

PALMGREN®

**EMBRACE
THE WORK**

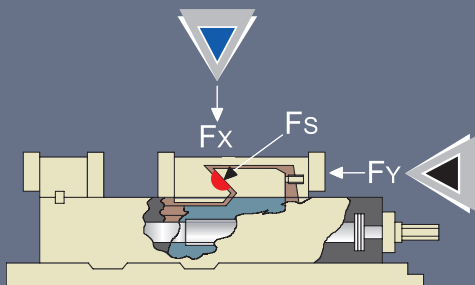


**MACHINE VISES
CATALOG**

PALMGREN... A FOUNDATION OF INNOVATION AND QUALITY

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.

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 datums, 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.



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).

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

EMBRACE THE WORK

At Palmgren we build tools for those who choose to work. Tools that were made to be used, that flex endless muscle, take a beating and ask for more. Tools that will stand by you on your daily grind. Tools that help you Embrace your Work.



PALMGREN

Selecting the right Dual Force vise, to meet your requirements requires careful assessment of your performance objectives. The following chart is a helpful tool to assist you in identifying the model of vise that best fits your application. Once you have determined the proper machine speed and feed rate for the material to be machined follow the chart below to help select the right operation and machine type. Then determine the application or use that best fits your specific requirement. Palmgren has the greatest selection of vises to assist you in adapting your existing equipment to handle a wider variety of clamping needs.

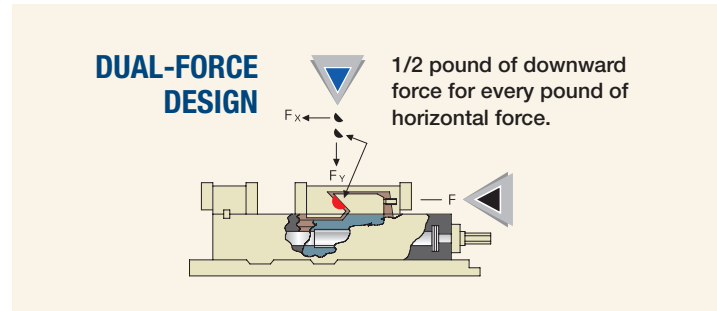
		OPERATIONS								MACHINES						
		Milling	Drilling	Reaming	Spot-facing	Counter Sinking	Counter Boring	Boring	Tapping	Slotting	Vertical Knee Mills	Mill/Drills	Horizontal Mills	Vertical Machining Centers	Horizontal Machining Centers	5 Axis Machining Centers
Dual Force Precision Machine Vises																
9625927	4" x 6" Dual Force Machine Vise	•	•	•	•	•	•	•	•	•	•	•	•	•		
9625929	6" x 8.9" Dual Force Machine Vise	•	•	•	•	•	•	•	•	•	•	•	•	•		
9625930	8" x 10" Dual Force Machine Vise	•	•	•	•	•	•	•	•	•	•	•	•	•		
9625937	6" XL Dual Force Machine Vise	•	•	•	•	•	•	•	•	•	•	•	•	•		
Dual Force Precision CNC Machine Vises																
9626600	4" x 5" Dual Force CNC Machine Vise	•	•	•	•	•	•	•	•				•	•		
9626610	6" x 6" Dual Force CNC Machine Vise	•	•	•	•	•	•	•	•				•	•		
Dual Force Multi-Function Precision Machine Vises																
9625932	6" Push Type Dual Force Vise	•	•	•	•	•	•	•	•	•			•	•		
Dual Force Double Station Machine Vises																
9625935	4" Dual Force Double Station Vise	•	•	•	•	•	•	•	•				•	•		
9625936	6" Dual Force Double Station Vise	•	•	•	•	•	•	•	•				•	•		
Dual Force 5 Axis Machine Vises																
9625943	3" 5-Axis Self Centering Machine Vise	•	•	•	•	•	•	•	•						•	
9625944	4" 5-Axis Self Centering Machine Vise	•	•	•	•	•	•	•	•						•	
9625945	5" 5-Axis Self Centering Machine Vise	•	•	•	•	•	•	•	•						•	
9625946	6" 5-Axis Self Centering Machine Vise	•	•	•	•	•	•	•	•						•	
Dual Force Speciality Vises																
9625959	4" Tilting Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625960	6" Tilting Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625947	6" High Precision Extra Capacity Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625948	8" High Precision Extra Capacity Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625949	6" Hydraulic Extra Capacity Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625950	8" Hydraulic Extra Capacity Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625951	6" Pneumatic/Hydraulic Machine Vise	•	•	•	•	•	•	•	•				•	•		
9625952	8" Pneumatic/Hydraulic Machine Vise	•	•	•	•	•	•	•	•				•	•		



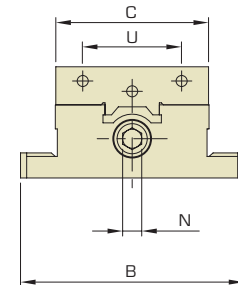
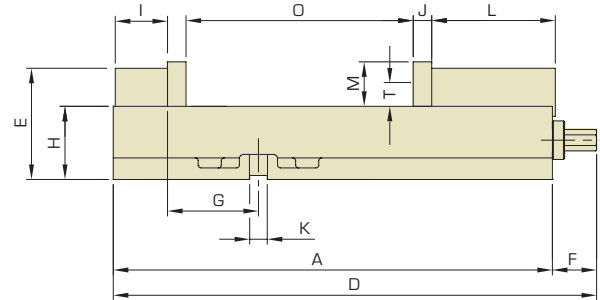
DUAL FORCE PRECISION PREMIUM MACHINE VISES

