Yes	1	5/8	2-1/2	16-1/2	21	13	1/2	120/240	1	3450	5.0/2.5	9682071

See page 46 for tool stands and accessories.

8" Heavy Duty Bench Grinders

POWERGRIND™

Palmgren's line up of industrial grade bench grinders provide smooth, quiet power for all grinding, cleaning, deburring, chamfering and sharpening jobs. Designed to handle heavy stock removal to finishing applications these powerful units are built for continuous, efficient use all day, every day.

- ♦ Heavy duty capacitor motors that supply the extra current required during the start-up and operation under load
- ♦ Extended wheel-to-wheel clearance which allows longer items to be ground easily
- ♦ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ♦ Large adjustable tool rests for safe, efficient tilt and angle grinding
- ♦ Adjustable safety eye shields, and spark guards easily positioned with hurricane bolts
- ♦ Exclusive single port dust collection system
- ♦ Maximum performance, accuracy and value
- ♦ CSA approved OSHA compliant



9682081

9682082

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
8" Grinder	8	Yes	1	5/8	2-1/2	16-1/2	21	13	3/4	120/240	1	3450	7.0/3.5	9682081
8" Grinder	8	Yes	1	5/8	2-1/2	16-1/2	21	13	3/4	220/440	3	3450	2.2/1.1	9682082

See page 46 for tool stands and accessories.

Finishing

10" Heavy Duty Bench Grinders

POWERGRIND™

Palmgren's line up of industrial grade bench grinders provide smooth, quiet power for all grinding, cleaning, deburring, chamfering and sharpening jobs. Designed to handle heavy stock removal to finishing applications these powerful units are built for continuous, efficient use all day, every day.

- ◆ Heavy duty capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground easily
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Large adjustable tool rests for safe, efficient tilt and angle grinding
- ◆ Adjustable safety eye shields, and spark guards easily positioned with hurricane bolts
- ◆ Exclusive single port dust collection system
- ◆ Maximum performance, accuracy and value
- ◆ CSA approved OSHA compliant



9682101
9682102

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
10" Grinder	10	Yes	1	1	2-1/2	20	24	16	1	115/230	1	1725	10.0/5.0	9682101
10" Grinder	10	Yes	1	1	2-1/2	20	24	16	1	220/440	3	1725	3.3/1.7	9682102

See page 46 for tool stands and accessories.

12" Heavy Duty Bench Grinder

POWERGRIND™

Palmgren's line up of industrial grade bench grinders provide smooth, quiet power for all grinding, cleaning, deburring, chamfering and sharpening jobs. Designed to handle heavy stock removal to finishing applications these powerful units are built for continuous, efficient use all day, every day.

- ◆ Heavy duty capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground easily
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Large adjustable tool rests for safe, efficient tilt and angle grinding
- ◆ Adjustable safety eye shields, and spark guards easily positioned with hurricane bolts
- ◆ Exclusive single port dust collection system
- ◆ Maximum performance, accuracy and value
- ◆ CSA approved OSHA compliant
- ◆ 12" model comes standard with pedestal floor stand



9682121

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
12" Grinder	12	Yes	2	1-1/4	2-1/2	21-3/4	23	50-1/2	2	220	1	1725	10.0	9682121

Finishing

6" POWERGRIND-XP

Palmgren's POWERGRIND-XP are the next generation in bench grinders. They provide more horsepower, torque and value added features delivering high productivity grinding solutions. A cut above the rest POWERGRIND-XP industrial grade bench grinders provide smooth, quite power for all your bench top grinding and finishing needs.

- ◆ Industrial grade capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground and finished easily
- ◆ Large adjustable tool rests easily adjusted with hurricane bolts for safe, accurate grinding
- ◆ Comes with three tool rests – (2) standard flat top and (1) v-grooved top for sharpening drill bits with 118° drill point angle
- ◆ 36 and 120 grit grinding wheels
- ◆ Exclusive single port dust collection system with coated steel hose



V-grooved tool rest



Single port dust collection

POWERGRIND-XP™

- ◆ Adjustable spark guards and safety eye shields – easily positioned with hurricane bolts
- ◆ Exceptional value and performance
- ◆ CSA/US approved and OSHA compliant
- ◆ Comes standard with wheel dresser



9682072

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
6" Bench Grinder	6	Yes	3/4	1/2	2-1/2	14-7/8	19-1/4	10-1/2	1/2	115/230	1	3450	8.8/4.4	9682072

See page 46 for tool stands and accessories.

8" POWERGRIND-XP

Palmgren's POWERGRIND-XP are the next generation in bench grinders. They provide more horsepower, torque and value added features delivering high productivity grinding solutions. A cut above the rest POWERGRIND-XP industrial grade bench grinders provide smooth, quite power for all your bench top grinding and finishing needs.

- ◆ Industrial grade capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground and finished easily
- ◆ Large adjustable tool rests easily adjusted with hurricane bolts for safe, accurate grinding
- ◆ Comes with three tool rests – (2) standard flat top and (1) v-grooved top for sharpening drill bits with 118° drill point angle
- ◆ 36 and 120 grit grinding wheels



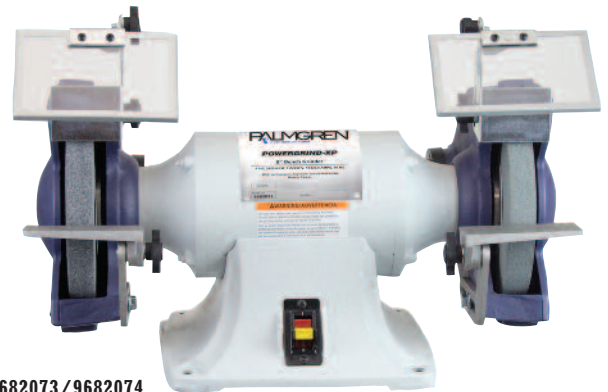
V-grooved tool rest



Single port dust collection

POWERGRIND-XP™

- ◆ Exclusive single port dust collection system with coated steel hose
- ◆ Adjustable spark guards and safety eye shields – easily positioned with hurricane bolts
- ◆ Exceptional value and performance
- ◆ CSA/US approved and OSHA compliant
- ◆ Comes standard with wheel dresser



9682073/9682074

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
8" Bench Grinder	8	Yes	1	5/8	2-1/2	16-1/2	21	13	1	115/230	1	3450	13.6/6.8	9682073
8" Bench Grinder	8	Yes	1	5/8	2-1/2	16-1/2	21	13	1	230/460	3	3450	3.6/1.9	9682074

See page 46 for tool stands and accessories.

Finishing

10" POWERGRIND-XP

Palmgren's POWERGRIND-XP are the next generation in bench grinders. They provide more horsepower, torque and value added features delivering high productivity grinding solutions. A cut above the rest POWERGRIND-XP industrial grade bench grinders provide smooth, quite power for all your bench top grinding and finishing needs.

- ◆ Industrial grade capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground and finished easily
- ◆ Large adjustable tool rests easily adjusted with hurricane bolts for safe, accurate grinding
- ◆ Comes with three tool rests – (2) standard flat top and (1) v-grooved top for sharpening drill bits with 118° drill point angle
- ◆ 36 and 120 grit grinding wheel
- ◆ Exclusive single port dust collection system with coated steel hose



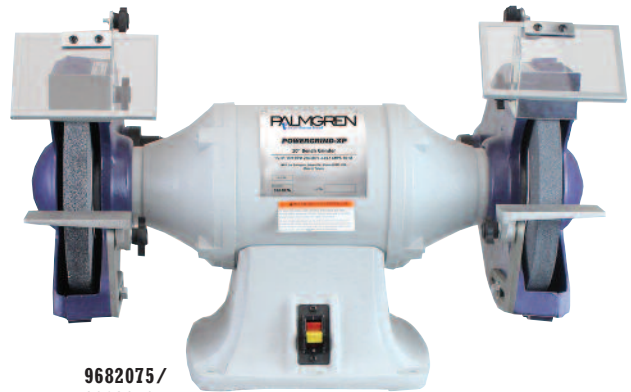
V-grooved tool rest



Single port dust collection

POWERGRIND-XP™

- ◆ Adjustable spark guards and safety eye shields – easily positioned with hurricane bolts
- ◆ Exceptional value and performance
- ◆ CSA/US approved and OSHA compliant



9682075/
9682076

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
10" Bench Grinder	10	Yes	1	1	2-1/2	20	24	16	1.5	115/230	1	1725	15.2/7.6	9682075
10" Bench Grinder	10	Yes	1	1	2-1/2	20	24	16	1.75	230/460	3	1725	4.6/2.4	9682076

See page 46 for tool stands and accessories.

12" POWERGRIND-XP

Palmgren's POWERGRIND-XP are the next generation in bench grinders. They provide more horsepower, torque and value added features delivering high productivity grinding solutions. A cut above the rest POWERGRIND-XP industrial grade bench grinders provide smooth, quite power for all your bench top grinding and finishing needs.

- ◆ Industrial grade capacitor motors that supply the extra current required during the start-up and operation under load
- ◆ Dynamically balanced rotors and sealed bearings to minimize vibration and ensure smooth running
- ◆ Extended wheel-to-wheel clearance which allows longer items to be ground and finished easily
- ◆ Large adjustable tool rests easily adjusted with hurricane bolts for safe, accurate grinding
- ◆ Comes with three tool rests – (2) standard flat top and (1) v-grooved top for sharpening drill bits with 118° drill point angle
- ◆ 36 and 120 grit grinding wheels
- ◆ Exclusive single port dust collection system with coated steel hose
- ◆ Adjustable spark guards and safety eye shields – easily positioned with hurricane bolts
- ◆ Exceptional value and performance
- ◆ CSA/US approved and OSHA compliant
- ◆ Comes standard with floor pedestal



V-grooved tool rest



Single port dust collection

POWERGRIND-XP™



9682077

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Length (In.)	Height (In.)	HP	Voltage	Phase	Max. RPM	Amps	Item No.
12" Bench Grinder	12	Yes	2	1-1/4	2-1/2	21-3/4	23	50-1/2	3	230/460	3	1725	7.8/4.0	9682077

See page 46 for tool stands and accessories.

Finishing

Heavy Duty Bench Grinder Buffer

POWERGRIND™

Designed to handle heavy stock removal to finishing and polishing operations. These grinder/ buffers come with capacitor motors to supply the extra current required during start up and operation under load.

- ◆ Dynamically balanced rotors and sealed bearings minimize vibration and ensure smooth running
- ◆ OSHA compliant wheel guard for all grinding wheel and wire brush operations
- ◆ Open flanged shaft for all your buffing and polishing applications
- ◆ Wheel guard with dust collection port on 8" model
- ◆ Includes 36 grit grinding wheel, 0.014" wire wheel, one wheel guard and tool rest, spiral cotton buffing wheel and mounting spacers



9682068
9682069

Description	Wheel Diameter (In.)	Dust Collection	Face Wheel (In.)	Arbor Hole (In.)	Exhaust Port (In.)	Wheels C to C (In.)	Buffer Width Min - Max (In.)	Length (In.)	Height (In.)	HP	Voltage	Max. RPM	Amps	Item No.
6" Grinder Buffer	6	No	3/4	1/2	-	14-1/4	1/4 - 1-1/8	18-1/2	10	1/3	115/230	3450	3.5/1/75	9682068
8" Grinder Buffer	8	Yes	1	5/8	2-1/2	16-3/8	1/4 - 2	21	13	3/4	115/230	3450	7/3.5	9682069

See page 46 for tool stands and accessories.

6" Buffer

POWERGRIND™

Palmgren's buffing machines easily remove scratches and other imperfections, brings out the natural luster of the metal and can effectively clean, finish, polish and buff a wide variety of materials. Each unit is equipped with a strong, powerful motor that supplies the necessary torque for start-up and operation under load.

- ◆ Large diameter armature shaft with shielded bearings for smooth operation
- ◆ Heavy duty cast iron construction for vibration free operation
- ◆ CSA approved OSHA compliant
- ◆ Units fit 9670101 tool stand

Description	Wheel Size (In.)	HP	RPM	Shaft Dia. (In.)	Amps	Voltage	Item No.
6" Buffer	6	1/2	3450	1/2	5.0/2.5	120/240	9682063



9682063

8" Buffer

POWERGRIND™

Palmgren's buffing machines easily remove scratches and other imperfections, brings out the natural luster of the metal and can effectively clean, finish, polish and buff a wide variety of materials. Each unit is equipped with a strong, powerful motor that supplies the necessary torque for start-up and operation under load.