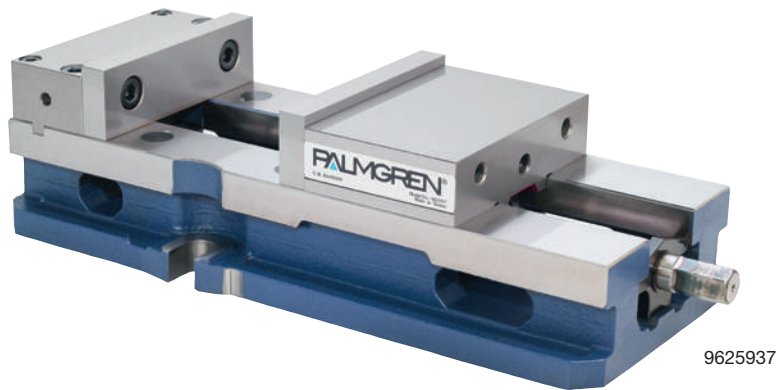
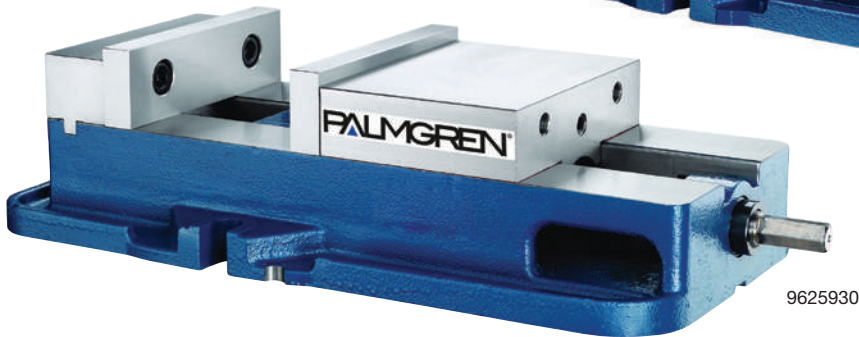
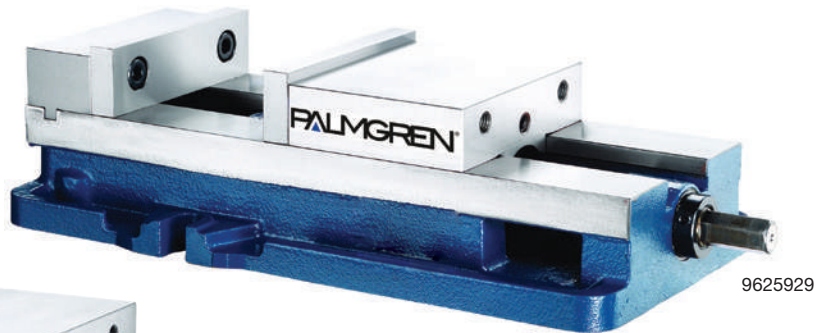
Palmgren's premium CNC vises combines quality, high precision and wide clamping capacities at an affordable price. Ideal for everyday use from high production environments to rapid prototyping machine shops.

- 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



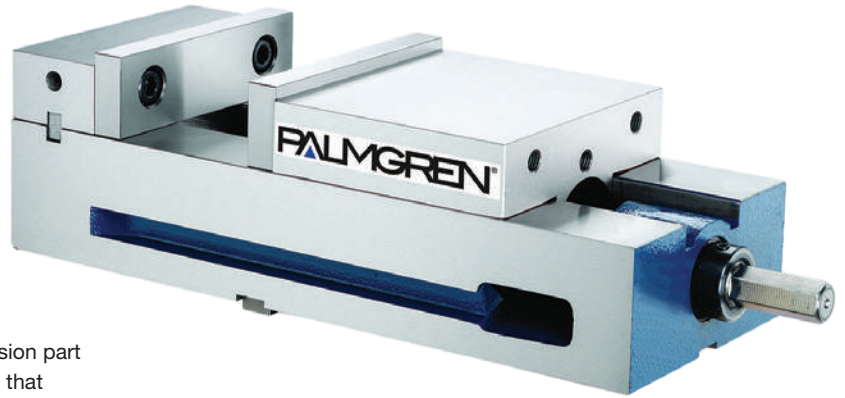
Item #	9625927	9625929	9625930	9625937
A	12.638	17.205	21.850	16.862
B	6.299	8.740	11.614	7.380
C	4.173	5.945	8.110	6.000
D	14.212	18.937	23.032	18.380
E	3.372	4.371	5.279	4.360
F	1.575	1.732	1.181	1.518
G	2.795	3.563	4.950	3.562
H	2.250	2.875	3.310	2.875
I	1.382	2.047	2.284	2.300
J	0.590	0.709	0.953	0.725
K	0.550	0.688	0.813	0.656
L	4.016	4.843	6.181	4.000
M	1.378	1.752	2.205	1.735
N	0.551	0.748	0.748	0.750
O	6.024	8.898	10.433	9.178
T	0.689	0.937	1.260	0.940
U	2.500	3.874	4.724	3.875
Weight	31 lbs.	80 lbs.	151 lbs.	65 lbs.





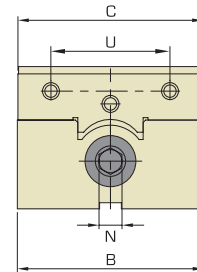
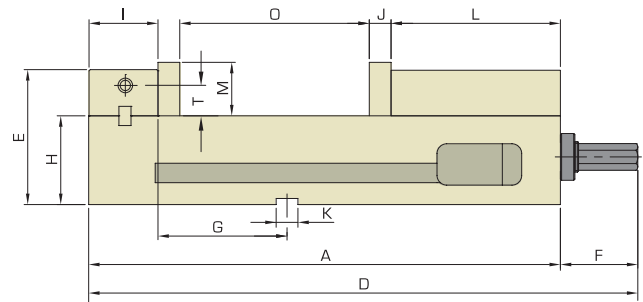
Description	Item #	Model #	Jaw Width	Jaw Opening	Throat Depth	Jaw Deflection
w/ Stationary Base	9625927	MPS40	4"	6"	1.378"	0.001" @ 4000 lbs.
w/ Stationary Base	9625937	MPS69	6"	9"	1.735"	0.001" @ 4000 lbs.
w/ Stationary Base	9625929	MPS68	6"	8.9"	1.752"	0.001" @ 4000 lbs.
w/ Stationary Base	9625930	MPS80	8"	10"	2.205 "	0.001" @ 4000 lbs.

DUAL FORCE PRECISION CNC MACHINE VISES



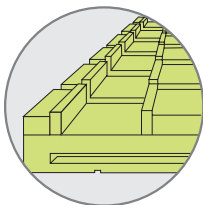
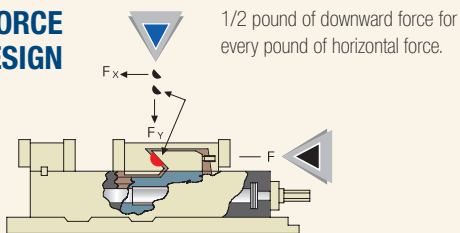
Built for use on all types of CNC machines where high precision part clamping is a necessity. This is an ideal vise for applications that require multiple vises to be mounted parallel to each other.

- Both sides are precision ground square to the bottom of the vise with in 0.0004"
- 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



Item #	Jaw Width	Jaw Opening	Throat Depth
9626600	4"	5"	1.575"
9626610	6"	6"	1.752"

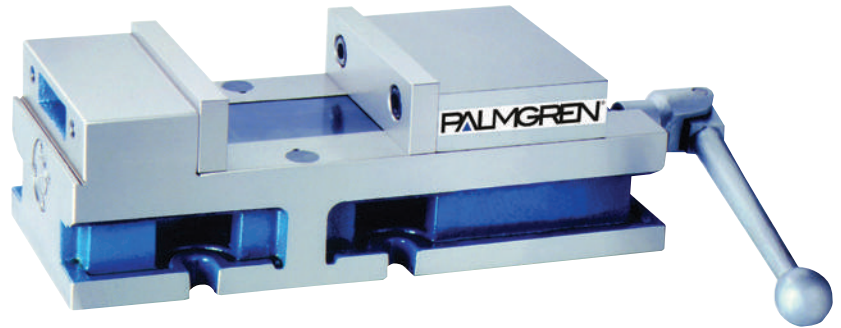
DUAL-FORCE DESIGN



Multiple Vises

Precise, easy alignment in multiples with guaranteed accuracy

Item #	9626610	9626600
A	15.354	12.992
B	6.063	4.134
C	5.945	4.016
D	17.913	14.646
E	4.370	3.937
F	2.560	1.654
G	4.200	3.606
H	2.874	2.677
I	2.244	1.843
J	0.709	0.827
K	0.709	0.709
L	5.512	4.173
M	1.752	1.575
N	0.748	0.551
O	5.827	4.921
T	0.937	0.689
U	3.874	2.500
Weight	81 lbs.	46 lbs



DUAL FORCE PRECISION MULTI-FUNCTION MACHINE VISES

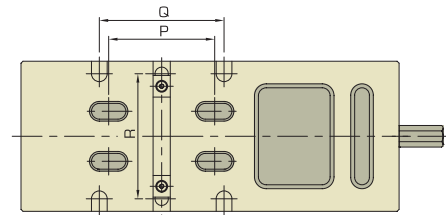
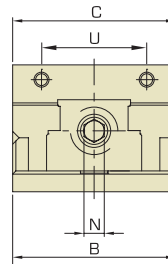
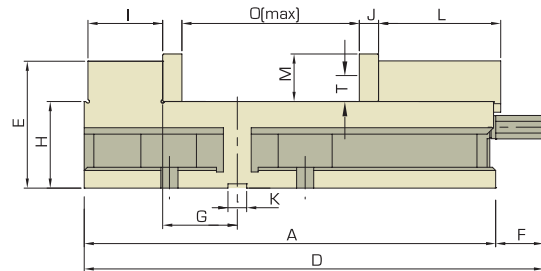
Model 9625932 is standard with the traditional push style moveable jaw

The lighter design vises can be mounted on their base/bottom, on either side or upright. They can also be mounted back to back to create a fast, easy and economical vise tombstone.

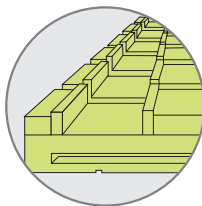
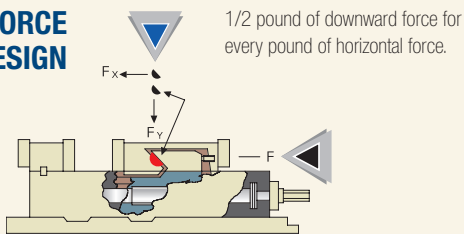
- 0.0005" clamping repeatability
- Equipped with Dual Force anti-lift mechanism
- 70,000 PSI ductile iron castings

DESCRIPTION:

Item # 9625932 - Push Style



DUAL-FORCE DESIGN



Multiple Vises
Precise, easy alignment in multiples with guaranteed accuracy

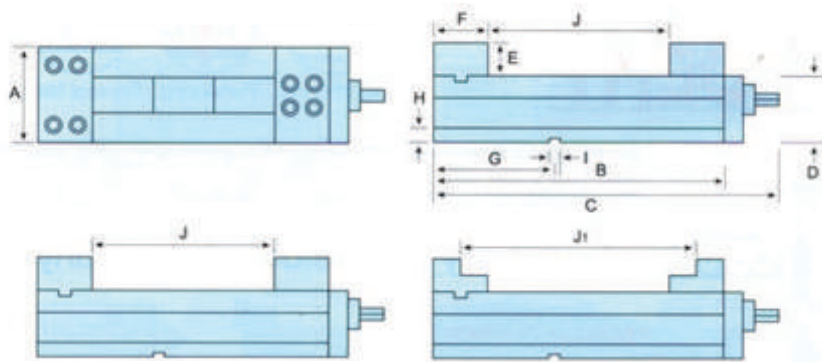
Item #	9625932
A	15.158
B	6.002
C	5.945
D	17.000
E	4.673
F	1.843
G	2.750
H	3.190
I	2.752
J	0.709
K	0.709
L	4.500
M	1.752
N	0.748
O	6.417
P	4.250
Q	5.000
R	5.000
T	0.937
U	3.874
Weight	69 lbs.



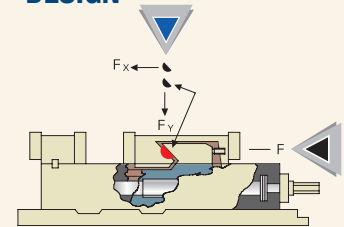
DUAL FORCE PRECISION EXTRA CAPACITY MACHINE VISES

Palmgren's Dual Force Precision Extra Capacity Machine Vises combine quality with high precision and are built for use on all types of CNC machines. These vises are perfect for large volume applications, where multiple vises must be mounted next to one another.

- Equipped with Dual Force Anti-Lift Mechanism
- Lead screw cover prevents premature wear from chip buildup
- Hardened jaw plates
- Hardened vise bed
- Parallelism of vise base to bed of 0.0004"
- Squareness from the bed to jaw face 0.0006"
- Parallelism of keyways on bottom of vise bed to the jaw face 0.0006"
- 80,000 PSI ductile iron castings resist vise bending
- Extra wide opening to hold larger workpieces



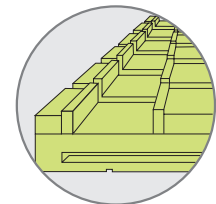
DUAL-FORCE DESIGN



1/2 pound of downward force for every pound of horizontal force.

Multiple Vises

Precise, easy alignment in multiples with guaranteed accuracy



Item #	A	B	C	D	E	F	G	H	I	J	J1	Weight	Max Clamping Pressure
9625947	6.299"	19.291"	24.213"	4.331"	2.165"	3.346"	5.906"	0.906"	0.709	11.811"	15.157"	132 lbs.	11,023 lbf
9625948	7.874"	22.244"	27.165"	4.724"	2.362"	3.937"	8.661"	0.906"	0.709	13.779"	17.717"	220 lbs.	11,023 lbf



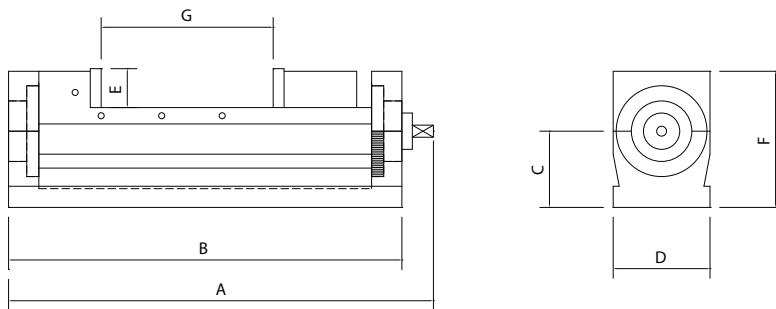
DUAL FORCE ANGLE MACHINE VISES

Palmgren's Dual Force Angle Machine Vises combine quality, high precision, and wide clamping capacities at an affordable price. These vises are ideal for everyday use from high production environments to rapid prototyping machine shops. Vises can be angled up to 50° and securely locked in place for rapid angular setups, without the use of blocks or wedges.