- ◆ Large diameter armature shaft with shielded bearings for smooth operation
- ◆ Heavy duty cast iron construction for vibration free operation
- ◆ CSA approved OSHA compliant
- ◆ Units fit 9670101 tool stand

Description	Wheel Size (In.)	HP	RPM	Shaft Dia. (In.)	Amps	Voltage	Item No.
8" Buffer	8	3/4	3450	5/8	8.0/4.0	120/240	9682083



9682083

Finishing

10" Buffer

Palmgren's buffing machines easily remove scratches and other imperfections, brings out the natural luster of the metal and can effectively clean, finish, polish and buff a wide variety of materials. Each unit is equipped with a strong, powerful motor that supplies the necessary torque for start-up and operation under load.

- ◆ Large diameter armature shaft with shielded bearings for smooth operation
- ◆ Heavy duty cast iron construction for vibration free operation
- ◆ CSA approved OSHA compliant
- ◆ Units fit 9670101 tool stand
- ◆ 9682093 features a heavy duty 2 speed motor

POWERGRIND™



9682093

Description	Wheel Size (In.)	HP	RPM	Shaft Dia. (In.)	Amps	Voltage	Item No.
10" Buffer	10	1/1.5	1725 to 3450	1	12/8	120	9682093

Combination Bench & Belt Grinder

Palmgren combined two machines into one. Ideal for grinding, deburring, polishing and finishing all types of parts, on any type of material. With such versatile capabilities this combination grinder eliminates the need for a number of different machines. Built with a powerful capacitor motor for use all day, every day.

- ◆ Dynamically balanced rotor and sealed bearings minimize vibration and ensure accuracy
- ◆ Front mounted safety on/off switch
- ◆ Adjustable work rests
- ◆ Dust collection ports
- ◆ Belt is adjustable in either the vertical or horizontal position or any position in-between
- ◆ OSHA compliant
- ◆ Unit fits 9670101 or 968600 tool stands

POWERGRIND™



9682088

Description	HP	Volts	Amps AC	Belt Size (In.)	Belt SFPM	Wheel Dia. (In.)	Wheel Face Dia. (In.)	Wheel Speed (RPM)	Arbor Hole (In.)	D	W	H	Item No.
Bench & Belt Grinder	3/4	120/240	7.0/3.5	2 x 48	4500	8	1	3450	5/8	21	14	26	9682088

Finishing

Belt Grinders

POWERGRIND™

Palmgren's belt grinders are ideal power tools for all shops. These versatile machines grind, sand, finish, polish, deburr and contour all types of parts on any type of material. Built with a powerful capacitor motor for all day use.

- ◆ Belt is adjustable for use in either the vertical or horizontal position or any position in-between
- ◆ Front mounted on/off paddle switch
- ◆ Simple belt tensioning and adjustment
- ◆ Full belt guard
- ◆ Dust collection port
- ◆ OSHA compliant
- ◆ Units fit 9670101 and 9686000 pedestal stands

9682401



9682402



9682404



Description	HP	Volts	Amps AC	Belt Size (In.)	Belt SFPM	Work Table Surface (In.)	D	W	H	Item No.
1" Belt Grinder	1/2	120/240	5.0/2.5	1 x 42	1800	4-1/4 x 3	18	25	45	9682401
2" Belt Grinder	3/4	120/240	7.0/3.5	2 x 48	4500	4-1/4 x 3	18	25	52	9682402
4" Belt Grinder	3/4	120/240	7.0/3.5	4 x 36	3615	6-1/4 x 3	19	26	40	9682404

12" Disc Abrasive Finishing Machine

Palmgren's 12" disc abrasive finishing machine is ideal for finishing outside radius of metal, wood, plastics and composite materials. You can sand, grind, chamfer, deburr or just use for general finishing and cleaning applications. This general purpose machine will handle a wide variety of precision finishing operations.

- ◆ Direct drive
- ◆ 45° tilting table
- ◆ Miter gauge
- ◆ Balanced disc
- ◆ Heavy duty cast construction
- ◆ Dust collection port

9681312



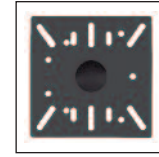
Description	HP	Volts	Disc. Dia. (In.)	Speed (RPM)	Table Size (In.)	Table Tilt	Dust Port (In.)	W	D	H	Item No.
12" Disc Finishing	3/4	120	12	1720	17-1/4 x 8-3/8	45°	2	17-1/4	17	14-3/8	9681312

Finishing Accessories

Heavy Duty Tool Stand

9670101 - Heavy duty cast iron tool stand fits all bench grinders, buffers and belt grinders.

- ◆ Multi-hole top for easy securing of finishing tool to stand
- ◆ Quench pot.



Top viewed
from above



9670101

Work Light

9682904 - LED work light easily mounts on bench grinders, bench top belt grinders as well as other manual machine tools for increased visibility at the point of operation.



9682904

Grinding Wheel Dressers

9682901 - Small grinding wheel dresser, cast iron construction, hardened steel cutters, for use on grinding wheels up to 1" wide.

9682902 - Large grinding wheel dresser, cast iron construction, hardened steel cutters, for use on 1" to 3" wide grinding wheels.



9682901
9682902

Bench Grinder Pedestal Dust Collection Cabinet

9686000 - Cabinet design allows for bench and belts grinders to be securely mounted while only taking up a small foot print of shop floor space. The front mounted hinged door is convenient for fast clean up.

The unit effectively removes hazardous material and dust particles away from the operator while recirculating clean air back into the shop resulting in a cleaner, safer work area.

- ◆ Dust collection
- ◆ Quench pot
- ◆ Easy access hinged door for dust & particle removal
- ◆ Spark arrestor
- ◆ 30 micron filter bag
- ◆ Replaceable HEPA filter

Item No.	Base Size (In.)	Table Size (In.)	Height (In.)	Exhaust Port (In.)	CFM
9686000	19 x 17	19 x 17	38	2-3/4	700



9686000



Shown with grinder
(grinder not included)

Finishing

Combination Belt & Disc Finishing Machine

Palmgren's direct drive combination belt and disc finishing machines grind, sand, finish, polish, deburr and contour all types of materials and parts. The direct drive power train with a heavy duty capacitor motor allows the units to work under load without slowing or bogging down.

- ◆ Belt operates in the horizontal or vertical position and is designed for fast, easy belt changes
- ◆ Both the belt and disc come with a tilting work table. Disc table is slotted to accept the standard miter gauge
- ◆ Cast base for maximum rigidity
- ◆ 9681601 - 2 x 42" belt with a 6" disc bench model



9681601

Description	HP	Volts	Amps AC	Disc Dia. (In.)	Disc Speed RPM	Belt Size (In.)	Belt SFPM	Disc Table Size (RPM)	Belt Table Size (In.)	D	W	H	Item No.
2 x 6" Belt & Disc	1/3	120	3.5	6	3500	2 x 42 or 1 x 42	4400	5-1/2 x 8-1/4	6-3/4 x 9	8	14-1/2	23	9681061

Combination Belt & Disc Finishing Machine

Palmgren's direct drive combination belt and disc finishing machines grind, sand, finish, polish, deburr and contour all types of materials and parts. The direct drive power train with a heavy duty capacitor motor allows the units to work under load without slowing or bogging down.

- ◆ Belt operates in the horizontal or vertical position and is designed for fast, easy belt changes
- ◆ Both the belt and disc come with a tilting work table that is slotted to accept the standard miter gauge
- ◆ The base is cast iron for maximum rigidity
- ◆ 9681093 - 6 x 48" belt with a 9" disc floor model with open stand



9681093

Description	HP	Volts	Amps AC	Disc Dia. (In.)	Disc Speed RPM	Belt Size (In.)	Belt SFPM	Disc Table Size (RPM)	Belt Table Size (In.)	D	W	H	Item No.
6 x 9" Belt & Disc	1	120/240	9.0/4.5	9	3450	6 x 48	2700	5-7/8 x 11-3/4	5-7/8 x 9-7/8	22	26-1/2	55	9681093

Finishing

Combination Belt & Disc Finishing Machine

Palmgren's combination belt and disc finishing machines are versatile and economical workshop tools. Dust collection shrouds for both the belt and the disc and the unit comes complete with a fully enclosed steel floor stand to protect the motor from dust.

- ◆ Belt operates in the horizontal or vertical position and is designed for fast, easy belt changes
- ◆ Both the belt and disc come with a cast iron tilting work table, slotted to accept the deluxe miter gauge to allow for plain and compound miters
- ◆ Cast iron construction delivers rigidity and vibration free operation



9681110

Description	HP	Volts	Amps AC	Disc Dia. (In.)	Disc Speed (RPM)	Belt Size (In.)	Belt SFPM	Disc Table (In.)	Belt Table (In.)	W	D	H	Item No.
6 x 10 Belt & Disc	1	120/240	13.4/6.7	10	2150	6 x 48	1830	7 x 14	6 X 10-1/8	21	18	59-1/2	9681110

Combination Belt & Disc Finishing Machine

Palmgren's combination belt and disc finishing machines are versatile and economical workshop tools. Dust collection shrouds for both the belt and the disc and the unit comes complete with a fully enclosed steel floor stand to protect the motor from dust.

- ◆ Belt operates in the horizontal or vertical position and is designed for fast, easy belt changes
- ◆ Both the belt and disc come with a cast iron tilting work table, slotted to accept the deluxe miter gauge to allow for plain and compound miters
- ◆ Cast iron construction delivers rigidity and vibration free operation



9681112

Description	HP	Volts	Amps AC	Disc Dia. (In.)	Disc Speed (RPM)	Belt Size (In.)	Belt SFPM	Disc Table (In.)	Belt Table (In.)	W	D	H	Item No.
6 x 12 Belt & Disc	1-1/2	120/240	14/7	12	2350	6 x 48	1830	7 x 16	6 X 10-1/8	23	19	59-1/2	9681112

Sawing

Bench Miter Band Saw

Palmgren's professional bench top band saw comes with large cutting capacities and it has the power to deliver accurate, fast cuts. Easy to move and position where needed this lightweight bench unit is loaded with quality features. The miter head swivels and locks for fast, easy miter cutting keeping the workpiece fixed and a heavy duty base with integrated vise for accurate secure clamping.

- ◆ Ergonomic hand grip & switch
- ◆ Electronic variable speed direct drive motor
- ◆ Adjustable tension feed control
- ◆ Work stop
- ◆ Push button power on/off switch

OPTIONAL ACCESSORY:

9670106 - Heavy duty steel floor stand is built to optimum work height and comes complete with wheels to easily move and position where needed.

CUTTING CAPACITY				
	Round		Square	
90°	153 mm	6.02 in	153 x 175 mm	6.02 x 6.89 in
45°	110 mm	4.33 in	120 x 110 mm	4.72 x 4.33 in
60°	70 mm	2.76 in	68 x 70 mm	2.68 x 2.76 in

SPECIFICATIONS										
Description	HP	Voltage	Phase	Blade Size (In.)	Blade Speed SFPM	L	W	H	Weight (Lb.)	Item No.
Bench Band Saw	1/2	115	1	0.51 x 0.003 x 70.27	115 - 280	35.43	17.99	20.87	85	9683306



9683306

9670106

Sawing

8 x 12" Horizontal Band Saw

Palmgren's 8 x 12" horizontal band saw is built to deliver fast, accurate cutting on all types of materials. Cast iron and rigid steel construction of the saw head and base provides full blade support and eliminates vibration and deflection. The combination of a direct drive train and hydraulic feed system delivers consistent accurate cuts and longer blade life.