- Equipped with Dual Force anti-lift mechanism
- Can tilt left or right up to 50° in 1° increments
- Hardened jaw plates
- Hardened vise bed
- Parallelism of vise base to bed of 0.0004"
- Squareness from the bed to jaw face 0.0006"
- Parallelism of keyways on bottom of vise bed to the jaw face 0.0006"
- Lead screw cover to prevent wear from chip build up
- 80,000 PSI ductile iron castings prevent vise bending



Angles left or right up to 50° in 1° increments



Item #	A	B	C	D	E	F	G	Adjustable Angle	Weight	Max Clamping Pressure
9625959	20.276	17.717	4.331	4.921	1.889	7.559	5.906	0-50°	106 lbs.	11,023 lbf
9625960	24.015	21.653	6.496	6.299	2.480	8.858	7.874	°0-50	163 lbs.	11,023 lbf

DUAL FORCE HYDRAULIC EXTRA CAPACITY MACHINE VISES

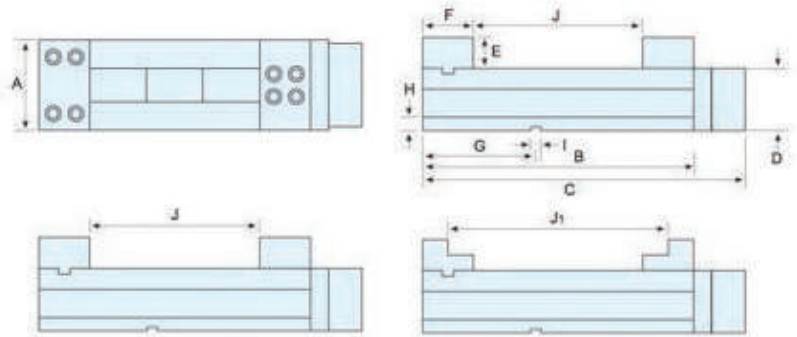
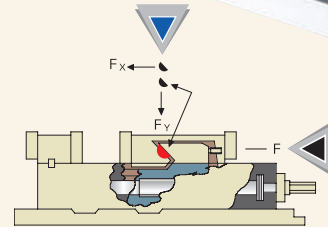
Palmgren Dual Force Hydraulic Extra Capacity Machine Vises are built for use on all sizes of CNC machines. With their mechanical booster, these vises have rapid closing capabilities and can achieve high clamping pressures. Palmgren Dual Force Hydraulic Extra Capacity Machine Vises give users the capability of opening and closing multiple vises at the same time. The vises are the perfect solution for full production shops and can be mounted parallel to each other for high throughput machining. With the addition of an optional Air-Actuated Hydraulic Booster (9625953), these vises can be connected directly to machining center airline connections, allowing for full automation of the vises.

- Improved hydraulic pump allows for greater clamping force
- Equipped with Dual Force anti-lift mechanism
- Lead screw cover to prevent wear from chip build up
- Hardened jaw plates
- Hardened vise bed
- Parallelism of vise base to bed of 0.0004"
- Squareness from the bed to jaw face 0.0006"
- Parallelism of keyways on bottom of vise bed to the jaw face 0.0006"
- 80,000 PSI ductile iron castings prevent vise bending
- Extra wide opening to hold larger workpieces



DUAL-FORCE DESIGN

1/2 pound of downward force for every pound of horizontal force.



Item #	A	B	C	D	E	F	G	H	I	J	J1	Weight	Max Clamping Pressure
9625949	6.299	19.291	23.228	4.331	2.165	3.346	5.906	0.906	0.709	11.811	15.157	132 lbs.	6,614 lbf
9625950	7.874	22.244	26.181	4.724	2.362	3.937	8.661	0.906	0.709	13.78	17.717	220 lbs.	6,614 lbf



AIR-ACTUATED HYDRAULIC BOOSTER

The Palmgren Air-Actuated Hydraulic Booster has a continuously reciprocating design, using air input to drive a boosting pump for higher hydraulic pressure. The booster allows for the control of vise clamping pressure by controlling the air inlet pressure via an adjusting valve. This booster can be used in conjunction with one or multiple Palmgren Dual Force Hydraulic Machine Vises.

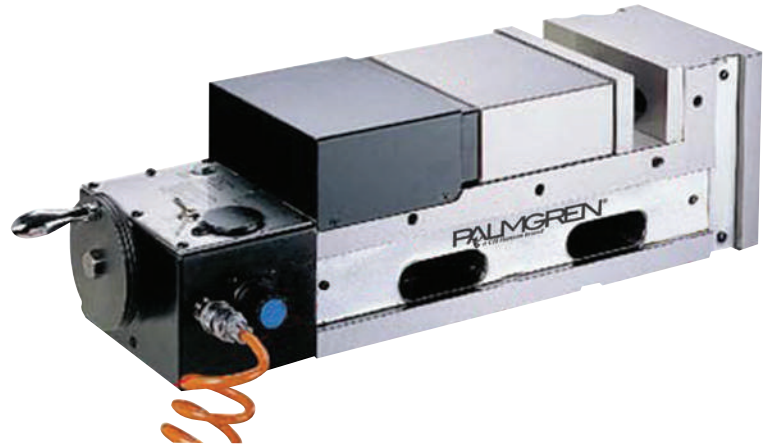
- Suitable in extended clamping operations
- Prevents oil temperature hikes
- Requires no electricity, making it safe to use in dangerous and restricted work areas
- Featuring a compact oil tank, the booster has a small footprint and is easy to install

Item # 9625953

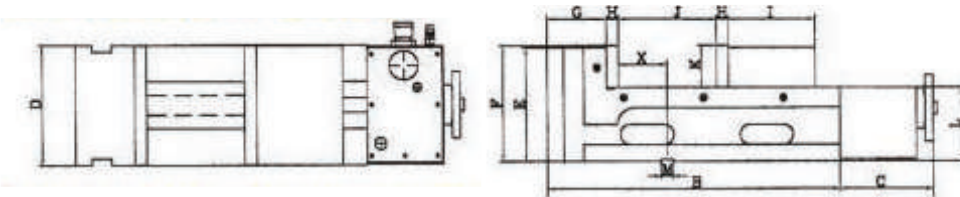


PNEUMATIC/HYDRAULIC ACTUATED MACHINE VISE WITH BOOSTER

Palmgren Pneumatic/Hydraulic Actuated Machine Vises with booster are the perfect solution for high volume runs where workpiece changeout time is critical. These vises give the user the ability to choose the exact clamping pressure via an internal air regulator. With its push button activation, the vise can be quickly opened and closed allowing for quick and easy workpiece changeout.



- Patterned pneumatic control that uses hydraulic fluid and pressurized air to consistently actuate the vise
- Patterned dual-force pressure cylinder creates high thrust for increased clamping pressure
- Equipped with Dual Force Anti-Lift Mechanism
- Lead screw cover to prevent wear from chip build up
- Reciprocating air pressure motor automatically clamps workpiece maintaining continuous clamping force
- Parallelism of vise base to bed of 0.0004"
- Squareness from the bed to jaw face 0.0006"
- Parallelism of keyways on bottom of vise bed to the jaw face 0.0006"
- Increased opening capacity compared to same style vises
- Ergonomic hand wheel to preset vise depth
- Air pressure setting allows the user to control the vise clamping pressure in infinite increments
- Push button clamping action allows for quick and repeatable clamping
- Vise can be clamped horizontally and vertically without the need of tombstones or fixturing
- 80,000 PSI ductile iron castings prevent vise bending



Item #	A	B	C	D	E	F	G	H	I	J	K	L	M	X	Weight	Max Clamping Pressure
9625951	21.260	15.748	5.512	6.299	6.181	6.299	3.425	0.591	4.724	6.299	2.165	4.134	0.709	1.772	104 lbs.	13,228 lbf
9625952	24.016	18.504	5.512	7.874	6.693	6.811	3.543	0.709	5.512	7.874	2.481	4.331	0.709	2.835	154 lbs.	19,842 lbf

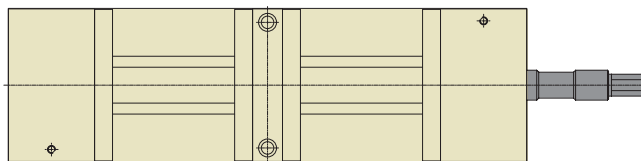
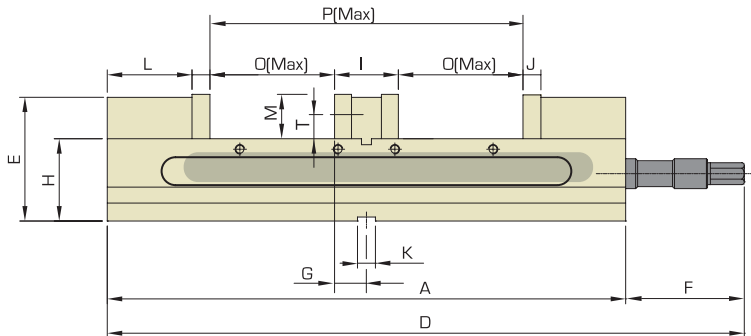
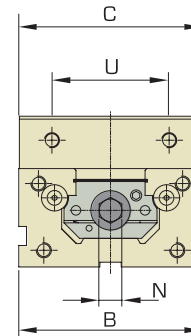


DUAL FORCE PRECISION DOUBLE STATION MACHINE VISES

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

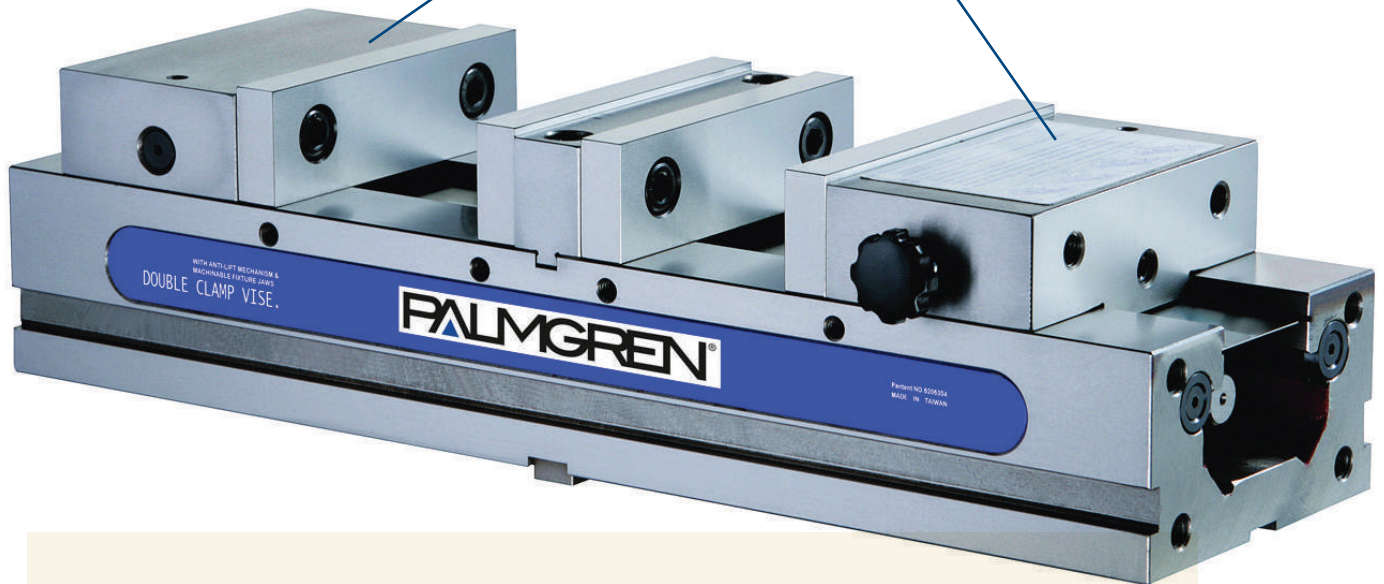
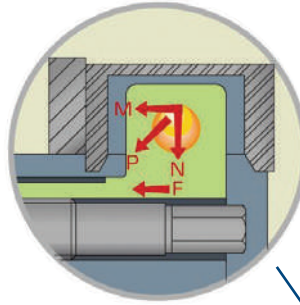
- 1/2 pound of downward force for every pound of horizontal force on both moveable jaws
- 80,000 PSI ductile iron casting deliver the strength, rigidity and long term accuracy required while absorbing machine vibration
- Can be mounted horizontally or vertically
- One handle operates the two moveable 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 +/- 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

Item #	Jaw Width	Jaw Opening	Throat Depth
9625935	4"	0 - 9.252"	1.496"
9625936	6"	0 - 12.441"	1.752"



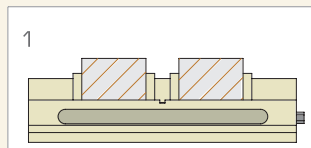
Item #	9625935	9625936
A	15.945	20.472
B	4.094	6.063
C	4.016	5.984
D	18.071	21.102
E	3.799	4.884
F	2.126	0.630
G	1.083	1.300
H	2.500	3.250
I	2.165	2.598
J	0.591	0.709
K	0.709	0.709
L	2.717	3.406
M	1.496	1.752
N	0.551	0.748
O	3.543	4.921
P	9.252	12.441
T	0.689	0.937
U	2.500	3.874
Weight	44 lbs.	115 lbs.