- ◆ Longer blade and larger blade wheels provide a greater radius to reduce stress on the blade
- ◆ Rugged direct drive gear box - no belts to set or change
- ◆ 3 Jaw quick acting vise for fast miter cutting set ups. No wrenches are needed the angle of cut can be easily set with the turn of a handle in just seconds
- ◆ Hydraulic feed control for cutting stock at variable rates and to lock the saw head at any height
- ◆ Adjustable blade guides deliver accurate cuts
- ◆ Chip blade brush
- ◆ Coolant system with adjustable coolant flow
- ◆ Wheels that roll easy for positioning where needed



9683308



DIRECT MOTOR DRIVE

The all gear drive power train is directly connected to the motor to deliver full power at any speed, driving the blade at nearly 100% of the available horsepower. The end result is higher efficiency, consistent speed to the blade resulting in longer blade life.



THREE JAW VISE

For standard cut off applications the ridged design makes square cuts easy. When miter cuts are required no wrenches or readjusting of the vise jaws are needed to set-up the vise. The angle can be pre-adjusted by simply loosening a handle. This innovative vise design is simple to use and adjusts in seconds.

CUTTING CAPACITY

	Round		Rectangle			
90°	20 mm	8 in	165 x 275 mm	6.5 x 11 in	55 x 300 mm	2 x 12 in
45°	120 mm	4.75 in	200 x 120 mm		7.87 x 4.72 mm	

SPECIFICATIONS

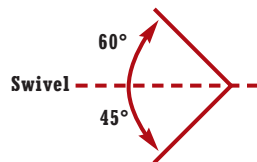
Description	HP	Voltage	Phase	Blade Size (In.)	Blade Speed SFPM	L	W	H	Weight (Lb.)	Item No.
8 x 12" Band Saw	1	120	1	0.75 x 0.032 x 93	150/210/255	51	19	43	300	9683308

Sawing

10 x 18" Horizontal Miter Band Saw

Flexibility and value describe Palmgren's 10 x 18" double miter band saw. This general purpose cut-off saw is equipped with a double mitering swiveling saw head that makes cutting many angle cuts fast and easy. The workpiece remains fixed while the saw head swivels left or right to cut any angle from 0 to 60° and locks into place with a quick acting locking lever. This model offers more standard features designed to provide maximum performance, greater accuracy and more economical operation.

- ◆ Conveniently located operator control panel that can be used from either the front or back of the band saw
- ◆ Variable speed drive to maximize the performance of today's bi-metal saw blades
- ◆ Top load blade for faster and easier blade changes
- ◆ Adjustable blade guides with 6 contact points using cam follower bearings and carbide pads for straight, accurate cuts
- ◆ Counter balanced hydraulic feed system for cutting stock at variable rates
- ◆ Chip blade brush
- ◆ Coolant system with adjustable flow through the guides
- ◆ Adjustable work stop
- ◆ Miters 60° to the left and 45° to the right
- ◆ Rapid acting vise



9683310

CUTTING CAPACITY

	Round		Rectangle		Square	
0°	254 mm	10 in	76 x 458 mm	3 x 18 in	254 x 254 mm	10 x 10 in
45°	254 mm	10 in	254 x 280 mm	10 x 11 in	254 x 254 mm	10 x 10 in
60°	204 mm	8 in	127 x 207 mm	5 x 8 in	178 x 178 mm	7 x 7 in

SPECIFICATIONS

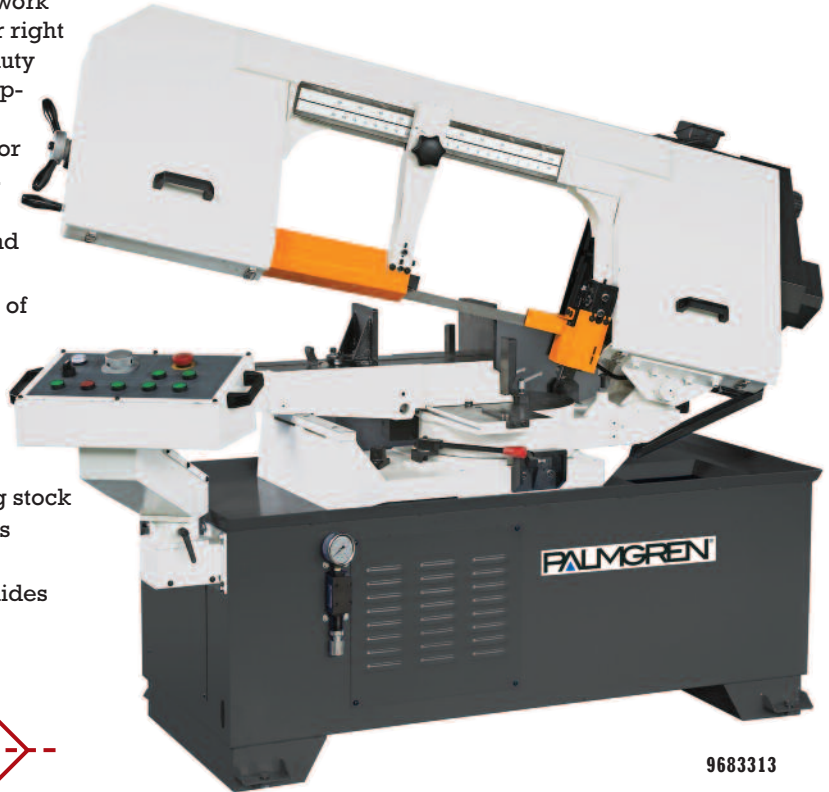
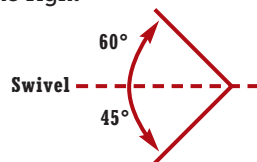
Description	HP	Voltage	Phase	Blade Size (In.)	Blade Speed SFPM	L	W	H	Weight (Lb.)	Item No.
10 x 18" Band Saw	2	220	3	1.06 x 0.035 x 132 mm	98 - 393	76	37.5	60	1165	9683310

Sawing

13 x 19" Horizontal Miter Band Saw

Palmgren's 13 x 19" horizontal miter band saw provides flexibility and value for those applications that require cut off of medium to large work pieces or parts that have many angle cuts. The work piece remains fixed while the saw head swivels left or right to cut any angle from 0 to 60° fast and easily. Heavy duty cast iron and steel construction provides full blade support while eliminating vibration and deflection. This saw is ideal for short run production work as well as for shops that do a considerable amount of utility cutting.

- ◆ Conveniently located operator control panel that can be used from either the front or back of the band saw
- ◆ Variable speed drive to maximize the performance of today's bi-metal saw blades
- ◆ Top load blade for faster and easier blade changes
- ◆ Adjustable blade guides with 6 contact points using cam follower bearings and carbide pads for straight, accurate cuts
- ◆ Counter balanced hydraulic feed system for cutting stock at variable rates while insuring straight, smooth cuts
- ◆ Chip blade brush
- ◆ Coolant system with adjustable flow through the guides
- ◆ Adjustable work stop
- ◆ Miters 60° to the left and 45° to the right
- ◆ Rapid acting vise



9683313

CUTTING CAPACITY				
	Round		Rectangle	
0°	330 mm	13 in	330 x 437 mm	13 x 18 in
45°	280 mm	11 in	330 x 280 mm	13 x 11 in
60°	175 mm	6-7/8 in	250 x 175 mm	10 x 6-7/8 in

SPECIFICATIONS										
Description	HP	Voltage	Phase	Blade Size (In.)	Blade Speed SFPM	L	W	H	Weight (Lb.)	Item No.
13 x 19" Band Saw	2	220	3	1.06 x 0.035 x 150	98 - 393	80	51.7	56.1	1301	9683313

Sawing

15" and 18" Vertical Band Saws

Palmgren's wood/metal vertical band saws are two saws in one. Specially designed to effectively cut a variety of materials including wood, plastic, composites, ferrous and non-ferrous metals.

- ◆ Unitized welding steel frame construction
- ◆ Cast blade wheels
- ◆ Large ground cast iron work table that tilts up to 45°
- ◆ Adjustable precision bearing blade guides
- ◆ Hinged wheel covers and convenient blade tensioning wheel for easy accessibility and fast blade changing and adjustments
- ◆ 4" dust port
- ◆ Rip fence.
- ◆ Rip fence
- ◆ Miter gauge
- ◆ Chip blower
- ◆ Chip chute
- ◆ Extra wide speed range
- ◆ 15" comes with one 1/2" - 14 TPI metal blade, and one 1/2" - 6 TPI wood blade
- ◆ 18" comes with one 3/4" - 14 TPI metal blade, and one 3/4" - 6 TPI wood blade



CUTTING CAPACITY					
Miter Capacity	Round.		Square		Item No.
90°	254 mm	10 in	254 x 381 mm	10 x 15 in	9683115
90°	304.8 mm	12 in.	304.8 x 450.85 mm	12 x 17-3/4	9683118

SPECIFICATIONS														
Description	HP	Voltage	Phase	Blade Length (In.)	Blade Thickness (In.)	Blade Width (In.)	Blade Speed SFPM	Throat Depth (In.)	Table Size (In.)	L	W	H	Weight (Lb.)	Item No.
15" Band Saw	1	115/230	1	114	0.035	3/16 to 3/4	45, 65, 90, 110 155, 215, 3000	15	15 x 15	23	20	78	345	9683115
18" Band Saw	1-1/2	115/230	1	133	0.035	3/16 to 1	45, 65, 90, 110 155, 215, 3000	18	19 x 19	24	29	80	415	9683118

Tapping Systems

The Palmgren Tapping Solution

The use of a Palmgren parallel arm tapping machine in combination with primary operations will generate savings through improved operator utilization, reduced set-up time, reduced material handling, and improved material flow. They are the right choice to create a profitable manufacturing cell when coupled with any CNC or manually operated machine tool. When used in conjunction with a CNC machining center, profitability is increased through additional hourly production. Coupled with the savings through the elimination of costly tool holders and additional programming time a tapping arm easily pays for itself in no time. The elimination of tapping on your machining centers can actually save between 30% to 40% or more.

Features

- ◆ Taps both blind and through holes
- ◆ Faster tapping cycles
- ◆ Greater thread quality and accuracy
- ◆ Easy to operate
- ◆ Extends tap life
- ◆ Eliminates broken taps
- ◆ Faster tap positioning with difficult locations – easier to reach holes
- ◆ No indexing or laborious handling of work pieces
- ◆ Increases productivity – lowers tapping cost per part
- ◆ Can be applied to many other shop uses and applications
- ◆ Highly flexible, mobile and easy to use

Applications

Palmgren offers a variety of universal (articulated) arm systems that can perform a wide range of applications. This allows you to customize a unit to fit a particular need saving you time and money while improving overall quality.

Standard Applications

(with tapping motor)

- ◆ Tapping new holes
- ◆ Re-tap previous tapped holes from damaged to warped heat treated holes (The tap will automatically self-center so the tap matches to the same lead already in the hole.)
- ◆ Reaming
- ◆ Countersinking

- ◆ Drilling – soft materials only
- ◆ Chamfering
- ◆ Hone
- ◆ Burnish & size through holes
- ◆ Finishing with wire brush or abrasives

Custom Applications

- ◆ Screw driving
- ◆ Nut running
- ◆ Routing
- ◆ Grinding/deburring with die grinders, straight or vertical grinders
- ◆ Insert Helicoils

Cost Comparison: Parallel Arm vs. Machining Center Tapping

Estimated Operating Burden	CNC Machining Center	Parallel Arm
Average Machine Burden Rate	\$50.00/hr	\$3.00/hr
Average Operator Burden Rate	\$20.00/hr	\$0.00
Average Programming Burden Rate	\$28.00/hr	\$0.00
Average Total Burden	\$98.00/hr	\$3.00/hr
Estimated Time for Tapping Each Hole		
Programming/Fixturing	.4 minutes	0 minutes
Set Up	.1 minute	0 minutes
Locating/Tool Changing	.4 minutes	.2 minutes
Tapping	.5 minutes	.3 minutes
Spindle Reversing	.4 minutes	.3 minutes
Total Time per Hole	1.8 minutes	.8 minutes
Estimated Cost per Hole	\$2.94 per hole	.05 per hole



Palmgren's Parallel Arm Tapping Machines Make Tapping Fast & Easy

Increased Efficiency

With Parallel Arm Tapping, the operator brings the tap to the work utilizing the efficiency of bearings at all swivel points versus positioning a part under a spindle. Bringing the tap to the work is 3 to 4 times more efficient than taking the work to the tap.