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

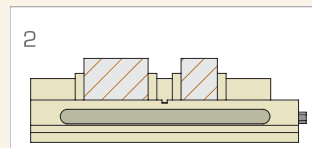


Patented auto memory mechanism gives you an advantage especially when clamping different size parts. The two jaws are auto set to the proper position for the two workpieces - then each time you open and close the vise the jaws maintain their set position allowing for quick repeat loading and unloading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

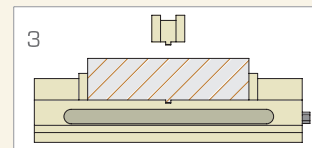
Clamping Applications



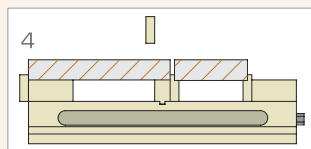
Two workpieces



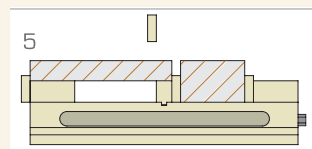
Two different size workpieces



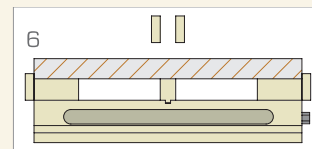
One large workpiece



Two thin workpieces



Two workpieces different shapes



One large workpiece

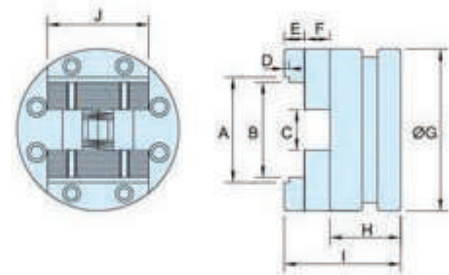
5-AXIS MACHINE VISES

Designed specifically for multi-face machining, the Palmgren 5-Axis Machining Vises are the perfect solution for machining simple to complicated workpieces. Equipped with jaws that provide a work holding solution for a variety of workpieces. With their round style, these vises occupy less space and reduce the amount of vise interference.

- Reduced clamping times through self-centering jaws
- Jaws specifically designed to hold square, round or odd-shaped parts
- Unique vise design allows for 5-sided access to the workpiece
- Symmetrical design allows for accurate machining over multiple axes
- The low-profile design allows for increased clearance for movements within the machine
- 80,000 PSI ductile iron castings prevent vise bending



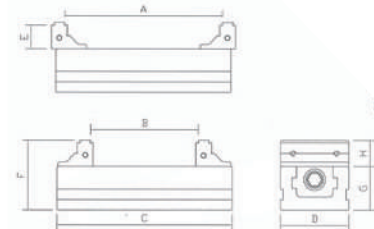
Item #	A	B	C	D	E	F	G	H	I	J	Weight
9625944	4.134	3.741	1.575	0.197	0.787	0.984	6.299	2.756	4.528	3.937	33 lbs.
9625945	5.315	4.921	1.969	0.197	0.787	0.984	8.268	3.151	4.921	5.118	76 lbs.
9625946	6.496	6.102	2.362	0.197	0.984	0.984	9.843	3.543	5.512	6.299	108 lbs.



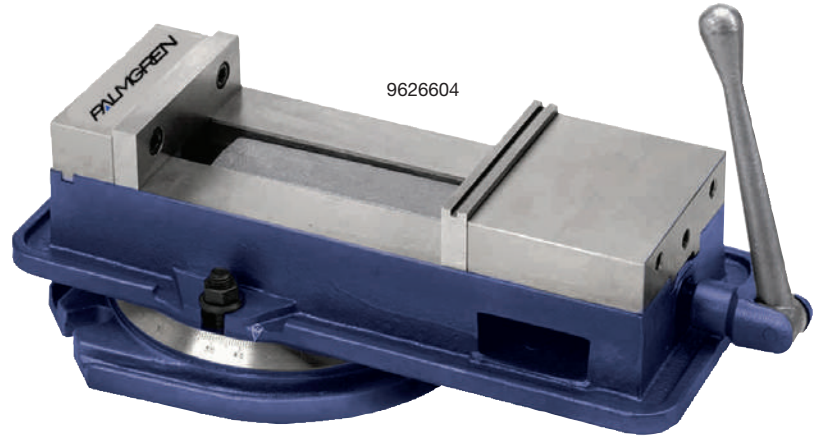
5-AXIS MACHINE VISE

The Palmgren 5-Axis Machining Vise is perfectly designed for quick and easy workpiece clamping on turning centers and 5-Axis machining centers. Their small stature occupies less machine space and reduces the amount of workpiece interference. This vise comes with various styles of jaws, able to hold a wide variety of workpieces.

- Simple and robust construction with smooth surfaces that makes for simple chip clean-up
- Self-centering, with both jaws moving simultaneously to reduce clamping times
- Jaws are suitable for cubical, round or oddly shaped parts
- Symmetrical design allows for accurate machining over multiple axes
- The low-profile design allows for increased clearance for movements within the machine
- 80,000 PSI ductile iron castings prevent vise bending



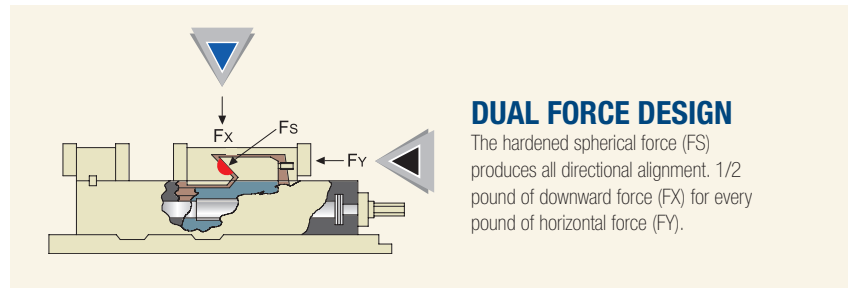
Item #	A	B	C	D	E	F	G	H	Weight
9625943	7.087	4.843	7.874	3.071	1.063	3.149	1.969	1.181	15 lbs.