Ergonomically Correct

With the articulated arm design, the operator benefits from improved ergonomics and proper tool handling. The ergonomically-correct design absorbs the tapping torque thus minimizing the exposure to torque reaction — reducing strain on the operator's hand, wrist and arm. They are also effective in making the tapping tool weightless with adjustable gas springs that virtually eliminate the weight of the tool from the operator resulting in reduced fatigue and increased productivity.

Increased Productivity

The tapping cycle always starts at the correct speed and can go direct to reverse at the desired depth. With rigid tapping, that tapping cycle starts from 0 rpm and the rate of acceleration and deceleration is limited when the tap is reversed. All the high torque tapping motors come standard with a quick change system that utilizes quick change torque control tap holder adaptors. With this style of adaptor it is a 5 second

quick change method that reduces tool change time and increases the productivity in all threading operations.

Maximum Quality

The balanced Parallel Arm allows the tap holder to float in the machine, allowing the tap to precisely follow the hole without the influence of the spindle. With this "float", typically the Palmgren tapping parallel arm system produces tapped holes with higher quality threads that permit less than a quarter turn on a No-Go Gauge.

Never Break a Tap Again

The Palmgren Parallel Arm tapping system uses an adjustable clutch style tap holder. The clutch built into the tap holder "clicks" when the tap bottoms, hits interference, or becomes dull. At bottoming or in case of an obstruction, the operator simply reverses the motor and backs the tap out of the hole. In the case of a dull tap, the operator simply changes to a new tap. If this practice is used, broken taps are a thing of the past.

Tapping Systems

How to Order Your Tapping System

PALMGREN'S PARALLEL ARM TAPPING SYSTEMS MAKE TAPPING EASY AND OFFER THE BEST SOLUTION FOR ALL OF YOUR TAPPING NEEDS

FOLLOW THESE EASY STEPS TO CHOOSE THE RIGHT TAPPING SYSTEM FROM PALMGREN:



1

SELECT THE TAPPING ARM SYSTEM THAT BEST FITS YOUR REQUIREMENTS.

Universal-Tap/Electric
Variable mounting capabilities with a unique articulating arm design which optimizes work area coverage. Suitable for small, medium and large size taps and all secondary bench operations, with a high torque reversible electric motor and a working reach area of 55".

Quick-Tap
Variable mounting capabilities, suitable for small and medium size taps with 2 different motor choices and a working area reach of 37".

Shop-Tap
Variable mounting capabilities, suitable for general purpose tapping with 2 different

motor choices and a working area reach of 62".

Production-Tap
Variable mounting capabilities, suitable for a wide range of general purpose to heavy duty tapping with 3 different motor choices and a working reach of 55".

2

SELECT THE MOTOR THAT BEST FITS YOUR OVERALL REQUIREMENTS.

The single speed 400 or 700 rpm motors are an economical choice when tapping small to medium size holes. The 300 rpm motor and electric motor are the proper choice when tapping medium to large size holes or when your applications cover a broad range of tap sizes.

Motor RPM	Number of Speeds	Tap Capacity Mild Steel	Tap Capacity Aluminum
400	1	1/2"	9/16"
700	1	3/8"	7/16"
300	1	5/8"	11/16"
130 & 400	2	5/8"	3/4"

3

SELECT THE TAP HOLDERS REQUIRED TO MEET YOUR NEEDS.

Whether you're tapping small, medium or large size holes it is recommended that you use a clutch style torque drive tap holder. They provide the added sensitivity and help prevent broken taps. A separate tap holder is required for each size tap you use. Tap holders come in two sizes (1 & 2). The specification box for each model of tapping machine lists the quick change tooling size. You would then choose the correct size tap holder located on page 11 that properly matches up to the quick change adaptor on the tapping arm system chosen.

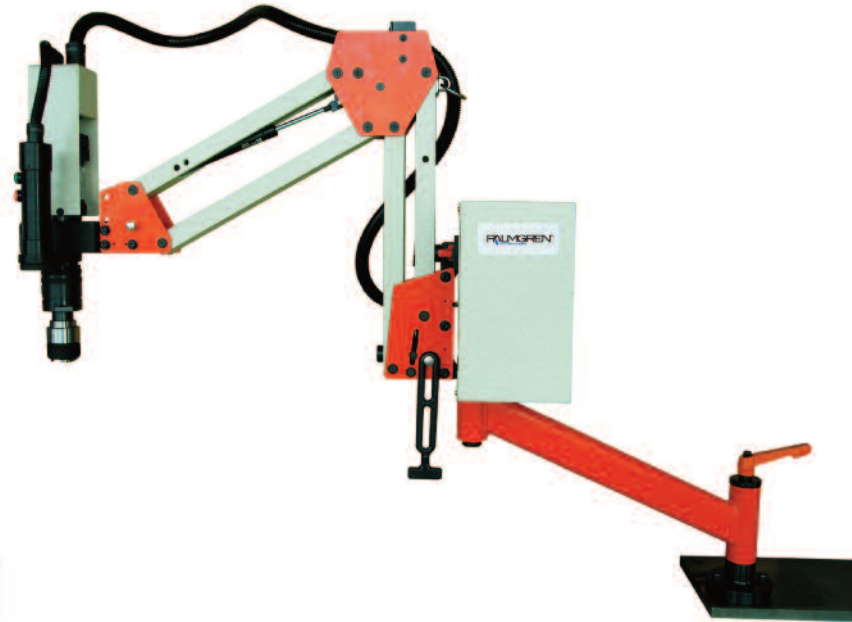
Tapping Systems

Universal-Tap

Palmgren's Universal-Tap electric tapping machine is suitable for small, medium and large size taps. It utilizes a unique single articulating arm design that permits tapping as close as eight inches to the vertical mounting bracket. This feature provides a large work envelope even in confined work areas. The arm is equipped with lubricated for life bearings at all swivel points, provides weightless operation through the use of gas counter balance springs and permits the operator to bring the tap to the hole with ease.

Standard Features

- ◆ Articulating arm with 8" to 55" reach
- ◆ Stationary bench bracket
- ◆ Quick change tooling adaptor
- ◆ Two-speed gear reducer with vari speed control to adjust torque speed to optimize the treading process
- ◆ 115 volt, 1 phase high torque reversible electric motor
- ◆ See page 11 for optional tap holders



Specifications

Model #	Item #	Motor (RPM)	Motor	Max. Tap Capacity/ Mild Steel	Max. Tap Capacity/ Aluminum	Quick Change Tooling Size
UTE400	9680426	130/400	.54 HP/ 115V/1PH	5/8"	3/4"	2



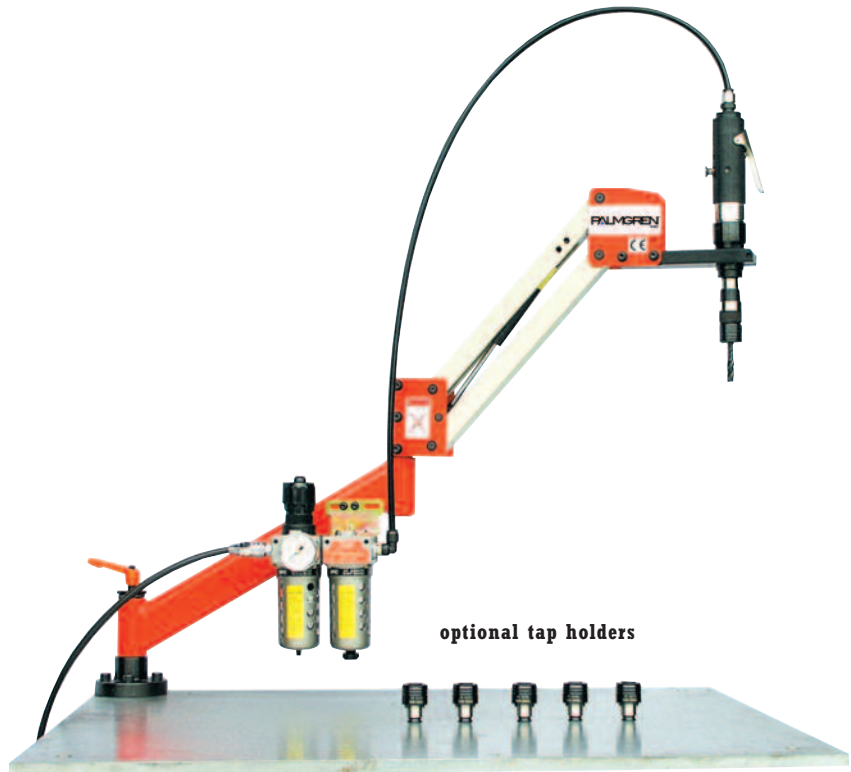
Tapping Systems

Quick-Tap

Palmgren's Quick-Tap pneumatic tapping machine is suitable for small and medium size taps. The arm is equipped with lubricated for life bearings at all swivel points, provides weightless operation through the use of gas counter balance springs and permits the operator to bring the tap to the hole with ease.

Standard Equipment

- ◆ Parallel arm with 4" to 37" reach
- ◆ Stationary bench bracket
- ◆ Quick change tooling adaptor
- ◆ Air preparation unit with lubricator, filter, regulator and pressure gauge
- ◆ Vertical motor bracket
- ◆ High torque reversible air motor
- ◆ See page 11 for optional tap holders



Specifications

Model #	Item #	Motor (RPM)	Torque @ 90PSI (ft/lbs)	Air Consumption (CFM)	Max. Tap Capacity/ Mild Steel	Max. Tap Capacity/ Aluminum	Quick Change Tooling Size
QT400	9680420	400	27	24	1/2"	9/16"	1
QT700	9680421	700	16	24	3/8"	1/2"	1

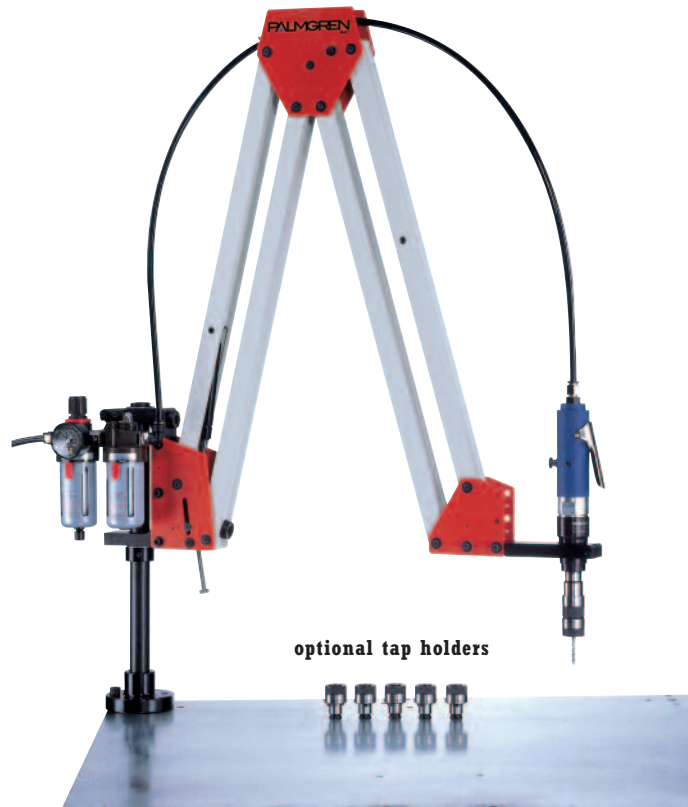
Tapping Systems

Shop-Tap

Palmgren's Shop-Tap pneumatic tapping machine is a medium duty general purpose machine suitable for tapping small to medium size taps. The arm is equipped with lubricated for life bearings at all swivel points, provides weightless operation through the use of gas counter balance springs and permits the operator to bring the tap to the hole with ease.

Standard Features

- ◆ Parallel arm with 20" to 62" reach
- ◆ Stationary bench bracket
- ◆ Quick change tooling adaptor
- ◆ Air preparation unit with lubricator, filter, regulator and pressure gauge
- ◆ Vertical motor bracket
- ◆ High torque reversible air motor
- ◆ See page 11 for optional tap holders



Specifications

Model #	Item #	Motor (RPM)	Torque @ 90PSI (ft/lbs)	Air Consumption (CFM)	Max. Tap Capacity/ Mild Steel	Max. Tap Capacity/ Aluminum	Quick Change Tooling Size
ST400	9680400	400	27	24	1/2"	9/16"	1
ST700	9680401	700	16	24	3/8"	1/2"	1

Tapping Systems

Production-Tap

Palmgren's Production-Tap pneumatic tapping machine is suitable for a wide range of general purpose to heavy duty tapping applications. The arm is equipped with lubricated for life bearings at all swivel points, provides weightless operation over a wide area and permits the operator to bring the tap to the hole on very large and multi-level parts with ease.



Standard Equipment

- ◆ Parallel arm with 8" to 55" reach
- ◆ Stationary bench bracket
- ◆ Quick change tooling adaptor
- ◆ Air preparation unit with lubricator, filter, regulator and pressure gauge
- ◆ High torque reversible air motor
- ◆ See page 11 for optional tap holders

Specifications

Model #	Item #	Motor (RPM)	Torque @ 90PSI (ft/lbs)	Air Consumption (CFM)	Max. Tap Capacity/ Mild Steel	Max. Tap Capacity/ Aluminum	Quick Change Tooling Size
PT400	9680410	400	27	24	1/2"	9/16"	1
PT700	9680411	700	16	26	3/8"	1/2"	1
PT300	9680412	300	30	29	5/8"	3/4"	2

Tapping Systems

Pneumatic Hand Tapper

Palmgren's pneumatic hand tapper is engineered to make your tapping job easier, safer and more efficient. It is ideal for all general purpose tapping making time consuming hand tapping obsolete. It uses a pneumatic high-reversal-type motor with added torque to easily handle a broad range of tap sizes. The tapping cycle starts at the correct speed and reverses instantly. A quick change tool holder adaptor is standard. The quick change tool holder design provides the ultimate in tap changing flexibility. It allows the tool to accept a broad range of both inch and metric tap holders fast and easily. The clutch built into the tap holder ratchets when the tap bottoms, hits any interference or begins to dull. This makes tapping both blind and through holes simple and aids in the elimination of broken taps. Whether you have only a few holes or many to tap the Palmgren hand tapper can save you up to 90% of time as compared to tapping by hand.



Standard Features

- ◆ 1/8" to 7/16" capacity in mild steel
- ◆ Ergonomic comfort grip
- ◆ Adjustable side handle
- ◆ Trigger reverse
- ◆ Quick change tooling adaptor
- ◆ Precision machined and hardened gear reduction
- ◆ High torque reversible air motor
- ◆ See page 11 for Optional Tap Holder Listing

Specifications

Model #	RPM	CFM	HP	Tapping Cap Mild Steel	Quick Change Tooling Size	Noise dB	Air Inlet (Inch-npt)	Min. Hose Size (inch-i.d.)	Max. Pressure PSI	Weight (Lbs.)
9680451	150	27	.50	1/8–7/16	1	80	1/4	3/8	90	2.6

Tapping Systems

Horizontal Vertical Motor Bracket

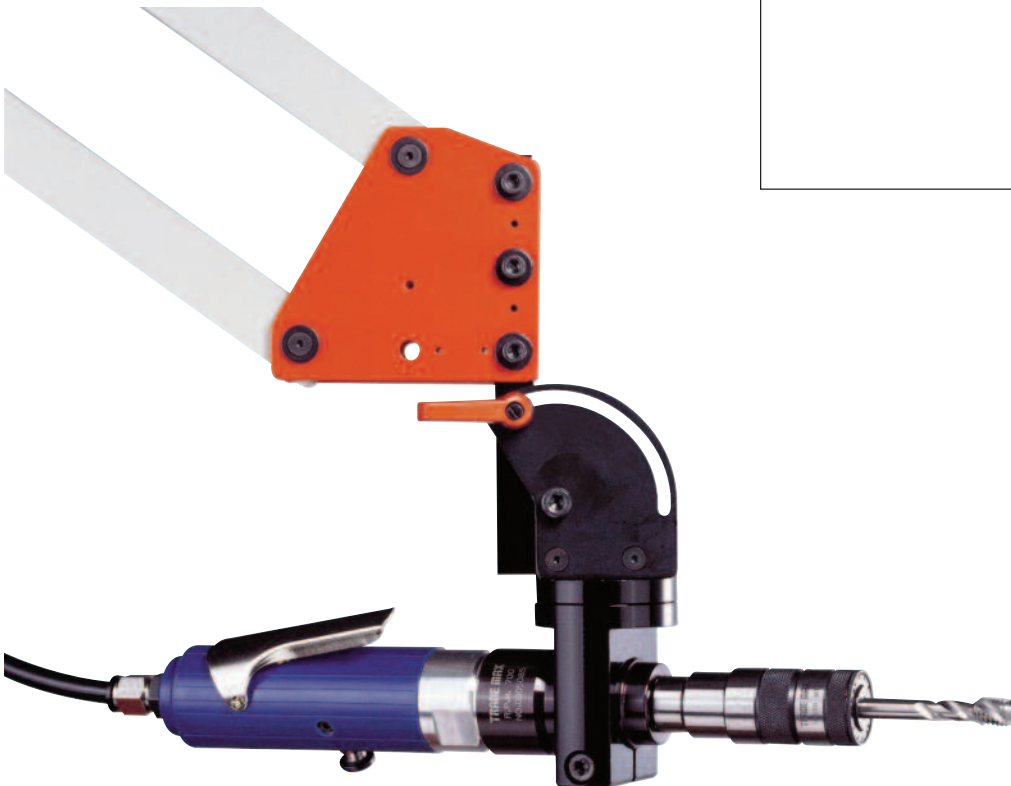
The optional horizontal/vertical motor bracket offers the operator the ability to tap vertically or horizontally or at any position in-between.

9680428

Horizontal/Vertical motor bracket for the 300 rpm pneumatic tapping motor and the Universal-Tap electric motor.

9680429

Horizontal/Vertical motor bracket for all 400 and 700 rpm pneumatic tapping motors

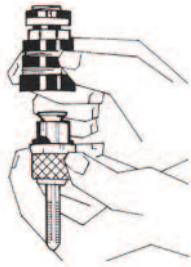


Tapping Systems

Torque Drive Tap Holders

No matter the size of taps — small, medium or large — the right choice of tap holder is a clutch style torque drive tap holder. These holders make tapping blind holes easy and even tap on parts that can't be easily tapped by other methods. The torque clutch allows the tap to stop turning when it becomes dull or encounters any obstruction that might cause tap breakage, and is adjustable for all types of materials. The quick change tap holder allows you to change from one size tap to another in 3 to 5 seconds. No gears, head height, or stops to change.

Tap adapters change easily by sliding chuck sleeve until adapter is free.



Torque drive tap holder shown with tap.

Adaptor for size 2 to 1- fits size 2 quick change adaptor and accepts all size 1 tap holders – 9680550



Drill chuck with size 1 quick change adaptor – 9680516

Torque Drive Tap Holders w/Clutch Fits Size 1 Quick Change Adaptor

Model	Description
9680500	0-6 Tap holder w/clutch fits size 1 quick change adaptor
9680501	8 Tap holder w/clutch fits size 1 quick change adaptor
9680502	10 Tap holder w/clutch fits size 1 quick change adaptor
9680503	12 Tap holder w/clutch fits size 1 quick change adaptor
9680504	1/4" Tap holder w/clutch fits size 1 quick change adaptor
9680505	5/16" Tap holder w/clutch fits size 1 quick change adaptor
9680506	3/8" Tap holder w/clutch fits size 1 quick change adaptor
9680507	7/16" Tap holder w/clutch fits size 1 quick change adaptor
9680508	1/2" Tap holder w/clutch fits size 1 quick change adaptor
9680509	9/16" Tap holder w/clutch fits size 1 quick change adaptor
9680510	1/8" NPT Pipe tap holder w/clutch fits size 1 quick change adaptor
9680511	9/16" NPT Pipe tap holder w/clutch fits size 1 quick change adaptor
9680520	Size M3 Tap holder w/clutch fits size 1 quick change adaptor
9680521	Size M4 Tap holder w/clutch fits size 1 quick change adaptor
9680522	Size M5 Tap holder w/clutch fits size 1 quick change adaptor
9680523	Size M6 Tap holder w/clutch fits size 1 quick change adaptor
9680524	Size M8 Tap holder w/clutch fits size 1 quick change adaptor
9680525	Size M10 Tap holder w/clutch fits size 1 quick change adaptor
9680526	Size M12 Tap holder w/clutch fits size 1 quick change adaptor
9680527	Size M14 Tap holder w/clutch fits size 1 quick change adaptor

Drill Chuck w/Size 1 Quick Change Adaptor

Model	Description
9680515	3/8" Drill chuck on size 1 quick change adaptor

Torque Drive Tap Holders w/clutch Fits Size 2 Quick Change Adaptor

Model	Description
9680530	5/16" Tap holder w/clutch fits size 2 quick change adaptor
9680531	3/8" Tap holder w/clutch fits size 2 quick change adaptor
9680532	7/16" Tap holder w/clutch fits size 2 quick change adaptor
9680533	1/2" Tap holder w/clutch fits size 2 quick change adaptor
9680534	9/16" Tap holder w/clutch fits size 2 quick change adaptor
9680535	5/8" Tap holder w/clutch fits size 2 quick change adaptor
9680536	11/16" Tap holder w/clutch fits size 2 quick change adaptor
9680537	3/4" Tap holder w/clutch fits size 2 quick change adaptor
9680538	13/16" Tap holder w/clutch fits size 2 quick change adaptor
9680539	7/8" Tap holder w/clutch fits size 2 quick change adaptor
9680540	1" Tap holder w/clutch fits size 2 quick change adaptor
9680541	1/4" NPT Pipe tap holder w/clutch fits size 2 quick change adaptor
9680542	3/8" NPT Pipe tap holder w/clutch fits size 2 quick change adaptor
9680550	Adaptor for size 2 to 1- fits size 2 quick change adaptor and accepts all size 1 tap holders

Drilling and Tapping

10" Bench Drill Press

Palmgren's practical light to medium duty drilling machine combines performance and economy into one. It's an ideal choice when working with metal, composite, plastic or wood. Available in a bench model, step pulley, belt driven and designed for general purpose intermittent use.

- ◆ Durable cast iron head, table & base
- ◆ Spindle supported by high quality ball bearings
- ◆ Rack and pinion table raiser
- ◆ Table tilts 45° to the right & left and swivels 360° around the column
- ◆ 1/2" through table & base slots for easy mounting & clamping of workpiece
- ◆ Laser alignment
- ◆ Spindle depth stop
- ◆ Front mounted safety, paddle on/off switch
- ◆ Drill chuck & key



Standard Duty Drill Press															
Swing (In.)	Motor HP	Voltage	Amps AC	Capacity Cast Iron (In.)	Spindle Speeds	RPM	Spindle Taper	Spindle Travel (In.)	Spindle to Table (In.)	Table Work Surface (In.)	Table Slots (In.)	H	W	D	Item No.
10	1/3	115	6.8	1/2	5	620-3100	JT33	2-1/2	10-11/16	7-13/16 x 7-13/16	1/2 W x 4-11/16 L	27-1/2	11-1/4	19-1/4	9680110

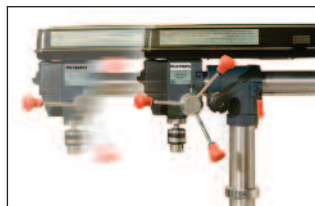
Radial Arm Drill Presses

Palmgren's radial arm drill presses have an extended reach, tilting drill head that is ideal for large or odd-shaped work pieces. The table tilts 45° left or right allowing easy machining of holes at almost any angle.

- ◆ Durable cast iron head, table & base
- ◆ Spindle supported by high quality ball bearings
- ◆ Rack and pinion table raiser
- ◆ Table tilts 45° right & left and swivels 360° around the column
- ◆ 1/2" through table & base slots for easy mounting and clamping of workpiece
- ◆ Front mounted safety, paddle on/off switch
- ◆ Drill chuck & key



The head tilts 90° left and 45° right.