STANDARD DUAL FORCE 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

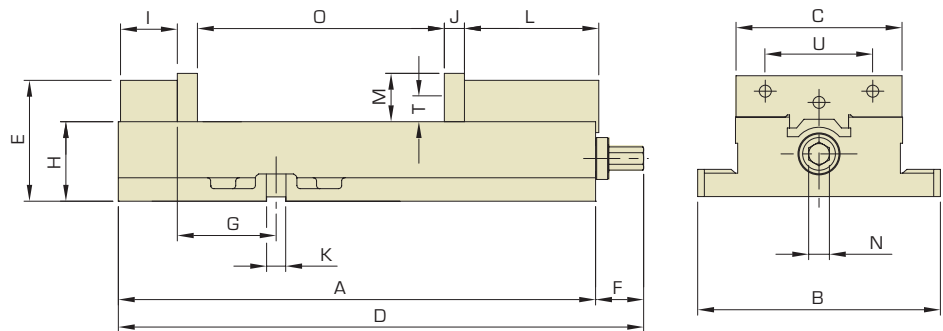


DUAL FORCE DESIGN

The hardened spherical force (FS) produces all directional alignment. 1/2 pound of downward force (FX) for every pound of horizontal force (FY).

Description	Item #	Model #	Jaw Width	Jaw Opening	Throat Depth	Jaw Deflection
w/ Swivel Base	9626604	MPS60SB	6"	8-3/4"	1-3/4"	0.001" @ 4000 lbs.
w/ Stationary Base	9626608	MPS60S	6"	8-3/4"	1-3/4"	0.001" @ 4000 lbs.

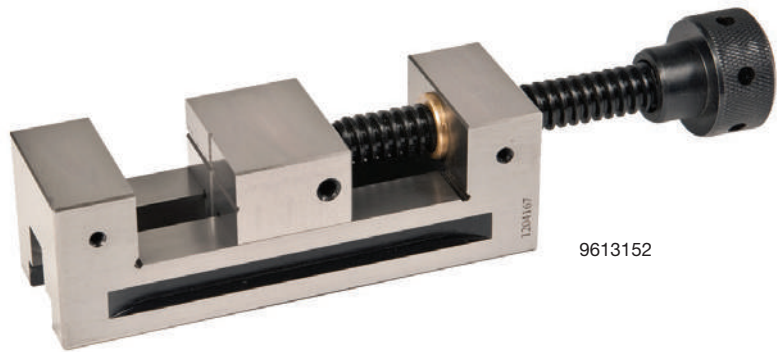
Item #	9626604	9626608
A	17.205	17.205
B	8.740	8.740
C	5.945	5.945
D	18.937	18.937
E	4.371	4.371
F	1.732	1.732
G	3.563	3.563
H	2.875	2.875
I	2.047	2.047
J	0.709	0.709
K	.636 / .709	.636 / .709
L	4.843	4.843
M	1.752	1.752
N	0.748	0.748
O	8.897	8.897
T	0.937	0.937
U	3.874	3.874
Weight	113 lbs.	83 lbs.



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.

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



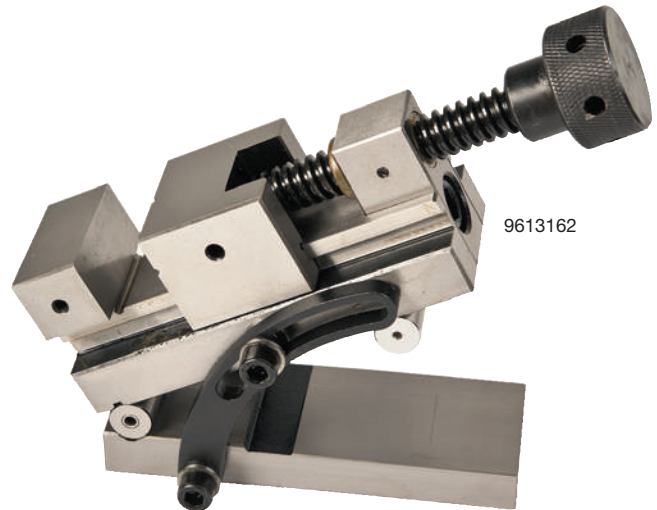
9613152

Description	Item #	Jaw Width	Jaw Opening	Throat Depth
2" Toolmaker's Vise	9613152	2"	2-1/2"	1"
4" Toolmaker's Vise	9613154	4"	4-15/16"	1-3/4"

ANGLE SINE VISES

Solid one-piece body, precision ground, and heat treated to 55 HRC then tempered to ensure stability and durability. Minute angle steps allow for very small angles to be set with ease, using standard gauge blocks.

- Top, sides, and bottom are precision ground square and parallel
- Screw type moveable jaw
- Parallelism: 0.0004"
- Squareness: 0.0004"



9613162

Description	Item #	Jaw Width	Jaw Opening	Throat Depth
2" Angle Sine Vise	9613162	2"	2-3/8"	1"
4" Angle Sine Vise	9613164	4"	4-15/16"	1-3/4"



PRECISION VISES

Item #9613153

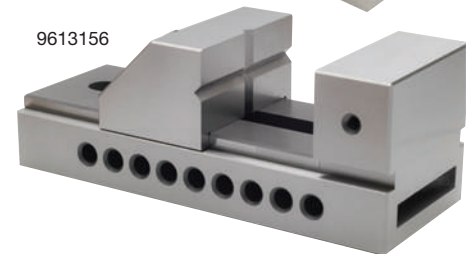
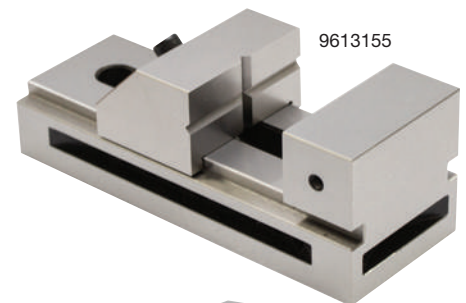
- Built for ultra-high precision jobs, Palmgren's Precision Vises are built to hold material with high accuracy for measuring and testing. The vises rapid positioning notches allow the vise to be locked in any position by means of an allen key, which is provided.
- Body and jaw are of solid steel construction
- Slotted ends and sides provide a multitude of clamping options
- Horizontal & vertical V-grooves on the sliding jaw for improved clamping on round parts
- Utilizes Dual Force clamping design for maximum clamping power
- Rapid positioning notches allow the vise to be locked in any position



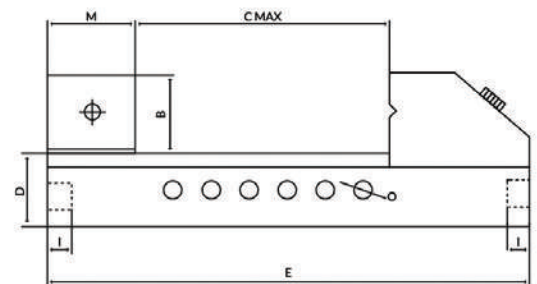
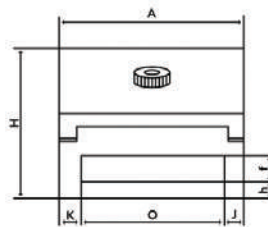
Item # 9613155 and 9613156

The Palmgren Precision Vises are built for high precision applications. These vises use a screwless design by utilizing a socket head cap screw that pulls down at a 45° angle. Due to the screwless design, these vises offer a Dual Force design with downward force as well as horizontal force.