The head of the drill press moves 12-1/2" forward or backward



Radial Arm Drill Presses															
Swing (In.)	Motor HP	Voltage	Amps AC	Capacity Cast Iron (In.)	Spindle Speeds	RPM	Spindle Taper	Spindle Travel (In.)	Spindle to Table (In.)	Table Work Surface (In.)	Table Slots (In.)	H	W	D	Item No.
9 to 33	1/2	115	4.8	5/8	5	575-3520	MT2	3-5/32	15	8-7/8 x 9	1/2	37	10	33	9680341
9 to 33	1/2	115	4.8	5/8	5	575-3520	MT2	3-5/32	30	10-3/8 x 10-3/8	1/2	65	14	33	9680342

Drilling and Tapping

Heavy Duty 16-Speed Bench Model Drill Presses

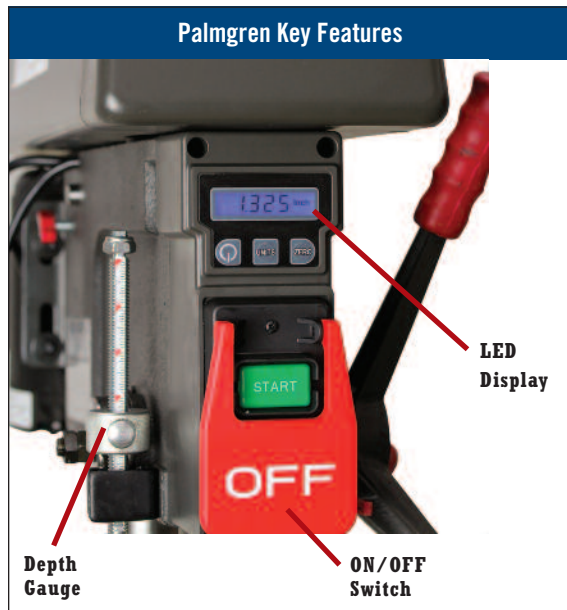
Palmgren's heavy duty 16-speed drill presses are designed and built for drilling a wide array of materials. They have the weight and rigidity to maintain the built-in tight tolerances required for metalworking applications. The oversized, massive drill heads have widely spaced bearing surfaces that provide full quill support throughout its travel. A wider range of operation speeds for drilling both large and small holes.

- ◆ Fully enclosed spindle for accurate drilling operations
- ◆ Maximum spindle run out of 0.0005"
- ◆ Extended quill/spindle travel ideal for deep hole applications
- ◆ LED readout of spindle speed and quill travel
- ◆ Rack and pinion table raiser
- ◆ Precision ground t-slotted work table with coolant trough
- ◆ Table tilts 45° right and left and rotates 360° around the column
- ◆ Quick change vertical depth stop for accurate, repeatable feed length
- ◆ Heavy cast metal 3 spoke quill feed handle with ergonomic speed feed handle
- ◆ Front mounted industrial paddle-type power switch
- ◆ Includes chuck with key and arbor



16-Speed Bench Model Drill Presses															
Swing (In.)	Motor HP	Voltage	Amps AC	Capacity Cast Iron (In.)	Spindle Speeds	RPM	Spindle Taper	Spindle Travel (In.)	Spindle to Table (In.)	Table Work Surface (In.)	Table Slots (In.)	H	W	D	Item No.
13.25	1/3	120	6.0	1/2	16	244-3386	JT33	3-1/4	16-3/4	8-5/8 x 9-7/16	1/2	38-7/8	9-3/4	16-1/2	9680150
15	1/2	120/240	8.6/4.3	5/8	16	138-3476	MT2	5	13	11-1/2 x 13	1/2	43	11	18-1/8	9680155

16-Speed Floor Model Special Features



Quick change depth stop with scale



Cast, 3-spoke feed lever with ergonomic speed handle



Front mount, industrial paddle on/off switch

Whether you're drilling one hole or many - where precision drilling is required, you'll do the job better and faster with Palmgren

Drilling and Tapping

Heavy Duty 16-Speed Floor Model Drill Presses

Palmgren's heavy duty 16-speed drill presses are designed and built for drilling a wide array of materials. They have the weight and rigidity to maintain the built-in tight tolerances required for metalworking applications. The oversized, massive drill heads have widely spaced bearing surfaces that provide full quill support throughout its travel. A wider range of operation speeds for drilling both large and small holes.

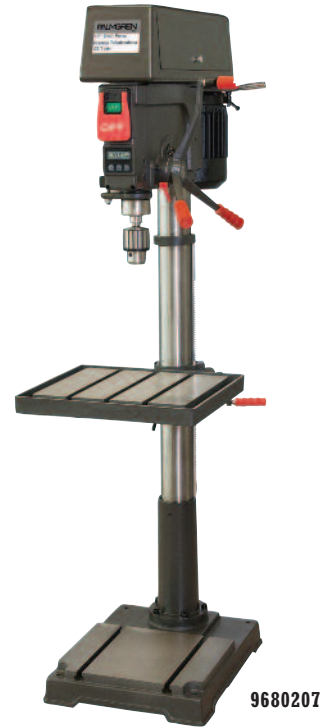
- ◆ Fully enclosed spindle for accurate drilling operations
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- ◆ Rack and pinion table raiser
- ◆ Precision ground t-slotted work table with coolant trough
- ◆ Table tilts 45° right and left and rotates 360° around the column
- ◆ Quick change vertical depth stop for accurate, repeatable feed length
- ◆ Heavy cast metal 3 spoke quill feed handle with ergonomic speed feed handle
- ◆ Front mounted industrial paddle-type power switch
- ◆ Includes chuck with key and arbor



9680156



9680174



9680207

16-Speed Floor Model Drill Presses

Swing (In.)	Motor HP	Voltage	Amps AC	Capacity Cast Iron (In.)	Spindle Speeds	RPM	Spindle Taper	Spindle Travel (In.)	Spindle to Table (In.)	Table Work Surface (In.)	Table Slots (In.)	H	W	D	Item No.
15	1/2	120/240	8.6/4.3	5/8	16	138-3476	MT2	5	26-1/4	11-1/2 x 13	1/2	66	12-3/4	19-3/4	9680156
17	1.0	120/240	10.2/5.1	3/4	16	138-3476	MT2	5	25	11-1/2 x 13	1/2	65-1/4	12-3/4	19-3/4	9680174
20	1.5	120/240	14/7	1-1/4	16	120-3605	MT3	5	26-3/8	16-5/8 x 18-5/8	1/2	69-3/4	17-5/8	22-1/2	9680207

Drilling and Tapping

Production Duty 12-Speed Floor Model Drill Press

Production duty drill press designed and built to handle a wide variety of uses from general purpose drilling applications to production jobs. Fully enclosed spindle with a maximum runout of .0005" for accurate drilled holes. Rack and pinion table raiser easily positions the work-piece and fixture at the proper height. This drill delivers performance and reliability at an economical price.

- ◆ Cast iron head, table and base
- ◆ Maximum spindle runout of 0.0005"
- ◆ Extended quill travel
- ◆ Rack and pinion table raiser
- ◆ Spindle depth stop
- ◆ Front mounted push button on/off switch
- ◆ Heavy duty, precision ground, T-slotted work table with coolant trough
- ◆ Heavy duty spindle bearings
- ◆ Drill chuck and arbor.



12-Speed Floor Model Drill Presses															
Swing (In.)	Motor HP	Voltage	Amps AC	Capacity Cast Iron (In.)	Spindle Speeds	RPM	Spindle Taper	Spindle Travel (In.)	Spindle to Table (In.)	Table Work Surface (In.)	Table Slots (In.)	H	W	D	Item No.
20	1	115/230	16/8	1	12	140 to 2600	MT3	5	26	13 x 15	5/8	70	23.5	33	9680329

Turning

7 x 12" Bench Lathe

Palmgren's 7" bench engine lathe delivers the precision, power and versatility to handle a wide range of turning operations normally found in much larger machines.

Heavy cast iron construction, smooth power transmission, precision thrust and ball bearings in the head stock and spindle, hardened and ground ways all designed to give you years of trouble-free, precise turning. Built and inspected to the DIN 8606 toolmakers precision lathe standard assuring accuracy and consistent performance.

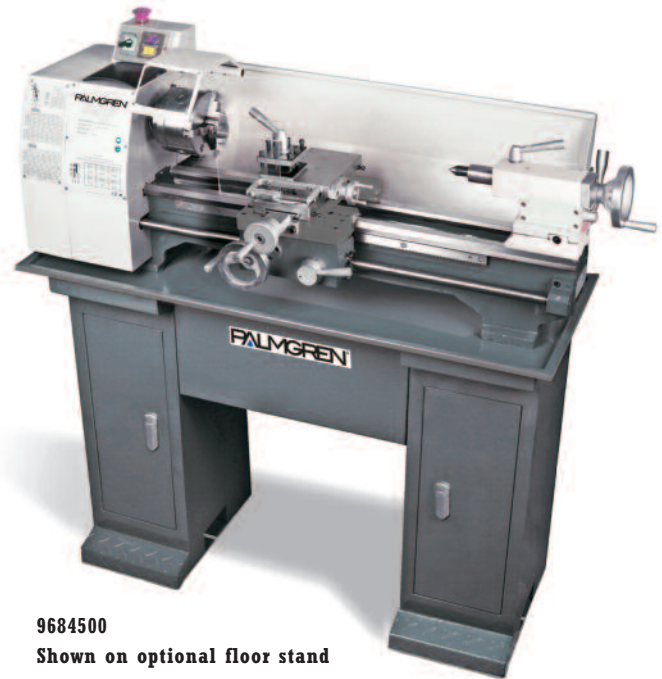
The bench lathe is the right choice for turning small metal parts and is used in proto type shops, tool rooms, fabrication shops, maintenance shops, jewelry manufacturing and by home and hobby machinists.

STANDARD FEATURES:

- ◆ Machine tool spindle
- ◆ Dual P5 taper roller bearings on spindle
- ◆ Prismatic bed of solid aged cast iron – hardened to HRO 42-52 for long life
- ◆ Feed lead screw is supported and runs on two bearings
- ◆ Trapezoid machine tool spindle
- ◆ Precision machined slide with adjustable hand wheels with 0.002" / 0.001" scales
- ◆ Tailstock with adjustable precision scale of 0.02 mm / 0.001"
- ◆ 3 Jaw lathe chuck
- ◆ 4 Way tool post
- ◆ Safety lathe chuck and tool post guards
- ◆ Centers
- ◆ Chip tray and splash guard

OPTIONAL ACCESSORIES:

- 9684501 - Heavy duty steel floor stand with hinged doors for added storage
- 9684502 - Follow rest for 7" bench lathe
- 9685403 - Steady rest for 7" bench lathe



9684500

Shown on optional floor stand

Item Number 9684500		
Motor	3/4 HP / 115V / 60HZ / 1PH	
Center Height	90 mm	3.54 in
Distance Between Centers	300 mm	11.81 in
Turning Diameter (max)	180 mm	7.09 in
Max Swing Over Compound Slide	110 mm	4.33 in
Bed Width	100 mm	3.94 in
Spindle		
Spindle Speed	150 - 2500 RPM	
Number of Steps	2	
Spindle Taper	MT3	
Spindle Hole	21 mm	0.83 in
Chuck Size	20 mm	0.79 in
Slide		
Top Slide Travel	55 mm	2.16 in
Compound Slide Travel	75 mm	2.95 in
Tailstock		
Tailstock Taper	MT2	
Tailstock Sleeve Travel	65 mm	2.56 in
Longitudinal Feed	0.05 & 0.1 mm	0.002" & .004"
Pitch	0.4 - 3 mm	10 - 44 in
Tool Holder Seat Height	8 mm	0.31
Dimensions/Weight		
Length	830 mm	32.68 in
Width	396 mm	15.59 in
Height	355 mm	13.98 in
Weight	55 kg	121.25 lb

Turning

9 x 20" Bench Lathe

Palmgren's 9" bench engine lathe delivers the precision, power and versatility to handle a wide range of turning operations normally found in much larger machines.

Heavy cast iron construction, smooth power transmission, precision thrust and ball bearings in the head stock and spindle, hardened and ground ways all designed to give you years of trouble-free, precise turning. Built and inspected to the DIN 8606 toolmakers' precision lathe standard, assuring accuracy and consistent performance.

The bench lathe is the right choice for turning small metal parts and is used in proto type shops, tool rooms, fabrication shops, maintenance shops, jewelry manufacturing and by home and hobby machinists.

STANDARD FEATURES:

- ◆ Machine tool spindle
- ◆ Dual P5 taper roller bearings on spindle
- ◆ Prismatic bed of solid aged cast iron – hardened to HRO 42-52 for long life
- ◆ Fast easy feed speed and direction changes with front mounted selector handles
- ◆ Feed gear box is constructed of steel gears running in an oil bath
- ◆ Feed lead screw is supported and runs on two bearings
- ◆ Precision machined slide with adjustable hand wheels with 0.002" / 0.001" scales
- ◆ Tailstock with adjustable precision scale of 0.02 mm / 0.001"
- ◆ 3 Jaw lathe chuck
- ◆ 4 Way tool post
- ◆ Safety lathe chuck and tool post guards
- ◆ Centers
- ◆ Chip tray and splash guard

OPTIONAL ACCESSORIES:

9684505 - Heavy duty steel floor stand with hinged doors for added storage

9684506 - Follow rest for 9" bench lathe

9685407 - Steady rest for 9" bench lathe



9684504

Shown on optional floor stand

Item Number 9684504		
Motor	1 HP / 115V / 60HZ / 1PH	
Center Height	125 mm	4.92 in
Distance Between Centers	550 mm	21.65 in
Turning Diameter (max)	250 mm	9.84 in
Max Swing Over Compound Slide	150 mm	5.91 in
Bed Width	135 mm	5.31 in
Spindle		
Spindle Speed	125 - 2000 RPM	
Number of Steps	6	
Spindle Taper	MT4	
Spindle Hole	26 mm	1.02 in
Chuck Size	125 mm	4.92 in
Slide		
Top Slide Travel	70 mm	2.76 in
Compound Slide Travel	110 mm	4.33 in
Tailstock		
Tailstock Taper	MT2	
Tailstock Sleeve Travel	65 mm	2.56 in
Longitudinal Feed	.002" - .012"	
Pitch	0.2 - 4.0 mm	56 - 8 in
Tool Holder Seat Height	13 mm	0.5 in
Dimensions/Weight		
Length	1250 mm	49.21 in
Width	585 mm	23 in
Height	475 mm	18.70 in
Weight	125 kg	276 lb

Turning

Combination 11 x 27" Bench Lathe & Mill

Palmgren's combination 11" bench lathe engine lathe and gear head mill delivers the precision, power and versatility to handle a wide range of turning, milling and drilling operations normally found in much larger machines.

Heavy cast iron construction, smooth power transmission with precision thrust and ball bearings in the head stock and spindles, hardened and ground ways all designed to go give you years of trouble-free, precise turning, milling and hole making machining. Built and inspected to the DIN 8606 toolmakers precision lathe standard assuring accuracy and consistent performance.

STANDARD FEATURES:

LATHE

- ◆ Trapezoid machine tool spindle
- ◆ Dual P5 taper roller bearings on spindle
- ◆ Prismatic bed of solid aged cast iron – hardened to HRO 42-52 for long life
- ◆ Fast easy feed speed and direction changes with front mounted selector handles
- ◆ Feed gear box is constructed of helical steel gears running in an oil bath
- ◆ Feed lead screw is supported and runs on two bearings
- ◆ Precision machined slide with adjustable hand wheels with 0.002" / 0.001" scales
- ◆ Tailstock with adjustable precision scale of 0.02 mm / 0.0008"
- ◆ 3 Jaw lathe chuck
- ◆ 4 Way tool post
- ◆ Safety lathe chuck and tool post guards
- ◆ Centers
- ◆ Chip tray and splash guard

MILL

- ◆ Electronic variable speed
- ◆ All steel gear drive train
- ◆ Built-in work light
- ◆ Box column with hardened, ground and hand scraped ways
- ◆ 2 MT machine tools spindle with draw bar
- ◆ Precision machine tool spindle with guaranteed concentricity of .0005" at the spindle nose
- ◆ Drill chuck and arbor

OPTIONAL ACCESSORIES:

9684505 - Heavy duty steel floor stand with hinged doors for added storage

The all gear drive transmission on the mill delivers full power at any speed driving the cutting tools at nearly 100% of available horsepower and torque.

With such a wide range of versatility and features, this all-purpose combination lathe/mill is one of the most function manual machine centers that can operate in all types and sizes of shops.



9684520

Shown on optional floor stand



9680170

9680170 - No. 2 MT round collet chuck set, 5 collets 1/8" to 7/16" with wooden storage box

Turning

Item Number 9684520		
Lathe Specifications		
Motor	1 HP / 115V / 60HZ / 1PH	
Height of Centers	140 mm	5.51 in
Max Turning Diameter	280 mm	11.02 in
Distance Between Centers	700 mm	27.56 in
Spindle		
Spindle Speed	150 - 2000 RPM	
Number of Speeds	6	
Spindle Taper	MT4	
Spindle Hole	26 mm	1.02 in
Chuck Size	127 mm	5 in
Slide		
Bed Width	180 mm	7.09 in
Travel Top Slide	61.65 mm	2.43 in
Compound Slide Travel	142.16 mm	5.60 in
Distance Between Center and Compound Table	88.55 mm	3.49 in
Tailstock		
Tailstock Taper	MT2	
Tailstock Sleeve Travel	105 mm	4.13 in
Longitudinal Feed	0.07 - 0.1 - 0.2 mm	0.002" - 0.004" - 0.008"
Pitch - (metric/inches)	0.2 - 4 mm	8 - 56 in
Dimensions/Weight		
Height	630 mm	24.80 in
Length	1390 mm	54.72 in
Depth	700 mm	27.56 in
4 Position tool Post Height	12.7 mm	1/2 in
Weight	200 kg	440.93 lb
Mill Specifications		
Motor	1 HP / 115V / 60HZ / 1PH	
Drilling Capacity	16 mm	0.63 in
Milling Capacity of end-mill cutter	20 mm	0.79 in
Milling Capacity of Inserted Tooth Cutter	63 mm	2.48 in
Working Radius	185 mm	7.28 in
Spindle		
Spindle Holding Fixture	MT2/M10	
Spindle Travel	50 mm	1.97 in
Drill-Mill Head		
Swivelling	+/- 90°	
Gear Stages	2	
Low Range	100 to 1500 RPM	
High Range	200 to 3000 RPM	
Z-Axis Travel	370 mm	14.57 in
Cross Table		
Table Length	500 mm	19.69 in
Table Width	180 mm	7.09 in
Y-Axis Travel	175 mm	6.89 in
X-Axis Travel	280 mm	11.02 in
T-Slot size / Distance / Quantity	12mm / 63 mm / 3	0.47 in / 2.48 in / 3
Dimensions/Weight		
Height	860 mm	33.85 in
Length	670 mm	26.38 in
Width	550 mm	21.65 in
Weight	103 kg	227.08 lb

Milling

Mill / Drill Machine

Our Mill / Drill machine offers maximum versatility and economy for your end milling, face milling, slotting, drilling and boring applications all in a single machine designed to bring a competitive advantage to the smaller job shop, model shop, fabrication shop and maintenance departments.

STANDARD FEATURES:

- ◆ Solid cast iron construction
- ◆ Large, precision ground T-slotted machine table with adjustable feed stops
- ◆ Hinged belt cover for faster speed changes
- ◆ Heavy-duty tapered roller bearings support the spindle
- ◆ Positive easy to read internal depth stop
- ◆ Fine feed mechanism with graduated dial for accurate down feed movement
- ◆ Easy to read dials
- ◆ 360° head swivel
- ◆ Comes standard with draw bar, work light, R8/J6 arbor, face mill cutter, R8/MT3 arbor, drill chuck and key and 6 piece R8 arbor set (1/8", 1/4", 3/8", 1/2", 5/8" & 3/4").

OPTIONAL ACCESSORIES:

- 9670104 - Heavy duty steel floor stand made from 14 gauge steel for rigid support. Comes with a large coolant and chip tray, 4 mounting holes for bolting stand to the floor and a hinged cabinet door for extra storage in the base.
- 9680162 - Table power feed attachment for automating the "X" axis. Power feeding on the table increases productivity and improves surface finish on the work pieces. Includes: travel limit stops and switches and all mounting hardware.



9680161

Shown on optional floor stand

Milling

Item Number 9680161		
Motor	2 HP / 230V / 60HZ / 1PH	
Drilling Capacity in Cast Iron (max.)	38.1 mm	1-1/2 in
Drilling Capacity in Steel (max.)	31.75 mm	1-1/4 in
Milling Capacity Cutter Head (max.)	76.2 mm	3 in
Milling Capacity End Mill Cutter (max.)	19.05 mm	3/4 in
Column Diameter	101.6 in	4 in
Working Range	2032 mm x 2540 mm x 1651 mm	80 in x 100 in x 65 in
Spindle Holding Fixture		
Spindle Taper	R8	
Quill Travel	120.65 mm	4-3/4 in
Quill Diameter	76.2 mm	3 in
Quill Collar Diameter	95.25 mm	3-3/4 in
Draw Bar Thread	11.11 mm	7/16" - 20 drawbar
Drill-Mill Head		
Head Rotation	360°	
Head Travel	304.8 mm	12 in
Maximum Spindle To Table	457.20 mm	18 in
Speeds		
Number of Speeds	12	
Speed Range	140 - 2436 RPM	
Cross Table		
Cross Table Length x Width	730.25 x 209.55 mm	28-3/4 x 8-1/4 in
X-Axis	501.65 mm	19-3/4 in
Y-Axis	177.8 mm	7 in
T-Slot Size / Quantity	355.6 mm / 3 ea	14 in / 3 ea
Swing	393.7 mm	15-1/2 in
Dimensions/Weight		
Length	965.2 mm	38 in
Width	762 mm	30 in
Height	1092.2 mm	43 in
Net Weight	272.15 kg	600 lb

Milling

Gear Head Milling Machine

Palmgren's deluxe gear head milling machine delivers the precision, power and versatility to handle a wide range of machining operations normally performed in much larger and more expensive milling machines.

The all gear drive transmission delivers full power at any speed driving the cutting tools at nearly 100% of the available horsepower and torque. This mill is equipped with a high performance brushless DC motor with permanent current control and the latest technology variable speed inverter providing the broadest range of spindle speeds to fit any application.

A rigid box column with hardened, ground and hand scraped dovetail ways provide accurate head positioning with minimum deflection and vibration. The milling head can be tilted right or left up to 90°.

Precision machine tool spindle equipped with taper roller bearings and a guaranteed spindle concentricity of .0005" at the spindle nose.

The cross slide table is precision ground with T-slots, adjustable limit stops, scale and three satin metal adjusting hand wheels.

For added versatility our gear head mill comes with an automatic tapping mode providing high quality threads and an auto mode which allows the starting and stopping of the spindle through the three spoke hand wheel for greater productivity.

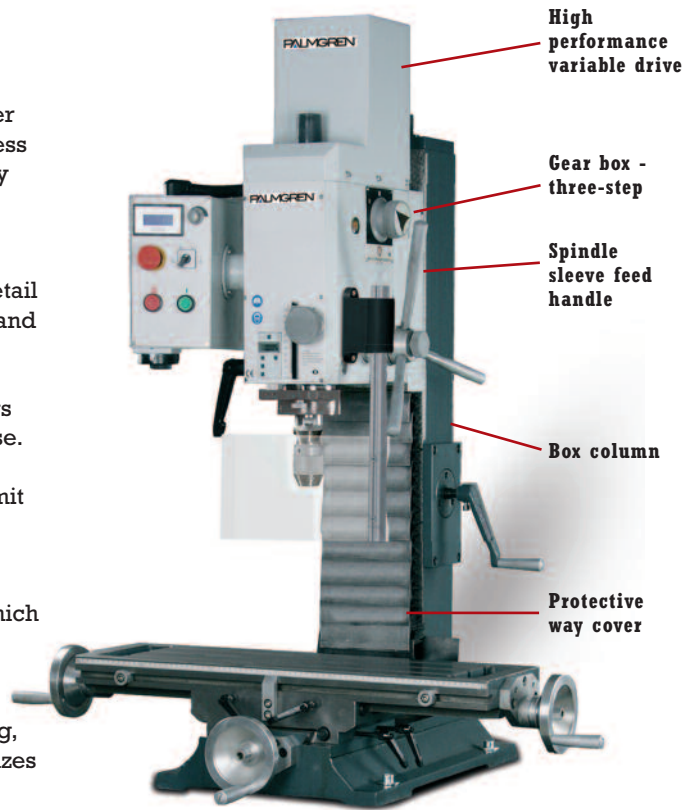
This all-purpose mill is ideal for milling, drilling, slotting, engraving, boring, tapping and angle machining operations in all types and sizes of shops.