- Horizontal & vertical V-grooves on the sliding jaw for improved clamping on round parts
- Utilizes Dual Force clamping design for maximum clamping power
- Rapid positioning notches allow the vise to be locked in any position
- Body and jaw are of solid steel construction
- Slotted ends and sides provide a multitude of clamping options



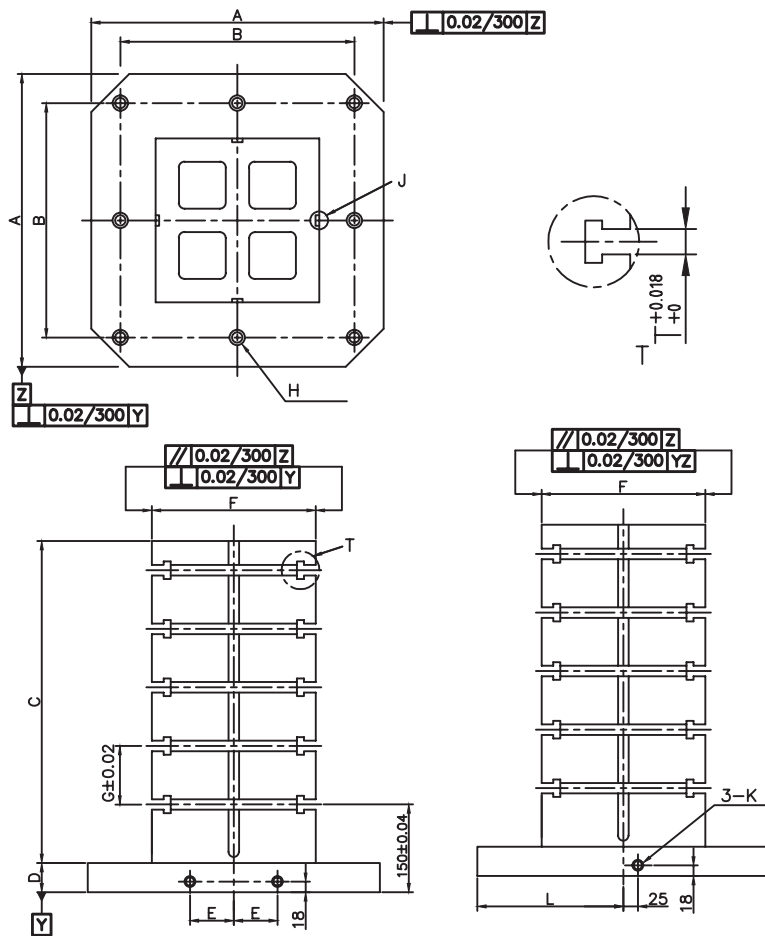
Item #	9613155	9613153	9613156
A	2.480	2.874	3.465
B	1.378	1.378	1.772
C	3.543	3.937	4.921
D	1.110	1.378	1.580
E	6.693	7.480	8.858
F	0.395	0.395	0.476
G	2.015	2.225	2.555
H	0.244	0.470	0.442
I	0.287	0.365	0.492
J	0.233	0.325	0.455
K	0.233	0.325	0.455
M	1.182	1.366	1.581
O	0.315	0.325	0.413
Weight	7.26 lbs.	9.46 lbs.	15.4 lbs.



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-ways 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



Item #	9626650	9626651	9626653
A	15.75	19.68	24.80
B	12.60	15.74	19.68
C	17.71	21.65	25.60
D	1.97	1.97	1.97
E	2.16	2.95	3.94
F	9.84	11.81	13.78
G	3.94	3.94	4.92
H	M16	M16	M16
K	M16	M16	M16
L	7.87	9.84	12.40
T	0.69	0.69	0.69
Weight	343 lbs.	587 lbs.	808 lbs.



Item #	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



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.

Item # 9638974 - 18 PIECE 4" & 6" COMBINATION SET

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

Item # 9638976 - 18 Piece 6" Parallel Set

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

Item # 9638978 - 8 Piece 8" Parallel Set

Set includes – wood case, 6 pair of parallels and 1 pair position clamps

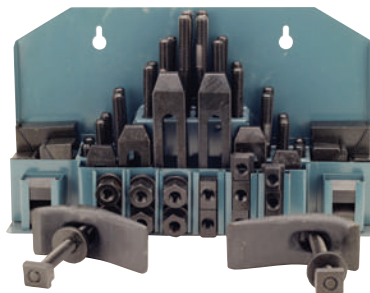
- 2 pieces – 0.315" x 0.945" x 7.874"
- 2 pieces – 0.472" x 1.417" x 7.874"
- 2 pieces – 0.866" x 1.575" x 7.874"
- 2 pieces position clamp



9638978

69 PIECE CLAMPING KIT

Item # 9638950



SWIVEL BASES

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



360° swivel base with 1° increments

	Description	Item #
For use with Palmgren's Dual Force STANDARD Machine Vises.	Swivel Base for use with 9626608 6-in. Vise	9626609
For use with Palmgren's Dual Force PREMIUM Machine Vises.	Swivel Base for use with 9625928 6-in. Vise	9625921
	Swivel Base for use with 9625930 8-in. Vise	9625931

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.

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



Description	Item #
Speed Handle for use with 9625928 6-in. Vise	9625913
Speed Handle for use with 9625930 8-in. Vise	9625914

PALMGREN QUICK VISE HANDLE

Palmgren's Quick Vise Handle works on all 6" & 8" Dual Force Machine Vises. Its single handle design allows for rapid opening and closing of the vise.

Item # 9625938



JACK SCREWS

- 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 style

Description	Item#	Height	Diameter
Standard	9638955	1.693" to 2.402"	1.969"
	9638956	2.559" to 3.150"	1.496"
	9638957	3.150" to 5.630"	2.008"
	9638958	4.921" to 9.450"	2.126"





For a detailed catalog of the full line of Palmgren Machine Tools visit our web site: www.palmgren.com or e-mail us to request a printed or electronic (pdf) catalog at: sales@chhanson.com

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