STANDARD FEATURES:

- ◆ Tapping cycle
- ◆ Depth stop
- ◆ Digital speed readout
- ◆ Digital readout depth gauge
- ◆ Interlocking spindle safety guard
- ◆ Draw bar
- ◆ Way cover

OPTIONAL ACCESSORIES:

9670105 - Heavy duty steel floor stand made of heavy gage steel for added stability. Comes with shelf and chip tray, easy access door for tool storage and 4 holes for mounting to the floor.



9680165



9670105 - Heavy duty steel floor stand



AUTO ON/OFF MODE

In the automatic mode, the motor will start automatically when the hand lever is pulled down and stops at the initial "up" position. This way, it is not necessary to press the push button Start and Stop for repeated drilling tasks.



TAPPING MODE

The motor is activated by moving the star grip/-handle downward. The spindle direction is changed by limit switches on the adjustable depth stop.

Milling

Item Number 9680165		
Motor	3 HP / 230V / 60HZ / 1PH	
Drilling Capacity in Casting (max.)	27.94 mm	1.1 in
Drilling Capacity in Steel (max.)	22.86 mm	0.9 in
Milling Capacity Cutter Head (max.)	76.66 mm	2.9 in
Milling Capacity End Mill Cutter (max.)	30.48 mm	1.2 in
Working Range	1075 mm / 795 mm / 1245 mm	42.3 in / 31.3 in / 49.0 in
Spindle Holding Fixture		
Spindle Taper	R8	
Draw Bar Thread	11.11 mm	7/16 in - 20 drawbar
Quill Travel	88.9 mm	3.5 in
Drill-Mill Head		
Swiveling	+/- 90°	
Gearbox Stages	3	
Z-Axis Travel	470 mm	18.5 in
Speeds		
Low	90 - 900 RPM	
Middle	150 - 1500 RPM	
High	300 - 3000 RPM	
Cross Table		
Cross Table Length x Width	749.3 mm	29.5 x 8.3 in
X-Axis	200.66 mm	7.9 in
Y-Axis	449.58 mm	17.7 in
T-Slot Size/ Distance/ Quantity	12.7 mm / 63.30 mm / 3	1/2 in / 2.45 in / 3
Dimensions/Weight		
Length	1899.92 mm	74.8 in
Width	2499.36 mm	98.4 in
Height	2100.58 mm	82.7 in
Net Weight	264.90 kg	584 lb

Machine Accessories

Drill Press Guard

This specially designed drill guard gives full protection from quill to drill point by the smooth telescopic action of the guard, which collapses as the drill penetrates the workpiece, returning to the extended position when the spindle is raised. This unit is made from strong, injection molded, high impact polycarbonate which offers clear and safe vision through body and visor. In the operating position the guard is securely locked in the closed position by a spring-loaded plunger pin assembly. When released, the guard hinges up, allowing instant access for cutting tool and/or chuck change. Complies fully with all ANSI and OSHA guidelines.

- ◆ Clear vision for safe operation
- ◆ Rapid adjustment for drill length
- ◆ Fast access for cutting tool changes



Description	Max. Chuck Dia. (In.)	Lower Spindle Bearing Collar Dia. (In.)	Quill Dia. (In.)	Max. Stroke (In.)	Min. Stroke (In.)	Item No.
Drill Press Guard	2-1/8	1-3/4 to 3	1-3/4 to 3	6-1/4	3-1/2	9615025

Must be machined to fit drill presses with exposed lower spindle bearing collar diameter of 1-3/4 to 3 in.

Swing-Away Adjustable Safety Guard

Designed specifically for use on mill/drill machines, vertical turret milling machines and larger size drilling machines, these shields are intended to deliver protection by deflecting chips, sparks, coolant or lubricants away from the operator and others in the work area. The unit is made of strong cast iron brackets and high impact polycarbonate which offers the operator clear and safe vision during the machining process. The height clearance is easily adjusted with convenient locking knobs located on the mounting bracket and the large shield easily swings in or out allowing instant access for cutting tool and tool holder changes. Complies with all ANSI and OSHA guidelines.



9615035 installed



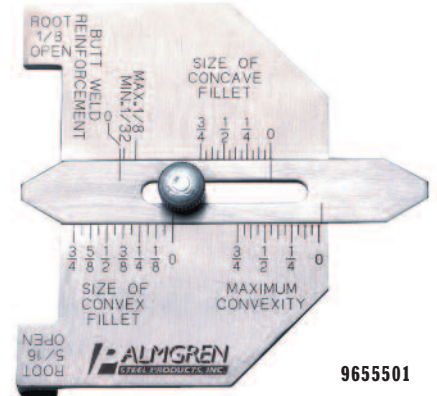
9615035

Description	L	W	H	Item No.
Swing-Away Adjustable Safety Guard	16	13-1/5	8	9615035

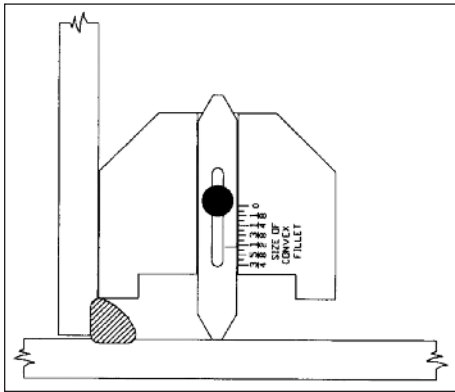
Welding Gauge

Butt-Weld & Fillet-Weld Gauge

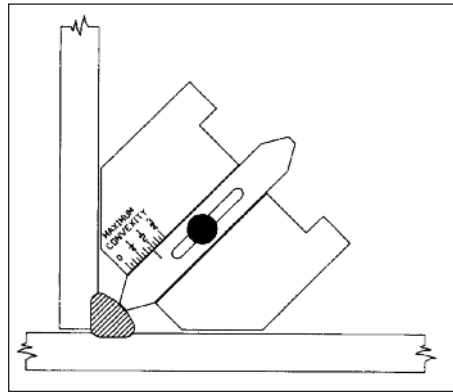
Palmgren 9655501 Weld Gauge is used for accurately checking butt and fillet welds. This handy tool may be used for measuring the size of convex and concave fillets, maximum convexity, the limit of reinforcement of butt welds and root openings. Made of stainless steel, laser etched and features a threaded pin and finger knob for easy locking of center slide.



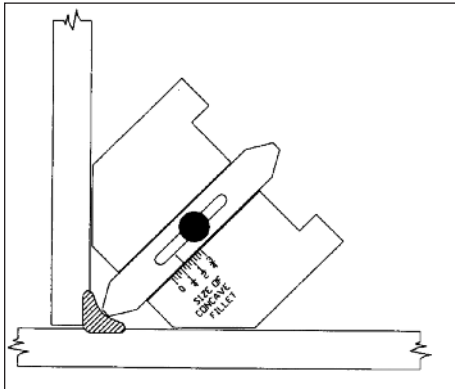
9655501



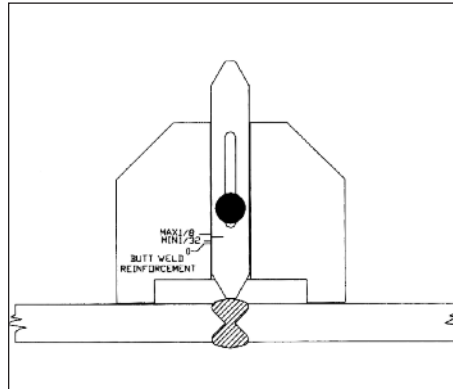
Determine the size of a convex fillet weld -
Place gauge against the toe of the shortest leg of the fillet and slide pointer out until it touches structure as shown. Read size of convex fillet on face of the gauge.



Check the permissible tolerance of convexity -
After the size of a convex weld has been determined, place the gauge against the structure and slide pointer until it touches face of the fillet weld as shown.



Determine the size of a concave fillet weld -
Place gauge against structure and slide pointer out until it touches the face of the fillet weld as shown. Read size of concave fillet on face of gauge.



Check the permissible tolerance reinforcement -
Place gauge so that reinforcement will come between legs of gauge and slide pointer out until it touches the face of the weld as shown.

Description	Fillet Size Range (In.)	Maximum Convexity (In.)	Butt Weld Size (In.)	Root Opening (In.)	Weight (Lb.)	Item No.
Weld Gauge	0 - 3/4	0 - 3/4	1/32 - 1/8	1/8, 5/8	.5	9655501

History

Palmgren History

Since 1919 Palmgren products have proven their reliability, efficiency and durability in over 95 years of use by all types of industry throughout the world. Clarence Palmgren was acclaimed for his achievements and contributions to the metalworking industry through his innovative designs and patents. He is credited with the design and manufacture of the first machine vises, cross slide and rotary tables that significantly increased efficiency and productivity with metalworking manufacturer's worldwide.

This created the foundation of innovation and quality that the Palmgren brand is built upon and follows today. So it is no surprise that Palmgren continues to be a market leader not only with our vises and positioning tables but across our whole expanded metalworking product offering.

Palmgren today delivers tools for the generations and solutions that solve the needs of the metalworking industry.

CH Hanson History

For almost 150 years, family-run CH Hanson has remained committed to their founding values of faith, hard work, and quality products. The company's founder, Christian Henry Hanson, the 'CH' of C.H. Hanson came to the United States of America from Denmark. Shortly after arriving in the US, the 39th New York Volunteer Infantry drafted Christian into the Civil War. The 39th Infantry, sometimes referred to as the Garibaldi Guard, consisted mostly of European immigrants. Christian fought with the 39th in many major battles, but was injured in the Battle of Gettysburg. He was taken to Fort Dearborn in Chicago, and decided to settle in the growing city.

On February 21st, 1866 Christian Henry Hanson founded C.H. Hanson, basing it off the stencil business he knew in Denmark. The first location was on Clark and South Water Street in Chicago, where he began producing hand-cut stencils. Christian also volunteered at the Denmark Consulate. He became the Danish Consul in Chicago in 1866, assisting the Danish immigrants in the surrounding areas. There, and at his own company, he led with kindness, generosity, and courage. The King of Denmark even recognized Christian Hanson for his work helping Danish immigrants.

Six years after the business began; the Great Chicago Fire destroyed almost all his work. After our building burned down with just the clothes on his back and a handful of stencil dies he vowed to rebuild everything.

Throughout the years, the company remains true to its past while reinventing themselves for the future. CH Hanson has produced everything from license plates to barricade tape, hand tools to and marking devices.

Recently, the company acquired Palmgren Steel Products, a 95 year old company that offers machine vises, positioning tables and wide variety of other metal working tools.

Today, the C.H. Hanson company continues its commitment to innovation and quality serving both the metalworking and construction markets and remains the market leader in stencils, tags, steel stamps, workholding and other metalworking machine tools and accessories.

Beyond the products, the high character of CH Hanson's people keeps the company going. From the tenacity required to start a business in a new land, to the strength and skill of immigrants from all over the world, CH Hanson's history and current operation are full of hard-working people of character.

CH Hanson remains a family business, with the fourth and fifth generation Hanson's running the company. It's not often that a company remains in one family for 148 years, and the Hanson's credit their success to the Lord's provision. Upon reflecting on the history of their family's company, Craig and Phil thank God for His grace and mercy and continue to build the company on strong, faith-based principles.

Fractions, Decimals, Millimeters

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1		1.0000	25.400



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